Project Palamon: NATS' response

NATS' Response to CAP2100: Investigation under s.34 of the Transport Act 2000: Project Palamon – Final Decision

Issue 1 – 10 August 2021

Issue 2 – 21 December 2021 (Summarising Ryanair feedback to allow publishing of report)

NATS

Table of contents

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Introduction

This submission sets out NATS' responses to the seven recommendations made by the CAA in its Final Decision on its Project Palamon investigation (CAP2100[1]) into complaints brought by Ryanair plc and Stansted Airport Ltd related to Air Traffic Flow Management delays experienced by airlines and passengers of Stansted and Luton airports between January 2019 and March 2020.

The investigation considered the compliance of NATS En-Route plc (NERL) with its obligations under its Air Traffic Services Licence and the Transport Act 2000.

NATS accepts the majority of recommendations and has developed its response in a manner that seeks to address the concerns identified by the CAA's investigation. NATS offers engagement with the CAA and customers on a regular basis to provide updates on the matters raised by the Palamon investigation. The CAA's findings raise broader questions about how best to resource the en-route operation to deliver a safe, cost effective, resilient and reliable service for all of our customers. We will address these issues in developing our business plan for the NR23 regulatory period, informed by customer engagement during the autumn.

In developing these responses, NATS has engaged with the CAA, Eurocontrol and customers. It has also started work with its staff and their Trade Union representatives on developing further the options to enhance the resilience and flexibility of its service. Some of the actions and activities proposed are already being progressed; where this is the case, this response provides an update on the progress made. Where responses point to more structural issues, and which may require engagement with its workforce and other stakeholders, our intended progress over the next six months and beyond (from date of submission of this response) is set out so that the CAA has tangible milestones to review progress.

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1 CAA, Investigation under s.34 of the Transport Act 2000: Project Palamon – Final Decision, February 2021

Each of the recommendations is presented for completeness, and to allow this response to be viewed as a standalone submission without needing to refer to CAP2100. NATS is willing to provide further clarification if requested.

Summary

NERL's responses to the seven recommendations are summarised below:

1   Staffing resilience

Since 2019, NERL has increased the availability of air traffic controllers trained and validated to work on non-Heathrow approach control functions, including Essex airspace, by 20%. ATCO training for additional validations will continue throughout 2021 and beyond. Recognising that SESAR deployment plays a critical role in our ability to deliver a more flexible and agile operational capability in the future, NERL is developing a range of initiatives to support this outcome, in consultation with staff and Trades Unions. These fall into two themes: training efficiencies, and flexible deployment of staff. As these initiatives mature over the coming year and beyond, NERL will deploy the resulting changes into its operation.

2   Airspace change

NERL, as co-sponsor of the Swanwick Airspace Improvement Project Airspace Deployment 6, alongside London Luton Airport (LLA), is planning for, and on target to achieve, a planned implementation in February 2022. This project will enhance safety and provide additional capacity to enable the continued growth of London Luton and London Stansted airports. The Airspace Change Proposal was delivered to the CAA in June 2021 and remains on target for regulatory approval in November 2021.

3   Engagement with stakeholders

As the aviation sector starts to recover this year, NATS has re-established monthly customer calls as part of strategic and pre-tactical planning to look-ahead to the forthcoming month's operation as well as regular bilaterals with all key customers and stakeholders, focused on reviewing past performance, lessons learned, operational issues and a look-ahead to future plans and any strategic operational concerns. These bilaterals form part of a broader key customer account management plan which will be shared and agreed by both parties and will clarify proposed ways of working.

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4   Coding of air traffic control delay

NERL follows the requirements within the Eurocontrol Network Manager (NM) Air Traffic Flow and Capacity Management (ATFCM) Operations Manual, which have operational precedence. The Network Manager supports NERL's current operating methods in this area. We consider that the PRC coding principles are contrary to the current operational requirements embodied in the NM ATFCM Operations Manual. NERL, along with all other ANSPs, follows the current ATFCM manuals as standard best practice. NERL would follow the PRC principles, if they were to be translated into updates to the ATFCM manuals.

5   Sector information to Eurocontrol

NERL is meeting the objective of this recommendation. NERL provides the information required by Eurocontrol Network Manager (NM) in the format it requests, and on a timely basis, to support NM's activities. NM has recently confirmed to NERL that the content and timeliness of Sector Opening information provided by NERL to NM meets its expectations and requirements.

6   Performance data

NERL is currently and plans to continue to make data available to CAA, airports and airspace users through publication on its customer website of its performance report (previously known as the Condition 11 Report).

7   Reporting on resilience planning

NERL will report six-monthly on its progress in responding to the Palamon recommendations. In parallel with the activities set out in this response to Recommendation 1, NERL has developed a separate Staffing Resilience Plan that outlines our current processes and capabilities, and how they can address potential staffing issues with proactive and reactive arrangements depending on the timescales. More broadly, the Service and Investment Plan (SIP) can and should provide an important means by which the CAA, NERL and customers can understand the interlinkages between the periodic price control settlement and NERL's day-to-day operational resilience. Since this set of process equally apply across the entire NERL operation, the content of the plan is not tailored specific to the London Approach Service (LAS), although it provides updated supply vs demand, and in the format requested.

NERL is committed to communicating better how the capacity made available in accordance with the SIP correlates to the economic settlement and how it affects short-term and long-term operational resilience.

The staffing resilience initiatives being developed in response to issues arising in the London Approach Service will also be applied across NERL's UK-wide operations.

# 1.	Staffing resilience

## 1.1.	CAA Recommendation

NERL should improve the staffing resilience available to London Approach airports and in Essex airspace in particular, including by making staffing arrangements more efficient and agile, to avoid a reoccurrence of the historical difficulties encountered at the Stansted and Luton approaches, before demand substantially recovers to pre-covid-19 levels. NERL should provide a resilient service that is capable of satisfying a range of reasonable scenarios for a rebound in traffic demand for the various areas of its regulated air traffic services. That said, we appreciate that some level of delay is to be expected in normal operations, as is some variation in performance across different parts of the network.

## 1.2.	Response

### 1.2.1.	Current context

NERL has made progress in increasing the supply of Air Traffic Control Officers relative to forecast demand in the period following the delay issues that triggered the Palamon review. The headcount number of rosterable controllers who provide the non-Heathrow approach control functions has increased by 20% since 2019 to August 2021. During this period there has been a particular focus on Stansted and Luton validations, which has seen the number of validations for these functions increase by 31% for Stansted and by 33% for Luton.

ATCOs' training for additional airspace validations throughout 2021and beyond is expected to increase further the number of non-Heathrow approach control validations. Compliance with the Covid-19 pandemic risk assessments and guidelines has impacted both the training capacity and efficiency. Despite these constraints, though, training has continued through this period. We will continue to monitor progress closely as traffic and training levels return and to introduce mitigations as part of normal operations.

A small number of ATCOs have let NERL management know their intention to leave once traffic returns to the previous levels observed (i.e. peak 2019, pre-pandemic levels); we consider such intents to be credible. NERL's management continues to engage with the operational workforce to maintain an open dialogue and acquire intelligence about retirement intentions. Absence due to illness rates are also likely to increase once traffic and workload increase to pre-pandemic levels.

Further detail on the supply of trained staff to meet current and forecast demand is set out in the staffing resilience plan document, submitted to the CAA in parallel with this response.

As well as continued focus on recruitment and training to increase both controller numbers and validations held, a suite of complementary initiatives have been identified for further investigation to increase the resilience of the Terminal Control (TC) approach control function, and which will enable benefits in other aspects of service delivery. These initiatives are described below.

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1.2.2.   Enhancing flexibility and agility in En Route Operations

The following section describes a range of initiatives which we have identified which could individually and together contribute to delivering a more flexible and agile operational capability in the coming years. Each initiative has individual merit and contributes to improving efficiency and flexibility in resourcing the operation. There is however synergy between a number of these that further enhances the benefits to TC approach, as well providing scope for extension to other parts of the NERL operation. This is highlighted where applicable. The initiatives are grouped into two themes: training efficiencies; and flexible deployment.

On the non-Heathrow approach sectors, controllers are required to hold two approach sector validations. Controllers generally validate on one sector first and then extend onto an additional approach sector. Facilitating this extension training has at times been difficult, as the numbers of available approach staff combined with high traffic levels, meant controllers were required to spend most of their time on their first approach sector and they could not be rostered to train on another. The intent is to develop initiatives under the flexible deployment theme to better enable staff either to be trained or to train others. When combined with training efficiency initiatives, we expect to be able to expedite our plan to increase the number of validations, thus delivering a more flexible and resilient workforce.

Many of the initiatives will require both internal consultation with the Trade Union (TU) and external support and collaboration with the CAA as well as, in some cases, airport operators.

1.2.3.   Training Efficiencies

1.2.3.1.   Potential to use simulators to expedite validation times

During the Covid-19 pandemic when traffic volumes have been artificially low, an initiative commenced to understand to what extent ATCOs training towards an additional validation would benefit from additional training time using both the Part Task Training Facility and full fidelity simulations, alongside Live OJT (On the Job Training), to meet training objectives associated with the new task. The Part Task Trainer is a facility on site at Swanwick that provides access to a low fidelity simulated training solution to support the operational training teams, allowing targeted training objectives to be met in a focused and flexible environment. It uses a bespoke workstation, with all key functional components allowing emulation of the ATC task across a number of the TC sectors and will continue to be expanded to meet the needs of the operation.

Historically trainee controllers have needed to accumulate training hours in the live environment and experience a variety of traffic levels and scenarios in order to progress to an experience level at which they can validate. Experience during the Covid-19 pandemic demonstrated that some of the traffic levels and scenarios which previously could only be experienced live, could be emulated to a sufficient fidelity in the simulator environment, enabling training progress to be made.

Recognising that the Covid-19 pandemic required a different approach to training, a project commenced in Summer 2020 to establish a new methodology which was an alternative to the traditional Unit Training Plan (UTP), this utilised significant time in the simulator rather than the live environment. Through close collaboration with the CAA SARG (Safety and Airspace Regulation Group) it was also possible to conduct validation boards in the simulator and to date, two validations have been achieved in this way.

An assessment is underway to further understand the benefits and risks associated with this approach and how the continued use of simulators could be best exploited to provide additional

training on an on-going basis e.g. during periods of low traffic demand, ATCOs could potentially be released from the operation to practice busy traffic in the simulator or specific scenarios that would enhance their familiarity with the nuances of the sector.

A further opportunity exists with this approach to mitigate the documented capacity issues with regards to available training hours or seats in the live environment, where you have more trainees than seats available to train them. By using the simulator or Part Task Trainer to upskill both controllers under going extension training and *ab initio* Student Air Traffic Controllers you could maintain a level of proficiency until such a time that capacity exists to complete the training process in the live environment.

NERL will consult with the CAA's Safety and Airspace Regulation Group to explore to what extent the Unit Training Plan can be modified to incorporate the use of simulated facilities to expose controllers to meaningful traffic levels and specific scenarios to enhance the training experience.

An initial review of feasibility and options to be completed during Autumn/Winter 2021/22 with recommendations for review by affected parties.

1.2.3.2.   Joint Validations following Airspace Development 6 implementation

As well as the safety and airspace capacity gains expected from the Swanwick Airspace Improvement Project (SAIP) Airspace Development 6 (AD6) (as discussed in response to Recommendation 2), the deployment of AD6 will also create opportunities for how controller training is provided. NERL's management is now exploring an opportunity suggested by the Trade Union, as part of bilateral discussions on responding to Palamon, that once AD6 has been deployed, Stansted and Luton approach could be jointly trained as initial validations for *ab initio* controllers. This may increase the efficiency of training and provide additional flexibility to the operation by increasing the pool of both validations in the workforce.

As part of the AD6 deployment, ATC Training will monitor the division of tasks associated with Stansted and Luton Approach Control functions, with the intention to recommend concurrent training towards both unit endorsements for future trainees. ATC Training will further review data related to dual endorsement training to ensure recommendations do not affect efficiency of training and/or reduce training capacity.

AD6 is due to deploy in February 2022, and with the intention of the subsequent Unit Endorsement Course for these sectors (scheduled for summer 2022) to be structured to address the above opportunity. In the next six months (following the submission on this response), the feasibility of this opportunity will be investigated, and subject to favourable outcome, the necessary approvals sought for amendments to Operational Conversion Training (OCT) materials.

1.2.4.   Operational staff deployment

NERL will explore with its Trades Unions opportunities to deploy operational staff more flexibly that satisfy a range of reasonable traffic demand scenarios and improve access to training. This would support the previously described initiatives aimed at improving training efficiency, and would help maintain the resilience and flexibility of the operational workforce over time.

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2.   Airspace change

2.1.   CAA Recommendation

NERL should continue to take steps to increase the capacity available in Essex airspace, including by progressing AD6 change.

2.2.   Response

Notwithstanding the impact of the Covid-19 pandemic on the aviation industry, ensuring that the Essex airspace has sufficient capacity to meet potential future demand remains a prime focus for NERL so that it can support delivery of the CAA and DfT co-sponsored Airspace Modernisation Strategy. Whilst air traffic demand in the Essex airspace has significantly reduced since February 2020 and thus does not require any short term action to provide immediate additional capacity, NERL, as co-sponsor of the Swanwick Airspace Improvement Project (SAIP) Airspace Deployment 6 (AD6), alongside London Luton Airport Ltd (LLA), is focussed on delivery of this proposed airspace change in February 2022, and has recently conducted a highly successful, digitally-based consultation on the AD6 Airspace Change Proposal (ACP).

The AD6 ACP is primarily focussed on enhancing safety and providing additional capacity to enable the continued growth of London Luton and London Stansted airports and reducing the potential for Air Traffic Management (ATM) delays attributed to Air Traffic Control (ATC) capacity in the region. The current airspace arrangements have been in place for nearly two decades with occasional evolutionary improvements implemented to mitigate the impact of significant growth in flights over that time. AD6 is NATS' next evolutionary step for airspace modernisation in the region and will achieve this by reducing the complexity of the ATM operation, segregating some of the current arrival flightpaths that are shared by aircraft inbound to either London Luton or London Stansted, and establishing a new dedicated hold for London Luton, whilst retaining the two existing holds primarily for London Stansted arrivals. It is important to note that AD6 does not alter the departure procedures at either airport.

Following extensive development activities associated with finalising the AD6 airspace design, it is anticipated that the AD6 ACP will provide sufficient airspace capacity and improvement to eliminate the ATC capacity-related delay previously attributed to TC Essex.

The current upstream sector managing the air traffic arriving into London Luton and London Stansted airports (the TC Essex sector) has an effective capacity of 40 flights per hour. When the actual number of flights entering this sector approaches this value, the safety of the operation must be prioritised and flights that would exceed this value can be regulated and their departure time delayed to ensure the capacity of the sector is not exceeded. The current capacity of the downstream, airport approach, sectors is 18 flights per hour for London Luton and 26 for London Stansted, resulting in insufficient capacity in the upstream TC Essex sector to meet peak demand. The new airspace arrangements proposed by AD6 effectively removes the Luton Airport arrivals from the TC Essex sector and therefore enables the full capacity of that sector to be dedicated to London Stansted arrivals. The new separated arrival flightpaths and procedures generate a Luton Approach sector capacity of 28 flights per hour and with a capacity of 40 per hour for London Stansted, the theoretic capacity will be increased from 40 flights per hour today in shared airspace

arrangements to 68 flights per hour in 2022. This increase in capacity would have avoided some 10,200 mins of delay in 2022, based upon 2019 traffic demands.

NERL pioneered a digitally-based platform to conduct the AD6 ACP consultation during the pandemic between October 2020 and February 2021. The consultation received over 11,000 separate visits and generated over 2,400 responses, the most public engagement from any CAP1616[2] airspace consultation to date. NERL and LLA are progressing the SAIP AD6 airspace change as fast as practically possible within the constraints of the CAA's CAP1616 regulatory process. To date NERL has met all milestones within this process.

The AD6 ACP was delivered to the CAA at the end of June 2021 and an approval decision is anticipated in early November 2021; this date is subject to any Secretary of State considerations following any potential activation of the "Call In" process. NERL has made every effort to mitigate this risk through extensive engagement with stakeholders and revisions to the proposal in light of the feedback received from consultation. Notwithstanding any unforeseen issues with regulatory approval and any action that may be taken as part of the Secretary of State "Call In" process, NERL and LLA are planning for, and on target to achieve, a planned implementation in February 2022. If this implementation date can be achieved then it would mean there would have been no delay to NERL's targeted implementation of increasing capacity in the TC Essex airspace region as a consequence of pandemic-related issues. The AD6 change will deliver airspace modernisation in this region of UK airspace to support the CAA's and DfT's strategies. The delivery of AD6 will support the industry's recovery from the catastrophic effects of the Covid-19 pandemic and significantly reduce the likelihood for ATM capacity-related delays attributed to the TC Essex airspace arrangements.

In addition to the implementation of AD6, the future delivery of the CAA and DfT co-sponsored Airspace Modernisation Strategy will provide an opportunity to implement revised airspace arrangements over the south east of the United Kingdom and to deploy additional Performance Based Navigation (PBN) procedures into the TC Essex region. This will benefit all airport operations, including London Stansted and London Luton airports. The Future Airspace Strategy Implementation plan, co-ordinated through the Airspace Change Organising Group (ACOG), will seek to deploy airspace changes that utilise PBN capability to position aircraft tracks that will support industry's efforts to deliver net zero emissions, provide airports the opportunity to minimise noise impacts, and enable the safe separation of aircraft tracks with reduced distances between routes and reduced controlled airspace volumes.

The implementation of this capability will importantly deliver a reduction in ATM operating complexity and controller workload per flight and enable a more systematic ATM operation based on accurate track adherence, thus exploiting the precise aircraft navigation capabilities inherent within the vast majority of operating aircraft flown today. The wider aviation industry, supported by the CAA, will need to find safe and effective ways of implementing and managing multiple PBN routes between specified start and end points to enable deployment of safe and effective route respite procedures at lower levels below 7000 feet, thus distributing and sharing the effect of aircraft overflight in a safe, managed and efficient way. The deployment of more PBN routes and procedures will deliver greater flexibility in how air traffic demand can be managed as the reduction

[2] The new guidance for airspace changes, introduced by the CAA in 2017

in controller workload per flight will enable a more efficient, standardised and simplified operation, permit more agile and flexible staff deployment, and enable peaks in demand to be more effectively managed with the resource available, with resultant improvements in service resilience.

AD6 is NERL's primary focus on delivering additional capacity in the TC Essex region in the medium term, aiming to deliver benefit for both London Luton and London Stansted airports from Spring 2022. NERL has conducted all necessary activities, in partnership with London Luton Airport, to try to ensure a successful outcome from the AD6 airspace change proposal submission with the outcome decision now resting with the CAA, or if called in, the Secretary of State. NERL continues to be heavily focussed and invested in realising the delivery of airspace modernisation across the UK to meet future air traffic demands and environmental considerations. NERL is actively progressing airspace modernisation as a company priority. This is clearly evidenced via the following on-going large-scale airspace change projects within which we are actively involved:

> Future Airspace Strategy Implementation – South/North (FASI-S/N);

> London Airspace Modernisation Programme (LAMP); and

> Free Route Airspace (FRA).

Progress of these projects can be tracked on the CAA airspace change portal.

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3.   Engagement with stakeholders

3.1.   CAA Recommendation

NERL should engage more pro-actively and transparently with its customers and key stakeholders including Ryanair and STAL. Ryanair and STAL should also do more to communicate with NERL in a constructive and cooperative manner. NERL and the other parties should take steps to improve the quality of their dialogue and, if necessary, consider the use of a range of dispute resolution mechanisms in the future.

We recommend that airports should seek timely input from NERL to feed into their capacity declaration and scheduling processes. NERL should work with all parties in this investigation and seek to improve collaboration. For example, all parties should take advantage of the work of the Industry Resilience Group (IRG) – where airports, airlines and ACL (the UK's slot coordinator) sit – and other fora in order to improve communication on strategic operational issues. NERL should also consider setting out formally what information it would be useful for them to receive from airports and airspace users, and by when, in order for them to plan their operations.

3.2.   Response

As we recover from the pandemic, NERL has re-established regular bilaterals with all key customers and stakeholders (including Ryanair and STAL), focused on reviewing past performance, lessons learned, operational issues and a look-ahead to future plans and any strategic operational concerns. These bilaterals form part of a broader key customer account management plan which will be shared and agreed by both parties.

NERL will clarify the information necessary to optimise the planning of our operation, to ensure clarity of understanding for both parties. Any data or information requests from either party should detail the following:

> what information is required and why the information is needed;

> how the information will be used;

> when the information is needed by in order to provide benefit; and

> the preferred format of the information required.

The pandemic has seen airports, airspace users and NERL communicate and collaborate in ways that have provided effective and efficient alignment and common understanding of strategic operational issues across the industry. NERL has participated in these groups, for example the Operations Directors Liaison Group, and will continue to contribute to these cross-industry collaboration forums in order to maintain alignment and to play our part in the overall recovery of our industry.

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4.   Coding of air traffic control delay

4.1   CAA Recommendation

NERL should adopt Performance Review Commission (PRC) coding principles unless NERL can demonstrate to the CAA a material operational reason not to adopt the PRC best practice principles.

4.2   Response summary

NERL has consistently and transparently followed the requirements within the Eurocontrol Network Manager (NM) Air Traffic Flow and Capacity Management (ATFCM) Operations Manual. These requirements have operational precedence over any other position taken by any other advisory or consultative group within the governance structure of Eurocontrol. The Network Manager supports NERL's current operating methods in this area, and supports NERL to continue operating in this way[3].

We consider that the PRC coding principles referenced in the CAA's recommendation are contrary to the current operational requirements embodied in the NM ATFCM Operations Manual. NERL, along with all other ANSPs, follows the current ATFCM manual as standard best practice. NERL will adopt the PRC principles if they were to be translated into updates to the ATFCM manuals.

4.3   Eurocontrol governance affecting ANSPs' operational practices

NERL operates within the governance framework established by Eurocontrol for the delivery and development of air navigation services across Europe. This framework is described in Eurocontrol's Network Cooperative Decision Making Processes document, April 2016. In the area of ATFCM, this document describes how the Network Manager develops, through the collaborative decision making process, the procedures and processes for the execution of the ATFM function.

The procedures are defined in 3 documents:

> Responsibilities Document for the application of Air Traffic Flow Management (ATFM) representing the CDM process for ATFM and included in the Annex E of the CDM;

> ATFCM User Manual; and,

> ATFCM Operating Procedures for Flow Management Positions within each ANSP.

The ATFCM manuals are approved by the Operations and Development Sub-Group (ODSG) acting on its mandate from Network Operations (NETOPS). Agreed timetables for the proposals of

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[3] Eurocontrol NM letter to NERL, 12 May 2021, reproduced at Annex A

amendments, review by stakeholders, and approval by ODSG and advance publication have been adopted by ODSG and are respected by NM.

NERL is expected by virtue of its role as the ANSP of a Eurocontrol member state to adhere to the ATFM manuals. In November 2020, the CAA's Safety and Airspace Regulation Group audited NERL's Airspace Capacity Management (ACM) department and confirmed that NERL discharge its ATFM obligations as per all current specified regulatory processes. In addition, any auditable comparison with other ANSPs within the European Civil Aviation Conference (ECAC) area would not be possible, as none currently code regulations outside of the NM ATFCM manual.

The PRU also found, in its study for the CAA in support of the Project Palamon investigation, that the practice by which NERL attributes and codes ATFM delays is consistent with the current guidelines in the ATFCM manual[4]. This conclusion was also supported recently in communication from Eurocontrol to NERL[5].

In parallel with oversight of the current operating requirements, other groups within the Eurocontrol Organisation provide analysis and develop policy on options for improving European air traffic management. In this context, the work of the PRU, acting under commission from the PRC, helps to inform Eurocontrol, its member states and its wider stakeholder network. The PRC reports to the Permanent Commission of Eurocontrol through the Provisional Council on all matters relating to the performance review of air traffic management.

In 2017 the Provisional Council of Eurocontrol, noting the concerns and recommendations of the PRC recommended that:

> "The Director General [of EUROCONTROL] and the Member States [should] strengthen the ATFCM process by developing and adopting strict procedures for attributing ATFM delay causes, instead of the current guidelines that lead to inconsistencies and opacity in monitoring capacity performance."

Notwithstanding the fact that the Provisional Council endorsed this recommendation, the actions envisaged have not yet been translated into changes to the ATFCM manuals. If and when the recommendation is enacted by Eurocontrol, and ratified by the Network Management Board (NMB), then the PRC principles on delay coding remain, for now at least, endorsed advice to Eurocontrol's governing body rather than operational best practice to be applied by ANSPs. Pending any future activity by Eurocontrol and its stakeholder groups to implement the recommendation, NERL along with all other ANSPs is obliged to continue to follow the current ATFCM manuals. NERL would adopt the approach recommended by the PRC principles, if they were to be translated into updates to the ATFCM manuals.

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[4] CAA, Investigation under s.34 of the Transport Act 2000: Project Palamon – Final Decision, February 2020, paragraph 5.13

[5] Eurocontrol Network Manager, letter to NERL, reproduced at Annex A

5.   Sector information to Eurocontrol

5.1.   CAA Recommendation

NERL should provide dynamic Sector Opening Times to Eurocontrol's Network Manager (NM) as soon as practicable. In the meantime, NERL should provide such information manually. NERL should update the CAA and stakeholders on progress and on when it expects such a system to be operational.

5.2.   Response

NERL believes it is meeting the objective of this recommendation, which is to provide Network Manager with the information it needs to help manage the European Network. NERL provides the information required by Eurocontrol Network Manager (NM) in the format it requests, and on a timely basis, to support NM's activities. NM has recently confirmed to NERL that the content and timeliness of Sector Opening information provided by NERL to NM meets its expectations and requirements of NM[6].

NM note that, in the absence of any business-to-business (B2B) information system connections being established between NERL and NM, the information provided by NERL on capacity declarations is aligned with NM requirements. NERL and NM agree that future connectivity between their respective operational systems would enable a more efficient transfer of data. To that end, NERL will continue to work closely with NM on the Integrated Network Manager Programme (iNM) over the next nine years, which is the timeline to which the NM is working for its implementation. As part of that programme, NERL will work towards developing the technological capability for submitting capacity declaration information directly from its own operational systems to the NM's. The alternative of creating and implementing a B2B technology solution in the short-term for the stand-alone purpose of providing dynamic sector opening information would require time, resource and investment with no direct benefit to the customer. As the introduction of other technology programmes progress over the next 9 years, NERL will work with NM to find the appropriate opportunity to implement a B2B solution as part of other benefits cases. Once this is defined, NERL will report the progress through our bi-annual reporting requirements under Licence Condition 10.

During the period of the Palamon investigation (October 2018 to February 2021), NERL was actively taking several steps to improve the process of sector opening declaration in the absence of an automated B2B solution. The previous process that NERL followed, which was in operation during the early stages of the investigation, involved NERL only submitting an annual capacity plan to the Network Manager. This declared all sectors open for the full 24 hours each day to NM, which was not an accurate representation of the planned capacity and resulted in NM being unable to update the Collaboration Human Machine Interface (CHMI) either strategically or pre-tactically

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[6] Eurocontrol NM letter to NERL, 12 May 2021, reproduced at Annex A

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to reflect NERL ACC sector capacities. At this time, NERL also coded en-route capacity and staffing delay against an internal Position Staffing Schedule, which was not fully in line with the NM ATFCM handbook. NERL could not demonstrate available capacity through NM post operational analysis, hampering discussion on regulation attributions.

In November 2019, NERL made a material advance in improving sector opening declaration information, when it accurately re-created and tested its current Airspace Environment in the NM system, which had not been updated for 10 years. By completing this work, every possible sector configuration in the three ACCs can now be accurately represented within the NM systems and CHMI. In December 2019, and for the first time, NERL provided a seasonal (Summer 2020) capacity declaration to NM, with a supporting indicative sector opening sequence. This allowed NM to accurately assess NERL's forecast demand against planned capacity and to support the creation of the NM Summer 2020 seasonal Network Operational Plan (NOP). In addition, NERL now submits both Summer and Winter capacity declarations to NM and provides updates the day before the day of operation (D-1). The UK Flow Management Position updates CHMI with the expected NERL sector configurations to reflect the optimised airspace, which in turn supports the NM daily NOP creation. The NM has confirmed its support of this approach through bilateral meetings during the creation process as well as the letter cited earlier.

Internally, NERL Operational Instructions are issued to ACC supervisors and UK FMP to guide their actions in relation to capacity management, with any significant shortfall in capacity notified to NM. The NM PRISME tool will reflect NERL sector capacity declarations in the planned and expected phases of capacity. This supports accurate post-operational analysis against the point of declaration at D-1 and enables en-route regulation attribution to be correctly coded in accordance with the NM AFTCM handbook.

NERL is now aligned with NM expectations of ANSPs, in terms of capacity declarations and overall network management.

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6.   Performance data

6.1.   CAA Recommendation

NERL should continue making data available to CAA, airports and airspace users on its performance as required by Condition 11 Service Standards Statement (including Oberon indicators) at least until end 2025.

6.2.   Response

NERL is currently and plans to continue to meet this recommendation through publication on its customer website of its performance report (previously known as the Condition 11 Report). This report was, until the start of the pandemic, issued quarterly, but, in agreement with the CAA, has since then been published on a twice-yearly basis. NERL will resume quarterly publication as air traffic starts to recover and will agree a timetable for doing so with the CAA. NERL continues to submit the Oberon Indicators every quarter and will continue to include them within the performance report.

The performance reports (along with a wide range of other information of interest and relevance to customers) are published on NATS' customer gateway at www.customer.nats.co.uk.

7.   Reporting on resilience planning

7.1.   CAA Recommendation

NERL should report to the CAA and interested parties in this investigation, within six months of this decision and then on a six-monthly basis until the end of 2025 on the progress that it is making, in an open and transparent way, with respect to:

> addressing any staffing resilience difficulties in the London Approach Service, including by making staffing arrangements for efficient and agile, as per Recommendation 1;

> the delivery and implementation of AD6 or other projects that increase ATC capacity in Essex airspace;

> the provision of dynamic sector opening times to the satisfaction of Eurocontrol;

> the implementation of PRC principles when coding of ATFM delays; and

> the roll out of its new rostering tool, if that has not yet been achieved.

NERL should provide within six months of this decision a detailed update of its staffing resilience plan (included in the overall resilience plan that NERL submitted to the CAA under Condition 2 of its Licence), setting out:

> how the staffing issues in the London Approach Service will be addressed;

> the timescales for such; and

> how this will be mapped to be able to meet a range of demand scenarios, including a reasonably optimistic recovery profile from Covid-19.

NERL should also set out how it will avoid similar difficult issues with staffing levels in other sectors. NERL should consult interested parties on this plan and respond to any concerns raised. The detailed staffing resilience plan should then be refreshed annually up to and including 2025 and thereafter in line with the regular reviews of the overall resilience plan.

This plan and the reporting above should include a transparent and granular account of any staffing resilience risks in the provision of the London Approach Service (LAS) and how they are being addressed as well as timescales for doing so. It should also include information similar to that provided in Figures 6.9 and 6.10 of the Final Decision on how rosterable ATCO supply compares to demand on a forward-looking basis to each of the 5 main London approach services, and the main drivers/assumptions underpinning those forecasts. NERL should keep the key aspects of this plan under review to ensure that the plan will remain fully effective as circumstances change.

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7.2.   Response

NERL will provide six monthly updates to the CAA on the progress of responses set out in this document and raise any possible concerns it may have encountered over the previous period. It will also make this report available to customers through its customer portal. In developing this initial response, NERL has consulted those stakeholders most directly affected by the Palamon investigation[7] on the scope and suitability of the improvements identified and has reflected their views when developing this response.

As detailed in our responses to the individual recommendations made, NERL confirms that the updates will include progress reports on:

> How NERL is addressing the staffing resilience difficulties in the London Approach Service by enhancing the flexibility and agility on the en-route operation through improvements to the rostering and deployment of staff the appropriate validations and improving the efficiency of the training processes; and,

> The progress of Airspace Development 6, which is scheduled to be delivered in February 2022.

NERL considers that responses in this document fully address recommendations 4, 5 and 6, and that these actions are closed and do not need to be reported on further.

The rostering tool mentioned was delivered in phases during 2018. NERL's 2019 post-project benefits analysis for this project (the D-SESAR Common Rostering Tool) confirmed that the anticipated benefits had been achieved, in terms of less resource required to manage rostering and greater ability to roster more flexibly and with greater granularity to meet operational demand and to release staff to non-operational projects.

Licence Condition 2 requires NERL to revise its Resilience Plan every 24 months (or when so directed by the CAA) or to provide a letter to the CAA confirming no revision is required. The first and current version of NERL's Resilience Plan was submitted to the CAA in March 2019, reviewed by an appointed Independent Reviewer in May 2019 and approved by the CAA in May 2020. In October 2020, the CAA agreed with NERL's proposal to submit a short paper as an Addendum to the current Resilience Plan, in lieu of a new edition of the Plan. This was recognised as an efficient approach considering the small number of recent changes to report and the impact from the Covid-19 pandemic that NERL, along with the wider aviation industry, has experienced and which has included the pausing of our major transformation programmes pending customer consultation and agreement on a re-plan. That paper was submitted to the CAA in March 2021.

In parallel with the activities set out in this response, and with a specific focus on our response to Recommendation 1, NERL has developed a separate Staffing Resilience Plan that outlines our current processes and capabilities, and how they address potential staffing issues with proactive and reactive arrangements depending on the timescales. Since this set of processes equally apply

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[7] London Luton Airport, London Stansted Airport, Ryanair

across the entire NERL operation, the content of the plan is not tailored specifically to the London Approach Service, although it provides updated supply versus demand, and in the format requested.

More broadly, NERL's Service and Investment Plan can and should provide an important means by which the CAA, NERL and customers can understand the interlinkages between the periodic price control settlement and NERL's day-to-day operational resilience. NERL is committed to communicating better how the capacity made available in accordance with the SIP correlates to the economic settlement and how it affects short-term and long-term operational resilience.

The improvement activities set out in this response are not applicable solely to the TC Essex sector – the intent is to develop solutions that are equally valid and applicable to other airspace where demand may exceed capacity without mitigating actions being undertaken. Flexible and agile rostering and improvements to the efficiency of the training programmes will deliver benefits across the entire TC operation and set out possibilities for further extension into the rest of the En Route operation.

The aspects of the NERL Resilience Plan that address staffing issues will include information on operational staffing supply and demand at the level and granularity specified in the CAA's recommendation.

7.3.   Stakeholder feedback

NERL consulted Ryanair, Stansted Airport and Luton Airport on its proposed responses to the CAA's recommendations made in CAP2100. The written responses are presented in Annex B and the main points raised are reflected below.

Response 1

Consultees provided a positive response to the increase in the number of Controller validations held within Essex airspace and recognised that plans are being developed to increase both the flexibility and agility in the deployment of the Controllers. The greater use of simulation facilities to expedite validations was seen as a positive way forward and one that NERL should continue to exploit. NERL values such feedback, further assuring that the initiatives being developed to address the immediate needs of the London Approach Service will also be applied across NERL's UK-wide operation where there is benefit.

Response 2

There was strong support for the AD6 airspace development and the outcomes expected, with an expectation that the staffing initiatives identified will enable further opportunities to be realised. NERL recognises the contribution that customers have made in support of the wider stakeholder and regulatory engagements which have helped NERL to remain on track to deliver the revised airspace configuration, subject to CAA approval.

Response 3

The commitments for more effective customer consultation were well received and it was acknowledged that these will provide a conduit for greater bi-lateral interactions with customers, focusing on their specific needs. NERL feels that the commitments made will address customers'

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requirements and remain responsive to customer feedback regarding the types, form and frequency of engagements.

Response 4

There was a consensus that NERL needed to adopt the CAA's recommendation in terms of the PRC coding principles and that the reasons provided in the response did not make a sufficiently persuasive argument. The PRC coding principles are contrary to the current operational requirements defined by Eurocontrol in the NM ATFCM Operations Manual. NERL, along with all other ANSPs, is required to follow the current ATFCM manuals. NERL would follow the PRC principles, if they were to be translated into updates to the ATFCM manuals. Eurocontrol Network Manager (NM) has confirmed that NERL's application of delay coding is correct.

Response 5

Customers were pleased to see that NERL will provide dynamic sector opening times to help improve the management of the European Network. NERL recognises that this will help the tactical management of the European network and will continue to work closely with NM to support such intents.

Response 6

Customers recognised that the performance data published are valuable to them and they expected complete and transparent reporting to assist their own operational decisions. NERL will explicitly raise the awareness of the information reported and test with customers whether the format and granularity suit their needs. In response to customer feedback during this consultation, NERL will return to quarterly reporting on Condition 11.

Response 7

Overall, customers supported the commitments made and responded positively to the development of the Staffing Resilience Plan. However, one consultee expressed dissatisfaction on the timeliness of the consultation on the Staffing Resilience Plan and expected it to be complete by the Palamon report response submission deadline. In response to this feedback, NERL will expedite the commencement of consultation on the Staffing Resilience Plan and make best endeavours to deliver a fully consulted plan as soon as possible.

The following feedback was also received from the Prospect ATCOs Trade Union:

NATS and Prospect have engaged regularly on the Palamon report response since early June. The engagement has consisted of high-level briefings and consultation on the broad NATS response to the seven recommendations and regular discussions have taken place on the progress made. More detailed work has been undertaken on Recommendation 1 output. In a series of workshops, solutions have been jointly identified, and these are in the process of being examined in more detail, with those found viable to be progressed. We will continue to work together in addressing the requirements of Recommendation 7 in due course.

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Annex A   Communication from Eurocontrol Network Manager

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NETWORK MANAGEMENT DIRECTORATE
Rue de la Fusée 96, 1130 Brussels, Belgium
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EUROCONTROL

Date	12 May 2021	Mr Steve Fox
Ref.:	NMD/NOM-2021-001	Head of Service Performance, NATS
Subject:	NATS	4000 Parkway
Contact:	S. Moore	Whiteley
Direct Line:	+32 2 7291125 / +32 492 135 454	Fareham
		PO15 7FL
		United Kingdom

Dear Steve,

Following our conversation and the two questions that you have posed, the NM has analysed your requests and confirms the following:

With regard to the delay coding NATS has consistently and transparently followed the requirements within the ATFCM Operations Manual; such requirements have precedence operationally and we consider NATS' continuation of the current application of the coding in line with the best operational practice. Delays in the Network from NATS are infrequent, identified largely in advance, operationally mitigated wherever possible, and post operatively investigated with reviews and lessons learned shared with NM. This should continue.

With regard to the amount and timeliness of Sector Opening information provided by NATS to NM, the information is indeed meeting the expectations and requirements of NM and is currently operationally sufficient. The adaptations made to the declarations of capacity and the submissions of such align with the requirement prior to any B2B connectivity.   B2B connectivity will make the process easier and scalable, but with the advent of wholesale system software changes within the Network with the iNM Programme (Integrated Network Manager) over the coming 9 years, any development by NATS in this area would be sensible to be planned in close conjunction with NM to ensure alignment with the system changes and thus allow for the most cost effective, timely and efficient connectivity. NM remains ready to support NATS (as with any ANSP) in this as the iNM programme advances.

Yours sincerely,

Steven Moore
Head of ATM Network Operations Division

CC:

Robert Pearson, Head of NATS ACM.
Razvan Bucuroiu, Head of AC Division, NM. Kenneth Thomas, Head of Office, Director NM

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NETWORK MANAGER

Annex B   Written Responses from Stakeholder Consultation

Response Received from Ryanair, 13th July 2021

Ryanair wrote to NATS following a meeting on the 2nd July '21 where the actions NATS is taking in response to the Palamon recommendatons were discussed.

Ryanair have not given permission for their letter to be published, however their feedback is summarised as part of Section 7.3 of this report.

Response Received From Stansted Airport (Manchester Airport Group – MAG)

Recommendation	MAG Comments
Recommendation 1 - *Improve staffing resilience available to London Approach airports and in Essex airspace in particular, including by making staffing arrangements more efficient and agile*	We are a encouraged to hear that the ATCO resource plan is improving by 20% following the investigation. We understand the majority of this is through increased dual validations, something we have requested numerous times. We have requested greater transparency through our MAG / NERL engagement sessions going forward. We would request this approach is continued as we see the recovery continue.
Recommendation 2 - *Increase the capacity available in Essex airspace, including timely progress with the AD6 change*	The ACP (AD06) has been a solution long anticipated from the previous peak in ATM's over 10 years ago and Stansted is again encouraged this solution has been developed for implementation in early 2022. We would expect to see a significant improvement in reduced delay, as suggested at the time, as a result.
Recommendation 3 - *Engage more pro-actively and transparently with its customers and key stakeholders. NERL and the other parties should take steps to improve the quality of their dialogue*	This again, is a positive step forward in ensuring full awareness on both sides of each other's priorities and will allow opportunity to develop agreed action plans to meet those objectives, or at least understand how we may have to change plans to minimise disruption. More generally MAG and NERL have established a 6-monthly meeting with senior level representation on both sides. This will provide a forum for constructive engagement and longer term planning.
Recommendation 4 - *Adopt PRC coding principles unless material operational reason not to do so*	Whilst we acknowledge the challenge with Euro Control governance we would expect NERL to deliver the recommendation as suggested, with the support of the CAA, if required.
Recommendation 5 - Provide dynamic Sector Opening Times to Network Manager as soon as practically possible	This appears eminently sensible and on the face of it allows NERL to be more dynamic with their resource planning. We would request that Essex Radar is safeguarded at all times.
Recommendation 6 - Continue to make performance data available to airlines, airports, CAA	We acknowledge the continued reporting schedule is appropriate and expect to glean greater understand of STN performance linked to recommendation 3.
Recommendation 7 - Progress report every 6 months on implementing Palamon recommendations. Updated staffing resilience plan, showing how staffing maps onto range of demand scenarios, and how NERL will avoid delay problems occurring in other sectors	Linked to recommendation 1 we are again encouraged to see a more transparent resource plan and would expect to understand how this impact the Essex radar sector going forward. One concern that remains is the ability to maintain resource levels given the challenge with TU agreements for additional shifts. We would expect to understand the granular plan through Recommendation 3.

NATS Public

Response Received From London Luton Airport (via email)

Dear Stu,

Thank you for sharing the recommendations and the work NATS is doing as part of this investigation, as we recognise Luton is clearly impacted by the findings and the improvements which can come from this. Below we have provided some comments based on the information which was shared.

Staffing resilience

It is positive that NERL have increased the staffing and training for controllers on the Luton and Essex airspace, we welcome this change and hope it does have a positive impact in this area of airspace. Should AD6 be approved and implemented we would hope that staffing for the new airspace is still sufficient and do not see a reduction of trained staff if AD6 is implemented.

 Regulatory change

Through the COVID pandemic we have learnt more about the requirements of ATCO's with regards to their working time and the breaks required. We would welcome a review of these as they seem outdated to understand if the current staff may be able to be more efficient. Separately we also welcome the ATCO validation's which have been permitted in the simulator, and would want to see this as a permanent policy change to enable quicker validation of controllers.

 Performance data

We were unaware until this meeting that performance data was published on the customer portal. It would be useful to have a link for this, and ensure we have access. We are already in discussions with the NERL sustainability team regarding 3Di data so this may meet that need. I am unsure how many other airports are unaware of this information and perhaps a small amount of engagement would be needed to let others know it is there too.

 A-MAN

Linked to the AD6 proposal, and should this be approved and implemented we are keen to understand how A-MAN can be implemented at Luton along with any other tools under development. We have already spoken to the NERL customer affairs team about this and understand it would need to go through the investment consultation as part of NR23. But as this is linked and would help with staffing in the area for Luton arrivals we thought it would be good to mention in our feedback too. Separately to this we are now under a new contract enabling joint work on tech at LTN and have just completed operational assessments as a first step on this road so there may be another avenue opening for tech deployments.

I hope this he]ps and any questions please do let me know.

Kind regards,

Nicole

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Luton
Airport

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