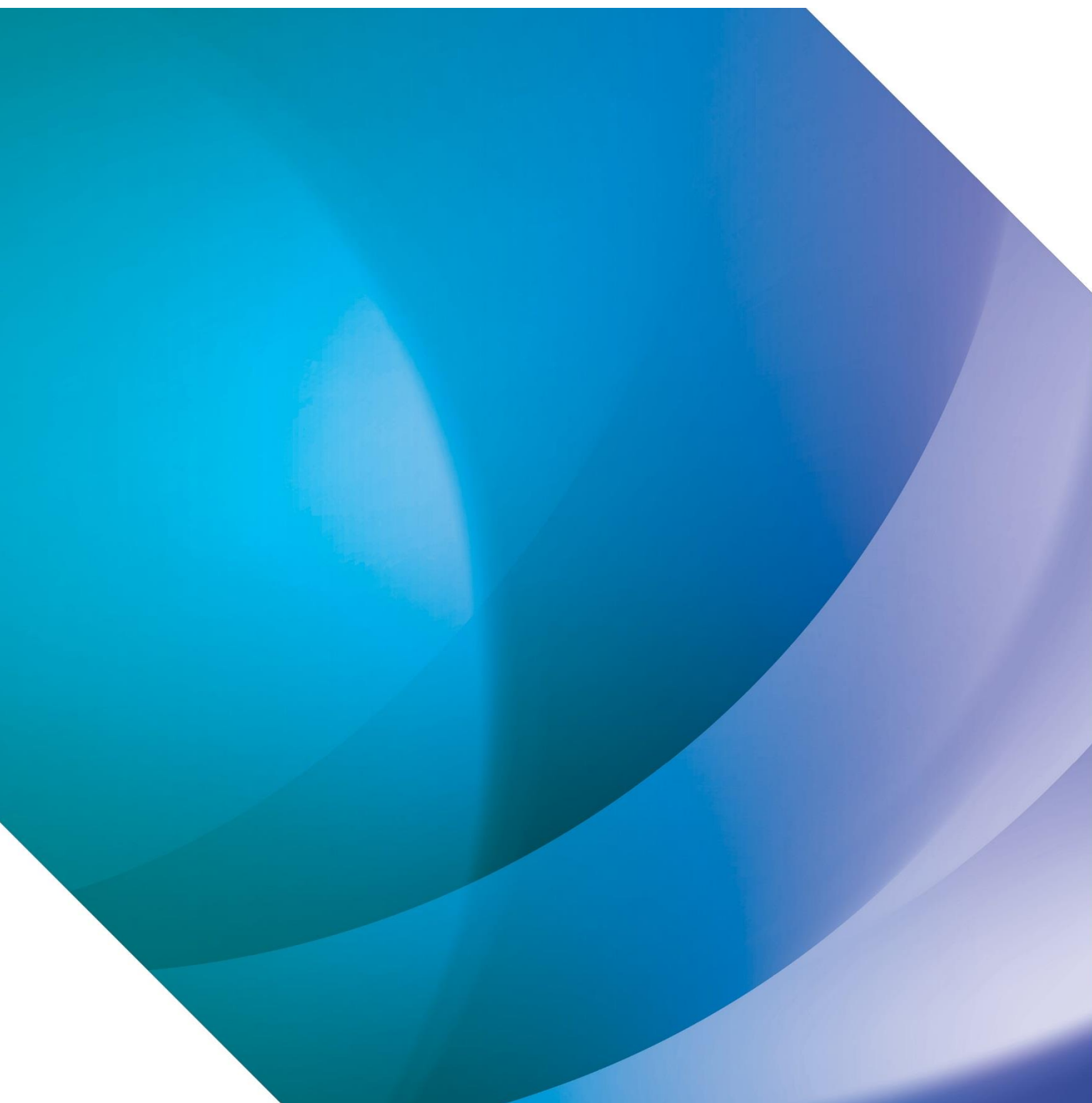


# Strategic outcomes for the economic regulation of NERL 2020-2024: Discussion document

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## About this document

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This discussion document seeks views from all interested parties on the process, strategic outcomes and the relevant issues that should shape the CAA's approach to the future economic regulation of NERL in the period from 2020 to 2024.

Following our consideration of feedback on this discussion document and engagement with stakeholders, we intend to publish a consultation paper in September that sets out our latest thinking on the best approach to the future economic regulation of NERL.

This document does not address safety issues, as NERL's pursuit of economic and service quality performance outcomes will always be in the context of maintaining safety.

## Views invited

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We welcome views on all the issues raised in this document, in addition to the discussion questions (listed in the Executive Summary). Responses are invited to our consultation no later than **31 May 2017**. While responses by online consultation are preferred, we will also accept responses sent to [economicregulation@caa.co.uk](mailto:economicregulation@caa.co.uk) no later than **5pm on 31 May 2017**. We cannot commit to take into account any representations received after this date.

We are keen to engage with anyone interested in the future regulation of NERL. If you would like to discuss the issues raised in this document outside the scope of the consultation, please contact Matt Claydon ([matt.claydon@caa.co.uk](mailto:matt.claydon@caa.co.uk)) or Bronwyn Fraser ([bronwyn.fraser@caa.co.uk](mailto:bronwyn.fraser@caa.co.uk)).

Representations will be made available on our website. There is an opportunity to mark your responses as anonymous or confidential on the consultation. Where responses are sent by email, any material considered confidential should be clearly marked as such and included in a separate annex. Please note that we have powers and duties with respect to disclosure of information under Schedule 9 of the Transport Act 2000 and the Freedom of Information Act 2000 and it may be necessary to disclose information consistent with these requirements.

## Executive summary

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NATS (En Route) Plc (NERL) provides en route (both domestic and Oceanic) and certain approach air traffic services in the UK. As a monopoly, it is subject to economic regulation under the EU's Single European Sky (SES) Performance Scheme for Air Navigation Services and the Transport Act 2000. This legislation provides for the setting of performance targets and incentives for NERL.

Such targets and incentives have been set for the current regulatory period, Reference Period 2 (RP2), which runs from 2015-2019. The European Commission's preparations for RP3 (2020-2024) of the Performance Scheme are already underway and this discussion document sets out our views on the main strategic outcomes for the economic regulation of NERL for this period.

### Our duties

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In developing the proposed strategic outcomes set out in this document, we have taken into account of our duties under the Transport Act to:

- maintain a high standard of safety in the provision of air traffic services;
- further the interests of airspace users;
- to promote the efficiency and economy of NERL;
- ensure that NERL does not find it unduly difficult to finance its activities; and
- take account of any Government guidance on environmental objectives.

These Transport Act duties (set out in more detail in Appendix A) mean that we will make proposals for the regulation of NERL's activities for the period 2020 to 2024 whatever the evolving nature of the UK's relationship with the EU.

Our duties and responsibilities (as the UK's National Supervisory Authority (NSA) under SES) have informed our initial views on the strategic outcomes we intend that NERL should achieve over RP3.

To further the interests of airspace users, NERL will need to deliver on airspace reform, particularly over the south east of England, to support the Government's plans for airport capacity expansion. This is important to our first strategic outcome for NERL – developing effective accountability mechanisms. In delivering these reforms NERL will need to develop plans that are efficient and economical and consistent with the efficient financing of its activities. This will allow for reasonable charges for airspace users and will support our second strategic outcome for NERL – that its prices are efficient. Finally, airspace users are concerned not only with delivery of change to airspace and efficient prices, but also that NERL delivers consistently high service levels across its existing and developing activities. These matters are addressed in our final strategic outcome – continuing improvement in quality of service.

## **Outcome 1 – Effective accountability mechanisms**

The CAA has consistently stressed that capacity improvement in the south east of England will benefit passengers. NERL had initially planned to address airspace redesign in RP2 through its London Airspace Management Programme phase 2 (LAMP2); however, in 2015 it was decided in light of several key challenges to delay the implementation of LAMP2 to RP3 and instead take the opportunity to accelerate the implementation of SESAR technologies and systems to replace ageing infrastructure. As airspace redesign has been delayed from RP2 to RP3 and plans for airport capacity expansion are moving ahead, it is critical that airspace change is delivered over the period 2020-2024. We expect that NERL will be responsible for the significant changes to airspace that are required across the south east of England, including LAMP2 and changes necessary to facilitate the expansion of runway capacity at Heathrow.

As a minimum it will be important:

- that NERL reflects user requirements and government priorities in the development of future capital investment programmes, including the UK's Future Airspace Strategy (FAS) and the EU's SES ATM Research (SESAR) programme;

- that those programmes are fully justified, well thought through, properly coordinated and transparent;
- that NERL keeps its customers properly informed and that these customers have suitable opportunities to make meaningful inputs into NERL's investment planning processes; and
- that NERL can be held accountable for the delivery of appropriate airspace change on time and to budget through regulatory interventions and incentives.

To the extent that broader measures need to be brought forward to ensure the appropriate leadership and coordination of airspace modernisation in the UK, we expect NERL to play a full role in developing and supporting the delivery of such measures.

## **Outcome 2 – Efficient prices**

The prices that NERL charge are a key issue for airspace users. In setting regulatory limits on the maximum prices NERL can charge airspace users, the CAA would expect to take into account no more than the efficient level of costs. This will involve:

- an assessment of the efficient level of operating and capital costs, where practicable supported by benchmarking;
- NERL supporting its proposals for capital investment programmes with transparent, robust and persuasive cost benefit analysis and strategic optioneering;
- NERL setting out clearly the interdependencies and potential tradeoffs between price levels and service quality and resilience;
- NERL demonstrating its costs are transparent and appropriately attributed and allocated between monopoly and other activities;
- within its monopoly activities, appropriate cost drivers are identified and costs attributed and allocated in a way users find helpful, including consideration of whether the cost of London Approach services should be separately identified;
- NERL's business planning taking into account a number of scenarios with regard to key economic drivers such as traffic levels; and



- ensuring that those paying for the service are able to understand NERL's cost base and its forecasts of costs, and influence the plans and service levels that drive these costs.

In considering efficient prices, we need to take into account our duty to ensure that it is not unduly difficult for NERL to finance its activities. This will require consideration of:

- how best take account of the significant deficit on NERL's defined benefits pension scheme; and
- the level of appropriate return that NERL can earn (commensurate with the risks it faces) on its Regulatory Asset Base (RAB).

### **Outcome 3 – Continued improvement in service quality**

The quality of the service provided by NERL across all its services is very important for airspace users, and we consider there is scope for more consistent delivery from NERL. The incentives to support this will be increasingly important in RP3, especially as there may be a risk that delivering airspace change means that NERL unnecessarily loses focus on service quality.

Performance incentives are limited under the current SES scheme and we would like to consider whether these can be strengthened. However, stronger incentives would only be effective if supported by good quality data on performance, and so we may also need to review the quality of NERL's performance data.

In addition to reviewing the current delay/capacity service quality targets, we have identified two further priorities in respect of continued improvement in service quality:

- resilience – ensuring NERL provides an effective and resilient service (not only in response to a specific events, but also in the face of demand/capacity imbalances) and is incentivised to act in the interests of the air traffic management network as a whole; and
- environment – how to broaden NERL's environmental focus beyond its current flight efficiency (3Di) metric to encourage it to consider the impact of noise on local communities resulting from changes to its operational procedures.

## Strategic outcomes for RP3 unrelated to NERL

Competition can drive significant benefits for consumers. Under the Performance Scheme, a Member State may be exempted from the requirement to set cost efficiency targets on terminal ANS (TANS) where it can be demonstrated that the market is subject to sufficient competition.

The UK has such an exemption for RP2. As the UK TANS market is not a monopoly activity and concerns activities in relation to NATS Services Ltd (NSL) rather than NERL, it is not addressed in this document.

## Proposed timetable

The Commission's key milestones and our proposed work plan for the development of the RP3 Performance Plan are set out below. These are indicative dates and will be refined as the programme develops.

Milestone	Proposed dates
CAA scene setting discussion document	April – 31 May 2017
CAA regulatory approach consultation document	September 2017
NERL customer consultation on its initial business plan	April – September 2018
European Commission adoption of revised regulations for RP3	June 2018
European Commission adoption of EU targets	December 2018
CAA consultation on draft RP3 performance plan	January – March 2019
DfT adoption of RP3 performance plan and submission to the European Commission	June 2019
European Commission assessment of performance plans	July – November 2019

## Key discussion questions

We welcome views on any issue raised in this document. We would particularly welcome feedback on the following key discussion questions:

1. Are the proposed three strategic outcomes the right ones to guide our future regulation of NERL in the period 2020-2024?

2. Is there additional context or background information we should consider in developing our approach to the strategic outcomes?
3. Have we captured the right issues within each of these strategic outcomes?
4. Is our timetable appropriate?

The focus of this discussion document is the strategic outcomes and our approach to the regulation of NERL for RP3, rather than views on the EU regulatory framework. However, if stakeholders feel change to the existing EU framework is necessary to support delivery of these outcomes then we would welcome representations on these matters.

## **Structure of this document**

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The structure of this document is as follows:

- **Chapter one** sets out background and context for the preparations towards the future economic regulation of NERL;
- **Chapter two** presents our initial views on the strategic outcomes for the future economic regulation of NERL; and
- **Chapter three** explains our initial proposed timetable for the development of the RP3 Performance Plan.

## Chapter 1

## Background and context

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### Background

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- 1.1 NERL is the provider of en route (both domestic and Oceanic) air traffic services in the UK. NERL is a subsidiary of NATS Limited, which in turn is a subsidiary of NATS Holdings Limited, established as a public-private partnership in 2001. NATS' shareholders are HMG (49%), Airline Group<sup>1</sup> (42%), Heathrow Airport Holdings Ltd (4%) and the NATS Employee Sharetrust Ltd (5%).
- 1.2 NERL provides en route, and some approach, air traffic services on a monopoly basis, under an economic regulation licence issued by the Secretary of State for Transport. It is also subject to the EU's Single European Sky Performance Scheme for Air Navigation Services.
- 1.3 The current regulatory period and settlement of the SES Performance Scheme, RP2, runs from 2015-2019. Preparations for RP3 (2020-2024) are already underway. The method used for setting the NERL price cap in RP2 is set out in Appendix C.
- 1.4 NERL's en route revenue for 2015 was approximately £585m – which was equivalent to approximately £2.30 of revenue per passenger in 2015.<sup>2</sup>

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<sup>1</sup> The Airline Group comprises USS (50%), British Airways (17%), easyJet (13%), Monarch (13%), Virgin (2%), Lufthansa (2%), Thomson Airways (2%) and Thomas Cook (1%).

<sup>2</sup> This figure is based on NERL's 2015 Regulatory Accounts and represents revenue from UK en route and London approach services derived from UK flights (2,302,757) and average passengers per flight based on Eurocontrol standard CBA (111); this leads to £2.29 average revenue per passenger.

## Legal and policy framework

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### Single European Sky Performance and Charging Regulations

- 1.5 The Performance Scheme is an EU initiative to improve the performance of Air Navigation Services (ANS) in four key performance areas (KPAs):
- Safety,
  - Environment,
  - Capacity, and
  - Cost efficiency.
- 1.6 The Performance Scheme sets targets on ANS providers over a fixed period. Under the Scheme, National Supervisory Authorities (NSAs) (including the CAA) must develop Performance Plans that contain local targets for each KPA that contribute to the achievement of EU-wide targets..
- 1.7 The Performance Scheme regulations (Commission Implementing Regulations (EU) No 390/2013 – the Performance Regulation; and (EU) No 391/2013 – the Charging Regulation) provide for:
- the European Commission to establish EU-wide targets for the four KPAs;
  - NSAs, working together within their Functional Airspace Blocks (FABs), to develop local performance targets and plans that demonstrate consistency with and contribution to the EU-wide targets;
  - the Performance Review Body (PRB) – as the Commission’s independent expert advisers – to support the Commission and NSAs in the development of EU-wide and local targets and then to assess the subsequent Performance Plans against the EU-wide targets; and
  - for the Commission, subject to PRB advice, to determine whether collectively FAB Plans meet the EU-wide targets, with the potential to direct States/FABs to amend Plans where they are deemed to fall short.

- 1.8 Under Article 25 of the performance regulation, by the end of each reference period the Commission is required to review the performance scheme and in particular analyse its impact, effectiveness and scope. The activity to review the framework for RP3 is now underway and we will engage with the Commission in detail on this in due course. We expect that the high level principles of the framework will remain, as specified in the SES Framework Regulation 549/2004<sup>3</sup> which sets out the framework for the creation of a single European sky and its performance scheme.
- 1.9 Nonetheless, we expect the Commission will revise the Performance and Charging Regulations for RP3. We will provide input to the Commission's process to ensure, as far as practicable, consistency between the UK's strategic priorities and the revised regulations.

## **The Transport Act 2000**

- 1.10 In the UK, the provision of en route ANS has been subject to economic regulation and fixed period price controls since privatisation of NATS in 2001. This has been given effect through a Licence under the Transport Act 2000.
- 1.11 There are many parallels between the UK's arrangements for the economic regulation of NATS' en-route business and the Performance Scheme. Nonetheless, at present, if a conflict were to arise the EU regulations take precedence.

## **Regulatory best practice**

- 1.12 Where appropriate, we take into account relevant best practice and lessons from other UK economic regulatory activities and regimes.
- 1.13 In support of our work on H7 – the next price control for Heathrow Airport – we commissioned a study looking at innovations that have appeared recently in price reviews carried out by other UK regulators. The [Final Report](#) was prepared by First Economics and provided the CAA with an

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<sup>3</sup> Article 11 of Regulation (EC) No 549/2004 of the European Parliament and of the Council of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation)

objective assessment of the transferability of innovative approaches taken by other regulators to an airport setting. We will take this and other information available into account as appropriate.

## **Key context for the development of RP3**

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### **Brexit**

- 1.14 In June 2016 the EU Referendum took place and resulted in a vote for the UK to leave the EU. Until the UK leaves the EU it remains a full member with all the rights and obligations therein and so the UK currently remains subject to the Performance Scheme. Following Brexit the Transport Act 2000 will continue to apply, and the extent to which elements of the EU regulations will apply will depend on the nature of the agreement negotiated with the EU.
- 1.15 Preparations for the next Reference Period and consideration of the priorities and strategic outcomes for the regulation of NERL from 2020 can be undertaken despite the uncertainty about the future statutory framework, which will be more relevant to determining how we implement those outcomes later in the process.

### **Airspace and SESAR**

- 1.16 The UK's FAS and the EU's SESAR programmes set out to modernise the ATM air and ground infrastructure, airspace and procedures and to provide safe and efficient operations to support delivery of sustainable growth in aviation.
- 1.17 For the UK, significant terminal airspace redesign is required in the south east to address congestion by existing demand and provide additional capacity for the future, particularly with the Government's recent decision regarding a third runway at Heathrow Airport.
- 1.18 Capital expenditure provision was included in the RP2 Performance Plan settlement for NERL, to deliver the required terminal airspace redesign, known as the London Airspace Management Programme Phase 2

(LAMP2). In 2015, it was decided that in light of several key challenges, certain elements of the plan would need to be reordered. NERL reviewed its technology programme and proposed taking the opportunity to accelerate the implementation of SESAR technologies and systems to replace its ageing infrastructure earlier, to which the aviation industry agreed. While there is consensus among ATM stakeholders on the logic of upgrading the systems infrastructure first, there remains an urgent need to deliver the airspace modernisation to deliver the necessary capacity to meet anticipated future demand.

1.19 In addition to the NERL capital expenditure, a FAS Deployment Facilitation Fund (FFF) was established in the RP2 performance plan. The FFF provision recognises the significant benefit to airspace users of large elements of the FAS programme, the high levels of dependency and uncertainty associated with deploying FAS-related projects and the potential for misalignments between the costs and benefits of small but important aspects of the FAS programme that might deter some third parties from investing where and when required (see our publication [CAP 1249 for a fuller explanation](#)). The fund is financed through the NERL component of the UK's en route unit rate.

1.20 We also note that the Transport Select Committee has recently launched an inquiry into airspace management and modernisation. The committee is seeking views on:

- the role of Government in facilitating improvements to the airspace;
- the need for modernisation, in terms of the economic and environmental sustainability benefits, and the risks for the aviation industry and wider economy from maintaining the current airspace structures;
- the essential changes that need to be made to UK airspace, particularly those associated with the development of an additional runway in the South East; and
- progress on the UK's FAS programme in achieving its core objectives of reducing congestion, improving safety and taking



advantage of new technologies to enable a more efficient airspace system.

- 1.21 We will consider carefully any recommendations made by this committee.

## **System resilience**

- 1.22 In December 2013 and December 2014 NERL suffered systems failures, some of which lead to extensive ATM delays. Following the December 2014 incident, an Independent Enquiry was established, which reported and made a number of recommendations on both NERL and the CAA - a number of which addressed systems resilience - in May 2015. Work to address those recommendations was completed in November 2016. The CAA is also proposing to make some modifications to the NERL licence to place additional resilience requirements on NERL.

## **NERL's past performance against regulatory targets**

- 1.23 NERL has been subject to economic regulation since its privatisation in 2001; and has been subject to the Performance Scheme since 2012.
- 1.24 In RP1 the focus of the Performance Scheme was on the en route ANS, with local targets at the national level only required for en route capacity and cost efficiency. A more broader approach was taken by the European Commission for RP2, with additional targets introduced at both the FAB and terminal levels for capacity, safety and environmental performance.
- 1.25 NERL's past performance under the Performance Scheme is summarised in Appendix B.
- 1.26 Overall, there has been a general improvement across most key performance areas and NERL has met most EU/FAB targets. NERL's unit costs have decreased in real terms over RP1 and the start of RP2. The UK's unit rate charged to airspace users (which is comprised of approximately 90% NERL costs, with the remainder made up by CAA, DfT and Met Office costs) was one of the highest in Europe and has gradually increased since 2011 but fell sharply in 2017, in part reflecting the devaluation of Sterling.

- 1.27 In terms of service quality, NERL consistently exceeded the capacity targets up until the end of 2015, although this was not the case last year.

## Chapter 2

## Initial views on the strategic outcomes for RP3

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2.1 The Summary to this document explains how our statutory duties and responsibilities support the strategic outcomes discussed in this Chapter. These outcomes are also supported by important background and context (as set out both in this Chapter and Chapter 1) including:

- the need for significant airspace modernisation to address future increases in air traffic especially in the south east of England;
- the public's increasing interest in how the aviation community mitigates its noise impacts, particularly as a result of the implementation of Performance Based Navigation (PBN);
- operational resilience considerations - in light of the system failure of 12 December 2014, significant work has been undertaken regarding NERL's service quality and resilience; and
- lessons learnt from developing the RP2 performance plan and its implementation to date.

### **Outcome 1 – Effective accountability mechanisms**

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2.2 Air traffic management and airspace is currently undergoing significant modernisation in both the UK and the rest of Europe. There are a wide range of issues associated with delivering the strategic changes to airspace across the south east of England that are necessary to support safety, efficiency, future traffic growth and airport capacity expansion. NERL has an important role to play in airspace reform, the successful delivery of which will further the interests of airspace users.

2.3 NERL had initially planned to address airspace redesign in RP2 through LAMP2; however, in 2015 it was decided that in light of several key challenges, certain elements of the plan would need to be reordered. NERL reviewed its technology programme and proposed taking the

opportunity to accelerate the implementation of SESAR technologies and systems to replace its aging infrastructure earlier, to which the aviation industry agreed. However, airlines have indicated that they still consider the delivery of LAMP2 to be a high priority.

2.4 Airspace modernisation requires potentially significant investment, which is paid for through user charges and publicly funded grants such as those from the EU's Innovation & Networks Executive Agency (INEA). Given NERL's critical role in the airspace modernisation process, it is increasingly important that NERL's investment planning and delivery:

- reflects user requirements and government priorities in the development of future capital investment programmes, including the UK's FAS and the EU's SESAR programme;
- that those programmes are fully justified, well thought through, properly coordinated and transparent;
- that NERL keeps its customers properly informed and that these customers have suitable opportunities to make meaningful inputs into NERL's investment planning processes; and
- that NERL can be held accountable for the delivery of appropriate airspace change on time and to budget through regulatory interventions and incentives.

2.5 Stakeholders are expecting a greater level of regulatory scrutiny and meaningful consultation than has historically been the case. This in part reflects the challenges associated with future airspace change and also:

- that airspace users have expressed a desire for greater involvement in investment decisions by NERL in the early stages of development of its RP3 business plan;
- there were significant changes to NERL's investment programme both in terms of scope and cost during the current RP2 period;
- the oversight requirements necessary to ensure the delivery of SESAR and its common projects; and

- the findings of the Independent Enquiry<sup>4</sup> that the CAA should not rely only on consultation between NERL and airlines to validate the ten-year capital programme, but should develop its own capacity to form judgements.

- 2.6 It is important that NERL's customers are well informed about its plans, have the opportunity to make meaningful inputs into NERL's investment decision making and that NERL is then accountable for delivery of agreed plans. Bearing these considerations in mind, we consider that more effective mechanisms for investment programme oversight should be established for RP3. This will involve reviewing how effectively the current arrangements that govern NERL's Service and Investment Plan required under its licence operate to incentivise efficient investment.
- 2.7 We consider that ensuring effective accountability mechanisms are included in the future regulation of NERL should further the interests of airspace users and facilitate the delivery of airspace change. Examples of such mechanisms could be new reporting/consultation requirements, financial incentives and new licence obligations.
- 2.8 It is clear the implementation of LAMP2 and airspace change needed for a third runway will pose challenges to the current broader regulatory architecture for UK airspace. That architecture will need to be capable of addressing controversial noise impacts, delivering decisions on prioritising access to airspace and producing and implementing a masterplan for future airspace design based on robust analysis (or master plan) for how the industry's long term growth aspirations can be accommodated. At present, there is no comprehensive mechanism in the airspace architecture to give one industrial party the obligation to develop this master plan and the accountability for delivering it.
- 2.9 Given the nature of the decisions and implementation required, further work is required by Government, CAA and wider stakeholder groups to address these architecture issues.

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<sup>4</sup> NATS System Failure 12 December 2014 – Final Report Independent Enquiry dated 13 May 2015, paragraph 5.12.3

- 2.10 To the extent that broader measures need to be brought forward to ensure the appropriate leadership and coordination of airspace modernisation in the UK, we expect NERL to play a full role in developing and supporting the delivery of such measures

## **Outcome 2 – Efficient prices**

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- 2.11 In delivering the above airspace reforms, NERL will need to develop plans that are efficient, economical and consistent with the efficient financing of its activities. Although recent changes in the exchange rate mean that UK en route charges now compare better with European comparators, it is important that we retain a focus on value for money and that further investment delivers substantial real benefits for consumers and airlines.
- 2.12 Under the Performance Scheme, the cost of provision of ANS is met through charges to airspace users. These users, and ultimately consumers, want efficient and reasonable prices for aviation services.
- 2.13 We set prices at the start of RP2 to reflect efficient costs and to fund investment. An explanation of the method we used to set the RP2 price cap is set out in Appendix C.
- 2.14 NERL's prices have fallen in unit terms over time, as set out in Appendix B. However, despite these targets and the current downward trend in real unit rates NERL is expected to remain among the most expensive ANSPs in Europe at the end of RP2. A historical comparator of the UK's unit rate against other European counterparts is also included at Appendix B.

### **Approach to considering efficient prices**

- 2.15 There are a number of approaches to evaluating NERL's efficiency, This could involve:
- an assessment of the efficient level of operating and capital costs, where practicable supported by benchmarking;

- NERL supporting its proposals for capital investment programmes with transparent, robust and persuasive cost benefit analyses and strategic optioneering;
- NERL demonstrating its costs are transparent and appropriately attributed and allocated between monopoly and other activities;
- within its monopoly activities, identification of appropriate cost drivers and attribution and allocation of costs in a way users find helpful, including consideration of whether the cost of London Approach service should be separately identified; and
- ensuring that those paying for the service are able to understand NERL's cost base and its forecasts of costs, and influence the plans and service levels that drive these costs.

2.16 Bearing the above in mind, ahead of RP3 NERL will need to:

- demonstrate its plans are consistent with a reasonable level of ongoing efficiencies, including by benchmarking;
- develop a capital programme that is supported by clear and compelling cost benefit analyses and strategic optioneering;
- develop meaningful options for airspace users to consider that explore the balance between price and service/resilience trade-offs;
- take into account a number of scenarios with regard to key economic drivers such as traffic levels; and
- develop plans that will deliver value for airspace users and ultimately consumers in relation to airspace reform and environmental improvements.

2.17 NERL, airspace users and the CAA will need to consider the balance between the pressure for immediate cost reductions – which will bring short term benefits to current users – and airspace modernisation programmes – which may require significant investment now but should deliver significant benefits (including unit cost reductions) in the longer term.

- 2.18 As noted above, NERL has made significant investments in its technology programme in RP2. We would expect detailed justification for an increase in the cost base in RP3 due to further technology investment.
- 2.19 Given the importance attached to NERL being held to account for the timely and successful delivery of some critical change programmes, there may be merit in the CAA considering whether its current approach to assessing capital efficiency is appropriate. The CAA's approach to date has seen it undertake an efficiency assessment at the end of the price control period before determining the level of the RAB to apply in the next price control period. It also takes into account information from NERL's annual Service and Investment Plans.

### **Transparency between en route and London Approach**

- 2.20 In considering whether costs are transparent and attributed and allocated appropriately between different types of service, we also wish to seek stakeholder views on the London Approach service – the centralised terminal approach service that NERL provides for traffic using the five main airports in the London area from the area control centre at Swanwick. This service has characteristics of both an en route and terminal service. Following consultation in October 2013 on the most appropriate regulatory treatment of charges for the London Approach service, the CAA concluded that it would take the following position over RP2:
- continue separate charges to users for London Approach;
  - recognise that the London Approach service combines elements of both terminal and en route services;
  - require a separate charging zone and charging formula to be defined for the separate terminal London Approach charge; and
  - continue with the current allocation of costs.
- 2.21 It will be important to consider how best to develop these arrangements over the RP3 period.



## Financeability

- 2.22 Capital expenditure is generally not recovered from customers in the year that it is incurred but added to the Regulatory Asset Base (RAB) and recovered by regulatory depreciation and returns over the economic life of the assets. NERL needs to retain access to capital markets to continue to finance capital expenditure and so its pricing arrangements need to support financeability.
- 2.23 Our initial views are that the main financeability issues for RP3 will be around to how best to take account of the significant deficit on NERL's defined benefits pension scheme and the level of appropriate return (or cost of capital) that NERL can earn on its RAB.

### Pension obligation costs

- 2.24 NERL operates two pension schemes: a defined benefit (DB) scheme that was closed to new members in 2009 and a defined contribution (DC) scheme for new members since 2009. The DB scheme presents significant financeability risks for NERL in terms of the size of the deficit against the value of the RAB.
- 2.25 The DB funding situation has deteriorated significantly over the last three triennial valuations. The last valuation, in December 2015, shows the DB scheme has a £459m deficit (on obligations valued at about £5.0bn), compared to a RAB of approximately £1.1bn representing a deficit/RAB ratio of about 42%. Given movements in financial markets since the last valuation, it is possible that the deficit may have increased further. Currently, NERL has a deficit repair plan agreed with Trustees to clear the deficit identified at the last valuation by December 2026.
- 2.26 Given the significance of these issues we will be seeking advice on whether these pension costs are consistent with efficient levels and best practice in terms of economic regulation in dealing with pension costs and deficits.

- 2.27 While many private sector companies have closed their DB schemes to both new and existing members, a number of enhanced legal protections were established when NATS was privatised. Such protections constrain the scope for management discretion for fundamental changes to address the risks posed by the NERL section of the NATS DB scheme..
- 2.28 The SES Charging Regulation provides for some cost pass-through in respect of additional pension costs due to unforeseen changes in national pensions law, pension accounting law, or costs resulting from unforeseen financial market conditions. These mitigate some cost risks faced by NERL in respect of the DB pension.
- 2.29 We adopted a pass-through approach to certain pensions costs in RP2 as a means of reducing the cost of pensions to airspace users over time. For example, this supports the Trustees confidence in recovering the deficit over a longer period of time than might otherwise be the case and avoiding factoring in a higher risk premia. A shorter period and/or higher risk premia would lead to higher contributions from NERL and hence greater pressure on its charges to airspace users.
- 2.30 The existing pass-through arrangements are symmetrical and DB valuations represent a snap shot in time. In seeking to reduce the burden on airspace users in servicing the current DB deficit, it is necessary to consider that pension investment performance may improve over time and we would wish to ensure airspace users therefore benefited from any associated 'upside' having borne the 'downside'.
- 2.31 It is very important to note that the pension pass-through arrangements are only appropriate where NERL can demonstrate that it has done all it can do to mitigate the future burden on airspace users arising from its pension obligations. We therefore apply a 'good stewardship' test. This assumes NERL, working with the Trustees, behaves in a manner consistent with a commercially minded company by taking all steps available to it within its legal discretion to manage and mitigate the drivers of the burden on airspace users arising from its pension obligations, having regard to actions taken by employers and Trustees of other

schemes in the UK that do not benefit from such pass-through arrangements.

### **The appropriate cost of capital and the Regulatory Asset Base**

- 2.32 As a regulated company NERL should be able to earn a return on its investment commensurate with the risk it takes and the efficiency of its operations. The return or weighted average cost of capital (WACC) is important in determining its financeability.
- 2.33 Setting the WACC involves considering the appropriate cost of debt, the cost of equity, and the level of gearing. In doing so we expect to consider market factors such as expectations around debt costs and equity market returns, as well as NERL specific factors such as the appropriate risks that should be borne by its equity shareholders. We expect to look at relevant benchmarks and comparators as well as whether there are any specific regulatory or institutional factors that set NERL apart in terms of its financing costs and risks. For example, in evaluating future equity risk proper consideration must be given to the benefit NERL derives from the regulatory arrangements to deal with its pension deficit obligations. We also expect to take into account best practice and developments in wider UK economic regulation in considering the appropriate approach to setting the WACC for NERL.
- 2.34 NERL's RAB reduces significantly after 2020 once the extended life of assets at privatisation have been fully depreciated. This may impact on NERL's cash flow from the reduced depreciation passing through to its charges. We will consider the implications of this during the RP3 review.

## **Outcome 3 – Continued improvement in service quality**

- 2.35 Airspace users have a legitimate expectation that NERL will continue to improve its service quality over time, taking into account a broad and strategic approach as to what constitutes service quality beyond simply meeting narrow regulatory targets. We consider there is scope for more consistent service delivery from NERL.

## **NERL delay/capacity performance**

- 2.36 Our engagement with airspace users demonstrates that they continue to have limited tolerance for delays deriving from NERL's performance, particularly in relation to the London Approach service.
- 2.37 NERL attributable delay increased from 0.08 mins/flight in 2015 (against the UK target of 0.22 mins/flight) to 0.29 mins/flight in 2016 (against the UK target of 0.23 mins/flight). This is currently being examined by the CAA.
- 2.38 Continued focus on NERL's delay/capacity performance for all its licensed services is a key airspace user expectation for the RP3 regime (and in any event is one of the Key Performance Areas under the Performance Scheme). With the need for delivery of significant airspace redesign in the south east of England in RP3 it is particularly important to consider how best to measure NERL capacity/delay performance in London terminal airspace and – to the extent that it differs – the London Approach service.

## **NERL's environmental responsibilities**

- 2.39 The Performance Scheme currently only addresses environmental issues in respect of flight efficiency (as a proxy for carbon emissions). ANSPs are incentivised to provide as direct as possible flight to minimise carbon emissions, but they are not incentivised to take account of other environmental impacts. This prioritisation may suit en route operations, but as flights move to terminal approach operations, this raises a question about NERL's approach to considering the impact of noise on local communities. Noise is an externality created by aviation, and it is in the interests of ANSPs, airlines, airports and passengers that it is appropriately managed so that capacity can be optimised without communities being unduly affected.
- 2.40 While local noise issues are generally addressed by the airports concerned, this is not necessarily the case for the centralised London Approach service, for which NERL:

- is able to change its operating procedures in a way that has a noise impact on communities, without a formal requirement to publicly consult or engage<sup>5</sup>;
- is not measured or held to account for whether and how it considers noise when it changes those procedures; and
- is not incentivised to reduce, where practicable, the impact of noise on communities.

2.41 There are increasing expectations from the public that the aviation sector should take the impact of noise seriously, in particular due to the high population density in the south east of England. This suggests NERL's incentives relating to environmental matters should be broadened to include local noise as well as carbon emissions where there is the potential for NERL's actions to impact on overflowed communities. By addressing both noise and carbon emissions together we could promote the overall efficiency of NERL's activities (i.e. by incentivising both the costs of its activities and the relevant externalities). This could further the interests of airlines, passengers and airports by increasing public acceptance of airport capacity expansion and airspace reform.

2.42 We are currently open minded as to the form which NERL's approach to noise should take. A specific metric was developed for RP2 to capture flight efficiency but such a quantitative approach may not necessarily be the best approach for noise in RP3.

## **Resilience**

2.43 Resilience concerns the minimisation and mitigation of disruptive events, including the service provided during, and recovery from, those disruptive events, as well as the prioritisation of traffic in times of high/excess demand versus available capacity. It also includes the use of resilient systems, in terms of both technological redundancy and in the face of threats from cyber security risks.

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<sup>5</sup> The DfT is currently consulting on its Airspace Policy and policy framework in respect of airspace change decisions. The consultation includes proposals that may change NERL responsibilities in this regard.

- 2.44 Following the Independent Enquiry into the December 2014 NERL system failure, CAA worked with NERL to develop definitions for contingency, resilience and business continuity, and devised a method for setting the requirements for continuity and resilience based on existing NERL risk management processes and current performance. This provides a framework for monitoring and scrutiny. We have also developed a licence condition for NERL to submit a resilience plan to the CAA, against which it can be held to account more effectively. We are currently seeking stakeholder comments on this work through a public consultation until 21 April 2017.<sup>6</sup>
- 2.45 There is a possibility to use this work to build performance targets and standards around resilience for NERL. We also consider this is an opportunity to encourage NERL to act more explicitly in the interests of the network, airlines and airports (and, ultimately the end consumer) by working more closely together – for example, by encouraging improved sharing of planning information between airlines and NERL.

### **Incentives around service quality**

- 2.46 The current SES Performance framework provides for financial incentives on capacity (delay) and environmental (flight efficiency) performance.
- 2.47 Performance incentives are limited under the current scheme – for example, bonuses and penalties may only be up to a maximum value of 1% of NERL's total annual revenue<sup>7</sup> and must be symmetrical. Prior to the Performance Scheme we used larger, and asymmetrical, bonus and penalty measures to incentivise NERL's performance.
- 2.48 The Commission has recently commenced work towards the review of the Performance and Charging Regulations ahead of RP3. This provides the opportunity to consider the strength and effectiveness of the current incentives scheme for driving ANSP behaviour and we will be engaging with the Commission in their review.

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<sup>6</sup> <https://consultations.caa.co.uk/cmng/nats-independent-enquiry-recommendations/>

<sup>7</sup> Article 15, Charging Regulation.

- 2.49 Stronger incentives would only be effective if supported by good quality data, and as such we will also need to review the quality of NERL's performance data.
- 2.50 It may also be appropriate to consider whether the present balance of incentives may drive NERL to focus on short term service quality at the expense of actions with longer term benefits. For instance, there is a question as to whether the SESAR arrangements provide sufficient incentives for NERL to innovate and whether NERL should be incentivised to review the future role of ATCOs and the need for greater automation in the long term.

## Chapter 3

## Proposed timetable for development of RP3 performance plan

### EU regulatory timetable

- 3.1 The European Commission has set out an indicative timetable of its planned work programme in the lead up to RP3.

Milestone	Proposed dates
European Commission adoption of revised regulations for RP3	June 2018
European Commission decision on targets	June – December 2018
European Commission assessment of performance plans	July – November 2019

### Proposed CAA timetable

- 3.2 Our proposed activities and key milestones for the development of the RP3 Performance Plan are set out below. We note these are currently indicative dates and will be refined subject to stakeholders' views and as the programme develops. We note that this timeline will necessarily remain under review in light of the Commission's review of framework for RP3, the need to establish FAB Performance Plans – the current RP2 Performance Plan was adopted jointly with Ireland – and the UK's future relationship with the EU. subject to stakeholders views and as the programme develops.

Milestone	Proposed dates
CAA scene setting discussion document	April – 31 May 2017
CAA regulatory approach consultation document	September 2017
Launch CAA consultancy studies	Winter 2017/18
NERL initial business plan published	March 2018
NERL customer consultation	April – September 2018



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<b>Milestone</b>	<b>Proposed dates</b>
NERL revised business plan published	October 2018
CAA consultation on draft PR3 performance plan	January – March 2019
CAA submission of proposed RP3 performance plan to DfT	May 2019
DfT adoption of RP3 performance plan and submission to the European Commission	June 2019

## Appendix A

## Our duties

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The Transport Act 2000 gives the CAA a primary duty to exercise its functions so as to maintain a high standard of safety in the provision of air traffic services.

In exercising its functions the CAA must do so in a manner it thinks best calculated:

- To further the interests of operators and owners of aircraft, owners and managers of aerodromes, persons travelling in aircraft and persons with rights in property carried in them;
- To promote efficiency and economy on the part of licence holders;
- To secure that licence holders will not find it unduly difficult to finance activities authorised by their licences;
- To take account of any international obligations of the United Kingdom notified to the CAA by the Secretary of State (whatever the time of purpose of the notification);
- To take account of any guidance on environmental objectives given to the CAA by the Secretary of State after the coming into force of this section.

Commission Implementing Regulation (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation services and network functions gives the CAA, as national supervisory authority (NSA) for the UK, responsibility for:

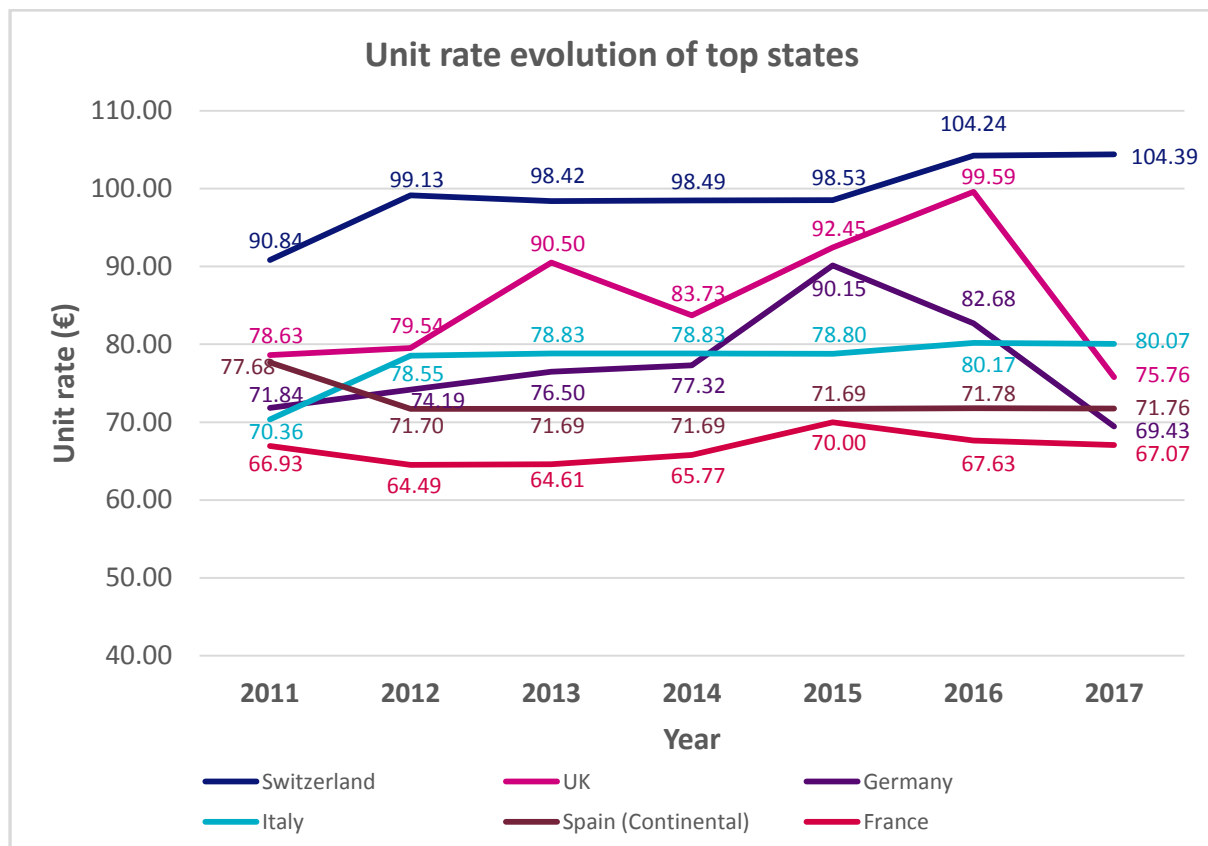
- Drawing up of the performance plans;
- Performance oversight and the monitoring of performance plans and targets.

Appendix B

# NERL past performance

## UK unit rate evolution against EU peers (nominal)

The UK's unit rate (which is comprised of approximately 90% NERL costs, with the remainder comprised of CAA, DfT and Met Office costs) has remained one of the highest in Europe over RP1 and the start of RP2. However, there is a current downward trend, partly because of recent changes in the exchange rate.

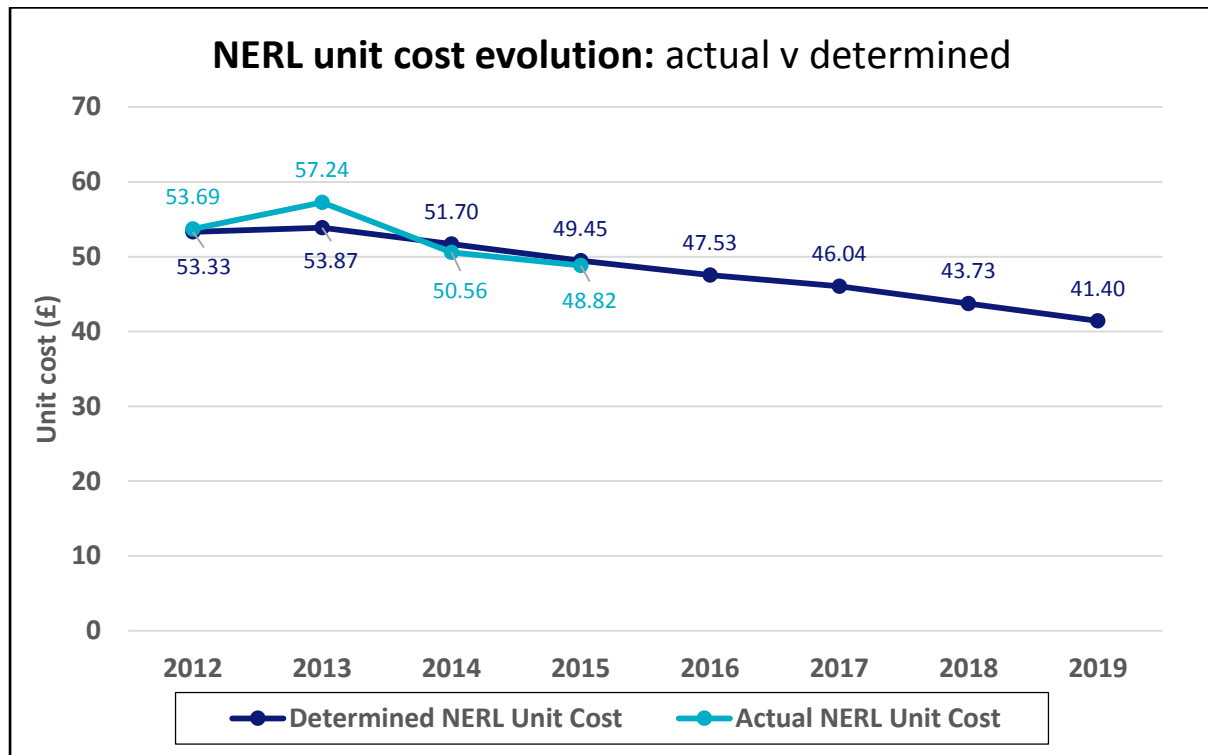


Source: CRCO Operations Reports (2011-2015) and Decisions 138 and 145 of the Eurocontrol Enlarged Committee (2016-2017)

## NERL unit cost efficiency (in 2009 prices)

NERL's unit costs have generally decreased over time, except for 2013 when out-turn traffic was below that forecast for 2013 and NERL was not able to reduce its

costs to offset this impact. Since then NERL’s actual unit costs have been below determined unit costs (in real terms). NERL anticipates that its unit costs will continue to fall over the remainder of the RP2 period.



Source: UK en route reporting tables, November 2016, accessible at <https://etna.crco.eurocontrol.int>

## NERL’s service quality metrics

### Capacity key performance area

NERL has generally outperformed the capacity target (measured by minutes of delay per flight). However, in 2016 NERL achieved delay of 0.29mins/flight, which exceeded the UK’s delay target of 0.23mins/flight.

	RP1			RP2				
	2012	2013	2014	2015	2016	2017	2018	2019
<b>EU target (mins/flight)</b>	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
<b>UK target</b>	0.31	0.26	0.26	0.23	0.23	0.23	0.23	0.23
<b>Actual (RP1 at UK level only)</b>	0.07	0.13	0.06	0.08	0.29			

Source: PRB Annual Monitoring Report 2015: Volume 2 – Local Overviews

## Environment key performance area

The RP2 Performance Plan includes a metric (3Di) based on flight path efficiency that acts as a proxy indicator for fuel inefficiencies in flight paths flown within UK airspace and is used to incentivise NERL to deliver optimal flight paths, in order to reduce customers' fuel burn. The metric is based on a linear regression model incorporating flight path inefficiencies in the vertical plane as well as horizontal (a explanation of the metric and how it works can be found in the UK-Ireland FAB RP2 Performance Plan – [Supporting Document](#)).

NERL has exceeded the 3Di target for the past three years. However, these scores were all within the prescribed deadband and as such no penalty or bonus was applied. We note that the 3Di model was re-estimated at the start of RP2 to incorporate available improvements to flight path efficiency measurements and reflect further improvements in data and input processes.

	RP1			RP2				
	2012	2013	2014	2015	2016	2017	2018	2019
<b>FAB target in PP</b>	24.0	24.0	23.0	29.7	29.3	28.9	28.1	27.7
<b>Actual</b>	23.9	23.7	23.2	30.1	30.3			

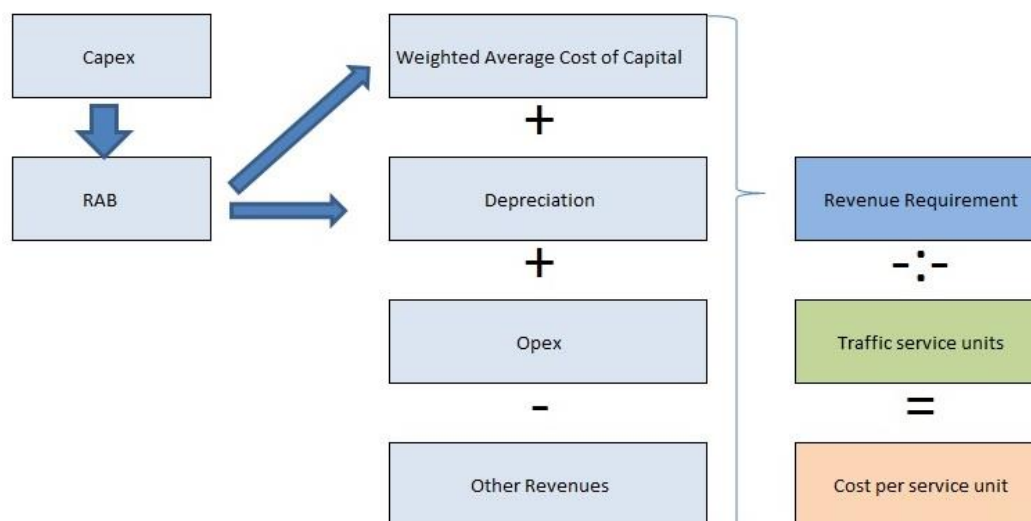
Source: <http://www.nats.aero/environment/3di/>

## Appendix C

## Setting of the NERL price control

At RP2 NERL's charges were calculated on the basis of a 'building block' method, as illustrated below. This is a standard way of setting price limits in UK economic regulation and is well understood, and valued, by investors as it helps underpin their long term confidence in the regime.

Under this approach capital expenditure is not allowed in the year that it is incurred but is added to the RAB and financed by allowances for regulatory depreciation and returns, reflecting the relatively long life of capital assets and the potential for year by year volatility in capital spending. These two building blocks (regulatory depreciation and returns) are then added to an allowance for operating expenditure to make up the company's revenue requirement. Any non-regulated or other revenue is then taken into account in assessing the appropriate level of regulated revenue as illustrated below.



This building block approach is not formally provided for under Charging Regulation but operates in parallel to meeting the requirements under Charging Regulation.