Performance Plan

United Kingdom

Third Reference Period (2020-2024)

Status:

Date of issue:

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** Only as per Article 15(6) of the Regulation*

Signatories

Performance plan details	
State name	United Kingdom
Status of the Performance Plan	Select performance plan status
Date of issue	
Date of adoption of Draft Performance Plan	
Date of adoption of Final Performance Plan	

We hereby confirm that the present performance plan is consistent with the scope of Regulation (EU) No 2019/317 pursuant to Article 1 of Regulation (EU) No 2019/317 and Article 7 of Regulation (EC) No 549/2004.

Name, title and signature of representative	

Additional comments	The UK performance plan is consistent with and reflects decisions made on the economic regulation of NERL for the period 2020-2024. A separate CAA Decisions Document - CAP 1830 (www.caa.co.uk/cap1830) has been published along side this performance plan template.

Document change record		
Version	Date	Reason for change

SECTION 1: INTRODUCTION

Annexes of relevance to this section

ANNEX C. CONSULTATION

ANNEX D. LOCAL TRAFFIC FORECASTS

ANNEX L. JUSTIFICATION FOR SIMPLIFIED CHARGING SCHEME

1 - INTRODUCTION

1.1 - The situation

NSA(s) responsible for drawing up the Performance Plan	UK Civil Aviation Authority

1.1.1 - List of ANSPs and geographical coverage and services

Number of ANSPs	1

ANSP name	Services	Geographical scope
NATS (Continental)	En route services in the Scottish and London Flight Information and Upper Information Regions (FIR/UIR) provided by NATS (en route) Ltd (NERL)	United Kingdom - 880,000km² (does not include Shanwick Oceanic airspace)

Cross-border arrangements for the provision of ANS services

Number CB arrangements where ANSPs provide services in an other State	1

See the UK Aeronautical Information Publication (AIP), Part 2 En Route section 2.2, for details of cross border arrangements for the provision of ANS https://www.aurora.nats.co.uk/htmlAIP/Publications/2019-08-15-AIRAC/html/index-en-GB.html

ANSPs providing services in the FIR of another State	
ANSP Name	Description and scope of the cross-border arrangement
NERL	NERL provides ATS to aircraft in the following areas, which are defined in UK Aeronautical Information Publication (AIP), Part 2 En Route section 2.2: Northern North Sea FL 85 and below x 2 Amsterdam FIR - IBNOS Areas x 3 Amsterdam FIR - SASKI Areas x 2 Shannon FIR/UIR x 4 Paris FIR – La Manche Low x 3 Reims UIR – La Manche High Area x 2

Number CB arrangements where ANSPs from another State provide services in the State	7

See the UK Aeronautical Information Publication (AIP), Part 2 En Route section 2.2, for details of cross border arrangements for the provision of ANS https://www.aurora.nats.co.uk/htmlAIP/Publications/2019-08-15-AIRAC/html/index-en-GB.html

ANSPs established in another Member State providing services in one or more of the State's FIRs	
ANSP Name	Description and scope of the cross-border arrangement
Norway	Norway provides ATS to aircraft in the following areas: Northern North Sea at FL 85 and below x 3
Denmark	Denmark provides ATS to aircraft in the following areas: Northern North Sea at FL 85 and below x 1 North Sea High Area between FL 195 and FL 660 (inclusive) x 1
The Netherlands	The Netherlands provides ATS to aircraft in the following areas: Southern North Sea at FL 55 and Below x 1 Southern North Sea between FL 175 and FL 245 (inclusive) x 1
France	France provides ATS to aircraft in the following areas: Southwestern Corner of the London UIR between FL 245 and FL 660 (inclusive) x 1 South-eastern Section of the English Channel x 1
Ireland	Ireland provides ATS to aircraft in the following areas: Southwestern Corner of the London UIR between FL 245 and FL 660 (inclusive) x 1 Within the Irish Sea x 2 Within the North Atlantic x 1
Iceland	Iceland provides ATS to aircraft in the following areas: Within the North Atlantic x 2

States of Jersey	States of Jersey provides ATS to aircraft in the following areas: The Channel Islands x 3

1.1.2 - Other entities in the scope of the Performance and Charging Regulation as per Article 1(2) last para.

Number of other entities	3

Entity name	Domain of activity	Rationale for inclusion in the Performance Plan
UK Civil Aviation Authority	UK NSA	NSA costs incurred in respect of airspace/ANS policy, regulation and oversight
Department for Transport	UK Member State	UK contribution to Eurocontrol costs/budget (Member of Eurocontrol Standing Committee on Finance)
Met Office	Aviation met services	Costs incurred in the provision of aviation Met services for ANS

1.1.3 - Charging zones (see also 1.4-List of Airports)

En-route	Number of en-route charging zones	1

En-route charging zone 1	United Kingdom

Terminal	Number of terminal charging zones	2

Terminal charging zone 1	UK - Zone B
Terminal charging zone 2	UK - Zone C

1.1.4 - Other general information relevant to the plan

NERL - the UK monoploy ATS provider - is subject to economic regulation under domestic legislation (the Transport Act 2000), which is complimentary to the EU framework, but also incorporates regulated activities outside the scope of the EU. The CAA, as the UK independent economic regulator for ATS (and NSA under the Single European Sky), has developed and consulted on regulatory targets, incentives and associated requriements that meet both EU and domestic requirements. The CAA's conclusions are set out in the CAA Decision Document www.caa.co.uk/cap1830. Where appropriate, this is referenced throughout this template and should be read in conjunction with this performance plan template.

Additional comments

1.2 - Traffic Forecasts

1.2.1 - En route

En route Charging zone 1 | **United Kingdom**

En route traffic forecast | STATFOR Base forecast FEB 2019 (Flight Plan 2017-19, Actual Route 2020-2024)

STATFOR Base forecast FEB 2019 (Flight Plan 2017-19, Actual Route 2020-2024)	2017A	2018A	2019	2020	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	2,534	2,558	2,600	2,649	2,685	2,737	2,771	2,802	1.5%
IFR movements (yearly variation in %)		0.9%	1.7%	1.9%	1.4%	1.9%	1.3%	1.1%	
En route service units (thousands)	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615	1.9%
En route service units (yearly variation in %)		3.6%	1.8%	1.9%	1.9%	2.3%	1.7%	1.6%	

1.2.2 - Terminal

Terminal Charging zone 1 | **UK - Zone B**

Terminal traffic forecast | STATFOR Base forecast FEB 2019

STATFOR Base forecast FEB 2019	2017A	2018A	2019	2020	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	855.6	855.5	-	-	-	-	-	-	-
IFR movements (yearly variation in %)		0.0%	-	-	-	-	-	-	
Terminal service units (thousands)	1,292.6	1,304.1	-	-	-	-	-	-	-
Terminal service units (yearly variation in %)		0.9%	-	-	-	-	-	-	

Terminal Charging zone 2 | **UK - Zone C**

Terminal traffic forecast | STATFOR Base forecast FEB 2019

STATFOR Base forecast FEB 2019	2017A	2018A	2019	2020	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	583.1	589.7	-	-	-	-	-	-	-
IFR movements (yearly variation in %)		1.1%	-	-	-	-	-	-	
Terminal service units (thousands)	964.9	982.4	-	-	-	-	-	-	-
Terminal service units (yearly variation in %)		1.8%	-	-	-	-	-	-	

1.3 - Stakeholder consultation

1.3.1 - Overall outcome of the consultation of stakeholders on the performance plan

Description of main points raised by stakeholders and explanation of how they were taken into account in developing the performance plan
In January 2018, the UK CAA published RP3 business plan guidance to NERL, www.caa.co.uk/cap1625. The guidance noted that NERL should consult extensively with its customers in the development of its business plan for RP3. In May 2018, NERL shared with its customers a initial business plan and established a Customer Consultation Working Group (co-chaired by NERL and airline representatives) and associated work programme. Between May and September NERL and airspace users followed an extensive engagement and consultation programme, culminating in September 2018, with the publication of a report by the co-chairs of the Customer Consutlation Working Group, setting out areas of agreement and disagreement between NERL and airspace users. In October 2018, NERL published its revised business plan, taking into account the customer consultation activity. Both the co-chairs report and NERL's revised business plan were key inputs to the development of CAA's draft RP3 proposals. The CAA published draft performance plan proposals www.caa.co.uk/cap1758 in February 2019 for an 8-week consultation period. The full written responses to the draft performance plan proposals are on the CAA website at www.caa.co.uk/natslicence. The CAA held a multilateral stakeholder meeting on 11 March 2019 and bilateral stakeholder consultation meetings with NERL, airspace users and staff representatives on 18 March 2019. Records of these meetings are at Appendix C of this plan. The CAA also conducted two further additional targetted written consultations (on KEA and capex governance) - the working notes and responses to these are also on our website. Alongside the CAA Decision Document, the CAA will publish a summary (www.caa.co.uk/cap1830C) setting out stakeholder feedback to the draft proposals and targetted consultations. The summary cross-references how the CAA has addressed stakeholder feedback in its final decisions.

1.3.2 - Specific consultation requirements of ANSPs and airspace users on the performance plan

Topic of consultation	Applicable	Results of consultation
Where applicable, decision to diverge from the STATFOR base forecast	No	CAA has used STATFOR base forecast. See CAP 1830.
Charging policy	Yes	See CAP 1830.
Maximum financial advantages and disadvantages for the mandatory incentive scheme on capacity	Yes	In light of stakeholder feedback, CAA reduced the strength of incentives, compared to its draft proposals. See CAP 1830.
Where applicable, decision to modulate performance targets for the purpose of pivot values to be used for the mandatory incentive scheme on capacity	No	In response to stakeholder feedback, and CAA's change in approach to capacity target levels, no target modulation is applied in final decisions. See CAP 1830.
Symmetric range ("dead band") for the purpose of the mandatory incentive scheme on capacity	Yes	No specific feedback provided on deadband symmetry requirements. NERL raised some concerns that resulted from the change - in RP2 CAA adopted asymmentric deadbands. See CAP 1830.
Establishment or modification of charging zones	Yes	No changes to en route or terminal charging zone B. The scope of terminal charging zone C (London Approach), has been expanded to incoporate Biggin Hill for the purposes of charging, although revenues treated as 'other revenue'. No stakeholders raised significant concerns with the inclusion of Biggin Hill. See CAP 1830.

Establishment of determined costs included in the cost base for charges	Yes	NERL and staff representatives raised concerns with CAA's proposed efficiency challenges for NERL's Determined Costs. Airspace users were broadly content although some thought CAA could have gone further in some areas. The CAA's final decision has allowed higher NERL Determined Costs, albeit still below NERL's business plan. Stakeholders commented on the significnat increase in CAA Determined Costs for RP3. Recognising the importance of airspace modernisation in RP3, stakeholders sought greater justification for the increases. See CAP 1830.
Where applicable, values of the modulated parameters for the traffic risk sharing mechanism	No	N/A. CAA has adopted default parameters from the performance and charging regulation.
Where applicable, decision to apply the simplified charging scheme	No	N/A. Simplified charging scheme is not suitable for UK arrangements.
New and existing investments, and in particular new major investments, including their expected benefits	Yes	NERL's investment programme was discussed and agreed through the Customer Consultation Working Group activity (see above). The CAA's final decisions do not alter the scope of the the capital expenditure programme set out in NERL's business plan. See CAP 1830.

1.3.3 - Consultation of stakeholder groups on the performance plan

#1 - ANSPs	
Stakeholder group composition	NERL
Dates of main meetings / correspondence	In addition to meetings and written consultation activities established above, the CAA and NERL also exchanged a number of letters seeking clarification, or providing feedback on specific parts of NERL's RP3 business plan, or the CAA's draft proposals. This correspondence is published at www.caa.co.uk/natslicence.
Main issues discussed	See CAP 1830.
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

#2 - Airspace Users	
Stakeholder group composition	The CAA's consultation material was published on its website and available to the general public and industry alike. Additionally, CAA drew its consultation activities specifically to the attention of a wide range of airspace users and representatives. IATA, IAG, British Airways, Virgin Atlantic, Ryanair, American Airways attended the CAA's multilateral consultation meeting. Additionally, Emirates provided a written reponse to the consultation.
Dates of main meetings / correspondence	See section 1.3.1 above.
Main issues discussed	See CAP 1830.
Actions agreed upon	
Points of disagreement and reasons	

Final outcome of the consultation	

Additional comments

#3 - Professional staff representative bodies	
Stakeholder group composition	The CAA's consultation material was published on its website and available to the general public and industry alike. Prospect and PCS responded to the CAA draft proposals consultation.
Dates of main meetings / correspondence	See section 1.3.1 above.
Main issues discussed	See CAP 1830.
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

#4 - Airport operators	
Stakeholder group composition	The CAA's consultation material was published on its website and available to the general public and industry alike. Additionally, the CAA drew its consultation activities specifically to the attention airport operators in scope of the performance scheme. As part of the NERL Customer Consultation Working Group activity, the following airports were represented at an airport specific workshop: Heathrow Airport, Stansted Airport, Bristol Airport, Cardiff Airport, Newcastle Airport , Gatwick Airport, Manchester Airport, TAG Farnborough Airport, Biggin Hill Airport, London City Airport.
Dates of main meetings / correspondence	See section 1.3.1 above.
Main issues discussed	See CAP 1830. Heathrow Airport was the only operator to explicity respond to the draft proposals consultation. Their response mostly focussed on the CAA's approach to determining the weighted average cost of capital (WACC) in respect of NERL, and in particular the approach to market-wide components of the WACC.
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

#5 - Airport coordinator	
Stakeholder group composition	The CAA's consultation material was published on its website and available to the general public and industry alike. Additionally, the CAA drew its consultation activities specifically to the attention airport operators in scope of the performance scheme and Airport Coordination Limited (ACL).
Dates of main meetings / correspondence	See section 1.3.1 above.
Main issues discussed	See CAP 1830.
Actions agreed upon	
Points of disagreement and reasons	

Final outcome of the consultation	

Additional comments

#6 - Other (specify)	
Stakeholder group composition	
Dates of main meetings / correspondence	
Main issues discussed	
Actions agreed upon	
Points of disagreement and reasons	
Final outcome of the consultation	

Additional comments

1.4 - List of airports subject to the performance and charging Regulation

1.4.1 - Airports as per Article 1(3) (IFR movements ≥ 80 000)

ICAO code	Airport name	Charging Zone	IFR air transport movements			
			2016	2017	2018	Average
EGLL	London/Heathrow	UK - Zone B	475,064	475,963	477,824	476,284
EGKK	London/Gatwick	UK - Zone B	280,080	285,945	283,965	283,330
EGCC	Manchester	UK - Zone B	192,154	203,621	201,256	199,010
EGSS	London/Stansted	UK - Zone B	178,968	188,156	200,134	189,086
EGGW	London/Luton	UK - Zone B	130,914	135,083	135,772	133,923
EGPH	Edinburgh	UK - Zone B	121,219	127,268	129,525	126,004
EGBB	Birmingham	UK - Zone B	110,708	119,143	110,076	113,309
EGPF	Glasgow	UK - Zone B	92,504	95,151	90,623	92,759
EGLC	London/City	UK - Zone B	85,007	80,382	80,762	82,050

1.4.2 Other airports added on a voluntary basis as per Article 1(4)

Number of airports	1		
ICAO code	Airport name	Charging Zone	Additional information
N/A	Biggin Hill airport	UK - Zone C	Biggin Hill Airport will be part of the London Approach for the purposes of charging for RP3. See CAP 1830.

Additional comments

1.5 - Services under market conditions

Number of services under market conditions	1

Services	Charging zone	Geographical scope of the services	State decision and assessment report	Reference to the agreement of the European Commission
TANS	UK - Zone B	Listed in Tab 1.4	Submitted to Commisison 25 May 2018 See CAP 1830, chapter 10 on TANS.	Commission Implementing Decision of 24.01.2019 on the establishment of market conditions for terminal air navigation services in the UK under Article 3 of Implementing Regulation No 391/2013

Additional comments

1.6 - Process followed to develop and adopt a FAB Performance Plan

Description of the process
Not applicable

1.7 - Establishment and application of a simplified charging scheme

Is the State intending to establish and apply a simplified charging scheme for any charging zone/ANSP?	No

SECTION 2: INVESTMENTS

Annexes of relevance to this section

ANNEX E. INVESTMENTS

NOTE: The requirements as per Annex II, 2.2.(c) are addressed in item 4.1.2

2.1 - Investments - NATS (Continental)

2.1.1 - Summary of investments

Number of new major investments	8

#	Name of new major investment (i.e. above 5 M€)	Total value of the asset (capex or contractual leasing value)	Value of the assets allocated to ANS in the scope of the PP	**Determined costs** of investment (i.e. depreciation, cost of capital and cost of leasing) (in national currency) **Outturn 2017 prices**					Lifecycle (Amortisation period in years)	Allocation (%)*		Planned date of entry into operation
				2020	2021	2022	2023	2024		Enroute	Terminal	
1	Airspace	115		17	34	31	21	12				Phased over RP3 & into RP4
2	Domestic En Route	32		9	5	7	7	4				Over RP3
3	DP En Route	26		22	4	0	0	0				2020 - 2021
4	DP Lower	178		87	74	15	1	1				2022
5	iTEC and Foursight for Terminal Control and Prestwick lower	74		0	0	0	16	58				RP4
6	Technical Resilience	130		23	24	32	28	23				Phased over RP3
7	Business Resilience	81		21	16	16	16	12				Phased over RP3
8	Contingency	31		0	5	7	7	12				Phased over RP3
Sub-total of **new major investments** above (1)		667	0	179	162	108	96	122				
Sub-total **other new investments** (2)												
Sub-total **existing investments** (3)												
Total new and existing investments (1) + (2) + (3)		667	0	179	162	108	96	122				

** The total % enroute+terminal should be equal to 100%.*

2.1.2 - Detail of new major investments

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives on new major investments.

Name of new major investment 1	***Airspace***	Total value of the asset	***115,000,000 €***

Description of the asset	The programme for airspace will draw on the capabilities provided by new technologies to deliver the principal changes and benefits required by customers. Uppermost is the design and implementation of significant airspace change across the south east and Manchester regions through the systemised airspace programme. It will, in conjunction with the delivery of free route airspace (FRA), enable NERL to use the advanced tools delivered by technology investments, such as iTEC, ExCDS and FourSight, to provide true performance based navigation (PBN). The programme will require the development of new standard instrument departures (SID), standard terminal arrival routes (STAR) and transitions to create a fully modernised airspace and facilitate a third runway at Heathrow. It will be supported by a variety of queue and capacity management tools such as time based separation (TBS), arrivals manager (AMAN) and extended arrivals manager (XMAN). Given interdependencies with airports to agree and deliver respective changes in support of the systemisation of lower airspace, NERL plan to manage this change on behalf of the aviation industry.	
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	EU 716/2014 AF1 - Extended AMAN and PBN in High Density TMA AF2 - Airport integration and throughput AF3 - Flexible airspace management and Free Route
Benefits for airspace users and results of the consultation of airspace users' representatives	The following benefits are expected to be delivered: safety, an anticipated 4.1% reduction in RAT points per 100,000 movements; service, 6.9 seconds reduction against what would be delivered without this programme (measured as the average ATM delay per flight in seconds); environment, 151.5 kT per annum (measured as fuel savings in kT per annum); cost efficiency, the airspace programme will contribute to a cost efficiency target of a 5% reduction in the DUC. Customers were consulted on NERL's RP3 plan during Spring/Summer 2018 with outcomes captured in the airline/NERL co-chairs' report. This report noted: 'The need for airspace modernisation was a critical subject recognised by all the stakeholders throughout the consultation process. The need to progress the required work as soon as possible was also fully supported; despite important discussions to finalise the governance and funding arrangements, these should not slow the progress down.' NERL notes (on page 108 of its RP3 business plan appendices document) that it expects there will be an overall expected safety benefit performance range of 6-9% (measured as a reduction in RAT points per 100,000K movements) in addition to the anticipated major investments benefits. NERL notes that separately delivered benefits cannot always be added due to a broader network effect.	
Joint investment / partnership	No	
Investment in ATM systems	Yes	
If investment in ATM system, type?	Replacement investment	
If investment in ATM system, Reference to European ATM Master Plan / PCP	PCP	

Name of new major investment 2	***Domestic En Route***	Total value of the asset	***32,000,000 €***

Description of the asset	This programme provides investment to deliver small scale operational capability improvements (safety, capacity or environmental benefits) in support of wider airspace systemisation and technology deployments, and the agility to deliver rapid airspace change to address hotspots. Although this programme is mainly reactive, NERL states that the nature of the requirements are well understood which will give NERL the opportunity to plan the programme with customers through annual SIP consultations. The investment programme includes the RP3 Swanwick Network Improvement Programme (SNIP) to deliver small scale enhancements to Swanwick airspace. These enhancements aim to reduce controller workload and deliver increased capacity. SNIP will also exploit the opportunities created by the adoption of flexible use of airspace (FUA), which will deliver revised route structures that enable fuel savings for airspace users. These changes will be in addition to the larger airspace change programmes such as LAMP and the Swanwick FRA Programme. Traffic demand can fluctuate markedly from year to year for many reasons and the aim of this programme is to be able to react more quickly than is possible in the larger scale projects. NERL considers it will be able to deliver smaller scale change to mitigate areas of network constraint between 2020 and 2024. The investment programme also includes Prestwick's RP3 Airspace Improvement Programme covering all of Prestwick's domestic airspace, working alongside SNIP and building on ATM system changes delivered under NERL's technology programme. NERL considers that airspace efficiency and system capabilities go hand in hand, so the programme is being developed to make the airspace work for the system and the system work for the airspace. This programme delivers changes to airspace design, utilisation and operation that proactively identifies performance improvements, and maximises the benefits delivered to key airspace users.	
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)?	No	
Level of impact of the investment	Network	Supports wider airspace systemisation including LAMP and FRA EU 716/2014 AF1/AF3.
	Local	Provides for rapid airspace change to address hotspots.
	Non-performance	N/A
Quantitative impact per KPA	Safety	Anticipated 5% reduction in RAT points per 100,000 movements over RP3 at a rate of 1% each year.
	Environment	Whilst not the primary purpose of this programme, some benefit may be planned where possible.
	Capacity	Anticipated 3.5 seconds per flight reduction over RP3 compared to what would be achieved without the programme.
	Cost Efficiency	Contributes to an overall reduction of 5% in DUC
Results of the consultation of airspace users' representatives	In keeping with the comments raised by customers during consultation for the broader airspace programme, customers were supportive of the programme noting in the co-chairs' report 'Airspace modernisation and tools are critical to meet current demand, not just future demand because the airspace was already constrained'. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.	
Joint investment / partnership	No	
Investment in ATM systems	Yes	
If investment in ATM system, type?	Overhaul of existing system	
If investment in ATM system, Reference to European ATM Master Plan / PCP	Click to select	

Name of new major investment 3	*DP En Route*		Total value of the asset	*26,000,000 €*
Description of the asset	This investment will be delivered in the early part of RP3 to complete the delivery of DP En Route and de-risk future transition steps ahead of the decommissioning of many of our current systems and is know as 'legacy escape'. It incorporates into one sub-programme two discrete areas that began in RP2: > Area control voice communications; and > En route area control and PC Upper iTEC and FourSight. The transition for London area control and PC upper airspace provides a 4D trajectory based FDP with the technology to support FRA and more flexible airspace designs in upper airspace. In addition, it provides improved resilience and contingency and the underlying capability to support new ATC concepts, for example, dynamic sectorisation. It removes key legacy assets from service and allows for resilience between both sites and prepares the way for the transformation of control in lower airspace. The majority of this work will be completed in RP2, with just the final stages of the deployment scheduled for completion in RP3. In keeping with the lessons learnt from the ExCDS deployment in RP2 and subsequent customer approval, and our RP3 customer consultation, we have concluded that we will split the operational deployment of the iTEC FDP into two transitions. This will minimise the risk of disruption and maintain agreed service levels. Area control will move over to a new VoIP communications system together with a higher performance backup system. This will reduce the risk associated with the existing voice system, which is end of life, will provide increased resilience to failure and will increase the flexibility of operations. This deployment will also de-risk future transition steps by gaining early experience of VoIP based communications, associated systems and supporting foundation services. This will represent the final stages of the deployment of the voice programme that is primarily delivered in RP2. These final aspects will support the roll out of the common VoIP solution to Prestwick.			
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	EU 716/ 2014 AF1 - Extended AMAN and PBN in High Density TMA AF2 - Airport integration and throughput AF3 - Flexible airspace management and Free Route AF4 - Network collaborative management AF5 - Initial SWIM AF6 - Initial trajectory information sharing		
Benefits for airspace users and results of the consultation of airspace users' representatives	Benefits are expected to be delivered in: safety, measured as an anticipated reduction of 0.2% in RAT points per 100,000 movements; environment, fuel savings of 5.8kT per annum; and contribute to a cost efficiency target of a 5% reduction in the DUC. However, the major benefit of this programme is that it provides a very significant component of the replacement of an ageing FDP system which is nearing its end-of-life. This replacement will ensure a flexible, cyber-secure and sustainable system is available into the future, improve resilience and performance and will enable future airspace capability changes. Without investment in this capability the benefits expects from Airspace and Domestic En Route programmes will not be achieved. Airlines were broadly supportive of the strategic thrust to replace outdated technology which enables the improvement of airspace. This was noted as an 'agreed' item during consultation. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.			
Joint investment / partnership	Yes	iTEC Alliance (DFS, ENAIRE, NATS, Avinor, LVNL, PANSA and Ora Navigacjia)		
Investment in ATM systems	Yes			
If investment in ATM system, type?	Replacement investment			

If investment in ATM system, Reference to European ATM Master Plan / PCP	PCP	

Name of new major investment 4	***DP Lower***		Total value of the asset	***178,000,000 €***
Description of the asset	DP Lower will provide a 4D trajectory based FDP with the technology to support systemised airspace and more flexible airspace designs. The iTEC FDP will be deployed to operate with the existing ExCDS paperless solution in both Swanwick terminal control and Prestwick lower airspace. The deployment of ExCDS during winter 2017-18 has already realised significant benefits, including a reduction in safety risk for both terminal control and area control, as well as a reduced requirement for operational support staff. Through this programme NERL state it will further reduce safety risk as it evolves ExCDS and maintain these capabilities as it introduces iTEC into terminal control. Use of ExCDS will simplify the technical solution at this stage and simplify the transition required for controllers. This capability will be sufficient to support subsequent deployment. In addition, NERL considers that this step provides improved resilience and contingency and the capability to support future ATC concepts, for example, dynamic sectorisation. NERL anticipate using a split deployment for Swanwick and Prestwick. This is a key transition as it achieves legacy escape leading to a reduction in the number and cost of assets to sustain. NERL states it will ensure that current systems are run concurrently with the new platform to maintain a safe and resilient transition to the new technology.			
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	EU 716/ 2014 AF1 - Extended AMAN and PBN in High Density TMA AF2 - Airport integration and throughput AF3 - Flexible airspace management and Free Route AF4 - Network collaborative management AF5 - Initial SWIM AF6 - Initial trajectory information sharing		
Benefits for airspace users and results of the consultation of airspace users' representatives	Benefits are expected to be delivered in: safety, an anticipated 3.5% reduction in RAT points per 100,000 movements; service, 0.7 seconds reduction against what would be delivered without this programme measured as the average ATM delay per flight in seconds; environment, 1.9kT per annum measured as fuel savings in kT per annum; and cost efficiency, the DP Lower programme will contribute to a cost efficiency target of a 5% reduction in the DUC. The major benefit of this programme is that it provides the lower airspace component of the replacement of an ageing FDP system which is nearing its end-of-life and enable the transfer of our services to our modernised platform - achieving legacy escape. This replacement will ensure a flexible, cyber-secure and sustainable system is available into the future, improve resilience and performance and will enable future airspace capability changes. Without investment in this capability the benefits expects from Airspace and Domestic En Route programmes will not be achieved. Airlines were broadly supportive of the strategic thrust to replace outdated technology which enables the improvement of airspace. This was noted as an 'agreed' item during consultation. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.			
Joint investment / partnership	Yes	iTEC Alliance (DFS, ENAIRE, NATS, Avinor, LVNL, PANSA and Ora Navigacjia)		
Investment in ATM systems	Yes			

If investment in ATM system, type?	Replacement investment	
If investment in ATM system, Reference to European ATM Master Plan / PCP	PCP	

Name of new major investment 5	***iTEC and Foursight for Terminal Control and Prestwick lower***	Total value of the asset	***74,000,000 €***
Description of the asset	In order to maximise benefits after delivery of the LAMP systemised airspace, as well as prepare for further evolution of the role of the controller supported by these tools, there will be a need to develop and implement the right types of tools, which will be an evolution of FourSight tactical tools, to work alongside iTEC in lower level airspace. This work would commence in RP3 in order to deploy early in RP4 and enable NERL to be able to continue to support growing traffic demand in the complex lower level airspace including accommodating Heathrow runway 3 and maximise the benefits of the airspace change.		
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)? Ref. to the Regulation and, if funded through Union assistance programmes, ref. to the relevant grant agreement.)	Yes	EU 716/ 2014 AF1 - Extended AMAN and PBN in High Density TMA AF2 - Airport integration and throughput AF3 - Flexible airspace management and Free Route AF4 - Network collaborative management AF5 - Initial SWIM AF6 - Initial trajectory information sharing	
Benefits for airspace users and results of the consultation of airspace users' representatives	Introduction of FourSight for upper airspace will deliver significant benefits in terms of capacity improvements and reductions in safety risk. Whilst it is too early to quantify the specific benefits which could be delivered in RP4, NERL expect to deliver significant capacity and safety improvements that maximise the benefits of airspace change delivered in lower airspace. During consultation there was an element of some uncertainty by airlines as to the benefits that would be achievable this far away from delivery. NERL have proposed to consult customers on the exact nature of required tools through the annual customer consultation process as the full requirement becomes clear. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.		
Joint investment / partnership	Yes	iTEC Alliance (DFS, ENAIRE, NATS, Avinor, LVNL, PANSA and Ora Navigacjia)	
Investment in ATM systems	Yes		
If investment in ATM system, type?	New system		
If investment in ATM system, Reference to European ATM Master Plan / PCP	PCP		

Name of new major investment 6	***Technical Resilience***	Total value of the asset	***130,000,000 €***

Description of the asset	This programme seeks to maintain sufficient investment to deliver a robust and resilient service, legislative compliance, operational performance and cyber resilience. NERL considers it has a firm understanding of its assets and systems, and its planned changes have a high level of maturity. NERL states it is aware that it is essential to have an appropriate and robust maintenance strategy. NERL adopts a risk based approach rather than a schedule based approach, as the risk of the consequence of failure far outweighs the cost of the equipment. NERL uses this knowledge to ensure the right balance for cost and complexity of maintenance in the plan, and plan to deliver investment through two separate lines of development: centres and build sustainment; and remote sites and CNS sustainment. Centres and build sustainment will sustain current operational assets. Some will require support to the end of 2022, when they will be withdrawn from service at legacy escape. Others, including most outstation infrastructure assets will require on-going support to maintain resilience. This sub-programme also incorporates cyber security enhancements to protect legacy assets from the growing threat. Remote sites and CNS sustainment aims to deliver planned annual sustainment and obsolescence management activities to manage the assets through to end of life, maintain resilience and deliver technical updates. The aim is to optimise technical resilience and sustainment expenditure and avoid the impact to safety and/or delay caused by service interruption.	
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)?	No	
Level of impact of the investment	Network	Maintains service continuity and operational resilience.
	Local	Maintains service continuity and operational resilience.
	Non-performance	N/A
Quantitative impact per KPA	Safety	None anticipated.
	Environment	None anticipated.
	Capacity	None anticipated.
	Cost Efficiency	None anticipated.
Results of the consultation of airspace users' representatives	Airlines were broadly supportive of the strategic thrust to replace outdated technology which enables the improvement of airspace. This was noted as an 'agreed' item during consultation at a high level. It was noted during the consultation that NERL would continue to sustain and maintain our existing systems based on an approach that seeks to minimise investment in systems that are near end-of-life and to use off-the-shelf- technology where replacement is required. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.	
Joint investment / partnership	No	
Investment in ATM systems	Yes	
If investment in ATM system, type?	Overhaul of existing system	
If investment in ATM system, Reference to European ATM Master Plan / PCP	Master Plan (non-PCP)	COM10 - Migrate from AFTN to AMHS ITY-AGDL - Initial ATC air-ground data link services above FL-285 ITY-AGVCS2 - Implement air-ground voice channel spacing requirements below FL195 NAV03 - Implementation of P-RNAV NAV10 - Implement APV procedures

Name of new major investment 7	***Business Resilience***		Total value of the asset	***81,000,000 €***
Description of the asset	This programme will ensure the availability of safe and secure information services and an estate that supports a safe operation. The programme supports this through two lines of development, facilities management (FM) and information solutions (IS). Facilities management includes property services, building and engineering services, environment (NERL have committed to reducing the technical load of estate CO2 emissions by 2024 by 30%) and health and safety. Information solutions is an essential component of business resilience. The increase in the cyber threat to NERL's business, reflected in revised legislation, requires the implementation of upgrades and new services to meet the needs of the business moving forward. NERL consider they have a firm understanding of its assets and systems, and that its planned changes have a high level of maturity.			
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)?	No			
Level of impact of the investment	Network	Maintains service continuity and operational resilience.		
	Local	Maintains service continuity and operational resilience.		
	Non-performance	N/A		
Quantitative impact per KPA	Safety	None anticipated.		
	Environment	None anticipated.		
	Capacity	None anticipated.		
	Cost Efficiency	None anticipated.		
Results of the consultation of airspace users' representatives	Airlines were broadly supportive of the strategic thrust to replace outdated technology which enables the improvement of airspace. This was noted as an 'agreed' item during consultation at a high level. It was noted during the consultation that we would continue to sustain and maintain our existing systems based on an approach that seeks to minimise investment in systems that are near end-of-life and to use off-the-shelf- technology where replacement is required. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.			
Joint investment / partnership	No			
Investment in ATM systems	No			
If investment in ATM system, type?	Click to select			
If investment in ATM system, Reference to European ATM Master Plan / PCP	Click to select			

Name of new major investment 8	***Contingency***		Total value of the asset	***£31,000,000***
Description of the asset	The capex contingency for RP3 is set at £31m (2017 process). The aim of the contingency is to enable NERL to manage the impact of risk within the investment plan. NERL will report its use to customers during routine reporting.			
The investment is mandated by a SES Regulation (i.e. PCP/Interoperability)?	No			
Level of impact of the investment	Network	Maintains service continuity and operational resilience.		
	Local	Maintains service continuity and operational resilience.		

Level of impact of the investment	Non-performance	N/A
Quantitative impact per KPA	Safety	None anticipated.
	Environment	None anticipated.
	Capacity	None anticipated.
	Cost Efficiency	None anticipated.
Results of the consultation of airspace users' representatives	Airlines agreed that a capex contingency fund held at the portfolio level is in principle more efficient than if contingency was built into each project. The CAA applied an efficiency challenge of 8% to the non-airspace capex in NERL's business plan. Further details are provideed in chapter 5 in CAP 1830.	
Joint investment / partnership	No	
Investment in ATM systems	No	
If investment in ATM system, type?	Click to select	
If investment in ATM system, Reference to European ATM Master Plan / PCP	Click to select	

2.1.3 - Other new and existing investments

Description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period	

SECTION 3: PERFORMANCE TARGETS AND MEASURES FOR THEIR ACHIEVEMENT

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

3.4 - Cost efficiency targets

3.4.1 - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #x

3.4.2 - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #x

3.4.3 - Pension assumptions

3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services

3.4.5 - Restructuring costs

3.5 - Additional KPIs / Targets

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

3.6.2 - Interdependencies and trade-offs between capacity and environment

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

3.6.4 - Other interdependencies and trade-offs

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX M. COST ALLOCATION
ANNEX J. OPTIONAL KPIs AND TARGETS
ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS
ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS
ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS

SECTION 3.1: SAFETY KPA

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety national performance targets

b) Detailed justifications in case of inconsistency between local and Union-wide safety targets

c) Main measures put in place to achieve the safety performance targets

Annexes of relevance to this section

ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS

3 - PERFORMANCE TARGETS AT LOCAL LEVEL

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety performance targets

	Number of Air Traffic Service Providers	1				
NATS NERL	Safety policy and objectives	C	C	C	C	C
	Safety risk management	D	D	D	D	D
	Safety assurance	C	C	C	C	C
	Safety promotion	C	C	C	C	C
	Safety culture	C	C	C	C	C
	Additional comments					

b) Detailed justifications in case of inconsistency between local and Union-wide safety targets

The UK has adopted the EU-wide safety targets. See chapter 2 of CAP 1830.

** Refer to Annex O, if necessary.*

c) Main measures put in place to achieve the safety performance targets

See chapter 2 of CAP 1830.

NERL's RP3 business plan states that its internal model (used to predict the net outcome for safety of its investment and improvement activities) indicates that it will be able to maintain its safety performance, based on assumed traffic growth.

** Refer to Annex O, if necessary.*

SECTION 3.2: ENVIRONMENT KPA

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) Environment national performance targets

b) Detailed justifications in case of inconsistency between national targets and national reference values

c) Main measures put in place to achieve the environment performance targets

Annexes of relevance to this section

ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) National environment performance targets

	2020	2021	2022	2023	2024
	Target	Target	Target	Target	Target
National reference values	3.53%	3.39%	3.25%	3.25%	3.25%
National targets	4.06%	4.05%	4.04%	3.88%	3.72%

b) Detailed justifications in case of inconsistency between national targets and national reference values

In proposing a target, we have considered the following factors:
- historical performance to date, which points to roughly 0.2% year on year rate of improvement since 2014;
- NERL's proposal and the stress placed on improving KEA in the context of anticipated traffic growth;
- the proposed national reference values, noting the absence of supporting explanatory material;
- the timing of NERL's implementation of FRA – according to NERL's business plan, full FRA will not be available until 2022, which suggest the improvement expected by the Network Manager in 2018-2022 may only be observable in terms of KEA performance towards the end of RP3.

On balance, we consider that a meaningful – both challenging and realistic – UK target should be based on historical performance until 2022, mindful of traffic growth but also the gradual implementation of FRA, with the target for 2023 and 2024 uplifted by Network Manager's anticipated annual rate of improvement resulting from FRA implementation of c. 4%, following UK full FRA implementation.

** Refer to Annex P, if necessary.*

c) Main measures put in place to achieve the environment performance targets

A key strategic consideration in making our final decisions for the performance plan for RP3 is airspace modernisation. In February 2017 the Government set out its strategic rationale for modernising airspace, and the consequences of not doing so. We expect airspace modernisation to deliver major benefits, through the introduction of technology enabling more efficient flight paths that can increase capacity, be optimised to reduce noise for local communities, deliver more carbon efficient routes and reduce delay for passengers. We also expect to see a large reduction in, or the elimination of, planes queueing in holding stacks over the UK, with any remaining stacks operating at higher altitudes.

** Refer to Annex P, if necessary.*

SECTION 3.3: CAPACITY KPA

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

a) Capacity national performance targets

b) Detailed justifications in case of inconsistency between national targets and national reference values

c) Main measures put in place to achieve the target for en-route ATFM delay per flight

d) ATCO planning

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

a) Capacity national performance targets

b) Contribution to the improvement of the European ATM network performance

c) Main measures put in place to achieve the target for terminal and airport ANS ATFM arrival delay per flight

Annexes of relevance to this section

ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

a) National capacity performance targets

	2020	2021	2022	2023	2024
	Target	Target	Target	Target	Target
National reference values	0.34	0.34	0.30	0.26	0.27
National targets	0.26	0.32	0.32	0.30	0.32

b) Detailed justifications in case of inconsistency between national targets and national reference values

We have used the NM's reference values as the starting point for UK domestic targets. We have then re-profiled the delay throughout the 5 year period to better reflect expected delays as a result of NERL's planned airspace/technology programmes. The re-profiling is intended to be net-neutral in terms of total number of minutes delay incurred between the NM's reference values and UK domestic targets.

See chapter 4 of CAP 1830.

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the target for en-route ATFM delay per flight

In its RP3 business plan NERL sets out the measures to achieve local targets and mitigate any potential impacts of traffic growth on service quality by introducing significant airspace changes. These include the next stage of LAMP in the south east of England which will utilise performance based navigation (PBN) capabilities on aircraft. NERL also says that the redesign of airspace will facilitate greater resilience to weather and faster recovery following disruption.

Key determinents in ensuring the provision of sufficient capacity are operational and technical resilience. In respect of operational resilience, the CAA has considered expected traffic growth, the extensive airspace modernisation programme, and expected ATCO staffing challenges during RP3 and beyond in reaching its decisions in respect of NERL Determined Costs and operating costs (in particular at the start of RP3). The increase in allowed costs should provide NERL with the flexibility to maximise the efficient use of its operational resources, including its ATCO recruitment and training activities.

The technical resilience of NERL's systems and operations is also important. Failure of core systems can be a source of significant delays. The resilience of NERL's systems and operations came under scrutiny in the Independent Enquiry into NERL's system failure on 12 December 2014, the CAA review of operating resilience in UK aviation, and Project Oberon investigation. Mindful of the importance of airspace modernisation, the CAA has allowed all of NERL's proposed airspace related capital expenditure as well putting a focus on delivery of key ATM systemts programmes. Furthermore, as a result of the Independent Enquiry's recommendations, the CAA introduced a condition into NERL's licence that requires it to prepare, consult on and submit a resilience plan and to review it at least every two years, in accordance with our published guidance.

In addition to the above measures and the service quality incentives set out tabs 5.2.1 and 5.3, the CAA expects NERL to commit to delivering its planned RP3 programme in full, which will have medium to long term capacity and environmental benefits to airspace users. We have therefore introduced a delivery incentive in RP3 to underpin this expected commitment. If NERL does not effectively deliver its capital investment programme, in particular in support of airspace modernisation, the CAA will look to make a reduction to their revenue in RP4, or a downward adjustment to its RP4 regulatory asset base, of up to £36 million (£2017 CPI prices). See tab 5.3.

More information on capacity targets, NERL's capital programme and associated incentives can be found in chapters 4 and 5 of CAP 1830.

** Refer to Annex Q, if necessary.*

d) ATCO planning

	Actual	Planning					
London (EGTT ACC)	2018	2019	2020	2021	2022	2023	2024
Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs)							
Number of ATCOs in OPS planned to stop working in the OPS room (FTEs)							
Number of ATCOs in OPS planned to be operational **at year-end (FTEs)**		0	0	0	0	0	0

	Actual	Planning					
London Terminal (EGTTT TC)	2018	2019	2020	2021	2022	2023	2024
Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs)							

Number of ATCOs in OPS planned to stop working in the OPS room (FTEs)							
Number of ATCOs in OPS planned to be operational **at year-end (FTEs)**		0	0	0	0	0	0

	Actual	Planning					
Prestwick (EGPX ACC)	2018	2019	2020	2021	2022	2023	2024
Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs)							
Number of ATCOs in OPS planned to stop working in the OPS room (FTEs)							
Number of ATCOs in OPS planned to be operational **at year-end (FTEs)**		0	0	0	0	0	0

Additional comments
The provision of ATCO planning data is not required under the performance and charging regulation.

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

a) National capacity performance targets

		2020	2021	2022	2023	2024
		Target	Target	Target	Target	Target
National targets		1.09	1.09	1.09	1.09	1.09
Additional comments		Analysis supporting the proposed targets can be found in chapter 10 of CAP 1830.				
Airport level	***EGLL-London/Heathrow***	1.93	1.93	1.93	1.93	1.93
	Airport contribution to national targets					
	EGKK-London/Gatwick	2.04	2.04	2.04	2.04	2.04
	Airport contribution to national targets					
	EGCC-Manchester	0.22	0.22	0.22	0.22	0.22
	Airport contribution to national targets					
	EGSS-London/Stansted	0.72	0.72	0.72	0.72	0.72
	Airport contribution to national targets					
	EGGW-London/Luton	0.47	0.47	0.47	0.47	0.47
	Airport contribution to national targets					
	EGPH-Edinburgh	0.02	0.02	0.02	0.02	0.02
	Airport contribution to national targets					
	EGBB-Birmingham	0.09	0.09	0.09	0.09	0.09
	Airport contribution to national targets					
	EGPF-Glasgow	0.01	0.01	0.01	0.01	0.01
	Airport contribution to national targets					
	EGLC-London/City	1.38	1.38	1.38	1.38	1.38
	Airport contribution to national targets					
	N/A-Biggin Hill airport	n/a	n/a	n/a	n/a	n/a
	Airport contribution to national targets					

b) Contribution to the improvement of the European ATM network performance

Constraining targetted growth at historic performance levels, in light of forecast traffic growth in an already constrained terminal capacity environment, should minimise adverse impacts on network performance.

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the target for terminal and airport ANS ATFM arrival delay per flight

A key strategic consideration in making our final decisions for the performance plan for RP3 is airspace modernisation. In February 2017 the Government set out its strategic rationale for modernising airspace, and the consequences of not doing so. Airspace modernisation is expected to deliver major benefits, through the introduction of technology enabling more efficient flight paths that can increase capacity, be optimised to reduce noise for local communities, deliver more carbon efficient routes and reduce delay for passengers. A large reduction in, or the elimination of, planes queueing in holding stacks over the UK is also expected, with any remaining stacks operating at higher altitudes.

TANS providers' business plans identified the following initiatives, which are anticipated to positively impact on ATFM delays in RP3:
- ANSL: staffing strategies, including policies that deliver the appropriate number of staff to ensure necessary resilience to staffing, equipment or other airport disruptions, and improved capacity performance resulting from the implementation of LAMP2 during RP3;
- NSL: airspace change in the Essex airspace (known as SAIP AD6) due late 2020. Continued engagement with airports and with NERL on their initiatives; and
- BAATL: investigation and implementation of new technologies and A-CDM in order to prioritise reduction of delay that is within its control.

** Refer to Annex Q, if necessary.*

SECTION 3.4: COST-EFFICIENCY KPA

3.4 - Cost efficiency targets

3.4.1 - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #x

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

b) Cost-efficiency performance targets

c) Description and justification of the methodology used to estimate the baseline values

d) Justification for the level of the baseline value for the determined costs in comparison with the latest available actual costs

e) Description and justification of the consistency between local and Union-wide cost-efficiency targets

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS

3.4.2 - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #x

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

b) Cost-efficiency performance targets

c) Description and justification of the methodology used to estimate the baseline values

d) Justification for the level of the baseline value for the determined costs in comparison with the latest available actual costs

e) Description and justification of the contribution of the the local targets to the performance of the European ATM network

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

3.4.3 - Pension assumptions

3.4.3.1 Total pension costs

3.4.3.2 Assumptions for the "State" pension scheme

3.4.3.3 Assumptions for the occupational "Defined contributions" pension scheme

3.4.3.4 Assumptions for the occupational "Defined benefits" pension scheme

3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services

3.4.5 - Restructuring costs

3.4.5.1 Restructuring costs from previous reference periods to be recovered in RP3

3.4.5.2 Restructuring costs planned for RP3

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX M. COST ALLOCATION
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS

NOTE: The following requirements as per Annex II, 3.3 are addressed in the Annexes A and B:

Point 3.3 (d) on cost-allocation;
Point 3.3 (e) on the return on equity and cost of capital;

Point 3.3 (f) on assumptions for pension costs and interest on debt for other entities, inflation forecast and adjustments beyong IFRS;
Point 3.3 (g) on adjustments to the unit rates carried over from previous reference periods;
Point 3.3 (h) on costs exempt from cost-sharing;
Point 3.3 (k) reporting tables and additional informations.

3.4 - Cost efficiency targets

3.4.1 - Cost efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #1 - United Kingdom

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

2019 baseline value for the determined costs (in real terms and in national currency)	715,704,179
2019 latest available service units forecast (actual route flown, see point 1.2 of Annex VIII)	12,408,200
2019 baseline value for the determined unit costs (in real terms and in national currency)	**57.68**

b) Cost-efficiency performance targets

En route charging zone Name of the CZ	Baseline 2014 2014 B	Baseline 2019 2019 B	RP3 Performance Plan (determined 2020-2024) 2020 D	 2021 D	 2022 D	 2023 D	 2024 D	CAGR 2014A-2024D	CAGR 2019B-2024D
Total en route costs in nominal terms (in national currency)			779,902,542	764,803,115	781,316,036	754,069,503	759,098,986		
Total en route costs in real terms (in national currency at 2017 prices)	**692,804,406**	**715,704,179**	**732,694,679**	**704,420,812**	**705,519,621**	**667,565,007**	**658,840,710**	**-0.5%**	**-1.6%**
YoY variation			2.4%	-3.9%	0.2%	-5.4%	-1.3%		
Total en route Service Units (TSU)	9,979,403	12,408,200	12,647,945	12,891,000	13,183,000	13,406,000	13,615,000	3.2%	1.9%
YoY variation			1.9%	1.9%	2.3%	1.7%	1.6%		
Real en route unit costs (in national currency at 2017 prices)	**69.42**	**57.68**	**57.93**	**54.64**	**53.52**	**49.80**	**48.39**	**-3.5%**	**-3.5%**
YoY variation			0.4%	-5.7%	-2.1%	-7.0%	-2.8%		
Real en route unit costs (in EUR2017) [1]	**79.26**	**65.85**	**66.14**	**62.39**	**61.10**	**56.85**	**55.25**	**-3.5%**	**-3.5%**
YoY variation			0.4%	-5.7%	-2.1%	-7.0%	-2.8%		

National currency	**GBP**
[1] Average exchange rate 2017 (1 EUR=)	**0.876**

c) Description and justification of the methodology used to estimate the baseline values

To estimate the baseline value for determined costs (DC) in 2019, we have used the best forecast available for total costs and split by cost item from each entity in the UK unit rate (NERL, Meteorological Office and NSA). We consider this approach provides the best view on the likely outturn costs in 2019 that are efficient and justified on the basis of capacity requirements and service quality targets in 2019 and RP3.

The main focus of our review on baseline costs has been on staff and non-staff operating costs, as pensions, depreciation and cost of capital are broadly as determined at the RP2 review. For NERL's operating costs, in particular, which comprises around 60% of the total UK determined cost in 2019, we have considered:

- the costs and justification put forward in NERL's RP3 business plan;
- feedback from airspace users and other stakeholders on NERL's business plan and the CAA's draft proposals for RP3 (www.caa.co.uk/cap1758), published in February 2019;
- NERL said increases in its costs are driven by growth in traffic and significant changes to the way it expects to run its business in the coming years. It will introduce new technology to replace existing legacy systems, undertake an airspace modernisation programme, improve operational resilience and manage air traffic growth and more complex interactions between air traffic movements in busier airspace; and
- analysis undertaken by our advisors, Steer/Helios on NERL's operating and capital costs. This has reviewed NERL's forecast costs and considered where this aligns with airspace users' feedback on NERL's forecasts.

From this review, we acknowledged that NERL needs to deal with quality of service issues, make progress with technology change, and push forward work on airspace modernisation. We have therefore accepted NERL's projected cost increases from 2017 to 2019, but assumed that NERL could achieve more significant efficiencies over RP3, in line with historical trends.

Further detail on the approach to assessing each cost item in the CAA's final decisions document (www.caa.co.uk/cap1830) provided alongside this template.

To estimate the baseline value for determined unit costs (DUCs) in 2019, we have used the STATFOR traffic forecast from February 2019 for total service units (TSUs). This is the latest 7-year forecast available and we have assessed that this is the best forecast to use. Our assessment of the STATFOR forecast and why it is preferred to the traffic forecast in NERL's business plan is set out in the CAA's final decisions document (CAP 1830). In summary, we consider the STATFOR forecast has a methodology that should mean it is more accurate and we also took into account the independence of the forecast.

** Refer to Annex F, if necessary.*

d) Justification for the level of the baseline value for the determined costs in comparison with the latest available actual costs

The UK baseline determined cost (DC) in 2019 is £715.704 million (in real 2017 prices), an increase of 5.6% compared with the actual costs in 2018 (£677.586 million).

The main drivers of this change are:

- 6.4% increase in NERL's DC, most due to an increase in operating costs;
- 3.5% reduction in the Met Offices' costs; and
- 2.0% increase in NSA costs, which is primarily from an increase in Eurocontrol costs.

Increases in NERL's costs are driven by growth in traffic and significant changes to the way it expects to run its business in the coming years. It will introduce new technology to replace existing legacy systems, undertake an airspace modernisation programme, improve operational resilience and manage air traffic growth and more complex interactions between air traffic movements in busier airspace.

The CAA also considered analysis undertaken by Steer/Helios on NERL's operating and capital costs, in particular where there was alignment between the Steer/Helios analysis and airspace users' feedback that NERL's forecasts were not properly justified.

As set out in our response to point (c) above, from our review we acknowledged that NERL needs to deal with quality of service issues, make progress with technology change, and push forward work on airspace modernisation. This means that costs in 2019 will be higher than actual costs in 2017 and 2018, but we expect costs to reduce during RP3. We have therefore accepted NERL's projected cost increases from 2017 to 2019, but assumed that NERL could achieve more significant efficiencies over RP3, in line with historical trends.

** Refer to Annex F, if necessary.*

e) Description and justification of the consistency between local and Union-wide cost-efficiency targets

For RP3, the CAA has developed final decisions and a performance plan and targets consistent with EU-wide targets set by the European Commission.

The performance scheme has a broad scope – as well as safety, service and efficiency targets for NERL, it encompasses cost efficiency targets for the Met Office, the CAA and the Department for Transport for certain activities associated with airspace management and oversight. The CAA also has a primary duty to exercise our functions so as to maintain a high standard of safety in the provision of air traffic services.

The UK cost efficiency target is an average reduction of Determined Unit Cost (DUC) of 3.5% per year between 2019 and 2024 and 3.5% per year between 2014 and 2024. This is significantly more challenging than the EU-wide cost efficiency target of an average 1.9% reduction in DUC per year over this period.

We set out further details on our justification for the determined costs and traffic forecasts used to calculate these cost efficiency targets in the CAA Decision Document, CAP 1830.

** Refer to Annex R, if necessary.*

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS

We set out in detail the measures put in place to achieve the UK DUC target in the CAA Decision Document, CAP 1830. These measures are summarised below.

Historically, NERL has demonstrated strong performance and been able to achieve efficiencies while delivering a high level of service. In making proposals for the RP3 period, the CAA have assumed that NERL will continue to be able to make efficiency savings in line with historical performance over the medium term. The CAA have also recognised the importance of NERL continuing to deliver its ongoing airspace and technology programme to deliver airspace modernisation, as this should enable very significant longer term benefits and efficiencies.

The CAA recognises the significant change and uncertainty ahead in RP3. We consider that NERL's high level plans to upgrade its legacy technology system and for airspace modernisation are both important and desirable for UK aviation, and have provided important strategic context for the development of the UK performance plan. We have considered how to facilitate the successful delivery of these high level plans as part of our final decisions and sought to ensure there are mechanisms that will allow flexibility (and provide appropriate protection to users) to support these changes. We have also allowed for cost increases at the end of RP2, as well as NERL's forecast operating costs for the first part of RP3, which should provide a strong basis for airspace modernisation work that will take place through RP3 and allow NERL to deliver a more resilient service. Notwithstanding these cost increases, these final decisions should mean that the UK DUC would fall by an average of 3.5% per year between 2019 and 2024.

A key strategic driver for NERL in RP3 is to support the implementation of the UK's Airspace Modernisation Strategy, which is intended to deliver a once in a generation upgrade to modernise critical national infrastructure and deliver a broad range of benefits in all key performance areas and more widely. The CAA considers that this national strategic objective is fundamental to furthering the interests of airspace users and therefore a key priority for RP3. Nonetheless, the systems that users have already funded over RP2 and the further systems and airspace changes that NERL plan to implement and coordinate over the RP3 should allow both for airspace modernisation and significant improvements in NERL's operational performance. We expect NERL to be able to deliver significant operational efficiencies during the latter stages of the RP3 period and for the RP4 period. We are expecting that users further share in the benefits of these efficiencies at the RP4 review.

The CAA's final decisions follow a programme of consultation and engagement with interested stakeholders including NERL and airspace users. In February 2019 we consulted on draft proposals and stakeholder feedback was mixed. NERL and employee representatives said that our efficiency proposals were too ambitious and would have an impact on NERL's ability to deliver both its day to day service, while maintaining systems resilience and play its role in airspace modernisation. Airspace users were largely supportive of our UK en route proposals.

In forming final decisions on determined costs for RP3, as well as NERL's RP3 business plan, the CAA has considered a range of evidence and inputs including:

- Historical analysis/trends (top down analysis);
- Independent in-depth consultant studies (bottom up analysis);
- The results of NERL's customer consultation process, including the Co-Chairs' Report and bilateral meetings with airspace users; and
- The EU targets adopted by the European Commission; and our own stakeholder consultation process on our draft proposals.

** Refer to Annex R, if necessary.*

3.4.2 - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #1 - UK - Zone B

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

2019 baseline value for the determined costs (in real terms and in national currency)	
2019 latest available service units forecast	
2019 baseline value for the determined unit costs (in real terms and in national currency)	

b) Cost-efficiency performance targets

Terminal charging zone Name of the CZ	Baseline 2019 2019 B	RP3 Performance Plan (determined 2020-2024) 2020 D	 2021 D	 2022 D	 2023 D	 2024 D	CAGR 2019B-2024D
Total terminal costs in nominal terms (in national currency)							
Total terminal costs in real terms (in national currency at 2017 prices)							
YoY variation							
Total terminal Service Units (TNSU)							
YoY variation							
Real terminal unit costs (in national currency at 2017 prices)							
YoY variation							
Real terminal unit costs (in EUR2017) [1]							
YoY variation							

National currency	
[1] Average exchange rate 2017 (1 EUR=)	

c) Description and justification of the methodology used to estimate the baseline values

As the UK TANS market has been found to be subject to market conditions (see tab 1.5 and chapter 10 of the CAA Decision Document, CAP 1830), there is an exemption from the requirement to calculate terminal charges or set terminal unit rates.

** Refer to Annex F, if necessary.*

d) Justification for the level of the baseline value for the determined costs in comparison with the latest available actual costs

** Refer to Annex F, if necessary.*

e) Description and justification of the contribution of the the local targets to the performance of the European ATM network

** Refer to Annex R, if necessary.*

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

** Refer to Annex R, if necessary.*

3.4.2 - Cost efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #2 - UK - Zone C

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

2019 baseline value for the determined costs (in real terms and in national currency)	12,948,337
2019 latest available service units forecast	994,100
2019 baseline value for the determined unit costs (in real terms and in national currency)	**13.03**

b) Cost-efficiency performance targets

Terminal charging zone	**Baseline 2019**	**RP3 Performance Plan (determined 2020-2024)**					**CAGR**
Name of the CZ	**2019 B**	**2020 D**	**2021 D**	**2022 D**	**2023 D**	**2024 D**	**2019B-2024D**
Total terminal costs in nominal terms (in national currency)		13,355,046	13,249,924	14,174,118	13,528,112	14,317,370	
Total terminal costs in real terms (in national currency at 2017 prices)	**12,948,337**	**12,546,659**	**12,203,824**	**12,799,069**	**11,976,209**	**12,426,398**	**-0.8%**
YoY variation		-3.1%	-2.7%	4.9%	-6.4%	3.8%	
Total terminal Service Units (TNSU)	994,100	1,005,900	1,015,600	1,041,800	1,054,300	1,061,000	1.3%
YoY variation		1.2%	1.0%	2.6%	1.2%	0.6%	
Real terminal unit costs (in national currency at 2017 prices)	**13.03**	**12.47**	**12.02**	**12.29**	**11.36**	**11.71**	**-2.1%**
YoY variation		-4.2%	-3.7%	2.2%	-7.5%	3.1%	
Real terminal unit costs (in EUR2017) [1]	**14.87**	**14.24**	**13.72**	**14.03**	**12.97**	**13.37**	**-2.1%**
YoY variation		-4.2%	-3.7%	2.2%	-7.5%	3.1%	

National currency	**GBP**
[1] Average exchange rate 2017 (1 EUR=)	**0.876**

c) Description and justification of the methodology used to estimate the baseline values

To estimate the baseline value for determined costs (DC) in 2019, the CAA has used the best forecast available for total costs and split by cost item from NERL. We consider this approach provides the best view on the likely outturn costs in 2019 that are efficient and justified on the basis of capacity requirements and service quality targets in 2019 and RP3. Our response to cost efficiency for En route has further details on our approach.

To estimate the baseline value for determined unit costs (DUCs) in 2019, we have used the STATFOR traffic forecast from February 2019 for London Approach total service units (TSUs). This is the latest 7-year forecast available and we have assessed that this is the best forecast to use. Our assessment of the STATFOR forecast and why it is preferred to the traffic forecast in NERL's business plan is set out in the CAA Decision Document CAP 1830. In summary, we consider the STATFOR forecast has a methodology that should mean it is more accurate and we also took into account the independence of the forecast.

** Refer to Annex F, if necessary.*

d) Justification for the level of the baseline value for the determined costs in comparison with the latest available actual costs

The UK baseline determined cost (DC) in 2019 is £12.948 million (in real 2017 prices), an increase of 1.2% compared with the actual costs in 2018 (£12.798 million).

The main drivers of this change are and increase in NERL's operating costs. Increases in NERL's costs are driven by growth in traffic and significant changes to the way it expects to run its business in the coming years. It will introduce new technology to replace existing legacy systems, undertake an airspace modernisation programme, improve operational resilience and manage air traffic growth and more complex interactions between air traffic movements in busier airspace.

We also considered analysis undertaken by Steer/Helios on NERL's operating and capital costs, in particular where there was alignment between the Steer/Helios analysis and airspace users' feedback that NERL's forecasts were not properly justified.

As set out in our response to point (c) above, from our review we acknowledged that NERL needs to deal with quality of service issues, make progress with technology change, and push forward work on airspace modernisation. This means that costs in 2019 will be higher than actual costs in 2017 and 2018, but we expect costs to reduce during RP3. We have therefore accepted NERL's projected cost increases from 2017 to 2019, but assumed that NERL could achieve more significant efficiencies over RP3, in line with historical trends.

** Refer to Annex F, if necessary.*

e) Description and justification of the contribution of the the local targets to the performance of the European ATM network

For RP3, we have developed final decisions and a performance plan and targets consistent with EU-wide targets set by the European Commission for en route. We have also adopted the same approach for London Approach.

Our London Approach cost efficiency target is an average reduction of Determined Unit Cost (DUC) of 2.1% per year between 2019 and 2024. This is more challenging than the EU-wide cost efficiency target for en route of an average 1.9% reduction in DUC per year over this period.

We set out further details on our justification for the determined costs and traffic forecasts used to calculate these cost efficiency targets in the CAA's final decisions document CAP 1830.

** Refer to Annex R, if necessary.*

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

In the CAA's final decisions document, CAP 1830, we set out in detail the measures put in place to achieve the DUC targets for en route and terminal DUC. This is summarised in section (f) for the En route table.

For London Approach service in particular, we have retained the current charging arrangements for London Approach in RP3 – a separate terminal charge with the current approach to the allocation of costs. However, we will continue to monitor European developments, and may review our approach in the future.

In consultation on our approach, NERL noted that our approach seemed a pragmatic way forward. Users also did not oppose the proposal to retain the RP2 charging arrangements for London Approach in RP3 with the same approach to the allocation of costs.

On service quality, we proposed that NERL would need to engage with users by the start of RP3 to identify and implement more suitable performance monitoring metrics under the requirements of its licence. We expect NERL to engage with users by the start of RP3 to identify and implement suitable performance monitoring metrics for the London Approach service.

** Refer to Annex R, if necessary.*

3.4.3 - Pension assumptions

NATS (Continental)

3.4.3.1 Total pension costs (in nominal terms in '000 national currency)

Pension costs	2020D	2021D	2022D	2023D	2024D
Total pension costs	94,912	95,996	96,594	72,981	71,891
En-route activity	94,912	95,996	96,594	72,981	71,891
Terminal activity					
Other activities					

3.4.3.2 Assumptions for the "State" pension scheme (in nominal terms in '000 national currency)

Are there different contribution rates for different staff categories? If yes, how many?	Select

<Staff category name>	2020D	2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies					
Employer % contribution rate to this scheme					
Total pension costs in respect of this scheme					
Number of employees the employer contributes for in this scheme					

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP3
N/A - no "state" pension scheme

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs
N/A - no "state" pension scheme

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users
N/A - no "state" pension scheme

3.4.3.3 Assumptions for the occupational "Defined contributions" pension scheme (in nominal terms in '000 national currency)

Are there different contribution rates for different staff categories? If yes, how many?	Yes-2

NERL (UKATS) Defined Contribution Scheme	2020D	2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies	77,703	87,920	96,532	99,734	107,649
Employer % contribution rate to this scheme	0	0	0	0	0
Total pension costs in respect of this scheme	**11,631**	**13,167**	**14,494**	**14,981**	**16,173**
Number of employees the employer contributes for in this scheme	1,447	1,502	1,539	1,505	1,536

NERL (UKATS) Pension Cash Alternative (+ ERNIC)	2020D	2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies	62,579	60,734	58,279	53,495	49,818
Employer % contribution rate to this scheme	0	0	0	0	0
Total pension costs in respect of this scheme	**16,961**	**16,384**	**15,673**	**14,342**	**13,246**
Number of employees the employer contributes for in this scheme	617	585	546	488	444

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP3
By law, UK companies are required by the State to provide a minimum level of pension benefits to employees. NERL, through its parent company NATS Limited, meets these legal obligations by providing pension benefits to its staff either through a defined benefit pension scheme or through a defined contribution scheme, unless staff opt-out. NERL operates two pension schemes: a legacy defined benefit scheme which has been closed to new members since 2009 and a defined contribution scheme open to new members since 2009. The determined costs reflect the forecast cash costs rather than the forecast accounting charge, calculated under IAS, included in NERL's forecast profit and loss account.

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs

The pension scheme information presented above covers NATS' Group employees who are within NERL's UKATS price control.

Employer contributions are made to the defined contribution scheme which match employee contributions on a 2:1 basis up to a maximum employer cost of 18% of pensionable salary. The average employer cost is 15% of pensionable salary, which is the basis for the projections.

The Pension Cash Alternative category includes costs relating to ex-Defined Benefit members who have opted out of the DB scheme. This has a lower employer contribution rate than the DB scheme. Further details are provided below under the description of the DB scheme.

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users
NERL bears the cost risk associated with contributions to the defined contribution scheme. During 2016 and 2017, 922 active members of the NATS group's defined benefit pension scheme (see below) deferred their membership or transferred out to take advantage of the pension cash alternative offered in lieu of employer defined benefit pension contributions. The pension cash alternative is less costly and lower risk than the costs of the regular pension cost of the defined benefit pension scheme and customers will benefit from this through lower prices. The number of active members transferring out of the defined benefit scheme reduced scheme assets and liabilities by around £1.7bn. This represents a significant de-risking of the company's exposure to the defined benefit scheme. The CAA has reviewed the forecast RP3 pension costs in NERL's business plan for efficiency. Where the CAA made efficiency adjustments to operating costs, which includes staff operating costs, it also made equivalent adjustments to the ongoing pension costs for the DB and DC schemes.

3.4.3.4 Assumptions for the occupational "Defined benefits" pension scheme (in nominal terms in '000 national currency)

Does the ANSP assume liability for meeting future obligations for the occupational "Defined benefits" scheme?	Yes
Is the occupational "Defined benefits" pension scheme funded?	Yes

	2020D	2021D	2022D	2023D	2024D
Total pensionable payroll to which this scheme applies	113,915	113,094	110,696	103,456	99,700
Total pension costs in respect of this scheme	**66,320**	**66,445**	**66,428**	**43,658**	**42,473**
- in respect of regular pension costs	47,503	47,160	46,714	43,658	42,473
- in respect of non-recurring deficit repair	18,818	19,282	19,716	0	0
- reported as staff costs (in reporting tables)	See comment in box below				
- not reported as staff costs (in reporting tables): please use comment box					
Actuarial assumptions					
% discount rate	Pre-retirement: 4.65% p.a. Post-retirement: 1.90% p.a.				
% projected increase in benefits	Pension increases: RPI inflation (for pensions earned prior to 1 November 2013) or CPI inflation (for pensions earned after 31 October 2013 service)				
% annual increase in salaries	CPI inflation				
% expected return on plan assets	0.3% p.a. in excess of the liability discount rate				
Net funding surplus / deficit	-118,377	-89,978	-60,820	-34,797	-21,517
Number of employees the employer contributes for in this scheme	1,346	1,308	1,250	1,134	1,069

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP3

The pension scheme information presented above covers NATS' Group employees who are within NERL's UKATS price control. Note there is no reconciliation to the reporting tables as the figures presented above are on a different basis, consistent with previous returns.

By law, UK companies are required by the State to provide a minimum level of pension benefits to employees. NERL, through its parent company NATS Limited, meets these legal obligations by providing pension benefits to its staff either through a defined benefit pension scheme or through a defined contribution scheme (see above), unless they opt-out. The defined benefit pension scheme is a fully funded scheme and provides benefits based on final pensionable salaries.

The defined benefit scheme is governed by an independent board of Trustees who are responsible for ensuring that the scheme is managed in accordance with the Trust Deed and Rules and for implementing the funding and investment strategy. Trustees must act within the framework of the law. There are several types of law affecting occupational pension schemes, in particular: the general law of trusts and specific UK law applying to pension schemes, including Acts of Parliament and regulations (supported by the codes of practice issued by The Pensions Regulator). These laws determine how occupational pension schemes are administered, the roles and duties of trustees and the roles and objectives of The Pensions Regulator. Two important pieces of pensions legislation in relation to the role and duties of a trustee are the Pensions Act 1995 and the Pensions Act 2004, and the regulations made under them. For example, the Pensions Act 1995 reinforces trust law affecting how schemes should be run and increases the security of members' benefits and the Pensions Act 2004 builds on this with the aims of further improving the security of members' benefits and standards of scheme administration, and strengthening the scheme funding requirements. Both Acts give trustees additional rights and duties. Trustees are also obliged to follow guidance from the Pensions Regulator.

The trust deed and rules set out the Trustees powers and the procedures Trustees must follow. The Trust Deed is a legal document that sets up and governs the scheme. UK legislation also determines how defined benefit schemes should be funded. A statutory funding framework, which replaced the minimum funding requirement, came into force in December 2005. Under these requirements each scheme must meet a 'statutory funding objective' to have sufficient and appropriate assets to cover its technical provisions. Technical provisions are a prudent estimate, based on actuarial principles, of the assets needed to cover the schemes liabilities. Liabilities include pensions in payment, benefits payable to the survivors of former members and those benefits accrued by other members which will be payable in the future.

The trust deed and rules provides members of the defined benefit scheme with significant protections provided by a “no decrement” clause. This clause prevents any amendment which reduces previously accrued or prospective benefits of existing members, including any increase in member contribution rates. These protections were further reinforced at the Public Private Partnership (PPP) through the Trust of a Promise. The Trust of a Promise is a legal document designed to implement an undertaking given by the UK State to employees employed by NATS at the time of the PPP. The Trust of a Promise provides a guarantee that an employee who was a member of the defined benefit scheme on or before the PPP date will have their pension maintained for as long as they remain an employee of NATS and an active member of the scheme. In conjunction with the Trust of a Promise, the Strategic Partnership Agreement (a key PPP document) specifies at Clause 11.6 that a member of the defined benefit scheme continues to accrue benefits under the scheme, on a basis which is overall at least as good as the basis which applied at 25th July 2001, immediately prior to the PPP.

Changes were made by the UK Government to the taxation of pension arrangements for individuals from the start of RP2. These changes included greater flexibility for individuals to manage their pension arrangements as well as material increases in taxation for those active members of defined benefit schemes. In order to reduce the future cost and risk of pension costs, from 1 January 2016 NATS offered individuals impacted by these tax changes an option to opt out of the defined benefit scheme and to receive instead an alternative cash contribution in lieu of employer pension contributions. Determined costs for RP3 include the costs of the alternative cash contribution in lieu of employer pension contributions (see above).

NERL operates under an air traffic services licence granted by the UK Secretary of State for Transport. Condition 6 of this licence requires the company to prepare Regulatory Accounts to help the CAA and the public to assess performance against the assumptions underlying the regulatory charge control. This requires the company to establish Determined Costs relating to pensions calculated using prudent assumptions based on the governance of the scheme and to report differences from Determined Costs annually to CAA through Regulatory Accounts. In the short to medium term the cash costs, which reflect the margin for prudence, may be different to the profit and loss account charge (IAS19), although in the long-run it is expected that they would converge on the same actual cost.

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs

UK legislation requires trustees to undertake actuarial valuations of pension schemes using prudent assumptions and to perform valuations on a regular basis (usually every three years). This forms the basis of the Defined Benefit (DB) contribution rates going forward. Contributions are made up of a standard contribution (regular pension costs) to cover the expected costs of benefits accruing to active members (from being employed for that period) and where there is a deficit in the valuation of the scheme, an element to allow for that deficit to be closed subject to a deficit repair plan agreed with the trustees (non-recurring deficit repair).

The projected contributions for RP3 represent NERL's share of the NATS group scheme, using the NATS cost allocation model which is reviewed by CAA-appointed consultants at each regulatory review. These projections reflect the outcome of the trustees' most recent actuarial valuation as at 31 December 2017 (the 2017 valuation). The 2017 valuation was brought forward by one year (from 31 December 2018) to inform the performance plan.

The 2017 valuation reported a deficit of £270m (a funding ratio of 94%) with the scheme's liabilities at £4.8billion. This is a reduction in the deficit from £459m (a funding ratio of 91%) reported following the 2015 valuation. This is also less than the 2012 valuation deficit of £383m (a funding ratio of 90%), which informed the RP2 projections. NERL's economic share of the scheme is 76% with other group companies accounting for the remaining 24%. Although the 2017 deficit has reduced (driven by strong investment returns and demographic factors), the reduction in real interest rates since the last valuation has increased the cost of future benefit accrual to 41.8% of pensionable pay from 31.8% at the 2015 valuation and 29.4% at the 2012 valuation (all in respect of CPI-linked accrual).

The regular pension costs in NERL's business plan represent a cost of future benefit accrual at 41.7%* of pensionable pay (being the cost indicated by the trustees based on an initial estimate of the valuation results, with a small balancing adjustment to the final recovery plan contributions). The non-recurring deficit repair costs represent the deficit recovery plan with an end date of 31 December 2026. The deficit recovery plan assumes an allowance for investment outperformance of 0.3% higher than the discount rate (the % expected return on plan assets), which means that part of the deficit is expected to be met by excess investment returns, resulting in lower deficit repair payments. Extensive consultation took place between the scheme, the scheme actuary and NATS during the 2017 valuation process. During the consultation, all valuation assumptions, which are set by trustees, were reviewed against relevant benchmarks and found to be reasonable.

The CAA commissioned the Government Actuary's Department (GAD) to review certain aspects of NERL's pension arrangements, including a 2018 annual update following the 2017 pensions valuation by NERL. In summary, GAD found that the NERL's DB and DC pension schemes are more generous than typical UK private sector pension schemes, and, the actuarial assumptions used to calculate the DB pension costs in NERL's RP3 business plan are within a broadly reasonable range compared to wider practice in other DB pension schemes. GAD also noted that the CAA should consider whether the level of prudence in the assumptions supporting the DB scheme valuation is appropriate given that NERL supports the scheme and is a low risk regulated monopoly business.

The CAA applied an efficiency adjustment of £18 million to NERL's assumption of DB pension deficit repair payments beyond 2023 to reflect the reasonable possibility of a surplus arising at the next 2020 valuation and concerns around how customers will benefit if a surplus arises in RP3.

The CAA also made a £6 million adjustment to ongoing pension costs in NERL's business plan line with the broader efficiency adjustments we applied to NERL's on-going costs.

Where, in the Reporting Tables, some occupational "defined benefits" costs (e.g. interest expense related to pensions) are reported in other cost item(s) than staff costs, the cost item(s) should be indicated here below along with corresponding explanations.
N/A

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users

The legal protections, afforded by the trust rules and the trust of a promise (TOAP), rule out actions that are available to many other companies with defined benefit schemes, for example, increasing employee contributions or closing the scheme to existing members. Within its legal constraints NATS has taken the following actions:

- Scheme closure: Closing the scheme to new entrants, with effect from 1 April 2009, following constructive and challenging discussions with trades unions, and achieved with no adverse impact on service delivery;
- Pensionable pay: Capping increases in general pensionable pay for existing members with agreement and support from NATS trades unions (retail price index (RPI) + 0.5% until 2013 and then CPI + 0.25%, each year until January 2024);
- Indexation of liabilities: With support from NATS trades unions, requesting trustees to index annual pension increases in respect of service earned after 1 November 2013 by CPI rather than by RPI. Trustees agreed to this request; and
- Pensionable pay rise assumptions: Requesting trustees to adopt annual pay increase assumptions for the calculation of future liabilities, based on CPI rather than CPI + 0.25% due to the trend in actual pay awards. Trustees agreed to retain CPI in the 31 December 2017 valuation. When adopted for the 31 December 2015 valuation, alongside a reduction in the assumed rate of promotional increases, this resulted in around a £65 million reduction in the NATS scheme's liabilities.

As a result of the 2013 changes to indexation and the pensionable pay cap, NATS avoided cost increases in RP2 of around £200 million. Further, NATS previously estimated that the changes made to the scheme in 2009 would result in avoided cost increases of around £600 million over the ten-year period from 2016.

Further mitigations by NATS have included the following:

- Pension cash alternative: Introducing a pension cash alternative in lieu of employer pension contributions for staff opting out of the defined benefit scheme for tax and other reasons based on independent financial advice. Including national insurance, this alternative pension allowance costs 28.5% of pensionable payroll, which is a fixed cost and less costly than the cost of future benefit accrual of 41.8%. Based on staff opt outs at 31 December 2017, this represents a saving of around £10 million p.a. from 2020. The existence of the pension cash alternative is likely to remain an effective cost mitigation in the future. The rate of this allowance is reviewable and will take into account the costs of future service following every triennial valuation. In addition, as explained above, to the extent that members opt out and then take a cash equivalent transfer value, this significantly de-risks the exposure to pension liabilities. Scheme assets and liabilities have been reduced by around £1.7 billion since 1 January 2016 by removing the risk of a future deficit arising with respect to those liabilities. Customers will benefit from the substitution of the lower pension cost allowance for the higher future service cost as this is passed on through lower prices.
- Transfer values: Ensuring that calculation of cash equivalent transfer values by the trustee is based on best estimate assumptions, rather than more prudent assumptions.
- Scheme governance: Continuing to ensure good governance of the scheme through the efforts of NATS nominated trustees, including input to the scheme's investment strategy. As funding levels have improved, changes to the investment strategy have reduced the exposure of the scheme to return seeking assets, along with increased hedging of the real interest rate exposure of the scheme's liabilities. As an example, it has been estimated that by significantly increasing real interest rate hedge ratios over the last few years (from around 25% to over 50%), the scheme's deficit is around £375 million lower than would have otherwise been the case, given changes in real interest rate levels since the previous valuation (31 December 2015).
- Deficit repair plan: Maintaining the end date of the recovery plan (and the associated expected investment outperformance period) as at 31 December 2026, rather than bringing it forward by three years to reflect the improved funding position. As a result, in NERL's RP3 business plan deficit repair contributions were around £40 million lower and also reduced the risk of a trapped surplus.

As described in the previous response, the CAA has applied an efficiency adjustment of £18 million to NERL's business plan assumption of DB pension deficit repair payments and a £6 million adjustment to ongoing pension costs.

On long term funding, NATS has agreed with the trustees a set of guiding principles for establishing a framework for long-term planning, strategy and de-risking. These enable the expected development of the assets and liabilities of the scheme to the point of full funding to be defined and expressed as a "journey plan", with metrics for monitoring progress and with a framework for decision making if the funding outcome exceeds or falls short of expectations.

In its RP3 business plan, NERL provided a draft of a possible Regulatory Policy Statement (RPS) pertaining to pension costs. NERL said this would allow the trustees of its pension scheme to place greater reliance on the employer's covenant, targeting higher investment returns that would lower its expected long-term pension contributions and so prices to users. The CAA will take account of the use of any surplus that arises in RP3 and the response to the RPS at RP4.

The CAA supports the principle of an RPS and will engage with NERL, the pension trustees and wider stakeholders on the drafting shortly. The CAA plans to have the RPS in place ahead of the next triennial valuation of the NERL scheme in December 2020.

In combination, the actions above have reduced the ex ante pensions cost and mitigated the adverse impact of current financial market conditions, thereby avoiding materially higher pension costs in RP3 and beyond.

3.4.4 - Interest rate assumptions for loans financing the provision of air navigation services

NATS (Continental)

Select number of loans	1

Interest rate assumptions for loans financing the provision of air navigation services
(Amounts in nominal terms in '000 national currency)

Loan #1	2020D	2021D	2022D	2023D	2024D
Description	The loans represent a combination of existing bank loans and bonds, along with assumed new debt for the RP3 period.				
Remaining balance	631,964	703,806	754,389	758,388	754,848
Interest rate %	3.89%	3.89%	3.89%	3.89%	3.89%
Interest amount	24,557	27,348	29,314	29,469	29,332

Other loans	2020D	2021D	2022D	2023D	2024D
Description					
Remaining balance					
Average weighted interest rate %	-	-	-	-	-
Interest amount					

Total loans	2020D	2021D	2022D	2023D	2024D
Total remaining balance	631,964	703,806	754,389	758,388	754,848
Average weighted interest rate %	3.89%	3.89%	3.89%	3.89%	3.89%
Interest amount	24,557	27,348	29,314	29,469	29,332

3.4.5 - Restructuring costs

3.4.5.1 Restructuring costs from previous reference periods to be recovered in RP3

Restructuring costs from previous reference periods approved by the European Commission?	No

3.4.5.2 Restructuring costs planned for RP3

Restructuring costs foreseen for RP3?	Select
If yes, number of charging zones concerned	Select

NATS (Continental)

a) Overall description of the restructuring measures planned for RP3

b) Detailed information on the restructuring measures planned for RP3

Number of restructuring measures	Select

	2020D	2021D	2022D	2023D	2024D
Total restructuring costs by measures	0	0	0	0	0

c) Detailed information on the restructuring costs by nature by charging zone

Total restructuring costs	0	0	0	0	0

	2020D	2021D	2022D	2023D	2024D
Total restructuring costs by charging zone	0	0	0	0	0

Additional comments

SECTION 3.5: ADDITIONAL KPIS / TARGETS

3.5 Additional KPIs / Targets

Annexes of relevance to this section

ANNEX J. OPTIONAL KPIs AND TARGETS

3.5 - Additional KPIs / Targets

Number of additional KPIs	3

3Di	Related KPA	Environment

		2020	2021	2022	2023	2024
		Target	Target	Target	Target	Target
National level	***NERL***	27.8	27.5	27.3	27.0	26.7
	Description and explanation of how this additional KPI and targets support the achievement of the EU and local performance targets	This KPI broadens the scope of the EU environmental target (KEA) as it encompasses vertical as well as horizontal flight effienciency. It has been used consistently in the UK since the start of RP1 and is valued by airspace users as a means of obarserving and driving flight efficiency performance, in particularly complex UK airspace.				

KPI details	
KPI description and rationale	Consistent with our approach to RP1 and RP2, we have set a target for an additional domestic environmental KPI that encompasses both vertical and horizontal flight (in)efficiency, referred to as 3Di. At an operational level, 3Di encourages NERL to provide efficient routeing both horizontally and vertically, in the climb, cruise and descent phases of flight. It also incentivises NERL to work with other ANSPs to provide as direct as possible 'point to point' flights from beyond and through UK airspace. At a more strategic level, it encourages NERL to consider airspace redesign to promote fuel efficient (direct) routes too. The closer to efficient routes NERL provides, the lower their three-dimensional inefficiency (3Di) score. Further details provided in the CAA Decision Document, chapter 3 (CAP 1830) and Appendix D (CAP 1830a).
Formula, metric and parameters	CAP 1830 and CAP 1830a set out the detail of the 3Di metric and incentive mechanism. Further information is set out in the 3Di Protocol, which will be updated for RP3.
Data sources	NERL data - subjected to CAA analysis and review, both as part of the CAA RP3 review and on an annual basis in accordance with the 3Di Protocol.

Additional comments
As mentioned above, the 3Di metric has airspace users' support and has been used to monitor and drive vertical flight efficiency performance (an important dimension gibven the complex airspace arrangements in the UK) since the inception of the performance scheme in 2012.

C3	Related KPA	Capacity

		2020	2021	2022	2023	2024
		Target	Target	Target	Target	Target
	NERL (Lower threshold)	16	20	20	19	20
National level	***NERL (Upper threshold)***	24	30	30	28	30
	Is the additional indicator and target(s) supporting the achievement of the Union-wide targets and the resulting targets at local level? Please specify.	The UK C3 indicator seeks to reflect the relatively high impact of long delays and early delays that have a disproportionate knock-on effect on the punctuality of subsequent flights, and are important to airspace users' operations. It is based on the C2 metric, which is calculated from C1 - the EU capacity KPI.				

KPI details	
KPI description and rationale	Impact Score, referred to as C3, which places greater weight on long delays and delays in the morning and the evening peaks. Chapter 4 of the CAA Decision Document, CAP 1830 provides further detail and analysis.
Formula, metric and parameters	This measure is calculated on the basis of the C2 measure, see the CAA Decision Document, chapter 4 (CAP 1830) and Appendix D (CAP 1830a). The upper value is converted into seconds per flight and then multiplied by a conversion factor developed on the basis of historical relation between C2 and C3. The lower threshold value is 2/3 of the upper threshold.
Data sources	NERL data, as analysed and reviewed by CAA.

Additional comments

The C3 metric has airspace users' support and has been used to monitor and drive capacity performance (focussing particularly operationally critical timing of delays) since before the inception of the EU performance scheme.

C4	Related KPA	Capacity

		2020	2021	2022	2023	2024
		Target	Target	Target	Target	Target
National level	***NERL***	1800	1800	1800	1800	1800
	Is the additional indicator and target(s) supporting the achievement of the Union-wide targets and the resulting targets at local level? Please specify.	Yes. C4 provides an incentive to avoid days where there is a particularly severe disruption which has a disproportionate impact on airline service. Unlike the EU target/incentive and C3, this is generally due to some form of system failure rather than any underlying shortfall in ongoing capacity and therefore helps to focus NERL on the importance of ongoing technical systems resilience.				

KPI details	
KPI description and rationale	Daily excess delay score, referred to as C4, which is based on weighted delays exceeding pre-determined thresholds on a daily basis. Chapter 4 of the CAA Decision Document (CAP 1830) and Appendix D (CAP 1830a) provides further information and analysis.
Formula, metric and parameters	See Appendix E of the CAA Decision Document, CAP 1830a.
Data sources	NERL data, as analysed and reviewed by CAA.

Additional comments
As with the C3 metric, C4 has airspace users' support and has been used to monitor and drive capacity performance (focussing technical resilience related delay) since before the inception of the EU performance scheme.

SECTION 3.6: DESCRIPTION OF KPAS INTERDEPENDENCIES AND TRADE-OFFS INCLUDING THE ASSUMPTIONS USED TO ASSESS THOSE TRADE-OFFS

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

a) Do the measures to reach the targets in the different KPAs require changes in the ANSP functional system that have safety implications? If yes, which mitigation measures are put in place?
NERL continue to develop safety management processes in order to deliver improved safety outcomes and meet obligations under D SESAR (for example, change management procedures based on the the 'barrier model'). It is not expected that specific changes to NERL's functional system are required in order to meet targets in the KPAs. See Executive Summary of the CAA Decision Document, CAP 1830, and Annex S of this performance plan for details on how the interdependencies of safety with other KPAs have been considered.

b) What are the main assumptions used to assess the interdependencies between safety and other KPAs?
See Annex S of this plan for details on how we have consider the interdependencies of safety with other KPAs.

c) What metrics, other than those indicators described in the Regulation, are you monitoring during RP3 to ensure targets in the KPAs of capacity , environment, and cost-efficiency are not degrading safety?
The CAA takes a performance based regulation approach to oversight of key UK aviation entities, including NERL. This means developing a comprehensive risk picture of regulated organisations, to building knowledge and data to make sure regulation can be targeted in the areas where it will make the biggest difference. Further information on the performance based regulation framework can be found at www.caa.co.uk/pbr. Safety regulation of NERL, and NATS more widely, is subject to this risk-based approach. In addition to regular accountable manager meetings and associated tools, one of the key documents used in the oversight of NERL is the NATS Annual Safety Report, which demonstrates that NERL has robust plans in place to ensure the priority of safety in the organisation and that its safety record shows an improving trend.

d) Do targets allow trade-offs in operational decision making to managing resource shortfalls in order to preserve safety performance? Do targets restrict the release of staff for safety activities, such as training?
NATS will always prioritise safety performance regardless of any internal or regulatory KPIs. NERL has stated that safety will always be its priority. In addition to the comprehensive EU safety regulatory system for ATM, NERL has a duty under the UK Transport Act 2000 that it *must secure that a safe system for the provision of authorised air traffic services in respect of a licensed area is provided, developed and maintained* . In the unlikely event that NERL is faced with a potential conflict between service quality and safety, it will prioritise safety over service performance (NERL RP3 Business Plan, Appendix K, page 80). It is for NERL to manage its resources effectively in a manner consistent with its stated objectives and legal duties. As such service quality targets cannot restrict NERL's ability to meet safety obligations as safety has primacy. The Secretary of State and the CAA also have *primary* duties in the exercise of their functions under the Transport Act to maintain a high standard of safety in the provision of air traffic services.

e) Has the State reviewed the ANSP financial and personnel resources that are needed to support safe ATC service provision through safety promotion, safety improvement, safety assurance and safety risk management after changes introduced to achieve targets in other KPAs? Please, explain.
We emphasise that it is for NERL to manage its business within the allowed cost envelope, making decisions on how many staff to employ and how they should be remunerated. Furthermore, under NERL's economic licence it is required to certify annually that it has the necessary financial, management and staff resources to meet its statutory and licence obligations for the following two years. If NERL were to identify any potential issues with meeting this requirement, CAA and NERL would engage accordingly and consider the best course of action.

3.6.2 - Interdependencies and trade-offs between capacity and environment

The Executive Summary of the CAA Decision Document sets out the approach to interdepdencies between KPAs in RP3 - this focuses on ensuring NERL has sufficient operational flexibility to meet the proposed targets, in the context of the UK's wider strategic objectives for the RP3 and beyond.

There has been no explicit consideration of potential trade-offs between capacity and environmental metrics. Notwithstading, it is recognised that NERL is expected to deliver significant airspace and technology programmes during RP3 in a potentially challenging operational context; as such, the proposed targets provide more flexibility than otherwise might have been proposed based on historic performance.

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

The Executive Summary of the CAA Decision Document sets out the approach to interdepdencies between KPAs, in RP3 - this focuses on ensuring NERL has sufficient operational flexibility to meet the proposed targets, in the context of the UK's wider strategic objectives for the RP3 and beyond.

It is recognised that NERL is expected to deliver significant airspace and technology programmes during RP3 in a potentially challenging operational context. This includes challenges in respect of staff demographics, training on new equipment as well as new ATCOs and airspace design, all in the context of traffic growth. The approach for RP3 has therefore been to:
- support greater operational flexibility through higher operating cost allowances;
- match service quality targets with the overall implied level of delay over RP3 for the UK in the Network Operations Plan, rather than more ambitious historical performance; and
- reducing the power of delay incentives, to mitigate the risk that NERL prioritises meeting day to day targets over longer term airspace modernisation or makes windfall gains from easier to achieve out performance.

3.6.4 - Other interdependencies and trade-offs

The Executive Summary of the CAA Decision Document sets out the approach to interdepdencies between KPAs in RP3 - this focuses on ensuring NERL has sufficient operational flexibility to meet the proposed targets, in the context of the UK's wider strategic objectives for the RP3 and beyond.

In particular, one of the key strategic objectives for RP3 is to start to implement the UK airspace modernisation strategy, which will deliver performance and other benefits to airspace users and other stakeholders over the next 20 years. As the monopoly provider of en route and London Approach air traffic services in the UK, NERL has an important role in supporting airspace modernisation. The CAA also has a critical role in developing and implementing and overseeing the strategy. The UK RP3 performance plan recognises the additional resources required by the CAA to fulfil its functions.

SECTION 4: CROSS-BORDER INITIATIVES AND SESAR IMPLEMENTATION

Annexes of relevance to this section

ANNEX N. CROSS-BORDER INITIATIVES

4.1 - Cross-border initiatives and synergies

4.1.1 - Planned or implemented cross-border initiatives at the level of ANSPs

Number of cross-border initiatives	1

Initiative #1	
Name	Borealis Alliance
Description	ANSPs of Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Norway, Sweden and the UK
Expected performance benefits	The Borealis Alliance is currently implementing a major programme to deliver free route airspace above FL310 in Alliance member states by 2020. The programme will create 'cross border' un-restricted free route airspace extending from the eastern boundary of the North Atlantic to the western boundary of Russian airspace enabling significant customer benefits in terms of fuel efficiency, environmental performance and increased capacity. The expected environmental benefit is a reduction in fuel per annum of 3.8kT per annum.

Additional comments

4.1.2 - Investment synergies achieved at FAB level or through other cross-border initiatives

Details of synergies in terms of common infrastructure and common procurement
The iTEC Alliance (http://www.itec.aero/) is a joint collaboration (between DFS, ENAIRE, NATS, Avinor, LVNL, PANSA and Ora Navigacjia) that aims to deliver improved operational performance and increased cost efficiency through four common objectives: (1) Concept of operations – based on SESAR, including 4D trajectory management. (2) Airspace architecture – aligned with FABs and based on common airspace types. (3) System architecture – that features improved interoperability and Flight Objects and SWIM. (4) ATS System – with interchangeable ATS components supported by open standards. The iTEC Alliance brings significant economies of scale to the development of future platform flight data processor and supporting systems by combining efforts with a range of ANSPs across Europe. This not only supports a more efficient delivery of systems for each ANSP but helps to drive further efficiencies through the potential to align other aspects of service delivery from operational training to the maintenance and upgrade of systems. This in turn supports the SESAR-JU that seeks to develop mutually supporting operation through the European Airspace Architecture Study.

4.2 - Deployment of SESAR Common Projects

PCP ATM Functionality (AF) / Sub functionality (s-AF)	Recent and expected progress
AF1 - Extended AMAN and PBN in high density TMA **Note these projects are the responsibility of the airports**	
s-AF1.1 AMAN extended to en-route airspace	
London-Heathrow	- MP Obj. ATC07.1 - AMAN Tools and Procedures: implementation completed in 2009. - MP Obj ATC15.1 - Information Exchange with En-route in Support of AMAN: implementation completed in 2013. - MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace: implementation completed in 2015.
London-Gatwick	- MP Obj. ATC07.1 - AMAN Tools and Procedures: implementation completed in 2009. - MP Obj ATC15.1 - Information Exchange with En-route in Support of AMAN: implementation completed in 2013. - MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace: implementation planned as a trial via a SESAR 2020 project.
London-Stansted	- MP Obj. ATC07.1 - AMAN Tools and Procedures: implementation planned by 2019. - MP Obj ATC15.1 - Information Exchange with En-route in Support of AMAN: implementation completed in 2013. - MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace: not yet implemented.
Manchester Ringway	- MP Obj. ATC07.1 - AMAN Tools and Procedures: implementation planned by 2021. - MP Obj ATC15.1 - Information Exchange with En-route in Support of AMAN: implementation completed in 2013. - MP Obj ATC15.2 - Arrival Management Extended to En-route Airspace: not yet implemented.
s-AF1.2 Enhanced TMA using RNP-based operations	
London-Heathrow	-MP Obj NAV03.2 - RNP 1 in TMA Operations: implementation in progress (32%). Completion expected by 2023. -MP Obj NAV10 - RNP Approach Procedures with Vertical Guidance: implementation completed in 2016.
London-Gatwick	-MP Obj NAV03.2 - RNP 1 in TMA Operations: implementation planned by 2023. -MP Obj NAV10 - RNP Approach Procedures with Vertical Guidance: implementation completed in 2016.
London-Stansted	-MP Obj NAV03.2 - RNP 1 in TMA Operations: implementation in progress (32%). Completion expected by 2023. -MP Obj NAV10 - RNP Approach Procedures with Vertical Guidance: implementation completed in 2016.
Manchester Ringway	-MP Obj NAV03.2 - RNP 1 in TMA Operations: implementation in progress (32%). Completion expected by 2023. -MP Obj NAV10 - RNP Approach Procedures with Vertical Guidance: implementation completed in 2016.
AF2 - Airport Integration and Throughput	
s-AF2.1 DMAN synchronised with predeparture sequencing	
London-Heathrow	- MP Obj AOP05 - Airport CDM: implementation completed in 2015. - MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - SLoA ASP03: implementation completed in 2016.
London-Gatwick	- MP Obj AOP05 - Airport CDM: implementation completed in 2014. - MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - SLoA ASP03: implementation completed in 2014.
London-Stansted	- MP Obj AOP05 - Airport CDM: implementation in progress (16%). Completion expected by 2020. - MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - SLoA ASP03: implementation completed.
Manchester Ringway	- MP Obj AOP05 - Airport CDM: implementation in progress (37%). Completion expected by 2020. - MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC) - SLoA ASP03: implementation completed in 2013.
s-AF2.2 DMAN integrating surface management constraints	
London-Heathrow	- MP Obj AOP04.1 - A-SMGCS Level 1: implementation in progress (93%). Completion expected by 2019. - MP Obj AOP04.2 - A-SMGCS Level 2: implementation in progress (85%). Completion expected by 2019.
London-Gatwick	- MP Obj AOP04.1 - A-SMGCS Level 1: implementation completed in 2013. - MP Obj AOP04.2 - A-SMGCS Level 2: implementation completed in 2008.

London-Stansted	- MP Obj AOP04.1 - A-SMGCS Level 1: implementation completed in 2017. - MP Obj AOP04.2 - A-SMGCS Level 2: implementation completed in 2017.
Manchester Ringway	- MP Obj AOP04.1 - A-SMGCS Level 1: implementatin in progress (57%). Completion expected by 2020. - MP Obj AOP04.2 - A-SMGCS Level 2: implementation in progress (25%). Completion expected by 2019.
s-AF2.3 Time-based separation for final approach	
London-Heathrow	- MP Obj AOP10 - Time Based Separation: implementation completed in 2015.
London-Gatwick	- MP Obj AOP10 - Time Based Separation: implementation not yet planned.
Manchester Ringway	- MP Obj AOP10 - Time Based Separation: implementation planned by 2023.
s-AF2.4 Automated assistance to controller for surface movement planning and routing	
London-Heathrow	- MP Obj AOP13 - Automated Assistance to Controller for Surface Movement Planning and Routing: implementation in progress (7%). Completion expected in 2023.
London-Gatwick	- MP Obj AOP13 - Automated Assistance to Controller for Surface Movement Planning and Routing: development plan commenced with joint governance between GAL and ANS.
London-Stansted	- MP Obj AOP13 - Automated Assistance to Controller for Surface Movement Planning and Routing: implementation not yet planned.
Manchester Ringway	- MP Obj AOP13 - Automated Assistance to Controller for Surface Movement Planning and Routing: implementation planned by 2023.
s-AF2.5 Airport safety nets	
London-Heathrow	-MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC): implementation completed in 2016.
London-Gatwick	-MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC): implementation completed in 2016.
London-Stansted	-MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC): implementation in progress (28%). Completion expected by 2020.
Manchester Ringway	-MP Obj AOP12 - Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC): implementation in progress (33%). Completion expected by 2020.
AF3 - Flexible Airspace Management and Free Route	
s-AF3.1 Airspace management and advanced flexible use of airspace	- MP Obj AOM19.1 - ASM Support Tools to Support Advanced FUA (AFUA): implementation in progress (82%). Completion expected by 2019. - MP Obj AOM19.2 - ASM Management of Real-Time Airspace Data: implementation in progress (18%). Completion expected by 2021. - MP Obj AOM19.3 - Full Rolling ASM/ATFCM Process and ASM Information Sharing: implementation in progress (20%). Completion expected by 2021. - MP Obj AOM19.4 - Management of Pre-defined Airspace Configurations: implementation in progress (5%). Completion expected by 2021.
s-AF3.2 Free route	- MP Obj AOM21.2 - Free Route Airspace: implementation in progress (11%). Completion expected by 2021.
AF4 - Network Collaborative Management	
s-AF4.1 Enhanced short-term ATFCM measures	- MP Obj FCM04.1 - Short Term ATFCM Measures (STAM) - Phase 1: implementation completed in 2012. - MP Obj FCM04.2 - Short Term ATFCM Measures (STAM) - Phase 2: implementation completed in 2018.
s-AF4.2 Collaborative NOP	- MP Obj FCM05 - Interactive Rolling NOP: implementation in progress (78%). Completion expected by 2021.
s-AF4.3 Calculated take-offtTime to target times for ATFCM purposes	No LSSIP info available.
s-AF4.4 Automated support for traffic complexity assessment	- MP Obj FCM06 - Traffic Complexity Assessment: implementation comleted in 2000.
AF5 - Initial SWIM	
s-AF5.1 Common infrastructure components	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.

s-AF5.2 SWIM technical infrastructure and profiles	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.
s-AF5.3 Aeronautical information exchange	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.
s-AF5.4 Meteorological information exchange	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.
s-AF5.5 Cooperative network information exchange	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.
s-AF5.5.6 Flight information exchange	- MP Obj INF08.1 - Information Exchanges using the SWIM Yellow TI Profile: implementation in progress (2%). Completion expected in 2024.
AF6 - Initial Trajectory Information Sharing	- MP Obj ITY-AGDL - Initial ATC Air-Ground Data Link Services: implementation completed in 2018.

4.3 - Change management

Change management practices and transition plans for the entry into service of major airspace changes or for ATM system improvements, aimed at minimising any negative impact on the network performance

NERL has provided a summary below of its approach to organisational change management, as well as an overview of its key programmes to be delivered in RP3 and beyond. Where NERL makes significnant system changes it does in accordance with safety regualtory requirements (with appropriate oversight from the CAA). In delivering its capital programmes, it consults with airspace users and other interested stakeholders both mulitlaterally and bilaterally. A key consultation is the Service and Invest Plan (SIP) process and associated capital expenditure governance process, which will be enhanced for RP3. The enhanced governance arrangements are set out in chapters 5 and 9 and Appendix I for the CAA Decision Document, CAP 1830 and CAP 1830a.

Organisational Change Management

During RP2, NERL established a Portfolio, Programmes and Projects Office (P3O) capability, with a view to ensuring it has a strong internal management and governance framework, so that it can focus on delivering agreed outcomes and benefits to costs and timescales. NERL says that this provides a greater level of confidence in the delivery of key milestones and, as plans develop, provides enhanced levels of information to its customers and stakeholders.

NERL notes that at this stage of development in planning with a portfolio looking several years ahead, while the overall programmes and high level outcomes are understood, the underlying detail in some areas, including benefits assessments, will undergo further development. Therefore, benefits assessments, as well as exact planning timescales for major transitions are yet to be fully defined and are the responsibility of programmes to develop. However it does use standardised processes for conducting transitions, which are set out at a high level further below.

Organisational change and performance is monitored through a P3O methodology led by the P3O office, which has overall responsibility for management of the portfolio, including the creation of benefit delivery panels and the associated processes of benefits tracking. The P3O provides detailed portfolio information, including supporting business case development, which is assessed through a range of governance levels through the benefit delivery panels, portfolio management meeting (PMM), the Portfolio Investment Board (PIB), and the Technical Review Committee (TRC).

NERL's Business Change Framework provides a series of processes that enable it to manage the portfolio and its programmes with an overarching quality assurance process. This includes detailed guidance for investment gate reviews, acceptance gate reviews and associated change activities. The latter includes a clear change management policy built around People Centred Implementation (PCI) methodology to support and embed change successfully across the business.

Transition Management

NERL manages service and airspace transitions through a well-established deployment process that it tailors to the scale and complexity of the transition at hand. Typically there are a series of gates and criteria to be met to deployment and may include a limited operational service (LOS) period before full operational service (FOS). The gates are:

- Service Ready for Use
- Service Ready for LOS or FOS
- Service Deployed

Service Ready for Use demonstrates that the service can be delivered in accordance with appropriate service level agreements and all appropriate support arrangements are fully implemented. This means that:

1. The new or updated service is available for consumption by the customer.
2. Known limitations are defined and provided to the customer.
3. Operating procedures and organization changes, as appropriate, are implemented and appropriate competent personnel are in place to operate and support the delivery of the service.
4. ATC Training is complete with appropriate competencies in place. [Applicable to Operational Services only].
5. Compliance to regulatory and legislative requirements has been provided and approval is provided (if applicable).
6. Satisfactory evidence exists for stakeholder acceptance for the Process Gate.

Service Ready for LOS or FOS demonstrates that the service is ready to be transitioned into operational service and all customer and interfacing stakeholders are fully engaged.

1. Transition Plans agreed for scope of activity (LOS or FOS).
2. External customers and key stakeholders have been engaged to enable the transition (including daily service updates with external customers as necessary).
3. Compliance to regulatory and legislative requirements has been provided and approval is provided (if applicable).
4. Satisfactory evidence exists for stakeholder acceptance for the Process Gate.

SECTION 5: TRAFFIC RISK SHARING ARRANGEMENTS AND INCENTIVE SCHEMES

Annexes of relevance to this section

ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING

ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES

ANNEX K. OPTIONAL INCENTIVE SCHEMES

5.1 - Traffic risk sharing

5.1.1 Traffic risk sharing - En route charging zones

United Kingdom			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2.00%	±10.0%	70.0%	5.6%	70.0%	5.6%

5.1.2 Traffic risk sharing - Terminal charging zones

UK - Zone B			Traffic risk-sharing parameters adapted?			Select

UK - Zone C			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2.00%	±10.0%	70.0%	5.6%	70.0%	5.6%

5.2 - Capacity incentive schemes

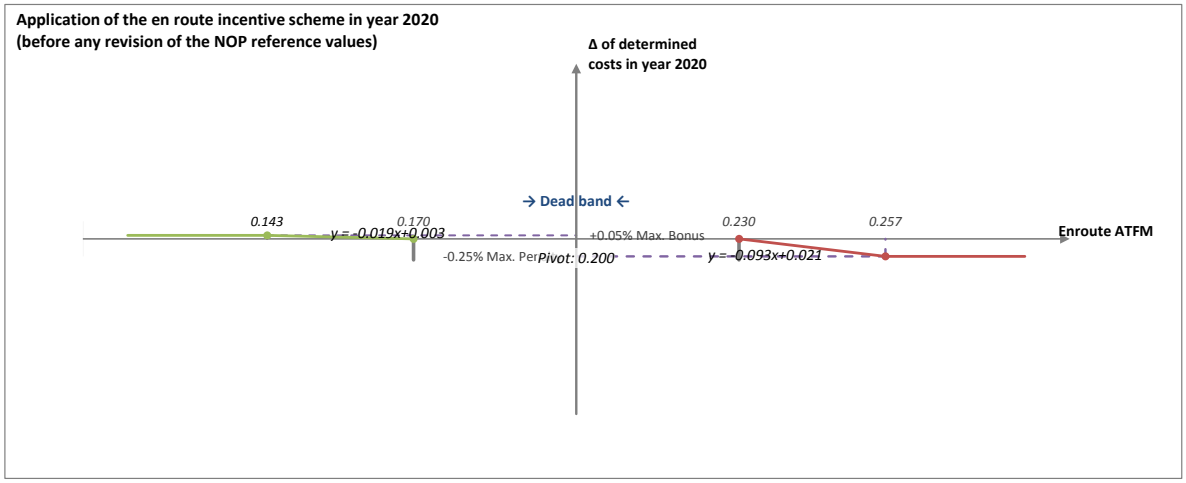
5.2.1 - Capacity incentive scheme - Enroute

5.2.1.1 Parameters for the calculation of financial advantages or disadvantages - Enroute

Enroute	Expressed in	Value
Dead band Δ	%	±15.0%
Max bonus (≤2%)	*% of DC*	0.05%
Max penalty (≥ Max bonus)	*% of DC*	0.25%
The pivot values for RP3 are	fixed	

NATS (Continental)

		2020	2021	2022	2023	2024
NOP reference values (mins of ATFM delay per flight)		0.34	0.34	0.3	0.26	0.27
Alert threshold (Δ Ref. value in fraction of min)		±0.057	±0.057	±0.055	±0.053	±0.054
Performance Plan targets (mins of ATFM delay per flight) (UK C1 target)		0.26	0.32	0.32	0.30	0.32
Pivot values for RP3 (mins of ATFM delay per flight) (UK C2 target)		0.20	0.25	0.25	0.23	0.25
Financial advantages / disadvantages	Dead band range	[0.17-0.23]	[0.21-0.29]	[0.21-0.29]	[0.2-0.26]	[0.21-0.29]
	Bonus range	[0.14-0.17]	[0.19-0.21]	[0.2-0.21]	[0.18-0.2]	[0.2-0.21]
	Penalty range	[0.23-0.26]	[0.29-0.31]	[0.29-0.31]	[0.26-0.28]	[0.29-0.3]



5.2.1.2 Rationale and justification - Enroute

If the pivot values are different that the values in the NOP, explain rationale for the difference and method of calculation**
The pivot values - referred to as C2 - are based on our C1 target adjusted for non-ANSP attributable delay in accordance with the modulation mechanism set out in Annex XIII 1.1(b) of the performance regulation. The CAA Decision Document (CAP 1830, chapter 4 and CAP 1830a Appendix D) sets out the approach to determining C2 from C1 and incentive mechanisms.

*** Refer to Annex I, if necessary.*

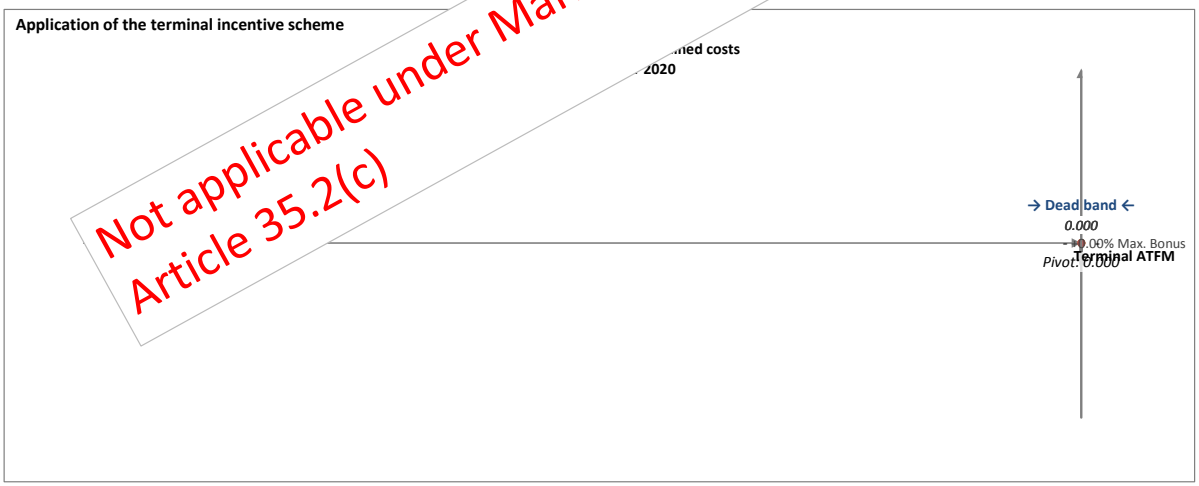
5.2.2 - Capacity incentive scheme - Terminal

5.2.2.1 Parameters for the calculation of financial advantages or disadvantages - Terminal

Terminal	Expressed in	Value
Dead band Δ	Select	
Bonus/penalty range (% of pivot value)	%	±50%
Max bonus	% of DC	
Max penalty	% of DC	
The pivot values for RP3 are	Select	

		2020	2021	2022	2023	2024
Performance Plan targets (mins of ATFM delay per flight)		1.09	1.09		1.09	1.09
Bonus/penalty range Δ (in fraction of min)		±0.000	±0.000		±0.000	±0.000
Pivot values for RP3 (mins of ATFM delay per flight)						
Financial advantages / disadvantages	Dead band range	-			-	-
	Bonus range	-			-	-
	Penalty range	-			-	-

Application of the terminal incentive scheme



5.2.2.2 Rationale and justification - Terminal

Explain how the bonus and penalties are going to be apportioned between the different terminal charging zones and ANSPs providing services in each of them**

*** Refer to Annex I, if necessary.*

5.3 - Optional incentives

Total maximum bonus for all optional incentives (≤2%):	0.75%	Total maximum penalty for optional incentives (≤4%):	1.5%

Number of optional incentives	4

Optional Incentive #1	Related KPA:	Environment	Applies to:	Enroute

Optional Incentive #1 details	
ANSP(s) concerned	NERL
Incentive description and rationale	3Di - this incentive underpins the 3Di annual targets (see other KPIs) and encourages NERL to manage and improve both horizontal and vertical flight efficiency
Maximum bonus (expressed as a % of the determined costs)	0.50%
Maximum penalty (expressed as a % of the determined costs)	0.50%
Other parameters, formulas and metrics	Deadband of +/- 5% applies to the target values. The incentive scheme then follows a smooth gliding path until +/-25% of the target value.
Data sources	NERL

Additional comments
See chapter 3 and Appendix D of the Decision Document, CAP 1830 and CAP 1830a, for details on this incentive scheme and calculation of the incentive.

Optional Incentive #2	KPA:	Capacity	Applies to:	Enroute

Optional Incentive #2 details	
ANSP(s) concerned	NERL
Incentive description and rationale	C3 - this incentive underpins the C3 annual targets (see other KPIs) and encourages NERL to manage ATFM delay during peak times of the day, where impact on customers (airlines) can be greater
Maximum bonus (expressed as a % of the determined costs)	0.25%
Maximum penalty (expressed as a % of the determined costs)	0.75%
Other parameters, formulas and metrics	This incentive in based on an upper threshold, calculated on the basis of the C2 pivot value *60 (to convert it from minutes to seconds) *2.0 (a conversion factor established on the basis of past C2-C3 relationship. This has been updated from 2.2 used in RP2). The annual impact score is calculated by weighting ATFM delays in accordance with scores developed in stakeholder consultation in an earlier price control (CP3). See Appendix D of Decision Document, CAP 1830a, for details.
Data sources	NERL

Additional comments
See chapter 4 and Appendix D of the Decision Document, CAP 1830 and CAP 1830a, for details on this incentive scheme and calculation of the incentive.

Optional Incentive #3	KPA:	Capacity	Applies to:	Enroute

Optional Incentive #3 details	
ANSP(s) concerned	NERL
Incentive description and rationale	C4 - this incentive underpins the C4 annual targets (see other KPIs) and encourages NERL to manage ATFM delay during particularly disruptive days
Maximum bonus (expressed as a % of the determined costs)	0%
Maximum penalty (expressed as a % of the determined costs)	0.25%
Other parameters, formulas and metrics	C4 is calculated by weighting ATFM delay depended daily lower and upper thresholds per season (winter & summer). Delay below the lower threshold is weighted as zero. See Appendix D, CAP 1830a for details.
Data sources	NERL

Additional comments
See chapter 4 and Appendix D of the Decision Document, CAP 1830 and CAP 1830a, for details on this incentive scheme and calculation of the incentive.

Optional Incentive #4	KPA:	Capacity	Applies to:	Enroute

Optional Incentive #4 details	
ANSP(s) concerned	NERL
Incentive description and rationale	NERL has a key role to play in the delivery of the UK airspace modernisation strategy. In reaching its final decisons, the CAA has sought to provide flexibilty to allow NERL to deliver the airspace and technology changes that will support airspace modernisation and therefore provide both future capacity and environment benefits to airspace users. Mindful of this flexibility the CAA has introduced a incentive to hold NERL to account for delivery of key components of its capital programme. The incentive consists of a potential penalty of up to £36 million that would be applied in RP4, if the CAA assesses that NERL had failed to meet expectations.
Maximum bonus (expressed as a % of the determined costs)	0%
Maximum penalty (expressed as a % of the determined costs)	The maximum penalty is capped at £36 million (2017 CPI prices).
Other parameters, formulas and metrics	The CAA Decision Document CAP 1830 sets out the scope and functioning of the delivery incentive. The CAA will carry out a broad assessment of NERL's capital expenditure delivery, supplemented by a focus on the delivery of specific milestones for programmes or projects that lead to important outcomes, linked to airspace modernisation, that benefit users. This assessment will be reasonably flexible and the intention is not that NERL mechanistically delivers programmes that have become uneconomic because of changing circumstances, but we will assess whether it has efficiently delivered (to the fullest extent practical and desirable) the programmes necessary to facilitate airspace modernisation. If NERL does not effectively deliver this programme a reduction will be made to NERL revenue in RP4, or a downward adjustment to its RP4 regulatory asset base, of up to £36 million.
Data sources	CAA analysis of NERL delivery, supported by advice from an independent reviewer.

Additional comments
The Executive Summary, chapters 5 and 9, and Appendix I of the CAA Decision Document (CAP 1830 and 1830a) set out the purpose, scope and functioning of the incentive in detail. It will be embedded in changes to NERL's economic licence.

SECTION 6: IMPLEMENTATION OF THE PERFORMANCE PLAN

6 - IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 Monitoring of the implementation plan

Description of the processes put in place by the NSA to monitor the implementation of the Performance Plan including the yearly monitoring of all KPIs and PIs defined in Annex I of the Regulation and a description of the data sources
NERL is subject to an economic licence (www.caa.co.uk/natslicence) under the UK Transport Act 2000 – this provides a key oversight and enforcement tool, as NERL's RP3 targets, incentives and requirements will be transposed inthe the NERL licence and therefore used to hold it to account for delivery and performance. In addition to the annual NSA monitoring report, the UK CAA monitors the performance of NERL through: • Business plans (required under Condition 10 of NERL's Licence, and also required under the EASA oversight and common requirements regulation) • Quarterly operational performance reports (required under Condition 11 of NERL's Licence) • Service and Investment Plans (submitted twice a year under Condition 10 of NERL's Licence) • Regular working level meetings between the CAA and NERL to discuss Licence matters The NERL Licence Group (NLG) – an internal cross-CAA group - is responsible for oversight of all aspects of the NERL licence, providing recommendations to the CAA Executive Committee and Board for key regulatory decisions.

6.2 Non-compliance with targets during the reference period

Description of the processes put in place and measures to be applied by the NSA to address the situation where targets are not reached during the reference period
In addition to any automatic application of financial penalties, if performance shortfalls are identified through the above means the CAA will engage with NERL (requesting further information where required) to identify causes, likelihood of performance improvement and potential corrective measures. Where appropriate, the CAA will notify the Commission and PRB of any persistent underperformance. The CAA's approach to enforcement of economic licences is set out in CAP 1234 (www.caa.co.uk/cap1234) and provides guidance on the application of our statutory and regulatory obligations under the Transport Act 2000 and NERL licence.

7 - ANNEXES

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
- ANNEX A.x - En route Charging Zone #x

ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
- ANNEX B.x - Terminal Charging Zone #x

ANNEX C. CONSULTATION
ANNEX D. LOCAL TRAFFIC FORECASTS
ANNEX E. INVESTMENTS
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES
ANNEX J. OPTIONAL KPIs AND TARGETS
ANNEX K. OPTIONAL INCENTIVE SCHEMES
ANNEX L. JUSTIFICATION FOR SIMPLIFIED CHARGING SCHEME
ANNEX M. COST ALLOCATION
ANNEX N. CROSS-BORDER INITIATIVES
ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS
ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS
ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS
ANNEX S. INTERDEPENDENCIES
ANNEX T. OTHER MATERIAL
ANNEX Z. CORRECTIVE MEASURES*

** Only as per Article 15(6) of the Regulation*

Legend for the Check sheet	
TRUE	Cells highlighted in green indicate that the items checked are equal and different to 0
TRUE	Cells highlighted in pale yellow indicate that the items entering the check are blank or 0
FALSE	Cells highlighted in red indicate that the items checked are not equal
FALSE	Cells highlighted in pale yellow indicate that one of the items entering the check is blank or 0
#DIV/0	Cells highlighted in orange indicate formulae that resulted in error
N/A	Cells highlighted in white with grey "N/A" indicate that the check is not applicable for the given combination of year and/or RP

		INFORMATION ON COSTS AND UNIT COSTS - TABLE 1	Rounding (dec. plcs)	Actual						Forecast		Determined				
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
#	Item	**Checks for Route TABLE 1 (consolidated)**														
#001	4.2	Check that values in Table 1 Consolidated are sums of the same items across all the entities (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total determined/actual costs (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
		Sum of Total determined/actual costs for all entities (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
		Sum of items 1.1 to 1.5 (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
		Sum of items 2.1 to 2.9 (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
#004	2.10	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
		Total costs by service (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
#100	5.1	Check that inflation rate is not negative	3							TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Inflation rate								2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
#009	5.2	Check calculation of Determined/Actual inflation index (base 100 in 2017)	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Calculated price index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#017b	5.5	Check calculation of the unit cost for RP3	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units			78.00	69.42	66.95	62.93	56.14	55.57	57.68	57.93	54.64	53.52	49.80	48.39
		Unit Cost			78.00	69.42	66.95	62.93	56.14	55.57	57.68	57.93	54.64	53.52	49.80	48.39
#063	4.2	Check total costs after deduction of costs for exempted VFR	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total determined/actual costs(in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
		Total costs by service deducted by Costs for exempted VFR flights (in '000 NC)		##########	##########	##########	657,372	666,365	660,596	694,359	746,880	779,903	764,803	781,316	754,070	759,099
#	Item	**Checks for Route Table 1 ANSP**														
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
		Sum of items 1.1 to 1.5 (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
		Sum of items 2.1 to 2.9 (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
#004	2.1	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
		Total costs by service (in '000 NC)		##########	##########	##########	573,075	577,165	567,867	602,995	653,538	678,457	661,997	675,863	643,690	646,695
#009	5.2	Check calculation of Determined/Actual inflation index (base 100 in 2017)	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Calculated price index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#014b RP3	5.3	Check total costs into real terms (in '000 NC) RP3-current cost accounting	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total determined/actual costs after deduction of costs for exempted VFR flights / price index (in '000 NC)		##########	##########	##########	592,668	592,748	567,867	588,429	626,259	637,390	609,732	610,297	569,848	561,282
		Total costs real terms (in '000 NC)		##########	##########	##########	592,668	592,748	567,867	588,429	626,259	637,390	609,732	610,297	569,848	561,282
#016	5.4	Check that Service Units are the same for all entities (in '000)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total Service Units (ANSP)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
		Total Service Units (Consolidated)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
#017b	5.5	Check calculation of the unit cost for RP3	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units		64.20	68.44	60.45	58.37	54.51	48.26	48.26	50.47	50.39	47.30	46.29	42.51	41.23
		Unit Cost		64.20	68.44	60.45	58.37	54.51	48.26	48.26	50.47	50.39	47.30	46.29	42.51	41.23
#006	5.1	Check that inflation rate for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Inflation rate (%) (ANSP)		2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
		Inflation rate (%) (Consolidated)		2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
#006b	5.2	Check that inflation index for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Price Index (ANSP)		92.85	95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index (Consolidated)		92.85	95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#019	3.5	Check calculation of cost of capital pre-tax rate	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Cost of capital pre tax rate (%)		6.800%	6.800%	6.800%	5.900%	5.900%	5.900%	5.900%	5.900%	2.900%	2.900%	2.900%	2.900%	2.900%
		Cost of capital / total asset base (%)		6.800%	6.800%	6.800%	5.900%	5.900%	5.900%	5.900%	5.900%	2.900%	2.900%	2.900%	2.900%	2.900%
#020	3.8	Check proportion of financing through equity is coherent with components	3	TRUE	FALSE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Proportion of financing through equity calculated from components is (in %):		40.20%	39.90%	40.10%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
		Proportion of financing through equity is (in %):		40.20%	40.00%	40.10%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
#018	3.4	Check total asset base (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Sum of assets (in '000 NC)		1,005,300	1,007,679	992,116	968,261	897,775	842,598	830,401	826,272	868,809	979,725	1,058,617	1,060,952	1,057,284
		Total asset base (in '000 NC)		1,005,300	1,007,679	992,116	968,261	897,775	842,598	830,401	826,272	868,809	979,725	1,058,617	1,060,952	1,057,284
#065	3.4	Check that no cost of capital is calculated if no asset base is reported	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total asset base (in '000 NC)		1,005,300	1,007,679	992,116	968,261	897,775	842,598	830,401	826,272	868,809	979,725	1,058,617	1,060,952	1,057,284
		Cost of capital (in '000 NC)		68,159	68,119	67,166	56,740	52,610	49,376	48,662	48,420	25,282	28,510	30,806	30,874	30,767
#	Item	**Checks for Route Table 1 MET**														
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
		Sum of items 1.1 to 1.5 (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
		Sum of items 2.1 to 2.9 (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
#004	2.1	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
		Total costs by service (in '000 NC)		##########	##########	##########	28,438	27,852	26,446	27,081	26,600	30,938	30,194	31,632	35,186	35,390
#009	5.2	Check calculation of Determined/Actual inflation index (base 100 in 2017)	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Calculated price index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index			95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#014 RP3	5.3	Check total costs into real terms (in '000 NC) RP3	3	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Total determined/actual costs after deduction of costs for exempted VFR flights / price index (in '000 NC)		##########	##########	##########	29,202	28,440	26,446	26,574	25,744	29,428	28,283	29,252	32,345	32,092
		Total costs real terms (in '000 NC)		##########	##########	##########	29,410	28,604	26,446	26,427	25,490	29,065	27,810	28,563	31,149	30,716
#016	5.4	Check that Service Units are the same for all entities (in '000)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total Service Units (MET)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
		Total Service Units (Consolidated)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
#017b	5.5	Check calculation of the unit cost for RP3	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units		3.27	3.09	2.92	2.90	2.63	2.25	2.17	2.05	2.30	2.16	2.17	2.32	2.26
		Unit Cost		3.27	3.09	2.92	2.90	2.63	2.25	2.17	2.05	2.30	2.16	2.17	2.32	2.26
#006	5.1	Check that inflation rate for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Inflation rate (%) (ANSP)		2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
		Inflation rate (%) (Consolidated)		2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
#006b	5.2	Check that inflation index for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Price Index (ANSP)		92.85	95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index (Consolidated)		92.85	95.27	96.69	96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#019	3.5	Check calculation of cost of capital pre-tax rate	3	N/A	N/A	N/A	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Cost of capital pre tax rate (%)		N/A	N/A	N/A	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%
		Cost of capital / total asset base (%)		N/A	N/A	N/A	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%	5.300%
#020	3.8	Check proportion of financing through equity is coherent with components	2	N/A	N/A	N/A	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Proportion of financing through equity calculated from components is (in %):		N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		Proportion of financing through equity is (in %):		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
#018	3.4	Check total asset base (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Sum of assets (in '000 NC)		0.000	0.000	0.000	39,505.000	39,505.000	39,505.000	39,505.000	39,505.000	37,554.787	37,554.787	37,554.787	37,554.787	37,554.787
		Total asset base (in '000 NC)		0.000	0.000	0.000	39,505.000	39,505.000	39,505.000	39,505.000	39,505.000	37,554.787	37,554.787	37,554.787	37,554.787	37,554.787
#065	3.4	Check that no cost of capital is calculated if no asset base is reported	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total asset base (in '000 NC)		0.000	0.000	0.000	39,505.000	39,505.000	39,505.000	39,505.000	39,505.000	37,554.787	37,554.787	37,554.787	37,554.787	37,554.787
		Cost of capital (in '000 NC)		0.000	0.000	0.000	2,088.000	2,088.000	2,088.000	2,088.000	2,088.000	1,984.923	1,984.923	1,984.923	1,984.923	1,984.923
#	Item	**Checks for Route Table 1 NSA**														
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
		Sum of items 1.1 to 1.5 (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
		Sum of items 2.1 to 2.9 (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
#004	2.10	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
		Total costs by service (in '000 NC)		56,918.000	60,137.000	58,351.838	55,858.412	61,348.080	66,282.816	64,282.503	66,741.612	70,507.453	72,611.745	73,821.427	75,193.617	77,014.029
#014 RP3	5.3	Check total costs into real terms (in '000 NC) RP3	3	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Total determined/actual costs after deduction of costs for exempted VFR flights / price index (in '000 NC)		##########	##########	##########	55,858	61,348	66,283	64,283	66,742	70,507	72,612	73,821	75,194	77,014
		Total costs real terms (in '000 NC)		##########	##########	##########	57,768	63,004	66,283	62,730	63,956	66,240	66,879	66,660	66,568	66,842
#016	5.4	Check that Service Units are the same for all entities (in '000)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total Service Units (NSA)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
		Total Service Units (Consolidated)		##########	##########	##########	10,154	10,875	11,768	12,194	12,408	12,648	12,891	13,183	13,406	13,615
#017b	5.5	Check calculation of the unit cost for RP3	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units		6.38	6.47	6.05	5.69	5.79	5.63	5.14	5.15	5.24	5.19	5.06	4.97	4.91
		Unit Cost		6.38	6.47	6.05	5.69	5.79	5.63	5.14	5.15	5.24	5.19	5.06	4.97	4.91
#019	3.5	Check calculation of cost of capital pre-tax rate	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Cost of capital pre tax rate (%)		4.700%	4.600%	4.600%	4.600%	4.600%	4.600%	4.700%	4.600%	4.600%	4.600%	4.600%	4.600%	4.600%
		Cost of capital / total asset base (%)		4.700%	4.600%	4.600%	4.600%	4.600%	4.600%	4.700%	4.600%	4.600%	4.600%	4.600%	4.600%	4.600%
#020	3.8	Check proportion of financing through equity is coherent with components	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Proportion of financing through equity calculated from components is (in %):		72.00%	69.00%	67.00%	68.00%	68.00%	68.00%	73.00%	54.00%	60.00%	60.00%	60.00%	60.00%	60.00%
		Proportion of financing through equity is (in %):		72.00%	69.00%	67.00%	68.00%	68.00%	68.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
#018	3.4	Check total asset base (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Sum of assets (in '000 NC)		9,162.000	7,860.000	6,558.000	5,256.000	3,954.000	2,652.000	1,350.000	350.000	1,065.000	935.000	783.000	652.000	500.000
		Total asset base (in '000 NC)		9,162.000	7,860.000	6,558.000	5,256.000	3,954.000	2,652.000	1,350.000	350.000	1,065.000	935.000	783.000	652.000	500.000
#065	3.4	Check that no cost of capital is calculated if no asset base is reported	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total asset base (in '000 NC)		9,162.000	7,860.000	6,558.000	5,256.000	3,954.000	2,652.000	1,350.000	350.000	1,065.000	935.000	783.000	652.000	500.000
		Cost of capital (in '000 NC)		427.000	365.000	304.000	244.000	183.466	123.000	63.002	16.000	49.000	43.000	36.000	30.000	23.000

Table 1 - Total Costs and Unit Costs

United Kingdom
Currency : GBP £
All Entities

	Actual costs 2012-2019								Determined costs - Performance Plan - RP3				
Cost details	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)													
1.1 Staff	273,294	266,644	250,904	261,862	274,115	265,678	300,362	*303,445*	337,084	342,382	363,458	333,187	327,013
of which, pension costs	0	0	0	0	0	0	0	*63,505*	85,246	86,535	87,252	66,063	65,003
1.2 Other operating costs	166,812	176,206	172,580	157,592	157,915	164,356	171,044	*211,671*	224,902	230,468	237,056	232,127	231,757
1.3 Depreciation	133,259	157,111	161,810	163,484	163,024	162,603	156,207	*155,063*	174,247	146,381	132,949	141,299	153,054
1.4 Cost of capital	68,586	68,484	67,470	59,072	54,881	51,587	50,813	*50,524*	27,316	30,538	32,827	32,889	32,775
1.5 Exceptional items	16,789	56,387	17,137	15,361	16,430	16,371	15,933	*26,177*	16,353	15,035	15,027	14,567	14,499
1.6 Total costs	**658,741**	**724,833**	**669,901**	**657,372**	**666,365**	**660,596**	**694,359**	***746,880***	**779,903**	**764,803**	**781,316**	**754,070**	**759,099**
Total % n/n-1		10.0%	-7.6%	-1.9%	1.4%	-0.9%	5.1%	*7.6%*	4.4%	-1.9%	2.2%	-3.5%	0.7%
2. Detail by service (in nominal terms)													
2.1 Air Traffic Management	475,867	529,274	483,033	477,941	482,523	475,439	505,268	*547,559*	574,242	562,475	574,594	548,711	551,680
2.2 Communication	44,566	48,322	44,027	43,483	43,940	43,293	46,069	*49,930*	51,834	50,576	51,636	49,178	49,407
2.3 Navigation	14,799	17,654	16,671	16,423	16,501	16,225	16,673	*18,071*	18,760	18,305	18,688	17,798	17,881
2.4 Surveillance	30,109	32,211	29,348	28,986	29,290	28,859	30,709	*33,283*	34,552	33,714	34,420	32,782	32,935
2.5 Search and rescue	0	0	0	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	3,995	4,046	5,698	4,384	3,475	3,495	3,835	*4,157*	4,315	4,211	4,299	4,094	4,113
2.7 Meteorological services	29,130	28,718	28,213	28,438	27,852	26,446	27,081	*26,600*	30,938	30,194	31,632	35,186	35,390
2.8 Supervision costs	6,866	7,259	7,248	7,067	6,529	6,493	6,357	*6,292*	6,047	5,923	6,037	5,732	5,712
2.9 Other State costs	53,409	57,347	55,663	50,650	56,255	60,346	58,367	*60,988*	59,214	59,405	60,011	60,589	61,980
2.10 Total costs	**658,741**	**724,833**	**669,901**	**657,372**	**666,365**	**660,596**	**694,359**	***746,880***	**779,903**	**764,803**	**781,316**	**754,070**	**759,099**
Total % n/n-1		10.0%	-7.6%	-1.9%	1.4%	-0.9%	5.1%	*7.6%*	4.4%	-1.9%	2.2%	-3.5%	0.7%
3. Complementary information (in nominal terms)													
Average asset base													
3.1 Net book val. fixed assets	939,762	927,485	865,540	878,999	888,721	908,862	914,061	*967,744*	1,038,520	1,067,044	1,027,053	985,372	954,109
3.2 Adjustments total assets	41,682	50,556	71,695	98,161	91,589	83,411	90,061	*52,738*	-99,615	-77,126	37,971	87,523	117,462
3.3 Net current assets	33,018	37,497	61,439	35,862	-39,076	-107,518	-132,866	*-154,355*	-31,476	28,297	31,931	26,263	23,768
3.4 Total asset base	1,014,462	1,015,539	998,674	1,013,022	941,234	884,755	871,256	*866,127*	907,429	1,018,215	1,096,955	1,099,159	1,095,339
Cost of capital %													
3.5 Cost of capital pre tax rate	6.76%	6.74%	6.76%	5.83%	5.83%	5.83%	5.83%	*5.83%*	3.01%	3.00%	2.99%	2.99%	2.99%
3.6 Return on equity													
3.7 Average interest on debts													
3.8 Share of financing through equity													
Costs of common projects													
3.9 Common projects	0	0	0	8,958	10,651	11,885	7,633	*5,292*	5,009	5,498	5,519	5,493	5,547
Costs of new and existing investments													
3.10 Depreciation	0	0	0	0	0	0	0	*0*	170,035	142,164	127,614	132,699	144,499
3.11 Cost of capital	0	0	0	0	0	0	0	*0*	25,282	28,510	30,806	30,874	30,767
3.12 Cost of leasing	0	0	0	0	0	0	0	*0*	5,517	5,556	5,510	5,406	5,424
Eurocontrol costs													
3.13 Eurocontrol costs (Euro)													
3.14 Exchange rate (if applicable)													
3.15 Eurocontrol costs (national currency)	43,386	47,046	45,588	42,365	48,197	53,269	51,491	*53,536*	51,478	51,856	52,304	53,248	54,606
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)													
4.1 Costs for exempted VFR flights	0	0	0	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	**658,741**	**724,833**	**669,901**	**657,372**	**666,365**	**660,596**	**694,359**	***746,880***	**779,903**	**764,803**	**781,316**	**754,070**	**759,099**
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)													
5.1 Inflation %	2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	92.9	95.3	96.7	96.7	97.4	100.0	*102.5*	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**709,460**	**760,858**	**692,804**	**679,846**	**684,357**	**660,596**	**677,586**	***715,704***	**732,695**	**704,421**	**705,520**	**667,565**	**658,841**
Total % n/n-1		7.2%	-8.9%	-1.9%	0.7%	-3.5%	2.6%	*5.6%*	2.4%	-3.9%	0.2%	-5.4%	-1.3%
5.4 Total Service Units	**9,607.9**	**9,754.9**	**9,979.4**	**10,153.9**	**10,874.8**	**11,767.6**	**12,194.2**	**12,408.2**	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**
Total % n/n-1		1.5%	2.3%	1.7%	7.1%	8.2%	3.6%	*1.8%*	1.9%	1.9%	2.3%	1.7%	1.6%
5.5 Unit cost in real terms prices (3)	**73.84**	**78.00**	**69.42**	**66.95**	**62.93**	**56.14**	**55.57**	***57.68***	**57.93**	**54.64**	**53.52**	**49.80**	**48.39**
Total % n/n-1		5.6%	-11.0%	-3.6%	-6.0%	-10.8%	-1.0%	*3.8%*	0.4%	-5.7%	-2.1%	-7.0%	-2.8%

Costs and asset base items in '000 - Service units in '000

(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan.

(2) Determined costs (performance plan) and actual costs in real terms

(3) Determined unit costs (performance plan) and actual unit costs in real terms

United Kingdom
Currency : GBP £
NERL

	Actual costs 2012-2019								Determined costs - Performance Plan - RP3				
Cost details	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)													
1.1 Staff	255,644	249,567	234,499	244,548	257,304	249,520	284,196	286,796	313,515	317,451	337,794	307,982	301,275
of which, pension costs								63,505	82,350	83,610	84,297	63,262	62,173
1.2 Other operating costs	110,160	116,110	114,038	104,260	99,114	101,314	109,066	147,792	160,271	164,838	170,623	163,569	161,654
1.3 Depreciation	127,940	151,794	156,496	158,166	157,707	157,285	151,139	150,353	170,035	142,164	127,614	132,699	144,499
1.4 Cost of capital	68,159	68,119	67,166	56,740	52,610	49,376	48,662	48,420	25,282	28,510	30,806	30,874	30,767
1.5 Exceptional items	10,789	50,387	11,137	9,361	10,430	10,371	9,933	20,177	9,353	9,035	9,027	8,567	8,499
1.6 Total costs	**572,693**	**635,978**	**583,336**	**573,075**	**577,165**	**567,867**	**602,995**	**653,538**	**678,457**	**661,997**	**675,863**	**643,690**	**646,695**
Total % n/n-1		11.1%	-8.3%	-1.8%	0.7%	-1.6%	6.2%	*8.4%*	3.8%	-2.4%	2.1%	-4.8%	0.5%
2. Detail by service (in nominal terms)													
2.1 Air Traffic Management	464,435	518,179	472,117	466,289	471,184	464,250	494,013	*535,421*	*555,836*	*542,352*	*553,711*	*527,353*	*529,815*
2.2 Communication	44,566	48,322	44,027	43,483	43,940	43,293	46,069	*49,930*	*51,834*	*50,576*	*51,636*	*49,178*	*49,407*
2.3 Navigation	14,799	17,654	16,671	16,423	16,501	16,225	16,673	*18,071*	*18,760*	*18,305*	*18,688*	*17,798*	*17,881*
2.4 Surveillance	30,109	32,211	29,348	28,986	29,290	28,859	30,709	*33,283*	*34,552*	*33,714*	*34,420*	*32,782*	*32,935*
2.5 Search and rescue	0	0		0	0			*0*	*0*	*0*	*0*	*0*	*0*
2.6 Aeronautical Information	3,995	4,046	5,698	4,384	3,475	3,495	3,835	*4,157*	*4,315*	*4,211*	*4,299*	*4,094*	*4,113*
2.7 Meteorological services	0	0		0	0			*0*	*0*	*0*	*0*	*0*	*0*
2.8 Supervision costs	4,766	5,263	5,400	5,226	4,718	4,669	4,820	*5,224*	*5,423*	*5,291*	*5,402*	*5,145*	*5,169*
2.9 Other State costs	10,023	10,301	10,075	8,285	8,057	7,077	6,876	*7,453*	*7,737*	*7,549*	*7,707*	*7,340*	*7,375*
2.10 Total costs	**572,693**	**635,978**	**583,336**	**573,075**	**577,165**	**567,867**	**602,995**	***653,538***	**678,457**	**661,997**	**675,863**	**643,690**	**646,695**
Total % n/n-1		11.1%	-8.3%	-1.8%	0.7%	-1.6%	6.2%	*8.4%*	3.8%	-2.4%	2.1%	-4.8%	0.5%
3. Complementary information (in nominal terms)													
Average asset base													
3.1 Net book val. fixed assets	930,600	919,625	858,982	834,238	845,262	866,705	*873,206*	*927,889*	*999,900*	*1,028,554*	*988,716*	*947,165*	*916,054*
3.2 Adjustments total assets	41,682	50,556	71,695	98,161	91,589	83,411	*90,061*	*52,738*	*-99,615*	*-77,126*	*37,971*	*87,523*	*117,462*
3.3 Net current assets	33,018	37,497	61,439	35,862	-39,076	-107,518	*-132,866*	*-154,355*	*-31,476*	*28,297*	*31,931*	*26,263*	*23,768*
3.4 Total asset base	**1,005,300**	**1,007,679**	**992,116**	**968,261**	**897,775**	**842,598**	**830,401**	**826,272**	**868,809**	**979,725**	**1,058,617**	**1,060,952**	**1,057,284**
Cost of capital %													
3.5 Cost of capital pre tax rate	6.78%	6.76%	6.77%	5.86%	5.86%	5.86%	5.86%	*5.86%*	2.91%	2.91%	2.91%	2.91%	2.91%
3.6 Return on equity	11.54%	11.54%	11.54%	10.90%	10.90%	10.90%	10.90%	*10.90%*	5.99%	5.99%	5.99%	5.99%	5.99%
3.7 Average interest on debts	3.58%	3.58%	3.58%	2.50%	2.50%	2.50%	2.50%	*2.50%*	0.86%	0.86%	0.86%	0.86%	0.86%
3.8 Share of financing through equity	40.20%	39.95%	40.08%	40.00%	40.00%	40.00%	40.00%	*40.00%*	40.00%	40.00%	40.00%	40.00%	40.00%
Costs of common projects													
3.9 Common projects				8,958.0	10,651.5	11,884.7	7,633.4	5,291.7	5,008.8	5,498.0	5,518.7	5,493.0	5,547.1
Costs of new and existing investments													
3.10 Depreciation									170,034.6	142,163.8	127,613.8	132,698.7	144,499.1
3.11 Cost of capital									25,282.4	28,510.0	30,805.8	30,873.7	30,767.0
3.12 Cost of leasing									5,517.1	5,555.6	5,510.0	5,406.3	5,423.9
Eurocontrol costs													
3.13 Eurocontrol costs (Euro)													
3.14 Exchange rate (if applicable)													
3.15 Eurocontrol costs (national currency)													
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)													
4.1 Costs for exempted VFR flights													
4.2 Total determined/actual costs	**572,693**	**635,978**	**583,336**	**573,075**	**577,165**	**567,867**	**602,995**	***653,538***	**678,457**	**661,997**	**675,863**	**643,690**	**646,695**
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)													
5.1 Inflation %	2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	92.9	95.3	96.7	96.7	97.4	100.0	102.47545	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**616,787**	**667,587**	**603,280**	**592,668**	**592,748**	**567,867**	**588,429**	***626,259***	**637,390**	**609,732**	**610,297**	**569,848**	**561,282**
Total % n/n-1		8.2%	-9.6%	-1.8%	0.0%	-4.2%	3.6%	*6.4%*	1.8%	-4.3%	0.1%	-6.6%	-1.5%
5.4 Total Service Units	**9,607.9**	**9,754.9**	**9,979.4**	**10,153.9**	**10,874.8**	**11,767.6**	**12,194.2**	***12,408.2***	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**
Total % n/n-1		1.5%	2.3%	1.7%	7.1%	8.2%	3.6%	*1.8%*	1.9%	1.9%	2.3%	1.7%	1.6%
5.5 Unit cost in real terms prices (3)	**64.20**	**68.44**	**60.45**	**58.37**	**54.51**	**48.26**	**48.26**	***50.47***	**50.39**	**47.30**	**46.29**	**42.51**	**41.23**
Total % n/n-1		6.6%	-11.7%	-3.4%	-6.6%	-11.5%	0.0%	*4.6%*	-0.2%	-6.1%	-2.1%	-8.2%	-3.0%

Costs and asset base items in '000 - Service units in '000

(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan.

(2) Determined costs (performance plan) and actual costs in real terms

(3) Determined unit costs (performance plan) and actual unit costs in real terms

United Kingdom
Currency : GBP £
Met Office

Cost details	Actual costs 2012-2019								Determined costs - Performance Plan - RP3				
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)													
1.1 Staff	13,730	13,618	13,213	13,288	12,718	12,059	12,041	*12,281*	15,404	15,558	15,714	14,897	15,046
of which, pension costs									2,897	2,926	2,955	2,801	2,829
1.2 Other operating costs	11,400	11,100	11,000	9,062	9,046	8,299	8,952	*8,231*	8,549	8,651	8,817	9,871	9,926
1.3 Depreciation	4,000	4,000	4,000	4,000	4,000	4,000	4,000	*4,000*	4,000	4,000	5,116	8,433	8,433
1.4 Cost of capital				2,088	2,088	2,088	2,088	*2,088*	1,985	1,985	1,985	1,985	1,985
1.5 Exceptional items									1,000				
1.6 Total costs	**29,130**	**28,718**	**28,213**	**28,438**	**27,852**	**26,446**	**27,081**	***26,600***	**30,938**	**30,194**	**31,632**	**35,186**	**35,390**
Total % n/n-1		-1.4%	-1.8%	0.8%	-2.1%	-5.0%	2.4%	*-1.8%*	16.3%	-2.4%	4.8%	11.2%	0.6%
2. Detail by service (in nominal terms)													
2.1 Air Traffic Management													
2.2 Communication													
2.3 Navigation													
2.4 Surveillance													
2.5 Search and rescue													
2.6 Aeronautical Information													
2.7 Meteorological services	29,130	28,718	28,213	28,438	27,852	26,446	27,081	*26,600*	30,938	30,194	31,632	35,186	35,390
2.8 Supervision costs													
2.9 Other State costs													
2.10 Total costs	**29,130**	**28,718**	**28,213**	**28,438**	**27,852**	**26,446**	**27,081**	***26,600***	**30,938**	**30,194**	**31,632**	**35,186**	**35,390**
Total % n/n-1		-1.4%	-1.8%	0.8%	-2.1%	-5.0%	2.4%	*-1.8%*	16.3%	-2.4%	4.8%	11.2%	0.6%
3. Complementary information (in nominal terms)													
Average asset base													
3.1 Net book val. fixed assets				39,505	39,505	39,505	39,505	*39,505*	37,555	37,555	37,555	37,555	37,555
3.2 Adjustments total assets							0	*0*	0	0	0	0	0
3.3 Net current assets				0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**39,505**	**39,505**	**39,505**	**39,505**	***39,505***	**37,555**	**37,555**	**37,555**	**37,555**	**37,555**
Cost of capital %													
3.5 Cost of capital pre tax rate				5.29%	5.29%	5.29%	5.29%	*5.29%*	5.3%	5.3%	5.3%	5.3%	5.3%
3.6 Return on equity				5.30%	5.30%	5.30%	5.30%	*5.30%*	5.3%	5.3%	5.3%	5.3%	5.3%
3.7 Average interest on debts													
3.8 Share of financing through equity	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	*100.00%*	100.00%	100.00%	100.00%	100.00%	100.00%
Costs of common projects													
3.9 Common projects													
Costs of new and existing investments													
3.10 Depreciation									0	0	0	0	0
3.11 Cost of capital									0	0	0	0	0
3.12 Cost of leasing									0	0	0	0	0
Eurocontrol costs													
3.13 Eurocontrol costs (Euro)													
3.14 Exchange rate (if applicable)													
3.15 Eurocontrol costs (national currency)													
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)													
4.1 Costs for exempted VFR flights													
4.2 Total determined/actual costs	**29,130**	**28,718**	**28,213**	**28,438**	**27,852**	**26,446**	**27,081**	***26,600***	**30,938**	**30,194**	**31,632**	**35,186**	**35,390**
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)													
5.1 Inflation %	2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	92.9	95.3	96.7	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**31,373**	**30,145**	**29,178**	**29,410**	**28,604**	**26,446**	**26,427**	**25,490**	**29,065**	**27,810**	**28,563**	**31,149**	**30,716**
Total % n/n-1		-3.9%	-3.2%	0.8%	-2.7%	-7.5%	-0.1%	*-3.5%*	14.0%	-4.3%	2.7%	9.1%	-1.4%
5.4 Total Service Units	**9,607.9**	**9,754.9**	**9,979.4**	**10,153.9**	**10,874.8**	**11,767.6**	**12,194.2**	***12,408.2***	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**
Total % n/n-1		1.5%	2.3%	1.7%	7.1%	8.2%	3.6%	*1.8%*	1.9%	1.9%	2.3%	1.7%	1.6%
5.5 Unit cost in real terms prices (3)	**3.27**	**3.09**	**2.92**	**2.90**	**2.63**	**2.25**	**2.17**	***2.05***	**2.30**	**2.16**	**2.17**	**2.32**	**2.26**
Total % n/n-1		-5.4%	-5.4%	-0.9%	-9.2%	-14.6%	-3.6%	*-5.2%*	11.9%	-6.1%	0.4%	7.2%	-2.9%

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan.
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

United Kingdom
Currency : GBP £
UK CAA + DfT Eurocontrol

	Actual costs 2012-2019								Determined costs - Performance Plan - RP3				
Cost details	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)													
1.1 Staff	3,920	3,459	3,192	4,026	4,093	4,099	4,126	*4,368*	8,164	9,373	9,950	10,309	10,692
of which, pension costs									0	0	0	0	0
1.2 Other operating costs	45,252	48,996	47,542	44,270	49,755	54,743	53,026	*55,648*	56,082	56,979	57,616	58,688	60,177
1.3 Depreciation	1,319	1,317	1,314	1,318	1,317	1,318	1,068	*710*	212	217	219	167	122
1.4 Cost of capital	427	365	304	244	183	123	63	*16*	49	43	36	30	23
1.5 Exceptional items	6,000	6,000	6,000	6,000	6,000	6,000	6,000	*6,000*	6,000	6,000	6,000	6,000	6,000
1.6 Total costs	**56,918**	**60,137**	**58,352**	**55,858**	**61,348**	**66,283**	**64,283**	***66,742***	**70,507**	**72,612**	**73,821**	**75,194**	**77,014**
Total % n/n-1		5.7%	-3.0%	-4.3%	9.8%	8.0%	-3.0%	*3.8%*	5.6%	3.0%	1.7%	1.9%	2.4%
2. Detail by service (in nominal terms)													
2.1 Air Traffic Management	11,432	11,095	10,916	11,652	11,339	11,189	11,255	*12,138*	*18,406*	*20,123*	*20,883*	*21,358*	*21,865*
2.2 Communication													
2.3 Navigation													
2.4 Surveillance													
2.5 Search and rescue													
2.6 Aeronautical Information													
2.7 Meteorological services													
2.8 Supervision costs	2,100	1,996	1,848	1,841	1,811	1,824	1,537	*1,068*	624	632	635	587	543
2.9 Other State costs	43,386	47,046	45,588	42,365	48,198	53,270	51,491	*53,536*	51,478	51,856	52,304	53,248	54,606
2.10 Total costs	**56,918**	**60,137**	**58,352**	**55,858**	**61,348**	**66,283**	**64,283**	***66,742***	**70,507**	**72,612**	**73,821**	**75,194**	**77,014**
Total % n/n-1		5.7%	-3.0%	-4.3%	9.8%	8.0%	-3.0%	*3.8%*	5.6%	3.0%	1.7%	1.9%	2.4%
3. Complementary information (in nominal terms)													
Average asset base													
3.1 Net book val. fixed assets	9,162	7,860	6,558	5,256	3,954	2,652	1,350	*350*	1,065	935	783	652	500
3.2 Adjustments total assets													
3.3 Net current assets													
3.4 Total asset base	**9,162**	**7,860**	**6,558**	**5,256**	**3,954**	**2,652**	**1,350**	***350***	**1,065**	**935**	**783**	**652**	**500**
Cost of capital %													
3.5 Cost of capital pre tax rate	4.66%	4.64%	4.64%	4.64%	4.64%	4.64%	4.67%	*4.57%*	4.60%	4.60%	4.60%	4.60%	4.60%
3.6 Return on equity	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%
3.7 Average interest on debts	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%	4.30%
3.8 Share of financing through equity	72.00%	69.00%	67.00%	68.00%	68.00%	68.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Costs of common projects													
3.9 Common projects													
Costs of new and existing investments													
3.10 Depreciation									0	0	0	0	0
3.11 Cost of capital									0	0	0	0	0
3.12 Cost of leasing									0	0	0	0	0
Eurocontrol costs													
3.13 Eurocontrol costs (Euro)	53,481.3	55,411.6	56,546.0	58,338.0	58,852.0	60,816.0	58,204.8	*67,698.0*	59,714.3	60,153.6	60,672.4	61,768.5	63,342.9
3.14 Exchange rate (if applicable)	0.811235	0.849020	0.806208	0.726200	0.818959	0.875911	0.884644	*0.790800*	0.862064	0.862064	0.862064	0.862064	0.862064
3.15 Eurocontrol costs (national currency)	43,385.9	47,045.6	45,587.8	42,365.1	48,197.4	53,269.4	51,490.5	*53,535.6*	51,477.5	51,856.3	52,303.5	53,248.4	54,605.6
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)													
4.1 Costs for exempted VFR flights													
4.2 Total determined/actual costs	**56,918**	**60,137**	**58,352**	**55,858**	**61,348**	**66,283**	**64,283**	***66,742***	**70,507**	**72,612**	**73,821**	**75,194**	**77,014**
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)													
5.1 Inflation %	2.80%	2.60%	1.50%	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	92.9	95.3	96.7	96.7	97.4	100.0	102.5	104.4	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**61,300**	**63,126**	**60,347**	**57,768**	**63,004**	**66,283**	**62,730**	**63,956**	**66,240**	**66,879**	**66,660**	**66,568**	**66,842**
Total % n/n-1		3.0%	-4.4%	-4.3%	9.1%	5.2%	-5.4%	*2.0%*	3.6%	1.0%	-0.3%	-0.1%	0.4%
5.4 Total Service Units	**9,607.9**	**9,754.9**	**9,979.4**	**10,153.9**	**10,874.8**	**11,767.6**	**12,194.2**	***12,408.2***	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**
Total % n/n-1		1.5%	2.3%	1.7%	7.1%	8.2%	3.6%	*1.8%*	1.9%	1.9%	2.3%	1.7%	1.6%
5.5 Unit cost in real terms prices (3)	**6.38**	**6.47**	**6.05**	**5.69**	**5.79**	**5.63**	**5.14**	***5.15***	**5.24**	**5.19**	**5.06**	**4.97**	**4.91**
Total % n/n-1		1.4%	-6.6%	-5.9%	1.8%	-2.8%	-8.7%	*0.2%*	1.6%	-0.9%	-2.5%	-1.8%	-1.1%

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan.
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 2 - Unit rate calculation

United Kingdom	
Currency : GBP £	
All Entities	

		Reference Period 3				
Table 2 A - Adjustments relating to year n		**2020**	**2021**	**2022**	**2023**	**2024**
A. Cost-sharing						
	Determined costs					
1.1	**Determined costs in nominal terms - VFR excl. - Table 1** ***(Art. 22)***	**779,902.5**	**764,803.1**	**781,316.0**	**754,069.5**	**759,099.0**
	Inflation adjustment calculation					
2.1	Determined costs subject to inflation adjustment	709,395.1	692,191.4	707,494.6	678,875.9	682,085.0
2.2	Forecast inflation index - Table 1	106.44	108.57	110.74	112.96	115.22
2.3	Actual inflation index - Table 1					
2.4	Actual / forecast total inflation index (in %)					
2.5	**Inflation adjustment relating to year n** ***(Art. 26)***					
	Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1	New and existing investments *(Art. 28(4))*					
3.3	Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4	Eurocontrol costs *(Art. 28(5))*					
3.5	Pension costs *(Art. 28(6))*					
3.6	Interest on loans *(Art. 28(6))*					
3.7	Changes in law *(Art. 28(6))*					
3.8	**Differences between determined and actual costs relating to year n** ***(Art. 28(4) to 28(6))***					
B. Traffic risk sharing						
	Traffic risk sharing adjustment					
4.1	Determined costs subject to traffic risk sharing	678,457.1	661,997.4	675,862.8	643,690.1	646,695.0
4.2	% deviation % referred to in Article 27(2) and 27(5)					
4.3	% additional revenue returned to users referred to in Article 27(3) and 27(5)					
4.4	% loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)					
4.5	% deviation referred to in Article 27(4)					
4.6	Forecast total service units (performance plan)	12,647.9	12,891.0	13,183.0	13,406.0	13,615.0
4.7	Actual total service units					
4.8	Actual / forecast total service units (in %)					
4.9	**Traffic risk sharing adjustment relating to year n** ***(Art. 27(2) to 27(5))***					
	Traffic adjustments					
5.1	For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2	Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3	**Traffic adjustements relating to year n** ***(Art. 27(8) and 27(9))***					
C. Financial incentive schemes on capacity and environment						
	Adjustments relating to financial incentives					
6.1	Financial incentives relating to capacity *(Art. 11(3))*					
6.2	Financial incentives relating to environment *(Art. 11(4))*					
6.3	Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4	**Financial incentives relating to year n** ***(Art. 11(3) and 11(4))***					
D. Other adjustments						
	Modulation of charges					
7.1	**Adjustment to ensure revenue neutrality for modulation of charges in year n** ***(Art. 32(1))***					
	Revision of the unit rate					
8.1	Temporary unit rate applied in year n					
8.2	**Difference in revenue due to the temporary application of unit rate in year n** ***(Art. 29(5))***					
	Cross-financing between charging zones					
9.1	**Cross-financing to (-) / from (+) other charging zone(s) relating to year n**					
	Other revenues					
10.1	Union assistance programmes *(Art. 25(3)(a))*					
10.2	National public funding *(Art. 25(3)(a))*					
10.3	Commercial activities (*Art. 25(3)(b))*					
10.4	Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5	**Total other revenues relating to year n** ***(Art. 25(3))***					
	Application of a lower unit rate					
11.1	**Loss of revenue relating to the application of a lower unit rate in n** ***(Art. 29(6))***					
12	**Total adjustments relating to year n**					

We note the adjustments below have been taken from the RP2 2018 cost reporting exercise

Table 2 B - Calculation of the unit rate for year n (1)		**2020**	**2021**	**2022**	**2023**	**2024**
13.1	Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	779,902.54	764,803.12	781,316.04	754,069.50	759,098.99
13.2	Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 15,141.94	- 13,953.26	-	-	-
13.3	Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	- 52,765.67	- 52,229.15	-	-	-
13.4	Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	1,590.66	7,943.64	6,507.08	8,106.47	8,180.71
13.5	Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	- 264.11	-	-	-	-
13.6	Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-
13.7	Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	710.59	12,300.36	-	-	-
13.8	Other revenues *(Art. 25(2)(i))*	- 7,473.08	- 39,467.92	- 2,644.50	- 4,716.56	- 1,167.84
13.9	Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-
13.10	Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-
13.11	**Grand total for the calculation of year n unit rate**	**706,559.0**	**679,396.8**	**785,178.6**	**757,459.4**	**766,111.9**
13.12	**Forecast total service units for year n (performance plan)**	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**
13.13	**Unit rate for year n as per Art. 25(2) (in national currency)**	**55.86**	**52.70**	**59.56**	**56.50**	**56.27**
13.14	**Reduction as per Art. 29(6), where applicable (in national currency)**	**0.00**				
14	**Applicable unit rate for year n**	**55.86**	**52.70**	**59.56**	**56.50**	**56.27**

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 2 - Unit rate calculation

United Kingdom	
Currency : GBP £	
NERL	

		Reference Period 3				
Table 2 A - Adjustments relating to year n		**2020**	**2021**	**2022**	**2023**	**2024**
A. Cost-sharing						
	Determined costs					
1.1	**Determined costs in nominal terms - VFR excl. - Table 1** ***(Art. 22)***	**678,457.1**	**661,997.4**	**675,862.8**	**643,690.1**	**646,695.0**
	Inflation adjustment calculation					
2.1	Determined costs subject to inflation adjustment	678,457.1	661,997.4	675,862.8	643,690.1	646,695.0
2.2	Forecast inflation index - Table 1	106.4	108.6	110.7	113.0	115.2
2.3	Actual inflation index - Table 1					
2.4	Actual / forecast total inflation index (in %)					
2.5	**Inflation adjustment relating to year n** ***(Art. 26)***					
	Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1	New and existing investments *(Art. 28(4))*					
3.3	Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4	Eurocontrol costs *(Art. 28(5))*					
3.5	Pension costs *(Art. 28(6))*					
3.6	Interest on loans *(Art. 28(6))*					
3.7	Changes in law *(Art. 28(6))*					
3.8	**Differences between determined and actual costs relating to year n** ***(Art. 28(4) to 28(6))***					
B. Traffic risk sharing						
	Traffic risk sharing adjustment					
4.1	Determined costs subject to traffic risk sharing	678,457.1	661,997.4	675,862.8	643,690.1	646,695.0
4.2	% deviation % referred to in Article 27(2) and 27(5)	2%	2%	2%	2%	2%
4.3	% additional revenue returned to users referred to in Article 27(3) and 27(5)	70%	70%	70%	70%	70%
4.4	% loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)	70%	70%	70%	70%	70%
4.5	% deviation referred to in Article 27(4)	10%	10%	10%	10%	10%
4.6	Forecast total service units (performance plan)	12,647.9	12,891.0	13,183.0	13,406.0	13,615.0
4.7	Actual total service units					
4.8	Actual / forecast total service units (in %)					
4.9	**Traffic risk sharing adjustment relating to year n** ***(Art. 27(2) to 27(5))***					
	Traffic adjustments					
5.1	For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2	Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3	**Traffic adjustements relating to year n** ***(Art. 27(8) and 27(9))***					
C. Financial incentive schemes on capacity and environment						
	Adjustments relating to financial incentives					
6.1	Financial incentives relating to capacity *(Art. 11(3))*					
6.2	Financial incentives relating to environment *(Art. 11(4))*					
6.3	Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4	**Financial incentives relating to year n** ***(Art. 11(3) and 11(4))***					
D. Other adjustments						
	Modulation of charges					
7.1	**Adjustment to ensure revenue neutrality for modulation of charges in year n** ***(Art. 32(1))***					
	Revision of the unit rate					
8.1	Temporary unit rate applied in year n					
8.2	**Difference in revenue due to the temporary application of unit rate in year n** ***(Art. 29(5))***					
	Cross-financing between charging zones					
9.1	**Cross-financing to (-) / from (+) other charging zone(s) relating to year n**					
	Other revenues					
10.1	Union assistance programmes *(Art. 25(3)(a))*	-166.7	-39,467.9	-2,644.5	-4,716.6	-1,167.8
10.2	National public funding *(Art. 25(3)(a))*					
10.3	Commercial activities *(Art. 25(3)(b))*	-7,306.4	0.0	0.0	0.0	0.0
10.4	Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5	**Total other revenues relating to year n** ***(Art. 25(3))***					
	Application of a lower unit rate					
11.1	**Loss of revenue relating to the application of a lower unit rate in n** ***(Art. 29(6))***					
12	**Total adjustments relating to year n**					

Table 2 B - Calculation of the unit rate for year n (1)		**2020**	**2021**	**2022**	**2023**	**2024**	
13.1	Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	678,457.13	661,997.45	675,862.80	643,690.08	646,694.95	
13.2	Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 13,078.94	- 13,953.26	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 ANSP, cell ref K13*
13.3	Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	- 52,765.67	- 52,229.15	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 ANSP, cell ref K31*
13.4	Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	1,590.66	7,943.64	8,029.81	8,106.47	8,180.71	
13.5	Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	- 264.11	-	-	-	-	Figure provided by NERL
13.6	Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-	
13.7	Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	4,076.59	12,300.36	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 ANSP, cell ref K34*
13.8	Other revenues *(Art. 25(2)(i))*	- 7,473.08	- 39,467.92	- 2,644.50	- 4,716.56	- 1,167.84	
13.9	Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-	
13.10	Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-	
13.11	**Grand total for the calculation of year n unit rate**	**610,542.6**	**576,591.1**	**681,248.1**	**647,080.0**	**653,707.8**	
13.12	**Forecast total service units for year n (performance plan)**	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**	
13.13	**Unit rate for year n as per Art. 25(2) (in national currency)**	**48.3**	**44.7**	**51.7**	**48.3**	**48.0**	
13.14	**Reduction as per Art. 29(6), where applicable (in national currency)**	**0.00**					
14	**Applicable unit rate for year n**	**48.27**	**44.73**	**51.68**	**48.27**	**48.01**	

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 2 - Unit rate calculation

United Kingdom	
Currency : GBP £	
Met Office	

		Reference Period 3				
Table 2 A - Adjustments relating to year n		**2020**	**2021**	**2022**	**2023**	**2024**
A. Cost-sharing						
	Determined costs					
1.1	**Determined costs in nominal terms - VFR excl. - Table 1** ***(Art. 22)***	**30,938.0**	**30,193.9**	**31,631.8**	**35,185.8**	**35,390.0**
	Inflation adjustment calculation					
2.1	Determined costs subject to inflation adjustment	30,938.0	30,193.9	31,631.8	35,185.8	35,390.0
2.2	Forecast inflation index - Table 1	106.4	108.6	110.7	113.0	115.2
2.3	Actual inflation index - Table 1					
2.4	Actual / forecast total inflation index (in %)					
2.5	**Inflation adjustment relating to year n** ***(Art. 26)***					
	Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1	New and existing investments *(Art. 28(4))*					
3.3	Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4	Eurocontrol costs *(Art. 28(5))*					
3.5	Pension costs *(Art. 28(6))*					
3.6	Interest on loans *(Art. 28(6))*					
3.7	Changes in law *(Art. 28(6))*					
3.8	**Differences between determined and actual costs relating to year n** ***(Art. 28(4) to 28(6))***					
B. Traffic risk sharing						
	Traffic risk sharing adjustment					
4.1	Determined costs subject to traffic risk sharing					
4.2	% deviation % referred to in Article 27(2) and 27(5)					
4.3	% additional revenue returned to users referred to in Article 27(3) and 27(5)					
4.4	% loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)					
4.5	% deviation referred to in Article 27(4)					
4.6	Forecast total service units (performance plan)	12,647.9	12,891.0	13,183.0	13,406.0	13,615.0
4.7	Actual total service units					
4.8	Actual / forecast total service units (in %)					
4.9	**Traffic risk sharing adjustment relating to year n** ***(Art. 27(2) to 27(5))***					
	Traffic adjustments					
5.1	For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2	Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3	**Traffic adjustements relating to year n** ***(Art. 27(8) and 27(9))***					
C. Financial incentive schemes on capacity and environment						
	Adjustments relating to financial incentives					
6.1	Financial incentives relating to capacity *(Art. 11(3))*					
6.2	Financial incentives relating to environment *(Art. 11(4))*					
6.3	Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4	**Financial incentives relating to year n** ***(Art. 11(3) and 11(4))***					
D. Other adjustments						
	Modulation of charges					
7.1	**Adjustment to ensure revenue neutrality for modulation of charges in year n** ***(Art. 32(1))***					
	Revision of the unit rate					
8.1	Temporary unit rate applied in year n					
8.2	**Difference in revenue due to the temporary application of unit rate in year n** ***(Art. 29(5))***					
	Cross-financing between charging zones					
9.1	**Cross-financing to (-) / from (+) other charging zone(s) relating to year n**					
	Other revenues					
10.1	Union assistance programmes *(Art. 25(3)(a))*					
10.2	National public funding *(Art. 25(3)(a))*					
10.3	Commercial activities (*Art. 25(3)(b)*)					
10.4	Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5	**Total other revenues relating to year n** ***(Art. 25(3))***					
	Application of a lower unit rate					
11.1	**Loss of revenue relating to the application of a lower unit rate in n** ***(Art. 29(6))***					
12	**Total adjustments relating to year n**					

Table 2 B - Calculation of the unit rate for year n (1)		**2020**	**2021**	**2022**	**2023**	**2024**	
13.1	Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	30,937.95	30,193.92	31,631.80	35,185.81	35,390.00	
13.2	Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 610.00	-	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 MET, cell ref K13*
13.3	Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	-	-	-	-	-	
13.4	Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	-	-	-	-	-	
13.5	Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	-	-	-	-	-	
13.6	Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-	
13.7	Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	- 3,366.00	-	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 MET, cell ref K50*
13.8	Other revenues *(Art. 25(2)(i))*	-	-	-	-	-	
13.9	Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-	
13.10	Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-	
13.11	**Grand total for the calculation of year n unit rate**	**26,962.0**	**30,193.9**	**31,631.8**	**35,185.8**	**35,390.0**	
13.12	**Forecast total service units for year n (performance plan)**	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**	
13.13	**Unit rate for year n as per Art. 25(2) (in national currency)**	**2.13**	**2.34**	**2.40**	**2.62**	**2.60**	
13.14	**Reduction as per Art. 29(6), where applicable (in national currency)**	**0.00**					
14	**Applicable unit rate for year n**	**2.13**	**2.34**	**2.40**	**2.62**	**2.60**	

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 2 - Unit rate calculation

United Kingdom
Currency : GBP £
UK CAA + DfT Eurocontrol

Table 2 A - Adjustments relating to year n	Reference Period 3 2020	2021	2022	2023	2024
A. Cost-sharing					
Determined costs					
1.1 Determined costs in nominal terms - VFR excl. - Table 1 *(Art. 22)*	**70,507.5**	**72,611.7**	**73,821.4**	**75,193.6**	**77,014.0**
Inflation adjustment calculation					
2.1 Determined costs subject to inflation adjustment					
2.2 Forecast inflation index - Table 1					
2.3 Actual inflation index - Table 1					
2.4 Actual / forecast total inflation index (in %)					
2.5 Inflation adjustment relating to year n *(Art. 26)*					
Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1 New and existing investments *(Art. 28(4))*					
3.3 Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4 Eurocontrol costs *(Art. 28(5))*					
3.5 Pension costs *(Art. 28(6))*					
3.6 Interest on loans *(Art. 28(6))*					
3.7 Changes in law *(Art. 28(6))*					
3.8 Differences between determined and actual costs relating to year n *(Art. 28(4) to 28(6))*					
B. Traffic risk sharing					
Traffic risk sharing adjustment					
4.1 Determined costs subject to traffic risk sharing					
4.2 % deviation % referred to in Article 27(2) and 27(5)					
4.3 % additional revenue returned to users referred to in Article 27(3) and 27(5)					
4.4 % loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)					
4.5 % deviation referred to in Article 27(4)					
4.6 Forecast total service units (performance plan)	12,647.9	12,891.0	13,183.0	13,406.0	13,615.0
4.7 Actual total service units					
4.8 Actual / forecast total service units (in %)					
4.9 Traffic risk sharing adjustment relating to year n *(Art. 27(2) to 27(5))*					
Traffic adjustments					
5.1 For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2 Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3 Traffic adjustements relating to year n *(Art. 27(8) and 27(9))*					
C. Financial incentive schemes on capacity and environment					
Adjustments relating to financial incentives					
6.1 Financial incentives relating to capacity *(Art. 11(3))*					
6.2 Financial incentives relating to environment *(Art. 11(4))*					
6.3 Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4 Financial incentives relating to year n *(Art. 11(3) and 11(4))*					
D. Other adjustments					
Modulation of charges					
7.1 Adjustment to ensure revenue neutrality for modulation of charges in year n *(Art. 32(1))*					
Revision of the unit rate					
8.1 Temporary unit rate applied in year n					
8.2 Difference in revenue due to the temporary application of unit rate in year n *(Art. 29(5))*					
Cross-financing between charging zones					
9.1 Cross-financing to (-) / from (+) other charging zone(s) relating to year n					
Other revenues					
10.1 Union assistance programmes *(Art. 25(3)(a))*					
10.2 National public funding *(Art. 25(3)(a))*					
10.3 Commercial activities *(Art. 25(3)(b))*					
10.4 Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5 Total other revenues relating to year n *(Art. 25(3))*					
Application of a lower unit rate					
11.1 Loss of revenue relating to the application of a lower unit rate in n *(Art. 29(6))*					
12 Total adjustments relating to year n					

Table 2 B - Calculation of the unit rate for year n (1)	2020	2021	2022	2023	2024	
13.1 Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	70,507.45	72,611.75	73,821.43	75,193.62	77,014.03	
13.2 Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 1,453.00	-	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 NSA, cell ref K13*
13.3 Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	-	-	-	-	-	
13.4 Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	-	-	- 1,522.73	-	-	
13.5 Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	-	-	-	-	-	
13.6 Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-	
13.7 Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	-	-	-	-	-	*Figure taken from from RP2 reporting tables, tab Route Table 2 NSA, cell ref K50*
13.8 Other revenues *(Art. 25(2)(i))*	-	-	-	-	-	
13.9 Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-	
13.10 Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-	
13.11 Grand total for the calculation of year n unit rate	**69,054.5**	**72,611.7**	**72,298.7**	**75,193.6**	**77,014.0**	
13.12 Forecast total service units for year n (performance plan)	**12,647.9**	**12,891.0**	**13,183.0**	**13,406.0**	**13,615.0**	
13.13 Unit rate for year n as per Art. 25(2) (in national currency)	**5.46**	**5.63**	**5.48**	**5.61**	**5.66**	
13.14 Reduction as per Art. 29(6), where applicable (in national currency)	**0.00**					
14 Applicable unit rate for year n	**5.46**	**5.63**	**5.48**	**5.61**	**5.66**	

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 3 - Complementary information on adjustments

te the adjustments below have been taken from the RP2 2018 cost reporting exercise

United Kingdom
Currency : GBP £
All Entities

Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
Inflation adjustment 2018	-15,142	-15,142	0	0	0	0	0
Inflation adjustment 2019	-13,953	0	-13,953	0	0	0	0
Total inflation adjustment up to 2019	-29,095	-15,142	-13,953	0	0	0	0
Inflation adjustment 2020	0	0	0	0	0	0	0
Inflation adjustment 2021	0	0	0	0	0	0	0
Inflation adjustment 2022	0	0	0	0	0	0	0
Inflation adjustment 2023	0	0	0	0	0	0	0
Inflation adjustment 2024	0	0	0	0	0	0	0
Total inflation Adjustment (Art. 26)*	**-29,095**	**-15,142**	**-13,953**	**0**	**0**	**0**	**0**
Traffic risk sharing up to 2017	0	0	0	0	0	0	0
Traffic risk sharing 2018	-52,766	-52,766	0	0	0	0	0
Traffic risk sharing 2019	-52,229	0	-52,229	0	0	0	0
Total traffic risk sharing adjustements up to 2019	-104,995	-52,766	-52,229	0	0	0	0
Traffic risk sharing 2020	0	0	0	0	0	0	0
Traffic risk sharing 2021	0	0	0	0	0	0	0
Traffic risk sharing 2022	0	0	0	0	0	0	0
Traffic risk sharing 2023	0	0	0	0	0	0	0
Traffic risk sharing 2024	0	0	0	0	0	0	0
Total traffic risk sharing adjustment (Art. 27(2) to 27(5))*	**-104,995**	**-52,766**	**-52,229**	**0**	**0**	**0**	**0**
Difference in investment costs 2020	0	0	0	0	0	0	0
Difference in investment costs 2021	0	0	0	0	0	0	0
Difference in investment costs 2022	0	0	0	0	0	0	0
Difference in investment costs 2023	0	0	0	0	0	0	0
Difference in investment costs 2024	0	0	0	0	0	0	0
Total adjustment relating to investment costs (Art. 28(4))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Difference in competent authorities and QEs costs 2020	0	0	0	0	0	0	0
Difference in competent authorities and QEs costs 2021	0	0	0	0	0	0	0
Difference in competent authorities and QEs costs 2022	0	0	0	0	0	0	0
Difference in competent authorities and QEs costs 2023	0	0	0	0	0	0	0
Difference in competent authorities and QEs costs 2024	0	0	0	0	0	0	0
Total adjustment relating to competent authorities and QEs costs (Art. 28(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Difference in Eurocontrol costs 2020	0	0	0	0	0	0	0
Difference in Eurocontrol costs 2021	0	0	0	0	0	0	0
Difference in Eurocontrol costs 2022	0	0	0	0	0	0	0
Difference in Eurocontrol costs 2023	0	0	0	0	0	0	0
Difference in Eurocontrol costs 2024	0	0	0	0	0	0	0
Total adjustment relating to Eurocontrol costs (Art. 28(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Difference in pension costs 2020	0	0	0	0	0	0	0
Difference in pension costs 2021	0	0	0	0	0	0	0
Difference in pension costs 2022	0	0	0	0	0	0	0
Difference in pension costs 2023	0	0	0	0	0	0	0
Difference in pension costs 2024	0	0	0	0	0	0	0
Total adjustment relating to pension costs (Art. 28(6))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Difference in interest on loans 2020	0	0	0	0	0	0	0
Difference in interest on loans 2021	0	0	0	0	0	0	0
Difference in interest on loans 2022	0	0	0	0	0	0	0
Difference in interest on loans 2023	0	0	0	0	0	0	0
Difference in interest on loans 2024	0	0	0	0	0	0	0
Total adjustment relating to interest on loans (Art. 28(6))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Costs relating to change in law 2020	0	0	0	0	0	0	0
Costs relating to change in law 2021	0	0	0	0	0	0	0
Costs relating to change in law 2022	0	0	0	0	0	0	0
Costs relating to change in law 2023	0	0	0	0	0	0	0
Costs relating to change in law 2024	0	0	0	0	0	0	0
Total adjustment relating to change in law (Art. 28(6))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cost exempt from cost sharing up to 2017	-1,153	0	0	-1,153	0	0	0
Cost exempt from cost sharing 2018	1,817	0	0	-370	0	0	0
Cost exempt from cost sharing 2019	2,193	0	0	0	0	0	0
Total adjustment relating to cost exempt from previous RPs	**36,708**	**1,591**	**7,944**	**6,507**	**8,106**	**8,181**	**0**
Financial incentives year up to 2017	0	0	0	0	0	0	0
Financial incentives year 2018	-264	-264	0	0	0	0	0
Financial incentives year 2019	0	0	0	0	0	0	0
Total financial incentives up to 2019	-264	-264	0	0	0	0	0
Financial incentives year 2020	0	0	0	0	0	0	0
Financial incentives year 2021	0	0	0	0	0	0	0
Financial incentives year 2022	0	0	0	0	0	0	0
Financial incentives year 2023	0	0	0	0	0	0	0
Financial incentives year 2024	0	0	0	0	0	0	0
Total financial incentives (Art. 11(3) and 11(4))*	**-264**	**-264**	**0**	**0**	**0**	**0**	**0**
Modulation of charges up to 2017	0	0	0	0	0	0	0
Modulation of charges year 2018	0	0	0	0	0	0	0
Modulation of charges year 2019	0	0	0	0	0	0	0
Total modulation of charges up 2019	0	0	0	0	0	0	0
Modulation of charges 2020	0	0	0	0	0	0	0
Modulation of charges 2021	0	0	0	0	0	0	0
Modulation of charges 2022	0	0	0	0	0	0	0
Modulation of charges 2023	0	0	0	0	0	0	0
Modulation of charges 2024	0	0	0	0	0	0	0
Total adjustment relating to modulation of charges (Art. 32(1))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Traffic adjustment up to 2017	0	0	0	0	0	0	0
Traffic adjustment 2018	-7,397	711	0	0	0	0	-8,108
Traffic adjustment 2019	12,300	0	12,300	0	0	0	0
Total traffic adjustments up to 2019	4,903	711	12,300	0	0	0	-8,108
Traffic adjustment on adjustments from previous RPs 2020	0	0	0	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2021	0	0	0	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2022	0	0	0	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2023	0	0	0	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2024	0	0	0	0	0	0	0
Total traffic adjustment on adjustments from previous reference periods	0	0	0	0	0	0	0
Traffic adjustment 2020	0	0	0	0	0	0	0
Traffic adjustment 2021	0	0	0	0	0	0	0
Traffic adjustment 2022	0	0	0	0	0	0	0
Traffic adjustment 2023	0	0	0	0	0	0	0
Traffic adjustment 2024	0	0	0	0	0	0	0
Total traffic adjustment (Art. 27(8) and 27(9))*	**4,903**	**711**	**12,300**	**0**	**0**	**0**	**-8,108**
Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2019	-40,246	0	0	0	0	0	0
Total revenues received from Union assistance programmes up to 2019	-40,246	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2020	-167	-167	0	0	0	0	0
Revenues received from Union assistance programmes in 2021	-39,468	0	-39,468	0	0	0	0
Revenues received from Union assistance programmes in 2022	-2,645	0	0	-2,645	0	0	0
Revenues received from Union assistance programmes in 2023	-4,717	0	0	0	-4,717	0	0
Revenues received from Union assistance programmes in 2024	-1,168	0	0	0	0	-1,168	0
Total revenues received from Union assistance programmes (Art. 25(3)(a))*	**-88,409**	**-167**	**-39,468**	**-2,645**	**-4,717**	**-1,168**	**0**
Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
Revenues received from national public funding in 2018	0	0	0	0	0	0	0
Revenues received from national public funding in 2019	0	0	0	0	0	0	0
Total revenues received from national public funding up to 2019	0	0	0	0	0	0	0
Revenues received from national public funding in 2020	0	0	0	0	0	0	0
Revenues received from national public funding in 2021	0	0	0	0	0	0	0
Revenues received from national public funding in 2022	0	0	0	0	0	0	0
Revenues received from national public funding in 2023	0	0	0	0	0	0	0
Revenues received from national public funding in 2024	0	0	0	0	0	0	0
Total revenues received from national public funding (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
Revenues from commercial activities in 2018	0	0	0	0	0	0	0
Revenues from commercial activities in 2019	0	0	0	0	0	0	0
Total revenues from commercial activities up to 2019	0	0	0	0	0	0	0
Revenues from commercial activities in 2020	-7,306	-7,306	0	0	0	0	0
Revenues from commercial activities in 2021	0	0	0	0	0	0	0
Revenues from commercial activities in 2022	0	0	0	0	0	0	0
Revenues from commercial activities in 2023	0	0	0	0	0	0	0
Revenues from commercial activities in 2024	0	0	0	0	0	0	0
Total revenues from commercial activities (Art. 25(3)(b))*	**-7,306**	**-7,306**	**0**	**0**	**0**	**0**	**0**
Revenues from contracts with airport operators up to 2017	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2018	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2019	0	0	0	0	0	0	0
Total revenues from contracts with airport operators up to 2019	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2020	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2021	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2022	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2023	0	0	0	0	0	0	0
Revenues from contracts with airport operators in 2024	0	0	0	0	0	0	0
Total revenues from contracts with airport operators (Art. 25(3)(c))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenue difference - revision of UR 2020	0	0	0	0	0	0	0
Revenue difference - revision of UR 2021	0	0	0	0	0	0	0
Revenue difference - revision of UR 2022	0	0	0	0	0	0	0
Revenue difference - revision of UR 2023	0	0	0	0	0	0	0
Revenue difference - revision of UR 2024	0	0	0	0	0	0	0
Total revenue differences from temporary application of UR (Art. 29(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cross-financing to (-) / from (+) other charging zone(s) relating to 2020	0	0	0	0	0	0	0
Cross-financing to (-) / from (+) other charging zone(s) relating to 2021	0	0	0	0	0	0	0
Cross-financing to (-) / from (+) other charging zone(s) relating to 2022	0	0	0	0	0	0	0
Cross-financing to (-) / from (+) other charging zone(s) relating to 2023	0	0	0	0	0	0	0
Cross-financing to (-) / from (+) other charging zone(s) relating to 2024	0	0	0	0	0	0	0
Total cross-financing to (-) / from (+) other charging zone(s)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total adjustments	**-188,459**	**-73,344**	**-85,406**	**3,863**	**3,390**	**7,013**	**-8,108**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 3 - Complementary information on adjustments

United Kingdom
Currency : GBP £
NERL

Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
Inflation adjustment 2018	-13,079	-13,079					
Inflation adjustment 2019	-13,953		-13,953				
Total inflation adjustment up to 2019	-27,032	-13,079	-13,953				
Inflation adjustment 2020	0			0			
Inflation adjustment 2021	0				0		
Inflation adjustment 2022	0					0	
Inflation adjustment 2023	0						0
Inflation adjustment 2024	0						0
Total inflation Adjustment (Art. 26)*	**-27,032**	**-13,079**	**-13,953**	**0**	**0**	**0**	**0**
Traffic risk sharing up to 2017	0	0	0	0	0	0	0
Traffic risk sharing 2018	-52,766	-52,766	0	0	0	0	0
Traffic risk sharing 2019	-52,229		-52,229	0	0	0	0
Total traffic risk sharing adjustements up to 2019	-104,995	-52,766	-52,229	0	0	0	0
Traffic risk sharing 2020	0			0			
Traffic risk sharing 2021	0				0		
Traffic risk sharing 2022	0					0	
Traffic risk sharing 2023	0						0
Traffic risk sharing 2024	0						0
Total traffic risk sharing adjustment (Art. 27(2) to 27(5))*	**-104,995**	**-52,766**	**-52,229**	**0**	**0**	**0**	**0**
Difference in investment costs 2020	0			0			0
Difference in investment costs 2021	0				0		0
Difference in investment costs 2022	0					0	0
Difference in investment costs 2023	0						0
Difference in investment costs 2024	0						0
Total adjustment relating to investment costs (Art. 28(4))	**0**			**0**	**0**	**0**	**0**
Difference in competent authorities and QEs costs 2020							
Difference in competent authorities and QEs costs 2021							
Difference in competent authorities and QEs costs 2022							
Difference in competent authorities and QEs costs 2023							
Difference in competent authorities and QEs costs 2024							
Total adjustment relating to competent authorities and QEs costs (Art. 28(5))							
Difference in Eurocontrol costs 2020							
Difference in Eurocontrol costs 2021							
Difference in Eurocontrol costs 2022							
Difference in Eurocontrol costs 2023							
Difference in Eurocontrol costs 2024							
Total adjustment relating to Eurocontrol costs (Art. 28(5))							
Difference in pension costs 2020	0			0			0
Difference in pension costs 2021	0				0		0
Difference in pension costs 2022	0					0	0
Difference in pension costs 2023	0						0
Difference in pension costs 2024	0						0
Total adjustment relating to pension costs (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Difference in interest on loans 2020	0			0			0
Difference in interest on loans 2021	0				0		0
Difference in interest on loans 2022	0					0	0
Difference in interest on loans 2023	0						0
Difference in interest on loans 2024	0						0
Total adjustment relating to interest on loans (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Costs relating to change in law 2020	0			0			0
Costs relating to change in law 2021	0				0		0
Costs relating to change in law 2022	0					0	0
Costs relating to change in law 2023	0						0
Costs relating to change in law 2024	0						0
Total adjustment relating to change in law (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Cost exempt from cost sharing up to 2017		0	0	0	0	0	0
Cost exempt from cost sharing 2018	2,187		0	0	0	0	0
Cost exempt from cost sharing 2019	2,192		0	0	0	0	0
Cost exempt from cost sharing 2020	1,591	1,591					0
Cost exempt from cost sharing 2021	7,944		7,944				0
Cost exempt from cost sharing 2022	8,030			8,030			0
Cost exempt from cost sharing 2023	8,106				8,106		0
Cost exempt from cost sharing 2024	8,181					8,181	0
Total adjustment relating to cost exempt from previous RPs	**38,231**	**1,591**	**7,944**	**8,030**	**8,106**	**8,181**	**0**
Financial incentives year up to 2017		0.0	0	0	0	0	0
Financial incentives year 2018	-264	-264					
Financial incentives year 2019	0		0				
Total financial incentives up to 2019	-264	-264	0	0	0	0	0
Financial incentives year 2020	0			0			
Financial incentives year 2021	0				0		
Financial incentives year 2022	0					0	
Financial incentives year 2023	0						0
Financial incentives year 2024	0						0
Total financial incentives (Art. 11(3) and 11(4))*	**-264**	**-264**	**0**	**0**	**0**	**0**	**0**
Modulation of charges up to 2017	0	0	0	0	0	0	
Modulation of charges year 2018	0	0	0	0	0	0	
Modulation of charges year 2019			0	0	0	0	
Total modulation of charges up 2019	0	0	0	0	0	0	
Modulation of charges 2020	0			0			
Modulation of charges 2021	0				0		
Modulation of charges 2022	0					0	
Modulation of charges 2023	0						0
Modulation of charges 2024	0						0
Total adjustment relating to modulation of charges (Art. 32(1))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Traffic adjustment up to 2017	0	0	0	0	0	0	0
Traffic adjustment 2018	4,077	4,077	0	0	0	0	0
Traffic adjustment 2019	12,300		12,300	0	0	0	0
Total traffic adjustments up to 2019	16,377	4,077	12,300	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2020	0			0			0
Traffic adjustment on adjustments from previous RPs 2021	0				0		0
Traffic adjustment on adjustments from previous RPs 2022	0					0	0
Traffic adjustment on adjustments from previous RPs 2023	0						0
Traffic adjustment on adjustments from previous RPs 2024	0						0
Total traffic adjustment on adjustments from previous reference periods	0	0	0	0	0	0	0
Traffic adjustment 2020	0			0			
Traffic adjustment 2021	0				0		
Traffic adjustment 2022	0					0	
Traffic adjustment 2023	0						0
Traffic adjustment 2024	0						0
Total traffic adjustment (Art. 27(8) and 27(9))*	**16,377**	**4,077**	**12,300**	**0**	**0**	**0**	**0**
Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2019	-40,246	0	0	0	0	0	0
Total revenues received from Union assistance programmes up to 2019	-40,246	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2020	-167	-167	0	0	0	0	0
Revenues received from Union assistance programmes in 2021	-39,468		-39,468	0	0	0	0
Revenues received from Union assistance programmes in 2022	-2,645			-2,645	0	0	0
Revenues received from Union assistance programmes in 2023	-4,717				-4,717	0	0
Revenues received from Union assistance programmes in 2024	-1,168					-1,168	0
Total revenues received from Union assistance programmes (Art. 25(3)(a))*	**-88,409**	**-167**	**-39,468**	**-2,645**	**-4,717**	**-1,168**	**0**
Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
Revenues received from national public funding in 2018	0	0	0	0	0	0	0
Revenues received from national public funding in 2019		0	0	0	0	0	0
Total revenues received from national public funding up to 2019	0	0	0	0	0	0	0
Revenues received from national public funding in 2020	0	0	0	0	0	0	0
Revenues received from national public funding in 2021	0		0	0	0	0	0
Revenues received from national public funding in 2022	0			0	0	0	0
Revenues received from national public funding in 2023	0				0	0	0
Revenues received from national public funding in 2024	0					0	0
Total revenues received from national public funding (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
Revenues from commercial activities in 2018	0	0	0	0	0	0	0
Revenues from commercial activities in 2019		0	0	0	0	0	0
Total revenues from commercial activities up to 2019	0	0	0	0	0	0	0
Revenues from commercial activities in 2020	-7,306	-7,306	0	0			
Revenues from commercial activities in 2021	0		0	0	0		
Revenues from commercial activities in 2022	0			0	0	0	
Revenues from commercial activities in 2023	0				0	0	0
Revenues from commercial activities in 2024	0					0	0
Total revenues from commercial activities (Art. 25(3)(b))*	**-7,306**	**-7,306**	**0**	**0**	**0**	**0**	**0**
Revenues from contracts with airport operators up to 2017							
Revenues from contracts with airport operators in 2018							
Revenues from contracts with airport operators in 2019							
Total revenues from contracts with airport operators up to 2019							
Revenues from contracts with airport operators in 2020							
Revenues from contracts with airport operators in 2021							
Revenues from contracts with airport operators in 2022							
Revenues from contracts with airport operators in 2023							
Revenues from contracts with airport operators in 2024							
Total revenues from contracts with airport operators (Art. 25(3)(c))*							
Revenue difference - revision of UR 2020	0	0	0	0	0	0	0
Revenue difference - revision of UR 2021	0		0	0	0	0	0
Revenue difference - revision of UR 2022	0			0	0	0	0
Revenue difference - revision of UR 2023	0				0	0	0
Revenue difference - revision of UR 2024	0					0	0
Total revenue differences from temporary application of UR (Art. 29(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cross-financing to (-) / from (+) other charging zone(s) relating to 2020							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2021							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2022							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2023							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2024							
Total cross-financing to (-) / from (+) other charging zone(s)							
Total adjustments	**-173,399**	**-67,915**	**-85,406**	**5,385**	**3,390**	**7,013**	**0**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 3 - Complementary information on adjustments

United Kingdom
Currency : GBP £
Met Office

Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
Inflation adjustment 2018	-610	-610					
Inflation adjustment 2019			0				
Total inflation adjustment up to 2019	-610	-610	0				
Inflation adjustment 2020	0			0			
Inflation adjustment 2021	0				0		
Inflation adjustment 2022	0					0.0	
Inflation adjustment 2023	0						0
Inflation adjustment 2024	0						0
Total inflation Adjustment (Art. 26)*	**-610**	**-610**	**0**	**0**	**0**	**0**	**0**
Traffic risk sharing up to 2017							
Traffic risk sharing 2018							
Traffic risk sharing 2019							
Total traffic risk sharing adjustements up to 2019							
Traffic risk sharing 2020							
Traffic risk sharing 2021							
Traffic risk sharing 2022							
Traffic risk sharing 2023							
Traffic risk sharing 2024							
Total traffic risk sharing adjustment (Art. 27(2) to 27(5))*							
Difference in investment costs 2020	0			0			0
Difference in investment costs 2021	0				0		0
Difference in investment costs 2022	0					0	0
Difference in investment costs 2023	0						0
Difference in investment costs 2024	0						0
Total adjustment relating to investment costs (Art. 28(4))	**0**			**0**	**0**	**0**	**0**
Difference in competent authorities and QEs costs 2020							
Difference in competent authorities and QEs costs 2021							
Difference in competent authorities and QEs costs 2022							
Difference in competent authorities and QEs costs 2023							
Difference in competent authorities and QEs costs 2024							
Total adjustments relating to competent authorities and QEs costs (Art. 28(5))							
Difference in Eurocontrol costs 2020							
Difference in Eurocontrol costs 2021							
Difference in Eurocontrol costs 2022							
Difference in Eurocontrol costs 2023							
Difference in Eurocontrol costs 2024							
Total adjustments relating to Eurocontrol costs (Art. 28(5))							
Difference in pension costs 2020	0			0			0
Difference in pension costs 2021	0				0		0
Difference in pension costs 2022	0					0	0
Difference in pension costs 2023	0						0
Difference in pension costs 2024	0						0
Total adjustment relating to pension costs (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Difference in interest on loans 2020	0			0			0
Difference in interest on loans 2021	0				0		0
Difference in interest on loans 2022	0					0	0
Difference in interest on loans 2023	0						0
Difference in interest on loans 2024	0						0
Total adjustment relating to interest on loans (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Costs relating to change in law 2020	0			0			0
Costs relating to change in law 2021	0				0		0
Costs relating to change in law 2022	0					0	0
Costs relating to change in law 2023	0						0
Costs relating to change in law 2024	0						0
Total adjustment relating to change in law (Art. 28(6))	**0**			**0**	**0**	**0**	**0**
Cost exempt from cost sharing up to 2017	0	0	0	0	0	0	0
Cost exempt from cost sharing 2018	0	0	0	0	0	0	0
Cost exempt from cost sharing 2019			0	0	0	0	0
Total adjustment relating to cost exempt from previous RPs	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Financial incentives year up to 2017							
Financial incentives year 2018							
Financial incentives year 2019							
Total financial incentives up to 2019							
Financial incentives year 2020							
Financial incentives year 2021							
Financial incentives year 2022							
Financial incentives year 2023							
Financial incentives year 2024							
Total financial incentives (Art. 11(3) and 11(4))*							
Modulation of charges up to 2017	0	0	0	0	0	0	
Modulation of charges year 2018	0	0	0	0	0	0	
Modulation of charges year 2019			0	0	0	0	
Total modulation of charges up 2019	0	0	0	0	0	0	
Modulation of charges 2020	0			0			
Modulation of charges 2021	0				0		
Modulation of charges 2022	0					0.0	
Modulation of charges 2023	0						0
Modulation of charges 2024	0						0
Total adjustment relating to modulation of charges (Art. 32(1))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Traffic adjustment up to 2017	0	0	0	0	0	0	0
Traffic adjustment 2018	-3,366	-3,366	0	0	0	0	0
Traffic adjustment 2019			0	0	0	0	0
Total traffic adjustments up to 2019	-3,366	-3,366	0	0	0	0	0
Traffic adjustment on adjustments from previous RPs 2020	0			0			0
Traffic adjustment on adjustments from previous RPs 2021	0				0		0
Traffic adjustment on adjustments from previous RPs 2022	0					0	0
Traffic adjustment on adjustments from previous RPs 2023	0						0
Traffic adjustment on adjustments from previous RPs 2024	0						0
Total traffic adjustment on adjustments from previous reference periods	0	0	0	0	0	0	0
Traffic adjustment 2020	0			0			
Traffic adjustment 2021	0				0		
Traffic adjustment 2022	0					0	
Traffic adjustment 2023	0						0
Traffic adjustment 2024	0						0
Total traffic adjustment (Art. 27(8) and 27(9))*	**-3,366**	**-3,366**	**0**	**0**	**0**	**0**	**0**
Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2019	0	0	0	0	0	0	0
Total revenues received from Union assistance programmes up to 2019	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2020	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2021	0		0	0	0	0	0
Revenues received from Union assistance programmes in 2022	0			0	0	0	0
Revenues received from Union assistance programmes in 2023	0				0	0	0
Revenues received from Union assistance programmes in 2024	0					0	0
Total revenues received from Union assistance programmes (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
Revenues received from national public funding in 2018	0	0	0	0	0	0	0
Revenues received from national public funding in 2019		0	0	0	0	0	0
Total revenues received from national public funding up to 2019	0	0	0	0	0	0	0
Revenues received from national public funding in 2020	0	0	0	0	0	0	0
Revenues received from national public funding in 2021	0		0	0	0	0	0
Revenues received from national public funding in 2022	0			0	0	0	0
Revenues received from national public funding in 2023	0				0	0	0
Revenues received from national public funding in 2024	0					0	0
Total revenues received from national public funding (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
Revenues from commercial activities in 2018	0	0	0	0	0	0	0
Revenues from commercial activities in 2019		0	0	0	0	0	0
Total revenues from commercial activities up to 2019	0	0	0	0	0	0	0
Revenues from commercial activities in 2020	0	0	0	0			
Revenues from commercial activities in 2021	0		0	0	0		
Revenues from commercial activities in 2022	0			0	0	0	
Revenues from commercial activities in 2023	0				0	0	0
Revenues from commercial activities in 2024	0					0	0
Total revenues from commercial activities (Art. 25(3)(b))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from contracts with airport operators up to 2017							
Revenues from contracts with airport operators in 2018							
Revenues from contracts with airport operators in 2019							
Total revenues from contracts with airport operators up to 2019							
Revenues from contracts with airport operators in 2020							
Revenues from contracts with airport operators in 2021							
Revenues from contracts with airport operators in 2022							
Revenues from contracts with airport operators in 2023							
Revenues from contracts with airport operators in 2024							
Total revenues from contracts with airport operators (Art. 25(3)(c))*							
Revenue difference - revision of UR 2020	0	0	0	0	0	0	0
Revenue difference - revision of UR 2021	0		0	0	0	0	0
Revenue difference - revision of UR 2022	0			0	0	0	0
Revenue difference - revision of UR 2023	0				0	0	0
Revenue difference - revision of UR 2024	0					0	0
Total revenue differences from temporary application of UR (Art. 29(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cross-financing to (-) / from (+) other charging zone(s) relating to 2020							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2021							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2022							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2023							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2024							
Total cross-financing to (-) / from (+) other charging zone(s)							
Total adjustments	**-3,976**	**-3,976**	**0**	**0**	**0**	**0**	**0**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 3 - Complementary information on adjustments

United Kingdom
Currency : GBP £
UK CAA + DFT Eurocontrol

Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
Inflation adjustment 2018	-1,453	-1,453					
Inflation adjustment 2019			0				
Total inflation adjustment up to 2019	-1,453	-1,453	0				
Inflation adjustment 2020							
Inflation adjustment 2021							
Inflation adjustment 2022							
Inflation adjustment 2023							
Inflation adjustment 2024							
Total inflation Adjustment (Art. 26)*	**-1,453**	**-1,453**	**0**	**0**	**0**	**0**	**0**
Traffic risk sharing up to 2017							
Traffic risk sharing 2018							
Traffic risk sharing 2019							
Total traffic risk sharing adjustements up to 2019							
Traffic risk sharing 2020							
Traffic risk sharing 2021							
Traffic risk sharing 2022							
Traffic risk sharing 2023							
Traffic risk sharing 2024							
Total traffic risk sharing adjustment (Art. 27(2) to 27(5))*							
Difference in investment costs 2020							
Difference in investment costs 2021							
Difference in investment costs 2022							
Difference in investment costs 2023							
Difference in investment costs 2024							
Total adjustment relating to investment costs (Art. 28(4))							
Difference in competent authorities and QEs costs 2020	0			0			
Difference in competent authorities and QEs costs 2021	0				0		
Difference in competent authorities and QEs costs 2022	0					0	
Difference in competent authorities and QEs costs 2023	0						0
Difference in competent authorities and QEs costs 2024	0						0
Total adjustment relating to competent authorities and QEs costs (Art. 28(5))	**0**			**0**	**0**	**0**	**0**
Difference in Eurocontrol costs 2020	0			0			
Difference in Eurocontrol costs 2021	0				0		
Difference in Eurocontrol costs 2022	0					0.0	
Difference in Eurocontrol costs 2023	0						0
Difference in Eurocontrol costs 2024	0						0
Total adjustment relating to Eurocontrol costs (Art. 28(5))	**0**			**0**	**0**	**0**	**0**
Difference in pension costs 2020							
Difference in pension costs 2021							
Difference in pension costs 2022							
Difference in pension costs 2023							
Difference in pension costs 2024							
Total adjustment relating to pension costs (Art. 28(6))							
Difference in interest on loans 2020							
Difference in interest on loans 2021							
Difference in interest on loans 2022							
Difference in interest on loans 2023							
Difference in interest on loans 2024							
Total adjustment relating to interest on loans (Art. 28(6))							
Costs relating to change in law 2020							
Costs relating to change in law 2021							
Costs relating to change in law 2022							
Costs relating to change in law 2023							
Costs relating to change in law 2024							
Total adjustment relating to change in law (Art. 28(6))							
Cost exempt from cost sharing up to 2017	-1,153	0	0	-1,153	0	0	0
Cost exempt from cost sharing 2018	-370		0	-370	0	0	0
Cost exempt from cost sharing 2019			0	0	0	0	0
Total adjustment relating to cost exempt from previous RPs	**-1,523**	**0**	**0**	**-1,523**	**0**	**0**	**0**
Financial incentives year up to 2017							
Financial incentives year 2018							
Financial incentives year 2019							
Total financial incentives up to 2019							
Financial incentives year 2020							
Financial incentives year 2021							
Financial incentives year 2022							
Financial incentives year 2023							
Financial incentives year 2024							
Total financial incentives (Art. 11(3) and 11(4))*							
Modulation of charges up to 2017	0	0	0	0	0	0	
Modulation of charges year 2018	0	0	0	0	0	0	
Modulation of charges year 2019			0	0	0	0	
Total modulation of charges up 2019	0	0	0	0	0	0	
Modulation of charges 2020	0			0			
Modulation of charges 2021	0				0		
Modulation of charges 2022	0					0.0	
Modulation of charges 2023	0						0
Modulation of charges 2024	0						0
Total adjustment relating to modulation of charges (Art. 32(1))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Traffic adjustment up to 2017	0	0	0	0	0	0	0
Traffic adjustment 2018	-8,108		0	0	0	0	-8,108
Traffic adjustment 2019			0	0	0	0	0
Total traffic adjustments up to 2019	-8,108	0	0	0	0	0	-8,108
Traffic adjustment on adjustments from previous RPs 2020	0			0			0
Traffic adjustment on adjustments from previous RPs 2021	0				0		0
Traffic adjustment on adjustments from previous RPs 2022	0					0	0
Traffic adjustment on adjustments from previous RPs 2023	0						0
Traffic adjustment on adjustments from previous RPs 2024	0						0
Total traffic adjustment on adjustments from previous reference periods	0	0	0	0	0	0	0
Traffic adjustment 2020	0			0			
Traffic adjustment 2021	0				0		
Traffic adjustment 2022	0					0	
Traffic adjustment 2023	0						0
Traffic adjustment 2024	0						0
Total traffic adjustment (Art. 27(8) and 27(9))*	**-8,108**	**0**	**0**	**0**	**0**	**0**	**-8,108**
Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2019		0	0	0	0	0	0
Total revenues received from Union assistance programmes up to 2019	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2020	0	0	0	0	0	0	0
Revenues received from Union assistance programmes in 2021	0		0	0	0	0	0
Revenues received from Union assistance programmes in 2022	0			0	0	0	0
Revenues received from Union assistance programmes in 2023	0				0	0	0
Revenues received from Union assistance programmes in 2024	0					0	0
Total revenues received from Union assistance programmes (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
Revenues received from national public funding in 2018	0	0	0	0	0	0	0
Revenues received from national public funding in 2019		0	0	0	0	0	0
Total revenues received from national public funding up to 2019	0	0	0	0	0	0	0
Revenues received from national public funding in 2020	0	0	0	0	0	0	0
Revenues received from national public funding in 2021	0		0	0	0	0	0
Revenues received from national public funding in 2022	0			0	0	0	0
Revenues received from national public funding in 2023	0				0	0	0
Revenues received from national public funding in 2024	0					0	0
Total revenues received from national public funding (Art. 25(3)(a))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
Revenues from commercial activities in 2018	0	0	0	0	0	0	0
Revenues from commercial activities in 2019		0	0	0	0	0	0
Total revenues from commercial activities up to 2019	0	0	0	0	0	0	0
Revenues from commercial activities in 2020	0	0	0	0			
Revenues from commercial activities in 2021	0		0	0	0		
Revenues from commercial activities in 2022	0			0	0	0	
Revenues from commercial activities in 2023	0				0	0	0
Revenues from commercial activities in 2024	0					0	0
Total revenues from commercial activities (Art. 25(3)(b))*	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Revenues from contracts with airport operators up to 2017							
Revenues from contracts with airport operators in 2018							
Revenues from contracts with airport operators in 2019							
Total revenues from contracts with airport operators up to 2019							
Revenues from contracts with airport operators in 2020							
Revenues from contracts with airport operators in 2021							
Revenues from contracts with airport operators in 2022							
Revenues from contracts with airport operators in 2023							
Revenues from contracts with airport operators in 2024							
Total revenues from contracts with airport operators (Art. 25(3)(c))*							
Revenue difference - revision of UR 2020	0	0	0	0	0	0	0
Revenue difference - revision of UR 2021	0		0	0	0	0	0
Revenue difference - revision of UR 2022	0			0	0	0	0
Revenue difference - revision of UR 2023	0				0	0	0
Revenue difference - revision of UR 2024	0					0	0
Total revenue differences from temporary application of UR (Art. 29(5))	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Cross-financing to (-) / from (+) other charging zone(s) relating to 2020							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2021							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2022							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2023							
Cross-financing to (-) / from (+) other charging zone(s) relating to 2024							
Total cross-financing to (-) / from (+) other charging zone(s)							
Total adjustments	**-11,084**	**-1,453**	**0**	**-1,523**	**0**	**0**	**-8,108**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 4 - Complementary information on common projects and on revenues from Union assistance programmes allocated to the charging zone

United Kingdom

Amounts received

Project reference (as per Grant Agreement)	Project title	Value of funded project in '000 Euro		Amounts granted (as per GA) in '000 Euro		Common project y/n	Actual amounts received (charging zone) in '000 Euro										
		Total	For the charging zone	Total	For the charging zone		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SESAR Deployment Manager- Brussels coordination and support costs (included in determined costs)																	
Coordination costs	Costs included in determined costs	6,555		6,555		n							1,458	1,301	1,254	1,265	1,278
Coordination income	Revenues included in determined costs	-6,555		-6,555									-1,458	-1,301	-1,254	-1,265	-1,278
Sub-total:													0	0	0	0	0
INEA Implementation Projects																	
INEA/CEF/TRAN/M2014/1072725 2014-EU-TM-0136-M	DP Implementation - Call 2014 CEF	94,081		46,100		y	0	0	13,286	14,814	0	8,895	0	0	4,876	0	0
INEA/CEF/TRAN/M2015/1131871 2015-EU-TM-0193-M	SESAR Deployment Programme implementation 2015 - Cluster 1	4,000		1,960		y	0	0	570	0	0	1,009	400	0	0	0	0
INEA/CEF/TRAN/M2015/1132363 2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 - Cluster 2	88,958		42,779		y	0	0	10,518	0	0	23,952	0	0	8,730	0	0
INEA/CEF/TRAN/M2015/1125694 2015-UK-TM-0010-W	New NATS (En Route) plc (NERL) Operational Facilities Phase 1	16,479		8,239		n	0	0	3,176	0	935	0	2,480	401	0	0	0
INEA/CEF/TRAN/M2015/1129117 2015-UK-TM-0012-W	Enablers to Support SESAR Deployment	21,514		10,757		n	0	0	3,851	0	3,193	0	2,752	0	0	0	0
INEA/CEF/TRAN/M2015/1126563 2015-UK-TM-0013-W	CNS Rationalisation and Upgrade within the UK	11,230		5,615		n	0	0	1,116	0	2,647	0	0	1,579	0	0	0
INEA/CEF/TRAN/M2015/1126607 2015-UK-TM-0047-S	Design of New NATS Systems to support SESAR Implementation	3,317		1,659		n	0	0	663	0	995	0	0	0	0	0	0
SESAR 2020 Wave 2																	
PJ01-W2 EAD	Dynamic E-TMA for Adv Continuous Climb and Descent Operations and improved Arr & Dep Operations	2,052		1,330		n	0	0	0	0	0	0	0	0	0	0	0
PJ02-W2 AART	Evolution of separation minima for increased runway throughput	639		315		n	0	0	0	0	0	0	0	0	0	0	0
PJ09-W2 DMNS	PJ.09 W2 - Digital Network Management Services	428		301		n	0	0	0	0	0	0	0	0	0	0	0
PJ10-W2	PJ.10 W2 – Separation Management & Controller Tools	2,604		1,295		n	0	0	0	0	0	0	0	0	0	0	0
PJ13-W2 ERICA	Collision avoidance for IFR RPAS	240		151		n	0	0	0	0	0	0	0	0	0	0	0
PJ14-W2 - I-CNSS	PJ.14 W2 - Integrated CNSS	161		105		n	0	0	0	0	0	0	0	0	0	0	0
PJ18-W2 4D skyways	PJ.18 W2 - 4D Skyways	2,558		1,190		n	0	0	0	0	0	0	0	0	0	0	0
PJ19-W2 CI	PJ.19 W2 - Content Integration	429		294		n	0	0	0	0	0	0	0	0	0	0	0
PJ20-W2 AMPLE	PJ.20 W2 - Master Plan Maintenance	255		175		n	0	0	0	0	0	0	0	0	0	0	0
VLD3	Improving Runway Throughput in One Airport	1,250		998		n	0	0	0	0	0	0	0	0	0	0	0
Total in '000 Euro		**250,194**	**0**	**123,262**	**0**		**0**	**0**	**33,180**	**14,814**	**7,771**	**33,857**	**5,632**	**1,980**	**13,607**	**0**	**0**
Total in '000 national currency		**218,314**	-	**107,556**	-	-	-	-	**28,953**	**12,926**	**6,781**	**29,551**	**4,914**	**1,728**	**11,873**	-	-

Assumption for conversion to national currency: **0.87258**

Amounts reimbursed to airspace users through other revenues

Project reference (as per Grant Agreement)	Project title	Amounts retained in respect of administrative costs for the charging zone in '000 Euro	Total to be reimbursed for the charging zone in '000 Euro	Amounts reimbursed to users (charging zone) in '000 national currency										
				2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	After RP
SESAR Deployment Manager- Brussels coordination and support costs (included in determined costs)															
Coordination costs	SDM costs reimbursement outstanding	5,177	-5,177	0	0	0	0	0	0	0	-5,177	0	0	0	0
INEA Implementation Projects															
INEA/CEF/TRAN/M2014/1072725 2014-EU-TM-0136-M	DP Implementation - Call 2014 CEF	0	46,100	0	0	0	0	0	22,386	0	10,250	0	0	412	2,373
INEA/CEF/TRAN/M2015/1131871 2015-EU-TM-0193-M	SESAR Deployment Programme implementation 2015 - Cluster 1	0	1,960	0	0	0	0	0	484	0	1,163	186	0	0	-209
INEA/CEF/TRAN/M2015/1132363 2015-EU-TM-0196-M	SESAR Deployment Programme implementation 2015 - Cluster 2	0	42,779	0	0	0	0	0	8,933	0	27,614	0	0	738	306
INEA/CEF/TRAN/M2015/1125694 2015-UK-TM-0010-W	New NATS (En Route) plc (NERL) Operational Facilities Phase 1	0	8,239	0	0	0	0	0	2,842	20	0	1,152	946	0	2,180
INEA/CEF/TRAN/M2015/1129117 2015-UK-TM-0012-W	Enablers to Support SESAR Deployment	0	10,757	0	0	0	0	0	3,446	98	0	1,276	0	0	6,738
INEA/CEF/TRAN/M2015/1126563 2015-UK-TM-0013-W	CNS Rationalisation and Upgrade within the UK	0	5,615	0	0	0	0	0	999	56	0	0	3,721	0	-129
INEA/CEF/TRAN/M2015/1126607 2015-UK-TM-0047-S	Design of New NATS Systems to support SESAR Implementation	0	1,659	0	0	0	0	0	594	21	0	0	0	0	1,513
Other : Interest; TSU/CSU adjustment									563	2	440	29	50	17	126
									40,321.0	168.7	39,467.9	2,644.5	4,716.6	1,167.8	12,898.0
SESAR 2020 Wave 2															
PJ01-W2 EAD	Dynamic E-TMA for Adv Continuous Climb and	0	1,330	0	0	0	0	0	0	0	0	0	0	0	0
PJ02-W2 AART	Evolution of separation minima for increased r	0	315	0	0	0	0	0	0	0	0	0	0	0	0
PJ09-W2 DMNS	PJ.09 W2 - Digital Network Management Servic	0	301	0	0	0	0	0	0	0	0	0	0	0	0
PJ10-W2	PJ.10 W2 – Separation Management & Controll	0	1,295	0	0	0	0	0	0	0	0	0	0	0	0
PJ13-W2 ERICA	Collision avoidance for IFR RPAS	0	151	0	0	0	0	0	0	0	0	0	0	0	0
PJ14-W2 - I-CNSS	PJ.14 W2 - Integrated CNSS	0	105	0	0	0	0	0	0	0	0	0	0	0	0
PJ18-W2 4D skyways	PJ.18 W2 - 4D Skyways	0	1,190	0	0	0	0	0	0	0	0	0	0	0	0
PJ19-W2 CI	PJ.19 W2 - Content Integration	0	294	0	0	0	0	0	0	0	0	0	0	0	0
PJ20-W2 AMPLE	PJ.20 W2 - Master Plan Maintenance	0	175	0	0	0	0	0	0	0	0	0	0	0	0
VLD3	Improving Runway Throughput in One Airport	0	998	0	0	0	0	0	0	0	0	0	0	0	0
Total in '000 Euro		**5177.19069**	**118,085**	**0**	**0**	**0**	**0**	**0**	**46,209**	**191**	**39,298**	**3,031**	**1,405**	**1,338**	**14,781**
Total in '000 national currency		**4518**	**103038**	0	0	0	0	0	40,321	167	34,291	2,645	4,717	1,168	12,898

To be offset in event of non-recovery

NOTES

SESAR Deployment manager costs assume continuation post BREXIT and that costs incurred will be reimbursed. These are included as per NERL's RBP.

SESAR Wave 2

NERL's RBP assumed an estimate for costs related to NERL's participation in the Horizon Wave 2 programme. (the second tranche of funding).

The estimate provided above relates to the R&D activities for Horizon 2020 included in NERL's RBP. No receipts were assumed in the RBP, but actuals would be reimbursed when received on an N+2 basis.

An update is provided below, which relates to the bid acceptance of Wave 2 in July 2019.

Income is subject to NATS being able to claim European grant funding or UK government grant funding post Brexit

The income profile is based on acceptance of NERL costs by the European Commission as per the annual reporting requirement of the H2020 programme

Income reimbursement is profiled on an N+2 basis

INEA Implementation projects

Return of INEA funding to air space users via the unit rate is subject to receipt of funds post BREXIT and after administrative costs have been reimbursed and in line with principles agreed with CAA

INEA funding relates to capital programmes. These costs (other than some minor support costs) are not included in determined cost.

Return of INEA funding is subject to SESAR Deployment Manager retentions for project related support costs

Grants received may not match the grant awarded as some projects may underspend the budgeted amounts.

Update to SESAR Horizon 2020

Project reference (as per Grant Agreement)	Project title	Value of funded project		Amounts granted (as per GA)		Common project y/n	Actual amounts received (charging zone) in '000 Euro										
		Total	For the charging zone	Total	For the charging zone		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SESAR 2020 Wave 2																	
PJ01-W2 EAD	Dynamic E-TMA for Adv Continuous Climb and Descent Operations and improved Arr & Dep Operations	2,052		1,330		n	0	0	0	0	0	0	0	530	492	308	0
PJ02-W2 AART	Evolution of separation minima for increased runway throughput	639		315		n	0	0	0	0	0	0	0	112	125	78	0
PJ09-W2 DMNS	PJ.09 W2 - Digital Network Management Services	428		301		n	0	0	0	0	0	0	0	107	119	75	0
PJ10-W2	PJ.10 W2 – Separation Management & Controller Tools	2,604		1,295		n	0	0	0	0	0	0	0	462	513	321	0
PJ13-W2 ERICA	Collision avoidance for IFR RPAS	240		151		n	0	0	0	0	0	0	0	54	60	37	0
PJ14-W2 - I-CNSS	PJ.14 W2 - Integrated CNSS	161		105		n	0	0	0	0	0	0	0	37	42	26	0
PJ18-W2 4D skyways	PJ.18 W2 - 4D Skyways	2,558		1,190		n	0	0	0	0	0	0	0	424	471	295	0
PJ19-W2 CI	PJ.19 W2 - Content Integration	429		294		n	0	0	0	0	0	0	0	105	116	73	0
PJ20-W2 AMPLE	PJ.20 W2 - Master Plan Maintenance	255		175		n	0	0	0	0	0	0	0	62	69	43	0
VLD3	Improving Runway Throughput in One Airport	1,250		998		n	0	0	0	0	0	0	0	356	395	247	0
Total in '000 Euro		**10,615**		**6,153**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,249**	**2,402**	**1,503**	**0**
Total in '000 national currency		9,262		5,369		0	0	0	0	0	0	0	0	1,963	2,096	1,311	0

RP3 Cost-efficiency targets

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

2019 baseline value for the determined costs (in real terms and in national currency)	**715,704,179**
2019 latest available service units forecast (actual route flown, see point 1.2 of Annex VIII)	**12,408,200**
2019 baseline value for the determined unit costs (in real terms and in national currency)	**57.68**

b) Cost-efficiency performance targets

En route charging zone	**Baseline 2014**	**Baseline 2019**	**RP3 Performance Plan (determined 2020-2024)**					**CAGR**	**CAGR**
United Kingdom	**2014B**	**2019 B**	**2020 D**	**2021 D**	**2022 D**	**2023 D**	**2024 D**	**2014A-2024D**	**2019B-2024D**
Total en route costs in nominal terms (in national currency)			779,902,542	764,803,115	781,316,036	754,069,503	759,098,986		
Total en route costs in real terms (in national currency at 2017 prices)	**692,804,406**	**715,704,179**	**732,694,679**	**704,420,812**	**705,519,621**	**667,565,007**	**658,840,710**	**-0.5%**	**-1.6%**
YoY variation			2.4%	-3.9%	0.2%	-5.4%	-1.3%		
Total en route Service Units (TSU)	9,979,403	12,408,200	12,647,945	12,891,000	13,183,000	13,406,000	13,615,000	3.2%	1.9%
YoY variation			1.9%	1.9%	2.3%	1.7%	1.6%		
Real en route unit costs (in national currency at 2017 prices)	**69.42**	**57.68**	**57.93**	**54.64**	**53.52**	**49.80**	**48.39**	**-3.5%**	**-3.5%**
YoY variation			0.4%	-5.7%	-2.1%	-7.0%	-2.8%		
Real en route unit costs (in EUR2017) [1]	**79.26**	**65.85**	**66.14**	**62.39**	**61.10**	**56.85**	**55.25**	**-3.5%**	**-3.5%**
YoY variation			0.4%	-5.7%	-2.1%	-7.0%	-2.8%		

National currency	**GBP**
[1] Average exchange rate 2017 (1 EUR=)	**0.875911**

En-route Charging Zone United Kingdom
Reference Period 3 (2020-2024)

ADDITIONAL INFORMATION TO REPORTING TABLES 1 – TOTAL COSTS AND UNIT COSTS

1. Determined costs and unit costs

a) Description of the methodology used for allocating costs of facilities or services between different air navigation services, based on the list of facilities and services listed in ICAO Regional Air Navigation Plan, European Region (Doc 7754) as last amended, and a description of the methodology used for allocating those costs between different charging zones;

The UK cost base is prepared under 4 separate organisations:

1. The Department for Transport (**DfT**) is the responsible Government department. The Department incurs the UK's Eurocontrol Member State costs as well as its own related administrative costs.

2. The Civil Aviation Authority (**CAA**, the UK National Supervisory Authority) supervises the economic regulation of NERL, the en-route ANSP, and the Meteorological Office's Civil Aviation-related services. Its cost base includes the costs of its airspace regulation, policy and oversight activities and policy, legal and financial support to the route charges system and performance scheme. Within the CRCO tables, one set of figures is submitted for the combined costs of DfT and CAA.

3. The Meteorological Office (**MET**) allocates a percentage of its core costs to Civil Aviation and is governed by a fixed pricing algorithm which guarantees year on year efficiencies.

4. NATS (En Route) Plc, known as NERL, under its licence, has a revenue capping mechanism, which is set after extensive consultation with the aviation community by the Regulator covering control periods. This follows the principles of determined cost. The last control period (RP2) expires in December 2019 and a new control period has been set for the period January 2020 to December 2024, based on the new performance and charging regulation.

NERL has two en route charging arrangements; the UK FIR and the Shanwick Oceanic area. Costs are allocated to each using an activity management process. This includes separate reporting of the asset bases. NERL produces an annual audited set of accounts for the CAA which identifies performance for each charging area, together with a reconciliation of each Regulatory Asset Base (on a calendar year basis for both charging areas). NERL also produces Statutory accounts prepared under IFRS. NERL's Shanwick Oceanic activities are not within scope of the EU performance scheme.

NATS Services Limited (NSL), a NERL sister company, provides terminal ATS, engineering and consultancy services. NSL's activities are not subject to economic regulation under the UK Transport Act 2000 or the EU performance scheme.

As part of the Licence arrangement, the revenue from other services NERL provides is offset against the en-route cost base to reduce the overall en-route charges. This is applied against staff, other operating and depreciation costs. This does not include NSL's terminal and consultancy activities.

b) Description of the methodology and assumptions used to establish the costs of air navigation services provided to VFR flights, when exemptions are granted for VFR flights in accordance with Article 31(3), 31(4) and 31(5);

Not applicable

c) Criteria used to allocate costs between terminal and en route services, in accordance with Article 22(5);

As set out above in response to (1a), NERL has two en route charging arrangements; the UK FIR and the Shanwick Oceanic area. Costs are allocated to each using an activity management process. This includes separate reporting of the asset bases. NERL produces an annual audited set of accounts for the CAA which identifies performance for each charging area, together with a reconciliation of each Regulatory Asset Base (on a calendar year basis for both charging areas). NERL also produces Statutory accounts prepared under IFRS.

NSL reports separately, including on costs for terminal operations.

For London Approach services (Charging Zone C), the performance regulation does not set out clear criteria for determining whether services should be treated as terminal or en route for the purposes of charging. London Approach's operational characteristics have elements of both terminal and en route functions.

In RP2 London Approach was considered as a separate terminal charging zone (Charging Zone C). To reflect that London Approach has both terminal and en route elements, around a third of the cost of the service is allocated to Charging Zone C, with the remainder allocated to NERL's en route charge. Alongside its business plan, NERL submitted to the CAA evidence on the allocation of approach functions between en route and terminal charges used by other ANSPs in Europe. NERL noted that en route charges do not apply within a 20km boundary from airports. NERL presented analysis that allocated its Radar Manoeuvring Area between en route (>=20km) and terminal (<20km less the area estimated to be handed over to TANS). It found that the resulting allocation was consistent with the cost allocation used in RP2.

Following consultation with users, for RP3 we have retained the current charging arrangements for London Approach in RP3 – a separate terminal charge with the current approach to the allocation of costs.

For RP3, we have included Biggin Hill airport in scope of the London Approach regulated charge. Under this approach, the services NERL provides to Biggin Hill airport will be acknowledged as operationally similar to those in scope of London Approach and will therefore be considered a commercial approach service that is treated as 'other revenue' in the meaning of the performance regulation, and therefore netted off the London Approach regulated charge with nil impact on airports in scope of the London Approach charge or their users. The remaining proportion of the current arrangements with Biggin Hill will be included in the en route component.

d) Breakdown of the meteorological costs between direct costs and the costs of supporting meteorological facilities and services that also serve meteorological requirements in general ('MET core costs'). MET core costs include general analysis and forecasting, surface and upper-air observation networks, meteorological communication systems, data processing centres and supporting core research, training and administration;

The Met Office has been Designated to provide a number of Met forecast and warnings services as part of the UK's obligations under ICAO Annex 3, Meteorological Service for International Air Navigation. The arrangements for Met comprise a number of elements including Core and Direct Services. Direct Services includes a Research and Development programme and support for Volcanic Ash operations.

Core costs are the en-route share of the underpinning infrastructure costs of providing a weather forecasting service (e.g. supercomputer, numerical weather prediction model etc.) and calculated in accordance with the guidance contained within ICAO Document 9161, Manual of Air Navigation Service Economics.

Direct costs are the costs associated with providing the specific products and services required as part of the UK's obligations under ICAO Annex 3. This includes human resources (e.g. aeronautical

meteorologists, IT specialists etc.), IT systems (e.g. post-processing systems to turn raw numerical weather prediction data into specific aeronautical data) and managerial support.

As set out in the Met Office planning overview and consultation briefing for RP3,[1] the costs of the National Capability can be split into two categories, International Subscriptions and Other National Capability:

- The International Subscriptions part describes the shared commitments from several countries to support a shared capability; satellites and the UK contribution towards the European Centre for Medium Range Weather Forecasting (ECMWF) and the UN's World Meteorological Organisation are examples; the cost is typically shared as a function of national Gross Domestic Product and in any given year is therefore subject to fluctuation (alongside currency conversion fluctuations). This currently constitutes approximately 33% of the total National Capability.
- The remaining National Capability costs include elements such as UK weather radar, UK observations, core NWP and Met Office science research and development.

The anticipated split between International Subscriptions and Other National Capability is as follows:

	2019 (RP2)	2020	2021	2022	2023	2024
International Subscriptions	£5,518,000	£5,611,000	£5,626,500	£6,882,000	£10,726,000	£10,726,000
Other National Capability	£11,257,000	£11,339,000	£11,373,500	£11,350,000	£11,350,000	£11,350,000
Total aviation contribution	**£16,775,000**	**£16,950,000**	**£17,000,000**	**£18,232,000**	**£22,076,000**	**£22,076,000**

Source: Met office, Reference Period 3, Met Office planning overview and consultation briefing note, updated January 2019

The total Met Office costs for RP3, including service deployment and delivery costs is set out in the table below. Additional detail on MET are set out in Appendix F of the CAA Decision Document – www.caa.co.uk/cap1830a.

Met Office Determined Costs in nominal and 2017 prices terms for RP3

£m	2020	2021	2022	2023	2024
National capability	17.0	17.0	18.2	22.1	22.1
Met service deployment and delivery	14.0	13.2	13.4	13.1	13.3
Total Met Office (nominal)	30.9	30.2	31.6	35.2	35.4
Total Met Office (2017 prices)	29.0	27.7	28.5	31.0	30.6

Source: Met Office

[1] https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/services/transport/aviation/met-office-rp3-briefing-note-update-jan-2019.pdf

e) Description of the methodology used for allocating total meteorological costs and MET core costs referred to in point (d) to civil aviation and between charging zones;

Please see response above to (1d).

f) For each entity, description of the composition of each item of the determined costs by nature and by service (points 1 and 2 of Table 1), including a description of the main factors explaining the planned variations over the reference period;

Determined costs by nature and by service

To reach its final decision on Determined Costs for NERL, the CAA considered a range of evidence and inputs including:

- NERL's RP3 business plan
- historical analysis/trends (top down analysis);
- independent in-depth consultant studies (bottom up analysis);
- the results of NERL's customer consultation process, including the Co-Chairs' Report and bilateral meetings with airspace users; and
- the EU targets adopted by the European Commission; and its own stakeholder consultation process on draft proposals.

The findings are summarised below. The CAA Decision Document, www.caa.co.uk/cap1830, provides further information.

Entity: NERL (ANSP)	
1. Detail by nature (in nominal terms)	
1.1 Staff costs	This includes pay costs, allowances, Employers national insurance and pension contributions. The increase in operating costs (both staff and other operating costs) from 2017 to 2019 and RP3 reflects additional operating costs to provide more flexibility and ensure NERL has sufficient resources to effectively deliver its planned RP3 programme, in particular its role airspace modernisation. It will introduce new technology to replace existing legacy systems, undertake an airspace modernisation programme, improve operational resilience and manage air traffic growth and more complex interactions between air traffic movements in busier airspace. The CAA has accepted NERL's forecast that its operating costs will increase by about 21% in the last two years of RP2 as well as its forecast operating costs for the first three years of RP3. In these years NERL is planning to deliver a number of important projects that will benefit users, such as new technology at its Swanwick and Prestwick centres (which will allow for the phasing out of legacy systems and provide improved contingency arrangements), the AD6 airspace change which will increase much needed capacity into Stansted and Luton, and Free Route Airspace. To implement these projects, NERL will need to train operational staff on new systems and in new procedures, thus requiring additional operating costs. However, we have assumed that it can achieve unit cost reductions of 2.3% per year during RP3, with the reductions starting in 2023.

	The increase in costs in RP3 also reflect £42m for the Opex Flexibility Fund (OFF), which will be utilised primarily to support NERL's airspace modernisation activities and will be subject to a stakeholder governance and escalation process. The CAA has also added £15m over RP3 for the establishment and running of the Airspace Change Organising Group (ACOG) function, to further support airspace modernisation. The CAA has deducted £24 million from operating costs to better align the forecast of costs with NERL's forecasts of non-regulated revenues and activities. **While the CAA has included an overall operating cost allowance for NERL in its Determined Costs, it does not set separate allowances for staff and non-staff costs, nor take a view on how many staff NERL should employ or how its staff should be remunerated.**
of which, pension costs	This includes pension contributions for NERL's defined benefit (DB) and defined contribution (DC) schemes. The DB costs include payments to repair the estimated scheme deficit. The increase in pension costs in 2020-2022 mainly reflect the profile of DB scheme contributions and deficit repair payments agreed as part of the pension scheme valuation as at end 2017. This reduces in 2023 as we have reduced NERL's forecast pension deficit repayments by £18 million in 2023 and no pension deficit payments were forecast in 2024.
1.2 Other operating costs	This includes non-staff related costs, including 3rd Party programme cost (not capitalised), facilities, asset management and engineering support. See explanation above under staff costs, which explains the drivers of increased Staff and Other operating costs.
1.3 Depreciation	This includes depreciation based on the regulatory asset base (RAB) value, with assets depreciated over 15 years on a straight-line basis. The regulatory depreciation allowance relates to capital expenditure in RP3 and previous reference periods. They also include backlog adjustments that true-up for differences in the level of actual capital expenditure and the level assumed in setting previous price controls. The increase in 2020 mainly reflects higher backlog adjustments as NERL has accelerated DSESAR. The reduction from 2021 is mainly due to the ending of the depreciation of the opening RAB from when NERL was privatised, which will have been fully depreciated over 20 years. The capital expenditure allowance (£667 million over RP3, about £50m below NERL's business plan) reflects the CAA view that NERL can realise capital expenditure efficiencies over RP3 but continue to deliver its full business plan programme. NERL's business plan includes a capital programme involving the continuing replacement and upgrade of its base technology platform, in part to support airspace modernisation. The CAA's final decision reflects that both the upgrade of its technology systems and airspace modernisation are important to the future of UK aviation, and therefore airspace users.
1.4 Cost of capital	The cost of capital relates to the allowed pre-tax weighted average cost of capital (2.91% in real terms, deflated by the retail price index (RPI)) on the average regulatory asset base (RAB). The significant reduction from RP2 to RP3 reflects the CAA's final decision to use a real pre-tax weighted average cost of capital of 2.91%, compared with 5.07% in NERL's business plan and 5.86% allowed in RP2.
1.5 Exceptional items	This includes the adjustment for military TSUs, restructuring costs and specific programmes' contingency. The cost in RP3 mainly relates to the adjustment for military TSUs.
2. Detail by service (in nominal terms)	
2.1 Air Traffic Management	This reflects the share of Determined Costs in 2018 (81.9%) as applied to total Determined Costs during RP3.
2.2 Communication	This reflects the share of Determined Costs in 2018 (7.6%) as applied to total Determined Costs during RP3.

2.3 Navigation	This reflects the share of Determined Costs in 2018 (2.8%) as applied to total Determined Costs during RP3.
2.4 Surveillance	This reflects the share of Determined Costs in 2018 (5.1%) as applied to total Determined Costs during RP3.
2.5 Search and rescue	This is assumed to be zero, as in RP2.
2.6 Aeronautical Information	This reflects the share of Determined Costs in 2018 (0.6%) as applied to total Determined Costs during RP3.
2.7 Meteorological services	This is assumed to be zero, as in RP2.
2.8 Supervision costs	This reflects the share of Determined Costs in 2018 (0.8%) as applied to total Determined Costs during RP3.
2.9 Other State costs	This reflects the share of Determined Costs in 2018 (1.1%) as applied to total Determined Costs during RP3.
Adjustments beyond the provisions of the International Financial Reporting Standards adopted by the Union pursuant to Regulation (EC) No 1126/2008	
Please see details below this table.	

Details on adjustments beyond the provisions of the International Accounting Standards:

NERL has prepared its annual accounts on the basis of International Accountancy Standards (IAS) since 2005/6. The Determined Costs for NERL have however been prepared on a regulatory building-block basis. The CAA takes an economic approach to its regulation of NERL. While the economic and accounting valuation and treatment of items is often the same or very similar, there are situations in which differences arise because of the different conceptual viewpoints of economics and accountancy.

The consistency of the calculation of determined costs with IAS is considered below. Unless otherwise stated below, the CAA considers that its calculation of Determined Costs is consistent with IAS.

- Revenue discounting: IFRS requires discounting of long term receivables. These are adjusted in statutory accounts for the impact of n+2 recoveries (e.g. traffic risk sharing, inflation, incentive schemes). The Determined Costs exclude this adjustment.
- Lease reinstatement provisions: Provisions are assessed annually for the lease reinstatement obligations on property leases. These are excluded from Determined Costs.
- Pension costs: The amounts included in Determined Costs in respect of the defined benefit pension scheme are the forecast cash costs as set out in the latest independent actuarial triennial valuation of the defined benefit scheme (as at 31 December 2017). These forecast cash costs are consistent with the schedule of contributions agreed with trustees of the pension scheme in accordance with the governance of the scheme and national law (which includes a margin for prudence). The CAA has included the forecast cash costs in Determined Costs rather than the forecast accounting charge, calculated under IAS, included in NERL's forecast profit and loss account. In the short to medium term the cash costs may be different to the profit and loss account charge (IAS19), although in the long-run it is expected that they would converge on the same actual cost.
- Regulatory asset base (RAB): The RAB is a measure of the amount invested in NERL that has yet to be returned through revenue allowances, and therefore represents capital employed. The RAB is indexed to inflation (measured using the retail price index, RPI) and is, therefore, presented on a current cost accounting basis. The RAB includes:
    a. Fixed assets. This comprises most of the RAB and IAS allows fixed assets to be valued at current costs.
    b. Working capital (excluding cash balances). The RAB includes small working capital asset necessary for the operation of the business. No cash balances are included. Working capital is stated on a current cost basis. This represents an immaterial departure from strict IAS current cost accounting but is consistent with other regulatory approaches;
    c. Pensions pass through asset. The pension pass-through mechanism relates to Determined Costs that can be exempted from the cost sharing mechanism, arising in RP3 and earlier periods. The CAA allows NERL to include in, and depreciate from the RAB, a pensions asset depending whether actual exempt pension costs are higher or lower than allowed costs. The pensions asset is being depreciated over 12 or 15 years depending on when the

asset was accrued. The depreciation charge on the pensions pass through asset from RP2 is not included in the Determined Unit Cost, but is included in the en route unit rate via the carry-overs from the previous reference period resulting from the implementation of the cost sharing mechanism referred to in Article 14 of Regulation 391/2013 Annex IV, paragraph 2.2 (v).

- Capitalised finance costs: These arise for two reasons. First, when the forecast capital expenditure is updated for actual capital expenditure any differences (including timing differences) give rise to additional finance costs (or benefits). This adjustment keeps NERL whole and ensures that NERL does not benefit from delaying capital expenditure. Second and similarly, the pensions pass-through mechanism also gives rise to timing differences and therefore finance costs (or benefits). Capitalised finance costs on the pension pass through makes sure that NERL does not gain or lose due to the timing difference. This concept could be considered consistent with IAS which allow the value of assets and liabilities that crystallise in the future to reflect the time value of money.
- Netting off of non-regulatory revenues against costs: NERL's licence allows it, within specified limits, to provide air navigation services in addition to the en route business. NERL is only able to provide these services because it has the en route business and, therefore, the CAA considers that it is appropriate and in the interest of users that income from these services should be used to reduce Determined Costs and the unit rate. Netting of revenues and costs is not consistent with International Accounting Standards but necessary to reflect this single-till approach. The valuation of these revenues is consistent with IAS.
- Goodwill: IAS requires goodwill to be included in the balance sheet and any impairment to be expensed to the profit and loss account. Determined Costs do not include allowances for the impairment of goodwill. NERL's goodwill arose from privatisation in 2001. To include goodwill impairment charges in Determined Costs would, therefore, be of benefit to shareholders and to the detriment of airline customers. For this reason, the CAA does not allow these charges in setting the unit rate.
- Borrowing costs incurred on borrowings to fund capital expenditure: With the introduction of IAS23: Borrowing Costs, the option to expense borrowing costs which are attributable to the acquisition, construction or production of fixed assets was removed. As a result, under IAS, borrowing costs relating to the development of fixed assets are capitalised as part of the cost of the asset and subsequently depreciated. The CAA does not permit the capitalisation of these borrowing costs as to do so would be to remunerate NERL twice, once through the cost of capital applied to the RAB (to calculate the allowed returns) and again through the inclusion of interest costs on assets in the course of construction in the RAB (which would be recovered through regulatory depreciation). To ensure that this is not remunerated twice, borrowing costs are excluded from fixed assets for regulatory purposes.

Entity: MET	
1. Detail by nature (in nominal terms)	
1.1 Staff costs	Staff pay increases of 1% pa applied as per the last public sector pay deal. Increase in 2020 of £3.0m is driven predominantly by MET data developments (£2m) and onsite meteorologists with NERL (£0.5m).
of which, pension costs	Projected as 18.8% of total staff costs
1.2 Other operating costs	Growth of £1.1m in 2023 driven predominantly by increases in international satellite subscriptions.
1.3 Depreciation	Growth over 2022 and 2023 driven by increases in international satellite subscriptions
1.4 Cost of capital	Fixed over RP3. Calculated as 5.3% of the share of fixed assets employed to deliver aviation services.
1.5 Exceptional items	£1m in 2020 is for Civil Contingencies Aircraft (Volcanic Ash) development spend
2. Detail by service (in nominal terms)	
2.1 Air Traffic Management	n/a
2.2 Communication	n/a
2.3 Navigation	n/a

2.4 Surveillance	n/a
2.5 Search and rescue	n/a
2.6 Aeronautical Information	n/a
2.7 Meteorological services	The Determined Costs are fully attributed to Meteorological services
2.8 Supervision costs	n/a
2.9 Other State costs	n/a
Adjustments beyond the provisions of the International Financial Reporting Standards adopted by the Union pursuant to Regulation (EC) No 1126/2008	
n/a	

Entity: NSA (CAA and DfT)	
1. Detail by nature (in nominal terms)	
1.1 Staff costs	This includes staff costs in respect of the CAA's airspace management, regulation and oversight functions. Most of these costs relate to the airspace regulation activities of the Safety and Airspace Regulation Group (SARG). SARG's duties include the planning and regulation of all UK airspace including the navigation and communications infrastructure. In RP3 there will be an increased focus on the CAA's capability for supporting airspace modernisation. The increase in CAA costs is largely driven by the current and expected growth in Airspace Change Proposals (ACPs) and to ensure that the CAA is adequately resourced to manage wider airspace modernisation responsibilities. Delivery of airspace modernisation is a key priority for airspace users in RP3, and our increase in staff for RP3 is intended to facilitate the delivery of this. It is anticipated that there will be a significant number of ACPs required during RP3 to support the implementation of airspace modernisation, of varying levels of complexity that will require different amounts of resource to process. For example, the FASI-South programme of airspace design changes will require action at 16 airports in southern England. The CAA plans to increase SARG Airspace staff resources in three tranches to deal with the backlog in work, and to prepare for the anticipated future increase in ACP workload and airspace modernisation: • Tranche one is immediate posts. In 2019 this has been funded by an increase in the CAA Schemes of Charges and the DfT. Tranche one is dedicated to addressing the existing business demand for ACPs and the requirements of implementing the Airspace Modernisation Strategy (AMS) • Tranche two will increase resources in 2020, and tranche three in 2021. These tranches are aimed at addressing additional ACP applications beyond the level currently experienced and necessary to support airspace modernisation. These new SARG Airspace posts are essential to the CAA successfully meeting its regulatory and statutory commitments for the duration of RP3. Increased SARG Airspace resource will also enable us to progress key programmes such as Electronic Conspicuity and Performance Based Navigation efficiently and effectively, in accordance with government strategic policy and industry and consumer expectations. The CAA is also establishing a Delivery Monitoring and Oversight (DMO) function to support delivery of the strategy and meet its obligations under the new Air Navigation Directions from the Secretary of State. A proportion of staff costs relate to a share of cross-CAA corporate functions and overheads such as policy, legal and financial support to the route charges system and the performance scheme.
of which, pension costs	The costs of meeting CAA pension obligations in respect of staff involved in airspace activities referred to above.
1.2 Other operating costs	This includes non-staff related costs, including Costs of IT systems, consultancy services and travel and related expenses associated with the CAA's airspace activities.

	In addition to the airspace costs described above, the CAA costs include an AMS Support Fund (ASF) of £10 million over RP3. The fund will be similar in purpose and function to the FAS Facilitation (Small Gaps) Fund for RP2, albeit wider in scope, slightly larger in scale and attached to the CAA Determined Costs, rather than NERL's. As with the RP2 Small Gaps Fund, unutilised funds will be returned to airspace users in future reference periods. Further information on the ASF is provided in the CAA Decision Document, CAP 1830.
1.3 Depreciation	Depreciation costs in respect of the building refurbishment at Aviation House for the change in location of Safety Regulation staff brought down prior to the closure of CAA House in December 2019. The costs are depreciated over the life of the assets using the straight-line method applied to historic costs.
1.4 Cost of capital	Cost of capital in connection with the Aviation House building refurbishment project
1.5 Exceptional items	Additional annual cash payments to the CAA's pensions scheme to fund the Pensions Benefit Obligation (PBO) of NATS pensioners and deferred pensioners up to the point of the separation of NATS from the CAA in 2001. The most recent actuarial valuation indicated that annual payments of £6m will be required throughout RP3
2. Detail by service (in nominal terms)	
2.1 Air Traffic Management	CAA costs of regulating air traffic management and airspace, including the provision of the AMS support fund
2.2 Communication	N/A
2.3 Navigation	N/A
2.4 Surveillance	N/A
2.5 Search and rescue	N/A
2.6 Aeronautical Information	N/A
2.7 Meteorological services	N/A
2.8 Supervision costs	These costs represent CAA other costs, that do not fall into ATM/Airspace regulation, policy and oversight – for example the share of corporate overhead costs applied to ATM
2.9 Other State costs	The DfT incurs costs as a result of being a Eurocontrol Member State. These costs are included as part of the item 'Other State Costs' and are based on costs Eurocontrol forecast for the reference period. Other State Costs contribute to the 'Supervision Costs' which are costs the UK incurs to supervise the provision of air navigation services and also include CAA costs.
Adjustments beyond the provisions of the International Financial Reporting Standards adopted by the Union pursuant to Regulation (EC) No 1126/2008	

Pension costs

Note: The determined pension costs of the main ANSPs are detailed and justified in the body of the performance plan (item 3.4.3)

Entity: NERL (ANSP)
Assumptions underlying the determined pension costs and expected evolution over Reference Period 3
Details on the underlying assumptions are provided in tab 3.4.3 Pensions in the UK performance plan.

Entity: MET
Assumptions underlying the determined pension costs and expected evolution over Reference Period 3
Will remain fixed as a proportion of total staff costs at 18.8%. Met Office staff are covered by the provisions of the Principal Civil Service Pension Scheme (PCSPS). The PCSPS is an unfunded multi-employer defined benefit scheme. However, since the Met Office is unable to identify its share of the underlying assets and liabilities it is accounted for as a defined contribution scheme. Contributions are paid at rates determined from time to time by the scheme's Actuary. The Scheme Actuary (The Government Actuary's Department) conducted a full actuarial valuation as at 31 March 2012. Details can be found in the resource accounts of the Cabinet Office: Civil Superannuation (www.civilservice.gov.uk). Full provision for early retirements is normally made in the year of retirement. Pursuant to the Superannuation Act 1972, employer's contributions were payable to the PCSPS at one of four rates in the range 26.6% to 30.3% of pensionable pay, based on salary bands. The Scheme Actuary reviews employer contributions every four years following a full scheme valuation. The contribution rates are set to meet the cost of the benefits accruing during a period to be paid when the member retires and not the benefits paid during this period to existing pensioners.

Entity: NSA (CAA and DfT)
Assumptions underlying the determined pension costs and expected evolution over Reference Period 3
Under exceptional items in the NSA Determined costs: Additional annual cash payments to the CAA's pensions scheme to fund the Pensions Benefit Obligation (PBO) of NATS pensioners and deferred pensioners up to the point of the separation of NATS from the CAA in 2001. The most recent actuarial valuation indicated that annual payments of £6m will be required throughout RP3

g) For each entity, a description and justification of the method adopted for the calculation of depreciation costs (point 1.3 of Table 1): historical costs or current costs referred to in the fourth subparagraph of Article 22(4), and, where current cost accounting is used, provision of comparable historical cost data;

NERL:

NERL's Regulatory asset base (RAB) is a measure of the amount invested in the business that has yet to be returned through revenue allowances, and therefore represents capital employed. The RAB is indexed to UK retail price index (RPI) inflation and is therefore, presented on a current cost accounting basis. The RAB includes a small working capital adjustment also stated on a current cost basis. This approach is consistent with the approach adopted by regulators in other markets. Also included in the RAB are pension pass through adjustments (which can be positive or negative), rolling incentive mechanisms and capitalised finance costs.

Together, IAS and the Charging Regulation require fixed assets to be depreciated over their useful economic lives on a straight-line basis from the date they come into operation. Furthermore, assets should be classed according to their nature and useful economic lives. In contrast, the CAA has applied an average economic life to all assets and depreciated from date of acquisition. In addition, the CAA's depreciation charge reflects the current cost adjustment to fixed assets, which contrasts with NERL's statutory reporting basis which reflects historical cost.

The economic and accounting view of depreciation differ. The accounting perspective sees depreciation as a wearing out of assets and a matching of costs with revenues. The economic perspective sees depreciation as a way of passing back to the company its investment in capacity and capability. Because a return is also provided on the RAB (i.e. the amount invested which has not yet been returned to

investors) the value of the business (the present value of future cashflows) is independent of the choice of depreciation life.[2]

From an economic viewpoint, depreciation is important as it provides the company with cash flows to fund further capital expenditure and, therefore, from a financing perspective economic lives should broadly match the useful lives of the assets which are being financed. For these reasons, the CAA provides depreciation from the date of acquisition (in order to facilitate financing) rather than from the date of operation (which is used in accountancy terms to match the costs with the revenues). This also reflects the CAA's statutory duty to secure that NERL will not find it unduly difficult to finance its licensed activities.

The CAA has applied an average useful economic life to all fixed assets that reflects the economic lives of the mix of assets in use. For RP1 and RP2 capital expenditure, the CAA has used a 15-year life which it considers appropriate for regulatory purposes and notes that this is consistent with the mix of assets and their useful economic lives. The CAA therefore concludes that, although the way in which the calculation is performed is not consistent with IAS, the outcome of the calculation is broadly consistent with that which would result from using individual asset lives.

On privatisation in 2001, all the existing assets were to be depreciated over 20 years with additions depreciated over 12 years. As a result of the RP1 review the CAA extended the useful economic lives of future additions to 15 years. Although this led to a range of lives depending on when the assets were acquired, the CAA considered it would be inappropriate to retrospectively change assets lives because to do so would have created uncertainty with respect to future capital expenditure.

The table below shows depreciation estimated for the RP3 period (in financial years) on the basis of statutory accounts. This is calculated by taking the total accounting depreciation forecast for NERL and applying the proportion of regulatory depreciation (87%) attributed to UKATS. This is lower than regulatory depreciation based on current cost accounting (Annex A RP3 en-route cost reporting Table 1 Line 1.3) in 2020 though similar to regulatory depreciation over the rest of the period.

Information on cost of capital is not available from NERL on a historical cost accounting basis.

Historical Cost Accounting Values for Depreciation Charge (£m), in financial years					
Outturn	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
Depreciation charge on the basis of					
Historical cost accounting (statutory accounts depreciation lives)	119.4	123.4	137.9	145.0	145.8

MET:

Freehold land is not depreciated. Depreciation on buildings is calculated to write-off the cost, or value, by equal instalments over the asset's estimated useful life (not exceeding 50 years). Plant and equipment and information technology assets are depreciated by the straight-line method at a rate calculated to write-off the cost, or value, over the asset's estimated useful life. Current policy is to write-off plant and equipment over three to 30 years and information technology equipment over two to 12 years. Satellite assets are depreciated using the straight-line method over their estimated useful life. This method reflects the principle that the economic benefit of satellite data remains constant between individual satellites. Fixtures and fittings include improvements to leasehold buildings and are

[2] In addition, the accounting charge reflected in NERL's statutory accounts may include the accelerated write down of assets due to impairment and gains or losses on asset sales, neither of which is allowed under economic regulation. It is the proceeds of asset disposals that are deducted from the RAB and are therefore reflected in depreciation.

depreciated over five to 25 years. Assets in the course of construction are not depreciated. Where there is evidence of impairment, fixed assets are written down to recoverable amount.

MET					
Equivalent in historic cost accounting					
	2020	2021	2022	2023	2024
Investment costs (in nominal terms in '000 national currency)					
1.3 Depreciation	4,000	4,000	5,116	8,433	8,433
1.4 Cost of capital	1,985	1,985	1,985	1,985	1,985
Average asset base					
3.1 Net book val. fixed assets	37,555	37,555	37,555	37,555	37,555
3.2 Adjustments total assets	NA	NA	NA	NA	NA
3.3 Net current assets	NA	NA	NA	NA	NA
3.4 Total asset base	NA	NA	NA	NA	NA
Cost of capital %					
3.5 Cost of capital pre tax rate	5.3%	5.3%	5.3%	5.3%	5.3%
3.6 Return on equity	5.3%	5.3%	5.3%	5.3%	5.3%
3.7 Average interest on debts	NA	NA	NA	NA	NA
3.8 Share of financing through equity	100%	100%	100%	100%	100%

NSA (CAA and DfT):

Depreciation costs in respect of the building refurbishment at Aviation House for the change in location of Safety Regulation staff brought down prior to the closure of CAA House in December 2019. The costs are depreciated over the life of the assets using the straight-line method applied to historic costs.

NSA					
Equivalent in historic cost accounting					
	2020	2021	2022	2023	2024
Investment costs (in nominal terms in '000 national currency)					
1.3 Depreciation	212	217	219	167	122
1.4 Cost of capital	49	43	36	30	23
Average asset base					
3.1 Net book val. fixed assets	1,065	935	783	652	500
3.2 Adjustments total assets	< … >	< … >	< … >	< … >	< … >
3.3 Net current assets	< … >	< … >	< … >	< … >	< … >
3.4 Total asset base	1,065	935	783	652	500
Cost of capital %					
3.5 Cost of capital pre tax rate	4.60%	4.60%	4.60%	4.60%	4.60%
3.6 Return on equity	4.80%	4.80%	4.80%	4.80%	4.80%
3.7 Average interest on debts	4.30%	4.30%	4.30%	4.30%	4.30%
3.8 Share of financing through equity	0.00%	0.00%	0.00%	0.00%	0.00%

h) For each entity, description and underlying assumptions of each item of complementary information (point 3 of Table 1), including a description of the main factors explaining the variations over the reference period;

NERL (ANSP)

Costs of new and existing investments (see also performance plan item 2)	
3.10 Depreciation	Covered in item f) above
3.11 Cost of capital	This is assumed to be equal to the Cost of capital in determined costs (Table 1, line 1.4)
3.12 Cost of leasing	This is the Eurocontrol share of Finance leases and IFRS 16 operating lease costs. These are included within Other operating costs (Table 1, line 1.2).

Eurocontrol costs	
3.13 Eurocontrol costs (Euro)	This is not applicable
3.14 Exchange rate (if applicable)	This is not applicable

MET	
Costs of new and existing investments (see also performance plan item 2)	
3.10 Depreciation	Covered in item f) above
3.11 Cost of capital	n/a
3.12 Cost of leasing	n/a

Eurocontrol costs	
3.13 Eurocontrol costs (Euro)	This is not applicable
3.14 Exchange rate (if applicable)	This is not applicable

NSA (CAA and DfT)	
Costs of new and existing investments (see also performance plan item 2)	
3.10 Depreciation	Covered in item f) above
3.11 Cost of capital	n/a
3.12 Cost of leasing	n/a

Eurocontrol costs	
3.13 Eurocontrol costs (Euro)	*Eurocontrol Costs* are paid by the DfT to the Agency. These costs are apportioned according to the sharing keys greed by the Contracting States. These costs cover staff and other operating costs. The UK does not contribute to the Maastricht Upper Area Control Centre (MUAC) aspect of Eurocontrol costs. The determined costs for RP3 are provided in euros by Eurocontrol. A forecast exchange rate is also provided for the figures to be converted into pounds for the tables. The actual amounts will be added to the tables throughout RP3. The determined *Eurocontrol Costs* are increasing over the five years of RP3. The increases have been attributed to the cost of the Agency carrying out an extensive investment program.
3.14 Exchange rate (if applicable)	The average exchange rate used is €1 = £ 0.862064, as provided by DfT in the Eurocontrol Multilateral Agreement

i) For each entity, description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity;

NERL	
Average asset base	
3.1 NBV fixed assets	Calculated as the fixed assets attributed to Eurocontrol that forms part of NERL's regulatory asset base (RAB)
3.2 Adjustments total assets	Calculated as the difference between NERL's regulatory asset base (RAB) and the fixed assets (line 3.1) and net current assets (line 3.3)
3.3 Net current assets	Calculated as the working capital assets attributed to Eurocontrol that forms part of NERL's regulatory asset base (RAB)
Cost of capital %	
3.6 Return on equity	The pre-tax cost of equity (in real terms, deflated by the retail price index (RPI)) used to calculate the weighted average cost of capital. Further details are provided below the table.
3.7 Average interest on debts	The pre-tax cost of debt (in real terms, deflated by the retail price index (RPI)) used to calculate the weighted average cost of capital. Further details are provided below the table.
3.8 Share of financing through equity	The notional level of the regulatory asset base (RAB) financed by equity, used to calculate the weighted average cost of capital. Further details are provided below the table.

Approach to estimating the cost of capital

The approach taken to NERL's cost of capital, including the cost of equity, is consistent with the approach for RP2 and the regulation of utility industries in the UK and widely used elsewhere. This is based on calculating the weighted average cost of capital (WACC), with cost of equity estimated using the capital asset pricing model (CAPM). The cost of capital applied is fully pre-tax and set in real terms using the UK retail price index (RPI), consistent with indexation of the regulatory asset base (RAB).[3]

In coming to its final decision, the CAA reviewed a wide range of evidence to estimate an appropriate cost of capital for RP3, including:

- the report CAA commissioned from Europe Economics on NERL's cost of equity betas and cost of new debt for its draft proposals and an updated report it commissioned to consider and respond to new evidence and issues raised by stakeholders and recent market information;[4]
- recent market information and trends;
- recent UK regulatory precedent;[5]
- reports the CAA commissioned from PwC to provide very early of initial range WACC estimates to help guide the initial preparation for the next Heathrow Airport (HAL) price control (H7) in December 2017,[6] an update to this report that was published in February 2019[7] and a further

[3] In the UK financial markets retail prices index (RPI) inflation is the measure of inflation used by investors. In estimating the real cost of capital, the CAA has deducted RPI inflation from the nominal cost of capital. In order that investors are kept whole in respect of inflation, it is appropriate to uplift the asset base by RPI inflation.
[4] Europe Economics, Components of the Cost of Capital for NERL (December 2018); Europe Economics, Comments on NERA/NERL critiques of Europe Economics' WACC analysis, June 2019
[5] This includes including WACC ranges in Ofwat's PR19 draft determinations, Ofcom's business connectivity statement, Ofgem's RIIO-2 methodology decision, and the UKRN cost of equity report
[6] CAP 1611 - PwC, Estimating the cost of capital for H7 (December 2017)
[7] PwC, Estimating the cost of capital for H7 – Response to stakeholder views, January 2019

update to consider and respond to sector-wide issues raised by stakeholders and published alongside the CAA's final decisions;[8]

- a report from CEPA commissioned by the International Airlines Group (IAG)[9] for our draft proposals and an updated CEPA note with IAG's consultation response;[10] and
- information and supporting evidence provided by NERL, including reports from NERA and Professor Zalewska,[11] and other stakeholder submissions, including the information and reports provided by HAL.

The CAA found there to be strong evidence pointing to a sharp reduction in the pre-tax WACC since RP2. It estimated a real (in RPI terms) pre-tax WACC for NERL of 2.91%, which is significantly below the 5.07% pre-tax WACC proposed by NERL in its RP3 business plan and the 5.86% pre-tax WACC used at RP2.

The CAA's point estimate for the post-tax cost of equity in its final decision (5.40%) is higher than the post-tax cost of equity in recent publications from Ofwat for PR19 (3.46%), Ofgem for RIIO-2 (3.22%) and Ofcom for Openreach (4.71%). We would expect NERL to have a higher cost of equity as NERL faces more demand risk than regulated water and energy companies.

The reduction in WACC since RP2 is due to:

- recent market trends and regulatory precedent that point to sharp reductions in expected equity returns and the risk-free rate since RP2;
- further evidence on risks that NERL faces relative to the market that point to reductions in the required cost of equity. The CAA considers that an equity beta at or below one to be appropriate, as the regulatory framework has a number of protections in place to reduce systematic risk compared with the market as a whole;
- reductions in the cost of new investment-grade debt and the relatively high proportion of new debt that NERL expects to raise during RP3; and
- reductions in the estimated effective tax rates for NERL.

The table below shows how the pre-tax WACC has been estimated from the components of the cost of debt, cost of equity and gearing. It reflects the WACC in real terms, deflated by the UK retail price index (RPI). We have assumed forecast RPI inflation of 3.0% p.a. during RP3. The cost of equity has been uplifted for corporate tax to provide NERL with an allowance to meet its forecast tax payments for RP3 (pre-tax cost of equity). This WACC is applied to the average RAB to calculate the cost of capital in the Determined Costs.

Additional detail on the CAA's approach to estimating the WACC and responses to issues raised by stakeholders is provided in Appendix E of the CAA Decision Document - www.caa.co.uk/cap1830a.

CAA's final decision for NERL's RP3 WACC (RPI-deflated)

	CAA – RP2 allowance	NERL – RP3 business plan	CAA – RP3 final decision
Gearing	60%	60%	60%
Cost of new debt	1.75%	0.42%	0.10%

[8] PwC, Estimating the cost of capital for H7 and RP3 – Response to stakeholder views on total market return and debt beta, August 2019
[9] CEPA, Cost of capital for NATS (En-Route) plc, November 2018
[10] CEPA, Response to CAA consultations on RP3 and H7 WACC, April 2019
[11] NERA, Weighted Average Cost of Capital for NATS (En-Route) plc at RP3 (March 2018, and updated September 2018); NERA, NERL's Asset Beta for RP3 (March 2018); and NATS, NERL response to CEPA's 'Cost of capital for NATS (En-Route) plc' report for the International Airlines Group (December 2018); NERA, Cost of equity for RP3, April 2019; and Professor Zalewska, Estimation of the debt beta of the bond issued by Nats (En-Route) plc, April 2019

	CAA – RP2 allowance	NERL – RP3 business plan	CAA – RP3 final decision
Cost of embedded debt	2.50%	2.13%	2.30%
Proportion of new debt	20%	70%	70%
Issuance costs	0.15%	0.15%	0.10%
Pre-tax cost of debt	**2.50%**	**1.08%**	**0.86%**
Total market return	6.25%	6.80%	5.40%
Risk-free rate	0.75%	0.46%	-1.70%
Asset beta	0.505	0.61	0.46
Equity beta	1.11	1.45	1.00
Debt beta	0.10	0.05	0.10
Post-tax cost of equity	**6.87%**	**9.65%**	**5.40%**
Vanilla WACC	**4.25%**	**4.51%**	**2.68%**
Tax uplift	37%	12.7%	9.9%
Pre-tax WACC	**5.86%**	**5.07%**	**2.91%**

Source: CAA analysis

MET	
Average asset base	
3.1 NBV fixed assets	Allocates share of fixed asset NBV based on RP3 costs as a proportion of total Met Office costs
3.2 Adjustments total assets	Zero
3.3 Net current assets	n/a
Cost of capital %	
3.6 Return on equity	Remains consistent with RP2
3.7 Average interest on debts	n/a
3.8 Share of financing through equity	Remains consistent with RP2

NSA (CAA and DfT)	
Average asset base	
3.1 NBV fixed assets	New staff kitchens and furniture to accommodate Safety Regulation staff relocated from CAA House to Aviation House prior to the closure of CAA House in December 2019
3.2 Adjustments total assets	
3.3 Net current assets	
Cost of capital %	
3.6 Return on equity	

3.7 Average interest on debts	
3.8 Share of financing through equity	

j) Description of the determined costs of common projects (point 3.9 of Table 1).

The breakdown of the determined costs of common projects is shown in the table below. This was estimated by NERL in its RP3 business plan.

NERL (ANSP)					
Determined costs of common projects (in nominal terms in '000 national currency)					
CP reference	**2020**	**2021**	**2022**	**2023**	**2024**
SESAR Deployment Alliance	1,272	1,135	1,094	1,103	1,115
SESAR 2020 Wave 2	3,737	4,363	4,424		
Future SESAR R&D				4,390	4,432
Total (Table 1 item 3.9)	**5,009**	**5,498**	**5,519**	**5,493**	**5,547**

NERL assumed income for the SESAR Deployment Alliance over RP3 of £5.702 million, as shown in the table below.

	2020	**2021**	**2022**	**2023**	**2024**
SESAR Deployment Alliance income assumption	1,290	1,140	1,090	1,090	1,090

2. Actual costs and unit costs

a) For each entity and for each cost item, a description of the reported actual costs and the difference between those costs and the determined costs, for each year of the reference period;

Not applicable for this submission

b) Description of the reported actual service units and a description of any differences between those units and the figures provided by the entity that is billing and collecting charges as well as any differences between those units and the forecast set in the performance plan, for each year of the reference period;

Not applicable for this submission

c) Breakdown of the actual costs of common projects per individual project;

Not applicable for this submission

d) Justification of the difference between the determined and the actual costs of new and existing investments of the air navigation service providers, as well as the difference between the planned and the actual date of entry into operation of the fixed assets financed by those investments for each year of the reference period;

Not applicable for this submission

e) Description of the investment projects added, cancelled or replaced during the reference period with respect to the major investment projects identified in the performance plan, and approved by the national supervisory authority in accordance with Article 28(4)..

Not applicable for this submission

ADDITIONAL INFORMATION TO REPORTING TABLES 2 – UNIT RATE CALCULATION

a) Description and rationale for establishment of the different charging zones, in particular with regard to terminal charging zones and potential cross-subsidies between charging zones;

Not applicable

b) Description of the policy on exemptions and description of the financing means to cover the related costs;

In addition to the mandatory exemptions, the UK exempts the following flights from en-route charges in RP3:

- Flights by military aircraft;
- Flights made exclusively for the purpose of the instruction or testing of flight crew;
- VFR flights of which the total weight authorised is 5.7 metric tonnes or less;
- Flights terminating at the aerodrome from which the aircraft has taken off ("circular flights");
- Flights made exclusively for the checking or testing of equipment used or intended to be used as aids to air navigation;
- Authorised humanitarian flights.

The UK keeps its compliance with State obligations under review to ensure that the costs of services provided to exempted flights is not passed on to other airspace users through its unit rate.

c) Description of adjustments resulting from the traffic risk sharing mechanism in accordance with Article 27;

For NERL:

2018: Traffic was 13.3% higher than the NPP forecast. This results in 8.9% of Determined Costs, about £53 million, being returned to users in 2020.

2019: Traffic is forecast to be 13.4% higher than the NPP forecast. This results in 9.0% of Determined Costs, about £52 million, being returned to users in 2020.

For RP3, the CAA's final decision is to retain the default traffic risk sharing mechanism and alert threshold process contained in the performance regulation. This defines a default traffic risk sharing mechanism that retains the same features as in RP2:

- the ANSP bears all traffic risk when traffic varies within ±2% of the forecast used for RP3. This represents a deadband;
- the ANSP bears 30% (the 'risk sharing rate') of the incremental risk when traffic varies between ±2% and ±10% (the 'cap/collar') of the forecast, with users bearing the remaining 70% of this incremental risk; and
- users bear all incremental risk when traffic is more than ±10% of the forecast.

The default mechanism puts a maximum of ±4.4% of eligible revenue at risk. The performance regulation allows Member States to consult on changes to the deadband and risk sharing rate, provided they do not reduce the ANSP's maximum risk exposure below the level implied by the default mechanism.

d) Description of the differences between determined costs and actual costs of year n as a result of the changes in costs referred to in Article 28(3) including description of the changes referred to in that Article;

NERL:

For RP3 we expect costs exempt from the cost risk sharing mechanism (as defined in 2019/317 Article 28(3) to include:

- Net capital expenditure costs associated with new and existing investments. As set out in the regulatory asset base (RAB) rules working document of the CAA Decision Document - www.caa.co.uk/cap1830b – NERL can recover unforeseen changes in capital expenditure, where efficient, through the RAB, which is then recovered from users through cost of capital and depreciation. The determined capital expenditure, depreciation and cost of capital are set out in the CAA Decision Document - www.caa.co.uk/cap1830.

- Unforeseen changes in pension costs. The calculation of the RP3 Pension Contribution Variance follows the methodology used in RP2 and is based on the European Commission methodology for the treatment of costs exempt from cost sharing. It includes the actual costs of NERL's Defined Benefit Future Service and Deficit Repair contributions. In line with RP2, it will also take into account the actual costs of any reasonable measures which NERL takes during RP3 to manage any cost increases ("mitigations"), such as the Pension Cash Alternative ("PCA"), including related Employers National Insurance contributions, for members who opt out of the Defined Benefit scheme during RP3. Further details are provided in the regulatory asset base (RAB) rules working document of the CAA Decision Document - www.caa.co.uk/cap1830b and the determined pension costs are set out in the UK performance plan table 3.4.3.

- Unforeseen changes in interest rates on loans. This has not been applied in RP2 and the CAA will need to consider any adjustments for RP3. The determined interest costs are set out in the UK performance plan table 3.4.3.

- Unforeseen changes in national taxation law or other new cost items required by law. The tax adjustment has not been applied in RP2 and the CAA will need to consider any adjustments for RP3. The determined tax costs can be calculated by the difference between pre-tax and post-tax cost of equity as applied to the average RAB, are set out in the CAA Decision Document - www.caa.co.uk/cap1830. For new cost items required by law, this has been applied to differences between actual and determined spectrum costs in RP2, which the CAA expects will continue to apply for RP3. The determined spectrum costs are set out in the regulatory asset base (RAB) rules working document of the CAA Decision Document - www.caa.co.uk/cap1830b.

NSA (CAA and DfT):

For RP3, we expect costs exempt from the cost risk sharing mechanism (as defined in 2019/317 Article 28(3) to include:

- Unforeseen changes in Eurocontrol costs, which are outside the control of the NSA. The determined costs are set out in Annex A RP3 En-route cost reporting tables of the UK performance plan.
- Unforeseen changes in CAA determined costs, as these relate to changes in costs referred to the third subparagraph of Article 22(1). The CAA Determined costs are set out in Annex A RP3

En-route cost reporting tables of the UK performance plan and the CAA Decision Document - www.caa.co.uk/cap1830.

e) Description of adjustments resulting from unforeseen changes in costs in accordance with Article 28(3) to (6);

NERL:

The cost sharing mechanism (CSM) adjustments in RP3 represent Pension cost variances in RP2 that have been added to NERL's regulatory asset base (RAB) and are recovered over 15 years through depreciation. The adjustments in RP3 include a pension cost variance of c.£13 million in 2018 and forecast cost variance in 2019 of c.£18 million. The actual adjustments during RP3 will be adjusted to reflect actual outturn Pension cost variances during RP2.

f) Description of the other revenues, if any, broken down between the different categories indicated in Article 25(3);

NERL:

NERL reports on a single till basis agreed with the CAA. As a consequence, revenue has been offset against costs to reflect the net position. This approach has been discussed with CRCO and is consistent with the Principles. The income that is netted off from other sources includes income from the provision of services to North Sea Helicopters, Ministry of Defence en route air traffic (where NERL provides the infrastructure but not the controllers), services to other group companies, miscellaneous commercial income, London Approach fees and revenue associated with the SESAR Joint Undertaking and other European programmes.

The London Approach charge is reflected as a terminal charge (Charging Zone C).

Following consultation with airspace users in May 2018, NERL agreed, with the CAA, a mechanism to transfer INEA funds to airspace users. NERL will transfer the net funds received in year n via the unit rate in year n+2. The first tranche of funds (c£40m, received in the years up to and including 2017) will be transferred to airspace users via the 2019 unit rate. The CAA has forecast that NERL will return to users a further c.£48 million of INEA funds during RP3, with the majority (c.£39 million returned via the 2021 unit rate).

The Future Airspace Strategy (FAS) Facilitation Fund was introduced in RP2 to allow NERL to fund unforeseen activities required to deploy FAS. The CAA has forecast that NERL will return c.£7 million of estimated unused funds in the 2020 unit rate, with any residual unused funds being returned in the 2021 unit rate.

g) Description of the application of the financial incentive schemes referred to in Article 11(3) and 11(4) in year n and the resulting financial advantages and disadvantages; description and explanation of the modulation of air navigation charges applied in year n under Article 32 where applicable, and resulting adjustments;

Financial incentive schemes

For RP2:

The unit rate in 2020 includes an incentive penalty of £264,000, from the 2018 cost reporting tables.

For RP3:

The description and justification of the parameters of the incentive scheme defined in accordance with Article 11(3) and 11 (4) are provided in the body of the performance plan under item 5.2.

No incentive scheme is applied to the safety KPI.

Financial incentive schemes in respect of cost efficiency are in accordance with the requirements of the performance and charging regulation.

In respect of the environment, no financial incentive has been established for the EU horizontal flight efficiency KPI known as KEA. However, as in RP1 and RP2, the CAA has established a financial incentive for the additional UK "3Di" environment KPI, which takes account of both horizontal and vertical flight (in)efficiency. The parameters of the incentive are set out in tab 5.3 of the UK performance plan template, with further information contained in chapter 3 of the CAA Decision Document, CAP 1830, and Appendix D, CAP 1830a. For RP3, the CAA has capped the strength of the incentive at 0.5% of Determined Costs and slightly reduced the sliding scale for the incentive – the point at which the maximum bonus/penalty is reached – from 28% to 25%. It is noted that as the 3Di metric is determined from modelled flight efficiency coefficients, based on a sample of actual flight data, an annual review is conducted to ensure the model is operating as expected. If the review is failed for two consecutive years, the incentive mechanism will be suspended.

Financial incentives have been established for three capacity metrics – C2, C3, and C4. The C2 metric is based on the C1 target, but allows for modulation in respect of the six ANSP-attributable delay codes: C, R, S, T, M and P. The parameters of the C2 financial incentive are set out in tab 5.2.1 of the performance plan template, with further information provided in chapter 4 of the CAA Decision Document, CAP 1830, and Appendix D, CAP 1830a. For RP3, the CAA has capped the strength of the C2 incentive at 0.05% of Determined Costs for the bonus, and 0.25% of Determined Costs for the penalty. These lower power incentives reflect the flexibility the CAA has incorporated into its C1 (and therefore C2) ATFM capacity targets. In RP3 NERL is expected to make significant airspace and technology transitions in support of airspace modernisation. The CAA has therefore built in significant flexibility into its ATFM delay targets to ensure NERL is not unduly discouraged from making these transitions, which are likely to incur short term delay. Equally, given the flexible nature of the targets, the near zero levels of bonus are to ensure NERL does not make windfall gains by readily outperforming the targets.

The financial incentive for C3 is designed to encourage NERL to ATFM delay during peak times of the day, where the impact on airspace users can be greater. The parameters of the C3 incentive are set out in tab 5.3 of the performance plan template, with further information in chapter 3 of the CAA Decision Document, CAP 1830, and Appendix D, CAP 1830a. For RP3, the strength of the incentive is capped at 0.25% of Determined Costs for the bonus, and 0.75% of Determined Costs for the penalty. The C3 metric is derived from C2 and so reflects the associated flexibility.

The financial incentive for C4 is designed to encourage NERL to manage ATFM delay during particularly disruptive periods. Given the exceptional nature of such delay, the C4 incentive is penalty only and set at 0.25% of Determined Costs. The parameters of the C4 incentive are set out in tab 5.3 of the performance plan template, with further information in chapter 3 of the CAA Decision Document, CAP 1830, and Appendix D, CAP 1830a. Additionally, for RP3 and in respect of C3 and C4, the CAA has increased the number of days that can be exempt from the incentive scheme from 75 to 100 over the period. This reflects the significant number transitions NERL is expected to implement over RP3.

The CAA has introduced a new capital programmes delivery incentive for RP3. The parameters of the delivery incentive are set out in tab 5.3 of the performance plan template, with further information in chapter 5 of the CAA Decision Document, CAP 1830, and Appendix I, CAP 1830a. This incentive is penalty only and will be applied in RP4, dependent on NERL's delivery of its capital programme, in particular in respect of airspace modernisation. It is capped at £36 million (2017 CPI prices) and linked

to NERL's return on equity on its capex allowance for RP3, rather than a percentage of Determined Costs.

Modulation of charges

No adjustments are assumed for RP3.

h) Description of adjustments relating to the temporary application of a unit rate under Article 29(5);

No adjustments are assumed for RP3.

i) Description of the cross-financing between en route charging zones, or between terminal charging zones, in accordance with point (e) of Article 15(2) of Regulation 550/2004;

No adjustments are assumed for RP3.

j) Information on the application of a lower unit rate under Article 29(6) than the unit rate calculated in accordance with Article 25(2) and the means to finance the difference in revenue;

No adjustments are assumed for RP3.

k) Information and breakdown of the adjustments relating to previous reference periods impacting the unit rate calculation;

As part of the RP3 cost reporting tables we have included adjustments from 2018 and forecast for 2019 that will be carried over on an n+2 basis and impact on the 2020 and 2021 unit rates (traffic risk sharing, incentives, inflation, cost sharing mechanism and other revenues). Details on these adjustments are set out in responses above.

The CAA has not made any additional adjustments to the unit rate calculations in RP3.

ADDITIONAL INFORMATION TO REPORTING TABLE 3 – COMPLEMENTARY INFORMATION ON COMMON PROJECTS AND ON UNION ASSISTANCE PROGRAMME

I) Information on the costs of common projects and other funded projects broken down per individual project, as well as of public funds obtained from public authorities for these projects.

The break down of costs of common projects and other funded projects for NERL is provided in Table 4 of Annex A of the UK performance plan.

Setup, Adoption, Implementation and Monitoring of Common Projects (IR 409/2013)

The Commission shall:

- set up proposals for common projects
- be assisted by the Network Manager, the European Aviation Safety Agency, the Performance Review Body the SESAR Joint undertaking, Eurocontrol, the European standardisation organisations, Eurocae and the deployment manager.
- consult the stakeholders, and the consultative group of experts on its proposals for common projects.
- ensure that proposals for common projects are endorsed by the airspace users and the ground operational stakeholders that are required to implement a specific common project.
- adopt common projects and any amendments to them in accordance with the procedure referred to in Regulation (EC) No 550/2004.
- monitor the implementation of common projects and their impact on the performance of the EATMN through specific reporting requirements and make best use of existing monitoring and reporting instruments.

Common projects shall be implemented through implementation projects and in accordance with the deployment programme.

NERL is involved at different levels in common projects:

1. Through involvement in the SESAR JU and the Horizon 2020 research and development programme to determine the common projects under the SESAR ATM masterplan

2. As a member of the SESAR AISBL entity (the SESAR Deployment Manager) governing the implementation of SESAR deployment projects. Annual grants are provided under specific grant agreements through DGMOVE.

3. As an implementing partner with responsibility for delivering SESAR Pilot Common projects (PCP). PCPs are set up under IR 716/2014 and are funded by CEF.

NERL receives Union assistance for each of these categories.

NERL includes the estimated cost of performing these activities within determined costs for items 1&2 above. Grant funding for item 2 is included as an offset to costs within determined costs. Horizon 2020 funding is assumed to be returned through other revenues when funds are received.

NERL includes the cost of implementing projects under item 3 within its Regulatory Asset Base. INEA funding for Common projects and other similar projects under item 3, which are part funded

are returned to airspace users on an N+2 basis, subject to NERL being in a no better, no worse position.

Legend for the Check sheet	
TRUE	Cells highlighted in green indicate that the items checked are equal and different to 0
TRUE	Cells highlighted in pale yellow indicate that the items entering the check are blank or 0
FALSE	Cells highlighted in red indicate that the items checked are not equal
FALSE	Cells highlighted in pale yellow indicate that one of the items entering the check is blank or 0
#DIV/0	Cells highlighted in orange indicate formulae that resulted in error
N/A	Cells highlighted in white with grey "N/A" indicate that the check is not applicable for the given combination of year and/or RP

				Actual					Determined				
#	Item	INFORMATION ON COSTS AND UNIT COSTS - TABLE 1	Rounding (dec. plcs)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
		Checks for T1 (consolidated)											
#001	4.2	Check that values in Table 1 Consolidated are sums of the same items across all the entities (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total determined/actual costs (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of Total determined/actual costs for all entities (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of items 1.1 to 1.5 (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of items 2.1 to 2.9 (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#004	2.10	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Total costs by service (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#100	5.1	Check that inflation rate is not negative	3				TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Inflation rate					2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
#009	5.2	Check calculation of Determined/Actual inflation index (base 100 in 2017)	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Calculated price index			97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index			97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#017b	5.5	Check calculation of the unit cost for RP3	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units		13.70	13.53	13.09	13.05	13.03	12.47	12.02	12.29	11.36	11.71
		Unit Cost		13.70	13.53	13.09	13.05	13.03	12.47	12.02	12.29	11.36	11.71
#063	4.2	Check total costs after deduction of costs for exempted VFR	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total determined/actual costs(in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Total costs by service deducted by Costs for exempted VFR flights (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#067	4.2	Check the sum of costs by airports (in '000 NC)	3	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Total determined/actual costs in T1 Consolidated (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of items 4.2 for all airports (in '000 NC)		0	0	0	0	0	0	0	0	0	0
#067b	5.3	Check the sum of costs by airports (in '000 NC)	3	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Total costs in real terms in T1 Consolidated (in '000 NC)		12,430	12,811	12,634	12,798	12,948	12,547	12,204	12,799	11,976	12,426
		Sum of items 5.3 for all airports (in '000 NC)		0	0	0	0	0	0	0	0	0	0
		Checks for T1 ANSP NERL											
#002	1.6	Check the sum of costs by nature (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of items 1.1 to 1.5 (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#003	2.10	Check the sum of costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by service (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Sum of items 2.1 to 2.9 (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#004	2.1	Check that total costs by nature equals total costs by service (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs by nature (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
		Total costs by service (in '000 NC)		12,019	12,474	12,634	13,115	13,512	13,355	13,250	14,174	13,528	14,317
#009	5.2	Check calculation of Determined/Actual inflation index (base 100 in 2017)	2		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Calculated price index			97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index			97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#014 RP3	5.3	Check total costs into real terms (in '000 NC) RP3	3	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
		Total determined/actual costs after deduction of costs for exempted VFR flights / price index (in '000 NC)		12,274	12,691	12,634	12,904	13,131	12,783	12,478	13,126	12,376	12,946
		Total costs real terms (in '000 NC)		12,430	12,811	12,634	12,798	12,948	12,547	12,204	12,799	11,976	12,426
#016	5.4	Check that Service Units are the same for all entities (in '000)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total Service Units (ANSP)		908	947	965	980	994	1,006	1,016	1,042	1,054	1,061
		Total Service Units (Consolidated)		908	947	965	980	994	1,006	1,016	1,042	1,054	1,061
#017b	5.5	Check calculation of the unit cost for RP3	2	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total costs real terms / Total service units		13.70	13.53	13.09	13.05	13.03	12.47	12.02	12.29	11.36	11.71
		Unit Cost		13.70	13.53	13.09	13.05	13.03	12.47	12.02	12.29	11.36	11.71
#006	5.1	Check that inflation rate for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Inflation rate (%) (ANSP)		0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
		Inflation rate (%) (Consolidated)		0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
#006b	5.2	Check that inflation index for the entity is the same as at Charging Zone level (in %)		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Price Index (ANSP)		96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
		Price Index (Consolidated)		96.69	97.37	100.00	102.48	104.36	106.44	108.57	110.74	112.96	115.22
#019	3.5	Check calculation of cost of capital pre-tax rate	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Cost of capital pre tax rate (%)		5.900%	5.900%	5.900%	5.900%	5.900%	2.900%	2.900%	2.900%	2.900%	2.900%
		Cost of capital / total asset base (%)		5.900%	5.900%	5.900%	5.900%	5.900%	2.900%	2.900%	2.900%	2.900%	2.900%
#020	3.8	Check proportion of financing through equity is coherent with components	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Proportion of financing through equity calculated from components is (in %):		40.00%	40.00%	40.10%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
		Proportion of financing through equity is (in %):		40.00%	40.00%	40.10%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
#018	3.4	Check total asset base (in '000 NC)	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Sum of assets (in '000 NC)		20,316	19,026	17,646	18,278	20,574	17,330	19,867	22,485	22,577	23,696
		Total asset base (in '000 NC)		20,316	19,026	17,646	18,278	20,574	17,330	19,867	22,485	22,577	23,696
#065	3.4	Check that no cost of capital is calculated if no asset base is reported	3	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE
		Total asset base (in '000 NC)		20,316	19,026	17,646	18,278	20,574	17,330	19,867	22,485	22,577	23,696
		Cost of capital (in '000 NC)		1,190	1,115	1,035	1,071	1,206	504	578	654	657	690

Scope of the Terminal Charging Zone

Charging zone: **UK Zone C**

		Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
ICAO Airport code	**Airport Name**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
EGGW	LONDON LUTON	1	1	1	1	1	1	1	1	1	1
EGKK	LONDON GATWICK	1	1	1	1	1	1	1	1	1	1
EGLC	LONDON/CITY	1	1	1	1	1	1	1	1	1	1
EGLL	LONDON HEATHROW	1	1	1	1	1	1	1	1	1	1
EGSS	LONDON STANSTED	1	1	1	1	1	1	1	1	1	1

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
All Entities

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	5,221	5,782	5,921	6,293	*6,033*	6,270	6,454	7,194	6,572	6,771
of which, pension costs						1,647	1,700	1,795	1,350	1,397
1.2 Other operating costs	2,213	2,235	2,409	2,451	*3,096*	3,181	3,327	3,609	3,467	3,609
1.3 Depreciation	3,395	3,343	3,269	3,300	*3,159*	3,400	2,890	2,718	2,832	3,248
1.4 Cost of capital	1,190	1,115	1,035	1,071	*1,206*	504	578	654	657	690
1.5 Exceptional items	0	0	0	0	*20*	0	0	0	0	0
1.6 Total costs	**12,019**	**12,474**	**12,634**	**13,115**	***13,512***	**13,355**	**13,250**	**14,174**	**13,528**	**14,317**
Total % n/n-1		3.8%	1.3%	3.8%	*3.0%*	-1.2%	-0.8%	7.0%	-4.6%	5.8%
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	11,991	12,385	12,544	13,017	*13,412*	13,256	13,152	14,069	13,428	14,211
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	29	89	90	97	*100*	99	98	105	100	106
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**12,019**	**12,474**	**12,634**	**13,115**	***13,512***	**13,355**	**13,250**	**14,174**	**13,528**	**14,317**
Total % n/n-1		3.8%	1.3%	3.8%	*3.0%*	-1.2%	-0.8%	7.0%	-4.6%	5.8%
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	17,504	17,919	18,149	19,212	*22,749*	19,945	20,857	21,000	20,156	20,530
3.2 Adjustments total assets	2,060	1,935	1,749	1,990	*1,610*	-1,987	-1,564	806	1,863	2,633
3.3 Net current assets	752	-828	-2,251	-2,923	*-3,784*	-628	574	678	559	533
3.4 Total asset base	20,316	19,026	17,646	18,278	*20,574*	17,330	19,867	22,485	22,577	23,696
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	1,355	1,928	1,417	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						3,400	2,890	2,718	2,832	3,248
3.11 Cost of capital						504	578	654	657	690
3.12 Cost of leasing						110	113	117	115	122
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	**12,019**	**12,474**	**12,634**	**13,115**	***13,512***	**13,355**	**13,250**	**14,174**	**13,528**	**14,317**
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**12,430**	**12,811**	**12,634**	**12,798**	***12,948***	**12,547**	**12,204**	**12,799**	**11,976**	**12,426**
Total % n/n-1		3.1%	-1.4%	1.3%	*1.2%*	-3.1%	-2.7%	4.9%	-6.4%	3.8%
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	***1,005.9***	***1,015.6***	***1,041.8***	***1,054.3***	***1,061.0***
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**13.70**	**13.53**	**13.09**	**13.05**	***13.03***	**12.47**	**12.02**	**12.29**	**11.36**	**11.71**
Total % n/n-1		-1.2%	-3.2%	-0.3%	*-0.2%*	-4.2%	-3.7%	2.2%	-7.5%	3.1%

Costs and asset base items in '000 - Service units in '000

(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan

(2) Determined costs (performance plan) and actual costs in real terms

(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
NERL

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	5,221	5,782	5,921	6,293	*6,033*	*6,270*	*6,454*	*7,194*	*6,572*	*6,771*
of which, pension costs					*1,356*	1,647	1,700	1,795	1,350	1,397
1.2 Other operating costs	2,213	2,235	2,409	2,451	*3,096*	*3,181*	*3,327*	*3,609*	*3,467*	*3,609*
1.3 Depreciation	3,395	3,343	3,269	3,300	*3,159*	*3,400*	*2,890*	*2,718*	*2,832*	*3,248*
1.4 Cost of capital	1,190	1,115	1,035	1,071	*1,206*	*504*	*578*	*654*	*657*	*690*
1.5 Exceptional items					*20*	*0*	*0*	*0*	*0*	*0*
1.6 Total costs	**12,019**	**12,474**	**12,634**	**13,115**	***13,512***	**13,355**	**13,250**	**14,174**	**13,528**	**14,317**
Total % n/n-1		3.8%	1.3%	3.8%	*3.0%*	-1.2%	-0.8%	7.0%	-4.6%	5.8%
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	11,991	12,385	12,544	13,017	*13,412*	*13,256*	*13,152*	*14,069*	*13,428*	*14,211*
2.2 Communication										
2.3 Navigation										
2.4 Surveillance										
2.5 Search and rescue										
2.6 Aeronautical Information										
2.7 Meteorological services										
2.8 Supervision costs	29	89	90	97	*100*	*99*	*98*	*105*	*100*	*106*
2.9 Other State costs										
2.10 Total costs	**12,019**	**12,474**	**12,634**	**13,115**	***13,512***	**13,355**	**13,250**	**14,174**	**13,528**	**14,317**
Total % n/n-1		3.8%	1.3%	3.8%	*3.0%*	-1.2%	-0.8%	7.0%	-4.6%	5.8%
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	17,504	17,919	18,149	19,212	*22,749*	*19,945*	*20,857*	*21,000*	*20,156*	*20,530*
3.2 Adjustments total assets	2,060	1,935	1,749	1,990	1,610	-1,987	-1,564	806	1,863	2,633
3.3 Net current assets	752	-828	-2,251	-2,923	*-3,784*	*-628*	*574*	*678*	*559*	*533*
3.4 Total asset base	**20,316**	**19,026**	**17,646**	**18,278**	***20,574***	**17,330**	**19,867**	**22,485**	**22,577**	**23,696**
Cost of capital %										
3.5 Cost of capital pre tax rate	5.86%	5.86%	5.87%	5.86%	*5.86%*	*2.91%*	*2.91%*	*2.91%*	*2.91%*	*2.91%*
3.6 Return on equity	10.9%	10.9%	10.9%	10.9%	*10.9%*	5.99%	5.99%	5.99%	5.99%	5.99%
3.7 Average interest on debts	2.5%	2.5%	2.5%	2.5%	*2.5%*	0.86%	0.86%	0.86%	0.86%	0.86%
3.8 Share of financing through equity	40.0%	40.0%	40.1%	40.0%	*40.0%*	40.0%	40.0%	40.0%	40.0%	40.0%
Costs of common projects										
3.9 Common projects	1,355	1,928	1,417	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						3,400	2,890	2,718	2,832	3,248
3.11 Cost of capital						504	578	654	657	690
3.12 Cost of leasing						110	113	117	115	122
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	12,019	12,474	12,634	13,115	*13,512*	13,355	13,250	14,174	13,528	14,317
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**12,430**	**12,811**	**12,634**	**12,798**	**12,948**	**12,547**	**12,204**	**12,799**	**11,976**	**12,426**
Total % n/n-1		3.1%	-1.4%	1.3%	*1.2%*	-3.1%	-2.7%	4.9%	-6.4%	3.8%
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**13.70**	**13.53**	**13.09**	**13.05**	***13.03***	**12.47**	**12.02**	**12.29**	**11.36**	**11.71**
Total % n/n-1		-1.2%	-3.2%	-0.3%	*-0.2%*	-4.2%	-3.7%	2.2%	-7.5%	3.1%

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
LONDON LUTON

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	0	0	0	0	*0*	0	0	0	0	0
of which, pension costs						0	0	0	0	0
1.2 Other operating costs	0	0	0	0	*0*	0	0	0	0	0
1.3 Depreciation	0	0	0	0	*0*	0	0	0	0	0
1.4 Cost of capital	0	0	0	0	*0*	0	0	0	0	0
1.5 Exceptional items	0	0	0	0	*0*	0	0	0	0	0
1.6 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	0	0	0	0	*0*	0	0	0	0	0
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	0	0	0	0	*0*	0	0	0	0	0
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	0	0	0	0	*0*	0	0	0	0	0
3.2 Adjustments total assets	0	0	0	0	*0*	0	0	0	0	0
3.3 Net current assets	0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	0	0	0	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						0	0	0	0	0
3.11 Cost of capital						0	0	0	0	0
3.12 Cost of leasing						0	0	0	0	0
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	0	0	0	0	*0*	0	0	0	0	0
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**0.00**	**0.00**	**0.00**	**0.00**	***0.00***	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
LONDON GATWICK

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	0	0	0	0	*0*	0	0	0	0	0
of which, pension costs						0	0	0	0	0
1.2 Other operating costs	0	0	0	0	*0*	0	0	0	0	0
1.3 Depreciation	0	0	0	0	*0*	0	0	0	0	0
1.4 Cost of capital	0	0	0	0	*0*	0	0	0	0	0
1.5 Exceptional items	0	0	0	0	*0*	0	0	0	0	0
1.6 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	0	0	0	0	*0*	0	0	0	0	0
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	0	0	0	0	*0*	0	0	0	0	0
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	0	0	0	0	*0*	0	0	0	0	0
3.2 Adjustments total assets	0	0	0	0	*0*	0	0	0	0	0
3.3 Net current assets	0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	0	0	0	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						0	0	0	0	0
3.11 Cost of capital						0	0	0	0	0
3.12 Cost of leasing						0	0	0	0	0
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	0	0	0	0	*0*	0	0	0	0	0
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**0.00**	**0.00**	**0.00**	**0.00**	***0.00***	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
LONDON/CITY

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	0	0	0	0	*0*	0	0	0	0	0
of which, pension costs						0	0	0	0	0
1.2 Other operating costs	0	0	0	0	*0*	0	0	0	0	0
1.3 Depreciation	0	0	0	0	*0*	0	0	0	0	0
1.4 Cost of capital	0	0	0	0	*0*	0	0	0	0	0
1.5 Exceptional items	0	0	0	0	*0*	0	0	0	0	0
1.6 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	0	0	0	0	*0*	0	0	0	0	0
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	0	0	0	0	*0*	0	0	0	0	0
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	0	0	0	0	*0*	0	0	0	0	0
3.2 Adjustments total assets	0	0	0	0	*0*	0	0	0	0	0
3.3 Net current assets	0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	0	0	0	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						0	0	0	0	0
3.11 Cost of capital						0	0	0	0	0
3.12 Cost of leasing						0	0	0	0	0
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	0	0	0	0	*0*	0	0	0	0	0
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**0.00**	**0.00**	**0.00**	**0.00**	***0.00***	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
LONDON HEATHROW

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	0	0	0	0	*0*	0	0	0	0	0
of which, pension costs						0	0	0	0	0
1.2 Other operating costs	0	0	0	0	*0*	0	0	0	0	0
1.3 Depreciation	0	0	0	0	*0*	0	0	0	0	0
1.4 Cost of capital	0	0	0	0	*0*	0	0	0	0	0
1.5 Exceptional items	0	0	0	0	*0*	0	0	0	0	0
1.6 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	0	0	0	0	*0*	0	0	0	0	0
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	0	0	0	0	*0*	0	0	0	0	0
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	0	0	0	0	*0*	0	0	0	0	0
3.2 Adjustments total assets	0	0	0	0	*0*	0	0	0	0	0
3.3 Net current assets	0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	0	0	0	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						0	0	0	0	0
3.11 Cost of capital						0	0	0	0	0
3.12 Cost of leasing						0	0	0	0	0
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	0	0	0	0	*0*	0	0	0	0	0
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**0.00**	**0.00**	**0.00**	**0.00**	***0.00***	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 1 - Total Costs and Unit Costs

UK Zone C
Currency: GBP
LONDON STANSTED

	Actual costs 2015-2019					Determined costs - Performance Plan - RP3				
Cost details	**2015**	**2016**	**2017**	**2018**	***2019***	**2020**	**2021**	**2022**	**2023**	**2024**
1. Detail by nature (in nominal terms)										
1.1 Staff	0	0	0	0	*0*	0	0	0	0	0
of which, pension costs						0	0	0	0	0
1.2 Other operating costs	0	0	0	0	*0*	0	0	0	0	0
1.3 Depreciation	0	0	0	0	*0*	0	0	0	0	0
1.4 Cost of capital	0	0	0	0	*0*	0	0	0	0	0
1.5 Exceptional items	0	0	0	0	*0*	0	0	0	0	0
1.6 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management	0	0	0	0	*0*	0	0	0	0	0
2.2 Communication	0	0	0	0	*0*	0	0	0	0	0
2.3 Navigation	0	0	0	0	*0*	0	0	0	0	0
2.4 Surveillance	0	0	0	0	*0*	0	0	0	0	0
2.5 Search and rescue	0	0	0	0	*0*	0	0	0	0	0
2.6 Aeronautical Information	0	0	0	0	*0*	0	0	0	0	0
2.7 Meteorological services	0	0	0	0	*0*	0	0	0	0	0
2.8 Supervision costs	0	0	0	0	*0*	0	0	0	0	0
2.9 Other State costs	0	0	0	0	*0*	0	0	0	0	0
2.10 Total costs	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets	0	0	0	0	*0*	0	0	0	0	0
3.2 Adjustments total assets	0	0	0	0	*0*	0	0	0	0	0
3.3 Net current assets	0	0	0	0	*0*	0	0	0	0	0
3.4 Total asset base	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects	0	0	0	0	*0*	0	0	0	0	0
Costs of new and existing investments										
3.10 Depreciation						0	0	0	0	0
3.11 Cost of capital						0	0	0	0	0
3.12 Cost of leasing						0	0	0	0	0
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights	0	0	0	0	*0*	0	0	0	0	0
4.2 Total determined/actual costs	0	0	0	0	*0*	0	0	0	0	0
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %	0.00%	0.70%	2.70%	2.48%	*1.84%*	2.00%	2.00%	2.00%	2.00%	2.00%
5.2 Inflation index (1)	96.7	97.4	100.0	102.5	*104.4*	106.4	108.6	110.7	113.0	115.2
5.3 Total costs real terms (2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
5.4 Total Service Units	**907.6**	**946.8**	**964.9**	**980.4**	***994.1***	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
Total % n/n-1		4.3%	1.9%	1.6%	*1.4%*	1.2%	1.0%	2.6%	1.2%	0.6%
5.5 Unit cost in real terms prices (3)	**0.00**	**0.00**	**0.00**	**0.00**	***0.00***	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total % n/n-1		#DIV/0!	#DIV/0!	#DIV/0!	*#DIV/0!*	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Costs and asset base items in '000 - Service units in '000
(1) Inflation index - Base 100 in 2017, Forecast inflation 2019 as per the Performance Plan
(2) Determined costs (performance plan) and actual costs in real terms
(3) Determined unit costs (performance plan) and actual unit costs in real terms

Table 2 - Unit rate calculation

UK Zone C	
Currency: GBP	
All Entities	

		Reference Period 3				
Table 2 A - Adjustments relating to year n		**2020**	**2021**	**2022**	**2023**	**2024**
A. Cost-sharing						
	Determined costs					
1.1	**Determined costs in nominal terms - VFR excl. - Table 1** ***(Art. 22)***	**13,355.0**	**13,249.9**	**14,174.1**	**13,528.1**	**14,317.4**
	Inflation adjustment calculation					
2.1	Determined costs subject to inflation adjustment	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
2.2	Forecast inflation index - Table 1	106.4	108.6	110.7	113.0	115.2
2.3	Actual inflation index - Table 1					
2.4	Actual / forecast total inflation index (in %)					
2.5	**Inflation adjustment relating to year n** ***(Art. 26)***					
	Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1	New and existing investments *(Art. 28(4))*					
3.3	Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4	Eurocontrol costs *(Art. 28(5))*					
3.5	Pension costs *(Art. 28(6))*					
3.6	Interest on loans *(Art. 28(6))*					
3.7	Changes in law *(Art. 28(6))*					
3.8	**Differences between determined and actual costs relating to year n** ***(Art. 28(4) to 28(6))***					
B. Traffic risk sharing						
	Traffic risk sharing adjustment					
4.1	Determined costs subject to traffic risk sharing	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
4.2	% deviation % referred to in Article 27(2) and 27(5)					
4.3	% additional revenue returned to users referred to in Article 27(3) and 27(5)					
4.4	% loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)					
4.5	% deviation referred to in Article 27(4)					
4.6	Forecast total service units (performance plan)	1,005.9	1,015.6	1,041.8	1,054.3	1,061.0
4.7	Actual total service units					
4.8	Actual / forecast total service units (in %)					
4.9	**Traffic risk sharing adjustment relating to year n** ***(Art. 27(2) to 27(5))***					
	Traffic adjustments					
5.1	For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2	Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3	**Traffic adjustements relating to year n** ***(Art. 27(8) and 27(9))***					
C. Financial incentive schemes on capacity and environment						
	Adjustments relating to financial incentives					
6.1	Financial incentives relating to capacity *(Art. 11(3))*					
6.2	Financial incentives relating to environment *(Art. 11(4))*					
6.3	Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4	**Financial incentives relating to year n** ***(Art. 11(3) and 11(4))***					
D. Other adjustments						
	Modulation of charges					
7.1	**Adjustment to ensure revenue neutrality for modulation of charges in year n** ***(Art. 32(1))***					
	Revision of the unit rate					
8.1	Temporary unit rate applied in year n					
8.2	**Difference in revenue due to the temporary application of unit rate in year n** ***(Art. 29(5))***					
	Cross-financing between charging zones					
9.1	**Cross-financing to (-) / from (+) other charging zone(s) relating to year n**	0.0	0.0	0.0	0.0	0.0
	Other revenues					
10.1	Union assistance programmes *(Art. 25(3)(a))*					
10.2	National public funding *(Art. 25(3)(a))*					
10.3	Commercial activities (*Art. 25(3)(b))*					
10.4	Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5	**Total other revenues relating to year n** ***(Art. 25(3))***					
	Application of a lower unit rate					
11.1	**Loss of revenue relating to the application of a lower unit rate in n** ***(Art. 29(6))***					
12	**Total adjustments relating to year n**					

Table 2 B - Calculation of the unit rate for year n (1)		**2020**	**2021**	**2022**	**2023**	**2024**
13.1	Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
13.2	Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 290.4	- 322.9	-	-	-
13.3	Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	- 209.4	- 157.4	-	-	-
13.4	Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	-	-	-	-	-
13.5	Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	-	-	-	-	-
13.6	Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-
13.7	Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	27.4	17.5	-	-	-
13.8	Other revenues *(Art. 25(2)(i))*	-	-	-	-	-
13.9	Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-
13.10	Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-
13.11	**Grand total for the calculation of year n unit rate**	**12,882.7**	**12,787.1**	**14,174.1**	**13,528.1**	**14,317.4**
13.12	**Forecast total service units for year n (performance plan)**	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
13.13	**Unit rate for year n as per Art. 25(2) (in national currency)**	**12.81**	**12.59**	**13.61**	**12.83**	**13.49**
13.14	**Reduction as per Art. 29(6), where applicable (in national currency)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
14	**Applicable unit rate for year n**	**12.81**	**12.59**	**13.61**	**12.83**	**13.49**

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 2 - Unit rate calculation

UK Zone C	
Currency: GBP	
NERL	

	Reference Period 3

Table 2 A - Adjustments relating to year n	**2020**	**2021**	**2022**	**2023**	**2024**
A. Cost-sharing					
Determined costs					
1.1 Determined costs in nominal terms - VFR excl. - Table 1 ***(Art. 22)***	**13,355.0**	**13,249.9**	**14,174.1**	**13,528.1**	**14,317.4**
Inflation adjustment calculation					
2.1 Determined costs subject to inflation adjustment	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
2.2 Forecast inflation index - Table 1	106.4	108.6	110.7	113.0	115.2
2.3 Actual inflation index - Table 1					
2.4 Actual / forecast total inflation index (in %)					
2.5 Inflation adjustment relating to year n ***(Art. 26)***					
Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1 New and existing investments *(Art. 28(4))*					
3.3 Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4 Eurocontrol costs *(Art. 28(5))*					
3.5 Pension costs *(Art. 28(6))*					
3.6 Interest on loans *(Art. 28(6))*					
3.7 Changes in law *(Art. 28(6))*					
3.8 Differences between determined and actual costs relating to year n ***(Art. 28(4) to 28(6))***					
B. Traffic risk sharing					
Traffic risk sharing adjustment					
4.1 Determined costs subject to traffic risk sharing	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
4.2 % deviation % referred to in Article 27(2) and 27(5)	2%	2%	2%	2%	2%
4.3 % additional revenue returned to users referred to in Article 27(3) and 27(5)	70%	70%	70%	70%	70%
4.4 % loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)	70%	70%	70%	70%	70%
4.5 % deviation referred to in Article 27(4)	10%	10%	10%	10%	10%
4.6 Forecast total service units (performance plan)	1,005.9	1,015.6	1,041.8	1,054.3	1,061.0
4.7 Actual total service units					
4.8 Actual / forecast total service units (in %)					
4.9 Traffic risk sharing adjustment relating to year n ***(Art. 27(2) to 27(5))***					
Traffic adjustments					
5.1 For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2 Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3 Traffic adjustements relating to year n ***(Art. 27(8) and 27(9))***					
C. Financial incentive schemes on capacity and environment					
Adjustments relating to financial incentives					
6.1 Financial incentives relating to capacity *(Art. 11(3))*					
6.2 Financial incentives relating to environment *(Art. 11(4))*					
6.3 Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4 Financial incentives relating to year n ***(Art. 11(3) and 11(4))***					
D. Other adjustments					
Modulation of charges					
7.1 Adjustment to ensure revenue neutrality for modulation of charges in year n ***(Art. 32(1))***					
Revision of the unit rate					
8.1 Temporary unit rate applied in year n					
8.2 Difference in revenue due to the temporary application of unit rate in year n ***(Art. 29(5))***					
Cross-financing between charging zones					
9.1 Cross-financing to (-) / from (+) other charging zone(s) relating to year n	0.0	0.0	0.0	0.0	0.0
Other revenues					
10.1 Union assistance programmes *(Art. 25(3)(a))*					
10.2 National public funding *(Art. 25(3)(a))*					
10.3 Commercial activities *(Art. 25(3)(b))*					
10.4 Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5 Total other revenues relating to year n ***(Art. 25(3))***					
Application of a lower unit rate					
11.1 Loss of revenue relating to the application of a lower unit rate in n ***(Art. 29(6))***					
12 Total adjustments relating to year n					

Table 2 B - Calculation of the unit rate for year n (1)	**2020**	**2021**	**2022**	**2023**	**2024**
13.1 Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*	13,355.0	13,249.9	14,174.1	13,528.1	14,317.4
13.2 Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*	- 290.4	- 322.9	-	-	-
13.3 Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*	- 209.4	- 157.4	-	-	-
13.4 Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*	-	-	-	-	-
13.5 Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*	-	-	-	-	-
13.6 Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*	-	-	-	-	-
13.7 Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))	27.4	17.5	-	-	-
13.8 Other revenues *(Art. 25(2)(i))*	-	-	-	-	-
13.9 Cross-financing between charging zones *(Art. 25(2)(j))*	-	-	-	-	-
13.10 Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*	-	-	-	-	-
13.11 Grand total for the calculation of year n unit rate	**12,882.7**	**12,787.1**	**14,174.1**	**13,528.1**	**14,317.4**
13.12 Forecast total service units for year n (performance plan)	**1,005.9**	**1,015.6**	**1,041.8**	**1,054.3**	**1,061.0**
13.13 Unit rate for year n as per Art. 25(2) (in national currency)	**12.81**	**12.59**	**13.61**	**12.83**	**13.49**
13.14 Reduction as per Art. 29(6), where applicable (in national currency)	**0.00**				
14 Applicable unit rate for year n	**12.81**	**12.59**	**13.61**	**12.83**	**13.49**

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 3 - Complementary information on adjustments

UK Zone C
Currency: GBP
All Entities

FILTER	Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
2018	Inflation adjustment 2018	-290	-290	0	0	0	0	0
2017	Traffic risk sharing up to 2017	0	0	0	0	0	0	0
2018	Traffic risk sharing 2018	-209	-209	0	0	0	0	0
2017	Cost exempt from cost sharing up to 2017	0	0	0	0	0	0	0
2018	Cost exempt from cost sharing 2018	0	0	0	0	0	0	0
2017	Financial incentives year up to 2017	0	0	0	0	0	0	0
2018	Financial incentives year 2018	0	0	0	0	0	0	0
2017	Modulation of charges up to 2017	0	0	0	0	0	0	0
2018	Modulation of charges year 2018	0	0	0	0	0	0	0
2017	Traffic adjustment up to 2017	0	0	0	0	0	0	0
2018	Traffic adjustment 2018	27	27	0	0	0	0	0
2017	Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
2018	Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
2017	Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
2018	Revenues received from national public funding in 2018	0	0	0	0	0	0	0
2017	Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
2018	Revenues from commercial activities in 2018	0	0	0	0	0	0	0
2017	Revenues from contracts with airport operators up to 2017	0	0	0	0	0	0	0
2018	Revenues from contracts with airport operators in 2018	0	0	0	0	0	0	0
	Total adjustments	**-935**	**-472**	**-463**	**0**	**0**	**0**	**0**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 3 - Complementary information on adjustments

UK Zone C
Currency: GBP
NERL

FILTER	Complementary information on adjustments	Amounts	2020	2021	2022	2023	2024	After RP
2018	Inflation adjustment 2018	-290	-290					
2019	Inflation adjustment 2019	-323		-323				
RP2	Total inflation adjustment up to 2019	-613	-290	-323				
2020	Inflation adjustment 2020	0			0			
2021	Inflation adjustment 2021	0				0		
2022	Inflation adjustment 2022	0					0	
2023	Inflation adjustment 2023	0						0
2024	Inflation adjustment 2024	0						0
Total	**Total inflation Adjustment (Art. 26)***	**-613**	**-290**	**-323**	**0**	**0**	**0**	**0**
2017	Traffic risk sharing up to 2017	0	0	0	0	0	0	0
2018	Traffic risk sharing 2018	-209	-209	0	0	0	0	0
2019	Traffic risk sharing 2019	-157		-157	0	0	0	0
RP2	Total traffic risk sharing adjustements up to 2019	-367	-209	-157	0	0	0	0
2020	Traffic risk sharing 2020	0			0			
2021	Traffic risk sharing 2021	0				0		
2022	Traffic risk sharing 2022	0					0	
2023	Traffic risk sharing 2023	0						0
2024	Traffic risk sharing 2024	0						0
Total	**Total traffic risk sharing adjustment (Art. 27(2) to 27(5))***	**-367**	**-209**	**-157**	**0**	**0**	**0**	**0**
2020	Difference in investment costs 2020	0			0			0
2021	Difference in investment costs 2021	0				0		0
2022	Difference in investment costs 2022	0					0	0
2023	Difference in investment costs 2023	0						0
2024	Difference in investment costs 2024	0						0
Total	**Total adjustment relating to investment costs (Art. 28(4))**	**0**			**0**	**0**	**0**	**0**
2020	Difference in competent authorities and QEs costs 2020							
2021	Difference in competent authorities and QEs costs 2021							
2022	Difference in competent authorities and QEs costs 2022							
2023	Difference in competent authorities and QEs costs 2023							
2024	Difference in competent authorities and QEs costs 2024							
Total	**Total adjustment relating to competent authorities and QEs costs (Art. 28(5))**							
2020	Difference in Eurocontrol costs 2020							
2021	Difference in Eurocontrol costs 2021							
2022	Difference in Eurocontrol costs 2022							
2023	Difference in Eurocontrol costs 2023							
2024	Difference in Eurocontrol costs 2024							
Total	**Total adjustment relating to Eurocontrol costs (Art. 28(5))**							
2020	Difference in pension costs 2020	0			0			0
2021	Difference in pension costs 2021	0				0		0
2022	Difference in pension costs 2022	0					0	0
2023	Difference in pension costs 2023	0						0
2024	Difference in pension costs 2024	0						0
Total	**Total adjustment relating to pension costs (Art. 28(6))**	**0**			**0**	**0**	**0**	**0**
2020	Difference in interest on loans 2020	0			0			0
2021	Difference in interest on loans 2021	0				0		0
2022	Difference in interest on loans 2022	0					0	0
2023	Difference in interest on loans 2023	0						0
2024	Difference in interest on loans 2024	0						0
Total	**Total adjustment relating to interest on loans (Art. 28(6))**	**0**			**0**	**0**	**0**	**0**
2020	Costs relating to change in law 2020	0			0			0
2021	Costs relating to change in law 2021	0				0		0
2022	Costs relating to change in law 2022	0					0	0
2023	Costs relating to change in law 2023	0						0
2024	Costs relating to change in law 2024	0						0
Total	**Total adjustment relating to change in law (Art. 28(6))**	**0**			**0**	**0**	**0**	**0**
2017	Cost exempt from cost sharing up to 2017	0	0	0	0	0	0	0
2018	Cost exempt from cost sharing 2018	0	0	0	0	0	0	0
2019	Cost exempt from cost sharing 2019			0	0	0	0	0
Total	**Total adjustment relating to cost exempt from previous RPs**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Financial incentives year up to 2017	0	0	0	0	0	0	0
2018	Financial incentives year 2018	0	0					
2019	Financial incentives year 2019			0				
RP2	Total financial incentives up to 2019	0	0	0	0	0	0	0
2020	Financial incentives year 2020	0			0			
2021	Financial incentives year 2021	0				0		
2022	Financial incentives year 2022	0					0	
2023	Financial incentives year 2023	0						0
2024	Financial incentives year 2024	0						0
Total	**Total financial incentives (Art. 11(3) and 11(4))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Modulation of charges up to 2017	0	0	0	0	0	0	
2018	Modulation of charges year 2018	0	0	0	0	0	0	
2019	Modulation of charges year 2019			0	0	0	0	
RP2	Total modulation of charges up 2019	0	0	0	0	0	0	
2020	Modulation of charges 2020	0			0			
2021	Modulation of charges 2021	0				0		
2022	Modulation of charges 2022	0					0	
2023	Modulation of charges 2023	0						0
2024	Modulation of charges 2024	0						0
Total	**Total adjustment relating to modulation of charges (Art. 32(1))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Traffic adjustment up to 2017	0	0	0	0	0	0	0
2018	Traffic adjustment 2018	27	27	0	0	0	0	0
2019	Traffic adjustment 2019	18		18	0	0	0	0
RP2	Total traffic adjustments up to 2019	45	27	18	0	0	0	0
2020	Traffic adjustment on adjustments from previous RPs 2020	0			0	0	0	0
2021	Traffic adjustment on adjustments from previous RPs 2021	0				0	0	0
2022	Traffic adjustment on adjustments from previous RPs 2022	0					0	0
2023	Traffic adjustment on adjustments from previous RPs 2023	0						0
2024	Traffic adjustment on adjustments from previous RPs 2024	0						0
RP2	Total traffic adjustment on adjustments from previous reference periods	0	0	0	0	0	0	0
2020	Traffic adjustment 2020	0			0			
2021	Traffic adjustment 2021	0				0		
2022	Traffic adjustment 2022	0					0	
2023	Traffic adjustment 2023	0						0
2024	Traffic adjustment 2024	0						0
Total	**Total traffic adjustment (Art. 27(8) and 27(9))***	**45**	**27**	**18**	**0**	**0**	**0**	**0**
2017	Revenues received from Union assistance programmes up to 2017	0	0	0	0	0	0	0
2018	Revenues received from Union assistance programmes in 2018	0	0	0	0	0	0	0
2019	Revenues received from Union assistance programmes in 2019		0	0	0	0	0	0
RP2	Total revenues received from Union assistance programmes up to 2019	0	0	0	0	0	0	0
2020	Revenues received from Union assistance programmes in 2020	0	0	0	0	0	0	0
2021	Revenues received from Union assistance programmes in 2021	0		0	0	0	0	0
2022	Revenues received from Union assistance programmes in 2022	0			0	0	0	0
2023	Revenues received from Union assistance programmes in 2023	0				0	0	0
2024	Revenues received from Union assistance programmes in 2024	0					0	0
Total	**Total revenues received from Union assistance programmes (Art. 25(3)(a))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Revenues received from national public funding up to 2017	0	0	0	0	0	0	0
2018	Revenues received from national public funding in 2018	0	0	0	0	0	0	0
2019	Revenues received from national public funding in 2019		0	0	0	0	0	0
RP2	Total revenues received from national public funding up to 2019	0	0	0	0	0	0	0
2020	Revenues received from national public funding in 2020	0	0	0	0	0	0	0
2021	Revenues received from national public funding in 2021	0		0	0	0	0	0
2022	Revenues received from national public funding in 2022	0			0	0	0	0
2023	Revenues received from national public funding in 2023	0				0	0	0
2024	Revenues received from national public funding in 2024	0					0	0
Total	**Total revenues received from national public funding (Art. 25(3)(a))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Revenues from commercial activities up to 2017	0	0	0	0	0	0	0
2018	Revenues from commercial activities in 2018	0	0	0	0	0	0	0
2019	Revenues from commercial activities in 2019		0	0	0	0	0	0
RP2	Total revenues from commercial activities up to 2019	0	0	0	0	0	0	0
2020	Revenues from commercial activities in 2020	0	0	0	0			
2021	Revenues from commercial activities in 2021	0		0	0	0		
2022	Revenues from commercial activities in 2022	0			0	0	0	
2023	Revenues from commercial activities in 2023	0				0	0	0
2024	Revenues from commercial activities in 2024	0					0	0
Total	**Total revenues from commercial activities (Art. 25(3)(b))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2017	Revenues from contracts with airport operators up to 2017	0	0	0	0	0	0	0
2018	Revenues from contracts with airport operators in 2018	0	0	0	0	0	0	0
2019	Revenues from contracts with airport operators in 2019		0	0	0	0	0	0
RP2	Total revenues from contracts with airport operators up to 2019	0	0	0	0	0	0	0
2020	Revenues from contracts with airport operators in 2020	0	0	0	0			
2021	Revenues from contracts with airport operators in 2021	0		0	0	0		
2022	Revenues from contracts with airport operators in 2022	0			0	0	0	
2023	Revenues from contracts with airport operators in 2023	0				0	0	0
2024	Revenues from contracts with airport operators in 2024	0					0	0
Total	**Total revenues from contracts with airport operators (Art. 25(3)(c))***	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2020	Revenue difference - revision of UR 2020	0	0	0	0	0	0	0
2021	Revenue difference - revision of UR 2021	0		0	0	0	0	0
2022	Revenue difference - revision of UR 2022	0			0	0	0	0
2023	Revenue difference - revision of UR 2023	0				0	0	0
2024	Revenue difference - revision of UR 2024	0					0	0
Total	**Total revenue differences from temporary application of UR (Art. 29(5))**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
2020	Cross-financing to (-) / from (+) other charging zone(s) relating to 2020	0	0					
2021	Cross-financing to (-) / from (+) other charging zone(s) relating to 2021	0		0				
2022	Cross-financing to (-) / from (+) other charging zone(s) relating to 2022	0			0			
2023	Cross-financing to (-) / from (+) other charging zone(s) relating to 2023	0				0		
2024	Cross-financing to (-) / from (+) other charging zone(s) relating to 2024	0					0	
Total	**Total cross-financing to (-) / from (+) other charging zone(s)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Total adjustments	**-935**	**-472**	**-463**	**0**	**0**	**0**	**0**

Amounts in '000 (national currency)
* Including carry-overs relating to the previous reference period(s)

Table 4 - Complementary information on common projects and on revenues from Union assistance programmes allocated to the charging zone

UK Zone C

Amounts received

Project reference (as per Grant Agreement)	Project title	Value of funded project in '000 Euro		Amounts granted (as per GA) in '000 Euro		Common project y/n	Actual amounts received (charging zone) in '000 Euro										
		Total	For the charging zone	Total	For the charging zone		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
XXX #1	XXX	0	0			Y	0	0	0	0	0						
XXX #2	XXX	0	0			Y	0	0	0	0	0						
XXX #3	XXX	0	0			Y	0	0	0	0	0						
XXX #4	XXX	0	0			Y	0	0	0	0	0						
Total in '000 Euro		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total in '000 national currency		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**						

Amounts reimbursed to airspace users through other revenues

Project reference (as per Grant Agreement)	Project title	Amounts retained in respect of aministrative costs for the charging zone in '000 Euro	Total to be reimbursed for the charging zone in '000 Euro	Amounts reimbursed to users (charging zone) in '000 national currency										
				2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	After RP
XXX #1	XXX	0	0	0	0	0	0	0	0	0					
XXX #2	XXX	0	0	0	0	0	0	0	0	0					
XXX #3	XXX	0	0	0	0	0	0	0	0	0					
XXX #4	XXX	0	0	0	0	0	0	0	0	0					
Total in '000 Euro		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total in '000 national currency		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**					

RP3 Cost-efficiency targets

a) Baseline value for the determined costs and the determined unit costs (in real terms and in national currency)

2019 baseline value for the determined costs (in real terms and in national currency)	**12,948,337**
2019 latest available terminal service units forecast	**994,100**
2019 baseline value for the determined unit costs (in real terms and in national currency)	**13.03**

b) Cost-efficiency performance targets

Terminal charging zone	**Baseline 2019**	**RP3 Performance Plan (determined 2020-2024)**					**CAGR**
UK Zone C	**2019 B**	**2020 D**	**2021 D**	**2022 D**	**2023 D**	**2024 D**	**2019B-2024D**
Total terminal costs in nominal terms (in national currency)		13,355,046	13,249,924	14,174,118	13,528,112	14,317,370	
Total terminal costs in real terms (in national currency at 2017 prices)	**12,948,337**	**12,546,659**	**12,203,824**	**12,799,069**	**11,976,209**	**12,426,398**	**-0.8%**
YoY variation		-3.1%	-2.7%	4.9%	-6.4%	3.8%	
Total terminal Service Units (TNSU)	994,100	1,005,900	1,015,600	1,041,800	1,054,300	1,061,000	1.3%
YoY variation		1.2%	1.0%	2.6%	1.2%	0.6%	
Real terminal unit costs (in national currency at 2017 prices)	**13.03**	**12.47**	**12.02**	**12.29**	**11.36**	**11.71**	**-2.1%**
YoY variation		-4.2%	-3.7%	2.2%	-7.5%	3.1%	
Real terminal unit costs (in EUR2017) [1]	**14.87**	**14.24**	**13.72**	**14.03**	**12.97**	**13.37**	**-2.1%**
YoY variation		-4.2%	-3.7%	2.2%	-7.5%	3.1%	

National currency	**GBP**
[1] Average exchange rate 2017 (1 EUR=)	**0.875911**

ADDITIONAL INFORMATION TO REPORTING TABLES 1 – TOTAL COSTS AND UNIT COSTS

1. Determined costs and unit costs

a) Description of the methodology used for allocating costs of facilities or services between different air navigation services, based on the list of facilities and services listed in ICAO Regional Air Navigation Plan, European Region (Doc 7754) as last amended, and a description of the methodology used for allocating those costs between different charging zones;

Since before the inception of the EU performance scheme, the London Approach function has covered 5 airports (Heathrow, Gatwick, Stansted, Luton and London City). In RP2 a separate charging zone was created, which replaced the previous charge which was levied on a landed tonnage basis, financial year basis, which formed part of NATS En-route single till. (i.e. the revenue received from London Approach was used to offset the appropriate costs). For RP3, revenue from the services NERL provides to Biggin Hill airport through the London Approach will also be included, as other revenue, for the London Approach.

NERL applies a cost allocation process using activity costs held within its SAP system as the core. Each activity at a certain level of detail is assigned a cost driver which allocates costs to key services (Eurocontrol en-route, Ministry of Defence, London Approach, Oceanic, External contracts, Inter-Company, North Sea Helicopters). A number of cost drivers are applied to particular costs including operational workstations, which are the primary basis for the London Approach accounting cost allocations. A further estimate is then made of the % allocation to be applied to the final approach costs as a proxy for the amount airports would bear if they were providing this service. This is currently estimated at circa 40% of the overall costs. The remainder are recovered through the en route charge.

The component parts of these charges are reported in the CRCO return as follows:

- Cost of capital charge has been attributed to London Approach based on the proportion that the London Approach revenue bears to the total UKATS Determined Costs.
- The remaining London Approach determined costs have been derived by subtracting the apportioned London Approach cost of capital allocation from London Approach revenues.
- These costs have then been notionally allocated to Staff costs (including cash pensions), Other Operating Costs, Regulatory Depreciation on the same proportions as these items in the UKATS Total Service line.

b) Description of the methodology and assumptions used to establish the costs of air navigation services provided to VFR flights, when exemptions are granted for VFR flights in accordance with Article 31(3), 31(4) and 31(5);

Not applicable

c) Criteria used to allocate costs between terminal and en route services, in accordance with Article 22(5);

See the Additional Information provided for en route.

d) Breakdown of the meteorological costs between direct costs and the costs of supporting meteorological facilities and services that also serve meteorological requirements in general ('MET core costs'). MET core costs include general analysis and forecasting, surface and

upper-air observation networks, meteorological communication systems, data processing centres and supporting core research, training and administration;

Not applicable. Further information on MET costs is provided in Additional Information for en route.

e) Description of the methodology used for allocating total meteorological costs and MET core costs referred to in point (d) to civil aviation and between charging zones;

Not applicable.

f) For each entity, description of the composition of each item of the determined costs by nature and by service (points 1 and 2 of Table 1), including a description of the main factors explaining the planned variations over the reference period;

Determined costs by nature and by service

Only NERL costs feature in the London Approach Determined Costs.
See Additional Information for en route for the breakdown,

Pension costs

Note: The determined pension costs of the main ANSPs are detailed and justified in the body of the performance plan (item 3.4.3)

Entity: NERL
Assumptions underlying the determined pension costs and expected evolution over Reference Period 3
See the relevant section provided in the Additional Information for En Route. Pension costs for London Approach are applied as proportion of the NERL overall costs, on the basis of the share of activity costs described in Section 1a

g) For each entity, a description and justification of the method adopted for the calculation of depreciation costs (point 1.3 of Table 1): historical costs or current costs referred to in the fourth subparagraph of Article 22(4), and, where current cost accounting is used, provision of comparable historical cost data;

Only NERL costs feature in the London Approach Determined Costs.
See Additional Information for en route for the breakdown.

h) For each entity, description and underlying assumptions of each item of complementary information (point 3 of Table 1), including a description of the main factors explaining the variations over the reference period;

Only NERL costs feature in the London Approach Determined Costs.
See Additional Information for en route for the breakdown.

i) For each entity, description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity;

Only NERL costs feature in the London Approach Determined Costs.
See Additional Information for en route for the breakdown.

j) Description of the determined costs of common projects (point 3.9 of Table 1).

Only NERL costs feature in the London Approach Determined Costs.
See Additional Information for en route for the breakdown.

2. Actual costs and unit costs

a) For each entity and for each cost item, a description of the reported actual costs and the difference between those costs and the determined costs, for each year of the reference period;

Not applicable for this submission

b) Description of the reported actual service units and a description of any differences between those units and the figures provided by the entity that is billing and collecting charges as well as any differences between those units and the forecast set in the performance plan, for each year of the reference period;

Not applicable for this submission

c) Breakdown of the actual costs of common projects per individual project;

Not applicable for this submission

d) Justification of the difference between the determined and the actual costs of new and existing investments of the air navigation service providers, as well as the difference between the planned and the actual date of entry into operation of the fixed assets financed by those investments for each year of the reference period;

Not applicable for this submission

e) Description of the investment projects added, cancelled or replaced during the reference period with respect to the major investment projects identified in the performance plan, and approved by the national supervisory authority in accordance with Article 28(4)..

Not applicable for this submission

ADDITIONAL INFORMATION TO REPORTING TABLES 2 – UNIT RATE CALCULATION

a) Description and rationale for establishment of the different charging zones, in particular with regard to terminal charging zones and potential cross-subsidies between charging zones;

The London Approach service is different in kind from the services provided at the individual towers. There are capacity and safety benefits to collocating this function in what is a particularly complex area of airspace. The service is part of the licensed monopoly operated under the NERL licence whereas the individual airport towers are operated under commercial contracts with a number of ANSPs under the market conditions.

b) Description of the policy on exemptions and description of the financing means to cover the related costs;

Exempt flights are recovered directly from the DfT and this income is offset against determined costs.

c) Description of adjustments resulting from the traffic risk sharing mechanism in accordance with Article 27;

2018: Traffic was 4.3% higher than the NPP forecast. This results in 1.6% of Determined Costs, about £0.2 million, being returned to users in 2020.

2019: Traffic is forecast to be 3.7% higher than the NPP forecast. This results in 1.2% of Determined Costs, about £0.2 million, being returned to users in 2020.

See Additional Information for en route for description of traffic risk-sharing mechanism for RP3.

d) Description of the differences between determined costs and actual costs of year n as a result of the changes in costs referred to in Article 28(3) including description of the changes referred to in that Article;

Not applicable for this submission.

e) Description of adjustments resulting from unforeseen changes in costs in accordance with Article 28(3) to (6);

Not applicable for this submission.

f) Description of the other revenues, if any, broken down between the different categories indicated in Article 25(3);

Not applicable for this submission.

g) Description of the application of the financial incentive schemes referred to in Article 11(3) and 11(4) in year n and the resulting financial advantages and disadvantages; description and explanation of the modulation of air navigation charges applied in year n under Article 32 where applicable, and resulting adjustments;

Financial incentive schemes

The description and justification of the parameters of the incentive scheme defined in accordance with Article 11(3) and 11 (4) are provided in the body of the performance plan under item 5.2.

Modulation of charges

No modulation of charges are applied in the UK in RP3.

h) Description of adjustments relating to the temporary application of a unit rate under Article 29(5);

Not applicable for this submission

i) Description of the cross-financing between en route charging zones, or between terminal charging zones, in accordance with point (e) of Article 15(2) of Regulation 550/2004;

Not applicable

j) Information on the application of a lower unit rate under Article 29(6) than the unit rate calculated in accordance with Article 25(2) and the means to finance the difference in revenue;

Not applicable

k) Information and breakdown of the adjustments relating to previous reference periods impacting the unit rate calculation;

Not applicable

ADDITIONAL INFORMATION TO REPORTING TABLE 3 – COMPLEMENTARY INFORMATION ON COMMON PROJECTS AND ON UNION ASSISTANCE PROGRAMME

l) Information on the costs of common projects and other funded projects broken down per individual project, as well as of public funds obtained from public authorities for these projects.

See Additional Information for en route.

Record of RP3 Stakeholder Multilateral – 11 March 2019

CAA House, London

Attendees: Andy Shand (NATS), Nigel Fotherby (NATS), Juliet Kennedy (NATS), Rob Watkins (NATS), David Milford (BA), Geoff Clarke (VA), Claire Lambert (VA), Ian Roy (VA), Ian Clayton (IAG), Rob Griggs (Airlines UK), Aaron Curtis (Prospect), Andy Mooney (Prospect), Choorah Singh (Ryanair), Emma Christian (UK Government Investments), Charles Mitchell (UK Government Investments), David Harrison (Independent)

Apologies: Robert Meinderts (KLM/Air France)

NATS

- Emphasised the priorities of completing airspace and technology modernisation programme while maintaining focus on a safe and high-quality service.
- Consider that the CAA's proposals force NERL to focus on current, rather than future, performance.
- Concerned about cumulative effect of CAA's proposed adjustments being applied to RP3 business plan, as well as increased service quality targets. NATS also noted that this will be the most challenging price control to date because of the twin track: i.e. cost reductions and the need to modernise the airspace and technology, with record traffic levels in each year of RP3.
- Concerned that without allowance for special event transition delay, the service performance targets are unachievable and would incur penalties in every year of RP3. Specifically concerned about meeting C2 target due to the lack of allowance for transition delays, which NATS considers are allowable under EU regulations.
- NERL considers the NPP's proposals would act as a disincentive to complete NERL's technology and airspace modernisation programmes.
- Concerned that the NPP does not reflect the changes to 3Di that NERL proposed and which were supported by customers. NERL considers the proposed 3Di targets are unachievable because they include factors outside of NERL control, and do not appear to be based on the quantitative data provided.
- Concerned at the level of incentives associated with the service quality performance regime in RP3.
- Concerned about the effect of proposed Opex reductions in RP3 on the ability to deliver service together with the airspace and technology change programme.
- NERL consider CAA's proposals are 'unattainable' as they are driven by a target profile that's reducing factors that NERL already knows it does not have control over.

BA, Virgin and IATA

- Overall support CAA's draft RP3 proposals.
- Noted they 'reluctantly accepted' NERL's traffic forecast during customer consultation process and believe that there is scope for a healthy debate.
- Satisfied if service quality in RP3 matches that of RP2 given the traffic increase. Satisfied with incentives being sharper.
- Keen to see what improvements to ATCOs' productivity levels can be delivered in RP3.
- Disappointed that CAA did not look in depth in to applied pension rates for new starters.
- Consider that NERL's proposed scope of capex programme was correct but still question whether it was the right level of cost.

- Airlines emphasised the need to deliver airspace modernisation during RP3; however, also want to see adequate governance with genuine options.
- Disagree with the level of accessible benefits presented on Oceanic and question the cost efficiency of the data charge. Acknowledge that CAA has laid out a governance structure and more work will need to be done on unlocking the benefits.
- Consider that the direction of travel on WACC is correct. Questioned whether there may be scope to go lower.
- Eager to discuss further SIP improvements.

Ryanair (jointly with EasyJet)

- Overall, support CAA draft proposals. In particular, satisfied with proposed lower WACC.
- Consider that there is more scope for CAA to challenge on cost efficiency and environmental performance.
- Consider NERL should ensure that it has sufficient ATCOs with the right validations, in the right place, at the right time
- Consider that capacity increase and associated delays should be part of usual conditions of running business rather than subject to exemption days.
- Consider there is more room to increase penalties.
- Consider STATFOR forecast is the right choice.

Questions

- NATS highlighted the desire for regulatory policy statement on pensions which may save over £400m by de-risking the scheme. CAA requested stakeholders submit views on this.
- IAG asked why ATCOs' training cannot be outsourced. NATS responded that it is due to inherent differences between various airspace blocks. However, airspace modernisation may allow to shorten the training hours required.
- Virgin Airways asked whether CAA planned to issue a document with specific responses to the points raised in the CCWG Co-Chairs Report. CAA noted the report was referenced within individual chapters in the proposals but there wasn't a single reference document. The CAA agreed to consider this as part of its final proposals.
- Virgin Airways asked what further discussions or work was planned before submissions closed on 12 April, and what discussions were planned after this date ahead of publication of the final plan. CAA noted capex governance and airspace modernisation licence modification work would start before 12 April, and that CAA would try to use existing mechanisms and opportunities to engage with stakeholders after this date as proposals were finalised.

Record of Bilateral Stakeholder Meetings – 18 March 2019

Note of RP3 bilateral between CAA and NERL – 18 March 2019

CAA: Richard Moriarty (Chief Executive); Paul Smith (Group Director Consumers and Markets; Tim Johnson (Policy Director); David Gray (Non-executive Director); Anne Lambert (Non-executive Director); Andrew Walker (Head of Markets and Performance); Matt Claydon (Head of ATS Regulation).

NERL: Martin Rolfe (Chief Executive), Juliet Kennedy (Operations Director), Rob Watkins (Technical Services Director), Nigel Fotherby (Finance Director), Thea Hutchinson (Head of Regulation).
The purpose of the bilateral was to enable senior CAA directors and board members to hear directly from NERL on their views on the CAA's draft RP3 proposals.

NERL started by providing their view of the operating context for RP2 and then set out areas of agreement/support for CAA's draft RP3 proposals, such as prioritisation of safety, good service performance, the need for greater resources and completion of their technology programme. NERL highlighted how their business plan proposals had been developed in an integrated manner to safely deliver a high standard of service quality with increased traffic, in addition to technical transitions, airspace modernisation and that me EU targets.

Based on the CAA's draft proposals, NERL thought they would be able to continue to maintain safety/meet EU safety targets, but that they did not think they would be able to meet other targets proposed, nor deliver technical transitions or airspace modernisation.

A particular concern was uncertainty in the relationship between achievement of performance targets and licence compliance, as such, NERL would prioritise meeting delay performance 'today' over preparation for the future in terms of airspace modernisation.

CAA highlighted that the draft proposals allowed a significant increase in costs to establish the base year to support staffing increases, opex efficiency in line with NERL's historic performance (with a higher start point), significant capital investment programme over RP2 and RP3, as well as pass through mechanisms for efficient capex and pensions and therefore, asked NERL to elaborate on expected productivity gains. NERL said that there were productivity benefits from technical roll out that would outweigh costs, but that traffic increases would outstrip those gains. They noted that the technology in itself did not necessarily make it cheaper to handle traffic *per se*, but provided the capability to handle more traffic as well as increased resilience.

NERL highlighted that ATCO availability was a significant factor. A high proportion of the ATCO workforce was due to retire during RP3 – which will represent a disproportionate loss in experience and flexibility, that would take 5-10 years to replace on a like for like basis (i.e. ATCOs with multiple validations).

NERL had conducted a high level impact assessment of CAA's draft proposals and identified that the proposed lower increase in opex would disproportionately impacts transitions, delivery dates and resilience. They highlighted a reduction in the number of delivery milestones that could be achieved (from 21 to 10-15), an increase in delivery programme length (from 5 to 6-8 years) and a delay to 2028 in LAMP delivery and airspace changes to support R3.

NERL said that if CAA's final proposals reflected the building block requirements set out in their business plan, they would expect to be held account for delivery.

NERL noted that, in their view, the STATFOR Sep 18 and Feb 19 forecasts overstate service units with (over) optimistic flight growth and limited reflection of Brexit risks. Also that the CAA proposed cost of capital did not reflect the greater risk NERL faced across the business, noting traffic risk on the North Atlantic and impact of lower returns combined with potentially larger penalty pot, and that the tighter beta calculation was at the stringent end of the range, rather than the mid point.
In closing NERL stated that in their consultation response, they would put forward counter proposals that would be consistent with the EU proposals, highlight the asymmetric risks with getting the final proposals wrong and provide more evidence to support their view on the cost of capital.

Note of RP3 bilateral between CAA and NERL – 18 March 2019
CAA: Richard Moriarty (Chief Executive); Paul Smith (Group Director Consumers and Markets; Tim Johnson (Policy Director); David Gray (Non-executive Director); Anne Lambert (Non-executive Director); Andrew Walker (Head of Markets and Performance); Matt Claydon (Head of ATS Regulation).

Airspace users: Rafael Schvartzman (IATA Regional VP); Giancarlo Buono (IATA Regional Director); Pete Curran IATA Head of ATM Infrastructure; Simon McNamara (IATA UK & Ireland Manager); Mark Gardiner (BA); Geoff Clark (Virgin Atlantic).

The purpose of the bilateral was to enable senior CAA directors and board members to hear directly from airspace users on their views on the CAA's draft RP3 proposals.
The airspace users highlighted six key areas for discussion:

- Cost of capital – Airspace users were encouraged by the CAA's draft WACC proposal, but noted that they thought there was scope for it to be lower, and highlighted the CEPA report commissioned by IAG that had already been provided to the CAA.
- Traffic forecast – Airspace users were supportive of the CAA's use of the STATFOR forecast. They noted that they had provisionally agreed to the use of NERL forecast as part of the customer consultation meeting, but this was on the basis of NERL continuing to engage with STATFOR to understand and narrow the differences between the forecasts.
  Notwithstanding, their principle position was that STATFOR, an independent forecast, should be the default for en route. Generally, airspace users expected to see continuous moderate growth through RP3.
- Capex and opex – Airspace users reinforced the importance of delivery of airspace modernisation in RP3. They recognised that there was an element of judgement in determining the *right* numbers of ATCOs, but that they expected greater productivity given RP2 and proposed RP3 investment plans. They thought that the CAA challenge was not been massive and that there should be more flexibility and efficiency in the system – they thought NERL had not been clear why any opex challenge automatically meant lower ATCO numbers. CAA noted that their approach was to put forward efficiency proposals, but that it was for NERL to manage opex and capex to meet their obligations.
- CAA sought to understand airspace users' views on the potential asymmetrical risk of stringent targets vs capacity performance. Airspace users thought that there were risks to oversimplifying the asymmetry risk associated with capacity and that having enough information to understand and inform trade offs was essential, noting that it had been difficult to get that information from NERL during the CCWG process.
  However, they were certainly aware of the implications of underinvestment and that historically investment had not delivered the necessary capacity at the right price.
- Airspace users thought that capex governance was moving in the right direction, with the SIP evolution to date, but further work was required and they were interested to engage on the principle set out in the CAA draft proposals. For RP3, they expected a greater role for the

independent reviewer, the need to ensure consistency in programme nomenclature, to allow proper tracking of delivery, and the need for access to the right level of information to inform their views. Whilst they recognised NERL was a high performing ANSP, compared to their peers, they thought change management processes needed to be improved. They thought that NERL's engagement processes were good, in comparison to peers, but the engagement content was unsatisfactory. However, they recognised their own role and the need to bring the right people into the engagement process at the right time. Recognising the need for proportionality, they thought NERL governance could be improved with CBA transparency to get better buy-in, the need to agree the content of programmes and a 'Heathrow-lite' gateway process.

- Oceanic satellite ADSB – Airspace users set out that NERL's original case for satellite-based ADSB over the North Atlantic was to enhance capacity and efficiency and that on the basis of NERL evidence these improvements would not fully materialise until 2028; and that in 2018, the NERL focus switched to addressing the target level of safety. Airspace users said that, currently, there was not a safety issue on the North Atlantic, but recognised that there might be in the future, however they had not seen the safety case. From their perspective, ADSB was only one means of meeting ICAO objectives, and that EU surveillance requirements were performance based and therefore technology neutral. They noted that NERL's surveillance proposals were not related to ICAO requirements for Global Tracking, but related to a single safety indicator (among others). Furthermore, that ICAO Annex 19 (Safety Management) required production of a safety case before changing operational requirements and that this had yet to be provided. Only with the production of the safety case will it be possible to properly determine how ADSB might improve safety on the North Atlantic. They noted there were a number of possible solutions to meeting the ICAO target level of safety, but that none could be implemented without a safety case.
  Airspace users also noted that whilst they understood – albeit not necessarily agreed with – CAA's approach to assessing the benefits of ADSB on the North Atlantic, they though the proposal was absent on cost-efficiency. In particular they highlighted that the introduction of ADSB meant a public monopoly (part) owning a private monopoly and signing a 12-year contract, during which time it was possible new entrants would enter the market.

In conclusion, airspace users were *broadly* supportive of CAA's draft domestic proposals but thought that a similar approach to RP2 should be adopted for RP3, whereby ADSB was excluded, but reviewed on an annual basis.

Appendix S - RP3 Interdependencies Assessment

1. Introduction

The RP3 performance regulation requires that interdependencies between performance targets should be taken into account for the purposes of target setting, having regard to the overriding safety objectives. The RP3 performance regulation requires performance plans to contain a description and explanation of the interdependencies and trade-offs between the key performance areas, including the assumptions used to assess those trade-offs. This annex sets out how we have undertaken an interdependencies assessment of the safety aspects as required under the RP3 performance regulation. The interdependencies between the other key performance areas is addressed in section 3.6 of the performance plan. We also note that EASA has recognised the need for enhancements in oversight of ATM performance that takes into account links between the different performance areas.[1]

We undertake the supervision of NERL in accordance with applicable EU regulations through oversight audits and reviews to systematically verify compliance with safety regulatory requirements, and in a manner that takes account of the safety performance of the organisation in order to ensure that NERL is managing risks effectively. Our oversight is scoped at multiple levels to ensure that operational personnel training and competence is assured, and ATM systems continue meet relevant standards during continued operation and through change. In addition, we conduct corporate level audits of NERL to ensure that top level processes are implemented consistently.

NERL's RP3 business plan states that it will comply with the EU targets for the safety KPI of Effectiveness of Safety Management (EoSM). Given past performance, we anticipate that NERL should be able to achieve this in RP3. NERL has also stated that it will also set its own internal, aspirational safety targets to ensure that it continues to challenge itself on the safety of its services.

NERL maintains the facility for flow restrictions as their ultimate means of preserving safety. NERL has stated that safety will always be its priority, and, should the two outcomes of service quality and safety conflict, they will prioritise safety over service performance.[2]

RP3 safety performance will be driven by our and NERL's safety strategy and safety plans through:

- Tactical Safety Improvements;
- Strategic Safety Improvements;
- Safety Management Improvements;
- Working with stakeholders, which may influence the safety of services to ensure key risk areas are managed; and
- the UK state safety programme.

2. Interdependency Assessment

We have used the following assumptions to demonstrate that NERL's operation is and will continue to be safe during RP3:

a. The operation is currently safe

[1] EASA MB 2019-01 *WP05 – Report of Task Force on Airspace Congestion 04 June 2019*

[2] NERL RP3 Business Plan, Appendix K, page 80

There are a number of extant measures and mechanisms used by NERL and us, where current safety is assessed and formally reported. These include:

- That the internal governance processes of the NATS Safety Steering Group and Safety Review Committee are effective in providing a strong focus on safety at the most senior levels within the company.
- The NATS Annual Safety Report, which demonstrates that NERL has robust plans in place to ensure the priority of safety in the organisation, and that NERL's safety record shows an improving trend.
- Compliance with the safety measures contained in the RP2 performance regulation, including Effectiveness of Safety Management (EOSM), Application of the Risk Analysis Tool (RAT) and presence and level of Just Culture (JC) KPIs. These show that NERL's Safety Management Maturity and application of continually improving safety processes continue to be robust.

b. Safety aspects of change are managed effectively

All change is subject to safety assessment by NERL and is notified to us before it is implemented. This includes changes from environmental, capacity and cost drivers as they impact the operation. We review either significant or high severity changes. This is undertaken to demonstrate that hazards have been identified, safety requirements derived, and mitigation implemented to ensure that any associated residual operational risks are tolerable. The procedures are:

- SP100, Safety assessment of organisational change. SP100 requires that any organisational change is assessed to ensure that the safety accountabilities within the revised organisational structure remain effective.
- SP401, ATM Risk Assessment and Mitigation. SP401 requires that all new systems and changes to existing operational systems are assessed for their impact on safety.
- SP406, ATC Providers Safety Analysis. SP406 assesses the safety significance of new or modified ATC procedures and ensures any residual risks are tolerable.

The procedures are embedded in NERL project governance and ATC procedure development processes and robustly applied throughout the business, overseen by Operations Directors and the NATS Safety Steering Group.

c. The appropriate safety governance is in place

The current safety management processes, including the flow of safety accountabilities held by managers, provides the architecture by which NERL encompasses a safe operation:

- An effective governance structure is in place ensuring safety remains a top priority.
- Any organisational change will be the subject to safety management system processes.
- Each Operational Business Area has an Head of Safety independent of service delivery to ensure that the appropriate focus on safety is maintained.
- The NATS Safety Steering Group and Safety Review Committee governance structure in place within NERL Operations maintains an appropriate focus on safety.
- NERL has a comprehensive record of its safety performance and safety activities which objectively demonstrates its safety performance record.
- The independent steady State Assurance processes (e.g. SP201 and SARG audits) are in place and report safety concerns through the accountability chain and governance processes.

- Operations supervisor, Group and Local Area supervisor training is effective and a consistent standard is demonstrated.
- Workload remains within acceptable parameters, NERL effectively implement Traffic management to maintain the safety of the operation.
- Stress, workload and fatigue levels are within acceptable measured parameters.