UK RP3 CAA Decision Document – RAB Rules Working Paper

CAP 1830b

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Enquiries regarding the content of this publication should be addressed to: Stewart.Carter@caa.co.uk

The latest version of this document is available in electronic format at: www.caa.co.uk

Introduction

1. In our draft proposals for RP3, we said we would work with NERL to check and, where necessary, improve the documentation around the regulatory asset base (RAB) calculations ahead of our final decision.

2. We have worked with our advisors and NERL to update the rules that we and NERL should use in RP3 to calculate the RAB for UKATS, Oceanic and London Approach.

3. The main changes to the existing RP2 RAB rules are:

    - as the RAB is inflated by RPI and revenues are inflated by CPI each year, differences between the actual wedge between RPI and CPI inflation measures and the forecast wedge in our final decision would lead to differences in depreciation and allowed returns recovered through revenues. We propose to true up for these differences in the RAB in the updated RP3 rules, to be recovered through revenue in RP4 and beyond;

    - we have adjusted the opening UKATS RAB in 2020 to correct for two errors we identified in previous RAB calculations, reducing the opening RAB by around £3.6 million in outturn prices. These adjustments have been discussed with NERL; and

    - we have included new sections in the RAB rules for calculation of the RAB for London Approach, for reporting purposes, and operation of the ex-post efficiency incentive, information incentive and delivery incentive set out in our final decision.

4. We have also included additional descriptions of the terms and adjustments used to calculate the RAB, following stakeholder feedback that the calculation of the RAB was not sufficiently transparent.

5. This is a working draft of the RAB rules for RP3. We welcome any comments from stakeholders and will work with NERL to finalise these RAB rules before the start of RP3. For example, we will need to clarify with NERL:

    - the appropriate price base (RPI or CPI-based) for UKATS and Oceanic net capex for the RPI-CPI wedge adjustment;

    - the appropriate RP2 estimated spectrum cost variance when expressed in 2017 CPI prices;

    - our calculations for the RP3 spectrum cost baseline, for calculation of spectrum cost variances; and

- the definition and calculation of the modelled interest costs for the tax clawback mechanism.

6. For the new RPI-CPI wedge adjustment, described above, we will monitor its calculation during RP3 to ensure it is working as intended, and make any required adjustments to the RAB rules following this review.

7. We engaged Grant Thornton to provide an independent review of the NERL financial model, including calculation of the RAB to make sure it is consistent with these updated RP3 RAB rules. Grant Thornton did not identify any material outstanding issues with the calculation of the RAB in its review.

Formulae for tracking the regulatory asset base – RP3 Opening RAB derivation and RP3 RAB rules

Section 1: Introduction

8. This document summarises the detail of the formulae which will govern the tracking of the Regulatory Asset Base (RAB) for:

   - UKATS; and
   - Oceanic.

9. These RAB rules are designed to align the UKATS RAB with the basis set out in the European Commission Implementing Regulation (EU) 2019/317, laying down a performance and charging scheme for RP3 (the "RP3 Performance and Charging Regulation"). In order to be consistent with these rules, the RAB will be reported on a calendar year basis. The RAB rules for Oceanic are designed to be consistent with the UKATS rules. The RAB rules are also designed in such a way that they are able to reflect the European Commission methodology regarding costs exempt from cost sharing for the RP2 period (2015 – 2019) and subsequently the RP3 period (2020 – 2024).

10. The Appendix comprises the following sections:

    - Section 2: sets out the approach to inflation which is to be incorporated when calculating the RAB;
    - Section 3: establishes the UKATS RAB for calendar years 2018 and 2019;
    - Section 4: establishes the Oceanic RAB for calendar years 2018 and 2019;
    - Section 5: establishes the approach for rolling the UKATS RAB forward in RP3;
    - Section 6: establishes the approach for rolling the Oceanic RAB forward in RP3;
    - Section 7: summarises the approach to be taken regarding the RP3 Tax Clawback and the baseline assumptions for RP3.
    - Section 8: summarises the approach to be taken for calculating the London Approach RAB in RP3
    - Section 9: captures a "running total" of incentives that could result in adjustment to the UKATS RAB for RP4.

- Annex A: establishes the approach to be taken for calculating the RPI–CPI wedge variance adjustment in RP3.

11. Regulatory accounts should be prepared according to accounting policies that are consistent with the basis of the determination values used in this appendix. Any change in the company's accounting policies for statutory accounts, whether required by new accounting standards or otherwise, that would have a material effect on the amounts used in formulae defined in this appendix should thus be disregarded in the regulatory accounts unless the CAA approves such a change.

Use of formatting in this document

12. Throughout this document, formatting styles are used to denote the following:

Format	Denotation
Bold blue text	Sub-section headers
Bold black text	Headings for the main terms used within the RAB formulae. Each term formatted in this way has a reference (e.g. 3a, 3b etc) and is described within that section.
Bold grey text	Headings for sub-terms used to calculate the main terms within the RAB formulae. Each sub-term is defined underneath the description of the relevant main term.
Text box	Short description of the purpose of an adjustment, how it fits with the overall treatment of the issue, and rationale for adopting such approach to an adjustment.

Abbreviations

Abbreviation	Meaning
CAA	UK Civil Aviation Authority
CPI	Consumer Prices Index
CRCO	Central Route Charges Office
NERL	NATS (En Route) plc
RAB	Regulatory Asset Base

Abbreviation	Meaning
RP2 / RP3 / RP4	Reference Period 2 (2015-19) / Reference Period 3 (2020-24) / Reference Period 4 (2025-29)
RPI	Retail Prices Index
SES	Single European Sky
TSU	En-route total service units
UKATS	UK Air Traffic Services

Glossary

Term	Definition
Calendar Year	The one-year period that begins on 1 January and ends on 31 December.
Capitalised Financing Costs	The price control set by the CAA does not include a return on all the assets in the RAB, e.g. if actual capex is higher than assumed at the time of the price review or if there is a Pension Contribution variance. For the assets on which a return has not been included, the financing costs are capitalised and added to the RAB, to enable NERL to recover them in future years.
Cost of capital	The allowed rate of return on capital (equity and debt) invested in the UKATS and Oceanic asset bases, as determined by the CAA. Often referred to as the Weighted Average Cost of Capital.
Financial Year	The one-year period that begins on 1 April and ends on 31 March.
RPI-CPI Wedge	The difference between RPI and CPI measures of inflation.
RP2 Charging Regulation	Commission Implementing Regulation (EU) 391/2013 laying down a common charging scheme for air navigation services
RP3 Performance and Charging Regulation	Commission Implementing Regulation (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky for the third reference period of the performance scheme (RP3).
Spectrum Costs	Charges for the use of aeronautical radio spectrum
Tax Clawback	A mechanism in NERL's licence which removes the tax benefit from gearing above 60 per cent.

Section 2: Inflation indices

Description: The retail price index (RPI) is used to convert each year's RAB values into year-end outturn prices. In this way, the RAB reflects the current cost of investment that has not yet been remunerated through user charges. The inflation true up adjustments are achieved through inflating RAB figures each year using actual outturn RPI inflation.

13. Each year, the RAB is expressed in actual calendar year end RPI price levels. The RP3 RAB rules are expressed in fixed 2017 RPI (year-average) price levels. These figures must be uplifted, or indexed, to be converted into outturn price terms for each calendar year as appropriate. The formulae in later sections include the necessary indexation calculations and reference the following definitions for each relevant calendar year (designated as calendar year t):

Calendar year:	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Calendar year t:	18	19	20	21	22	23	24

Calendar year indices for RP3 rules:

RPI Growth from 2017 for calendar year t

= The Retail Prices Index (RPI, CHAW January 1987 = 100) for the last month of the calendar year t, divided by the average of the monthly RPI figures for the calendar year 2017, which is based on the All Items index starting at 100 in Jan 1987 equals 272.4750.

Annual RPI Growth for calendar year t

= The RPI for the last month of calendar year t, divided by the RPI for the last month of the previous calendar year (year t-1).

Within-year RPI Growth for calendar year t

= The RPI for the last month of calendar year t, divided by the average of the monthly RPI figures for calendar year t (i.e. January RPI + February RPI + . . . + December RPI, divided by 12).

RPI Growth from 2012/13 for calendar year t

= The RPI for the last month of calendar year t, divided by the average of the monthly RPI figures for financial year 2012/13.

References to outturn prices:

14. Where the document references outturn prices, this will always relate to year-end prices.

Recording of actual inflation indices and the calculation of averages:

15. NERL will record monthly RPI indices to 4 decimal places (e.g. 259.1275) and using these monthly indices will calculate average calendar year indices which will be rounded to four decimal places (e.g. 259.1235).

Units

16. All RAB values are given in £000s unless otherwise stated.

Section 3: Rolling forward the UKATS RAB to 31 December 2019

17. This section describes how the starting value of the UKATS RAB for RP3 will be calculated.

18. First, it establishes the starting point for these calculations i.e. the value of the RAB at the end of the last full calendar year available to CAA at the time of its price control calculations which is 31 December 2017.

19. It then describes how the RAB will be updated for assumed changes in 2018 and 2019. It takes into consideration the net capital expenditure made in UKATS, any Pension Contribution Variances, the movements in working capital (e.g. debtors and creditors) and the allowances for depreciation which have been incorporated in the price control calculations.

20. In this way, the RAB is expected to reflect the value of cash-flow investment made in the assets of the company, net of amounts contributed by customers by way of depreciation allowances.

21. The price control provides for a return on the RAB. Importantly, the value of the return allowed within the price control is based on assumptions for levels of net capital expenditure, and assumptions for the levels of cash pension contributions. CAA intends that variances against these assumptions, and their financing cost implications (consistent with the equivalent formulae existing before this modification), are taken into account by making suitable additions or deductions in the RAB calculations.

Closing RAB for calendar year 2017

22. The RAB at the end of the last full calendar year before CAA's RP3 price control calculations, at 31 December 2017 (expressed as £ 983,681 in 2017 year-end prices), forms the starting point for subsequent RAB calculations.

Closing RAB for calendar year t

23. Thereafter, the closing RAB is to be calculated (in outturn calendar year-end prices), according to the following formulae (where t is the relevant calendar year). Note that explanations are provided for each of the terms in blue text on the following pages of this section.

=		Closing RAB for the previous year (calendar year t-1)

+		Closing RAB for the previous year (calendar year t-1) x ((Annual RPI Growth for calendar year t) – 1)
+	**3a**	**Total Actual Net Capex for calendar year t** x Within-year RPI Growth for calendar year t
+	**3b**	**Real Movements in Working Capital for calendar year t**
+	**3c**	**Allowed Underlying Depreciation for calendar year t** x RPI Growth from 2017 for calendar year t
+	**3d**	**Backlog Adjustments to Allowed Depreciation for calendar year t** x RPI Growth from 2017 for calendar year t
+	**3e**	**Regulatory depreciation on RP1 exempt cost pension pass-through adjustment included in RP2 charges for calendar year t** x RPI Growth from 2017 for calendar year t
+	**3f**	**Amortisation of the CP3 RIM for calendar year t** x RPI Growth from 2017 for calendar year t
+	**3g**	**RP2 Estimated Pension Contribution Variance for calendar year t** x RPI Growth from 2017 for calendar year t
+	**3h**	**Actual Pension Contribution Variance for calendar year t**
+	**3i**	**RP2 Estimated Capitalised Financing Costs** x RPI Growth from 2017 for calendar year t
+	**3j**	**Capitalised Financing Costs for calendar year t**

24. Where:

(3a) Total Actual Net Capex for calendar year t

Description: This ensures that the correct amount of capex is added to the RAB, comprising the capex incurred but removing any grants or other contributions that NERL receives, as well as capitalised operating leases, which are remunerated in determined costs through the operating cost building block.

= Additions to UKATS fixed assets in calendar year t (on an accruals basis) from the audited regulatory accounts. Note, this will exclude any additions relating to "Right of Use" assets resulting from capitalisation of operating leases under IFRS 16 (Leases). The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and this exclusion is noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

– the proceeds of disposals of UKATS fixed assets in calendar year t from the audited regulatory accounts,

– any grants or other contributions (e.g. customer contributions) to UKATS fixed assets for financial year t from the audited regulatory accounts.

Where grants for assets relate to government assistance designed to provide a permanent economic benefit to an entity, and specifically exclude funding which carries an obligation for repayment either to the government or by way of a reduction in charges to customers other than through reduced determined costs. Assistance provided by the Innovation and Networks Executive Agency (INEA) and associated Union assistance programmes such as the Trans-European transport network (TEN-T), Connecting Europe Facility (CEF) and the Cohesion Fund, where funding is to be returned to airline customers via a specific unit rate reduction rather than a lower determined cost would therefore be excluded.

(3b) Real Movements in Working Capital for calendar year t

Description: This adjustment to the RAB is for changes in NERL's capital which is used in its day-to-day activities: i.e. operating liquidity. Similar to net capex, this adjustment excludes specific items such as projects for the Ministry of Defence.

= **Closing Working Capital for calendar year t** (defined below)

− Closing Working Capital for calendar year t-1 x Annual RPI Growth for calendar year t

Closing Working Capital for calendar year t

= Net UKATS working capital (in outturn prices) at the end of calendar year t derived from the regulatory accounts excluding any debtor, creditor, accrual, prepayment or other provision in respect of financing (e.g. bank accounts, loans, accrued interest and cash), corporation and deferred tax, distributions and pension pass-through (see below).

For the purpose of this calculation, working capital is defined as debtors and creditors, accruals and prepayments arising from UKATS trading (including transactions in respect of attributable fixed assets).

This also includes any creditor attributable to the FAS Facilitation Fund, and the adjustment to creditors required on the implementation of IFRS 16 (Leases).

This excludes:

- any debtor related to Pension Contribution Variances created by the adoption of the new International Financial Reporting Standard IFRS 15 (Revenue from contracts with customers), as none of the adjustments arising from the adoption of IFRS 15 are reflected in NERL's Regulatory Performance Statements or impact the calculation of Eurocontrol charges; and
- any debtor or creditor relating to customer funded projects which are not included in the UKATS RAB (e.g. MoD customer funded projects).

The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and these inclusions / exclusions are noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

(3c) Allowed Underlying Depreciation for calendar year t

Description: Depreciation is deducted from the RAB and recovered through the depreciation building block in determined costs (with the exception of pension pass-through depreciation which is recovered separately through user charges). The amount of depreciation is calculated by reference to the average asset life assumptions across NERL's regulated assets. Any variances between the depreciation values fixed at RP2 and the depreciation on actual capex will be adjusted through the backlog adjustment to depreciation described in item (3d).

= The amount in respect of underlying depreciation allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: - £ 168,467

Calendar year 2019: - £ 161,176

The value of regulatory depreciation for 2018 and 2019 will be recalculated when the level of capital expenditure, the value of the defined benefit pension variances and the value of capitalised finance costs are updated to reflect actuals. Any differences will be added to or deducted from RP4 regulatory depreciation as a backlog adjustment.

(3d) Backlog Adjustments to Depreciation for calendar year t

Description: This adjustment reflects the difference between assumed depreciation and depreciation calculated based on actual outturn capex in previous reference periods. This ensures the RAB is adjusted to reflect the backlog depreciation that is recovered through the depreciation building block in determined costs.

= The amount in respect of adjustments to depreciation allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices, amounts represent a reduction to aggregate allowed depreciation):

Calendar year 2018: £ 3,746

Calendar year 2019: £ 3,751

(3e) Regulatory depreciation on RP1 exempt cost pension pass-through adjustment included in RP2 charges for calendar year t

Description: The methodology for determining exempt costs in relation to pension contributions during RP1 had not been finalised at the time of the CP3 price review. An adjustment was therefore included in the RP2 settlement which will be depreciated over RP2.

The methodology for determining exempt costs in relation to pension contributions during RP1 had not been finalised at the time of the CP3 price review. An adjustment was therefore included in the RP2 settlement which will be depreciated over RP2.

= The amount in respect of RP1 Exempt cost pension pass through regulatory depreciation adjustment included in RP2 charges allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: - £ 1,155

Calendar year 2019: - £ 1,155

(3f) Amortisation of the CP3 RIM for calendar year t

Description: Rolling Incentive Mechanism (RIM) adjustment represents the remuneration that NERL earned for out-performing its operating cost efficiency targets in RP1. The mechanism was discontinued since RP2, and the adjustments below are the last ones to affect NERL's RAB.

= The amount in respect of amortisation of the CP3 RIM allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: - £ 2,443

Calendar year 2019: £ 0

(3g) RP2 Estimated Pension Contribution Variance for calendar year t

Description: The adjustment captures the expected annual difference between actual and assumed defined benefit pension costs that are exempt from cost sharing under the Charging Regulation and are applied to the RAB. These costs are assumed by CAA for 2018 and 2019 for the RP3 final decision.

= The amount of Pension contribution variance relating to Defined Benefit ("DB") Future Service and Deficit Repair contributions and for the Pension Cash Alternative {including related Employers National Insurance contributions} ("PCA") for members who have opted out of the DB scheme, following the calculation required for cost exempt reporting, assumed by CAA in respect of 2018 and 2019 and factored into the RP3 settlement (shown in 2017 RPI prices).

This is to be added to the RAB, with figures fixed at the following values:

Calendar year 2018: £ 11,958

Calendar year 2019: £ 17,122

(3h) Actual Pension Contribution Variance for calendar year t

Description: The adjustment captures the actual annual difference between actual and assumed defined benefit pension costs that are exempt from cost sharing under the Charging Regulation. The adjustment is net of the estimated annual difference from 3g.

This adjustment is made to account for 2018 and 2019 actual variance in pension contributions made (as described below).

The calculation basis for the RP2 Pension contribution variance for Defined Benefit Future Service and Deficit Repair contributions and for the Pension Cash Alternative {including related Employers National Insurance contributions} ("PCA") for members who have opted out of the DB scheme, was determined in Autumn 2015 and is based on the European Commission methodology for the treatment of costs exempt from cost sharing.

For each year of RP2, NERL will report for its UKATS Service line, the annual DB pension costs exempt from cost sharing in tables 10.1 in the row labelled "Unforeseen financial market conditions requiring changes in deficit repair contributions and future service contributions". For the purposes of these rules this row will be called "Actual pension contribution variance", and will be added to the RAB in calendar year-end prices.

Article 14.2 of the RP2 Charging Regulation makes provision for the review of "Actual pension contribution variance", which are included in the CAA's Annual Assessment report, by the European Commission. Any adjustment to NERL's UKATS service line "Actual pension contribution variance", defined as "Actual pension contribution variance adjustment", following this this review will be added/deducted to/from the RAB in the following period.

This amount needs to be adjusted for any differences between actual value and the estimated values included in the RP3 settlement (see section 3g above) and the cumulative difference will be recovered through charges via regulatory depreciation from RP4 and beyond.

For calendar years 2018 & 2019:

[Actual pension contribution variance (t) + Actual pension contribution variance adjustments (t-1)]

x Annual RPI Growth for calendar year t

Less:

RP2 Estimated Pension contribution variance for calendar year t (3g) x RPI growth from 2017 for calendar year t

Key CAA assumptions used in the Actual pension contribution variance (t) calculation are set out below. Note these are the RP2 CAA assumptions and are stated in 2012 CPI prices:

CAA Assumed pension rate:

Calendar year 2018: 38.46 %

Calendar year 2019: 37.06 %

CAA Assumed Pensionable pay (2012 CPI prices as used in the Cost exempt calculations):

Calendar year 2018: £ 163,340

Calendar year 2019: £ 158,380

(3i) RP2 Estimated Capitalised Financing Costs

Description: Capitalised financing costs, at the allowed cost of capital, are calculated for capex and pension variance adjustments so that the timing of the adjustments is neutral in present value terms. This adjustment represents assumed capitalised financing costs calculated by CAA based on RP2 assumptions.

= The fixed amount of capitalised financing costs calculated by CAA in respect of RP2 based on capital expenditure and pension contribution variance assumptions. These Capitalised Financing Costs have been factored into the RP3 regulatory settlement, and are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: £ 8,838

Calendar year 2019: £ 13,504

(3j) Capitalised Financing Costs for calendar year t

Description: This adjustment represents actual capitalised financing costs, calculated as the differences between the actual capitalised financing cost based on actual capex and pension contribution variances in 2018 and 2019, and the assumed capex and pension contribution variances.

This adjustment calculates the value of the capitalised financing cost which needs to be applied in relation to the net capex and actual pension contribution variances and corrections made in respect of calendar years 2018 and 2019:

= **[{ Net Capex Variance for calendar year t**

+ Actual Pension Contribution Variance for calendar year t (see 3h)

}, Divided by 2 (two)

+ (**Closing Cumulative Capitalised Variances for calendar year t-1** x Annual RPI Growth for calendar year t)]

x **UKATS cost of capital determined by the CAA for calendar year t**

Where:

Net Capex Variance for calendar year t

= Total Actual Net Capex for calendar year t x Within-year RPI Growth for calendar year t

− The **CAA's Assumed Net Capex** for calendar year t (see below) x RPI Growth from 2017 for calendar year t, where:

CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values (in 2017 RPI prices). The values below have been updated to reflect the net capex assumed by CAA in the RP3 settlement:

Calendar year 2018: £ 167,481

Calendar year 2019: £ 139,410

Closing Cumulative Capitalised Variances calendar year t

The formula below calculates the cumulative value running total of variances between assumptions and actual costs for capital expenditure, and states the closing position as at 31st December 2018 and 31st December 2019. Keeping a running total for these variances is essential to ensure that appropriate adjustments can be made either to reflect additional returns due to NERL or amounts that need to be returned to customers in future periods.

For calendar year 2017 (i.e. year t-1 for the calendar year 2018)

= £ 0 (zero)

Thereafter:

= Closing Cumulative Capitalised Variances for calendar year t-1 x Annual RPI Growth for calendar year t

+ Net Capex Variance for calendar year t

+ Actual Pension Contribution Variance for calendar year t

+ Capitalised Financing Costs for calendar year t

UKATS cost of capital determined by the CAA for calendar year t

= For each calendar year, figures are fixed at the following values:

Calendar year 2018: 5.86 %

Calendar year 2019: 5.86 %

Tracking the RP2 Spectrum cost variance

Description: The adjustment represents costs related to spectrum licence fees that NERL incurs as a result of its procurement of various radio frequency bands. These costs are exempt from cost-sharing under the Charging Regulations. The mechanism below tracks the variance between actual and assumed costs in 2018 and 2019, which will be included in the RAB at the start of RP3.

25. This adjustment is made to account for 2018 and 2019 actual variance in annual Spectrum licences costs which are exempt from cost sharing.

26. The calculation for the RP2 Spectrum contribution variance is based on the European Commission methodology for the treatment of costs exempt from cost sharing. This variance needs to be tracked over the RP2 period and will be included in the RP3 RAB on 1 January 2020 in two places:

27. The **RP2 Estimated Spectrum Cost Variance** assumed by the CAA and factored in to the RP3 settlement (see (5b));

28. The **RP2 Spectrum Cost Variance adjustment** which updates the RAB for any difference between 2018 and 2019 estimates and actuals. The cumulative difference will be recovered through charges via regulatory depreciation from RP4 and potentially beyond (if the amounts to be recovered impact the unit rate in a disproportionate manner) (see (5c)).

29. For each year of RP2 NERL will report, for its UKATS Service line, the annual Spectrum licences' costs which are exempt from cost sharing in the relevant unit rate reporting tables (Table 2, Item 3.7) in the row labelled "unforeseen new cost items not covered in the performance plan, but required by law" and will be added to the RAB in calendar year end prices.

30. Article 14(2) of the RP2 Charging Regulation makes provision for the review of the RP2 spectrum cost variance adjustment, which is included in an annual verification report by the CAA, which is reviewed by the European Commission. This amount will be added to/deducted from the RAB as part of the RP2 Spectrum Cost Variance adjustment.

31. Key assumptions used in the **Spectrum cost variance** calculation are set out below. Note these are the RP2 CAA assumptions and are stated in 2012 RPI prices:

    CAA Assumed Spectrum Costs:

    Calendar Year 2018: £ 929

    Calendar Year 2019: £ 895

Section 4: Rolling Forward the Oceanic RAB to 31 December 2019

32. This section describes how the opening value of the Oceanic RAB for RP3 will be calculated. It then describes how the RAB will be updated for assumed changes in 2018 and 2019. The steps for calculating the Oceanic RAB largely mirror those of the UKATS RAB.

Closing RAB for calendar year 2017

33. The RAB at the end of the last full financial year before the CAA's price control calculations, at 31 December 2017 (expressed as £ 38,966 in 2017 year-end price terms), forms the starting point for subsequent RAB calculations.

Closing RAB for calendar year t

34. Thereafter, the closing RAB is to be calculated (in outturn calendar year-end prices), according to the following formulae (where t is the relevant calendar year). Note that explanations are provided for each of the terms in bold text on the following pages of this section.

=		Closing RAB for the previous year (calendar year t-1)
+		Closing RAB for the previous year (calendar year t-1) x ((Annual RPI Growth for calendar year t) – 1)
+	**4a**	**Total Actual Net Capex for calendar year t** x Within-year RPI Growth for calendar year t
+	**4b**	**Real Movements in Working Capital for calendar year t**
+	**4c**	**Allowed Underlying Depreciation for calendar year t** x RPI Growth from 2017 for calendar year t
+	**4d**	**Backlog Adjustments to Allowed Depreciation for calendar year t** x RPI Growth from 2017 for calendar year t
+	**4e**	**RP2 Estimated Pension Contribution Variance for calendar year t** x RPI growth from 2017 for calendar year t
+	**4f**	**Actual Pension Contribution Variance for calendar year t**
+	**4g**	**RP2 Estimated Capitalised Financing Costs** x RPI Growth from 2017 for calendar year t
+	**4h**	**Capitalised Financing Costs for calendar year t**

35. Where:

(4a) Total Actual Net Capex for calendar year t

Description: This ensures that the correct amount of capex is added to the RAB, comprising the capex incurred but removing any grants or other contributions that NERL receives, as well as capitalised operating leases, which are remunerated in determined costs through the operating cost building block.

= Additions to Oceanic fixed assets in calendar year t (on an accruals basis) from the audited regulatory accounts. Note, this will exclude any additions relating to "Right of Use" assets resulting from capitalisation of operating leases under IFRS 16 (Leases). The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and this exclusion is noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

− the proceeds of disposals of Oceanic fixed assets in calendar year t from the audited regulatory accounts,

− any grants or other contributions (e.g. customer contributions) to Oceanic fixed assets for calendar year t from the audited regulatory accounts.

Where grants for assets relate to government assistance designed to provide a permanent economic benefit to an entity, and specifically exclude funding which carries an obligation for repayment either to the government or by way of a reduction in charges to customers other than through reduced determined costs. Assistance provided by the Innovation and Networks Executive Agency (INEA) and associated Union assistance programmes such as the Trans-European transport network (TEN-T), Connecting Europe Facility (CEF) and the Cohesion Fund, where funding is to be returned to airline customers via a specific unit rate reduction rather than a lower determined cost would therefore be excluded.

(4b) Real Movements in Working Capital for calendar year t

Description: This adjustment to the RAB is for changes in NERL's capital which is used in its day-to-day activities: i.e. operating liquidity. Similar to net capex, this adjustment excludes specific items such as customer funded projects and adjustments from the adoption of a new financial reporting standard that are not part of regulatory accounting.

= **Closing Working Capital for calendar year t**

− Closing Working Capital for calendar year t-1 x Annual RPI Growth for calendar year t, where:

Closing Working Capital for calendar year t

= Net Oceanic working capital (in outturn prices) at the end of calendar year t derived from the regulatory accounts excluding any debtor, creditor, accrual, prepayment or other provision in respect of financing (e.g. bank accounts, loans, accrued interest and cash), corporation and deferred tax, distributions and pension pass-through (see below).

For the purpose of this calculation, working capital is defined as debtors and creditors, accruals and prepayments arising from Oceanic trading (including transactions in respect of attributable fixed assets). This also includes any creditor attributable to the adjustment to creditors required on the implementation of IFRS 16 (Leases).

For the purpose of this calculation, this excludes:

- any debtor related to Pension Contribution Variances created by the adoption of the new International Financial Reporting Standard IFRS 15 (Revenue from contracts with customers), as none of the adjustments arising from the adoption of IFRS 15 are reflected in NERL's Regulatory Performance Statements or impact the calculation of Oceanic charges; and
- any debtor or creditor relating to customer funded projects which are not included in the Oceanic RAB.

The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and these inclusions / exclusions are noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

(4c) Allowed Underlying Depreciation for calendar year t

Description: Depreciation is deducted from the RAB and recovered through the depreciation building block in determined costs (with the exception of pension pass-through depreciation which is recovered separately through user charges). The amount of depreciation is calculated by reference to the average asset life assumptions across NERL's regulated assets. Any variances between the depreciation values fixed at RP2 and the depreciation on actual capex will be adjusted through the backlog adjustment to depreciation described in item (4d).

= The amount in respect of depreciation allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: - £ 4,076

Calendar year 2019: - £ 3,961

Actual regulatory depreciation for 2018 and 2019 will be recalculated when capex, the defined benefit pension variance and capitalised finance costs are updated for actuals. Any differences will be added to or deducted from RP4 regulatory depreciation as a backlog adjustment.

(4d) Backlog Adjustments to Depreciation for calendar year t

Description: This adjustment reflects the difference between assumed depreciation and depreciation calculated based on actual outturn capex in previous reference periods. This ensures the RAB is adjusted to reflect the backlog depreciation that is recovered through the depreciation building block in determined costs.

= The amount in respect of adjustments to depreciation allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices, amounts represent a reduction to aggregate allowed depreciation):

Calendar year 2018: - £ 71

Calendar year 2019: - £ 71

(4e) RP2 Estimated Pension Contribution Variance for calendar year t

Description: The adjustment captures the expected annual difference between actual and assumed defined benefit pension costs that are exempt from cost sharing, similar to UKATS under the Charging Regulation, and are applied to the RAB. These costs are assumed by CAA for 2018 and 2019 for the RP3 final decision.

= The amount of Pension contribution variance relating to Defined Benefit ("DB") Future Service and Deficit Repair contributions and for the Pension Cash Alternative {including related Employers National Insurance contributions} ("PCA") for members who have opted out of the DB scheme} assumed by CAA in respect of 2018 and 2019 and factored into the RP3 settlement (in 2017 RPI prices). This is to be added to the RAB, with figures fixed at the following values:

Calendar year 2018: £ 993

Calendar year 2019: £ 889

(4f) Actual Pension Contribution Variance for calendar year t

Description: The adjustment captures the actual annual difference between actual and assumed defined benefit pension costs that are exempt from cost sharing, similar to UKATS under the Charging Regulation. The adjustment is net of the estimated annual difference from 4e.

= {Total actual Defined Benefit pension contributions made (in cash terms) in respect of the defined benefit pension scheme (for Benefit Future Service and Deficit Repair contributions)

Plus

PCA for members who have opted out of the DB scheme for calendar year t }

x Within-year RPI Growth for calendar year t

Less

CAA's Assumed Defined Benefit Pension Contributions for calendar year t
x RPI Growth from 2017 for calendar year t, where:

CAA's Assumed Defined Benefit Pension Contributions

= For each calendar year, figures are fixed at the following values in 2017 RPI prices. The values below have been updated to reflect the Defined Benefit pension contributions {for Defined Benefit Future Service and Deficit Repair contributions and for the Pension Cash Alternative {plus associated Employers National Insurance contributions} ("PCA") for members who have opted out of the DB scheme} assumed by CAA and factored in to the RP3 settlement:

Calendar year 2018: £ 3,903

Calendar year 2019: £ 3,559

(4g) RP2 Estimated Capitalised Financing Costs

Description: Capitalised financing costs, at the allowed cost of capital, are calculated for capex and pension variance adjustments so that the timing of the adjustments is neutral in present value terms. This adjustment represents assumed capitalised financing costs calculated by CAA based on RP2 assumptions.

= The fixed amount of capitalised financing costs calculated by the CAA in respect of RP2 based on capital expenditure and pension contribution variance assumptions. These Capitalised Financing Costs have been factored into the

RP3 regulatory settlement, and are fixed at the following values (in 2017 RPI prices):

Calendar year 2018: £ 1,075

Calendar year 2019: £ 1,336

(4h) Capitalised Financing Costs for calendar year t

Description: This adjustment represents actual capitalised financing costs, calculated as the differences between the actual capitalised financing cost based on actual capex and pension contribution variances in 2018 and 2019, and the assumed capex and pension contribution variances.

= This adjustment calculates the value of the capitalised financing cost which needs to be applied in relation to the net capex and actual pension contribution variances and corrections made earlier in RP2.

= [{ (**Net Capex Variance** for calendar year t)

\+ (Actual Pension Contribution Variance for calendar year t) (see 4f) },

divided by 2 (two)

\+ (**Closing Cumulative Capitalised Variances for calendar year t-1** x Annual RPI Growth for calendar year t)]

x **the cost of capital determined by the CAA for Oceanic** for calendar year t, where:

Net Capex Variance for financial year t

= Total Actual Net Capex for calendar year t x Within-year RPI Growth for calendar year t

− the **CAA's Assumed Net Capex** for calendar year t x RPI Growth from 2017 for calendar year t, where:

CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2017 RPI prices. The values below have been updated to reflect the net capex assumed by CAA in the RP3 settlement:

Calendar year 2018: £ 5,778

Calendar year 2019: £ 1,168

Calculation of closing Cumulative Capitalised Variances for calendar year t (Oceanic)

The formula below calculates the cumulative value running total of variances between assumptions and actual costs for pension costs and capital expenditure and states the closing position as at 31st December 2018 and 31st December 2019. Keeping a running total for these variances is essential to ensure that appropriate adjustments can be made either to reflect additional returns due to NERL or amounts that need to be returned to customers in future periods.

For 2017 (i.e. year t-1 for the calendar year 2018)

= £ 0 (zero)

Thereafter:

= Closing Cumulative Capitalised Variances for calendar year t-1 x Annual RPI Growth for calendar year t

+ Net Capex Variance for calendar year t

+ Actual Pension Contribution Variance for calendar year t

+ Capitalised Financing Costs for calendar year t

Oceanic cost of capital determined by the CAA for calendar year t

= For each calendar year, figures are fixed at the following values:

Calendar year 2018: 5.86 %

Calendar year 2019: 5.86 %

Section 5: Rolling forward the UKATS RAB in RP3 (and calculation of cumulative capitalised variances during RP3)

36. This section describes how the UKATS RAB will be rolled forward from one year to another during RP3. The start point for these calculations is the RAB as at 31 December 2019.

37. This section takes into consideration the net capital expenditure made by UKATS, and Pension Contribution Variances, the movements in working capital (e.g. debtors and creditors) and the allowances for depreciation incorporated in the price control calculations. In this way, the RAB during RP3 will reflect the cash-flow investment made in the assets of the company, net of amounts contributed by customers by way of depreciation allowances.

38. The price control provides for a return on the RAB, based on assumptions for levels of net capital expenditure, and also provided for an allowance for pensions costs based on assumptions for levels of pension contributions. CAA intends that variances against these assumptions, and their financing cost implications (consistent with the equivalent formulae existing before this modification), are taken into account by making suitable additions or deductions in the RAB calculations.

Closing RAB for calendar year 2019

39. The RAB at 31 December 2019 forms the starting point for subsequent RP3 RAB calculations. The calculation of this value is defined in Section 3, and is calculated in 2019 calendar year-end prices.

Closing RAB for calendar year t

40. Thereafter, the closing RAB is to be calculated (in outturn calendar year-end prices), according to the following formulae (where t is the relevant calendar year). Note that explanations are provided for each of the terms in blue text on the following pages of this section, although the majority of terms below have already been described in Section 3 or Section 4 of this document.

=		Closing RAB for the previous year (calendar year t-1)
+		Closing RAB for the previous year (calendar year t-1) x ((Annual RPI Growth for calendar year t) – 1)

+	**5a**	**RP3 Opening RAB correction in 2017 RPI prices** x RPI Growth from 2017 for calendar year t
+	**5b**	**RP2 Estimated Spectrum cost variance** x RPI Growth from 2017 for calendar year t
+	**5c**	**RP2 Spectrum cost variance adjustment**
+	**5d**	**2020 revenue allowance and RP3 pricing adjustments for calendar year t** x RPI growth from 2017 for calendar year t
+	**5e**	**Total Actual Net Capex for calendar year t** x Within-year RPI Growth for calendar year t
+	**5f**	**Real Movements in Working Capital for calendar year t**
+	**5g**	**Allowed Underlying Depreciation for year t** x RPI Growth from 2017 for calendar year t
+	**5h**	**Backlog Adjustments to Allowed Depreciation for year t** x RPI Growth from 2017 for calendar year t
+	**5i**	**Pension Contribution Variance for calendar year t**
	5j	**RPI / CPI wedge variance adjustment**
+	**5k**	**Capitalised Financing Costs for calendar year t**
-	**5l**	**RP2 Tax clawback adjustment** x RPI growth from 2012/13 for calendar year t

41. Where:

(5a) RP3 Opening RAB correction in 2017 RPI prices

Description: This is a correction to the opening RAB for RP3 for two issues that the CAA identified with the calculation of the RAB in RP2 on capitalised financing costs and indexation.

= The amount to be deducted from the opening RP3 RAB to correct for issues identified with the RP2 RAB rules. During the review of the RP3 opening RAB, the CAA identified that capitalised financing costs on RP1 Pension pass through (PPT) had been double counted, and highlighted some minor indexation errors in the December 2014 opening RAB calculations.

This is to be deducted from the RP3 RAB on 1 January 2020.

1 January 2020: - £ 3,371

(5b) RP2 Estimated Spectrum cost variance

Description: The adjustment represents costs related to spectrum licence fees that NERL incurs as a result of its procurement of various radio frequency bands. These costs are exempt from cost-sharing under the Charging Regulations. This is the estimated variance between actual and assumed spectrum costs in 2018 and 2019, which to be included in the RAB at the start of RP3.

= The estimated amount of the RP2 spectrum cost variance assumed by the CAA in respect of the second reference period for the RP3 settlement; figures are fixed at the following values (in 2017 RPI prices).

This is to be added / deducted from the RP3 RAB on 1 January 2020.

1 January 2020: - £ 360

(5c) RP2 Spectrum cost variance adjustment

Description: The adjustment represents costs related to spectrum licence fees that NERL incurs as a result of its procurement of various radio frequency bands. These costs are exempt from cost-sharing under the Charging Regulations. This adjustment is for the difference between the actual variance between actual and assumed spectrum costs in 2018 and 2019 and the estimated variance in 5b.

= The adjustment required to be made to the RP2 Estimated Spectrum cost variance to reflect 2018 and 2019 actual results and align with the RP2 Charging Regulation is calculated as follows.

To be added to the RP3 RAB on 1 January 2020 and will be depreciated over RP4 and potentially beyond (if the amounts to be recovered impact the unit rate in a disproportionate manner).

1 January 2020 =

Spectrum cost adjustment as calculated under the RP2 Charging Regulation (stated in 2019 calendar year-end prices)

Less

RP2 Estimated spectrum cost variance x RPI growth from 2017 for calendar year 2019

(5d) 2020 revenue allowance and RP3 pricing adjustments

Description: This adjustment is for any differences in RP3 charges and revenue that result from information that is known after charges are set for the forthcoming year. These adjustments are made to the RAB where they are not otherwise compensated through future charges and revenue. This was the approach adopted at RP2 and the CAA has continued this for RP3, though we do not forecast any adjustments being required.

Calendar year 2020

NERL's Eurocontrol charge for 2020 was fixed based on a roll forward of the current RP2 charging conditions. The value was fixed before the RP3 Charging conditions were finalised. As NERL already consulted on the 2020 charge, the difference between this fixed charge and the charge which would have resulted, if the RP3 conditions for 2020 had been applied, needs to be added / deducted to / from the RAB. This will not affect regulatory depreciation until RP4, where it will be fully depreciated. From 2021 onwards, NERL will follow the updated RP3 charging conditions so this adjustment only applies for 2020.

The adjustment in 2017 calendar RPI prices is:

Calendar year 2020: £ [zero]

Calendar years 2021 - 2024

Under the Commission's RP3 Performance and Charging Regulation NERL sets out its Eurocontrol charge for year t in CRCO returns provided in June and November in year t-1. The charge set in the June return forms the basis for the year t charge, however not all the inputs required to set this charge is known at this time. Therefore, if there is a difference between the charge forecast for year t in the June t-1 CRCO return and the November t-1 CRCO return (when all inputs are final). This £m impact of this difference is added to the RAB in year t and will be depreciated over RP4 and using the following formula:

Calendar year 2021 and beyond for year t =

(Eurocontrol charge for year t in November t-1 CRCO return

- Eurocontrol charge for year t in June t-1 CRCO return)

x Forecast TSU's for year t in November t-1 CRCO return

(5e) Total Actual Net Capex for calendar year t

Description: This ensures that the correct amount of capex is added to the RAB, comprising the capex incurred but removing any disposals, grants or other contributions that NERL receives, as well as capitalised operating leases, which are remunerated in determined costs through the operating cost building block.

= Additions to UKATS fixed assets in year t (on an accruals basis) from the audited regulatory accounts. Note, this will exclude any additions relating to “Right of Use” assets resulting from capitalisation of operating leases under IFRS 16 (Leases). The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and this exclusion is noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

- the proceeds of disposals of UKATS fixed assets in year t from the audited regulatory accounts,

- any grants or other contributions (e.g. customer contributions) to UKATS fixed assets for calendar year t from the audited regulatory accounts.

Where grants for assets relate to government assistance designed to provide a permanent economic benefit to an entity, and specifically exclude funding which carries an obligation for repayment either to the government or by way of a reduction in charges to customers other than through reduced determined costs. Assistance provided by the Innovation and Networks Executive Agency (INEA) and associated Union assistance programmes such as the Trans-European transport network (TEN-T), Connecting Europe Facility (CEF) and the Cohesion Fund, where funding is to be returned to airline customers via a specific unit rate reduction rather than a lower determined cost would therefore be excluded.

(5f) Real Movements in Working Capital

Description: This adjustment to the RAB is for changes in NERL’s capital which is used in its day-to-day activities: i.e. operating liquidity. Similar to net capex, this adjustment excludes specific items such as projects for the Ministry of Defence. This is the same as the approach adopted for RP2.

For calendar year 2020:

The closing working capital balance as at 31 December 2019 as defined in Section 3 of these rules.

= Closing Working Capital for calendar year 2020

− Closing Working Capital as at 31 Dec 2019 x Annual RPI Growth for calendar year 2020

Real Movements in Working Capital for calendar year t

Thereafter:

= **Closing Working Capital for calendar year t**

− Closing Working Capital for year t-1 x Annual RPI Growth for calendar year t, where:

Closing Working Capital for calendar year t

= Net UKATS working capital (in outturn prices) at the end of calendar year t derived from the regulatory accounts excluding any debtor, creditor, accrual, prepayment or other provision in respect of financing (e.g. bank accounts, loans, accrued interest and cash), corporation and deferred tax, distributions and pension pass-through (see below).

For the purpose of this calculation, working capital is defined as debtors and creditors, accruals and prepayments arising from UKATS trading (including transactions in respect of attributable fixed assets).

This also includes any creditor attributable to the FAS Facilitation Fund or similar variable fund that would apply in RP3, and the adjustment to creditors required on the implementation of IFRS 16 (Leases).

This excludes:

- any debtor related to Pension Contribution Variances created by the adoption of the new International Financial Reporting Standard IFRS 15 (Revenue from contracts with customers), as none of the adjustments arising from the adoption of IFRS15 are reflected in NERL's Regulatory Performance Statements or impact the calculation of Eurocontrol charges; and
- any debtor or creditor relating to customer funded projects which are not included in the UKATS RAB (e.g. MoD customer funded projects).

The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and these inclusions / exclusions are noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

(5g) Allowed Underlying Depreciation for calendar year t

Description: Depreciation is deducted from the RAB and recovered through the depreciation building block in determined costs (with the exception of pension pass-through depreciation which is recovered separately through user charges). The amount of depreciation is calculated by reference to the average asset life assumptions across NERL's regulated assets. These values are fixed for RP3. Any variances between the depreciation values fixed at RP3 and the depreciation on actual capex could be recovered through the backlog adjustment at a future price control, similar to item (5h). This is the same as the approach adopted for RP2.

= The amount in respect of underlying depreciation allowed for in the CAA's price control calculations in the relevant calendar year. Figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2020: - £ 175,945

Calendar year 2021: - £ 140,546

Calendar year 2022: - £ 121,476

Calendar year 2023: - £ 123,548

Calendar year 2024: - £ 131,215

It is important to note that Regulatory Depreciation for RAB purposes does not equate to the value of Regulatory Depreciation allowed for in Determined Costs. This is because Regulatory Depreciation for RAB purposes also includes Regulatory Depreciation on Pension Contribution Variances, which are included in the Cost Sharing Mechanism {"CSM(t)"} term in Condition 21. Therefore, it is not included in the Regulatory Depreciation element of Determined Costs (also as defined in Condition 21).

(5h) Backlog Adjustments to Depreciation for calendar year t

Description: This adjustment reflects the difference between assumed depreciation and depreciation calculated based on actual outturn capex in RP2. This ensures the RAB is adjusted to reflect the backlog depreciation that is recovered through the depreciation building block in determined costs. This is the same as the approach adopted for RP2.

= The amount in respect of adjustments to depreciation allowed for in the CAA's price control calculations in the relevant calendar year; figures are fixed at the following values (in 2017 RPI prices, amounts represent an increase to aggregate allowed depreciation):

Calendar year 2020: - £ 8,742

Calendar year 2021: - £ 9,543

Calendar year 2022: - £ 9,543

Calendar year 2023: - £ 9,543

Calendar year 2024: - £ 9,543

(5i) Pension Contribution Variance for calendar year t

Description: The adjustment captures the annual difference between actual and assumed defined benefit pension costs in RP3 that are exempt from cost sharing under the Charging Regulation and are applied to the RAB. This is similar to the approach at RP2, though the variance may be recovered from users over a shorter period in line with the revisions to the Charging Regulation for RP3.

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.

For each year of RP3 NERL will report, for its UKATS Service line, the annual Pension contribution variance costs exempt from cost sharing in the relevant unit rate reporting tables (Table 2, Item 3.5) in the row labelled “Unforeseen financial market conditions requiring changes in deficit repair contributions and future service contributions, taking into account any mitigations (such as Pension cash alternative payments (including unforeseen changes in National taxation law relating to Employer National Insurance)). For the purposes of these rules this row will be called “Pension Contribution Variance” and will be added to the RAB in calendar year end prices.

Article 28(7) of the RP3 Performance and Charging Regulation makes provision for the review of “Pension contribution variance”, which is included in the CAA’s annual verification report, and is subject to consultation with airspace users representatives. Any adjustment to NERL’s UKATS service line “Pension contribution variance”, defined as “Pension contribution variance adjustments”, following this review will be added/deducted to/from the RAB in the following period.

Both of these elements will be recovered through the charge via regulatory depreciation from RP4 and potentially beyond (if the amounts to be recovered impact the unit rate in a disproportionate manner), in line with the cost risk sharing mechanism set out in the RP3 Performance and Charging Regulation. For Calendar years 2020 to 2024:

[**Pension contribution variance (t)** + Pension contribution variance adjustments (t-1)] x Annual RPI Growth for calendar year t

Key CAA assumptions used in the Pension contribution variance (t) calculation are set out below. Note these are the RP3 CAA assumptions and are stated in 2017 CPI prices:

CAA Assumed DB (including Deficit recovery) pension rate:

Calendar year 2020: 58.2 %

Calendar year 2021: 58.8 %

Calendar year 2022: 60.0 %

Calendar year 2023: 42.2 %

Calendar year 2024: 42.6 %

CAA Assumed DB Pensionable pay (2017 CPI prices as used in the Cost exempt calculations):

Calendar year 2020: 107,020

Calendar year 2021: 104,166

Calendar year 2022: 99,958

Calendar year 2023: 91,588

Calendar year 2024: 86,532

(5j) RPI–CPI wedge variance adjustment

Description: The adjustment captures the impact on revenue from unexpected changes in the difference between retail price index (RPI) inflation and consumer price index (CPI) inflation (called the RPI-CPI wedge). The impact on revenue is through differences in depreciation and regulatory return had the outturn RPI-CPI wedge been used in place of the forecast made at RP3.

This is a new mechanism that the CAA has introduced for RP3. It reduces the inflation risk that NERL faces as it is now neutral to unexpected changes in RPI and the RPI-CPI wedge that are outside its control.

Under the SES Regulations (of which the RP3 Performance and Charging Regulation is the most recent iteration), NERL's allowed revenue is indexed to CPI, so prices paid by users of UKATS airspace are adjusted to reflect differences between actual outturn CPI, and the CPI forecast assumed in the RP3 price review.

But the UKATS RAB is updated to reflect actual RPI. So any variance between the actual outturn RPI–CPI Wedge and the assumed RPI–CPI Wedge means that the revenues recovered by NERL, mainly in relation to revenue allowances for (a) regulatory depreciation and (b) regulatory returns, may lead to gains or losses.

To keep NERL neutral to the impact of the variance between the RPI–CPI Wedge assumed by the CAA and the actual outturn RPI–CPI Wedge, this term acts a true-up adjustment for the RP3 UKATS RAB. This adjustment will be added to the RAB in calendar year t following the calculations set out in Annex A, and will be recovered through revenues over RP4 and beyond.

(5k) Capitalised Financing Costs

Description: Capitalised financing costs, at the allowed cost of capital, are calculated for capex variance, pension variance, RPI-CPI wedge, RP2 spectrum cost variance and RP2 tax clawback, so that the timing of the adjustments is neutral in present value terms. This is the same approach as for RP2 but includes capitalised financing costs for the RPI-CPI wedge adjustment from 5j that is new for RP3.

Capitalised Financing Costs for calendar year t

= [{**Net Capex Variance for calendar year t**

+ Pension Contribution Variance for calendar year t

+ 2020 revenue allowance and RP3 pricing adjustments for calendar year t x RPI Growth from 2017 for calendar year t

+ RPI / CPI wedge variance adjustment for calendar year t (in year-end outturn prices)

}, Divided by 2 (two)

+ RP2 Spectrum pass-through adjustment (stated in 2019 calendar year-end prices)

+ RP2 Tax clawback adjustment x RPI Growth from 2012/13 for calendar year t

+ (**Closing Cumulative Capitalised Variances for year t-1** x Annual RPI Growth for calendar year t)]

x **UKATS cost of capital determined by the CAA for calendar year t**, where:

Net Capex Variance for calendar year t

= Total Actual Net Capex for year t x Within-year RPI Growth for calendar year t

− The CAA's Assumed Net Capex for year t x RPI Growth from 2017 for calendar year t, where:

CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2017 RPI prices:

Calendar year 2020: £ 174,791

Calendar year 2021: £ 156,763

Calendar year 2022: £ 102,985

Calendar year 2023: £ 91,000

Calendar year 2024: £ 114,996

UKATS Closing Cumulative Capitalised Variances during RP3

The formula below calculates the cumulative value running total of variances between assumptions and actual costs for pension costs, spectrum costs and capital expenditure during RP3. Keeping a running total for these variances is essential to ensure that appropriate adjustments can be made either to reflect additional returns due to NERL or amounts that need to be returned to customers in the future.

Closing Cumulative Capitalised Variances as at 31 December 2019

31 December 2019: As set out in Section 3 of these rules.

Closing Cumulative Capitalised Variances for calendar year 2020

= Closing Cumulative Capitalised Variances as at 31 December 2019 x Annual RPI Growth for calendar year 2020

\+ Net Capex Variance for calendar year 2020

\+ 2020 Revenue allowance adjustment for 2020 x RPI Growth from 2017 for calendar year 2020)

\+ RPI–CPI wedge variance adjustment for calendar year t (in year-end outturn prices)

\+ Pension Contribution Variance for calendar year 2020

\+ RP2 Spectrum pass through adjustment

\+ RP2 Tax clawback adjustment x RPI Growth from 2012/13 for calendar year 2020

\+ Capitalised Financing Costs for year 2020

Closing Cumulative Capitalised Variances for calendar year t

For each calendar year thereafter:

= Closing Cumulative Capitalised Variances for calendar year t-1 x Annual RPI Growth for calendar year t

\+ 2020 Revenue allowance and RP3 pricing adjustments x RPI Growth from 2017 for calendar year t

\+ RPI–CPI wedge variance adjustment for calendar year t (in year-end outturn prices)

\+ Net Capex Variance for calendar year t

\+ Pension Contribution Variance for calendar year t

\+ Capitalised Financing Costs for calendar year t

UKATS cost of capital determined by the CAA for calendar year t

= For each calendar year, figures are fixed at the following values:

Calendar year 2020: 2.91 %

Calendar year 2021: 2.91 %

Calendar year 2022: 2.91 %

Calendar year 2023: 2.91 %

Calendar year 2024: 2.91 %

RP3 Spectrum cost variance

Description: The adjustment represents costs related to spectrum licence fees that NERL incurs as a result of its procurement of various radio frequency bands. These costs may be exempt from cost-sharing under the Charging Regulations. The adjustment below tracks RP3 Spectrum cost variances which will be included in the RAB at the start of RP4. This is similar to the approach at RP2, though the variance may be recovered from users over a shorter period in line with the revisions to the Charging Regulation for RP3.

The assumed spectrum costs are in line with the spectrum cost forecasts in NERL's RP3 business plan, to ensure that any variance in actual costs is returned to or recovered from users.

42. Any variance between estimated and actual Spectrum costs will need to be tracked over the RP3 period and included in the RP4 RAB on 1 January 2025 in two places (as shown below):

- The **RP3 Estimated Spectrum Cost Variance** assumed by the CAA in and factored in to the RP4 settlement;
- The **RP3 Spectrum Cost Variance adjustment** which updates the RAB for any difference between estimates used in the RP4 settlement and actuals. The cumulative difference will be recovered through charges via regulatory depreciation from RP5 and beyond in line with the cost risk sharing mechanism set out in the RP3 Performance and Charging Regulation.

43. The calculation of the cost variance will be based on the European Commission methodology for the treatment of costs exempt from cost sharing.

44. For each year of RP3 NERL will report, for its UKATS Service line, the annual Spectrum licences costs which are exempt from cost sharing in the relevant unit rate reporting tables (Table 2, Item 3.7) in the row labelled "Changes in law" and will be added to the RAB in calendar year-end prices.

45. Article 28(7) of the RP3 Performance and Charging Regulation makes provision for the review by the CAA in an annual verification report, to be consulted on by airspace users' representatives. This amount will be added to/deducted from the RAB as part of the RP3 Spectrum Cost Variance adjustment.

46. Key assumptions used in the **Spectrum cost variance** calculation are set out below. Note these are the RP3 CAA assumptions and are based on NERL's RP3

Business Plan. Any variance between the estimates used in the RP3 settlement and actuals will be tracked according to the procedure described in paragraphs 27 to 30 and factored into the RP4 settlement as described above. The following values are stated in 2017 RPI prices:

CAA Assumed Spectrum Costs:

Calendar year 2020: £ 916

Calendar year 2021: £ 906

Calendar year 2022: £ 895

Calendar year 2023: £ 886

Calendar year 2024: £ 876

(5k) RP2 Tax clawback adjustment

Description: The adjustment seeks to account for the tax benefit NERL would receive if geared above 60% (i.e. above the notional level). The adjustment would be reflected in the UKATS RP3 opening RAB if the specific conditions are met (see Section 7).

47. There is no RP2 tax clawback assumed in the RP3 settlement. At the end of 2019 the tax clawback calculation will be re-performed and if a clawback is required this will be included in the RAB as set out below.

48. NERL's Tax clawback as defined in the RP2 RAB Rules is stated in 2012/13 financial year prices and is deducted from the RAB on 1 January 2020.

49. 1 January 2020 = Tax clawback in 2012/13 financial year prices

Calculation of UKATS Average RAB in RP3

Description: The calculation of the average RAB has been amended by the CAA for RP3 to provide a consistent treatment of retail price index (RPI) inflation in the average of the opening and closing RAB. This does not have a significant impact on the calculation of the average RAB.

50. The UKATS Average RAB is calculated as follows. Note that the resulting Average RAB will be in calendar year t average RPI prices. When updated for actuals this approach will agree to the Average RAB in the Regulatory Performance Statement in the Regulatory Accounts.

Average RAB in Calendar Year t

= { Closing RAB for previous calendar year (t-1) in average year t prices

+ Closing RAB for calendar year t in average year t prices }

/ divided by two (2)

Section 6: Rolling Forward the Oceanic RAB in RP3 (and calculation of cumulative capitalised variances during RP3)

51. This section describes how the Oceanic RAB will be rolled forward from one year to another during RP3. The steps for calculating the Oceanic RAB mirror those of the UKATS RAB. The start point for these calculations is the RAB as at 31 December 2019 which is derived using the formula within Section 4 of this document.

52. This section takes into consideration the net capital expenditure made by Oceanic, the pension contribution variances, the movements in working capital (e.g. debtors and creditors) and the allowances for depreciation incorporated in the price control calculations. In this way, the RAB during RP3 will reflect the cash-flow investment made in the assets of the company, net of amounts contributed by customers by way of depreciation allowances.

53. The price control provides for a return on the RAB, based on assumptions for levels of net capital expenditure, and also provided for an allowance for pensions costs based on assumptions for levels of pension contributions. CAA intends that variances against these assumptions, and their financing cost implications (consistent with the equivalent formulae existing before this modification), are taken into account by making suitable additions or deductions in the RAB calculations.

54. The following formulae specify how the Oceanic RAB will be rolled forward.

55. The RAB at 31 December 2019 forms the starting point for subsequent RAB calculations. These calculations are as follows:

Closing RAB for calendar year 2019 (i.e. at 31 December 2019)

56. As defined in section 6 of this document in 2019 calendar year end prices

57. Thereafter, the closing RAB is to be calculated (in outturn calendar year-end prices), according to the following formulae (where t is the relevant calendar year) below:

Closing RAB for year t

=		Closing RAB for the previous year (calendar year t-1)

+		Closing RAB for the previous year (calendar year t-1) x ((Annual RPI Growth for calendar year t) – 1)
+	**6a**	**Total Actual Net Capex for calendar year t** x Within-year RPI Growth for calendar year t
+	**6b**	**Real Movements in Working Capital for calendar year t**
+	**6c**	**Allowed Underlying Depreciation for year t** x RPI Growth from 2017 for calendar year t
+	**6d**	**Backlog Adjustments to Allowed Depreciation for year t** x RPI Growth from 2017 for calendar year t
+	**6e**	**Pension Contribution Variance for calendar year t**
+	**6f**	**RPI–CPI wedge variance adjustment**
+	**6g**	**Capitalised Financing Costs for calendar year t**
-	**6h**	**RP2 Tax clawback adjustment** x RPI Growth from 2012/13 for calendar year t

58. Where:

(6a) Total Actual Net Capex for calendar year t

Description: This ensures that the correct amount of capex is added to the RAB, comprising the capex incurred but removing any disposals, grants or other contributions that NERL receives, as well as capitalised operating leases, which are remunerated in determined costs through the operating cost building block.

= Additions to Oceanic fixed assets in year t (on an accruals basis) from the audited regulatory accounts. Note this will exclude any additions relating to "Right of Use" assets resulting from capitalisation of operating leases under IFRS 16 (Leases). The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and this exclusion is noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

− the proceeds of disposals of Oceanic tangible fixed assets in year t from the audited regulatory accounts,

− any grants or other contributions (e.g. customer contributions) to Oceanic fixed assets for calendar year t from the audited regulatory accounts.

Where grants for assets relate to government assistance designed to provide a permanent economic benefit to an entity, and specifically exclude funding which carries an obligation for repayment either to the government or by way of a reduction in charges to customers other than through reduced determined costs. Assistance provided by the Innovation and Networks Executive Agency (INEA) and associated Union assistance programmes such as the Trans-European transport network (TEN-T), Connecting Europe Facility (CEF) and the Cohesion Fund, where funding is to be returned to airline customers via a specific unit rate reduction rather than a lower determined cost would therefore be excluded.

(6b) Real Movements in Working Capital for calendar year t

Description: This adjustment to the RAB is for changes in NERL's capital which is used in its day-to-day activities: i.e. operating liquidity. Similar to net capex, this adjustment excludes specific items such as customer funded projects and adjustments from the adoption of a new financial reporting standard that are not part of regulatory accounting. This is the same as the approach adopted for RP2.

For calendar year 2020

= Closing Working Capital for calendar year 2020

− Closing Working Capital as at 31 Dec 2019 x Annual RPI Growth for calendar year 2020

The closing working capital balance as at 31 December 2019 is defined in section 4 of these rules.

For calendar years t

= **Closing Working Capital for calendar year t**

− Closing Working Capital for year t-1 x Annual RPI Growth for calendar year t, where:

Closing Working Capital for calendar year t

= Net Oceanic working capital (in outturn prices) at the end of calendar year t derived from the regulatory accounts excluding any debtor, creditor, accrual, prepayment or other provision in respect of financing (e.g. bank accounts, loans, accrued interest and cash), corporation and deferred tax, distributions and pension pass-through (see below).

For the purpose of this calculation, working capital is defined as debtors and creditors, accruals and prepayments arising from Oceanic trading (including transactions in respect of attributable fixed assets).

This also includes the adjustment to creditors required on the implementation of IFRS 16 (Leases).

This excludes:

- any debtor related to Pension Contribution Variance created by the adoption of the new International Financial Reporting Standard IFRS 15 (Revenue from contracts with customers), as none of the adjustments arising from the adoption of IFRS 15 are reflected in NERL's Regulatory Performance Statements or impact the calculation of Oceanic charges; and
- any debtor or creditor relating to customer funded projects which are not included in the Oceanic RAB.

The regulatory accounting rules and financial reporting standards (i.e. IFRS) are distinct, and these inclusions / exclusions are noted to ensure that financial reporting standards do not affect the RAB where this would conflict with the intended principles of the regulatory accounts.

(6c) Allowed Depreciation for calendar year t

Description: Depreciation is deducted from the RAB and recovered through the depreciation building block in determined costs (with the exception of pension pass-through depreciation which is recovered separately through user charges). The amount of depreciation is calculated by reference to the average asset life assumptions across NERL's regulated assets. These values are fixed for RP3. Any variances between the depreciation values fixed at RP3 and the depreciation on actual capex could be recovered through the backlog adjustment at a future price control, similar to item (6d). This is the same as the approach adopted for RP2.

= The amount in respect of depreciation allowed for in the CAA's price control calculations in the relevant calendar year. Figures are fixed at the following values (in 2017 RPI prices):

Calendar year 2020: - £ 5,428

Calendar year 2021: - £ 4,346

Calendar year 2022: - £ 3,919

Calendar year 2023: - £ 3,886

Calendar year 2024: - £ 4,090

(6d) Backlog Adjustments to Depreciation for calendar year t

Description: This adjustment reflects the difference between assumed depreciation and depreciation calculated based on actual outturn capex in RP2. This ensures the RAB is adjusted to reflect the backlog depreciation that is recovered through the depreciation building block in determined costs. This is the same as the approach adopted for RP2.

= The amount in respect of backlog adjustments to depreciation allowed for in the CAA's price control calculations in the relevant calendar year. Figures are fixed at the following values (in 2017 RPI prices, amounts represent an increase to aggregate allowed depreciation):

Calendar year 2020: - £ 1,232

Calendar year 2021: - £ 1,208

Calendar year 2022: - £ 1,208

Calendar year 2023: - £ 1,208

Calendar year 2024: - £ 1,208

(6e) Pension Contribution Variance for calendar year t

Description: The adjustment captures the annual difference between actual and assumed defined benefit pension costs in RP3 that are exempt from cost sharing, in the same way as for UKATS under the Charging Regulation, and are applied to the RAB. This is similar to the approach at RP2, though the variance may be recovered from users over a shorter period in the same way as UKATS, in line with the revisions to the Charging Regulation for RP3.

This variance is calculated by comparing actual costs against assumed costs, as follows:

= {Total actual Defined Benefit pension contributions made (in cash terms) in respect of the defined benefit pension scheme (for Benefit Future Service and Deficit Repair contributions), and taking into account the actual costs of any reasonable measures which NERL takes during RP3 to manage any pension cost risk ("mitigations"), such as the PCA, including related Employers National Insurance contributions, for members who opt out of the Defined Benefit scheme during RP3, for calendar year t }

x Within-year RPI Growth for calendar year t

Less

CAA's Assumed Pension Contributions for year t x RPI Growth from 2017 for calendar year t, where:

CAA's Assumed Pension Contributions

The values below are the allowance {for Defined Benefit Future Service and Deficit Repair contributions} in the RP3 settlement.

= For each calendar year, figures are fixed at the following values in 2017 RPI prices:

Calendar year 2020: £ 2,401

Calendar year 2021: £ 2,321

Calendar year 2022: £ 2,450

Calendar year 2023: £ 1,414

Calendar year 2024: £ 1,269

(6f) RPI–CPI wedge variance adjustment

Description: The adjustment captures the impact on revenue from unexpected changes in the difference between retail price index (RPI) inflation and consumer price index (CPI) inflation (called the RPI-CPI wedge). The impact on revenue is through differences in depreciation and regulatory return had the outturn RPI-CPI wedge been used in place of the forecast made at RP3.

This is a new mechanism that the CAA has introduced for RP3. It reduces the inflation risk that NERL faces as it is now neutral to unexpected changes in RPI and the RPI-CPI wedge that are outside its control.

59. Under the SES Regulations (of which the RP3 Performance and Charging Regulation is the most recent iteration), NERL's allowed revenue is indexed to CPI, so prices paid by users of Oceanic airspace are adjusted to reflect differences between actual outturn CPI, and the CPI forecast assumed in the RP3 price review.

60. But the Oceanic RAB is updated to reflect actual RPI. So any variance between the actual outturn RPI–CPI Wedge and the assumed RPI–CPI Wedge means that the revenues recovered by NERL, mainly in relation to revenue allowances for (a) regulatory depreciation and (b) regulatory returns, may lead to gains or losses.

61. To keep NERL neutral to the impact of the variance between the RPI–CPI Wedge assumed by the CAA and the actual outturn RPI–CPI Wedge, this term acts a true-up adjustment for the RP3 Oceanic RAB. This adjustment will be added to the RAB in calendar year t following the calculations set out in Annex A, and will be recovered through revenues over RP4 and beyond.

(6g) Capitalised Financing Costs for calendar year t

Description: Capitalised financing costs, at the allowed cost of capital, are calculated for capex variance, pension variance, RPI-CPI wedge and RP2 tax clawback, so that the timing of the adjustments is neutral in present value terms. This is the same approach as for RP2 but includes capitalised financing costs for the RPI-CPI wedge adjustment from 6f that is new for RP3.

= [{(Net Capex Variance for calendar year t)

\+ (Pension Contribution Variance for calendar year t)

\+ RPI / CPI wedge variance adjustment for calendar year t (in year-end outturn prices)},

divided by 2 (two)

\+ RP2 Tax clawback adjustment x RPI Growth from 2012/13 for calendar year t

\+ (**Closing Cumulative Capitalised Variances for year t-1** x Annual RPI Growth for calendar year t)]

x **Oceanic cost of capital determined by the CAA for calendar year t**

Where:

Net Capex Variance for calendar year t

= Total Actual Net Capex for year t x Within-year RPI Growth for calendar year t

− the **CAA's Assumed Net Capex for year t** x RPI Growth from 2017 for calendar year t, where:

The CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2017 RPI prices:

Calendar year 2020: £ 4,307

Calendar year 2021: £ 2,436

Calendar year 2022: £ 5,063

Calendar year 2023: £ 1,437

Calendar year 2024: £ 3,059

Oceanic Closing Cumulative Capitalised Variances during RP3

62. The calculation below calculates the cumulative value running total of variances between assumptions and actual costs for pension costs, spectrum costs and

capital expenditure during RP3. Keeping a running total for these variances is essential to ensure that appropriate adjustments can be made either to reflect additional returns due to NERL or amounts that need to be returned to customers in the future.

Closing Cumulative Capitalised Variances as at 31 December 2019

63. 31 December 2019: As set out in Section 4 of these rules

Closing Cumulative Capitalised Variances for calendar year 2020

= Closing Cumulative Capitalised Variances for 31 December 2019 x Annual RPI Growth for calendar year 2020

+ Net Capex Variance for calendar year 2020

+ Pension Contribution Variance for calendar year 2020

+ RPI–CPI wedge variance adjustment for calendar year t (in year-end outturn prices)

+ RP2 Tax clawback adjustment x RPI Growth from 2012/13 for calendar year 2020

+ Capitalised Financing Costs for calendar year 2020

Closing Cumulative Capitalised Variances for calendar year t

For each calendar year thereafter:

= Closing Cumulative Capitalised Variances for calendar year t-1 x Annual RPI Growth for calendar year t

+ Net Capex Variance for calendar year t

+ Pension Contribution Variance for calendar year t

+ RPI–CPI wedge variance adjustment for calendar year t (in year-end outturn prices)

+ Capitalised Financing Costs for calendar year t

Oceanic cost of capital determined by the CAA for calendar year t

= For each calendar year, figures are fixed at the following values:

Calendar year 2020: 2.91 %

Calendar year 2021: 2.91 %

Calendar year 2022: 2.91 %

Calendar year 2023: 2.91 %

Calendar year 2024: 2.91 %

(6h) RP2 Tax clawback adjustment

Description: The adjustment seeks to account for the tax benefit NERL would receive if geared above 60% (i.e. above the notional level). The adjustment would be reflected in the Oceanic RP3 opening RAB if the specific conditions are met (see Section 7).

64. There is no RP2 tax clawback assumed in the RP3 settlement. At the end of 2019 the calculation will be re-performed and if a clawback is required this will be included in the RAB as set out below.

65. NERL's Tax clawback as defined in the CAA's RP3 Decision is stated in 2012/13 financial year prices and is deducted from the RAB on 1 January 2020.

66. 1 January 2020 = Tax clawback in 2012/13 financial year prices

Calculation of Oceanic Average RAB in RP3

Description: The calculation of the average RAB has been amended by the CAA for RP3 to provide a consistent treatment of retail price index (RPI) inflation in the average of the opening and closing RAB. This does not have a significant impact on the calculation of the average RAB.

67. The Oceanic Average RAB is calculated as follows. Note that the resulting Average RAB will be in calendar year t average RPI prices.

Average RAB in Calendar Year t

= { Closing RAB for previous calendar year (t-1) in average year t prices

\+ Closing RAB for calendar year t in average year t prices }

/ divided by two (2)

Section 7: RP3 Tax Clawback

68. This section outlines the methodology for calculating and adjusting for the tax benefit the licensee receives from adopting a higher level of gearing than the 60 per cent notional level in NERL's licence.

69. The clawback calculation takes the following steps:

- Step 1: Compare actual gearing to the notional level of gearing of 60 percent. Gearing is defined and measured as set out in Condition 5 of the licence. If the simple average of actual gearing for the control period is lower or equal to the notional gearing, then no clawback applies. If it is higher, then proceed to step 2.
- Step 2: Compare actual interest to modelled interest. If actual interest costs used in the calculation of actual tax are lower or equal to the costs used to estimate the tax charge in the price decision, then no clawback applies. If they are higher, then proceed to step 3.
- Step 3: The excess relief is calculated as actual interest less modelled interest. This is then multiplied by the statutory corporation tax rate used in the price determination, and uplifted by the RP3 cost of capital to reflect the time value of money. The resulting clawback adjustment is to be included in the opening RP4 RAB. The tax clawback is then apportioned to the UKATS and Oceanic RABs in proportion to the estimated opening RAB values at the start of RP4 broadly to reflect the relative size of the two businesses.

70. In calculating the tax uplift for RP4, the reduction in revenue (and the tax thereon) arising from the tax clawback should be excluded from the calculation.

71. For the purpose of this appendix, the RPI measure of inflation is to be used.

72. In the event that NERL's financial year changes from 31 March to 31 December during RP3, NERL will approach the CAA to discuss any necessary changes to methodology to enable the clawback to remain consistent with the current approach, however being expressed on a calendar year basis.

STEP 1: The Calculation of Average Gearing

73. As set out in Condition 5, gearing is measured at 31 March and 30 September each year as:

Gearing G_t	=	Actual gearing, as measured in accordance with Condition 5 at 30 September 2020, 31 March 2021, 30 September 2021, 31 March 2022, 30 September 2022 and 31 March 2023, 30 September 2023 and 31 March 2024, forecast gearing, as estimated in accordance with Condition 5 at 30 September 2024 and 31 March 2025
Average gearing (a simple arithmetic mean of gearing at the ten measurement dates)	=	$\frac{\sum_{t=1 to 10} G_t}{10}$
If average gearing	>	60 percent, then proceed to step 2.
	≤	60 percent, then no tax clawback

STEP 2 Comparison of Actual Interest Costs to Modelled Interest Costs

A (year ending 31 March 2021-2025)	=	Actual interest costs used in the calculation of Corporation Tax for the years ending 31 March 2021, 2022, 2023 and 2024 and the forecast interest costs used in the estimation of the corporation tax charge for the year ending 31 March 2025 all expressed in 2017 RPI prices[1]
M (year ending 31 March 2021-2025)	=	Modelled interest costs (2017 RPI prices) assuming the Net Debt to RAB ratio is maintained at 60% over RP3[2]
Namely M_{2021}	=	[To be finalised before the start of RP3]

[1] Actual interest cost will be derived in a manner consistent with Modelled interest costs. However if any bonds issued in RP3 are not issued at par, the full finance cost of the discounted bonds (i.e. the interest rate plus the accretion of any discount upon issuance) will need to be included in the actual interest charge.

[2] [The modelled interest figures are based on interest on external debt (including RCF debt but excluding intercompany debt) plus interest on RPI swaps. This will be finalised before the start of RP3]

M_{2022} M_{2023} M_{2024} M_{2025}	= = = =	
Additional interest costs (AA)	=	The difference between actual interest costs and modelled interest costs
Namely, for each year $AA_{\text{(year ending 31 March 2021-2025)}}$	=	$A_{\text{(year ending 31 March 2021-2025)}} - M_{\text{(year ending 31 March 2021-2025)}}$
If $\Sigma AA_{\text{(year ending 31 March 2021-2025)}}$ (The sum of AA for all years)	$>$ $\leq$	0 then proceed to step 3 0 then no tax clawback

STEP 3 CALCULATION OF THE CLAWBACK

Tax claw back (the amount by which the RP4 RABs will be reduced on 1 January 2025 (2017 prices))	=	$[AA_{2021} \times (1+WACC)^{9/2} \times T_{2021}$ $+ AA_{2022} \times (1+WACC)^{7/2} \times T_{2022}$ $+ AA_{2023} \times (1+WACC)^{5/2} \times T_{2023}$ $+ AA_{2024} \times (1+WACC)^{3/2} \times T_{2024}$ $+ AA_{2025} \times (1+WACC)1^{/2} \times T_{2025}]$
Where WACC	=	the cost of capital for RP4
Where T	=	the statutory Corporation Tax rates used in the modelling of RP3 price control
Namely T_{2021} T_{2022} T_{2023} T_{2024} T_{2025}	 = = = = =	 17 percent 17 percent 17 percent 17 percent 17 percent

Section 8: Approach to calculating the London Approach Closing and Average RAB

74. This section describes the high level, simplified approach which is used to calculate the London Approach RAB.

75. NERL calculates the London Approach RAB for regulatory reporting purposes only. The London Approach RAB is a subset of the UKATS RAB, and is therefore derived (or "backwards calculated") from other values (i.e. those used in the calculation of the UKATS RAB and other values specified in the NERL licence). Any presentation of the London Approach RAB must not "double count" components of the UKATS RAB.

Approach to calculating the closing value of the London Approach RAB

76. The starting point for these calculations is the value of the UKATS RAB at the end of the last full calendar year in RP2 (i.e. 31 December 2019), calculated following the approach described in Section 3. The value of the RAB is then multiplied by the ratio of London Approach Determined Costs to Total UKATS Determined Costs for calendar year 2019, as specified in Conditions 21 and 21a of the NERL Licence.

For calendar years 2018 and 2019

For the following calendar years before the start of RP3 (i.e. calendar years 2018 and 2019), the calculation follows the same approach:

= Closing UKATS RAB for calendar year t (as per Section 3) x (London Approach Determined Costs for calendar year t / Total UKATS Determined Costs for calendar year t)

For calendar years 2020 to 2024 (i.e. during RP3)

During RP3 (i.e. calendar years 2020, 2021, 2022, 2023 and 2024) the London Approach RAB will follow a similar approach to that described for rolling forward the UKATS RAB in Section 5.

= Closing UKATS RAB for calendar year t (as per Section 5) x (London Approach Determined Costs for calendar year t / Total UKATS Determined Costs for calendar year t)

Approach to calculating the average value of the London Approach RAB

The average RAB for London Approach is calculated as follows for the remaining years of RP2 (i.e. 2018 and 2019) and each year thereafter.

= { Closing RAB for previous calendar year (t-1) in average year (t-1) prices

+ Closing RAB for calendar year t in average year t prices}

/ divided by two (2)

Values for Determined Costs

77. The values for London Approach and total UKATS determined costs, as set out in the NERL Licence, are shown in Table 1 below.

Table 1: Determined costs for London Approach and UKATS

Year	London Approach Determined Costs	Total UKATS Determined Costs	Ratio
2019	13,400	579,007	0.0231
2020	13,355	678,457	0.0197
2021	13,250	661,997	0.0200
2022	14,174	675,863	0.0210
2023	13,528	643,690	0.0210
2024	14,317	646,695	0.0221

Section 9: Incentives that could be reflected in the UKATS RAB for RP4

78. This section identifies three incentives relating to NERL's capex programme for RP3. The application of these incentive would result in a change (in these cases, downward adjustments) to the UKATS opening RAB for RP4.

79. The incentives are only described in this section at a high level as a way of providing a memo item for RP4. The contents of this section do not represent a detailed methodology for applying the three incentives.

Delivery incentive

80. The CAA will apply a financial incentive to NERL's delivery of its capex programme. This will involve a general assessment of NERL's capex delivery, supplemented by a focus on the delivery of specific milestones for programmes or projects that lead to important outcomes that benefit users. The specific milestones that will be considered are yet to be confirmed, but may include:

- the DP (en route) and DP (lower) technology changes which together will provide a common platform for the Swanwick and Prestwick centres allowing for legacy escape and mutual contingency, and will provide the capacity necessary for airspace modernisation;
- the ADP6 airspace change for Essex airspace which would increase capacity into Stansted and Luton airports; and
- LAMP airspace changes to modernise airspace in the South East of England to take account of the performance capabilities of modern aircraft.

81. The financial incentive will be capped at a £36 million penalty and would take the form of a reduction in NERL's revenue or opening RAB for RP4, based on both the general assessment of NERL's delivery and the delivery of the specific programme or project milestones above. The assessment shall be complementary to any CAA ex post efficiency review of NERL's RP3 capital programme.

Ex-post efficiency incentive

82. During RP3, the CAA will commission an independent review of the cost efficiency of NERL's capex in RP2. If the review identifies any expenditure as inefficient, the CAA may decide to disallow some or all of the inefficient expenditure. This will be achieved by a downwards adjustment to NERL's starting RAB for RP4.

83. During RP3 the Independent Reviewer will also be reviewing the efficiency of NERL's capex in RP3 on an ongoing basis. If the Independent Reviewer identifies any expenditure as inefficient, the CAA may decide to disallow some or all of the inefficient expenditure. Dependent on the timing of these ongoing reviews, this will be achieved by either a downwards adjustment to NERL's starting RAB for RP4 or to its starting RAB for RP5. The expectation is that any downwards adjustment relating to inefficient expenditure in the first three years of RP3 will be made to the starting RAB in RP4, while any downwards adjustment relating to inefficient expenditure in the last two years of RP3 will be made to the starting RAB of RP5.

Information incentive

84. The CAA will apply a financial incentive to encourage NERL to provide high quality information as part of capex engagement under the enhanced Service and Investment Plan (SIP) process in RP3. Under this incentive, if there are significant weaknesses in NERL's ongoing provision of information on its capital spending, then any capex overspend during RP3 would only be remunerated at its **cost of new debt** finance (rather than the full WACC), even if it subsequently passes an efficiency test. The incentive shall apply when there has been a serious failure in the provision of information to justify the overspend.

85. The incentive will take effect through a one-off reduction in the starting RAB for RP4. The assessment shall be complementary to any CAA ex-post efficiency review of NERL's RP3 capital programme and the delivery incentive (see below).

86. The cost of new debt for RP3 is as per the CAA's final determination: 0.86 % in RPI–deflated terms.

Appendix A: RPI–CPI Wedge Variance adjustment

Important points to note:

This is a new mechanism for RP3, which reduces the inflation risk that NERL faces by adjusting the RAB for the impact on depreciation and regulatory return based on the outturn RPI-CPI wedge in RP3.

This section has been prepared by CAA with inputs from NERL and should be considered draft only. The mechanism will be tested during RP3 to ensure it is working as intended and not leading to a systematic over or understatement of the adjustments. Any adjustments required to the mechanism will be reflected in the RAB rules during RP3.

In the process of finalising the RAB rules, we will also consider any feedback from NERL and other stakeholders on the mechanics of the RPI–CPI Wedge Variance adjustment, and in particular the price basis of the inputs to the regulatory return true-up.

87. If the consumer prices index (CPI) differs from the CAA's assumption over RP3 then NERL recovers the impact of this difference through revenues via the INF term in Charging Condition 21.

88. However, both Regulatory Depreciation and Return assumptions included in RP3 revenues are first calculated in retail prices index (RPI) prices before being converted to CPI prices for revenues.

89. If the difference between actual outturn RPI and CPI (the "RPI–CPI Wedge") during RP3 differs from the CAA's assumption at the time of the RP3 price review, then NERL's revenues will be either higher or lower than would have been the case had the outturn RPI-CPI wedge been used to set RP3 revenue.

90. To keep NERL neutral to the impact of the variance between the RPI–CPI Wedge assumed by the CAA and the actual outturn RPI–CPI Wedge, these rules include a true-up adjustment for RP3. This adjustment (expressed below in average outturn prices) will be added to the RAB in calendar year t, and will be recovered through revenues over RP4 and beyond.

91. This means that during RP4 and beyond, regulatory depreciation is calculated for each year's adjustment (including both the variance and the impact on Capitalised Financing Costs) based on a 15 year life. From RP4, NERL will earn a regulated return on the net amount that remains in the RAB (i.e. the remaining RPI – CPI Wedge Variance amount net of depreciation plus the impact on Capitalised Financing Costs). The regulatory depreciation (if any) on the adjustment which accrues during RP3 (but not reflected in prices) is spread equally over RP4 via Backlog Depreciation.

92. The RPI–CPI Wedge Variance adjustment is calculated using the following equation which is further defined in Parts A to C below.

= **Regulatory Depreciation true-up for calendar year t** x Within-year RPI Growth for calendar year t

+ **Regulatory Return true-up for calendar year t** x Within-year RPI Growth for calendar year t

93. The variance adjustment set out above is a pragmatic and proportionate approach based on the estimated difference between the revenues that NERL recovers in RP3 (i.e. based on the assumed RPI–CPI wedge), and the level of revenues it would have recovered in RP3 if based on the actual outturn RPI–CPI Wedge (had it been known at the time of the RP3 Price Review). But it is not an exact adjustment because it is based on a simplified model of NERL's regulatory financial statements.

94. This is a new mechanism for RP3. The CAA will keep this approach under review to assess whether it remains the most appropriate method and achieves the objective set out above.

Part A: inflation indices specific to the RPI–CPI Wedge variance adjustment

95. Each year, the RAB is expressed in actual end year RPI price levels (calendar year end). The RP3 RAB rules are expressed in fixed 2017 RPI (year-average) price levels. These figures must be uplifted, or indexed, to convert the values into outturn price terms for each calendar year as appropriate.

96. In this case, to estimate the difference between the revenues that NERL earns in RP3, and what the revenues would have been if using the actual outturn RPI–CPI Wedge in RP3, we need to apply the following indexation calculations to account for the actual RPI–CPI wedge.

Differential RPI for calendar year t

"Differential RPI" is what RPI would be if the actual RPI–CPI Wedge was added to the CAA's assumed RP3 CPI forecast.

= CAA Assumed CPI for calendar year t + Actual RPI–CPI Wedge for calendar year t

Where,

CAA Assumed CPI for calendar year t

Average CPI Growth for calendar year t assumed by the CAA at the time of the RP3 price review. This is fixed at the following values:

2018	2019	2020	2021	2022	2023	2024
2.48%	1.84%	2.00%	2.00%	2.00%	2.00%	2.00%

Actual RPI–CPI Wedge for calendar year t

= Average RPI Growth for calendar year t - Average CPI Growth for calendar year t

Where,

Average RPI Growth for calendar year t

= The average of the monthly RPI figures for calendar year t (i.e. January RPI + February RPI + . . . + December RPI, divided by 12), divided by the average of the monthly RPI figures for calendar year t-1.

Average CPI Growth for calendar year t

= The average of the monthly CPI figures for calendar year t (i.e. January CPI + February CPI + . . . + December CPI, divided by 12), divided by the average of the monthly CPI figures for calendar year t-1.

Differential RPI Growth from 2017 for calendar year t

"Differential RPI Growth from 2017" is what the (2017 based year average) RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed RP3 CPI forecast.

For calendar year 2017 = 1.0000

For calendar year 2018 and beyond

= Differential RPI Growth from calendar year t-1 x (1 + CAA Assumed CPI for calendar year t + Actual RPI–CPI Wedge for calendar year t)

97. To estimate the Regulatory Return true-up, we also need to define the following indexation calculations to calculate what the Average RAB would be (in average outturn prices) based on the actual outturn RPI–CPI Wedge.

Year end outturn Differential RPI Growth from 2017 for calendar year t

"Year end outturn Differential RPI Growth from 2017" is what the end year RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed RP3 CPI forecast.

For calendar year 2017 = Within-year RPI Growth for calendar year 2017

For calendar year 2018 and beyond

= Year end outturn Differential RPI Growth from 2017 for calendar year t-1 x (1 + Differential RPI for calendar year t)

Opening RAB inflator (Differential RPI) for calendar year t

The "Opening RAB inflator" inflates the opening RAB for calendar year t into average outturn Differential RPI prices, based on what the RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed RP3 CPI forecast.

= Differential RPI Growth from 2017 for calendar year t, divided by Year end outturn Differential RPI Growth from 2017 for calendar year t-1

Closing RAB deflator (Differential RPI) for calendar year t

The "Closing RAB deflator" deflates the closing RAB for calendar year t into average outturn Differential RPI prices, based on what the RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed RP3 CPI forecast.

= Year end outturn Differential RPI Growth from 2017 for calendar year t, divided by Differential RPI Growth from 2017 for calendar year t

Part B: Regulatory Depreciation true-up for calendar year t

98. The Regulatory Depreciation true-up estimates the difference between the allowed determined cost for regulatory depreciation in RP3, and what the RP3 determined cost would have been if based on the actual outturn RPI–CPI Wedge. The true-up is calculated as follows:

Regulatory Depreciation true-up for calendar year t

= CAA Assumed Regulatory Depreciation for calendar year t (2017 RPI prices) x Differential RPI Growth from 2017 for calendar year t

Less

CAA Assumed Regulatory Depreciation for calendar year t (expressed in average outturn prices)

Where,

CAA's Assumed RP3 Regulatory Depreciation (2017 RPI prices)

= For each calendar year, figures are fixed at the following values:

	2020	2021	2022	2023	2024
UKATS	£ 179,956	£ 145,517	£ 126,447	£ 128,519	£ 136,185
Oceanic	£ 6,660	£ 5,554	£ 5,127	£ 5,094	£ 5,298

CAA's Assumed RP3 Regulatory Depreciation (average outturn prices)

= For each calendar year, figures are fixed at the following values:

	2020	2021	2022	2023	2024
UKATS	£ 195,974	£ 163,224	£ 146,230	£ 153,086	£ 167,084
Oceanic	£ 7,253	£ 6,230	£ 5,929	£ 6,068	£ 6,500

Part C: Regulatory Return true-up for calendar year t

99. The Regulatory Return true-up estimates the difference between the allowed determined cost for regulatory return in RP3, and what the determined cost would have been if based on the actual outturn RPI–CPI Wedge. The true-up is calculated as follows:

{ Average RAB for calendar year t (expressed in average outturn Differential RPI prices)

Less

CAA's Assumed Average RAB for calendar year t (expressed in average outturn prices) }

x The cost of capital for the relevant price control (either UKATS or Oceanic) determined by the CAA for calendar year t

100. The formula above shows that the true-up is estimated by calculating an Average RAB in average outturn Differential RPI prices for each calendar year (i.e. accounting for the actual outturn RPI–CPI Wedge). The Average RAB in average outturn Differential RPI prices is calculated as follows:

Average RPI Differential RAB for calendar year t

= { Opening Differential RPI RAB for calendar year t x Opening RAB inflator (RPI) for calendar year t

+ Closing Differential RPI RAB for calendar year t x Closing RAB deflator (RPI) for calendar year t }

Divided by two

101. Where,

Opening Differential RPI RAB for calendar year t

For calendar year 2020 = CAA's Assumed Opening RAB for calendar year 2020 (see below) x Year end outturn Differential RPI Growth from 2017 for calendar year 2019

For calendar years 2021 and beyond = Closing Differential RPI RAB for calendar year t-1 x Opening RAB inflator (RPI) for calendar year t

Closing Differential RPI RAB for calendar year t

= Opening Differential RPI RAB for calendar year t

+ Opening Differential RPI RAB for calendar year t x (Year end outturn Differential RPI Growth from 2017 for calendar year t / Year end outturn Differential RPI Growth from 2017 for calendar year t-1)

+ Regulatory Depreciation and RP3 adjustment for calendar year t x Year end outturn Differential RPI Growth from 2017 for calendar year t

+ Working capital, Pension Contribution Variances, Capitalised Financing Costs, Spectrum Variances and Tax Clawback Adjustment for calendar year t x Year end outturn Differential RPI Growth from 2017 for calendar year t

+ CAA's Assumed Net Capex for calendar year t x Year end outturn Differential RPI Growth from 2017 for calendar year t

102. The Closing Differential RPI RAB formula relies on the following inputs (expressed in 2017 prices). These values are based on the CAA's assumed values for each item at the time of the RP3 price review. These values are also set out in terms (5j) and (6f).

For UKATS

(£000s)	Base	2020	2021	2022	2023	2024
Opening RAB	RPI	934,255				
RP3 adjustment	RPI					
Regulatory Depreciation	RPI	-184,687	-150,089	-131,019	-133,092	-140,758
Working capital	RPI	75,748	84,626	19,648	-1,664	-1,913
Pension Variance	RPI					
Capitalised Financing Costs	RPI					
Spectrum variance	RPI					
Tax clawback	RPI					
Net Capex	RPI	174,791	156,763	102,985	91,000	114,996

For Oceanic

(£000s)	Base	2020	2021	2022	2023	2024
Opening RAB	RPI	44,808				
Regulatory Depreciation	RPI	-6,660	-5,554	-5,127	-5,094	-5,298
Working capital	RPI	-636	-301	-345	110	-139
Pension Variance	RPI					
Capitalised Financing Costs	RPI					
Spectrum variance	RPI					
Tax clawback	RPI					
Net Capex	RPI	4,307	2,436	5,063	1,437	3,059