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UK CAA NR23 Initial Proposals – Draft RAB Rules Appendix I

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APPENDIX I

NR23 draft RAB rules

Formulae for tracking the regulatory asset base – draft NR23 Opening RAB derivation and NR23 RAB rules

Section 1: Introduction

I1 This document summarises the detail of the formulae which will govern tracking of the Regulatory Asset Base (RAB) for:

- UKATS; and
- Oceanic.

I2 These RAB rules are designed to ensure the functioning of the UKATS RAB is consistent with the Eurocontrol Principles and the UKATS regulatory framework under the Transport Act 2000, including the NERL licence. In accordance with these rules, the RAB will be reported on a calendar year basis. The RAB rules for Oceanic are aligned with the UKATS rules. The RAB rules are also designed in such a way that they are able to reflect the method for consideration of those costs exempt from cost sharing, under EU regulations applicable at the time for past reference periods, and under the Eurocontrol Principles and CAA regulatory policy going forwards.

I3 This Appendix comprises of 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 2021 and 2022;
- Section 4: establishes the Oceanic RAB for calendar years 2021 and 2022;
- Section 5: establishes the approach for rolling UKATS RAB forward in NR23;
- Section 6: establishes the approach for rolling the Oceanic RAB forward in NR23;
- Section 7: summarises the approach to be taken regarding the NR23 Tax Clawback and the baseline assumptions for NR23;
- Section 8: summarises the approach to be taken for calculating the London Approach RAB;

- Section 9: captures a "running total" of incentives that could result in adjustments to UKATS RAB for NR28.

I4 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.

Formatting styles

I5 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
NR23 / NR28	NERL's Price Control Review 2023 (2023-2027) / NERL Price Control Review 2028 (2028 – 2032)

Abbreviation	Meaning
RAB	Regulatory Asset Base
RP2 / RP3	Reference Period 2 (2015-19) / Reference Period 3 (2020-22)
RPI	Retail Prices Index
SES	Single European Sky
TRS	Traffic Risk Sharing Mechanism
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.

Term	Definition
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).
Eurocontrol Principles	Principles for Establishing the Cost-Base for En Route Charges and the Calculation of the Unit Rates - Doc. N° 20.60.02 – January 2020.
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

I6 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.

I7 Each year, the RAB is expressed in actual calendar year end RPI price levels. The NR23 RAB rules are expressed in fixed 2020 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:	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
Calendar year t:	21	22	23	24	25	26	27

Calendar year indices for NR23 rules:

RPI Growth from 2020 for calendar year t

= The Retail Price 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 2020, which is based on the All Items index starting at 100 in Jan 1987 equals 293.1417.

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 2017/18 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 2017/18.

References to outturn prices:

I8 Where the document references outturn prices, this will always relate to year-end prices.

Recording of actual inflation indices and the calculation of averages:

I9 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

I10 All RAB values are given in £000s unless otherwise stated.

Section 3: Rolling forward the UKATS RAB to 31 December 2022

I11 This section describes how the starting value of the UKATS RAB for NR23 will be calculated.

I12 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 2020.

I13 It then describes how the RAB will be updated for assumed changes in 2021 and 2022. 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.

I14 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.

I15 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 2020

I16 The RAB at the end of the last full calendar year before CAA's NR23 price control calculations, at 31 December 2020 (expressed as £ 1,186,364 in 2020 year-end prices), forms the starting point for subsequent RAB calculations.

Closing RAB for calendar year t

I17 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 2020 for calendar year t
+	**3d**	**Backlog Adjustments to Allowed Depreciation for calendar year t** x RPI Growth from 2020 for calendar year t
+	**3e**	**RP3 Estimated Pension Contribution Variance for calendar year t** x RPI Growth from 2020 for calendar year t
+	**3f**	**Actual Pension Contribution Variance for calendar year t**
+	**3g**	**RPI / CPI wedge variance adjustment**
+	**3h**	**Estimated Capitalised Financing Costs for calendar year t** x RPI Growth from 2020 for calendar year t
+	**3i**	**Capitalised Financing Costs for calendar year t**

I18 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 programmes 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. This includes movements in the TRS relating to the RP3 period (2020-2022) to be recovered through revenues, starting in NR23.

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 includes the traffic risk sharing (TRS) debtor accrued over 2020-2022 to be recovered through the unit rate over subsequent price control periods.

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 RP3 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 2020 RPI prices):

Calendar year 2021: - £ 151,206

Calendar year 2022: - £ 130,689

The value of regulatory depreciation for 2021 and 2022 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 NR28 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 2020 RPI prices, amounts represent a reduction to aggregate allowed depreciation):

Calendar year 2021: - £ 10,267

Calendar year 2022: - £ 10,267

(3e) RP3 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 2021 and 2022 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 2021 and 2022 and factored into the NR23 settlement (shown in 2020 RPI prices).

Calendar year 2021: - £ 3,387

Calendar year 2022: £ 3,558

(3f) 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 (3e).

= This adjustment is made to account for 2021 and 2022 actual variance in pension contributions made (as described below).

The calculation basis for the RP3 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 RP3, NERL will report for its UKATS Service line, the annual DB pension costs exempt from cost sharing 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.

The Eurocontrol Principles, and our regulatory policy statement on the treatment of NERL pension costs, provide for the review of "Actual pension contribution

variance." Any adjustment to NERL's UKATS service line "Actual pension contribution variance", defined as "Actual pension contribution variance adjustment", following 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 NR23 settlement (see section 3e above) and the cumulative difference will be recovered through charges via regulatory depreciation from NR28 and beyond.

For calendar years 2021 & 2022:

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

x Annual RPI Growth for calendar year t

Less:

RP3 Estimated Pension contribution variance for calendar year t (3e) x RPI growth from 2020 for calendar year t

Key CAA assumptions used in the Actual pension contribution variance (t) calculation are set out below. Note these are the RP3 CAA assumptions and are stated in 2020 CPI prices:

CAA Assumed pension rate:

Calendar year 2021: 58.6 %

Calendar year 2022: 59.8 %

CAA Assumed Pensionable pay (2020 CPI prices as used in the Cost exempt calculations):

Calendar year 2021: £ 110,611

Calendar year 2022: £ 106,157

(3g) 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 NR23.

This mechanism was introduced by the CAA for RP3 in order to reduce 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.

I19 Under the Eurocontrol Principles (3.3.2) 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 NR23 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 NR23 UKATS RAB.

(3h) 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 RP3 assumptions.

I20 The fixed amount of capitalised financing costs calculated by CAA in respect of RP3 based on capital expenditure and pension contribution variance assumptions. These Capitalised Financing Costs have been factored into the NR23 price controls and are fixed at the following values (in 2020 RPI prices):

Calendar year 2021: - £ 6,339

Calendar year 2022: - £ 7,958

(3i) 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 2021 and 2022, and the assumed capex and pension contribution variances.

I21 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 2020, 2021 and 2022:

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

\+ Actual Pension Contribution Variance for calendar year t (see 3f)}, 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 2020 for calendar year t, where:

CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values (in 2020 RPI prices). The values below have been updated to reflect the net capex assumed by CAA in the RP3 settlement:

Calendar year 2021: £ 168,653

Calendar year 2022: £ 110,796

Closing Cumulative Capitalised Variances calendar year t

I22 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 31 December 2021 and 31 December 2022. 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 2020 (i.e. year t-1 for the calendar year 2021)

= £ 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 2021: 3.48 %

Calendar year 2022: 3.48 %

Tracking the 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 are exempt from cost-sharing under the Eurocontrol Principles, and previously the EU Charging Regulations. The mechanism below tracks the variance between actual and assumed costs in 2021 and 2022, which will be included in the RAB at the start of RP3.

I23 This adjustment is made to account for 2021 and 2022 actual variance in annual Spectrum licences costs which are exempt from cost sharing.

I24 The calculation for the RP3 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 RP3 period and will be included in the RP3 RAB on 1 January 2023 in two places:

I25 The **RP3 Estimated Spectrum Cost Variance** assumed by the CAA and factored in to the NR23 settlement (see (5b));

I26 The **RP3 Spectrum Cost Variance adjustment** which updates the RAB for any difference between 2021 and 2022 estimates and actuals. The cumulative difference will be recovered through charges via regulatory depreciation from NR23 and potentially beyond (if the amounts to be recovered impact the unit rate in a disproportionate manner) (see (5c)).

I27 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 "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.

I28 The Eurocontrol Principles (3.3.4.2) make a provision for the review of the spectrum costs variance adjustment, which is included in an annual verification report by the CAA. This amount will be added to/deducted from the RAB as part of the RP3 Spectrum Cost Variance adjustment.

I29 Key assumptions used in the **Spectrum cost variance** calculation are set out below. Note these are the RP3 CAA assumptions and are stated in 2020 RPI prices:

CAA Assumed Spectrum Costs:

Calendar Year 2021: £ 975

Calendar Year 2022: £ 963

Section 4: Rolling Forward the Oceanic RAB to 31 December 2022

I30 This section describes how the opening value for the Oceanic RAB for NR23 will be calculated. It then describes how the RAB will be updated for assumed changes in 2021 and 2022. The steps for calculating the Oceanic RAB largely mirror those of UKATS RAB.

Closing RAB for calendar year 2020

I31 The RAB at the end of the last full financial year before the CAA's NR23 price control calculations, at 31 December 2020 (expressed as £ 37,768 in 2020 year-end price terms), forms the starting point for subsequent RAB calculations.

Closing RAB for calendar year t

I32 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 2020 for calendar year t
+	**4d**	**Backlog Adjustments to Allowed Depreciation for calendar year t** x RPI Growth from 2020 for calendar year t
+	**4e**	**RP3 Estimated Pension Contribution Variance for calendar year t** x RPI growth from 2020 for calendar year t
+	**4f**	**Actual Pension Contribution Variance for calendar year t**
+	**4g**	**Estimated Capitalised Financing Costs for calendar year t**
+	**4h**	**Capitalised Financing Costs for calendar year t**

I33 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 programmes 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 RP3 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 2020 RPI prices):

Calendar year 2021: - £ 4,676

Calendar year 2022: - £ 4,216

Actual regulatory depreciation for 2021 and 2022 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 NR28 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 2020 RPI prices, amounts represent a reduction to aggregate allowed depreciation):

Calendar year 2021: - £ 1,300

Calendar year 2022: - £ 1,300

(4e) RP3 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 2021 and 2022 for the NR23 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 2021 and 2022 and factored into the NR23 settlement (in 2020 RPI prices). This is to be added to the RAB, with figures fixed at the following values:

Calendar year 2021: - £ 198

Calendar year 2022: - £ 507

(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 Eurocontrol Principles, and previously the EU 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 2020 for calendar year t, where:

CAA's Assumed Defined Benefit Pension Contributions

= For each calendar year, figures are fixed at the following values in 2020 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 NR23 settlement:

Calendar year 2021: £ 2,497

Calendar year 2022: £ 2,636

(4g) 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 RP3 assumptions.

I34 The fixed amount of capitalised financing costs calculated by CAA in respect of RP3 based on capital expenditure and pension contribution variance assumptions. These Capitalised Financing Costs have been factored into the NR23 price controls and are fixed at the following values (in 2020 RPI prices):

Calendar year 2021: - £ 110

Calendar year 2022: - £ 175

(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 2021 and 2022, 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 respect of 2020, 2021 and 2022.

= [{ (**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 2020 for calendar year t, where:

CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2020 RPI prices. The values below have been updated to reflect the net capex assumed by CAA in the RP3 settlement:

Calendar year 2021: £ 2,621

Calendar year 2022: £ 5,447

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

I35 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 31 December 2021 and 31 December 2022. 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 2019 (i.e. year t-1 for the calendar year 2020)

= £ 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 2021: 3.48 %

Calendar year 2022: 3.48 %

Section 5: Rolling forward the UKATS RAB in NR23 (and calculation of cumulative capitalised variances during NR23)

I36 This section describes how the UKATS RAB will be rolled forward from one year to another during NR23. The start point for these calculations is the RAB as at 31 December 2022.

I37 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 NR23 will reflect the cash-flow investment made in the assets of the company, net of amounts contributed by customers by way of depreciation allowances.

I38 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 2022

I39 The RAB at 31 December 2022 forms the starting point for subsequent NR23 RAB calculations. The calculation of this value is defined in Section 3 and is calculated in 2022 calendar year-end prices.

Closing RAB for calendar year t

I40 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 Estimated Spectrum cost variance** x RPI Growth from 2020 for calendar year t
+	**5b**	**RP3 Spectrum cost variance adjustment**
+	**5c**	**Total Actual Net Capex for calendar year t** x Within-year RPI Growth for calendar year t

+	**5d**	**Real Movements in Working Capital for calendar year t**
+	**5e**	**Allowed Underlying Depreciation for year t** x RPI Growth from 2020 for calendar year t
+	**5f**	**Backlog Adjustments to Allowed Depreciation for year t** x RPI Growth from 2020 for calendar year t
+	**5g**	**Pension Contribution Variance for calendar year t**
	5h	**RPI / CPI wedge variance adjustment**
+	**5i**	**Capitalised Financing Costs for calendar year t**
-	**5j**	**RP3 Tax clawback adjustment** x RPI growth from 2017/18 for calendar year t

I41 Where:

(5a) RP3 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 Eurocontrol Principles. This is the estimated variance between actual and assumed spectrum costs in 2021 and 2022 which to be included in the RAB at the start of NR23.

= The estimated amount of the RP3 spectrum cost variance assumed by the CAA in respect of the third reference period for the NR23 settlement; figures are fixed at the following values (in 2020 RPI prices).

This is to be added / deducted from the NR23 RAB on 1 January 2023.

1 January 2023: - £ 268

(5b) RP3 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 Eurocontrol Principles. This adjustment is for the difference between the actual variance between actual and assumed spectrum costs in 2021 and 2022 and the estimated variance in 5a.

= The adjustment required to be made to the RP3 Estimated Spectrum cost variance to reflect 2021 and 2022 actual results and align with the RP3 Charging Regulation and Eurocontrol Principles is calculated as follows.

To be added to the NR23 RAB on 1 January 2023 and will be depreciated over NR28 and potentially beyond (if the amounts to be recovered impact the unit rate in a disproportionate manner).

1 January 2023 =

Spectrum cost adjustment as calculated under the RP3 Charging Regulation (stated in 2022 calendar year-end prices)

Less

RP3 Estimated spectrum cost variance x RPI growth from 2020 for calendar year 2022

(5c) 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 programmes where funding is to be returned to airline customers via a specific unit rate reduction rather than a lower determined cost would be excluded.

(5d) 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 includes movements in the TRS relating to RP3 (2020-2022) to be recovered through revenues, starting in NR23.

For calendar year 2023:

The closing working capital balance as at 31 December 2022 as defined in Section 3 of these rules.

= Closing Working Capital for calendar year 2023

− Closing Working Capital as at 31 Dec 2022 x Annual RPI Growth for calendar year 2023

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 includes the traffic risk sharing (TRS) debtor accrued over 2020-2022 to be recovered through the unit rate over subsequent price control periods.

This also includes 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.

(5e) 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 NR23. Any variances between the depreciation values fixed at NR23 and the depreciation on actual capex could be recovered through the backlog adjustment at a future price control, similar to item (5e). This is the same as the approach adopted for RP3.

= 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 2020 RPI prices):

Calendar year 2023: - £ 115,617

Calendar year 2024: - £ 122,483

Calendar year 2025: - £ 129,187

Calendar year 2026: - £ 127,306

Calendar year 2027: - £ 123,471

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).

(5f) 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 RP3. 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 RP3.

= 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 2020 RPI prices, amounts represent an increase to aggregate allowed depreciation):

Calendar year 2023: - £ 1,300

Calendar year 2024: - £ 1,300

Calendar year 2025: £ 8,282

Calendar year 2026: £ 8,282

Calendar year 2027: £ 8,282

(5g) Pension Contribution Variance for calendar year t

Description: The adjustment captures the annual difference between actual and assumed defined benefit pension costs in NR23 that are exempt from cost sharing under the Eurocontrol Principles and consistent with the CAA pensions regulatory policy statement and are applied to the RAB. This is similar to the approach at RP3, though the variance may be recovered from users over a shorter period.

The calculation of the NR23 Pension Contribution Variance follows the methodology used in RP3 and is consistent with the treatment of costs exempt from cost sharing provided for in our regulatory policy statement and Eurocontrol Principles. It includes the actual costs of NERL's Defined Benefit Future Service and Deficit Repair contributions. In line with RP3, it will also take into account the actual costs of any reasonable measures which NERL takes during NR23 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.

For each year of NR23 NERL will report, for its UKATS Service line, the annual Pension contribution variance costs exempt from cost sharing in the relevant unit rate reporting 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.

The Eurocontrol Principles (3.3.4.2), and our pensions regulatory policy statement, provide for the review of "Actual pension contribution variance." 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 NR28 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 Eurocontrol Principles. For Calendar years 2023 to 2027:

[**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 NR23 CAA assumptions and are stated in 2020 CPI prices:

CAA Assumed DB Ongoing Contributions (2020 CPI prices):

Calendar year 2023: 64,018

Calendar year 2024: 62,615

Calendar year 2025: 47,958

Calendar year 2026: 46,161

Calendar year 2027: 45,759

CAA Assumed DB Deficit Repair (2020 CPI prices):

Calendar year 2023: 19,071

Calendar year 2024: 19,226

Calendar year 2025: 0

Calendar year 2026: 0

Calendar year 2027: 0

(5h) 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 NR23.

This is a mechanism the CAA 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 Eurocontrol Principles (3.3.2), 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 NR23 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 as a true-up adjustment for the NR23 UKATS RAB. This adjustment will be added to the RAB in calendar year t following the calculations are set out in Annex A of the NR23 RAB Rules, and will be recovered through revenues over NR28 and beyond.

(5i) Capitalised Financing Costs

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

Capitalised Financing Costs 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)

}, Divided by 2 (two)

+ RP3 Spectrum pass-through adjustment (stated in 2022 calendar year-end prices)

+ RP3 Tax clawback adjustment x RPI Growth from 2017/18 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 2020 for calendar year t, where:

CAA Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2020 RPI prices:

Calendar year 2023: £ 111,294

Calendar year 2024: £ 107,219

Calendar year 2025: £ 101,864

Calendar year 2026: £ 89,048

Calendar year 2027: £ 90,279

UKATS Closing Cumulative Capitalised Variances during NR23

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 NR23. 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 2022

31 December 2022: As set out in Section 3 of these rules.

Closing Cumulative Capitalised Variances for calendar year 2023

= Closing Cumulative Capitalised Variances as at 31 December 2022 x Annual RPI Growth for calendar year 2023

+ Net Capex Variance for calendar year 2023

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

+ Pension Contribution Variance for calendar year 2023

\+ RP3 Spectrum pass through adjustment

\+ RP3 Tax clawback adjustment x RPI Growth from 2017/18 for calendar year 2023

\+ Capitalised Financing Costs for year 2023

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

\+ 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 2023: 2.81 %

Calendar year 2024: 2.81 %

Calendar year 2025: 2.81 %

Calendar year 2026: 2.81 %

Calendar year 2027: 2.81 %

NR23 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 Eurocontrol Principles. The adjustment below tracks NR23 Spectrum cost variances which will be included in the RAB at the start of NR28. This is a similar to the approach at RP3.

The assumed spectrum costs are in line with the spectrum cost forecasts in NERL's NR23 business plan, to ensure that any variance in actual costs is returned to or recovered from users.

I42 Any variance between estimated and actual Spectrum costs will need to be tracked over the NR23 period and included in the NR28 RAB on 1 January 2028 in two places (as shown below):

- The **NR23 Estimated Spectrum Cost Variance** assumed by the CAA in NR23 and factored into the NR28 settlement;

- The **NR23 Spectrum Cost Variance adjustment** which updates the RAB for any difference between estimates used in the NR28 settlement and actuals. The cumulative difference will be recovered through charges via regulatory depreciation from NR33 and beyond in line with the cost risk sharing mechanism set out in Eurocontrol Principles (3.3.4.2).

I43 For each year of NR23 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 in the row labelled "Changes in law" and will be added to the RAB in calendar year-end prices.

I44 The Eurocontrol Principles (3.3.4.4) make a provision for the annual review of spectrum costs by the CAA, to be consulted on by airspace users' representatives. This amount will be added to/deducted from the RAB as part of the Spectrum Cost Variance adjustment.

I45 Key assumptions used in the **Spectrum cost variance** calculation are set out below. Note these are the NR23 CAA assumptions and are based on NERL's NR23 Business Plan. Any variance between the estimates used in the NR23 settlement and actuals will be tracked according to the procedure described in paragraphs 27 to 30 and factored into the NR28 settlement as described above. The following values, to be confirmed as part of the final performance plan, are stated in 2020 RPI prices:

CAA Assumed Spectrum Costs:

Calendar year 2023: £ [TBC]

Calendar year 2024: £ [TBC]

Calendar year 2025: £ [TBC]

Calendar year 2026: £ [TBC]

Calendar year 2027: £ [TBC]

(5j) RP3 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) in RP3. The adjustment would be reflected in the UKATS NR23 opening RAB if the specific conditions are met (see Section 8).

I46 There is a tax clawback mechanism in the RP3 settlement. At the end of 2022 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.

I47 NERL's Tax clawback as defined in the RP3 RAB Rules is stated in 2017/18 financial year prices and is deducted from the RAB on 1 January 2023.

I48 1 January 2023 = Tax clawback in 2017/18 financial year prices

Calculation of UKATS Average RAB in NR23

Description: The calculation of the average RAB has been amended for NR23 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.

I49 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 } / (1 + WACC in year t)

/ divided by two (2)

Section 6: Rolling Forward the Oceanic RAB in NR23 (and calculation of cumulative capitalised variances during NR23)

I50 This section describes how the Oceanic RAB will be rolled forward from one year to another during NR23. 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 2022 which is derived using the formula within Section 4 of this document.

I51 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 NR23 will reflect the cash-flow investment made in the assets of the company, net of amounts contributed by customers by way of depreciation allowances.

I52 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.

I53 The following formulae specify how the Oceanic RAB will be rolled forward.

I54 The RAB at 31 December 2022 forms the starting point for subsequent RAB calculations. These calculations are as follows:

Closing RAB for calendar year 2022 (i.e. at 31 December 2022)

I55 As defined in section 6 of this document in 2022 calendar year end prices.

I56 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 2020 for calendar year t
+	**6d**	**Backlog Adjustments to Allowed Depreciation for year t** x RPI Growth from 2020 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**

I57 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.

(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 was the approach adopted for RP3.

For calendar year 2023

= Closing Working Capital for calendar year 2023

− Closing Working Capital as at 31 Dec 2022 x Annual RPI Growth for calendar year 2023

The closing working capital balance as at 31 December 2022 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 NR23. Any variances between the depreciation values fixed at NR23 and the depreciation on actual capex could be recovered through the backlog adjustment at a future price control, similar to item (6c). This is the same as the approach adopted for RP3.

= 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 2020 RPI prices):

Calendar year 2023: - £ 3,972

Calendar year 2024: - £ 4,407

Calendar year 2025: - £ 4,810

Calendar year 2026: - £ 4,840

Calendar year 2027: - £ 4,686

(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 RP3. 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 RP3.

= 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 2020 RPI prices) and the amounts represent an addition to aggregate allowed depreciation):

Calendar year 2023: - £ 1,132

Calendar year 2024: - £ 1,132

Calendar year 2025: £ 147

Calendar year 2026: £ 147

Calendar year 2027: £ 147

(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, as per the approach for UKATS, and are applied to the RAB. This is similar to the approach 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 NR23 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 NR23, 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 2020 for calendar year t, where:

CAA's Assumed Pension Contributions for year t x RPI Growth from 2020 for calendar year t, where:

CAA's Assumed Pension Contributions

The values below are the allowance (for Defined Benefit Future Service and Defined Benefit Repair Contributions) in the NR23 settlement.

= For each calendar year, figures are fixed at the following values in 2020 RPI prices:

Defined Benefit Future Service:

Calendar year 2023: £ 2,567

Calendar year 2024: £ 2,556

Calendar year 2025: £ 1,809

Calendar year 2026: £ 1,651

Calendar year 2027: £ 1,476

Defined Benefit Repair Contributions:

Calendar year 2023: £ 858

Calendar year 2024: £ 817

Calendar year 2025: £ 637

Calendar year 2026: £ 642

Calendar year 2027: £ 680

(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 NR23.

This mechanism was introduced by the CAA for RP3 in order to reduce 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.

I58 Consistent with the approach adopted for UKATS, 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 NR23 price review.

I59 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.

I60 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 NR23 Oceanic RAB. This adjustment will be added to the RAB in calendar year t following the calculations which is set out in Annex A of the NR23 RAB Rules, and will be recovered through revenues over NR28 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 RP3 tax clawback, so that the timing of the adjustments is neutral in present value terms. This is the same approach that was taken in 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)

\+ RP3 Tax clawback adjustment x RPI Growth from 2017/18 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 2020 for calendar year t, where:

The CAA's Assumed Net Capex

= For each calendar year, figures are fixed at the following values in 2020 RPI prices:

Calendar year 2023: £ 5,707

Calendar year 2024: £ 6,606

Calendar year 2025: £ 5,627

Calendar year 2026: £ 2,794

Calendar year 2027: £ 925

Oceanic Closing Cumulative Capitalised Variances during RP3

I61 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 NR23. 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 2022

I62 31 December 2022: As set out in Section 4 of these rules

Closing Cumulative Capitalised Variances for calendar year 2023

= Closing Cumulative Capitalised Variances for 31 December 2022 x Annual RPI Growth for calendar year 2020

+ Net Capex Variance for calendar year 2023

+ Pension Contribution Variance for calendar year 2023

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

+ RP3 Tax clawback adjustment x RPI Growth from 2017/18 for calendar year 2020

+ Capitalised Financing Costs for calendar year 2023

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 2023: 2.81 %

Calendar year 2024: 2.81 %

Calendar year 2025: 2.81 %

Calendar year 2026: 2.81 %

Calendar year 2027: 2.81 %

Calculation of Oceanic Average RAB in RP3

Description: The calculation of the average RAB has been amended for NR23 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.

I63 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 / (1 + WACC in year t)

/ divided by two (2)

Section 7: NR23 Tax Clawback

I64 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 notional level used to set price controls.

I65 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 NR23 cost of capital to reflect the time value of money. The resulting clawback adjustment is to be included in the opening NR28 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 NR28 broadly to reflect the relative size of the two businesses.

I66 For the purpose of this appendix, the RPI measure of inflation is to be used.

I67 In the event that NERL's financial year changes from 31 March to 31 December during NR23, 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

I68 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, where t corresponds with the following: 30 September 2023, 31 March 2024, 30 September 2024, 31 March 2025, 30 September 2025, 31 March 2026, 30 September 2026 and 31 March 2027, forecast gearing, as estimated in accordance with Condition 5 at 30 September 2027 and 31 March 2028
Average gearing (a simple arithmetic mean of gearing at the ten measurement dates)	=	$\frac{\sum_{t=1to10} G_t}{10}$
If average gearing	> ≤	[50] percent, then proceed to step 2. [50] percent, then no tax clawback. Note: Average gearing to be determined by assumption used in price control model

STEP 2 Comparison of Actual Interest Costs to Modelled Interest Costs

A (year ending 31 March 2023-2027)	**=**	Actual interest costs used in the calculation of Corporation Tax for the years ending 31 March 2023, 2024, 2025, 2026 and the forecast interest costs used in the estimation of the corporation tax charge for the year ending 31 March 2027 all expressed in 2020 RPI prices[1]
M (year ending 31 March 2023-2027)	=	Modelled interest costs (2020 RPI prices) assuming the Net Debt to RAB ratio is maintained at 60% over NR23[2]

[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 NR23.

A (year ending 31 March 2023-2027)	**=**	Actual interest costs used in the calculation of Corporation Tax for the years ending 31 March 2023, 2024, 2025, 2026 and the forecast interest costs used in the estimation of the corporation tax charge for the year ending 31 March 2027 all expressed in 2020 RPI prices[1]
Namely M_{2023} M_{2024} M_{2025} M_{2026} M_{2027}	 = = = = =	 £ 19,221 £ 15,838 £ 12,420 £ 8,176 £ 3,561
Additional interest costs (AA)	=	The difference between actual interest costs and modelled interest costs
Namely, for each year AA (year ending 31 March 2023-2027)	 =	 A (year ending 31 March 2023-2027) - M (year ending 31 March 2023-2027)
If ΣAA (year ending 31 March 2023-2027) (The sum of AA for all years)	> ≤	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 NR28 RABs will be reduced on 1 January 2028 (2020 prices))	=	$[AA_{2023} \times (1+WACC)^{9/2} \times T_{2023}$ $+ AA_{2024} \times (1+WACC)^{7/2} \times T_{2024}$ $+ AA_{2025} \times (1+WACC)^{5/2} \times T_{2025}$ $+ AA_{2026} \times (1+WACC)^{3/2} \times T_{2026}$ $+ AA_{2027} \times (1+WACC)1^{/2} \times T_{2027}]$
Where WACC	=	the cost of capital for NR28
Where T	=	the statutory Corporation Tax rates used in the modelling of NR23 price control

Tax claw back (the amount by which the NR28 RABs will be reduced on 1 January 2028 (2020 prices))	=	$[AA_{2023} \times (1+WACC)^{9/2} \times T_{2023}$ $+ AA_{2024} \times (1+WACC)^{7/2} \times T_{2024}$ $+ AA_{2025} \times (1+WACC)^{5/2} \times T_{2025}$ $+ AA_{2026} \times (1+WACC)^{3/2} \times T_{2026}$ $+ AA_{2027} \times (1+WACC)1^{/2} \times T_{2027}]$
Namely T_{2023} T_{2024} T_{2025} T_{2026} T_{2027}	 = = = = =	 24 percent[3] 25 percent 25 percent 25 percent 25 percent

[3] Corporation tax rate used from FY2023 is 25%. However, because NERL reports its results in calendar years, we blend the CY2022 tax rate with the CY2023 tax rate.

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

I69 This section describes the high level, simplified approach which is used to calculate the London Approach RAB.

I70 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

I71 The starting point for these calculations is the value of the UKATS RAB at the end of the last full calendar year in RP3 (i.e. 31 December 2022), 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 2022, as specified in Conditions 21 and 21a of the NERL Licence.

For calendar years 2021 and 2022

For the following calendar years before the start of NR23 (i.e. calendar years 2021 and 2022), 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 2023 to 2027 (i.e. during NR23)

During NR23 (i.e. calendar years 2023, 2024, 2025, 2026 and 2027) 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 RP3 (i.e. 2021 and 2022) 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 / (1 + WACC in year t) }

/ divided by two (2)

Values for Determined Costs

I72 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
2022	14,448	688,739	0.0210
2023	14,320	703,645	0.0204
2024	14,647	738,499	0.0198
2025	16,084	697,724	0.0231
2026	16,244	703,678	0.0231
2027	16,503	706,089	0.0234

Section 9: Incentives reflected in the RAB for NR23

I73 This section identifies two incentives relating to NERL's capex programme for RP3. As stated in the RP3 RAB rules, the application of these incentive would result in a change to the UKATS opening RAB for NR23.

I74 The incentives are only described in this section at a high level as a way of providing a memo item for NR23. The contents of this section do not represent a detailed methodology for applying the two incentives.

Ex-post efficiency incentive

I75 During NR23, the CAA will commission an independent high level review of the cost efficiency of NERL's capex in RP3. 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 NR28.

I76 The Independent Reviewer reviewed the efficiency of NERL's capex in RP3 on an ongoing basis. The Independent Reviewer will undertake a discrete review on part of NERL's capex in NR23 to determine if any capex is demonstrably inefficient and/ or wasteful. Dependent on the timing of the review, this will be achieved by either a downwards adjustment to NERL's starting RAB for NR28 or to its starting RAB for NR33. The expectation is that any downwards adjustment

relating to inefficient expenditure in the first three years of NR23 will be made to the starting RAB in NR28, while any downwards adjustment relating to inefficient expenditure in the last two years of NR23 will be made to the starting RAB of NR33.

I77 During NR23 the Independent Reviewer will also be reviewing the efficiency of NERL's capex in NR23 on an ongoing basis. As in RP3, 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 NR28 or to its starting RAB for NR33. The expectation is that any downwards adjustment relating to inefficient expenditure in the first three years of NR23 will be made to the starting RAB in NR28, while any downwards adjustment relating to inefficient expenditure in the last two years of NR23 will be made to the starting RAB of NR33.

Engagement incentive

I78 The CAA will apply a financial incentive to encourage high quality engagement between NERL and its customers on its capex programme, including through the development and publication of its Service and Investment Plan plans during NR23. In the light of reviews to be undertaken by the Independent Reviewer, if NERL's engagement with its customers does not reach an appropriate standard (determined in accordance with the scoring matrix for the incentive), then any incentives will be applied accordingly.

I79 The maximum penalty shall be capped at NERL's rate of return on equity on its actual capex in the price control period. Any penalty will be implemented by either:

- a RAB adjustment; or
- a revenue adjustment

at the beginning of the NR28 price control.

I80 The penalty will be calculated using the scoring set out in the Guidance on NERL's capital expenditure engagement incentive issued by the CAA under Condition 10 of NERL's licence and shall be determined as follows:

- No penalty will be applied for a weighted average Overall Capex Engagement Score of 3 or above;
- Penalties will be applied if performance falls below 3. The maximum penalty will be applied if NERL's Overall Capex Engagement Score is 1.5 or below.
- The level of the penalty increases linearly with the level of underperformance at a rate of 0.1 units of underperformance, up to the penalty cap.

- Scores will be rounded to the nearest 0.1 decimal.

Annex A: RPI–CPI Wedge Variance adjustment

Important points to note:

This mechanism has been carried forward from 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 NR23.

This section has been prepared by CAA with inputs from NERL and should be considered draft only. The mechanism has been tested during NR23 and we believe that it does not systematically over or understate any of the adjustments.

1. If the consumer prices index (CPI) differs from the CAA's assumption over NR23 then NERL recovers the impact of this difference through revenues via the INF term in Charging Condition 21.

2. However, both Regulatory Depreciation and Return assumptions included in NR23 revenues are first calculated in retail prices index (RPI) prices before being converted to CPI prices for revenues.

3. If the difference between actual outturn RPI and CPI (the "RPI–CPI Wedge") during NR23 differs from the CAA's assumption at the time of the NR23 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 NR23 revenue.

4. 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 NR23. 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 NR28 and beyond.

5. This means that during NR28 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 NR28, 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 NR23 (but not reflected in prices) is spread equally over NR28 via Backlog Depreciation.

6. 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

7. The variance adjustment set out above is a pragmatic and proportionate approach based on the estimated difference between the revenues that NERL recovers in NR23 (i.e. based on the assumed RPI–CPI wedge), and the level of revenues it would have recovered in NR23 if based on the actual outturn RPI–CPI Wedge (had it been known at the time of the NR23 Price Review). But it is not an exact adjustment because it is based on a simplified model of NERL's regulatory financial statements.

8. This mechanism has been brought forward from RP3.

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

9. Each year, the RAB is expressed in actual end year RPI price levels (calendar year end). The NR23 RAB rules are expressed in fixed 2020 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.

10. In this case, to estimate the difference between the revenues that NERL earns in NR23, and what the revenues would have been if using the actual outturn RPI–CPI Wedge in NR23, 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 NR23 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 NR23 price review. This is fixed at the following values:

2021	2022	2023	2024	2025	2026	2027
2.59%	7.44%	4.04%	1.54%	1.88%	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 2020 for calendar year t

"Differential RPI Growth from 2020" is what the (2020 based year average) RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed NR23 CPI forecast.

For calendar year 2020 = 1.0000

For calendar year 2021 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)

11. 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 2020 for calendar year t

"Year end outturn Differential RPI Growth from 2020" is what the end year RPI index would be if the actual RPI–CPI Wedge was added to the CAA's assumed NR23 CPI forecast.

For calendar year 2020 = Within-year RPI Growth for calendar year 2020

For calendar year 2021 and beyond

= Year end outturn Differential RPI Growth from 2020 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 NR23 CPI forecast.

= Differential RPI Growth from 2020 for calendar year t, divided by Year end outturn Differential RPI Growth from 2020 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 NR23 CPI forecast.

= Year end outturn Differential RPI Growth from 2020 for calendar year t, divided by Differential RPI Growth from 2020 for calendar year t

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

I81 The Regulatory Depreciation true-up estimates the difference between the allowed determined cost for regulatory depreciation in NR23, and what the NR23 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 (2020 RPI prices) x Differential RPI Growth from 2020 for calendar year t

Less

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

Where,

CAA's Assumed NR23 Regulatory Depreciation (2020 RPI prices)

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

	2023	2024	2025	2026	2027
UKATS	£ 111,244	£ 118,848	£ 117,897	£ 116,017	£ 112,182
Oceanic	£ 5,104	£ 5,539	£ 4,663	£ 4,693	£ 4,539

CAA's Assumed NR23 Regulatory Depreciation (average outturn prices)

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

	2023	2024	2025	2026	2027
UKATS	£ 134,115	£ 146,640	£ 149,127	£ 150,731	£ 149,704
Oceanic	£ 6,153	£ 6,834	£ 5,898	£ 6,097	£ 6,057

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

I82 The Regulatory Return true-up estimates the difference between the allowed determined cost for regulatory return in NR23, 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

I83 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

I84 Where,

Opening Differential RPI RAB for calendar year t

For calendar year 2023 = CAA's Assumed Opening RAB for calendar year 2023 (see below) x Year end outturn Differential RPI Growth from 2020 for calendar year 2019

For calendar years 2024 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 2020 for calendar year t / Year end outturn Differential RPI Growth from 2020 for calendar year t-1)

+ Regulatory Depreciation and NR23 adjustment for calendar year t x Year end outturn Differential RPI Growth from 2020 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 2020 for calendar year t

+ CAA's Assumed Net Capex for calendar year t x Year end outturn Differential RPI Growth from 2020 for calendar year t

I85 The Closing Differential RPI RAB formula relies on the following inputs (expressed in 2020 RPI prices). These values are based on the CAA's assumed values for each item at the time of the NR23 price review. These values are also set out in terms (5h) and (6e).

For UKATS

(£000s)	Base	2023	2024	2025	2026	2027
Opening RAB	RPI	1,486,255				
Regulatory Depreciation[4]	RPI	-116,917	-123,783	-120,905	-119,024	-115,190
Working capital	RPI					
Pension Variance	RPI					
Capitalised Financing Costs	RPI	-3,812	-71,684	-57,430	-63,519	-82,760
Spectrum variance	RPI					
Tax clawback	RPI					
Net Capex	RPI	111,294	107,219	101,864	89,048	90,279

For Oceanic

(£000s)	Base	2023	2024	2025	2026	2027
Opening RAB	RPI	32,655				
Regulatory Depreciation	RPI	-5,104	-5,539	-4,663	-4,693	-4,539
Working capital	RPI					
Pension Variance	RPI					
Capitalised Financing Costs	RPI	850	-1,461	-203	-20	-45
Tax clawback	RPI					
Net Capex	RPI	5,707	6,606	5,627	2,794	925

[4] This includes the allowed depreciation for year and the backlog adjustment to depreciation.