CONNECTIVITY CONSOLIDATED CONTRACT SCHEDULE

CONSOLIDATED SCHEDULE 4

SERVICE LEVELS AND RELATED REMEDIES

for Contract Number DCNS/080

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Consolidated Schedule 4
Service Levels and Related Remedies

This Consolidated Schedule provides a consolidated version of Part A of Schedule 2.1 (*Service Levels, Related Remedies and Performance Monitoring*) of the Call-Off Terms, Appendix 4 to the Call-Off Form and the Customer Authority's special terms relating to service levels and related remedies.

Capitalised terms used but not defined in this Consolidated Schedule are defined in Consolidated Schedule 1 (*Definitions*).

1 INTRODUCTION

1.1 This Consolidated Schedule:

1.1.1 sets out the principal objectives of the Service Levels regime (see Paragraph 2 below);

1.1.2 provides an overview of the Service Levels regime (see Paragraph 3 below);

1.1.3 sets out the Service Criteria (see Paragraph 4 below);

1.1.4 describes the process and consequences for Repeat Failures (see Paragraph 5 below);

1.1.5 describes the method by which Service Credits will be calculated (see Paragraph 6 below);

1.1.6 describes the nature of Service Credits (see Paragraph 7 below);

1.1.7 sets out some general principles for Service Levels (see Paragraph 8 below); and

1.1.8 sets out the Service Levels and Service Credits (see Paragraphs 9 to 25 below).

PART A: CALCULATION OF SERVICE PERFORMANCE

2 PRINCIPAL OBJECTIVES

2.1 The objectives of the Service Levels, Service Credits and other related remedies are to:

2.1.1 ensure that the Services are of a consistently high quality and meet the Service Levels and other requirements of the Customer Authority;

2.1.2 without prejudice to the Contractor's obligations to deliver the Services in accordance with Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), use Service Credits as a method of price adjustment to reflect poor performance in breach of the Service Levels;

2.1.3 provide a mechanism whereby the Service Credit regime can evolve over the duration of this Consolidated Contract as the profile of Services change; and

2.1.4 incentivise the Contractor to meet the Service Levels and remedy any failure to meet the Service Levels promptly.

2.2 The Parties acknowledge that:

2.2.1 the Customer Authority will, in all cases, prefer to receive Services that meet or exceed the Service Levels in preference to receiving the Service Credits; and

2.2.2 the Contractor shall, in all cases, seek to deliver the Services so that they meet or exceed the Service Levels in preference to accepting a liability for Service Credits.

3 SERVICE LEVELS

3.1 Each of the Services may be subject to one or more of four (4) different types of Service Criteria. These are:

3.1.1 Availability (as further set out in Paragraph 4.1 of this Part A);

3.1.2 Quality (as further set out in Paragraph 4.2 of this Part A);

3.1.3 Provisioning (as further set out in Paragraph 4.3 of this Part A); and

3.1.4 Service Management (as further set out in Paragraph 4.4 of this Part A).

3.2 Part B of this Consolidated Schedule identifies which Service Criteria apply to each Service and/or Service Element.

3.3 The Contractor shall monitor its performance of each of the Service Criteria referred to in Paragraph 3.1 of this Part A by reference to the applicable Service Levels and shall send the Customer Authority a Monthly Summary in accordance with Consolidated Schedule 14 (*Performance Monitoring and Reporting*).

3.4 Not all Service Levels attract Service Credits. In respect of a Service Level which attracts Service Credits, if the Achieved Service Level does not meet the relevant Service Level, then Service Credits will be due from the Contractor in accordance with Paragraph 6 of this Part A and Part B of this Consolidated Schedule.

3.5 Subject to Paragraph 3.6 below, the Customer Authority may change the Service Credits applicable to any Service Level (including by applying Service Credits to Service Levels that did not previously attract Service Credits) without the need to go through the Contract Change Procedure and at no additional cost:

3.5.1 once per Contract Year, on at least three (3) months' prior written notice; and

3.5.2 within sixty (60) Working Days after the Contractor has been issued a Milestone Achievement Certificate for Milestone numbers:

(i) 5.5 to 5.8 (as applicable) *Service Deployment (Site Roll-Out) – Migration: LAN Service*;

(ii) 5.13 to 5.16 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Connectivity Service*;

(iii) 5.21 to 5.24 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Cyber Access Service*;

(iv) 5.29 to 5.32 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Point to Point Service*;

(v) 5.37 to 5.40 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Encryption Service*;

(vi) 4.11 *Service Deployment (First of Class) – Implementation: Miscellaneous Connectivity Service*;

(vii) 4.12 *Service Deployment (First of Class) – Implementation: Bespoke Engineering Service*;

(viii) 4.13 *Service Deployment (First of Class) – Implementation: DNSIP Service*; and

(ix) 4.14 or 4.15 (as applicable) *Service Deployment (First of Class) – Implementation: Boundary Protection Service*,

in respect of that particular Service for that particular Customer Authority Site.

3.6 The Customer Authority shall, when exercising its rights under Paragraph 3.5 above:

3.6.1 give the Contractor at least two (2) weeks to comment on the proposed changes before a notice of change is given; and

3.6.2 not increase the total value of Service Credits potentially payable.

3.7 In the event of any change to the Service Credits, the Contractor will provide the Customer Authority with an updated draft of this Consolidated Schedule within two (2) weeks of receiving notice of such change.

4 SERVICE CRITERIA

4.1 Availability

4.1.1 Unless stated otherwise in this Consolidated Schedule, the Achieved Service Level for Availability is calculated as a percentage of the total time in a Service Measurement Period in accordance with the following formula:

$$\textbf{Service Availability} = \frac{\textbf{(MP - SD) × 100\%}}{\textbf{MP}}$$

where:

"**MP**" = Total time within the Agreed Service Time for the relevant Customer Authority Site or Service (as designated in Paragraph 8 below and Part B), excluding Planned Downtime, within the relevant Service Measurement Period (the "**Measurement Period**"); and

"**SD**" = Total Service Downtime within the Agreed Service Time for the relevant Customer Authority Site or Service (as designated in Paragraph 8 below and Part B) within the relevant Service Measurement Period during which the Contractor System, a Service and/or Service Element is not Available, excluding Planned Downtime.

4.1.2 The Service Levels and Service Credits for Availability are set out in Part B of this Consolidated Schedule.

4.2 Quality

For certain Services and/or Service Elements it will be possible for a measure of Quality to be applied in addition to the measure of Availability. The Service Levels and Service Credits for Quality are set out in Part B of this Consolidated Schedule.

4.3 Provisioning

For certain Services and/or Service Elements (including MACs) a measure of the effectiveness of Provisioning will be applied. The Service Levels and Service Credits for Provisioning are set out in Part B of this Consolidated Schedule.

4.4 Service Management

The Service Levels and Service Credits for Incident Management, Problem Management, Change Management, Request Fulfilment, Knowledge Management, Management Information Exchange and the Contractor Service Desk are set out in Part B of this Consolidated Schedule.

5 REPEAT FAILURES TO MEET SERVICE LEVELS

5.1 If the Contractor fails to achieve a Service Level for a particular Contractor System, Service and/or Service Element in a Service Measurement Period and then fails to achieve the same Service Level in a subsequent (as defined in Table 1 below) Service Measurement Period, the failure in the subsequent Service Measurement Period shall be a "**Repeat Failure**". The Repeat Failure count shall increment by one (1) for each additional failure.

5.2 Repeat Failures shall apply to Service Levels for Availability, Quality and Service Management. Repeat Failures shall not apply to Service Levels for Provisioning.

5.3 The Repeat Failure count shall be reset to zero (0) once there have been two (2) consecutive Service Measurement Periods in which the Service Level has been met.

5.4 A worked example is set out below:

	Service Measurement Period											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Failure to meet Service Level for a Service (F)	F	F	✓	F	✓	✓	F	✓	F	F	✓	F
No. of Repeat Failures	0	1		2			0		1	2		3

Table 1 - Repeat Failure Example

5.5 For any failure to meet Service Levels which is a Repeat Failure, the Service Credit applicable shall be increased as follows (a "**Repeat Failure Multiplier**"):

Repeat Failure count applicable to the Service Measurement Period	**Repeat Failure Multiplier**
0	1
1	1.25

Repeat Failure count applicable to the Service Measurement Period	Repeat Failure Multiplier
2	1.5
3	1.75
4 and above	2

Table 2 - Repeat Failure Multipliers

6 SERVICE CREDIT CALCULATION

6.1 Service Credits are required to be paid in the event that the relevant Achieved Service Level does not meet the Service Level in a Service Measurement Period.

6.2 Subject to Paragraph 6.10 below, the Service Credit Percentage is determined by the Achieved Service Level, the Service Level and the Service Failure Threshold and is calculated by using the straight line formula below:

Service Credit Percentage = (M * (A – X) + C) * Repeat Failure Multiplier

Where:

"**A**" is the Service Level Percentage (%) below which Service Credits become payable;

"**B**" is the Service Failure Threshold (%);

"**X**" is the Achieved Service Level (%) for a Service Measurement Period;

"**C**" is the Minimum Service Credit Percentage (%) payable if the Achieved Service Level falls below the Service Level;

"**D**" is the Maximum Service Credit Percentage (%) payable if the Achieved Service Level reaches the Service Failure Threshold;

"**M**" is a coefficient defined for the Contractor System, Service and/or Service Element which is calculated from the formula **M = (D – C) / (A – B)**, that is the slope of the straight line (see Figure 1 below); and

Repeat Failure Multiplier shall have the meaning set out in Paragraph 5.5 of this Consolidated Schedule.

6.3 For the avoidance of doubt Service Failure Threshold is as defined in Consolidated Schedule 1 (*Definitions*).

6.4 Unless stated otherwise in this Consolidated Schedule, the Achieved Service Level for all Service Management Service Criteria shall be calculated in accordance with the following formula:

X = ((Z – Y) / Z) * 100%

Where:

"**Y**" is the total number of Service Management Events across all Customer Authority Sites, that have not met the relevant Service Level in the Agreed Service Time applicable to that Customer Authority Site, during the Service Measurement Period; and

"**Z**" is the total number of Service Management Events, across all Customer Authority Sites during the Service Measurement Period.

6.5 Unless stated otherwise in this Consolidated Schedule, the Achieved Service Level for all Provisioning Service Criteria shall be measured by reference to the length of time specified in the relevant Service Level description (as set out in Part B of this Consolidated Schedule).

6.6 Unless stated otherwise in Part B of this Consolidated Schedule, the Service Credit (£) is calculated by Service Credit (£) = Service Credit Percentage x Service Charge for the Service Measurement Period.

6.7 The Service Charge referred to in the calculation set out in Paragraph 6.6 above shall at all times be the relevant Service Charge described in relation to each Service Level in Part B of this Consolidated Schedule; and that the Contractor has become entitled to charge the Customer Authority for in accordance with Consolidated Schedule 9 (*Charges and Invoicing*) during the relevant Service Measurement Period.

6.8 Service Credits for a particular Service for the Service Criteria are cumulative (that is Service Credits for all four (4) Service Criteria (if specified for the relevant Service) will be added together to make the total Service Credit payable for that Service.

6.9 Aggregate Service Credits for all Services delivered by the Contractor to the Customer Authority shall be limited in each Service Measurement Period to fifty percent (50%) of the aggregate Service Charges payable to the Contractor within the same Service Measurement Period.

6.10 Service Credits for Provisioning do not work in the same way as for the other Service Criteria. Where Service Levels exist for Provisioning, Service Credits are required to be paid where the Achieved Service Level for Provisioning is in excess of twenty five percent (25%) longer than the Service Level for such Provisioning. The Service Credit for breach of a Service Level for Provisioning will be fifty percent (50%) of the Non-Recurring Charge for the relevant Service Element.

6.11 The Customer Authority may use the Monthly Summaries to, among other things, verify the calculation and accuracy of the Service Credits, if any, applicable to each relevant Service Measurement Period.

6.12 Service Credits are a reduction of the amounts payable in respect of the Services and do not include VAT. The Contractor shall set-off the value of any Service Credits against the appropriate invoice in accordance with Clause 7.23 of this Consolidated Contract and Part B (*Invoicing*) of Consolidated Schedule 9 (*Charges and Invoicing*).

6.13 Nothing in this Consolidated Schedule prevents or restricts a Critical Service Failure or other failure from arising and affording the Customer Authority the remedies available to it in this Consolidated Contract.

Availability of the Connectivity Service – Example Service Credit Calculation with different Agreed Service Times

6.14 The Availability of the Connectivity Service is an Instance Service Level. This Service Level measures the Availability of the Connectivity Service at each Connection. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8.2 of Part B provides that the AST for an Instance Service Level is (in the case of a Connection) the AST of the Customer Authority

Site at which the Connection is hosted unless provided otherwise in Part B, and Part B does not provide otherwise in regard to the AST for a Connection.

6.15 An example Service Credit regime for the Availability of a number of Connections within the Connectivity Service is as follows:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Non-Resilient Connection (Fixed Access) (*Instance Service Level*)	50	99.75%	99.50%	12.50%	25.00%

Table 3 - Example Service Credits for Availability of the Connectivity Service

6.15.1 Let us assume for the purpose of this example that there are three (3) Connections provided during the relevant Service Measurement Period. For a particular Customer Authority Site (called in this example "**Site 1**") the Agreed Service Time is 00.00-24:00 hours, Monday to Sunday (Option A) and one (1) OFFICIAL 1 Gbit/s Non-Resilient Connection wholly within the UK Connectivity Subscriber Domain (called in this example "**Connection 1**") is provided. For a second Site (called in this example "**Site 2**") the Agreed Service Time is 08:00-18:00 hours Monday to Friday (Option B), and two (2) OFFICIAL 1 Gbit/s Non-Resilient Connections wholly within the UK Connectivity Subscriber Domain (called in this example "**Connection 2**" and "**Connection 3**") are provided. The Service Measurement Period is thirty (30) days in duration, and all of those days fall within the Agreed Service Time stipulated by Option A, and 19 of those days fall within the Agreed Service Time stipulated by Option B. Within the applicable Agreed Service Time during the Service Measurement Period, Connection 1 had a Service Downtime of thirty (30) minutes, Connection 2 had zero (0) Service Downtime and Connection 3 had a Service Downtime of six (6) hours.

6.15.2 In this example the Achieved Service Level for each respective Connection is, in accordance with Paragraph 17.2.4 of Part B, calculated using the formula for Service Availability at Paragraph 4.1.1 above and is as follows:

Achieved Service Level **= ((MP – SD) / MP) * 100%**

Achieved Service Level (Connection 1)

Where:

MP = 24 hours x 30 days = 720 hours

SD = 0.5 hours

Therefore:

Service Availability = ((720 – 0.5) / 720) x 100% = 99.931%

Achieved Service *Where:*

Level (Connection 2)

MP = 10 hours x 19 days = 190 hours

SD = 0 hours

Therefore:

Service Availability = ((190 – 0) / 190) x 100% = 100.000%

Achieved Service Level (Connection 3)

Where:

MP = 10 hours x 19 days = 190 hours

SD = 6 hours

Therefore:

Service Availability = ((190 – 6) / 190) x 100% = 96.842%

6.15.3 The above values for the Achieved Service Level may, in accordance with Paragraph 17.4 of Part B, be used to calculate any Service Credits for the Availability of the Connectivity Service applicable to each of the above Connections.

Availability of the Connectivity Service – Basic Calculation of Service Credit Percentages and Service Credits (£), Instance Service Levels

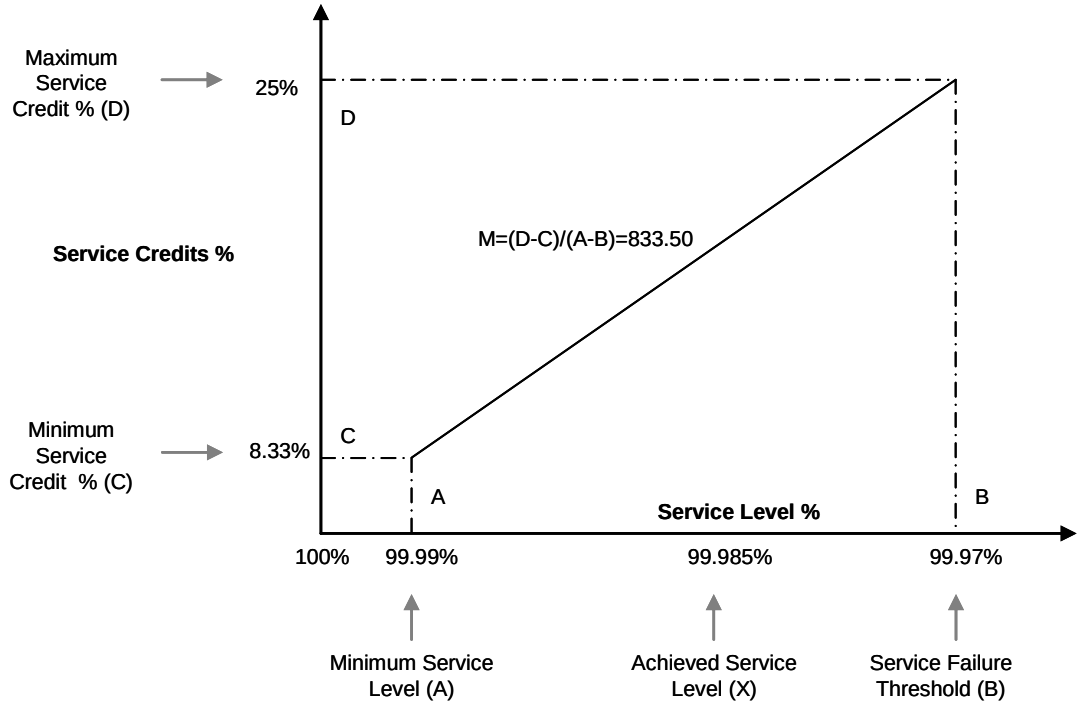
6.16 The Availability of the Connectivity Service is an Instance Service Level. This Service Level measures the Availability of the Connectivity Service at each Connection. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8.2 of Part B provides that the AST for an Instance Service Level is (in the case of a Connection) the AST of the Customer Authority Site at which the Connection is hosted unless provided otherwise in Part B, and Part B does not provide otherwise in regard to the AST for a Connection.

6.17 An example Service Credit regime for the Availability of a single Connection within the Connectivity Service is as follows:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Resilient Fully Diverse (Separation) Connection (Fixed Access) (*Instance Service Level*)	833.50	99.99%	99.97%	8.33%	25.00%

Table 4 - Example Service Credit for Availability of the Connectivity Service

The example Service Credit regime is shown diagrammatically as follows:



6.17.1 Let us assume for the purpose of this example that we are calculating the Availability of a single SECRET 1 Gbit/s Resilient Fully Diverse (Separation) Connection within the UK Connectivity Subscriber Domain, that is located on a Customer Authority Site with an Agreed Service Time of Option A (i.e. 00.00-24.00 hours, Monday to Sunday (inclusive)) for the Service Measurement Period, and the Service Measurement Period is thirty (30) days in duration. Within this Agreed Service Time during the Service Measurement Period, there is a total Service Downtime of seven and a half minutes (0.125 hours) for the Connection. The Service Charge (being, in accordance with Paragraph 17.4.5 of Part B, the total Recurring Charges associated with such Connection) for the Service Measurement Period is one thousand pounds sterling (£1,000). Previous performance for Connection 1 had exceeded the Service Level for Availability (i.e. there are no Repeat Failures and the Repeat Failure Multiplier is 1).

6.17.2 In this example:

(i) **Achieved Service Level = ((MP – SD) / MP) * 100%**

Where:

MP = 24 hours per day * 30 days = 720 hours

SD = 7.5 minutes (i.e. 0.125 hours)

Therefore:

Achieved Service Level = ((720 – 0.125) / 720) * 100% = 99.983%

(ii) **Service Credit Percentage (£) = (M * (A – X) + C) * Repeat Failure Multiplier**

Where:

M = (D – C) / (A – B) = (25 – 8.33%) / (99.99% – 99.97%) = 833.50

A = 99.99%

X = 99.983%

C = 8.33%

Therefore:

Service Credit Percentage (£) = (833.50 * (99.99% – 99.983%) + 8.33%) = 14.165%

(iii) **Service Credit (£) = Service Charge x Service Credit Percentage**

Where:

Service Charge = £1,000

Service Credit Percentage = 14.165%

Therefore:

Service Credit (£) = £1,000 x 14.165% = £141.65

6.18 An equivalent calculation to that set out at Paragraph 6.17 above needs to be performed for each Service Level for the Availability of the Connectivity Service, for all Connections, in order to calculate the total Service Credit for the Availability of the Connectivity Service.

Availability of the PPS – Example Service Credit Calculation

6.19 The Availability of the Point to Point Service is an Instance Service Level. This Service Level measures the Availability of each PPS Connection. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8.2 of Part B provides that, unless provided otherwise in Part B, the AST for an Instance Service Level in the case of a PPS Connection is the AST of the Customer Authority Sites on which the ends of that PPS Connection are hosted or (where such Customer Authority Sites have different ASTs) the times during which the respective ASTs of such Customer Authority Sites overlap. Part B does not provide otherwise in regard to the AST for a Connection.

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Non-Resilient PPS Connection – Ethernet and Fibre Channel Interface Type (*Instance Service Level*)	25	99.90%	99.00%	2.50%	25%

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Non-Resilient PPS Connection ATM Access Synchronous Interface Types (*Instance Service Level*)	25	99.90%	99.00%	2.50%	25%

Table 5 - Example Service Credit for Availability for the PPS

6.20 An example Service Credit calculation for the performance of PPS Connections within the Connectivity Service against the Service Levels set out in Paragraph 18 of Part B is as follows:

6.20.1 There are three (3) PPS Connections provided during the relevant Service Measurement Period: an OFFICIAL 1 Gbit/s Non-Resilient Ethernet PPS Connection wholly within the UK PPS Subscriber Domain (called in this example "**PPS Connection 1**"); a second OFFICIAL 1 Gbit/s Non-Resilient Ethernet Fixed PPS Connection wholly within the UK PPS Subscriber Domain (called in this example "**PPS Connection 2**"); and a single OFFICIAL 155.520 Mbit/s Non-Resilient ATM Access Fixed PPS Connection split across domains with one end in Cyprus (called in this example "**PPS Connection 3**"). For these types of PPS Connections, the relevant Service Level is ninety nine point nine per cent (99.90%) and the Service Failure Threshold is ninety nine per cent (99.00%). The total monthly Recurring Charge for the Service Measurement Period is one thousand pounds sterling (£1,000) for PPS Connection 1 and PPS Connection 2. The total monthly Recurring Charge for PPS Connection 3 is eight hundred pounds sterling (£800) plus a PPS Overseas Cost Adjustment of two hundred and fifty pounds sterling (£250) for Cyprus. Note that there are a number of Fixed PPS Connections that use PPS Connection 3 as a bearer but these are not relevant for the Service Credit calculation. Previous performance for all PPS Connections had exceeded the Service Level for Availability.

6.20.2 In this example:

(i) **Achieved Service Level**

Let us assume that the Achieved Service Level for all three (3) PPS Connections has already been calculated, in accordance with the formula described in Paragraph 18.4.5 of Part B. On the basis of those calculations, the Availability of PPS Connection 1 was recorded as ninety nine point eight five per cent (99.85%) for a Service Measurement Period; the Availability of PPS Connection 2 was recorded as ninety nine point nine nine nine per cent (99.999%) for the same Service Measurement Period; and the Availability of PPS Connection 3 was recorded as ninety nine point seven per cent (99.7%).

(ii) **<u>Service Credit Percentage</u> = (M * (A – X) + C) * Repeat Failure Multiplier**

Service Credit Percentage (PPS Connection 1)	= 25 x (99.9% - 99.85%) + 2.5% = 3.750%
Service Credit Percentage (PPS Connection 2)	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (PPS Connection 3)	= 25 x (99.9% - 99.700%) + 2.5% = 7.500%

(iii) **<u>Service Credit</u> (£) = Service Charge x Service Credit Percentage**

Service Credit (£) (PPS Connection 1)	= 3.750% x £1,000 = £37.50
Service Credit (£) (PPS Connection 2)	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit (£) (PPS Connection 3)	= 7.5% x (£800.00 + £250.00) = £78.75

Therefore:

the total Service Credit for the Availability of the Point to Point Service during the **Service Measurement Period is £37.50 + £78.75 = £116.25.**

6.21 An equivalent calculation to that set out at Paragraph 6.20 above needs to be performed for each Service Level for the Availability of the Point to Point Service, for all PPS Connections, in order to calculate the total Service Credit for the Availability of the Point to Point Service.

Availability of the Boundary Protection Service – Basic Example Service Credit Calculation

6.22 Each Service Level for the Availability of the Boundary Protection Service is a Network Service Level. These Service Levels measure the Availability of the entire Boundary Protection Service. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8.2 of Part B provides that the AST for a Network Service level is 00.00-24.00 hours, Monday to Sunday (inclusive), unless provided otherwise in Part B, and Part B does not provide otherwise in regard of the AST of the Boundary Protection Service.

6.23 An example Service Credit regime for the Availability of the Boundary Protection Service is as follows:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the Remote Access Gateway(*Network Service Level*)	200	99.95%	99.85%	5%	25%
Availability of the OFFICIAL Secure Interface(s) (*Network Service Level*)	20	99.5%	98.5%	5%	25%
Availability of the SECRET Secure Interface(s) (*Network Service Level*)	20	99.5%	98.5%	5%	25%
Availability of the Internet Capability (*Network Service Level*)	16.7	99.20%	98.00%	5%	25%
Availability of the PSN/GSI Capability (*Network Service Level*)	16.7	99.20%	98.00%	5%	25%
Availability of the N3 Capability (*Network Service Level*)	16.7	99.20%	98.00%	5%	25%
Average Availability of all BPS Accounts (*Network Service Level*)	200	99.95%	99.85%	5%	25%

Table 6 - Example Service Credits for Availability for the Boundary Protection Service

6.23.1 Let us assume for the purpose of this example, that the Service Measurement Period is thirty (30) days in duration. The BPS User Accounts total 100,000 and the BPS Remote Access User Accounts total 10,000. For the purposes of this example it can be assumed there are no other types of BPS Accounts being provided (that is, there are nil BPS Business Server Gateway Accounts, BPS Industry/OGD Accounts and BPS Gateway Reverse Web Proxy Accounts). The Service Charge (for all BPS Accounts being, in accordance with Paragraph 20.4.3 of Part B, the sum of the monthly Recurring Charge for all BPS Accounts during the Service Measurement Period) is one thousand five hundred pounds sterling (£1,500) for BPS User Accounts and is five hundred pounds sterling (£500) for BPS Remote Access User Accounts. The total monthly Recurring Charge for all BPS Capability

Charge Service Elements during the same Service Measurement Period is one thousand pounds sterling (£1,000) per Capability Charge Service Element. Previous performance for all Boundary Protection Services had exceeded the Service Level for Availability.

6.23.2 In this example:

(i) **Achieved Service Level**

Assume that the relevant Achieved Service Level has already been calculated, using the formulas described in Paragraph 20.2.3 of Part B. On the basis of those calculations:

(a) the average Availability of the BPS User Accounts were recorded as ninety nine point nine three per cent (99.93%) for the Service Measurement Period, and the average Availability of the BPS Remote Access User Accounts were recorded as ninety nine point nine per cent (99.90%) for the same Service Measurement Period. Therefore, the Average Availability of all BPS Accounts is (in accordance with Paragraph 20.2.3 of Part B): (100,000 x 99.93% + 10,000 x 99.90%) / (100,000 +10,000) = 99.927%; and

(b) in the same Service Measurement Period the Availability of the OFFICIAL Secure Interface was recorded as ninety nine point nine five per cent (99.95%); the Availability of the SECRET Secure Interface was recorded as ninety nine point nine five per cent (99.95%); the Availability of the Remote Access Gateway was recorded as ninety nine per cent (99.00%); the Availability of the Internet Capability was recorded as ninety nine point five per cent (99.50%); the Availability of the PSN/GSI Capability was recorded as ninety nine point nine per cent (99.90%); and the Availability of the N3 Capability was recorded as ninety nine per cent (99.00%).

(ii) **Service Credit Percentage = (M*(A – X) + C) * Repeat Failure Multiplier**

Service Credit Percentage (OFFICIAL Secure Interface)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (SECRET Secure Interface)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (Remote Access Gateway)	= 200 x (99.95% - 99.00%) + 5% = 25% (Percentage capped at Maximum Service Credit Percentage of 25%)
Service Credit Percentage (Internet Capability)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (PSN/GSI Capability)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage	= 16.67 x (99.20% - 99.00%) + 5% = 8.333%

(N3 Capability)

Service Credit Percentage (All BPS Accounts) = 200 x (99.95% - 99.927%) + 5% = 9.545%

(iii) **Service Credit (£) = Service Charge x Service Credit Percentage**

Service Credit (£) (OFFICIAL Secure Interface) = n / a (the Service Level has been met, and so Service Credits do not apply)

Service Credit (£) (SECRET Secure Interface) = n / a (the Service Level has been met, and so Service Credits do not apply)

Service Credit (£) (Remote Access Gateway) = 25.000% x £1,000 = £250.00

Service Credit (£) (Internet Capability) = n / a (the Service Level has been met, and so Service Credits do not apply)

Service Credit (£) (PSN/GSI Capability) = n / a (the Service Level has been met, and so Service Credits do not apply)

Service Credit (£) (N3 Capability) = 8.333% x £1,000 = £83.33

Service Credit (£) (All BPS Accounts) = 9.545% x £2,000 = £190.91

Therefore:

the Service Credit for the Boundary Protection Service is **£250.00 + £83.33 + £190.91 = £524.24.**

Availability of the Managed Data LAN Service – Example Service Credit Calculation

6.24 The Availability of the Managed Data LAN Service is a Site Service Level. This Service Level measures the Availability of Data Ports at each Customer Authority Site. With respect to each Customer Authority Site, there shall be a single Achieved Service Level calculation for each Security Classification.

Service Level Name	Coefficient (M)	Service Levels for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit% (C)	Maximum Service Credit % (D)
Availability of the Managed Data LAN Service	100	99.90%	99.75%	10.0%	25.0%

Service Level Name	Coefficient (M)	Service Levels for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit% (C)	Maximum Service Credit % (D)
excluding the Wireless RA LAN and Wireless LAN Service (*Site Service Levels*)					

Table 6B - Example Service Credit for Availability for the Managed LAN

6.25 An example Service Credit calculation for the Availability of the Managed Data LAN Service against the Service Levels set out in Paragraph 21 of Part B is as follows:

6.25.1 On a particular Customer Authority Site, for the OFFICIAL Security Classification, the Managed Data LAN Service delivers Data LAN Connectivity through three (3) access switches. "**Switch 1**", "**Switch 2**" and "**Switch 3**" and these access switches have twenty four (24), twenty four (24) and forty eight (48) Data Ports respectively (which makes a total of ninety-six (96) Data Ports). For the purposes of this example, the applicable Recurring Charges are ten pounds sterling (£10) per Data Port. The total Recurring Charges are nine hundred and sixty pounds sterling (£960) per month in respect of all ninety six (96) Data Ports.

6.25.2 Across all Sites the agreed PSN Service Class of Service traffic mix is eighty eight per cent. (88%) PSN Default Service Class and twelve per cent. (12%) PSN Real-Time Service Class for OFFICIAL data traffic.

6.25.3 Let us assume for the purpose of this example that the Customer Authority Site has an Agreed Service Time of Option A (i.e. 00.00-24.00 hours, Monday to Sunday (inclusive) for the Service Measurement Period, and the Service Measurement Period is thirty (30) days in duration. Within this Agreed Service Time during the Service Measurement Period Switch 1 has a total Service Downtime of 7.2 hours and this Downtime affects all PSN Service Class traffic equally, whilst Switch 2 and Switch 3 have nil Service Downtime. Previous performance for all switches had exceeded the Service Level for Availability (i.e. there are no Repeat Failures and the Repeat Failure Multiplier is 1).

6.25.4 In this example the Achieved Service Level for Switch 1 is:

i. **$\underline{\text{Achieved Service Level}}_{\underline{\text{Switch 1}}} = ((MP - SD) / MP) * 100\%$**

Where:

MP = 24 hours per day * 30 days = 720 hours

SD = 7.2 hours

Therefore:

Achieved Service Level $_{\text{Switch 1}}$ = ((720 – 7.2) / 720) * 100%

= 99.000%

For Switches 2 and 3 the Achieved Service Levels are 100%

ii. **Achieved Service Level $_{\text{Site}}$ = Average of all Achieved Service Levels for each access switch, weighted according to the number of Data Ports at the relevant access switch**

= (24/96 x 99%) + (24/96 * 100%) + (48/96 x 100%)

= 99.75%

iii. **Service Credit Percentage = (M * (A – X) + C) * Repeat Failure Multiplier**

Where:

M = (D – C) / (A – B) = (25% – 10%) / (99.9% – 99.75%) = 100

A = 99.90%

X = 99.75%

C = 10.00%

Therefore:

Service Credit Percentage = (100.00 * (99.90% – 99.75%) + 10.00%) = 25.00%

iv. **Service Credit (£) = Service Charge x Service Credit Percentage**

Service Credit (£) (Real Time, Site LAN OFFICIAL) = 25.00% x £960 x 12% = £28.80

Service Credit (£) (Default, Site LAN OFFICIAL) = 25.00% x £960 x 88% = £211.20

Therefore:

Service Credit (£) = £28.80 + £211.20 = £240

6.26 An equivalent calculation to that set out at Paragraph 6.25 above needs to be performed for each Security Classification and for each Customer Authority Site that receives the Managed Data LAN Service in order to calculate the total Service Credit for the Availability of the Managed Data LAN Service.

Quality of the PPS – Example Service Credit Calculation

6.27 The Quality of the PPS is an Instance Service Level. This Service Level measures the Quality of each PPS Connection. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8.2 of Part B provides that, unless provided otherwise in Part B, the AST for an Instance Service Level in the case of a PPS Connection is the AST of the Customer Authority Sites on which the ends of that PPS Connection are hosted or (where such Customer Authority Sites have different ASTs) the times during which the respective ASTs of such Customer Authority Sites overlap. Part B does not provide otherwise in regard to the AST for a PPS Connection.

Service Level Name (Interface Type)	Coefficient (M)	Service Level (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Ethernet MAN Connections	-0.0375	OWD Less than or equal to 8ms	OWD is more than 12ms	10%	25%
Ethernet VLL Connections	-0.025	OWD Less than or equal to 10ms	OWD is more than 16ms	10%	25%

Table 7 - Example Service Credits for Quality of the PPS

6.28 An example Service Credit calculation for the performance of PPS Connections within the PPS against the Service Levels set out in Paragraph 18 of Part B is as follows:

6.28.1 Let us assume for the purpose of this example, that we are measuring the OWD of a single OFFICIAL 1 Gbit/s Non-Resilient Ethernet - MAN Fixed PPS Connection wholly within the UK PPS Subscriber Domain ("**PPS Connection 1**"), and of a single OFFICIAL 1 Gbit/s Non-Resilient Ethernet - VLL Fixed PPS Connection wholly within the UK Connectivity Subscriber Domain ("**PPS Connection 2**"). The relevant Service Levels are less than eight milliseconds (8ms) for PPS Connection 1 and less than ten milliseconds (10ms) for PPS Connection 2. The Service Failure Thresholds are less than twelve milliseconds (12ms) for PPS Connection 1 and less than sixteen milliseconds (16ms) for PPS Connection 2. The total monthly Recurring Charge during the Service Measurement Period is one thousand pounds sterling (£1,000) for PPS Connection 1 and eight hundred pounds sterling (£800)

for PPS Connection 2. Previous performance for all PPS Connections had exceeded the Service Level for Availability.

6.28.2 In this example:

(i) **Achieved Service Level**

Let us assume that the Achieved Service Level for both PPS Connections has already been calculated in accordance with Part B, using the formula and measurement techniques described at Paragraph 18.5 of Part B. On the basis of those calculations, the OWD for PPS Connection 1 was recorded as ten milliseconds (10ms) and the OWD for PPS Connection 2 was recorded as four milliseconds (4ms).

(ii) **Service Credit Percentage = (M * (A – X) + C) * Repeat Failure Multiplier**

Service Credit Percentage (PPS Connection 1)	= -0.0375 x (8ms – 10ms) + 10% = 17.50%
Service Credit Percentage (PPS Connection 2)	= n / a (the Service Level has been met, and so Service Credits do not apply)

(iii) **Service Credit (£) = Service Charge x Service Credit Percentage**

Service Credit (£) (PPS Connection 1)	= 17.50% x £1,000 = £175.00
Service Credit (£) (PPS Connection 2)	= n / a (the Service Level has been met, and so Service Credits do not apply)

Therefore:

the total Service Credit for PPS Connection 1 and PPS Connection 2 is **£175.00 + £0 = £175.00.**

6.29 An equivalent calculation to that set out at 6.25 will need to be repeated in respect of all PPS Connections, in order to calculate the total Service Credit for the Quality of the Point to Point Service.

Quality of the Connectivity Service (Round Trip Delay) – More Complex Example Service Credit Calculations Involving Different PSN Service Classes

6.30 The Quality of the Connectivity Service (Round Trip Delay) is an Instance Service Level. This Service Level measures the Quality of each Connection. There shall be a single Achieved Service Level calculation and a single Service Credit calculation with respect to each such measure. Paragraph 8 of Part B provides that, unless provided otherwise in Part B, the AST for an Instance Service Level in the case of a Connection is the AST of the Customer Authority Sites on which the ends of that that Connection are hosted or (where such Customer Authority Sites have different ASTs) the times during which the respective

ASTs of such Customer Authority Sites overlap. Part B does not provide otherwise in regard to the AST for a Connection.

6.31 An example Service Credit regime for the Round Trip Delay of two (2) PSN Service Classes within the Connectivity Service is as follows:

Service Level Name	Coefficient (M)	Service Level (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
PSN Real-Time (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 20ms	Round Trip Delay is 25ms or more	5%	10%
PSN Default (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 30ms	Round Trip Delay is 35ms or more	5%	10%

Table 8A - Example Service Credits for Round Trip Delay for the Connectivity Service

6.31.1 There are only two (2) PSN Service Classes in this example (PSN Real-Time and PSN Default), and N Connections, including a single SECRET 1 Gbit/s Non-Resilient Connection within the UK Connectivity Subscriber Domain ("**Connection 1**") and a single OFFICIAL 100 Mbit/s Non-Resilient Connection ("**Connection 2**"). The total monthly Recurring Charge for Connection 1 during any Service Measurement Period is one thousand pounds sterling (£1,000) and for Connection 2 the total monthly Recurring Charge is five hundred pounds sterling (£500). For all other Connections the total monthly Recurring Charge is five hundred pounds sterling (£500) per Connection. The PSN Service Class Percentage of PSN Default for all Connections has been determined as eighty eight per cent (88%), and the PSN Service Class Percentage of PSN Real-Time has been determined as twelve percent (12%). There is no data traffic of other PSN Service Classes. Previous performance for all Round Trip Delay measurements for Connections had exceeded the Service Levels.

6.31.2 In this example:

(i) **Achieved Service Level**

Let us assume that the Achieved Service Level for all *N* Connections have already been calculated in accordance with the formula and measurement techniques described at Paragraph 17.5 of Part B. The Round Trip Delay of PSN Service Class PSN Real-Time data traffic for Connection 1 was recorded as twenty seven milliseconds (27ms) when averaging measurements made according to PSN Default measurement method of Paragraph 17.5 of Part B for a Service Measurement Period. For the same Connection in the same Service Measurement Period the Round Trip Delay

of PSN Service Class PSN Default data traffic was recorded as twenty nine milliseconds (29ms), again measured as per Paragraph 17.5 of Part B. For Connection 2, the Round Trip Delay of PSN Service Class PSN Real-Time data traffic was recorded as nineteen milliseconds (19ms) and the Round Trip Delay of PSN Service Class PSN Default data traffic was recorded as thirty one milliseconds (31ms) for the same Service Measurement Period.

(ii) **Service Credit Percentage = (M * (A - X) + C) * Repeat Failure Multiplier**

In accordance with Paragraph 17.9.2 of Part B, the Service Credit Percentage for Quality of the Connectivity Service shall be determined for each PSN Service Class applicable to that Connection. In this example, the only PSN Service Classes applicable to Connections 1 and 2 are PSN Real-Time and PSN Default. Therefore, the Service Credit Percentages are as follows:

Service Credit Percentage (PSN Real-Time, Connection 1)	= -0.010 x (20ms – 27ms) + 5% = 10.000% (Percentage capped at Maximum Service Credit Percentage of 10%)
Service Credit Percentage (PSN Default, Connection 1)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (PSN Real-Time, Connection 2)	= n / a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (PSN Default, Connection 2)	= -0.010 x (30ms – 31ms) + 5% = 6.000%
Service Credit Percentage (PSN Real-Time, Connection 3)	**= M x ($A_{(RT)} – X_{3\,(RT)}$) + C = $SCP_{3\,(RT)}$** (Where X_3 is the measured RTD for PSN Real-Time)
Service Credit Percentage (PSN Default, Connection 3)	**= M x ($A_{(PSN\ Default)} – X_{3\,(PSN\ Default)}$) + C = $SCP_{3\,(PSN\ Default)}$** (Where X_3 is the measured RTD for PSN Default)
	…
Service Credit Percentage (PSN Real-Time, Connection N)	**= M x ($A_{(RT)} – X_{N\,(RT)}$) + C = $SCP_{N\,(RT)}$** (Where $X_{N\,(RT)}$ is the measured RTD for PSN Real-Time)
Service Credit Percentage (PSN Default, Connection N)	**= M x ($A_{(PSN\ Default)} – X_{N\,(PSN\ Default)}$) + C = $SCP_{N\,(PSN\ Default)}$** (Where $X_{N\,(PSN\ Default)}$ is the measured RTD for PSN Default)

(iii) **Service Credit (£) = Service Credit Percentage * Service Charges * PSN Service Class Percentage**

Service Credit (£) (PSN Real-Time, Connection 1)	= 10.000% x £1,000 x 12% = £12.00
Service Credit (£) (PSN Default, Connection 1)	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit (£) (PSN Real-Time, Connection 2)	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit (£) (PSN Default, Connection 2)	= 6.000% x £500 x 88% = £26.40

6.32 An equivalent calculation to that set out at Paragraph 6.31 above for Connections 1 and 2 needs to be performed for all *N* Connections in the Service Measurement Period, in order to calculate the total Service Credit for the Quality of the Connectivity Service.

Quality of the Connectivity Service (Round Trip Delay) – Example Service Credit Calculations Involving Measurements from a Subset of Customer Authority Sites

6.33 The Quality of the Connectivity Service (Round Trip Delay) is an instance Service Level. As described in Paragraph 6.30 in the example above this Service Level measures the Quality of each Connection but in accordance with Paragraph 17.5.4 of Part B not all Connections need to be measured if this has previously been agreed with the Customer Authority in which case an average Achieved Service Level must be calculated in accordance with Paragraph 17.5.4(ix) of Part B.

6.34 This example uses the Service Credit regime as laid out in the example above at Paragraph 6.31.

6.34.1 There are only two (2) PSN Service Classes in this example (PSN Real Time and PSN Default), and a total ten (10) Connections, including a single OFFICIAL 1 Gbit/s Non-Resilient Connection within the UK Connectivity Subscriber Domain ("**Connection 1**") and a single OFFICIAL 100 Mbit/s Non-Resilient Connection ("**Connection 2**"). All other Connections are the same type as Connection 2. The total monthly Recurring Charge for Connection 1 during any Service Measurement Period is one thousand pounds sterling (£1,000) and for Connection 2 the total monthly Recurring Charge is five hundred pounds sterling (£500). For all other Connections the total monthly Recurring Charge is the same as Connection 2, namely five hundred pounds sterling (£500) per Connection. The PSN Service Class Percentage of PSN Default for all Connections has been determined as eighty eight per cent (88%), and the PSN Service Class Percentage of PSN Real - Time has been determined as twelve percent (12%). There is no data traffic of other PSN Service Classes. Previous performance for all Round Trip Delay measurements for Connections had exceeded the Service Levels.

6.34.2 In this example:

(i) **Achieved Service Level**

For this example Connection 1 and Connection 2 are measured and have Achieved Service Levels calculated in accordance with the formula and measurement techniques described at Paragraph 17.5 of Part B. The Round Trip Delay of PSN Service Class PSN Real -Time data traffic for Connection 1 was recorded as twenty seven milliseconds (27ms) when averaging measurements made according to PSN Default measurement method of Paragraph 17.5 of Part B for a Service Measurement Period. For the same Connection in the same Service Measurement Period the Round Trip Delay of PSN Service Class PSN Default data traffic was recorded as twenty eight milliseconds (28ms), again measured as per Paragraph 17.5 of Part B. For Connection 2, the Round Trip Delay of PSN Service Class PSN Real -Time data traffic was recorded as nineteen milliseconds (19ms) and the Round Trip Delay of PSN Service Class PSN Default data traffic was recorded as thirty one milliseconds (31ms) for the same Service Measurement Period.

(ii) **Average Achieved Service Level**

In accordance with Paragraph 17.5.4(ix) of Part B the average Achieved Service Levels for each PSN Service Class are:

Average Achieved Service Level (PSN Real - Time)	= (27ms + 19ms) / 2 = 23ms
Average Achieved Service Level (PSN Default)	= (28ms + 31ms) / 2 = 29.5ms

(iii) **Service Credit Percentage = (M * (A - X) + C) * Repeat Failure Multiplier**

In accordance with Paragraph 17.5 of Part B, the Service Credit Percentage for Quality of the Connectivity Service shall be determined for each PSN Service Class. In this example the Achieved Service Levels used to calculate the Service Credit Percentages shall be the average Achieved Service Levels, calculated as follows:

Service Credit Percentage (PSN Real - Time)	= -0.010 x (20ms – 23ms) + 5% = 8.000%
Service Credit Percentage (PSN Default)	= n / a (the Service Level has been met, and so Service Credits do not apply)

(iv) **Service Credit = Service Credit Percentage * Service Charges * PSN Service Class Percentage**

Service Credit (£) (PSN Real - Time)	= 8.000% x £5,500 x 12% = £52.80

Service Credit (£) **(PSN Default)**	= n/a (the Service Level has been met, and so Service Credits do not apply)

Quality of the Managed Data LAN Service (Round Trip Delay) – Example Service Credit Calculations Involving Different PSN Service Class and Security Classification

6.35 The Quality of the Managed Data LAN Service is a Site Service Level. This Service Level measures the Quality of the Managed Data LAN Service at each Customer Authority Site, and Paragraph 21.5.7 of Part B provides that it is to be measured separately for each Security Classification of the Managed Data LAN Service at that Customer Authority Site. There shall be one Achieved Service Level calculation and one Service Credit calculation with respect to each such measure at each Customer Authority Site. Paragraph 8.2 of Part B provides that the AST for a Site Service Level is the AST of the Customer Authority Site in respect of which Service Level is being measured, unless provided otherwise in Part B, and Part B does not provide otherwise in respect of the AST of the Managed Data LAN Service.

PSN Service Class	Coefficient (M)	Service Level – Round Trip Delay (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit% (C)	Maximum Service Credit % (D)
PSN Real-Time	-0.04	Less than or equal to 30ms	More than 35ms	5%	25%
PSN Default	-0.04	Less than or equal to 40ms	More than 45ms	5%	25%

Table 8B - Example Service Credits for Round Trip Delay for the Managed Data LAN Service

6.35.1 This example is for a single Customer Authority Site and all measurements for Round Trip Delay are measured between Data Ports on this Site defined by the Customer Authority and several other Sites in the same LAN Subscriber Domain to enable the Quality measurement for LAN, these Sites also defined by the Customer Authority. There are only two (2) PSN Service Classes in this example (Real Time and Default).

6.35.2 The Recurring Charge for a single Data Port OFFICIAL is ten pounds sterling (£10) and there are 100 Data Ports on the Customer Authority Site. The Recurring Charge for a single Data Port SECRET is twenty pounds sterling (£20) and there are 25 on the same Site. Therefore the total Recurring Charges are one thousand pounds sterling (£1,000) for OFFICIAL Data LAN Connectivity and five hundred pounds sterling (£500) for SECRET Data LAN Connectivity.

6.35.3 Across all Sites the agreed PSN Service Class traffic mix is eighty eight per cent (88%) PSN Default Service Class and twelve per cent (12%) PSN Real-Time Service Class for OFFICIAL data traffic. For SECRET the traffic mix is fifty per cent

(50%) for PSN Default Service Class and fifty per cent (50%) PSN Real-Time Service Class. There is no data traffic of other PSN Service Classes for either Security Classification.

6.35.4 Previous performance for all Round Trip Delay measurements for Data LAN Connectivity had exceeded the Service Levels.

6.35.5 In this example:

(i) **Achieved Service Level**

The Round Trip Delay of PSN Service Class PSN Real-Time data traffic for a single Site receiving OFFICIAL Data LAN Connectivity was recorded as thirty two milliseconds (32ms) when averaging measurements made according to default measurement method of Paragraph 21.5.3 of Part B for the Data Ports defined by the Customer Authority for a Service Measurement Period ("**Site LAN OFFICIAL**"). For the same Site in the same Service Measurement Period the Round Trip Delay of PSN Service Class PSN Default data traffic was recorded as thirty five milliseconds (35ms), again measured as per 21.5 for the Data Ports defined by the Customer Authority. For the same Site the Round Trip Delay of PSN Service Class PSN Real-Time data traffic for the SECRET Data LAN Connectivity was recorded as thirty one milliseconds (31ms) ("**Site LAN SECRET**") and the Round Trip Delay of PSN Service Class PSN Default data traffic was recorded as forty six milliseconds (46ms) for the same Service Measurement Period.

(ii) **Service Credit Percentage = (M * (A - X) + C) * Repeat Failure Multiplier**

Service Credit Percentage (Real Time, Site LAN OFFICIAL)	= - 0.040 x (30ms – 32ms) + 5% = 13.000%
Service Credit Percentage (Default, Site LAN OFFICIAL)	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit Percentage (Real Time, Site LAN SECRET)	= - 0.040 x (30ms – 31ms) + 5% = 9.000%
Service Credit Percentage (Default, Site LAN SECRET)	= - 0.040 x (40ms – 46ms) + 5% = 25.000% (Percentage capped at Maximum Service Credit Percentage of 25%)

(iii) **The Service Credit (£) = Service Charge x Service Credit Percentage x PSN Service Class Percentage**

Service Credit (£) (Real Time, Site LAN OFFICIAL)	= 13.000% x £1,000 x 12% = £15.60

Service Credit (£) **(Default, Site LAN OFFICIAL)**	= n/a (the Service Level has been met, and so Service Credits do not apply)
Service Credit (£) **(Real Time, Site LAN SECRET)**	= 9.000% x £500 x 50% = £22.50
Service Credit (£) **(Default, Site LAN SECRET)**	= 25.000% x £500 x 50% = £62.50

Therefore:

the total Service Credit for this Customer Authority Site is **£15.00 + £0 + £22.50 + £62.50 = £100.60.**

6.36 An equivalent calculation to that set out at Paragraph 6.35 above needs to be performed for all other Customer Authority Sites that receive the Managed Data LAN Service.

Incident Resolution – Example Service Credit Calculation

6.37 Incident Resolution is an Aggregated Site Service Level. This Service Level measures the Service Management of the entire Incident Resolution Service, and Paragraph 10.1.1 of Part B provides that it does so for each Incident Priority Level at which there are Incidents. For the Incident Resolution Aggregated Site Service Level, we are measuring how many Incidents meet the Service Level within the AST of the Customer Authority Site applicable to each Incident.

6.38 An example of the Service Credit calculation for Incident Resolution is as follows:

Number of Incidents per Incident Priority Level in the Service Measurement Period	Coefficient (M)	Service Level (A). This will have been achieved if:	Service Failure Threshold (B). Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
39 or fewer Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	-0.8333	No more than one (1) Incident is Resolved in excess of the relevant Maximum Incident Resolution Time *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by completing the relevant sections of the relevant Incident Record*	Four (4) or more such Incidents are Resolved in excess of the Maximum Incident Resolution Times	2.5%	5%
40 or more Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	0.6	97.5% of all Incidents occurring during the Service Measurement Period are Resolved within the relevant Maximum Incident Resolution Times *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by*	90% of all Incidents occurring during the Service Measurement Period are Resolved within the relevant Maximum Incident Resolution Times	0.5%	5%

Number of Incidents per Incident Priority Level in the Service Measurement Period	Coefficient (M)	Service Level (A). This will have been achieved if:	Service Failure Threshold (B). Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
		completing the relevant sections of the relevant Incident Record			

Table 9 - Example Service Credits for Incident Resolution

6.38.1 For this Service:

(i) the Service Level Percentage (A) is ninety seven point five percent (97.5%);

(ii) the Service Failure Threshold (B) is ninety percent (90%);

(iii) the Minimum Service Credit % (C) is zero point five per cent (0.5%); and

(iv) the Maximum Service Credit % (D) is five per cent (5%).

6.38.2 Let us assume for the purpose of this example, that the Service Measurement Period is thirty (30) days in duration and that there are one hundred (100) Incidents at Incident Priority Level 1 within a Service Measurement Period across all Customer Authority Sites, five (5) of which are not Resolved within the Maximum Incident Resolution Time of four (4) hours for Incident Priority Level 1 within the Agreed Service Times of the Customer Authority Sites to which each respective Incident relates. The Service Charge (being, in accordance with Paragraph 10.2.3 of Part B, the total Service Charges for the Service Management Service for the Service Measurement Period) is fifty thousand pounds sterling (£50,000). Previous performance had exceeded the Service Levels for Incident Resolution Times (i.e. there are no Repeat Failures and the Repeat Failure Multiplier is 1).

6.38.3 The Service Credit calculation at Incident Priority Level 1 is:

(i) **Achieved Service Level = ((Z – Y)/Z) * 100%**

Where:

Z = 100

Y = 5

Therefore:

Achieved Service Level = ((100-5) / 100) * 100% = 95%

(ii) **Service Credit Percentage = (M * (A - X) + C) * Repeat Failure Multiplier**

Where:

M = (D – C) / (A –B) = (5 – 0.5) / (97.5 – 90.0) = 4.5 / 7.5 = 0.6

A = 97.5%

X = 95%

C = 0.5%

Therefore:

Service Credit Percentage = 0.6 x (97.5% - 95%) + 0.5% = 2%

(iii) **Service Credit (£) = Service Charge x Service Credit Percentage**

Where:

Service Charge = £50,000

Service Credit Percentage = 2%

Therefore:

Service Credit (£) = £50,000 x 2% = £1,000.00

6.39 An equivalent calculation needs to be performed for all Incidents at all other Incident Priority Levels, in order to obtain the total Service Credit for Incident Resolution.

Provisioning – Example Service Credit Calculation

6.40 An example of the Service Credit calculation for Provisioning is as follows:

6.40.1 A service has been Provisioned in a time in excess of twenty five per cent (25%) longer than the Service Level time for the Provisioning of this service. The Non-Recurring Charge is two thousand pounds sterling (£2,000).

6.40.2 The Service Credit calculation is:

Service Credit (£) = Service Charge x Service Credit Percentage (%)

Therefore:

Service Credit (£) = £2,000 x 50% = £1,000

Availability of the Connectivity Service – Example Aggregation of Instance Service Levels

6.41 Let us assume for the purpose of this example the same type of Connections as per the example at Paragraph 6.15 above. The Contractor has determined that within a particular geographic area of the UK there are a number of Connections located at Sites that have the Agreed Service Time of 00.00-24:00 hours, Monday to Sunday (Option A) and a number of Connections at Sites with the Agreed Service Time of 08:00-18:00 hours Monday to Friday (Option B). The Service Measurement Period is thirty (30) days in duration, and all of those days fall within the Agreed Service Time stipulated by Option A, and 19 of those days fall within the Agreed Service Time stipulated by Option B. The Service Charges (being, in accordance with Paragraph 17.4.5 of Part B, the total Recurring Charges associated with such Connection) for the Service Measurement Period is one thousand pounds sterling (£1,000) for each Connection. Previous performance for Connections has exceeded the Service Level for Availability (i.e. there are no Repeat Failures and the Repeat Failure Multiplier is 1).

6.41.1 In this example the Service Measurement Periods are:

Service Measurement Periods

Service Measurement Period (Option A AST)	**MP** $_{\text{OPTION A}}$ = 24 hours x 30 days = 720 hours
Service Measurement Period (Option B AST)	**MP** $_{\text{OPTION B}}$ = 10 hours x 19 days = 190 hours

6.41.2 The Triggering Service Downtimes are:

(i) **Triggering Service Downtimes**

TSD (AST A)	**TSD** $_{\text{A}}$ = 720 hours – (99.75% x 720 hours) = 1.8 hours (108 minutes)
TSD (AST B)	**TSD** $_{\text{B}}$ = 190 hours – 99.75% x 190 hours = 0.475 hours (28.5 minutes)

6.41.3 Where prior to the relevant Service Measurement Period the Contractor has proposed, in accordance with Paragraph 8.8 of Part B, to aggregate two (2) Connections on particular Sites with Agreed Service Time of Option A and four (4) Connections with Agreed Service Time of Option B, and the Customer Authority has agreed to such aggregation:

Total Triggering Service Downtime

TSD (Total)	**TSD** = (2 x 1.8 hours) + (4 x 0.475 hours) = 5.5 hours

6.41.4 In this example the Achieved Service Level for each respective Connection is, in accordance with Paragraph 17.2.4 of Part B, calculated using the formula for Service Availability at Paragraph 4.1.1 above and all Connections achieve a 100% Service Availability bar Connection 1 which is down for six (6) hours and Connection 2 which is down for one (1) hour:

(i) **Achieved Service Level**

Service Downtime	*Where:*	
		SD $_{\text{Connection 1}}$ = 6 hours
		SD $_{\text{Connection 2}}$ = 1 hours
	Therefore:	
		SD = 7 hours
Achieved Service Level	*Where:*	

SD = 7 hours

Therefore:

$$\text{Service Availability} = 1 - \frac{SD \times (1 - \text{Service Level (A)})}{TSD_{Total}}$$

$$= 1 - \frac{7 \times (1 - 99.75\%)}{5.5}$$

$$= 99.682\%$$

(ii) **Service Credit Percentage = (M * (A – X) + C) * Repeat Failure Multiplier**

Service Credit Percentage = 50 x (99.75% - 99.682%) + 12.5% = 15.91%

(iii) **Service Credit (£) = Service Charges x Service Credit Percentage**

Note the Service Charges are the total Service Charge for the aggregated Service Instance (i.e. 6 (Connections) x £1000).

Service Credit (£) = 15.91% x £6,000 = £954.55

7 NATURE OF SERVICE CREDITS

The Contractor confirms that it has modelled the Service Credits and has taken them into account in setting the level of the Charges. The Contractor agrees that the Service Credits are a reasonable method of price adjustment to reflect poor performance in breach of the required Service Levels.

PART B: SERVICE LEVELS AND SERVICE CREDITS

8 GENERAL

8.1 In this Part B:

8.1.1 Service Levels that are designated as "**Network Service Levels**", measure the entire provision of the relevant Service (including at each Security Classification or Incident Priority Level at which such Service is provided, as described in this Part B), and there shall be a single Achieved Service Level and Service Credit calculation with respect to such Service (at each Security Classification or Incident Priority Level, as described in this Part B);

8.1.2 Service Levels that are designated as "**Site Service Levels**", measure the provision of the relevant Service at each Customer Authority Site (including at each Security Classification or Incident Priority Level at which such Service is provided to the relevant Customer Authority Site, as described in this Part B), and there shall be an Achieved Service Level and Service Credit calculation with respect to each such Customer Authority Site (at each Security Classification or Incident Priority Level, as described in this Part B);

8.1.3 Service Levels that are designated as "**Instance Service Levels**", shall measure the provision of the relevant Service at each Service Instance (including at each Incident Priority Level at which such Service Level is provided to the relevant Service Instance, as described in this Part B), and there shall be an Achieved Service Level and Service Credit calculation in respect of each such Service Instance (including at each Incident Priority Level at which such Service Level is provided to the relevant Service Instance, as described in this Part B).

8.2 Unless otherwise stated in this Part B, the Achieved Service Level of:

8.2.1 Network Service Levels shall be calculated using the AST of 00.00-24.00 hours, Monday to Sunday (inclusive);

8.2.2 Site Service Levels shall be calculated using the AST of the Customer Authority Site in respect of which Service Level is being measured;

8.2.3 Instance Service Levels shall be calculated using the AST of:

(i) in the case of a Connection, the Customer Authority Site on which that Connection is hosted; and

(ii) in the case of a PPS Connection, the Customer Authority Sites on which the ends of that PPS Connection are hosted or (where such Customer Authority Sites have different ASTs) the AST shall be the times during which the respective ASTs of such Customer Authority Sites overlap,

in so far as AST is applicable to the calculation of the relevant Achieved Service Level.

8.3 Service Levels that are designated as **"Aggregated Site Service Levels**" measure the number of Service Management Events that occur across all Customer Authority Sites in a Service Measurement Period. The Achieved Service Level of Aggregated Site Service Levels measures the number of Service Management Events that meet the Service Level

within the AST of the Customer Authority Site applicable to each such Service Management Event.

8.4 There are four (4) options for the Agreed Service Time applicable to Customer Authority Sites located *within* the UK. These options are:

8.4.1 *Option A*: 00.00-24.00 hours, Monday to Sunday (inclusive);

8.4.2 *Option B*: 08.00-18.00 hours on any day excluding Saturdays, Sundays and public holidays, as appropriate, depending upon the location of the relevant Customer Authority Site;

8.4.3 *Option C*: 08:00–19:00 hours, Monday to Friday, plus 08:30–13:00 hours on Saturdays and public holidays, as appropriate, depending upon the location of the relevant Customer Authority Site; or

8.4.4 *Option D*: 07:00-19:00 hours on any day excluding Saturdays, Sundays and public holidays, as appropriate, depending upon the location of the relevant Customer Authority Site.

8.5 There are three (3) options for the Agreed Service Time applicable to Customer Authority Sites located *outside of* the UK. These options are:

8.5.1 *Option E*: 00.00-24.00 hours, Monday to Sunday (inclusive);

8.5.2 *Option F*: 07:00-19:00 hours local time on any day excluding Saturdays, Sundays and public holidays, as appropriate, depending upon the location of the relevant Customer Authority Site.

8.5.3 *Option G*: as agreed between Parties through the Contract Change Procedure in order to take account of local arrangements and public holidays.

8.6 The Customer Authority may, from time to time, on at least one (1) month's prior written notice to the Contractor, change the Agreed Service Time of any given Customer Authority Site. Changes shall be at no additional cost save that in respect of a Customer Authority Site that is changed to either Option A or Option E Agreed Service Times (as described in Paragraphs 8.4 and 8.5 above) the Contractor shall be entitled to charge the Service Management – twenty four (24) hours, seven (7) days a week Uplift in accordance with Consolidated Schedule 9 (*Charges and Invoicing*).

8.7 All Service Levels shall:

8.7.1 be measured over a Service Measurement Period unless otherwise stated;

8.7.2 be applicable to Services delivered to any and all Customer Authority Sites regardless of location unless otherwise stated; and

8.7.3 be applicable to Services regardless of the Security Classification, unless otherwise expressly stated to the contrary in this Consolidated Schedule.

8.8 Where the Triggering Service Downtime of a Service Instance in a Service Measurement Period is less than the Incident Resolution Time for an Incident Priority Level 1 Incident, then the Contractor may apply the relevant Service Level to an aggregate of other Service Instances from the same Service, provided that:

8.8.1 the maximum cumulative Triggering Service Downtime for the aggregated Service Instances does not exceed eight (8) hours. For the purpose of this Paragraph

8.8.1, "**Triggering Service Downtime**" means in respect of any one (1) Service Instance, the maximum Service Downtime that could occur in respect of such Service Instance without the applicable Service Level for Availability being breached. For example, if the Triggering Service Downtime with respect to "Connection A" is 30 minutes, then (subject to the provisions of this Paragraph 8.8) the Contractor will only be permitted to aggregate this Connection with other Connections if the cumulative Triggering Service Downtime of those other Connections is seven and a half (7.5) hours or less;

8.8.2 only Services which have the same Service Levels and Service Failure Thresholds may be aggregated;

8.8.3 the Service Charges used for calculating Service Credits shall be the total of the Service Charges for the aggregated Service Instances; and

8.8.4 the Customer Authority has given its Approval in respect of the proposed aggregation prior to the relevant Service Measurement Period.

Operation of Service Levels and Service Credits Prior to Migration

8.9 The Contractor may elect to meet the Service Levels described in Appendix 1 to this Consolidated Schedule, for the periods prior to date on which the applicable Services are Migrated.

8.10 Prior to the date on which the Contractor has been issued a Milestone Achievement Certificate for Milestone numbers:

(i) 5.5 to 5.8 (as applicable) Service Deployment (Site Roll-Out) – Migration: LAN Service;

(ii) 5.13 to 5.16 (as applicable) Service Deployment (Site Roll-Out) – Migration: Connectivity Service;

(iii) 5.21 to 5.24 (as applicable) Service Deployment (Site Roll-Out) – Migration: Cyber Access Service;

(iv) 5.29 to 5.32 (as applicable) Service Deployment (Site Roll-Out) – Migration: Point to Point Service;

(v) 5.37 to 5.40 (as applicable) Service Deployment (Site Roll-Out) – Migration: Encryption Service;

(vi) 4.11 Service Deployment (First of Class) – Implementation: Miscellaneous Connectivity Service;

(vii) 4.12 Service Deployment (First of Class) – Implementation: Bespoke Engineering Service;

(viii) 4.13 Service Deployment (First of Class) – Implementation: DNSIP Service; and

(ix) 4.14 or 4.15 (as applicable) Service Deployment (First of Class) – Implementation: Boundary Protection Service,

in respect of a particular Service (or a particular Service at a particular Customer Authority Site, as the case may be), the Service Levels described in Appendix 1 to this Consolidated Schedule shall be the lower of the following:

8.10.1 the Service Levels set out in this Part B of this Consolidated Schedule;

8.10.2 Comparable Legacy Service Levels; and

8.10.3 where the Comparable Legacy Service Level is not achieved in the three (3) months prior to the relevant Operational Service Commencement Date, the average level of service achieved in the three (3) months prior to the relevant Operational Service Commencement Date.

8.11 For those Service Levels that:

8.11.1 do not have a Comparable Legacy Service Level; or

8.11.2 which do have a Comparable Legacy Service Level but are not measured prior to the relevant Operational Service Commencement Date,

then, and only as indicated in Appendix 1 to this Consolidated Schedule, the Contractor may monitor the Service for three (3) months from the relevant Operational Service Commencement Date and the average level of service achieved over this three (3) month period shall be deemed to be the Service Level for any such Service(s) prior to the date on which the Contractor has been issued a Milestone Achievement Certificate for Milestone numbers:

8.11.3 5.5 to 5.8 (as applicable) *Service Deployment (Site Roll-Out) – Migration: LAN Service*;

8.11.4 5.13 to 5.16 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Connectivity Service*;

8.11.5 5.21 to 5.24 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Cyber Access Service*;

8.11.6 5.29 to 5.32 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Point to Point Service*;

8.11.7 5.37 to 5.40 (as applicable) *Service Deployment (Site Roll-Out) – Migration: Encryption Service*;

8.11.8 4.11 *Service Deployment (First of Class) – Implementation: Miscellaneous Connectivity Service*;

8.11.9 4.12 *Service Deployment (First of Class) – Implementation: Bespoke Engineering Service*;

8.11.10 4.13 *Service Deployment (First of Class) – Implementation: DNSIP Service*; and

8.11.11 4.14 or 4.15 (as applicable) *Service Deployment (First of Class) – Implementation: Boundary Protection Service*,

in respect of that particular Service for that particular Customer Authority Site.

8.12 Service Credits shall continue to apply from the relevant Operational Service Commencement Date (or three (3) months after that date in respect of those Services where Paragraph 8.11 above applies) should the Contractor elect (in accordance with Paragraph 8.9 above) to adopt the Service Levels set out in Paragraph 8.10 above and Appendix 1 to this Consolidated Schedule save that:

8.12.1 for the purposes of applying the calculations set out in Paragraph 6.2 of Part A, variable "A" shall be determined in accordance with Paragraphs 8.10 and 8.11 above; and

8.12.2 The Service Failure Thresholds or Variable "B" in the calculations set out in Paragraph 6.2 of Part B shall be determined in accordance with Paragraph 1 in Appendix 1 to this Consolidated Schedule.

9 INCIDENT MANAGEMENT

9.1 Service Levels for Incident Management

9.1.1 Incident Management shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Incidents raised by the Customer Authority to the Contractor			
Incident Notification *(Aggregated Site Service Level)*	The percentage of all Incidents occurring during the Service Measurement Period, which the Contractor has accepted or rejected within fifteen (15) minutes of each Incident first being received by the Contractor from the Customer Authority. *Incidents shall only be considered as being validly accepted or rejected if the Contractor has completed the relevant sections of the Incident Record and provided a reason for any rejected Incident.*	95%	90%
Incident Acceptance *(Aggregated Site Service Level)*	The percentage of all Incidents occurring during the Service Measurement Period that the Contractor is responsible for resolving, which the Contractor initially accepted when such Incidents were first received by the Contractor from the Customer Authority. *Incidents shall only be considered as being validly accepted if the Contractor has completed the relevant sections of the Incident Record.*	95%	90%

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Incidents raised by the Contractor to the Customer Authority			
Major Incident Notification *(Aggregated Site Service Level)*	The percentage of all Major Incidents occurring during the Service Measurement Period, which are notified by the Contractor to the Customer Authority within five (5) minutes of first being identified by the Contractor. *Such Contractor notification shall be effected by: (a) the creation of an Incident Record (if one does not already exist) and the completion of the relevant sections of the relevant Incident Record; and (b) a telephone call being made to the Customer Authority's incident alert manager (the identity of such manager being as is notified by the Customer Authority to the Contractor from time to time).*	99%	95%
General			
Service State Change Notification *(Aggregated Site Service Level)*	The percentage of all Service State Changes occurring during the Service Measurement Period, in respect of which the Contractor has provided an Affected Service Notification within fifteen (15) minutes of the relevant Service State Change occurring.	95%	90%

Table 10 - Service Levels for Incident Management

9.1.2 The Achieved Service Level shall be measured using the formula set out at Paragraph 6.4 of Part A.

9.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Incident Management shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 19.1.1 to 19.1.4 of Section 9 (*Service Management and Service Integration (Service Operations)*).

9.2 Service Credits for Incident Management

9.2.1 The following Service Credits for Incident Management are payable if the Service Levels for Incident Management are not met:

Service Level Name	Coefficient (M)	Service Level% (A)	Service Failure Threshold% (B)	Minimum Service Credit% (C)	Maximum Service Credit % (D)
Incident Notification *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%
Incident Acceptance	0.9	95%	90%	0.5%	5%
Major Incident Notification *(Aggregated Site Service Level)*	1.125	99%	95%	0.5%	5%
Service State Change Notification *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%

Table 11 - Service Credits for Incident Management

9.2.2 The Service Credit Percentage for Incident Management is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

9.2.3 The Service Credit (£) for Incident Management is equal to the Service Credit Percentage multiplied by the total Service Charges for the Service Management Service for the Service Measurement Period.

10 INCIDENT RESOLUTION

10.1 Service Levels for Incident Resolution

10.1.1 The Service Levels for Incident Resolution shall be measured for all Incidents at each Incident Priority Level.

10.1.2 Incident Priority Levels shall be defined as follows:

Incident Priority Level	Definition
Level 0	• Prevents one (1) or more Heightened Users from accessing one (1) or more Services, or services that rely on one (1) or more Services. Note that this Incident Priority Level only applies when the Heightened User is on a Customer Authority Site that has Option A or Option E Agreed Service Times, otherwise the Incident Priority Level is 1.

Incident Priority Level	Definition
Level 1	• Prevents more than twenty (20) End Users from accessing one (1) or more Services, or services that rely on one (1) or more Services; • has a critical impact on the ability of the Customer Authority or a PSN Service Consumer to carry out its statutory obligations; • causes major financial loss to the Customer Authority or a PSN Service Consumer; • results in material loss or corruption of any Customer Authority data or PSN Service Consumer data; or • prevents End Users of a TOP SECRET Service or Service Element from accessing one (1) or more Services, or services that rely on one (1) or more Services.
Level 2	• Prevents a group of End Users from working; • has a major (but not critical) adverse impact on the activities of the Customer Authority or a PSN Service Consumer; or • causes some financial loss to the Customer Authority, or a PSN Service Consumer.
Level 3	• prevents one (1) or more End Users from working; or • has a moderate adverse impact on the activities of the Customer Authority or a PSN Service Consumer.
Level 4	• causes a minor adverse impact on the provision of the Services, or services that rely on one (1) or more Services, to End Users.

Table 12 - Incident Priority Levels

10.1.3 The Customer Authority OSM shall assign an Incident Priority Level to Incidents and may reassess or amend such levels from time to time (in each case, in the Customer Authority's sole discretion). The Contractor shall comply with any Incident Priority Levels so assigned, reassessed or amended by the Customer Authority OSM from time to time. If the Contractor believes that an Incident Priority Level ought to be adjusted, it shall notify the Customer Authority OSM of this fact promptly.

10.1.4 Incident Resolution Times shall be calculated from the time that an Incident is first reported to the Contractor Service Desk until the time that Incident is Resolved (acknowledging that such resolution may include the implementation of a Workaround) and the Contractor has notified the Customer Authority OSM that the Incident has been Resolved.

10.1.5 The Customer Authority OSM will 'close' an Incident once it has confirmed that the End User believes Incident Resolution has in fact been achieved. Notwithstanding the foregoing, if the Contractor has in fact achieved Incident Resolution and has made three (3) attempts in good faith to confirm this with the Customer Authority OSM, but has been unable to contact the Customer Authority OSM to obtain this confirmation, the Incident will be deemed to be closed. For the avoidance of doubt,

nothing in this Paragraph 10.1.5 shall affect the calculation of the Incident Resolution Times.

10.1.6 The Maximum Incident Resolution Times for Incidents across all of the Services provided to the Customer Authority shall be as follows:

Incident Priority Level	Maximum Incident Resolution Times (within Agreed Service Time)
Level 0	Two (2) hours
Level 1	Four (4) hours
Level 2	Five (5) hours
Level 3	Eight (8) hours
Level 4	By 1900 hours local time on the next Working Day or earlier if the Working Day finishes before 1900 hours local time.

Table 13 - Maximum Incident Resolution Times

10.1.7 The Service Level for Incident Resolution is expressed as a percentage of Incidents to be Resolved within the Maximum Incident Resolution Times, or the maximum number of Incidents that can be Resolved in a time in excess of the Maximum Incident Resolution Times, as follows:

Number of Incidents per Service Measurement Period per Incident Priority Level	Service Level (A)
39 or fewer Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	No more than one (1) Incident is Resolved in excess of the relevant Maximum Incident Resolution Time *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by completing the relevant sections of the relevant Incident Record*
40 or more Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	97.5% of all Incidents occurring during the Service Measurement Period are Resolved within the relevant Maximum Incident Resolution Times *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by completing the relevant sections of the relevant Incident Record*

Table 14 - Service Levels for Incident Resolution

10.1.8 The Service Levels for Incident Resolution are Aggregated Site Service Levels.

10.1.9 The Achieved Service Level shall be calculated using the formula set out at Paragraph 6.4 of Part A, for each relevant Incident Priority Level.

10.1.10 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Incident Resolution shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs

19.1.5 to 19.1.9 of Section 9 (*Service Management and Service Integration (Service Operations)*).

10.2 Service Credits for Incident Resolution

10.2.1 The following Service Credits for Incident Resolution are payable if the Service Levels for Incident Resolution are not met:

Number of Incidents per Incident Priority Level in the Service Measurement Period	**Coefficient (M)**	**Service Level (A)**	**Service Failure Threshold (B)**	**Minimum Service Credit % (C)**	**Maximum Service Credit % (D)**
39 or fewer Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	- 0.00833	No more than one (1) Incident is Resolved in excess of the relevant Maximum Incident Resolution Time *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by completing the relevant sections of the relevant Incident Record*	Four (4) or more such Incidents are Resolved in excess of the Maximum Incident Resolution Times	2.5%	5%

40 or more Incidents across all Customer Authority Sites *(Aggregated Site Service Level)*	0.6	97.5% of all Incidents occurring during the Service Measurement Period are Resolved within the relevant Maximum Incident Resolution Times *Incidents shall only be considered as validly Resolved if the Contractor has Resolved the Incident and notified the Customer Authority OSM that it has Resolved such Incident by completing the relevant sections of the relevant Incident Record*	90% of all Incidents occurring during the Service Measurement Period are Resolved within the relevant Maximum Incident Resolution Times	0.5%	5%

Table 15 - Service Credits for Incident Resolution

10.2.2 The Service Credit Percentage for Incident Resolution is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule for each Incident Priority Level, and the variables "A", "B" and "X" shall be deemed to be percentages such that 1 Incident shall be read as 1%.

10.2.3 For each Incident Priority Level, Service Credits (£) for Incident Resolution are equal to the Service Credit Percentage for the total number of Incidents at that Incident Priority Level multiplied by the total Service Charges for the Service Management Service for the Service Measurement Period.

11 PROBLEM MANAGEMENT

11.1 Service Levels for Problem Management

11.1.1 The following Problem Priority Levels and Problem Resolution Time shall be measured from the time at which a Problem is identified or raised by the Contractor, or the time at which the Customer Authority notifies the Contractor that a situation requires Problem Management:

Problem Priority Level	Criteria	Resolution Time
1	The Problem poses significant risk to the Customer Authority's business or operations in that the Incident or	Ten (10) Working

Problem Priority Level	Criteria	Resolution Time
	series of Incidents which are caused by the Problem may result in a loss of business or significant adverse impact to the Customer Authority's operations. No Workarounds have been identified to Resolve the Problem.	Days
2	The Problem poses no immediate risk to the Customer Authority's business or operations but may, if not Resolved, result in degradation in the performance of a Service. Workarounds are available to Resolve the Problem.	One (1) month
3	The Problem poses no risk to the Customer Authority's business or operations but may in the long term impact on the overall performance of a Service.	Six (6) months

Table 16 - Problem Management Priority Levels

11.1.2 The Customer Authority OSM shall assign a Problem Priority Level to Problems and may reassess or amend such levels from time to time (in each case, in the Customer Authority's sole discretion). The Contractor shall comply with any Problem Priority Levels so assigned, reassessed or amended either by the Customer Authority OSM from time to time or as otherwise in accordance with this Consolidated Schedule. If the Contractor believes that a Problem Priority Level ought to be adjusted, it shall notify the Customer Authority OSM of this fact promptly.

11.1.3 If the Resolution of a Problem of Priority Level 1 is a Workaround the Problem Priority Level is reduced to Level 2.

11.1.4 Problem Management shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Problem Notification *(Aggregated Site Service Level)*	The percentage of all Problems occurring during the Service Measurement Period, which the Contractor has accepted or rejected within thirty (30) minutes of each Problem first being received by the Contractor from the Customer Authority. *Problems shall only be considered as being validly accepted or rejected if the Contractor has completed the relevant sections of the Problem record and provided a reason for any rejected Problem.*	95%	90%

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Problem Resolution *(Aggregated Site Service Level)*	The percentage of all Problems occurring during the Service Measurement Period that the Contractor has Resolved within the relevant Resolution Time for each Problem. *Problems shall only be considered as validly Resolved if the Contractor has Resolved the Problem and notified the Customer Authority that it has Resolved such Problem by completing the relevant sections of the relevant Problem record.*	95%	90%

Table 17 - Service Levels for Problem Management

11.1.5 The Achieved Service Level shall be measured using the formula set out at Paragraph 6.4 of Part A.

11.1.6 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Problem Management shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 19.1.10 to 19.1.11 of Section 9 (*Service Management and Service Integration (Service Operations)*).

11.2 Service Credits for Problem Management

11.2.1 The following Service Credits for Problem Management are payable if the Service Levels for Problem Management are not met:

Service Level Name	Coefficient (M)	Service Level% (A)	Service Failure Threshold% (B)	Minimum Service Credit% (C)	Maximum Service Credit% (D)
Problem Notification *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%
Problem Resolution *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%

Table 18 - Service Credits for Problem Management

11.2.2 The Service Credit Percentage for Problem Management is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

11.2.3 The Service Credit (£) for Problem Management is equal to the Service Credit Percentage multiplied by the total Service Charges for the Service Management Service for the Service Measurement Period.

12 CHANGE MANAGEMENT

12.1 Service Levels for Change Management

12.1.1 Change Management shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold% (B)
Unplanned Downtime Not Caused *(Aggregated Site Service Level)*	The percentage of Service Changes implemented during the Service Measurement Period which have not caused Unplanned Downtime.	95%	90%

Table 19 - Service Levels for Change Management

12.1.2 The Achieved Service Level shall be measured using the formula set out at Paragraph 6.4 of Part A except that Y shall be the number of Service Changes implemented during the Service Measurement Period that have caused Unplanned Downtime in the Agreed Service Time of the Customer Authority Site(s) (on which the Unplanned Downtime occurs).

12.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Change Management shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraph 19.1.1 to 19.1.7 of Section 8 (*Service Transition*).

12.2 Service Credits for Change Management

12.2.1 The following Service Credits for Change Management are payable if the Service Levels for Change Management are not met:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Unplanned Downtime Not Caused *(Aggregated*	0.9	95%	90%	0.5%	5%

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Site Service Level)					

Table 20 - Service Credits for Change Management

12.2.2 The Service Credit Percentage for Change Management is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

12.2.3 The Service Credit (£) for Change Management is equal to the Service Credit Percentage multiplied by the total Service Charges for the Service Management Service for the Service Measurement Period.

13 REQUEST FULFILMENT

13.1 Service Levels

13.1.1 Request Fulfilment shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Service Request Response *(Aggregated Site Service Level)*	The percentage of all Service Requests raised during the Service Measurement Period, which the Contractor has accepted, rejected or provided a Service Request Impact Notification for (if required in accordance with the Standards) within three (3) hours of the time that each Service Request was (as appropriate): (a) raised by the Contractor through the creation of a Service Request Record; or (b) received by the Contractor. *Service Requests shall only be considered as being validly accepted, rejected or having had a Service Request Impact Notification provided for it, if the Contractor has accepted, rejected or provided a Service Request Impact Notification for the Service Request and has completed the relevant sections of the Service Request Record and provided a reason for any rejected Service*	95%	90%

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
	Request.		
Service Request Completion *(Aggregated Site Service Level)*	The percentage of all Relevant Service Requests for a Service Measurement Period, which have in fact been fulfilled in accordance with the Service Levels. For this Service Level, "**Relevant Service Request**" means in respect of a Service Measurement Period, all Service Requests to which Service Levels for Provisioning apply and which are (in accordance with the Service Levels) due to be completed during that Service Measurement Period.	95%	90%

Table 21 - Service Levels for Request Fulfilment

13.1.2 The Achieved Service Level shall be measured using the formula set out at Paragraph 6.4 of Part A.

13.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Request Fulfilment shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraph 19.1.12 of Section 9 (*Service Management and Service Integration (Service Operations)*).

13.2 Service Credits for Request Fulfilment

13.2.1 The following Service Credits for Request Fulfilment are payable if the Service Levels for Request Fulfilment are not met:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Service Request Response *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%
Service Request Completion *(Aggregated Site Service Level)*	0.9	95%	90%	0.5%	5%

Table 22 - Service Credits for Request Fulfilment

13.2.2 The Service Credit Percentage for Request Fulfilment is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

13.2.3 The Service Credit (£) for Request Fulfilment is equal to the Service Credit Percentage multiplied by the total Service Charge for the Service Management Service for the Service Measurement Period.

14 KNOWLEDGE MANAGEMENT

14.1 Service Levels for Knowledge Management

14.1.1 Knowledge Management shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold % (B)
Knowledge Articles for Knowledge Incidents *(Network Service Level)*	The percentage of Knowledge Incidents for which the Contractor has produced and provided to the Customer Authority a Knowledge Article (which shall include details of Workarounds, known errors and known solutions) within three (3) Working Days of each Knowledge Incident being Resolved. Such Knowledge Article must comply with the Standards and shall be of sufficient quality and detail so as to enable a reasonably skilled person to understand how the Contractor, Customer Authority and Other Tower Service Providers (as appropriate) may respond effectively to and Resolve the Knowledge Incident.	95%	90%

Table 23 - Service Levels for Knowledge Management

14.1.2 The Achieved Service Level for Knowledge Management shall be calculated in accordance with the formula set out at Paragraph 6.4 of Part A, except that AST shall not apply for the purposes of the formula.

14.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for Knowledge Management shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraph 19.1.8 to 19.1.10 of Section 8 (*Service Transition*).

14.2 Service Credits for Knowledge Management

14.2.1 The following Service Credits for Knowledge Management are payable if the Service Levels for Knowledge Management are not met:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Knowledge Articles for Knowledge Incidents	0.9	95%	90%	0.5%	5%

Table 24 - Service Credits for Knowledge Management

14.2.2 The Service Credit Percentage for Knowledge Management is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

14.2.3 The Service Credit (£) for Knowledge Management is equal to the Service Credit Percentage multiplied by the total Service Charges for the Service Management Service for the Service Measurement Period.

15 MANAGEMENT INFORMATION EXCHANGE

15.1 Service Levels for the Management Information Exchange

15.1.1 The Management Information Exchange shall have the following Service Levels:

Service Level Name	Description	Service Level% (A)	Service Failure Threshold% (B)
Availability of Management Information Exchange *(Network Service Level)*	The percentage of total time during the Service Measurement Period, during which the elements of the Management Information Exchange that are the responsibility of the Contractor are Available	99.75%	99%

Table 25 - Service Levels for the Management Information Exchange

15.1.2 The Achieved Service Level for the Availability of the Management Information Exchange shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A.

15.2 Service Credits for the Management Information Exchange

15.2.1 The following Service Credits for the Management Information Exchange are payable if the Service Levels for the Management Information Exchange are not met:

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of Management Information Exchange *(Network Service Level)*	6	99.75%	99%	0.5%	5%

Table 26 - Service Credits for the Management Information Exchange

15.2.2 The Service Credit Percentage for Management Information Exchange is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

15.2.3 The Service Credit (£) for the Management Information Exchange is equal to the Service Credit Percentage multiplied by the total Service Charge for the Service Management Service for the Service Measurement Period.

16 CONTRACTOR SERVICE DESK

16.1 Service Levels for the Contractor Service Desk

16.1.1 The Contractor Service Desk shall have the following Service Levels:

Service Level Name	Description	Service Level % (A)	Service Failure Threshold % (B)
Availability of Contractor Service Desk *(Network Service Level)*	The percentage of total time during the Service Measurement Period, during which the Contractor Service Desk is capable of receiving calls from the Customer Authority (including the Customer Authority OSM).	99.99%	99%
Core Hours Contractor Service Desk Response *(Network Service Level)*	The percentage of all telephone calls to the Contractor Service Desk made during Core Hours, which are Answered within 15 seconds of the call being placed.	85%	65%

Non-Core Hours Contractor Service Desk Response *(Network Service Level)*	The percentage of all telephone calls to the Contractor Service Desk made during Non-Core Hours which are Answered within 15 seconds of the call being placed.	75%	50%

Table 27 - Service Levels for the Contractor Service Desk

16.1.2 The Achieved Service Level for the Availability of the Contractor Service Desk shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A, and the Agreed Service Time shall be:

(i) 00:00-24:00 hours, Monday to Sunday (inclusive) for the Availability of Contractor Service Desk;

(ii) all Core Hours, for the Core Hours Contractor Service Desk Response; and

(iii) all Non-Core Hours, for the Non-Core Hours Contractor Service Desk Response.

16.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Service Levels for the Contractor Service Desk shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 19.1.13 of Section 9 (*Service Management and Service Integration (Service Operations)*).

16.2 Service Credits for the Contractor Service Desk

16.2.1 Service Credits for the Contractor Service Desk shall not apply.

17 CONNECTIVITY SERVICE

17.1 Service Levels for Provisioning of the Connectivity Service

17.1.1 Subject to Paragraph 17.1.2 below, the Connectivity Service shall have the following Service Levels for Provisioning:

Service Level Name	Description	Service Level
Provisioning of Standard Connection (DSL Access)	The period of time between: (a) the time at which the Customer Authority requests that a Standard Connection (DSL Access) is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Connection is provided with Connectivity.	Thirty (30) Working Days

Service Level Name	Description	Service Level
Provisioning of any Fixed Access Connection	The period of time between: (a) the time at which the Customer Authority requests that a Fixed Access Connection (except for a TOP SECRET Connection) is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Connection is provided with Connectivity.	Forty-five (45) Working Days
Provisioning of TOP SECRET Standard Connection	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Standard Connection is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Connection is provided with Connectivity.	One hundred and twenty (120) Working Days
Provisioning of TOP SECRET Special Variant Connection	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Special Variant Connection is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Connection is provided with Connectivity	One hundred and twenty (120) Working days
Provisioning of TOP SECRET Enclosures (Type 1 and 2)	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Enclosure is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Enclosure is provided	One hundred (100) Working Days
Provisioning of TOP SECRET Engineering Laptop	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Engineering Laptop is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Engineering Laptop is provided in connection with a TOP SECRET Connection.	Prior to the relevant TOP SECRET Connection being provided, or where such TOP SECRET Connection has already been provided, forty five

Service Level Name	Description	Service Level
		(45) Working Days
Provisioning of TOP SECRET Bootable CD	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Bootable CD is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Bootable CD is provided in connection with a TOP SECRET Connection.	Ten (10) Working Days
Provisioning of TOP SECRET Cold Spare	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Cold Spare is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Cold Spare is provided.	One hundred and twenty (120) Working Days
Provisioning of TOP SECRET Rack Mounting Kit	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Rack Mounting Kit is provided in connection with a TOP SECRET CPE Box for a TOP SECRET Special Variant Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Rack Mounting Kit is provided.	Thirty (30) Working Days
Provisioning of TOP SECRET Training – Connection to be Installed	The period of time between: (a) the time at which the Customer Authority requests that TOP SECRET Training is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided for such TOP SECRET Training. This Service Level shall only apply where the relevant TOP SECRET Connection has not yet been provided at the time of the request.	Prior to a TOP SECRET Connection being provided.
Provisioning of TOP SECRET Training – Connection Already Installed	The period of time between: (a) the time at which the Customer Authority requests that TOP SECRET Training is provided in connection with a TOP SECRET Connection; and (b) the time at which the Delivery Confirmation is provided for such	Thirty (30) Working Days

Service Level Name	Description	Service Level
	TOP SECRET Training. This Service Level shall only apply where the relevant TOP SECRET Connection is already installed.	
Activation of a TOP SECRET Interface Port	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Interface Port is activated in connection with a TOP SECRET Connection or a TOP SECRET Special Variant Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Interface Port has been activated and is able to receive Connectivity.	Four (4) hours
Deactivation of a TOP SECRET Interface Port	The period of time between: (a) the time at which the Customer Authority requests that a TOP SECRET Interface Port is deactivated in connection with a TOP SECRET Connection or TOP SECRET Special Variant Connection; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant TOP SECRET Interface Port has been deactivated.	Four (4) hours
MAC - Connection Move	The length of the MAC Implementation Period	Thirty (30) Working Days
MAC – Channel Bandwidth Change (soft)	The length of the MAC Implementation Period	One (1) Working Day
MAC – Remote/Soft Change	The length of the MAC Implementation Period	One (1) Working Day
MAC - Connection Bandwidth Change (hard)	The length of the MAC Implementation Period. This Service Level shall only apply where no survey is required.	Five (5) Working Days
MAC - CPE Installation	The length of the MAC Implementation Period. This Service Level shall only apply where no survey is required.	Five (5) Working Days
MAC - Community of Interest (soft)	The length of the MAC Implementation Period	One (1) Working Day
MAC - Community of Interest (hard)	The length of the MAC Implementation Period	Thirty (30) Working

Service Level Name	Description	Service Level
		Days after Cryptographic Equipment is made available to the Contractor by the CA.
MAC –Cease Connection (Soft)	The length of the MAC Implementation Period	One (1) Working Day
MAC BGP Change (soft)	The length of the MAC Implementation Period	One (1) Working Day
MAC PSN Service Class Allocation Change	The length of the MAC Implementation Period	One (1) Working Day
MAC – Cease Connection (hard)	The length of the MAC Implementation Period	As stated in the relevant Service Request

Table 28 - Connectivity Service - Service Levels for Provisioning

17.1.2 The Service Levels for Provisioning of Connections for the Connectivity Service in Paragraph 17.1.1 above shall only apply where any fibre required (if at all) to deliver the Connection is already in place (at the time at which the request for the relevant Connection is made) at and around the Customer Authority Sites to facilitate the Provisioning of the relevant Connection. If this is not the case, the timeframe for Provisioning the relevant Connection shall be agreed by the Parties (acting reasonably) and the Contractor shall deliver such Connection (and the associated connectivity to that Connection) within the agreed timeframe.

17.1.3 **Where**:

(i) the Provisioning of a Connection is dependent on the performance of a service by a regulated provider such as BT Openreach (acting as Sub-contractor); and

(ii) the performance of that service by a regulated provider such as BT Openreach would (under the terms of such Sub-contract) cause Provisioning of that Connection to take longer than the applicable Service Level,

then the Service Level for the Provisioning of that Connection shall be adjusted, but only to the extent required to reflect the additional time stipulated in (b).

17.1.4 The Achieved Service Level for the Provisioning of the Connectivity Service shall be calculated in accordance with Paragraph 6.5 of Part A.

17.1.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the Connectivity Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraphs 19.1.40 to 19.1.81 of Section 10 (*Connectivity*).

17.2 Service Levels for Availability of the Connectivity Service

17.2.1 When measuring the Availability of the Connectivity Service, the measurements shall encompass all integral components of the Connectivity Service, including:

(i) the Connectivity Network, access bearer(s) and CPE(s); and

(ii) any encryption.

17.2.2 The Connectivity Service (and each Connection) shall be Available twenty four (24) hours a day seven (7) days a week.

17.2.3 The Service Levels for Availability of each Fixed Access Connection and DSL Access Connection shall be measured over a Service Measurement Period for the six (6) service availability types as follows:

Service Level Name	Description	Service Level Percentage (A)	Service Failure Threshold Percentage (B)
Availability of a Resilient Fully Diverse (Separation) Connection (Fixed Access) *(Instance Service Level)*	The percentage of total time during the Service Measurement Period, during which the relevant Connection is Available and provides Connectivity (the "**Connection Percentage Connectivity**")	99.99%	99.97%
Availability of a Resilient Fully Diverse Connection (Fixed Access) *(Instance Service Level)*	The Connection Percentage Connectivity	99.99%	99.97%
Availability of	The Connection Percentage	99.97%	99.95%

Service Level Name	Description	Service Level Percentage (A)	Service Failure Threshold Percentage (B)
a Resilient Diverse Connection (Fixed Access) *(Instance Service Level)*	Connectivity		
Availability of a Resilient Connection (Fixed Access) *(Instance Service Level)*	The Connection Percentage Connectivity	99.95%	99.90%
Availability of a Non-Resilient Connection (Fixed Access) *(Instance Service Level)*	The Connection Percentage Connectivity	99.75%	99.50%
Availability of a Standard Connection (DSL Access) *(Instance Service Level)*	The Connection Percentage Connectivity	99.50%	99.00%

Table 29 - Connectivity Service - Service Levels for Availability

17.2.4 The Achieved Service Level for the Availability of the Connectivity Service shall be calculated for each Connection, in accordance with the formula set out at Paragraph 4.1.1 of Part A.

17.2.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the Connectivity Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs

11.1.31, 11.1.34 to 11.1.35, 11.1.38 to 11.1.39 and 11.1.61 to 11.1.73 of Section 1 (*Architecture and User Experience*) and Paragraphs 19.1.40 to 19.1.81 of Section 10 (Connectivity).

17.3 Service Credits for Provisioning of the Connectivity Service

17.3.1 The Service Credits for Provisioning of the Connectivity Service shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

17.4 Service Credits for Availability of the Connectivity Service

17.4.1 If the Service Levels for Availability of the Connectivity Service measured over a Service Measurement Period are not met for a Connectivity Service or Service Element then Service Credits will become due in respect of each relevant Connection as shown in the table below. Service Credits for Availability of the Connectivity Service shall only become due and payable by the Contractor for Resilient Connections if both links are down. Loss of a single link shall be automatically assigned as an Incident Priority Level 3, and the Contractor shall Resolve such Incident in accordance with the provisions of Paragraph 10.1 of this Part B.

17.4.2 The Service Levels for Availability of the Connectivity Service will apply to a Connection prior to the first complete Service Measurement Period following the relevant Operational Service Commencement Date.

17.4.3 The following Service Credits for Availability of the Connectivity Service are payable if the Service Levels for the Availability of the Connectivity Service are not met.

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Resilient Fully Diverse (Separation) Connection (Fixed Access) (*Instance Service Level*)	833.5	99.99%	99.97%	8.33%	25.00%
Availability of a Resilient Fully Diverse Connection (Fixed Access) (*Instance Service Level*)	833.5	99.99%	99.97%	8.33%	25.00%

Service Level Name	Coefficient (M)	Service Level % (A)	Service Failure Threshold % (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Resilient Diverse Connection (Fixed Access) (*Instance Service Level*)	500	99.97%	99.95%	15.00%	25.00%
Availability of a Resilient Connection (Fixed Access) (*Instance Service Level*)	250	99.95%	99.90%	12.50%	25.00%
Availability of a Non-Resilient Connection (Fixed Access) (*Instance Service Level*)	50	99.75%	99.50%	12.50%	25.00%
Availability of a Standard Connection (DSL Access) (*Instance Service Level*)	10	99.50%	99.00%	5.00%	10.00%

Table 30 - Connectivity Service - Service Credits for Availability

17.4.4 The Service Credit Percentage for Availability for each Connection is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

17.4.5 The Service Credit (£) for Availability for each Connection is equal to the relevant Service Credit Percentage for that Connection multiplied by the sum of the Recurring Charges for the provision of the Connectivity Service to that Connection, for the relevant Service Measurement Period.

17.5 Service Levels for Quality of the Connectivity Service

17.5.1 The Contractor shall measure the Quality of the Connectivity Service at the following six (6) PSN Service Classes:

PSN Service Class Name
PSN Real-Time
PSN Application Class 1
PSN Application Class 2
PSN Application Class 3

PSN Service Class Name
PSN Application Class 4
PSN Default

Table 31 - Connectivity Service - Service Levels for Quality - PSN Service Class Names

17.5.2 When measuring the Quality of the Connectivity Service, the measurements shall encompass all integral components of the Connectivity Service, including:

(i) the Connectivity Network, access bearers and CPEs; and

(ii) any encryption.

17.5.3 The definitions and measurement methods applicable for each Service Level shall be in accordance with the relevant ITU-T or IEEE specification, unless otherwise agreed in writing by the Customer Authority.

17.5.4 The Service Levels for Quality of the Connectivity Service are only applicable for Fixed Access Connections and shall be measured as follows:

(i) the measurement methodology should provide a fair representation of the performance of the Services within each Subscriber Domain (subject to Paragraph 17.5.4(v) below) and between different types of Customer Authority Sites (including those which are more geographically distant from other Customer Authority Sites or other potential worst case measurements);

(ii) the measurement of the Quality of the Connectivity Service shall be calculated using a sample that includes for each Security Classification a minimum of any five percent (5%) of the total number of Customer Authority Sites to receive the Connectivity Service at that Security Classification;

(iii) the Contractor shall prior to the first Operational Service Commencement Date for the Connectivity Service submit to the Customer Authority for Approval a proposed measurement methodology which complies with the remainder of Paragraph 17.5.4 and includes the Customer Authority Sites that the Contractor proposes to measure and how it will use the sample measurement to perform the Service Credit calculation. In the absence of Approval by the Customer Authority of the proposal, the Contractor shall measure all Service Levels for Quality of the Connectivity Service in respect of all Fixed Access Connections at all Customer Authority Sites;

(iv) the methodology should not significantly impact other Services including those delivered by any Other Tower Service Providers. Specifically, measurement traffic should not utilise more than 4% of the provisioned bandwidth;

(v) the Customer Authority Sites used for each Quality measurement should be located in the same Subscriber Domain. No Quality measurements are required in respect of Customer Authority Sites located in the Overseas (Type C) Connectivity Subscriber Domain or between different Subscriber Domains;

(vi) at the Customer Authority's request, the Contractor shall exchange those Customer Authority Sites included in the sample measurement regime used

in accordance with Paragraph 17.5.4(iii) above and identified by the Customer Authority, with alternative Customer Authority Sites identified by the Customer Authority;

(vii) the methodology should be based on the PSN recommendations in the document entitled "PSN Technical Domain Description" that forms part of the Standards. In the case of the Connectivity Service the measurement of Service Levels for Quality are as follows:

(a) a Quality measurement is initiated randomly at least every 15 minutes;

(b) in the case of Connections that carry more than PSN Default PSN Service Class traffic, a Quality measurement for each PSN Service Class is initiated randomly at least every 15 minutes, for each Connection in receipt of such PSN Service Class covered by the relevant Service;

(c) the Contractor shall use a sampling process based on: (A) periodic sampling for the PSN Real-Time PSN Service Class; and (B), a Poisson probability function for all other Connections, such sampling being in accordance with the Internet Engineering Task Force (IETF) RFC 2330 and RFC 3432;

(d) the Quality measurements for the Connectivity Service are taken by transferring: (A) for the PSN Real-Time PSN Service Class, two hundred (200) 60-byte packets; and (B) for all other PSN Service Classes, two hundred (200) 400-byte packets;

(viii) the Contractor's performance against each Service Level for the Quality of the Connectivity Service will be equal to the average of all of the Quality measurements relevant to that Service Level and Security Classification taken during the Service Measurement Period; and

(ix) the above sampling shall be used to show the average Achieved Service Level for Connections across all Customer Authority Sites and to be used to calculate the Service Credit Percentage for all Customer Authority Sites. The Service Credit Percentage will be applied against the overall Charges for this Service to calculate the overall Service Credit.

17.5.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the Connectivity Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.40 to 11.1.41 and 11.1.90 to 11.1.96 of Section 1 (*Architecture and User Experience*) and Paragraphs 19.1.40 to 19.1.81 of Section 10 (Connectivity).

17.5.6 The Achieved Service Level for the Quality of the Connectivity Service shall be calculated as follows:

(i) all Round Trip Delay measurements taken for each PSN Service Class within each applicable Security Classification for each measured Connection within the Agreed Service Time for the relevant Service

Measurement Period (as derived from the measurement method of Paragraph 17.5.4 above) shall be averaged; and

(ii) the Achieved Service Level for the Quality of the Connectivity Service shall be the average of all average measurements calculated in accordance with 17.5.6(i) above at each applicable PSN Service Class within each applicable Security Classification (i.e. there shall be a different Achieved Service Level for each applicable PSN Service Class within each applicable Security Classification, each of which relates to the traffic at that PSN Service Class and Security Classification across all measured Connections).

17.5.7 The Achieved Service Level calculated in accordance with Paragraph 17.5.4(ix) above shall be used to calculate the Service Credit Percentage in accordance with Paragraph 17.9.2 below.

17.6 Service Levels for Quality of the Connectivity Service – IP Packet Loss Ratio

17.6.1 The Service Levels for Quality of the Connectivity Service in relation to IPLR shall be measured in accordance with Paragraph 4.2 of Part A and Paragraph 17.5 and shall be as follows:

PSN Service Class	Service Level Percentage – IPLR	Service Failure Threshold Percentage
PSN Real-Time	IPLR is less than or equal to 0.1%	Not applicable
PSN Application Class 1	IPLR is less than or equal to 0.2%	Not applicable
PSN Application Class 2	IPLR is less than or equal to 0.2%	Not applicable
PSN Application Class 3	IPLR is less than or equal to 0.2%	Not applicable
PSN Application Class 4	IPLR is less than or equal to 0.2%	Not applicable
PSN Default	IPLR is less than or equal to 1.0%	Not applicable

Table 32 - Connectivity Service - Service Levels for Quality - IPLR

17.6.2 The Service Levels for Quality of the Connectivity Service in relation to IPLR are Instance Service Levels.

17.7 Service Levels for Quality of the Connectivity Service – Inter-Packet Delay Variation

17.7.1 The Service Levels for Quality of the Connectivity Service in relation to IPDV, (analogous to Jitter in relation to certain Standards), shall be measured in accordance with Paragraph 4.2 of Part A and Paragraph 17.5 and shall be as follows:

PSN Service Class	Service Level – IPDV	Service Failure Threshold %
PSN Real-Time	IPDV is less than or equal to 10ms	Not applicable
PSN Application Class 1	None (but IPDV should still be measured and recorded)	Not applicable

PSN Service Class	Service Level – IPDV	Service Failure Threshold %
PSN Application Class 2	None (but IPDV should still be measured and recorded)	Not applicable
PSN Application Class 3	None (but IPDV should still be measured and recorded)	Not applicable
PSN Application Class 4	None (but IPDV should still be measured and recorded)	Not applicable
PSN Default	None (but IPDV should still be measured and recorded)	Not applicable

Table 33 - Connectivity Service - Service Levels for Quality - IPDV

17.7.2 The Service Levels for Quality of the Connectivity Service in relation to IPDV are Instance Service Levels.

17.8 Service Levels for Quality of the Connectivity Service – Round Trip Delay

17.8.1 The Service Levels for Quality of the Connectivity Service in relation to Round Trip Delay shall be measured in accordance with Paragraph 4.2 of Part A and Paragraph 17.5 and shall be as follows:

PSN Service Class	Service Level – Round Trip Delay (A)	Service Failure Threshold (B)
PSN Real-Time	Round Trip Delay is less than or equal to 20ms	Round Trip Delay is 25ms or more
PSN Application Class 1	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more
PSN Application Class 2	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more
PSN Application Class 3	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more
PSN Application Class 4	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more
PSN Default	Round Trip Delay is less than or equal to 30ms	Round Trip Delay is 35ms or more

Table 34 - Connectivity Service - Service Levels for Quality - Round Trip Delay

17.8.2 The values given for Round Trip Delay in Paragraph 17.8.1 above shall apply for Connections that are less than 400km total round trip distance. For every additional 100km another 2ms of Round Trip Delay shall be added to the Service Level and 3ms to the Service Failure Threshold. Additionally, the Service Level for Round Trip Delay can by agreement with the Customer Authority be increased providing the overall Round Trip Delay detailed in Paragraph 21.5.6 below, adjusted as per this Paragraph 17.8.2, is still met**. The distance between Connections shall be measured on a 'straight line basis' between the shortest distance between**

two points (for example, Bristol (Abbeywood) to London is 170km straight line, Bristol (Abbeywood) to Kinloss is 650km straight line).

17.8.3 The Service Levels for Quality of the Connectivity Service in relation to Round Trip Delay are Instance Service Levels.

17.9 Service Credits for Quality of the Connectivity Service – Round Trip Delay

17.9.1 The following Service Credits for Quality of the Connectivity Service in relation to Round Trip Delay are payable if the Service Levels for Quality of the Connectivity Service in relation to Round Trip Delay are not met:

Service Level Name	**Coefficient (M)**	**Service Level (A). This will have been achieved if:**	**Service Failure Threshold (B). Service Failure will be deemed to have occurred if:**	**Minimum Service Credit % (C)**	**Maximum Service Credit % (D)**
PSN Real-Time (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 20ms	Round Trip Delay is 25ms or more	5%	10%
PSN Application Class 1 (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more	5%	10%
PSN Application Class 2 (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more	5%	10%
PSN Application Class 3 (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more	5%	10%
PSN Application Class 4 (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 25ms	Round Trip Delay is 30ms or more	5%	10%

Service Level Name	Coefficient (M)	Service Level (A). This will have been achieved if:	Service Failure Threshold (B). Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
PSN Default (*Instance Service Level*)	-0.010	Round Trip Delay is less than or equal to 30ms	Round Trip Delay is 35ms or more	5%	10%

Table 35 - Connectivity Service - Service Credits for Quality - Round Trip Delay

17.9.2 The Service Credit Percentage for Quality of the Connectivity Service shall be calculated for each applicable PSN Service Class at each applicable Security Classification, by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule, except that the values for A and B in that formula shall be expressed as milliseconds of Round Trip Delay and not as percentages.

17.9.3 Subject to Paragraph 17.9.2 above, the Service Credit (£) for Quality of the Connectivity Service shall, for each PSN Service Class at each applicable Security Classification, be calculated using the following formula:

Service Credit (£) = SCP * SC * PSN Service Class Percentage

Where:

"**SCP**"	shall be the relevant Service Credit Percentage calculated in accordance with Paragraph 17.9.2
"**SC**"	shall be the sum of all of the Recurring Charges for the provision of the Connectivity Service for the Service Measurement Period
"**PSN Service Class Percentage**"	shall be the percentage of overall data traffic that constitutes the PSN Service Class to which the Service Credit Percentage relates, as notified to the Contractor by the Customer Authority and as varied from time to time.

18 POINT TO POINT SERVICE

Unless otherwise expressly stated in this Paragraph 18, all of the Service Levels for the PPS shall only apply in respect of a PPS Connection that has both of its ends located within the same PPS Subscriber Domain.

18.1 Service Levels for Provisioning of the PPS

18.1.1 The Service Levels for Provisioning of the PPS shall only apply in respect of a PPS Connection that has both of its ends located within the UK.

18.1.2 The Contractor shall offer the following Service Levels for Provisioning for the PPS:

Service Level Name	Description	Service Levels
Provisioning of Fixed PPS Connection - Ethernet and Fibre Channel Interface / Transmission Types	The period of time between: (i) the time at which the Customer Authority requests that a Fixed PPS Connection with Ethernet and Fibre Channel interface types is provided; and (ii) the time at which the Delivery Confirmation is provided, confirming that such Fixed PPS Connection is provided with PPS Connectivity.	Seventy (70) Working Days
Provisioning of Fixed PPS Connection – non-Ethernet or non-Fibre Channel Interface / Transmission Types	The period of time between: (i) the time at which the Customer Authority requests that a Fixed PPS Connection with non-Ethernet and non-Fibre Channel Interface / Transmission Types is provided; and (ii) the time at which the Delivery Confirmation is provided, confirming that such Fixed PPS Connection is provided with PPS Connectivity.	One hundred and sixty (160) Working Days
Provisioning of Flexible Configuration Equipment to enable the delivery of particular types of Flexible PPS Connections specified by the Customer Authority	The period of time between: (i) the time at which the Customer Authority requests that Flexible Configuration Equipment (and any interface cards and Flexible PPS Connections ordered at the same time for installation or activation on the Flexible Configuration Equipment) be provided to enable the delivery of particular types of Flexible PPS Connections specified by the Customer Authority when ordering; and (ii) the time at which the Delivery Confirmation is provided, confirming that the appropriately relevant Flexible Configuration Equipment and interface cards have been installed and commissioned and that any Flexible PPS Connections that have been ordered by the Customer Authority at the same time are provided with PPS Connectivity.	One hundred and sixty (160) Working Days
Provisioning of Flexible PPS Connection that cannot be provided via the 'Flexible Configuration Equipment – Reconfiguration Activity – MAC'	The period of time between: (i) the time at which the Customer Authority requests that a Flexible PPS Connection that cannot be provided via the 'Flexible Configuration Equipment – Reconfiguration Activity – MAC' be provided; and (ii) the time at which the Delivery Confirmation is provided, confirming that such Flexible PPS Connection and any required additional interface cards have been	Thirty (30) Working Days

Service Level Name	Description	Service Levels
	installed and commissioned so that the Flexible PPS Connection receives PPS Connectivity. *This Service Level does not apply if additional Flexible Configuration Equipment is required in order for the relevant Flexible PPS Connection to be commissioned and provided with PPS Connectivity.*	
Provisioning of the PPARS	The period of time between: (i) the time at which the Customer Authority requests a PPARS connection be configured and (ii) the time at which the Delivery Confirmation is provided, confirming that the relevant PPARS has been configured.	One (1) Working Day
MAC - PPS Connection move	The length of the MAC Implementation Period	Five (5) Working Days
MAC – PPS Bandwidth Change (soft)	The length of the MAC Implementation Period	One (1) Working Day
MAC - PPS Bandwidth Change (hard)	The length of the MAC Implementation Period. This Service Level shall only apply if the relevant site infrastructure is supported.	Twenty (20) Working Days
MAC - PPARS Reconfiguration	The length of the MAC Implementation Period	One (1) Working Day
MAC – Fixed PPS Connection Group Reconfiguration Activity	The length of the MAC Implementation Period	One (1) Working Day
MAC - Flexible Configuration Equipment - Reconfiguration Activity	The length of the MAC Implementation Period	One (1) Working Day
MAC - Cease Fixed	The length of the MAC Implementation Period	One (1)

Service Level Name	Description	Service Levels
PPS Connection (soft)		Working Day
MAC - Cease Fixed PPS Connection (hard)	The length of the MAC Implementation Period	Thirty (30) Working Days
MAC - Cease of Flexible Configuration Equipment and any associated Flexible PPS Connections	The length of the MAC Implementation Period	Thirty (30) Working Days
MAC - Training for Cold Standby	The period of time between: (i) the time at which the Customer Authority requests that training for Cold Standby is provided for a TOP SECRET Flexible PPS Connection; and (ii) the time at which the Delivery Confirmation is provided, confirming that the relevant training has been provided.	One hundred (100) Working Days

Table 36 - PPS - Service Levels for Provisioning

18.1.3 The Service Levels for Provisioning of the PPS in Paragraph 18.1.2 above shall only apply where any fibre required (if at all) to deliver the PPS Connection is already in place (at the time at which the request for the relevant PPS Connection is made) at and around the Customer Authority Sites to facilitate the Provisioning of the relevant PPS Connection. If this is not the case, the timeframe for Provisioning the relevant PPS Connection shall be agreed by the Parties (acting reasonably) and the Contractor shall deliver such PPS Connection (and the associated PPS connectivity to that PPS Connection) within the agreed timeframe.

18.1.4 Where:

(i) the Provisioning of a Connection is dependent on the performance of a service by a regulated provider such as BT Openreach (acting as Sub-contractor); and

(ii) the performance of that service by a regulated provider such as BT Openreach would (under the terms of such Sub-contract) cause the Provisioning of that Connection to take longer than the applicable Service Level,

then the Service Level for the Provisioning of that Connection shall be adjusted, but only to the extent required to reflect the additional time stipulated in (b).

18.1.5 The Achieved Service Level for the Provisioning of the PPS shall calculated in accordance with the formula set out at Paragraph 6.5 of Part A.

18.1.6

18.1.7 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the PPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 11 (*Point to Point Service*).

18.2 Service Levels for Availability of the PPS

18.2.1 The PPS shall be Available twenty four (24) hours a day seven (7) days a week.

18.2.2 The Service Levels for Availability of a PPS Connection shall be measured over a Service Measurement Period and shall be for the nine (9) Service Availability types as follows:

Service Level Name	**Description**	**Service Level Percentage for Availability (A)**	**Service Failure Threshold Percentage (B)**
Availability of a Non-Resilient PPS Connection - Ethernet and Fibre Channel Interface Types *(Instance Service Level)*	The percentage of total time during the Service Measurement Period during which the relevant PPS Connection, including any infrastructure existing at the relevant Operational Service Commencement Date, is Available and provides PPS Connectivity ("**PPS Percentage Connectivity**")	99.90%	99.000%
Availability of a Resilient PPS Connection - Ethernet and Fibre Channel Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.995%	99.900%
Availability of a Resilient Fully Diverse PPS Connection - Ethernet and Fibre Channel Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.995%	99.900%

Service Level Name	Description	Service Level Percentage for Availability (A)	Service Failure Threshold Percentage (B)
Availability of a Non-Resilient PPS Connection - ATM Access Synchronous Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.75%	99.000%
Availability of a Resilient PPS Connection - ATM Access Synchronous Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.9875%	99.900%
Availability of a Resilient Fully Diverse PPS Connection - ATM Access Synchronous Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.9875%	99.900%
Availability of a Non-Resilient PPS Connection - Other Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.364%	Not applicable
Availability of a Resilient PPS Connection- Other Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.93%	Not applicable

Service Level Name	Description	Service Level Percentage for Availability (A)	Service Failure Threshold Percentage (B)
Availability of an Resilient Fully Diverse PPS Connection- Other Interface Types *(Instance Service Level)*	The PPS Percentage Connectivity	99.93%	Not applicable

Table 37 - PPS - Service Levels for Availability

18.2.3 Where any PPS Connection has different interface types at each end of the Connection, the applicable Service Level for such Connection shall be the lowest of the relevant Service Levels for the interface types at each end of such Connection.

18.2.4 The Achieved Service Level for the Availability of the Point to Point Service shall be calculated for each PPS Connection, in accordance with the formula set out at Paragraph 4.1.1 of Part A.

18.2.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the PPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 1.1.35, 11.1.38 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.75 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 11 (*Point to Point Service*).

18.3 Service Credits for Provisioning of the PPS

18.3.1 The Service Credits for the Provisioning of the PPS shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

18.4 Service Credits for Availability of the PPS

18.4.1 If the Service Levels for Availability of the PPS measured over a Service Measurement Period are not met for the PPS or a PPS Service Element, then Service Credits will become due in respect of each relevant Connection as shown in the table below. Service Credits for Availability of the PPS shall only become due and payable by the Contractor for Resilient PPS Connections if both links are down. Loss of a single link shall be automatically assigned as an Incident Priority Level 3, and the Contractor shall Resolve such Incident in accordance with the provisions of Paragraph 10.1 of this Part B.

18.4.2 The Service Levels for Availability of the Point to Point Service will apply to a Customer Authority Site prior to the first complete Service Measurement Period following the relevant Operational Service Commencement Date.

18.4.3 The following Service Credits for the Availability of the PPS are payable if the Service Levels for Availability of the PPS are not met.

Service Level Name	Coefficient (M)	Service Level (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of a Non-Resilient PPS Connection - Ethernet and Fibre Channel Interface Types (*Instance Service Level*)	25	99.90%	99.000%	2.50%	25.00%
Availability of a Resilient PPS Connection - Ethernet and Fibre Channel Interface Types (*Instance Service Level*)	250	99.995 %	99.900%	1.25%	25.00%
Availability of a Resilient Fully Diverse PPS Connection - Ethernet and Fibre Channel Interface Types (*Instance Service Level*)	250	99.995 %	99.900%	1.25%	25.00%
Availability of a Non-Resilient PPS Connection - ATM Access Synchronous Interface Types (*Instance Service Level*)	30	99.75%	99.000%	2.50%	25.00%
Availability of a Resilient PPS Connection - ATM Access Synchronous Interface Types (*Instance Service Level*)	250	99.9875 %	99.900%	3.13%	25.00%
Availability of a Resilient Fully Diverse PPS Connection - ATM Access Synchronous Interface Types (*Instance Service Level*)	250	99.9875 %	99.900%	3.13%	25.00%
Availability of a Non-Resilient PPS Connection - Other Interface Types (*Instance Service Level*)	n/a	99.364 %	n/a	n/a	n/a
Availability of a Resilient PPS Connection- Other Interface Types (*Instance Service Level*)	n/a	99.93%	n/a	n/a	n/a
Availability of a Resilient Fully Diverse PPS Connection- Other Interface Types (*Instance Service Level*)	n/a	99.93%	n/a	n/a	n/a

Table 38 - PPS - Service Credits for Availability

18.4.4 The Service Credit Percentage for Availability of the PPS for each PPS Connection is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

18.4.5 The Service Credit (£) for Availability of the PPS for each PPS Connection is equal to the Service Credit Percentage for each PPS Connection, multiplied by the sum of the Recurring Charges (inclusive of any Overseas Cost Adjustment) for that PPS Connection for the Service Measurement Period.

18.5 Service Levels for Quality of the PPS

18.5.1 When measuring the Quality of the Point to Point Service, the measurements shall encompass all integral components of the Point to Point Service, including:

(i) all elements of PPS Connectivity including access bearers and CPEs;

(ii) interface cards associated with the relevant interface types; and

(iii) any encryption.

18.5.2 The Service Levels for Quality of the PPS described in this Paragraph 18.5 for each PPS Connection shall apply to both directions of transmission via the PPS Connections unless otherwise expressly stated in this Consolidated Schedule.

18.5.3 The definitions and measurement methods applicable for each Service Level for Quality of the PPS shall be applied in accordance with the relevant ITU-T or IEEE specification, unless otherwise agreed in writing by the Customer Authority.

18.5.4 The non-Ethernet interface types to be measured, and the Service Levels for such interface types, shall be as set out in the table below: They are Instance Service Levels:

Interface Type	Data Rates	Service Level for Bit Error Rate ("BER")	Service Level for One Way Delay	Service Level for Jitter and Wander
V.11 (RS422) signalling	1.024 Mbit/s 1.536 Mbit/s 2.048 Mbit/s 2.560 Mbit/s 3.840 Mbit/s 7.68 Mbit/s	In terms of severely errored seconds, and errored seconds, the BER shall be at least the requirements specified in Table 1 of ITU-T G.826 (2002), as applicable to a single national segment (i.e. 17.5% of Table 1 values + 0.2% per 100Km. The BER requirements shall apply at all Data Rates. (the "**PPS BER Rate**")	Less than or equal to 12ms (*Instance Service Level*)	At least the levels specified in ITU-T G.823 (2000) (*Instance Service Level*)
T1 unstructured	1.5 Mbit/s	PPS BER Rate (*Instance Service Level*)	Less than or equal to 12ms (*Instance Service Level*)	At least the levels specified in ITU-T G.823 (2000) (*Instance Service Level*)
T3 unstructured	45 Mbit/s	PPS BER Rate (*Instance Service Level*)	Less than or equal to 12ms (*Instance Service Level*)	At least the levels specified in ITU-T G.823 (2000) (*Instance Service Level*)

Interface Type	Data Rates	Service Level for Bit Error Rate ("BER")	Service Level for One Way Delay	Service Level for Jitter and Wander
Plesiochronous G.703 75 Ohm Unbalanced on grounded BNC connectors	2.048 Mbit/s 8.192 Mbit/s 34.368 Mbit/s	PPS BER Rate (*Instance Service Level*)	Less than or equal to 12ms (*Instance Service Level*)	At least the levels specified in ITU-T G.823 (2000) (*Instance Service Level*)

Table 39 - Point to Point Service - Service Levels for Quality (Non-Ethernet)

18.5.5 The Service Levels for Quality of the PPS for Ethernet interface types to be measured, shall be as follows. They are Instance Service Levels:

Interface Type	Data Rates	Service Level for IPLR	Service Level for IPDV	Service Level for OWD (A)	Service Failure Threshold for OWD (B)
Ethernet (IEEE 802.3) Base-T/ Ethernet (IEEE 802.3) Base-X	10Mbit/s to 1Gbit/s	Less than or equal to 1.0% (*Instance Service Level*)	n/a	Less than or equal to 12 ms (*Instance Service Level*)	More than 20ms
Ethernet (IEEE 802.3) Base- (TBD)	10Gbit/s	Less than or equal to 1.0% (*Instance Service Level*)	n/a	Less than or equal to 12 ms (*Instance Service Level*)	More than 20ms

Interface Type	Data Rates	Service Level for IPLR	Service Level for IPDV	Service Level for OWD (A)	Service Failure Threshold for OWD (B)
Ethernet MAN Connections	100Mbit/s and 1Gbit/s	Less than or equal to 0.1% (*Instance Service Level*)	Less than or equal to 5ms (*Instance Service Level*)	Less than or equal to 8ms (*Instance Service Level*)	More than 12ms
Ethernet VLL Connections	At least 1Gbit/s	Less than or equal to 0.1% (*Instance Service Level*)	Less than or equal to 3ms (*Instance Service Level*)	Less than or equal to 10ms (*Instance Service Level*)	More than 16ms
Fibre Channel VLL Connections	At least 1Gbit/s	Less than or equal to 0.1% (*Instance Service Level*)	Less than or equal to 3ms (*Instance Service Level*)	Less than or equal to 10ms (*Instance Service Level*)	More than 16ms

Table 40 - PPS - Service Levels for Quality (Ethernet)

18.5.6 The Service Levels for Quality of the PPS for the interface types set out in Table 40 above shall be measured as follows:

(i) the measurement methodology should provide a fair representation of the performance of the Services within each Subscriber Domain (subject to Paragraph 18.5.6(v) below) and between different types of Customer Authority Sites (including those which are more geographically distant from other Customer Authority Sites or other potential worst case measurements);

(ii) the measurement of the Quality of the PPS shall be calculated using a sample that includes for each Security Classification a minimum of any ten percent (10%) of the total number of Customer Authority Sites receiving the PPS (Ethernet and Fibre Channel Interface Types) at that Security Classification.

(iii) the Contractor shall prior to the Operational Service Commencement Date for the PPS Service submit for Approval a proposed measurement methodology which complies with the remainder of 18.5.6 and includes the

Customer Authority Sites that the Contractor proposes to measure and how it will use the sample measurement to perform the Service Credit calculation. In the absence of Approval by the Customer Authority of the proposal, the Contractor shall measure all Service Levels for Quality of the PPS Connections (Ethernet and Fibre Channel Interface Types) at all Customer Authority Sites;

(iv) the methodology should not significantly impact other Services including those delivered by any Other Tower Service Providers. Specifically, measurement traffic should not utilise more than 4% of the provisioned bandwidth;

(v) the Customer Authority Sites used for each Quality measurement should be located in the same Subscriber Domain. No Quality measurements are required in respect of Customer Authority Sites located in the Overseas (Type C) Connectivity Subscriber Domain (If applicable) or between different Subscriber Domains;

(vi) at the Customer Authority's request, the Contractor shall exchange those Customer Authority Sites included in any sample measurement regime Approved in accordance with Paragraph 18.5.6(iii) above and identified by the Customer Authority, with alternative Customer Authority Sites identified by the Customer Authority;

(vii) the methodology should be based on the PSN recommendations in the document entitled "PSN Technical Domain Description" that forms part of the Standards. In the case of the PPS the measurement of Service Levels for Quality are as follows:

(a) a Quality measurement is initiated randomly at least every 15 minutes;

(b) the Contractor shall use a sampling process based on a Poisson probability function, such sampling being in accordance with the Internet Engineering Task Force (IETF) RFC 2330 and RFC 3432;

(c) the Quality measurements for this PPS are taken by transferring two hundred (200) 400-byte packets;

(viii) the Contractor's performance against each Service Level for the Quality of the Connectivity Service will be equal to the average of all of the Quality measurements relevant to that Service Level and Security Classification taken during the Service Measurement Period; and

(ix) the above sampling shall be used to show the average Achieved Service Level for the Ethernet and Fibre Channel interface types for all Customer Authority Sites, and to be used to calculate the Service Credit Percentages applicable to these Services for all Customer Authority Sites. The Service Credit Percentages will be applied against the overall Charges for these Services to calculate the overall Service Credits.

18.5.7 The Service Levels for Quality of the PPS for ATM Access Synchronous types to be measured, shall be as follows. They are Instance Service Levels:

(i) **ATM performance parameters** – the definitions of terms and measurement methods for ATM performance parameters shall be in accordance with ITU-T I.356 (2000) and I.371 (2000);

(ii) **Cell Loss Ratio** – Cell Loss Ratio shall be at least $3x10^{-7}$;

(iii) **Cell Error Rate** – Cell Error Rate shall be at least 7 * 10^{-8}. This requirement has been derived from I.356 as the national portion (17.5%) of the improved Cell Error Rate (at note 1 of table 2 of ITU-T I.356 (2000));

(iv) **Cell Misinsertion Rate** – Cell Misinsertion Rate shall not exceed one (1) cell per twenty four (24) hour period (note this is an exception to the normal measurement period of one (1) month);

(v) **Cell Delay Time** – Cell Delay Time shall not exceed 12ms;

(vi) **Cell Delay Variation** – Any outputs from ATM Access Synchronous interface types shall be constrained within a Cell Delay Variation such that they are accepted without cell loss by an input with Cell Delay Variation Tolerance at the stringent level specified in ITU-T I.371 (2000) (Paragraph 5). It is desirable that the Cell Delay Variation of outputs may be settable down to 0.1/PCR. Cell Delay Variation shall not exceed 1ms; and

(vii) **Cell Delay Variation Tolerance**– Any inputs to ATM Access Synchronous interface types shall offer a Cell Delay Variation Tolerance not less than the stringent level specified in ITU-T I.371 (2000) (Paragraph 5) without cell loss.

18.5.8 The Service Levels for Quality of the PPS for ATM Access Synchronous interface types set out in Paragraph 18.5.7 above shall be measured as follows:

(i) the measurement methodology should provide a fair representation of the performance of the Services within each Subscriber Domain (subject to Paragraph 18.5.8(v) below) and between different types of Customer Authority Sites (including those which are more geographically distant from other Customer Authority Sites or other potential worst case measurements);

(ii) the measurement of the Quality of the PPS shall be calculated using a sample that includes for each Security Classification a minimum of any ten percent (10%) of the total number of Sites receiving the PPS (ATM Access Synchronous interface types) at that Security Classification;

(iii) the Contractor shall prior to the Operational Service Commencement Date for the PPS Service submit for Approval a proposed measurement methodology which complies with the remainder of Paragraph 18.5.8 above and includes the Customer Authority Sites that the Contractor proposes to measure and how it will use the sample measurement to perform the Service Credit calculation. In the absence of the Approval by the Customer Authority of the proposal, the Contractor shall measure all Service Levels for Quality of the PPS Connections (ATM Access Synchronous interface types) at all Customer Authority Sites;

(iv) the methodology should not significantly impact other Services including those delivered by any Other Tower Service Providers. Specifically,

measurement traffic should not utilise more than 4% of the provisioned bandwidth;

(v) the Customer Authority Sites used for each Quality measurement should be located in the same Subscriber Domain. No Quality measurements are required in respect of Customer Authority Sites located in the Overseas (Type C) Connectivity Subscriber Domain (if applicable) or between different Subscriber Domains;

(vi) at the Customer Authority's request, the Contractor shall exchange those Customer Authority Sites included in any sample measurement regime Approved in accordance with Paragraph 18.5.8(iii) above and identified by the Customer Authority, with alternative Customer Authority Sites identified by the Customer Authority;

(vii) the methodology should be based on the PSN recommendations in the document entitled "PSN Technical Domain Description" that forms part of the Standards. In the case of the PPS the measurement of Service Levels for Quality are as follows:

(a) a Quality measurement is initiated randomly at least every 15 minutes;

(b) the Contractor shall use a sampling process based on a Poisson probability function, such sampling being in accordance with the Internet Engineering Task Force (IETF) RFC 2330 and RFC 3432;

(c) the Quality measurements for this PPS are taken based on packet sizes and profiles appropriate to ATM Access Synchronous interface types;

(viii) the Contractor's performance against each Service Level for the Quality of the Connectivity Service will be equal to the average of all of the Quality measurements relevant to that Service Level and Security Classification taken during the Service Measurement Period; and

(ix) The above sampling shall be used to show the average Achieved Service Level for the ATM Access Synchronous interface types for all Customer Authority Sites, and to be used to calculate the Service Credit Percentage applicable to this Service for all Customer Authority Sites. The Service Credit Percentage will be applied against the overall Charges for this Service to calculate the overall Service Credit.

18.5.9 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the PPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.44 to 11.1.56, 11.1.90 to 11.1.91 and 11.1.97 to 11.1.99 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 11 (Point to Point Service).

18.5.10 The Service Levels for Quality of the PPS for Analogue Interface Types shall be measured at the Customer Authority's request (and at all times within ten (10) Working Days of such request), and shall be as follows:

(i) **Echo path loss** – shall be greater than 29 dB;

(ii) **Planned voice distortion** – between CPEs shall not exceed five (5) quantisation distortion units as defined in ITU-T G.113 (1996); and

(iii) **Transmission** – loss shall be in the range 0 – 6 dB.

18.5.11 The Achieved Service Level for the Quality of the PPS shall be calculated as follows:

(i) all OWD measurements taken in respect of each measured PPS Connection with an Ethernet Interface type at each applicable Security Classification (as derived from the default measurement method for that Quality measurement for PPS determined in accordance with this Paragraph 18.5) within the Agreed Service Time during the Service Measurement Period shall be averaged; and

(ii) the Achieved Service Level for the Quality of the PPS shall be the average of all average measurements calculated in accordance with Paragraph 18.5.11(i) above at each applicable Security Classification (i.e. there shall be a different Achieved Service Level for each applicable Security Classification, each of which relates to the traffic at that Security Classification across all measured Connections).

18.5.12 The Achieved Service Level calculated in accordance with Paragraph 18.5.11 above shall be used to calculated the Service Credit Percentage in accordance with Paragraph 18.6.2 below.

18.6 Service Credits for Quality of the PPS

18.6.1 The following Service Credits for Quality of the PPS are payable if the relevant Service Levels for Quality are not met:

Interface Type	Data Rates	Coefficient (M)	Service Level for OWD (A)	Service Failure Threshold for OWD (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Ethernet MAN Connections	100Mbit/s and 1Gbit/s	-0.0375	Less than or equal to 8ms	More than 12ms	10.00%	25.00%
Ethernet VLL Connections	At least 1Gbit/s	-0.025	Less than or equal to 10ms	More than 16ms	10.00%	25.00%
Fibre Channel VLL Connections	At least 1Gbit/s	-0.025	Less than or equal to 10ms	More than 16ms	10.00%	25.00%

Table 41 - PPS - Service Credits for Quality

18.6.2 The Service Credit Percentage for Quality of the PPS shall be calculated for each applicable Security Classification by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule, except that the values of A

and B in that formula shall be expressed as milliseconds for OWD and not as a percentage.

18.6.3 The Service Credit (£) for Quality of the PPS shall, for each applicable Security Classification, be equal to the Service Credit Percentage multiplied by the sum of all Recurring Charges (including for any Overseas Cost Adjustment) for the relevant PPS Connections for the Service Measurement Period.

19 DNSIP SERVICE

19.1 Service Levels for Provisioning of the DNSIP Service

19.1.1 The Service Levels for Provisioning of the DNSIP Service shall be as follows:

Service Level Name	Description	Service Level
IP Address allocation	The period of time between (a) the time at which the Customer Authority or Registered Owner (as applicable) requests that an IP Address or range of IP Addresses are allocated; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant IP Address or range of IP Addresses have been allocated.	Five (5) Working Days
IP Address cessation	The period of time between (a) the time at which the Registered Owner requests that an IP Address or range of IP Addresses are ceased; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant IP Address or range of IP Addresses have been ceased.	Five (5) Working Days
Expansion to a Subnet	The period of time between (a) the time at which the Registered Owner requests that a Subnet is expanded; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Subnet has been expanded.	Five (5) Working Days
Change to an IP Address within a Subnet	The period of time between (a) the time at which a Registered Owner requests that a change to an IP Address within a Subnet is implemented; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant change to that IP Address within a Subnet has been successfully implemented.	Five (5) Working Days
Domain name registration	The period of time between (a) the time at which the Customer Authority (including its	Fifteen (15)

Service Level Name	Description	Service Level
(per domain name)	nominees and authorised Customer Authority Third Parties) requests that a domain name is registered; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant domain name has been registered.	Working Days
Domain name cessation (per domain name)	The period of time between (a) the time at which the Customer Authority (including its nominees and authorised Customer Authority Third Parties) requests that a domain name is ceased; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant domain name has been ceased.	Fifteen (15) Working Days
Configure DHCP IP Helper function	The period of time between (a) the time at which the Customer Authority requests that a DHCP IP Helper function is configured; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant DHCP IP Helper function has been configured.	Five (5) Working Days

Table 42 - DNSIP Service - Service Levels for Provisioning

19.1.2 The Achieved Service Level for the Provisioning of the DNSIP Service shall be calculated in accordance with the formula set out at Paragraph 6.5 of Part A.

19.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the DNSIP Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 11 (*Point to Point Service*) and Paragraphs 19.1.8 to 19.1.11 of Section 13 (*DNSIP*).

19.2 Service Levels for Availability of the DNSIP Service

19.2.1 The DNSIP Service shall be Available twenty four (24) hours seven (7) days a week.

19.2.2 The Service Levels for Availability of the DNSIP Service are measured over a Service Measurement Period and shall be as follows:

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)
Availability of the DNSIP Service (*Network Service Level*)	The percentage of total time during the Service Measurement Period during	99.999%	99.997%

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)
	which the DNSIP Service is Available		

Table 43 - DNSIP Service - Service Levels for Availability

19.2.3 The Achieved Service Level for the Availability of the DNSIP Service shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A.

19.2.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the DNSIP Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 11.1.35, 11.1.38 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.76 of Section 1 (*Architecture and User Experience*) and Paragraphs 19.1.8 to 19.1.11 of Section 13 (*DNSIP*).

19.3 Service Credits for Provisioning of the DNSIP Service

19.3.1 The Service Credits for Provisioning of the DNSIP Service shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

19.4 Service Credits for Availability of the DNSIP Service

19.4.1 The following Service Credits are payable if the Service Levels for Availability of DNSIP Service are not met:

Service Level Name	Coefficient (M)	Service Level for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the DNSIP Service	10,000	99.999%	99.997%	5%	25%

Table 44 - DNSIP Service - Service Credits for Availability

19.4.2 The Service Credit Percentage for Availability of the DNSIP Service is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

19.4.3 The Service Credit (£) for Availability of the DNSIP Service is equal to the Service Credit Percentage multiplied by the sum of any Service Charges for the DNSIP Capability for the Service Measurement Period.

20 BOUNDARY PROTECTION SERVICE

20.1 Service Levels for Provisioning of the BPS

20.1.1 The Service Levels for Provisioning of the BPS shall be as follows:

Service Level Name	Description	Service Level
New BPS Remote Access User Account	The period of time between (a) the time at which the Customer Authority requests that a new BPS Remote Access User Account is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant new BPS Remote Access User Account has been provided.	Five (5) Working Days
New BPS User Account	The period of time between (a) the time at which the Customer Authority requests that a new BPS User Account is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant new BPS User Account has been provided	Five (5) Working Days
New BPS Gateway Reverse Web Proxy Account	The period of time between (a) the time at which the Customer Authority requests that a new BPS Gateway Reverse Web Proxy Account is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant new BPS Gateway Reverse Web Proxy Account has been provided	Five (5) Working Days
New BPS Industry/OGD Account	The period of time between (a) the time at which the Customer Authority requests that a new BPS Industry/OGD Account is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant new BPS Industry/OGD Account has been provided	Five (5) Working Days
New BPS Business Server Gateway Account	The period of time between (a) the time at which the Customer Authority requests that a new BPS Business Server Gateway Account is provided; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant new BPS Business Server Gateway Account has been provided	Five (5) Working Days
Change details of BPS Remote Access User Account	The period of time between (a) the time at which the Customer Authority requests that the details of a BPS Remote Access User Account are changed; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant details of a BPS Remote Access User	Five (5) Working Days

Service Level Name	Description	Service Level
	Account has been changed.	
Change details of BPS User Account	The period of time between (a) the time at which the Customer Authority requests that the details of a BPS User Account are changed; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant details of a BPS User Account has been changed.	Five (5) Working Days
Implement BPS User change identified in Customer Authority white list	The period of time between (a) the time at which the Customer Authority notifies the Contractor that the email account details of a BPS User has been added into, or deleted from, the Customer Authority white list; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant BPS User is (i) where such BPS User details have been added, able to send encrypted email attachments; or (ii) where such BPS User details have been deleted, no longer able to send encrypted email attachments.	Next Working Day
Implement URL change identified in Customer Authority black list	The period of time between (a) the time at which the Customer Authority notifies the Contractor that a certain new URL has been added to the Customer Authority black list; and (b) the time at which the Delivery Confirmation is provided, confirming that access to that particular URL has been blocked.	Next Working Day
Upgrade Internet gateway bandwidth – up to the Approved upper limit	The period of time between (a) the time at which the Customer Authority Approves an upgrade of the bandwidth used to provide the Internet Capability (in accordance with Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*)); and (b) the time at which the Delivery Confirmation is provided, confirming that the bandwidth used to provide the Internet Capability has been upgraded.	Twenty (20) Working Days
Downgrade Internet gateway bandwidth – down to the Approved lower limit	The period of time between (a) the time at which the Customer Authority Approves a downgrade of the bandwidth used to provide the Internet Capability (in accordance with Consolidated Schedule 3	Twenty (20) Working Days

Service Level Name	Description	Service Level
	(*Service Requirements and Contractor Service Descriptions*)); and (b) the time at which the Delivery Confirmation is provided, confirming that the bandwidth used to provide the Internet Capability has been downgraded.	
Cease BPS Remote Access User Account	The period of time between (a) the time at which the Customer Authority requests that a BPS Remote Access User Account is ceased; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant BPS Remote Access User Account has been ceased.	Five (5) Working Days
Cease BPS User Account	The period of time between (a) the time at which the Customer Authority requests that a BPS User Account is ceased; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant BPS User Account has been ceased.	Five (5) Working Days

Table 45 - BPS - Service Levels for Provisioning

20.1.2 The Achieved Service Level for the Provisioning of the BPS shall be calculated in accordance with the formula set out at Paragraph 6.5 of Part A.

20.1.3 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the BPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 15 (*Boundary Protection Service*).

20.2 Service Levels for Availability of the BPS

20.2.1 The Boundary Protection shall be Available twenty four (24) hours seven (7) days a week.

20.2.2 The Service Levels for Availability of the BPS shall be as follows:

Service Level Name	Description	Service Level (A)	Service Failure Threshold (B)
Availability of the Remote Access Gateway (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the Remote Access	99.95%	99.85%

Service Level Name	Description	Service Level (A)	Service Failure Threshold (B)
	Gateway is Available		
Availability of the OFFICIAL Secure Interface(s) (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the OFFICIAL Secure Interface or Interfaces, where relevant, are Available	99.5%	98.5%
Availability of the SECRET Secure Interface(s) (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the SECRET Secure Interface or Interfaces, where relevant, are Available	99.5%	98.5%
Availability of the Internet Capability (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the Internet Capability is Available.	99.20%	98.00%
Availability of the PSN/GSI Capability (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the PSN/GSI Capability is Available.	99.20%	98.00%
Availability of the N3 Capability (*Network Service Level*)	The percentage of total time during the Service Measurement Period during which the N3 Capability is Available.	99.20%	98.00%

Service Level Name	Description	Service Level (A)	Service Failure Threshold (B)
Availability of all BPS Accounts (*Network Service Level*)	The average availability of all BPS Accounts during the Service Measurement Period	99.95%	99.85%

Table 46 - BPS - Service Levels for Availability

20.2.3 The Achieved Service Level for the Availability of the Boundary Protection Service shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A, except that in the case of all BPS Accounts, the Achieved Service Level shall be calculated using the following formula:

$$\frac{(Av_1 \times V_1) + (Av_1 \times V_2) + \cdots (Av_N \times V_N)}{V_1 + V_2 + \cdots V_N}$$

Where B

"**N**" is the type of BPS Account (for example, User Accounts)

"$\mathbf{Av_N}$" is, for BPS Account type *N*, the average Availability of all such BPS Account across all Customer Authority Sites

"$\mathbf{V_N}$" is the total number of BPS Accounts type *N* across all Customer Authority Sites

20.2.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the BPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 11.1.35, 11.1.38 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.77 to 11.1.79 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 15 (*Boundary Protection Service*).

20.3 Service Credits for Provisioning of the BPS

20.3.1 The Service Credits for Provisioning of the BPS shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

20.4 Service Credits for Availability of the BPS

20.4.1 The following Service Credits for Availability of the BPS are payable if the Service Levels for Availability of the BPS are not met:

Service Level Name	Coefficient (M)	Service Level (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the	200	99.95%	99.85%	5.0%	25.0%

Service Level Name	Coefficient (M)	Service Level (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Remote Access Gateway (*Network Service Level*)					
Availability of the OFFICIAL Secure Interface(s) (*Network Service Level*)	20	99.5%	98.5%	5.0%	25.0%
Availability of the SECRET Secure Interface(s) (*Network Service Level*)	20	99.5%	98.5%	5.0%	25.0%
Availability of the Internet Capability (*Network Service Level*)	16.7	99.20%	98.00%	5.0%	25.0%
Availability of the PSN/GSI Capability (*Network Service Level*)	16.7	99.20%	98.00%	5.0%	25.0%
Availability of the N3 Capability (*Network Service Level*)	16.7	99.20%	98.00%	5.0%	25.0%
Availability of all BPS Accounts (*Network Service Level*)	200	99.95%	99.85%	5.0%	25.0%

Table 47 - BPS - Service Credits for Availability

20.4.2 The Service Credit Percentage for Availability of the BPS is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

20.4.3 The Service Credit (£) for Availability of the BPS is equal to the sum of:

(i) the Service Credit Percentage for each BPS Capability Charge Service Element multiplied by the sum of the Recurring Charge for such BPS

Capability Charge Service Element (such calculation being repeated for each BPS Capability Charge Service Element in that Service Measurement Period); and

(ii) the Service Credit Percentage for the average Availability of all BPS Accounts (calculated in accordance with Paragraph 20.4.2 above) multiplied by the total Recurring Charges for all BPS Accounts,

for the Service Measurement Period.

20.5 Service Levels for Quality of the BPS

20.5.1 The baseline usage parameters for the Gateways shall be as follows:

BPS parameter	Maximum usage for Service Level measurement purposes
HTTP web browsing	8400 URLs per second
HTTPS web browsing	1484 URLs per second
Inbound emails	224,000 per hour
Outbound emails	112,000 per hour

Table 48 - BPS - Baseline Usage Parameters

20.5.2 The Service Levels for Quality of the BPS shall be as follows

Service Level Name	Description	Service Level	Measurement Period
Time to retrieve HTTP or HTTPs web object requests *(Network Service Level)*	The average time taken for a retrieved web object transaction to transit the Gateway	Less than or equal to two (2) seconds	Any five (5) minute period within the Service Measurement Period
Time for e-mail between BPS users *(Network Service Level)*	The average time taken for an incoming or outgoing e-mail to transit the Gateway	Less than or equal to one (1) hour	Any two (2) hour period within the Service Measurement Period
Latency of cross domain OFFICIAL Chat Session *(Network Service Level)*	Maximum latency at receiver across the OFFICIAL SI	Less than or equal to twenty (20) seconds	Any five (5) minute period within the Service Measurement Period
Latency to	Maximum latency introduced by the	Less than or	Any five (5)

Service Level Name	Description	Service Level	Measurement Period
performance of OFFICIAL end applications *(Network Service Level)*	OFFICIAL SI to the performance of an end application	equal to sixty (60) seconds	minute period within the Service Measurement Period
Access to directory services with respect to OFFICIAL shared data, applications and services *(Network Service Level)*	Maximum time taken for directory to be visible to End User via the OFFICIAL SI	Less than or equal to fifteen (15) seconds	Any five (5) minute period within the Service Measurement Period
Delivery of cross domain OFFICIAL e-mail messages *(Network Service Level)*	Max time taken for an e-mail with attachment below 8MB to transit the OFFICIAL SI	Less than or equal to one (1) hour	Any two (2) hour period within the Service Measurement Period
Latency of cross domain OFFICIAL whiteboarding session *(Network Service Level)*	Maximum latency at receiver across the OFFICIAL SI	Less than or equal to fifteen (15) seconds	Any five (5) minute period within the Service Measurement Period
Latency of a cross domain SECRET Chat Session *(Network Service Level)*	Maximum latency at receiver across the SECRET SI	Less than or equal to twenty (20) seconds	Any five (5) minute period within the Service Measurement Period
Latency to performance of SECRET	Maximum latency introduced by the SECRET SI to the performance of	Less than or equal to sixty	Any five (5) minute period within the

Service Level Name	Description	Service Level	Measurement Period
end application *(Network Service Level)*	an end application	(60) seconds	Service Measurement Period
Access to directory services with respect to SECRET shared data, applications and services *(Network Service Level)*	Maximum time taken for directory to be visible to End User via the SECRET SI	Less than or equal to fifteen (15) seconds	Any five (5) minute period within the Service Measurement Period
Delivery of cross domain SECRET e-mail messages *(Network Service Level)*	Maximum time taken for an e-mail with attachment below 20MB to transit the SECRET SI	Less than or equal to one (1) hour	Any two (2) hour period within the Service Measurement Period
Latency of cross domain SECRET whiteboarding session *(Network Service Level)*	Maximum latency at receiver across the SECRET SI	Less than or equal to fifteen (15) seconds	Any five (5) minute period within the Service Measurement Period

Table 49 - BPS - Service Levels for Quality

20.5.3 The Service Levels for Quality of the BPS for retrieval of HTTP and HTTPS web object requests set out in Table 49 above shall be measured as follows:

(i) the Contractor shall take measurements of the retrieval time of web object requests at least once every twenty four (24) hours, averaging all measurements over the Service Measurement Period;

(ii) if the maximum usage parameters are exceeded during a measurement, the measurement must be repeated until the maximum usage parameters are not exceeded. If no measurement is possible within twenty four (24) hours no measurement is to be recorded for that period.

20.5.4 The Service Levels for Quality of the BPS for transit of e-mails set out in Table 49 above shall be measured as follows:

(i) the Contractor shall take measurements of the transit time of e-mails at least once every twenty four (24) hours, averaging all measurements over a Service Measurement Period;

(ii) if the maximum usage parameters are exceeded during a measurement, the measurement must be repeated until the maximum usage parameters are not exceeded. If no measurement is possible within twenty four (24) hours no measurement is to be recorded for that period.

20.5.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the BPS shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.40 to 11.1.41, 11.1.90 to 11.1.91 and 11.1.100 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 15 (*Boundary Protection Service*).

20.5.6 The Service Levels for Quality of the BPS for any other Service Level set out in Table 49 above shall be measured at least once every twenty four (24) hours, averaging all measurements over the Service Measurement Period;

20.5.7 The Achieved Service Level for the Quality of the BPS Service shall be the average of all measurements taken in the Service Measurement Period for retrieval of web object requests and transit of e-mails respectively.

20.6 Service Credits for Quality of the BPS

20.6.1 Service Credits for Quality of the BPS shall not apply.

21 LAN SERVICE

21.1 Service Levels for Provisioning of the LAN Service

21.1.1 The Service Levels for Provisioning of the LAN Service shall be as follows:

Service Level Name	Description	Service Level
Provisioning of Voice Cabling Service	The period of time between: (a) the time at which the Contractor receives a Voice Break Notification from the Customer Authority and (b) the time at which the Delivery Confirmation is provided, confirming that the investigation and any necessary repairs to the relevant Voice Cables has been completed.	The Service Level for the Provisioning of Voice Cabling Service shall be the Service Levels for Incident Resolution as set out at Paragraph 10.1.
Provisioning of	The period of time between: (a) the time at which the Customer Authority requests that	Twenty (20)

Service Level Name	Description	Service Level
On-Site Support	On-Site Support is provided to an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant On-Site Support is provided to the identified Customer Authority Site.	Working Days
Provisioning of Berthing Telephony Capability	The period of time between (a) the time at which the Customer Authority requests that the Contractor Personnel at a Customer Authority Site carries out all of the activities which are part of the Berthing Telephony Capability requested by the Customer Authority and; (b) the time at which the Delivery Confirmation is provided, confirming to the Contractor that all requested activities have been completed at the relevant ship or submarine and that such ship or submarine is provided with Data LAN Connectivity.	Two (2) hours
Provisioning of a Wireless RA LAN Service or Wireless LAN Service	The period of time between: (a) the time at which the Customer Authority requests that a Data Device at an identified Customer Authority Site is provided with Data LAN Connectivity via a Wireless Access Point or Wireless Access Points; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Wireless Access Point (to which the relevant Data Device is to Connect) at the relevant Customer Authority Site is provided with Data LAN Connectivity.	Forty five (45) Working Days
MAC – Remote/Soft change	The length of the MAC Implementation Period	One (1) Working Day
MAC - Small move or addition of a Data Device or Voice Device	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Install new Data Port or Voice Port into a floor unit using existing containment	The length of the MAC Implementation Period	Ten (10) Working Days

Service Level Name	Description	Service Level
infrastructure - UTP		
MAC - Install new Data Port or Voice Port into a wall outlet using existing containment infrastructure - UTP	The length of the MAC Implementation Period	Ten (10) Working Days
MAC - Install new Data Port into a floor unit using existing containment infrastructure - fibre	The length of the MAC Implementation Period	Ten (10) Working Days
MAC - Install new Data Port into a wall outlet using existing containment infrastructure - fibre	The length of the MAC Implementation Period	Ten (10) Working Days
MAC - Complex MAC requiring visit	The length of the MAC Implementation Period	As stated in the relevant Service Request
MAC - Fibre Optic Line Extender (FOLE) and Fibre Optic Line Driver (FOLD)	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Remote/Soft cease	The length of the MAC Implementation Period	One (1) Working Day
MAC - Cease - engineer visit required	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Complex cease	The length of the MAC Implementation Period	As stated in the relevant Service

Service Level Name	Description	Service Level
		Request
MAC - UPS Install	The length of the MAC Implementation Period	Thirty (30) Working Days
MAC - UPS Fix	The length of the MAC Implementation Period	One (1) Working Day
MAC - UPS Move per single Data Device	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Miscellaneous Wiring Maintenance – first fix	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Miscellaneous Wiring Maintenance – extended fix	The length of the MAC Implementation Period	As stated in the relevant Service Request
MAC - Basic Inspection – physical infrastructure and electrical safety	The length of the MAC Implementation Period	Five (5) Working Days
MAC - Addition of new switch capacity	The length of the MAC Implementation Period	Thirty (30) Working Days
MAC - Addition of new switch capacity - complex	The length of the MAC Implementation Period	As stated in the relevant Service Request

Table 50 - LAN Service - Service Levels for Provisioning

21.1.2 The Service Levels for Provisioning of the LAN Service shall only apply where any fibre required (if at all) to deliver the relevant part of the LAN Service is already in place (at the time at which the request for the relevant part of the LAN Service is made) at and around the Customer Authority Sites to facilitate the Provisioning of the relevant part of the LAN Service. If this is not the case, the timeframe for Provisioning the relevant part of the LAN Service shall be agreed by the Parties and the Contractor shall deliver such part of the LAN Service within the agreed timeframe.

21.1.3 Where the LAN Service is required along with the Connectivity Service in order to provide end-to-end access for Data Devices or any other connection requirements,

the Contractor shall assist the Customer Authority in the co-ordination of the introduction of these services.

21.1.4 The Achieved Service Level for the Provisioning of the LAN Service shall be calculated in accordance with the formula set out at Paragraph 6.5 of Part A.

21.1.5 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the LAN Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 16 (*LAN Service*).

21.2 Service Levels for Availability of the Managed Data LAN Service

21.2.1 The Managed Data LAN Service shall be Available twenty four (24) hours a day seven (7) days a week.

21.2.2 The Service Levels for Availability of the Managed Data LAN Service shall be measured over a Service Measurement Period and shall be as follows:

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service (*Site Service Levels*)	The percentage of total time during the Service Measurement Period during which Data LAN Connectivity is Available excluding any wireless connections.	99.90%	99.75%	10.0%	25.0%
Availability of the Wireless RA LAN Service (*Site Service Levels*)	The percentage of total time during the Service Measurement Period during which Data LAN	99.0%	97.5%	10.0%	25.0%

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
	Connectivity is Available through the Wireless RA LAN Service.				
Availability of the Wireless LAN Service (*Site Service Levels*)	The percentage of total time during the Service Measurement Period during which Data LAN Connectivity is Available through the Wireless LAN Service.	98.0%	95.0%	10.0%	25.0%

Table 51 - LAN Service - Service Levels for Availability of the Managed Data LAN Service

21.2.3 The Achieved Service Level for the Availability of each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A for each Customer Authority Site. For the purposes of this calculation the Contractor should:

(i) unless otherwise Approved by the Customer Authority prior to the first Operational Service Commencement Date, measure (at each Security Classification) the Availability of:

(a) each relevant Data Port at the relevant access switch for that Data Port; and

(b) each relevant Wireless Access Point,

for a Customer Authority Site.

(ii) average the Availability for such Data Ports and Wireless Access Points.

21.2.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the Managed Data LAN Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 11.1.35, 11.1.38 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.80 to 11.1.86 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 16 (*LAN Service*).

21.3 Service Credits for Provisioning of the LAN Service

21.3.1 The Service Credits for Provisioning of the LAN Service shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

21.4 Service Credits for Availability of the Managed Data LAN Service

21.4.1 The following Service Credits are payable if the Service Level for Availability of the Managed Data LAN Service is not met:

Service Level Name	Coefficient (M)	Service Levels for Availability (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service (*Site Service Levels*)	100	99.90%	99.75%	10.0%	25.0%
Availability of the Wireless RA LAN Service (*Site Service Levels*)	10	99.0%	97.5%	10.0%	25.0%
Availability of the Wireless LAN Service (*Site Service Levels*)	5	98.0%	95.0%	10.0%	25.0%

Table 52 - LAN Service - Service Credits for Availability of the Managed Data LAN Service

21.4.2 The Service Credit Percentage for Availability of each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service is calculated for each applicable Security Classification, by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

21.4.3 The Service Credit (£) shall be equal to the Service Credit Percentage at each Security Classification multiplied by the sum of all Recurring Charges for the provision of each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service at the applicable Security Classification for the Service Measurement Period across all Customer Authority Sites, and weighted according to applicable PSN Service Class at that Security Classification.

21.5 Service Levels for Quality of the Managed Data LAN Service – Round Trip Delay

21.5.1 For the purposes of measuring the Quality of the Managed Data LAN Services the Round Trip Delay shall be measured across the Managed Data LAN Service and the Connectivity Service.

21.5.2 The definitions and measurement methods applicable for each Service Level shall be in accordance with the relevant ITU-T or IEEE specification, unless otherwise agreed in writing by the Customer Authority.

21.5.3 The Service Levels for the Quality of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service shall be measured as follows:

(i) the measurement methodology should provide a fair representation of the performance of the Services within each Subscriber Domain (subject to Paragraph 21.5.3(vi) below) and between different types of Customer Authority Sites (including those which are more geographically distant from other Customer Authority Sites or other potential worst case measurements);

(ii) the measurement of the Quality of each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service shall be calculated using:

(a) subject to Paragraph 21.5.3(ii)(b) below, and for each Security Classification, a sample that encompasses the higher of:

(I) five percent (5%) of the total number of Customer Authority Sites; and

(II) ten (10) Customer Authority Sites;

receiving the relevant LAN Service at that Security Classification; or

(b) where the total number of Customer Authority Sites receiving the relevant LAN Service is less than ten (10), all Customer Authority Sites;

(iii) where the Quality of a LAN Service is calculated on the basis of Paragraph 21.5.3(ii)(b) above, the Contractor must extend the measurement point to at least one (1) LAN access switch per Customer Authority Site;

(iv) The Contractor shall, prior to the first Operational Service Commencement Date for each of the three (3) LAN Services, submit for Approval a measurement methodology which complies with the remainder of Paragraph 21.5.3 above and includes the Customer Authority Sites and the LAN access switches, and which documents how Service Credit calculations are to be performed. In the absence of Approval by the Customer Authority of the proposal, all Sites and LAN access switches must be measured for all Quality levels;

(v) the methodology should not significantly impact other Services including those delivered by any Other Tower Service Providers. Specifically, measurement traffic should not utilise more than four percent (4%) of the provisioned bandwidth;

(vi) the Customer Authority Sites used for each Quality measurement should be located in the same Subscriber Domain. No Quality measurements are required in respect of Customer Authority Sites located in the Overseas (Type C) Connectivity Subscriber Domain (if applicable) or between different Subscriber Domains;

(vii) at the Customer Authority's request, the Contractor shall exchange those Customer Authority Sites included in any sample measurement regime Approved in accordance with Paragraph 21.5.3(iv) above and identified by the Customer Authority with alternative Customer Authority Sites identified by the Customer Authority;

(viii) the methodology should be based on the PSN recommendations in the document entitled "PSN Technical Domain Description" that forms part of the Standards. In the case of the Managed Data LAN Service the measurement of Service Levels for Quality are as follows:

(a) a Quality measurement is initiated randomly at least every 15 minutes;

(b) in the case of Connections that carry more than PSN Default PSN Service Class traffic, a Quality measurement for each PSN Service Class is initiated randomly at least every 15 minutes, for each Connection in receipt of such PSN Service Class covered by the relevant Service;

(c) the Contractor shall use a sampling process based on: (A) periodic sampling for the PSN Real-Time PSN Service Class; and (B), a Poisson probability function for all other Connections, such sampling being in accordance with the Internet Engineering Task Force (IETF) RFC 2330 and RFC 3432;

(d) the Quality measurements are taken by transferring: (A) for the PSN Real-Time PSN Service Class, two hundred (200) 60-byte packets; and (B) for all other Connections, two hundred (200) 400-byte packets; and

(e) the Contractor's performance against each Service Level for the Quality of the Connectivity Service will be equal to the average of all of the Quality measurements relevant to that Service Level and Security Classification taken during the Service Measurement Period.

(f) In respect of each of the LAN Services, the above sampling to show the average Achieved Service Level for all Customer Authority Sites and to be used to calculate the Service Credit Percentage applicable to each of those Services for all Customer Authority Sites. The Service Credit Percentage will be applied against the overall Charges for the applicable LAN Service to calculate the overall Service Credit.

21.5.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the Managed Data LAN Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.40 to 11.1.41, 11.1.90 to 11.1.91 and 11.1.101 to 11.1.102 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 16 (*LAN Service*).

21.5.5 The Contractor shall measure the Quality of the Managed Data LAN Service at the following six (6) PSN Service Classes:

PSN Service Class
PSN Real-Time
PSN Application Class 1
PSN Application Class 2
PSN Application Class 3
PSN Application Class 4
PSN Default

Table 53 - LAN Service - Service Levels for Quality of the Managed Data LAN Service - PSN Service Classes

21.5.6 The Service Levels for Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service – Round Trip Delay shall be as set out in the table below. In measuring Round Trip Delay for the Managed Data Service, the Round Trip Delay for the Connectivity Service shall be taken into account, and accordingly, the Service Levels for Quality of the Managed Data LAN Service – Round Trip Delay as set out in Tables 54A and 54B below shall comprise the Service Levels for Quality for the Connectivity Service - Round Trip Delay. They are Instance Service Levels:

PSN Service Class	**Service Level – Round Trip Delay (A)**	**Service Failure Threshold (B)**
PSN Real-Time	Less than or equal to 30ms	More than 35ms

PSN Service Class	Service Level – Round Trip Delay (A)	Service Failure Threshold (B)
PSN Application Class 1	Less than or equal to 35ms	More than 40ms
PSN Application Class 2	Less than or equal to 35ms	More than 40ms
PSN Application Class 3	Less than or equal to 35ms	More than 40ms
PSN Application Class 4	Less than or equal to 35ms	More than 40ms
PSN Default	Less than or equal to 40ms	More than 45ms

Table 54A - Combined Connectivity and LAN Service - Service Levels for Quality of the Managed Data LAN Service Excluding the Wireless RA LAN Service and Wireless LAN Service - Round Trip Delay

21.5.7 The Achieved Service Level for the Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service – Round Trip Delay shall be calculated as follows:

(i) all Round Trip Delay measurements taken for each PSN Service Class within each applicable Security Classification at each measured Data Port (as derived from the default measurement method described in Paragraph 21.5.3 above)) within the Agreed Service Time during the Service Measurement Period shall be averaged ; and

(ii) the Achieved Service Level for the Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service – Round Trip Delay shall be the average of all average measurements calculated in accordance with 21.5.7(i) at each PSN Service Class within each applicable Security Classification (i.e. there shall be a different Achieved Service Level for each applicable PSN Service Class within each applicable Security Classification, each of which relates to the traffic at that PSN Service Class and Security Classification across all measured Data Ports) .

21.5.8 The Service Levels for Quality of the Wireless RA LAN Service and Wireless LAN Service– Round Trip Delay shall be as set out in the table below:

PSN Service Class[1]	Service Level – Round Trip Delay (A)	Service Failure Threshold (B)
PSN Real-Time	Less than or equal to 40ms	More than 45ms
PSN Application Class 1	Less than or equal to 45ms	More than 50ms
PSN Application Class 2	Less than or equal to	More than 50ms

[1] PSN Application Classes 2, 3 and 4 shall be combined in accordance with Paragraph 11.2.6 of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*).

PSN Service Class[1]	Service Level – Round Trip Delay (A)	Service Failure Threshold (B)
	45ms	
PSN Application Class 3	Less than or equal to 45ms	More than 50ms
PSN Application Class 4	Less than or equal to 45ms	More than 50ms
PSN Default	Less than or equal to 50ms	More than 55ms

Table 54B - Combined Connectivity and LAN Service - Service Levels for Quality of the Wireless RA LAN Service and Wireless LAN Service - Round Trip Delay

21.5.9 The Achieved Service Level for the Quality of the Wireless RA LAN Service and Wireless LAN Service– Round Trip Delay shall be calculated as follows:

(i) all Round Trip Delay measurements taken for each PSN Service Class within each applicable Security Classification for each measured End User Device connected to a Wireless Access Point (as derived from the default measurement method described in Paragraph 21.5.3 above)) within the Agreed Service Time during the Service Measurement Period shall be averaged; and

(ii) the Achieved Service Level for the Quality of the Wireless RA LAN Service and Wireless LAN Service – Round Trip Delay shall be the average of all average measurements calculated in accordance with 21.5.9(i) at each applicable PSN Service Class within each applicable Security Classification (i.e. there shall be a different Achieved Service Level for each applicable PSN Service Class within each applicable Security Classification, each of which is relevant for the traffic at that PSN Service Class and Security Classification across all measured End User Device connected to Wireless Access Points).

21.5.10 In calculating the Round Trip Delay, the delay caused by any WAN acceleration or data traffic shaping equipment installed pursuant to Paragraph 3.7 of Consolidated Schedule 3 *(Service Requirements and Contractor Service Descriptions)*, that is not managed by or on behalf of the Contractor can be removed from the measured Round Trip Delay.

21.5.11 The Achieved Service Levels calculated in accordance with Paragraphs 21.5.7 and 21.5.9 above shall be used to calculate the applicable Service Credit Percentages in accordance with Paragraph 21.6.2 below.

21.6 Service Credits for Quality of the Managed Data LAN Service – Round Trip Delay

21.6.1 The following Service Credits are payable if the Service Levels for Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service are not met:

PSN Service Class	Coefficient (M)	Service Level – Round Trip Delay (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
PSN Real-Time	-0.04	Less than or equal to 30ms	More than 35ms	5%	25%
PSN Application Class 1	n/a	Less than or equal to 35ms	More than 40ms	5%	25%
PSN Application Class 2	n/a	Less than or equal to 35ms	More than 40ms	5%	25%
PSN Application Class 3	n/a	Less than or equal to 35ms	More than 40ms	5%	25%
PSN Application Class 4	n/a	Less than or equal to 35ms	More than 40ms	5%	25%
PSN Default	-0.04	Less than or equal to 40ms	More than 45ms	5%	25%

Table 55A - Combined Connectivity and LAN Service - Service Credits for Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service - Round Trip Delay

21.6.2 The Service Credit Percentage for Quality of each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), the Wireless RA LAN Service and the Wireless LAN Service, shall be calculated for each applicable PSN Service Class at each applicable Security Classification by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule, except that the values for A and B in that formula shall be expressed as milliseconds of Round Trip Delay and not as percentages.

21.6.3 The following Service Credits are payable if the Service Levels for Quality of the Wireless RA LAN Service and Wireless LAN Service are not met:

PSN Service Class	Coefficient (M)	Service Level – Round Trip Delay (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
PSN Real-Time	-0.04	Less than or equal to 40ms	More than 45ms	5%	25%
PSN Application Class 1	-0.04	Less than or equal to 45ms	More than 50ms	5%	25%
PSN Application Class 2	-0.04	Less than or equal to 45ms	More than 50ms	5%	25%
PSN Application Class 3	-0.04	Less than or equal to 45ms	More than 50ms	5%	25%
PSN Application Class 4	-0.04	Less than or equal to 45ms	More than 50ms	5%	25%
PSN Default	-0.04	Less than or equal to 50ms	More than 55ms	5%	25%

Table 55B - Combined Connectivity and LAN Service - Service Credits for Quality of the Wireless RA LAN Service and Wireless LAN Service - Round Trip Delay

21.6.4 Subject to Paragraph 21.6.2 above, the Service Credit (£) for Quality of the Managed Data LAN Service shall, for each PSN Service Class, at each applicable Security Classification, and for each of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service and Wireless LAN Service be calculated using the following formula:

Service Credit (£) = SCP * SC * PSN Service Class Percentage

Where:

"**Service Credit Percentage**"	shall be the Service Credit Percentage calculated in accordance with Paragraph 21.6.2
"**Service Charges**"	shall be the sum of all of the Recurring Charges for the provision of the Managed Data LAN Service (excluding the Wireless RA LAN Service and Wireless LAN Service), Wireless RA LAN Service or Wireless LAN Service (as applicable)

	for the Service Measurement Period
"**PSN Service Class Percentage**"	shall be the percentage of overall data traffic that constitutes the PSN Service Class to which the Service Credit Percentage relates, as notified to the Contractor by the Customer Authority and as varied from time to time.

22 BESPOKE ENGINEERING SERVICE

22.1 Service Levels for Availability of the Bespoke Engineering Service

22.1.1 The Bespoke Engineering Service and BES Help Desks at Northwood and Whitehall shall be Available twenty four (24) hours a day seven (7) days a week and the Agreed Service Time shall be 00.00-24.00 hours as set out in Paragraph 8.2 of this Part B.

22.1.2 The Service Level for the BES Help Desks at Northwood and Whitehall shall be capability of receiving contact via phone, email or direct contact and capability of responding ninety nine point ninety nine per cent (99.99%) of the time when measured over any Service Measurement Period.

22.1.3 The Achieved Service Level for the Availability of the Bespoke Engineering Service shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A.

22.1.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the Bespoke Engineering Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 11.1.36, 11.1.38 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.87 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 17 (*Bespoke Engineering Service*).

22.2 Service Levels for Quality of the Bespoke Engineering Service

22.2.1 The Service Levels for Quality of the Bespoke Engineering Service in relation to the BES Help Desk's response to requests shall be as follows:

BES Priority Level	Service Level Name	Description	Service Level
Level 2	TMS Matrix Switches *(Network Service Level)*	The period of time between: (a) the time at which the Customer Authority first contacts the BES Help Desk with a Bespoke Engineering Service request for assistance or to report an Incident in connection with TMS or Matrix Switch at an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the BES Help Desk has responded to such Bespoke Engineering Service	One (1) hour

BES Priority Level	Service Level Name	Description	Service Level
		request.	
Level 3	All systems and services covered by the BES activities *(Network Service Level)*	The period of time between: (a) the time at which the Customer Authority first contacts the BES Help Desk with a Bespoke Engineering Service request for assistance or to report an Incident in connection with any in-scope system other than System 1, TMS or Matrix Switch at an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the BES Help Desk has responded to such Bespoke Engineering Service request.	One (1) hour

Table 56 - Bespoke Engineering Service - Service Levels for Quality of responses by the BES Help Desk

22.2.2 The Achieved Service Level for the Quality of the Bespoke Engineering Service in relation to the BES Help Desk's response to requests shall be the number of BES Help Desk responses to meet the Service Levels described in Table 56 above, as a percentage of the total number of BES Help Desk responses across the entire network, for the Service Measurement Period.

22.2.3 The Service Levels for Quality of the Bespoke Engineering Service in relation to the BES Help Desk's resolution of requests shall be as follows:

BES Priority Level	Service Level Name	Description	Service Level
Level 1	System 1 *(Network Service Level)*	The period of time between: (a) the time at which the Customer Authority first contacts the BES Help Desk with a Bespoke Engineering Service request for assistance or to report an Incident in connection with System 1 at an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the BES Help Desk has resolved such Bespoke Engineering Service request.	Ten (10) minutes
Level 2	TMS Matrix Switches*(Network Service Level)*	The period of time between: (a) the time at which the Customer Authority first contacts the BES Help Desk with a Bespoke Engineering Service request, such time not to include the time that a legacy system owner requires with regards to resolution of a service request, for assistance or to report	Four (4) hours

BES Priority Level	Service Level Name	Description	Service Level
		an Incident in connection with TMS or Matrix Switch at an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the BES Help Desk has resolved such Bespoke Engineering Service request.	
Level 3	All systems and services covered by the BES Activities *(Network Service Level)*	The period of time between: (a) the time at which the Customer Authority first contacts the BES Help Desk with a Bespoke Engineering Service request, such time not to include the time that a legacy system owner requires with regards to resolution of a service request, for assistance or to report an Incident in connection with any in-scope system other than System 1, TMS or Matrix Switch at an identified Customer Authority Site; and (b) the time at which the Delivery Confirmation is provided, confirming that the BES Help Desk has resolved such Bespoke Engineering Service request.	End of next day within the Agreed Service Time

Table 57 - Bespoke Engineering Service - Service Levels for Quality of resolutions by the BES Help Desk

22.2.4 The Achieved Service Level for the Quality of the Bespoke Engineering Service in relation to the BES Help Desk's resolution of requests shall be the number of BES requests to the BES Help Desk that are resolved and meet the Service Levels described in Table 57 above, as a percentage of the total number of BES requests to the BES Help Desk, for the Service Measurement Period.

22.2.5 The Service Levels for the Quality of the Bespoke Engineering Service (response and resolution) shall be as follows:

Number of Service Responses by BES Help Desk per Service Measurement Period	Service Level (A)	Service Failure Threshold (B)
39 or fewer across all Customer Authority Sites *(Network Service Level)*	No more than two (2) Bespoke Engineering Service requests to the BES Help Desk responded to or resolved in excess of the Service Levels for Quality of the Bespoke Engineering Service described at Paragraph 22.2.1 or 22.2.3 above.	Four (4)
40 or more across all	95% of Bespoke Engineering Service	85%

Number of Service Responses by BES Help Desk per Service Measurement Period	Service Level (A)	Service Failure Threshold (B)
Customer Authority Sites *(Network Service Level)*	requests to the BES Help Desk responded to or resolved within the Service Levels for Quality of the Bespoke Engineering Service described at Paragraph 22.2.1 and 22.2.3 above.	

Table 58 - Bespoke Engineering Service - Service Levels for Quality

22.2.6 The Achieved Service Level for the Quality of the Bespoke Engineering Service (response and resolution) shall be the number of service responses to meet the Service Levels described in Table 58 above, as a percentage of the total number of service responses across the entire network, for the Service Measurement Period.

22.2.7 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the Bespoke Engineering Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.42, 11.1.90 to 11.1.91 and 11.1.103 to 11.1.104 of Section 1 (*Architecture and User Experience*) and Paragraph 19 of Section 17 (*Bespoke Engineering Service*).

22.3 Service Credits for Availability of the Bespoke Engineering Service

22.3.1 Service Credits for Availability of the Bespoke Engineering Service shall not apply.

22.4 Service Credits for Quality of the Bespoke Engineering Service

22.4.1 The following Service Credits are payable if the Service Levels for Quality of Bespoke Engineering Service (response and resolution) are not met:

Number of Service Requests made to BES Help Desk per Service Measurement Period	Coefficient (M)	Service Level (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
39 or fewer across all Customer Authority Sites *(Network*	-0.033	No more than two (2) Bespoke Engineering Service requests to the BES Help Desk	4	3.33%	10.00%

Number of Service Requests made to BES Help Desk per Service Measurement Period	Coefficient (M)	Service Level (A) This will have been achieved if:	Service Failure Threshold (B) Service Failure will be deemed to have occurred if:	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Service Level)		responded to or resolved in excess of the Service Levels for Quality of the Bespoke Engineering Service described at Paragraph 22.2.1 and 22.2.3 above.			
40 or more across all Customer Authority Sites *(Network Service Level)*	0.667	95% of Bespoke Engineering Service requests to the BES Help Desk responded to or resolved within the Service Levels for Quality of the Bespoke Engineering Service described at Paragraph 22.2.1 and 22.2.3 above.	85%	3.33%	10.00%

Table 59 - Bespoke Engineering Service - Service Credits for Quality

22.4.2 The Service Credit Percentage for Quality of the Bespoke Engineering Service (response and resolution) is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

22.4.3 The Service Credit (£) for Quality of the Bespoke Engineering Service (response and resolution) shall be calculated for each BES Priority Level and is equal to the Service Credit Percentage for the total number of Incidents at the relevant BES

Priority Level multiplied by the total Recurring Charges for the Bespoke Engineering Service for the Service Measurement Period.

23 CYBER ACCESS SERVICE

23.1 Service Levels for Provisioning of the Cyber Access Service

23.1.1 The Service Levels for Provisioning of the Cyber Access Service shall be:

Service Level Name	Description	Service Level
Provisioning of Cyber Access Service	The period of time between: (a) the time at which the Customer Authority requests that a Customer Authority Site is provided with the Cyber Access Service; and (b) the time at which the Delivery Confirmation is provided, confirming that the relevant Customer Authority Site is provided with the Cyber Access Service.	Sixty (60) Working Days

Table 60 - Cyber Access Service - Service Levels for Provisioning

23.1.2 The Service Level for Provisioning of major capability and infrastructure changes for the Cyber Access Service shall be agreed on a case by case basis in accordance with the Contract Change Procedure.

23.1.3 The Achieved Service Level for the Provisioning of the Connectivity Service shall be calculated in accordance with the formula set out at Paragraph 6.5 of Part A.

23.1.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Provisioning of the Cyber Access Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.57 to 11.1.58 of Section 1 (*Architecture and User Experience*) and Paragraph 19.1.2 of Section 18 (*Cyber Access Service*).

23.2 Service Levels for Availability of the Cyber Access Service

23.2.1 The Cyber Access Service shall be Available twenty four (24) hours seven (7) days a week.

23.2.2 The Service Levels for Availability of the Cyber Access Service shall be as follows:

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)
Availability of the OFFICIAL Cyber Access Service	The percentage of total time during the Service Measurement Period during which the	99.75%	99.5%

Service Level Name	Description	Service Level for Availability (A)	Service Failure Threshold (B)
(Network Service Level)	OFFICIAL Cyber Access Service is Available		
Availability of the SECRET Cyber Access Service *(Network Service Level)*	The percentage of total time during the Service Measurement Period during which the SECRET Cyber Access Service is Available	99.3%	98.50%
Availability of the Buffering Capability *(Network Service Level)*	The percentage of total time during the Service Measurement Period during which the Buffering Capability is Available	99.0%	90.0%

Table 61 - Cyber Access Service - Service Levels for Availability

23.2.3 The Achieved Service Level for the Availability of the Cyber Access Service shall be calculated in accordance with the formula set out at Paragraph 4.1.1 of Part A.

23.2.4 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Availability of the Cyber Access Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs 11.1.31, 11.1.34 to 11.1.35, 11.1.37 to 11.1.39, 11.1.61 to 11.1.72 and 11.1.88 to 11.1.89 of Section 1 (*Architecture and User Experience*) and Paragraph 19.1.2 of Section 18 (Cyber Access Service).

23.3 Service Credits for Provisioning of the Cyber Access Service

23.3.1 The Service Credits for Provisioning of the Cyber Access Service shall be calculated in accordance with Paragraph 6.10 of Part A of this Consolidated Schedule.

23.4 Service Credits for Availability of the Cyber Access Service

23.4.1 The following Service Credits are payable if the Service Levels for Availability of Cyber Access Service are not met:

Service Level Name	Coefficient (M)	Service Level (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Availability of the OFFICIAL Cyber Access Capability *(Network Service*	50	99.75%	99.5%	12.50%	25.00%

Service Level Name	Coefficient (M)	Service Level (A)	Service Failure Threshold (B)	Minimum Service Credit % (C)	Maximum Service Credit % (D)
Level)					
Availability of the SECRET Cyber Access Capability *(Network Service Level)*	16.66	99.3%	98.50%	11.67%	25.00%

Table 62 - Cyber Access Service - Service Credits for Availability

23.4.2 The Service Credit Percentage for the Availability of the Cyber Access Service is calculated by using the straight line formula set out in Paragraph 6.2 of Part A of this Consolidated Schedule.

23.4.3 The Service Credit (£) for the Availability of the Cyber Access Service shall be equal to the Service Credit Percentage multiplied by the sum of all Recurring Charges for the relevant Cyber Access Capability for the Service Measurement Period.

23.5 Service Levels for Quality of the Cyber Access Service

23.5.1 The Service Levels for Quality of the Cyber Access Service shall be as follows:

Description	Service Levels for Quality
Percentage traffic flow within the scope of the Cyber Access Service that is monitored *(Network Service Level)*	95%
Time to block hostile traffic following detection at any gateway or interconnection in the Boundary Protection Service *(Network Service Level)*	Five (5) seconds
Time to send an alert of hostile traffic following detection *(Network Service Level)*	Five (5) seconds
Time to block hostile traffic following an alert being sent to the ECND capability excluding any time taken by the ECND capability to confirm traffic to be blocked.	One (1) minute

Table 63 - Cyber Access Service - Service Levels for Quality

23.5.2 To the extent that such provisions do not conflict with this Consolidated Schedule 4 (*Service Levels and Related Remedies*), the Quality of the Cyber Access Service shall be measured in accordance with Part B of Consolidated Schedule 3 (*Service Requirements and Contractor Service Descriptions*), in particular Paragraphs

11.1.43, 11.1.90 to 11.1.91 and 11.1.105 of Section 1 (*Architecture and User Experience*) and Paragraph 19.1.2 of Section 18 (*Cyber Access Service*).

23.6 Service Credits for Quality of the Cyber Access Service

23.6.1 Service Credits for Quality of the Cyber Access Service shall not apply.

24 ENCRYPTION SERVICE

There are no Service Levels or Service Credits associated with the Encryption Service.

25 MISCELLANEOUS CONNECTIVITY SERVICE

There are no Service Levels or Service Credits associated with the Miscellaneous Connectivity Service.

APPENDIX 1
COMPARABLE LEGACY SERVICE LEVELS

The following Service Levels shall be applied under the conditions set out in Paragraph 8.9 to 8.12 of Part B of this Consolidated Schedule:

Service	Service Level Name / Type	Legacy Service Mapping (DFTS unless otherwise stated)	Applicable Service Level
Connectivity (WAN)	Availability of a Resilient Fully Diverse (Separation) Connection (Fixed Access) (OFFICIAL)	RLi HA availability	99.96%
	Availability of a Resilient Fully Diverse (Separation) Connection (Fixed Access) (SECRET)	SLi HA availability	99.93%
	Availability of a Resilient Fully Diverse Connection (Fixed Access) (OFFICIAL and SECRET)	R/SLi HA availability	99.96%
	Availability of a Resilient Diverse Connection (Fixed Access) (OFFICIAL and SECRET)	R/SLi HA availability	99.96%
	Availability of a Resilient Connection (Fixed Access) (OFFICIAL)	RLi UK HA availability	As per this Consolidated Schedule, Part B
		RLi HA Overseas Type 1 Germany & Cyprus	99.93%
	Availability of a Resilient Connection (Fixed Access) (SECRET)	SLi UK EA availability	99.90%
	Availability of a Non-Resilient Connection (Fixed Access) (OFFICIAL)	RLi UK SA availability	As per this Consolidated Schedule, Part B
		RLi SA Overseas Type 1 Germany & Cyprus	99.30%
		RLi SA Overseas Type 1 USA & Canada	99.30%

Service	Service Level Name / Type	Legacy Service Mapping (DFTS unless otherwise stated)	Applicable Service Level
		RLi SA Overseas Type 2	99.30%
	Availability of a Non-Resilient Connection (Fixed Access) (SECRET)	SLi UK SA availability	99.30%
	Availability of a Standard Connection (DSL Access)	BT Managed Broadband	As per this Consolidated Schedule, Part B
	Quality of the Connectivity Service - Round Trip Delay (PSN Real-Time)	All RLi/SLi	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
	Quality of the Connectivity Service - Round Trip Delay (PSN Default)	All RLi/SLi	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
Point to Point Service	Availability of a Non-Resilient PPS Connection - Ethernet and Fibre Channel Interface Types	RLi VLL/Shorthaul SA availability	99.75%
	Availability of a Resilient PPS Connection - Ethernet and Fibre Channel Interface Types	RLi VLL/Shorthaul HA availability	99.96%
	Availability of a Resilient Fully Diverse PPS Connection - Ethernet and Fibre Channel Interface Types	RLi VLL/Shorthaul HA availability	99.96%
	Availability of a Non-Resilient PPS Connection - ATM Access Synchronous Interface Types	ATM Access SA availability	As per this Consolidated Schedule, Part B
	Availability of a Resilient PPS Connection- ATM Access Synchronous Interface Types	ATM Access HA availability	As per this Consolidated Schedule, Part B
	Availability of a Resilient Fully Diverse PPS Connection - ATM Access Synchronous Interface Types	ATM Access HA availability	As per this Consolidated Schedule, Part B

Service	Service Level Name / Type	Legacy Service Mapping (DFTS unless otherwise stated)	Applicable Service Level
	Quality of the PPS - Ethernet MAN Connections (OWD measurement only)	RLi Shorthaul SA/HA	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
	Quality of the PPS - Ethernet VLL Connections (OWD measurement only)	RLi VLL SA/HA	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
	Quality of the PPS - Fibre Channel VLL Connections (OWD measurement only)	RLi VLL SA/HA	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
LAN Service	Availability of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service	DII LAN	As per this Consolidated Schedule, Part B
	Availability of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service	LDCN LAN	As per this Consolidated Schedule, Part B
	Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service - PSN Real-Time	DII LAN	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
	Quality of the Managed Data LAN Service excluding the Wireless RA LAN Service and Wireless LAN Service - PSN Default	DII LAN	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule
Bespoke Engineering Service	Quality of the Bespoke Engineering Service - Number of Service Responses by BES Help Desk	MSC Syscon CoS Completion	As per this Consolidated Schedule, Part B
Cyber Access Service	Availability of the OFFICIAL Cyber Access Service	ECND	As per this Consolidated Schedule, Part B
	Availability of the SECRET	ECND	As per this Consolidated

Service	Service Level Name / Type	Legacy Service Mapping (DFTS unless otherwise stated)	Applicable Service Level
	Cyber Access Service		Schedule, Part B
DNSIP Service	Availability of the DNSIP Service	DNS Management availability	As per this Consolidated Schedule, Part B
Boundary Protection Service	Availability of the Remote Access Gateway, the OFFICIAL Secure Interface(s), and the SECRET Secure Interface(s)	RLi RA	99.90%
	Availability of the Internet Capability, PSN/GSI Capability and N3 Capability	RGS Enterprise Gateway Fixed EGS GSI NHS	As per this Consolidated Schedule, Part B
	Availability of all BPS Accounts	RGS EGS Users Account	Contractor to measure in accordance with Paragraph 8.11 of Part B of this Consolidated Schedule

1 In the case where any Comparable Legacy Service Level applies in accordance with Paragraphs 8.9 to 8.12 of Part B of this Consolidated Schedule, then the relevant Service Failure Threshold and Coefficient (M) of the Service Credit Percentage calculations shall be adjusted as follows:

As before:

$M = (D - C) / (A – B)$

Allowed adjustment to $B_{INTERIM}$ (*paragraph 9.1, 9.2*):

$B_{INTERIM} = A_{INTERIM} – M * (1 - A_{INTERIM}) * (A – B) / C$

And:

$M_{INTERIM} = (D - C) / (A_{INTERIM} – B_{INTERIM})$