



## Schedule 2.2 – Performance Levels

## CHANGE HISTORY

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## **1 Performance Indicators**

- 1.1 Annex 1 (Performance Indicators) sets out the Performance Indicators which shall be used to measure the performance of the Services by the Concessionaire.
- 1.2 The Concessionaire shall monitor its performance against each Performance Indicator and, in accordance with Paragraph 2, shall provide TTL with reports which detail the level of service achieved.

## **2 Performance Monitoring and Performance Review**

- 2.1 No later than the tenth (10th) Working Day of each month (commencing the month following the earliest Performance Indicator Start Date), the Concessionaire shall provide to the TTL Representative a report which summarises the performance of the Services delivered by the Concessionaire in the previous month against each of the Performance Indicators as described in Annex 1 (Performance Indicators) (the "**Performance Monitoring Report (PMR1)**").
- 2.2 The Performance Monitoring Report (PMR1) shall be provided in the format specified in Schedule 4.1 (Concessionaire Solution) and shall contain the following information:
  - (a) information in respect of the Measurement Period just ended:
    - (i) the date of the report;
    - (ii) details of the Measurement Period(s) addressed;
    - (iii) for each Performance Indicator reported:
      - (A) the description of the Performance Indicator and associated reference;
      - (B) the applicable Target Performance Levels;
      - (C) the total number of Severity Level 1 Service Incidents, if applicable;
      - (D) the total number of Severity Level 2 Service Incidents, if applicable;
      - (E) the actual measured performance in accordance with the Performance Measurement Approach;
      - (F) the actual measured performance for the previous twelve (12) months for the Performance Indicator; and
      - (G) details of any interim calculations relevant to the calculation methodology (e.g. the total available hours);
    - (iv) where applicable, the status of any outstanding Rectification Plan processes, including:
      - (A) whether or not a Rectification Plan has been agreed; and
      - (B) where a Rectification Plan has been agreed, a summary of the Concessionaire's progress in implementing that Rectification Plan;

- (v) relevant particulars of any aspects of the Concessionaire's performance which fail to meet the requirements of this Agreement; and
- (b) such other details as TTL may require from time to time in respect of the Concessionaire's performance against the Performance Indicators.

### **3 Performance Records**

- 3.1 The Concessionaire shall keep appropriate documents and Records in relation to the calculation of the Performance Indicators in order to substantiate the Performance Monitoring Reports (PMR1).
- 3.2 The Concessionaire shall provide to TTL such supporting documentation as TTL may reasonably require in order to verify the level of performance of the Concessionaire.

## Annex 1 – Performance Indicators

The Performance Indicators that shall apply to the Services are set out in the tables below:

### 1 Commercial Mobile Services

CM1 – (Commercial Mobile Availability)	
Ref	CM1
Name	Commercial Mobile Availability
Service Line	Commercial Mobile
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	The earlier of 1 April 2025 or the Commercial Mobile Services Commencement Date.
Description	CM1 (Commercial Mobile Availability) measures the Customer experience of the Commercial Mobile Services. This will include all service delivery components: Stations, Tunnel Sections and Base Station Hotels.
Performance Measure	<p>The weighted minutes of unavailability per month for all public areas where cellular coverage is required by Mobile Network Operators (MNOs): <i>The availability of the whole DAS shall meet or exceed 98.000% of the time measured</i></p> <p>The proposed detailed measurement approach includes the:</p> <ol style="list-style-type: none"> <li>1. service areas covered;  <i>the whole ADAS as each portion of the network is accepted (as per defined Acceptance Criteria) in London Underground Stations and Tunnels. Excludes any back of house areas of coverage provided for ESN.</i></li> <li>2. service unavailability;</li> </ol>

CM1 – (Commercial Mobile Availability)	
	<p><i>The Unavailability of the DAS (being the total sum of all Coverage Areas) calculated and expressed as a percentage in accordance with the below</i></p> <p><i>The DAS Availability will be expressed as a percentage to two (2) decimal places</i></p> <p>3. weighting of each component of the service;</p> <p><i>The weighting of each component, where it has the ability to impact on Unavailability of a Coverage Area, is weighted equally.</i></p> <p>4. how the time unavailable is measured including start and end of unavailability, any allowed stopping of the clock (due to access or any other reason).</p> <p><i>All time measurements defined in these formulae will be in minutes, with minutes rounded to the nearest 15 minute period.</i></p> <p><i>The DAS Availability Calculation will exclude unavailability due to Unavailability Force Majeure and any time elapsed when the Concessionaire can demonstrate they are unable to rectify the unavailability as a result of access restrictions to TfL's Assets</i></p>
Performance Measurement Approach	<p>The Concessionaire shall establish the number of minutes of unavailability through:</p> <ol style="list-style-type: none"> <li>1. continual monitoring (polling at least once every five (5) minutes, with the same polling frequency to be applied to all measurement points);</li> <li>2. allocating any reported unavailability captured to the relevant measurement points; and</li> <li>3. applying the weighting to the unavailability.</li> </ol> <p><i>Proposal:</i></p> <ol style="list-style-type: none"> <li>1. Continual monitoring of the ADAS (real time from SNMP event time stamp)</li> </ol>

CM1 – (Commercial Mobile Availability)	
	<p>2. ITSM tool used to record all unavailability in tickets, recording failed asset, service impacted and all relevant measurement points. Elapsed outage time verified against Alarm data from the Active network elements.</p> <p>3. Applying the number of Coverage Areas to the Availability calculation</p>
Performance Calculation	<p><math>A = 1 \text{ minus } (\text{outage minutes in the month} \times \text{number of Coverage Areas} / \text{total available minutes in month} \times \text{number of Coverage Areas})</math></p> <p>To be measured to the nearest 15 minutes, excluding minutes caused by any Unavailability Exclusions</p>
Target Performance Level	98.00% availability of accepted Coverage Areas, where availability shall meet or exceed the Coverage Objective,
Example Calculation	<p><i>Example 1:</i>  1 outage affecting 4 stations (Coverage Areas) for 24 hours (assumes Concessionaire has immediate access to rectify the fault, therefore no adjustment to outage calculation)  Coverage Areas = 379  Outage minutes: <math>4 \times 24 \times 60 = 5,760 \text{ minutes}</math>  Days in month = 30 days</p> <p>Total available minutes in month: <math>379 \times 30 \times 24 \times 60 = 16,372,800</math>  Outage calculation: <math>1 - (5,760 / 16,372,800) = 99.96\%</math></p> <p><i>Example 2:</i>  1 outage affecting 8 stations:  Alarm 10:00 incident start time  Ticket raised 10:01  Access request 10:30 and access approved for 01:00 following day  Service restored 02:00</p>



CM1 – (Commercial Mobile Availability)	
	<p>Unavailability time = A-B  A) minutes between 10:00 incident alarm and 03:00 (service restored) <u>less</u>  B) minutes between 10:30 (access request) and 01:00 the following day (access granted)  A (1,020) – B (870) = 150 minutes  Coverage Areas = 379</p> <p>Outage minutes: 8 x 75 = 1,200 minutes  Days in month = 30 days  Total available minutes in month: 379 x 30 x 24 x 60 = 16,372,800  Outage calculation: 1 - (1,200 / 16,372,800) = 99.99%</p>
Definitions	<p><i>Definitions</i></p> <p><i>Coverage Objective: Coverage is in accordance with the Acceptance Criteria and is provided in all public access areas of the Stations (Commercial Mobile Station Area) and all Tunnels (Commercial Mobile Tunnel Area)</i></p> <p><i>Coverage Area: means either Commercial Mobile Station Area or Commercial Mobile Tunnel Area where Commercial Mobile Services are provided</i></p> <p><i>Acceptance Criteria: is the sole basis upon which the MNO(s) shall accept or reject any portion of the network. The following standard when met shall trigger MNO(s)s acceptance of that portion of the network covered by an approved SLA in accordance with the agreed Coverage Requirements which defines coverage is required in 95% of the Commercial Mobile Station Area and 87% of the Commercial Mobile Tunnel Area.</i></p> <p><i>Unavailable Start Time = (PCN Pilot requirement TR5.19) the earlier of: (i) the point at which the Concessionaire's monitoring tools (if any) log the Service Incident; (ii) the point at which TfL assigns a Service Incident to the Concessionaire through the Concessionaire Service Desk; or (iii) when the Concessionaire first became aware of the Service Incident or would have become aware of that Service Incident but for a failure of the Concessionaire to comply with its obligations</i></p>

CM1 – (Commercial Mobile Availability)	
	<p><i>Unavailability means loss of wireless function of any whole station or tunnel pair. That is, a functional loss of wireless service to an end user.</i></p> <p><i>Clock Stop e.g. awaiting site access to repair. Therefore, clock will stop from the time of access request and start from the time access available for Availability calculation. (Schedule 2.1 GRT4e: The Concessionaire shall ensure that where the Concessionaire needs to undertake work on the London Underground for the purposes of this Agreement, it only undertakes such work during Engineering Hours, unless otherwise agreed in advance with TfL.)</i></p> <p><i>Unavailability Force Majeure: an event or circumstance beyond the reasonable control of the Concessionaire, other than where such event or circumstance was caused by an act or omission of the Concessionaire in contravention of the terms of this Concession Agreement including, without limitation, an act of god, riot, terrorism, fire, act of government or state, war or armed conflict, civil commotion, insurrection, embargo, prevention from or hindrance in obtaining any raw materials, energy or other supplies, cable cuts, labour disputes of whatever nature, or the act or omission of any Government Authority.</i></p> <p><i>Unavailability Exclusions:</i>  <i>failures caused in whole or part by i) one or more acts or omissions of MNO or any of MNOs employees, agents or contractors; ii) the use, failure, malfunction, unavailability, or inoperability of MNO Equipment; iii) any Unavailability Force Majeure event; iv) planned interruptions or degradations for maintenance or repair that are scheduled by the Concessionaire, v) a change in or addition to MNOs frequencies, equipment, or wirelessly deployed telephone connections, vi) comply with all Governmental Requirements, including but not limited to those of TfL, and any laws, rules, regulations and orders pertaining to environmental or health and safety matters; or vii) any acts or omissions of TfL or any of its employees, agents, or contractors.</i></p>
CM2 – (Commercial Mobile Severity Level 1 Fix Time Failure)	
Ref	CM2
Name	Commercial Mobile Severity Level 1 Fix Time Failure

CM2 – (Commercial Mobile Severity Level 1 Fix Time Failure)	
Service Line	Commercial Mobile
Measurement Period	Three (3) consecutive months and twelve (12) consecutive months
Performance Indicator Type	KPI
Performance Indicator Start Date	The earlier of 1 April 2025 or the Commercial Mobile Services Commencement Date.
Description	CM2 (Commercial Mobile Severity 1 Fix Time Failure) measures the number of Severity Level 1 Service Incidents not fixed within the required Fix Time during the Measurement Period.
Performance Measure	The number of Failures for Severity Level 1 Service Incidents in the Measurement Period.
Performance Measurement Approach	<p>The Concessionaire shall measure the Fix Times for all Severity Level 1 Service Incidents and report any Failures in the Performance Monitoring Report (PMR1).</p> <p><i>Proposal for measurement of the Fix Times:</i></p> <ol style="list-style-type: none"> <li><i>1. Continual monitoring of all Active Elements of the ADAS (real time from SNMP event time stamp)</i></li> <li><i>2. All incidents will be logged in ITSM tool and assigned Severity</i></li> <li><i>3. start time will be the alarm time stamp or customer report time</i></li> <li><i>4. ITSM tool will be the source data for reporting - provided via Dashboard and input to Monthly Performance Report (PMR1)</i></li> <li><i>5. Clock stopping start and end times will be recorded in the ticket, with time excluded from Outage Time calculations. See definitions below.</i></li> </ol>
Performance Calculation	N/A
Target Performance Level	<p>No more than three (3) Failures over a three (3) consecutive month period; and</p> <p>No more than five (5) Failures over a twelve (12) consecutive month period.</p>

CM2 – (Commercial Mobile Severity Level 1 Fix Time Failure)		
Example Calculation	N/A	
Definitions	<p><b>Failure</b> means the Fix Time is greater than the relevant Fix Time Target;</p> <p><b>Fix Time</b> means, in relation to a Service Incident, the period from the time that the Service Incident has been reported to the Concessionaire to the point of its Fix;</p> <p><b>Severity Level 1 Fix Time Target</b> means: <i>Repair / restore / mitigate in ≤24 hours in respect of a Severity Level 1 Service Incident</i></p> <p><b>Fix</b> means, in relation to a Service Incident, either:</p> <ul style="list-style-type: none"> <li>(a) the root cause of the Service Incident has been removed and the Customer Products are being provided in accordance with the relevant Customer Contract; or</li> <li>(b) the relevant Mobile Network Operator has been provided with a workaround in relation to the Service Incident deemed acceptable by the Mobile Network Operator;</li> </ul> <p><b>Service Incident</b> means a reported occurrence of a failure to deliver any part of a Customer Product in accordance with a Customer Contract;</p> <p><b>Severity Level 1 Service Incident</b> means a Service Incident with a high actual or potential impact on the Customer Product rendering the Customer Product or any substantial functionality of the Customer Product unusable or at serious risk.</p> <p><b>Non-exhaustive illustrative examples for the Customer Products relating to Commercial Mobile Services below:</b></p> <ul style="list-style-type: none"> <li>(a) total loss of one (1) or more Base Station Hotels (e.g. loss of power);</li> <li>(b) loss of service affecting multiple Tunnel Sections and/or Stations (e.g. failure of the ADAS equipment hosted in a Base Station Hotel); or</li> <li>(c) loss of access to the Concessionaire's service desk;</li> </ul>	

CM2 – (Commercial Mobile Severity Level 1 Fix Time Failure)	
	<p><b>BAI Define Severity Level 1 as the Loss of service affecting an entire BSH or more than 50% of Coverage Areas (Stations or Tunnels) served by that BSH</b></p> <p><i>e.g. Catastrophic failure of BSH capability in the DAS, Fibre and power systems</i></p>

CM3 – (Commercial Mobile Severity Level 2 Fix Time Failure)	
Ref	CM3
Name	Commercial Mobile Severity Level 2 Fix Time Failure
Service Line	Commercial Mobile
Measurement Period	Month and three (3) consecutive months
Performance Indicator Type	KPI
Performance Indicator Start Date	The earlier of 1 April 2025 or the Commercial Mobile Services Commencement Date.
Description	CM3 (Commercial Mobile Severity Level 2 Fix Time Failure) measures the number of Severity Level 2 Service Incidents not fixed within the required Fix Time during the Measurement Period.
Performance Measure	The number of Failures for Severity Level 2 Service Incidents in the Measurement Period.
Performance Measurement Approach	<p>The Concessionaire shall measure the Fix Times for all Severity Level 2 Service Incidents and report these Failures in the Performance Monitoring Report (PMR1).</p> <p><i>Proposal for measurement of the Fix Times:</i></p> <ol style="list-style-type: none"> <li><i>Continual monitoring of all Active Elements of the ADAS (real time from SNMP event time stamp)</i></li> <li><i>All incidents will be logged in ITSM tool and assigned Severity</i></li> <li><i>start time will be the alarm time stamp or customer report time</i></li> </ol>

CM3 – (Commercial Mobile Severity Level 2 Fix Time Failure)	
	<p>4. ITSM tool will be the source data for reporting - provided via Dashboard and input to Monthly Performance Report (PMR1)</p> <p>5. Clock stopping start and end times will be recorded in the ticket, with time excluded from Availability calculations. See definitions below.</p>
Performance Calculation	N/A
Target Performance Level	<p>No more than two (2) Failures per month; and</p> <p>No more than five (5) Failures in any three (3) consecutive months.</p>
Example Calculation	N/A
Definitions	<p><b>Severity Level 2 Fix Time Target</b> means: <i>Repair / restore / mitigate in <math>\leq 72</math> hours in respect of a Severity Level 2 Service Incident</i></p> <p><b>Severity Level 2 Service Incident</b> means a Service Incident that results in serious inconvenience to Mobile Network Operators or End Users or substantially impacts the working operation of the Customer Products.</p> <p><b>Non-exhaustive illustrative examples for the Customer Products relating to Commercial Mobile Services below:</b></p> <ul style="list-style-type: none"> <li>(d) loss of service affecting one (1) or more Tunnel Sections or one (1) or more Stations served by a component of a Base Station Hotel (e.g. failure of an ADAS serving a set of Tunnel Sections or Stations);</li> <li>(e) loss of the Concessionaire's service management system or interface (as long as the Concessionaire is able to respond via the service desk to Service Incidents and record such incidents in the incident log); or</li> <li>(f) loss of access to the Concessionaire's incident log;</li> </ul>

<b>CM4 – (Commercial Mobile – Total Mobile Network Operators)</b>	
Ref	CM4
Name	Total Mobile Network Operators
Service Line	Commercial Mobile
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	The earlier of 1 April 2025 or the Achievement of Milestone MS16.
Description	<p>CM4 (Commercial Mobile MNO Agreements In Place) applies to the Commercial Mobile Services and measures the number of Mobile Network Operators in the Measurement Period who have entered into or are party to an MNO Commercial Agreement (or multiple MNO Commercial Agreements) under which:</p> <ul style="list-style-type: none"> <li>(a) the Concessionaire is providing the Mobile Network Operator with the use of the Neutral Host Cellular Solution to provide mobile coverage in all the locations listed in Annex 1 of Schedule 2.1; and</li> <li>(b) the Mobile Network Operator is obliged to make payments to the Concessionaire within the Measurement Period in respect of all locations listed in Annex 1 of Schedule 2.1.</li> </ul>
Performance Measure	<p>The number of different Mobile Network Operators who have entered into or are party to an MNO Commercial Agreement (or multiple MNO Commercial Agreements) under which:</p> <ul style="list-style-type: none"> <li>(c) the Concessionaire is providing the Mobile Network Operator with the use of the Neutral Host Cellular Solution to provide mobile coverage in all the locations listed in Annex 1 of Schedule 2.1; and</li> <li>(d) the Mobile Network Operator is obliged to make payments to the Concessionaire within the Measurement Period in respect of all locations listed in Annex 1 of Schedule 2.1.</li> </ul>
Performance Measurement Approach	The Concessionaire shall report the number of Mobile Network Operators which have entered into or are party to a MNO Commercial Agreement (or multiple MNO Commercial Agreements) each month under which:

<b>CM4 – (Commercial Mobile – Total Mobile Network Operators)</b>	
	<p>(a) the Concessionaire is providing the Mobile Network Operator with the use of the Neutral Host Cellular Solution to provide mobile coverage in all the locations listed in Annex 1 of Schedule 2.1; and</p> <p>(b) the Mobile Network Operator is obliged to make payments to the Concessionaire within the Measurement Period in respect of all locations listed in Annex 1 of Schedule 2.1,</p> <p>in the Monthly Financial Report (FIN1) and in the Performance Monitoring Report (PMR1).</p>
Performance Calculation	<p>The number of Mobile Network Operators which have entered into or are party to an MNO Commercial Agreement (or multiple MNO Commercial Agreements) each month under which:</p> <p>(a) the Concessionaire is providing the Mobile Network Operator with the use of the Neutral Host Cellular Solution to provide mobile coverage in all the locations listed in Annex 1 of Schedule 2.1; and</p> <p>(b) the Mobile Network Operator is obliged to make payments to the Concessionaire within the Measurement Period in respect of all locations listed in Annex 1 of Schedule 2.1.</p>
Target Performance Level	<p>No less than two (2) Mobile Network Operators which have entered into or are party to an MNO Commercial Agreement (or multiple MNO Commercial Agreements) each month under which:</p> <p>(a) the Concessionaire is providing the Mobile Network Operator with the use of the Neutral Host Cellular Solution to provide mobile coverage in all the locations listed in Annex 1 of Schedule 2.1; and</p> <p>(b) the Mobile Network Operator is obliged to make payments to the Concessionaire within the Measurement Period in respect of all locations listed in Annex 1 of Schedule 2.1.</p>
Example Calculation	N/A
Definitions	N/A
<b>CM5 – (Commercial Mobile End User Satisfaction)</b>	
Ref	CM5



CM5 – (Commercial Mobile End User Satisfaction)	
Name	End User Satisfaction
Service Line	Commercial Mobile
Measurement Period	Once per Financial Year in June
Performance Indicator Type	KPI
Performance Indicator Start Date	The earlier of 1 April 2025 or the Commercial Mobile Services Commencement Date.
Description	CM5 (Commercial Mobile End User Satisfaction) applies to the Commercial Mobile Services and measures End User satisfaction within the Measurement Period.
Performance Measure	End User satisfaction with the Commercial Mobile Services.
Performance Measurement Approach	<p><i>NPS (Net Promoter Score):</i>  <i>Customer survey through Q&amp;A measurable responses 0-10</i>  <i>Promoters: Customers who answer the question with 8-10</i>  <i>Passives: Customers who answer the question with 6-7</i>  <i>Detractors: Customers who answer the question with 0-5</i></p> <p>BAI will target not less than 250 customer surveys from each MNO who has entered into a Customer Contract and is providing Commercial Mobile Services.</p>
Performance Calculation	<i>% Promoters - % Detractors = NPS</i>
Target Performance Level	<i>Report completed once each year</i>
Example Calculation	<i>40% Promoters - 35% Detractors = NPS 5</i>

CM5 – (Commercial Mobile End User Satisfaction)	
	<i>50% Promoters - 25% Detractors = NPS 25</i>
Definitions	<p><i>NPS - Net Promoter Score is used in coordinated with customer surveys to measure customer Satisfaction.</i></p> <p><i>Promoters - Those customers who are likely to use the service again and recommend to friends (8-10).</i></p> <p><i>Detractors - Those customers who would not use the service again or not recommend (0-5)</i></p>

## 2 Fibre Service

<b>FB1 – (Fibre: Severity Level 1 Fix Time Failure)</b>	
Ref	FB1
Name	<i>Fibre Severity Level 1 Fix Time Failure</i>
Service Line	Fibre
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	<i>From the date on which the Concessionaire commences delivery of Fibre Services and generates Fibre Services Gross Revenue.</i>
Description	<i>FB1 (Fibre Severity Level 1 Fix Time Failure) measures the number of Severity Level 1 Service Incidents not fixed within the required Fix Time during the consecutive three months immediately prior to the Measurement Period.</i>
Performance Measure	<i>The number of Failures for Severity Level 1 Fibre Incidents in the consecutive three months immediately prior to the Measurement Period.</i>
Performance Measurement Approach	<i>Concessionaire shall measure the Fix Times for all Fibre Level 1 Service Incidents and report any Failures in the Performance Monitoring Report (PMR1).</i>
Performance Calculation	N/A
Target Performance Level	<i>No more than 3 Failures over a 3 consecutive month period; or No more than 10 Failures over a 12 consecutive month period</i>
Example Calculation	N/A

<b>FB1 – (Fibre: Severity Level 1 Fix Time Failure)</b>	
Definitions	<p><i>Fibre means a full fibre based network with a minimum number of fifty (50) Points of Presences (PoP) on TfL Assets, such PoPs to include the PoPs used in the Grant Funded Works Services by the Milestone Date for the Key Milestones FS4. (Schedule 2.1 para 3 requirement FST1(a))</i></p> <p><i>Available means customer can pass optical signals between interface points.</i></p> <p><i>Service Affecting / Unavailable means customer cannot pass optical signals between interface points.</i></p> <p><i>Excludes Unavailability Force Majeure outage hours</i></p> <p><i>Excludes planned outage hours</i></p> <p><i>Excludes 'clock stop' e.g. awaiting site access to repair</i></p> <p><i>Excludes damage by 3rd parties including but not limited to TfL e.g. Fibre cuts</i></p> <p><i>(from CM2) Service Incident means a reported occurrence of a failure to deliver any part of a Customer Product in accordance with a Customer Contract;</i></p> <p><i>(from CM2) Severity Level 1 Service Incident means a Service Incident with a high actual or potential impact on the Customer Product rendering the Customer Product or any substantial functionality of the Customer Product unusable or at serious risk</i></p> <p><b>Severity Level 1 Fix Time Target means: Response = 1 hour and Fix = 8 (access) hours</b></p> <p><i>Non-exhaustive illustrative examples for the Customer Products relating to Fibre Services below:</i></p> <p><b>a) total loss of Fibre to or from a BSH</b></p>

<b>FB2 – (Fibre: Severity Level 2 Fix Time Failure)</b>	
Ref	FB2
Name	<i>Fibre Severity Level 2 Fix Time Failure</i>
Service Line	Fibre

<b>FB2 – (Fibre: Severity Level 2 Fix Time Failure)</b>	
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	<i>From the date on which the Concessionaire commences delivery of Fibre Services and generates Fibre Services Gross Revenue</i>
Description	<i>FB2 (Fibre Severity Level 2 Fix Time Failure) measures the number of Severity Level 2 Service Incidents not fixed within the required Fix Time during the consecutive three months immediately prior to the Measurement Period.</i>
Performance Measure	<i>The number of Failures for Severity Level 2 Fibre Incidents in the consecutive three months immediately prior to the Measurement Period</i>
Performance Measurement Approach	<i>The Concessionaire shall measure the Fix Times for all Fibre Level 2 Service Incidents and report any Failures in the Performance Monitoring Report (PMR1).</i>
Performance Calculation	<b>N/A</b>
Target Performance Level	<i>No more than 2 Failures per month; or No more than 5 Failures in any 3 consecutive months.</i>
Example Calculation	N/A
Definitions	<p><i>Fibre means a full fibre based network with a minimum number of fifty (50) Points of Presences (PoP) on TfL Assets, such PoPs to include the PoPs used in the Grant Funded Works Services by the Milestone Date for the Key Milestones FS4. (Schedule 2.1 para 3 requirement FST1(a))</i></p> <p><i>Available means customer can pass optical signals between interface points.</i></p> <p><i>Service Affecting / Unavailable means customer cannot pass optical signals between interface points.</i></p> <p><i>Excludes Unavailability Force Majeure outage hours, including fibre cuts</i></p> <p><i>Excludes planned outage hours</i></p> <p><i>Excludes 'clock stop' e.g. awaiting site access to repair</i></p>

<b>FB2 – (Fibre: Severity Level 2 Fix Time Failure)</b>	
	<p><i>(from CM3) Severity 2 means a Service Incident that results in serious inconvenience to Fibre Services Customers or substantially impacts the working operation of the Customer Products</i></p> <p><b>Severity Level 2 Fix Time Target means: Response = 2 hours and Fix = 16 (access) hours</b></p> <p><i>Non-exhaustive illustrative examples for the Fibre Services below that would be a Fibre Severity Level 2 if a service is materially degraded due to:</i></p> <ul style="list-style-type: none"> <li><i>a) a failure at a fibre PoP at a station or a BSH</i></li> <li><i>b) In LU / outside LU: active equipment for a wavelength service affected</i></li> </ul>

<b>FB3 – N/A</b>	
Ref	FB3
Name	N/A
Service Line	Fibre
Measurement Period	N/A
Performance Indicator Type	KPI
Performance Indicator Start Date	N/A
Description	N/A
Performance Measure	N/A

<b>FB3 – N/A</b>	
Performance Measurement Approach	N/A
Performance Calculation	N/A
Performance Indicator Target	N/A
Example Calculation	N/A
Definitions	N/A

### 3 Streetscape Services

<b>SS1 – (Streetscape - Severity Level 1 Fix Time Failures)</b>	
Ref	SS1
Name	<i>Severity Level 1 Fix Time Failures</i>
Service Line	Streetscape
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	<i>The date on which the number of active small cells reaches <math>\geq 150</math></i>
Description	<i>SS1 measures the fix time of the Streetscape service when <math>\geq 25</math> small cells are unavailable due to a single failure. This will include loss of backhaul or loss of power. The threshold of 25 cells is driven by price point and size of footprint impacted</i>
Performance Measure	<i>&gt;25 small cells with no connectivity as a result of Concessionaire's network failure</i>
Performance Measurement Approach	<p><i>Proposal:</i></p> <ol style="list-style-type: none"> <li><i>1. Continual monitoring of all Active Elements of the service (real time). This will be power and lit fibre.</i></li> <li><i>2. All incidents will be logged in ITSM tool and assigned Severity</i></li> <li><i>3. start time will be the alarm time stamp or customer report time</i></li> <li><i>4. tool will be the source data for reporting - provided via Dashboard and input to Monthly Performance Report (PMR1)</i></li> <li><i>5. Clock stopping start and end times will be recorded in the ticket, with time excluded from Unavailability calculations. See definitions below.</i></li> </ol>
Performance Calculation	<i>For each Severity Level 2 Incident (incident fix time - incident start time) - (clock stop time - clock resume time) = outage hours</i>
Target Performance Indicator	<b>Response = 2 hours</b>



<b>SS1 – (Streetscape - Severity Level 1 Fix Time Failures)</b>	
	<b>Fix (Repair / restore / mitigate) = 16 (access) hours</b>
Example Calculation	<p><i>Example 1 with clock stop time:</i>  Fix time = (04/09/19 22:00 minus 04/09/19 10:00) minus (04/09/19 19:30 minus 04/09/19 10:30) = 3 outage hours</p> <p><i>Example 2 with zero clock stop time:</i>  Fix time = (04/09/19 22:00 minus 04/09/19 19:30) minus (0) = 3 outage hours</p>
Definitions	<p><i>Failure means the Fix Time is greater than the relevant Fix Time Target;</i>  <i>Fix Time means, in relation to a Service Incident, the period from the time that the Service Incident has been reported to the Concessionaire to the point of its Fix;</i>  <i>Fix time excludes:</i></p> <ul style="list-style-type: none"> <li>- 'clock stop' e.g. awaiting site access to repair. Therefore, clock will stop from the time of access request and start from the time access available</li> <li>- Unavailability Force Majeure outage hours, including fibre cuts</li> <li>- planned outage hours</li> </ul> <p><i>Severity Level 2 means:</i>  <i>BAI examples:</i></p> <ul style="list-style-type: none"> <li>- Power supply failures impacting &gt; 25 small cells</li> <li>- Risk of impact to operational requirements or building occupants if not actioned within 24 hours</li> </ul>

<b>SS2 – (Streetscape - Severity Level 2 Fix Time Failures)</b>	
Ref	SS2
Name	Severity Level 2 Fix Time Failures
Service Line	Streetscape

<b>SS2 – (Streetscape - Severity Level 2 Fix Time Failures)</b>	
Measurement Period	Month
Performance Indicator Type	KPI
Performance Indicator Start Date	<i>The date on which the number of active small cells reaches <math>\geq 150</math></i>
Description	<i>SS2 measures the fix time of the Streetscape service when a single small cell is unavailable due to a single failure. This will include loss of backhaul or loss of power</i>
Performance Measure	<i><math>\leq 25</math> Small Cells with no connectivity as a result of the Concessionaire's network failure</i>
Performance Measurement Approach	<p><i>Proposal:</i></p> <ol style="list-style-type: none"> <li><i>1. Continual monitoring of all Active Elements of the service (real time). This will be power and lit fibre.</i></li> <li><i>2. All incidents will be logged in ITSM tool and assigned Severity</i></li> <li><i>3. start time will be the alarm time stamp or customer report time</i></li> <li><i>4. tool will be the source data for reporting - provided via Dashboard and input to Monthly Performance Report (PMR1)</i></li> <li><i>5. Clock stopping start and end times will be recorded in the ticket, with time excluded from Unavailability calculations. See definitions below.</i></li> </ol>
Performance Calculation	<i>For each Severity Level 3 Incident (incident fix time - incident start time) - (clock stop time - clock resume time) = outage hours</i>
Target Performance Level	<p><b>Response = 24 hours</b></p> <p><b>Fix (Repair / restore / mitigate) = 10 business days</b></p>
Example Calculation	<p><i>Example 1 with clock stop time:</i></p> <p><i>Fix time = (04/09/19 22:00 minus 04/09/19 10:00) minus (04/09/19 19:30 minus 04/09/19 10:30) = 3 outage hours</i></p> <p><i>Example 2 with zero clock stop time:</i></p> <p><i>Fix time = (04/09/19 22:00 minus 04/09/19 19:30) minus (0) = 3 outage hours</i></p>

<b>SS2 – (Streetscape - Severity Level 2 Fix Time Failures)</b>	
Definitions	See SS1

#### 4 Public Wi-Fi Services

WF1 – (Public Wi-Fi End User Satisfaction)	
Ref	WF1
Name	End User Satisfaction
Service Line	Public Wi-Fi
Measurement Period	Once per Financial Year
Performance Indicator Type	KPI
Performance Indicator Start Date	1 April 2023
Description	WF1 (Public Wi-Fi End User Satisfaction) measures End User satisfaction with the Public Wi-Fi Services.
Performance Measure	<i>NPS (Net Promoter Score)</i>
Performance Measurement Approach	<p><i>NPS (Net Promoter Score):</i>  <i>Customer survey through Q&amp;A measurable responses 0-10</i>  <i>Promoters: Customers who answer the question with 8-10</i>  <i>Passives: Customers who answer the question with 6-7</i>  <i>Detractors: Customers who answer the question with 0-5</i></p> <p>BAI will target not less than 500 customer surveys from End Users.</p>
Performance Calculation	<i>% Promoters - % Detractors = NPS</i>
Target Performance Level	Reported at least once each year

Example Calculation	<p><i>40% Promoters - 35% Detractors = NPS 5</i></p> <p><i>50% Promoters - 25% Detractors = NPS 25</i></p>
Definitions	<p><i>NPS - Net Promoter Score is used in coordinated with customer surveys to measure customer Satisfaction.</i></p> <p><i>Promoters - Those customers who are likely to use the service again and recommend to friends (8-10).</i></p> <p><i>Detractors - Those customers who would not use the service again or not recommend (0-5)</i></p>

WF2 – (Public Wi-Fi Authentication Service Availability)	
Ref	WF2
Name	Authentication Service Availability
Service Line	Public Wi-Fi
Measurement Period	Month (excluding Engineering Hours)
Performance Indicator Type	KPI
Performance Indicator Start Date	1 April 2023
Description	WF2 (Public Wi-Fi Authentication Service Availability) measures the percentage time Availability of the Authentication Service (excluding Engineering Hours).
Performance Measure	<b>The total time that the Authentication Service is Available in a Measurement Period.</b>
Performance Measurement Approach	<p><i>PRTG is used to measure the availability of the GRT Public Wi-Fi platform. This process is to be carried out at the beginning of the month by a member of the engineering team.</i></p> <p><i>99.5% uptime across our captive portals and pri/sec RADIUS</i></p>

WF2 – (Public Wi-Fi Authentication Service Availability)	
Performance Calculation	<p>Authentication Availability shall be measured as a percentage of the total time in the Measurement Period in accordance with the following formula:</p> $\text{Authentication Availability \%} = ((\text{MP} - \text{SD}) \times 100) / \text{MP}$ <p>where:</p> <p>MP = total number of minutes within the relevant Measurement Period; and</p> <p>SD = total number of minutes of Service Downtime in the relevant Measurement Period.</p>
Target Performance Level	99.5%
Example Calculation	<p><i>Service availability is measured by hours per month. The baseline Measurement Period (MP) is 36,600 minutes (43,800 minutes less 7,200 minutes of Engineering Hours) per month (365x24/12). The MP is calculated by minutes as a measurable value. The following provides 2 examples in accordance with TfL requirements. The examples provide a successful KPI and unsuccessful KPI which will illustrate the margin of availability in minutes to impact overall KPI calculation.</i></p> <p><i>Authentication Availability % = (36,600 minutes– 300 minutes) x 100/36,600 = 99.2%</i></p> <p><i>Authentication Availability % = (36,600 minutes– 180 minutes) x 100/36,600 = 99.8%</i></p>
Definitions	<p><b>Available</b> means Authentication Platform available to authenticate users (and "Availability" shall be construed accordingly);</p> <p><b>Service Downtime</b> means any period of time during which the Authentication Service is not Available;</p> <p><b>Measurement Period</b> 43,800 minutes per month (365x24/12) less any minutes of Engineering Hours</p> <p>To be measured to the nearest 15 minutes, excluding minutes caused by any Unavailability Exclusions</p>

WF2 – (Public Wi-Fi Authentication Service Availability)		
	<b>Unavailability Exclusions</b>	Failures caused in whole or part by i) the use, failure, malfunction, unavailability, or inoperability of TfL Equipment; ii) any Unavailability Force Majeure event; iii) planned interruptions or degradations for maintenance or repair that are scheduled by the Concessionaire, iv) a change in or addition to Wi-Fi frequencies, TfL equipment, or supporting connections, v) comply with all Governmental Requirements, including but not limited to those of TfL, and any laws, rules, regulations and orders pertaining to environmental or health and safety matters; or vi) any acts or omissions of TfL or any of its employees, agents, or contractors.

WF3 – (Public Wi-Fi Internet Service Availability)	
Ref	WF3
Name	Internet Service Availability
Service Line	Public Wi-Fi
Measurement Period	Month (excluding Engineering Hours)
Performance Indicator Type	KPI
Performance Indicator Start Date	1 April 2023
Description	WF3 (Public Wi-Fi Internet Service Availability) measures the Internet Service Availability for End Users once authenticated in accordance with the Authentication Service (excluding Engineering Hours).
Performance Measure	<b>The total time that the Internet Service is Available in a Measurement Period.</b>
Performance Measurement Approach	

WF3 – (Public Wi-Fi Internet Service Availability)	
	<i>The ISP service provider will provide a fully managed service to continuously monitor the Wi-Fi Internet Service and action any alarms. Reporting will be provided for the defined reporting period, verified against alarm data.</i>
Performance Calculation	<p>Internet Service Availability shall be measured as a percentage of the total time in the Measurement Period in accordance with the following formula:</p> $\text{Internet Service Availability \%} = \frac{(\text{MP} - \text{SD}) \times 100}{\text{MP}}$ <p>where:</p> <p>MP = total number of minutes within the relevant Measurement Period; and</p> <p>SD = total number of minutes of Service Downtime in the relevant Measurement Period.</p>
Target Performance Level	<b>99.5%</b>
Example Calculation	<p><i>The baseline Measurement Period (MP) is 36,600 minutes (43,800 minutes less 7,200 minutes of Engineering Hours) per month (365x24/12). The MP is calculated by minutes as a measurable value. The following provides 2 examples in accordance with TfL requirements.</i></p> <p><i>Internet Service Availability % = (36,600 minutes – 300 minutes) x 100/36,600 = 99.3%</i></p> <p><i>Internet Service Availability % = (36,600 minutes – 180 minutes) x 100/36,600 = 99.6%</i></p>
Definitions	<p><b>Available</b> means Internet Service Availability available to authenticate users (and "Availability" shall be construed accordingly);</p> <p><b>Service Downtime</b> means any period of time during which the Internet Service is not Available;</p> <p><b>Measurement Period</b> 43,800 minutes per month (365x24/12) less any minutes of Engineering Hours</p> <p>To be measured to the nearest 15 minutes, excluding minutes caused by any Unavailability Exclusions</p>



WF3 – (Public Wi-Fi Internet Service Availability)		
	<b>Unavailability Exclusions</b>	Failures caused in whole or part by i) the use, failure, malfunction, unavailability, or inoperability of TfL Equipment; ii) any Unavailability Force Majeure event; iii) planned interruptions or degradations for maintenance or repair that are scheduled by the Concessionaire; v) a change in or addition to Wi-Fi frequencies, TfL equipment, or supporting connections, vi) comply with all Governmental Requirements, including but not limited to those of TfL, and any laws, rules, regulations and orders pertaining to environmental or health and safety matters; or vii) any acts or omissions of TfL or any of its employees, agents, or contractors.

WF4 – (Public Wi-Fi Content Filter Service Availability)	
Ref	WF4
Name	Content Filter Service Availability
Service Line	Public Wi-Fi
Measurement Period	Month (excluding Engineering Hours)
Performance Indicator Type	KPI
Performance Indicator Start Date	1 April 2023
Description	WF4 (Public Wi-Fi Content Filter Service Availability) measures the Content Filter Service Availability for End Users once authenticated in accordance with the Authentication Service (excluding Engineering Hours).
Performance Measure	<b>The total time that the Content Filter Service is Available in a Measurement Period.</b>
Performance Measurement Approach	<i>PRTG is used to measure the availability of the GRT Public Wi-Fi content filtering platform. This process is to be carried out at the beginning of the month by a member of the engineering team.</i>

WF4 – (Public Wi-Fi Content Filter Service Availability)	
	99.5% uptime across our captive portals and pri/sec RADIUS.
Performance Calculation	<p>Content Filter Service Availability shall be measured as a percentage of the total time in the Measurement Period in accordance with the following formula:</p> $\text{Content Filter Service Availability \%} = \frac{((\text{MP} - \text{SD}) \times 100)}{\text{MP}}$ <p>where:</p> <p>MP = total number of minutes within the relevant Measurement Period; and</p> <p>SD = total number of minutes of Service Downtime in the relevant Measurement Period.</p>
Target Performance Level	99.5%
Example Calculation	<p><i>Content Filtering availability is measured in hours per month. The baseline Measurement Period (MP) is 36,600 minutes (43,800 minutes less 7,200 minutes of Engineering Hours) per month (365x24/12). The MP is calculated by minutes as a measurable value. The following provides 2 examples in accordance with TfL requirements. The examples provide a successful KPI and unsuccessful KPI which will illustrate the margin of availability in minutes to impact overall KPI calculation.</i></p> <p><i>Content Filter Service Availability % = (36,600 minutes – 300 minutes) x 100/36,600 = 99.3%</i></p> <p><i>Content Filter Service Availability % = (36,600 minutes – 180 minutes) x 100/36,600 = 99.6%</i></p>
Definitions	<p><b>Available</b> means <b>Content Filtering platform online and active</b> (and "Availability" shall be construed accordingly);</p> <p><b>Service Downtime</b> means any period of time during which the Content Filter Service is not Available.</p> <p><b>Measurement Period</b> 43,800 minutes per month (365x24/12) less any minutes of Engineering Hours</p>

WF4 – (Public Wi-Fi Content Filter Service Availability)		
	<b>Unavailability Exclusions</b>	<p>To be measured to the nearest 15 minutes, excluding minutes caused by any Unavailability Exclusions</p> <p>Failures caused in whole or part by i) the use, failure, malfunction, unavailability, or inoperability of TfL Equipment; ii) any Unavailability Force Majeure event; iii) planned interruptions or degradations for maintenance or repair that are scheduled by the Concessionaire, iv) a change in or addition to Wi-Fi frequencies, TfL equipment, or supporting connections, v) comply with all Governmental Requirements, including but not limited to those of TfL, and any laws, rules, regulations and orders pertaining to environmental or health and safety matters; or vi) any acts or omissions of TfL or any of its employees, agents, or contractors.</p>