



Transport for London  
Telecommunications Commercialisation Project Tender

Annex 3 – Summary of Contract Terms  
Appendix 1 – Scope of Services Description

TfL Reference Number: TfL 93898

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## **1 DEFINITIONS**

- 1.1 In this Schedule 2.1 capitalised terms shall have the meaning set out in Paragraph 1 of Part B of the SSQ.
- 1.2 Unless otherwise stated, references to 'Sections' are to sections within this document.

## **2 INTRODUCTION**

- 2.1 TfL wishes to support the Mayor of London's strategy to improve digital connectivity in London, including the delivery of mobile phone coverage on the below ground sections of the London Underground.
- 2.2 TfL is entering into a concession agreement to allow the Concessionaire to commercialise certain of TfL's assets through investment in and operation of telecoms infrastructure to create a long term revenue generating opportunity from the sale of the telecommunications services, which will be shared between the Concessionaire and TfL.
- 2.3 This Schedule 2.1 sets out at a summary level the intended scope of the services to be provided by the Concessionaire and a description of what each service entails.
- 2.4 In relation to the project the Concessionaire shall:
  - 2.4.1 Fund both the capital expenditure and working capital requirements of the concession. It is also necessary that the Concessionaire continues to invest throughout the length of the concession to continue to provide commercially attractive services, for example support for the introduction of 5G technology.
  - 2.4.2 Design and build the infrastructure necessary to meet TfL's requirements specified in Section 2.7 at a minimum, and to invest beyond that in a manner that best exploits the market demand and commercial opportunities within the scope of the concession.
  - 2.4.3 Operationally manage the infrastructure together with providing both maintenance and replacement capital expenditure when required to meet the performance levels that will be specified in Schedule 2.2 and its service level obligations to its customers.
  - 2.4.4 Use its business development and relationship management skills to secure sustainable revenue streams over the life of the concession through the sale of telecommunications services.
- 2.5 The Concession Agreement will be offered over a term of 20 years with a 5 year extension available.
- 2.6 TfL will purchase any infrastructure that is on TfL property, from the concessionaire at the end of the Concession Agreement for independently assessed market value.

The Concessionaire must ensure, at their own cost if necessary, that assets have a Residual Life of at least 2 years.

- 2.7 The Concessionaire will be required to provide the following services, which are defined in greater detail in Sections 7, 8, 9, 10, 11 and 12:

2.7.1 Neutral host mobile coverage on below ground sections of the London Underground including tunnels, platforms and station areas;

2.7.2 Build a commercial fibre optic network incorporating available TfL assets that supports the development of ultrafast connectivity throughout London;

2.7.3 Utilisation of TfL's streetscape assets for the deployment of small cell radio coverage;

2.7.4 Continue and improve the existing public station Wi-Fi service at the end of the current concession agreement;

2.7.5 At TfL's discretion, supply service management services and integration of new assets for ESN; and

2.7.6 At TfL's discretion, supply the necessary connectivity to meet the requirements set out in the LFFN grant agreement.

- 2.8 The Concessionaire must supply the ESN Service Management Services at the price supplied in their Final Tender Submission. TfL will have the right to request the delivery of those services, at this price, at any time for 5 years after the Effective Date, adjusted for inflation.

- 2.9 The Concessionaire must supply the LFFN services at the price determined by their capped time and materials quote for the delivery of the LFFN scope. TfL will have the right to request the delivery of those services, at this price, within one year of the effective date.

- 2.10 Exclusive use of specific TfL assets for the purpose of providing public telecommunications services will be offered to the Concessionaire and are identified in Section 13.1.

- 2.11 This exclusivity will not restrict TfL's existing obligations such as:

- ESN
- communications for internal purposes
- existing telecoms external services such as fibre wayleaves and macro cell site rental

- 2.12 Other TfL assets may be made available to the Concessionaire based on commercial terms.

### **3 REQUIREMENTS OVERVIEW**

- 3.1 The Concessionaire is required to develop and maintain a business plan that delivers the required outcomes and generates revenue for TfL.
- 3.2 The Concessionaire must deliver the investment programme set out in the Final Tender Submission, unless varied by agreement.
- 3.3 It is understood that there will be a need to revise the business plan as the market and service lines are further developed and understood. It is required that the Concessionaire regularly updates the business plan and shares those plans with TfL at least annually. A change to the capital investment budget in the Concessionaire's business plan which is more than +/- 10% of the figure in the Concessionaire's final tender must be approved by TfL. The variance will be measured on a five year rolling cumulative basis.

### **4 REVENUE**

- 4.1 The Concessionaire will deliver a revenue stream to TfL in accordance with the Schedule 7.1, which will comprise of a:
- Fixed concession fee;
  - Asset usage fee; and
  - A percentage share of revenues generated by the concession.

### **5 GRANT FUNDING**

- 5.1 In addition to capital works and services as part of the business plan funded by the Concessionaire, TfL requires the Concessionaire to deliver additional capital works, as far as they relate to the provision of telecommunication services. These capital works will include scope and payments from various grants and competitions from central and local government, or any other source. It is required that the Concessionaire will support TfL in applying for funds by providing the estimates needed to complete the application.
- 5.2 A grant has already been announced but has not yet been confirmed. This is the DCMS LFFN capital grant. If this grant is confirmed TfL will have the right to ask the Concessionaire to deliver the scope of the capital delivery in accordance with the payment schedule provided in the grant agreement.
- 5.3 The Concessionaire shall provide bid and implementation support for future grant opportunities and undertake to deliver against the requirements should the bid be successful.
- 5.4 If required by TfL the Concessionaire will be required to deliver the ESN Service Management Services, the integration of new assets into the service and ensure Home Office service levels can be met. A summary of the ESN Service Management Services requirements are detailed in Appendix 1 to this schedule should TfL require it.

## **6 WORKING WITH TfL**

- 6.1 The Concessionaire will provide access to passive equipment to support TfL's internal operational requirements. The Concessionaire will provide access to passive infrastructure for TfL's needs at the same price that they pay TfL for the use of existing equivalent infrastructure.
- 6.2 The Concessionaire will minimise the carbon footprint of the solution as a whole, taking into account the whole supply chain. In particular the power consumption and cooling of all equipment installed as part of the solution should be designed to be at a minimum. For the avoidance of doubt that includes the base station equipment installed for the use of the MNOs.
- 6.3 The Concessionaire is required to work with TfL to ensure all activities undertaken ensure the safety of all stakeholders.
- 6.4 TfL will make available engineering and project assurance resources to the Concessionaire, at the rates provided in Schedule 7.1. The Concessionaire is required to:
- Use TfL engineering and project assurance services
  - Pay TfL the rates in Schedule 7.1
  - Provide TfL with a rolling 6 month resource plan and pay TfL according to the 6 month plan, unless it receives specific concession to the variation in the plan.
- 6.5 The Concessionaire shall avoid negative impacts on TfL's transport operations

## **7 SPECIFIC REQUIREMENTS – NEUTRAL HOST MOBILE COVERAGE**

- 7.1 The Concessionaire shall deliver and manage a neutral host cellular solution that will allow all licenced UK MNOs to deliver a service to their customers in all public areas in London Underground Section 12 Stations, platforms and tunnels, including the Elizabeth Line. This requirement does not cover the back office of stations or sidings and depots.
- 7.2 The Concessionaire shall specify and install equipment capable of supporting all carrier bands utilised by UK MNOs and make these specifications available to TfL for use on other installation projects
- 7.3 Provide coverage to future expansion of the below ground network including Crossrail 2, the Northern Line Extension and any other.
- 7.4 Deliver substantial coverage by December 2019, which must include the Elizabeth Line, with full coverage completed by no later than December 2024.
- 7.5 The network must continue to receive investment to meet with MNO requirements. That investment will be required to support new technologies and the inevitable

increase in capacity requirement. It is impossible to predict the long term technology changes but plans and investment to support 5G is required in the early years of the concession as well as a long term approach to technology investment are to be included in the business plan.

- 7.6 TfL requires the Concessionaire to build and maintain the neutral host mobile service in accordance with the contractual requirements (including but not limited to compliance with Good Industry Practice, and required standards (for example JOTS 4.1).
- 7.7 TfL requires the Concessionaire to build and maintain the neutral host service in line with a range of London Underground standards relating to stations. These include fire, electromagnetic compatibility, environmental, heat, power, ambience etc.
- 7.8 Implement remote units that allow for modular expansion in order to support future requirements for additional frequency bands.
- 7.9 The Concessionaire will have the exclusive right to deliver commercial mobile services on the London Underground's below ground areas including the Elizabeth Line tunnels, platforms and stations.
- 7.10 The Concessionaire will deliver neutral host mobile services to other TfL locations as agreed between the TfL and the Concessionaire

## **8 SPECIFIC REQUIREMENTS – FIBRE**

- 8.1 The Concessionaire shall build a commercial fibre optic network utilising TfL assets, including the London Underground tunnel network, other TfL owned ducts and trackside infrastructure.
- 8.2 The Concessionaire will be required to provide fibre based wholesale services to telco operators through commercial agreements. These may include, but are not limited to:
  - wavelength services
  - dark fibre access
  - unbundled local loop services
  - ethernet
  - leased line B2B services
- 8.3 The Concessionaire must deliver the investment programme set out in the bid, unless varied by agreement.
- 8.4 The Concessionaire will support the scope of the LFFN grant by providing the core network, including the station interface points at the stations specified in Appendix 2. The LFFN network traffic will be carried over the installed fibre optic cable.

## **9 SPECIFIC REQUIREMENTS – STREETSCAPE**

- 9.1 The Concessionaire will arrange for TfL streetscape assets, such as lighting columns, be used by telecommunication service providers. The MNOs and potentially other network operators can use the streetscape assets in ways to support their existing installations in several ways, any use is permitted as long as planning and engineering requirements are met. It is expected that as this market develops there may be several different business models with different operators.
- 9.2 The Concessionaire will have exclusive access to the streetscape assets for commercial telecommunications usage. These assets can be used independently or in combination with fibre assets and space in stations if it is available. This is to support the different models such as C-RAN and network edge compute. These models and the assets needs will be specified in the business plan.
- 9.3 There is a requirement to meet the minimum levels of installation specified in Schedule 6.1.

## **10 SPECIFIC REQUIREMENTS – PUBLIC STATION WI-FI**

- 10.1 This contract will replace the terminating Virgin media contract for public Wi-Fi services, this contract is due to expire in March 2019.
- 10.2 The Concessionaire must continue to support the existing EAP-SIM service to the MNOs and extend to additional MNOs and MVNOs.
- 10.3 In addition to the MNO based connectivity, the Concessionaire must deliver a new 'open access' Wi-Fi service. This service will be open to anyone that registers for the service and accepts the terms and conditions of the service. When the User Ts & Cs change we will require explicit acceptance of the new Ts & Cs.
- 10.4 Registration must be possible either from a mobile device when on the London Underground network or via pre-registration before using the service.
- 10.5 A service to filter unsuitable content must be provided.
- 10.6 A splash screen should be shown with updates and reminders, this splash screen can contain advertising. The advertising will be managed by the TfL media team. TfL will retain advertising revenues.

## **11 SPECIFIC REQUIREMENTS – ESN**

- 11.1 At TfL's request, the Concessionaire will assure and integrate additional coverage areas in back office areas and non-public track sections such as sidings and depots. The additional capital works will be procured separately but the Concessionaire will be required to provide service management as specified in Appendix 1.
- 11.2 The Concessionaire shall offer data centre co-location services to support an ESN Service Management Service at the same price that they offer similar space to MNOs for commercial services.

## 12 SPECIFIC REQUIREMENTS – LFFN

- 12.1 The Concessionaire shall comply with the requirements of the DCMS LFFN Wave 2 grant (award pending confirmation) by March 2021, including a minimum of 50 points of presence on TfL stations and serving the 51 buildings specified in the bid. These are specified in Appendix 2.
- 12.2 If confirmed, the DCMS LFFN funding requires the fibre connection to specific addresses, with the connection from the local stations to the addresses specified in the bid documentation, this scope is funded. These connections will require ISP services and they must be provided by the Concessionaire either directly or by partnership with an external ISP.

## 13 ASSETS AVAILABLE TO THE CONCESSIONAIRE

- 13.1 TfL will make available a set of core assets for exclusive use of the Concessionaire, for the purpose of providing the services required by this Concession Agreement. TfL's asset are changing daily. As assets become available for use, the Concessionaire will have an automatic right to their exploitation for telecommunications use. Assets are also decommissioned and the Concessionaire must plan for such withdrawal of assets from use and remove equipment and reconfigure systems as required to continue the service, at no cost to TfL.

QUANTITY	
Section 12 Stations	121 – Excludes any non-TfL Overground, DLR and Heathrow T5
Tunnel Length	360km
Above Ground Stations	152 – Excludes non-TfL Overground and DLR stations
Street Lighting columns	36,070
CCTV and VMS	998
Bus Shelters	13,380
Ducts	4,953 access locations (c.500km in length)

- 13.2 The Concessionaire will be required to obtain TfL engineering approval prior to any modifications to TfL assets. Such modifications can only be made by TfL approved contractors. Existing approved contractors include:

	Installation	Maintenance
Street Lighting	LoHAC	LoHAC
CCTV	Tyco	Telent
Bus Shelters	Trueform	Mitie/Skanska
Bus Shelters (Non – advertising)	Trueform	Skanska/Dabs



Ducts	LoHAC	LoHAC
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- 13.3 Specified infrastructure installed for ESN may be made available to the Concessionaire to support public cellular, subject to confirmation at ITT stage. The Concessionaire must not interfere with the use of the asset for ESN usage.
- 13.4 The GLA Group and London Boroughs will be able to contribute their assets to the concession. This would be done via a short form agreement between TfL and the party proposing to contribute assets.

GLA GROUP	
The Greater London Authority London Fire Commissioner Mayor's Office for Policing and Crime Metropolitan Police Commissioner / Service London Pension Fund Authority London Legacy Development Corporation Old Oak and Park Royal Development Corporation	
LONDON LOCAL AUTHORITIES	
Barking and Dagenham Barnet Bexley Brent Bromley Camden City of London Croydon Ealing Enfield Greenwich Hackney Hammersmith and Fulham Haringey Harrow Havering Hillingdon	Hounslow Islington Kensington and Chelsea Kingston upon Thames Lambeth Lewisham Merton Newham Redbridge Richmond upon Thames Southwark Sutton Tower Hamlets Waltham Forest Wandsworth Westminster

## 14 SERVICE MANAGEMENT

- 14.1 The service should be delivered in line with a recognised standard, for example:
- Information Technology Infrastructure Library (ITIL) v3.0
  - ISO/IEC 20000-1:2011

ISO/IEC 20000-1:2011 is a SMS standard. It specifies requirements for the service provider to plan, establish, implement, operate, monitor, review, maintain and improve an SMS. The requirements include the design, transition, delivery and improvement of services to fulfil agreed service requirements.

- 14.2 Ensure that operational changes are implemented in a co-ordinated and controlled fashion so as to minimise disruption to TfL and the performance of the Services.
- 14.3 For each operational change:
  - i) assess the impact on the Services and other operational changes;
  - ii) ensure that all documents required to support the operational change are updated (including the as-built records);
  - iii) undertake any required testing prior to the implementation of the operational change; and
  - iv) adequately plan the operational change, including carrying out commissioning testing and post-implementation testing.
- 14.4 In addition the overall asset management approach must comply with ISO 55001 or an equivalent standard.
- 14.5 All service levels will include a requirement for periodic reporting, at least monthly and possible additional reporting as specified in Schedule 7.5.
- 14.6 The Concessionaire is required to monitor and report on customer satisfaction in accordance with Schedule 2.2 and ensure remedial action is taken when satisfaction falls below the specified level.
- 14.7 The Concessionaire will provide a service management capability (for PCN and ESN where required) to meet the performance level requirements set out in Schedule 2.2
- 14.8 All engineering work will be undertaken in engineering hours, unless agreed in advance with TfL.
- 14.9 The business case should include the plans for achieving the stated service levels.
- 14.10 The service model should be published and shared with TfL.
- 14.11 Service improvement plans should be shared annually with TfL.

## **15 DATA COLLECTION**

- 15.1 It is currently envisaged that the Concessionaire will be obliged to collect data from the Wi-Fi service in accordance with a user access license which will be in a form provided by TfL and which specifies the data to be collected. Users of the Wi-Fi service will give explicit prior approval for the data to be collected and be able to opt out of data collection activities. Any data collection activities will be required to be in

accordance with the GDPR or other applicable legislation and the data protection provisions in the Concession Agreement.

- 15.2 It is currently envisaged that the Concessionaire will be obliged to transact with the MNOs for the supply of the equivalent data based on cellular service from the MNOs.
- 15.3 Further details in respect of the required data collection activities will be provided in the draft contract terms included with the ITT.

## APPENDIX 1

### ESN SERVICE MANAGEMENT SERVICES - SPECIFIC REQUIREMENTS

The following requirements are a high level summary of the ESN Service Management Services requirements. TfL requires the Concessionaire to deliver these services.

Section No	Section Header	Requirement
1	Introduction	<p>This document is intended as high level information for the requirements of service management needed for the ESN. It will define the overall owner from the Home Office and TfL perspective as well as define lines of demarcation with respect to who will support the components and processes related to the application of the services based on the ITIL framework. This includes the responsibilities and obligations of both the Home Office and Concessionaire that will be required to deliver the service as described.</p> <p>This is a working document and will be required to continue to be updated as the support of this service goes live in line with continue service improvement.</p> <p>The document will include an overview of:</p> <ul style="list-style-type: none"> <li>- service management;</li> <li>- service operations; and</li> <li>- roles and responsibilities.</li> </ul> <p>The general service management, service strategy, service transition, service operation and continual service improvement, functional services and their associated service components define the scope of this document.</p>
2	Service Management	The Concessionaire is responsible for the provision of specialised organisational capabilities that provide value to TfL through their effective management of the services. In providing the service management functional services and components the Concessionaire shall ensure that the following objectives are met.
2.1	Service Management	The services continue to meet the requirements and demands of TfL and remain value for money.
		Services are reviewed and assessed with a continual service improvement plan in place.
		The services are proactively managed ensuring they are consistently operate to meet or exceed performance target levels.
		Relevant reporting and data are provided in a format that can be shared with the Home Office on specified criteria.
	EE Service Management	Provide a 24x7x365 service desk to interface with EE unless otherwise stated.
		Provide 24x7 maintenance support for equipment where required.

Section No	Section Header	Requirement
		Adherence to ITIL process for incident, problem and change.
		Adherence to the agreed SLA's and processes to support the service.
		Participate in and support continual process improvement for the service.
		Provide reporting to support EE reporting to the Home Office.
		Creating and maintaining a known error database.
	Base station Hotel Operational Requirements	Ensure 24x7 access to the base station hotels and EE's equipment to maintain and support the equipment and meet the service level agreements.
		TfL maintenance teams available 24x7 to support TfL equipment and services related to the base station hotel and EE equipment.
		Ensure there is resilient power sources for the base station hotel and associated EE equipment.
		Support and participate in the creation of a working level agreement to document the interfaces and interactions between the parties for activities in the base station hotel.
		Agree demarcation points between EE solution and TfL solution.
		Agree test points and associated to levels to assist in fault diagnosis in service.
2.2		<p>The Concessionaire shall at all times:</p> <p>a) demonstrate good industry best practice service management processes and methodologies in its deliver and supply of services; and</p> <p>b) perform it's obligations under this agreement in accordance with the best practices set out in the most current ITIL framework.</p>
2.3		<p>The Concessionaire's service management processes will ensure traceability and audit by keeping a record of:</p> <p>(i) actions taken in relation to the management of the service; and</p> <p>(ii) the Concessionaire Personnel responsible for effecting those actions.</p>
2.4	Operations Manual	<p>The Concessionaire shall produce and maintain a document that sets out appropriate and relevant information to enable the day to day operation of the service effectively and efficiently, including supporting information (the '<b>Operations Manual</b>'). In the event of any conflict or ambiguity between the agreement and Operations Manual then the agreement will take precedence.</p>

Section No	Section Header	Requirement
2.5	Operations Manual	The Operations Manual shall contain and where appropriate make reference to other documents (so as to avoid duplication) that contain the following minimum information: I. details of key roles and responsibilities for the delivery of the service; II. details of required access complying with relevant TfL security standards; III. details of TfL personnel authorised to make decisions relating to the delivery of service; and IV. any activities such as TfL change management process or location access that need to be followed.
		Overview of technical architecture and services.
		Operational processes and monitoring schedules.
		Process for identification and management for security incidents.
		Process for document control.
		Process for recording and managing risks and Issues.
		Process for business continuity and how to invoke.
		Process for adding service improvements.
2.6	Operations Manual	The Concessionaire will provide TfL with the initial version of the operations manual for review and approval so that it is signed prior to the commencement date.
2.7	Operations Manual	The Concessionaire will regularly review the Operations Manual and ensure that the content is up to date and accurate, if the changes re made to the Operations Manual the Concessionaire will provide TfL with a copy for review and approval. This should be done at the earliest opportunity to allow the changes to be approved prior to implementation.
2.8	Operations Manual	Both the Concessionaire and TfL will carry out a yearly audit of the Operations Manual to ensure it's accuracy in process and policy.
2.9	Operations Manual	The Concessionaire will provide when required, to TfL's reasonable satisfaction that the Operations Manual is being maintained and followed.
2.10	EE Operational Requirements	TfL hardware and software maintenance support for the DAS solution and associated equipment.
		Resilient power supplies for the active units in the TfL solution.
		Support optimisation and network performance activities for the DAS solution.
		Agree acceptance criteria for service and document signal levels for solutions for use in benchmarking/in service fault resolution activities.
		Carry out live coverage surveys and test calls to validate coverage signal levels and performance issues to support resolution activities.

Section No	Section Header	Requirement
		Support and participate in the creation of a working level agreement to document the interfaces and interactions between the parties for activities in the TfL solution.
3.1	Toolsets and Information Integration	Integration with remedy systems to be able to pass incidents, problems, changes etc.
3.2		The Concessionaire must ensure that all incidents, problems and changes be recorded with the appropriate amount of information in them, that all actions are noted in the appropriate notes/actions sections and that they contain the latest detail.
3.3		Systems between required parties will need to be linked, each record will need to have a unique reference number, all parties will be able to update notes/ actions and see audit trails but only the Concessionaire will be able to fully close upon confirmation with the raiser.
3.4		Changes must be appropriately logged and able to accept approval from multiple sources including Home Office, TfL and EE.
3.5		The Concessionaire shall provide TfL with monitoring data as required and ensure that this is available for sharing with other parties as determined by TfL.
3.6		The Concessionaire will ensure that incident/problem reports are accessible by TfL and will provide service reporting on a period basis to the specified requirements of TfL (to be determined) to include ad-hoc reporting.
	Toolsets and Information Integration	To manage the incident problem and change activities between the parties, EE and TFL shall look to build an interface between their respective ticket systems. The systems will hold agreed configuration data in their systems to allow the creation of tickets and provide an understanding of the solution.
4.1	Service Strategy	The Concessionaire will provide a service strategy component which shall review the portfolio of services to ensure that it:
4.1	Service Strategy	supports TfL's business needs as communicated to the Concessionaire in service review; and
		remains part of industry best practice, unless not approved by TfL.
4.2	Service Strategy	The Concessionaire will maintain a service catalogue and roadmap in respect to the services provided, which will be submitted to TfL for review and approval.
4.3	Service Strategy	The service catalogue and roadmap will:

Section No	Section Header	Requirement
		provide a Service Catalogue that is accurate and reflects the current details, status, interfaces and dependencies of all services that are being run, or prepared to run in the live environment;
		the Concessionaire shall add changes to the service catalogue at no additional cost to TfL;
		support the evolving needs of all other support services;
		detail the future road map for the services so that they continue to meet TfL's requirements as set out in the agreement and remain within the industry best practice, including in relation to cost effectiveness and on going support;
		set out how the Concessionaire will identify and manage innovation opportunities so new products and service developments can be introduced to support TfL requirements; and
		outline how the services will be developed over time, upgraded, retired or replaced.
4.4	Service Strategy	The Concessionaire shall review the service catalogue and roadmap quarterly to ensure that it remains updated and shall review with TfL at least every 6 months or as requested.
5.1	Capacity Management	a) The Concessionaire shall provide a capacity management service component to TfL which will enable the Concessionaire to: <ul style="list-style-type: none"> <li>i. ensure that service assets are correctly and cost-effectively scaled to cater for both current and predicted future TfL demand;</li> <li>ii. mitigate capacity threats in a timely manner prior to such threats affecting the delivery of the services; and</li> <li>iii. provide information to TfL as required for reporting purposes.</li> </ul>
		b) The Concessionaire will establish and maintain a capacity plan, which they will submit to TfL 5 days prior to the period service review meeting.
		c) The capacity plan should include a summary of the key highlights including, capacity threats, capacity warning alerts and instances where capacity thresholds have been improved.
		d) The capacity plan should also report on historical and projected utilisation of relevant service assets which have a capacity limit which would or might be reasonably exceeded as a result of planned works.
		e) Any agreed changes to capacity must go through the TfL change management process prior to implementation.



Section No	Section Header	Requirement
5.1	Capacity Reporting	f) The capacity plan should report on historical utilisation information in respect of each of the service assets and the features of such assets which the Concessionaire has defined as being required to be monitored for capacity threats to allow TfL to look at utilisation and discuss with the appropriate parties.
		g) The Concessionaire will provide TfL with the underlying data so that it can be easily accessed, interpreted and filtered, by (and not limited to) service location, service asset, service asset type.
		h) Any issues identified as part of the monitoring of services should be raised as alerts or where the services are impacted, as Incidents and resolved accordingly.
		i) The Concessionaire should identify areas of opportunity for improvement as part of continual service improvement plan and report on the continual service improvement log.
5.1	Capacity Forecasts	The capacity plan will analyse historical maximum utilisation information for each service asset type defined and provide a forecast capacity injection.
		The Concessionaire shall define an operational baseline in conjunction with TfL for the service assets which is necessary for the Concessionaire to monitor for capacity threats to ensure the services remain stable and available.
		Where a change is introduced the Concessionaire will ensure the capacity projection for all relevant service assets is amended so as to consider any anticipated change in demand for services.
		TfL will reserve the right to amend any assumptions to capacity projections from where it reasonably believes that it is in the best interests of TfL to do so.
		The capacity plan will lay out the date for when additional capacity must be ordered, so that capacity upgrades are executed in the most cost effective manner for TfL as well as in good time before maximum utilisation hits the capacity threshold.
5.2	Service Level Management	The Concessionaire will provide a service level management component to TfL which will enable the Concessionaire to monitor and manage the service and demonstrate that the services are being delivered as per the performance requirements set out by TfL.
		The Concessionaire will produce a service performance report in a structure detailing the data required as agreed with TfL, this should be submitted for review 5 days prior to the service review meeting.
		The Concessionaire will if required provide the supporting raw data used to create the reports to demonstrate how they have calculated against each performance measure.

Section No	Section Header	Requirement
		Continued failure of service performance by the Concessionaire will be subject to a contractual review by TfL.
		The Concessionaire will provide TfL with a link to a dashboard in the service management tool to enable them to see number of incidents, severity level, status, length of time open, owner, and breached tickets with the ability to filter.
		<p>Operational review meeting</p> <p>The purpose of the meeting is to act as the governance meeting for the day to day operational interactions/ activities that will occur between the parties to support the service.</p> <p>Key discussions points below:</p> <ul style="list-style-type: none"> <li>a) review operational SLA, KPI performance between the parties (incident, problem, change etc.);</li> <li>b) escalation point for operational issues that cannot be resolved at a working level; and</li> <li>c) operational process reviews and improvements;</li> <li>d) health and safety.</li> </ul> <p>The meeting is proposed to meet monthly.</p> <p>Proposed list of attendees are EE and TFL operational teams and associated managed service partners.</p>
		<p>Technical review meeting</p> <p>The purpose of the meeting is review, update and manage the technical design and, parameter settings for the solution that will be used by the operational teams to maintain the system.</p> <p>Typical responsibilities for the meeting are:</p> <ul style="list-style-type: none"> <li>a) act as the technical design authority for the end to end system;</li> <li>b) review, update and issuance of design documents during the life of the system;</li> <li>c) technical design document;</li> <li>d) network parameter master document; and</li> <li>e) escalation point for technical issues that require design input. (E.g. change to defined parameter levels).</li> </ul>
		<p>Reporting</p> <p>TfL shall provide reporting to support EE's onward reporting up to the Home Office.</p> <p>The exact reports required will need to be agreed.</p> <p>Some typical reports that may be required are set out below:</p> <ul style="list-style-type: none"> <li>a) service management reports (incident, problem, change) e.g. major incident reports;</li> <li>b) vendor roadmap for software / hardware implementations; and</li> <li>c) performance reports: DAS specific performance reports to review in conjunction with overall end-to-end performance.</li> </ul>
		Service Credits

Section No	Section Header	Requirement
5.3	Change Management	The Concessionaire will log all planned operational changes in the Concessionaire IT service management system, with TfL and any other relevant parties (i.e. EE, MNO, Home Office) as approvers these should be raised at least 2 weeks prior to the scheduled change date to ensure all interested parties have reviewed. Emergency changes should go through an agreed emergency change advisory board process, and any standard changes would need to be reviewed and agreed with TfL and relevant parties.
		The Concessionaire will ensure that all changes are raised with the appropriate information for approval to be able to take place, this should include as much detail around the change itself, impact to TfL or other system users, affected assets, planned start and end times, testing details, associated risks of both implementation and non-implementation and their weightings, exit plans and business communications plans, details of any associated incidents or problems, details of support and escalation.
		The Concessionaire will ensure that following the implementation of the change the service management tool is fully updated with all information relating to the change and provide a report of completed changes in the service performance pack for review at the service review meeting, to be distributed 5 days prior to the meeting.
		The Concessionaire will look to provide a forward schedule of change and distribute for approval from TfL, EE, Home Office in accordance with their operational schedules:
		<ul style="list-style-type: none"> <li>a) adherence V3 2011 ITIL problem management standards and processes;</li> <li>b) provide a single point of contact for change management;</li> <li>c) change management operating hours Mon – Fri 08:00 -17:30;</li> <li>d) provide forward schedule of change for activities on TfL solution yearly, monthly, 16 days;</li> <li>e) support change management processes to support Home Office requirements;</li> <li>f) adhere to nested SLA's to support Home Office requirements for change;</li> <li>g) provide technical impact assessments for changes raised on TfL;</li> <li>h) ensure emergency late notice changes are maintained to the SLA; and</li> <li>i) support release management activities for the TfL hardware and software solutions.</li> </ul>

Section No	Section Header	Requirement
6.1	Service Desk	The Concessionaire will provide a technical service desk service function that will include I. being the central point of contact between EE, TfL and the Concessionaire day to day; II. logging all incidents, problems and work orders with the Concessionaire; III. carrying out initial triage of incidents logged and first call fix; and IV. initial point of contact for progress updates and escalations.
		The Concessionaire service desk will operate a 24x7x365.
		service desk will be a technical service desk and staffed with technically able support staff, with the ability to resolve minimum of 95% of all incidents, problems and requests for information raised.
		The Concessionaire service desk will be the single point of contact for all TfL associated ESN incidents, problems and work orders, ensuring that all are logged in the service management tool with the appropriate information around the customer location, and full details of the incident, when it happened, what they were doing etc. (scripts to be reviewed by TfL).
		All incidents, problems and work orders will be fully updated with TfL having access to view audit trails and notes added to each record.
		The Concessionaire will provide TfL with details on re-occurring incidents, trends and the number of re-opened tickets per period, this should be provided in the service performance pack 5 days prior to the review.
		The Concessionaire will provide TfL with a complaints handling process and escalation process for review and will report on any received in the service performance pack.
		The Concessionaire will provide a technical service desk function that will include: a) being the central point of contact between EE, TfL and the Concessionaire; b) logging and updating all incidents, problems, work orders and changes; c) carrying out initial triage of incidents logged and where possible first call fix; d) initial point of contact for progress update and escalation; and e) hand off to other support functions of high profile incidents and sending out regular communications.
		Authentication of callers
6.2	Event Management	The Concessionaire will provide an event management service to TfL which will proactively monitor the services to identify alerts allowing the Concessionaire to take measures to resolve or mitigate the impact of incidents before they occur.

Section No	Section Header	Requirement
		The Concessionaire will ensure that the services are continually monitored 24x7x365.
		All alerts are logged in the service desk tool for trending so that any repeat issues can be resolved and for reporting purposes and reported on at the end of the period in the service performance pack.
	Event Management	Environmental (heating, ventilation and air conditioning cooling etc. ) alarms made available to EE.
		Service level view of TfL system status and alarms provided to EE for early indication of issues with the service.
6.3	Incident Management	The Concessionaire will provide an incident management service that will ensure incidents are appropriately raised and resolved as soon as possible after the incident occurs to reduce the impact on the service.
		The Concessionaire will manage and resolve any incidents logged to them.
		The Concessionaire will manage the ticket raised end to end ensuring constant communication with EE and TfL.
		The Concessionaire will report on incident totals, breaches and resolutions each period as part of the service performance pack.
	Incident Management	Alignment to ITIL V3 2011 Incident Management standards.
		Provide 24x7x365 service desk support.
		Provide incident management resource to support agreed high priority faults/meetings.
		Participate in and support incident management bridges.
		Work to the agreed fault priority matrix for the service and regularly update.
		Investigate, diagnose and resolve incidents on the elements of their scope in line with agreed SLAs.
		Provide support and work collaboratively with EE and its suppliers to investigate, diagnose and resolve incidents.
		Update incident related tools and systems with actions undertaken updates and resolutions.
		Providing reports on incidents to support root cause analysis.
		Agree nested SLA's to meet overall incident SLA's.
		Support out of hours emergency change process.
		Incident severity definitions in line with the rest of ESN where possible.

Section No	Section Header	Requirement
6.4	Problem Management	The Concessionaire shall provide a problem management service to TfL, which shall enable the detection of the underlying causes of incidents and alerts and shall facilitate their subsequent permanent resolution, thereby preventing their reoccurrence and ensuring long-term improvements in the quality of the service.
		The Concessionaire shall regularly review incidents and alerts in order to identify recurring trends which may indicate a problem, where upon the Concessionaire shall proactively raise a problem ticket in the Concessionaire service management tool.
		When identifying or being assigned a problem, the Concessionaire shall conduct an investigation to establish the root cause of all such recurring incidents an alert trends.
		Investigations should also be conducted on all major incidents unless otherwise agreed with TfL.
		A report should be produced with the status of any open problem tickets, this should be included in the period performance pack.
	Problem Management	Adherence V3 2011 ITIL problem management standards and processes: a) provide single point of contact for problem management activities; b) problem management service desk available Mon– Fri. - 08:00 -17:30; c) support major incidents reporting for agreed fault priority levels and upon request within the required SLA to meet the Home Office SLA's; d) proactive problem management to prevent network failures and faults; e) proactive problem management to identify and address issues that undermine network availability; f) support major incident reviews support; g) provide problem management relating to support the service; and h) participate in post incident reviews and meetings.

## APPENDIX 2

### LFFN SPECIFIC REQUIREMENTS

Stations to be connected by high speed fibre

<b>Borough</b>	<b>FTTP connected public body premise</b>	<b>Address</b>	<b>Postcode</b>
Camden	Russell Square Tube Station	Bernard Street	WC1N 1LJ
Camden	Kings Cross Tube Station	Euston Road	N1 9AL
Camden	Euston Tube Station	Eversholt Street	NW1 2DU
Camden	Mornington Cres. Tube Station	Eversholt Street	NW1 2JA
Camden	Warren St Tube Station	Tottenham Court Road	NW1 3AA
City of London	Barbican Tube Station	Aldersgate Street	EC1A 4JA
City of London	Aldgate Tube Station	Aldgate High St, London	EC3N 1AH
H&F	East Acton Tube Station	Erconwald street	W12 0BP
H&F	Ravenscourt Park Tube Station	Ravenscourt road	W6 0UG
H&F	Fulham Broadway Tube Station	Fulham Broadway	SW6 1BY
K&C	Latimer Road Tube Station	Bramley Road	W10 6SZ
K&C	Earls Court Tube Station	Earl's Court Road	SW5 9QA
K&C	South Kensington Tube Station	Pelham Street	SW7 2NB
K&C	Sloane Square Tube Station	Sloane Square	SW1W 8BB
K&C	Latimer Road Tube Station	Bramley Rd	W10 6SZ
Lambeth	Oval Tube Station	318 Kennington Park Road	SE11 4PP
Lambeth	Clapham Common Tube Station	The Pavement	SW4 7AJ
Southwark	Canada Water Tube Station	Deal Porter Way	SE16
Southwark	Bermondsey Tube Station	142-154 Jamaica Rd	SE16 4RX
Tower Hamlets	Whitechapel Tube Station	27 Whitechapel Road	E1 1BY
Tower Hamlets	Canary Wharf Tube Station	Heron Quays Road	E14 4HJ
Westminster	Pimlico Tube Station	Bessborough	SW1V 2JA
Westminster	St James's Park Tube Station	Petty France	SW1H 08D

Addresses to be connected to gigabit capable broadband services

<b>Borough</b>	<b>FTTP connected public body premise</b>	<b>Address</b>	<b>Postcode</b>	<b>Type of premise</b>
Camden	Churchway TRA Hall	1 Churchway	NW1	TRA Hall
Camden	Coopers Lane TRA Hall	2 Hampden Close	NW1 1HW	TRA Hall
Camden	30/40 Grafton Way TRA Hall	40 Grafton Way	WC1E	TRA Hall
Camden	Amptuil Square TRA Hall	Barnby St	NW1	TRA Hall
Camden	Tybalds Close Estate TRA Hall	Dombey St	WC1N 3PD	TRA Hall
Camden	Brunswick Estate TRA Hall	The Brunswick	WC1N 1BS	TRA Hall
City of London	Sir John Cass Foundation Primary School	St James' Passage, Duke's Place	EC3A 5DE	School

<b>Borough</b>	<b>FTTP connected public body premise</b>	<b>Address</b>	<b>Postcode</b>	<b>Type of premise</b>
City of London	Barbican Estate Office	Lauderdale Place	EC2Y 8BY	Estate Office
City of London	Guildhall School of Music & Drama	Silk St	ECY2 8DT	School
H&F	Little Wormwood Scrubs Playhut	1 Dalgarno Gardens	W10 5LL	Playcentre
H&F	Hammersmith Town Hall	1 Riverside Gardens	W6 9LE	Council office
H&F	Avonmore Library and Neighbourhood Centre	7 North End Crescent	W14 8TG	Library
H&F	Fulham Central Library	598 Fulham Road	SW6 5NX	Library
H&F	Hammersmith Central Library	Shepherd's Bush Road	W6 7AT	Library
H&F	Hammersmith & Fulham Law Centre & Housing Office	363 North End Road	SW61NJ	Council office
H&F	Hammersmith North Housing Office	New Zealand Way	W12 7DE	Council office
H&F	New King's Childrens Centre	116 New Kings Road	SW64LY	Childrens Centre
H&F	Old Oak Primary School	Mellitus St	W120AS	School
K&C	Christchurch Primary School	1 Robinson Street	SW3 4AA	School
K&C	Ashburnham Primary School	17 Blantyre Street, Chelsea Worlds end	SW10 0DT	School
K&C	Council Offices	37 Pembroke Road	W8 6PW	Council Office
K&C	Oratory Primary School	Bury Walk, Cale Street	SW3 6QH	School
K&C	Chelsea Old Town Hall	King's Road	SW3 5EE	Library/Office
K&C	Kensington Aldridge Academy school	Scrubs Lane	W12 0DE	School
K&C	Kensal Library	20 Golborne Rd, London	W10 5PF	Library
Lambeth	Phoenix House	10 Wandsworth Road	SW8 2LL	Council offices
Lambeth	International House	1-5 Lambeth Road	SE1 7DQ	Council offices
Lambeth	LBL Archive	303 Kennington Lane	SE11 5QU	New Archive 2020
Lambeth	Lilian Baylis School	323 Kennington Lane	SE11 5QY	School
Lambeth	Clapham Library, Mary Seacole Centre	89 Clapham High Street	SW4 7DB	Library
Southwark	Albion Primary School	Albion Street	SE16 7JD	School
Southwark	Peter Hills with St Mary's & St Paul's Church of England Primary School	Beatson Walk	SE16 5ED	School
Southwark	Alfred Salter Primary School	Quebec Way	SE16 7LP	School
Southwark	Rotherhithe Primary School and Children's Centre	Rotherhithe New Road	SE16 2PL	School
Southwark	Redriff Primary School and Children's Centre	Salter Road	SE16 5LQ	School



<b>Borough</b>	<b>FTTP connected public body premise</b>	<b>Address</b>	<b>Postcode</b>	<b>Type of premise</b>
Southwark	Chaucer Resource Centre	13 ANN MOSS WAY	SE16 2TH	
Southwark	Blue Anchor Library	MARKET PLACE	SE16 3UQ	Library
Southwark	Kintore Way Nursery School and Children's Centre	97-102 GRANGE ROAD	SE1 3BW	Nursery
Southwark	Grange Primary School	WEBB STREET	SE1 4RP	School
Southwark	Snowsfields Primary School	KIRBY GROVE	SE1 3TD	School
Southwark	The New Mill Street Surgery	1 WOLSELEY STREET	SE1 2BP	Surgery
Tower Hamlets	Unit 1A, Idea Store Canary Wharf	2 Churchill Place	E14 5RB	
Tower Hamlets	Tower Hamlets Pupil Referral Unit	21 Tollet Street	E1 4EE	
Tower Hamlets	Christchurch Primary School	47A Brick Lane	E1 6PU	
Tower Hamlets	John Scurr Primary School	Cephas Street	E1 4AX	
Tower Hamlets	Canon Barnett Primary School	Gunthorpe Street	E1 7RQ	
Tower Hamlets	Harry Gosling Primary School	Henriques Street	E1 1NB	
Tower Hamlets	Stepney Green Tube Station	Mile End Road	E1 4AQ	
Tower Hamlets	Redlands Primary School	Redmans Road	E1 3AQ	
Tower Hamlets	Smithy Street Primary School	Smithy Street	E1 3BW	
Tower Hamlets	English Martyrs Primary School	St Mark Street	E1 8DJ	
Tower Hamlets	Aldgate East Tube Station	Whitechapel High Street	E1 7PT	Leaseholders
Westminster	Nursery/Clinic	1 Bessborough Street	SW1V 2JD	NHS Clinic
Westminster	City Hall	64 Victoria Street	SW1E 6QP	Council office