



Schedule 8.6 - Business Continuity and Disaster Recovery

CHANGE HISTORY

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1 BCDR Plan

1.1 Within forty (40) Working Days from the Effective Date the Concessionaire shall prepare and deliver to TTL for Assurance a plan which shall detail the processes and arrangements that the Concessionaire shall follow to:

- (a) ensure continuity of the Services following any failure or disruption of any element of the Services; and
- (b) the recovery of the Services in the event of a Disaster,
(the "**BCDR Plan**").

1.2 The BCDR Plan shall:

- (a) be divided into three (3) parts:
 - (i) Part A which shall set out general principles applicable to the BCDR Plan;
 - (ii) Part B which shall relate to business continuity (the "**Business Continuity Plan**"); and
 - (iii) Part C which shall relate to disaster recovery (the "**Disaster Recovery Plan**"); and
- (b) unless otherwise required by TTL in writing, be based upon and be consistent with the provisions of Paragraphs 2.1, 3 and 4.

2 The BCDR Plan and General Principles and Requirements

2.1 Part A of the BCDR Plan shall:

- (a) set out how the business continuity and disaster recovery elements of the BCDR Plan link to each other;
- (b) provide details of how the invocation of any element of the BCDR Plan may impact upon the operation of the Services;
- (c) contain an obligation upon the Concessionaire to liaise with TTL with respect to issues concerning business continuity and disaster recovery where applicable;
- (d) detail how the BCDR Plan links and interoperates with any overarching and/or connected disaster recovery or business continuity plan of TTL as notified to the Concessionaire by TTL from time to time;
- (e) contain a communication strategy including details of an incident and problem management service and advice and help desk facility which can be accessed via multi-channels (including a web-site (with FAQs), e-mail and phone) for both portable and desk top configurations;
- (f) contain a risk analysis, including:
 - (i) failure or disruption scenarios and assessments and estimates of frequency of occurrence;

- (ii) identification of any single points of failure within the Services and processes for managing the risks arising therefrom; and
 - (iii) a business impact analysis (detailing the impact on business processes and operations) of different anticipated failures or disruptions;
- (g) provide for documentation of processes, including business processes, and procedures;
- (h) set out key contact details (including roles and responsibilities) for the Concessionaire (and any Sub-contractors) and for TTL and any member of the TfL Group;
- (i) identify the procedures for reverting to “normal service”;
- (j) set out method(s) of recovering or updating data collected (or which ought to have been collected) during a failure or disruption to ensure that there is no more than the accepted amount of data loss and to preserve data integrity;
- (k) identify the responsibilities (if any) that TTL has agreed it will assume in the event of the invocation of the BCDR Plan; and
- (l) set out methods and identify procedures and processes for dealing with failures in and disruption to the Services caused by cut or damaged cabling.

2.2 The BCDR Plan shall be designed so as to ensure that:

- (a) the Services are provided in accordance with this Agreement at all times during and after the invocation of the BCDR Plan;
- (b) the adverse impact of any Disaster, service failure, or disruption on the operations of TTL, any member of the TfL Group or the Customers is minimal as far as reasonably possible;
- (c) it complies with the relevant provisions of ISO/IEC 27002 and all other relevant industry standards in force from time to time; and
- (d) there is a process for the management of disaster recovery testing detailed in the BCDR Plan.

2.3 The BCDR Plan shall be structured to support and allow for any changes to the Services.

2.4 The Concessionaire shall not be entitled to:

- (a) any relief from its obligations under this Agreement;
- (b) any increase in the Charges; or
- (c) any decrease in the Fees or any Revenue Share Percentage,

to the extent that a Disaster occurs as a consequence of any breach by the Concessionaire of this Agreement.

3 Business Continuity Plan - Principles and Contents

- 3.1 The Business Continuity Plan shall set out the arrangements that are to be invoked to ensure continuity of the Services including, unless TTL expressly states otherwise in writing:
- (a) the alternative processes (including business processes), options and responsibilities that may be adopted in the event of a failure in or disruption to the Services; and
 - (b) the steps to be taken by the Concessionaire upon resumption of the Services in order to address any prevailing effect of the failure or disruption including a root cause analysis of the failure or disruption.
- 3.2 The Business Continuity Plan shall:
- (a) address the various possible levels of failures of or disruptions to the Services;
 - (b) set out the services to be provided and the steps to be taken to remedy the different levels of failures of and disruptions to the Services (such services and steps, the “**Business Continuity Services**”);
 - (c) specify the timings with respect to the provision of the Business Continuity Services and details of any agreed relaxation to the Performance Indicators in respect of other Services during any period of invocation of the Business Continuity Plan; and
 - (d) clearly set out the conditions and/or circumstances under which the Business Continuity Plan is invoked.

4 Disaster Recovery Plan - Principles and Contents

- 4.1 The Disaster Recovery Plan shall be designed so as to ensure that, upon the occurrence of a Disaster, the Concessionaire ensures continuity of the Services following any Disaster or during any period of service failure or disruption with, as far as reasonably possible, minimal adverse impact.
- 4.2 The Disaster Recovery Plan shall be invoked only upon the occurrence of a Disaster.
- 4.3 The Disaster Recovery Plan shall include the following:
- (a) the technical design and build specification of the Disaster Recovery System;
 - (b) details of the procedures and processes to be put in place by the Concessionaire in relation to the Disaster Recovery System and the provision of the Disaster Recovery Services and any testing of the same including the following:
 - (i) data centre and disaster recovery site audits;
 - (ii) backup methodology and details of the Concessionaire's approach to data back-up and data verification;
 - (iii) identification of all potential disaster scenarios;
 - (iv) risk analysis;
 - (v) documentation of processes and procedures;

- (vi) hardware configuration details;
 - (vii) network planning including details of all relevant data networks and communication links;
 - (viii) invocation rules;
 - (ix) Service recovery procedures; and
 - (x) steps to be taken upon resumption of the Services to address any prevailing effect of the failure or disruption of the Services;
- (c) any applicable timings with respect to the provision of the Disaster Recovery Services and details of any agreed relaxation to the Performance Indicators in respect of other Services during any period of invocation of the Disaster Recovery Plan;
 - (d) details of how the Concessionaire shall ensure compliance with security Standards ensuring that compliance is maintained for any period during which the Disaster Recovery Plan is invoked;
 - (e) access controls to any disaster recovery sites used by the Concessionaire in relation to its obligations pursuant to this Schedule; and
 - (f) testing and management arrangements.

5 Review of the BCDR Plan

5.1 The Concessionaire shall review the BCDR Plan (and the risk analysis on which it is based):

- (a) on a regular basis and as a minimum once every six (6) months;
- (b) within three (3) months of the BCDR Plan (or any part) having been invoked pursuant to Paragraph 7; and
- (c) where TTL requests any additional reviews (over and above those provided for in Paragraphs 5.1(a) and 5.1(b)) by notifying the Concessionaire to such effect in writing, whereupon the Concessionaire shall conduct such reviews in accordance with TTL's written requirements. Prior to starting its review, the Concessionaire shall provide an accurate written estimate of the total costs payable by TTL for TTL's approval. The costs of both Parties of any such additional reviews shall be met by TTL except that the Concessionaire shall not be entitled to charge TTL for any costs that it may incur above any estimate without TTL's prior written approval.

5.2 Each review of the BCDR Plan pursuant to Paragraph 5.1 shall be a review of the procedures and methodologies set out in the BCDR Plan. The review shall assess the suitability having regard to any change to the Services or any underlying business processes and operations facilitated by or supported by the Services which have taken place since the later of the initial Assurance of the BCDR Plan or the last review of the BCDR Plan. The review shall also have regard to any occurrence of any event since that date (or the likelihood of any such event taking place in the foreseeable future) which may increase the likelihood of the need to invoke the BCDR Plan. The review shall be completed by the Concessionaire within the period required by the BCDR Plan or, if no such period is required, within such period as TTL shall reasonably require.

- 5.3 The Concessionaire shall, as soon as is reasonably practicable, effect any change in its practices or procedures necessary so as to give effect to any amendments required as a result of each review of the BCDR Plan pursuant to Paragraphs 5.1 and 5.2.

6 Testing of the BCDR Plan

- 6.1 The Concessionaire shall test the BCDR Plan on a regular basis (and in any event not less than once in every Financial Year) and in the event of any major reconfiguration of the Services.
- 6.2 Subject to Paragraph 6.3, TTL may require the Concessionaire to conduct additional tests of some or all aspects of the BCDR Plan at any time where TTL considers it necessary, including where there has been any change to the Services or any underlying business processes, or on the occurrence of any event which may increase the likelihood of the need to implement the BCDR Plan.
- 6.3 If TTL requires an additional test of the BCDR Plan, it shall give the Concessionaire written notice and the Concessionaire shall conduct the test within sixty (60) Working Days from the date of TTL's notice in accordance with TTL's requirements and the relevant provisions of the BCDR Plan. The Concessionaire's costs of the additional test shall be borne by TTL unless the BCDR Plan fails the additional test in which case the Concessionaire's costs of that failed test shall be borne by the Concessionaire.
- 6.4 The Concessionaire shall undertake and manage testing of the BCDR Plan in full consultation with TTL and shall liaise with TTL in respect of the planning, performance, and review, of each test, and shall comply with the reasonable requirements of TTL in this regard. Each test shall be carried out under the supervision of TTL or its nominee. The Concessionaire shall not test the BCDR Plan during times reasonably specified by TTL.
- 6.5 The Concessionaire shall ensure that any use by it or any Sub-contractor of TTL Data in such testing is first approved by TTL. Copies of TTL Data used in any such testing shall be (if so required by TTL) destroyed or returned to TTL on completion of the test.
- 6.6 In the event of any failures in the BCDR Plan (including the BCDR Plan's procedures) revealed by each test, the Concessionaire shall:
- (a) within twenty (20) Working Days of the conclusion of the test, provide to TTL a report setting out:
 - (i) the outcome of the test;
 - (ii) details of the failures in the BCDR Plan (including the BCDR Plan's procedures) revealed by the test; and
 - (iii) the Concessionaire's proposals for remedying any such failures,
 - (b) following the test, take all measures requested by TTL, (including requests for the re-testing of the BCDR Plan) to remedy any failures in the BCDR Plan and such remedial activity and re-testing shall be completed by the Concessionaire by the date reasonably required by TTL and set out in the notice pursuant to Paragraph 6.3.
- 6.7 For the avoidance of doubt, the carrying out of a test of the BCDR Plan (including a test of the BCDR Plan's procedures) shall not relieve the Concessionaire of any of its obligations under this Agreement.

7 Invocation of the BCDR Plan

In the event of a loss of any critical part of the Services or in the event of a Disaster, the Concessionaire shall immediately invoke the BCDR Plan (and shall inform TTL promptly of such invocation).

8 BCDR Review Report and Updated BCDR Plan

8.1 Subject to Paragraph 8.2, the Concessionaire shall regularly (and in any event, not less than once every Financial Year) update the BCDR Plan.

8.2 The Concessionaire shall, at least thirty (30) Working Days prior to the date of each Annual Strategic Meeting provide to TTL for Assurance:

(a) a report (a **"BCDR Review Report"**) for the Financial Year that precedes the relevant Annual Strategic Meeting setting out:

- (i) the findings of each review carried out by the Concessionaire pursuant to Paragraph 5;
- (ii) any changes in the risk profile associated with the Services;
- (iii) the Concessionaire's proposals (the **"BCDR Concessionaire's Proposals"**) for addressing any changes in the risk profile and its proposals for amendments to the BCDR Plan following each review pursuant to Paragraph 5, detailing the impact (if any and to the extent that the Concessionaire can reasonably be expected to be aware of the same) that the implementation of such proposals may have on any services or systems provided by a third party;
- (iv) the outcomes of each test carried out by the Concessionaire pursuant to Paragraph 6; and
- (v) all measures undertaken by the Concessionaire to remedy any failures in the BCDR Plan revealed by any test pursuant to Paragraph 6 (including any remedial activity and re-testing of the BCDR Plan); and

(b) an updated BCDR Plan incorporating:

- (i) any amendments identified in the BCDR Concessionaire's Proposals;
- (ii) any changes required as a result of any updates to the Business Plan; and
- (iii) any changes as a result of learnings from any tests pursuant to Paragraph 6.

8.3 The Concessionaire shall, as soon as is reasonably practicable, effect any change in its practices or procedures necessary so as to give effect to each updated BCDR Plan.