

## **APPENDIX 15**

### **REQUIRED MODIFICATIONS TO SCHEDULE 12C CO-LOCATION SPACE & SERVICE IN NEW CO-LOCATION ROOM**

**SCHEDULE 12C**

**CO-LOCATION SPACE & SERVICE IN NEW CO-LOCATION  
ROOM**

***Note: Unless otherwise specified in IDA’s Directed Modifications in the Explanatory Memorandum and other IDA Directed Modifications in other parts of the direction (including Schedule 12C – Co-Location Space & Service In New Co-Location Room), NetLink Trust’s proposed modifications to Schedule 12C – Co-Location Space & Service In New Co-Location Room are approved.***

## **SCHEDULE 12C**

### **CO-LOCATION SPACE & SERVICE IN NEW CO-LOCATION ROOM**

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## SCHEDULE 12C

### CO-LOCATION SPACE & SERVICE IN NEW CO-LOCATION ROOM

#### 1. GENERAL

- 1.1 This Schedule sets out the terms and conditions under which OpenNet will provide the Requesting Licensee with
- (a) Co-Location Space in new Co-Location Room at the Central Offices for hosting the Requesting Licensee's **Co-Location Equipment** for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment; and
  - (b) the provision of **Co-Location Service**.
- 1.2 Schedule 12B (Co-Location Supplementary Cooling Service) shall not be applicable for the Co-Location Space provided under this Schedule 12C.
- 1.3 Except as provided in this Schedule, the Requesting Licensee shall, at its own cost, provide all installation materials and manpower needed for the installation and replacement of their Co-Location Equipment. Where certain work is to be carried out by OpenNet under this Schedule, and the quantum of the Charge is not defined under Schedule 15 (Charges), the Requesting Licensee must pay all the reasonable costs incurred by OpenNet in provisioning Co-Location Service, subject to the following conditions:
- (a) the costs incurred by OpenNet will relate to the work that OpenNet needs to perform in order to provision the Co-Location Space in New Co-Location Room at a Central Office;
  - (b) before incurring the costs, OpenNet will provide Requesting Licensee with prior reasonable notice that the Requesting Licensee's request requires OpenNet to undertake such work and such notice shall clearly and with sufficient detail set out the following:
    - (i) the reasonable costs which OpenNet seeks to recover from the Requesting Licensee in respect of the costs incurred by OpenNet (including a breakdown of the individual cost components and justification for incurring each cost component); and

- (ii) based on the information set out in paragraph (i), a binding quote to the Requesting Licensee in respect of the work to be undertaken by OpenNet which shall be valid for a period of ten (10) Business Days (or such other time as may be agreed between the Parties) from the date they are notified to the Requesting Licensee by OpenNet;
  - (c) OpenNet shall obtain the prior approval of the Requesting Licensee to the costs noted in the notice within the time period under paragraph (b)(ii) and if the Requesting Licensee does not provide its approval within that time period, then OpenNet may suspend OpenNet's work under this clause 1.3 until the Requesting Licensee agrees. For the avoidance of doubt, the Requesting Licensee shall not be liable to bear any costs incurred by OpenNet under clause 1.3 unless the Requesting Licensee has given its prior approval under this clause 1.3(c); and
  - (d) any dispute in respect of determining the reasonable costs set out in the notice shall be resolved in accordance with Schedule 17 (Dispute Resolution) of the ICO Agreement.
- 1.4 The list of Central Offices as at the date of this ICO Agreement is listed in Annex 12B-1. OpenNet may vary the Central Offices listed in Annex 12B-1 from time to time with the approval of the Authority.
- 1.5 Information relating to the Co-Location Space that is available, basic facilities at the Co-Location Room, procedures and forms for ordering Co-Location Service, installation and physical access and an updated list of COs, including information on whether any of the listed COs has been earmarked for decommissioning, will be available on OpenNet Platform, for access by the Requesting Licensee through secured means. The secured access to OpenNet Platform will require payment of a Per User Account Charge (specified in clause 14 of Schedule 15 (Charges)) for each user account created. The aforementioned information is available on the OpenNet Platform. For the avoidance of doubt, where OpenNet has imposed a Per User Account Charge on the Requesting Licensee for each user account created to allow the Requesting Licensee to access OpenNet's website, such Per User Account Charge shall not be re-imposed when the information relating to Mandated Services is made available on the OpenNet's Service Portal.
- 1.6 OpenNet shall not be responsible for any damage to the Requesting Licensee's Co-Location Equipment caused by fire, water leakage, air-conditioning/mechanical ventilation failure, power fluctuation/interruption, or anything beyond OpenNet's

control in the Central Office other than to the extent that it is the result of a negligent, wilful or reckless breach of this ICO Agreement by OpenNet.

- 1.7 The timeframes in this Schedule relating to provisioning work for Co-Location Service to be undertaken by OpenNet under clauses 3.4 and 3.5 (**Ordering and Provisioning Procedure**), 4.1 (**Project Study**), 6.1 (**Site Preparation Work**) are subject to delays caused by events outside OpenNet's reasonable control, in which case such failure to meet the timeframes shall not constitute a breach of this ICO Agreement and clause 1.8(a) shall not apply, provided that OpenNet must notify the Requesting Licensee as soon as practicable upon the occurrence of such event, stating the cause of the events and specifying a new date for completion of the relevant provisioning work which is extended for the period of such delays.
- 1.8 (a) OpenNet will provide the Service Level Guarantees in respect of provisioning of Co-Location Service as set out in Annex 12A-1 (**Provisioning SLG**). If OpenNet fails to meet any Service Level Guarantees applicable to this Schedule and the failure to meet such Service Level Guarantees is solely caused by OpenNet, its contractors and/or suppliers, OpenNet will provide a remedy to the Requesting Licensee in accordance with:
- (i) section 1 of Annex 12A-1 and any terms and conditions contained therein in respect of Co-Location Request timeframes;
  - (ii) section 2 of Annex 12A-1 and any terms and conditions contained therein in respect of Project Study timeframes;
  - (iii) section 3 of Annex 12A-1 and any terms and conditions contained therein in respect of timeframes for Site Preparation Work; and
  - (iv) section 4 of Annex 12A-1 in respect of claims made under Annex 12A-1.
- (b) The Requesting Licensee acknowledges that the relevant remedy provided under clause 1.8(a) is a genuine pre-estimate of the Requesting Licensee's loss and will be the sole and exclusive remedy available to the Requesting Licensee for such failure to meet the relevant Service Level Guarantees for Co-Location Service and shall be OpenNet's sole and exclusive liability to the Requesting Licensee for such failure.

- 1.9 Onsite charges are applicable whenever Requesting Licensee requests for OpenNet to be onsite other than for provisioning of Co-Location Service or for reasons caused by OpenNet's fault or error.

## **2. AVAILABILITY AT A CENTRAL OFFICE**

- 2.1 OpenNet shall offer Co-Location Space as per stated in Annex 12B-1 per Central Office in the New Co-Location Room.
- 2.2 OpenNet shall maintain an ambient temperature not exceeding 27 degree Celsius (as currently defined by American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE") version applicable as at 1 January 2013) measured at the cold aisle in the Co-Location Space as per stated in Annex 12B-2 (**Temperature Control Procedures**).

## **3. ORDERING AND PROVISIONING PROCEDURE**

- 3.1 OpenNet shall process requests for Co-Location Service at a Central Office listed in Annex 12B-1 (**Co-Location Requests**) and allocate Co-Location Space to Requesting Licensees in a non-discriminatory manner on a first-come-first-serve basis.
- 3.2 OpenNet shall process a cumulative maximum of sixteen (16) Co-Location Requests (inclusive of Co-Location Modification Requests) from both Schedule 12 (Co-Location Service) and Schedule 12C (Co-Location Space & Service in New Co-Location Room) per week from all Requesting Licensees (**Co-Location Service Request Quota**). Any additional requests will be processed in the next available week where the Co-Location Service Request Quota has not been exceeded. OpenNet shall inform the Requesting Licensee of that overflow within one (1) Business Day of the date of receiving the Co-Location Request / Co-Location Modification Request (**Request Date**).
- 3.3 (A) The Requesting Licensee shall submit its Co-Location Request using a Co-Location Request Form in the form of Annex 12C-1 containing but not limited to the following information:
- (a) the Central Office listed in Annex 12B-1 at which Co-Location Space is sought;
  - (b) confirmation that the Requesting Licensee's Co-Location Equipment to be installed at the Co-Location Space at that Central Office is for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-



Location Equipment and the provision of services over the OpenNet Network;

- (c) the type and specifications of the Co-Location Equipment proposed to be installed at the Co-Location Space;
- (d) the number of rack space required and power requirements;
- (e) the future demand forecast within the next six (6) months
- (f) the maximum projected heat load of the Requesting Licensee's Co-Location Equipment within each rack which shall not exceed 3kW;
- (g) the floor loading of the Co-Location Equipment;
- (h) not more than One (1) type and quantity of the Transmission Tie Cable required, the rack where the Tie Cable is to be terminated with termination sequence and starting port for termination information; and
- (i) the Requesting Licensee's contact details.

(B) As an alternative to submitting a Request under the form set out in Annex 12C-1 under clause 3.4(A), the Requesting Licensee may also submit its Co-Location Request using a Co-Location Request Form via the OpenNet Platform containing but not limited to the following information:

- (a) the Central Office listed in Annex 12B-1 at which Co-Location Space is sought;
- (b) confirmation that the Requesting Licensee's Co-Location Equipment to be installed at the Co-Location Space at that Central Office is for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network;
- (c) the type and specifications of the Co-Location Equipment proposed to be installed at the Co-Location Space;
- (d) the number of rack space required and power requirements;
- (e) the future demand forecast within the next six (6) months;

- (f) the maximum projected heat load of the Requesting Licensee's Co-Location Equipment within each rack which cannot exceed 3kW;
- (g) the floor loading of the Co-Location Equipment;
- (h) not more than One (1) type (number of fibre cores) and quantity of the Transmission Tie Cable required, the rack where the Tie Cable is to terminated with termination sequence and starting port for termination information; and
- (i) the Requesting Licensee's contact details;
- (j) attachments such as Annex 12C -1 Part A – C(where applicable).

3.4 (A) Within one (1) Business Day of the date on which OpenNet receives the Co-Location Request (Request Date) and subject to clause 3.2, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) if its Request is rejected, for any one of the following reasons:

- (a) the Co-Location Request is not in the prescribed form;
- (b) the Co-Location Request does not contain the required information or the information provided is inaccurate or misleading;
- (c) OpenNet has plans or otherwise proposes to decommission the Central Office within six (6) months of the date of the Co-Location Request; or
- (d) The Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

(B) Alternatively, where OpenNet receives the Co-Location Request (**Request Date**) via the OpenNet Platform, OpenNet will validate and notify the Requesting Licensee, so that the Requesting Licensee is able to make the necessary corrections, in real time, if the request does not meet any one of the following requirements:

- (a) data entered for the fields does not meet the required format;
- (b) the Co-Location Request does not contain all the required information or the information provided is inaccurate or misleading;

Within one (1) Business Day of the date on which OpenNet receives the Request via the OpenNet Platform for Co-Location Request (**Request Date**) and subject to clause 3.3, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) if its Request is rejected for any one of the following reasons:

- (i) OpenNet has plans or otherwise proposes to decommission the Central Office within six (6) months of the date of the Co-Location Request; or
- (ii) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule

Where the OpenNet Platform is experiencing technical problems, OpenNet shall inform the Requesting Licensee to submit the Requests through fax/email or offer alternative solutions.

- 3.5 Within three (3) Business Days of the Request Date and subject to clause 3.2, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) if its Request is accepted, or if rejected, for any one of the following reasons:

- (a) Co-Location Space at a Central Office is not available;
- (b) the provision of Co-Location Space at a Central Office will give rise to significant health, safety, technical or engineering issues; or
- (c) there are security and confidentiality requirements or restrictions imposed on OpenNet by Governmental Agencies.

Where OpenNet rejects the Co-Location Request, OpenNet must provide reasons explaining the basis for rejection promptly. Where OpenNet rejects the Co-Location Request due to clause 3.5(a), OpenNet shall take reasonable measure to find an alternative solution.

- 3.6 The Requesting Licensee shall be liable for and shall pay OpenNet the Co-Location Ordering Charge for processing the Co-Location Request as provided in Schedule 15 (Charges), irrespective of the outcome of the Co-Location Request, unless the Co-Location Request was wrongfully rejected by OpenNet.

- 3.7 Where OpenNet is unable to offer the Co-Location Service due to unavailability, OpenNet shall take reasonable measures to cater for additional space where possible. The provision of such additional Co-Location Space shall not be subject to the Provisioning SLG.
- 3.8 The Requesting Licensee acknowledges that the Co-Location Space allocated and the actual placement of the Co-Location Equipment shall be determined by OpenNet. OpenNet is not obligated to place the same Requesting Licensee's Co-Located Equipment adjacent to each other, provided that OpenNet will use its reasonable endeavours to accommodate any reasonable request for adjacent placement made by the Requesting Licensee.

#### **4. PROJECT STUDY**

- 4.1 Subject to clause 3.2 and except where OpenNet has rejected a Co-Location Request under clauses 3.4 and 3.5, OpenNet shall, within five (5) Business Days of the Request Date, provide a quotation for the Project Study Fee as specified in Schedule 15 (Charges). The quotation shall be valid and binding for ten (10) Business Days from the date of the quotation.
- 4.2 The Requesting Licensee shall, within ten (10) Business Days from the date of the quotation referred to in clause 4.1 above, inform OpenNet in writing whether it accepts the quotation. If the Requesting Licensee does not accept the quotation, or if the Requesting Licensee does not (for any reason whatsoever) inform OpenNet in writing of its acceptance of the quotation within ten (10) Business Days from the date of the quotation, the quotation and the Co-Location Request shall be deemed cancelled. The Requesting Licensee shall in any event be liable for and shall pay OpenNet the Co-Location Ordering Charge for processing the Co-Location Request as provided in Schedule 15 (Charges).
- 4.3 OpenNet shall complete a Project Study within fifteen (15) Business Days of its receipt of the written notice of acceptance by the Requesting Licensee of the quotation for the Project Study Fee. The Requesting Licensee must pay the Project Study Fee specified in Schedule 15 (Charges). The Project Study normally entails a joint site survey with the Requesting Licensee to determine the space and Site Preparation Works required at the Co-Location space.

- 4.4 Following completion of the Project Study, OpenNet shall provide the Requesting Licensee with the following information ascertained as a result of the Project Study:
- (a) the estimated Charges for the Site Preparation Work (including a breakdown of the major components of the Charges) and an outline of the major elements of the Site Preparation Work to be undertaken by OpenNet; and
  - (b) the number of Business Days (which shall not exceed twenty five (25) Business Days as specified in clause 6.3) reasonably expected to complete the Site Preparation Work.
- 4.5 OpenNet shall be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges) irrespective of whether the Requesting Licensee proceeds with the Co-Location Request after completion of the Project Study.

## **5. MODIFICATION OF CO-LOCATION REQUEST**

- 5.1 The Requesting Licensee may, before the completion of the Project Study, submit a modification to the Co-Location Request (“Co-Location Modification Request”) to OpenNet in the form of Annex 12C-1. The Requesting Licensee shall, in the Co-Location Modification Request, state the Application Reference Number used in the original Co-Location Request and clearly indicate the changes requested.
- 5.2 OpenNet shall, if the Requesting Licensee has requested for suspension of the Project Study in the Co-Location Modification Request, immediately suspend the Project Study upon its receipt of the Co-Location Modification Request. If the Requesting Licensee has not requested for suspension of the Project Study in the Co-Location Modification Request, the Project Study shall continue and the Requesting Licensee shall be liable for the full amount of the Project Study Fee for the Project Study. If OpenNet anticipates that the Co-Location Modification Request will result in extensive changes to the Project Study and that the Project Study should be suspended, OpenNet shall inform the Requesting Licensee and seek the Requesting Licensee’s consent before suspending the Project Study.
- 5.3 Where the Project Study has been suspended pursuant to clause 5.2, the duration of the Project Study suspension shall not be included in the calculation of the Service Level Guarantee for the Project Study.
- 5.4 Subject to clause 3.2, OpenNet shall, within three (3) Business Days of its receipt of the Co-Location Modification Request, assess the Co-Location Modification Request and inform the Requesting Licensee in writing whether it accepts or rejects the Co-

Location Modification Request. OpenNet shall reject the Co-Location Modification Request for any of the following reasons:

- (a) proposed modification will give rise to significant health, safety, technical or engineering issues;
- (b) there are security and confidentiality requirements or restrictions imposed on OpenNet by Government Agencies;
- (c) the Co-Location Space at Central Office is not available

Where OpenNet rejects the Co-Location Modification Request due to clause 5.4(c), OpenNet shall take reasonable measure to find an alternative solution.

5.5 If OpenNet rejects the Co-Location Modification Request, the Requesting Licensee shall, within three (3) Business Days of OpenNet's rejection of the Co-Location Modification Request (or such other period as may be agreed between the Parties), inform OpenNet in writing whether it wishes to:

- (a) continue with the Project Study, whereupon the suspension of the Project Study as per clause 5.2 will be lifted within one (1) Business Day of OpenNet's receipt of Requesting Licensee's request to continue with the Project Study; or
- (b) cancel the Co-Location Request and terminate the Project Study.

In any event, OpenNet shall be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges).

5.6 If OpenNet anticipates that it would not incur additional costs and/or charges arising from the acceptance of the Co-Location Modification Request, OpenNet shall continue the Project Study as per the timeframe stated in Clause 4.3 and be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges). If OpenNet anticipates that it would incur additional costs and/or charges arising from the acceptance of the Co-Location Modification Request, OpenNet shall terminate the Project Study and be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges). OpenNet shall provide a quotation to the Requesting Licensee with the estimated additional Project Study Fee for the Co-Location Modification Request Project Study within five (5) Business Days from the date of OpenNet's receipt of the Co-Location Modification Request. The Requesting Licensee shall notify OpenNet in writing whether it accepts the quotation for the Co-Location

Modification Request Project Study within ten (10) Business Days of its receipt of the quotation.

- 5.7 Upon the Requesting Licensee's acceptance of the quotation in clause 5.6, OpenNet shall complete the Co-Location Modification Request Project Study within fifteen (15) Business Days of the date of its receipt of the Receiving Licensee's acceptance. For the avoidance of doubt, any work already performed by OpenNet pursuant to the Project Study shall be included in the Co-Location Modification Request Project Study at no additional cost to the Requesting Licensee. OpenNet shall provide the same Service Level Guarantee for the Co-Location Modification Request Project Study as it would for a Project Study.

## **6. SITE PREPARATION WORK**

- 6.1 Within ten (10) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the Project Study under clause 4.2 or Co-Location Modification Request Project Study under clause 5.7, the Requesting Licensee shall confirm in writing whether it wishes to proceed with Co-Location and whether it agrees to pay the estimated Charges for Site Preparation Work. Where the Co-Location Request is submitted via the OpenNet Platform, within ten (10) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the Project Study under clause 4.2 or Co-Location Modification Request Project Study under clause 5.7, the Requesting Licensee shall confirm in writing whether it wishes to proceed with Co-Location and whether it agrees to pay the estimated Charges for Site Preparation Work via the OpenNet Platform.
- 6.2 OpenNet shall use its best endeavours to complete the Site Preparation Work within the estimated charges. If OpenNet's costs increase above OpenNet's estimate set out in the notice under clause 4.4(a) (as may be varied from time to time under this clause 6.2), OpenNet must as soon as possible provide the Requesting Licensee with a revised price estimate. OpenNet must obtain the prior approval of the Requesting Licensee to the revised price estimate and if the Requesting Licensee does not provide its approval, then, OpenNet may suspend the Site Preparation Work until the Requesting Licensee agrees to the revised price estimate.
- 6.3 OpenNet shall complete any Site Preparation Work within a period of twenty five (25) Business Days of the date on which the Requesting Licensee notifies OpenNet under clause 6.1 that it wishes to proceed with Co-Location and agrees to pay estimated charges. Subject to delays that may result from suspension of Site Preparation Work under clause 6.2, if OpenNet is not able to complete the Site

Preparation Work within the timeframe under this clause 6.3, OpenNet shall inform the Requesting Licensee of when the Site Preparation Work will be completed. The Requesting Licensee may seek a remedy for any delay in completing the Site Preparation Work in accordance with clause 1.8(a).

- 6.4 Within one (1) Business Day after the completion of the Site Preparation Work, OpenNet will notify the Requesting Licensee and request the Requesting Licensee to attend the Central Office for a final site inspection of the Co-Location Space.

## **7. INSTALLATION AND MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE**

- 7.1 The Requesting Licensee's Co-Location Equipment must only be used for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network.

- 7.2 The Parties agree to comply with the following procedures in connection with the installation and maintenance of the Requesting Licensee's Co-Location Equipment:

- (a) the Co-Location Equipment Installation and Maintenance Procedures at Annex 12D-1 and as amended by OpenNet from time to time;
- (b) the Standard Operating Procedures for Co-Location Space at Annex 12E-1 and as amended by OpenNet from time to time; and
- (c) the Physical Access Procedures at Annex 12F-1 and as amended by OpenNet from time to time.

- 7.3 The Requesting Licensee shall:

- (a) provide all installation materials and manpower needed for the installation and maintenance of its Co-Location Equipment;
- (b) provide and install FDF at the Requesting Licensee's Co-Location Space in the Central Office for the termination of Transmission Tie Cable; and
- (c) be responsible for any cabling and patching required between its Co-Location Equipment and its FDF located together at the Requesting Licensee's Co-Location Space whether in the original Co-Location Room and/or in the New Co-Location Room.



7.4 Subject to OpenNet's agreement on the requested capacity of the Transmission Tie Cable from Requesting Licensee's FDF to OpenNet's FDF, OpenNet shall provide, at its own cost:

- (a) the necessary, in OpenNet's reasonable opinion, Transmission Tie Cable between the Requesting Licensee's FDF and the OpenNet's FDF;
- (b) installation of the Transmission Tie Cable from the OpenNet's FDF to the Requesting Licensee's FDF in the Co-Location Space; and
- (c) termination of the Transmission Tie Cable to the OpenNet's FDF

7.5. OpenNet shall terminate the Transmission Tie Cable installed pursuant to clause 7.4 at the Requesting Licensee's FDF in the Co-Location Space at the Requesting Licensee's cost. The Requesting Licensee shall pay OpenNet the Fibre Splicing Charge in accordance with Schedule 15 (Charges) for such termination of the Transmission Tie Cables at the Requesting Licensee's FDF. The Requesting Licensee shall provide at its own cost the necessary equipment and facilities such as splice tray etc for such termination. The Requesting Licensee may request for additional Transmission Tie Cable through OpenNet Platform once the utilisation of Transmission Tie Cable reaches a level mutually agreed between OpenNet and the Requesting Licensee. Upon receipt of a successful submission of the request for additional Transmission Tie Cable, OpenNet shall install the Transmission Tie Cable within twenty five (25) Business Days from the date of the receipt of the request for additional Transmission Tie Cable or any other date to be mutually agreed between OpenNet and the Requesting Licensee. For avoidance of doubt, the Requesting Licensee is responsible for monitoring the level of utilisation of their Transmission Tie Cable.

7.6. When OpenNet is required to terminate the Transmission Tie Cable installed pursuant to clause 7.4 at the Requesting Licensee's FDF in the Co-Location Space, OpenNet agrees to comply with the following procedures:

- (a) the Standard Operating Procedures for Co-Location Space at Annex 12E-1 and as amended by OpenNet from time to time; and
- (b) the Physical Access Procedures at Annex 12F-1 and as amended by OpenNet from time to time.

7.7 Both Parties shall use standard SC/APC (Angled Polished) connectors which are tested according to Bellcore Specifications TR-TSY-000326 or equivalent standards.

7.8 The Requesting Licensee acknowledges that:

- (a) it will fully indemnify and hold OpenNet harmless at all times against all actions, claims, proceedings, costs (including legal costs), losses or damages or expenses for injuries or death to any person whomsoever, which may be brought against OpenNet by any person out of or in connection with any loss or damage to any property, including third party equipment, resulting from the actions or omissions of the Requesting Licensee's employees or contractors;
- (b) it must comply with any guidelines for accessing and working in the Central Office issued by OpenNet from time to time;
- (c) it must maintain good engineering and operational practices in its use of its equipment; and
- (d) the technical means by which OpenNet supplies the Co-Location Service, including the Transmission Tie Cable, power and earthing, is at OpenNet's sole discretion.

7.9 The Requesting Licensee shall, immediately on notice from OpenNet, remove from the Central Office any hardware, software or cabling component of the Requesting Licensee that OpenNet (in its discretion) considers may cause or is likely to cause a hazard, interference or obstruction to OpenNet's operation of the Central Office.

#### ***CLAUSES 7.10 & 7.11 – MODIFICATION REQUIRED***

7.10 Where it is necessary to carry out any planned service interruption, including but not limited to planned repair, or replacement or upgrade to any equipment or facility which will cause the Co-Location Service to be unavailable or which may affect the Requesting Licensee's Co-Location Equipment, OpenNet shall provide the Requesting Licensee with at least two (2) weeks' notice in advance of such interruptions, repairs or upgrades, and shall inform the Requesting Licensee of the period of service interruption. In the event the planned service interruption has to be changed, OpenNet shall provide the Requesting Licensee with no less than twenty-four (24) hours' notice. OpenNet shall also take reasonable measures to minimise any service disruption to the Requesting Licensee.

7.11 If it is necessary to carry out any urgent service interruption, including but not limited to planned repair, or replacement or upgrade to any equipment or facility forming part of the Co-Location Supplementary Cooling Service, OpenNet shall notify the

Requesting Licensee as soon as practicable, including after the carrying out of the service interruption, and shall inform Requesting Licensees of the period of service interruption. OpenNet shall take reasonable measures to minimise any service disruption to the Requesting Licensee.

***IDA Directed Modifications: IDA refers NetLink Trust to Section 5 of the Explanatory Memorandum to this Direction. IDA directs NetLink Trust to propose, for IDA's approval, modifications to clauses 7.10 and 7.11 to (a) revert the notification period for all Planned Interruptions to one (1) month; (b) clarify that NetLink Trust shall provide at least one-week's notice to RLs for any postponement of Planned Interruptions; and (c) clarify that should NetLink Trust be restricted to a shorter notification period due to corresponding short notices provided by third parties, NetLink Trust shall use the same principle in the process for Unplanned Interruptions to inform the RLs as soon as practicable of such unforeseen postponement of Planned Interruptions.***

***IDA further directs NetLink Trust to propose, for IDA's approval, modifications to both clauses 7.10 and 7.11 to reflect that NetLink Trust shall take best endeavours to minimise any service disruption to the Requesting Licensee in cases of service interruptions described in clauses 7.10 and 7.11.***

7.12 OpenNet shall include the following details in the written notification or via the OpenNet Platform APIs to the Requesting Licensee:

- (a) Affected Location;
- (b) Date of occurrence;
- (c) Time of occurrence (start & end timings);
- (d) Cause of Planned Disruption; and
- (e) OpenNet's Network Operations Centre Contact Number.

## **8. BRIDGING CONNECTION BETWEEN CO-LOCATION ROOMS**

8.1 Subject to OpenNet's agreement on the requested capacity of the bridging tie cable from Requesting Licensee's FDF in the original Co-Location Room listed under Schedule 12 (Co-Location Service) to the Requesting Licensee's FDF in the new Co-

Location Room listed under this Schedule 12C, OpenNet shall provide, at its own cost:

- (a) subjected to clause 8.2, installation of the bridging tie cable to interconnect between the Requesting Licensee's FDFs for the installation performed for the first sign up request in the new Co-Location Room listed under this Schedule 12C,
- (b) subjected to clause 8.2, termination of the bridging tie cable to the Requesting Licensee's FDF located in the new Co-Location Room listed under this Schedule 12C for the installation performed for the first sign up request in the new Co-Location Room listed under this Schedule 12C.

8.2 OpenNet shall provide One (1) Ninety-Six (96) fibre core during the first sign up which will be terminated during the installation according to the first sign up request by the Requesting Licensee, to interconnect the Requesting Licensee's FDF in the original Co-Location Room as listed in Schedule 12 (Co-Location Service), Annex 12B provisioned by OpenNet and the Requesting Licensee's FDF in the new Co-Location Room as listed in Schedule 12C, Annex 12B-1 provisioned by OpenNet. Subsequent bridging tie cable will be at the Requesting Licensee's cost.

8.3 However, at all times, OpenNet is entitled to not provision or cease provisioning the bridging service as described in this clause 8 where such bridging service will :

- (a) give rise to significant health, safety, technical or engineering issues; or
- (b) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

## **9. TERM OF LICENCE**

9.1 The term of a Co-Location Service licence granted under this Schedule shall commence on the date of completion of the Site Preparation Work (**Commencement Date**) and continues for the term of two (2) years until the earlier of any of the following events:

- (a) either party terminates the Co-Location Service in accordance with clause 11 of this Schedule;
- (b) the OpenNet ICO is revoked by the Authority under clause 12.8 of the Main Body of the ICO Agreement; or

- (c) the Authority removes the requirement for OpenNet to provide Co-Location Service under the OpenNet ICO or exempts OpenNet from providing Co-Location Service under clause 12.9 of the Main Body of the ICO Agreement.

9.2 OpenNet shall, three (3) months before the licence expiry date, send a first reminder to the Requesting Licensee notifying it of the impending expiry of Co-Location Service licence. If the Requesting Licensee does not respond to the first reminder, OpenNet shall, two (2) months before the licence expiry date, send a second reminder to the Requesting Licensee. If the Requesting Licensee does not respond to the first and second reminders, OpenNet shall, one (1) month before the licence expiry date, send a third reminder to the Requesting Licensee. If OpenNet does not receive a response from the Requesting Licensee at least three (3) weeks before the licence expiry date that it does not wish to extend the Co-Location Service licence, then in this event, the Co-Location Service licence shall be extended for a further term of two (2) years on the same terms and conditions as the initial term.

## **10. SUSPENSION OF LICENCE**

- 10.1 OpenNet may suspend the Requesting Licensee's Co-Location Service licence at any time until further notice to the Requesting Licensee if the Requesting Licensee's Co-Location Equipment causes or is likely to cause physical or technical harm to any telecommunications network, system or services (whether of OpenNet or any other person) including but not limited to causing damage, interfering with or causing deterioration in the operation of OpenNet's Network.
- 10.2 If the suspension is the result of the Requesting Licensee's fault, the Requesting Licensee shall continue to pay the Monthly Recurring Charge as specified under Schedule 15 (Charges) during the period of suspension.
- 10.3 Where the suspension is not the result of OpenNet's fault, OpenNet shall, upon the end of the suspension period, charge the Requesting Licensee a Reconnection Charge as specified under Schedule 15 (Charges) for the service reconnection works.
- 10.4 Subject to clause 14 of the Main Body of the ICO Agreement, OpenNet shall not be liable to the Requesting Licensee for any Loss resulting from, or in connection with, suspension of access to Co-Location Space under this clause 10. For the avoidance of doubt, nothing in this clause 10.4 shall exclude or limit OpenNet's liability to a greater extent than clause 14 of the Main Body of the ICO Agreement.

## 11. TERMINATION OF LICENCE

11.1 OpenNet may terminate the licence of Co-Location Service at any time with immediate effect by giving notice to the Requesting Licensee if the Requesting Licensee fails to complete the installation of its Co-Location Equipment within thirty (30) Business Days under Annex 12D-1. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such request must be received prior to the expiry of the aforementioned thirty (30) Business Days period. OpenNet must respond to the Requesting Licensee's request under this clause 11.1 within two (2) Business Days from the date of receipt of such request.

11.2 Either Party (**Terminating Party**) may terminate the licence of Co-Location Service:

- (a) if the other Party is in breach of this Schedule other than failure to pay any sum for which the Requesting Licensee has been invoiced, and such breach remains un-remedied for a period of sixty (60) Calendar Days after receiving notice from the Terminating Party; or
- (b) if the Requesting Licensee is in breach of this Schedule by its failure to pay any sum for which the Requesting Licensee has been invoiced, and such breach remains un-remedied for a period of fourteen (14) Calendar Days after receiving notice from the Terminating Party. For the avoidance of doubt, this sub-clause shall not apply pending the resolution of any Billing Dispute in accordance with the provisions of Schedule 16 (Billing).

11.3 OpenNet may immediately terminate a licence of Co-Location Service if:

- (a) in OpenNet's reasonable opinion, the Requesting Licensee is using the Co-Location Space in contravention of an applicable law, licence, code, regulation or direction and OpenNet has the necessary confirmation from the relevant Governmental Agencies that the Requesting Licensee is in contravention of the applicable law, licence, code, regulation or direction;
- (b) the Requesting Licensee's Co-Location Service licence has been suspended pursuant to clause 10.1 of this Schedule, and the Requesting Licensee fails to rectify the fault resulting in the suspension within a period of sixty (60) Calendar Days from the date of suspension;

- (c) the Co-Location Equipment is used for a purpose other than for connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and providing services over the OpenNet Network;
  - (d) the Co-Location Space has become unsafe for its purpose;
  - (e) the Central Office has become unfit for its purpose; or
  - (f) OpenNet's right to own, maintain or operate the Central Office is revoked or terminates or expires.
- 11.4 OpenNet may terminate the licence of Co-Location Service on ten (10) Business Days prior written notice, if the Requesting Licensee removes or abandons its Co-Location Equipment and the Requesting Licensee did not dispute such written notice by OpenNet.
- 11.5 If at any time during the term that the licence of a Co-Location Service is to be terminated because of the closure of that Central Office, OpenNet must give the Requesting Licensee prior written notice at least eighteen (18) months before the scheduled closure of that Central Office. In the event of a closure of a Central Office, OpenNet must take reasonable measures to minimise disruptions to the Requesting Licensee in the provision of its services to End-Users. The Requesting Licensee shall bear its own cost associated with the closure of a Central Office. In the event that the Requesting Licensee requests assistance from OpenNet within thirty (30) Business Days after receiving a notice under this clause to provide an alternative solution to the Co-Location Space which is being terminated, OpenNet will use its reasonable endeavours in providing such assistance. The Requesting Licensee shall remain solely responsible for making any alternative arrangements as are necessary to continue to provide its Customers with services and shall remove its Co-Location Equipment prior to the closure of the Central Office.
- 11.6 The Requesting Licensee may terminate the Co-Location Service licence by giving OpenNet at least one (1) month's prior notice.
- 11.7 Upon expiry or termination of the licence of Co-Location Service:
- (a) the Requesting Licensee must discontinue the use of its Co-Location Equipment and, at its own cost, remove its Co-Location Equipment from the Co-Location Space without undue delay;

- (b) OpenNet shall reinstate the Co-Location Space to its original condition and recover/reinstate all cables/supports/opening and recover the reasonable cost of such reinstatement (other than the cost of removing the Transmission Tie Cable) from the Requesting Licensee, other than in circumstances where the Requesting Licensee's discontinuation of the use of the Co-Location Equipment is a direct result of OpenNet's decommissioning of the Central Office under this Schedule 12C, or where the termination occurs as a result of OpenNet's fault; and
- (c) the Requesting Licensee shall pay OpenNet the charges for the lease of the Co-Location Space for the remainder of the term of the Co-Location Service licence if the termination is the result of the Requesting Licensee's fault, except where termination is pursuant to clauses 9.1(b), 9.1(c), 11.3(d), 11.3(e), 11.3(f), 11.5 or where the termination is initiated by the Requesting Licensee pursuant to clause 11.2(a).

11.8 If the Requesting Licensee fails to discontinue the use of its Co-Location Equipment and/or remove its Co-Location Equipment in accordance with clause 11.7(a), OpenNet may at its sole discretion proceed to remove and/or dispose of the Requesting Licensee's Co-Location Equipment after giving the Requesting Licensee no less than ten (10) Business Days' written notice. OpenNet shall notify the Requesting Licensee of the costs payable by the Requesting Licensee prior to OpenNet's removal and/or disposal of the Requesting Licensee's Co-Location Equipment. The Requesting Licensee shall pay to OpenNet all reasonable costs notified to it by OpenNet, including the cost of disposing the Co-Location Equipment. In such event, the Requesting Licensee shall have no claim whatsoever against OpenNet related to or in connection with the work undertaken by OpenNet.

11.9. Upon termination of the licence of Co-Location Service, the Requesting Licensee shall have physical access to the Central Office for a reasonable period, solely for the purposes of fulfilling its obligation under clause 11.7(a) to remove its Co-Location Equipment, after which any physical access granted to the Central Office shall also be terminated. The Requesting Licensee shall comply with all associated procedures for such physical access, and physical access charges shall apply.

## **12. ADDITIONAL CO-LOCATION SPACE, CO-LOCATION EQUIPMENT AND/OR TRANSMISSION TIE CABLE**

12.1 If the Requesting Licensee wishes to replace, modify or rearrange existing Co-Location Equipment in the Co-Location Space, install additional Co-Location Equipment in the Co-Location Space or install additional Transmission Tie Cable



between the Requesting Licensee's FDF and OpenNet's FDF (**Co-Location Equipment Modification**), the Requesting Licensee must submit a separate Co-Location Request and the process of ordering and provisioning in this Schedule 12C shall apply unless otherwise stated in this clause 12.

12.2 The request in respect of the Co-Location Equipment Modification must contain the following information (where applicable):

- (a) purpose of replacement, modification or rearrangement;
- (b) date, time and duration of replacement, modification or rearrangement;
- (c) detailed description of works and process to be carried out in the Co-Location Space;
- (d) the Co-Location Equipment to be installed, replaced, modified or rearranged;
- (e) any assistance required from OpenNet (subject to approval and charges);
- (f) a description of the precautions on how the Requesting Licensee would ensure that the replacement, modification, rearrangement or addition would not affect any OpenNet plant or equipment; and
- (g) any other information which the Requesting Licensee believes would be useful to OpenNet in assessing the Requesting Licensee's request.

12.3 Save for a wrongful rejection of a Co-Location Equipment Modification request by OpenNet, the Requesting Licensee shall be liable for all reasonable costs incurred by OpenNet in processing a request for Co-Location Equipment Modification under clause 12.1.

12.4 The Requesting Licensee shall not add, modify, alter or change any Co-Location Equipment within its leased Co-Location Space without the prior written approval of OpenNet.

12.5 OpenNet may reject the request in respect of the Co-Location Equipment Modification if OpenNet reasonably believes that the replacement, modification and rearrangement under the request for Co-Location Equipment Modification may affect the operation of OpenNet's or any Third Party's equipment or plant.

## ANNEX 12A-1

### SERVICE LEVEL GUARANTEES

#### 1. REBATES FOR CO-LOCATION REQUEST TIMEFRAMES

OpenNet shall provide Service Level Guarantees in respect of the response to a request for Co-Location Service within three (3) Business Days from the date of the request.

<b>Missed notification timeframe as to response to Co-Location Request following detailed processing (clause 3.6) by:</b>	<b>Rebate</b>
1-30 Calendar Days	Number of days of delay x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

#### 2. REBATES FOR PROJECT STUDY TIMEFRAMES

OpenNet shall provide Service Level Guarantees in respect of the completion of Project Study within fifteen (15) Business Days from the date of the request.

<b>Missed timeframe for completion of Project Study (clause 4.3) by:</b>	<b>Rebate</b>
1-30 Calendar Days	Number of days of delay x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

#### 3. REBATES FOR SITE PREPARATION WORK

OpenNet shall provide Service Level Guarantees in respect of the completion of the Site Preparation Work within twenty five (25) Business Days from the date of the Requesting Licensee's agreement to proceed with Site Preparation Work.

<b>Missed timeframe for completion of Site Preparation Work (clause 6.3) by:</b>	<b>Rebate</b>
1-30 Calendar Days	Number of days of delay x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

#### **4. CLAIM PROCEDURES**

- (a) A claim by the Requesting Licensee shall be made in writing within thirty (30) Calendar Days of the completion of the relevant Calendar Month on which the Service Level Guarantees are measured. The amount in respect of any claim shall be paid to the Requesting Licensee in the form of a rebate. The Requesting Licensee acknowledges that a failure to make a claim within the specified timeframes under this paragraph means that the Requesting Licensee waives any entitlement to the Service Level Guarantee payment in respect of that claim. OpenNet will respond within thirty (30) Calendar Days from the date of claim stating whether the claim by the Requesting Licensee: (a) is valid for rebates; or (b) is an invalid claim. Where OpenNet assessed that the Requesting Licensee's claim is invalid, OpenNet will explain its basis or require the Requesting Licensee to provide additional information. For valid claims submitted within the timeframe, OpenNet shall provide the rebate in its next Invoice.
- (b) If the Requesting Licensee is entitled to a rebate pursuant to the claim made hereunder, then the amount of the rebate will be credited into the Requesting Licensee's account after it has been processed by OpenNet and will be reflected in OpenNet's bill to the Requesting Licensee in accordance with OpenNet's billing cycle.
- (c) The guarantee and rebates provided by OpenNet under this Annex 12A-1 are:
  - (i) of an ex-gratia nature and personal to the Requesting Licensee and are non-transferable; and
  - (ii) subject to this Schedule.
- (d) Despite anything to the contrary in this section, if the Requesting Licensee qualifies for any claim under this Annex 12A-1, OpenNet shall honour its obligations in respect of that claim but in the event of a dispute as to whether the Requesting Licensee qualifies for a claim or as to the quantum of the claim payable to the Requesting Licensee, the dispute shall be resolved in accordance with the Dispute Resolution Procedures in Schedule 17 (Dispute Resolution) of the ICO Agreement, or in the case of a Billing Dispute, in accordance with Schedule 16 (Billing) of the ICO Agreement.

**ANNEX 12B-1**  
**LIST OF CENTRAL OFFICES**

S/N	Central Office	No of Rack space available in New Co-Location Room (subject to site constraint) and Area Space
1	Jurong West Telephone Exchange	600 x 600 rack type = 8 600 x 600 rack type* = 7 600 x 1000 rack type = 10 600 x 1000 rack type* = 1 800 x 1000 rack type = 21 Area Space (m2) = 124.10
2	Bukit Panjang Telephone Exchange	600 x 600 rack type = 19 600 x 600 rack type* = 3 600 x 1000 rack type = 14 800 x 1000 rack type = 16 Area Space (m2) = 121.50
3	Ayer Rajah Telephone Exchange	600 x 1000 rack type = 21 600 x 1000 rack type* = 2 800 x 1000 rack type = 27 Area Space (m2) = 125.30
4	Ang Mo Kio Telephone Exchange	600 x 600 rack type = 5 600 x 600 rack type* = 11 600 x 1000 rack type = 16 800 x 1000 rack type = 16 Area Space (m2) = 104.50
5	Orchard Telephone Exchange	600 x 600 rack type = 11 600 x 600 rack type* = 12 600 x 1000 rack type = 3 600 x 1000 rack type* = 5 800 x 1000 rack type = 4 Area Space (m2) = 85.75
6	East Exchange	600 x 600 rack type = 4 600 x 1000 rack type = 21 600 x 1000 rack type * = 1 800 x 1000 rack type = 21 Area Space (m2) = 114.30
7	Bedok Telephone Exchange	600 x 600 rack type = 9 600 x 1000 rack type = 18 800 x 1000 rack type = 15 800 x 1000 rack type * = 4 Area Space (m2) = 109.80

S/N	Central Office	No of Rack space available in New Co-Location Room (subject to site constraint) and Area Space
8	Tampines Telephone Exchange	600 x 600 rack type = 12 600 x 1000 rack type = 22 800 x 1000 rack type = 15 Area Space (m2) = 123.30

\*Rack space with floor loading constraint

**ANNEX 12B-2**  
**TEMPERATURE CONTROL PROCEDURES**

**1. Standards Applicable**

- 1.1 The standards and guidelines to be followed shall be that as issued by American Society of Heating, Refrigerating and Air-Conditioning Engineers (“ASHRAE”) applicable as at 1 January 2013. Unless otherwise stated, all references shall be to such standards issued by ASHRAE.

**2. Permissible Ambient Temperature**

- 2.1 The ambient temperature shall be maintained not exceeding 27 degree Celsius at the cold aisle in the Co-Location Space.

**3. Measurement of Ambient Temperature**

- 3.1 The ambient temperature shall be measured in accordance with ASHRAE’s standards and guidelines.

**4. Temperature Control Procedures**

- 4.1 The Requesting Licensee shall comply with the provisions of this Schedule.
- 4.2 In the event that the ambient temperature exceeds 27 degree Celsius for a continuous period longer than forty-eight (48) hours and such increase in the ambient temperature is not due to OpenNet’s fault or negligence, OpenNet shall inform the Requesting Licensee accordingly and the Requesting Licensee shall take immediate measures to prevent the ambient temperature from increasing further.
- 4.3 Where the Requesting Licensee has performed all necessary checks to ensure that such increase in the ambient temperature is not attributable to the Requesting Licensee’s Co-Located Equipment, the Requesting Licensee shall inform OpenNet and OpenNet may call for a joint investigation with the Requesting Licensee whose equipment is located in the vicinity where the ambient temperature exceed 27 degree Celsius, to determine if the cause is due to the Requesting Licensee. For the avoidance of doubt, Onsite Charges will not be applicable to the Requesting Licensee for such joint investigation.

- 4.4 If it is discovered that the Requesting Licensee has not complied with clause 4.1 above, the Requesting Licensee is to take immediate actions to rectify the non-compliance within twenty-four (24) hours from the point where the Requesting Licensee has notified OpenNet or after the joint investigation where OpenNet has initiated a joint investigation. In the event that the Requesting Licensee fails to take remedial actions after the stipulated timeframe, OpenNet shall exercise its rights to take such immediate actions as may be necessary and recover all costs incurred from the Requesting Licensee.
- 4.5 If it is discovered that the Requesting Licensee has complied with clause 4.1 above and the cause cannot be immediately determined, OpenNet shall use its best endeavours to take immediate actions to restore the ambient temperature to not exceeding 27 degree Celsius within twenty-four (24) hours from the point where the Requesting Licensee has notified OpenNet or after the joint investigation where OpenNet has initiated a joint investigation. In the event that OpenNet cannot restore the required ambient temperature within the stipulated timeframe, OpenNet shall provide periodic updates on the status of its investigations and daily updates on the ambient temperature to all the Requesting Licensees who are co-locating in the affected Co-Location Room until such time that the ambient temperature is restored to not exceeding 27 degree Celsius.

## ANNEX 12C-1

### CO-LOCATION REQUEST / CO-LOCATION MODIFICATION REQUEST FORM

#### REQUEST FOR CO-LOCATION SERVICE / MODIFICATION OF CO-LOCATION

##### Requesting Licensee

Date of Application : \_\_\_\_\_ Application Reference Number : \_\_\_\_\_

Request for Physical Co-Location is sought for the purpose of : \_\_\_\_\_

Address of Co-Location space : [Address / Building Name]

Location of Space : [Name of Central Office]

Type of Equipment to be installed : [Description / Manufacturer / Dimensions]

Co-Location Space Required : [Dimensions and floor area to be occupied]

Power Requirements / Heat Load: [Power Consumption & Heat Load]

Future demand forecast (within next six months): [Utilization]

Floor Loading of Equipment : [Weight of Equipment Fully Installed]

Transmission Tie-Cable Requirements (where applicable)

Type of fibre cores: ☐ [96] ☐ [288] (Tick ONLY ONE where applicable)

Number of fibre cores: \_\_\_\_\_ (Insert quantity) Start of Termination port: \_\_\_\_\_

Termination Sequence Information: (Rack/Frame/Shelf)

##### Requesting Licensee

Sign : \_\_\_\_\_ Name of Requesting Licensee: \_\_\_\_\_

Name : \_\_\_\_\_ [Company Name]

Designation : \_\_\_\_\_

Contact Number : \_\_\_\_\_ Company Stamp : \_\_\_\_\_

Fax Number : \_\_\_\_\_

##### OpenNet

☐ Application returned – incomplete/illegible

☐ Not Approved Reason for Rejection \_\_\_\_\_

☐ Approved OpenNet Approval Code \_\_\_\_\_

##### OpenNet

Sign : \_\_\_\_\_ Contact Number : \_\_\_\_\_

Name : \_\_\_\_\_ Fax Number : \_\_\_\_\_

##### OpenNet

Received Date : \_\_\_\_\_ Queue Status : \_\_\_\_\_ Processed Date : \_\_\_\_\_



## Part A: Rack and Equipment Information

Rack Information											Equipment Information				
	Rack Size (mm)				Power per Rack (W)	Heat Load per Rack (W)	Weight per Fully Equipped Rack (kg)	Comply with 5kN floor loading requirement	Power Supply required from OpenNet						
	W	D	H						Power	Type	Fused Amps (A)	Earthing Required	Description	Manufacturer	Dimensions (W X L X H) mm
Rack	W	D	H												
1				42U								free text	free text	free text	free text
2				42U											
3				42U											
4				42U											
5				42U											
6				42U											
7				42U											
8				42U											
9				42U											
10				42U											

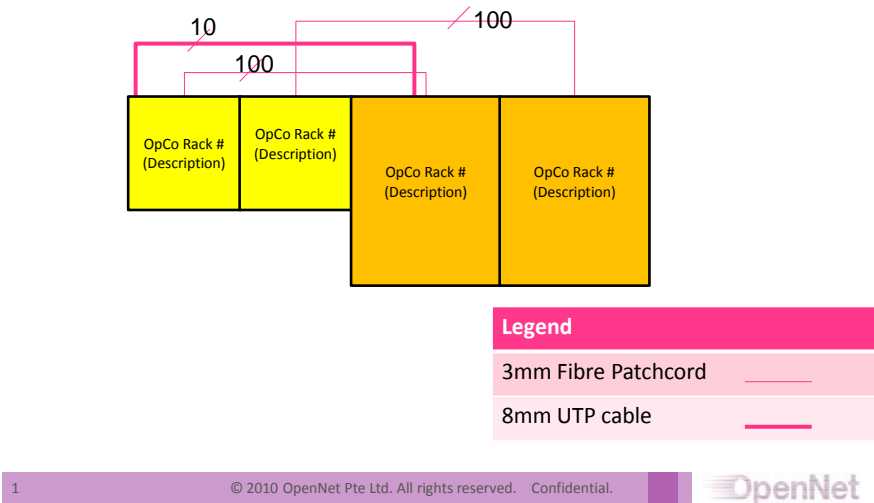
11			42U												
12			42U												
13			42U												
14			42U												
15			42U												

\* Please insert more rows as necessary.

Part B: Equipment Connectivity

- 1. For the purpose of determining the cable tray requirements, please provide an inter-connectivity diagram detailing the number of UTP/fibre connections between the Requesting Licensee's Equipment. Illustration of equipment connectivity diagram provided below is for reference only.
- 2. Please provide any other useful information.

Equipment Connectivity Diagram



## Part C: Tie Cable Splicing Requirements

**Tie Cable Required:** Yes / No (Please delete accordingly.)

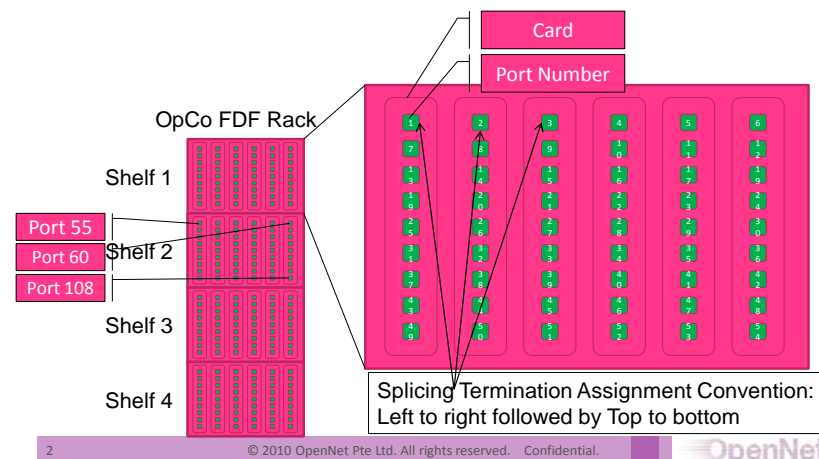
**If Yes:**

**1. For the purpose of determining the tie cable convention for splicing at the Requesting Licensee's FDF, please provide a diagram indicating how the FDF frame and cards are to be spliced and the order in which OpenNet is to splice them. Illustration of tie cable splicing diagram provided below is for reference only.**

Requesting Licensees may choose to submit this information to OpenNet at a later stage, provided that the submission is received by OpenNet prior to commencement of the Site Preparation Work.

**2. Please provide any other useful information.**

### Tie Cable Splicing Diagram



## **ANNEX 12D-1**

### **CO-LOCATION EQUIPMENT INSTALLATION AND MAINTENANCE PROCEDURES**

#### **1. INSTALLATION OF EQUIPMENT AT CO-LOCATION SPACE**

##### **1.1 Installation of Co-Location Equipment**

1.1.1 Prior to commencing installation of its Co-Location Equipment, the Requesting Licensee must submit detailed installation plans, installation timetable and provide equipment specification that will be installed in the order request form no less than ten (10) Business Days before commencement of works for OpenNet's approval. The Requesting Licensee shall not commence installation of its Co-Location Equipment until it has received OpenNet's approval.

1.1.2 The Requesting Licensee shall house only the following rack types in the Co-Location Space:

- (a) 600mm (Width) by less than or equal to 1000mm (Depth) by less than or equal to 2200mm (Height), these are industry standard 19 inch racks; and/or
- (b) 800 mm (Width) by less than or equal to 1000mm (Depth) by less than or equal to 2200mm (Height) racks, these are based on industry-standard 24-inch but incorporates space for cabling and airflow.

1.1.3 The Requesting Licensee must ensure that the floor loading of its Co-Located Equipment shall be limited to a maximum 5 kN per sqm or otherwise as specified by OpenNet, provided that the maximum 5 kN per sqm specification (or any other floor loading specification) stipulated by OpenNet shall be due to structural weight limitations. The Requesting Licensee acknowledges that the floor loading will be determined in respect of each Central Office based on its individual configuration. OpenNet shall notify the Requesting Licensee of the applicable floor loading during the joint site survey. The Requesting Licensee shall engage a Professional Structural Engineer licensed in the Republic of Singapore to compute the actual floor loading to certify that the floor loading limit is not exceeded prior to any installation of Co-Location Equipment. The Requesting Licensee shall not commence any installation of Co-Location Equipment until it has provided OpenNet, with five (5) Business Days advance notice, of a copy of the certification of compliance issued by the licensed Professional Structural Engineer. If the Requesting Licensee wishes to provide an alternative form of certification to demonstrate that it will not exceed the applicable

floor loading limit, the Requesting Licensee must send a written request to OpenNet at least fifteen (15) Business Days prior to the proposed date of installation of the Co-Location Equipment. OpenNet shall inform the Requesting Licensee whether the alternative form of certification is accepted within five (5) Business Days from the date of submission of the alternative form of certification. Any alternative form of certification (to demonstrate that floor loading limit will not be exceeded) will only be accepted in-lieu-of a certification of compliance issued by a licensed Professional Structural Engineer if OpenNet is, in its sole discretion, satisfied with the alternative form of certification provided by the Requesting Licensee.

1.2 The Requesting Licensee must install its Co-Location Equipment in the Co-Location Space within thirty (30) Business Days after the final site inspection. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such request must be received prior to the expiry of the aforementioned thirty (30) Business Day period. OpenNet must respond to the Requesting Licensee's request under this clause 1.2 within two (2) Business Days from the date of receipt of such request.

1.3 The Requesting Licensee must not locate equipment other than Co-Location Equipment in the Co-Location Space.

1.4 **Transmission Tie Cables**

1.4.1 OpenNet shall install and terminate Transmission Tie Cables from the Requesting Licensee's FDF at the Co-Location Space to OpenNet's FDF.

1.4.2 The Requesting Licensee shall be responsible for any cabling and patching required between its Co-Location Equipment and its FDF located at its leased Co-Location Space.

1.5 **Power, Earth and Heat Load**

1.5.1 OpenNet shall designate and provide the communication earth and Power Distribution Point for the Requesting Licensee's Co-Location Equipment. OpenNet shall endeavour to provide an earthing standard of 1 ohm. The Requesting Licensee shall pay OpenNet the Charges for the provision of the communication earth and power installation and termination in accordance with Schedule 15 (Charges).

1.5.2 OpenNet shall provide power of:

- (a) twenty (20) Amps circuit breaker or thirty-two (32) Amps circuit breaker or forty (40) Amps circuit breaker or sixty-three (63) Amps circuit breaker where the Requesting Licensee requires direct current;
- (b) sixteen (16) Amps circuit breaker where the Requesting Licensee requires single phase alternating current.

Circuits are based on provisioned power (not utility rates) and provisioned in accordance with OpenNet standard circuit breaker size as stated above. Should the Requesting Licensee requires redundant power supply, the Requesting Licensee can make such request to OpenNet. For the provisioning of redundant power supply, each rack is entitled to one (1) redundant circuit via a separate power distribution unit with the identical circuit breaker size at no additional monthly recurring power charges. The Requesting Licensee shall only be required to pay the one-time setup cost for the redundant circuit.

1.5.3 The Requesting Licensee shall ensure that:

- i. Power requested by the Requesting Licensee and provided by OpenNet to that particular rack must only be used for Co-Location Equipment in that particular rack. Where the Requesting Licensee wishes to pull and use the power designated for a rack for another rack, the Requesting Licensee shall seek OpenNet's approval and such approval shall not be unreasonably withheld.
- ii. Each rack installed by the Requesting Licensee shall not exceed the maximum heat load of 3kW.

1.6 **Interference**

- 1.6.1 Each Party shall ensure that its Co-Location Equipment does not cause any interference to the other Party's equipment, plant, Facilities, Networks and the equipment of other occupying Requesting Licensees in the Co-Location Space, including when installing equipment. In the event of any interference, the Parties shall take in good faith, reasonable measures to resolve the problem promptly. Where the Requesting Licensee's equipment is causing interference to existing equipment and the interference cannot be resolved, the Requesting Licensee shall remove the source of interference immediately.

- 1.6.2 If OpenNet determines that any interference from the Requesting Licensee's Co-Location Equipment poses an immediate risk of personal injury or significant property damage, it may, withdraw physical access and at the Requesting Licensee's cost, take measures necessary to prevent such injury or damage. Otherwise, OpenNet may provide the Requesting Licensee with five (5) Business Days' notice to rectify the interference. After such time, if the interference continues, OpenNet may withdraw physical access and at the Requesting Licensee's cost, take measures to prevent the interference.

**1.7 Standard Operating Procedures and Safety**

- 1.7.1 In relation to the installation, operation and maintenance of its Co-Located Equipment located in the Co-Location Space, the Requesting Licensee must comply with the Standard Operating Procedures for Co-Location Space in Annex 12E-1 of this Schedule as amended from time to time, and any reasonable written instructions which are provided to the Requesting Licensee by OpenNet.
- 1.7.2 In relation to physical access to the Co-Location Space, the Requesting Licensee shall comply with the Physical Access Procedures in Annex 12F-1 as amended from time to time and any reasonable written instructions which are provided to the Requesting Licensee by OpenNet.
- 1.7.3 Any rubbish/debris created in the course of installation or maintenance shall be removed daily by the Requesting Licensee.
- 1.7.4 OpenNet may attend the Co-Location Space to which access has been approved for the installation, modification, replacement or addition of the equipment to verify that the Requesting Licensee is undertaking the installation, modification, maintenance, operation, replacement or addition of the equipment in accordance with the approved request, the installation plans, the Standard Operating Procedures in Annex 12E-1 and such other reasonable written instructions provided to the Requesting Licensee.
- 1.7.5 Where, as a result of an attendance under clause 1.7.4, OpenNet notifies the Requesting Licensee that its installation is not in accordance with the approved request, the installation plans, the Standard Operating Procedures for Co-Location Space in Annex 12E-1 of this Schedule or such other reasonable written instructions provided to the Requesting Licensee, the Requesting Licensee must take appropriate corrective action within five (5) Business Days of notice. If the Requesting Licensee fails to do so, OpenNet may withdraw physical access or undertake the appropriate corrective action and recover the reasonable cost from the Requesting Licensee accordingly.



- 1.7.6 The Requesting Licensee shall consult with and obtain the consent of OpenNet before carrying out any hacking or drilling work on the floor, wall and ceiling slabs.
- 1.7.7 No Hot Works shall be carried out by the Requesting Licensee without prior approval from OpenNet and any such works must be performed in accordance with OpenNet's safety procedures. Hot Works means any work involving riveting, welding, flame cutting, burning, gouging or any other work involving the use of heat for producing sparks.
- 1.7.8 No work shall be performed by the Requesting Licensee on any of OpenNet's equipment, Facilities, plant or Networks including, but not limited to earth bars and Power Distribution Points/boards.
- 1.7.9 No flammable or hazardous materials shall be used by the Requesting Licensee, whether on a permanent or temporary basis, during and after the installation period. No smoking is allowed. No food or drinks are allowed in the Co-Location Space.
- 1.7.10 All connection of the Requesting Licensee's Co-Location Equipment to OpenNet's earth bars and Power Distribution Points/boards shall be carried out by OpenNet's staff. Charges for the work shall be borne by the Requesting Licensee as set out in the Site Preparation Work.
- 1.7.11 Where, during the course of installation, operation, maintenance, replacement or repair of its Co-Located Equipment the Requesting Licensee causes any damage to OpenNet's Central Office, plant, Network, equipment or Facilities, the Requesting Licensee must report the damage immediately to OpenNet. OpenNet shall rectify any damage in any way it deems fit. Any cost and expense incurred by OpenNet in this regard shall be reasonable, and reasonably incurred, and such cost and expense in connection with the damage including for the repair thereof shall be borne by the Requesting Licensee.
- 1.7.12 The Requesting Licensee shall report immediately any incident, injury, harm, fatal or otherwise that occurs at the Central Office to OpenNet. For fatal or serious accidents, the accident site shall be left undisturbed to facilitate the relevant authority to investigate the circumstance leading to the accident. The Requesting Licensee shall report immediately to the Ministry of Manpower, police and insurance company of any fatal accident having occurred at the Central Office. The Requesting Licensee shall be liable for and shall indemnify and keep indemnified OpenNet against all losses, claims, proceedings, damages, liabilities, costs and expenses for injuries or death to any person whomsoever or any loss or damage to any property whatsoever which arise out of or in consequence of any act or omission of the Requesting Licensee's employees and

contracts in relation to the Central Office and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof.

## **1.8 Final Inspection**

- 1.8.1 Upon completion of the installation of the Co-Location Equipment in the Co-Location Space, the Requesting Licensee shall advise OpenNet and request OpenNet to conduct a final inspection and confirm that the installation conforms with the approved detailed installation plans.
- 1.8.2 Where the final inspection reveals that the installation does not materially conform with the approved detailed installation plans, OpenNet shall notify the Requesting Licensee. The Requesting Licensee must reinstall or take other appropriate corrective action within ten (10) Business Days of notification, or such other time as is otherwise agreed. The Requesting Licensee shall bear the reasonable costs that OpenNet incurs for the inspection of the reinstallation or other appropriate corrective action. OpenNet may still inform and require the Requesting Licensee to make adjustments to its installation where the installation does not conform with the installation plan in a non-material way, but this notification will not delay the approval process under this Schedule.
- 1.8.3 If the Requesting Licensee fails to reinstall or take the appropriate corrective action referred to in clause 1.8.2, OpenNet may take appropriate corrective action including removal of the Requesting Licensee's Co-Location Equipment. The reasonable costs for the corrective action shall be borne by the Requesting Licensee.

## **2. MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE**

- 2.1 The Requesting Licensee shall be responsible for the operation and maintenance of its Co-Location Equipment.
- 2.2 In the operation and maintenance of the Co-Location Equipment, the Requesting Licensee must:
  - (a) take such other action as a reasonably prudent Requesting Licensee would;
  - (b) keep the Co-Location Space in a tidy and safe condition at all times; and
  - (c) ensure that flammable or toxic material is not left in or around the Co-Location Space following maintenance or other operations.

2.3 If a fault, defect or problem with the Co-Location Equipment of the Requesting Licensee causes or may cause damage to the Co-Location Space or OpenNet's Facilities, the Requesting Licensee must:

- (a) notify OpenNet as soon as practicable; and
- (b) repair the fault, defect or problem or take other appropriate corrective action immediately.

2.4 Where OpenNet determines that the Requesting Licensee's Co-Location Equipment pose an immediate risk of personal injury or significant property damage, it may, at the Requesting Licensee's cost, take interim measures necessary to prevent such injury or damage, pending attendance by the Requesting Licensee to perform corrective work.

2.5 The Co-Location Equipment must only be used by the Requesting Licensee for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network.

2.6 If the Requesting Licensee detects a fault, defect or problem in a Co-Location Space, it must notify OpenNet as soon as possible.

## 2.7 **Compliance**

2.7.1 The Requesting Licensee must ensure that its employees, agents and approved subcontractors comply with the provisions of this Schedule including all reasonable procedures and directions of OpenNet as notified to the Requesting Licensee from time to time.

2.7.2 The Requesting Licensee must comply with all laws, codes, standards, authorisations and licences when performing works under this Schedule.

2.7.3 The Requesting Licensee must ensure that it has all necessary permits, approvals and licences from any person, governmental, regulatory or relevant authority in order to perform works under this Schedule. Where requested to do so, OpenNet will reasonably assist the Requesting Licensee to obtain any such necessary permit, approval or licence.

2.7.4 Nothing in this Schedule vests in the Requesting Licensee any right, title or proprietary interest in the Central Office.

## **2.8 Marking of Equipment**

- 2.8.1 The Co-Location Equipment must be marked by the Requesting Licensee to clearly indicate that it is owned by the Requesting Licensee and in such manner as OpenNet may reasonably direct from time to time.

## **ANNEX 12E-1**

### **STANDARD OPERATING PROCEDURES FOR CO-LOCATION SPACE**

#### **1. ROLES AND DUTIES**

##### **1.1 Supervisor**

- 1.1.1 The Supervisor shall provide guidance and advice to his workers on the general safety requirements and any other particular safety measures required at a specific site and/or project.
- 1.1.2 The Supervisor must ensure that compliance with safety requirements is strictly observed.
- 1.1.3 The Supervisor must be familiar with all safety practices and procedures.
- 1.1.4 Proper personal protective equipment such as safety helmets, safety belts, etc. must be issued when necessary for use.
- 1.1.5 Every accident/injury should be reported immediately to OpenNet Site Supervisor
- 1.1.6 For minor injuries, ensure that the injured receives first aid attention, even for the smallest wound.
- 1.1.7 For serious injuries, identify and isolate the cause of accident immediately, and render first aid treatment by a trained first aider. Notify the OpenNet Site Supervisor immediately for the necessary follow-up action.

#### **2. INSTRUCTIONS TO BE STRICTLY ADHERED TO**

- 2.1 Personnel working at the hoist area, especially the contractor's worker-in-charge of securing equipment must wear safety belt (to be supplied by their own contractor).
- 2.2 During lunch break, no contract workers shall remain on top of the frame on the cable trough and there will be no hoisting but the contractor's workers are free to carry out other work eg. packing in the work area.
- 2.3 All contract workers shall adhere to strict instructions from the staff of OpenNet.
- 2.4 No materials are to be temporarily stored at the hoist area and passage ways.

2.5 All debris must be removed daily.

### **3. GENERAL CENTRAL OFFICE REGULATION**

3.1 Every worker is expected to:-

- (a) comply with instructions, both verbal and written; and
- (b) follow safety, housekeeping and other rules.

3.2 Every worker is strictly prohibited from, and shall not:-

- (a) listen into or interfere with telephone conversations or tamper with circuitry or any other equipment in the Central Office;
- (b) disclose official documents or information;
- (c) remove property belonging to OpenNet, any other Requesting Licensee or any Third Party without proper authorisation;
- (d) smoke within prohibited areas;
- (e) gamble, sleep or be engaged in any other unauthorised activity in the Central Office;
- (f) commit any act of vandalism;
- (g) be within Central Office premises and prohibited areas (eg. Power Room, MDF Room) after duty hours;
- (h) be within Central Office premises and prohibited areas (eg. MDF Room) when not required to go there to work;
- (i) consume food and drinks within prohibited areas; or
- (j) bring any unauthorised receivers, transmitters and tape recorders into Central Office or any prohibited areas.

## **4. GENERAL SAFETY WORK PROCEDURES**

### **4.1 Housekeeping**

- 4.1.1 All workers must clean up their work place at the end of each day.

### **4.2 Proper Attire**

- 4.2.1 Female workers are advised to refrain from wearing loose clothing, for example skirts or baju kurong, etc.

### **4.3 Personal Protective Equipment**

- 4.3.1 Wear safety helmets during the recovery of ironworks, racks, cutting of cables and hoisting work.
- 4.3.2 Wear gloves when handling rough or sharp materials.

### **4.4 Working with Ladder**

- 4.4.1 Ladders shall be securely fixed or placed on level ground so as to prevent slipping or falling.
- 4.4.2 Do not stand on the top two steps of a ladder exceeding 3m height (standing on top of a ladder is dangerous).
- 4.4.3 Do not leave tools on the ladder. Use tool bags or pockets where appropriate.
- 4.4.4 Do not overreach from a ladder or lean too far out. Move the ladder close to the work.
- 4.4.5 Do not repair damage or worn-out ladders. Any such ladders should be returned to store for replacement.
- 4.4.6 Do not place boxes on top of ladders and/or platforms for doing work.
- 4.4.7 Ensure that travelling ladders are securely locked before stepping onto the ladder steps.
- 4.4.8 Do not jam the locking device of the travelling ladder with wedges.

- 4.4.9 Always face a ladder when climbing or descending.
- 4.4.10 In positioning the ladder, make sure that electric power lines are not in the way.
- 4.4.11 When working atop a ladder placed in front of the door, ensure that it is locked.
- 4.4.12 Refrain from working under ladders.

#### **4.5 Handling of Equipment and Tools**

- 4.5.1 Be thoroughly familiar with the operational procedures of electrical appliances before use.
- 4.5.2 Inspect tools before you use them – broken, cracked or worn out tools are unsafe.
- 4.5.3 Use the correct tool intended for a particular job.
- 4.5.4 After the usage of any tool, it must be returned to the tool box in its original position.
- 4.5.5 Inspect all electrical tools/equipment for damaged insulation, loose wires and proper connections before use.
- 4.5.6 Electrical supply to the electrical tools/equipment must be switched off and the plugs disconnected when not in use.
- 4.5.7 If any work is to be carried out on live electrical parts, disconnect the power supply.
- 4.5.8 Never throw tools from one person to another especially when working at heights.
- 4.5.9 Do not run or leave electrical wire/cable across passageways, wet surfaces and on sharp edges.

#### **4.6 Safety Measures Process for Hoist Process**

- 4.6.1 Whenever a hoisting or lifting work is to be carried out at the Central Office (CO), the Requesting Licensee shall present to OpenNet's authorized personnel a valid certificate that the named personnel performing the hoisting or lifting work is certified by a competent authority and submission of the risk assessment and lifting plans prior to the hoisting or lifting work. A competent authority shall mean any government, approved agency, authority, instrumentality, regulatory body, court, or other entity



exercising executive, legislative, judicial, regulatory or administrative powers or functions.

- 4.6.2 OpenNet shall be entitled to conduct ad-hoc inspection at its absolute discretion and if the operator is not able to produce a valid certificate to operate any machines used for the hoisting or lifting work, OpenNet will suspend all hoisting or lifting work until such time the Requesting Licensee is able to provide a satisfactory explanation. In any event, OpenNet may refer the matter to Ministry of Manpower.
- 4.6.3 The Requesting Licensee and its agents and subcontractors shall comply with the provisions of the Workplace Safety and Health Act 2006 and its Subsidiary Legislation as may be applicable from time to time, and take all necessary measures to ensure the safety and health of all workers working at the CO on the Requesting Licensee's instruction and the public at the workplace.
- 4.6.4 The Requesting Licensee shall not permit its subcontractors or any worker to do anything not in accordance with good safety habits. The Requesting Licensee shall indemnify OpenNet against all cost, expenses, damages, liability, claims proceedings and the like, arising out of or in relation to the Requesting Licensee's failure to comply with the Workplace Safety and Health Act 2006 and its Subsidiary Legislation as may be applicable from time to time.
- 4.6.5 All Hoisting and Lifting works shall be carried out during 0900 hours to 1700 hours on a Business Day. Hoisting and Lifting works are not permitted on non-Business Day and/or after 1700 hours. All Hoisting and Lifting work shall be carried out in the presence of the Site Supervisor and a certified Lifting Supervisor who shall be provided by the Requesting Licensee's appointed subcontractors.

## **5. DOS AND DON'TS FOR FIRE PREVENTION**

### **5.1 DOS**

- 5.1.1 DO familiarise yourself with the location of fire alarm buttons, fire extinguishers and hose reels in your work area and the operation of the extinguishing system eg. halon gas.
- 5.1.2 DO familiarise yourself with the Fire Evacuation Routes in your work area.
- 5.1.3 DO ensure that all electrical appliances and equipment are in good working condition and are maintained by authorised personnel.

- 5.1.4 DO mop spilt oil, solvent, varnish or flux off the floor.
- 5.1.5 DO dispose waste into the dust bins or other receptacles provided and empty them regularly.
- 5.1.6 DO remove combustibles away from the work areas when they are not in use.
- 5.1.7 DO attack the fire from the windward side with the fire fighting aid. By so doing, the wind will carry the flame with smoke and fumes away from the fire fighters and at the same time, carry the extinguishing agent into the fire.
- 5.1.8 DO familiarise yourself with the use of safety breathing apparatus.
- 5.2 DON'TS
- 5.2.1 DON'T smoke in any Central Office/workshop areas and any other areas designated "No Smoking".
- 5.2.2 DON'T empty the waste from an ash tray into any receptacle containing combustible materials.
- 5.2.3 DON'T overload any power point with electrical appliances or equipment.
- 5.2.4 DON'T replace any blown fuse with one of more than the specified rating.
- 5.2.5 DON'T store any flammable material/liquid (varnish or solvent) below or near any main electrical switch box or heat source.
- 5.2.6 DON'T accumulate waste and packing materials at the work areas.
- 5.2.7 DON'T leave solvent, varnish, flux, alcohol or other flammable liquids in the open without any lid on the container.
- 5.2.8 DON'T open or break windows or doors when an area is filled with smoke due to combustion except to avoid suffocation.
- 5.2.9 DON'T walk upright in a room filled with smoke due to combustion. Crawl out of the affected area through the nearest exit.

- 5.2.10 DON'T use water or any soda acid extinguisher to put out electrical, oil or liquid fires as these will not put out the fire but help to spread the fire and pose electrocution risks.
- 5.2.11 DON'T discard solvent, thinner or alcohol into the waste bin. Use proper containers with lids for its disposal.
- 5.2.12 DON'T leave unattended any hot soldering iron or other 'live' electrical appliances.
- 5.2.13 DON'T obstruct the passage ways, walk ways, corridors and fire exit door, and fire fighting and fire detection equipment/installation.

## **ANNEX 12F-1**

### **PHYSICAL ACCESS PROCEDURES**

#### **1. GENERAL**

- 1.1 The Requesting Licensee will provide and update regularly a list of the person(s) authorised by the Requesting Licensee to:
- (a) access the Requesting Licensee's leased co-location space; and
  - (b) supply instructions to OpenNet relating to the Service.
- 1.2 OpenNet shall permit the Requesting Licensee's authorized staff and/or authorized agents to access the Requesting Licensee's leased co-location space within the Central Office on a seven (7) days-a-week, twenty-four (24) hours-a-day basis, subject to escort service provided by OpenNet at the stipulated charges as set out in Schedule 15 (Charges) to the Requesting Licensee. The escorted access shall be available to the Requesting Licensee on the following basis:
- (a) for service-affecting emergencies; within 1 hour of notification;
  - (b) for non-service affecting emergencies, within 4 hours of notification; and
  - (c) in all other cases, within 24 hours of notification.
- 1.3 If OpenNet, acting reasonably, has any doubt as to the identity or authorisation of any person seeking to gain entry into the Central Office or to supply instructions to OpenNet, then OpenNet reserves the right to refuse access to the Central Office to that person, or not to accept that person's instructions, without any liability to the Requesting Licensee or that person.
- 1.4 The Requesting Licensee shall provide, via manual means or OpenNet Platform, OpenNet a master list of persons nominated by it to have physical access to the Co-Location Space in accordance with the prescribed form in Annex 12G-1. The master list shall contain, without limitation, for each person, the following details:
- (a) Full name;
  - (b) Company name/Requesting Licensee's Contractor name;

- (c) NRIC/Passport no.;
  - (d) Contact no.; and
  - (e) Fax no.
- 1.5 The master list provided under clause 1.4 shall be maintained and updated by the Requesting Licensee and a new master list provided to OpenNet whenever any amendments are made to the master list. OpenNet may charge an administrative Charge under Schedule 15 (Charges) for processing and updating its master list.
- 1.6 The Requesting Licensee shall ensure that its workmen listed in the master list are either Singaporeans or holders of valid work permits.
- 1.7 No person will be permitted physical access to the Central Office without being nominated on the master list under clause 1.4 and without a current valid Letter of Authorisation as in Annex 12I-1.

#### ***ANNEX 12F-1 CLAUSE 1.8 – MODIFICATION REQUIRED***

##### **1.8 Physical Access Request**

- 1.8.1 Subject to clause 1.9, where the Requesting Licensee wishes to obtain physical access to the Co-Location Space, it must submit a request in writing in accordance with the prescribed form in Annex 12H-1 to the designated contact points of the Co-Location Space, not less than twenty four (24) hours before the requested physical access date. In the alternative, the Requesting Licensee may submit its request via the OpenNet Platform in accordance with clause 1.8.4. The request must contain, without limitation:
- (a) the purpose for which physical access is requested;
  - (b) the identity of the senior person who will be present and who will be responsible for the persons who will be physically accessing the facility;
  - (c) a complete list of the persons (limited to a maximum of four (4)) who will be physically accessing the facility on the relevant date of access in accordance with clause 1.8.2; and
  - (d) an estimate of the time during which, physical access is requested.

- 1.8.2 Request received on a day not being a Business Day or after office hours will be deemed to be received the next Business Day. Office hour means 0900 hours to 1700 hours of a Business Day.
- 1.8.3 For avoidance of doubt, clauses 1.8.1 and 1.8.4 will not be applicable for Request for physical access due to service-affecting emergencies and non-service-affecting emergencies.
- 1.8.4 Subject to clause 1.9, where the Requesting Licensee wishes to obtain physical access to the Co-Location Space, it may submit a Request via the OpenNet Platform, not less than twenty four (24) hours before the requested physical access date. The Request must contain, without limitation:
- (a) the purpose for which physical access is requested;
  - (b) a complete list of the persons (limited to a maximum of four (4)) who will be physically accessing the facility on the relevant date of access in accordance with clause 1.8.2;
  - (c) an estimate of the time during which, physical access is requested.
- 1.8.5 No later than the day on which physical access to the Co-Location Space has been granted but prior to physical access actually being granted, the Requesting Licensee must notify OpenNet the names of up to four (4) person(s) from the list in the request made under clause 1.8.1(c) who will actually be physically accessing the Co-Location Space.
- 1.8.6 OpenNet shall, upon receipt of the request under clause 1.8.1 or clause 1.8.4, advise the Requesting Licensee of whether the request for physical access has been approved in accordance with the prescribed form in Annex 12H-1 or via OpenNet Platform. The approval shall be the Letter of Authorisation as in Annex 12I-1, sent by facsimile or via email. The Requesting Licensee shall be liable for the Charge specified in Schedule 15 (Charges) for OpenNet to process a request under clause 1.8.1 or clause 1.8.4.
- 1.8.7 Upon approval under clause 1.8.6, OpenNet shall provide escort service to the Requesting Licensee to physically access the Co-Location Space. The Requesting Licensee shall pay to OpenNet the Charges for escort service as provided in Schedule 15 (Charges).
- 1.8.8 Where OpenNet approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.11.

- 1.8.9 The Requesting Licensee will be liable for escort Charges commencing at the time of approved access and ceasing when the Requesting Licensee's personnel leaves the Central Office. Where the Requesting Licensee's personnel leaves the Central Office within two (2) hours of the time of approved access, the Requesting Licensee will be liable for escort Charges for a minimum of two (2) hours.
- 1.8.10 The Requesting Licensee must notify OpenNet as soon as possible (but in any event, within six (6) hours of the time approved for physical access) of any change or cancellation to time of the request for physical access. Request received on a day not being a Business Day or after office hours will be deemed to be received the next Business Day. Office hour means 0900 hours to 1700 hours of a Business Day.
- 1.8.11 Subject to clause 1.8.10, where the Requesting Licensee's personnel is not present at the approved date and time of physical access, OpenNet shall be entitled to recover the full escort Charges for the approved duration of access. Where the Requesting Licensee's personnel was scheduled to leave the Central Office within two (2) hours of the approved time of physical access, the Requesting Licensee shall be liable for escort Charges for a minimum of two (2) hours.

***IDA Directed Modifications: A respondent is of the view that NetLink Trust's proposed changes to this clause is too restrictive on the number of names allowed to be submitted for clearance and the number of personnel accessing the co-location facility. The respondent also commented that RLs should be allowed to submit more names for clearance as situations could arise on the date of physical access where personnel are unavailable due to unforeseen circumstances. IDA is of the view that it is reasonable for NetLink Trust to limit the number of personnel accessing the co-location facility to four (4) per RL given the limited size of the co-location space. IDA recognises that there is a need to preserve security and stringent oversight of access to the co-location space because the area is a highly critical network node of the NBN. Notwithstanding the above, IDA agrees with the respondent that the number of names allowed to be submitted to NetLink Trust should not be over-restrictive. Accordingly, IDA directs NetLink Trust to propose, for IDA's approval, modifications to Annex 12F-1 Clause 1.8 to (a) revert the number of names allowed for submission to NetLink Trust for clearance to eight (8); and (b) clarify that, among the eight (8) names submitted for clearance, a maximum of four (4) personnel per RL would be allowed physical access to the co-location facility on the relevant date of access.***

## **1.9 Emergency Physical Access Request**

1.9.1 The Requesting Licensee shall submit via manual means or OpenNet Platform to OpenNet for approval, a list of designated senior personnel contained on the master list who are authorised to request emergency physical access.

1.9.2 In the event of an emergency where physical access is required by the Requesting Licensee to address the emergency situation, the Requesting Licensee must first obtain OpenNet's consent for access by telephone using the designated telephone number of the contact point of the Co-Location Space. If OpenNet grants the Requesting Licensee with emergency access, the Requesting Licensee may proceed with its access but must provide OpenNet, via facsimile, a confirmation of emergency access in writing by the Business Day that follows the granting of such access. Alternatively, the Requesting Licensee shall provide OpenNet, via the OpenNet Platform, a confirmation of emergency access by the Business Day that follows the granting of such access.

1.9.3 The verbal and written emergency physical access request and confirmatory fax under clause 1.9.2 must specify, without limitation:

- (a) the full name of the requesting party;
- (b) NRIC/Passport number;
- (c) contact number;
- (d) details of the emergency situation (whether it is service affecting or non-service affecting);
- (e) the identity of the senior person who will be present and who will be responsible for the persons who will be accessing the Co-Location Space;
- (f) a complete list of the persons (limited to a maximum of four (4)) who will be accessing the Co-Location Space on the relevant occasion of emergency access; and
- (g) an estimate of the time during which, physical access is requested.

1.9.4 OpenNet shall upon receipt of the request advise the Requesting Licensee of whether the request for physical access has been approved. The Requesting Licensee shall be



liable for the Charge specified in Schedule 15 (Charges) for OpenNet to process an application for physical access.

1.9.5 Upon approval under clause 1.9.4, OpenNet shall provide escort service to physically access the Co-Location Space within one (1) hour for a service affecting emergency or within four (4) hours for a non-service affecting emergency. This access shall be permitted on an interim basis only. Physical access shall be for a maximum period of eight (8) hours unless the Requesting Licensee requests a reasonable extension of time for access and OpenNet accepts that request. OpenNet shall not unreasonably reject the Requesting Licensee's request. The Requesting Licensee shall pay to OpenNet the Charges for escort service as provided in Schedule 15 (Charges).

1.9.6 Where OpenNet approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.11.

1.9.7 Where, in an emergency situation, both OpenNet and the Requesting Licensee require physical access to undertake corrective action, OpenNet shall have priority.

#### **1.10 Rejection Of Physical Access Request**

1.10.1 OpenNet may reject a request for physical access other than a bona fide emergency physical access request under clause 1.9, or revoke an approval for physical access where:

- (a) the request is not in the prescribed form and does not contain all the required information;
- (b) the persons listed on the request do not appear on the master list or OpenNet has advised that the person(s) listed have been barred either by OpenNet or the relevant authorities;
- (c) OpenNet has scheduled work for the time specified by the Requesting Licensee in the request;
- (d) OpenNet determines that the physical access or work to be performed by the Requesting Licensee as specified in the request may breach clause 1.11.2 of this Schedule;
- (e) OpenNet determines that the physical access may jeopardise or interfere with the integrity of OpenNet's Network, Facilities, equipment or plant or create a security risk;

- (f) OpenNet determines that the area is unsafe; or
- (g) the Requesting Licensee is in breach of this Schedule and such breach continues and remains unremedied at the time of the request for physical access.

1.10.2 If OpenNet rejects a request for physical access under clause 1.10.1, OpenNet shall provide the Requesting Licensee with its reasons for rejection.

#### **1.11 Conditions Of Physical Access**

1.11.1 OpenNet may refuse any person physical access to, or require that person to be removed from a Central Office where:

- (a) that person cannot, upon request, produce a current valid Letter of Authorisation and any identification card which is issued by OpenNet;
- (b) OpenNet has previously notified the Requesting Licensee of problems with that person (e.g. the person has breached safety requirements or Standard Operating Procedures);
- (c) the person has been barred under clause 1.11.7;
- (d) where in the opinion of OpenNet, the person's action may cause damage to OpenNet's properties or may compromise or threaten safety; or
- (e) the person loiters around OpenNet's premises other than the Co-Location Space for which physical access is granted for permitted works to be carried out.

1.11.2 The Requesting Licensee must not do or omit to do anything in connection with gaining physical access to the Central Office which may:

- (a) threaten the safety of OpenNet's employees, customers or third persons;
- (b) interfere physically or electrically with the delivery of telecommunication services supplied or to be supplied by OpenNet;
- (c) jeopardise the integrity or confidentiality of communications within OpenNet's Network;

- (d) threaten the security of the Central Office; or
- (e) cause damage to the Central Office.

1.11.3 The Requesting Licensee must ensure that:

- (a) physical access is gained through the specified entry;
- (b) only persons with a current and valid Letter of Authorisation can gain physical access;
- (c) physical access is gained only to the Central Office or part thereof for which approval has been granted;
- (d) each person gaining physical access shall comply with all the check-in procedures such as exchanging their identity cards or work permits for the “V” or “C” identification cards or such as may be implemented by OpenNet from time to time and signing a log book at the security post in which is recorded the full name of the person, IC/Passport no., contact no., date and time of entry and departure from the facility;
- (e) the applicable Standard Operating Procedures and any written instructions are followed;
- (f) the Co-Location Space is left in a safe and tidy condition; and
- (g) the Requesting Licensee’s senior person informs OpenNet when work has been completed and all Requesting Licensee personnel have left the facility.

1.11.4 No still, motion or digital cameras, film, negatives, tape or digital recorders, explosives, inflammables, cigarettes, lighters and equipment with electromagnetic emissions or radiation are allowed in the Central Office.

1.11.5 Where, for whatever reason, the Requesting Licensee decides that a person nominated by it under clause 1.4 should no longer be permitted physical access it must immediately update the master list via manual means or the OpenNet Platform.

1.11.6 Without prejudice to any other rights OpenNet may have (whether under contract, at law, or in equity), where the Requesting Licensee:

- (a) gains unauthorised entry to the Central Office or part thereof; or

- (b) uses, or attempts to use, the Letter of Authorisation for any purpose other than the purpose for which approval was granted,

physical access may be immediately terminated and the person(s) will henceforth be barred from entering any Facilities of OpenNet.

1.11.7 The Requesting Licensee must not grant a third person physical access to the Central Office.

1.11.8 The Requesting Licensee shall report to the police and OpenNet for any loss of identification card and bear the cost and expense for the replacement of the card.

**ANNEX 12G-1**

## MASTER LIST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

S/n	Name	Company Name / Requesting Licensee A's Contactor Name	NRIC / Passport No.	Contact Tel No.	Fax No.
1	Richard Tan	Requesting Licensee A	1234567C	68888999	62899848
2	Yeh Sing Ping	Pipe Construction Pte Ltd	3333444A	67777788	62885678
	Two examples for reference.				

## ANNEX 12H-1

### REQUEST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

REQUEST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE	
<b>Requesting Licensee</b>	
Date of Application : _____ Application Reference Number : _____ Approval for Physical Access is sought for the purpose of : _____ [ Emergency [Service Affecting / Non-Service Affecting] Normal Access]	
Address of Co-Location Space : _____ Requested Date / Time of Access : _____ Estimated Duration of Access : _____	
Name of Person(s) for which Physical Access is requested. (Please attach separate sheet if space is insufficient). (a) _____ [Name of Senior Person & NRIC No / Passport No] (b) _____ [Name & NRIC No / Passport No] (c) _____ [Name & NRIC No / Passport No] (d) _____ [Name & NRIC No / Passport No]	
<b>Requesting Licensee</b>	
Sign : _____ Name : _____ Designation : _____ Department : _____ Contact Number : _____ Fax Number : _____	Name of Requesting Licensee: _____ [Company Name]  Company Stamp : _____
<b>OpenNet</b>	
Reason for Rejection : _____	
OpenNet Approval Code : _____	
<b>OpenNet</b>	
Sign : _____ Name : _____ Date : _____	Contact Number : _____ Fax Number : _____
<b>OpenNet</b>	
Received Date : _____ Queue Status : _____ Processed Date : _____	

## ANNEX 12I-1

### LETTER OF AUTHORISATION FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

#### LETTER OF AUTHORISATION FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

This Letter of Authorisation is issued in conjunction with the final approval given to the request application via reference \_\_\_\_\_ date \_\_\_\_\_

It must be carried in the possession of the senior person at all time during the duration of access granted to the Co-Location Space as indicated below.

Location of Co-Location Space granted for access :

\_\_\_\_\_

Name of Person(s) granted to access :

1. \_\_\_\_\_ [Name of Senior Person & NRIC No /  
Passport No]
2. \_\_\_\_\_ [Name & NRIC No / Passport No]
3. \_\_\_\_\_ [Name & NRIC No / Passport No]
4. \_\_\_\_\_ [Name & NRIC No / Passport No]

Approved Date of Access : \_\_\_\_\_

Approved Time of Access : \_\_\_\_\_

Approved Duration of Access : \_\_\_\_\_

#### OpenNet

Sign : \_\_\_\_\_ Contact Number : \_\_\_\_\_

Name : \_\_\_\_\_ Fax Number : \_\_\_\_\_

Date : \_\_\_\_\_