

## APPENDIX 1

### IMPORTANT NOTICE:

This document must be disseminated to ALL contractors and personnel who are in any way involved in earthworks at the work site. A copy of this document is also available on attached here Annex A – List of FBO Licensees' web links.

### ALL REQUIREMENTS IN THIS DOCUMENT MUST BE STRICTLY COMPLIED WITH

If a contractor encounters difficulty in complying with any requirement, it must consult respective Licensees on the appropriate action to be taken.

## REQUIREMENTS TO BE COMPLIED WITH BY EARTHWORKS CONTRACTORS FOR THE PREVENTION OF DAMAGE TO TELECOMMUNICATION CABLES

### INTRODUCTION

1. Section 29(3)(a) of the Telecommunications Act (Cap. 323) ("Telecoms Act") requires contractors who carry out earthworks<sup>1</sup> ("Earthworks Contractors") to comply with all reasonable requirements of telecommunication system licensees for the prevention of damage to telecommunication cables.
2. This document sets out the requirements as per **Annex A – list of FBO licensees** (the "Licensee") that must be complied with by Earthworks Contractors for the purposes of Section 29(3)(a) of the Telecoms Act ("Licensee's Earthworks Requirements").
3. This document comprises 3 sections —
  - Section A sets out the step-by-step procedures that must be followed by Earthworks Contractors before they can commence earthworks.
  - Section B sets out the measures to be complied with by Earthworks Contractors where the Licensee's telecommunication cables need to be diverted.

Under the Telecoms Act, "earthworks" is defined as including —

- (a) any act of excavating earth, rock or other material (by whatever means) in connection with —
  - (1) any works for or relating to the construction, reconstruction, extension, renovation, alteration, demolition or repair of any building, road, railway, bridge, viaduct, flyover, sewer or sewage works;
  - (2) any works for or relating to the laying, inspecting, repairing or renewing of any mains, pipes, cables, fittings or other apparatuses;
  - (3) any soil investigation works; or
  - (4) such other works as are usually undertaken by a person carrying on business as a contractor in the construction industry or as a professional civil or structural engineer;
- (b) any act of boring, dredging, jacking, levelling, piling or tunneling on or under any premises or street by any mechanical means; and
- (c) the driving or sinking of any earth rod, casing or tube into the ground.

- Section C sets out the “Do’s and Don’ts” to be complied with by Earthworks Contractors at work sites to prevent damage to the Licensee’s telecommunication cables.
4. The Earthworks Contractor who performs the actual earthworks (e.g. a piling contractor) shall be directly responsible for complying with the Licensee’s Earthworks Requirements. It shall not be an excuse for the Earthworks Contractor to claim that it had delegated such responsibility to another party or relied on another party to ensure that the requirements are complied with, whether pursuant to any contract, agreement, arrangement, understanding or otherwise that it has with such other party.
  5. In addition, all parties who supervise or instruct Earthworks Contractors on any aspect of the earthworks (e.g. a developer or main contractor) should also ensure that the Earthworks Contractors comply with the Licensee’s Earthworks Requirements to prevent damage to telecommunication cables.

## SECTION A: STEP-BY-STEP PROCEDURES TO BE COMPLIED WITH BY EARTHWORKS CONTRACTORS BEFORE COMMENCING EARTHWORKS

### STEP 1: OBTAIN LICENSEE’S SERVICE LAYOUT PLAN

- A.1 The Earthworks Contractor shall contact all telecommunication system licensees with underground plant<sup>2</sup> and through online [www.earthworks.sg](http://www.earthworks.sg) to obtain the relevant service layout plans from licensees who have telecommunication cables located within the vicinity of the proposed earthworks.
- A.2 **IMPORTANT: The Licensee’s service layout plan only indicates the approximate locations of the Licensee’s telecommunication cables and is not conclusive. The exact positions and depths of the Licensee’s telecommunication cables MUST be ascertained by the manual digging of trial holes by the Earthworks Contractor (refer to Steps 6 and 7 below).**
- A.3 The Licensee’s service layout plan shall only be valid for a period of 6 months. In this regard —
  - (a) If the Earthworks Contractor will only commence the proposed earthworks more than 6 months from the date that it obtained the Licensee’s service layout plan, the Earthworks Contractor shall obtain a fresh set of the Licensee’s service layout plan. This is important as updates and revisions may have been made to the licensee’s service layout plan since the time it was issued to the Earthworks Contractor.

<sup>2</sup> Please refer to the list of telecommunication system licensees with underground plant at the Info-communications Media Development Authority’s website at <https://www2.imda.gov.sg/regulations-and-licensing-listing/Notification-of-Earthwork>

The Earthworks Contractor shall ensure that its copy of the Licensee's service layout plan is obtained no more than 6 months prior to the date of commencement of the earthworks.

- (b) The Earthworks Contractor shall ensure that it refers to and uses the most updated version of the Licensee's service layout plan in its possession at all times.

## **STEP 2: ENGAGE LICENSED TELECOMMUNICATION CABLE DETECTION WORKER TO CARRY OUT CABLE DETECTION WORK**

**A.4** The Earthworks Contractor shall engage a licensed telecommunication cable detection worker ("**TCDW**") to carry out telecommunication cable detection work and to prepare a cable detection report to indicate the locations and routes of all the Licensee's telecommunication cables throughout the entire vicinity of the proposed earthworks.

**A.5** **IMPORTANT: The TCDW's cable detection report only indicates the approximate detected locations of the Licensee's telecommunication cables and is not conclusive. The TCDW may also not be able to detect all telecommunication cables (e.g. optical fibre cables without copper elements or metallic tracer wire inserts). The exact positions and depths of the Licensee's telecommunication cables MUST be ascertained by the manual digging of trial holes (refer to Steps 6 and 7 below).**

**A.6** The Earthworks Contractor shall ensure that —

- (a) the TCDW physically marks out the locations and routes of all detected telecommunication cables throughout the entire vicinity of the proposed earthworks using suitable methods such as surface markers, pegs, barricades and signposts to alert all contractors and personnel at the work site to the presence of the cables;
- (b) the markings are durable, prominent and visible;
- (c) the markings are maintained and reapplied from time to time as necessary so that they remain prominent and visible at all times throughout the entire duration of the earthworks;
- (d) the markings are not covered over, obscured, disturbed, removed or tampered with at any time by any person, plant, equipment, material or object; and
- (e) all contractors and personnel at the work site are fully briefed on the markings so that they are clear about the locations and routes of the telecommunication cables.

## **STEP 3: CONDUCT JOINT SITE MEETING (TO BE ATTENDED BY EARTHWORKS CONTRACTOR, TCDW AND LICENSEE)**

**A.7** After Step 2 is completed, the Earthworks Contractor shall arrange for the conduct of a joint site meeting at the work site together with the Licensee and the TCDW ("**Joint Site Meeting**") to —

- (a) ensure that there is consistency between the Licensee's service layout plan, the TCDW's cable detection report, the locations and routes of the Licensee's telecommunication cables as physically marked out by the TCDW, and the actual site conditions;
- (b) confirm that the locations and routes of the Licensee's telecommunication cables throughout the entire vicinity of the proposed earthworks have been accurately and properly marked out by the TCDW;
- (c) determine if there is any need for diversion works by the Licensee in relation to part of or all of the Licensee's telecommunication cables; and
- (d) determine the positions and number of trial holes that are to be manually dug by the Earthworks Contractor to ascertain the exact location of the Licensee's telecommunication cables.

The actions to be carried out at the Joint Site Meeting are elaborated upon below.

**A.8** At the Joint Site Meeting, the Earthworks Contractor shall verify that there are no discrepancies between —

- (a) the Licensee's service layout plan;
- (b) the TCDW's cable detection report;
- (c) the physical markings applied by the TCDW to indicate the locations and routes of the Licensee's telecommunication cables; and
- (d) the actual conditions at the work site.

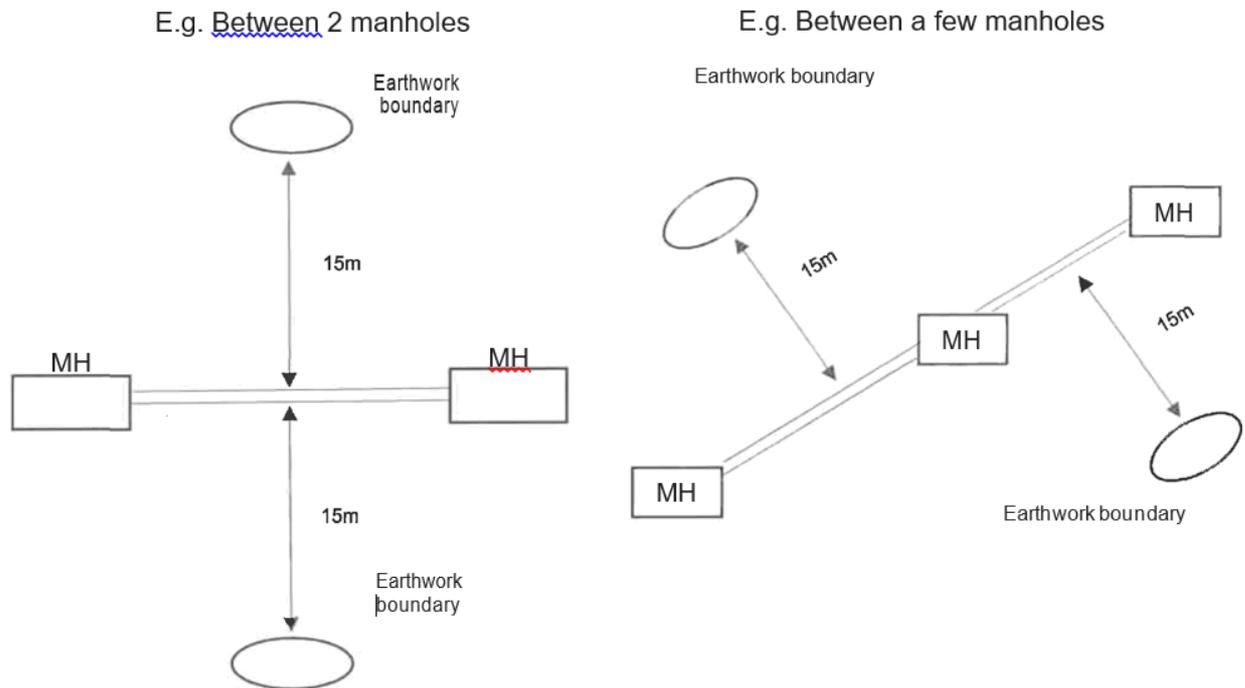
**A.9** If there are any such discrepancies, the following actions shall be taken —

- (a) Where there are any inaccuracies in the Licensee's service layout plan, the Licensee shall physically mark up the service layout plan on the spot to indicate the corrected locations and routes of the Licensee's telecommunication cables, and provide the marked-up plan to the Earthworks Contractor. The Licensee shall follow up by issuing an updated service layout plan to the Earthworks Contractor.
- (b) Where there are any inaccuracies in the TCDW's cable detection report, the Earthworks Contractor shall ensure that the TCDW physically marks up the TCDW's cable detection report on the spot to indicate the corrected locations and routes of the Licensee's telecommunication cables, and provide the marked-up report to the Earthworks Contractor. The Earthworks Contractor shall follow up by obtaining an updated cable detection report from the TCDW.
- (c) Where there are any inaccuracies in the physical markings applied by the TCDW to indicate the locations and routes of the Licensee's telecommunication cables, the Earthworks Contractor shall ensure that the TCDW makes the necessary corrections to the markings on the spot (which shall comply with the requirements stated in A.6 above). The Earthworks Contractor shall also ensure that any inaccurate markings are entirely removed and that all contractors and personnel at the work site are fully briefed on the revised markings.

- A.10** After the Joint Site Meeting, the Earthworks Contractor shall in a timely manner —
- (a) ensure that all relevant drawings and plans utilized by contractors and personnel at the work site are updated to accurately reflect the locations and routes of all the Licensee’s telecommunication cables throughout the entire vicinity of the proposed earthworks, and
  - (b) provide a copy of the updated service layout plan and cable detection report to all contractors and personnel (e.g. earthworks supervisor, earthworks machine operator, etc.) that are in any way involved in the proposed earthworks.
- A.11** The Licensee shall inform the Earthworks Contractor if any diversion works are required in relation to the Licensee’s telecommunication cables. In the event that such diversion works are necessary, the Earthworks Contractor shall co-ordinate and co- operate with the Licensee to facilitate the necessary diversion works and comply with the requirements specified in Section B. The Earthworks Contractor shall factor in the planning time required by the Licensee to carry out the necessary diversion works, which may generally range from 6 to 18 months depending on the site conditions.
- A.12** At the Joint Site Meeting, the Earthworks Contractor shall consult the TCDW and the Licensee to determine the exact positions and number of proposed trial holes that are to be manually dug by the Earthworks Contractor to ascertain the exact location of the Licensee’s telecommunication cables throughout the entire vicinity of the proposed earthworks.
- A.13** The proposed trial holes —
- (a) shall be positioned on and along the routes of the telecommunication cables indicated in the TCDW’s cable detection report in order to positively confirm that the cables are in fact running along the said routes; and
  - (b) shall be spaced at intervals of no more than 30m apart where the length of the telecommunication cables within the work site is 50m or more.
- A.14** The exact positions and number of proposed trial holes as determined at the Joint Site Meeting shall be accurately recorded by the Earthworks Contractor for the purposes of NCE Submission (refer to Step 4 below).

#### **STEP 4: SUBMIT NOTICE FOR COMMENCEMENT OF EARTHWORKS**

- A.15** If the proposed earthworks are to be carried out within **a distance of 15m** of any of the Licensee’s telecommunication cables (which refers to the perpendicular distance between the linear line of sight of manholes as shown in the examples below), the Earthworks Contractor shall submit the “Notice for Commencement of Earthworks” (“NCE”) via online [www.earthworks.sg](http://www.earthworks.sg) as set out at **Appendix A** to the Licensee **not less than 7 days** prior to the commencement of the proposed earthworks.



**A.16** The Earthworks Contractor shall submit the NCE **together** with the following information —

- (a) the latest version of the TCDW's cable detection report and the Licensee's service layout plans;
- (b) the exact positions and number of proposed trial holes that will be manually dug by the Earthworks Contractor (as determined at the Joint Site Meeting described in Step 3 above), which shall be clearly indicated and marked up on the TCDW's cable detection report; and
- (c) the works schedule for the proposed earthworks.

(collectively, the "**NCE Submission**")

**A.17** The Earthworks Contractor shall submit the NCE Submission to the Licensee via online [www.earthworks.sg](http://www.earthworks.sg)

**A.18** **Each NCE Submission shall only be valid for a period of 12 months.** Where the earthworks are to be carried out more than 12 months after the date of the NCE Submission, the Earthworks Contractor shall comply with the following procedure —

- (a) The Earthworks Contractor shall obtain a fresh set of the Licensee's service layout plan from the Licensee to confirm whether there have been any revisions or updates to the plan since the previous set obtained by the Earthworks Contractor (which shall be within the validity period specified in A.3 above).
- (b) If there have been changes such as updates or revisions to the Licensee's service layout plan, the Earthworks Contractor shall be required to repeat Steps 2 to 4 and make a fresh NCE Submission to the Licensee.

- (c) If there have been no changes to the Licensee's service layout plan, the Earthworks Contractor may apply to the Licensee for an extension of the NCE Submission for a further period of 12 months via online [www.earthworks.sg](http://www.earthworks.sg) , which shall be accompanied by the updated works schedule for the proposed earthworks.

**A.19 IMPORTANT: The "Notice for Commencement of Earthworks" WILL BE ACKNOWLEDGED, ACCEPTED AND AGREED online upon login in and submitted by the Earthworks Contractor who will be carrying out the actual earthworks. This is to ensure that the actual party carrying out the earthworks is fully aware of the Licensee's Earthworks Requirements and is directly responsible for providing the declarations, confirmations and information required in the NCE Submission.**

#### **STEP 5: OBTAIN CONDITIONAL APPROVAL FOR DIGGING OF TRIAL HOLES**

**A.20** After receipt of the NCE Submission and if there are no further clarifications required by the Licensee, the Licensee shall issue the "Conditional Approval for Digging of Trial Holes" in the form set out at **Appendix B** to the Earthworks Contractor

**A.21** The "Conditional Approval for Digging of Trial Holes" is solely for the purposes of permitting the Earthworks Contractor to proceed with the manual digging of trial holes to ascertain the exact location of the Licensee's telecommunication cables, which shall be based on the positions and number of proposed trial holes as stated by the Earthworks Contractor in its NCE Submission.

**A.22** The "Conditional Approval for Digging of Trial Holes" shall only be valid for a period of 1 month from the date of its issuance by the Licensee. If the Earthworks Contractor does not carry out the digging of trial holes before the expiry of the "Conditional Approval for Digging of Trial Holes", the Earthworks Contractor shall be required to submit a fresh NCE Submission to the Licensee in accordance with Step 4 above.

#### **STEP 6: DIG TRIAL HOLES TO ASCERTAIN EXACT LOCATION OF TELECOMMUNICATION CABLES**

**A.23** The Earthworks Contractor shall do the trial holes manually until it positively locates (i.e. visually confirms) and physically exposes all of the Licensee's telecommunication cables throughout the entire vicinity of the proposed earthworks.

**A.24 IMPORTANT: The Earthworks Contractor shall only use manual digging and exercise due care when digging the trial holes to avoid damaging the telecommunication cables. The Earthworks Contractor MUST NOT -**

- (a) use any mechanical equipment (e.g. excavator); or
- (b) use any manual equipment that has sharp pointed edges (e.g. hand auger) which may damage the telecommunication cables.

In the event that the Earthworks Contractor damages or has reason to suspect that it has damaged -

- (c) the Licensee's telecommunication cables; and/or
- (d) the ducts, pipes or other infrastructure housing or encasing the Licensee's telecommunication cables,

**In the course of digging any trial holes, the Earthworks Contractor MUST informed the Licensee immediately**

- A.25** The Earthworks Contractor **must not assume** that the Licensee's telecommunication cables are not present if the cables are not found or encountered when the trial holes are dug. There may be various reasons for this (e.g. the telecommunication cables are located deeper than the level to which the trial holes are dug, the telecommunication cables may not be travelling in a straight-line path, etc.). Accordingly, the Earthworks Contractor must continue to dig additional and/or deeper trial holes to positively locate and physically expose the telecommunication cables.
- A.26** **IMPORTANT: In the event that the Earthworks Contractor is unable to positively locate and physically expose all of the Licensee's telecommunication cables after digging the trial holes, the Earthworks Contractor MUST obtain the Licensee's assistance to ascertain the exact location of the telecommunication cables throughout the entire vicinity of the proposed earthworks. UNDER NO CIRCUMSTANCE should the Earthworks Contractor proceed with the proposed earthworks without consulting the Licensee.**
- A.27** The Earthworks Contractor shall maintain photographic records of all the trial holes that it has dug and the exposed telecommunication cables within the trial holes. The photographic records shall be made available to the Licensee upon request.

**STEP 7: CONDUCT JOINT TRIAL HOLES INSPECTION (TO BE ATTENDED BY EARTHWORKS CONTRACTOR, TCDW AND LICENSEE)**

- A.28** After the Earthworks Contractor has positively located and physically exposed the Licensee's telecommunication cables via the digging of trial holes, the Earthworks Contractor shall arrange for the conduct of a joint trial holes inspection at the work site together with the Licensee and the TCDW ("**Joint Trial Holes Inspection**").
- A.29** The purpose of the Joint Trial Holes Inspection is for all parties to jointly verify that the exact location of **all** the Licensee's telecommunication cables throughout the entire vicinity of the proposed earthworks have been positively ascertained by the Earthworks Contractor.
- A.30** The Licensee may require additional trial holes to be dug by the Earthworks Contractor if there is a need to further confirm the exact locations and/or routes of the Licensee's telecommunication cables.
- A.31** After the location of all the Licensee's telecommunication cables throughout the entire vicinity of the proposed earthworks have been ascertained pursuant to the Joint Trial

Holes Inspection, the Earthworks Contractor shall re-verify that there are no discrepancies between —

- (a) The Licensee's service layout plan;
- (b) The TCDW's cable detection report; and
- (c) The physical markings previously applied by the TCDW to indicate the locations and routes of the Licensee's telecommunication cables.

If there are any such discrepancies, the actions stated in A.9 above shall be carried out. In particular, where there are any inaccuracies in the physical markings previously applied by the TCDW, the Earthworks Contractor shall ensure that the TCDW makes the necessary corrections to the markings on the spot (which shall comply with the requirements stated in A.6 above). The Earthworks Contractor shall also ensure that any inaccurate markings are entirely removed and that all contractors and personnel at the work site are fully briefed on the revised markings.

**A.32** At the Joint Trial Holes Inspection, the Earthworks Contractor shall also brief the Licensee on the protection measures and methods of support that it will implement to prevent damage to the Licensee's telecommunication cables. The Earthworks Contractor shall implement such other measures that the Licensee may require the Earthworks Contractor to undertake to protect the telecommunication cables.

**A.33** The protection measures and methods of support to be implemented by the Earthworks Contractor shall be accurately detailed by the Earthworks Contractor in its "Application for Final Approval for Commencement of Earthworks" (refer to Step 8 below).

## **STEP 8: SUBMIT APPLICATION FOR FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS**

**A.34** After completion of the Joint Trial Holes Inspection, the Earthworks Contractor shall submit the "Application for Final Approval for Commencement of Earthworks" in the form set out at **Appendix C** to the Licensee via online [www.earthworks.sg](http://www.earthworks.sg)

**A.35** The purpose of the "Application for Final Approval for Commencement of Earthworks" is for the Earthworks Contractor to —

- (a) declare and confirm that the Earthworks Contractor has read, understood and will comply with the Licensee's Earthworks Requirements;
- (b) declare and confirm that the Earthworks Contractor has duly completed Steps 1 to 7 above; and
- (c) provide full details of the protection measures and methods of support that the Earthworks Contractor will implement to prevent damage to Licensee's telecommunication cables throughout the entire course of the proposed earthworks.

**A.36 IMPORTANT: The "Application for Final Approval for Commencement of Earthworks" MUST be signed and submitted by the Earthworks Contractor who will be carrying out the actual earthworks. This is to ensure that the actual**

party carrying out the earthworks is fully aware of the Licensee's Earthworks Requirements and is directly responsible for providing the declarations, confirmations and information required in the "Application for Final Approval for Commencement of Earthworks". The Earthworks Contractor shall also provide a copy of this document to any party that is instructing or supervising the Earthworks Contractor in the performance of the actual earthworks.

#### **STEP 9: OBTAIN FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS**

- A.37** After receipt of the duly completed Application for "Final Approval for Commencement of Earthworks" from the Earthworks Contractor and if the Licensee is satisfied as to the adequacy of the protection measures and methods of support detailed by the Earthworks Contractor therein, the Licensee shall issue the "Final Approval for Commencement of Earthworks" in the form set out at Appendix D to the Earthworks Contractor.
- A.38** In carrying out the earthworks, the Earthworks Contractor shall —
- (a) fully implement the protection measures and methods of support which it has undertaken to implement, as detailed in its "Application for Final Approval for Commencement of Earthworks"; and
  - (b) fully comply with the "Do's and Don'ts" specified in Section C below to ensure that the Licensee's telecommunication cables are protected from damage throughout the entire course of the earthworks.
- A.39** **IMPORTANT: The Earthworks Contractor MUST NOT proceed with the proposed earthworks until it receives the "Final Approval for Commencement of Earthworks" from the Licensee. Upon its receipt, the Earthworks Contractor shall also provide a copy of this document to any party that is instructing or supervising the Earthworks Contractor in the performance of the actual earthworks.**

#### **SECTION B: MEASURES TO BE COMPLIED WITH BY EARTHWORKS CONTRACTOR IN THE EVENT OF CABLE DIVERSION**

- B.1** In the event that the Licensee determines at the Joint Site Meeting (refer A.7 above) that it is necessary to divert any of the Licensee's telecommunication cables within the vicinity of the proposed earthworks which may be affected by the proposed earthworks ("Affected Cables"), the following procedures and requirements shall apply —
- (a) The Earthworks Contractor shall ensure that the Affected Cables are adequately protected and supported before the diversion works are carried out.
  - (b) After completion of the relevant diversion works, the Licensee shall issue a written notice to the Earthworks Contractor to confirm that the Licensee's Affected Cables have been fully diverted.
  - (c) Upon receipt of such written notice, the Earthworks Contractor shall arrange for a joint site inspection with the Licensee.

- (d) The purpose of the joint site inspection is for the Earthworks Contractor and Licensee to carry out the following —
- (i) to confirm that all of the Licensee's Affected Cables have been diverted;
  - (ii) to confirm the exact locations and routes of the newly diverted telecommunication cables; and
  - (iii) to ensure that the Licensee's service layout plan is updated to accurately reflect the diversion of the Licensee's Affected Cables.

**B.2** The Licensee shall provide the Earthworks Contractor with the updated service layout plan reflecting the diverted telecommunication cables. The Licensee shall ensure that the updated service layout plans are accurately geo-tagged to include GPS Coordinates and/or 3D Coordinates (where applicable). Where the diverted telecommunication cables are relocated to any other area within the vicinity of the Earthworks Contractor's proposed earthworks, the Earthworks Contractor shall ensure that the TCDW physically marks out the locations and routes of the diverted telecommunication cables (which shall comply with the requirements stated in A.6 above)

**B.3** Where the diverted telecommunication cables are relocated to any other areas where earthworks are to be carried out by other Earthworks Contractors (e.g. where the Licensee diverts its telecommunication cables into an adjacent land at which another contractor is to perform earthworks), the Licensee shall inform such other Earthworks Contractors of the locations and routes of the diverted telecommunication cables in the vicinity of their earthworks and provide them with the updated service layout plan.

## **SECTION C: DO'S AND DON'TS TO BE COMPLIED WITH BY EARTHWORKS CONTRACTORS AT WORK SITES TO PREVENT DAMAGE TO TELECOMMUNICATION CABLES**

### **DO'S**

- C.1 DO** display the following in a prominent place at the work site for all contractors and personnel at the work site to refer to —
- Section A & B for employees from Supervisory Level and above
  - Section C for all employees involving in carrying out earthworks
  - the latest version of the Licensee's service layout plan issued to the Earthworks Contractor;
  - the latest version of the TCDW's cable detection report showing the locations and routes of the Licensee's telecommunication cables; and
  - the "Notice for Commencement of Earthworks" submitted by the Earthworks Contractor to the Licensee.
- C.2 DO** provide a competent full-time site supervisor to closely supervise the performance of the earthworks throughout the entire duration of the earthworks and ensure that the site supervisor is fully familiar with all the requirements stated in this document. Do keep the Licensee informed of any changes in key personnel such as the site supervisor, TCDW, etc.
- C.3 DO** ensure that appropriate and adequate protection measures and methods of support are implemented to prevent damage to the Licensee's telecommunication cables (including but not limited to such measures and methods as may be required by the Licensee), and conduct regular inspections and maintenance to ensure that the measures and methods that are implemented remain sound and effective throughout the duration of the earthworks.
- C.4 DO** create a cable corridor using barricades and signposts where appropriate, and ensure that works and personnel movement inside the barricaded cable corridor are strictly controlled by the site supervisor.
- C.5 DO** provide protective plates over trenches in which the Licensee's telecommunication cables are located so as to prevent pressure being exerted on the cables by heavy vehicles or machinery traversing over them.
- C.6 DO** ensure that earth rods are driven into the ground away from the Licensee's telecommunication cables and whenever possible, use earth mats instead of earth rods.

- C.7 DO** ensure that all contractors and personnel at the work site are fully briefed on the locations and routes of the Licensee’s telecommunication cables, including locations and routes of any diverted cables, throughout the entire vicinity of the proposed earthworks so that they are aware of the same. Do maintain records of all such briefings (including the date and time, venue, person conducting the briefing, contents of the briefing, and the names of the personnel who attended the briefing) and make them available to the Licensee upon request.
- C.8 DO** grant the Licensee access to the work site to enable the Licensee to inspect the adequacy of the protection measures and methods of support implemented by the Earthworks Contractor, and to take any measures necessary to protect the Licensee’s telecommunication cables from damage.
- C.9 DO** notify and obtain the Licensee’s prior written approval before any removing or dismantling any protection measures and methods of support for the Licensee’s telecommunication cables and/or before backfilling the Licensee’s telecommunication cables after the completion of the earthworks. It is recommended that Earthworks Contractors maintain photographic records of the entire dismantling and backfilling process.
- C.10 DO** when demolishing, altering, shifting, severing or removing any tree, root, vegetation, rock, boulder, object, obstacle or other material (including man- made structures) which are within the vicinity of the Licensee’s telecommunication cables, take all necessary precautions and exercise all due diligence to protect the Licensee’s telecommunication cables from damage when carrying out such works;
- C.11 DO** immediately halt all works and report to the Licensee any damage or suspected damage caused at any point in time to —
- (a) the Licensee’s telecommunication cables; and/or
  - (b) the ducts, pipes or other infrastructure housing or encasing the Licensee’s telecommunication cables,
- so as to enable the Licensee to take early action to address any possible disruption in telecommunication services resulting from such damage. The report shall be lodged with the Licensee by calling 68624022 during office hours and 97537533 after office hours.

- C.12 DO** monitor the soil conditions at the work site and check once every 6 weeks for soil movement that may damage the Licensee's telecommunication cables or cause the locations or routes of the Licensee's telecommunication cables to be shifted or altered. Do provide appropriate and adequate soil control measures such as shoring and shuttering to prevent soil movement which may cause damage to the Licensee's telecommunication cables.
- C.13 DO** where requested to do so by the Licensee or any relevant authority (including the Info-communications Media Development Authority), furnish all documents and information required to be prepared, submitted or maintained by the Earthworks Contractor as referred to in this document.
- C.14 DO** consult the Licensee and seek the Licensee's assistance in the event that the Earthworks Contractor encounters any difficulty in complying with any of the requirements stated in this document, whether due to site conditions or otherwise. Under no circumstance should the Earthworks Contractor ignore or circumvent any of the requirements and/or take matters into its own hands.

#### **DON'TS**

- C.15 DON'T** take any short cuts or omit any of the steps / actions required to be taken in Section A before commencing with the earthworks. In the event of cable diversion, don't take any action that may damage the Affected Cables unless and until **all** the steps / actions required to be taken in Section B have been carried out and express confirmation has been given by the Licensee that the Affected Cables have been abandoned.
- C.16 DON'T** assume that the Licensee's telecommunication cables are only located at a maximum depth of 1.5m as the telecommunication cables may be located at greater depths.
- C.17 DON'T** assume that the Licensee's telecommunication cables run at a consistent depth throughout the work site as the depth of the telecommunication cables may vary (e.g. the telecommunication cables may be located very deep at the point where they under-cross a drain or canal, while being shallower elsewhere).
- C.18 DON'T** assume that the Licensee's telecommunication cables run in a straight path from manhole to manhole as the route of the telecommunication cables may detour or deviate (e.g. the telecommunication cables may be contoured around an existing underground feature).

**C.19 DON'T** assume that all of the Licensee's telecommunication cables are housed within a single pipe/duct as the telecommunication cables may be deployed in different sets of pipes/ducts within the same area. Accordingly, all telecommunication cables within the vicinity of the earthworks must be accounted for and verified.

**C.20 DON'T** park or place heavy vehicles, equipment or machinery across, over or along the location and routes of the telecommunication cables.

**C.21 DON'T** open, remove or cover up any of the Licensee's manholes, equipment boxes or pedestal boxes with earth or any construction/building materials, equipment or machinery without obtaining the Licensee's prior written approval.

**C.22 DON'T** fence up or in any way prevent access to the Licensee's manholes, equipment boxes or pedestal boxes without obtaining the Licensee's prior written approval.

**C.23 DON'T** ignore any damage, cover up any damage, or attempt to repair any damage or suspected damage caused at any point in time to —

- (a) the Licensee's telecommunication cables; and/or
- (b) the ducts, pipes or other infrastructure housing or encasing the Licensee's telecommunication cables.

The Earthworks Contractor must immediately report any such damage or suspected damage to the Licensee by calling the [insert Licensee's contact number] during office hours and [insert Licensee's contact number] after office hours.

**C.24 DON'T** tamper with, remove, modify, dismantle or in any way interfere with the Licensee's installation and plant, including —

- (a) the Licensee's telecommunication cables;
- (b) the ducts/pipes housing the Licensee's telecommunication cables;
- (c) any concrete encasing the Licensee's telecommunication cables or the ducts/pipes housing the telecommunication cables; and
- (d) any warning slab installed at the Licensee's telecommunication cables or the ducts/pipes housing the telecommunication cables.

without obtaining the Licensee's prior written approval.

**Note: The requirements stated in this document are not exhaustive. Additional requirements may be issued from time to time by the Licensee. These additional requirements, together with the requirements in this document, shall constitute the full set of requirements that must be complied with by the Earthworks Contractor at all times to prevent damage to telecommunication cables. Should you require any further clarification, please contact the Licensee at -**

c/o Mobility Consult Pte Ltd (MCPL)  
Call Centre: No.19, #02-02, Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830 (during office hours)  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

## NOTICE FOR COMMENCEMENT OF EARTHWORKS

Licensee (Annex A)  
 c/o Mobility Consult Pte Ltd  
 Telephone: 66926830  
 No 19,#02-02, Tuas Ave 3  
 Singapore 638645  
 Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

For Official Use

Date Received:

Emergency Works ID :

S/No:

### 1. EARTHWORKS CONTRACTOR'S PARTICULARS

Company Name:	_____	Contact Person:	_____
Telephone Number:	_____	Mobile Number:	_____
Email Address:	_____	Designation:	_____
Company Address:	_____		
Postal Code:	_____		

### 2. SITE SUPERVISOR'S PARTICULARS

Company Name:	_____	NRIC/ Fin No	_____
Site Supervisor's Name	_____	Mobile Num	_____
Telephone Num	_____		

### 3. PROJECT DETAILS

Employer	_____	Project Officer	_____
Telephone Num	_____	Mobile Number	_____
Contract Period: From (DD/MM/YYYY)	_____	To (DD/MM/YYYY)	_____
Contract No.	_____	Work Order No.	_____

### 4. TCDW's PARTICULARS

Name	_____	NRIC Num	_____
Telephone Num	_____	Mobile Num	_____
Licensee Num	_____	Expiry Date (DD/MM/YYYY)	_____

### 5. EARTHWORKS DETAILS

Location of Proposed Earthworks \_\_\_\_\_

Duration: From (DD/MM/YYYY) \_\_\_\_\_ to (DD/MM/YYYY) \_\_\_\_\_

Nature of Proposed Earthworks:

Open Trench Excavation	<input type="checkbox"/>	Soil Investigation	<input type="checkbox"/>
Sinking of earth rod, casing of tubes	<input type="checkbox"/>	Boring, Dredging, Jacking, leveling, Piling or Tunneling	<input type="checkbox"/>

Others (Please specify) \_\_\_\_\_

Pipe affected (state all) \_\_\_\_\_ (No of ways) identified by TCDW

Distance of work area boundary from cable plant: \_\_\_\_\_ meter  
 Depth of earthworks: \_\_\_\_\_ meter  
 Actual Commencement of Date (DD/MM/YYYY): \_\_\_\_\_  
 Estimated Completion Date (DD/MM/YYYY): \_\_\_\_\_

Are the earthworks carried out pursuant to S29(2) of the Telecommunication Act (Cap 323)? **Yes/ No**  
 (Note: in the case of earthworks carried out in the interest of public or private safety as described under 29(2), the is form must be submitted within 7 days after the earthworks have been commenced).

**6. PARTICULAR OF PARTY WHO IS INSTRUCTING OR SUPERVISING THE EARTHWORKS CONTRACTOR IN THE PERFORMANCE OF EARTHWORKS (IF ANY)**

Company Name	_____	Contact Person	_____
Telephone Num	_____	Mobile Num	_____
Email Address	_____	Designation	_____
Company Address	_____		
Postal Code	_____		

**7. DECLARATION BY EARTHWORKS CONTRACTOR** (Please read carefully)

The Contractor hereby declares and confirms the follows:

- (a) We are the contractor that will be carrying out the actual earthworks notified above
- (b) We have read and understood the requirements stated in the document issued by [insert Licensee’s Name] (“Licensee”) and made available on the Licensee’s website titled “Requirements to be Complied with by Earthworks Contractors for the Prevention of Damage to Telecommunication Cables” (the “Licensee’s Earthworks Requirements”).
- (c) We undertake to strictly comply with the Licensee's Earthworks Requirements in relation to the proposed earthworks. Without limitation, we confirm that —
  - I. we have procured the Licensee’s service layout plan;
  - II. we have engaged a Licensed Telecommunication Cable Detection Worker (“TCDW”) to carry out cable detection work to locate the Licensee’s telecommunication cables;
  - III. We have conducted the Joint Site Meeting with the Licensee and the TCDW;
  - IV. we have ensured that the locations and routes of the Licensee’s telecommunication cables have been physically marked out by the TCDW throughout the entire vicinity of the proposed earthworks in an accurate and proper manner; and
  - V. we have briefed all contractors and personnel at the work site, including the party who is instructing or supervising us in the performance of earthworks (if any), on the locations and routes of the Licensee’s telecommunication cables and the measures to be taken to prevent damage to the cable
- (d) We will be carrying out the manual digging of trial holes to **positively locate and physically expose** the Licensee’s telecommunication cables at the trial hole positions which are indicated in the TCDW’s cable detection report attached to this NCE
- (e) Upon completion of the trial holes, we will arrange for the conduct of the Joint Trial Holes Inspection with the Licensee and the TCDW to verify that we have ascertained the exact location of all the Licensee’s telecommunication cables throughout the entire vicinity of the proposed earthwork

- (f) We shall not proceed with the proposed earthworks until we receive the "Final Approval for Commencement of Earthworks" from the Licensee.
- (g) The information submitted in this NCE and the attached documents are true, correct and complete to the best of our knowledge.

Signature and Date	Name and Designation
Contractor's Company Name	Date and Company Stamp

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Fees

1. A fee of \$280.00 (every 1.5km) excluding prevailing GST (Good and Service Tax) will be charged for each Notice For Commencement of Earthworks processed by Mobility Consult Pte Ltd. The fees includes consultation call-out services within 7 days and inspection of trial holes upon call from Requestor within 3 days
2. Payment will be credit card online

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Please attach and submit the following together with the NCE:

- (a) the latest version of the TCDW's cable detection report and the Licensee's service layout plan;
- (b) the exact positions and number of proposed trial holes that will be dug by the Contractor, to be clearly indicated and marked up on the TCDW's cable detection report; and
- (c) the works schedule for the proposed earthworks.

\*The trial holes shall be —

- positioned on and along the routes of the telecommunication cables indicated in the TCDW's cable detection report; and
- spaced at intervals of no more than 30m apart where the length of the telecommunication cables within the work site is 50m or more.

## APPENDIX B

### CONDITIONAL APPROVAL FOR DIGGING OF TRIAL HOLES

Licensee (Annex A)  
c/o Mobility Consult Pte Ltd (MCPL)  
No.19, #02-02 Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

**Notice for Commencement of Earthworks ("NCE") Ref:**

**Date:**

**[Earthworks Contractor's Name, Address and Contact Person]**

Dear Sirs

#### CONDITIONAL APPROVAL FOR DIGGING OF TRIAL HOLES

1. We refer to the NCE submitted by [Name of Contractor] (the "**Contractor**") to [Licensee's name] (the "**Licensee**") as referenced above.
2. The Contractor is hereby permitted to carry out the digging of the trial holes as indicated in the Contractor's NCE submission for the purpose of ascertaining the exact location of the Licensee's telecommunication cables before commencing any earthworks.
3. The Contractor is required to comply strictly with all of the following requirements —
  - (a) The Contractor shall ensure that it has fully completed Steps 1 to 4 as described in the document titled "Requirements to be Complied with by Earthworks Contractors for the Prevention of Damage to Telecommunication Cables" issued by the Licensee and made available on the Licensee's website (the "**Licensee's Earthworks Requirements**").
  - (b) The Contractor shall only use manual digging with hand tools and exercise due care when digging the trial holes to avoid damaging the Licensee's telecommunication cables. The Contractor shall not dig any trial holes using an excavator or any other mechanical equipment, or use any manual equipment that has sharp pointed edges (e.g. hand auger) which may damage the telecommunication cables.
  - (c) The Contractor shall dig the trial holes manually until the Contractor **positively locates and physically exposes all the Licensee's telecommunication cables** (i.e. the Contractor must find and visually confirm the telecommunication cables). The Contractor must not assume that the Licensee's telecommunication cables are not present simply because they are not found or encountered when the trial holes are dug.
  - (d) **IMPORTANT: In the event that the Contractor is unable to positively locate and physically expose all of the Licensee's telecommunication cables after digging the trial holes, the Contractor must obtain assistance from the Licensee to ascertain the exact location of the telecommunication cables. UNDER NO CIRCUMSTANCE shall the Earthworks Contractor proceed with the proposed earthworks without consulting the Licensee**
  - (e) The Contractor shall ensure that the locations and routes of the telecommunication cables, as positively ascertained by the trial holes, are physically marked out by the TCDW throughout the entire

vicinity of the proposed earthworks in an accurate and proper manner.

4. The Contractor shall arrange with the Licensee to conduct the Joint Trial Holes Inspection at the work site within three (3) working days from the date the Contractor completes the digging of the trial holes. Please contact [insert Licensee's contact person] to arrange for the Joint Trial Holes Inspection.
5. Please note that this Conditional Approval is only valid for one (1) month from the date of its issuance. In the event that the Contractor does not complete the digging of the trial holes before the expiry of this Conditional Approval, the Contractor shall be required to submit a fresh NCE to the Licensee.
6. This letter only permits the Contractor to carry out the digging of trial holes and the Joint Trial Holes Inspection as described in the Licensee's Earthworks Requirements, and does not constitute the Licensee's approval for the commencement of earthworks. The Contractor must not proceed with the proposed earthworks until the Contractor has been issued the "Final Approval for Commencement of Earthworks" by the Licensee.
7. Should you require any clarifications, please contact the undersigned at [insert particulars of Licensee's contact person].

**Name:** \_\_\_\_\_

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

Licensee (Annex A)  
c/o Mobility Consult Pte Ltd (MCPL)  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

## APPENDIX C

### APPLICATION FOR FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS

**[Contractor's Name, Address  
and Contact Person]**

**Notice for Commencement of Earthworks ("NCE") Ref:**

**Date:**

Licensee (Annex A)  
c/o Mobility Consult Pte Ltd (MCPL)  
No.19, #02-02 Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

Dear Sirs

### APPLICATION FOR FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS

1. We refer to the NCE submitted by [Name of Contractor] (the "**Contractor**") to [Licensee's name] (the "**Licensee**") as referenced above.
2. The Contractor hereby declares, confirms and undertakes as follows —
  - (a) We are the contractor that will be carrying out the actual earthworks as notified in the NCE.
  - (b) We have read and understand the requirements stated in the document titled "Requirements to be Complied with by Earthworks Contractors for the Prevention of Damage to Telecommunication Cables" issued by the Licensee and made available on the Licensee's website ("Licensee's Earthworks Requirements"), and shall comply strictly with all of the Licensee's Earthworks Requirements.
  - (c) All the procedures and actions described in Steps 1 to 7 of the Licensee's Earthworks Requirements have been fully carried out and completed as indicated below —

Step	Requirement	Completion status (state Yes or No)	Insert dates
1	<b>OBTAIN LICENSEE'S SERVICE LAYOUT PLAN</b> (A.1 to A.3 of Licensee's Earthworks Requirements)		Date when service layout plan issued:
2	<b>ENGAGE LICENSED TELECOMMUNICATION CABLE DETECTION WORKER TO CARRY OUT CABLE DETECTION WORK</b> (A.4 to A.6 of Licensee's Earthworks Requirements)		Date of cable detection report:
3	<b>CONDUCT JOINT SITE MEETING (TO BE ATTENDED BY EARTHWORKS CONTRACTOR, TCDW AND LICENSEE)</b> (A.7 to A.14 of Licensee's Earthworks Requirements)		Date of Joint Site Meeting:

4	<b>SUBMIT NOTICE FOR COMMENCEMENT OF EARTHWORKS</b> (A.15 to A.19 of Licensee's Earthworks Requirements)		Date when NCE submitted extended):
5	<b>OBTAIN CONDITIONAL APPROVAL FOR DIGGING OF TRIAL HOLES</b> (A.20 to A.22 of Licensee's Earthworks Requirements)		Date when Conditional Approval issued:
6	<b>DIG TRIAL HOLES TO ASCERTAIN THE LOCATION OF TELECOMMUNICATION CABLES</b> (A.23 to A.27 of Licensee's Earthworks Requirements)		Date when trial holes completed:
7	<b>CONDUCT JOINT TRIAL HOLES INSPECTION (TO BE ATTENDED BY EARTHWORKS CONTRACTOR, TCDW AND LICENSEE)</b> (A.28 to A.33 of Licensee's Earthworks Requirements)		Date of Joint Trial Holes Inspection:

- (d) We have briefed the party as notified in the NCE (if any), who is instructing or supervising us in the performance of the proposed earthworks, of our completion of Steps 1 to 7 above.
- (e) We shall not proceed with the proposed earthworks until we receive the "Final Approval for Commencement of Earthworks" from the Licensee.
- (f) To ensure that the Licensee's telecommunication cables within the vicinity of the proposed earthworks are protected from damage, we shall be implementing the protection measures and methods of support detailed below —

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3. Based on the declarations, confirmations and undertakings provided above, the Contractor hereby requests the Licensee to issue the "Final Approval for Commencement of Earthworks to the Contractor". The Contractor acknowledges that the Licensee shall be entitled to rely on the truth, accuracy and completeness of the information provided by the Contractor and shall not be obliged to conduct any independent verification of the same, for which the Contractor shall be held solely responsible.

**Name:** \_\_\_\_\_

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

**[Contractor's Name]**

**FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS**

Licensee (Annex A)  
c/o Mobility Consult Pte Ltd (MCPL)  
No.19, #02-02 Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

Notice for Commencement of Earthworks (“NCE”) Ref:  
Date:  
[Earthworks Contractor’s Name, Address and Contact Person]

Dear Sirs

**FINAL APPROVAL FOR COMMENCEMENT OF EARTHWORKS**

1. We refer to —
  - (a) the NCE submitted by [Name of Contractor] (the “Contractor”) to [Licensee's name] (the “Licensee”) as referenced above;
  - (b) the Joint Trials Holes Inspection conducted on [insert date] by the Contractor, the TCDW and the Licensee; and
  - (c) the “Application for Final Approval for Commencement of Earthworks” submitted by the Contractor to the Licensee dated [insert date].
2. Based on the information, declarations, confirmations and undertakings provided by the Contractor to the Licensee as set out in its NCE submission and “Application for Final Approval for Commencement of Earthworks” and subject to paragraph 3 below, the Licensee hereby grants its approval for the Contractor to proceed with the earthworks as notified in the NCE.
3. In carrying out the earthworks, the Contractor shall —
  - (a) provide a copy of this “Final Approval for Commencement of Earthworks” to the party as notified in the NCE (if any) who is instructing or supervising the Contractor in the performance of the proposed earthworks;
  - (b) strictly comply with all requirements stated in the document titled “Requirements to be Complied with by Earthworks Contractors for the Prevention of Damage to Telecommunication Cables” issued by the Licensee (“Licensee’s Earthworks Requirements”), including but not limited to the “Do’s and Don’ts” specified in Section C of the Licensee’s Earthworks Requirements; and
  - (c) ensure that the Contractor implements all the protection measures and methods of support stated in its “Application for Final Approval for Commencement of

Earthworks” to protect the Licensee’s telecommunication cables from damage.

4. The Contractor is reminded of its statutory duties under Sections 29, 32 and 49 of the Telecommunications Act (Cap.323), extracts of which are attached at **Annex A** hereto.
  
5. Should you require any clarifications, please contact the undersigned at [insert particulars of Licensee’s contact person].

Name: \_\_\_\_\_

Licensee (Annex A)  
c/o Mobility Consult Pte Ltd (MCPL)  
No.19, #02-02 Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

## Annex A – List of FBO Licensees

Mobility Consult Pte Ltd (MCPL)  
No.19, #02-02 Tuas Avenue 3  
Singapore 639415  
Telephone: +65 66926830  
Email: [servicedesk@earthworks.sg](mailto:servicedesk@earthworks.sg)

S/no	FBO Licensees	Links
1	Australia-Singapore Cable (Singapore) Pte Ltd (ASC)	<a href="https://www.earthworks.sg/notification/asc">https://www.earthworks.sg/notification/asc</a>
2	Agora Communication Pte Ltd (Agora)	<a href="https://www.earthworks.sg/notification/agora">https://www.earthworks.sg/notification/agora</a>
3	Colt Technology Services Pte Ltd (Colt)	<a href="https://www.earthworks.sg/notification/colt">https://www.earthworks.sg/notification/colt</a>
4	Global Transit Singapore Pte Ltd (GTS)	<a href="https://www.earthworks.sg/notification/gt">https://www.earthworks.sg/notification/gt</a>
5	Matrix Networks Pte Ltd (Matrix)	<a href="https://www.earthworks.sg/notification/matrix">https://www.earthworks.sg/notification/matrix</a>
6	SP Telecommunications Pte Ltd	<a href="https://www.earthworks.sg/notification/sptel">https://www.earthworks.sg/notification/sptel</a>
7	Superinternet ACCESS Pte Ltd (Supernet)	<a href="https://www.earthworks.sg/notification/supernet">https://www.earthworks.sg/notification/supernet</a>
8	Super Sea Cable Networks Pte Ltd (SEAX)	<a href="https://www.earthworks.sg/notification/seax">https://www.earthworks.sg/notification/seax</a>
9	Telekomunikasi Indonesia International Pte Ltd (Telin)	<a href="https://www.earthworks.sg/notification/telin">https://www.earthworks.sg/notification/telin</a>
10	ViewQwest Pte Ltd	<a href="https://www.earthworks.sg/notification/viewqwest">https://www.earthworks.sg/notification/viewqwest</a>