MS Reference Number:	CSHK	CET	MS	ELE	2024	000094
ACC Reference Number:	1701	W	000	CSC	760	000178

METHOD STATEMENT TITLE	Rev. 1

(BS-SHD-EL) New Electrical Installation for Catering Equipment Replacement at Main Depot Building Kitchen in Siu Ho Wan Depot

	Prepared by:	Checked by:	Reviewed by:	Reviewed by:
Signature:				
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Position:	BS Engineer	Senior BS Engineer	SM / ~~SO~~	~~QM~~ / QE
Date:	8/5/2024	8/5/2024	8/5/2024	8/5/2024
	Reviewed by:	Reviewed by:	Reviewed by:	Approved by:
Signature:				
Name:	James Ma / Iris Ho	Yeung Wai Lun	Paul Freeman / Mark McGleenon	Eric Fong
Position:	EM / EO	A. Project Director	Sr. Project Director / A. Project Director	Project Director
Date:	9/5/2024	9/5/2024	10/5/2024	10/5/24

CONTENT

1. Introduction (Overview of the operation/works)

This method statement gives a guideline for the installation of a new electrical system to supply power from existing LV switchboard MSB-2.2 to the catering equipment at the existing SHD kitchen. The installation works will involve power cable, cable containment, MCCB distribution board and accessories will be taken place. The detailed procedures for the installation and safety measures will be outlined to ensure the works are carried out in a proper and safe way with good quality and to meet the project programme.

This method statement will be reviewed and amended to improve the aspects of safety and quality based on the actual conditions.

2. Reference Documents (Identify relevant documents by name and reference number)

a) Code of Practice for the Electricity (Wiring) Regulations (2020 Edition), EMSD
b) "Rule & Procedures for Working within or adjacent to the Railway", "Railway Safety Rules" and "Safety Requirements and Information for Contractor"
c) The General Specification for Electrical and Mechanical (E&M)
d) The Factories and Industrial Undertaking Construction Site (Safety) Regulations of the Hong Kong Special Administration Region
e) The Factories and Industrial Undertaking (Electricity) Regulations of the Hong Kong Special Administration Region
f) A Guide to the Factories and Industrial Undertaking Ordinance (Section 6A & 6B) from the Labour Department of the Hong Kong Special Administrative Region

3. Details of Sub-Contractor/Specialist Sub-Contractor

China State Mechanical and Electrical Engineering Limited

4. Responsibilities for Activities described within Method Statement

CSHK is responsible to inspect and carry out the construction works. The following persons, as listed in the table below, will attend the specific tool-box talk and be responsible for the activities:

Company	Name	Position
CSCE	Leung Hing On, Hobby	Senior BS Engineer
	Wong Ho Yin, Maxson	BS Engineer
CSME	Ha Hau Sze, Keith	Project Manager (BS System) REW C0 & H0 (No. W075836)
	Tam Chun Pong, Eric	Construction Manager (BS System) REW C0 (No. W077108)
	Yip Siu On	Project Manager (ESS) REW B0 (No. W122256)

5. Programme and Working Hours (Start & finish date of operation/works)

The general working hours will be from 09:00 to 18:00 daily, from Monday to Saturday. However, it may be required to carry out works from 19:00 to 23:00 and Sunday and Public Holidays in case of essential speeding up of the working process. CSHK would check internally to fulfil the Construction Noise Permit Requirement.

The proposed working time for respective location is shown as below:

Working Area	Proposed Working Time
LV Switch Room, Cable Riser, 1st Floor	Day Time (09:00 – 22:00)
Canteen Dining Area	Day Time (09:00 – 22:00)
Steel Deck	Day Time (09:00 – 22:00)
Dry Store	Day Time (09:00 – 22:00)
Inside Kitchen	Further coordinate and agree with Depot, Stove Supplier and relevant parties

6. Plant, Equipment & Material (Identify type, model and specification of MAJOR plant & equipment)

All plants and equipment will be inspected prior to the mobilization on site to ensure that they are in good working condition and comply with the current regulations. The major plants and equipment will be deployed to carry out the works are as follow: -

Plant / Equipment	**Quantity**
Handheld electric drill (Battery-charged type)	1 (no.)
Screwdriver (Battery-charged type)	3 (nos.)
Toolbox with Hand Tools	1 (no.)
Conduit Bender	1 (set)
Wall scanner (HILTI PS 85 Wall Scanner)	1 (set)
Measuring Tape	2 (nos.)
Elevated Working Platform	1 (set)
Portable Lighting Set	1 (set)
PPE (Helmet, Safety Shoes, Reflective Vest)	1 (set per person)
Generator (DG12000XSE-T)	1 (no.)

Manpower	**Quantity**
General Worker	3
Registered Electrical Worker	2
Supervisor	3
Competent Person (Non-track)	1

7. Construction Methods / Construction Sequence Drawings

<u>7.0 – Precautions before Work</u>

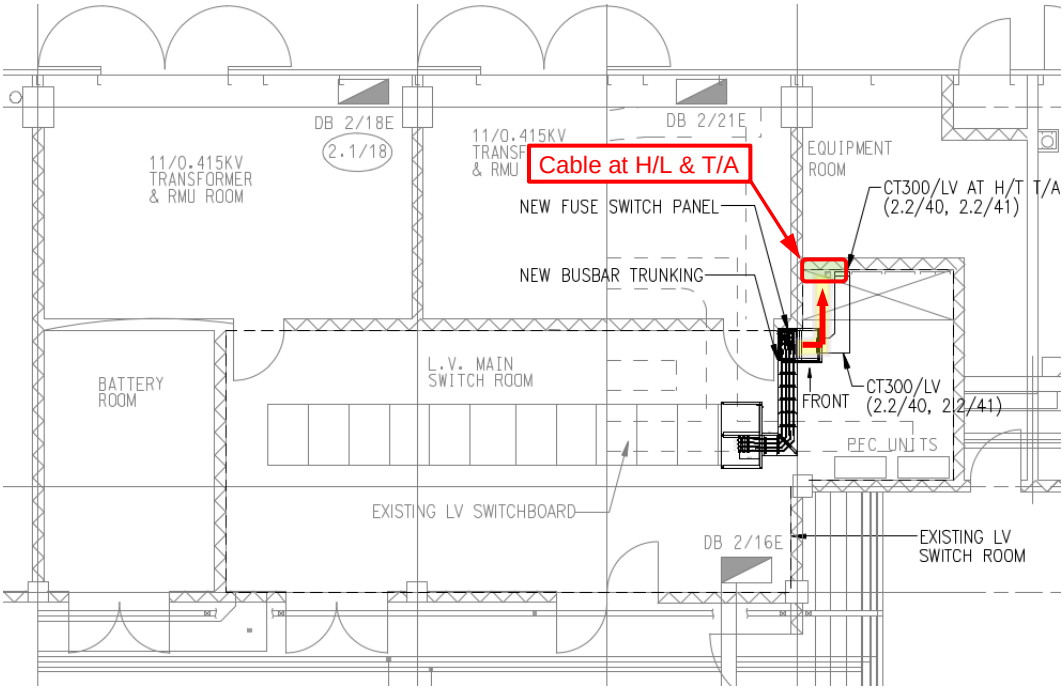
Before any drilling works, cover meter or wall scanner will be used to confirm the absence of concealed or cast-in conduits or items inside a slab or wall before drilling. Guideline / general procedure on how to use a cover meter / wall scanner will be given and briefing will be provided to workers who use the equipment before they operate. For any drilling or coring works on wall or slab, detection and scanning shall be carried out in order to recognise the concealed services inside existing partitions, a Permit-to-drill/core shall be signed and issued before carrying out the corresponding works as well.

Also, pre-work briefing is a must before carrying out works on site to make sure all parties identify the forthcoming tasks, natures, potential hazards and risks, as well as the contingency and emergency plans during works.

7.1 – Cable Routing

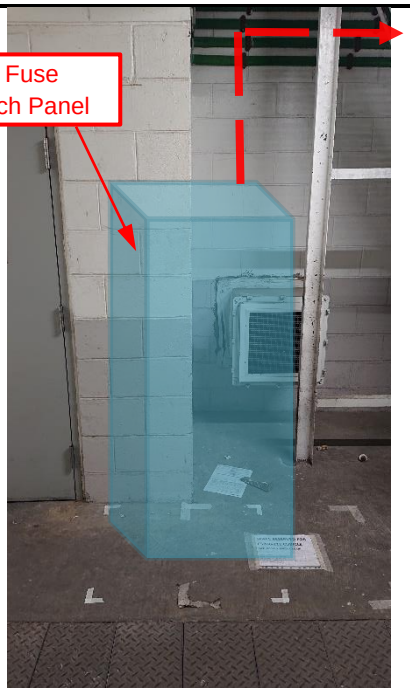
In terms of power supply to the kitchen, 2 nos. of 300mm^2 XLPE/SWA/LSHF cable will be provided for the power distribution from new fuse switch panel to be fed from MSB-2.2 at LV Switch Room to MCCB board located at Dry Store. The cables will be terminated at newly installed fuse switch panel respectively for power supply fed from MSB-2.2 in G/F Room 8.27 LV Switch Room and started running at existing cable riser up to upper ground floor (UG/F) and turn to **Canteen Dining Area** high level towards **steel deck of kitchen at UG/F**. The cable containment will be mounted on existing structural steel frame. The following sketches and photos indicated the proposed cable routing in **RED**. Drawings of cable routing refer to the **Appendix A**.

The 300mm^2 XLPE/SWA/LSHF cables will be terminated to the new fuse switch panel before power energisation, and no power isolation is required. Therefore, the cable termination work would not affect the general operation of Depot.



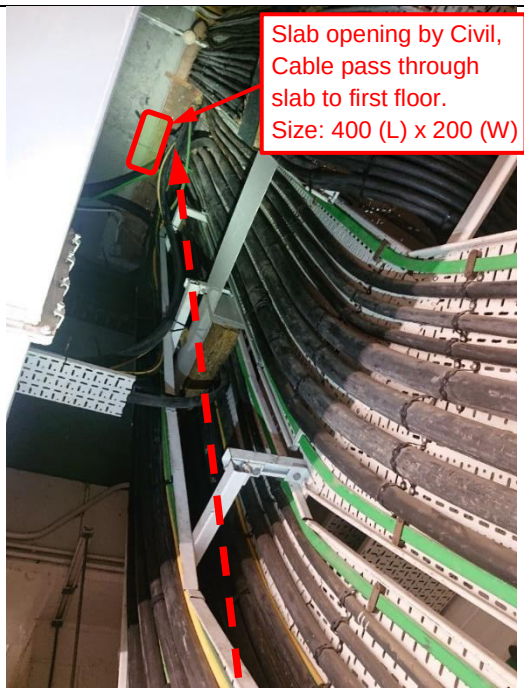
Layout of LV Switch Room (Room No. 8.27) at Ground Floor

Since the working at height would be taken place in the LV Switch Room, the ceiling permit system should be implemented. The sample of ceiling permit refers to the **Appendix E**.



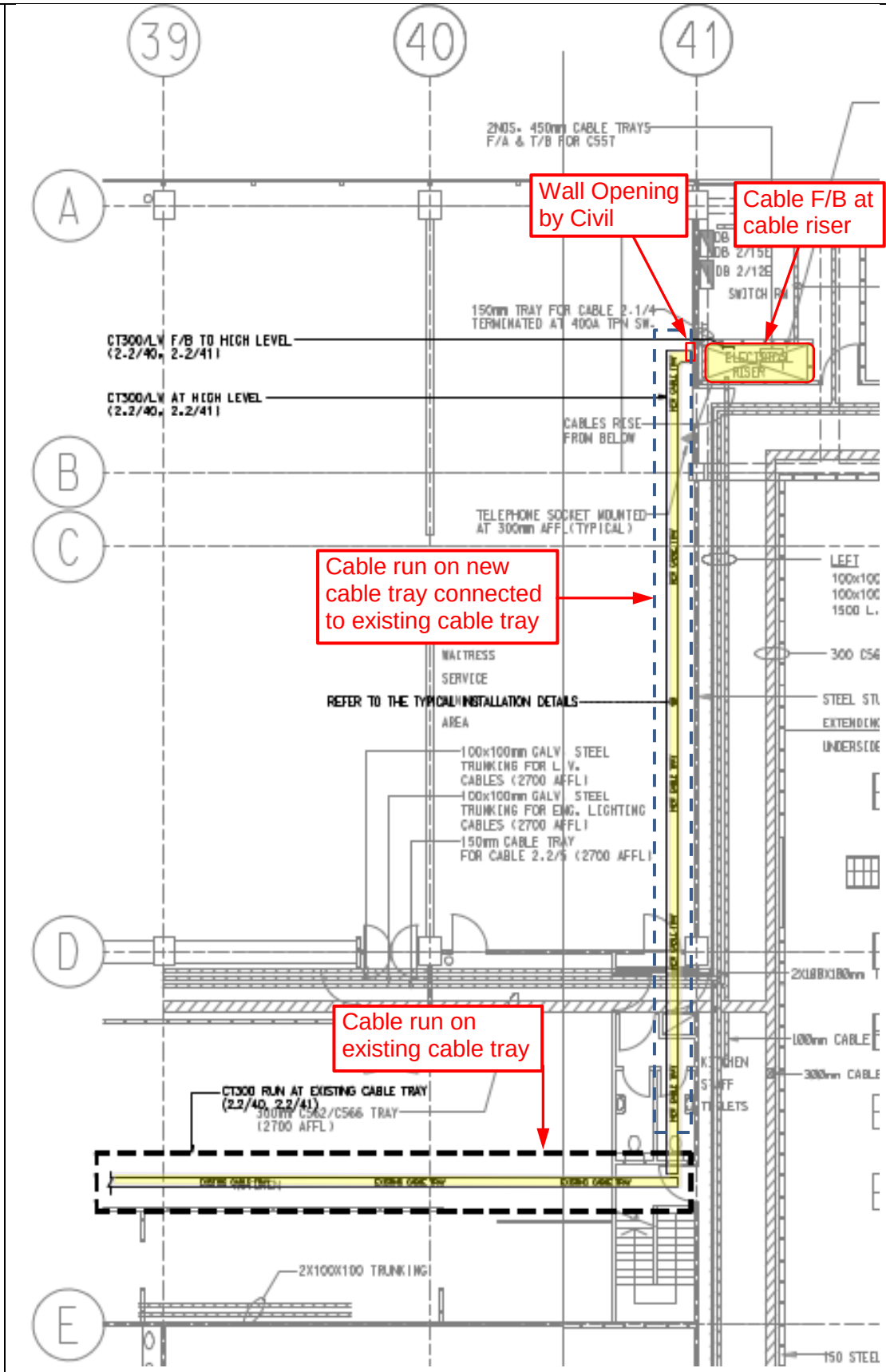
Switchboard Location LV Switch Room 8.27

Cable Riser in LV Switch Room 8.27



Cable Riser at G/F towards 1/F & UG/F

Cable Riser at UG/F



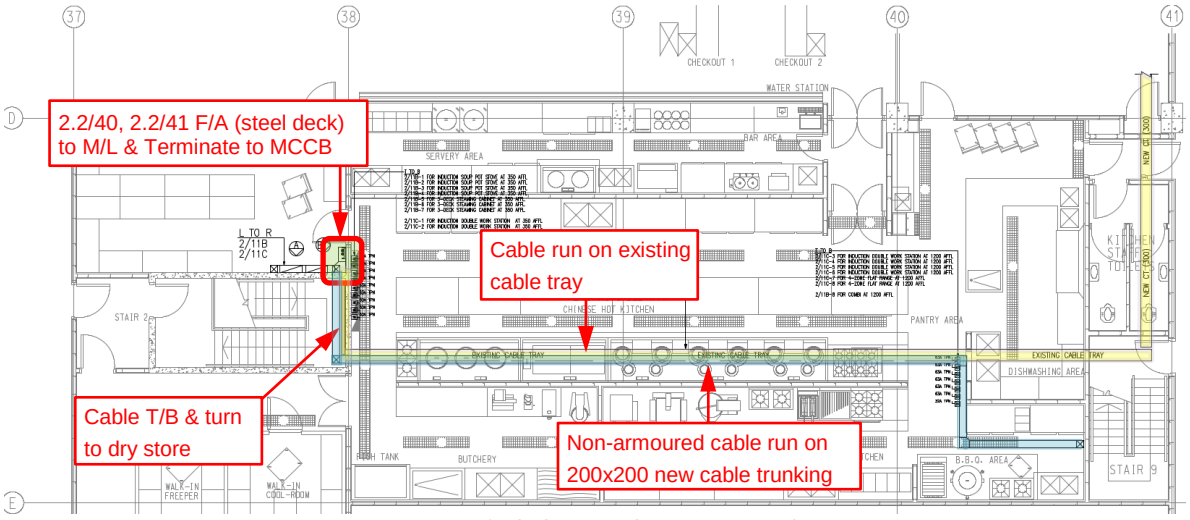
Layout of Cable Routing at First Floor

Proposed Cable Routing at Canteen Dining Area

Proposed Cable Routing at Canteen Dining Area

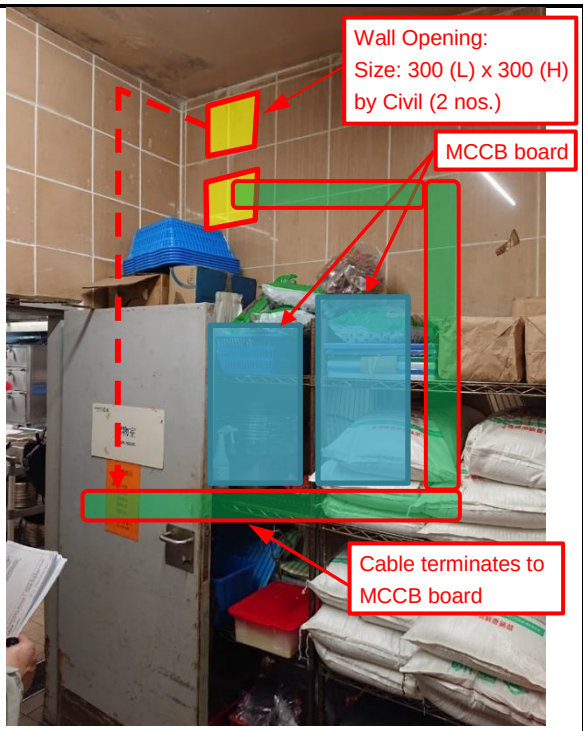
Remark:

1. When working at height, the mobile working platform would be adopted.
2. Any drilling works involved, it should be implemented Permit System to Drill or Core. The Blank Form of permit to drill please refer to **Appendix F**.
3. Existing cast-in items detection shall be performed prior to drilling and/or fixing on wall and/or slab.
4. Scanning demo shall be conducted prior to any physical installation.



Layout of Kitchen and Store at UG/F

Existing Cable Tray at Steel Deck



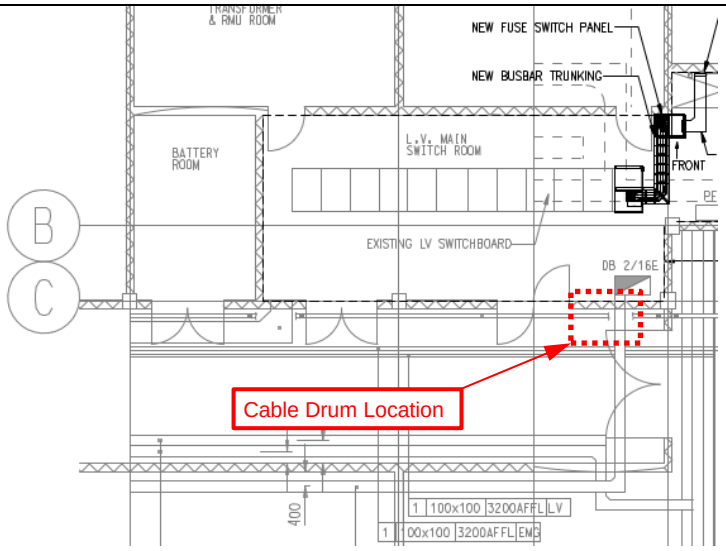
Dry Store inside Kitchen

Remark:

1. When working at height, the mobile working platform would be adopted.
2. Any drilling works involved, it should be implemented Permit System to Drill or Core. The Blank Form of permit to drill please refer to **Appendix F**.
3. Existing cast-in items detection shall be performed prior to drilling and/or fixing on wall and/or slab.
4. Scanning demo shall be conducted prior to any physical installation.

7.2 – Cable Laying

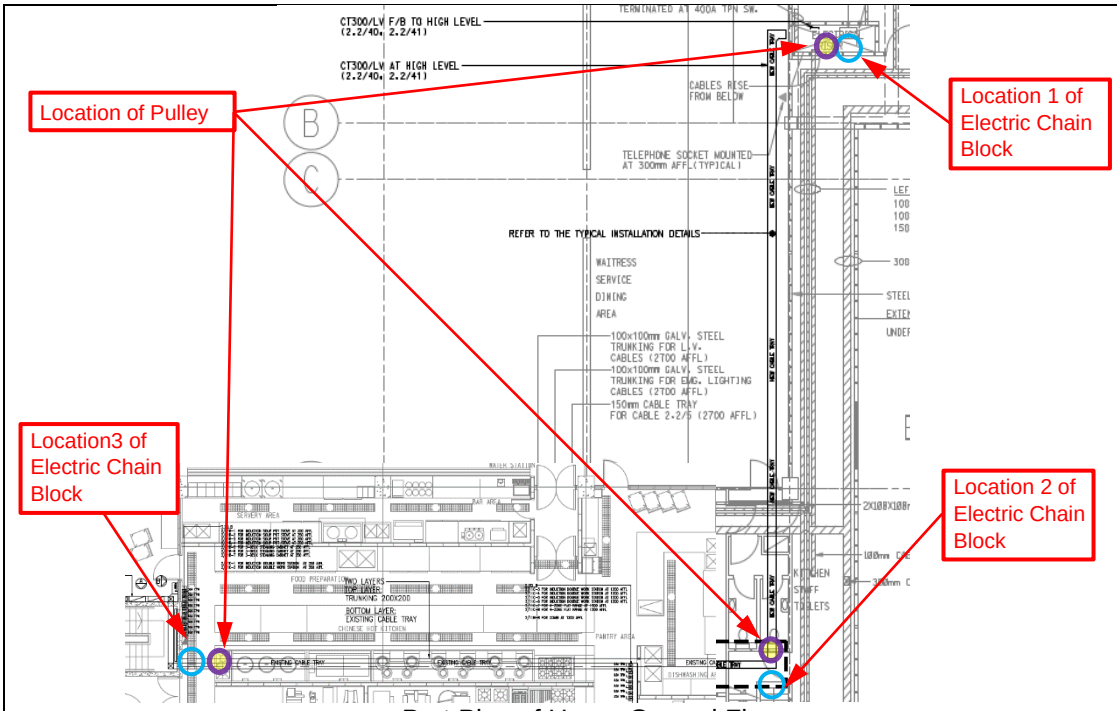
After cable containment completed, the cable laying works will start subsequently. There will be 2 nos. 300mm^2 XLPE/ SWA/LSHF cable laying from LV switch room 8.27 to kitchen. The location of cable drum was proposed at outside the LV switchboard as shown as part plan and photo.



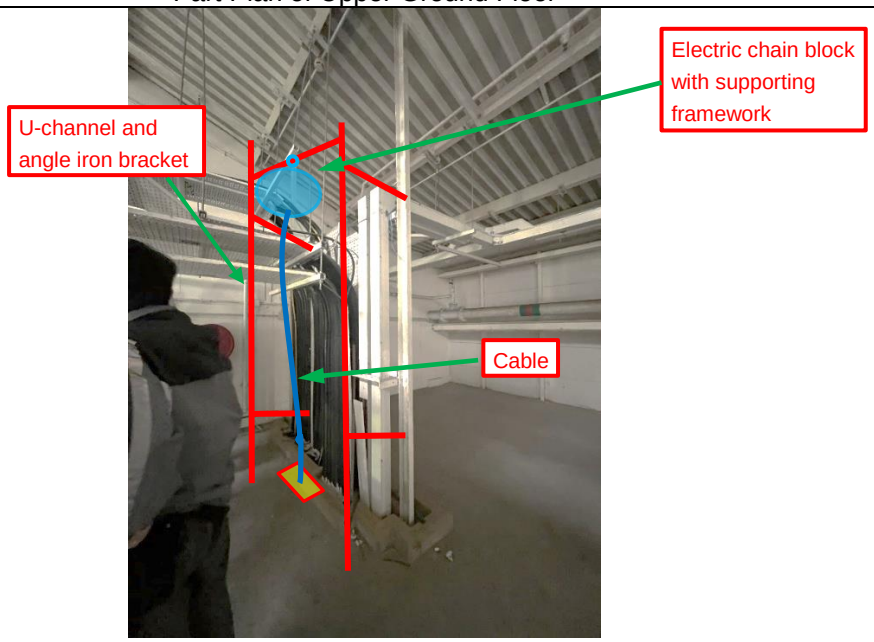
Part Plan of Ground Floor

Cable Drum Location

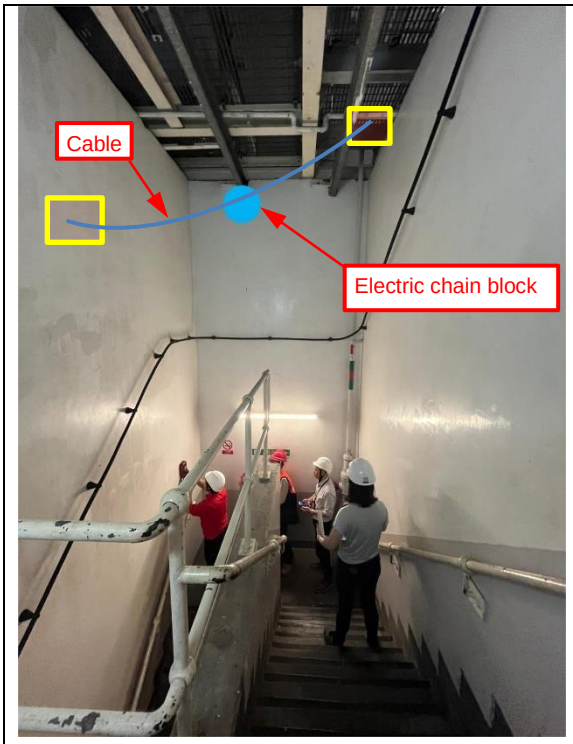
For armoured cable laying, the electric chain block and pulley will be used to lift and lead the armoured cable to designated cable tray. There will be 3 location of electric chain block will be set-up at UG as shown as part plan below. All the supporting framework is temporary. The material of the supporting framework will be built up by U-channel and angle bracket and fixed by bolt.



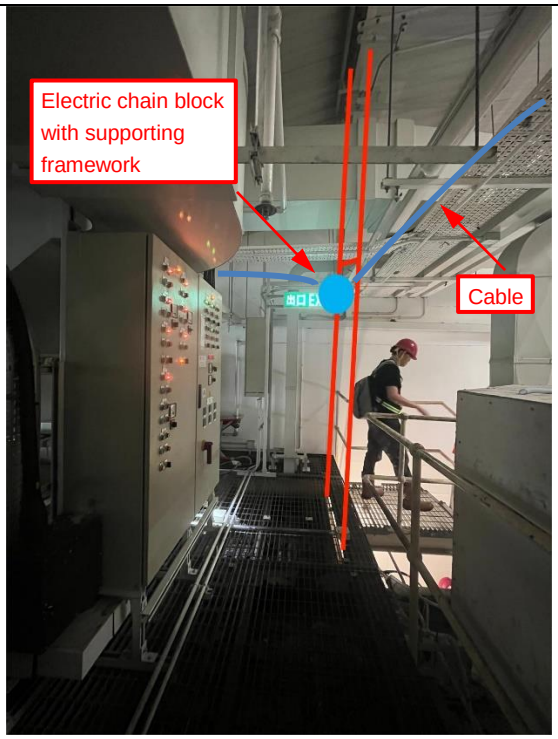
Part Plan of Upper Ground Floor



Electric Chain Block with Supporting Framework at Location 1

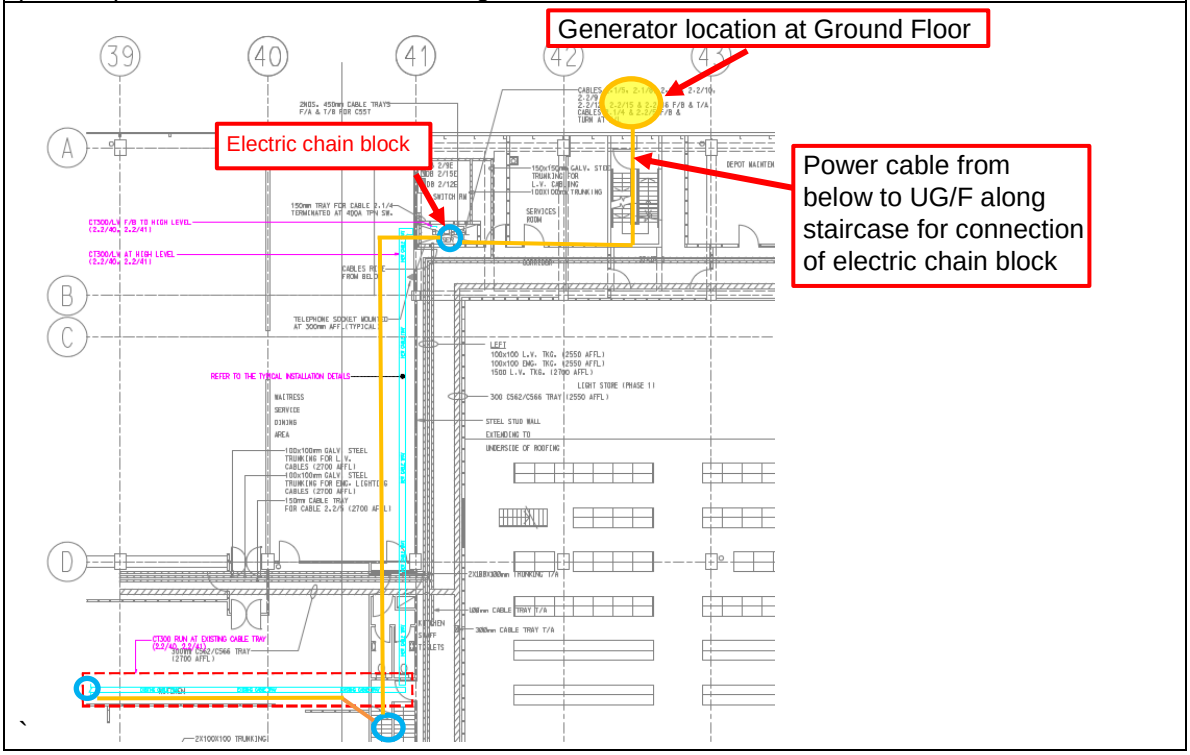


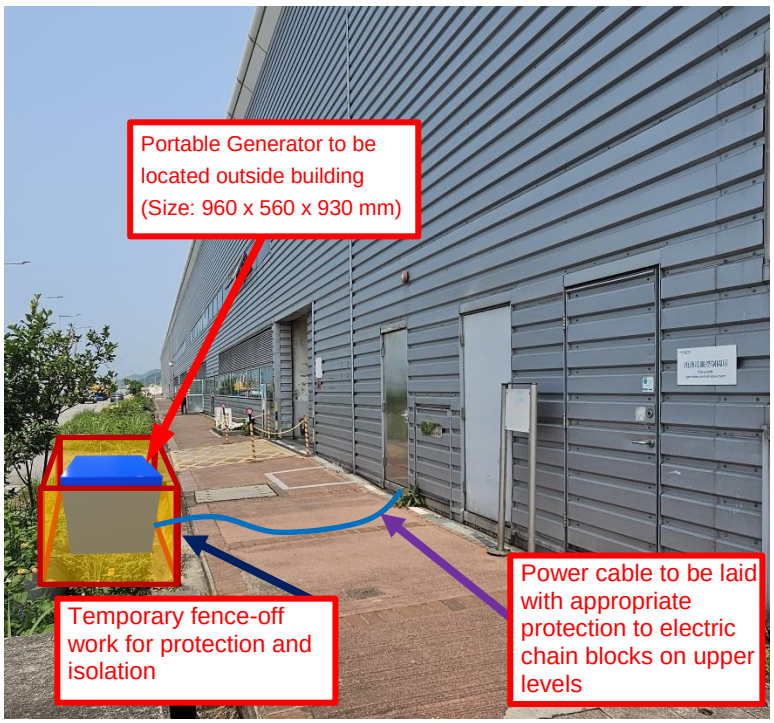
Electric Chain Block at Location 3



Electric Chain Block with Supporting Framework at Location 2

The electric chain blocks for cable laying will be powered by temporary portable generator and it will be located outside SHD, which is adjacent to Room 8.25 – Pre-action Sprinkler Control Valve Room at G/F. Temporary fencing work will be provided in order not to obstruct the passage and provide protection as shown in below figure.kkk





Proposed Location of Portable Generator and Protection Work

7.3 – Installation Location of Power Supply Equipment

The following listed summary of the equipment and location. The details refer to below tables and photos.

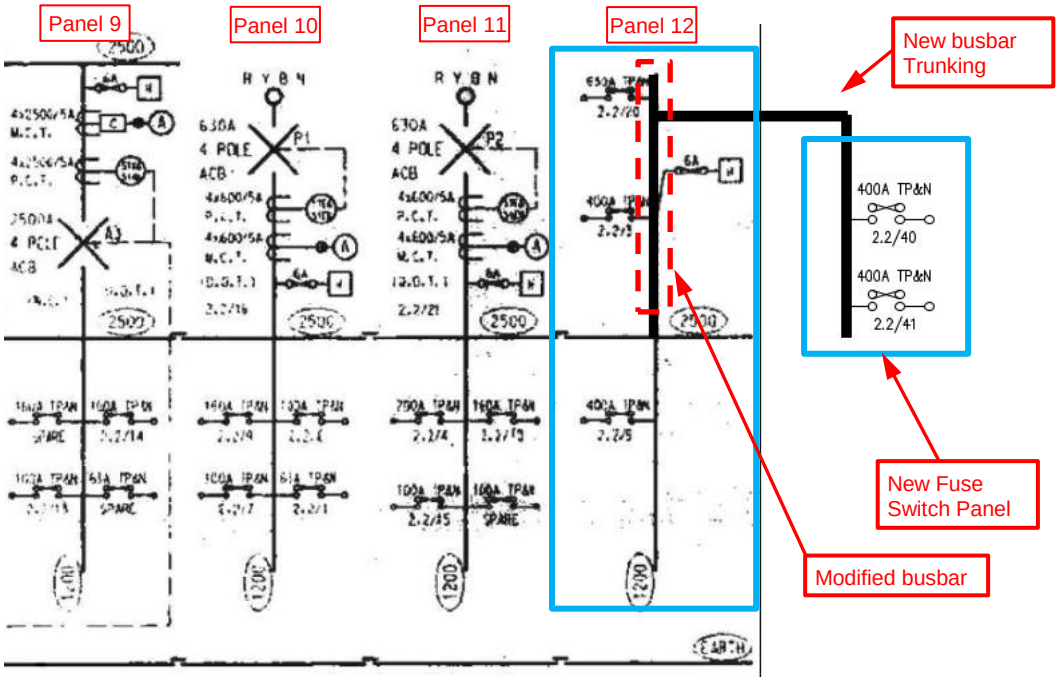
Location	Equipment
Dry Store	- 400A 10 Way TPN MCCB Board - 400A 12 Way TPN MCCB Board
Kitchen Area	- 63A TPN Isolating Switch - 32A TPN Isolating Switch


Proposed isolator location
63A TPN Isolating Switch
32A TPN Isolating Switch
Drywall opening for cable containment from Dry Store to Kitchen Area
Size: 200 (L) x 200 (W)

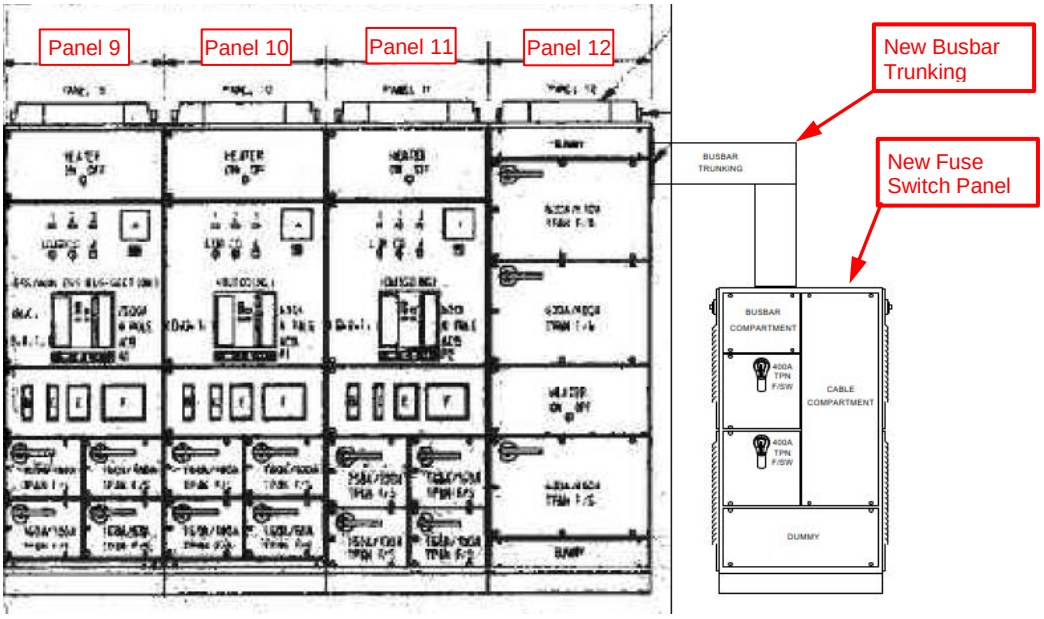

False ceiling opening for cable containment from above to Kitchen
Size: 200 (L) x 200 (W)
Cable trunking to proposed location of isolators adjacent to Dishwashing Area

7.4 – Cable Termination on Fuse Switch Panel

Two nos. 300mm² XLPE/ SWA/LSHF which will be terminated to the new fuse switch panel adjacent to Panel 12 of LV switchboard MSB-2.2 for power supply to kitchen as below diagram. Power isolation may be required during the cable termination on fuse switch panel next to MSB-2.2 if the fuse switch panel is energised in advance. The detail schedule of work activities refers to **Appendix B**.



Part of Single Line Busbar Diagram of Existing MSB '2.2'



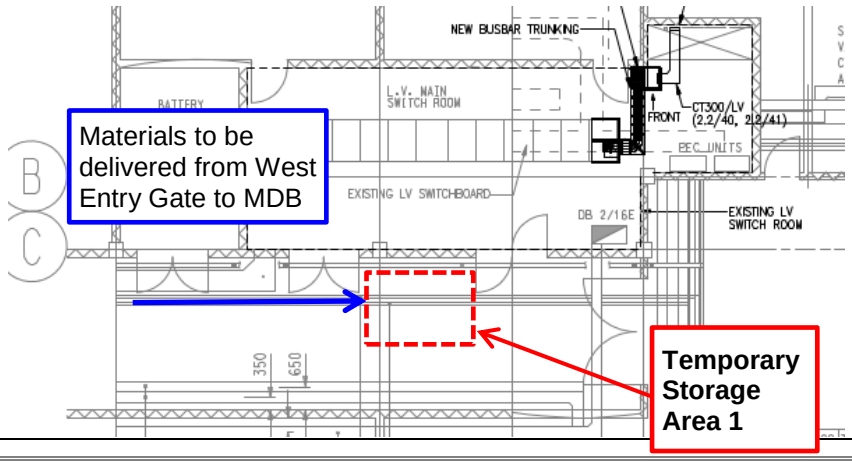
Elevation of LV Switchboard MSB – 2.2

7.4.1 – Procedure of Cable Termination

I. The cables prior to being cut, appropriate tail length of cables shall be remained for terminated at the LV switchboard.
II. The cables will be top entry of LVSB's rear compartment and properly gland on top of LVSB.
III. The cables sheath shall be clasped by a gland with a compression washer which will hold the cable sheath securely.
IV. The termination of the cable conductors shall be crimpled by cable lug with a hydraulic crimping tool.
V. The cables connected to the designated busbar by bolts & nuts.

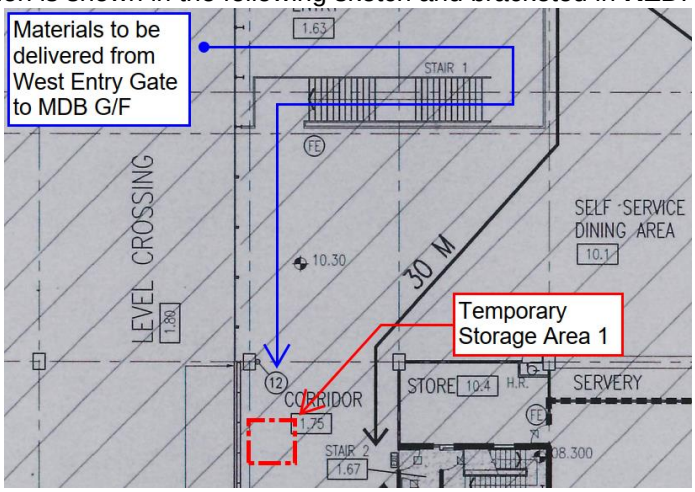
7.5 – Temporary Material Storage and Delivery Route

Two locations are proposed as the temporary storage area for the installation materials, the first location is the area outside Room 8.27 LV Switch Room at G/F MDB. Corresponding location is shown in the following sketch and bracketed in **RED**.

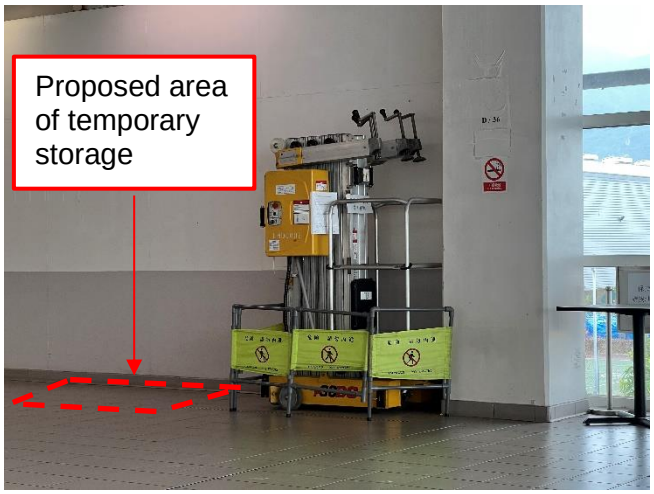


Material Delivery Route and Temporary Storage Area in G/F MDB

Another storage area will be located at the corridor next to 1/F Self Service Dining Area. Corresponding location is shown in the following sketch and bracketed in **RED**.



Material Delivery Route and Temporary Storage Area in 1/F Canteen, MDB



Proposed Temporary Storage Area at 1/F MDB

The general delivery route of those installation materials should be delivered by Truck, starting from the West Entry Gate of SHD. After obtaining entry by Security Staffs at Gate, the truck will go along the depot access road until MDB Entrance, and the materials will be unloaded at the Carpark nearby and deliver to the designated temporary storage area at G/F and 1/F respectively. The respective delivery routes in MDB are shown in above sketches in **BLUE**.

Materials to be stored in designated area will be fenced-off, and warning signs will be shown in the fences. They will be completely covered to prevent injury by stepping on uncovered materials.

8. Safety (Risk Assessments)

Risk Assessment attached in **Appendix H** has been prepared for all general activities. Specific safety procedures and precautions have been developed for all site operatives to follow. The Construction Team Leader together with the RSO, will supervise the implementation and make adjustment according to the actual site operations, in order to maintain a safe and amicable working environment.

General Site Safety

With reference to the Project Safety Plan, the following items need to be instituted through the course of the works described within this method statement.

Prevention of Fire

- Do not smoke or light fires near flammable equipment and fire exits.
- Familiarise yourself where to find firefighting equipment and fire exits.
- Recognise how to use the firefighting equipment.
- Keep means of escape clear and unobstructed.
- Do not obstruct access to fire extinguishers.
- Learn the operation and limitations of the fire extinguishers in your area.
- Do not hang clothing over or near heating equipment and no debris is allowed.
- Report smoke or fire to your supervisor immediately.

PPE

- All workers and site personnel shall wear safety helmet, reflective jacket and safety boots on site.
- Depending on work nature, different PPE will be required.
- CP(NT) or WPIC will ensure the workers are wearing suitable PPE while working in Depot Area.

Warning Signs

- Warning labels with emergency contact list will be provided during works.
- Temporary fence-off for working area should be provided if necessary.

Risk Assessment

All the potential hazards, consequences and mitigations will be analysed in the risk assessment attached in the **Appendix H.**

Plant & Equipment

1 Hand Tools

- All hand tools shall be taken away from working area after work completion.
- No damaged hand tools shall be used during works.

9.	**Environmental** (Environmental aspect & impact identification as well as mitigation measures)
	The following mitigation measures will be followed: - General works shall be carried out during normal working hours (08:00 to 18:00). No works using PME will be carried out after 07:00pm on Sunday and public holiday without a valid construction noise permit. - Dust control shall be strictly followed during works in Depot Area, appropriate protection and isolation work shall be provided prior to carrying out works. - The works shall follow relevant mitigation measures as required under the Environmental Permit (EP) / EP submission and Contractor's Environmental Management Plan (EMP).
10.	**Quality Control** (Inspection and Test Plan including hold points)
	To ensure the attainment of the required standard of works, the methods of working and the required works standards / acceptance criteria are defined in the method statement, inspection & test plans, and are communicated to relevant staff and workers carrying out the works. Day to day routine inspections of the works will be carried out by the Construction Team Leader, Site Engineers and Foreman as appropriate, to ensure that all works are performed following the requirements of these documents. Specific quality checks shall be carried out in accordance with the approved Inspection & Test Plan with "Hold Points" at critical elements for confirmation of compliance before proceeding further. Request for Inspection and Testing (RIT) for BS installations, inspections and T&Cs shall be issued to the MTR by the CSHK's project team. The Inspection & Test Plan for the works attached as **Appendix I** will identify all Hold Points and Witness Points. Following the Inspection & Test carried out, inspection and / or test records are to be prepared to indicate whether the specified requirements have been met. Records of Inspection and testing will be maintained and kept available for inspection and final handover as appropriate.
11.	**Appendices** (Identify and include additional information in the submission package)
	Appendix A – Drawings of Cable Routing and Details Appendix B – Switching Sequence of Isolation for Cable Termination Appendix C – Catalogue of Wall Scanner Appendix D – Certificate Appendix E – Sample of Ceiling Permit Appendix F – Sample of Permit-to-Drill/Core Appendix G – Sample of Permit-to-Work for Electrical Work Appendix H – Risk Assessment Appendix I – Inspection and Test Plan