CSF Reference Number:	CSHK	CET	CSF	C	2024	000157
ACC Reference Number:	1701	W	000	CSC	143	000534

EDOC for RP Fencing Installation (South Side)

Description:

Refer to 2nd HAZOP Meeting, dated on 22 Mar 2024 & 26 Mar 2024, enclosed herewith the EDOC Application for RP Fencing Installation (South Side), and associated hazard log, Meeting Minutes and presentation materials for your review.

Revision	Date	Prepared by	Checked by	Reviewed by		Approved by
A1	21/05/2024					
	Name:	David Lam	Vincent Li	Max Leung	Paul Freeman/ McGleenon	Eric Fong
	Position:	Senior Engineer	Construction Manager	Engineering Manager	Sr. Project Director/ A. Project Director	Project Director

Engineering Document for Works

Part A

Engineering Works No: ZCV20347

Change History	Issue/Rev.	Reason for Change	Date
	1/0	First Formal Issue	22/05/2024

Part B

1. F1 No. N/A

2. C&R Works No. N/A

3. Baseline Programme[i] Please refer to attached Appendix A

Design	Installation	Testing & Commissioning	Completion	Associated Actions (Refer to Item 19)
SHD Property Development Contract 1701 – Oyster Bay Station and Associated Works	June 2024	N/A	OCT 2024 (tentatively)	N/A

4. Description of works

4.1 Title **Contract 1701 – RP Fencing Installation (South Side)**

4.2 Reason Prior to the commencement of the bifurcation work at mainline and OYB station associated works, RP protective fence shall be installed prior to the commencement of piling and associated works.

4.3 Description

A. GENERAL

1701 Contractor will carry out the RP fence installation as per correlated latest version of method statement under **ACC Ref No. 1701-W-000-CSC-760-000339**. Precaution measures for various potential risks/ situation have been reviewed and summarized in the hazard log referring to **Appendix B**.

B. WORKING TIME

Mainline: 3 Nos of NTH per week (2:00am to 4:00am);

Tentative Programme: May to October 2024

[i] For any programme change or update, please refer to the Project Controller / Project Manager

C. PREPARATION WORK

Before commencement of the installation, the following works shall be completed.

C.1 Temporary Connection Details for Existing RP Fence

Some wire mesh of the existing RP fence will be temporarily removed to allow the transportation of plants and materials to track side (proposed works locations), and then install the wire mesh with U-Clamp in NTH (Details, please refer to **Appendix E, Para. 8.3.1**)

C.2 UU Detection

UU detection will be carried out before start of the works. (Details, please refer to separate submission **ACC Ref No. 1701-W-000-CSC-760-000253**).

C.3 Existing Signs Removal

Carrying out the site conditions survey with MTR to identify what existing signs will be maintained when install the new RP Fence. The affected existing signs will be installed at on the new RP fence with same chainage and positions (if possible).

(Details, please refer to **Appendix E, Para. 8.3.3**)

C.4 Existing Cable Troughs and Draw Pits

MTRCL Advance Work Contractor has diverted all cables from the existing cable trough onto the temporary cable brackets. Break the existing cable troughs by handheld breaker and pack into small size, remove it manually, and the existing cable drawing pits will be partially removed by portable hand-held breaker to provide the space for RP Fence Installation.

(Details, please refer to **Appendix E, Para. 8.3.4**)

C.5 Ground Levelling & Earthing Installation

Ground levelling and earthing installation will be carried out after the site clearance and cable trough, cable draw pit and signage removed. Granular sub-base or concrete blinding will be used for ground levelling depending on the actual site condition.

(Details, please refer to **Appendix E, Para. 8.3.5**)

C.6 Site Clearance

Site clearance shall be completed and existing ground shall be levelled up before commencement of RP fence installation.

C.7 Setting Out

The location of RP fence will be set out at the co-ordinates shown on the Construction Drawings or as agreed with MTR's representatives on site.

Once the location has been set out a joint inspection will be held with MTR's representatives on site and other stakeholders

Referring to the railway safety requirements and construction drawings, the proposed RP fence is close to the OHL mast / track, CSHK will further verify the site conditions with MTR / Depot Yard Master (DYM) representatives onsite to ensure that the proposed location meets the minimum safety distance and take relative precautions, such as de-energize, before commencement of the installation work.

(Details, please refer to **Appendix E, Para. 8.4**)

C.8 Trial Pit

Trial Pits will be carried out in accordance with Permit-to-Dig System before start of the works. For details, please refer to separate submissions **ACC Ref. No. 170-W-000-CSC-760-000115**.

C.9 Temporary Drainage System Supply

Wetsep will be set up when fencing / waterfilled barriers once installed.

C.10 Lifting Operation

The operator of crane lorry / mobile crane shall ensure a clear and unrestricted view of the load carried in prior to lifting works. The ground condition where lifting crane to be sit shall be checked to ensure to have adequate bearing capacity and the lifting load shall not exceed 80% of the safe lifting load of the lifting crane. Lifting supervisor will be engaged and the lifting zone will be fenced off. Lifting work required to lift above, over and in the close vicinity of the railway tracks and OHL, the relevant approved EDOC shall be followed.

C.11 Pre-construction survey

Pre-construction survey, Survey and UU detection will be carried out and completed before the commencement of the works, survey of existing MTR equipment at ground level. Reports to be submitted to MTR, showing the protections applying to the MTR equipment.

D. **INSTALLATION PROCEDURE**

The RP Fence Installation Works will be carried out in close proximity to the existing TCL mainline where proper railway protection measures need to be in place before commencement of any physical site works. Referring to (Library) Working Paper No.6 & the approved BUGN – Railway Protection, a minimum 4.5 m High RP Fence is required for construction activities that do not require plant / machinery with a high boom or where there are no overhead line (OHL) masts on that particular side of the track. A minimum 7 m high RP Fence is required for

activities which require the use of plant / machinery with high booms adjacent to the existing RP Fence, or where the OHL masts are located on that side of the existing track. The minimum clearance between the RP Fence and the OHL line return wire is required to be at least 850 mm in any direction.

(Details, please refer to **Appendix E, Para. 8.4**)

E. EXISTING GATE RELOCATION

With reference to the approved BUGN, the southern side existing access gate 50.84U MAG shall be maintained at the same chainage / location once the new RP Fence has been installed. Approval shall be obtained from RP, SC-Air and TC before commencing the relocation works. The existing gate will be re-used and the relocation works shall be completed in the same NTH track access.

(Details, please refer to **Appendix E, Para. 8.9**)

F. LIFTING ARRANGEMENT

a. The crane lorry will set up in Works Area W1;

b. And then lift up the object 300mm from the ground, keep 3m distance from the object, hold 3 second;

c. Lift the concrete block over the existing RP fencing, then lower down the concrete 300mm above ground, and then swift the concrete to proposed locations slowly.

d. Lift the concrete block to proposed locations.

e. Lift the fence panels to the proposed alignment slowly, and two workers will assist that. One worker will use the tag line to control the position of RP Fence Panel; and the other worker will swift and hold the RP fence in right position.

(Details, please refer to **Appendix E, Para. 8.10**)

G. MITIGATION MEASUREMENT

- No part of the mobile crane / crane lorry will work beyond the water-filled barriers and the maximum lifting load shall be <80% of S.W.L. (LA / LG must be counted in the lifting loading).
- All lifting operation by crane lorry / mobile crane, the mobile crane / crane lorry outriggers must be fully extended and the unsafe zone should be fenced off.
- Provision of sufficient lighting during lifting operation when necessary.
- Adequate barriers for the lifting safety zone shall be arranged.
- Crane lorry / mobile crane shall be set in position that its jib is pointing away from existing railway premises or facilities if reasonably practicable when idle such that possible collapse of

jib would not fall onto nearby railway premises.

- CCTV and C-smart will be provided at Works Area W1 to enforce the site security (Details please refer to **ACC Ref No. 1701-W-000-CSC-760-000032**).

4.4	Application	RP fence installation at the mainline (South Side) shall be carried during NTH 2:00 am to 4:00 am
4.5	Category	N/A
4.6	In-house/Contract	CONTRACT 1701
4.7	Estimated Cost	Under SHD Property Development Contract 1701 – Oyster Bay Station and Associated Works
4.8	Nature	Trial project carried out by HKTS Business Unit and costing $4.5M or above ☐ **Yes** ☑ **No** If yes, please attach the SMART Success Criteria for Trial [Template can be obtained via the link below http://opinfomall.corp.mtrc.com/dept_T&ES/tes_admin/other%20files/smart%20success%20criteria%20for%20trials.docx]

5. Name and Title of Responsible Parties

Design Manager / Chief Construction Manager	Project Controller / Project Manager	Implementer / Senior Construction Manager	Maintainer / Asset Owner
CHONG Daniel Hing Pong **Chief Design Manager – OYB**	**KOO Raymond Kai On** **Chief Construction Manager – OYB Civil**	**KOO Raymond Kai On** **Chief Construction Manager – OYB Civil**	**KOO Raymond Kai On** **Chief Construction Manager – OYB Civil**

6. Implication on Safety

- Affecting / modifying on Safety Critical System(s)[ii] ☐ **Yes** ☑ **No**
  If no, please provide justification.

There are no Safety Critical System involved

- Confirming ISA Requirement for SCS Related Change Assessment Form[iii] is completed (ref. P/OD/SMS/004) ☐ **Yes** ☑ **No**
  If no, please provide justification.

There are no Safety Critical System involved

- Modifying on PSD/APG/MGF/Floodgate [iv] [Specific Safety Related System(s)] ☐ **Yes** ☑ **No**
- Confirming ISR Requirement for Safety Related System Related Change Assessment Form[v] is completed (ref. P/OD/SMS/004) ☐ **Yes** ☑ **No**
  If no, please provide justification.

[ii] The list of Safety Critical Systems (SCS) stipulated in Exhibits E1 of P/OD/SMS/004 refers.

[iii] For modification work on SCS or affects SCS, project controller of C&R work shall complete the assessment form.

[iv] The list of Safety Related Systems (SRS) stipulated in Exhibits E1 of P/OD/SMS/004 refers. Independent safety review on operation and control, as well as signalling interface, shall be deployed for i) PSD and APG (automatic sliding door), ii) Floodgate and iii) MGF.

There are no Safety Critical System involved

• Mitigation of R1 / R2 Hazards	☐ **Yes**	☑ **No**
• Affecting Signal Sighting (ref. P/OD/SMS/028) If yes, please specify	☐ **Yes**	☑ **No**
• Affecting maintenance or operational requirements e.g. Safety-related Application Conditions (SRAC) / Safe Operating Requirements (SOR) If yes, please specify in Section 19.	☐ **Yes**	☑ **No**
• Submission of a paper to SAFTEC[vi] If yes, please specify the paper number and if the paper has been accepted by SAFTEC	☐ **Yes**	☑ **No**

1. CP(T) or CP (NT) shall be full time looking after the railway safety and report to the OCC / SC daily before and after the construction works. Full-time supervision shall be carried out by MTR Project Team under the approved MS during the construction work. Trucks and workers shall be restricted to use a designated route as delivery and worker's pedestrian route within the site which shall be further agreed with the SHD Manager / YM.
2. Proper safety barriers shall be erected to demarcate the work site from the railway area.
3. Proper personal protective equipment shall be employed while carrying out of works.
4. The 1701 Contractor shall carry out temporary pedestrian / traffic diversion and implement TTM wherever the works will interfere with existing roads, footways or other ways over which there is a public or private right of way. Minimum width of EVA will be maintained at all times during the works.
5. Delivery of equipment shall be considered carefully and avoid damaging any structure on site such as depot warehouse, OHL, track work, light post, etc.
6. Measures including sandbags and standby water pump shall be provided to avoid flooding.
7. Designated works area shall be fenced off by proper safety barriers with warning notices and shall be securely fastened together to prevent unauthorized entry. The detailed safety measures shall be specified in the method statement for the cable bridge construction works.
8. All workers shall receive Railway Safety Induction training and follow Railway Safety Rules (RSR).

The contractor's person-in-charge (CPIC) shall be present at the work site at all times of work. The responsible person shall ensure that all sources of ignition are removed, all power supplies are isolated, and the work site is in a safe condition before leaving the site.

[v] For modification work on PSD/APG/MGF/Floodgate [Specific Safety Related System], Project Controller of C&R work shall complete the assessment form. E4 of P/OD/SMS/004 refers.

[vi] Refer to SAFTEC ToR in Operations Knowledge Mall, submission of a paper to SAFTEC is required for engineering work involving:-

- application of new technology;
- modifications to approved technical standards on operational / occupational / system safety (including deviations from approved technical standards);
- improvement on safety of the railway and other prescribed businesses in Hong Kong by mitigating R1 / R2 hazards; or
- modification which may induce high consequence risk including derailment or train collision which affecting rail integrity / switch and crossing integrity / track adhesion performance

7. Implication on Fire Safety

- Affecting / modifying on Fire Safety System(s) ☐ **Yes** ☑ **No**

1. Smoking is not permitted on site.
2. Storage of flammable and dangerous materials are prohibited.
3. Cleaning of garbage shall be carried out regularly to maintain good housekeeping.
4. Fire extinguisher shall be provided at site container offices and each work front with mechanical plants/fire risk as identified in risk assessment (part 5 below).
5. Risk assessment shall be carried out to identify safety and fire hazard as well as the relevant control measures.
6. Grass cutting shall be arranged before any hot works.

- Implication to existing Fire Service Installations (FSIs) ☐ **Yes** ☑ **No**

  Example to implication:

  - Obstructions to the existing active FSIs[vii], including but not limited to sprinklers, detectors, hose reels, smoke curtain, natural smoke vent, some extraction outlet etc.

  If yes, please provide the justification to demonstrate the compliance of statutory requirement.

8. Deployment of Licensed Staff on Safety Critical / Safety Related Work

This is not a safety critical / safety related works, but the following measures will be implemented to ensure safety.

1. Contractor shall work in compliance with the Corporation's railway safety rules and procedures.
2. CP(T) or CP(NT) shall be deployed on site responsible for arranging protection and supervision of working parties for works carried out inside operating railway premises.
3. The 1701 Project Team CIOW and Safety teams will also put full teams on work supervision and site safety during the construction.

9. Implication on Operating Procedures

No implication on operating procedures.

10. Statutory Submissions

[vii] Refer to M&W Standards for the definition of obstruction.
1. S/EM-fss/MW/04(99) - Material & Workmanship Standard for Sprinkler System - Clause 10.10 & 10.17.
2. S/EM-fss/MW/03(99) - Material & Workmanship Standard for Fire Hydrant / Hose Reel System - Clause 7.1, 10.1, 11.13 & 11.14.
3. S/EM-fss/MW/02(99) - Material & Workmanship Standard for Automatic Fire Alarm and Detection System - Clause 4.1.10 to 4.1.13.

Are there any statutory submissions ☑**Yes** ☐ **No**

If yes, please state the details:

The works in this EDOC are covered under the Building Ordinance. Statutory submissions with the Buildings Department are handled by CSHK. Construction drawings are attached in Appendix C.

[State any submission/approval dates and consequences of non-approval by external statutory parties]

11. Design Capacity / Design Limit[viii]

All design works are designed to MTR NWDSM, M&W specification and general specification, the related code of practice and HK regulations.

The temporary works for shoring support or working platform would be certified by nominated Temporary Works Co-ordinator (TWC), checked by TCPs and approved by MTR CWBU.

12. Electromagnetic Compatibility

No impact on the electromagnetic compatibility.

13. Implementation, Inspection, Testing or Commissioning Instruction

- Prior to the commencement of works, the Contractor shall provide submission including detailed method statements with Inspection & Testing Plan (ITP) to MTR for approval.
- Before submission of EDOC, the method statement and ITP has been approved.
- The proposed work shall be inspected and checked by MTR CSHK team under related ITP procedure, and will be registered by digital RISC forms under iSuper system for quality control.
- All construction works shall be carried out according to the approved method statements and agreed safety plans and measures.

13.1 State the pre-requisite tests / safety precautions before allowing an item / system to be put in operation/testing on the Operating Railway, e.g. gauge checking, approach-locking distance, signal sighting etc., for:

- works on a Safety Critical System, or
- works on other items / system which may result in disruption to train services for more than 20 minutes or to station operation for more than 1 hour, if the change causes the item / system / its interfacing system(s) to fail to perform its intended function.]

13.2 Safety independent check [~~is~~/is not *] required for the installation, T&C in this modification.

[If not required, please provide justification.

Safety independent check is required for the modifications to safety critical systems / equipment / items as defined in the divisional procedure P/OD/SMS/004.]

There are no T&C modification works.

[viii] Refer to P/OD/AMS/015 for the definition, use and updating of design limits.

13.3 On-Site Design Verification [~~is~~/is not *] required after Testing and Commissioning for the installation of this modification,

[Provide justification particularly when no or sample check on On-Site Design Verification is required by P/OD/AMS/015.]

NO on-site design verification is required, as no major modification on existing equipment and / or safety critical systems is envisaged for these proposed monitoring points. Aside from on-site verification and confirmation of the monitoring locations (as-built records to be submitted), it is not expected that other design specific requirements checking / verification will be required

14. Design Standards / Manuals / Procedures / References

- Works to be designed and constructed to comply with the latest requirement of: -
- Contract 1701 Scope of Work
- MTR New Work Design Standard Manual (NWDSM)
- MTR Operation Division Safety Requirement and Information for Contractors
- Operation Division Railway Safety Rule
- Approved method statement

15. Environmental Management

The Contract shall follow all requirements and conditions set on Environmental Permit issued by EPD. All construction waste, dust and noise will be controlled during construction.

16. Configuration Management

N/A

17. Application to New Extension Projects

N/A

18. Other Concerns / Instructions

Prior to site construction, the Contractor shall conduct site survey, route verification and measurement.

19. Impact of the works (Please mark the appropriate check box)

[State any concerns (other than those mentioned in other parts of this EDOC) that this test, trial or modification may have]

Impact on			Responsible Parties (Name & Title)	Actions Required
☐	19.1	Operations Manuals / Procedures	N/A	N/A
☐	19.2	Maintenance Manuals / Procedures / Work Instructions/ Schedules	N/A	N/A
☐	19.3	Spare parts catalogues and stock levels	N/A	N/A
☐	19.4	Interfaced Systems	N/A	N/A
☐	19.5	Drawings, and schematic and wiring diagram if applicable	N/A	N/A
☐	19.6	Training for staff	N/A	N/A
☐	19.7	Registration of new assets[ix]	N/A	N/A
☐	19.8	Any other related matters (please specify)	N/A	N/A

20. Incoming Goods Inspection (IGI) Requirements

- The contractor will be responsible for the inspection of all material prior to the installation on site.

21. FMECA

[FMECA is mandatory for engineering works involving any of the following:

- Change to a SCS / introduce a new SCS
- Change to PSD/APG/MGF/floodgate [Specific SRS]
- Affecting or Interface with SCS
- Act as measures to mitigate R1/ R2 hazards
- Change to C1/ C2 systems / equipment or introduce a new C1/C2 system / equipment
- Introduce a new design (i.e. new hardware or change to hardware / modify a hardware involving non-standard design)
- Redundancy for systems on controlling / carrying / supplying power to Signalling or Power Remote Control
- Change to a revenue-critical equipment or introduce a new revenue-critical equipment
- Change to P-Way systems/equipment[x] or interface with P-Way systems/equipment

[ix] Remind Project Controller and/or Lead Maintainer to register the new assets according to CGI 239 and Asset Registration guideline.

[x] Involving high consequence risk including derailment or train collision which affecting rail integrity / switch and crossing integrity / track adhesion performance.

The engineering works involving any of the above-mentioned items If no, please provide justification. ☐ **Yes** ☑ **No**

The captioned works do not involve the above items.

22. Concept of Design (ConDes)

ConDes[xi] is mandatory for engineering works involving any of the following:

- SCS Design Change
- Design change for PSD, APG, MGF and floodgate [Specific SRS]
- Change to C1/C2 systems/equipment or introduce a new C1/C2 systems / equipment
- Redundancy for systems on controlling/ supplying power to Signalling or Power Remote Control
- Modification affecting track adhesion performance / rail integrity / switch and crossing integrity
- New design affecting inter-system interface
- Application of technology that is newly introduced in MTR

The engineering works involving any of the above-mentioned items? If yes, please attach the ConDes to this EDoc. If no, please provide justification[4]. ☐ **Yes** ☑ **No**

The captioned works do not involve the above items

23. Safety Impact of Trackside Equipment Installation – SG Infringement

[xi] Project Definition Documents such as Service Requirement Document (SRD), Functional Requirement Manual (FRM) might be used as a substitute to ConDes.

23.1	Is the gauging and clearance assessment required according to P/OD/AMS/041? If no, please provide justification. _____	☑	**Yes**	☐	**No**
23.2	Is the clearance requirement compiled with the requirement in S/NT-Saf/DS/01(01)? If no, please state the endorsed SAFTEC Paper number and/or approved Operations Engineering Standard (OES) Waiver Request number which has/have been obtained. _____	☑	**Yes**	☐	**No**
23.3	State whether the trackside installation of fixed equipment with potential hazard[xii] of Structure Gauge (SG) infringement during operations and maintenance. If yes, please quote the hazard log reference and/or the ASRisk ID. The preventive / monitoring measure is stated in the hazard log in Appendix B to mitigate the potential hazard. If no, please provide justification. _____	☑	**Yes**	☐	**No**

24. New / Modified Trackside Installation in EAL

	Is earth/equipotential bond required to add or modify on the traction return rail? If yes, please seek approval from EAL Bonding Review Working Group [xiii] (EALBRWG) and attached the endorsed form as record. _____ If no, please provide justification. No works in EAL	☐	**Yes**	☑	**No**

[xii] The potential gauge infringement hazards during operations and maintenance, include operation/working condition and potential failure impacts on the systems, equipment or facilities.

[xiii] For EAL bonding application form, applicant shall seek MM-S&T EAL.

Approval List for Works Requiring EDOC Approval (Engineering Works No. : ZCV20347)

Responsibilities	Name & Title	Signature	Date
Prepared by *(Designer or delegate)* [1] *(SCM or delegate)*	**YIU Alex Chun Ting** **Sr Construction Engineer – Civil**		
Checked by *(Design Manager or delegate)* [1] *(SCM or delegate)*	**Adrian Tan** **Sr Construction Manager - Civil**		
Checked by [2] *(GM-PP&D(O) or delegate)*	**CHAN Taky Tsun Kei** **Chief Projs Plan &** **Dev Mgr (Ops)**		
Approved by [3] *(On behalf of CCB)*	**N/A**		
Approved and authorised by [6] *(Design Manager from HKTS only)*	**N/A**		
Approved by [4] [1]*(Design Manager or CCM from CWBU / HKPBU)*	**CHONG Daniel Hing Pong** **Chief Design Manager – OYB** **KOO Raymond Kai On** **Chief Construction Manager – OYB**		
Independent Checked by [5] *(COAM / SOSoAM or delegate)*	**N/A**		
Endorsed by [8] *(Lead T&ES Representatives)*	**NG Patrick Chi Chung** **Lead Civil&Stn Fac Engg Mgr** **LUI William Ching Man** **Acting Lead Design Mgr-PWEngg**		
Authorised by [7] *(CSE(Ops) or COES&I)*	**CHAN HK Hing Keung** **Chief of Ops Engg Serv & Inno** **TANG Simon Siu Cheung** **DGM-Technical & Asset Engg**		
Endorsed by [9] *(Maintainer)*	**KOO Raymond Kai On** **Chief Construction Manager – OYB Civil**		
Endorsed by [10] *(Asset Owner)*	**KOO Raymond Kai On** **Chief Construction Manager – OYB Civil**		
Endorsed by [11] *(Head of Line Group Management /HTO or delegate)*	**LEE Andy Po Wing** **Chief Ops Mgr – AEL, TCL & DRL**		

Responsibilities	Name & Title	Signature	Date
Endorsed by *(Project Controller)*	**KOO Raymond Kai On** **Chief Construction Manager – OYB**		
Endorsed by	**FAN Dave Pui Kiu** **Sr. Railway Protection Engineer**		
Endorsed by *(SHD Landlord)*	**TSUI Barry Ka Fai** **Senior Depot Manager - SHD**		

Notes:

[1] Applicable to works on the Operating Railway by Capital Works Business Unit or Hong Kong Property Business Unit.

[2] Check is required by:- GM-PP&D(O) or delegates when (i) the work is Extension related (e.g. new lines) or (ii) the changes will be adopted in New Extension Projects as stated in Section 17; or (iii) when the work is major C&R works (e.g. station modification, ped-links etc).

[3] Approval by relevant CCB(s) is required when works involves changes of software and configurations under the (P/OD/AMS/012) System Configuration Management and Change Control Procedure

[4] Approval by Design Manager(s) or Chief Construction Manager (CCM) from CWBU/HKPBU is required for works on the Operating Railway undertaken by Capital Works Business Unit or Hong Kong Property Business Unit prior to the authorisation by COES&I or CSE(Ops).

[5] Independent Check is required for works which affect / modify on Safety Critical Systems or modify PSD/APG/MGF/Floodgate [Specific Safety Related Systems] or for mitigating R1/R2 hazards of the Operating Railway; and shall be carried by Operations Assurance Section according to the scope of modification.

[6] Approval by Design Manager(s) from HKTS is required for all works on the Operating Railway undertaken by HKTS.

[7] Authorisation from CSE(Ops)/ COES&I on their respective discipline is required when the works is:
- affecting / modifying on Safety Critical Systems, or
- modifying PSD/APG/MGF/Floodgate [Specific Safety Related Systems]
- affecting the Fire Safety of the Railway, or
- for mitigating R1/R2 hazards, or
- works on OR undertaken by Capital Works Business Unit or Hong Kong Property Business Unit.

[8] Endorsement by Lead T&ES Representatives is required for works on the Operating Railway undertaken by Capital Works Business Unit or Hong Kong Property Business Unit prior to the authorisation by COES&I or CSE(Ops). The Lead T&ES Representatives shall be identified based on the relevant discipline of the lead designer.

[9] Endorsement by the relevant maintainer(s) is required when the works affect / introduce new maintenance procedures / practices.

[10] Endorsement by the relevant Asset Owner is required when the works affects the cost of ownership for or life expectancy of the asset.

[11] Head of Line Group Management's delegated representatives is:-

a.) COM for modifications on (i) station based systems for specific line and/or specific station(s) & (ii) train services related modifications;

b.) Head of Traffic Operation (HTO) for modification on OCC migration systems and train service related issues such as equipment alteration or new equipment provision which have impact to the train service.

Endorsement by (Head of Line Group Management/HTO)'s delegated representatives is required when the works affect railway operations or operating procedure.

Engineering Drawings affected by this Engineering Work

The following circuit diagrams shall be updated

< Please also fill in the "Requisition for Drawing Service" (OPM781D/R1/04.97) >

Drawing Title	Drawing no.

Summary of Comment Sheet (Engineering Works No. : ZCV20347)			
EDOC Clause No.	Commented by (and Date)	Comments	Action (including the decision and rationale if comment is not accepted)

	Appendices (Identify and include additional information in the submission package)
	Appendix A – Programme Appendix B – Hazard Log Appendix C – Construction Drawing Appendix D – BD Approval Drawing Appendix E – Method Statement (extract section 8.1 to 8.14)