Our ref: 258952/L083/FC/jy

ARUP

By Post & Fax (2147-0894)

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road, Wan Chai, Hong Kong

Attention: Mr Andy WONG Wing Hong (Asst Env Protection Offr (Metro Assessment) 24)

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8 Dec 2023

Dear Mr. Wong

Contract No. CM 4/2017
Independent Environmental Checker for Construction of Dry Weather Flow Interceptor at Cherry Street Box Culvert
Submission of Monthly Environmental Audit Report No.71

In accordance with Clause 2.1 of the Environmental Permit for Proposed Sewage Pumping Station and Dry Weather Flow Interceptor at Cherry Street Box Culvert (No. EP-523/2016), we are pleased to submit herewith four hard copies and one electronic copy of the Monthly Environmental Audit Report No.71 for your perusal.

If you require any further information, please do not hesitate to contact the undersigned.

Yours sincerely

Franki Chiu
Independent Environmental Checker

Enc

cc. DSD — Mr. Jason Cheung (one hardcopy)
Black & Veatch Hong Kong Limited — Mr. Joseph Ho (one hardcopy)
CMGC-TECEL Joint Venture — Mr. Benson Yau (one hardcopy)

Drainage Services Department

Contract No. CM 4/2017 Independent Environmental Checker for Construction of Dry Weather Flow Interceptor at Cherry Street Box Culvert

Monthly Environmental Audit Report No.71 (Nov 2023)

Monthly Environmental Audit Report

First version | Nov 2023

Job number 258952

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1 INTRODUCTION

1.1 Background

The existing Cherry Street Box Culvert (CSBC) is a reinforced concrete 8-cell stormwater box culvert; each cell is 4.8 m wide and 3.5 m high. The CSBC collects run-off from three upstream box culverts underneath Palm Street, Cheung Wong Road and a section of West Kowloon Corridor West and ultimately discharges into the New Yau Ma Tei Typhoon Shelter (NYMTTS).

At present, the water quality at NYMTTS and the odour associated with it remains unsatisfactory. It is believed that polluted flow, including those from the expedient connections, cross-connections between the foul water sewerage and the stormwater drainage system in the area found their way into the CSBC and in turn discharges into NYMTTS. Measures have to be taken to improve the present conditions at the CSBC.

In 2010, Environmental Protection Department (EPD) completed a West Kowloon and Tsuen Wan Sewerage Master Plans Study Review and recommended to construct a dry weather flow interceptor (DWFI) at the outfall of the CSBC. Upon commissioning of the DWFI system, the intercepted flow would be discharged to the existing sewerage system via proposed discharge sewerage.

The proposed DWFI system will comprise construction of a DWFI at the CSBC to intercept the dry weather flow (DWF) inside the box culvert and construction of a sewage pumping station to pump the intercepted DWF to the existing sewerage network via proposed twin rising mains.

The Project titled “Construction of dry weather flow interceptor at Cherry Street box culvert” mainly comprises the construction of (i) an underground DWFI with automatic penstocks at CSBC; (ii) a pumping station; (iii) an underground stormwater bypass box culvert; and (iv) about 270 metres of underground twin rising main from the pumping station in (ii) above to an existing sewer at Lin Cheung Road. The Project will be implemented under PWP Item No. 4380DS. The Project location is shown in **Figure 1**.

The Project is classified as a designated project under item F.3(b) (i), Part 1 of the Schedule 2 of the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO), since the proposed sewage pumping station has an installed capacity (average dry weather flow) of more than 2,000m^3 per day and its boundary is less than 150 m from an existing residential area.

A project profile (Register No. PP-527/2015) (“Project Profile”) entitled “Proposed Sewage Pumping Station and Dry Weather Flow Interceptor at Cherry Street Box Culvert” was submitted to Environmental Protection Department (EPD) under Application No. DIR241/2015. Permission to apply directly for environmental permit was granted by EPD in September 2015. An Environmental Permit (EP-

523/2016) ("EP") to construct and operate the Designated Project was issued to Drainage Services Department (DSD) on 23 December 2016.

According to the EP, DSD shall employ an Independent Environmental Checker ("IEC") to audit the implementation of all mitigation measures recommended in the Project Profile and required under the EP, and certify in writing in the monthly audit report full implementation of the mitigation measures during the construction phase of the Project

Arup was commissioned by DSD as the IEC in accordance with the conditions stipulated in the EP (EP-523/2016) for a period of 64 months from 8 January 2018.

1.2 Scope of the Assignment

Scope of work of this Assignment includes:

(i) Provide the continual services of an IEC as stipulated in the Project Profile and the EP and reporting the findings to the Employer and the Engineer. The role of the IEC shall be independent from the Contractors;

(ii) Conduct monthly site audits on the implementation of all mitigation measures recommended in the Project Profile and the EP and reporting the findings to the Employer and the Engineer;

(iii) Advise the Engineer and the Employer on environmental issues related to the implementation of environmental mitigation measures under Contract No. DC/2017/01;

(iv) Provide comments on the environmental aspects of the works programme, method statements and other relevant submissions by the Contractors;

(v) Attend the monthly Site Safety and Environmental Management Committee (SSEMC) meetings;

(vi) Report the findings of the site inspection and other environmental performance reviews to the Engineer and the Employer; and

(vii) Submit monthly audit reports to EPD and confirming in writing in the report full implementation of the mitigation measures as recommended in the Project Profile and EP during and upon completion of the construction works under Contract No. DC/2017/01.

2 Project Organization

2.1 Project Organization and Management Structure

The project organization and contacts of key personnel of the Project are shown in **Appendix A**.

3 Concise Overview of Assignment Period

3.1 Construction Activities in the Reporting Period

The construction activities carried out by the Contractor during the reporting period included the following:

- Defect rectification works was in progress.

The environmental performance was considered acceptable during the assignment period from 1 Nov 2023 to 30 Nov 2023.

4 Status on Implementation of Environmental Mitigation Measures

The potential environmental impacts and proposed mitigation measures to be incorporated into the design and construction of the Project are summarised in **Table 4.1** below.

Table 4.1 Summary of potential environmental impacts and proposed environmental mitigation measures

Mitigation Measures	Implementation Agent	Status
Dust nuisance		
1. Adopt dust control and suppression measures as stipulated in the Air Pollution Control (Construction Dust) Regulation.	Contractor (Construction Phase)	Implemented
2. Water spraying on exposed area and during excavation.		Implemented
3. Provide wheel-washing facilities.		Implemented
4. Cover stockpile of dusty materials by impervious sheets.		Implemented

Mitigation Measures	Implementation Agent	Status
5. Provide hoarding of not less than 2.4m high from ground level along the site boundary adjoining Hoi Fai Road.		N/A due to site constraint. (Contractor will increase the watering frequency as mitigation measures.)
6. Cover dusty load on trucks before they leave the construction site.		Implemented
7. Avoid concurrent excavation activities for construction of underground DWFI, underground emergency stormwater bypass culvert and CSBCSPS.		Implemented
8. Minimize area involving dusty construction activities by arrangement of construction activities and methods.		Implemented
Odour		
1. Locate the inlet chamber, screen chamber, valve chamber and wet well of the sewage pumping station underground and enclose them by a reinforced concrete structure. EP-523/2016 Specific Conditions 2.2 (i)	Contractor (Construction Phase) DSD (Operational Phase)	Implemented
2. Install and properly maintain a deodorizer with a forced ventilation system and an odour removal efficiency of at least 99.5%. EP-523/2016 Specific Conditions 2.2 (ii)		Implemented, supporting see Appendix C
Water Quality		
1. Control construction surface run-off according to ProPECC PN1/94, EPD's Practice Note for Professional Persons, Construction Site Drainage.	Contractor (Construction Phase)	Implemented
2. All chemical tanks and storage areas will be provided with locks and placed on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank.		Implemented

Mitigation Measures	Implementation Agent	Status
3. Install and properly maintain a standby pump and dual power supply. EP-523/2016 Specific Conditions 2.4 (i)	Contractor (Construction Phase) DSD (Operational Phase)	Implemented, supporting see Appendix D
4. Provide a telemetry system to transmit signals showing irregularity or operational problem of the sewage pumping station and the dry weather flow interceptor to the Stonecutters Island Sewage Treatment Works. EP-523/2016 Specific Conditions 2.4 (ii)		Implemented, supporting see Appendix E
Noise		
1. Adoption of standard control measures such as adopting quiet mechanical equipment, temporary noise barriers and good site practices etc.	Contractor (Construction Phase)	Implemented
2. Construction Noise Permit is required for construction work during restricted hours as defined under the Noise Control Ordinance.		Implemented
3. Locate the pumps and screening facilities of the sewage pumping station underground and enclose them by a reinforced concrete structure. EP-523/2016 Specific Conditions 2.3 (i)		Implemented
4. Install all outlets of the extraction fans with acoustic louvers. EP-523/2016 Specific Conditions 2.3 (ii)		Implemented
Waste Management		
1. Standard waste management measures and good site practices in waste handling, disposal and transportation will be implemented.	Contractor (Construction Phase)	Implemented

Mitigation Measures	Implementation Agent	Status
2. The Contractor will be required to sort all C&D materials and general refuse into different categories for reuse on site, recycling and disposal at designated public fill reception facilities or landfills. Disposal of C&D materials will be managed through the trip-ticket system as stipulated in DEVB TC(W) No. 6/2010.		Implemented
3. All chemical wastes due to maintenance of equipment will be handled, stored and disposed of in accordance with the requirements of the Waste Disposal (Chemical Waste) (Chemical) Regulation.		Implemented
4. General refuse will be stored and disposed of separately from general construction waste and chemical waste. The storage bins for general refuse will be provided with lids, which should be kept closed to avoid odour nuisance and windblown litter. General refuse will be removed regularly and disposed of to landfills.		Implemented
Landscape and Visual		
1. Erect site hoarding with decorative features that are compatible with the surrounding environment;	Contractor (Construction Phase) DSD (Operational Phase)	Implemented
2. Maintain site cleanliness and tidiness;		Implemented
3. Properly manage construction waste in the works area;		Implemented
4. Reinstate all temporary works areas to its original conditions upon completion of works.		N/A for the reporting month and shall be implemented in the later months
5. Implement and properly maintain the landscape and visual mitigation measures (e.g. rooftop greening, grasscrete, paving lock, vertical greening, permanent shrub planter, removable shrub planter, bench with shelter, and removable planter with trees) as shown in Figure 2 of the EP.		N/A for the reporting month and shall be implemented in the later months

5 Major Accomplishment

5.1 Deliverables

Deliverables completed in the reporting period are summarised in **Table 5.1**.

Table 5.1 Completed deliverables

Description	Submitted by IEC
Monthly Environmental Audit Report No. 70 (Oct 2023)	10 Nov 2023

Planned deliverables to be completed in the coming reporting period is summarised in **Table 5.2**.

Table 5.2 Planned deliverables

Description	Planned Submission Date	Status
Monthly Environmental Audit Report No. 71 (Nov 2023)	8 Dec 2023	On schedule

5.2 Meetings

No meeting was held in the reporting month.

5.3 Summary of Work Done

Upon commencement of the Assignment, accumulated numbers of IEC monthly environmental audit report submission and various kinds of meetings are summarized in **Table 5.3**.

Table 5.3 Summary of work done

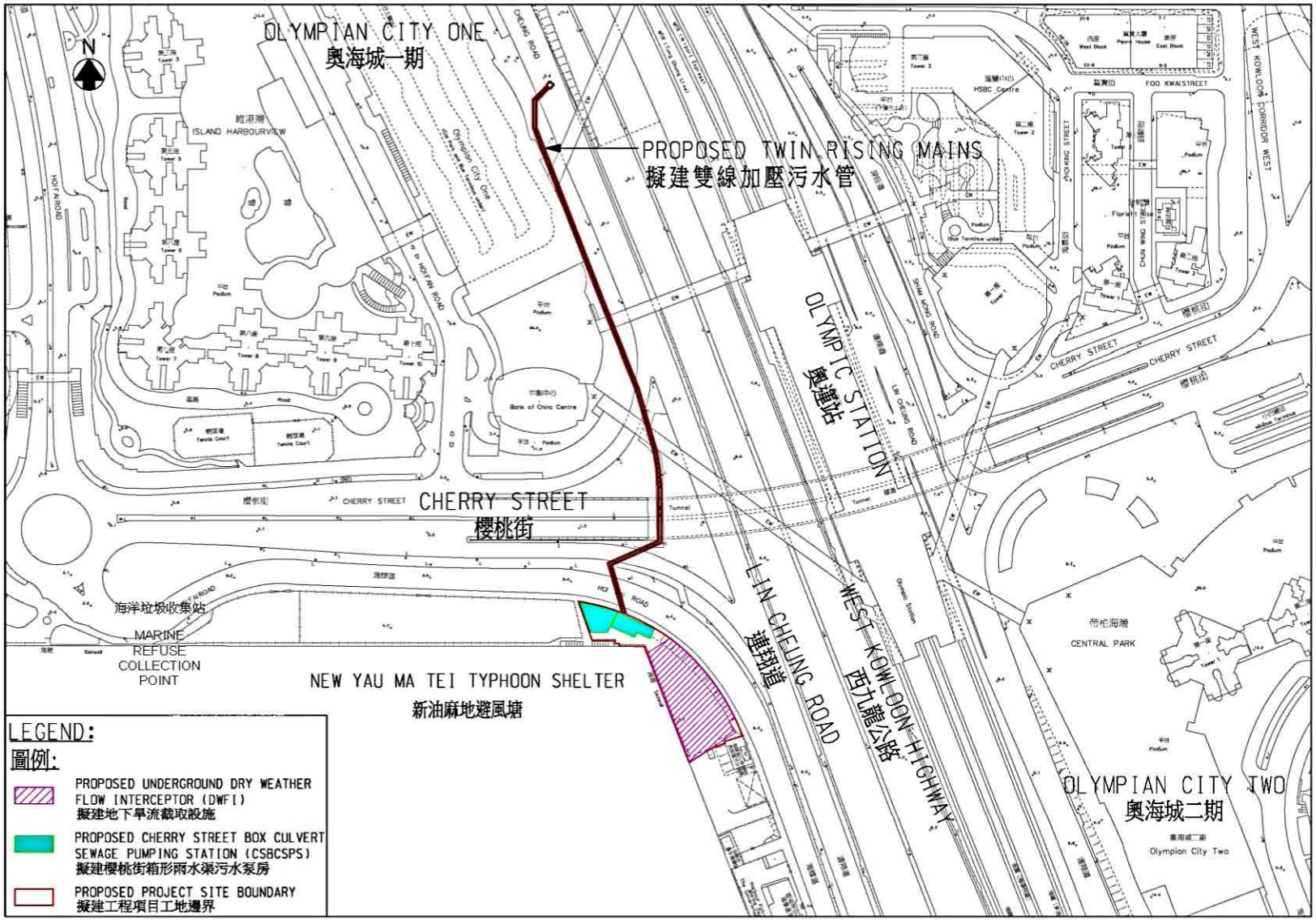
Work	Number
Reports	
IEC Monthly Environmental Audit Report	71
Meeting	
IEC monthly site inspection with DSD, Engineer Representative and Contractor	67
Project related meeting with DSD and EPD	1

5.4 IEC Site Audit

IEC site audit was conducted on 24 Nov 2023 with the presence of DSD, Resident Site Engineer, Contractor and IEC. No major site defect was observed in the reporting month. The IEC site audit checklist is given in Appendix B.

Figure 1

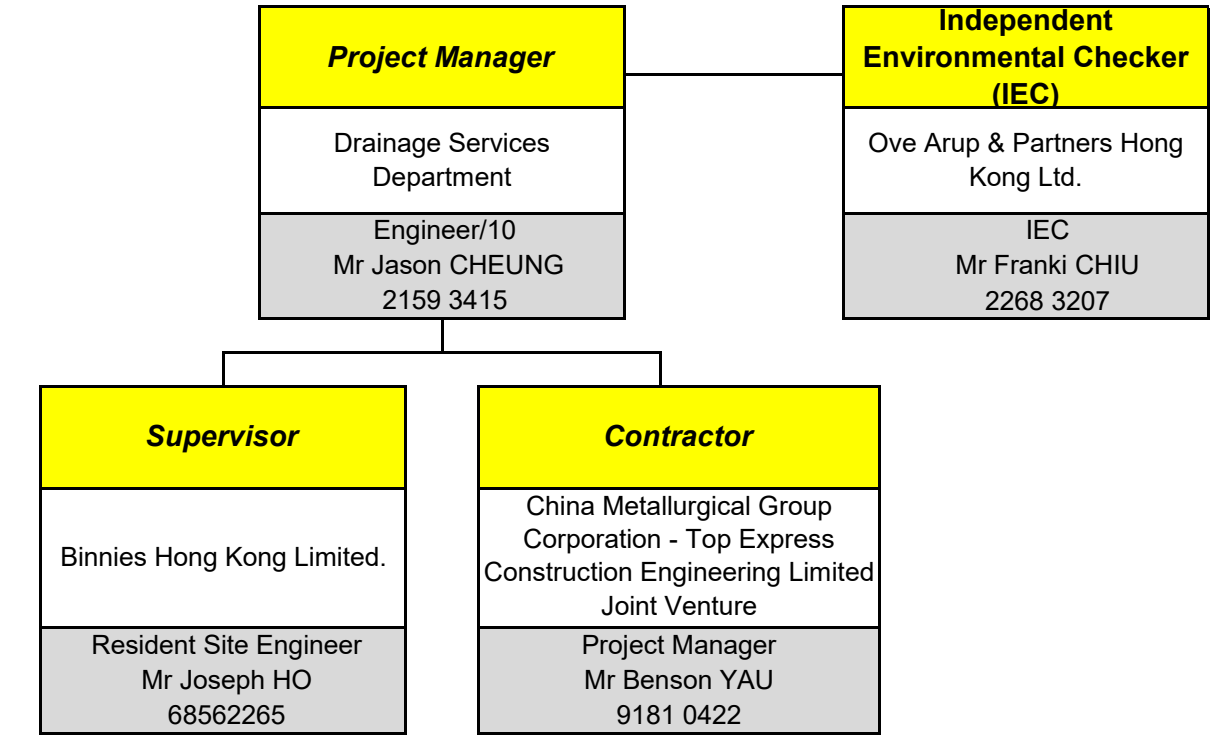
Project Location



Project Title – Proposed Sewage Pumping Station and Dry Weather Flow Interceptor at Cherry Street Box Culvert 工程項目名稱 – 櫻桃街箱形雨水渠擬建污水泵房及旱流截取設施	Environmental Permit No.: EP-523/2016 環境許可證編號：EP-523/2016
Figure 1 – Project Location Plan 圖 1 – 工程項目位置圖	

Appendix A

Project Organization and Contacts of Key Personnel


Project Manager
Drainage Services Department
Engineer/10
Mr Jason CHEUNG
2159 3415
Independent Environmental Checker (IEC)
Ove Arup & Partners Hong Kong Ltd.
IEC
Mr Franki CHIU
2268 3207
Supervisor
Binnies Hong Kong Limited.
Resident Site Engineer
Mr Joseph HO
68562265
Contractor
China Metallurgical Group Corporation - Top Express Construction Engineering Limited Joint Venture
Project Manager
Mr Benson YAU
9181 0422
Contractual Relationship

Appendix B

IEC Site Audit Checklist

Construction of Dry Weather Flow Interceptor at Cherry Street Box Culvert
Independent Environmental Checker
Environmental Site Inspection Checklist

ARUP

Ref. No.			
Project	Construction of dry weather flow interceptor at Cherry Street Box Culvert	**IEC**	Ove Arup & Partners Hong Kong Ltd.
		Client	Drainage Services Department
Contract No.	CM 4/2017	**Contractor**	China Metallurgical Group Corporation - Top Express Construction Engineering Limited JV
Inspected By	IEC's Rep. : Hilfion Tam		
	Cilent's Rep. :	**Engineer**	Black & Veatch HK Ltd.
	Engineer's Rep.:	**Inspection Date**	24-11-2023
	Contractor's Rep. :	**Time Period**	14:30 to 17:00

Part I Weather

Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Storm	☐ Rain	☐ Drizzle	☐ Hazy
Humidity	☐ High	☐ Moderate	☑ Low				
Wind	☐ Calm	☑ Light	☐ Breeze	☐ Strong			

Temperature 25 °C

No.	Part II Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?	☐	☐	☑	☐	☐	☐	
2	Is drainage system well maintained?	☐	☐	☑	☐	☐	☐	
3	Is drainage system adequately designed for storm flow?	☐	☐	☑	☐	☐	☐	
4	Are there dykes to surround areas of earthworks for flood protection?	☐	☐	☐	☐	☐	☐	
5	Are there perimeter channels at site boundaries to intercept storm runoff from outside the site so that it will not wash across the site?	☑	☐	☐	☐	☐	☐	
6	Are sediment control measures inspected & maintained after rainy storms?	☑	☐	☐	☐	☐	☐	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?	☑	☐	☐	☐	☐	☐	
8	Are these temporary ditches with silt retention and removal facilities?	☑	☐	☐	☐	☐	☐	
9a	Do permanent drainage channels have: sedimentation basin?	☑	☐	☐	☐	☐	☐	
9b	traps and baffles?	☑	☐	☐	☐	☐	☐	
10	Is site runoff prohitated from entering the river channel?	☐	☐	☑	☐	☐	☐	
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?	☐	☐	☑	☐	☐	☐	
12	Are there sedimentation tanks for settling runoff prior to disposal?	☐	☑	☐	☐	☐	☐	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?	☑	☐	☐	☐	☐	☐	
13b	with adequate capacity?	☑	☐	☐	☐	☐	☐	
13c	free from silt and sediment?	☑	☐	☐	☐	☐	☐	
14	Are there neutralisation tanks for concrete batching/mixing discharge?	☐	☑	☐	☐	☐	☐	
15	Is the discharge diverted to and treated in neutralisation tanks?	☑	☐	☐	☐	☐	☐	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?	☑	☐	☐	☐	☐	☐	
17	Are there oil interceptors in drainage system?	☑	☐	☐	☐	☐	☐	
18	Are oil and grease removed regularly (at least weekly)?	☑	☐	☐	☐	☐	☐	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?	☑	☐	☐	☐	☐	☐	
20	Are vehicles and plant cleaned of earth, mud and debris before leaving the site?	☐	☐	☑	☐	☐	☐	
21	Is a wheel washing bay provided at every site exit?	☐	☑	☐	☐	☐	☐	
22a	Is the wheel washing bay with: adequate design?	☑	☐	☐	☐	☐	☐	
22b	adequate settling & removal of sand/silt?	☑	☐	☐	☐	☐	☐	
22c	paved access road leading to exit?	☑	☐	☐	☐	☐	☐	
22d	access road sufficiently backfill toward	☑	☐	☐	☐	☐	☐	
22e	wheel wash bay?							
23	Is exposed earth stabilized after completion of earthworks?	☐	☐	☑	☐	☐	☐	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?	☐	☐	☑	☐	☐	☐	
25	Are open stockpiles covered during heavy rain?	☑	☐	☐	☐	☐	☐	
26	Are manholes covered and sealed?	☑	☐	☐	☐	☐	☐	
27	Are accessed roads protected by crushed stones or gravels?	☑	☐	☐	☐	☐	☐	
28	Are toilets connected to foul sewer or chemical toilets provided?	☐	☐	☑	☐	☐	☐	
29	Are debris and rubbish on site collected and disposed of properly?	☐	☐	☑	☐	☐	☐	
30	Is wastewater discharge licence available for inspection?	☑	☐	☐	☐	☐	☐	

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

No.	Part III Air Quality	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Are vehicles in the site travelling within speed limit of 10 km/h?	☑	☐	☐	☐	☐	☐	
2	Are site vehicle movement confined to designated haul roads?	☑	☐	☐	☐	☐	☐	
3	Is the public road around the site entrance kept clean and free from dust?	☐	☐	☑	☐	☐	☐	
4	Are areas of site with regular traffic movement have hard surface?	☐	☐	☑	☐	☐	☐	
5	Are the haul roads watered regularly to avoid dust disturbance?	☑	☐	☐	☐	☐	☐	
6	Are unpaved areas watered regularly to avoid dust disturbance?	☑	☐	☐	☑	☐	☐	
7	Does the water spraying truck work effectively?	☐	☐	☑	☐	☐	☐	
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	☑	☐	☐	☐	☐	☐	
9	Are the dusty materials sprayed with water during transfer operation?	☑	☐	☐	☐	☐	☐	
10	Do the site vehicles use the wheel wash at the site exits?	☐	☐	☑	☐	☐	☐	
11	Does the wheel wash work effectively?	☐	☐	☑	☐	☐	☐	
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☑	☐	☐	☐	☐	☐	
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	☑	☐	☐	☐	☐	☐	
14	Is dark smoke emission avoided?	☑	☐	☐	☐	☐	☐	
15	Are dusty materials properly covered?	☐	☐	☑	☐	☐	☐	
16	Are the bags of cement (more than 20) covered entirely?	☑	☐	☐	☐	☐	☐	
17	Are the excavated materials dropped at minimum practical height?	☑	☐	☐	☐	☐	☐	
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	☑	☐	☐	☐	☐	☐	
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	☑	☐	☐	☐	☐	☐	
20	Are air vents on cements silos fitted with fabric filters?	☑	☐	☐	☐	☐	☐	
21	Are weigh hoppers vented to suitable filters?	☑	☐	☐	☐	☐	☐	
22	Are there enclosures around the main dust-generating activities?	☑	☐	☐	☐	☐	☐	
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☑	☐	☐	☐	☐	☐	
24	Is open burning avoided?	☑	☐	☐	☐	☐	☐	
25	Are vehicles and equipment switched off while not in use?	☐	☐	☑	☐	☐	☐	
26	Are all trucks loaded to a level within the side and tail boards?	☐	☐	☑	☐	☐	☐	
27	Are materials transported by dump trucks with mechanical cover?	☑	☐	☐	☐	☐	☐	
28	Do the truck covers work effectively?	☐	☐	☑	☐	☐	☐	
29	Does ULSD used in the construction activities?	☑	☐	☐	☐	☐	☐	
30	Observable dust sources ☐ Wind erosion ☐ Loading/unloading of materials							☐ Vehicle/equipment movements ☑ Others Construction

No.	Part IV Construction Noise Impact	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	Are the construction works scheduled to minimize airborne noise nuisance?	☐	☐	☑	☐	☐	☐	
1b	groundborne noise nuisance?	☑	☐	☐	☐	☐	☐	
2a	Are the works or equipment sited to minimize airbrone noise nuisance?	☑	☐	☐	☐	☐	☐	
2b	groundbrone noise nuisance?	☑	☐	☐	☐	☐	☐	
3	Are all plant and equipment well maintained and in good operating condition?	☐	☐	☑	☐	☐	☐	
4	Are idling equipment throttled down or turned off?	☐	☐	☑	☐	☐	☐	
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☐	☐	☑	☐	☐	☐	
6	Are silenced equipment used where practicable?	☐	☐	☑	☐	☐	☐	
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	☐	☐	☑	☐	☐	☐	
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	☑	☐	☐	☐	☐	☐	
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	☐	☐	☑	☐	☐	☐	
10	Do air compressors have valid noise labels?	☐	☐	☑	☐	☐	☐	
11	Do compressors operate with doors closed?	☑	☐	☐	☐	☐	☐	
12	Are Construction Noise Permits available for inspection?	☑	☐	☐	☐	☐	☐	
13	Major noise source(s) ☐ Traffic ☐ Construction activities outside of site							☑ Construction activities inside of site ☐ Others

No.	Part V Waste Management and Contamination	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1a	General refuse: Is accumulation avoided?	☐	☐	☑	☐	☐	☐	
1b	Is receptacles (e.g. rubbish bins) available?	☐	☐	☑	☐	☐	☐	
1c	Is there regular and proper disposal?	☐	☐	☑	☐	☐	☐	
2a	Construction waste: Is there avoidance or minimization of construction waste generation (e.g. use of steel formwork)?	☑	☐	☐	☐	☐	☐	
2b	Is there on site segregation as far as practicable for reuse and recycle?	☑	☐	☐	☐	☐	☐	
2c	Is construction waste reused where practicable?	☑	☐	☐	☐	☐	☐	
2d	Is construction waste disposed at public dumping area or public landfill?	☑	☐	☐	☐	☐	☐	
2e	Are trip tickets available for inspection?	☑	☐	☐	☐	☐	☐	
3a	Chemical waste/waste oil: Is there designated storage area?	☑	☐	☐	☐	☐	☐	
3b	Is chemical waste/waste oil stored properly?	☑	☐	☐	☐	☐	☐	
3c	Is there proper disposal?	☑	☐	☐	☐	☐	☐	
3d	Are trip tickets available for inspection?	☑	☐	☐	☐	☐	☐	
3e	Is chemical waste license available for inspection?	☑	☐	☐	☐	☐	☐	
4a	Excavated material: Does excavated material appear uncontaminated (colour, odour)?	☑	☐	☐	☐	☐	☐	
4b	If contamination is suspected, is appropriate procedure followed?	☑	☐	☐	☐	☐	☐	
4c	Are trip tickets available for inspection?	☑	☐	☐	☐	☐	☐	
5a	Chemical/fuel: Is chemical/fuel stored in bunded area?	☑	☐	☐	☐	☐	☐	
5b	Is bund capacity adequate (>110% of the largest tank)?	☑	☐	☐	☐	☐	☐	
5c	Are storage areas provided with locks and located on sealed area?	☑	☐	☐	☐	☐	☐	
6	Are relevant license/permit for disposal of construction waste or excavated materials available for inspection?	☑	☐	☐	☐	☐	☐	
7	Is foam, oil, grease or other objectionable matters in water of nearby drains or sewer avoided?	☐	☐	☑	☐	☐	☐	

No.	Part VI Landscape & Visual Impact and Ecology	N/A	N/O	Yes	Rdr	Obs	N/C	
1	Is stripped top soil stored for re-use?	☑	☐	☐	☐	☐	☐	
2	Are retained trees protected from damage?	☑	☐	☐	☐	☐	☐	
3	Are compensatory trees planted and properly maintained?	☑	☐	☐	☐	☐	☐	
4	For trees identified for transplant in EP:							
4a	sufficient buffer zone allowed prior to transplant?	☑	☐	☐	☐	☐	☐	
4b	properly maintained following transplant?	☑	☐	☐	☐	☐	☐	
5	Is night-time lighting controlled to minimise glare to sensitive receivers?	☑	☐	☐	☐	☐	☐	
6	Is the screen hoarding compatible with the surrounding setting?	☑	☐	☐	☐	☐	☐	
7	Do the site clearance and tree felling works at the existing ardeid night roost only be carried out at wintering season (November to March inclusive)?	☑	☐	☐	☐	☐	☐	

No.	Part VII Others	N/A	N/O	Yes	Rdr	Obs	N/C	
1	Is a copy of the relevant permits/licences/registrations displayed on the Project site at all vehicular site entrances/exits or at a convenient location for public information all times?	☐	☐	☒	☐	☑	☐	

Part VIII Follow-up for the Pervious Site Audit

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Part IX Remarks

Rdr : NIL

Obs : ~~NIL~~
EP shall be displayed at vehicles entrance.

Part X Signatures

IEC's Representative

(Name: Hilton TAM)

Engineer's Representative

(Name: Joseph HO)

Client's Representative

(Name:)

Contractor's Representative

(Name: W-H-HO)

Notes:
N/A - Not Applicable; N/O - Not Observed; Yes - Compliance; Rdr - Reminder; Obs - Observation; and N/C - Non Compliance

Appendix C

Supporting for EP-523/2016 Specific Conditions 2.2 (ii)-

Deodorizer with odour removal efficiency of at least 99.5%

1. Please further provide methodology of the test, standards, test certificates of monitoring systems & sensers to secure the integrity of measurement data.

RTC:

Type of H2S Sensor: Crown Xgard Type 1

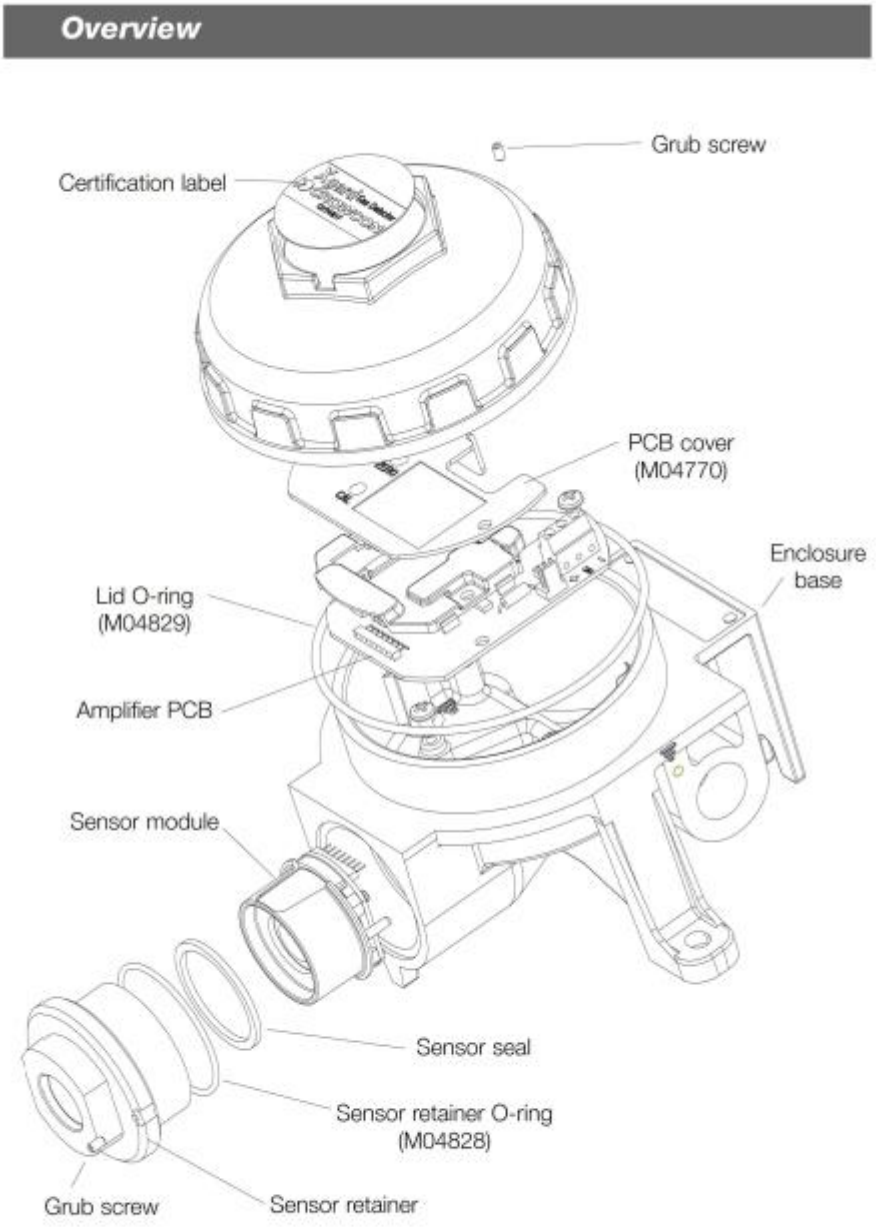
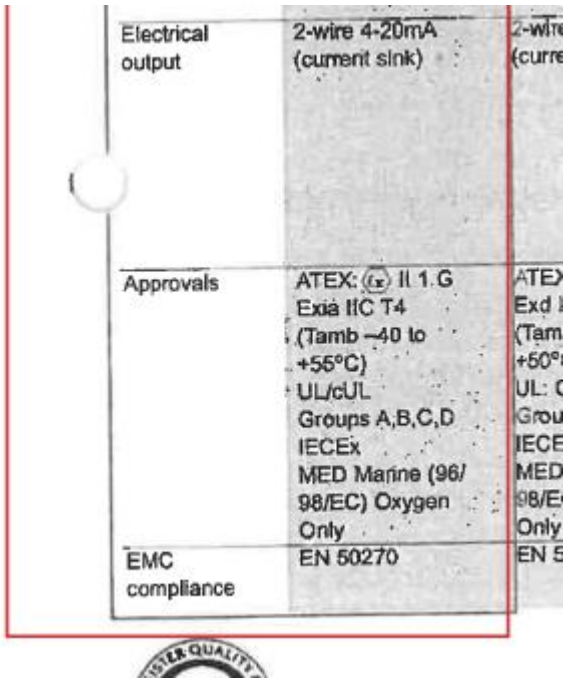
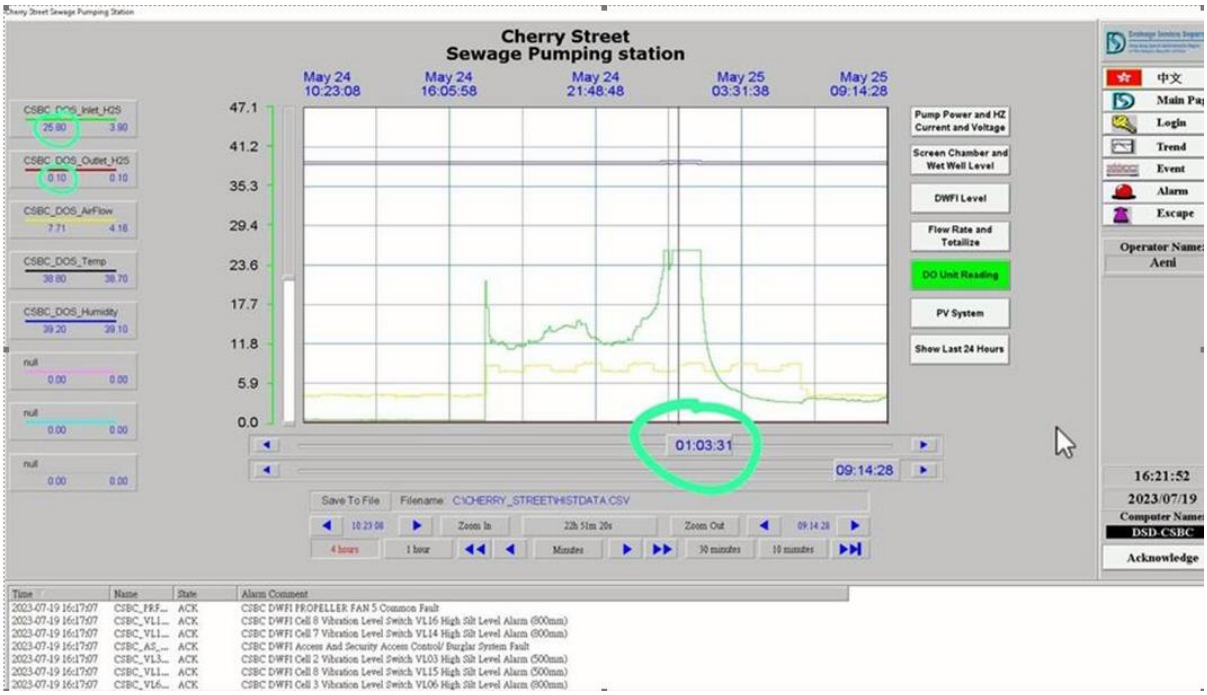


*Diagram 3: **Xgard** exploded view (part numbers shown in brackets where applicable. For part numbers not shown, see Spares and Accessories on page 61)*

Specification of Crown H2S Sensor



Crown sensor is a worldwide famous gas detection sensor and under design as EN 50270.



There are inlet (green line) and outlet (red line) Crown H2S sensor, thus, inlet and outlet H2S are 25.8ppm and 0.1ppm respectively, odour removal efficiency could at least 99.5% (25.8-0.1)/25.8 = 99.6%.

DRAINAGE SERVICES DEPARTMENT

CONSTRUCTION OF DRY WEATHER FLOW INTERCEPTOR AT CHERRY STREET BOX CULVERT

INSPECTION / ~~SURVEY CHECK~~ REQUEST FORM

Contract No. **DC/2017/01** Request No. EE-580

To Engineer's Representative

This is a new submission ~~/ re-submission (previous request no. _____)~~ *

(1) Location of Work	Pumping Station	Date & Time
(2) Work to be Inspected ~~/ Surveyed~~ *	Calibration of H2S Sensors for D.O. System (2nd)	2022-11-30 10:00
(3) Work Proposed after Approval of (2)		
(4) Remarks (if this is a re-submission state work carried out since last inspection ~~/ survey~~ *)		

REQUESTED BY : Benson Yau TIME : 15:04

DESIGNATION : Project Manager DATE : 2022-11-29

Received by IOW TIME : 16:32 DATE : 2023-01-11

NAME : Lui Man Ho SIGNED : AIOW (E&M)

Filled in by IOW NAME : Lui Man Ho Please arrange inspection ~~/ check setting out~~ *

SIGNED : AIOW (E&M) DATE : 2023-01-11

Filled in by Inspector ~~/ Surveyor~~ *

Work outlined in (2) above has been inspected ~~/ surveyed~~ *. Permission to carry out proposed work outlined in (3) above is given ~~/ not given~~ * for the following reason(s):
The functional test has been inspected, result as attachment.
This in no way limits or alters the Contractor's obligations under the Contract.
Form is returned to the Contractor at time stated below.

SIGNED : Lui Man Ho TIME : 16:36

DESIGNATION : AIOW (E&M) DATE : 2023-01-11

#COUNTERSIGNED : Lui Man Ho TIME : 16:36

DESIGNATION : AIOW (E&M) DATE : 2023-01-11

Received on behalf of Contractor by

NAME : CAI KWOK HONG TIME : 10:30

SIGNED : DATE : 12-1-23.

* Delete where inappropriate

\# Countersigned by Resident Engineer may be required for critical items

基電工程有限公司
REC Engineering Company Limited
(A wholly owned subsidiary of Yau Lee Holdings Limited)

SITE ACCEPTANCE TEST FORM

Project : Construction of Dry Weather Flow Interceptor at Cherry Street Box Culvert
Contract No. : DC/2017/01
Type of Test : **Calibration of H2S Sensors for D.O. System**
Location : LV Switchroom & D.O. Room
Testing Date : 30 Nov 2022 RFI No: EE-580

Calibration of H2S Sensors for D.O. System

Item	Description	Result
Inlet H2S Sensor before Activated Carbon Filter (Range 0 – 25 ppm)		
1.1	0ppm H2S Calibration for 4mA output	4mA Pass
1.2	25ppm H2S Calibration for 20mA output	20mA Pass
Outlet H2S Sensor after Activated Carbon Filter & After Filter (Range 0 – 5 ppm)		
2.1	0ppm H2S Calibration for 4mA output	4mA Pass
2.2	5ppm H2S Calibration for 20mA output	20mA Pass

Photo Record: As per attached
Drawing: As per attached
Equipment is/are in good condition. (Yes) / No

Remark:

Tested by		**Witnessed by**		**Witness by:**	
Name	: Lucas Cheng	Name	: Alex Lai	Name	: Sam Lai
Position	: Assistant Engineer (REC)	Position	: Site Engineer (CMGC-TECEL JV)	Position	: Atow (Binnies)
Signature	:	Signature	:	Signature	:
Date	: 30 Nov 2022	Date	: 30 Nov 2022	Date	: 30 Nov 2022

Content Page

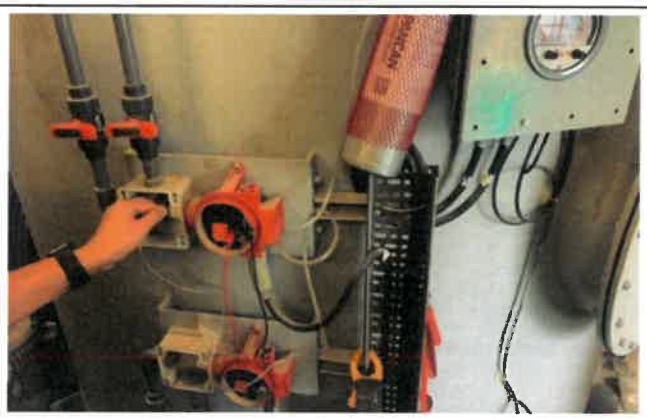
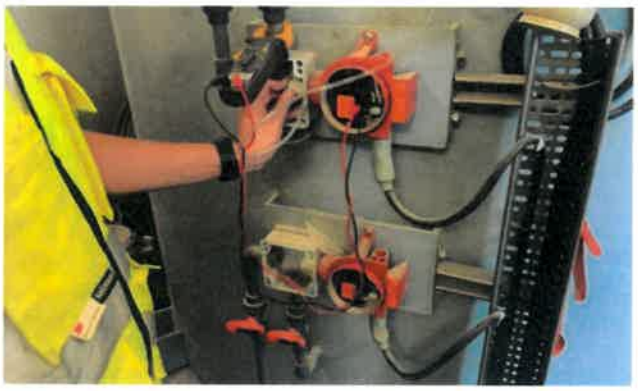
1. Photo Record

Contract No. DC/2017/01
Construction of Dry Weather Flow Interceptor
at Cherry Street Box Culvert

盈電工程有限公司
REC Engineering Company Limited
(A wholly-owned subsidiary of Yau Lee Holdings Limited)

Title: Calibration of H2S Sensors for D.O System (Part 2)

RFI No.: EE-580
Date: 30 Nov 2022

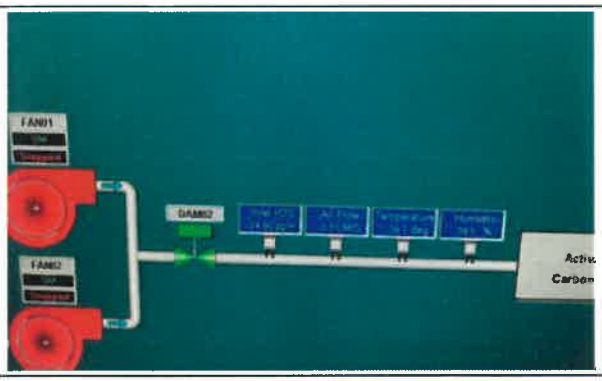
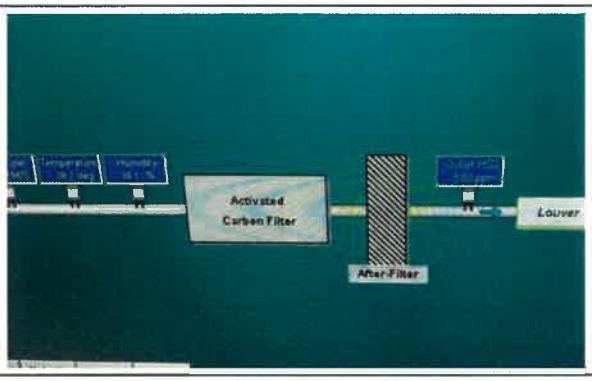
	
N2, 5ppm & 25ppm H2S Calibration Gas	25ppm H2S Calibration for Inlet H2S Sensor
	
5ppm H2S Calibration for Outlet H2S Sensor	5ppm H2S Calibration for Outlet H2S Sensor
	
N2 Calibration Gas for 0ppm Calibration	0ppm Calibration for Outlet H2S Sensor

Contract No. DC/2017/01
Construction of Dry Weather Flow Interceptor
at Cherry Street Box Culvert

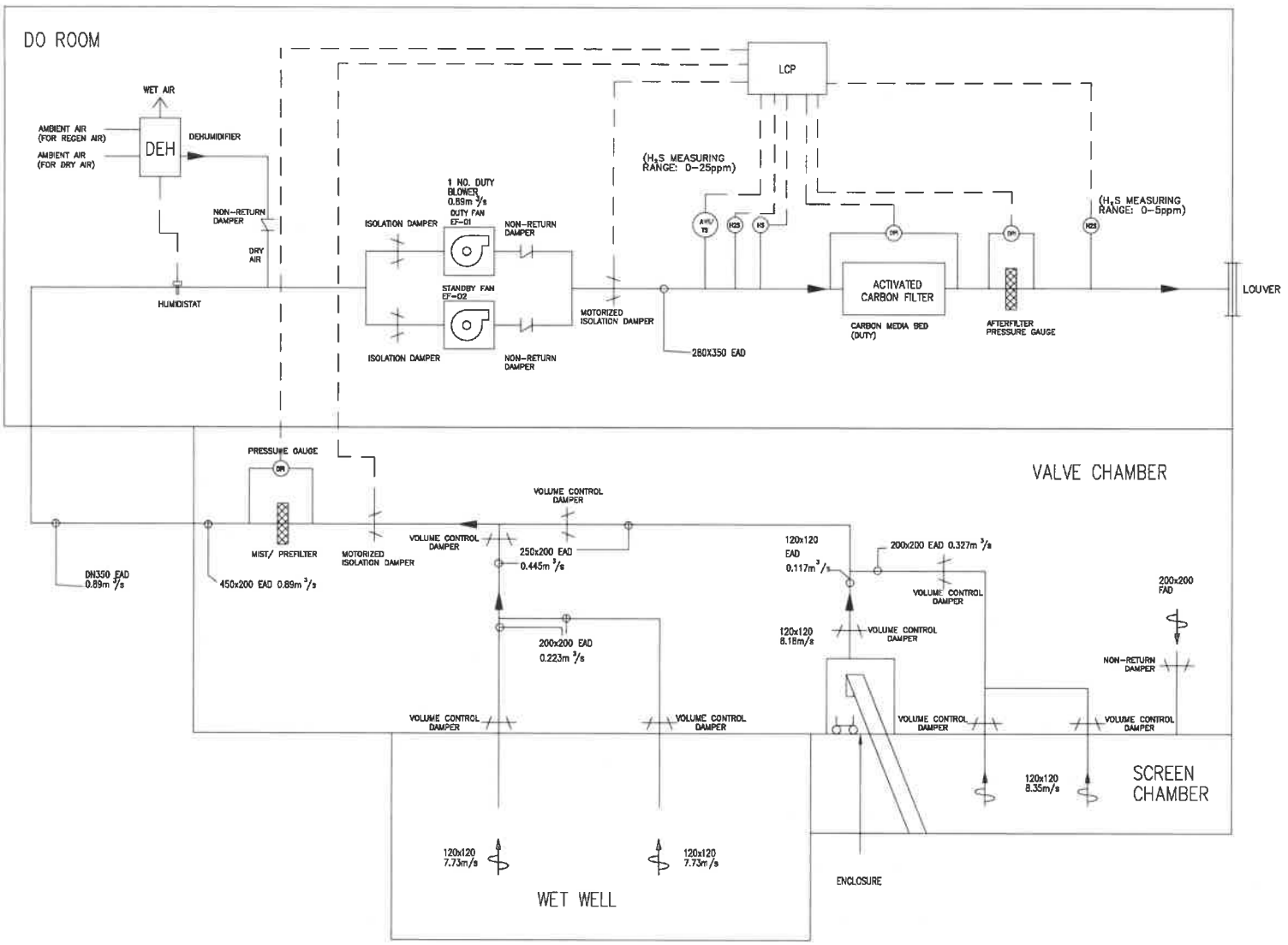
盈電工程有限公司
REC Engineering Company Limited
(A wholly-owned subsidiary of Yau Lee Holdings Limited)

Title: Calibration of H2S Sensors for D.O. System (Part 2)

RFI No.: EE-580
Date: 30 Nov 2022

	
SCADA Display for 25ppm H2S Calibration	SCADA Display for 5ppm H2S Calibration

2. Drawing



DEODORIZING SYSTEM SCHEMATIC DIAGRAM

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT THE DESIGN AND SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL PRIOR TO THE WORKS COMMENCEMENT.
2. AIR DUCTS WITHIN THE DEODORIZATION ROOM OF SPS SHALL BE FABRICATED FROM FRP. ALL OTHER METAL PARTS OF THE DUCTWORK SHALL ALSO BE MADE OF STAINLESS STEEL.

LEGEND:

- AIR BLOWER
- VOLUME CONTROL DAMPER
- NON-RETURN DAMPER
- HUMIDITY SENSOR
- TEMPERATURE SENSOR
- DIFFERENTIAL PRESSURE GAUGE
- H_2S SENSOR
- AIR VELOCITY SENSOR

Review and Approval by:
17 OCT 2022

REV	DESCRIPTION	DRN	REVIEW & APPROVAL FOR SUBMISSION BY	DATE
Z	AS-FITTED DRAWING	LAMY	ECHH	2022-10-1

CLIENT: DRAINAGE SERVICES DEPARTMENT

PROJECT: CONSTRUCTION OF DRY WEATHER FLOW INTERCEPTOR AT CHERRY STREET BOX CULVERT

CONTRACT No.: DC/2017/01

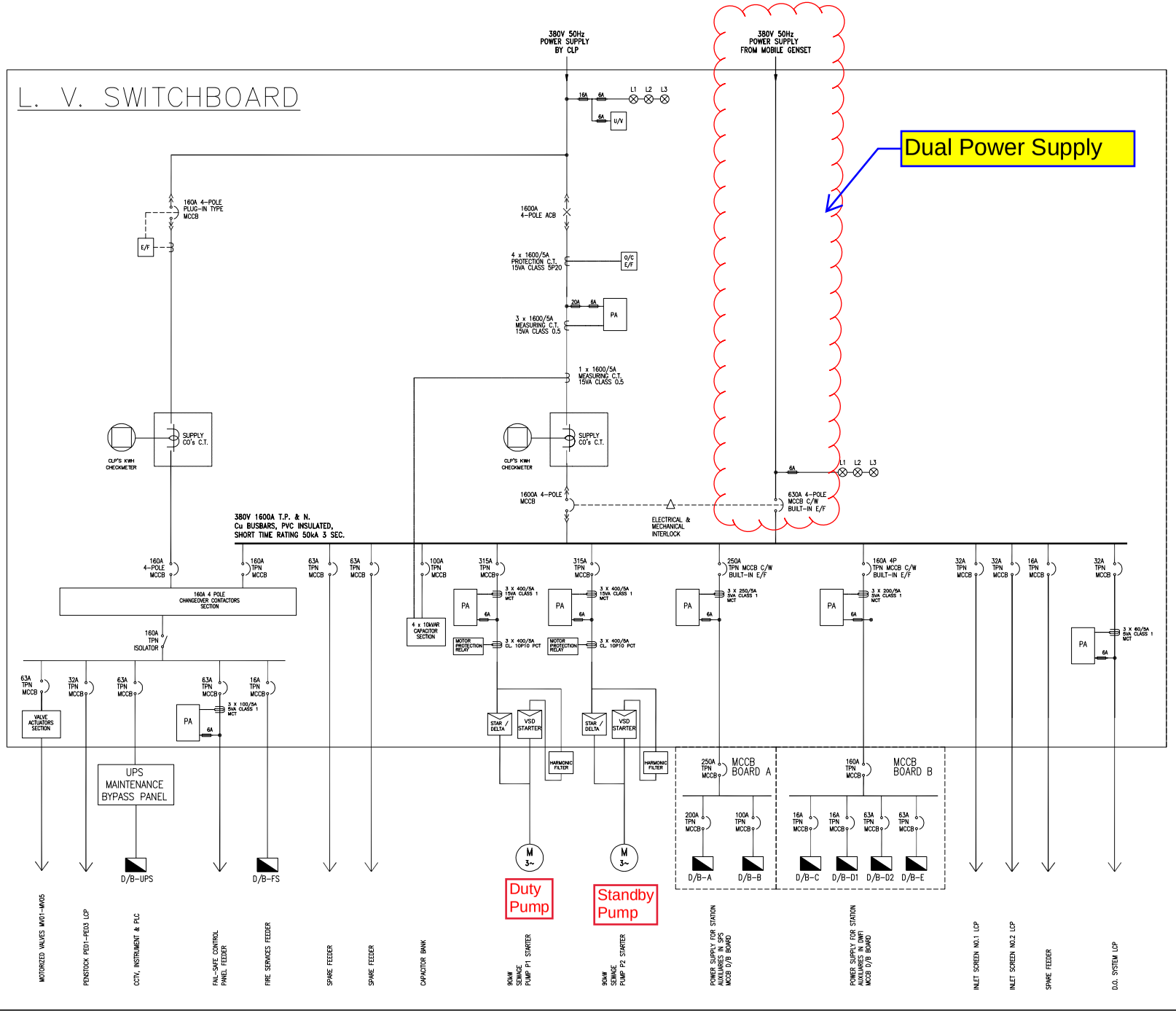
DRAWING TITLE: DEODORIZATION SYSTEM SCHEMATIC DIAGRAM

CONTRACTOR: 盈電工程有限公司 REC Engineering Company Limited (A wholly-owned subsidiary of Yau Lee Holdings Limited)

SCALE:	NIL	DATE: 2020-11-08
DESIGNED BY:	-	JOB NO: 2221-8218
DRAWN BY:	CCHO	DWG NO: EE-8218-SPS-DO-101
REVIEW & APPROVAL FOR SUBMISSION BY:	ECHH	

Appendix D

Supporting for EP-523/2016 Specific Conditions 2.4 (i)- Standby pump and dual power supply



NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.

LEGEND

O/C E/F	OVER CURRENT & EARTH FAULT PROTECTION RELAY (SEG MRI3-IE)
E/F	EARTH FAULT PROTECTION RELAY (SEG MRI3-IE)
U/V	UNDERVOLTAGE PROTECTION RELAY
PA	POWER METER (WITH INDICATIONS FOR CURRENT, VOLTAGE, POWER FACTOR ON EACH PHASE)
M	MEASURING CURRENT TRANSFORMER
P	PROTECTION CURRENT TRANSFORMER
	HRC FUSE
	AIR CIRCUIT BREAKER
	TPN MCCB
	INDICATOR LAMP (TRANSFORMER OPERATED 6V LED BULB)
STAR / DELTA	STAR / DELTA STARTER
VSD	VARIABLE SPEED DRIVE
36V DC BATTERY CHARGER	30V DC BATTERY CHARGER FOR OVER CURRENT & EARTH FAULT PROTECTION RELAY

Review and Approval
by:
15 OCT 2022

REV	DESCRIPTION	DRN	REVIEW & APPROVAL FOR SUBMISSION BY	DATE
Z	AS-FITTED DRAWING	LAMY	CYJL	15 OCT 2022

CLIENT

DRAINAGE SERVICES DEPARTMENT

PROJECT

CONSTRUCTION OF DRY WEATHER FLOW INTERCEPTOR AT CHERRY STREET BOX CULVERT

CONTRACT No. DC/2017/01

DRAWING TITLE

MAIN ELECTRICAL SINGLE LINE SCHEMATIC WIRING DIAGRAM

CONTRACTOR

盈電工程有限公司
REC Engineering Company Limited
(A wholly-owned subsidiary of Yau Lee Holdings Limited)

SWITCHBOARD MANUFACTURER

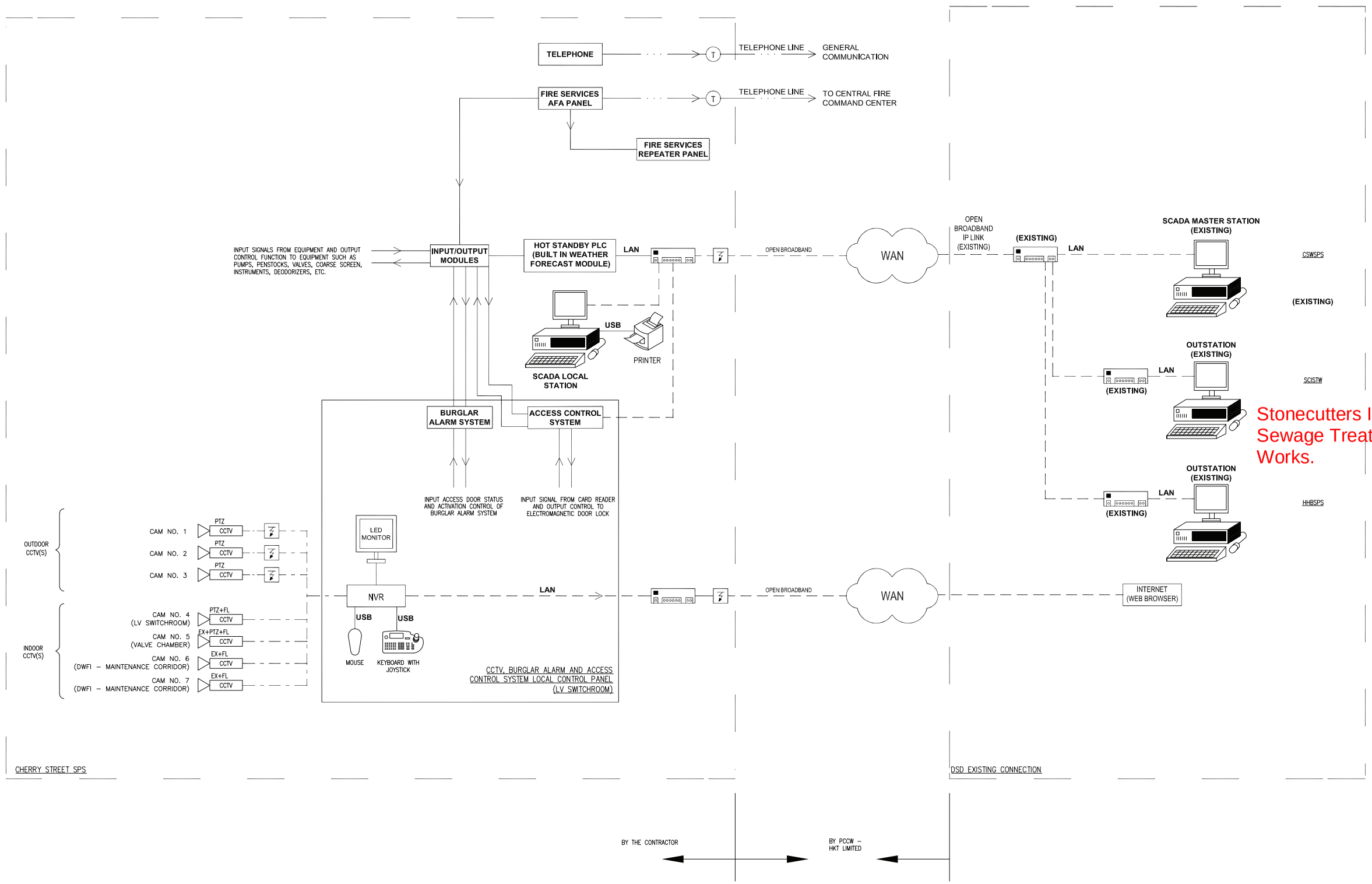
VIKINGS & ELLISON LTD.
HONG KONG

SCALE:	NTS	DATE:	15/10/2022
DESIGNED BY:	ECHH	JOB NO:	2221-8218
DRAWN BY:	LAMY	DWG NO:	EE/8218/SPS/SB/101
REVIEW & APPROVAL FOR SUBMISSION BY:	CYJL		

Appendix E

Supporting for EP-523/2016 Specific Conditions 2.4 (ii)- Telemetry system to Stonecutters Island Sewage Treatment Works

Review and Approval
by:
19 OCT 2022



NOTES:

1) SURGE ARRESTERS SHALL BE PROVIDED FOR THE POWER AND SIGNAL CABLES TO ALL OUTDOOR CCTV CAMERAS.
2) LIGHTING SURGE ARRESTERS SHALL BE PROVIDED ON BOTH SIDES OF OUTDOOR CABLES WHEREVER PRACTICAL.
3) THIS SCADA AND COMMUNICATION DRAWING CONSISTS OF THE INFORMATION ON THE AFA PANEL, CCTV, SECURITY AND ACCESS CONTROL SYSTEM.

LEGEND:

T	TELEPHONE SOCKET
	LIGHTNING SURGE ARRESTER
	MULTI PORT ROUTER
EX+PTZ+FL CCTV	EXPLOSION PROOF PTZ CCTV CAMERA WITH FLOODLIGHT
PTZ+FL CCTV	PTZ CCTV CAMERA WITH FLOODLIGHT
EX+FL CCTV	EXPLOSION PROOF FIXED CCTV CAMERA WITH FLOODLIGHT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
CSWSPS	CHEUNG SHA WAN SEWAGE PUMPING STATION
SCISTW	STONECUTTERS ISLAND SEWAGE TREATMENT WORKS
KTPTW	KWUN TONG PRELIMINARY TREATMENT WORKS
NVR	NETWORK VIDEO RECORDER
WAN	WIDE AREA NETWORK
———	MULTI-CORE SIGNAL CABLES
——— – ———	PoE/CAT 5e COMMUNICATION CABLES
– – – – –	CAT 5e / FIBER OPTIC CABLES
——— · · · ———	TELEPHONE LINE

REV	DESCRIPTION	DRN	REVIEW & APPROVAL FOR SUBMISSION BY	DATE
Z	AS-FITTED DRAWING	LAMY	ECHH	19 OCT 2022

CLIENT

DRAINAGE SERVICES DEPARTMENT

PROJECT

CONSTRUCTION OF
DRY WEATHER FLOW INTERCEPTOR AT
CHERRY STREET BOX CULVERT

CONTRACT No. DC/2017/01

DRAWING TITLE

SEWAGE PUMPING STATION – SCHEMATIC DIAGRAM OF COMMUNICATION BETWEEN MACS, ACCESS CONTROL SYSTEM, BURGLAR ALARM SYSTEM AND CCTV SYSTEM

CONTRACTOR

盈電工程有限公司
REC Engineering Company Limited
(A wholly-owned subsidiary of Yau Lee Holdings Limited)

SCALE:	N.T.S.	DATE:	26 JANUARY 2021
DESIGNED BY:	–	JOB NO:	2221-8218
DRAWN BY:	MWLS	DWG NO:	EE-8218-SPS-ELV-101
REVIEW & APPROVAL FOR SUBMISSION BY:	CYJL		