

By Post & Fax (2147-0894)

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

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10 Dec 2021

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.47**

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.47 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
Black & Veatch Hong Kong Limited
CMGC-TECEL Joint Venture

Mr. Bernard Chan (one hardcopy)
Mr. Quentin Yau (one hardcopy)
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.47 (Nov 2021)

Month Environmental Audit Report

First version | Nov 2021

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 258952

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ARUP

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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 2,000m³ 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:

- Installation of DfMA segments of Maintenance Corridor at Cell 1 was completed.
- Installation of DfMA segments of Staircase 'A' was in progress.
- Installation of E&M equipment in sewage pumping station and Maintenance Corridor was in progress.
- Installation of stoplog and penstock in Cell 7 of DWFI was completed.
- Construction of civil requirement works in Cell 1 of DWFI was in progress.
- Installation of multi-part covers at expanded desilting access outside Olympian City 2 was in progress.
- Installation of stoplog frame in Cell 6 of Olympian City 2 was completed.
- Installation of stoplog frame in Cell 8 of Olympian City 2 was in progress.
- Desilting by Builderprise's diving teams in Cell 5 at DWFI using air-lifting method was completed.

The environmental performance was considered acceptable during the assignment period from 1 Nov 2021 to 30 Nov 2021.

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
5. Provide hoarding of not less than 2.4m high from ground level along the site boundary adjoining Hoi Fai Road.		Implemented
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.	Contractor (Construction Phase)	Implemented
2. Install and properly maintain a deodorizer with a forced ventilation system and an odour removal efficiency of at least 99.5%.	DSD (Operational Phase)	N/A for the reporting month and shall be implemented in the later months

Mitigation Measures	Implementation Agent	Status
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
3. Install and properly maintain a standby pump and dual power supply.	Contractor (Construction Phase) DSD (Operational Phase)	Implemented
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.		N/A for the reporting month and shall be implemented in the later months
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.		Implemented
4. Install all outlets of the extraction fans with acoustic louvers.		Implemented

Mitigation Measures	Implementation Agent	Status
Waste Management		
1. Standard waste management measures and good site practices in waste handling, disposal and transportation will be implemented.	Contractor (Construction Phase)	Implemented
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)	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.	DSD (Operational Phase)	N/A for the reporting month and shall be implemented in the later months

Mitigation Measures	Implementation Agent	Status
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. 46 (Oct 2021)	8 Nov 2021

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. 47 (Nov 2021)	10 Dec 2021	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

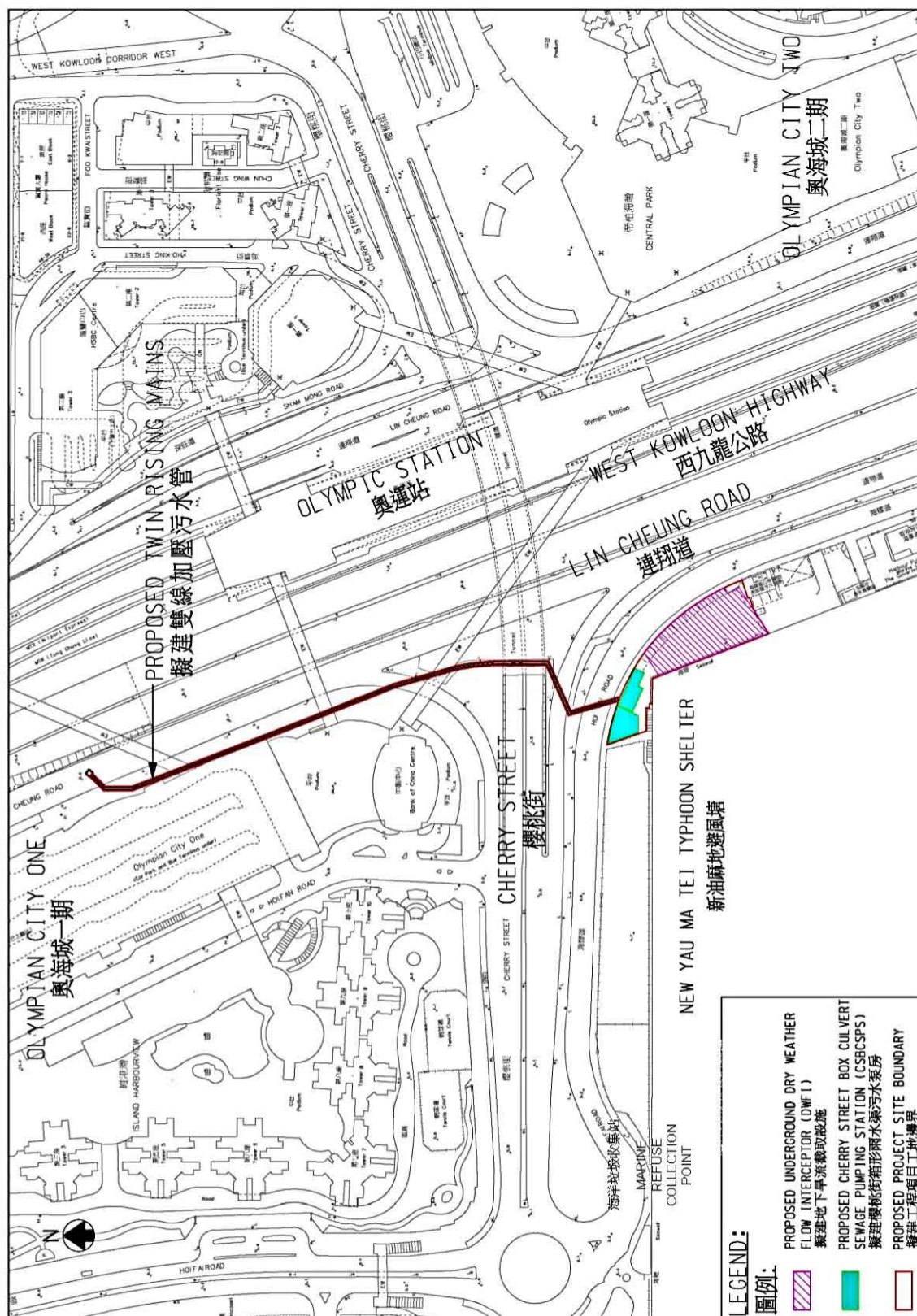
Work	Number
Reports	
IEC Monthly Environmental Audit Report	47
Meeting	
IEC monthly site inspection with DSD, Engineer Representative and Contractor	43
Project related meeting with DSD and EPD	1

5.4 IEC Site Audit

IEC site audit was conducted on 26 Nov 2021 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



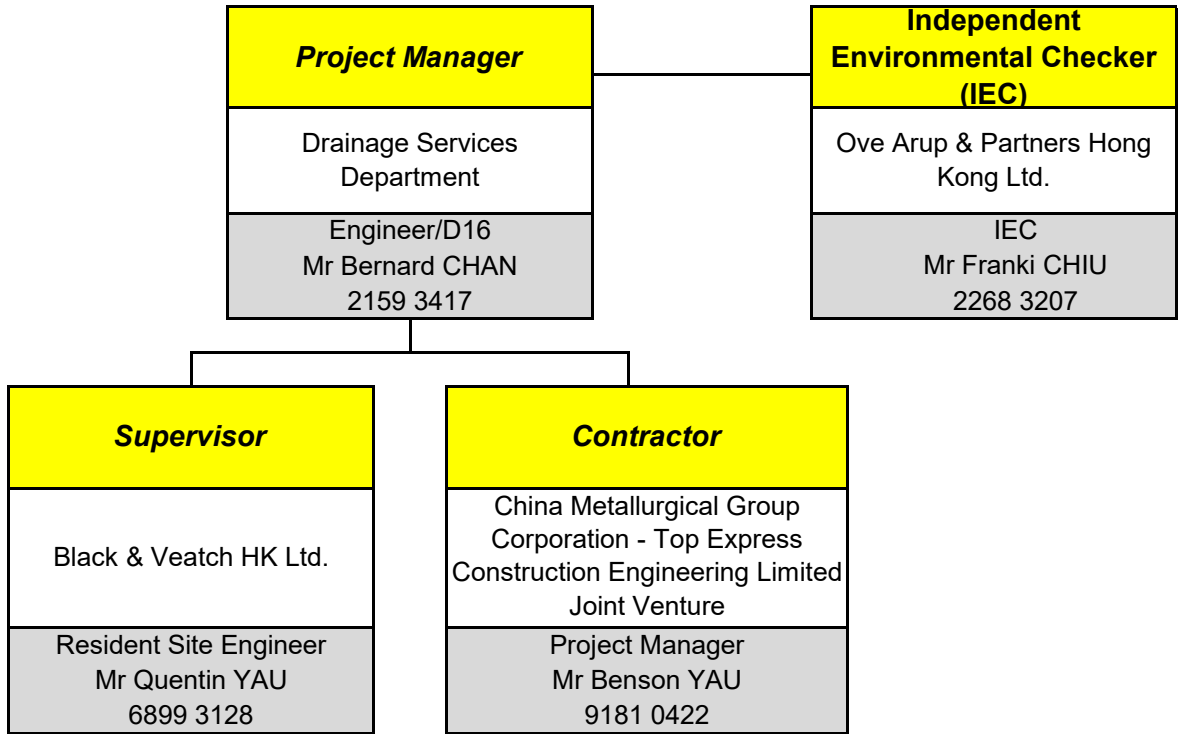
Environmental Permit No.: EP-523/2016
 環境許可證編號: EP-523/2016

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

Figure 1 - Project Location Plan
圖 1 - 工程項目位置圖

Appendix A

Project Organization and Contacts of Key Personnel



———— 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.		IEC	Ove Arup & Partners Hong Kong Ltd.
Project	Construction of dry weather flow interceptor at Cherry Street Box Culvert	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.: <u>Hilton Tam</u>	Engineer	Black & Veatch HK Ltd.
	Client's Rep.:	Inspection Date	<u>26-11-2021</u>
	Engineer's Rep.:	Time Period	<u>14:30 ~ 17:00</u>
	Contractor's Rep.:		

Part I	Weather										
Condition	<input checked="" type="checkbox"/> Sunny	<input checked="" type="checkbox"/> Fog	<input type="checkbox"/> Overcast	<input type="checkbox"/> Storm	<input type="checkbox"/> Rain	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Hazy				
Humidity	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low								
Wind	<input checked="" type="checkbox"/> Breeze	<input type="checkbox"/> Light	<input type="checkbox"/> Breeze	<input type="checkbox"/> Strong				Temperature	<u>25 °C</u>		

No.	Part II	Water Quality and Drainage	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1	Is drainage system adequate?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	Is drainage system well maintained?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3	Is drainage system adequately designed for storm flow?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Are there dykes to surround areas of earthworks for flood protection?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Are sediment control measures inspected & maintained after rainy storms?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Are there temporary ditches for runoff discharge into appropriate watercourse?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8	Are these temporary ditches with silt retention and removal facilities?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9a	Do permanent drainage channels have: sedimentation basin?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9b	traps and baffles?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10	Is site runoff prohibited from entering the river channel?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11	Is groundwater from tunnels or surface runoff collected and discharged via sedimentation traps/tanks?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12	Are there sedimentation tanks for settling runoff prior to disposal?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13a	Are the sedimentation tanks: constructed of pre-formed individual cells?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13b	with adequate capacity?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13c	free from silt and sediment?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14	Are there neutralisation tanks for concrete batching/mixing discharge?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15	Is the discharge diverted to and treated in neutralisation tanks?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16	Is the discharge from neutralisation tanks routed to silt trap or sedimentation tanks before disposal?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17	Are there oil interceptors in drainage system?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18	Are oil and grease removed regularly (at least weekly)?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
19	Is there any bypass for oil to prevent flushing during periods of heavy rain?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20	Are vehicles and plant cleaned of earth, mud and debris before leaving the site?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21	Is a wheel washing bay provided at every site exit?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22a	Is the wheel washing bay with: adequate design?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22b	adequate settling & removal of sand/silt?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22c	paved access road leading to exit?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22d	access road sufficiently backfill toward		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22e	wheel wash bay?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23	Is exposed earth stabilized after completion of earthworks?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
24	Are exposed slope surfaces covered (by tarpaulin or other means)?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
25	Are open stockpiles covered during heavy rain?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
26	Are manholes covered and sealed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
27	Are accessed roads protected by crushed stones or gravels?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
28	Are toilets connected to foul sewer or chemical toilets provided?		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
29	Are debris and rubbish on site collected and disposed of properly?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
30	Is wastewater discharge licence available for inspection?		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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

ARUP

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/hr?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2	Are site vehicle movement confined to designated haul roads?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	Is the public road around the site entrance kept clean and free from dust?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	Are areas of site with regular traffic movement have hard surface?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	Are the haul roads watered regularly to avoid dust disturbance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	Are unpaved areas watered regularly to avoid dust disturbance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	Does the water spraying truck work effectively?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	Is working area of excavation or earth moving operation sprayed with water to maintain the entire surface wet?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	Are the dusty materials sprayed with water during transfer operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10	Do the site vehicles use the wheel wash at the site exits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11	Does the wheel wash work effectively?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13	Are incombustible screens not less than 1.8m tall provided in the public area affected by exhaust fumes or smoke emission?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
14	Is dark smoke emission avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
15	Are dusty materials properly covered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
16	Are the bags of cement (more than 20) covered entirely?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
17	Are the excavated materials dropped at minimum practical height?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
18	Are conveyor belts fitted with windboards, transfer points and hoppers enclosed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
19	Are bulk fine grained materials stored in closed silos fitted with high level alarm indicator?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
20	Are air vents on cements silos fitted with fabric filters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
21	Are weigh hoppers vented to suitable filters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
22	Are there enclosures around the main dust-generating activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
23	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
24	Is open burning avoided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
25	Are vehicles and equipment switched off while not in use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
26	Are all trucks loaded to a level within the side and tail boards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
27	Are materials transported by dump trucks with mechanical cover?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
28	Do the truck covers work effectively?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
29	Does ULSD used in the construction activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
30	Observable dust sources	<input type="checkbox"/> Wind erosion	<input type="checkbox"/> Vehicle/equipment movements	<input checked="" type="checkbox"/> Others					<u>construction</u>
	<input type="checkbox"/> Loading/unloading of materials								

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1b	groundborne noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2a	Are the works or equipment sited to minimize airborne noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2b	groundborne noise nuisance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3	Are all plant and equipment well maintained and in good operating condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4	Are idling equipment throttled down or turned off?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6	Are silenced equipment used where practicable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7	Are noise enclosure, noise barrier, or portable noise barrier used where necessary?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8	Do hand-held breakers (larger than or equal to 10kg) have valid noise labels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
9	Do Quality Powered Mechanical Equipments (QPME) have valid noise labels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
10	Do air compressors have valid noise labels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
11	Do compressors operate with doors closed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
12	Are Construction Noise Permits available for inspection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13	Major noise source(s)	<input type="checkbox"/> Traffic	<input type="checkbox"/> Construction activities outside of site	<input checked="" type="checkbox"/> Construction activities inside of site					
	<input type="checkbox"/> Others								

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

ARUP

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

No.	Part VI	Landscape & Visual Impact and Ecology	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
1		Is stripped top soil stored for re-use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2		Are retained trees protected from damage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3		Are compensatory trees planted and properly maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4		For trees identified for transplant in EP:							
4a		sufficient buffer zone allowed prior to transplant?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4b		properly maintained following transplant?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5		Is night-time lighting controlled to minimise glare to sensitive receivers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6		Is the screen hoarding compatible with the surrounding setting?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

No.	Part VII	Others	N/A	N/O	Yes	Rdr	Obs	N/C	Photos / Remarks
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	


Part VIII Follow-up for the Previous Site Audit

Part IX Remarks

Rdr : Site curtain shall be maintained properly.


Part X Signatures

IEC's Representative



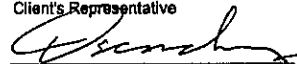
(Name: Horton TAM)

Engineer's Representative




(Name: S. K. Loo)

Client's Representative



(Name: Jason CHEUNG)

Contractor's Representative



(Name: W. H. Lam)