

Environmental Assessment for Operation of Temporary Jetty

1. Introduction

- 1.1. Section 6.6.6 of the EIA Report for Central – Wan Chai Bypass (Register No. AEIAR-125/2008), which was approved on 11 December 2008, recommended that C&D material should be transported from the site by barge wherever possible to reduce impacts from road transportation. To facilitate the transportation of excavated materials, a temporary jetty was proposed to be used for unloading excavating materials onto the works barge for off-site delivery.
- 1.2. This Environmental Assessment aims to identify potential environmental impacts arising from the operation of temporary jetty with corresponding environmental mitigation measures to minimize the nuisance to the sensitive receivers.

2. Site Description and Jetty Operation

- 2.1. The temporary jetty is located at the seafront within Portion VII of the works site area of this Contract. The location of the temporary jetty is shown on the site layout plan in Appendix A and the photo of the jetty is shown in Appendix F.
- 2.2. The jetty serves as a temporary platform for facilitating the unloading of excavated materials onto the works barge for off-site delivery. Excavated materials will be transported by trucks before unloading onto the works barge. The transportation route of the excavated materials from site to barge is shown in Appendix A.
- 2.3. The total amount of excavated materials to be removed and transported by barge is about 15,000m³. It is estimated that a maximum of 3 barges per week and 600 trucks per week will be in operation.
- 2.4. The jetty is solely used by the Contractor of this Contract.
- 2.5. To cope with the Works of this Contract, the jetty is anticipated to operate from March 2016 to September 2017.
- 2.6. The jetty will operate under normal working hours from 0700-1900.
- 2.7. The design of the jetty is mentioned as follows:
 - 2.7.1. The base of the jetty has been fabricated with steel members with the surface inclining towards the project site. Any water on the surface of the jetty will flow in the direction towards the project site instead of the sea due to the presence of such gradient.
 - 2.7.2. Furthermore, there will be a bund constructed at the end near the seaside to:

- (i) stop any overspill of water if it was near the edge;
- (ii) withhold any material at the edge from falling down; and
- (iii) as a safety measure to ensure the truck to stop when reaching the point for unloading of material which prevent from the falling incident.

2.7.3. Above the steel members, the jetty will be enclosed with openings at the two ends. One opening is designed for the truck to enter into the unloading area and the other opening is for the purpose of unloading material into the barge.

2.8. There are two Sensitive Receivers, namely Victoria Centre and Harbour Heights, identified within 300m of the site.

2.9. Consultation with the sensitive receivers has been conducted in August 2015 and the stakeholders for both the premises have no objection to the operation of temporary jetty under this Contract (See Appendix B).

3. Environmental Impacts and Mitigation Measures

3.1. In view of the nature and scope of the temporary jetty, the potential impacts associated with the jetty would be occurred during the construction phase only.

3.2. With no change of works boundary and limited construction activities, the potential impacts, associated with marine ecology arising from the construction works were assessed and addressed in the approved EIA report, and no additional impacts are anticipated with the adoption of standard good site practice and recommended mitigation measures as presented in the approved EIA report. Also, there would be no additional waste will be generated during the setting up and operation of the proposed temporary jetty; therefore, no additional impact associated with waste management is anticipated. With no change of works boundary and limited construction activities, the potential impacts associated with landscape and visual is considered insignificant.

3.3. The only potential impact arising from the temporary jetty is anticipated to be construction dust, noise and water quality. Sections 4 to 7 below summarise the nature and extent of the key environmental impacts arising from the erection and operation of jetty.

4. Air Quality

4.1. As observed, the nearest domestic premises are Victoria Centre and Harbour Heights, which are identified as the Air Sensitive Receivers (ASRs) for this review. Victoria Centre and Harbour Heights are located about 130m and 145 m respectively from the location of jetty (See Appendix C).

4.2. As the jetty is to facilitate the unloading of excavated materials, the air quality impact would mainly be related to dust from excavated material during discharging from dump truck to barge.

- 4.3. Also, the possible sources of air pollutants emission from materials handling would be from the ingress and egress of vehicles for transportation of materials.
- 4.4. The following mitigation measures would be implemented to minimize nuisance to air sensitive receivers:-
- The jetty access ramp will be water sprayed to minimize any fugitive dust emission due to vehicle movements;
 - The jetty has been fabricated with an enclosure such that emission of airborne dust is prevented during unloading of excavated materials into the barge;
 - Stockpiles of dusty materials on the barge would be sprayed with water during dry or windy conditions to prevent airborne dust emission if necessary;
 - Ultra Low Sulfur Diesel will be used in all construction plants as far as possible; and
 - Limit the travelling speed of dump truck to jetty to 10km/h.
- 4.5. It is confirmed that the assumptions such as work area and percentage area actively operating adopted and mitigation measures for dust emissions proposed in the approved EIA report remain valid. As such, with the implementation of the above mitigation measures, the air quality impact is considered not significant.

5. Noise

- 5.1. As observed, the nearest domestic premises are Victoria Centre and Harbour Heights, which are identified as the representative Noise Sensitive Receivers (NSRs) for this review.
- 5.2. With respect to the operation of jetty, the noise impact would mainly be related to noise from unloading the excavated material during discharging from dump truck to barge.
- 5.3. Also, the possible sources of noise emission would be from the ingress and egress of vehicles for transportation of materials.
- 5.4. The following mitigation measures would be implemented to minimize noise nuisance to noise sensitive receivers:-
- The operation of jetty with the use of relevant Powered Mechanical Equipment (PME) would be carried out under normal working hours (from 0700 to 1900, Mondays to Saturdays), and a Construction Noise Permit application will be required as if such operation needs to be carried out during restricted hours (i.e. Any day not being a general holiday 1900-0700 next day; and general holiday including Sundays 0000 – 2400);
 - Ensure that all plant and equipment to be used are properly maintained and in good operating condition;
 - PME would be switched off if not being operated, particularly for PME such as the tug boat which will be switched off during the loading / unloading operation; and

- Limit the travelling speed of dump truck to jetty to 10km/h.
- 5.5. As the operation of dropping C&D materials by dump truck is to be carried out intermittently (e.g. sustain few seconds for each cycle of approximately 15 minutes with the use of 2 nos. dump trucks), the noise impact is therefore considered insignificant.
- 5.6. The jetty has been designed and constructed such that it has been extended beyond the seawall from the construction site with 2 layers of concrete blocks underneath the jetty (See the sketch showing the detail of the Jetty in Appendix G). The dropping location of the C & D materials will be on the barge which is situated below the ground level. The concrete blocks and seawall will block and absorb the impact noise generated from the barge due to dropping of C & D materials.
- 5.7. The construction professionals have confirmed that PMEs including the winch of the derrick barge, tug boat and dump truck will be involved in jetty operation and the operating time will be normally from 0700-1900 which has been assessed to be reasonable and necessary to suit actual site progress.
- 5.8. Construction noise assessment had been conducted to assess the cumulative construction noise impact with inclusion of jetty operation at the identified sensitive receivers (Victoria Centre and Harbour Heights) with reference to (i) Appendix 4.13 - Powered Mechanical Equipment (PME) for the Different Construction Tasks during Normal Daytime Working Hours (with Mitigation Measures), and (ii) Appendix 4.14 - Calculations and Results of Construction Noise Impacts During Normal Daytime Working Hour (with Mitigation Measures) of approved EIA report (See Appendix E). The results reveal that:
- (i) The anticipated construction noise impact due to the proposed jetty operation is negligible from the period of March 2016 to January 2017 when comparing with the estimated noise level during EIA stage; and
 - (ii) The anticipated construction noise impact due to the proposed jetty operation is comparably higher than the estimated noise level during EIA stage from the period of February 2017 to August 2017 but still at an acceptable noise level (i.e. equal to or below 68dB(A)) when compared with other construction period .
- 5.9. Notwithstanding the above, we have exhausted all practicable mitigation measures as required in TM-EIAO in order to minimize the construction noise impact to nearby residents. Temporary noise barriers have been placed in complying with latest EP conditions to minimize environmental nuisance to the nearby NSRs.
- 5.10. To minimize environmental nuisance to the nearby NSRs, we have exhausted all practicable mitigation measures as required in TM-EIAO in order to minimize the construction noise impact to nearby resident.

6. Water

- 6.1. As observed, the nearest Water Sensitive Receivers (WSR) identified for this review is the cooling water intake at City Garden. The distance is far away from the jetty (approx. 500 m) and the impact of jetty operation on such WSR is therefore insignificant (See Appendix D).
- 6.2. As the unloading of excavated materials is at the seafront, the jetty operation will have potential impact to sea water nearby.
- 6.3. As no additional dredging or marine works would be required during the setting up of the temporary jetty, the potential source of water quality impact from the operation of temporary jetty would be falling of excavated materials into the sea from the jetty during the unloading of dump truck.
- 6.4. The following control measures would be implemented during the transportation of material at the temporary jetty:
- The jetty will be constructed such that it extend beyond the seawall such that the barge is underneath the jetty during unloading of excavated materials to prevent material falling into the surrounding water;
 - All hopper barges will be fitted with tight fitting seals at their bottom openings to prevent leakage of material;
 - Loading of barges should be controlled to prevent splashing of excavated materials into the surrounding water. Hopper barges should not be filled to a level that will cause the overflow of materials and polluting the water during loading or transportation; and
 - Monitoring of the barge loading shall be conducted to ensure no over loading of material take place during transportation.
- 6.5. With the consideration of the distance from the cooling water intake at City Garden to the jetty location and implementation of the above control measures, the potential water quality impact on the cooling water intake at City Garden is considered insignificant.
- 6.6. With the implementation of the above control measures, the impact on water quality is considered insignificant.

7. Conclusion

- 7.1. An environmental assessment has been conducted for the temporary jetty. The potential issues due to the setting up and operation of the jetty have been assessed. With no change of works boundary and limited construction activities, no additional impact associated with marine ecology and waste management is anticipated and the landscape and visual impacts is considered insignificant. By implementing the above-mentioned mitigation measures, the potential environmental impacts (including air, noise and water) arising from the setting up and operation of the temporary jetty to the sensitive receivers is considered insignificant.

- 7.2. No additional environmental monitoring is required for the temporary jetty and regular EM&A requirements as specified in the Environmental Monitoring and Audit (EM&A) Manual would be followed. The amount of excavated material generated in each month would be submitted to EPD for review via the Monthly EM&A Report.

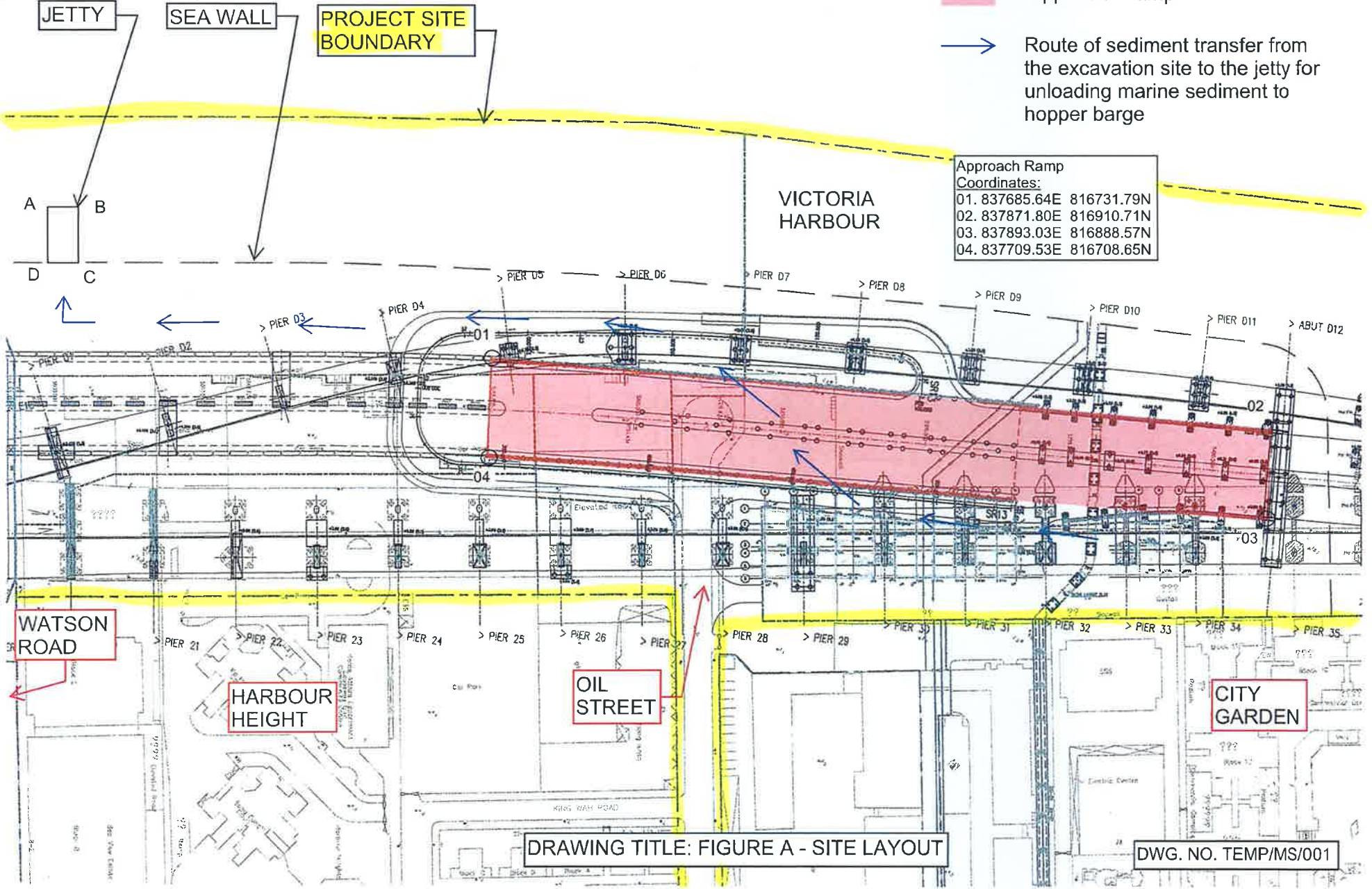
Appendix A

Location of Temporary Jetty

Coordinates:
 A. 837553.09E 816639.12N
 B. 837557.26E 816643.91N
 C. 837572.06E 816631.09N
 D. 837567.92E 816626.29N

Approach Ramp
 Route of sediment transfer from the excavation site to the jetty for unloading marine sediment to hopper barge

Approach Ramp
 Coordinates:
 01. 837685.64E 816731.79N
 02. 837871.80E 816910.71N
 03. 837893.03E 816888.57N
 04. 837709.53E 816708.65N



DRAWING TITLE: FIGURE A - SITE LAYOUT

DWG. NO. TEMP/MS/001

Appendix B

No-objection Correspondences from Sensitive Receivers on the Jetty Operation

Remmy Chu

From: Remmy Chu
Sent: Wednesday, August 19, 2015 4:56 PM
To: 'skmong@hongyip3.com'
Cc: Lydia Lee
Subject: Works progress of Central – Wan Chai Bypass project near Victoria Centre

Dear Mr Mong

Further to our telephone conversation this afternoon, I would like to recap our recent works under the Central – Wan Chai Bypass project (CWB) in the vicinity of Victoria Centre.

As previously introduced, under the CWB project, a section of the original Island Eastern Corridor westbound bridge would have to be demolished and to be reconstructed at the same location. The demolition works had commenced for a few months and the bridge demolition adjacent to Victoria Centre would soon be carried out around a month time. The original bridge would be demolished piece-by-piece and then transferred off-site. Rest assure that proper mitigation measure would be deployed on site to minimize any concerns to your resident.

On the tunnel construction works, we have continuously carried out excavation and then construct the CWB tunnel and the tunnel portal. Temporary jetty along the seashore near Watson Road is used to assist unloading of the excavated soil onto the works barges and then transfer off-site. From our telephone conversation just now, we are pleased that such arrangement does not create a concern to your resident and we would continue to remind our contractor to upkeep the arrangement. Upon commissioning of the CWB project, the temporary jetty and all respective machinery would be removed and relocated off-site.

I hope that the above updates would provide you more details of our on-going construction works nearby. I would like to thank for your continual coordination with us. As usual, please feel free to contact me if you have any enquiry or concern and I'm happy to assist you.

Regards

Remmy Chu

Resident Engineer (PR) | Central - Wan Chai Bypass and Island Eastern Corridor Link
D: 3912 3221 | M: 6463 3063 | Remmy.Chu@cwbaecom.com

AECOM

Remmy Chu

From: Remmy Chu
Sent: Wednesday, August 19, 2015 4:42 PM
To: jackelwong@emo.urban.com.hk; mingchoy@emo.urban.com.hk
Cc: Lydia Lee
Subject: RE: Works progress of Central – Wan Chai Bypass project near Harbour Heights

Dear Jackel and Ming

Further to my colleague's bi-monthly updates on the construction works under the Central – Wan Chai Bypass project (CWB) in the vicinity of Harbour Heights, I would like to recap again our recent works after our numerous liaison meetings recently.

As previously introduced, we would have to demolish a section of the original Island Eastern Corridor westbound bridge and then to reconstruct a new section at the same location. Last Saturday (15 August 2015), we have carried out closure inside the Wilson Parking for 2 hours in order to facilitate the removal of the first outer beam on the bridge section adjacent to Ko Fung Court. It went smooth and from our telephone conversation with Ming this afternoon, no adverse comment from your residents was recorded so far. Rest assure that we would continue to closely liaise with you for the next removal works.

On the tunnel works, we have continuously carried out excavation works and then to construct the CWB tunnel and the tunnel portal. Temporary jetty along the seashore near Watson Road is used to assist unloading of the excavated soil onto the works barges and then transfer off-site. From our telephone conversation with Ming just now, we are pleased that such arrangement does not create a concern to your resident and we would continue to remind our contractor to upkeep the arrangement. Upon commissioning of the CWB project, the temporary jetty and all respective machinery would be removed and relocated off-site.

I hope that the above updates would provide you more details of our on-going construction works nearby. I would like to thank for your continual coordination with us. As usual, please feel free to contact me if you have any enquiry or concern and I'm happy to assist you.

Regards

Remmy Chu

Resident Engineer (PR) | Central - Wan Chai Bypass and Island Eastern Corridor Link
D: 3912 3221 | M: 6463 3063 | Remmy.Chu@cwbaecom.com

AECOM

From: CWB-HyD [<mailto:enquiry@cwbaecom.com>]
Sent: Monday, August 03, 2015 2:36 PM
To: jackelwong@emo.urban.com.hk
Cc: mingchoy@emo.urban.com.hk; Finy Mo
Subject: Works progress of Central – Wan Chai Bypass project near Harbour Heights

Dear Mr. Wong,

Thank you for your continuous support to the Central – Wan Chai Bypass (CWB) project. As per your previous request of receiving a regular update on the works progress of CWB, please find below information for your kind reference.

To facilitate the preparatory work and subsequent demolition work of a section of Island Eastern Corridor (IEC) westbound near Harbour Heights, we had previously arranged piling works near Ko Fung Court at Wilson

Parking. Such works was completed in end-July 2015. The next upcoming arrangement in the vicinity would be implementation of temporary traffic arrangements in stages from mid-August 2015. The access road besides Toyota Service Centre and some of the parking space at Wilson Parking would be fenced off for the removal of IEC westbound bridge structure in mid-August 2015 tentatively. Up until around mid-September 2015, the access road would be fully closed for 2 hours twice for the lifting operation to ensure public safety. Prior notice would be issued to relevant stakeholders 48 hours in advance.

From August to September 2015, the works of tunnel construction and tunnel approach ramp will be continued in CWB works site in North Point.

We appreciate your kind understanding and cooperation. We will continue to monitor our contractor's performance and review the construction works from time to time.

Should you have any questions, you are most welcome to contact me.

Thanks & Regards,

Finy MO

Public Relations Officer

Central – Wan Chai Bypass and Island Eastern Corridor Link

Hotline: 2512 6233 (24 hours) | Fax: 2512 6220

Enquiry: enquiry@cw-b-hyd.hk

Appendix C

Location of Noise / Air Sensitive Receivers

Appendix C

Victoria Harbour

Temporary Jetty

Seafront

EXISTING CHANNEL
TO BE DEMOLISHED

Seawall 海堤

Seawall

食物環境衛生署
運輸組 威菲車房
Food & Environmental Hygiene Department
Transport Section Whitfield Depot

沙壙

Sand Depot

停車場

Car Park

130 m (approx.)

145 m (approx.)

TUNG LO WAN
FIREBOAT
STATION

東區走廊
ISLAND EASTERN CORRIDOR

Elevated Road

高架道路

ACCESS GATE
BY OTHERS

ACCESS GATE
BY OTHERS

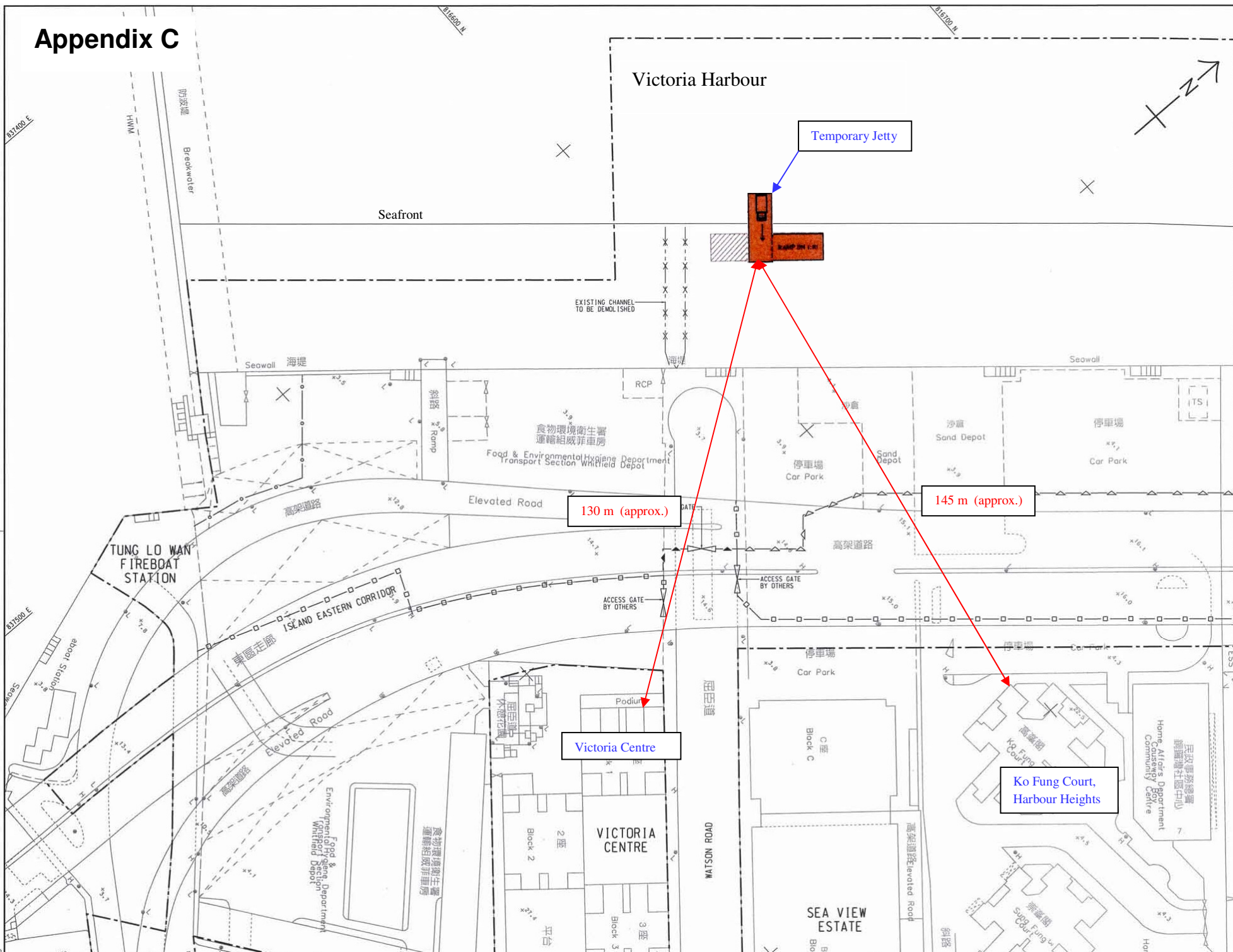
Victoria Centre

VICTORIA CENTRE

Ko Fung Court,
Harbour Heights

SEA VIEW
ESTATE

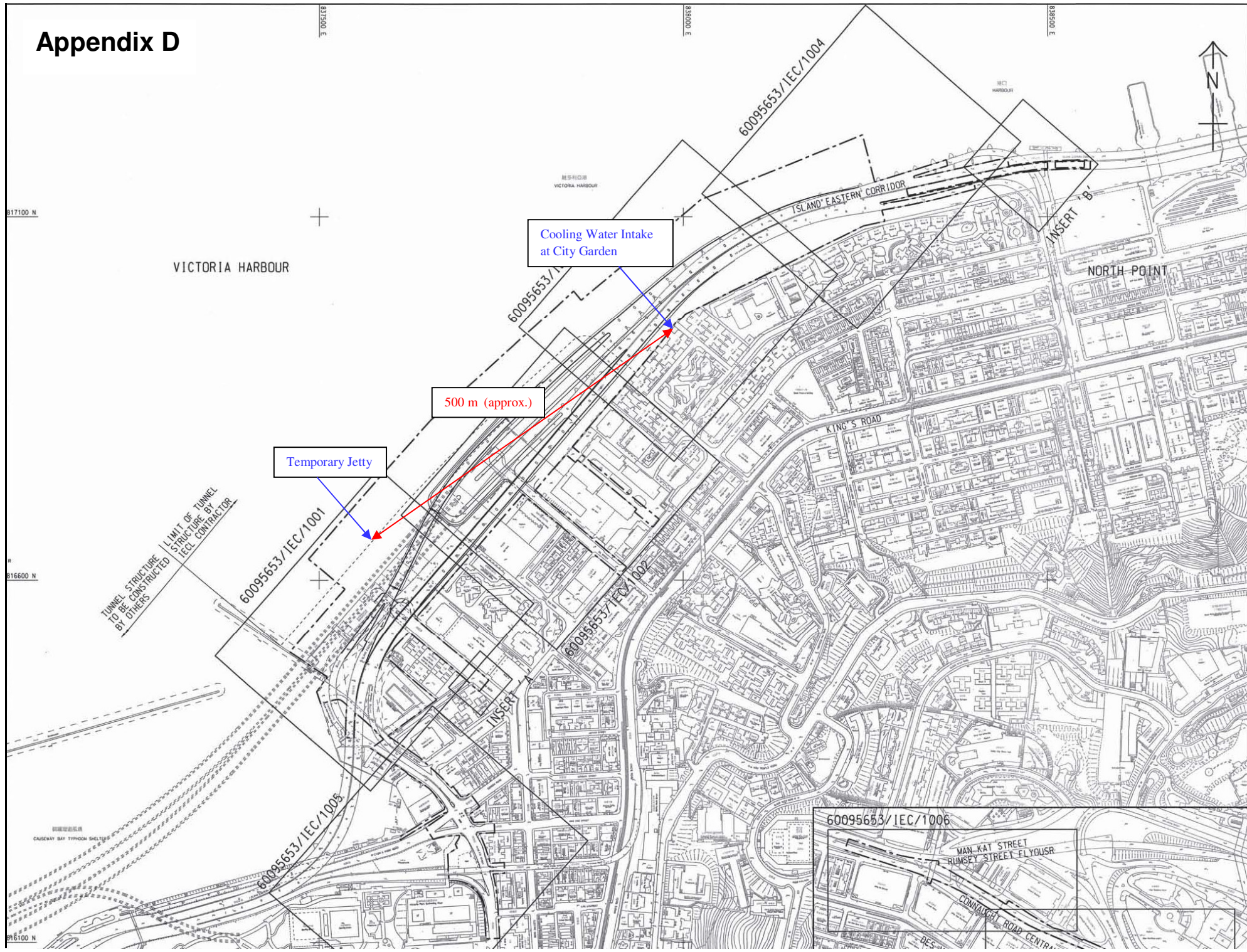
WATSON ROAD



Appendix D

Location of Water Sensitive Receiver

Appendix D



Appendix E

Construction Noise Assessment

Appendix F

General View of Temporary Jetty



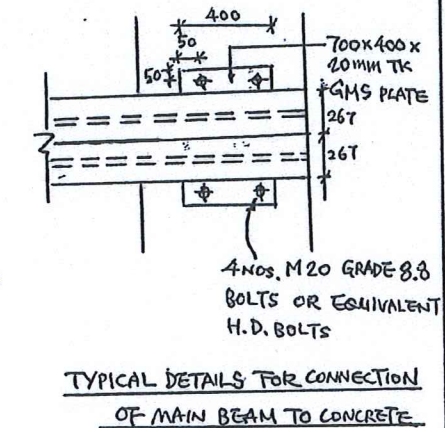
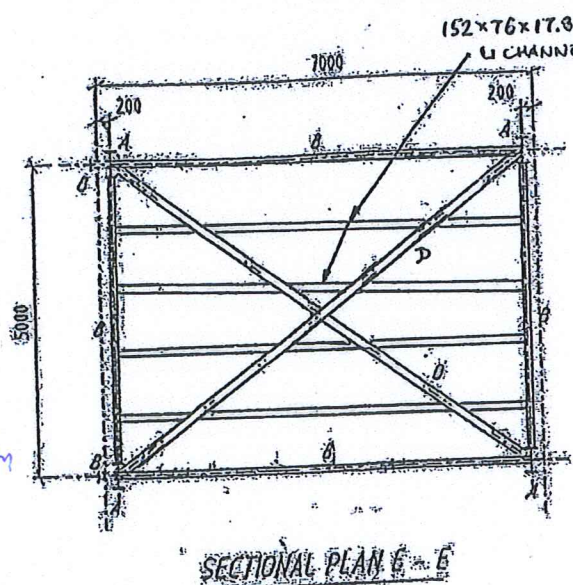
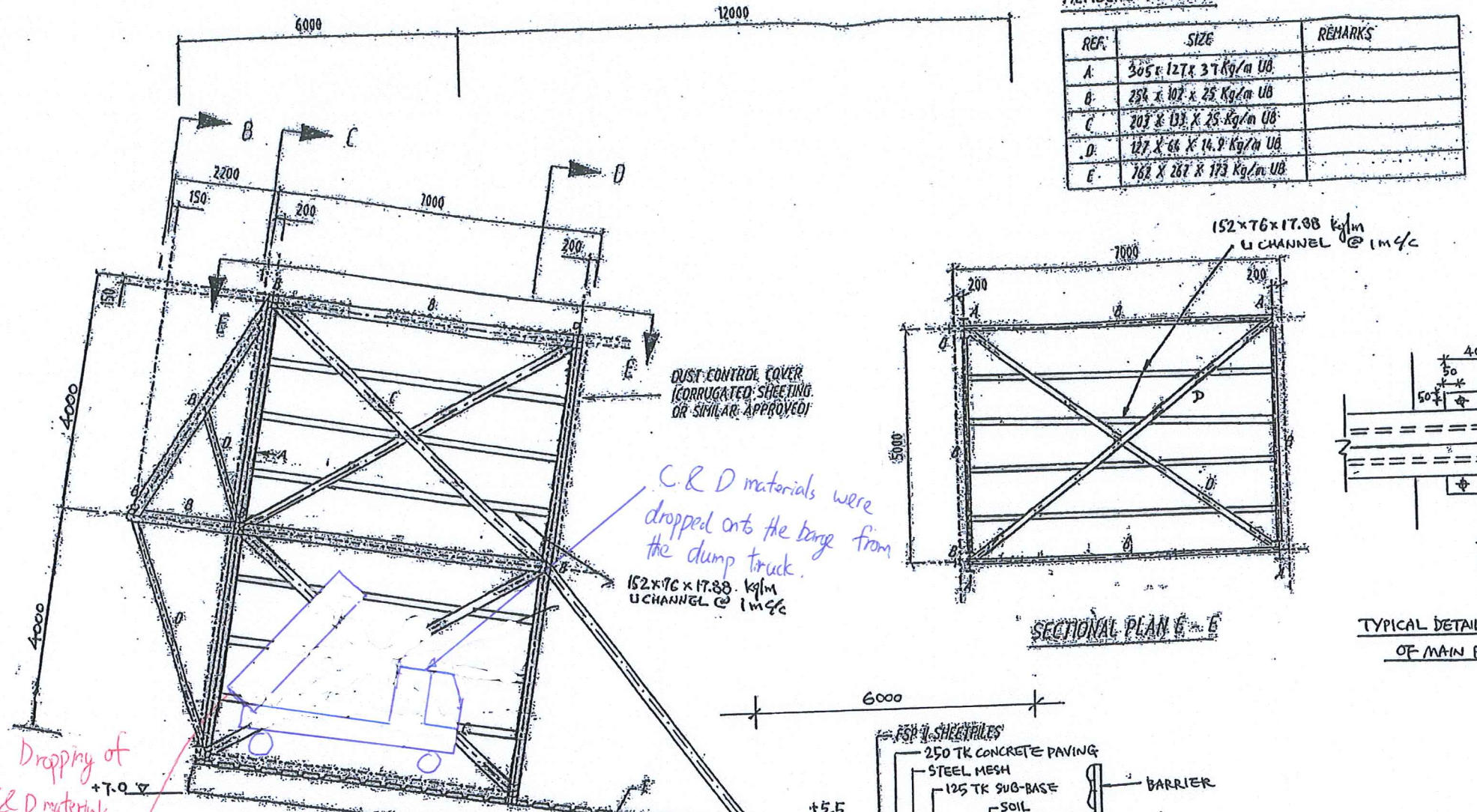
Photo No. 1 – General Views of Temporary Jetty

Appendix G

**Detail of Temporary Jetty with
Noise Mitigation Measures on the
Dropping Motion of C&D Materials
onto the Barge**

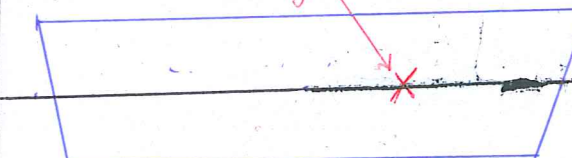
MEMBERS SCHEDULE

REF.	SIZE	REMARKS
A	305 x 127 x 37 Kg/m UB	
B	254 x 102 x 25 Kg/m UB	
C	203 x 133 x 25 Kg/m UB	
D	127 x 66 x 14.9 Kg/m UB	
E	168 x 267 x 173 Kg/m UB	

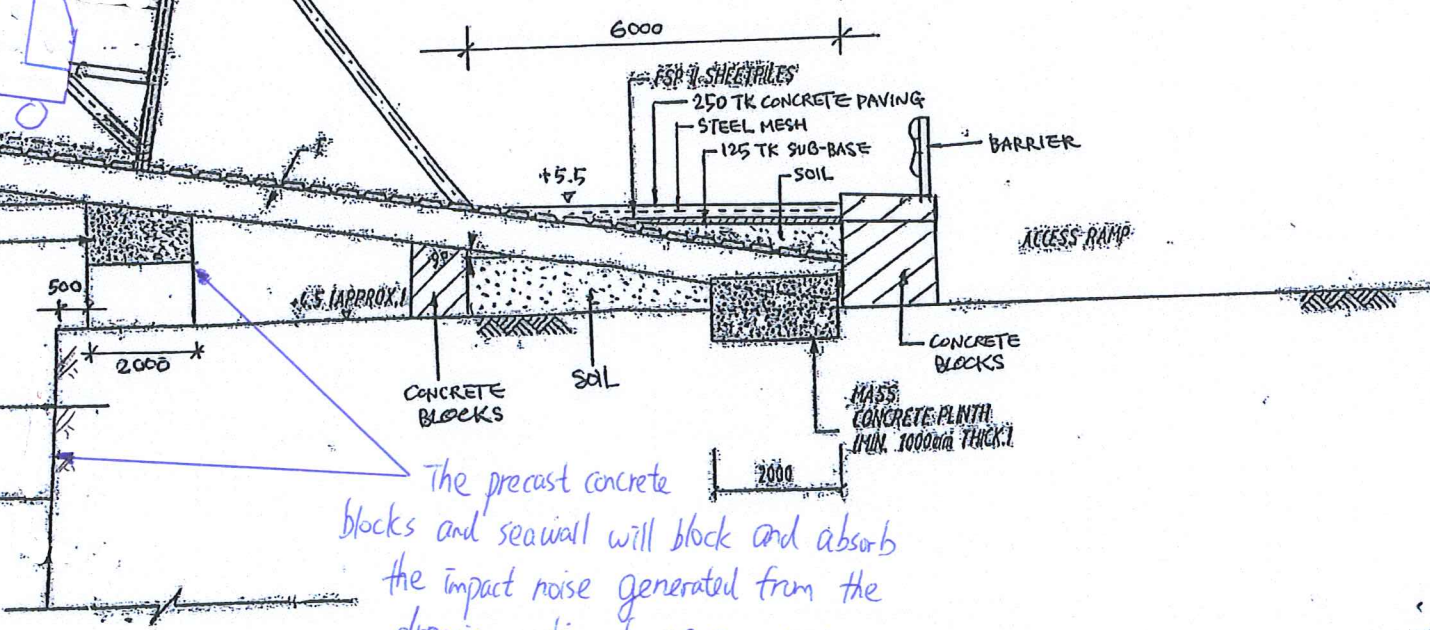


Dropping of C & D materials onto the barge

Location of noise source due to dropping of C & D materials onto the barge



Derrick Barge for containing C & D materials



The precast concrete blocks and seawall will block and absorb the impact noise generated from the dropping motion of C & D materials onto the barge

SECTION A-A



LI KOK KEUNG
MENG MICE MSTRUCT
MHKIE CENG RPE

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMITS	15/01/2011	SK
Highways Department 路政署 Major Works Project Management Office 路政署 CENTRAL - WAN CHAI BYPASS AND IEG LINK			
STRUCTURAL LAYOUT OF JETTY SECTIONS SHEET 1 OF 1			
AECOM			
DRGNO. 圖號	SK-002A		
DESIGNED BY 設計	CONTRACT NO. 合約編號	DATE APPROVED 核准日期	
DRAWN BY 繪圖	SCALE 比例	CHECKED BY 校核	
DATE 日期	APPROVED BY 核准		
MEASUREMENTS ARE IN 尺寸以	MILLIMETRES 毫米		
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