JOB NO.: TCS00744/14

TSW-C004 – OCEAN PARK TAI SHUE WAN DEVELOPMENT
SITE FORMATION AND FOUNDATION WORKS

4th QUARTERLY ENVIRONMENTAL MONITORING & AUDIT SUMMARY REPORT –

(17 April 2016 to 16 July 2016)

PREPARED FOR OCEAN PARK CORPORATION

Date	Reference No.	Prepared By	Certified By
15 August 2016	TCS00744/14/600/R069v2		
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Version	Date	Remarks
1	5 August 2016	First Submission
2	15 August 2016	Amended against IEC comments dated on 15 August 2016

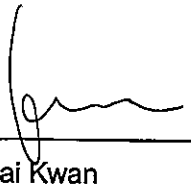
Pursuant to Environmental Monitoring and Audit Manual Section 11.4, a "Quarterly Environmental Monitoring and Audit (EM&A) Report (no.4) – 17 April 2016 to 16 July 2016" was certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC).

Certified by:

Tam Tak Wing
Environmental Team Leader (ETL)
Action-United Environmental Services and Consulting (AUES)

Date: 17 August 2016

Verified by:



Chui Wai Kwan
Independent Environmental Checker (IEC)
Ove Arup and Partners Hong Kong Limited

Date: 17 August 2016

EXECUTIVE SUMMARY

ES.01. This is the **4th** Quarterly EM&A Summary Report for the "*Ocean Park Tai Shue Wan Development*" under Environmental Permit No. EP-487/2014 (hereinafter ''the EP''), covering the period from **17 April to 16 July 2016** (hereinafter "Reporting Period").

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

ES.02. Environmental monitoring activities under the EM&A programme in the Reporting Period are summarized in the following table.

Environmental Aspect	Environmental Monitoring Parameters / Inspection	Total Occasions
Construction Noise	$L_{eq(30min)}$ Daytime	**26**
Ecology	Site Inspection	**3**
landscape and Visual	Inspection of the mitigation measures implementation situation	**6**
Site Inspection / Audit	Environmental Team (ET), the Contractor and Project Management Representative (PMR) joint site Inspection and Auditing	**13**
	Independent Environmental Checker (IEC) joint site Inspection and Auditing	**3**

BREACHES OF ACTION/LIMIT LEVELS

ES.03. In this Reporting Period, construction noise monitoring results demonstrated that no exceedance of environmental performance. The summary of breach is shown below.

Environmental Aspect	Monitoring Parameters	Action Level	Limit Level	Event & Action		
				NOE Issued	Investigation	Corrective Actions
Construction Noise	$L_{eq(30min)}$ Daytime	0	0	0	0	0

ENVIRONMENTAL COMPLAINT

ES.04. No environmental complaints were received under the EM&A Programme in the Reporting Period.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES.05. No environmental summons or successful prosecutions were recorded in the Reporting Period.

REPORTING CHANGES

ES.06. No reporting changes were made in the Reporting Period.

FUTURE KEY ISSUES

ES.07. During wet season, the contractor should pay attention to prevent muddy water and other water pollutants via site surface runoff draining into the sea. Water quality mitigation measures should be properly to implement in accordance with EMIS stipulation.

ES.08. Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement since construction noise is a key environmental issue during construction work of the Project.

ES.09. Furthermore, dust mitigation measures should be properly performed to avoid fugitive dust generated from the Project.

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1. Ocean Park Corporation is the Project Proponent and the Permit Holder of the *Ocean Park Tai Shue Wan Development* (hereinafter "the Project"), which is a Designated Project to be implemented under Environmental Permit number EP-487/2014 (hereinafter referred as "the EP-487/2014" or "the EP").

1.1.2. The Project will redevelop the existing theme park areas at Tai Shue Wan into a Water Park to enhance the attractiveness of Ocean Park into a world-class theme park and provide a must-see destination to visitors. The layout plan of the Project is shown in ***Appendix A***.

1.1.3. Site formation and foundation works as part of the Project is awarded by Paul Y. Construction Company Limited (hereinafter called "the Contractor") on 17 July 2015. To compliance with Environmental Permit requirement, the Contractor has been appointed Action-United Environmental Services & Consulting (AUES) as the Environmental Team (hereinafter referred as "the ET") to implement the relevant Environmental Monitoring and Audit (EM&A) programmes.

1.1.4. Action-United Environmental Services & Consulting has been commissioned as an Independent ET to implement the relevant EM&A program in accordance with the approved EM&A Manual, as well as the associated duties.

1.1.5. This is the **4th** Quarterly EM&A Summary Report for the Site formation and foundation works as part of the Project under Environmental Permit No. EP-487/2014, covered the period from **17 April 2016 to 16 July 2016**.

1.2 REPORT STRUCTURE

1.2.1 The Monthly Environmental Monitoring and Audit (EM&A) Report is structured into the following sections:-

Section 1 *Introduction*
Section 2 *Project Organization and Construction Progress*
Section 3 *Summary of Impact Monitoring Requirements*
Section 4 *Construction Noise*
Section 5 *Ecology*
Section 6 *Landscape & Visual*
Section 7 *Waste Management*
Section 8 *Site Inspections*
Section 9 *Environmental Complaints, Non-Compliance, Notifications of Summons and Successful Prosecutions*
Section 10 *Implementation Status of Mitigation Measures*
Section 11 *Conclusions and Recommendations*

2 PROJECT ORGANIZATION AND CONSTRUCTION PROGRESS

2.1 PROJECT ORGANIZATION

2.1.1 The project organization is shown in ***Appendix B***. The responsibilities of respective parties are:

Ocean Park Corporation

2.1.2 Ocean Park Corporation is the Project Proponent and the Permit Holder of the EP for the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by Ocean Park Corporation to audit the results of the EM&A works carried out by the ET.

Environmental Protection Department (EPD)

2.1.3 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Project Management Representative (PMR) of Ocean Park Corporation

2.1.4 The PMR is responsible for overseeing the construction works and for ensuring that the works are undertaken by the Contractor in accordance with the specification and contract requirements. The duties and responsibilities of the ER with respect to EM&A are:

- Monitor the Contractors' compliance with contract specifications, including the implementation and operation of the environmental mitigation measures and their effectiveness
- Monitor Contractors's, ET's and IEC's compliance with the requirements in the Environmental Permit (EP) and EM&A Manual
- Facilitate ET's implementation of the EM&A programme
- Participate in joint site inspection by the ET and IEC
- Oversee the implementation of the agreed Event / Action Plan in the event of any exceedance
- Adhere to the procedures for carrying out complaint investigation
- Liaison with the related government departments, ET, IEC, the Contractor and the other Contractors of the Project discussing regarding the cumulative impact issues.

The Contractor

2.1.5 The duties and responsibilities of the Contractor are:

- Comply with the relevant contract conditions and specifications on environmental protection
- Employ an Environmental Team (ET) to undertake monitoring, laboratory analysis and reporting of EM &A Facilitate ET's monitoring and site inspection activities
- Participate in the site inspections by the ET and IEC, and undertake any corrective actions
- Provide information / advice to the ET regarding works programme and activities which may contribute to the generation of adverse environmental impacts
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event / Action Plans
- Implement measures to reduce impact where Action and Limit levels are exceeded
- Adhere to the procedures for carrying out complaint investigation

Environmental Team (ET)

2.1.6 The ET should be employed by the Contractor to conduct the EM&A programme. The ET should be managed by the ET Leader. ET Leader should have relevant professional qualifications in environmental control and possess at least 7 years' experience in EM&A. Suitably qualified professional and technical staff should be included in the ET, and resources for the implementation of the EM&A programme should be allocated in the time under the Contract, to enable fulfilment of the Project's EM&A requirements as specified in the EM&A Manual during construction of the Project. The ET shall include qualified botanist/ecologist for the ecological service and a Registered Landscape Architect for review of implementation of landscape and visual mitigation measures. The ET should report to the OPC and the duties should include:

- to monitor and audit various environmental parameters as required in the Approved EM&A Manual;
- to analyse the EM&A data, review the success of EM&A programme and the adequacy of mitigation measures implemented, confirm the validity of the EIA predictions and identify any adverse environmental impacts arising;
- to monitor compliance with conditions in the EP, environmental protection, pollution prevention and control regulations and contract specifications;
- to audit environmental conditions on site;
- to report on the EM&A results to EPD, the ER, the IEC and Contractor or their delegated representatives;
- to recommend suitable mitigation measures to the Contractor in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans;
- to liaise with the IEC on all environmental performance matters, and ensure timely submission of all relevant EM&A pro forma for IEC's approval;
- to provide advice to the Contractor on environmental improvement, awareness and enhancement matters, etc on site;
- to adhere to the procedures for carrying out complaint investigation;
- to prepare reports on the environmental monitoring data and the site environmental conditions;
- to submit the EM&A report to Director of Environmental Protection (DEP) timely;
- to review proposals of mitigation measures from the Contractor in case of exceedance of Action and Limit levels, in accordance with the Event and Action Plan; and
- to carry out site inspection to investigate and audit the Contractor's site practice, equipment and work methodologies with respect to pollution control and mitigation measures.

Independent Environmental Checker (IEC)

2.1.7 The IEC is empowered to audit the environmental performance of construction, but is independent from the management of construction works. As such, the IEC should not be in any way an associated body of the Contractor or the ET for the Project. The IEC should be employed by OPC prior to the commencement of the construction of the Project. The IEC should be a person who has relevant professional qualifications in environmental control and at least 7 years' experience in EM&A and environmental management. The duties and responsibilities of the IEC are:

- to provide proactive advice to the ER and OPC on EM&A matters related to the project;
- to review and verify the monitoring data and all submissions in connection with the EP and EM&A Manual submitted by the ET;
- to arrange and conduct regular, at least monthly site inspections of the works during the construction phase, and to carry out ad hoc inspections if significant environmental problems are identified;
- to check compliance with the agreed Event and Action Plan in the event of any exceedance;
- to check compliance with the procedures for carrying out complaint investigation;
- to check the effectiveness of corrective measures;
- to feedback audit results to the ET by signing off relevant EM&A pro forma;
- to check that mitigation measures are effectively implemented;
- to report the works conducted, and the findings, recommendations and improvements of the site inspections, after reviewing ET's and Contractor's works, the ER and OPC on a monthly basis;
- to verify the investigation result of the environmental complaint cases and the effectiveness of corrective measures;
- to verify EM&A report that has been certified by ET leader; and
- to audit EIA recommendations and requirements against the status of implementation of environmental mitigation measures on site.

2.2 CONSTRUCTION PROGRESS

2.2.1 The master construction program of Site Formation and Foundation Works is enclosed in ***Appendix C***. In the Reporting Period, major construction activities conducted under the Contract is summarized below.

- Site surveying
- UU detection
- Site clearance
- Excavation for thoroughfare and footings
- Site formation works and slope stabilization works
- Soil nailing
- Construction of Flat EVA and Covered EVA
- Drainage works like catch pit, intake, stepped channel and pipe laying
- Construction of retaining wall, sewage tank and pumping room
- Construction of Raft A and Raft B footings
- Fire service pipe laying
- Construction of retaining wall and pumping room
- Construction of Raft B footings
- 11kV cable diversion & 22kV cable diversion and jointing
- Pipe piling
- Hydro-seeding
- Gas main laying at slope EVA

2.3 SUMMARY OF ENVIRONMENTAL SUBMISSIONS

2.3.1 Summaries of the relevant permits, licenses, and/or notifications on environmental protection for the Project are presented in ***Table 2-1***.

Table 2-1 Status of Environmental Licenses and Permits of the Project

No.	Type of Permit/ License	Submission Date	Reference/ License No.	Date of Issue	Date of Expiry
1	Air pollution Control (Construction Dust) Regulation	Submitted to EPD on 27/07/2015	392566	07/09/2015	N/A
2	Chemical Waste Producer Registration - Waste Producers	4-08-2015	5213-176-P2781-21	25/08/2015	N/A
3	Water Pollution Control Ordinance - Discharge License	Application was on 25/08/2015	WT00022680-2015	14/10/2015	31/10/2020
4	Waste Disposal Regulation - Billing Account for Disposal of Construction Waste	22-07-2015	7022926	06-08-2015	N/A
5	Construction Noise Permit	08-03-2016	GW-RS0314-16	24/03/2016	22/09/2016
6	Construction Noise Permit (replaced GW-RS0314-16)	14-06-2016	GW-RS0682-16	28/06/2016	29/12/2016

2.3.2 To according with the EP stipulation, the required documents has submitted to EPD for retention as listed below:

- Project Layout Plans
- Management Organization of Main Construction Companies
- Detailed Vegetation Survey Report
- Woodland Compensation Plan
- Ardeid Inspection Report

- Short-nosed Fruit Bat Inspection Report
- Baseline Monitoring Report Revision A of the Project

3 SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

3.1.1 The Environmental Monitoring and Audit requirements are set out in the Approved EM&A Manual. During the construction phase of the Project, construction noise is identified a key Environmental issue. Moreover, Landscape & Visual and Ecology monitoring are also required during the construction phase in accordance with the Approved EM&A Manual.

3.1.2 A summary of construction phase EM&A requirements are presented in the sub-sections below.

3.2 MONITORING PARAMETERS

3.2.1 The EM&A program of construction phase monitoring shall cover the following environmental issues:

- Construction noise;
- Landscape & Visual; and
- Ecology

3.2.2 A summary of the monitoring parameters is presented in ***Table 3-1.***

Table 3-1 Summary of EM&A Requirements

Environmental Issue	Parameters
Noise	• $L_{eq(30min)}$ in normal working days (Monday to Saturday) 07:00-19:00 except public holiday; • 3 sets of consecutive $L_{eq(5min)}$ on restricted hours i.e. 19:00 to 07:00 next day, and whole day of public holiday or Sunday when applicable, and • Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.
Landscape & Visual	• Site inspection, monitoring and Audit
Ecology	• Site inspection and monitoring

3.3 MONITORING LOCATIONS

3.3.1 The designated noise monitoring locations as recommended in the *EM&A Manual* is shown in ***Appendix D***. During baseline monitoring, the designated monitoring location NM1 was denied by the owner, so the previous ETL proposed alternative location NM1A. The proposal was verified by the previous IEC and agreed by EPD. ***Table 3-2*** and ***Appendix E*** respectively list and show the construction noise monitoring locations for the Project.

Table 3-2 Impact Monitoring Stations - Construction Noise

Station ID	Description
NM1A	Slope near Victoria Shanghai Academy (VSA) to replace NM1 of the VSA
NM2	Hong Kong Juvenile Care Centre (HKJCC)

3.4 MONITORING FREQUENCY AND PERIOD

3.4.1 Measurement of $L_{eq(30min)}$ between 0700-1900 hours on normal weekdays and once every week during course of works. If construction work necessary to carry out at other time periods, i.e. restricted time period (19:00 to 07:00 the next morning and whole day on public holidays) (hereinafter referred as "the restricted hours"), 3 consecutive $L_{eq(5min)}$ measurement will depended Control Noise Permit (CNP) requirements to undertake. Supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

3.5 MONITORING EQUIPMENT

3.5.1 Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications shall be used for carrying out the noise monitoring. The sound level meter shall be checked using an acoustic calibrator. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m s^{-1}.

3.5.2 Noise monitoring equipment to be used for monitoring is listed in ***Table 3-3***.

Table 3-3 Construction Noise Monitoring Equipment

Equipment	Model
Integrating Sound Level Meter	B&K Type 2238
Calibrator	B&K Type 4231
Portable Wind Speed Indicator	Testo Anemometer

3.5.3 Sound level meter listed above comply with the *International Electrotechnical Commission Publications 651: 1979 (Type 1)* and *804: 1985 (Type 1)* specifications, as recommended in TM issued under the NCO. The acoustic calibrator and sound level meter to be used in the impact monitoring will be calibrated yearly.

3.6 MONITORING METHODOLOGY

3.6.1 Noise measurements were taken in terms of the A-weighted equivalent sound pressure level (L_{eq}) measured in decibels (dB). Supplementary statistical results (L_{10} and L_{90}) were also obtained for reference.

3.6.2 During the monitoring, all noise measurements would be performed with the meter set to FAST response and on the A-weighted equivalent continuous sound pressure level (L_{eq}). $Leq_{(30min)}$ as the monitoring parameter for the time period between 0700-1900 hours on weekdays; and also $Leq_{(15min)}$ in three consecutive $Leq_{(5min)}$ measurements would be used as monitoring parameter for other time periods (e.g. during restricted hours), if necessary.

3.6.3 Prior of noise measurement, the accuracy of the sound level meter is checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The checking is performed before and after the noise measurement.

3.7 EQUIPMENT CALIBRATION

3.7.1 The sound level meter and calibrator are calibrated and certified by a laboratory accredited under HOKLAS or any other international accreditation scheme at yearly basis.

3.7.2 The calibration certificates of sound level meter and calibrator used for impact monitoring program in the Reporting Period are attached in ***Appendix F***.

3.8 METEOROLOGICAL INFORMATION

3.8.1 Meteorological information was extracted from “the Hong Kong Observatory Wong Chuk Hang Station”. For Wong Chuk Hang Station, it is situated nearby the Project site and can provide the humidity, rainfall, and air pressure and temperature etc. meteorological information.

3.9 DERIVATION OF ACTION/LIMIT (A/L) LEVELS

3.9.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual with baseline monitoring results, construction noise criterion, namely Action and Limit levels

proposed are listed in ***Table 3-4***.

Table 3-4 Action and Limit Levels for Construction Noise

Monitoring Location	Action Level	Limit Level in dB(A)
	Time Period: 0700-1900 hours on normal weekdays	
NM1A and NM2	When one or more documented complaints are received	70 dB(A)[Note 1 and Note 2]

Note 1: Acceptable Noise Levels for school should be reduced to 65 dB(A) during examination period
Note 2: If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the NCA have to be followed.

3.9.2 Should non-compliance of the environmental quality criteria occurs, remedial actions will be triggered according to the Event and Action Plan which presented in ***Appendix G.***

3.10 DATA MANAGEMENT AND DATA QA/QC CONTROL

3.10.1 All monitoring data will be handled by the ET's in-house data recording and management system. The monitoring data recorded in the equipment will be downloaded directly from the equipment at the end of each monitoring day. The downloaded monitoring data will input into a computerized database properly maintained by the ET.

4 CONSTRUCTION NOISE MONITORING

4.1 GENERAL

4.1.1 Total 26 construction noise monitoring events conducted at the two designated locations were in the Reporting Period.

4.2 NOISE MONITORING RESULTS IN REPORTING PERIOD

4.2.1 All noise monitoring results throughout the Reporting Period is tabulated in ***Table 4-1*** and relevant graphical plot is shown in ***Appendix H***.

Table 4-1 Summary of Construction Noise Monitoring Results

Date	Time		(*)NM1A		Time		NM2 ($L_{eq30min}$)
	Start	Finish	($L_{eq30min}$)	Correction	Start	Finish	
22-Apr-16	10:52	11:22	62	65	13:03	13:33	59
28-Apr-16	9:38	10:08	65	68	10:39	11:09	59
4-May-16	9:54	10:24	63	66	10:45	11:15	59
10-May-16	15:28	15:58	63	66	13:45	14:15	59
16-May-16	10:53	11:23	63	66	10:08	10:38	60
27-May-16	13:20	13:50	62	65	14:45	15:15	61
1-Jun-16	10:33	11:03	62	65	09:25	09:55	63
7-Jun-16	13:53	14:23	63	65	14:51	15:21	63
13-Jun-16	09:33	10:03	63	65	10:23	10:53	59
24-Jun-16	13:49	14:19	55	58	13:04	13:34	56
29-Jun-16	13:13	13:43	64	67	14:05	14:35	63
5-Jul-16	10:09	10:39	62	65	09:18	09:48	59
11-Jul-16	09:51	10:21	63	66	10:51	11:21	59
Limit Level	**70dB(A)**						

Remarks:

(*) *Sound level meter set at NM1A is made free-field measurement, façade correction (+3dB(A)) is therefore added according to acoustical principles and EPD guidelines.*

4.2.2 As shown in Table 4-1, all the results of noise measurement are below 70dB(A) of the acceptance criteria. Furthermore, there were no noise complaints (Action Level exceedance) received by the PMR, Contractor or EPD in the Reporting Period. Therefore, no Action Level exceedance was triggered nor corrective action was therefore required.

4.2.3 The summary of weather conditions during the Reporting Period is presented in ***Appendix I.***

5 ECOLOGY MONITORING

5.1 GENERAL

5.1.1 As required under the ***Section 8.3.2*** of the approved EM&A Manual, the implementation of ecological mitigation measures as detailed in the ***Section 15*** of the EIA report and ***Appendix C*** of the approved EM&A Manual shall be routinely audited during the routine environmental audit; and any observations and recommendations shall be reported in periodic EM&A reports.

5.1.2 Among those mitigation measures recommended to avoid or minimize the disturbance to any plants of conservation interest (EM&A reference 8.3.1.1), nested ardeids (EM&A reference 8.3.1.2) and roosted short-nosed fruit bat (EM&A reference 8.3.1.3), the required inspection has already been undertaken in August/September 2014 with the results presented in the submitted respective baseline report. Therefore, the following sections only address those applicable to this stage of the project, i.e., Section 8.3.2 of the approved EM&A Manual.

5.2 MONITORING REQUIREMENT

Monitoring of Plants of Conservation Interest (Platycondon grandiflorus)

5.2.1 The Detailed Vegetation Survey Report (DVSR) has located two groups of the protected *Platycodon grandiflorus* and recommended that the plants should be protected with temporary protective fencing to avoid potential impact from construction activities (such as material storage), and monitor the identified *Platycodon grandiflorus* on a monthly basis throughout the construction phase to make sure that they are not affected by the construction works of the Project. Accordingly, the following monitoring parameters will be undertaken on a monthly basis during the construction period.

i. Effective implementation of the protection measures as recommended in the Section 4.1 of the DVSR
ii. Monitoring of the two groups of *Platycodon grandiflorus* identified during the detailed vegetation survey to make sure that they are not affected by the construction works

Monitoring of Nesting Activities of Ardeids in Breeding Season

5.2.2 The project area should be checked monthly in breeding season (April to July) for any potential breeding and nesting activities, and if required suitably sized buffer area will be recommended to avoid human or machinery disturbance until the nest is abandoned.

Monitoring of Roosting Activities of Ardeids in Peak Wintering Season

5.2.3 The existing ardeid night roost within the project area should be monitored monthly during peak wintering season (November to March) during the construction phase using direct observation from a vantage point (i.e., point count method) at evening time from an hour before sunset, and last until the nightfall.

Compensation for Ardeid roosting Site

5.2.4 An enhancement area provided as an alternative roosting site for ardeids should be developed during the first phase of the construction.

Compensation of Woodland Habitat

5.2.5 Mitigation measures recommended in the approved Woodland Compensation Plan should be fully and properly implemented, including but not limited to the creation of 0.84 ha woodland compensation on-site and 0.78 ha on-site woodland reinstatement, to mitigate for permanent loss of woodland habitat.

5.3 INSPECTION FINDINGS

5.3.1 In the Reporting Period, ecological inspections were undertaken on ***11th May 2016, 7th June 2016*** and ***9th July 2016*** by the qualified ecologist. The inspection findings are presented below.

Plants of Conservation Interest (Platycondon grandiflorus)

5.3.2 In the reporting period between 17 April 2016 and 16 July 2016, within the fenced area of the two groups *Platycodon grandiflorus* recorded in the 2015s' growing season was observed to healthy and vigorously growing. Moreover, the preventive mitigation measures, i.e., erecting of temporary protective fencing and sign post, are found to be effectively implemented, and there is no signs or evidence to suggest that the on-going construction activities within the Project Area has affected the health condition of the *Platycodon grandiflorus*.

5.3.3 Moreover, each EM&A Monthly Report has enclosed the relevant month photograph records.

Nesting Activities of Ardeids in Breeding Season

5.3.4 According to the Approved EM&A Manual, *Nesting Activities of Ardeids* monitoring was commenced on 15th April 2016. Neither signs nor breeding activities (such as courtship and nest building) of ardeids were noted within or in proximity of the project area during the time of monitoring in the reporting period.

Roosting Activities of Ardeids in Peak Wintering Season

5.3.5 The last monitoring event of roosting activities of Ardeids in Peak Wintering Season was carried out on 15 March 2016. Hence, no monitoring of roosting activities was carried out in the reporting period between 17 April 2016 and 16 July 2016.

Compensation for Ardeid roosting Site

5.3.6 To be implemented.

Compensation of Woodland Habitat

5.3.7 To be implemented.

5.4 CONCLUSION

5.4.1 The implementation of the mitigation measures for the plant species of conservation interest, i.e., the *Platycodon grandiflorus*, was found to be effective during the reporting period and no sign of activities related to construction work was noted within or in proximity of the fenced up area. The growth of the 2 groups of *Platycodon grandiflorus* within the fenced area was found to be vigorous and all of the shoots were all in healthy condition.

5.4.2 On the other hand, no sighting of ardeids or signs of any breeding/nesting activities were noted within the project area during the reporting period of monitoring.

6 LANDSCAPE & VISUAL MONITORING

6.1 GENERAL

6.1.1 According to the EM&A Manual requirements, a Registered Landscape Architect (RLA) was responsible for monitoring the implementation of landscape and visual mitigation measures during the construction.

6.2 INSPECTION FINDINGS

6.2.1 In the Reporting Period, total six occasions of landscape and visual site inspection were undertaken on *27th April 2016, 13th & 26th May 2016, 13th & 29th June 2016* and *12th July 2016*

6.2.2 According to the inspections, no construction activities conducted or materials storage placed outside of the working site boundary. The Contractor is fully compliance with the intended of mitigation measures.

7 WASTE MANAGEMENT

7.1 GENERAL WASTE MANAGEMENT

7.1.1 Waste management was carried out by an on-site Environmental Officer or an Environmental Supervisor from time to time.

7.2 RECORDS OF WASTE QUANTITIES

7.2.1 All types of waste arising from the construction work are classified into the following:

- Construction & Demolition (C&D) Material;
- Chemical Waste;
- General Refuse; and
- Excavated Soil.

7.2.2 The quantities of waste for disposal in this Reporting Period are summarized in ***Tables 7-1*** and ***7-2***.

Table 7-1 Summary of Quantities of Inert C&D Materials

Type of Waste	Quantity (in tonne)				Disposal Location
	17 Apr to 16 May 2016	17 May to 16 Jun 2016	17 Jun to 16 Jul 2016	Total	
C&D Materials (Inert)	10,070.87	11,907.97	20,189.56	42,168.40	-
Mixed Waste to Sorting Facility	0	0	0	0	-
Reused in this Contract (Inert)	0	0	0	0	-
Reused in other Projects (Inert)	60.00	0	0	60.00	MTR SIL 904
Disposal as Public Fill	10,010.87	11,907.97	20,189.56	42,108.40	Chai Wan Barging Point and TKO137 and TM38

Table 7-2 Summary of Quantities of C&D Wastes

Type of Waste	Quantity (in tonne)				Disposal Location
	17 Apr to 16 May 2016	17 May to 16 Jun 2016	17 Jun to 16 Jul 2016	Total	
Recycled Metal	0	0	43.40	43.40	Licensed collector
Recycled Paper / Cardboard Packing	0	0	0	0.00	-
Recycled Plastic	0	0	0	0.00	-
Chemical Wastes	0	0	0	0.00	-
General Refuses	23.87	23.81	23.58	71.26	SENT Landfill

7.2.3 The Monthly Summary Waste Flow Table is shown in ***Appendix J***. Whenever possible, materials were reused on-site as far as practicable.

8 SITE INSPECTION

8.1 REQUIREMENTS

8.1.1 According to the approved EM&A Manual, the environmental site inspection shall be formulation by ET Leader. Weekly environmental site inspections should carry out to confirm the environmental performance.

8.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

8.2.1 In the Reporting Period, total 13 occasions of joint site inspection to evaluate site environmental performance has been carried out by the PMR, ET and the Contractor. Moreover, IEC performed site inspection and audit is on **3 May 2016**, **7 June 2016** and **8 July 2016.**

8.2.2 In the Reporting Period, no non-compliance was recorded; however, ***five (5)*** reminders and ***fourteen (14)*** observations were recorded during the site inspections. The findings / deficiencies observed during the weekly site inspections are summarized in ***Table 8-1***.

Table 8-1 Site Observations of the Project

Reporting Period	Findings / Deficiencies
17 April 2016 to 16 May 2016	• Turbid water observed is flowed to and cumulated within the working areas where the location is closer sea shore. The contractor should inspect where the turbidity water come from and make sure all discharge water from site should comply with the discharge license requirement. • Stagnant water cumulated inside the drip tray after the rainstorm was observed. Advise cleanup to keep it functional. • Remind that all waste water as discharge from site should comply with discharge license requirement. Also, the contractor should closely monitor the de-silting facilities are effective. (Reminder) • As reminded that mitigation measures or facilities should be provided minimize dust generation during manual excavation on the slope. (Reminder) • Haul road observed is loose and dry. Dust mitigation measures shall be implemented to reduce dust impact. • Large amount of dust emitted from rock drilling is observed. Enhance dust mitigation measures should implement to reduce dust generation from rock drilling. • Stagnant water was found in the material storage area, the contractor reminded cleanup the stagnant water to prevent mosquito breeding. (Reminder)
17 May 2016 to 16 June 2016	• Dust emission is observed during rock breaking. Mitigation measures should be provided to reduce air quality impact. • Stagnant water cumulated inside the drip tray after the rainstorm was observed. Advise cleanup to keep it functional. • Remind that all construction materials as located on site should covered it prevent emission to impact air quality. (Reminder) • A sandbag bund was shattered during heavy rain. Therefore, mud water was observed flowed to public area and then to the sea. The Contractor was reminded immediately fixed it. Additional, enhance water mitigation measures should be properly to follow-up.
17 June 2016 to 16 July 2016	• For slope stabilization of shotcrete works, the cement sand mixing area is observed top position and three sides are without shelter. To reduce dust emission to impact air quality, shelter or tarpaulin cover should be provided the cement sand mixing area.

	• Dry and loose of the haul road surface is observed. Dust mitigation measures should be provided to reduce dust impact. • Oil stains was observed on ground. To prevent land contamination, the contractor is requested immediately cleanup it. • Dust emission from construction activity was observed. Although water spray was provided, dust mitigation measures should be enhanced as reduce air quality impact. • Stagnant water cumulated inside the drip tray after the rainstorm was observed. Advise cleanup to keep it functional. • The contractor was reminded to pay attention on the stagnant water on site. (Reminder) • Stagnant water is observed nearby the outfall. Remind that stagnant water shall discharge to treatment facilities and comply with the discharge license and its requirement. • Unlabeled oil drum is observed without drip tray as located on working area. To prevent land contamination, the contractor is requested to immediately remove it or provide drip tray.

8.2.3 Minor deficiencies found in the weekly site inspection were in general rectified within the specified deadlines. No non-compliance was observed by ET and IEC in the Reporting Period. Remind that wastewater discharge from the working site shall be followed the discharge license stipulation. Wastewater sampling and analysis shall be conducted per quarter in accordance the discharge license requirements. Moreover, dust mitigation measures implementation should be enhanced during rock breaking or drilling activities to minimize air quality impact.

8.2.4 In the Reporting Period, no external parties visited the Project site. Overall, the environmental performance of the Project as managed by the Contractor with OPC is satisfactory.

9 ENVIRONMENTAL COMPLAINT AND NON-COMPLIANCE

9.1 ENVIRONMENTAL COMPLAINT, SUMMONS AND PROSECUTION

9.1.1 No environmental complaint, summons and prosecution was received in the Reporting Period. The statistical summary table of environmental complaint is presented in ***Tables 9-1, 9-2*** and ***9-3***.

Table 9-1 Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
17 Apr 2016 – 16 May 2016	0	0	NA
17 May 2016 – 16 Jun 2016	0	0	NA
17 Jun 2016 – 16 Jul 2016	0	0	NA

Table 9-2 Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Complaint Nature
17 Apr 2016 – 16 May 2016	0	0	NA
17 May 2016 – 16 Jun 2016	0	0	NA
17 Jun 2016 – 16 Jul 2016	0	0	NA

Table 9-3 Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Complaint Nature
17 Apr 2016 – 16 May 2016	0	0	NA
17 May 2016 – 16 Jun 2016	0	0	NA
17 Jun 2016 – 16 Jul 2016	0	0	NA

10 IMPLEMENTATION STATUS OF MITIGATION MEASURES

10.1 GENERAL REQUIREMENTS

10.1.1 The environmental mitigation measures that recommended in the Implementation Schedule for Environmental Mitigation Measures (ISEMM) in the approved EM&A Manual covered the issues of dust, noise, water and waste and they are summarized presented in ***Appendix K.***

10.1.2 The Project shall be implementing the required environmental mitigation measures according to the approved EM&A Manual as subject to the site condition. Environmental mitigation measures generally implemented by the Contractor in this Reporting Period are summarized in ***Table 10-1***.

Table 10-1 Environmental Mitigation Measures

Issues	Environmental Mitigation Measures
Construction Noise	• Shut down construction equipment when not in used
Ecology	• Wire fencing provided for temporary protect the identified flora species of conservation concern • Undertake site inspection of the flora species of conservation and the Ardeid of breeding and nesting activities
Landscape & Visual	• Good site management
Air Quality	• Good site management to reduce air quality impact • Main temporary access road paved with concrete • Prior to any loading or transfer operation, all dusty materials has sprayed with water to keep its wet • Any debris has covered entirely by impervious sheeting • Before debris dumped into a chute, water has sprayed onto the debris to make its wet • Vehicles has covered with tarpaulin during transporting dusty materials • When vehicles leaving the construction site, any vehicles loaded dusty materials covered with clean impervious sheeting as prevent fugitive dusty materials emission • The speed of the trucks passing site areas was controlled to below 10 km/hour • Water spray has been provided for soil-nailing work
Water Quality	• Portable chemical toilets has provided on site • A licensed collector has employed to collect effluent and off-site dispose.
Waste and Chemical Management	• A temporary container which located far away from sea shore and drainage channel, has provided for chemical materials and waste storage • Drip tray is provided for chemical materials which use on the working areas • Has provided a waste skip for general refuse disposal
General	• The site was generally kept tidy and clean

11 CONCLUSIONS AND RECOMMENDATIONS

11.1 CONCLUSIONS

11.1.1 This is **4th** Quarterly EM&A Summary Report presenting the monitoring results and inspection findings for the Reporting Period from **17 April 2016 to 16 July 2016**.

11.1.2 In Reporting Period, there were no noise complaints (Action Level exceedance) received by the PMR, Contractor or EPD in the Reporting Period. Furthermore, no noise complaint (which is an Action Level exceedance) was received by the EPD, PMR and the Contractor. No NOEs or the associated corrective actions were therefore issued. Therefore, no Action Level exceedance was triggered nor corrective action was therefore required.

11.1.3 In the Reporting Period, ecological inspections were undertaken on ***11th May 2016, 7th June 2016*** and ***9th July 2016*** by the qualified ecologist. The implementation of the mitigation measures for the plant species of conservation interest, i.e., the *Platycodon grandiflorus*, was found to be effective during the reporting period of monitoring. Also, the growth of the 2 groups of *Platycodon grandiflorus* within the fenced area were found to be vigorously and all of the shoots were in healthy condition in the reporting period. In addition, monitoring of nesting activities by ardeids have also be undertaken at the reporting month but neither signs nor breeding activities (such as courtship and nest building) of ardeids were noted within or in proximity of the project area during the reporting period of monitoring.

11.1.4 In the Reporting Period, total six occasions of landscape and visual site inspection were undertaken. No construction activities conducted or materials storage placed outside of the working site boundary. The Contractor is fully compliance with the intended of mitigation measures.

11.1.5 During the Reporting Period, total 13 occasions of joint site inspection to evaluate site environmental performance has been carried out by the PMR, ET and the Contractor. Moreover, IEC performed three events of the site inspection and audit. No adverse environmental impacts were observed during the weekly site inspection and environmental audit of the Reporting Period, indicating the implemented mitigation measures for air quality, construction noise and water quality were effective. Minor deficiencies found in the weekly site inspection were in general rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

11.1.6 In the Reporting Period, no external parties visited the Project

11.1.7 No documented complaint, notifications of summons and successful prosecutions were received during the Reporting Period.

11.2 RECOMMENDATIONS

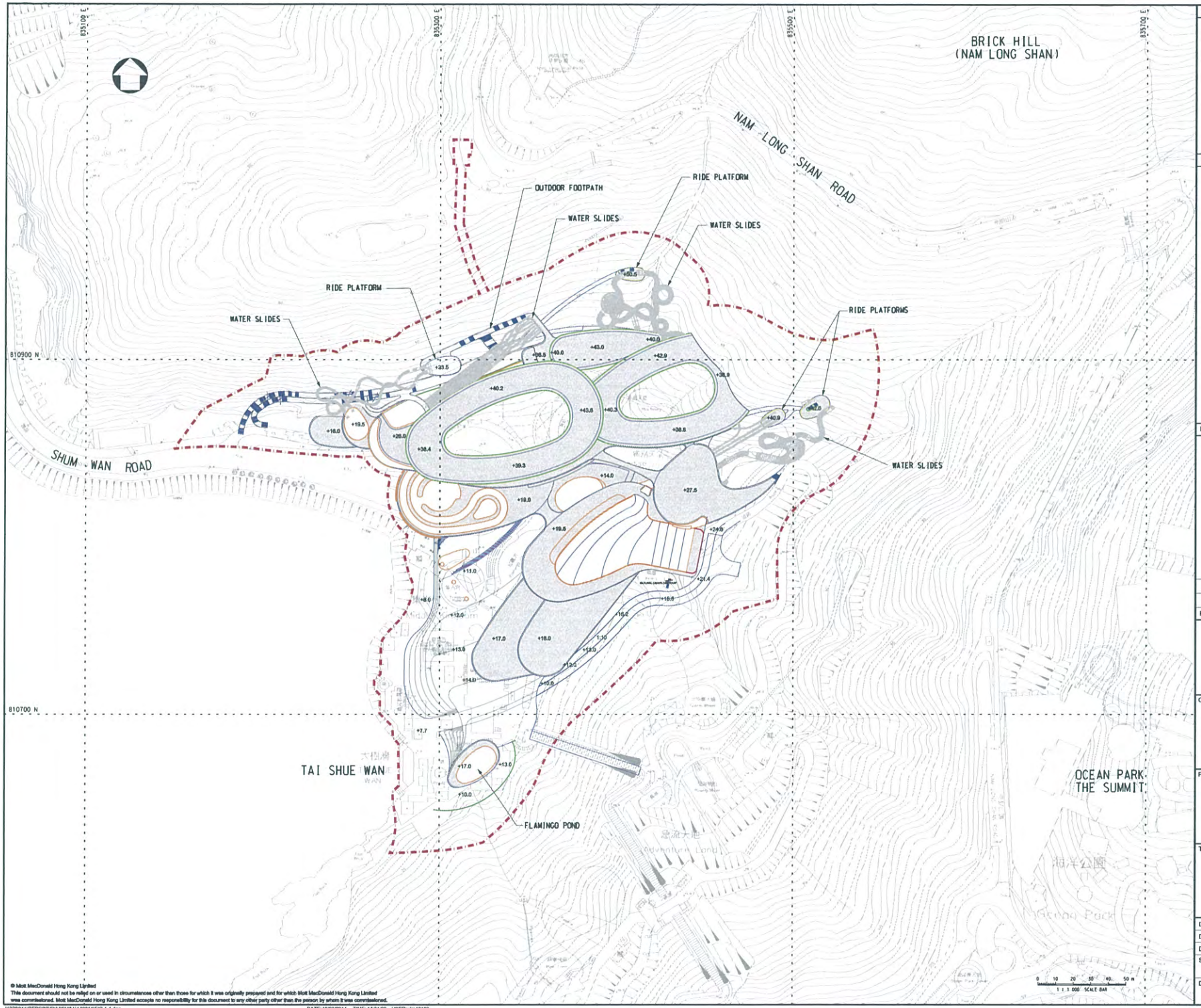
11.2.1 During wet season, the contractor should pay attention to prevent muddy water and other water pollutants via site surface runoff draining into the sea. Water quality mitigation measures should be properly to implement in accordance with EMIS stipulation.

11.2.2 Noise mitigation measures such as using quiet plants should be implemented in accordance with the EM&A requirement since construction noise is a key environmental issue during construction work of the Project.

11.2.3 Furthermore, dust mitigation measures should be properly performed to avoid fugitive dust generated from the Project. To control the site performance on waste management, the Contractor shall ensure that all solid and liquid waste management works are fully in compliance with the relevant license/permit requirements, such as the effluent discharge license and the chemical waste producer registration. The Contractor is also reminded to implement the recommended environmental mitigation measures according to the Environmental Monitoring and Audit Manual.

Appendix A

Layout Plan of the Project



Notes

Key to symbols

PROJECT BOUNDARY

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P2	MAR 14	MING	GENERAL REVISION	HY	AFK
P1	FEB 14	MING	FIRST ISSUE	HY	AFK

Mott MacDonald

20/F Two Landmark East
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Client

Ocean Park Hong Kong

Project

TAI SHUE WAN DEVELOPMENT AT OCEAN PARK

Title

PROJECT LAYOUT PLAN

Designed	HY		Eng check	FW	
Drawn	MING		Coordination	FW	
Dwg check	HY		Approved	AFK	
Scale at A1 1:1000		Status PRE		Rev P2	

Drawing Number

FIGURE 1.1

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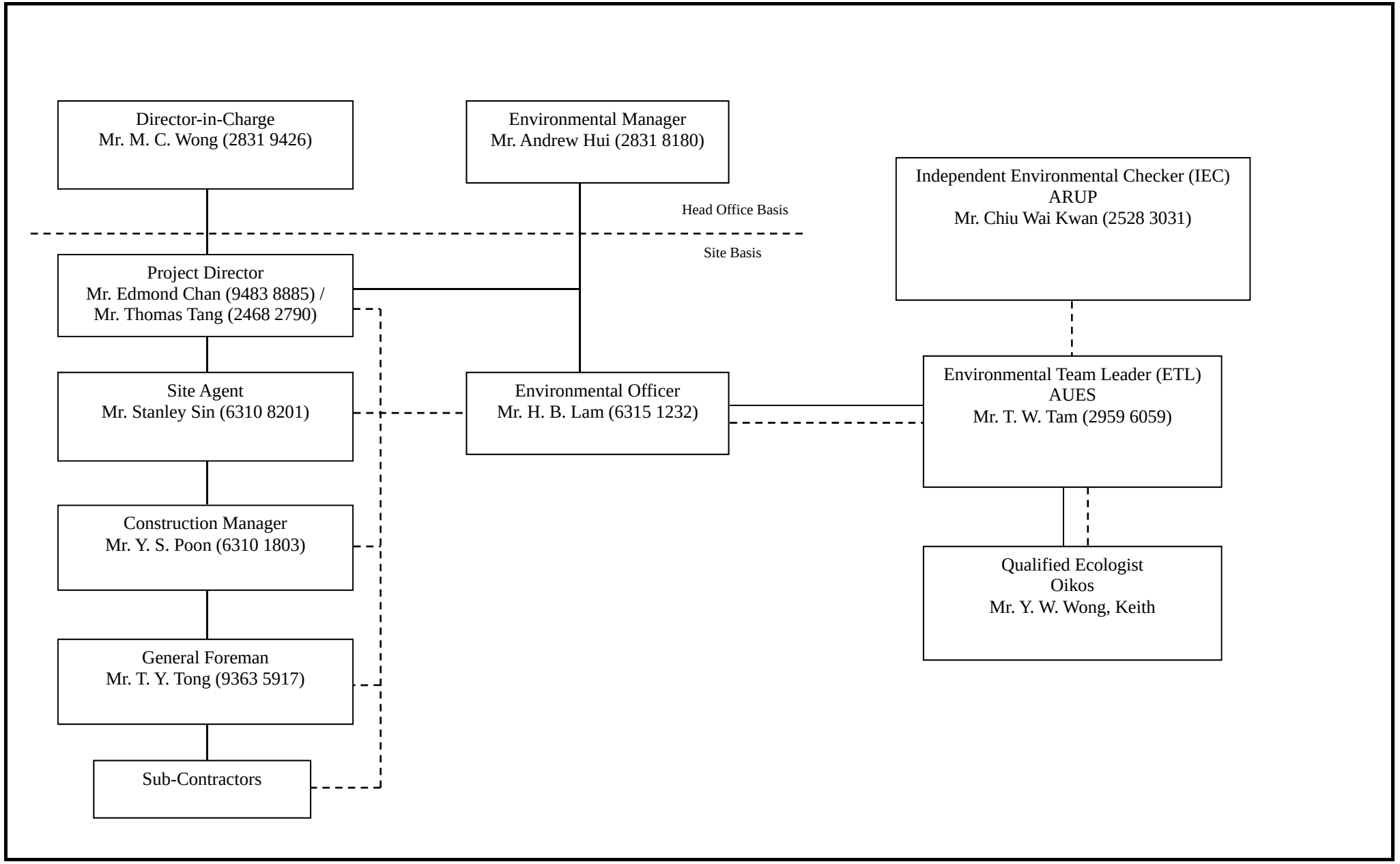
Appendix B

Organization Chart


Director-in-Charge
Mr. M. C. Wong (2831 9426)
Environmental Manager
Mr. Andrew Hui (2831 8180)
Independent Environmental Checker (IEC)
ARUP
Mr. Chiu Wai Kwan (2528 3031)
Head Office Basis
Site Basis
Project Director
Mr. Edmond Chan (9483 8885) /
Mr. Thomas Tang (2468 2790)
Site Agent
Mr. Stanley Sin (6310 8201)
Environmental Officer
Mr. H. B. Lam (6315 1232)
Environmental Team Leader (ETL)
AUES
Mr. T. W. Tam (2959 6059)
Construction Manager
Mr. Y. S. Poon (6310 1803)
Qualified Ecologist
Oikos
Mr. Y. W. Wong, Keith
General Foreman
Mr. T. Y. Tong (9363 5917)
Sub-Contractors

Contact Details of Key Personnel

Organization	Project Role	Name of Key Staff	Tel No.	Fax No.
Project Proponent : Ocean Park Corporation				
OPC	(*) Project Management Representative / Resident Engineer (Planning)	Mr. Tsoi Mau Chui	2870 6121	2814 0179
Arup	Independent Environmental Checker	Mr. Chiu Wai Kwan	2528 3031	2268 3950
Paul Y	Project Director of Contractor	Mr. Thomas Tang	2468 2790	2833 5604
Paul Y	Site Agent of Contractor	Mr. Stanley S.C. Sin	2831 8282	2833 5604
Paul Y	Construction Manager of Contractor	Mr. Y. S. Poon	6310 1803	2833 5604
Paul Y	Environmental Officer of Contractor	Mr. Lam Ho Ben	2831 8282	2833 5604
AUES	Environmental Team Leader	Mr. T. W. Tam	2959 6059	2959 6079
AUES	Environmental Consultant	Ms. Nicola Hon	2959 6059	2959 6079
AUES	Environmental Consultant	Mr. Ben Tam	2959 6059	2959 6079
Oikos	Qualified Ecologist	Dr. Keith Wong	9421 2016	2542 3411

Legend:

OPC – Ocean Park Corporation

Arup – Ove Arup & Partners Hong Kong Ltd

Paul Y – Paul Y. Construction Company, Limited

AUES – Action-United Environmental Services & Consulting

Oikos – Oikos Consulting Limited

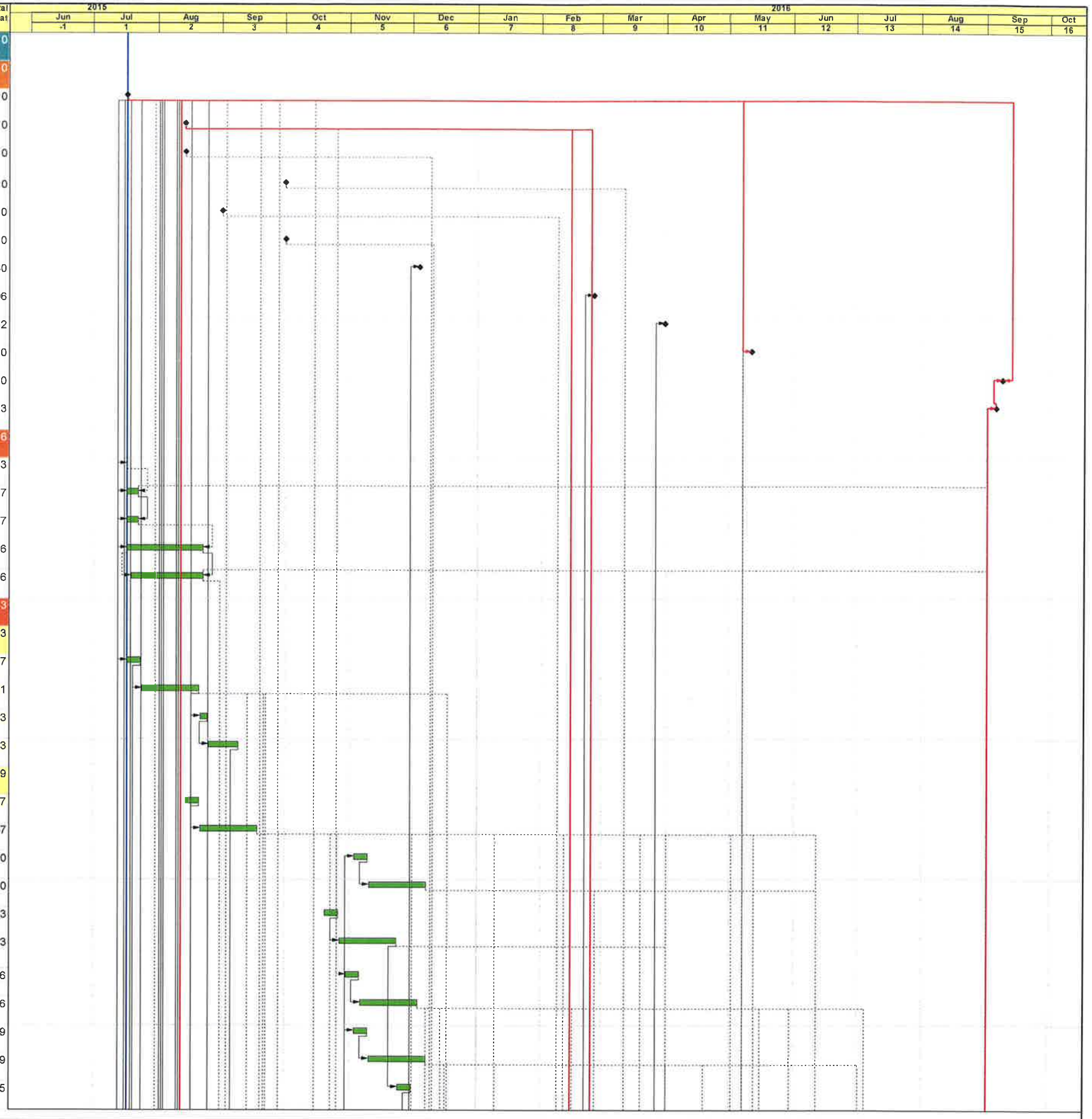
Remarks:

(*) - Acting

Appendix C

Master Construction Programme – Formation and Foundation Works

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
OPC-Master Programme		342	17-Jul-15	08-Sep-16	0
Key Dates& Programme Dates		420	17-Jul-15	08-Sep-16	0
KD10000	Commencement Date	0	17-Jul-15*		0
KD10010	Instruct Optional Works - FS Pipes	0	14-Aug-15*		0
KD10020	Instruct Optional Works - Additional slope works	0	14-Aug-15*		0
KD10025	Instruct VO - Site Formation for Ride P2, P4	0	01-Oct-15*		0
KD10035	Instruct VO - Site Formation for Ride P3	0	01-Sep-15*		0
KD10050	Instruct VO - Raft A Foundation Amendment	0	01-Oct-15*		0
KD10060	HEC 22kV cable - EVA (Flat Section) Access Date	0	04-Dec-15		280
KD10070	HEC 22kV cable - North of Site Access Date	0	26-Feb-16		196
KD10075	HEC 22kV cable - EVA (Covered and Sloping Section) Access Date	0	31-Mar-16		162
KD10080	Access the designated part of the Site for other Contractor	0		11-May-16*	0
KD10085	Contract Completion	0		08-Sep-16*	0
KD10090	Programme Completion	0		05-Sep-16	3
Permit Application		37	17-Jul-15	22-Aug-15	16
PA10000	LD Notification for Commencement of Works	0	17-Jul-15	17-Jul-15	53
PA10010	Prepare and Submit of Billing Account (Waste)	6	17-Jul-15	22-Jul-15	47
PA10030	Prepare and Submit of EPD Notification Regulation (Air)	6	17-Jul-15	22-Jul-15	47
PA10040	Prepare and Apply of Chemical Waste Disposal License	37	17-Jul-15	22-Aug-15	16
PA10050	Prepare and Apply of Wastewater Discharge License	35	19-Jul-15	22-Aug-15	16
BD Submission		339	17-Jul-15	05-Sep-16	3
BD Submission for Site Formation Works		54	17-Jul-15	08-Sep-15	13
BD10000	Submission for site formation (SSP and BA10)	7	17-Jul-15	23-Jul-15	17
BD10010	BD Consent for site formation (SSP and BA10)	28	24-Jul-15	20-Aug-15	31
BD10180	Submission for GI Works (SSP and BA10)	4	21-Aug-15	24-Aug-15	13
BD10190	BD consent for GI Works (SSP and BA10)	15	25-Aug-15	08-Sep-15	13
BD Submission for Foundation Works		137	14-Aug-15	28-Dec-15	79
BD10020	Submission for excavation for foundation works (Packages 2,3,5,6) (SSP and BA10)	7	14-Aug-15*	20-Aug-15	47
BD10030	Consent for excavation for foundation works (Packages 2,3,5,6) (SSP and BA10)	28	21-Aug-15	17-Sep-15	47
BD10040	Submission for excavation for foundation works (Package 2 for 16 Footings due to GI required) (SSP and BA10)	7	03-Nov-15	09-Nov-15	100
BD10050	Consent for excavation for foundation works (Package 2 for 16 Footings due to GI required) (SSP and BA10)	28	10-Nov-15	07-Dec-15	100
BD10060	Submission for excavation for foundation works (Package 4) (SSP and BA10)	7	20-Oct-15*	26-Oct-15	43
BD10070	BD consent for excavation for foundation works (Package 4) (SSP and BA10)	28	27-Oct-15	23-Nov-15	43
BD10360	Submission for RC foundation works (Packages 3,5,6) (SSP and BA10)	7	30-Oct-15*	05-Nov-15	26
BD10370	BD consent for RC foundation works (Packages 3,5,6) (SSP and BA10)	28	06-Nov-15	03-Dec-15	26
BD10380	Submission for RC foundation works (Package 2) (SSP and BA10)	7	03-Nov-15	09-Nov-15	49
BD10390	BD consent for RC foundation works (Package 2) (SSP and BA10)	28	10-Nov-15	07-Dec-15	49
BD10400	Submission for RC foundation works (Package 4) (SSP and BA10)	7	24-Nov-15	30-Nov-15	55



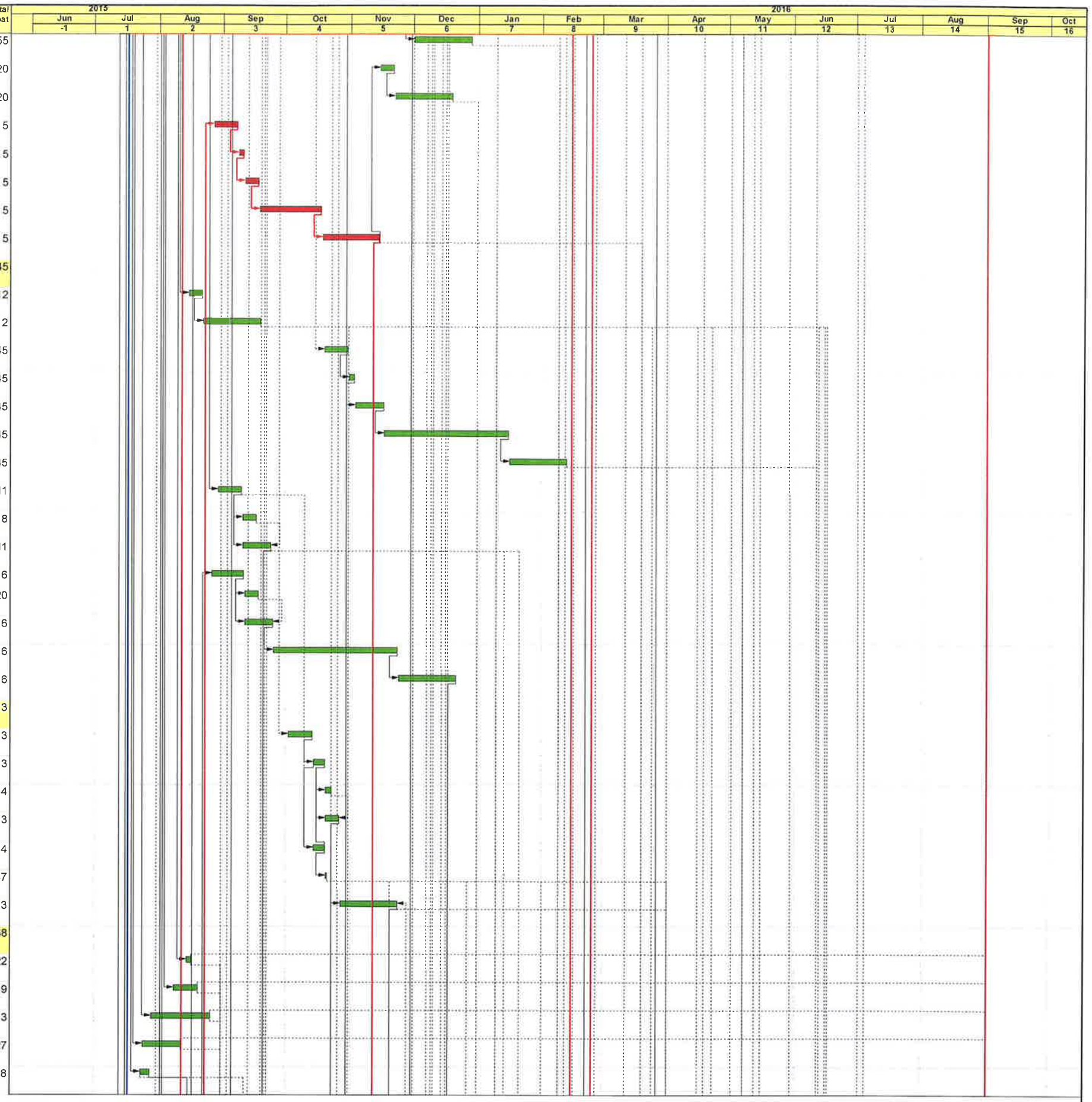
Date	Revision	Checked	Approved
15/10/2015	3	TF	ED

Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
BD10410	BD consent for RC foundation works (Package 4) (SSP and BA10)	28	01-Dec-15	28-Dec-15	55
BD10420	Submission for RC foundation works (Covered EVA)(Package 7) (SSP and BA10)	7	15-Nov-15	21-Nov-15	20
BD10430	BD consent for RC foundation works (Covered EVA)(Package 7)(SSP and BA10)	28	22-Nov-15	19-Dec-15	20
BD10470	Design ELS temporary works for ELS at Covered EVA (Package 7)	12	27-Aug-15	07-Sep-15	5
BD10480	ICE approval for ELS temporary works at Covered EVA (Package 7)	3	08-Sep-15	10-Sep-15	5
BD10490	PM approval for ELS temporary works at Covered EVA (Package 7)	7	11-Sep-15	17-Sep-15	5
BD10500	BD approval for ELS temporary works at Covered EVA (Package 7)	30	18-Sep-15	17-Oct-15	5
BD10510	BD consent for ELS temporary works at Covered EVA (Package 7)	28	18-Oct-15	14-Nov-15	5
BD Submission for Drainage Works		182	15-Aug-15	12-Feb-16	145
BD10200	Submission for drainage works (SSP and BA10)	7	15-Aug-15	21-Aug-15	112
BD10210	BD consent for drainage works (SSP and BA10)	28	22-Aug-15	18-Sep-15	112
BD10240	Design temporary works for ELS at Manhole excavation >3.7 m deep	12	19-Oct-15*	30-Oct-15	145
BD10250	ICE approval for ELS temporary worksfor Manhole excavation >3.7 m deep	3	31-Oct-15	02-Nov-15	145
BD10260	PM approval for ELS temporary worksfor Manhole excavation >3.7 m deep	14	03-Nov-15	16-Nov-15	145
BD10270	BD approval for ELS temporary worksfor Manhole excavation >3.7 m deep	60	17-Nov-15	15-Jan-16	145
BD10280	BD consent for ELS temporary worksfor Manhole excavation >3.7 m deep	28	16-Jan-16	12-Feb-16	145
BD10570	Proposal for Temporary diversion of drainage for the intakes	12	29-Aug-15	09-Sep-15	11
BD10590	ICE approval for Temporary diversion of drainage for the intakes	7	10-Sep-15	16-Sep-15	18
BD10600	PM approval for Temporary diversion of drainage for the intakes	14	10-Sep-15	23-Sep-15	11
BD10620	Design for 1.2 m dia. drainage under the existing escalator	16	26-Aug-15	10-Sep-15	16
BD10630	ICE approval for design of 1.2 m dia. drainage under the existing escalator	7	11-Sep-15	17-Sep-15	20
BD10640	PM approval for design of 1.2 m dia. drainage under the existing escalator	14	11-Sep-15	24-Sep-15	16
BD10650	BD approval for design of 1.2 m dia. drainage under the existing escalator	60	25-Sep-15	23-Nov-15	16
BD10660	BD consent for design of 1.2 m dia. drainage under the existing escalator (BA10 and SSP)	28	24-Nov-15	21-Dec-15	16
BD Submission for Demolition Works		53	02-Oct-15	23-Nov-15	13
BD10520	Prepare the Demolition method statement and temporary support drawings	12	02-Oct-15*	13-Oct-15	13
BD10530	Translate the Demolition method statement in Chinese	6	14-Oct-15	19-Oct-15	13
BD10540	ICE approval for translation of the Demolition method statement in Chinese	3	20-Oct-15	22-Oct-15	14
BD10550	PM approval for Translation of the Demolition method statement in Chinese	7	20-Oct-15	26-Oct-15	13
BD10555	Prepare drainage assessment report	6	14-Oct-15	19-Oct-15	14
BD10558	Submit drainage assessment report to BD for reference (Demolition works Requirement)	1	20-Oct-15	20-Oct-15	47
BD10560	BD consent for the demolition works (BA 10 and SSP)	28	27-Oct-15	23-Nov-15	13
Miscellaneous		46	23-Jul-15	06-Sep-15	368
BD10220	Public Relation Plan (PR Plan)	3	14-Aug-15	16-Aug-15	22
BD10230	Details of the debris disposal and management system	12	08-Aug-15	19-Aug-15	19
BD10690	Prepare and Submit Baseline or Initial Reading of New and Existing Instruments	29	28-Jul-15	25-Aug-15	13
BD10700	Prepare and Submit Pre-construction Condition Survey Report	19	24-Jul-15	11-Aug-15	27
BD10710	Layout Plan for PM Office	5	23-Jul-15	27-Jul-15	368



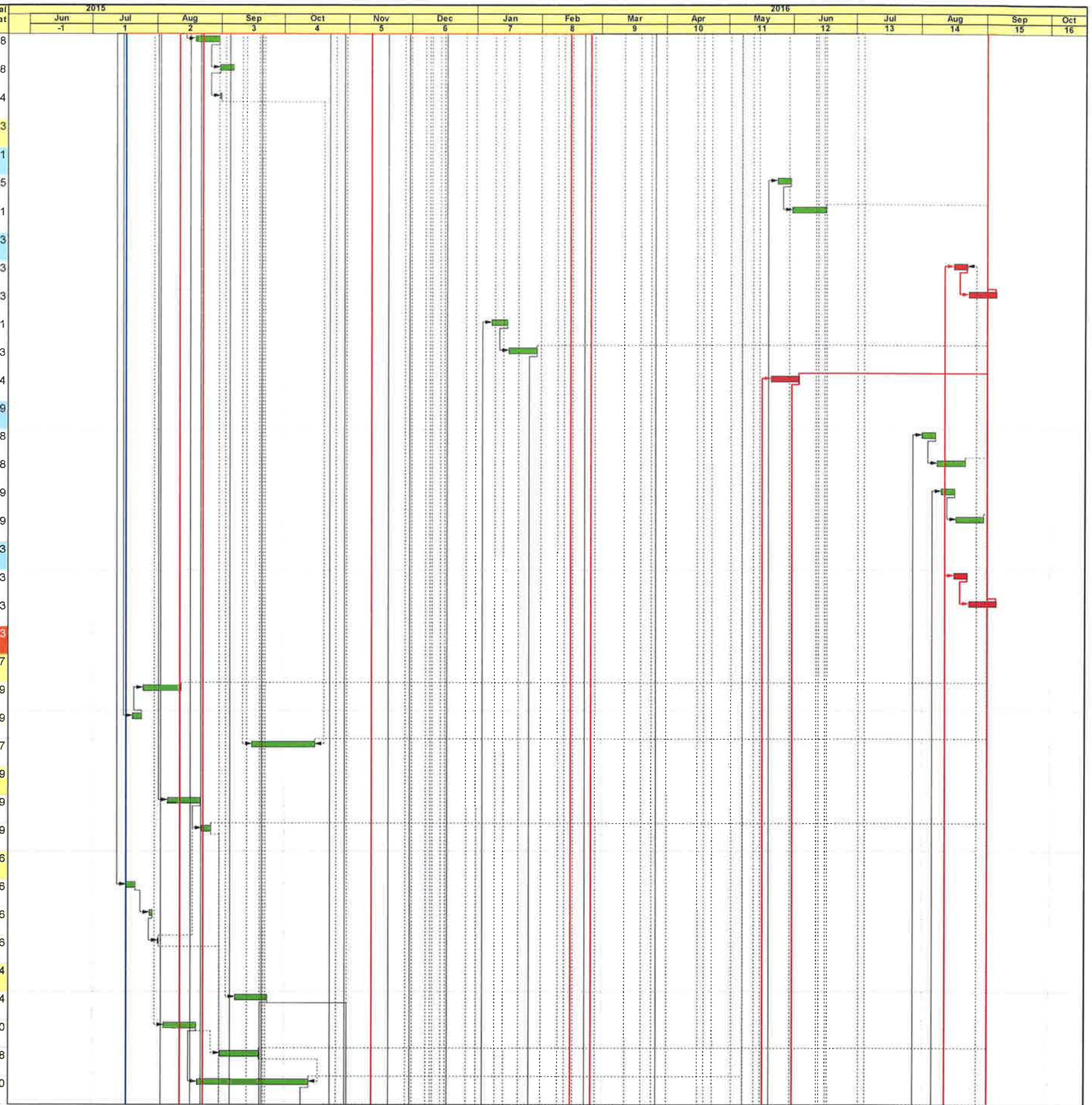
Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Date	Revision	Checked	Approved
15/10/2015	3	TF	ED

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
BD10720	Design Calculation and Shop Drawings for PM Office	12	19-Aug-15	30-Aug-15	368
BD10730	Review and approval for Design Calculation and Shop Drawings for PM Office	7	31-Aug-15	06-Sep-15	368
BD10740	Submit Design Calculation and Shop Drawings to BD for PM Office	1	31-Aug-15	31-Aug-15	374
BA14		196	08-Jan-16	05-Sep-16	3
BA14 for Demolition Works		20	24-May-16	16-Jun-16	71
BA10000	BA14 Preparation for Demolition Works	7	24-May-16	30-May-16	85
BA10010	BA14 Submission and Acknowledgement for Demolition Works	14	31-May-16	16-Jun-16	71
BA14 for Site Formation Works		196	08-Jan-16	05-Sep-16	3
BA10020	BA14 Preparation for Site Formation Works	7	16-Aug-16	22-Aug-16	3
BA10030	BA14 Submission and Acknowledgement for Site Formation Works	14	23-Aug-16	05-Sep-16	3
BA10040	BA 14 Preparation for Sheet piling under existing escalator	7	08-Jan-16	15-Jan-16	11
BA10050	BA 14 Submission and Acknoledgement for Sheet piling under existing escalator	14	16-Jan-16	29-Jan-16	13
BA10060	BA 14 Submission and Acknoledgement for new EVA	14	21-May-16	03-Jun-16	4
BA14 for Drainage Works		30	01-Aug-16	30-Aug-16	9
BA10070	BA14 Preparation for Storm Drainage/Sewage Works	7	01-Aug-16	07-Aug-16	18
BA10080	BA14 Submission and Acknowledgement for Storm Drainage/Sewage Works	14	08-Aug-16	21-Aug-16	18
BA10090	BA14 Preparation for 1.2 dia. Drainage under Existing escalator	7	10-Aug-16	16-Aug-16	9
BA10100	BA14 Submission and Acknowledgement for 1.2 dia. Drainage under Existing escalator	14	17-Aug-16	30-Aug-16	9
BA14 for Foundation Works		21	16-Aug-16	05-Sep-16	3
BA10110	BA14 Preparation for Foundation Works	7	16-Aug-16	22-Aug-16	3
BA10120	BA14 Submission and Acknowledgement for Foundation Works	14	23-Aug-16	05-Sep-16	3
Preliminary Works		89	17-Jul-15	02-Nov-15	253
Site Accommodation		73	20-Jul-15	15-Oct-15	267
OH10060	Erection of Contractor's Office	16	25-Jul-15	12-Aug-15	319
PW10010	Set Up of Temporary Contractor's Office	5	20-Jul-15	24-Jul-15	319
PW10020	Erection of PM Office	25	15-Sep-15*	15-Oct-15	267
Hoarding		18	06-Aug-15	26-Aug-15	9
PW10030	Shop Drawings of Site Hoarding and Gate	14	06-Aug-15	21-Aug-15	9
PW10040	Erection of Site Hoarding and Gate	4	22-Aug-15	26-Aug-15	9
Hammer Head		14	17-Jul-15	01-Aug-15	26
PW10050	Proposal for Construction of Hammer Head and Site Hoarding	4	17-Jul-15	21-Jul-15	26
PW10060	Construction of Hammer Head	2	28-Jul-15	29-Jul-15	26
PW10070	Trial Run for the Turning Point by Shuttle Bus	1	01-Aug-15	01-Aug-15	26
UU detection and CCTV		63	04-Aug-15	19-Oct-15	264
PW10080	Conduct CCTV Survey of Existing Drainage and Sewerage System	14	07-Sep-15*	22-Sep-15	54
PW10090	UU dectection for Site 1-Shum Wan Road	14	04-Aug-15*	19-Aug-15	170
PW10100	UU dectection for Site 2-Flat Ground within Construction Site	16	31-Aug-15*	18-Sep-15	188
PW10110	UU dectection for Site 3-Slope within Construction Site	43	20-Aug-15*	12-Oct-15	170



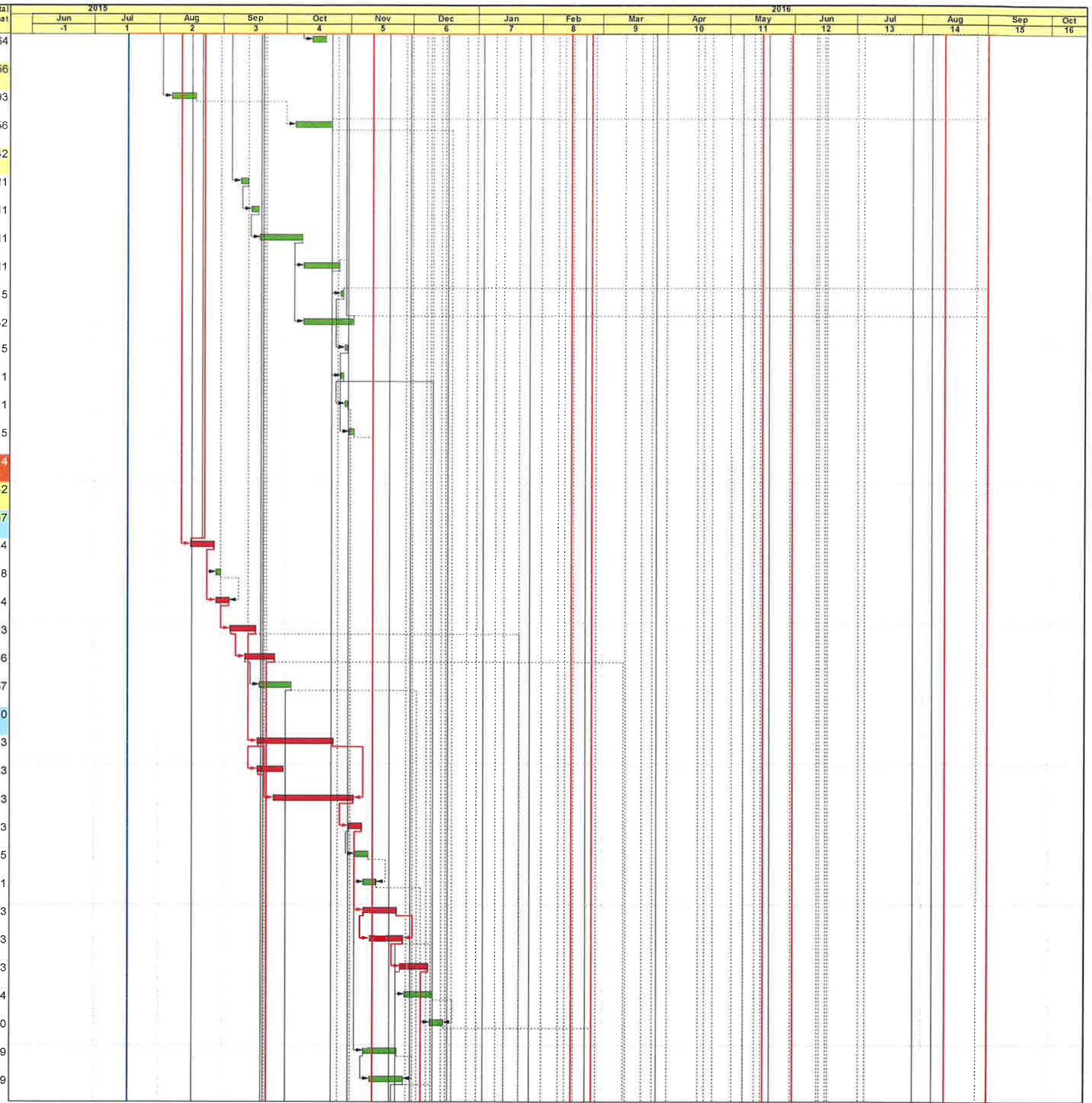
Date	Revision	Checked	Approved
15/10/2015	3	TF	ED

Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
PW10120	UU dectection for Site 4-Site Office	6	13-Oct-15	19-Oct-15	264
Tree Protection		62	07-Aug-15	22-Oct-15	56
PW10130	Installation of Fencing to Protect Existing Trees at Shum Wan Road	10	07-Aug-15	18-Aug-15	93
PW10140	Tree protection work to A1795 (P)	15	05-Oct-15*	22-Oct-15	56
GI Works		44	09-Sep-15	02-Nov-15	42
GI10000	Drilling holes for P1 and P2	4	09-Sep-15	12-Sep-15	11
GI10010	Drilling Boreholes for AABH1-2	4	14-Sep-15	17-Sep-15	11
GI10020	Drilling Boreholes (PBH8-23)(Package 2)	16	18-Sep-15	08-Oct-15	11
GI10030	Drilling boreholes (PBH1-7)(Package 2)	14	09-Oct-15	26-Oct-15	11
GI10040	Predrill hole(GG-39-A)(Package 2)	2	27-Oct-15	28-Oct-15	15
GI10050	Impression Packer test on Boreholes (PBH8-23) (Package 2)	20	09-Oct-15	02-Nov-15	42
GI10060	Predrill hole(HH37-A)(Package 3)	2	29-Oct-15	30-Oct-15	15
GI10070	Predrill hole(PD1)(Package 4)	2	27-Oct-15	28-Oct-15	11
GI10080	Predrill hole(12-56-A)(Package 5)	2	29-Oct-15	30-Oct-15	11
GI10090	Predrill hole(PBH-A)(Package 7)	2	31-Oct-15	02-Nov-15	15
Main Construction Work		302	16-Aug-15	23-Aug-16	14
Site Formation Work		256	16-Aug-15	29-Jun-16	42
Temporary Haul Road		39	16-Aug-15	03-Oct-15	57
TR10000	Design for temporary access	12	16-Aug-15	27-Aug-15	4
TR10010	ICE approval for Design for temporary access	3	28-Aug-15	30-Aug-15	8
TR10020	PM approval for Design for temporary access	7	28-Aug-15	03-Sep-15	4
TR10030	Contruction of temporary access (N)	11	04-Sep-15	16-Sep-15	3
TR10070	Contruction of temporary access (NE)	13	11-Sep-15	25-Sep-15	6
TR10110	Contruction of temporary access (SE)	12	18-Sep-15	03-Oct-15	57
Slope Stabilization, North of Site (Phase I)		74	17-Sep-15	15-Dec-15	10
SN10002	Soil Excavation, S9	29	17-Sep-15	23-Oct-15	3
SN10003	Trial nail and pullout test for North Site(5nos.)	10	17-Sep-15	29-Sep-15	3
SN10010	Soil Nailing, S9 (159 no @ 8no)	30	25-Sep-15	02-Nov-15	3
SN10015	Rock excavation, R22	6	31-Oct-15	06-Nov-15	3
SN10018	Rock mapping and Rock Stabilization	6	03-Nov-15	09-Nov-15	35
SN10020	Surfacing, S9	6	07-Nov-15	13-Nov-15	31
SN10030	Soil Excavation, S10	14	07-Nov-15	23-Nov-15	3
SN10040	Soil Nailing, S10 (93 no @ 8 no)	15	10-Nov-15	26-Nov-15	3
SN10045	Rock Excavation, R28	12	25-Nov-15	08-Dec-15	3
SN10048	Rock mapping and Rock Stabilization	12	27-Nov-15	10-Dec-15	14
SN10050	Surfacing, S10	6	09-Dec-15	15-Dec-15	10
SN10060	Soil Excavation, S8	14	07-Nov-15	23-Nov-15	9
SN10070	Soil Nailing, S8 (53 no @ 8 no)	15	10-Nov-15	26-Nov-15	9



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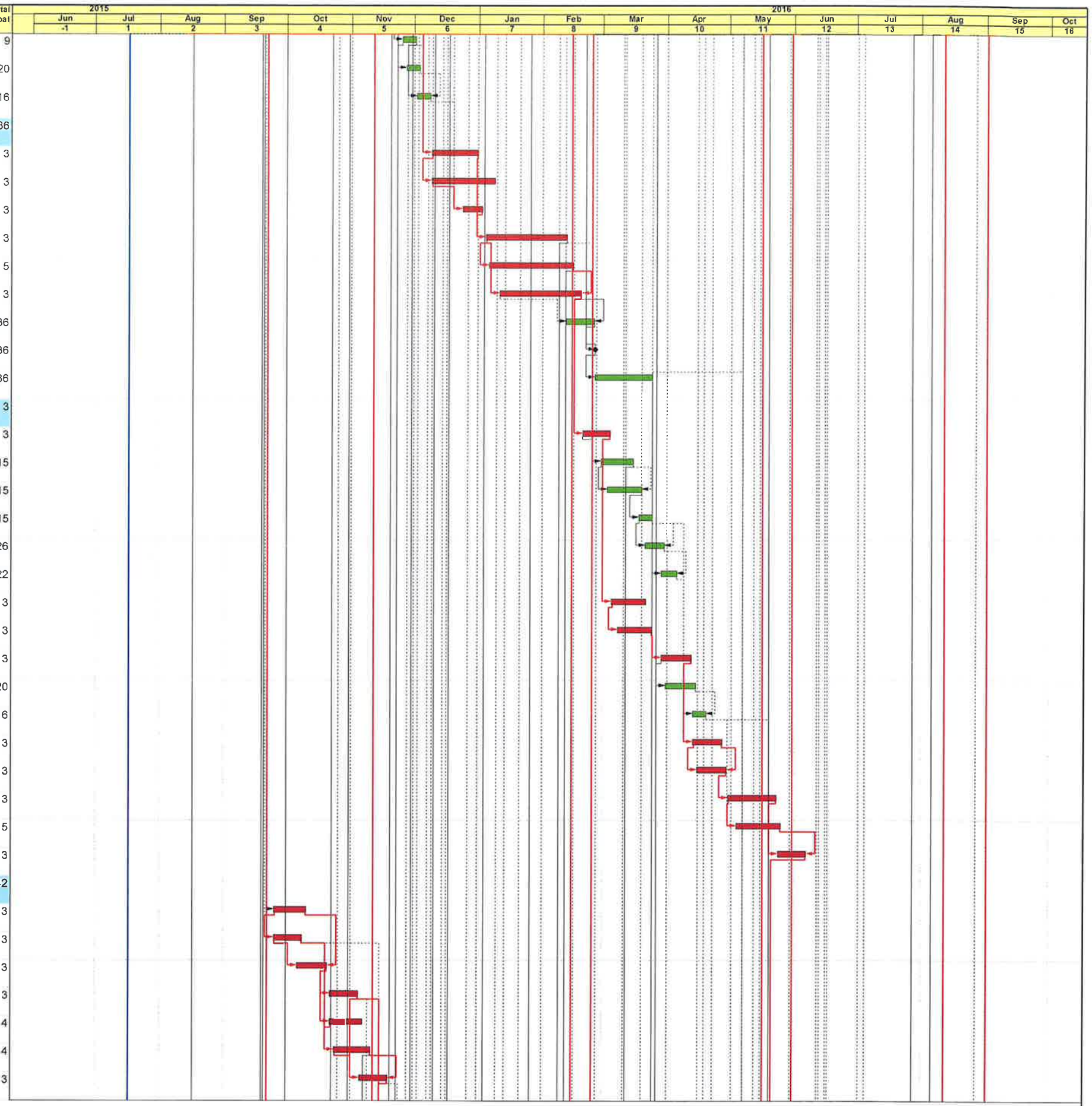
SN10075	Rock Excavation, 23	6	25-Nov-15	01-Dec-15	9
SN10078	Rock mapping and Rock Stabilization	6	27-Nov-15	03-Dec-15	20
SN10080	Surfacing, S8	6	02-Dec-15	08-Dec-15	16
Thoroughfare		86	09-Dec-15	24-Mar-16	36
TH10010	Hual Road for 22kV Cable laying	18	09-Dec-15	31-Dec-15	3
TH10015	Diversion of existing cables from Shum Wan Road to Nan Long Shan Road	24	09-Dec-15	08-Jan-16	3
TH10018	Soil excavation for Thoroughfare	6	24-Dec-15	02-Jan-16	3
TH10020	Rock excavation for Thoroughfare (R3, 4,6,5, 7,8,10,11,12,13,14,15 25, 26, 29, 34, 35)	32	04-Jan-16	12-Feb-16	3
TH10025	Rock mapping and Rock Stabilization	32	06-Jan-16	15-Feb-16	5
TH10030	Rock excavation,Trench for 22kV Cable in the Thoroughfare	32	11-Jan-16	19-Feb-16	3
TH10040	Construct Cable Trough and joint bay	12	12-Feb-16	25-Feb-16	36
TH10045	Cable Trough ready for HEC access	0	26-Feb-16		36
TH10050	HEC lay 22kV Cable at Thoroughfare	24	26-Feb-16	24-Mar-16	36
Slope Stabilization, North of Site (Phase II)		86	20-Feb-16	06-Jun-16	3
SN10085	Trial nail and pullout test for North Site(9nos.)	12	20-Feb-16	04-Mar-16	3
SN10090	Soil Excavation, S5 and S7	14	29-Feb-16	15-Mar-16	15
SN10100	Soil Nailing, S5 and S7 (60 no @ 8 no)	15	03-Mar-16	19-Mar-16	15
SN10110	Rock Excavation, R17, R18	6	18-Mar-16	24-Mar-16	15
SN10115	Rock mapping and Rock Stabilization	6	21-Mar-16	30-Mar-16	26
SN10120	Surfacing, S5 and S7	6	29-Mar-16	05-Apr-16	22
SN10130	Soil Excavation, S12	14	05-Mar-16	21-Mar-16	3
SN10140	Soil Nailing, S12 (98 no @ 8 no)	15	08-Mar-16	24-Mar-16	3
SN10145	Rock Excavation, R24	12	29-Mar-16	12-Apr-16	3
SN10148	Rock mapping and Rock Stabilization	12	31-Mar-16	14-Apr-16	20
SN10150	Surfacing, S12	6	13-Apr-16	19-Apr-16	16
SN10160	Soil Excavation, S4, S6, S13, S14, S15	13	13-Apr-16	27-Apr-16	3
SN10170	Soil Nailing, S4, S6, S13, S14, S15 (140 no @ 8 no)	13	15-Apr-16	29-Apr-16	3
SN10175	Rock Excavation, R9,19,16,27,32,37	18	30-Apr-16	23-May-16	3
SN10178	Rock mapping and Rock Stabilization	18	04-May-16	25-May-16	5
SN10180	Surfacing, S4, S6, S13, S14, S15	12	24-May-16	06-Jun-16	3
Slope Stabilization, South-East of Site		223	25-Sep-15	29-Jun-16	42
SB10480	Soil Excavation, S34, S36	12	25-Sep-15*	10-Oct-15	3
SB10490	Trial nail and pullout test for South-East of Site (6nos)	10	25-Sep-15	08-Oct-15	3
SB10500	Soil Nailing, S34, S36 (40no @ 8 no)	13	06-Oct-15	20-Oct-15	3
SB10510	Surfacing, S34, S36	12	22-Oct-15	04-Nov-15	3
SB10520	Soil Excavation, S41	14	22-Oct-15	06-Nov-15	4
SB10530	Soil Nailing, S41 (110no @ 8 no)	15	24-Oct-15	10-Nov-15	4
SB10540	Surfacing, S41	12	05-Nov-15	18-Nov-15	3



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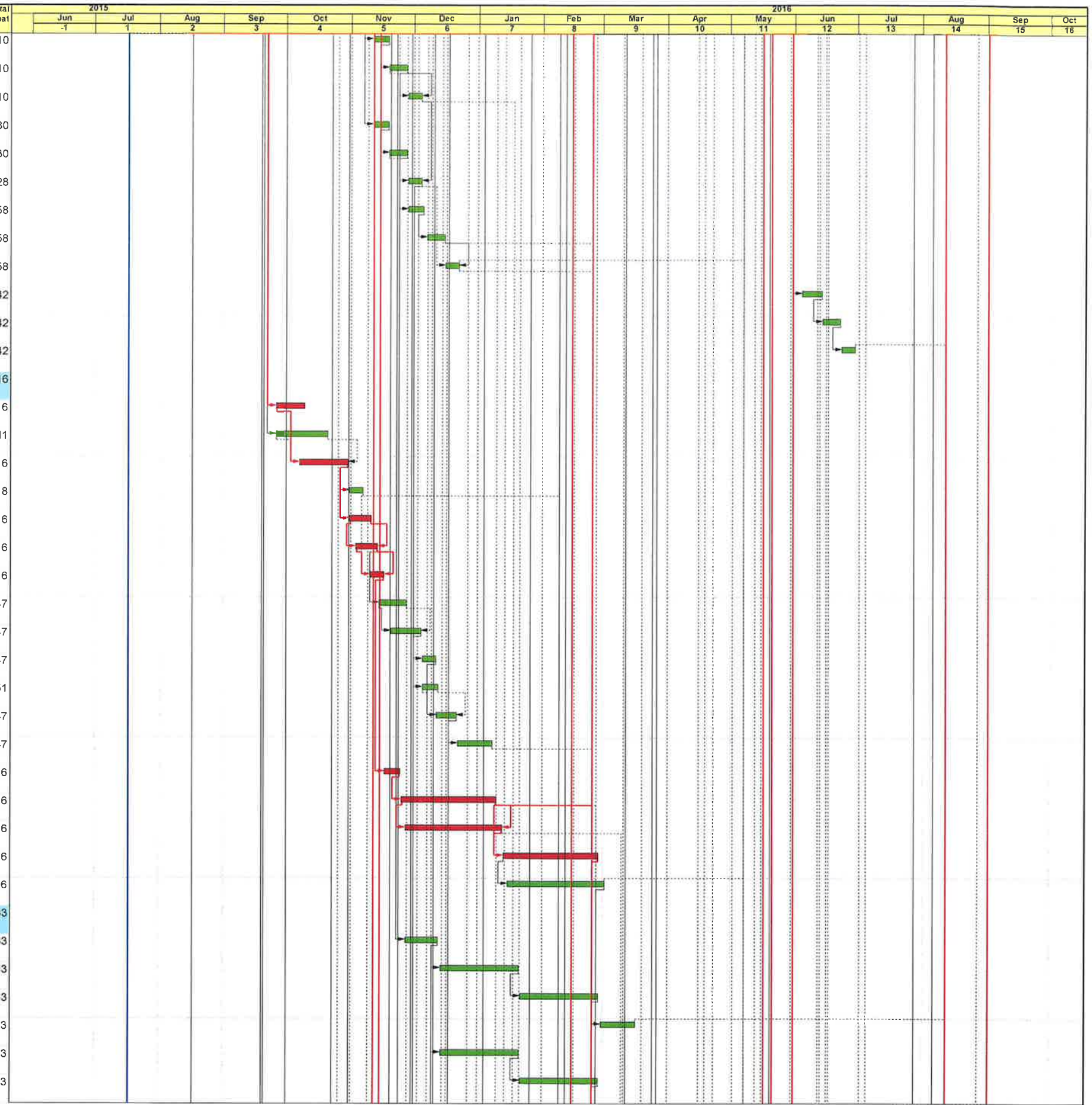
SB10580	Soil Excavation, S40	7	11-Nov-15	18-Nov-15	10
SB10690	Soil Nailing, S40 (5 no @8)	8	19-Nov-15	27-Nov-15	10
SB10700	Surfacing, S40	6	28-Nov-15	04-Dec-15	10
SB10800	Soil Excavation, S30	7	11-Nov-15	18-Nov-15	30
SB10900	Soil Nailing, S30 (21 no @ 8no)	8	19-Nov-15	27-Nov-15	30
SB11000	Surfacing, S30	6	28-Nov-15	04-Dec-15	28
SB11010	Soil Excavation, S32 (Northern Part)	7	28-Nov-15	05-Dec-15	58
SB11020	Soil Nailing, S32 (21 no @8 no)(Northern Part)	8	07-Dec-15	15-Dec-15	58
SB11030	Surfacing, S32(Northern Part)	6	16-Dec-15	22-Dec-15	58
SB11040	Soil Excavation, S32 (Southern Part)	7	04-Jun-16	13-Jun-16	42
SB11050	Soil Nailing, S32 (21 no @8 no)(Southern Part)	8	14-Jun-16	22-Jun-16	42
SB11060	Surfacing, S32(Southern Part)	6	23-Jun-16	29-Jun-16	42
Slope Stabilization, North-East of Site		126	26-Sep-15	01-Mar-16	16
SN10195	Trial nail and pullout test for all North-East Site(5nos)	10	26-Sep-15	09-Oct-15	6
SN10220	Soil Excavation, S19	19	26-Sep-15	20-Oct-15	11
SN10230	Soil Nailing, S19 (72 no @ 8 no)	20	07-Oct-15	30-Oct-15	6
SN10240	Surfacing, S19	6	31-Oct-15	06-Nov-15	8
SN10250	Soil Excavation, S20 and S17	9	31-Oct-15	10-Nov-15	6
SN10260	Soil Nailing, S20 and S17 (36 no @ 8 no)	10	03-Nov-15	13-Nov-15	6
SN10270	Surfacing, S20 and S17	6	10-Nov-15	16-Nov-15	6
SN10400	Soi Excavation, S23	12	14-Nov-15	27-Nov-15	47
SN10410	Soil Nailing, S23 (26 no @8 no)	13	20-Nov-15	04-Dec-15	47
SN10420	Surfacing, S23	6	05-Dec-15	11-Dec-15	47
SN10422	Soil Excavation, S25	7	05-Dec-15	12-Dec-15	51
SN10424	Soil Nailing, S25 (22 no @ 8 no)	8	12-Dec-15	21-Dec-15	47
SN10426	Surfacing, S25	12	22-Dec-15	07-Jan-16	47
SN10430	Site Formation (Soil Excavation), Between Intakes	7	17-Nov-15	24-Nov-15	6
SN10440	Site Formation (Rock Excavation, R41,39,40,47,48,49), Between Intakes	37	25-Nov-15	09-Jan-16	6
SN10450	Rock Mapping and Rock Stabilization Works	37	27-Nov-15	12-Jan-16	6
SN10460	Site Formation (Rock Excavation, R38,36,45,42,43,44,74), Between Intakes	37	13-Jan-16	27-Feb-16	6
SN10470	Rock Mapping and Rock Stabilization Works	37	15-Jan-16	01-Mar-16	16
Upgrading Slope Features		99	27-Nov-15	31-Mar-16	33
SB10585	Trial nails and pullout test for Features B/F85, B/C178, B/C179 (4nos)	14	27-Nov-15	12-Dec-15	33
SB10590	Soil Nailing, 15NW-B/F85 (30 no@8no) (upper level)	30	14-Dec-15	20-Jan-16	43
SB10595	Soil Nailing, 15NW-B/F85 (31 no@8no) (upper level)	30	21-Jan-16	27-Feb-16	43
SB10600	Surfacing, 15NW-B/F85	15	29-Feb-16	16-Mar-16	43
SB10610	Soil Nailing, 15NW-B/C178 (33 no@8no) (upper level)	30	14-Dec-15	20-Jan-16	43
SB10615	Soil Nailing, 15NW-B/C178 (34 no@8no) (upper level)	30	21-Jan-16	27-Feb-16	43



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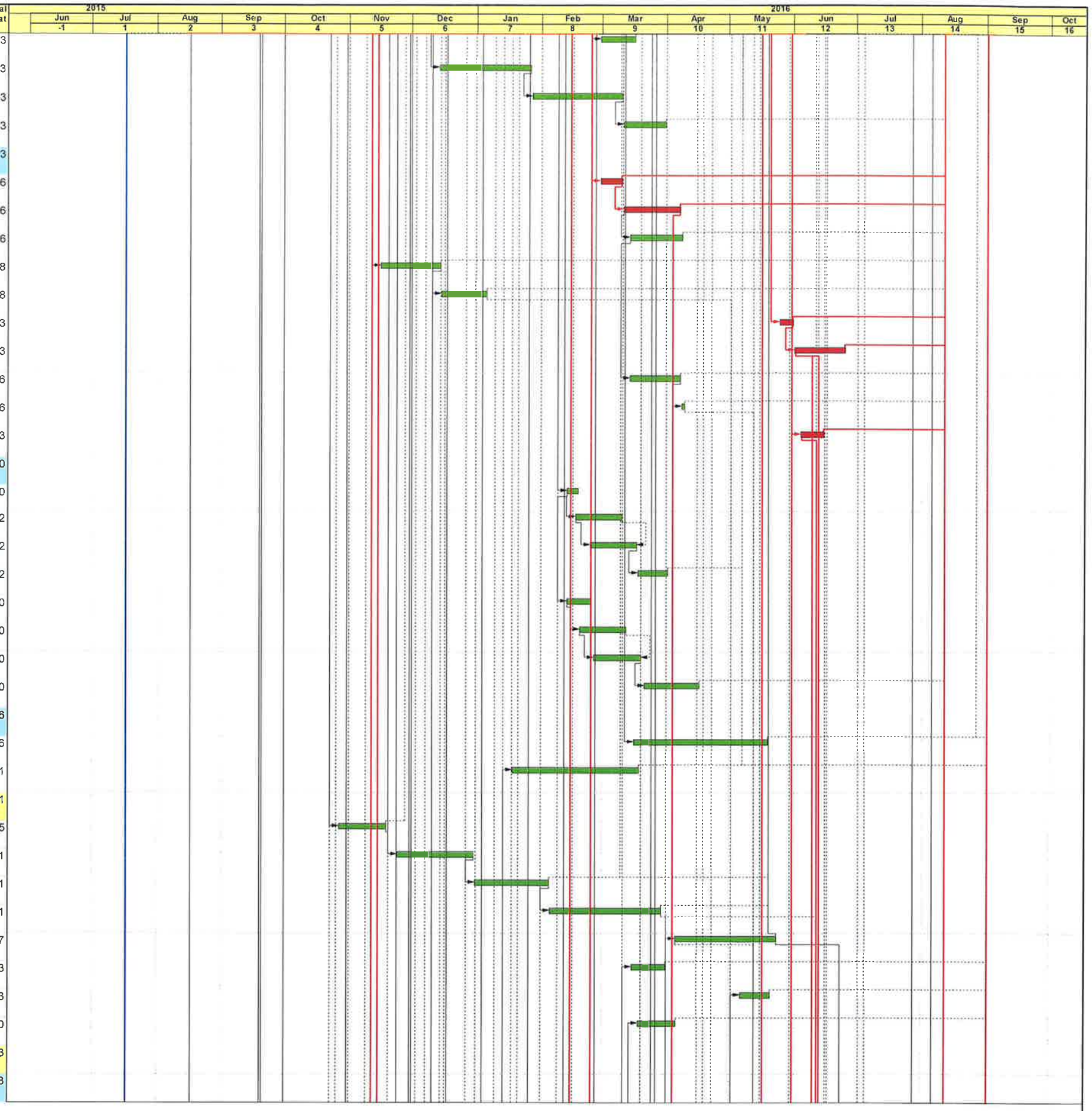
SB10620	Surfacing, 15NW-B/C178	15	29-Feb-16	16-Mar-16	43
SB10630	Soil Nailing, 15NW-B/C179 (51 no@8no)	35	14-Dec-15	26-Jan-16	33
SB10635	Soil Nailing, 15NW-B/C179 (52 no@8no)	35	27-Jan-16	10-Mar-16	33
SB10640	Surfacing, 15NW-B/C179	15	11-Mar-16	31-Mar-16	33
Site Formation, Main Site Area		179	16-Nov-15	25-Jun-16	3
SB10650	Site Formation (soil Excavation), North-East of site	10	29-Feb-16	10-Mar-16	6
SB10655	Site Formation (Rock Excavation, R50,53,54,55), North-East of site	20	11-Mar-16	07-Apr-16	6
SB10658	Rock mapping and Rock Stabilization Works	19	14-Mar-16	08-Apr-16	36
SB10660	Site Formation (Soil Excavation), South of site	25	16-Nov-15	14-Dec-15	88
SB10665	Site Formation (Rock Excavation,R62), South of site	16	15-Dec-15	05-Jan-16	88
SB10670	Site Formation (Soil Excavation), North of site	6	25-May-16	31-May-16	3
SB10675	Site Formation (Rock Excavation), North of site	21	01-Jun-16	25-Jun-16	3
SB10720	Site Formation (Soil Excavation), Stream Area	18	14-Mar-16	07-Apr-16	36
SB10730	Site Formation (Rock Excavation), Stream Area	2	08-Apr-16	09-Apr-16	36
SB10740	Site Formation (Soil Excavation), Existing EVA	9	04-Jun-16	15-Jun-16	3
Ride Platform P3(Variation)		51	13-Feb-16	16-Apr-16	20
SR11018	Soil Excavation for P3, west of intake	5	13-Feb-16	18-Feb-16	20
SR11025	Soil Nailing for P3, west of intake 2	20	17-Feb-16	10-Mar-16	32
SR11026	Surfacing for P3, west of intake 2	20	24-Feb-16	17-Mar-16	32
SR11030	Rock Excavation for P3, west of inake 2	10	18-Mar-16	01-Apr-16	32
SR12020	Soil Excavation for P3, east of intake 2	10	13-Feb-16	24-Feb-16	20
SR12040	Soil Nailing for P3, east of intake 2	20	19-Feb-16	12-Mar-16	20
SR12050	Surfacing for P3, east of intake 2	20	26-Feb-16	19-Mar-16	20
SR12060	Rock Excavation for P3, east of intake 2	20	21-Mar-16	16-Apr-16	20
Rides Platform P2 and P4 (Variation)		97	18-Jan-16	19-May-16	76
SR12010	Exavation for Ride Platform P2	50	16-Mar-16	19-May-16	76
SR12030	Exavation for Ride Platform P4	50	18-Jan-16	18-Mar-16	41
Demolition Works/Abandoning Works		168	27-Oct-15	23-May-16	91
DE10040	Erection of Temporary Works for Demolition	20	27-Oct-15	18-Nov-15	15
DE10050	Demolish Underground Pump Rooms	30	24-Nov-15	30-Dec-15	11
DE10060	Demolish the existing Pavilion and Footbridge	30	31-Dec-15	04-Feb-16	11
DE10070	Demolish the Exit Buildings Footbridge	40	05-Feb-16	29-Mar-16	11
DE10080	Demolish the Existing EVA Bridge	40	05-Apr-16	23-May-16	7
DE10090	Abandon existing gas main	12	15-Mar-16	31-Mar-16	133
DE10100	Abandon existing 11kV, 22kV cables	12	06-May-16	20-May-16	93
DE10110	Abandon Existing FS water main and FS signal cable	12	18-Mar-16	05-Apr-16	130
Foundations		245	27-Oct-15	23-Aug-16	3
Basement Water Tank & Sewage Tank (Package 6)		114	27-Oct-15	14-Mar-16	13



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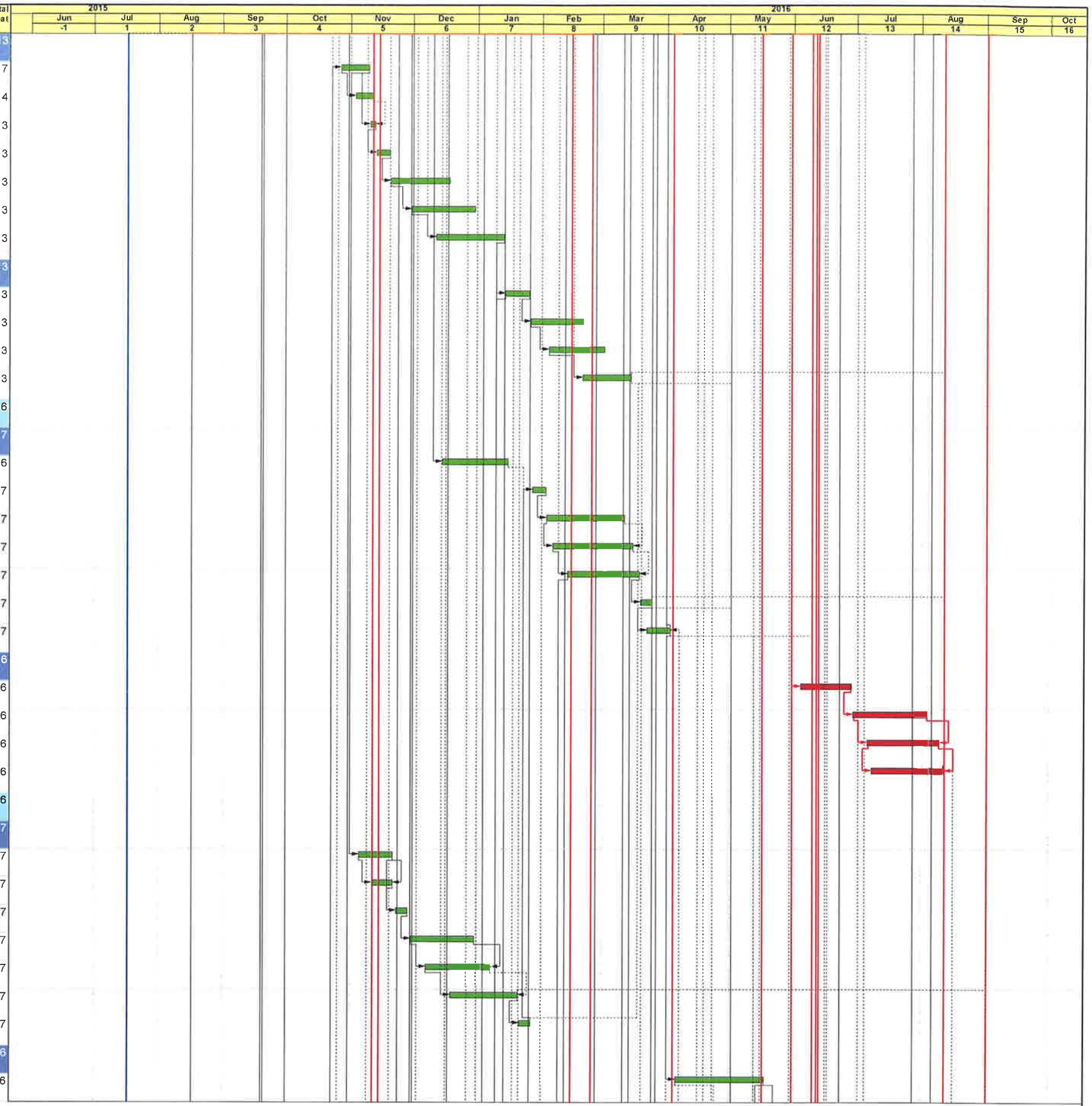
Sewage Tank		65	27-Oct-15	13-Jan-16	13
FB10000	Soil Excavation, Sewage Tank	12	27-Oct-15	09-Nov-15	7
FB10005	Temporary support, 11kV and 22kV	8	03-Nov-15	11-Nov-15	14
FB10010	Rock Excavation, Sewage Tank	3	10-Nov-15	12-Nov-15	13
FB10020	Plate Load test (1no.)	6	13-Nov-15	19-Nov-15	13
FB10030	Formwork, Sewage Tank	25	20-Nov-15	18-Dec-15	13
FB10040	Reinforcement, Sewage Tank	25	30-Nov-15	30-Dec-15	13
FB10050	Concreting, Sewage Tank	25	12-Dec-15	13-Jan-16	13
Basement Water Tank		49	14-Jan-16	14-Mar-16	13
FB10080	Soil Excavation, Basement water tank Tank	10	14-Jan-16	25-Jan-16	13
FB10090	Formwork, Basement slab	20	26-Jan-16	20-Feb-16	13
FB10100	Reinforcement, Basement slab	20	04-Feb-16	01-Mar-16	13
FB10110	Concreting, Basement slab	20	20-Feb-16	14-Mar-16	13
Raft A (Package 4)		193	15-Dec-15	11-Aug-16	6
Raft A, Phase I		86	15-Dec-15	02-Apr-16	7
FA10050	Soil Excavation, south part of Raft A	25	15-Dec-15	15-Jan-16	16
FA10055	Plate Load test (2 nos.)	6	27-Jan-16	02-Feb-16	7
FA10060	Formwork, south part of Raft A	30	03-Feb-16	11-Mar-16	7
FA10070	Reinforcement, south part of Raft A	30	06-Feb-16	15-Mar-16	7
FA10080	Concreting, south part of Raft A	30	13-Feb-16	18-Mar-16	7
FA10090	Backfill south part of Raft A to the final formation level	5	19-Mar-16	24-Mar-16	7
FA10095	Realign Existing EVA	8	22-Mar-16	02-Apr-16	7
Raft A, Phase II		57	04-Jun-16	11-Aug-16	6
FA10100	Soil Excavation, north part of Raft A	20	04-Jun-16	28-Jun-16	6
FA10120	Formwork, north part of Raft A	30	29-Jun-16	03-Aug-16	6
FA10130	Reinforcement, north part of Raft A	30	06-Jul-16	09-Aug-16	6
FA10140	Concreting, north part of Raft A	30	08-Jul-16	11-Aug-16	6
Raft B (Package 5)		217	05-Nov-15	30-Jul-16	16
Raft B, Phase I		68	05-Nov-15	26-Jan-16	7
FD10000	Soil Excavation, south part of Raft B (Package 5, Phase 1)	15	05-Nov-15	21-Nov-15	7
FD10005	Temporary support, 11kV and 22kV(Package 5, Phase I)	10	11-Nov-15	21-Nov-15	7
FD10010	Plate Load Test (1 no)	6	23-Nov-15	28-Nov-15	7
FD10030	Formwork, south part of Raft B (Package 5, Phase I)	25	30-Nov-15	30-Dec-15	7
FD10040	Reinforcement, south part of Raft B (Package 5, Phase I)	25	07-Dec-15	07-Jan-16	7
FD10045	Concreting, south part of Raft B (Package 5, Phase I)	25	19-Dec-15	20-Jan-16	7
FD10065	Backfill South part of Raft B to the final formation level	5	21-Jan-16	26-Jan-16	7
Raft B, Phase II		97	05-Apr-16	30-Jul-16	16
FD10050	Soil Excavation, north part of Raft B(Package 5, Phase II)	35	05-Apr-16	17-May-16	16



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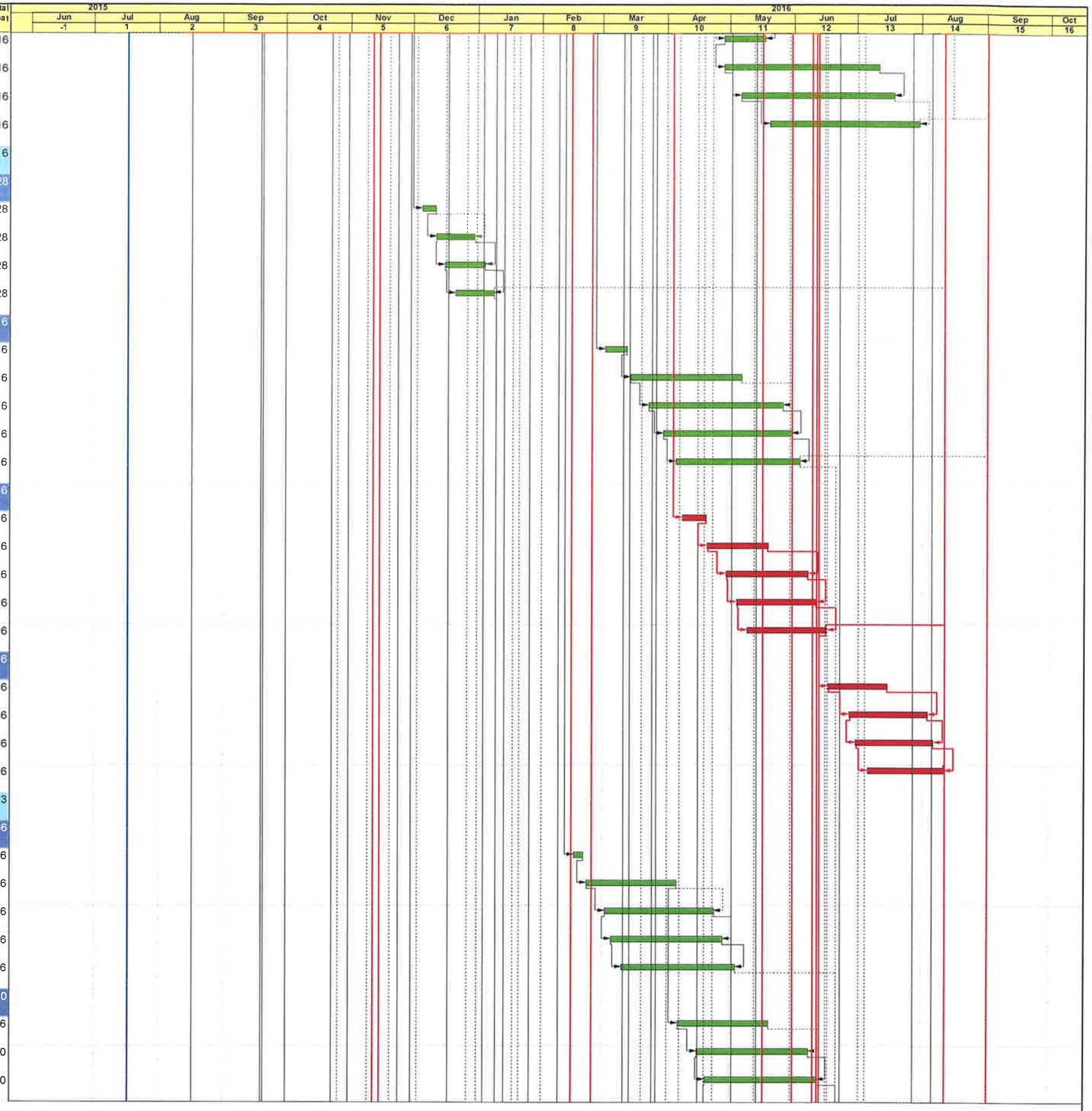
FD10052	Temporary support, 11kV and 22kV(Package 5, Phase II)	15	28-Apr-16	17-May-16	16
FD10060	Formwork, north part of Raft B(Package 5, Phase II)	60	28-Apr-16	11-Jul-16	16
FD10070	Reinforcement, north part of Raft B(Package 5, Phase II)	60	06-May-16	18-Jul-16	16
FD10080	Concreting, north part of Raft B(Package 5, Phase II)	60	20-May-16	30-Jul-16	16
Footings, North-East of Site (Package 2)		201	05-Dec-15	11-Aug-16	6
Footings near S30		27	05-Dec-15	08-Jan-16	28
FN10000	Soil Excavation, 5 Footings near to S30	6	05-Dec-15	11-Dec-15	28
FN10010	Formwork, 5 Footings near to S30	14	12-Dec-15	30-Dec-15	28
FN10020	Reinforcement, 5 Footings near to S30	14	16-Dec-15	04-Jan-16	28
FN10030	Concreting, 5 Footings near to S30	14	21-Dec-15	08-Jan-16	28
Footings between intakes		75	02-Mar-16	03-Jun-16	16
FN10035	Soil Excavation, 25 Footings between intakes in North-East of site	10	02-Mar-16	12-Mar-16	16
FN10040	Rock Excavation, 25 Footings between intakes in North-East of site	42	14-Mar-16	06-May-16	16
FN10050	Formwork, 25 Footings between intakes in North-East of site	50	23-Mar-16	26-May-16	16
FN10060	Reinforcement, 25 Footings between intakes in North-East of site	50	30-Mar-16	30-May-16	16
FN10070	Concreting, 25 Footings between intakes in North-East of site	50	05-Apr-16	03-Jun-16	16
Footing at North east Site (Part I)		57	08-Apr-16	16-Jun-16	6
FN10165	Soil Excavation, 16 Footings in North-East of site (Part I)	10	08-Apr-16	19-Apr-16	6
FN10170	Rock Excavation, 16 Footings in North-East of site (Part I)	24	20-Apr-16	19-May-16	6
FN10180	Formwork, 16 Footings in North-East of site (Part I)	32	29-Apr-16	07-Jun-16	6
FN10190	Reinforcement, 16 Footings in North-East of site (Part I)	32	04-May-16	11-Jun-16	6
FN10200	Concreting, 16 Footings in North-East of site (Part I)	32	09-May-16	16-Jun-16	6
Footing at North east Site (Part II)		47	17-Jun-16	11-Aug-16	6
FN10210	Rock Excavation, 16 Footings in North-East of site (Part II)	24	17-Jun-16	15-Jul-16	6
FN10220	Formwork, 16 Footings in North-East of site (Part II)	32	27-Jun-16	03-Aug-16	6
FN10230	Reinforcement, 16 Footings in North-East of site (Part II)	32	30-Jun-16	06-Aug-16	6
FN10240	Concreting, 16 Footings in North-East of site (Part II)	32	06-Jul-16	11-Aug-16	6
Footings, North of Site (Package 2)		155	16-Feb-16	23-Aug-16	3
Footing at Temp. Haul Road (Part I)		62	16-Feb-16	03-May-16	66
FN10080	Soil Excavation, Footings at Temp Hual Road	5	16-Feb-16	20-Feb-16	26
FN10085	Rock Excavation, 21 Footing at Temp Hual Road	34	22-Feb-16	05-Apr-16	26
FN10090	Formwork, 21 Footing at Temp Hual Road	42	02-Mar-16	23-Apr-16	66
FN10100	Reinforcement, 21 Footing at Temp Hual Road	42	05-Mar-16	27-Apr-16	66
FN10110	Concreting, 21 Footing at Temp Hual Road	42	10-Mar-16	03-May-16	66
Footing at Temp. Haul Road (Part II)		59	06-Apr-16	16-Jun-16	30
FN10250	Rock Excavation, 22 Footing at Temp Hual Road	36	06-Apr-16	19-May-16	26
FN10260	Formwork, 22 Footing at Temp Hual Road	44	15-Apr-16	07-Jun-16	30
FN10270	Reinforcement, 22 Footing at Temp Hual Road	44	19-Apr-16	11-Jun-16	30



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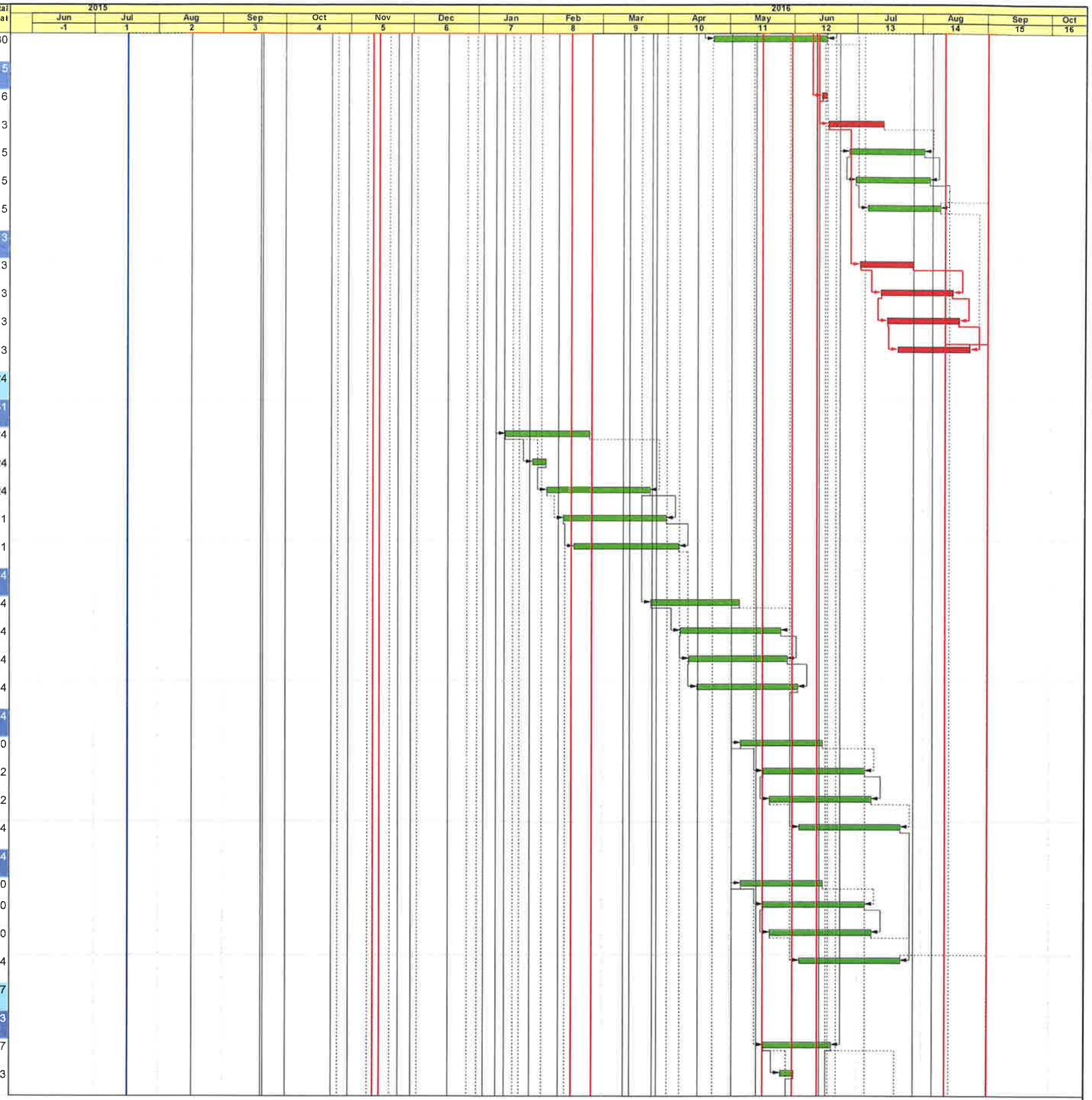
Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
FN10290	Concreting, 21 Footing at Temp Hual Road	44	23-Apr-16	16-Jun-16	30
Footings at toe of North Site (Part I)		48	14-Jun-16	09-Aug-16	15
FN10125	Soil Excavation, Footings at toe of North Site (part I)	3	14-Jun-16	16-Jun-16	6
FN10130	Rock Excavation, 15 Footings at toe of North Site (part I)	22	17-Jun-16	13-Jul-16	3
FN10140	Formwork, 15 Footings at toe of North Site (part I)	30	27-Jun-16	01-Aug-16	15
FN10150	Reinforcement, 15 Footings at toe of North Site (part I)	30	30-Jun-16	04-Aug-16	15
FN10160	Concreting, 15 Footings at toe of North Site (part I)	30	06-Jul-16	09-Aug-16	15
Footings at toe of North Site (Part II)		45	02-Jul-16	23-Aug-16	3
FN10300	Rock Excavation, 15 Footings at toe of North Site (part I)	22	02-Jul-16	27-Jul-16	3
FN10310	Formwork, 15 Footings at toe of North Site (part I)	30	12-Jul-16	15-Aug-16	3
FN10320	Reinforcement, 15 Footings at toe of North Site (part I)	30	15-Jul-16	18-Aug-16	3
FN10330	Concreting, 15 Footings at toe of North Site (part I)	30	20-Jul-16	23-Aug-16	3
Footings, South of Site (Package 2 &3)		152	14-Jan-16	21-Jul-16	24
Footings, South of Site (Phase I)		65	14-Jan-16	06-Apr-16	31
FS10040	Soil Excavation, 20 Footings in South of Site	32	14-Jan-16	23-Feb-16	24
FS10050	Plate Load Test (2 nos)	6	27-Jan-16	02-Feb-16	24
FS10060	Formwork, 20 Footings in South of Site	40	03-Feb-16	23-Mar-16	24
FS10070	Reinforcement, 20 Footings in South of Site	40	11-Feb-16	31-Mar-16	31
FS10080	Concreting, 20 Footings in South of Site	40	16-Feb-16	06-Apr-16	31
Footings, South of Site (Phase II)		55	24-Mar-16	02-Jun-16	24
FS10090	Soil Excavation, 20 Footings in South of Site	32	24-Mar-16	05-May-16	24
FS10100	Formwork, 20 Footings in South of Site	40	07-Apr-16	25-May-16	24
FS10110	Reinforcement, 20 Footings in South of Site	40	11-Apr-16	28-May-16	24
FS10120	Concreting, 20 Footings in South of Site	40	15-Apr-16	02-Jun-16	24
Footings, South of Site (Phase III)		63	06-May-16	21-Jul-16	24
FS10130	Soil Excavation, 20 Footings in South of Site	32	06-May-16	14-Jun-16	30
FS10140	Formwork, 20 Footings in South of Site	40	17-May-16	04-Jul-16	32
FS10150	Reinforcement, 20 Footings in South of Site	40	20-May-16	07-Jul-16	32
FS10160	Concreting, 20 Footings in South of Site	40	03-Jun-16	21-Jul-16	24
Footings, South of Site (Phase IV)		63	06-May-16	21-Jul-16	24
FS10000	Soil Excavation, 21 Footings in South of Site	32	06-May-16	14-Jun-16	30
FS10010	Formwork, 21 Footings in South of Site	40	17-May-16	04-Jul-16	30
FS10020	Reinforcement, 21 Footings in South of Site	40	20-May-16	07-Jul-16	30
FS10030	Concreting, 21 Footings in South of Site	40	03-Jun-16	21-Jul-16	24
Footings, Stream Area (Package 2 &3)		79	17-May-16	18-Aug-16	7
Footings, Stream Area (Part I)		56	17-May-16	22-Jul-16	23
FM10000	Soil Excavation, 18 Footings Near to the existing stream	28	17-May-16	18-Jun-16	7
FM10005	Plate Load Test (2 nos.)	6	25-May-16	31-May-16	23



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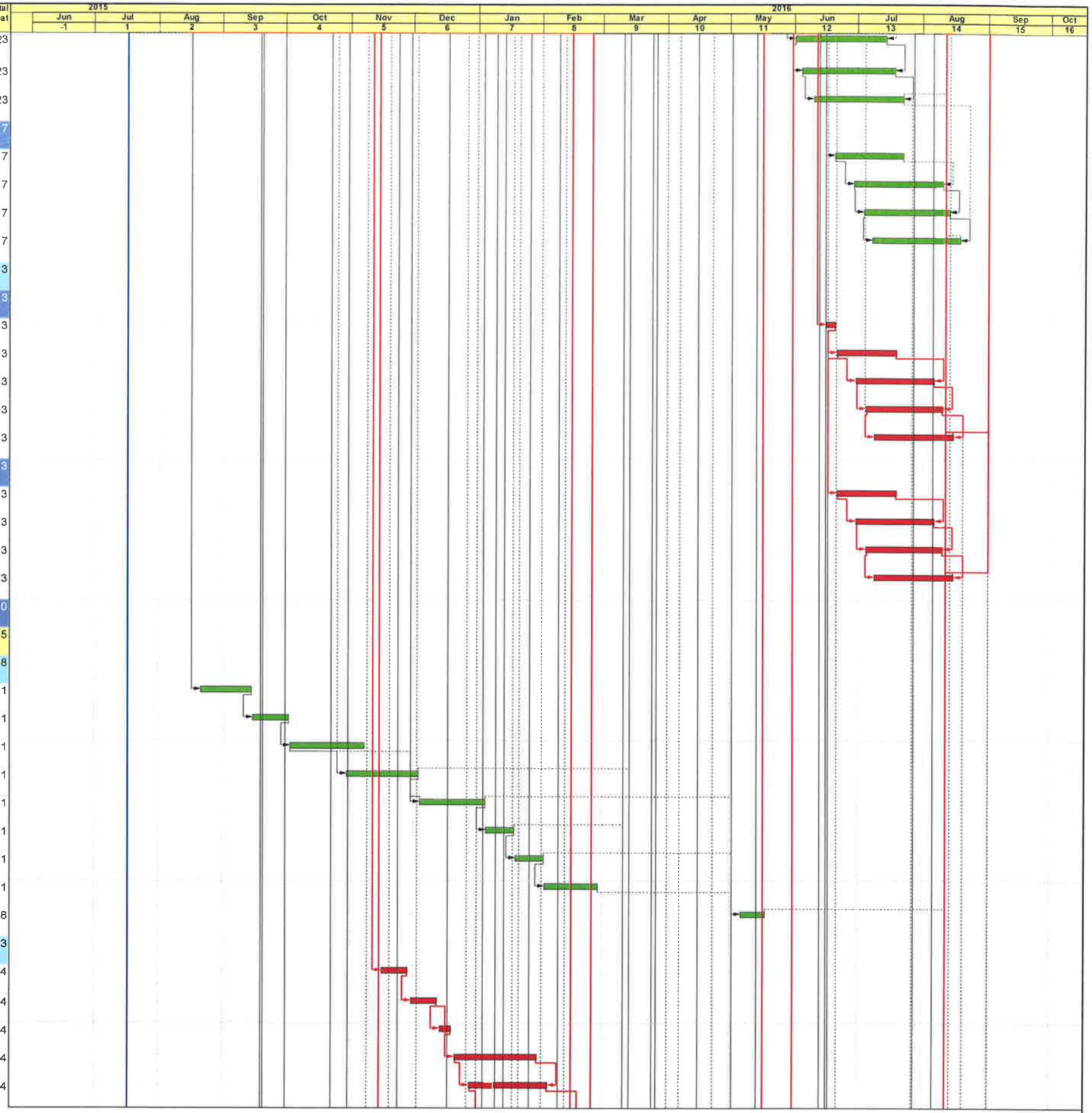
Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
FM10010	Formwork, 18 Footings Near to the existing stream	36	01-Jun-16	14-Jul-16	23
FM10020	Reinforcement,18 Footings Near to the existing stream	36	04-Jun-16	18-Jul-16	23
FM10030	Concreting, 18 Footings Near to the existing stream	36	10-Jun-16	22-Jul-16	23
Footings, Stream Area (Part II)		51	20-Jun-16	18-Aug-16	7
FM10080	Soil Excavation, 18 Footings Near to the existing stream	28	20-Jun-16	22-Jul-16	7
FM10100	Formwork, 18 Footings Near to the existing stream	36	29-Jun-16	10-Aug-16	7
FM10110	Reinforcement,18 Footings Near to the existing stream	36	04-Jul-16	13-Aug-16	7
FM10120	Concreting, 18 Footings Near to the existing stream	36	08-Jul-16	18-Aug-16	7
Footings, Existing EVA (Package 2 &3 &5)		51	16-Jun-16	15-Aug-16	3
Footings, Existing EVA (Part I)		51	16-Jun-16	15-Aug-16	3
FM10035	Soil Excavation, 16 Footings at existing EVA	4	16-Jun-16	20-Jun-16	3
FM10040	Rock Excavation, 16 Footings at existing EVA	24	21-Jun-16	19-Jul-16	3
FM10050	Formwork, 16 Footings at existing EVA	32	30-Jun-16	06-Aug-16	3
FM10060	Reinforcement, 16 Footings at existing EVA	32	05-Jul-16	10-Aug-16	3
FM10070	Concreting, 16 Footings at existing EVA	32	09-Jul-16	15-Aug-16	3
Footings, Existing EVA (Part II)		47	21-Jun-16	15-Aug-16	3
FM10130	Rock Excavation, 16 Footings at existing EVA	24	21-Jun-16	19-Jul-16	3
FM10140	Formwork, 16 Footings at existing EVA	32	30-Jun-16	06-Aug-16	3
FM10150	Reinforcement, 16 Footings at existing EVA	32	05-Jul-16	10-Aug-16	3
FM10160	Concreting, 16 Footings at existing EVA	32	09-Jul-16	15-Aug-16	3
Footings, Existing EVA (Part III)		0			0
Construction of New EVA		219	21-Aug-15	20-May-16	15
Flat EVA Section		216	21-Aug-15	17-May-16	18
FE10000	Break Up Concrete Pavement	20	21-Aug-15	14-Sep-15	71
FE10005	Reduce to road formation	14	15-Sep-15	02-Oct-15	71
FE10010	Form UtilitiesTrench	30	03-Oct-15	07-Nov-15	71
FE10015	Lay Fire water main, EVA Flat Section	30	30-Oct-15	03-Dec-15	71
FE10020	HEC lay 11kV, 22kV Cable, EVA Flat Section	24	04-Dec-15	04-Jan-16	71
FE10040	Towngas lay Gas main, EVA Flat Section	12	05-Jan-16	18-Jan-16	71
FE10055	Lay OPC 11kV Cable , EVA Flat Section	12	19-Jan-16	01-Feb-16	71
FE10058	Construction of ducts, EVA Flat Section	20	02-Feb-16	27-Feb-16	71
FE10060	Pavement of Flat EVA Section	9	06-May-16	17-May-16	18
Covered EVA Structure Section		149	16-Nov-15	20-May-16	3
CV10055	Soil Excavation, Covered EVA Structure	12	16-Nov-15	28-Nov-15	4
CV10060	Rock Excavation, Covered EVA Structure	12	30-Nov-15	12-Dec-15	4
CV10065	Plate Load Test (1 no)	6	14-Dec-15	19-Dec-15	4
CV10070	Formwork, Covered EVA Structure	32	21-Dec-15	29-Jan-16	4
CV10080	Reinforcement, Covered EVA Structure	32	28-Dec-15	03-Feb-16	4



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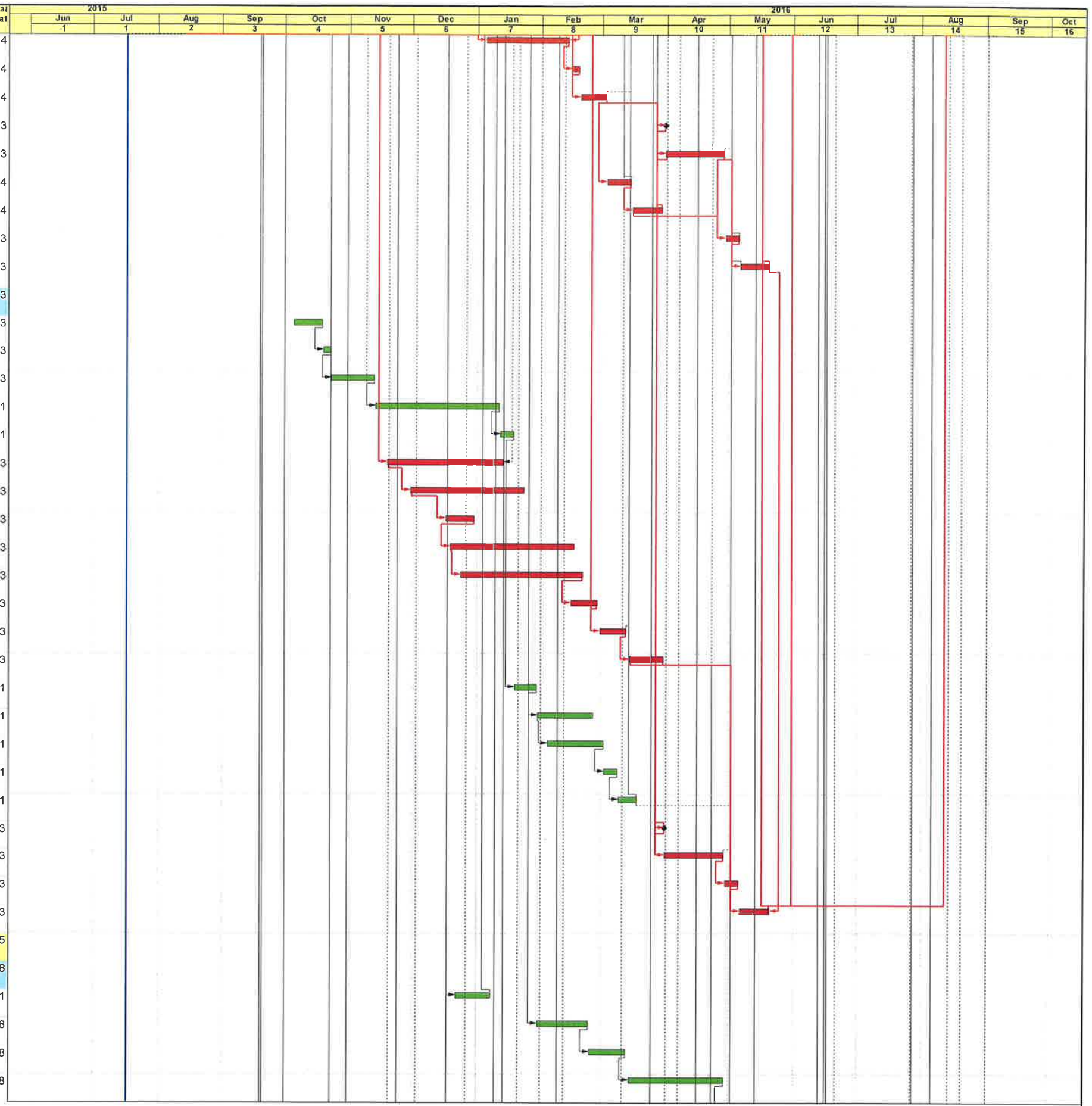
Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
CV10090	Concreting, Covered EVA Structure	32	05-Jan-16	13-Feb-16	4
CV10100	Backfill, Covered EVA Structure	4	15-Feb-16	18-Feb-16	4
CV101006	Lay Fire water main, EVA Covered Section	11	19-Feb-16	02-Mar-16	4
CV10110	HEC cable access ready (Covered EVA)	0	31-Mar-16		3
CV10115	HEC lay 11kV, 22kV Cable, EVA Covered Section	24	31-Mar-16	28-Apr-16	3
CV10160	Towngas lay Gas main, EVA Covered Section	10	03-Mar-16	14-Mar-16	4
CV10170	Construction ducts, EVA Covered Section	10	15-Mar-16	29-Mar-16	4
CV10180	Lay OPC 11kV Cable, EVA Covered Section	5	29-Apr-16	05-May-16	3
CV10210	Pavement of Covered EVA Section	12	06-May-16	20-May-16	3
Sloping EVA Section		184	05-Oct-15	20-May-16	3
EV10000	Design ELS temporary works for Diversion of Existing Sloping EVA	14	05-Oct-15*	18-Oct-15	13
EV10002	ICE approval for ELS temporary works of Existing Sloping EVA	4	19-Oct-15	22-Oct-15	13
EV10004	PM approval for ELS temporary works for Diversion of Existing Sloping EVA	21	23-Oct-15	12-Nov-15	13
EV10010	Temporary Works	48	13-Nov-15	11-Jan-16	11
EV10012	Temporary diversion of existing EVA	6	12-Jan-16	18-Jan-16	11
EV10015	Soil Excavation,Retaining Wall at lower portion	45	19-Nov-15	13-Jan-16	3
EV10020	Rock Excavation,Retaining Wall at lower portion	45	30-Nov-15	23-Jan-16	3
EV10030	Mass Concrete filling under Bays 5, 7	10	17-Dec-15	30-Dec-15	3
EV10050	Retaining Wall Base (Bays1 - 6)	45	19-Dec-15	16-Feb-16	3
EV10060	Retaining Wall Stem (Bays 1 - 6)	45	24-Dec-15	20-Feb-16	3
EV10080	Backfill, Retaining Wall	12	15-Feb-16	27-Feb-16	3
EV10105	Lay Fire water main at the lower Sloping EVA Section	12	29-Feb-16	12-Mar-16	3
EV10135	Construction of drainage system at the lower Sloping EVA Section	12	14-Mar-16	30-Mar-16	3
EV10150	Soil Excavation,Retaining Wall at the connection of the existing EVA	10	19-Jan-16	29-Jan-16	11
EV10160	Retaining Wall Base at the connection of the existing EVA	20	30-Jan-16	25-Feb-16	11
EV10170	Retaining Wall Stem at the connection of the existing EVA	20	04-Feb-16	01-Mar-16	11
EV10180	Backfill, Retaining Wall at the connection of the existing EVA	6	02-Mar-16	08-Mar-16	11
EV10190	Lay remaining Fire water main EVA Sloping Section	8	09-Mar-16	17-Mar-16	11
EV10210	HEC 22kV cable access ready (Sloping EVA)	0	31-Mar-16		3
EV10220	HEC lay 22kv Cable, Sloping Section	24	31-Mar-16	28-Apr-16	3
EV10230	Construction of remaining drainage system at theSloping EVA Section	5	29-Apr-16	05-May-16	3
EV10250	Pavement for Sloping EVA Section	12	06-May-16	20-May-16	3
Drainage Works		259	23-Sep-15	09-Aug-16	15
1.2 m dia. Drainage under existing escalator		185	22-Dec-15	09-Aug-16	8
DW10272	Sheet piling under existing escalator	12	22-Dec-15	07-Jan-16	11
DW10276	Excavation of Shaft	18	30-Jan-16	23-Feb-16	8
DW10280	Construction of Gantry	16	24-Feb-16	12-Mar-16	8
DW10290	Set up hydraulic jacks and driving shield in launching pit	36	14-Mar-16	28-Apr-16	8



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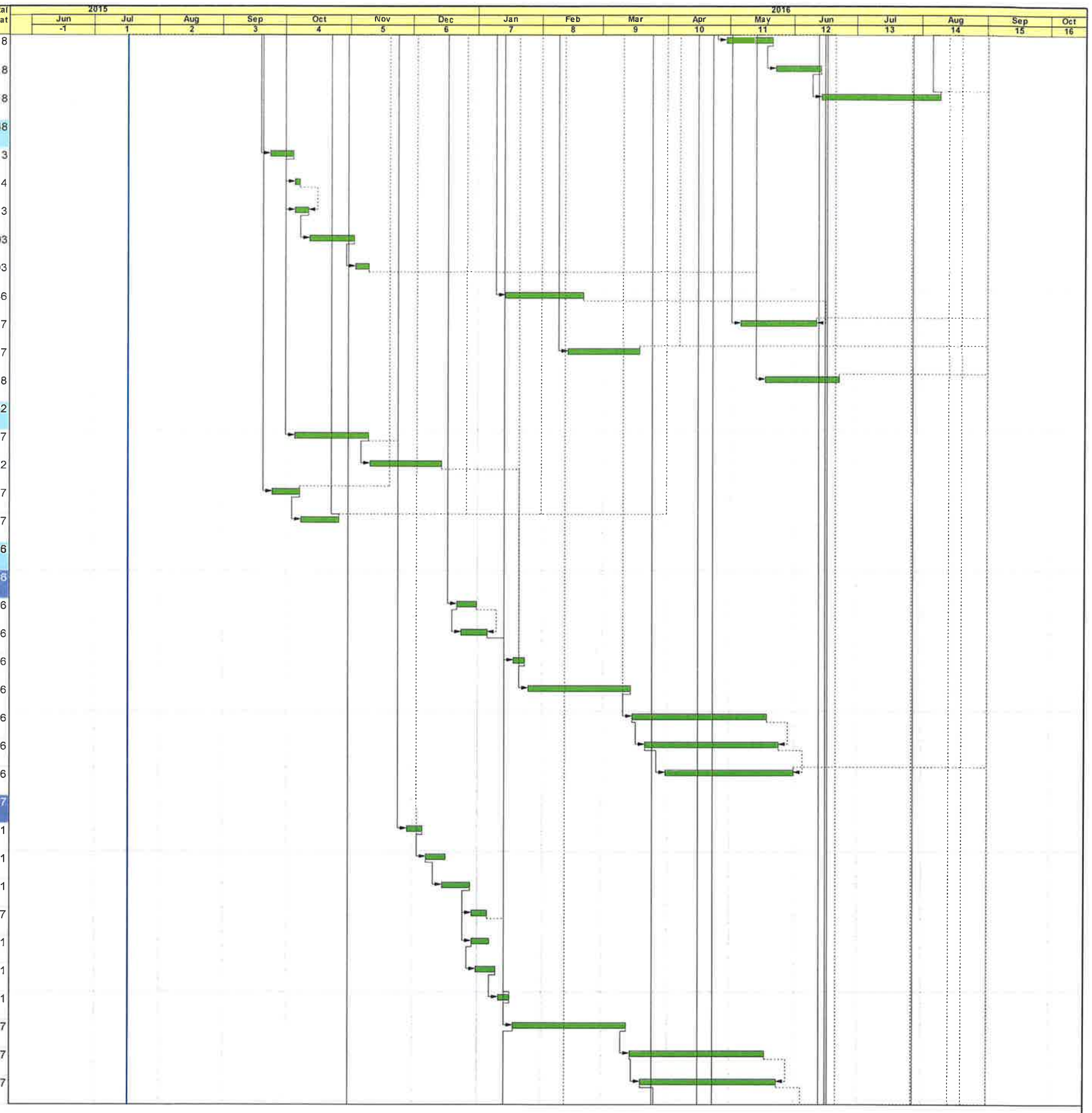
Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
DW10340	Pipe Jacking	18	29-Apr-16	21-May-16	8
DW10350	Drain pipe laying, testing and annulus fill	18	23-May-16	13-Jun-16	8
DW10360	Complete MH & Backfill	48	14-Jun-16	09-Aug-16	8
Sewage System Construction		219	23-Sep-15	22-Jun-16	48
DW10000	Proposal for temporary sewage diversion	12	23-Sep-15	04-Oct-15	113
DW10010	ICE approval for proposal for temporary sewage diversion	3	05-Oct-15	07-Oct-15	114
DW10020	PM approval for proposal for sewage drainage diversion	7	05-Oct-15	11-Oct-15	113
DW10024	Installation, Temporary Sewage Pipe	18	12-Oct-15	02-Nov-15	93
DW10026	Diversion, existing Sewage	6	03-Nov-15	09-Nov-15	93
DW102005	New Sewage Pipe and Manhole, South of Site (SMH2.1-Sewage Tank)	30	14-Jan-16	20-Feb-16	146
DW10210	New Sewage Pipe and Manhole, South of Site (SMH2.5-2.1)	30	06-May-16	11-Jun-16	57
DW10220	New Sewage Pipe and Manhole, North of Site (SMH1.1-Sewage Tank)	30	13-Feb-16	18-Mar-16	17
DW10450	New Sewage Pipe and Manhole, North of Site (SMH1.2-1.3)	30	18-May-16	22-Jun-16	48
Temporary Storm Drainage Diversion		67	24-Sep-15	14-Dec-15	72
DW10030	Construction of Temporary diversion, intake Culvert at hill (Intake 3)	30	05-Oct-15	09-Nov-15	57
DW10040	Construction of Temporary diversion, intake Culvert at hill (Intake 2)	30	10-Nov-15	14-Dec-15	72
DW10050	Construction of Temporary diversion, existing stream	10	24-Sep-15	07-Oct-15	7
DW10060	Construction of Temporary stream diversion near Exit Building Footbridge	15	08-Oct-15	26-Oct-15	7
Storm Drainage Construction		225	04-Nov-15	08-Aug-16	16
Intake 2		127	22-Dec-15	31-May-16	66
SI12000	Soil Excavation, S62	7	22-Dec-15	31-Dec-15	66
SI12010	Soil Nailing, S62 (16 no)	8	24-Dec-15	05-Jan-16	66
SI12030	Surfacing, S62	6	18-Jan-16	23-Jan-16	66
SI12040	Rock Excavation (R72,71,70,67,68,69,64,65)to the Formation Level of Intake 2.1, 2.8, DAC2.8,2.7	40	25-Jan-16	14-Mar-16	66
SI12045	Formwork Intake 2.1, 2.8, DAC2.8,2.7	50	15-Mar-16	18-May-16	66
SI12050	Reinforcement, Intake 2.1, 2.8, DAC2.8,2.7	50	21-Mar-16	24-May-16	66
SI12070	Concreting, Intake 2.1, 2.8, DAC2.8,2.7	50	31-Mar-16	31-May-16	66
Intake 3		146	28-Nov-15	30-May-16	67
SI13000	Trial nail and Pullout Test for S63, 64, S70 (1 no)	7	28-Nov-15	05-Dec-15	41
SI13005	Soil Excavation, S63, S64 and S70	9	07-Dec-15	16-Dec-15	41
SI13010	Soil Nailing, S63, S64 and S70 (49 no @8 no)	10	15-Dec-15	28-Dec-15	41
SI13020	Surfacing, S63, S64 and S70	6	29-Dec-15	05-Jan-16	77
SI13030	Soil Excavation, S67	7	29-Dec-15	06-Jan-16	41
SI13040	Soil Nailing, S67 (5 no)	8	31-Dec-15	09-Jan-16	41
SI13050	Surfacing, S67	6	11-Jan-16	16-Jan-16	41
SI13060	Rock Excavation (R85,79,78,77,76)to the Formation Level of Intake 3.6,3.5, DAC3.4	45	18-Jan-16	12-Mar-16	67
SI13070	Formwork Intake Intake 3.6,3.5, DAC3.4	50	14-Mar-16	17-May-16	67
SI13080	Reinforcement, Intake Intake 3.6,3.5, DAC3.4	50	19-Mar-16	23-May-16	67



Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

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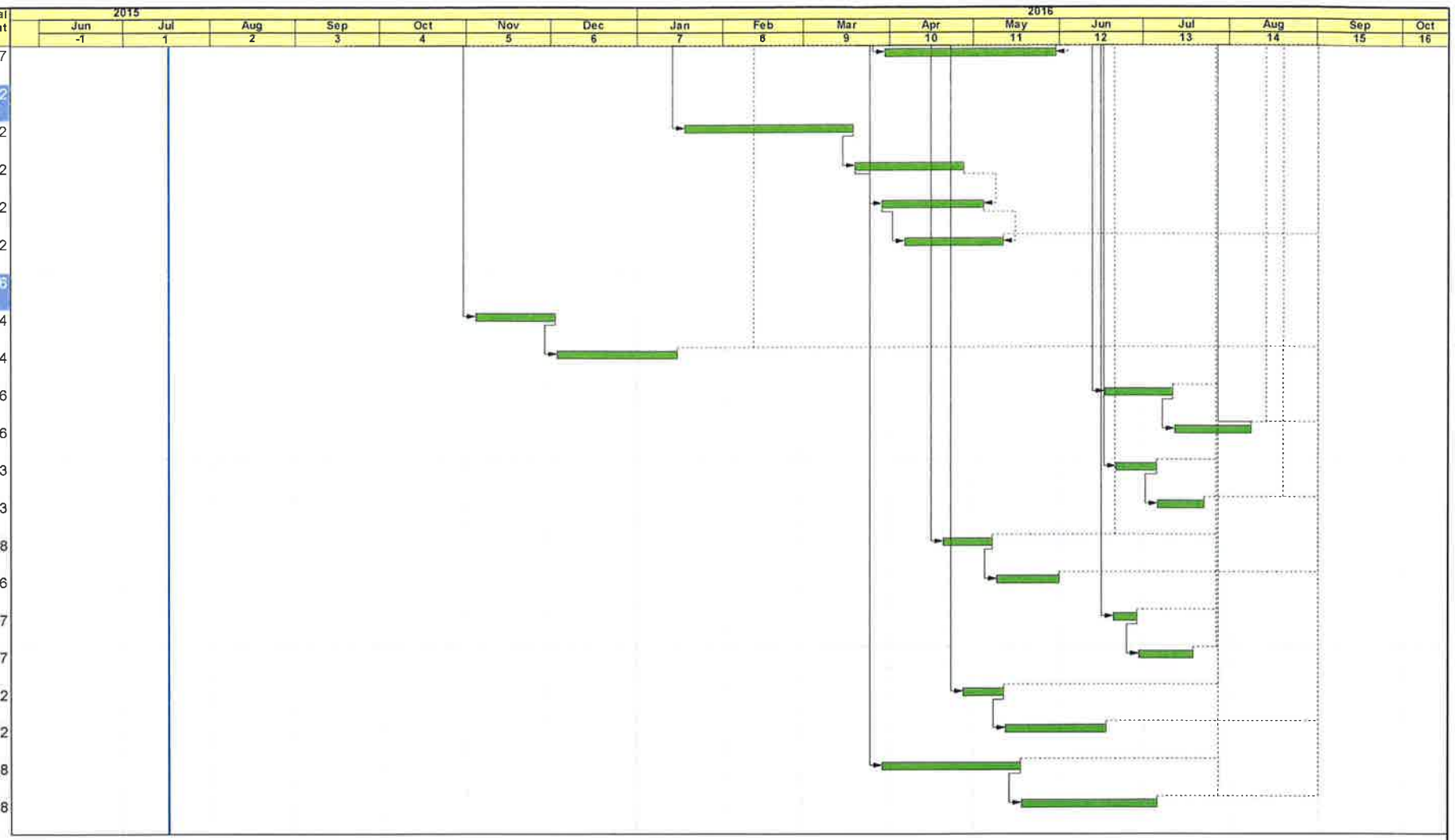
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float
SI13090	Concreting, Intake Intake 3.6,3.5, DAC3.4	50	30-Mar-16	30-May-16	67
Intake 8.1		91	18-Jan-16	11-May-16	82
SI18000	Rock Excavation (R55,60,59) to the Formation Level of Intake 8.1	50	18-Jan-16	18-Mar-16	82
SI18010	Formwork, Intake 8.1	30	19-Mar-16	27-Apr-16	82
SI18020	Reinforcement, Intake 8.1	30	29-Mar-16	04-May-16	82
SI18030	Concreting, Intake 8.1	30	06-Apr-16	11-May-16	82
General Storm Drainage Net Work		225	04-Nov-15	08-Aug-16	16
DW10064	Excavation for New Drainage Pipe and Manhole, South of Site (MH6.1, MH2.2 -MH1.3)	25	04-Nov-15	02-Dec-15	54
DW10070	Construction of New Drainage Pipe and Manhole, South of Site (MH6.1,MH2.2 -MH1.3)	35	03-Dec-15	15-Jan-16	54
DW10080	Excavation for New Drainage Pipe and Manhole, North of Site (MH4.3-MH4.2-MH5.2)	20	17-Jun-16	11-Jul-16	16
DW10085	Construction of New Drainage Pipe and Manhole, North of Site (MH4.3-MH4.2-MH5.2)	24	12-Jul-16	08-Aug-16	16
DW10090	Excavation for New Drainage Pipe and Manhole, Southeast of Site (MH3.2-MH2.3)	12	21-Jun-16	05-Jul-16	23
DW10095	Construction of New Drainage Pipe and Manhole, Southeast of Site (MH3.2-MH2.3)	15	06-Jul-16	22-Jul-16	23
DW10100	Excavation for New Drainage Pipe and Manhole, Northeast of Site (MH2.6, MH3.3)	15	20-Apr-16	07-May-16	38
DW10105	Construction of New Drainage Pipe and Manhole, Northeast of Site (MH2.6, MH3.3)	19	09-May-16	31-May-16	66
DW10110	Excavation for New Drainage Pipe and Manhole, Main Site (MH2.5-MH2.3)	8	20-Jun-16	28-Jun-16	27
DW10115	Construction of New Drainage Pipe and Manhole, Main Site (MH2.5-MH2.3)	16	29-Jun-16	18-Jul-16	27
DW10410	Excavation for the U-channel above Sloping EVA Section	12	27-Apr-16	11-May-16	52
DW10420	Construction of the UC and manhole above the new EVA	30	12-May-16	17-Jun-16	52
DW10430	Excavation for the UC and manhole along slopes, North of Site	40	29-Mar-16	17-May-16	38
DW10440	Construction of the UC and manhole along slopes, North of Site	40	18-May-16	05-Jul-16	38



Ocean Park Tai Shue Wan Development

Site Formation and Foundation Works

Works Programme

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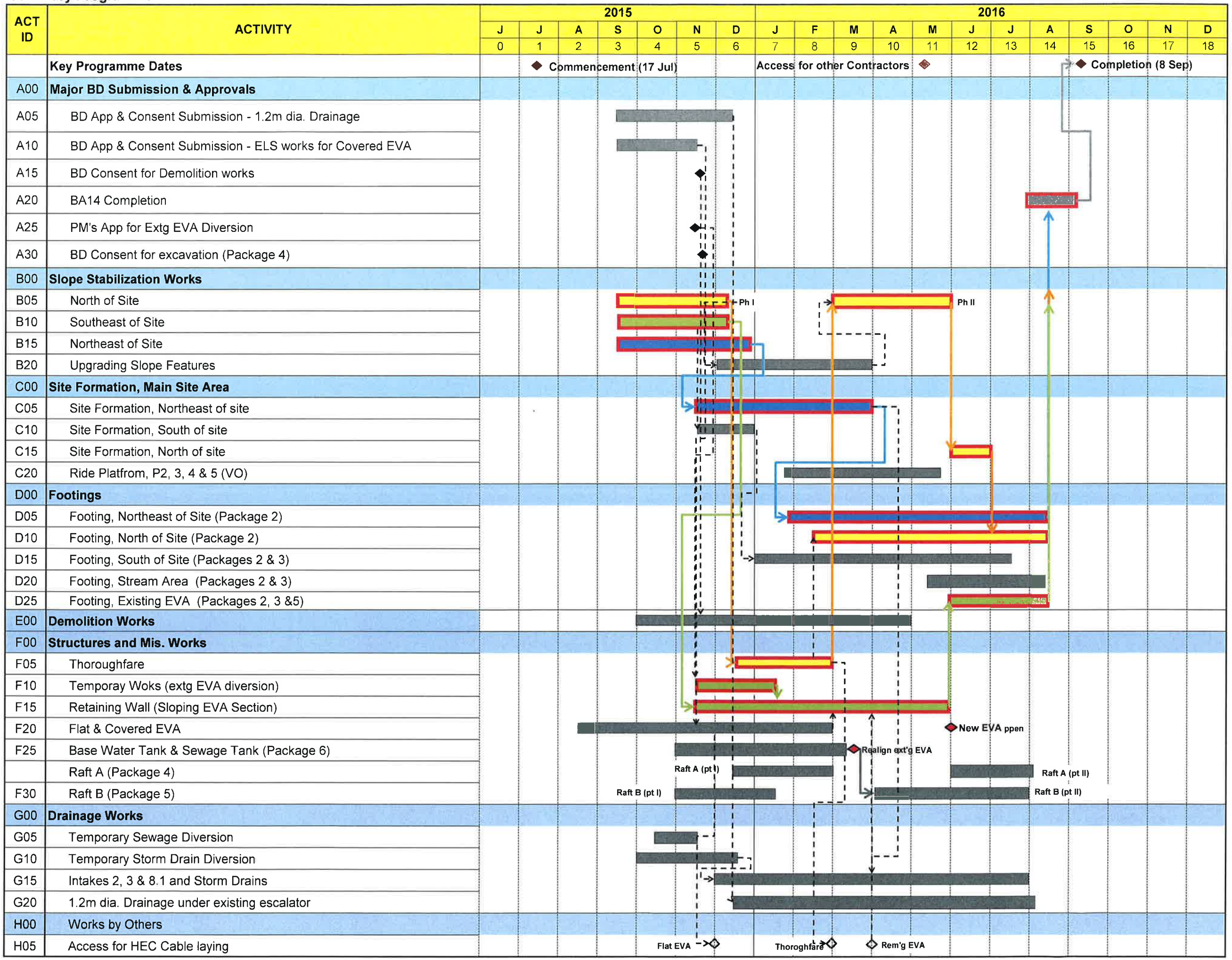
Ocean Park Tai Shue Wan Development: Site Formation and Foundation Works

Summary Programme

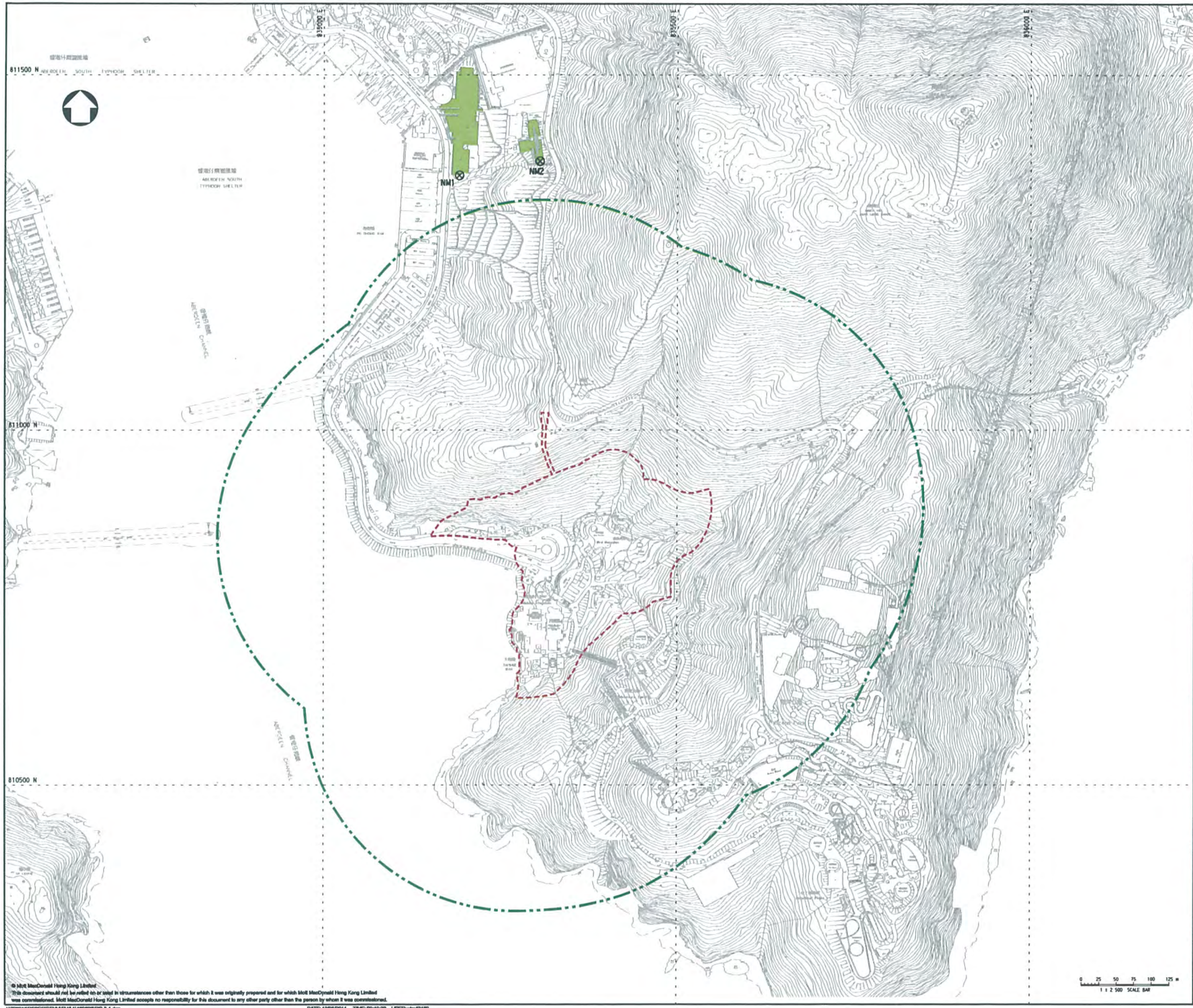
ACT ID	ACTIVITY
	Key Programme Dates
A00	**Major BD Submission & Approvals**
A05	BD App & Consent Submission - 1.2m dia. Drainage
A10	BD App & Consent Submission - ELS works for Covered EVA
A15	BD Consent for Demolition works
A20	BA14 Completion
A25	PM's App for Extg EVA Diversion
A30	BD Consent for excavation (Package 4)
B00	**Slope Stabilization Works**
B05	North of Site
B10	Southeast of Site
B15	Northeast of Site
B20	Upgrading Slope Features
C00	**Site Formation, Main Site Area**
C05	Site Formation, Northeast of site
C10	Site Formation, South of site
C15	Site Formation, North of site
C20	Ride Platfrom, P2, 3, 4 & 5 (VO)
D00	**Footings**
D05	Footing, Northeast of Site (Package 2)
D10	Footing, North of Site (Package 2)
D15	Footing, South of Site (Packages 2 & 3)
D20	Footing, Stream Area (Packages 2 & 3)
D25	Footing, Existing EVA (Packages 2, 3 &5)
E00	**Demolition Works**
F00	**Structures and Mis. Works**
F05	Thoroughfare
F10	Temporay Woks (extg EVA diversion)
F15	Retaining Wall (Sloping EVA Section)
F20	Flat & Covered EVA
F25	Base Water Tank & Sewage Tank (Package 6)
	Raft A (Package 4)
F30	Raft B (Package 5)
G00	**Drainage Works**
G05	Temporary Sewage Diversion
G10	Temporary Storm Drain Diversion
G15	Intakes 2, 3 & 8.1 and Storm Drains
G20	1.2m dia. Drainage under existing escalator
H00	Works by Others
H05	Access for HEC Cable laying



Printed Date: 16/10/2015

Appendix D

Designated Monitoring Locations as Recommended in the Approved EM&A Manual



Notes

Key to symbols

Symbol	Meaning
green dash-dot line	300m ASSESSMENT AREA
red dashed line	PROJECT BOUNDARY
⊗	CONSTRUCTION NOISE MONITORING STATION

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P3	MAY 14	MING	GENERAL REVISION	FX	AFK
P2	MAR 14	MING	GENERAL REVISION	AM	AFK
P1	FEB 14	MING	FIRST ISSUE	AM	AFK

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Hong Kong
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W www.mottmac.com.hk

Client

Ocean Park Hong Kong

Project

TAI SHUE WAN DEVELOPMENT AT OCEAN PARK

Title

PROPOSED LOCATIONS OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	AM		Eng check	FW
Drawn	MING		Coordination	FW
Dwg check	AM		Approved	AFK
Scale at A1 1:2500		Status PRE		Rev P3

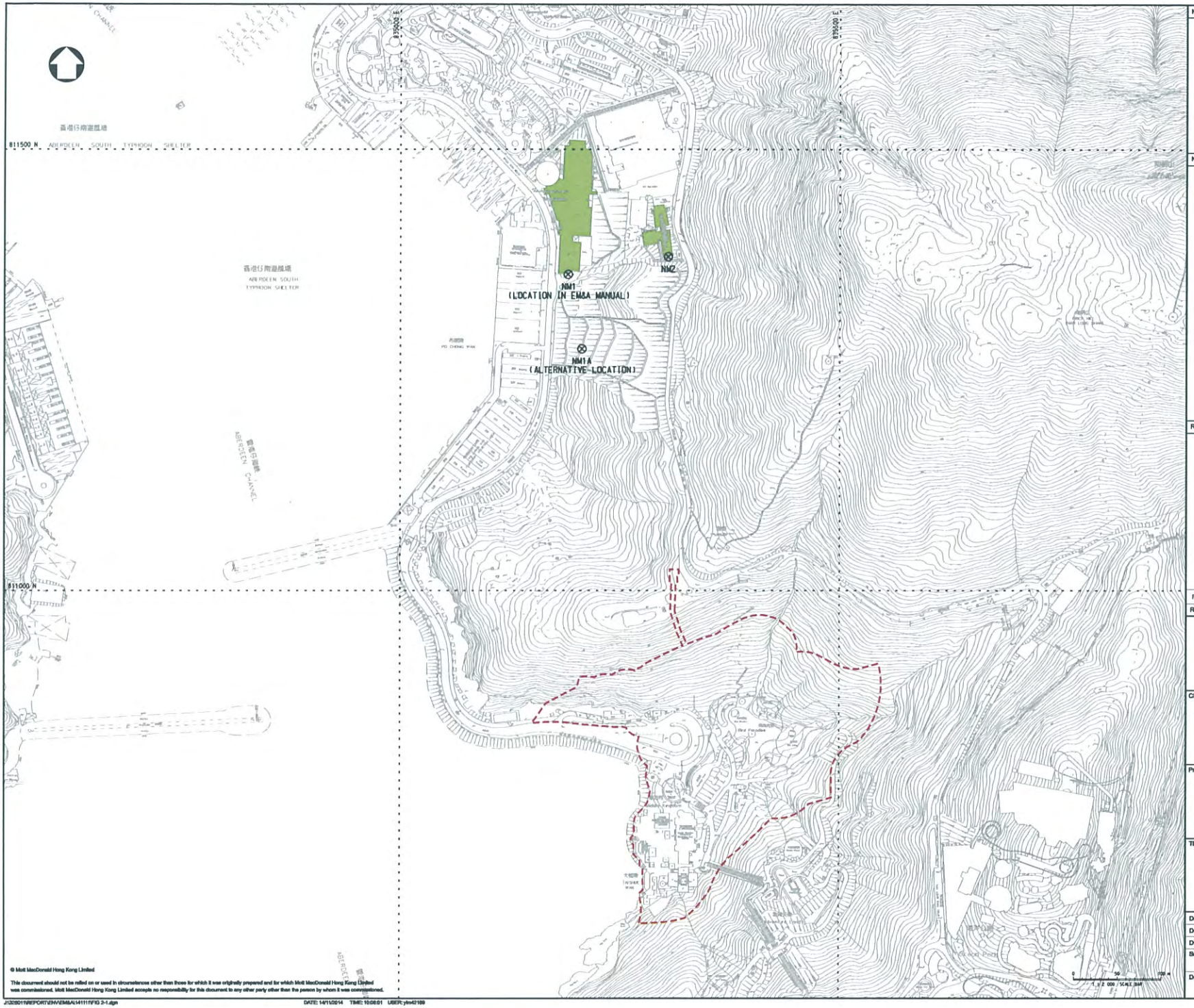
Drawing Number

FIGURE 3.1

DATE: 12/05/2014 TIME: 09:19:32

Appendix E

Actual Locations of Impact Monitoring



Notes

Key to symbols

PROJECT BOUNDARY

CONSTRUCTION NOISE MONITORING STATION

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	NOV 14	MING	FIRST ISSUE	BW	AFK

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Landmark East
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Client

Ocean Park Hong Kong

Project

TAI SHUE WAN DEVELOPMENT AT OCEAN PARK

Title

LOCATIONS OF CONSTRUCTION NOISE MONITORING STATIONS

Designed	BW		Eng check	FW	
Drawn	MING		Coordination	FW	
Dwg check	BW		Approved	AFK	
Scale at A1	1:2000	Status	PRE	Rev	P1

Drawing Number

FIGURE 2.1

J:\320501\REPORT\EM\EM&A\141111\FIG 2-1.dgn DATE: 14/11/2014 TIME: 10:08:01 USER: ylee42189

Appendix F

Calibration Certificate of Monitoring Equipment

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C162125
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-0843) Date of Receipt / 收件日期 : 14 April 2016

Description / 儀器名稱 : Acoustical Calibrator (EQ082)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 4231
Serial No. / 編號 : 2713428
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 22 April 2016

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong, Technical Officer

Certified By 核證 : K C Lee, Project Engineer

Date of Issue 簽發日期 : 25 April 2016

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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c/o 香港新界屯門興安里一號青山灣機樓四樓
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Certificate of Calibration
校正證書

Certificate No. : C162125
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C153519
CL281	Multifunction Acoustic Calibrator	PA160023
TST150A	Measuring Amplifier	C161175

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	94.0	± 0.2	± 0.2
114 dB, 1 kHz	114.1		

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 0.1 %	± 0.1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C162177
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-0843) Date of Receipt / 收件日期 : 14 April 2016

Description / 儀器名稱 : Integrating Sound Level Meter (EQ006)
Manufacturer / 製造商 : Brüel & Kjær
Model No. / 型號 : 2238
Serial No. / 編號 : 2285762
Supplied By / 委託者 : Action-United Environmental Services and Consulting
Unit A, 20/F., Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, N.T.

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 25 April 2016

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA
- Rohde & Schwarz Laboratory, Germany

Tested By 測試 : H T Wong, Technical Officer

Certified By 核證 : K C Lee, Project Engineer

Date of Issue 簽發日期 : 27 April 2016

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
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Certificate of Calibration
校正證書

Certificate No. : C162177
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.4.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C160077
CL281	Multifunction Acoustic Calibrator	PA160023

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.2

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	± 0.7

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
50 - 130	L_{AFP}	A	F	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		113.9

IEC 60651 Type 1 Spec. : ± 0.4 dB per 10 dB step and ± 0.7 dB for overall different.

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Certificate of Calibration
校正證書

Certificate No. : C162177
證書編號

6.2 Time Weighting

6.2.1 Continuous Signal

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
50 - 130	L_{AFP}	A	F	94.00	1	94.0	Ref.
	L_{ASP}		S			94.0	± 0.1
	L_{AIP}		I			94.1	± 0.1

6.2.2 Tone Burst Signal (2 kHz)

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Burst Duration		
30 - 110	L_{AFP}	A	F	106.0	Continuous	106.0	Ref.
	L_{AFMax}				200 ms	105.0	-1.0 ± 1.0
	L_{ASP}		S		Continuous	106.0	Ref.
	L_{ASMax}				500 ms	102.0	-4.1 ± 1.0

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{AFP}	A	F	94.00	31.5 Hz	55.1	-39.4 ± 1.5
					63 Hz	67.9	-26.2 ± 1.5
					125 Hz	77.9	-16.1 ± 1.0
					250 Hz	85.3	-8.6 ± 1.0
					500 Hz	90.7	-3.2 ± 1.0
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.0
					4 kHz	95.0	+1.0 ± 1.0
					8 kHz	91.0	-1.1 (+1.5 ; -3.0)
					12.5 kHz	89.8	-4.3 (+3.0 ; -6.0)

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Certificate of Calibration
校正證書

Certificate No. : C162177
證書編號

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 60651 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
50 - 130	L_{CFP}	C	F	94.00	31.5 Hz	91.5	-3.0 ± 1.5
					63 Hz	93.4	-0.8 ± 1.5
					125 Hz	93.9	-0.2 ± 1.0
					250 Hz	94.1	0.0 ± 1.0
					500 Hz	94.1	0.0 ± 1.0
					1 kHz	94.1	Ref.
					2 kHz	93.9	-0.2 ± 1.0
					4 kHz	93.2	-0.8 ± 1.0
					8 kHz	92.9	-3.0 (+1.5 ; -3.0)
					12.5 kHz	87.9	-6.2 (+3.0 ; -6.0)

6.4 Time Averaging

UUT Setting				Applied Value					UUT Reading (dB)	IEC 60804 Type 1 Spec. (dB)
Range (dB)	Parameter	Frequency Weighting	Integrating Time	Frequency (kHz)	Burst Duration (ms)	Burst Duty Factor	Burst Level (dB)	Equivalent Level (dB)		
30 - 110	L_{Aeq}	A	10 sec.	4	1	1/10	110.0	100	100.0	± 0.5
						$1/10^2$		90	89.9	± 0.5
			60 sec.			$1/10^3$		80	79.2	± 1.0
			5 min.			$1/10^4$		70	69.2	± 1.0

Remarks : - UUT Microphone Model No. : 4188 & S/N : 2812705

- Mfr's Spec. : IEC 60651 Type 1 & IEC 60804 Type 1

- Uncertainties of Applied Value :

94 dB	: 31.5 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB : 1 kHz		: ± 0.10 dB (Ref. 94 dB)
114 dB : 1 kHz		: ± 0.10 dB (Ref. 94 dB)
Burst equivalent level		: ± 0.2 dB (Ref. 110 dB continuous sound level)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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Appendix G

Event and Action Plan

Event and Action Plan for Construction Noise

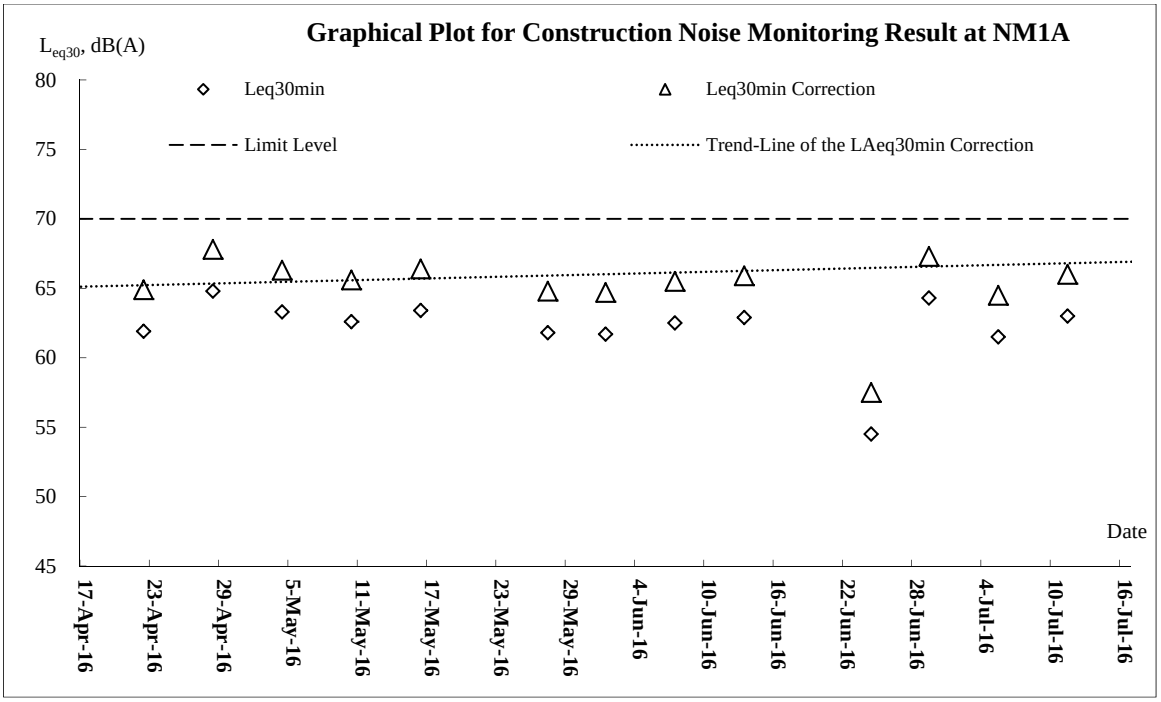
Event	Action			
	ET	**IEC**	**ER**	**Contractor**
Action Level	1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Advise the ER on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and ER; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, ER, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and ER on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the ER until the exceedance is abated.

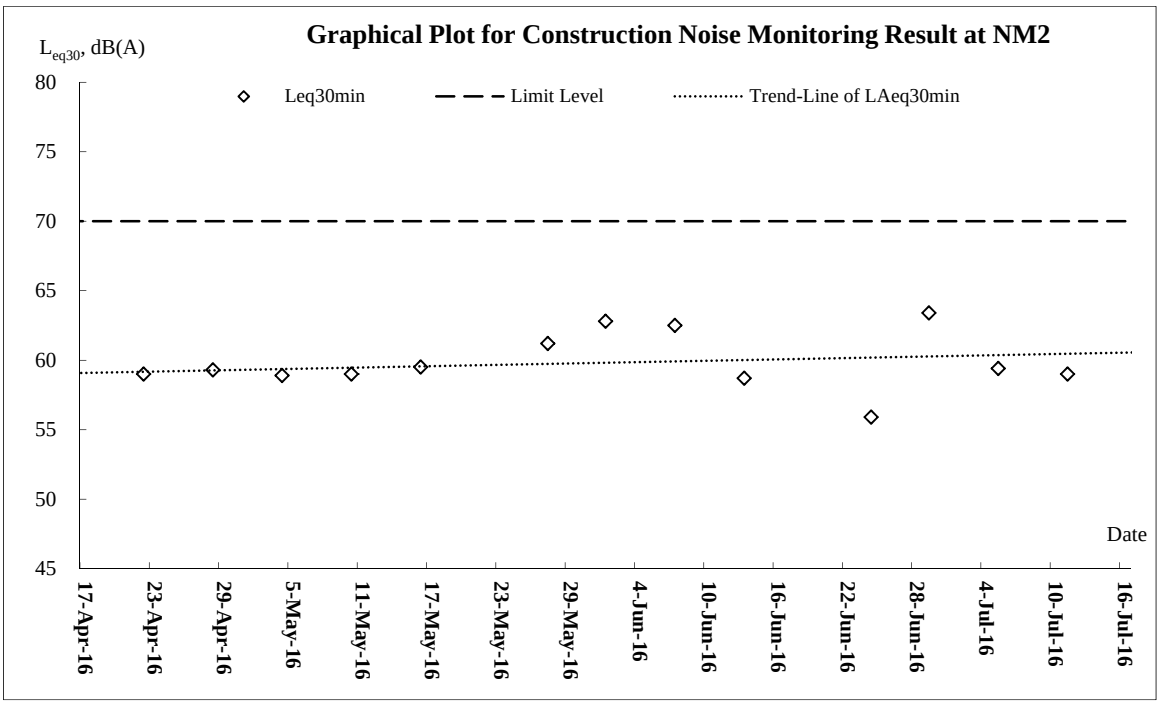
Event and Action Plan for Landscape and Visual Impact during Construction Phase

Action Level	Environmental Team Leader (ETL)	Independent Environmental Checker (IEC)	Engineer's Representative (ER)	Contractor
Non-conformity On one occasion	1. Identify source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial action until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement
Repeated Non-conformity	1. Identify source 2. Inform the IEC and the ER 3. Increase monitoring (site audit) frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring (site audit)	1. Check report 2. Check the Contractor's working method 3. Discuss with the ER and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake remedial measures or any necessary replacement

Appendix H

Graphical Plots for Monitoring Result


Graphical Plot for Construction Noise Monitoring Result at NM1A
L_{eq30}, dB(A)
Leq30min
Leq30min Correction
Limit Level
Trend-Line of the LAeq30min Correction
80
75
70
65
60
55
50
45
Date
17-Apr-16
23-Apr-16
29-Apr-16
5-May-16
11-May-16
17-May-16
23-May-16
29-May-16
4-Jun-16
10-Jun-16
16-Jun-16
22-Jun-16
28-Jun-16
4-Jul-16
10-Jul-16
16-Jul-16


Graphical Plot for Construction Noise Monitoring Result at NM2
L_{eq30}, dB(A)
Leq30min
Limit Level
Trend-Line of LAeq30min
80
75
70
65
60
55
50
45
Date
17-Apr-16
23-Apr-16
29-Apr-16
5-May-16
11-May-16
17-May-16
23-May-16
29-May-16
4-Jun-16
10-Jun-16
16-Jun-16
22-Jun-16
28-Jun-16
4-Jul-16
10-Jul-16
16-Jul-16

Appendix I

Meteorological Data

Weather Conditions - 17 to 30 April 2016

Date		Total Rainfall (mm)	Wong Chuk Hang Station			
			Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
Sun	17-Apr-16	Trace	25.1	8.7	91.2	E/SE
Mon	18-Apr-16	23.1	23.3	11.7	82.0	S/SE
Tue	19-Apr-16	Trace	21.0	14.6	82.0	E/NE
Wed	20-Apr-16	Trace	23.3	12.0	80.7	E/NE
Thu	21-Apr-16	Trace	24.4	7.0	86.5	E/NE
Fri	22-Apr-16	8.3	23.5	6.0	79.5	E/SE
Sat	23-Apr-16	2.8	24.6	7.0	82.0	E/SE
Sun	24-Apr-16	41.4	24.7	7.1	95.0	E/SE
Mon	25-Apr-16	12.4	25.6	8.0	88.2	E/SE
Tue	26-Apr-16	Trace	26.1	9.0	92.5	E/SE
Wed	27-Apr-16	0.9	26.5	9.8	85.5	W/SW
Thu	28-Apr-16	1.7	25.9	7.0	83.5	E/SE
Fri	29-Apr-16	Trace	24.5	11.7	72.5	E
Sat	30-Apr-16	1.5	23.1	9.0	78.0	E

Weather Conditions – May 2016

Date		Total Rainfall (mm)	Wong Chuk Hang Station			
			Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
Sun	1-May-16	3.1	23.5	7.8	84.1	E/SE
Mon	2-May-16	0.3	25.3	8.0	88.7	E/SE
Tue	3-May-16	30.7	25.9	8.2	85.7	E/SE
Wed	4-May-16	Trace	25.9	7.6	83.0	S.SE
Thu	5-May-16	0	27.9	9.7	81.2	E/SE
Fri	6-May-16	0	27.8	11.2	87.5	E/SE
Sat	7-May-16	0	28.1	10.0	85.3	E/SE
Sun	8-May-16	0	28.1	9.6	86.0	E/SE
Mon	9-May-16	0	26.9	12.0	86.0	E/SE
Tue	10-May-16	60.3	25.8	12.3	90.5	E/SE
Wed	11-May-16	0	25.8	9.7	76.0	S/SE
Thu	12-May-16	Trace	25.1	12.0	80.0	E
Fri	13-May-16	Trace	25.5	11.5	82.0	E/SE
Sat	14-May-16	4.7	25.4	10.1	89.0	SE
Sun	15-May-16	1.0	26.6	8.9	85.0	SE
Mon	16-May-16	0.3	24.8	12.6	73.0	NW
Tue	17-May-16	1.2	24.1	11	81	E
Wed	18-May-16	0	25.1	12.3	68	E
Thu	19-May-16	Trace	26.2	11.5	77.2	E/SE
Fri	20-May-16	16.1	26.1	9.7	88	E
Sat	21-May-16	37.6	26.8	8	86	E
Sun	22-May-16	0	26.9	7.5	83.5	S/SE
Mon	23-May-16	Trace	26.1	8.7	81.5	S/SE
Tue	24-May-16	Trace	27.2	11.5	80.5	SE
Wed	25-May-16	Trace	27.5	11.6	80.5	SE
Thu	26-May-16	0.1	28.1	17.6	79.7	E
Fri	27-May-16	14.4	27.7	18.5	86.2	E/SE
Sat	28-May-16	62.9	26.9	9	87	E/SE
Sun	29-May-16	0.8	28.1	8.5	88	S/SE
Mon	30-May-16	0.1	29.6	13.2	85	W/SW
Tue	31-May-16	0	29.7	11.5	82.5	N/NW

Weather Conditions – June 2016

Date		Total Rainfall (mm)	Wong Chuk Hang Station			
			Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
Wed	1-Jun-16	0	29.5	12	83.2	W/SW
Thu	2-Jun-16	0	30	12.4	82.5	W/SW
Fri	3-Jun-16	Trace	29.9	13.2	84	W/NW
Sat	4-Jun-16	12.4	28.3	14	86.4	W/NW
Sun	5-Jun-16	7.6	27.3	16	81	W/NW
Mon	6-Jun-16	77.6	26.5	8.8	88.2	S/SW
Tue	7-Jun-16	0.4	27.9	10.5	82.5	S/SE
Wed	8-Jun-16	46.5	27	12.2	87	S/SE
Thu	9-Jun-16	Trace	28.3	10.7	80.5	SE
Fri	10-Jun-16	9.1	28.7	10.2	81.2	S/SE
Sat	11-Jun-16	85.5	26	10	97.1	SE
Sun	12-Jun-16	28.2	26.7	10.8	96.5	N/NE
Mon	13-Jun-16	0.1	28.4	9.3	90.7	N/NW
Tue	14-Jun-16	Trace	29.6	11.9	86.5	N/NW
Wed	15-Jun-16	0.6	29.7	10.4	86.2	W/NW
Thu	16-Jun-16	2.8	28.5	10.3	66.2	W/NW
Fri	17-Jun-16	2.5	28.4	10.5	85.7	W/SW
Sat	18-Jun-16	13.1	28.7	10.2	87.7	SW
Sun	19-Jun-16	0	29.3	10	75.5	E/SE
Mon	20-Jun-16	Trace	29.6	9.9	82.0	SE
Tue	21-Jun-16	0	29.6	8.9	80.5	N/NW
Wed	22-Jun-16	0	29.4	9.2	80.0	W/NW
Thu	23-Jun-16	0	29.1	9.5	77.0	SE
Fri	24-Jun-16	0	29.6	11.6	76.2	S/SW
Sat	25-Jun-16	0	30.1	8.4	75.0	SE
Sun	26-Jun-16	Trace	30.2	11.1	73.2	SE
Mon	27-Jun-16	1.7	30.4	8.7	76.5	E/SE
Tue	28-Jun-16	37.1	28.4	11.7	84.7	W/NW
Wed	29-Jun-16	20.4	29.1	12.6	81.7	E/SE
Thu	30-Jun-16	1.8	29.3	9.2	85.0	W/NW

Weather Conditions – 1 to 16 July 2016

Date		Total Rainfall (mm)	Wong Chuk Hang Station			
			Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction
Fri	1-Jul-16	3.4	33.0	7.8	78.0	SW
Sat	2-Jul-16	20.8	32.0	8.3	86.0	SW
Sun	3-Jul-16	2.7	31.5	8.7	84.0	N
Mon	4-Jul-16	3.8	33.0	7.8	83.0	N
Tue	5-Jul-16	9.8	32.6	11.7	88.0	SE
Wed	6-Jul-16	33.6	28.8	15.3	88.0	E
Thu	7-Jul-16	Trace	34.0	12.7	53.0	E/SE
Fri	8-Jul-16	0	34.2	9.2	46.0	SE/W
Sat	9-Jul-16	10.3	35.6	8.1	57.0	SE/SW
Sun	10-Jul-16	1.7	31.3	6.2	88.0	SW
Mon	11-Jul-16	11.7	31.1	15.0	89.0	NW/W
Tue	12-Jul-16	0.1	29.0	6.1	88.0	SW
Wed	13-Jul-16	35.2	31.7	9.3	82.0	SE
Thu	14-Jul-16	10.2	30.3	8.5	83.0	SW/S
Fri	15-Jul-16	1.0	33.0	9.4	78.0	S
Sat	16-Jul-16	0.3	33.2	8.8	69.0	S/SW

Appendix J

Waste Flow Table

Paul Y. Construction Company, Limited

Contract No.: TSW-C004

Billing Account: 7022926

Month	Total Inert Waste Disposed to Public Fill (tonne)	Total Inert Waste Disposed to MTR SIL 904 (tonne)	Total Inert Waste Disposed to HY/2009/18 (tonne)	Mixed Waste to Sorting Facility (tonne)	Total Non-inert Waste Disposed Landfill (tonne)	Total Waste Paper Recycled (tonne)	Total Waste Plastic Recycled (tonne)	Total Waste Metal Recycled (tonne)
17/07/2015 to 16/08/2015	0.00	0.00	0.00	0.00	0.00	0.137	0.000	0.000
17/08/2015 to 16/09/2015	2298.12	0.00	0.00	0.00	3.89	0.000	0.000	17.415
17/09/2015 to 16/10/2015	1872.90	0.00	0.00	24.21	0.00	0.000	0.000	0.356
17/10/2015 to 16/11/2015	17652.55	2174.40	0.00	0.00	22.19	0.000	0.000	0.000
17/11/2015 to 16/12/2015	27030.86	3011.10	0.00	0.00	12.14	0.000	0.000	24.000
17/12/2015 to 16/01/2016	34694.02	2092.90	8370.00	0.00	16.02	0.000	0.000	10.816
17/01/2016 to 16/02/2016	35771.45	1308.00	0.00	0.00	13.99	0.000	0.000	7.460
17/02/2016 to 16/03/2016	42710.92	1086.00	0.00	0.00	15.23	0.000	0.000	8.300
17/03/2016 to 16/04/2016	26213.23	24.00	0.00	0.00	7.63	0.000	0.000	0.000
17/04/2016 to 16/05/2016	10010.87	60.00	0.00	0.00	23.87	0.000	0.000	0.000
17/05/2016 to 16/06/2016	13142.59	0.00	0.00	0.00	26.63	0.000	0.000	0.000
17/06/2016 to 16/07/2016	20189.56	0.00	0.00	0.00	23.58	0.000	0.000	43.400
17/07/2016 to 16/08/2016								
17/08/2016 to 16/09/2016								
17/09/2016 to 16/10/2016								
17/10/2016 to 16/11/2016								
Total:	**231587.07**	**9756.40**	**8370.00**	**24.21**	**165.17**	**0.137**	**0.000**	**111.747**

Appendix K

Implementation Schedule for Environmental Mitigation Measures

Appendix C. Implementation Schedule for Environmental Mitigation Measures

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1]				Relevant Legislation & Guidelines
					Des	Con	Op	Dec	
Cat.1 Key/specific proposed mitigation measure									
Noise Impact (Construction)									
5.7	3.2	**Selecting Quiet Plant** The actual SWL of quiet plant is less than the value specified in GW-TM for the same piece of equipment. It should be noted that the silenced PME taken from EPD's Quality Powered Mechanical Equipment (QPME) Inventory.	Within Project area / Duration of the construction phase / Prior to commencement of operation	Contractor appointed by OPC		✓			EIAO and Noise Control Ordinance
5.7	3.2	**Use of Movable Barriers** Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided that the direct line of sight between the PME and the NSRs is blocked.	Within Project area / Duration of the construction phase / Prior to commencement of operation	Contractor appointed by OPC		✓			EIAO and Noise Control Ordinance
Ecological Impact									
10.7	8.3	**Inspection of Active Ardeid Nest** Prior to site clearance works at the planting area abandoned for ardeid breeding, the area around the boundary of the ardeids roosting site as indicatively shown in Figure 8.1 should be inspected to confirm no active ardeid nest is present. If any active ardeid nest is observed, suitably sized buffer area should be established to avoid human or machinery disturbance until the nest is abandoned.	Indicative boundary of the ardeids roosting site within Project construction site (location indicated in Figure 8.1) / For once / Before site clearance	Qualified ecologist appointed by OPC	✓				EIAO-TM; HK Ordinance Cap. 170
10.7	8.3	**Inspection of Short-nosed Fruit Bat** As precautionary measure, prior to any proposed arboricultural works of the trees (particularly the Chinese Fan-palms), daytime	Project construction site / For once / Before arboricultural works of	ET appointed by OPC	✓	✓			EIAO-TM; HK Ordinance Cap. 170

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		inspection should be carried out to confirm no Short-nosed Fruit Bat is present. If any Short-nosed Fruit Bat is observed roosting, suitably sized buffer area should be established around the tree to minimise human or machinery disturbance until the bat has left.	the trees						
10.7	8.3	**In-situ Preservation of Plant Species of Conservation Interest** During construction phase, protective fence for the identified flora species of conservation concern shall be erected and maintained.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			EIAO-TM
10.7	8.3	**Inspection of Ardeid Nest during breeding season** After commencement of construction phase, the Site should be monitored monthly in breeding season (April to July) to check for any potential breeding and nesting activities.	Project construction site / Throughout construction stage / Until completion of all construction activities	Qualified ecologist appointed by OPC		✓			EIAO-TM
10.7	8.2	**Timing of site clearance and tree felling works** Site clearance and tree felling works at the existing ardeid night roost location as shown in Figure 8.1 should be avoided during the peak wintering season of ardeids, i.e. between November and March.	Indicative boundary of the ardeids roosting site within Project construction site (location indicated in Figure 8.1) / Throughout construction stage / Until completion of site clearance and tree felling works within the boundary	Contractor appointed by OPC		✓			EIAO-TM
10.7	8.3	**Compensation for Ardeid Roosting Site** An enhancement area with following features should be provided as an alternative roosting site for ardeids. ▪ The location is at southern part of the Project area (location indicated in Figure 8.1) ▪ The enhancement area shall include a Flamingo Pond ▪ Native tree species *Macaranga tanarius* and *Celtis sinensis* and tree species which was used by ardeids for roosting *Mallotus paniculatus, Ficus hispida* and *Cratoxylum cochinchinense* shall be considered in the plan. ▪ Heavy standard sized trees shall be considered for planting to allow early establishment of the trees around the Flamingo	Southern part of Project construction site (location indicated in Figure 8.1) / Before and throughout construction stage / Until completion of Flamingo Pond construction and tree planting activities at that area	Qualified ecologist and Contractor appointed by OPC	✓	✓	✓		EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		Pond.							
10.7	8.3	**Compensation for Woodland Habitat** ▪ Provision of a Woodland Area of about 1.62 ha, which includes 0.84 ha woodland compensation on-site and 0.78 ha on-site woodland reinstatement, to mitigate for permanent loss of woodland habitat. ▪ In the woodland compensation area, whips should be planted with predominately native tree species similar to the affected woodland, such as *Celtis sinensis*, *Cratoxylum cochinchinense*, *Polyspora axillaris* and *Sterculia lanceolata*.	Location of Woodland Compensation Area indicated in Figure 8.2/ Before and throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓	✓		EIAO-TM
Landscape and Visual Impact (Construction)									
Table 12.13 (CP07)	Table 9.1 (CP07)	**Temporary Tree Nurseries** Temporary tree nurseries may be set up within the Project area at an early stage to allow small trees to grow during the construction period. By the time these trees are needed for landscape planting at the end of the construction phase, they will have grown larger, require minimal pruning and suffer much less damage during transplanting, as the moving distance from an on-site rather than off-site nursery will be much smaller. The temporary tree nurseries can also temporarily hold the existing trees to be transplanted if direct transplantation from their original locations to the final recipient location is impracticable. The locations of the temporary tree nurseries should be carefully selected so that the trees can also act as screen planting to block the views of the Project area from the VSRs during the construction phase, if practicable.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Table 12.13 (CP08)	Table 9.1 (CP08)	**Advance Planting** Advance planting should be undertaken at the earliest possible stage of the construction phase of the project. Plant species, preferably native ones, should be carefully selected to blend in with the existing preserved vegetation. Landscape planting in movable planters should also be considered as a temporary greening measure for the Project area.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Landscape and Visual Impact (Operation)									
Table 12.14 (OP04)	Table 9.2 (OP04)	**Green Roofs and Vertical Greening** Green Roofs and Vertical Greening should be provided where feasible and appropriate to screen and soften the hard edges of	Project building rooftops / During design stage / Throughout operation	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		building structures.	phase						
Table 12.14 (OP05)	Table 9.2 (OP05)	**Reprovision of Flamingo Pond** A pond is recommended to replace the demolished Flamingo Pond as compensation for the loss of semi-natural ponds, where wildlife, such as birds, can utilise.	Project area / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM
Table 12.14 (OP07)	Table 9.2 (OP07)	**Woodland Compensation** 1.53ha of affected woodland is recommended to be reinstated / compensated by 1.62ha of whip tree planting adjacent to the existing unaffected woodland and tall shrubland. Native species should be proposed as far as practicable to re-create a native landscape, restore the ecological habitats and blend in with the existing native vegetation.	Project area / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM
Cat. 2 Submission required post EIA stage									
Sewerage and Sewage Treatment Implications									
7.7	5.2	**Detailed Sewerage Design Report** In order to prevent septicity problems during operation phase, a detailed sewerage design report should be submitted to DSD for approval prior to installation of the rising mains.	Rising mains site / During design stage	Design Engineer	✓				Sewerage Manual Part 1
Ecological Impact (Construction)									
10.7	8.3	**Vegetation Survey for Plant Species of Conservation Interest** For precautionary purposes and to further ensure no flora species of conservation interest to be affected, a detailed vegetation survey need to conduct to the exact locations, number and condition of individuals of *Platycodon grandiflorus*.	Project construction site / For once / Before site clearance	Qualified botanist/ecologist of the ET appointed by OPC	✓				EIAO-TM; Hong Kong Ordinance Cap. 96
10.7	8.3	**Woodland Compensation Plan** A Woodland Compensation Plan shall be prepared and submitted to AFCD for approval no later than one month prior to commencement of site clearance. The plan shall include but not limited to the following: ▪ Timing of planting works ▪ Planting location ▪ Species, size and number of trees ▪ Monitoring methodology	Location of Woodland Compensation Area indicated in Figure 8.2/ Before construction stage / No later than one month prior to commencement of site clearance	Qualified botanist/ecologist of the ET appointed by OPC	✓				EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		▪ Action Plan							
Landscape and Visual Impact (Construction)									
Table 12.13 (CP05)	Table 9.1 (CP05)	**Transplantation of Existing Trees** Trees which are in direct conflict with the development proposals and suitable for transplantation should be transplanted as far as practicable. A tree transplantation proposal should be submitted together with the tree removal application. Trees proposed to be transplanted should preferably be transplanted from their original locations directly to their final recipient locations in one go. If this is infeasible, the trees should be held in a temporary tree nursery, preferably within the Project area, where the trees will be properly maintained.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM; LAO PN No. 07/2007
Landscape and Visual Impact (Operation)									
Table 12.14 (OP02)	Table 9.2 (OP02)	**Compensatory Tree Planting** Existing trees to be felled should be compensated as far as practicable. Native species should be proposed as far as practicable to re-create a native landscape, restore the ecological habitats and blend in with the existing native vegetation. A compensatory tree planting proposal should be submitted together with the tree removal application for approval by relevant authorities in accordance with LAO Practice Note No. 7/2007. It is recommended that approximately 608 heavy standard trees and approximately 18,202 whip trees could be planted on-site. The availability of off-site compensatory tree planting area is still subject to further investigation and agreement with relevant authorities.	Project area / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM; LAO PN No. 07/2007
Cat. 3 Good site practice/housekeeping measures under EM&A mechanism									
Air Quality Impact (Construction)									
3.9.1	2.2	**Dust Control Measures** To achieve compliance with the FSP, RSP and TSP criteria during the construction phase, good practices for dust control should be implemented to reduce dust impacts. The dust control measures are detailed as follows: ▪ Use of regular water spraying (once every 2.5 hours or 4 times per day) to reduce dust emissions from heavy construction activities (including ground excavation, earth moving, etc.) at all active works area exposed site surfaces and unpaved	Project construction site / Duration of the construction phase / Prior to commencement of operation	Contractor appointed by OPC		✓			EIA Recommendation and Air Pollution Control (Construction Dust) Regulation

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		roads, particularly during dry weather. ▪ Covering 80% of stockpiling area by impervious sheets and spraying all dusty material with water immediately prior to any loading transfer operations to keep the dusty materials wet during material handling at the stockpile areas Relevant dust control practices as stipulated in the Air Pollution Control (Construction Dust) Regulation should be adopted: Good Site Management ▪ Good site management is important to help reduce potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standards of housekeeping to prevent emissions of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. Disturbed Parts of the Roads ▪ Main temporary access points should be paved with concrete, bituminous hardcore materials or metal plates and be kept clear of dusty materials; or ▪ Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. Exposed Earth ▪ Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. Loading, Unloading or Transfer of Dusty Materials ▪ All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as							

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		to keep the dusty material wet. Debris Handling ▪ Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. ▪ Before debris is dumped into a chute, water should be sprayed onto the debris so that it remains wet when it is dumped. Transport of Dusty Materials ▪ Vehicles used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. Wheel washing ▪ Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. Use of vehicles ▪ The speed of the trucks within the site should be controlled to about 10 km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. ▪ Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. ▪ Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. Site hoarding ▪ Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit								
Noise Impact (Construction)									

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
5.7	3.2	**Good Site Practice** Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. ▪ only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; ▪ machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum; ▪ plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; ▪ mobile plant should be sited as far away from NSRs as possible; and ▪ material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	Project construction site / Duration of the construction phase / Prior to commencement of operation	Contractor appointed by OPC		✓			EIAO and Noise Control Ordinance
Noise Impact (Operation)									
5.7	3.3.2	**Fixed Plant Noise** With the adoption of the proposed maximum allowable SWLs, all representative NSRs is expected to comply with the relevant noise criteria for the daytime and evening time periods. No adverse fixed plant noise impact is anticipated. It is also recommended that the following noise reduction measures should be considered as far as practicable during design stage: ▪ choose quiet plant such as those which have been effectively silenced; ▪ include noise levels specification when ordering new plant (including chiller and E&M equipment); ▪ locate fixed plant / louvre away from any NSRs as far as practicable; ▪ locate fixed plant in walled plant rooms or in specially designed enclosures; ▪ locate noisy machine in a basement or a completely separate building;	Within Project area / Prior to operation phase / Duration of the operation phase / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓	✓	✓		EIAO and Noise Control Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		▪ install direct noise mitigation measures including silencers, acoustic louvres and acoustic enclosure where necessary; and ▪ develop and implement a regularly scheduled plant maintenance programme so that equipment is properly operated and serviced in order to maintain a controlled level of noise. Prior to the operation of the Project, noise commissioning tests for all major fixed noise sources should be conducted.							
5.7	3.3.2	**Open Air Entertainment Noise** With the adoption of the proposed maximum allowable SWLs, all representative NSRs is expected to comply with the relevant noise criteria for the daytime and evening periods, the following measures should be considered as far as practicable during stage: ▪ use small clusters of small power loudspeakers rather than a few large power loudspeakers; and ▪ loudspeakers should be pointed away from nearby NSRs.	Within Project area / Duration of the operation phase / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓	✓			EIAO and Noise Control Ordinance
Water Quality Impact (Construction)									
6.7	4.2	**Construction Site Runoff** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and erosion. The following measures are recommended to protect water quality of the inland areas: ▪ At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the Contractors prior to the commencement of construction; ▪ Sand/ silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			EIAO-TM; ProPECC Note PN 1/94; WPCO; TM-DSS

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the Contractors prior to the commencement of construction; ▪ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times; ▪ Measures should be taken to minimise the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from site formation excavations should be discharged into storm drains via silt removal facilities; ▪ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains; ▪ Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system; ▪ Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers; ▪ Precautions should be taken at any time of the year when								

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes; and, ▪ Bentonite slurries used on site should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. The Contractor would be required to obtain a license from EPD under the WPCO for discharge to the public drainage system or the marine environment. Construction site discharge should be collected by the temporary drainage system installed by the Contractor and treated or desilted on-site to fulfil the WPCO discharge license requirements before discharge.							
6.7	4.2	**General Construction Activities** Best Management Practices (BMPs) should be implemented at the construction site, including proper handling, sorting and storage of construction solid waste, debris and refuse generated on-site prior to disposal. Stockpiles of cement and other construction materials should be kept covered when not being used. The Contractor should also follow the guidelines set in the "Pesticides Used for Outdoor Mosquito Control", published by AFCD in 2010, for mosquito control on site.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			EIAO-TM; ProPECC Note PN 1/94
6.7	4.2	**Expansion of Existing Storm U-Channel** Guidelines and measures summarised in ProPECC PN 1/94 for trenching activities should be implemented.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94
6.7	4.2	**Interception of Natural Streams** Guidelines and measures summarised in ProPECC PN 1/94 for excavation and stockpiling activities should be implemented.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94
6.7	4.2	**Site Formation Works** The construction programme should be properly planned to minimise excavation works during the wet season (April to September), temporarily exposed slope/soil surfaces should be	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		covered by a tarpaulin or other means, as far as practicable. Interception channels should be provided (e.g. along the crest/edge of the excavation) to prevent storm runoff from washing across exposed soil surfaces. Arrangements should be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm. Measures will be taken to minimise water ingress into the excavation. Diverting any water from the excavated areas to on-site wastewater treatment facilities for treatment prior to discharge should also be performed. Other measures that need to be implemented before, during and after rainstorms are summarised in ProPECC PN 1/94.							
6.7	4.2	**Construction of Sewage Sump Pit and Rising Mains** Measures for excavation works summarised for site formation works should also be implemented during construction of the sewage sump pit. During the laying of rising mains, guidelines and measures summarised in ProPECC PN 1/94 for trenching activities should be performed. Concrete water generated from the construction of the concrete support should be collected and treated with the wastewater treatment facilities prior to discharge.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94
6.7	4.2	**Accidental Spillage** The Contractor should register as a chemical waste producer if chemical wastes are produced from construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. This will prevent contamination of top soil and water pollution due to construction site runoff. Maintenance of vehicles and equipment, involving activities with potential for leakage and spillage, should only be undertaken within areas appropriately equipped to control these discharges. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94; Waste Disposal Ordinance (Cap 354); Waste Disposal (Chemical Waste) (General) Regulation

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: ▪ Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport. ▪ Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents. ▪ Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.							
6.7	4.2	**Sewage Effluent from the Construction Workforce** The Contractor should provide temporary sanitary facilities, such as portable chemical toilets within the construction site to handle sewage from the workforce. The Contractor has the responsibility to ensure that chemical toilets are used and properly maintained, and that licensed Contractors are employed to collect and dispose of the waste off-site at approved locations.	Project construction site / Duration of the construction phase	Contractor appointed by OPC		✓			ProPECC Note PN 1/94
Water Quality Impact (Operation)									
6.7	4.2	**Runoff from Road Surfaces** Road drainage system design has already included silt traps in the gully inlets to remove silt and grit before the runoff enters the public storm water drainage system. Silt traps should be regularly checked and maintained to ensure efficient operation.	Within Project area / During operation phase	OPC/Operator appointed by OPC			✓		EIAO-TM; WPCO
6.7	4.2	**Runoff from On-site Planting Area** Watering of plants on site should always be performed before application of pesticides, herbicides and fertilizers. Regular training should also be provided to frontline staff on the appropriate treatment and disposal of pesticides, herbicides and fertilizers.	Within Project area / During operation phase	OPC/Operator appointed by OPC			✓		EIAO-TM; WPCO; TM-DSS
Waste Management Implications (Construction)									
8.5.1.1	6.2	**Good Site Practice**	Project construction site / Throughout construction	Contractor		✓			Waste Disposal Ordinance; Waste

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		Recommendations for good site practices during the construction activities include: ▪ Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site ▪ Training of site personnel in proper waste management and chemical handling procedures ▪ Provision of sufficient waste disposal points and regular collection of waste ▪ Appropriate measures to minimise windblown litter and dust/ odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers ▪ Stockpiles of C&D materials should be kept covered by impervious sheets to avoid wind-blown dust ▪ All dusty materials including C&D materials should be sprayed with water immediately prior to any loading transfer operation so as to keep the dusty material wet during material handling at the stockpile areas ▪ Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads ▪ Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated	stage / Until completion of all construction activities	appointed by OPC					Disposal (Chemical Wastes) (General) Regulation; and ETWB Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site
8.5.1.2	6.2	**Waste Reduction Measures** Good management and control can prevent the generation of a significant amount of waste. Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction include: ▪ Sort inert C&D materials to recover any recyclable portions such as metals ▪ Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		materials and their proper disposal ▪ Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force ▪ Proper site practices to minimise the potential for damage or contamination of inert C&D materials ▪ Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste							
8.5.1.3	6.2	**Inert and Non-inert C&D materials** In order to minimise impacts resulting from collection and transportation of inert C&D materials for off-site disposal, the inert C&D materials should be reused on-site as fill material as far as practicable. In addition, inert C&D materials generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation. The surplus inert C&D materials will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the DEVB Technical Circular (Works) No.6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the ETWB Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			Waste Disposal Ordinance ; DEVB Technical Circular (Works) No.6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials; and ETWB Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site
8.5.1.4	6.2	**Chemical Waste** If chemical wastes are produced at the construction site, the	Project construction site / Throughout construction	Contractor appointed by OPC		✓			Code of Practice on the Packaging

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the "Code of Practice on the Packaging Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended.	stage / Until completion of all construction activities						Labelling and Storage of Chemical Wastes; Waste Disposal (Chemical Waste) (General) Regulation
8.5.1.5	6.2	**General Refuse** General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			Waste Disposal Ordinance and Public Health and Municipal Services Ordinance - Public Cleansing and Prevention of Nuisances Regulation
8.5.1.6	6.2	**Floating Refuse** Provide general refuse collection points on site can minimise the refuse contaminate the marine environment. The construction contractors will be required to regularly check and clean any refuse trapped or accumulated along the artificial seawall. Such refuse will then be stored and disposed of together with the general refuse.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			Waste Disposal Ordinance
Waste Management Implications (Operation)									
8.5.2.1	6.2	**General Refuse** General refuse should be collected on daily basis and delivered	Project area / On a regular basis /	Contractor appointed by OPC			✓		Waste Disposal Ordinance

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		to the refuse collection point accordingly. A reputable waste collector should be employed to remove general refuse regularly to avoid odour nuisance or pest/vermin problem. Sufficient recycling containers are recommended to be provided at suitable locations of the Project to encourage recycling of such waste as aluminium cans, plastics and waste paper.	Throughout operation stage						
8.5.2.2	6.2	**Chemical Waste** If chemical wastes are expected to be produced during the operation phase, the Project Proponent should register with the EPD as a chemical waste producer and follow the guidelines stated in the "Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidising, irritant, toxic, harmful, corrosive, etc. Licensed collector should be deployed to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Project area / On a regular basis / Throughout operation stage	Contractor appointed by OPC			✓		Code of Practice on the Packaging Labelling and Storage of Chemical Wastes; Waste Disposal (Chemical Waste) (General) Regulation
8.5.2.3	6.2	**Floating Refuse** Regular inspection should be carried out along the artificial seawall of the Project boundary for any entrapment or accumulation of floating refuse. Where an appreciable amount of floating refuse is found on the artificial seawall during the inspection, the locations of such refuse will be recorded and arrangements with the project proponent will immediately be made to collect and clear the refuse from the seawall.	Project area / On a regular basis / Throughout operation stage	Contractor appointed by OPC			✓		Waste Disposal Ordinance
Land Contamination (Construction)									
9.6	7.2	In any case where contaminated soil is identified after the commencement of works, a Contamination Assessment Plan (CAP) is required to be prepared for EPD's endorsement prior to	Project construction site / Before construction stage	Contractor appointed by OPC	✓				Guidance Note for Contaminated Land Assessment and Remediation

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		the site investigation. The Contamination Assessment Report (CAR) and/ or Remediation Action Plan (RAP) should be prepared for EPD's approval after the site investigation. If land contamination is confirmed, remediation works should be carried out according to the approved RAP. A Remediation Report (RR) should also be prepared for EPD's endorsement to demonstrate that the clean-up of the contaminated land is completed. No construction work or development of site should be carried out before the approval of the RR.							Guidance Manual for Use of Risk-based Remediation Goals for Contaminated Land Management Practice Guide for Investigation and Remediation of Contaminated Land
9.6	7.2	If contaminated soil is identified, the following mitigation measures are for the excavation and transportation of contaminated materials (if any): ▪ To minimise the incidents of construction workers coming in contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; ▪ Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when working directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; ▪ Stockpiling of contaminated excavated materials on site should be avoided as far as possible; ▪ The use of any contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; ▪ Vehicles containing any excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; ▪ Truck bodies and tailgates should be sealed to prevent any discharge; ▪ Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			Waste Disposal Ordinance (Cap 354) Waste Disposal (Chemical Waste) (General) Regulation (Cap 354)

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		tipping; ▪ Speed control for trucks carrying contaminated materials should be exercised. ▪ Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap 354) and obtain all necessary permits where required; and ▪ Maintain records of waste generation and disposal quantities and disposal arrangements.							
Landscape and Visual Impact (Construction)									
Table 12.13 (CP01)	Table 9.1 (CP01)	**Minimisation of Construction Period** The construction programme should be carefully designed to minimise the length of the construction period.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Table 12.13 (CP02)	Table 9.1 (CP02)	**Minimisation of Works Areas** The footprint of the proposed hard structures as well as the extent of temporary works areas should be minimised as far as practicable.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Table 12.13 (CP03)	Table 9.1 (CP03)	**Construction Site Controls** Construction site controls should be enforced, where possible, to ensure that the landscape and visual impacts arising from the construction phase activities, such as the storage of materials, the location and appearance of site accommodation, etc. are minimised.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Table 12.13 (CP04)	Table 9.1 (CP04)	**Preservation of Existing Vegetation** The development proposal should avoid disturbance to existing vegetation as far as practicable. A formal tree removal application should be submitted for approval by relevant authorities in accordance with LAO PN No. 07/2007 "Tree Preservation and Tree Removal Application for Building Development in Private Projects" during the detailed design phase of the Project. Where possible, all trees which are not in direct conflict with the development proposals should be retained *in situ*.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM; LAO PN No. 07/2007
Table	Table	**No Intrusion Zones**	Project construction site /	Contractor	✓	✓			EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
12.13 (CP06)	9.1 (CP06)	Where practicable, "no intrusion zones" should be designated within the Project area for protection of existing vegetation. Durable boundary fences should be erected to clearly demarcate these "no intrusion zones". No construction activities, storage of materials and vehicular access will be allowed within the "no intrusion zones" to prevent potential damage to canopies and root zones of vegetation.	Throughout construction stage / Until completion of all construction activities	appointed by OPC					
Table 12.13 (CP09)	Table 9.1 (CP09)	**Construction Site Hoardings** Two types of hoardings should be considered. One is used for areas in close contact with visitors and for areas where visual intrusion is a key concern. It should be graphical and thematic, and visually 'impermeable' to block the views of construction activities from the VSRs. The other is used for areas to be viewed at a distance. It should be subtle and camouflaged so that it blends in with the surrounding landscape.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC	✓	✓			EIAO-TM
Table 12.13 (CP10)	Table 9.1 (CP10)	**Dust and Erosion Control for Exposed Soil** Exposed soil shall be covered or "camouflaged" and watered frequently. Areas that are expected to be left with bare soil for a long period of time should be hydroseeded and / or covered with suitable protective fabrics.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			EIAO-TM
Table 12.13 (CP11)	Table 9.1 (CP11)	**Appearance of Construction Plant / Machinery** To minimise the visual intrusion of construction activities to visitors and other VSRs, a suitable colour scheme of construction machines and plants should be adopted where possible.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			EIAO-TM
Table 12.13 (CP12)	Table 9.1 (CP12)	**Construction Lighting Control** All security floodlights for construction sites should be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimise light pollution and night-time glare to the VSRs.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			EIAO-TM
Table 12.13 (CP13)	Table 9.1 (CP13)	**Appearance of Construction Workers** To protect Ocean Park's image, construction workers should be required to enter the park areas with their helmets and safety vests properly stored or carried in non-transparent bags. They should also dress properly and cleanly.	Project construction site / Throughout construction stage / Until completion of all construction activities	Contractor appointed by OPC		✓			EIAO-TM
Landscape and Visual Impact (Operation)									

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
Table 12.14 (OP01)	Table 9.2 (OP01)	**Sensitive Design and Disposition** All proposed hard structures should be sensitively designed in a manner that responds to the existing and planned landscape context, and minimises potential adverse landscape and visual impacts. The structural design should seek to reduce the apparent visual mass through the use of natural materials such as wooden frame and semi-transparent panels. Subdued tones should be considered for the colour palette with non-reflective finishes to reduce glare effect. Site specific measures, such as the disposition of the key structures closer to the northern slopes, the design of building forms as extension along the existing slope topography, the use of concave roof form and the location of ride platforms on or near the slopes to minimise structural support, should also be considered for better integration with the surroundings and minimisation of potential visual impacts.	Project buildings / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM
Table 12.14 (OP03)	Table 9.2 (OP03)	**Enhancement Planting** Other than compensatory tree planting, additional trees, shrubs, groundcovers and lawn should also be considered to maximise greening within the redevelopment area.	Project area / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM
Table 12.14 (OP06)	Table 9.2 (OP06)	**Responsive Lighting Design** Overall lighting design would carefully consider a reasonable level of functional and thematic lighting with due consideration of possible light pollution and night-time glare to the surroundings. Consideration shall be made by the lighting designers to the following measures: ▪ Lighting shall be designed with due consideration of mounting height and direction of light fixtures so as not to point directly towards any sensitive receiver. ▪ Lighting shall be arranged with due consideration of reflectance so as to avoid glare effect. ▪ Lighting shall be regularly monitored during operation. ▪ Lights located adjacent or in proximity to neighbours shall be carefully designed to prevent possible light intrusion. ▪ Lighting operation schedule shall specify only lights necessary for security to be left on after business hours. ▪ Paving materials should be selected as necessary to reduce	Project area / During design stage / Throughout operation phase	Design Architect / Contractor appointed by OPC	✓		✓		EIAO-TM

EIA Ref.	EM&A Log Ref.	Environmental Protection Measures	Location / Duration of measures / Timing of completion of measures	Implementation Agent	Implementation Stage[1] Des	Con	Op	Dec	Relevant Legislation & Guidelines
		potential glare from surface reflectance. ▪ Particular attention should be paid to the use of lighting having a high intensity or harsher tone (e.g. metal halide lamps). ▪ Lights shall generally be models having precise cut-off range (such as full cut-off optics where available and practicable) and if necessary be fitted with adjustable anti-glare shields.							

Remarks:
1. Des – Design Stage, Con – Construction Stage, Op – Operation, Dec - Decommissioning