

The Hong Kong Jockey
Club

**2008 Olympic
Equestrian Event**

Monthly Environmental
Monitoring and Audit
Report - December 2006

Final

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Club

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Equestrian Event**

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Monitoring and Audit
Report - December 2006

January 2007

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Job number 24469



INDEPENDENT ENVIRONMENTAL CHECKER CHECK CERTIFICATE

**Independent Environmental Checker for
Main Arena of the 2008 Olympic Equestrian Event
Monthly EM&A Report for December 2006 (Final)**

We confirm having used reasonable skill and care in the preparation of the Monthly EM&A Report and we certify that we can verify the report.

Signed:




A handwritten signature in dark ink, appearing to read 'H. J. Cochrane', written over a horizontal line.

Independent Environmental Checker
H. J. Cochrane
Director and IEC

Date:

A handwritten date '11/1/07' in dark ink, written over a horizontal line.

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Executive Summary

This is the fifth monthly environmental monitoring and audit (EM&A) report presenting the progress of environmental monitoring and audit work for Main Arena of the 2008 Olympic Equestrian Event for the period from 1 to 31 December 2006, including noise monitoring and landscape and visual audit. Noise was measured in terms of $L_{eq(30min)}$ with L_{10} and L_{90} measurements for reference.

A total of 4 sets of daytime (0700 – 1900 hours) noise monitoring was conducted on 7, 14, 21 and 28 December 2006. The highest noise level of 64 dB(A) was recorded at the roof of Racecourse Villa (NM2) on 21 December 2006 while the lowest noise level of 56.4 dB(A) was recorded at the podium outside Block 1 of Ravana Garden (NM3) on 21 December 2006. There was no exceedance of noise A/L Levels recorded during the reporting period.

A total of 2 landscape and visual audit was carried out bi-weekly on 5 and 19 December 2006. The Registered Landscape Architect (RLA) has the following observations:

- More trees have been transplanted and are in fair condition. More frequent watering is recommended in the dry season.

A total of 4 environmental site audits were conducted weekly on 8, 15, 22 and 29 December 2006. The major environmental concerns included the following issues:

Air quality: Regular watering on haul road should be provided.

Noise: No environmental noise issue was raised during the reporting period.

Water quality: Stagnant water should be cleared regularly.

Handling of waste and chemicals: General refuse on site should be cleared regularly.

A total of 0.17 tonnes of Construction and Demolition (C&D) waste and a total of 0.72 tonnes of C&D material (public fill) were disposed of at Landfill and Public Filling Area respectively in December 2006. No chemical waste was disposed of during the reporting period.

No environmental complaint was received during the reporting period.

No new construction noise permit was granted during the reporting period.

No exceedance of noise monitoring action/limit levels was recorded during the reporting period.

There was neither notification of summons nor prosecution received during the reporting period.

1 Introduction

1.1 Project Background

Having considered the advantage of established international equine import and export protocols as well as the supporting facilities already in place, the International Olympic Committee (IOC) has accepted the Beijing Organising Committee for the Games of the 29th Olympiad (BOCOG)'s proposal of staging the 2008 Olympic and Paralympic Equestrian Events in Hong Kong.

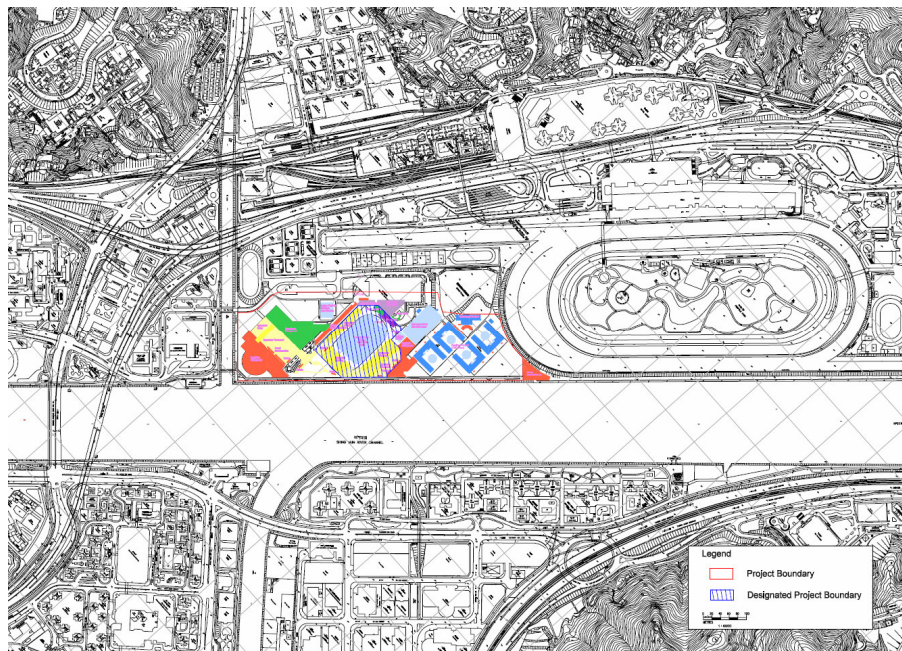
Given the very tight schedule of the project, Hong Kong Sports Institute (HKSI) in Shatin will be temporarily converted into the core competition venues for the Olympic Equestrian Event. Facilities to be provided on the core venues include:

- Main Competition Arena for 20,000 spectators
- Stable Complex
- Training Arenas
- Logistic Compound
- Spectator Entry & Broadcast Compound
- Food & Merchandise

The venues will be in operation for approximately one month during the Olympic event, with the competition expected to last from between 10 to 14 days. 14 days after the Olympic Events, the Paralympic competition will be staged, which will last for a few days.

One year before the 2008 Olympic Event, the site will be occupied for the Test Event, which is used by all divisions of the Olympic Organising Committee to test their organisational capabilities for the Games and Event Management to trail the equine facilities and the footing (riding surface) of the Main Arena, Stables and Training Facilities. These mock up events are known as the 'Test Event Mode', and limited public access will be given.

Figure 1-1: Location plan of the project



The implementation of the Project is scheduled from July 2006 to December 2008. Table 1-1 gives the tentative project timetable and phasing.

Table 1-1: Timetable and phasing for the Project

| Task | Start | Finish |
|------------------------------|-------------------------|---------------|
| Pre- Test Event Construction | July 2006 | June 2007 |
| Test Event | August 2007 (2 weeks) | |
| Post Test Event Construction | September 2007 | June 2008 |
| Olympic Event | August 2008 (2 weeks) | |
| Paralympic Event | September 2008 (1 week) | |
| Reinstatement of HKSI | October 2008 | December 2008 |

The Main Arena of the 2008 Olympic Equestrian Event is classified as a Designated Project (DP) under item O7, Part 1, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) – an outdoor sporting facility with a capacity to accommodate more than 10,000 persons.

In accordance with the requirements of Section 5(1) of the EIAO, a project profile (No. PP-266/2005) was submitted to Environmental Protection Department (EPD) for the application of an EIA Study Brief on 17 October 2005. Pursuant to Section 5(7)(a) of the EIAO, EPD issued to The Hong Kong Jockey Club (HKJC) a study brief (ref: EIA Study Brief No: ESB-136/2005 dated 7 November 2005) to carry out an EIA study.

The EIA Report for the Project (EIA-118/2005) was approved and an Environmental Permit (EP) (EP-236/2006) granted by EPD on 24th and 25th March 2006 respectively.

1.2 Project Organisation

The Project Proponent is the Hong Kong Jockey Club (HKJC); the Engineer's Representative (ER) is Ove Arup & Partners Hong Kong Ltd (Arup); the Contractor is China State Construction Engrg (HK) Ltd; the Independent Environmental Checker (IEC) is Meinhardt Infrastructure and Environment Ltd; the Environmental Team (ET) is Arup.

1.3 Scope of Impact EM&A

The impact environmental monitoring and audit for the Project included noise monitoring, landscape and visual audit, and environmental site audit.

1.4 Purpose of the Report

The purpose of this monthly EM&A report is to provide information on monitoring methodology, monitoring results, environmental permit status, site audit findings, recommendations and conclusions of the EM&A of the project.

This is the fifth monthly EM&A report prepared by Arup for the submission to the HKJC summarising the implementation of the EM&A programme from 1 to 31 December 2006.

2 Scope of Construction Works

2.1 Construction Programme

The construction works commenced on 15 August 2006. An up-to-date construction programme is attached in **Appendix A**.

2.2 Construction Activities of the Month

Major construction activities carried out by the Contractor in December 2006 include:

- Trial pit excavation along Shing Mum River footpath.

- Excavation for manhole construction.
- External drainage works.
- Underground drains at all stables.
- RC wall construction and steel erection in Veterinary and Main stables.
- Structural, non-structural walls and ground floor slab at Vet Stable.
- Wall construction in Retaining Wall 3 and Chiller Plant Room.
- Structural steel fabrication works and erection works in Veterinary, Main Stable 1, transformer room and switch room.
- ABWF work and E&M work at outdoor transformer room.

3 Summary of EM&A Requirements

Noise monitoring shall be conducted by the ET at specified monitoring locations during the construction stage. Landscape and visual audits and environmental site audits shall also be carried out. The monitoring schedule for the month of December 2006 and the tentative schedule for January 2007 are attached in **Appendix B**.

3.1 Construction Noise

3.1.1 Monitoring Parameters

Construction noise is measured in terms of A-weighted equivalent continuous sound pressure level (L_{eq}). L_{10} and L_{90} were also recorded as supplementary reference information for data auditing.

3.1.2 Monitoring Frequency

Noise monitoring was performed on a weekly basis in accordance with the EM&A Manual. The monitoring time periods, parameters and frequency are summarised in Table 3-1.

Table 3-1: Construction noise monitoring parameters and frequency

| Time Period (when construction activity is found) | Parameters | Monitoring Frequency | No. of Measurements for Each Monitoring |
|--|--------------------------|-------------------------|--|
| Between 0700-1900 hours on normal weekdays | $L_{eq}(30\text{ min})$ | Once per week | 1 |
| Between 1900-2300 hours on normal weekdays | $L_{eq}(5\text{ min})^*$ | | 3 (consecutive) |
| Between 2300-0700 hours of next day | | | |
| Between 0700-1900 hours on holidays | | | |

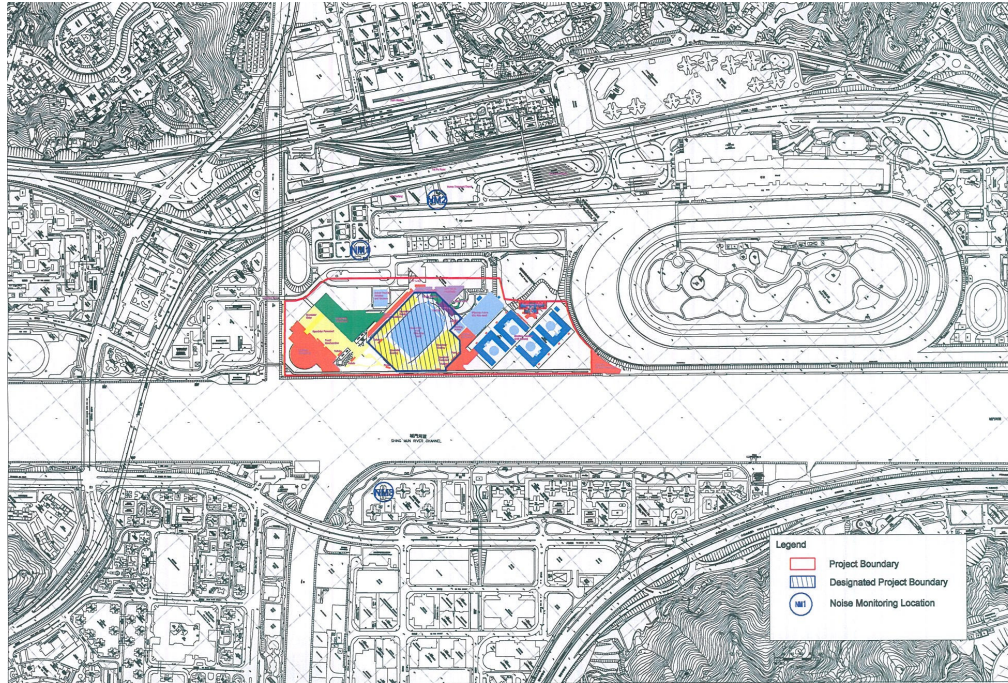
*The $L_{eq}(5 \text{ min})$ will only be measured if construction activities are conducted during holidays and between the period of 1900 and 0700 hours during normal weekdays.

3.1.3 Monitoring Locations

A total of three locations were specified for the noise monitoring as shown in Table 3-2 and Figure 3-1. Measurements were conducted at a position 1.2m above ground and kept away from reflective surface.

Table 3-2: Construction noise monitoring locations

| Monitoring Station ID | Location | Monitoring Point |
|-----------------------|---|---|
| NM1 | Chung Cheung Court, HKJC Staff Quarters | On the roof, 1 meter from façade, facing the main works area |
| NM2 | Racecourse Villa | On the roof, 1 meter from façade, facing the main works area |
| NM3 | Ravana Garden | On the podium outside Block 1, 1 meter from façade, facing the main works area. |

Figure 3-1: Noise Monitoring Location

3.2 Landscape and Visual

3.2.1 Audit Parameters

All landscape and visual mitigation measures implemented by both the Contractor Team (CT) and the Landscape Contractor during the construction phase and the first year of the operational phase shall be audited by a landscape auditor, to ensure compliance with the aims of the mitigation measures.

3.2.2 Audit Frequency

The landscape and visual monitoring and audit shall be undertaken once every two weeks throughout the construction, operation and reinstatement phases.

3.2.3 Audit Location

The landscape and visual monitoring and audit shall be conducted throughout the entire site area.

3.3 Performance Limits and Event-Action Plans

The monitoring results will be checked against appropriate standards and requirements. A two-tier system performance limits have been established in the Project specific EM&A Manual. The "Action Level" and the "Limit Level" (A/L) are established according to the EPD requirements. The ET, ER, IEC, and CT will take corresponding action in accordance with the Event-Action Plans if the monitoring results exceed the performance limits.

3.3.1 Construction Noise

The A/L Levels for construction noise have been established in accordance with TM-EIAO as summarised in Table 3-3.

Table 3-3: Action and Limit Levels for construction noise

| Time Period | Action Level | Limit Level |
|---|---|-------------|
| 0700 – 1900 hours on any day not being a Sunday or public holiday | When one documented complaint is received | 75 dB(A) |

The action required to be taken by different parties in the case of occurrence of exceedance of A/L Levels are summarised in the Event and Action Plan in Table 3-4.

Table 3-4: Event and Action Plan for construction noise exceedance

| Event | Action | | | |
|---------------------|---|--|---|---|
| | ET Leader | IEC | ER | Contractor |
| Action Level | <ol style="list-style-type: none"> 1. Notify IEC, ER and the Contractor within 24 hours of identification of the exceedance. 2. Carry out investigation. 3. Report the results of investigation to IEC, ER and the Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation measures. | <ol style="list-style-type: none"> 1. Review with analysed results submitted by ET. 2. Review the proposed remedial measures by the Contractor and advise ER accordingly. 3. Supervise the implementation of remedial measures. | <ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. | <ol style="list-style-type: none"> 1. Submit noise mitigation proposals to ER and IEC. 2. Implement noise mitigation proposals. |
| Limit Level | <ol style="list-style-type: none"> 1. Identify the source. 2. Notify IEC, ER, EPD and the Contractor within 24 hours of identification of the exceedance. 3. Repeat measurement to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform IEC, ER, and EPD the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 8. If exceedance stops, cease additional monitoring 9. Report the results of investigation to the IEC, EPD and ER. | <ol style="list-style-type: none"> 1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly. 3. Supervise the implementation of remedial measures. | <ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated. | <ol style="list-style-type: none"> 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. Resubmit proposals if problem still not under control. 5. Stop the relevant activity of works as determined by the ER until the exceedance is abated. |

3.4 Site Inspection and Environmental Complaint Handling

3.4.1 Site Inspection Frequency and Areas Covered

Regular site inspections will be carried out on a weekly basis. The areas of inspection cover the different environmental impacts, such as air quality, noise, water quality and waste, and their pollution controls and mitigation measures for both within and outside the site area. Site inspection for landscape and visual impact shall be carried out on a bi-weekly basis.

Ad hoc site inspection will be carried out if significant environmental non-compliance is identified. Inspections may also be carried out subsequent to receipt of any environmental complaints, or as part of the investigation work, as specified in the Event and Action Plans.

3.4.2 Site Inspection Procedures

- (a) The CT and/or ER will advise the Environmental Auditor (EA) of ET for all information on any environmental related aspects.
- (b) The EA will discuss with the CT and/or ER to forecast any potential environmental impact.
- (c) The EA will conduct a site walk with the CT and/or ER, particularly the areas with extensive construction works.
- (d) The EA will conduct inspection for the main environmental facilities and measures such as wheel washing facilities located at site exits, water spraying truck, temporary noise barrier, and internal noise-reducing measures of heavy equipment etc, to ensure that these environmental facilities operate normally and effectively.
- (e) The EA will fill up a site inspection checklist during the site inspection for recording any special observations.
- (f) The EA will conduct post-discussion with the CT and/or ER for the establishment of additional/special measures if any non-conformance is found. The completion date for such additional measures will be confirmed during the post-discussion.
- (g) The EA will propose a reasonable timeframe together with the CT and/or ER, for preparation of the proposal for remediation of environmental non-compliance.
- (h) The completed site inspection checklist will be signed by the EA, the CT and/or ER, for reference and for taking action in accordance with the agreed procedures, reporting systems and time frame.

3.4.3 Environmental Complaints

In accordance with the EM&A Manual, environmental complaints will be referred to the ET for initiation of the complaint investigation procedures. The ET will undertake the following procedures upon receipt of complaints:

- a) The ET will record the details of the complaint and the date of receipt into the complaint database, and inform ER immediately.
- b) The ET will perform complaint investigation to determine its validity and to assess whether the source of the problem is due to work activities.
- c) The ER will instruct the CT to identify mitigation measures in consultation with the ET, if the complaint is valid and due to works.
- d) The ET will liaise with the CT on their mitigation measure proposals and implementation, if required.
- e) The ET will conduct review of the CT's response on the identified mitigation measures, and of the updated situation.
- f) The ET will submit interim report to EPD if the complaint is received via EPD. The interim report will clearly state the status of the complaint investigation and the follow-up action within the time frame assigned by EPD.
- g) The ET will undertake additional monitoring and audit to verify the situation if necessary, and ensure that any valid reason for complaint does not recur.
- h) The ET will report on the investigation results and the subsequent actions to the source of complaint for responding to the complainant. If the source of complaint is via EPD, the results will be reported within the time frame assigned by EPD.

- i) The ET will record the details of the complaint, investigation, subsequent actions and results in the monthly EM&A report.

During the complaint investigation work undertaken by the ET, CT and ER should cooperate with the ET on providing all the necessary information and assistance for completion of the investigation. If mitigation measures are identified as necessary after the investigation, the CT should promptly carry out the required mitigation to the satisfaction of ET. The ER should ensure that the CT has carried out such identified measures.

A flow chart of the complaint response procedures is shown in Figure 3-2 for reference.

3.5 Environmental Mitigation Measures

Environmental mitigation measures as recommended in the EIA report were stipulated in the EM&A Manual for the Contractor to adopt. A list of mitigation measures and their implementation status are given in **Appendix C**.

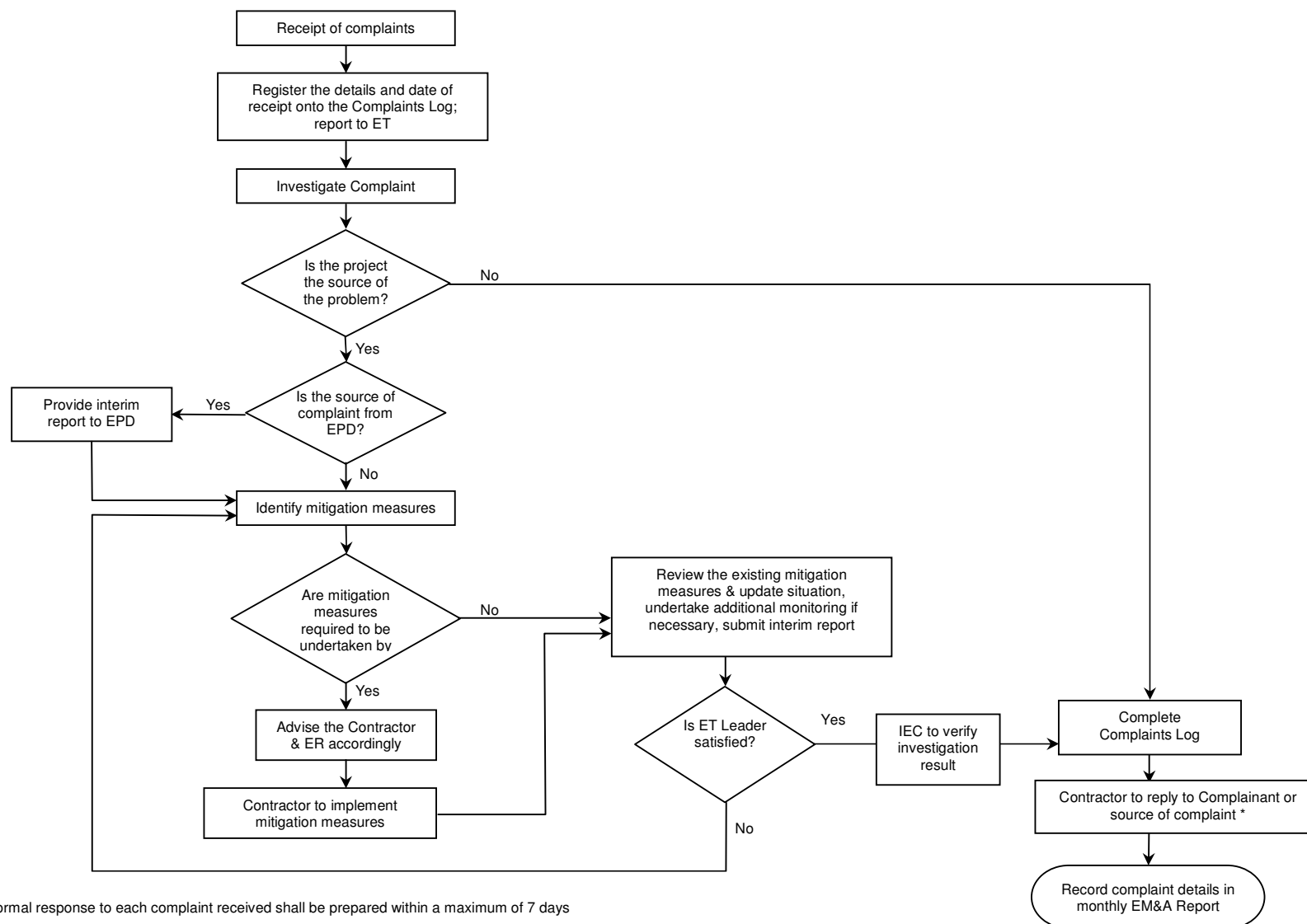


Figure 3-2: Flow chart of complaint response procedures

4 Noise Monitoring

4.1 Monitoring Equipment

Details of the integrating sound level meters used in the noise monitoring are shown in Table 5-1.

Table 5-1: Equipment list for construction noise monitoring

| Equipment | Manufacturer & Model No. | Precision Grade | Qty. |
|-------------------------------|--------------------------|-----------------|------|
| Integrating sound level meter | Brüel & Kjær 2238 | IEC 651 Type 1 | 3 |
| Windshield | Brüel & Kjær UA0237 | IEC 804 Type 1 | 3 |
| Acoustical calibrator | Brüel & Kjær 4230 | IEC 942 Type 1 | 1 |
| LCD wind speed indicator | Kestrel Vane Anemometer | -- | 1 |

4.2 Methodology

4.2.1 Field Measurement

- The sound level meter and battery were checked to ensure that they were in proper condition.
- The sound level meter was set on a tripod at 1.2m above ground and at 1m from the exterior of the building façade.
- Before conducting the measurement, the sound level meter was calibrated by an acoustical calibrator.
- The measurement parameter was set to A-weighted sound pressure level. The time weighting was set in fast response and the time period of measurement at 30 minutes.
- The wind speed was checked during noise monitoring to ensure the steady wind speed did not exceed 5m/s, or wind with gusts did not exceed 10m/s.
- Any abnormal conditions that generated intrusive noise during the measurement were recorded on the field record sheet.
- After each measurement, the equivalent continuous sound pressure level (L_{eq}), L_{10} and L_{90} were recorded on the field record sheet.
- The sound level meter was re-calibrated by the acoustical calibrator to confirm that there was no significant drift of reading.

4.2.2 Equipment Maintenance and Calibration

All sound level meters comply with the standards of IEC 651 (Fast, Slow, Impulse RMS detector tests) and IEC 804 (L_{eq} functions). The calibration certificates of the noise monitoring equipment are attached in **Appendix D**.

4.3 Results and Observations

4.3.1 Weather Conditions and Other Factors

No adverse weather conditions, in particular adverse wind speed & wind direction and fog & rain that may significantly affect or invalidate the collected noise monitoring data, were recorded during the reporting period.

Neither unusual operation of the construction site nor abnormal noise source was observed during the reporting period.

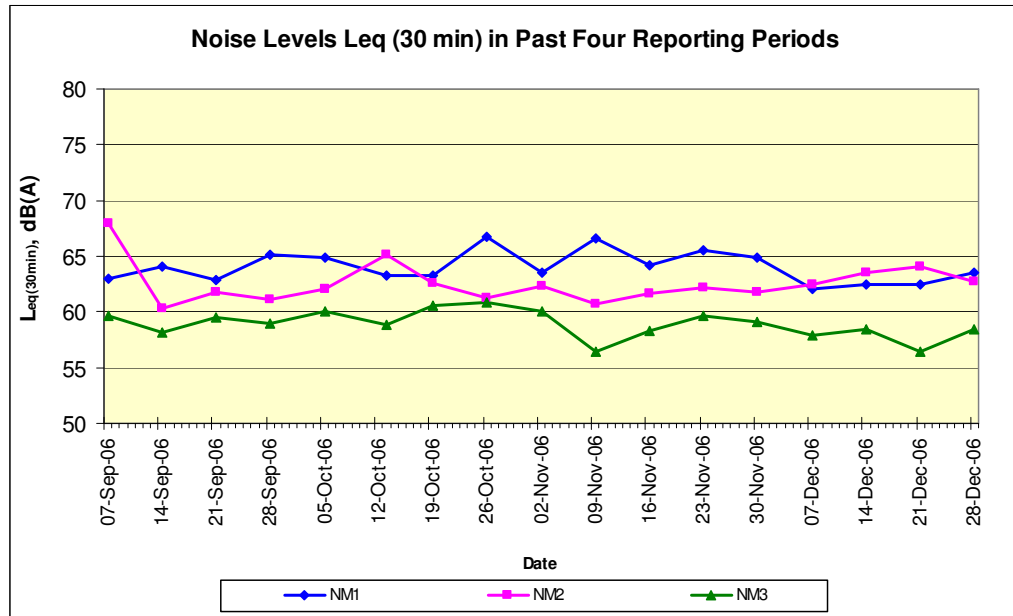
4.3.2 Summary of Results

A total of 4 sets of daytime (0700 – 1900 hours) noise monitoring was conducted on 7, 14, 21 and 28 December 2006.

The highest noise level of 64 dB(A) was recorded at the roof of Racecourse Villa (NM2) on 21 December 2006 while the lowest noise level of 56.4 dB(A) was recorded at the podium outside Block 1 of Ravana Garden (NM3) on 21 December 2006. There was no exceedance of noise A/L Levels recorded during the reporting period.

Detailed construction noise monitoring results are attached in **Appendix E** and graphical presentation of the noise levels at each monitoring location is illustrated in Figure 5-1.

Figure 5-1: Graphical presentation of day-time noise levels



5 Landscape and Visual Monitoring and Audit

5.1 Summary of Inspection

Landscape and visual monitoring and site audits were carried on 5th and 19th December 2006. Site formation works are being carried out and stables are being constructed. More trees have been transplanted and are in fair condition. More frequent watering is recommended in the dry season. The audit findings and recommendations are recorded in a detailed report in **Appendix F**.

6 Site Inspection, Waste Disposal, Environmental Complaints, Environmental Licenses and Non-compliance Records

6.1 Site Audit Findings

Four weekly environmental site audits were carried out in December 2006. The findings of the site audits are summarised in Table 6-1.

Table 6-1: Findings of weekly environmental site audit in December 2006

| Date of Issue Raised | Observation | Advice from EA | CT's Response / Environmental Outcomes | Closing Date |
|----------------------|--|--|--|--------------|
| 8 Dec 2006 | 1. General refuse was accumulated inside rubbish bins. 2. Poor housekeeping was observed. | Contractor was reminded to clear the bins regularly. Contractor was reminded to tidy up the transformer room area. | Agreed with the ET's advice. | 8 Dec 2006 |
| 15 Dec 2006 | 1. General refuse was found outside the rubbish bin. | Contractor was reminded to remove general refuse regularly. | Agreed with the ET's advice. | 15 Dec 2006 |
| 22 Dec 2006 | 1. Oil drum without drip tray was observed at Stable 4. 2. Haul road was found to be dry. 3. Stagnant water was observed near wheel washing bay. | Contractor was reminded to provide drip tray for all oil drums. Contractor was reminded to increase the watering frequency. Contractor was reminded to improve the drainage system. | Agreed with the ET's advice. | 22 Dec 2006 |
| 29 Dec 2006 | 1. Stagnant water was observed inside the drip tray. 2. Poor housekeeping was observed. 3. An oil drum without drip tray was observed. | Contractor was reminded to clear the stagnant water. Contractor was reminded to improve the tidiness of the site, especially inside the stables. Contractor was reminded to provide drip tray for all oil drums. | Agreed with the ET's advice. | 29 Dec 2006 |

6.2 Waste Disposal

Disposal of waste material during the reporting period generally complied with the corresponding waste disposal requirements. The waste disposal quantity during the reporting period is summarised in Table 6-2.

Table 6-2: Waste disposal quantity in December 2006

| Type of waste or material | | Disposal at | No. of loads or quantities |
|---------------------------|----------------|---------------------------------|----------------------------|
| C&D waste | | SENT Landfill | 0.17 tonnes |
| C&D material | | Public Filling Area in TKO 137 | 0.72 tonnes |
| Chemical waste | Spent lube oil | Collected by licensed collector | 0 L |

6.3 Complaint Record

No environmental complaint was received during the reporting month.

A log record on the environmental complaints is given in **Appendix G** and a cumulative statistics on environmental complaints is given in Table 6-3.

Table 6-3 : Cumulative statistics on environmental complaints

| No. of complaints received in the reporting month | No. of outstanding complaints | Cumulative no. of complaints received since the commencement of project |
|---|-------------------------------|---|
| 0 | 0 | 4 |

6.4 Exceedance

There was no exceedance of environmental monitoring data for A/L Levels during the reporting period.

6.5 Notification of Summons and Successful Prosecution

No notification of summon and prosecution was received during the reporting month.

6.6 Environmental Licenses

No new CNP was granted in the reporting period. A summary of the valid environmental licenses is given in Table 6-4.

Table 6-4: Summary of valid environmental licenses

| Type of Licence | Reference No. | Valid from | Valid to | Remarks |
|---------------------------------|------------------------|------------------|--------------|-----------------------------------|
| Environmental Permit | EP-236/2006 | 25 March 2006 | -- | - |
| Construction Noise Permit | GW-RN0433-06 | 4 September 2006 | 3 March 2007 | General Earth Works in HKSI Area. |
| Construction Noise Permit | GW-RN0497-06 | 6 October 2006 | 5 April 2007 | Bar fixing and formworking |
| Registration of Waste Producer | WPN: 5213-753-C3317-11 | 1 Nov 2006 | -- | - |
| Site Effluent Discharge Licence | Licence No: 3448 | 1 Nov 2006 | 30 Nov 2011 | - |

7 Future Key Issue

7.1 Forecast of Works Programme

Based on the 3-month rolling programme as shown in **Appendix A**, key construction activities to be carried out in the coming three months will include:

- ABWF work and E&M work in progress at outdoor transformer room.
- Structural, non-structural walls and ground floor slab at Vet Stable.
- Structural steel installation at transformer room and Switch room.
- ABWF work at transformer room and office below 1st floor plant room.
- Excavation for manhole construction at Shing Mum Walkway.
- Underground drains installation, ground floor slab and internal partition wall at Main Stable no 1 to 4.
- Excavation and Backfilling works.
- Formwork erection and steel fixing of stem wall.

- Concreting to the base slab of water tank, Grid 1-2/A-B ground floor slab and lower walls at Chiller Plant Room.
- Installation of underground plumbing and Fire Services pipe in Main Stables.
- E&M Installation at semi-outdoor transformer room and switch room.
- Wall construction in Retaining Wall 3 and Chiller Plant Room.
- Structural steel fabrication works and erection works in Veterinary and Main Stable 1.

7.2 Key Issues for Coming Month

Based on the construction programme as shown in **Appendix A**, the following key issues are anticipated in the coming month:

- Site drainage management;
- Wastewater/runoff and effluent discharge management;
- Dust generation from land-based activities, such as breaking, excavation and stockpiling of dusty material;
- Noise from construction activities and mobilisation of plant and equipment;
- Tree transplant and protection; and
- General housekeeping and waste management.

8 Comments, Recommendations and Conclusion

8.1 Comments and Recommendations

According to the environmental site inspections performed during the reporting period, the following recommendations were provided:

- Water Quality
 - Stagnant water should be cleared regularly.
- Air Quality
 - Watering at dry haul road should be applied frequently.
- Construction Noise
 - Nil
- Waste / Chemical Management
 - General refuse on site should be cleared regularly.
- Landscape & Visual
 - More frequent watering especially for newly transplanted trees is recommended in the dry season.

8.2 Conclusion

Construction phase impact monitoring and audit were conducted in the reporting month. Monitoring and audit programme included construction noise monitoring, landscape and visual monitoring and audit, and weekly site inspection.

Daytime noise levels were monitored at 3 monitoring locations during the reporting month. No exceedance of Limit Level was recorded.

Weekly site inspections were conducted in the reporting month. Remedial measures were advised for those deficiencies observed for the Contractor to follow up.

No Construction Noise Permit was obtained in the reporting month.

No environmental complaint was received during the reporting period.

There was neither notification of summons nor prosecution received during the reporting period.

9 References

[1] Ove Arup & Partners Hong Kong Ltd. June 2006. Main Arena of the 2008 Olympic Equestrian Event – Environmental Monitoring & Audit Manual

[2] Ove Arup & Partners Hong Kong Ltd. July 2006. Main Arena of the 2008 Olympic Equestrian Event – Environmental Baseline Monitoring Report

Appendix A

**Construction
Programme**

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | 2006 | | 2007 | | | | | | | |
|---|--|---------|-------------|--------------|------|--|------|--|-----|--|-----|--|--|--|
| | | | | | DEC | | JAN | | FEB | | MAR | | | |
| Section KD-1 (Portion HKSI-1 to HKSI-2) | | | | | | | | | | | | | | |
| Portion HKSI-1 | | | | | | | | | | | | | | |
| Chiller Plant Room | | | | | | | | | | | | | | |
| Retaining Wall No. 3 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 50075 | RW3- Wall | 0 | 22-NOV-06A | 06-DEC-06A | | | | | | | | | | |
| 50085 | Drainage and backfill | 6 | 20-DEC-06 | 27-DEC-06 | | | | | | | | | | |
| 50095 | Extract sheet pile | 6 | 28-DEC-06 | 04-JAN-07 | | | | | | | | | | |
| Foundation and Superstructure Works | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 50125 | RC Walls and Water Tanks | 0 | 22-NOV-06A | 19-DEC-06A | | | | | | | | | | |
| 50135 | Roof deck | 12 | 20-DEC-06 | 04-JAN-07 | | | | | | | | | | |
| 50140 | Structural steel works | 12 | 20-DEC-06 | 04-JAN-07 | | | | | | | | | | |
| Finishes | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 50145 | Chiller Plant - internal finishes | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | |
| 50155 | Chiller Plant- doors and windows | 12 | 19-JAN-07 | 01-FEB-07 | | | | | | | | | | |
| M&E Services | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 50128 | Chiller Plant -M&E Access | 0 | 26-JAN-07* | | | | | | | | | | | |
| 50130 | Chiller Plant - M&E Installation | 48 | 26-JAN-07 | 29-MAR-07 | | | | | | | | | | |
| Veterinary Stables | | | | | | | | | | | | | | |
| Foundation and Superstructure Works | | | | | | | | | | | | | | |
| AREA 1: Grid A-H/1-5 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| VS-205 | Backfill/subbase, Grid E-H | 0 | 18-NOV-06A | 22-NOV-06A | | | | | | | | | | |
| VS-210 | Grade slab, + 6.7, Grid E-H | 0 | 23-NOV-06A | 24-NOV-06A | | | | | | | | | | |
| VS-212 | RC Partitions | 0 | 23-NOV-06A | 06-DEC-06A | | | | | | | | | | |
| VS-215A | Wall (G/F, +6.7 to +9.5) | 0 | 20-OCT-06A | 24-NOV-06A | | | | | | | | | | |
| VS-220 | Steel Truss + lower roof +12.674 | 6 | 09-DEC-06A | 27-DEC-06 | | | | | | | | | | |
| VS-225 | Steel Upper Roof + 13.39 | 6 | 28-DEC-06 | 04-JAN-07 | | | | | | | | | | |
| VS-230 | Steel sheet roofing/cladding, +12.6->+13.3 | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | |
| VS-235 | Ceiling installation | 12 | 12-JAN-07 | 25-JAN-07 | | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | |
|---------------------------------|---|---------|-------------|--------------|---|--|-------------|--|--|--|-------------|--|--|--|-------------|--|
| | | | | | 2006 DEC | | 2007 JAN | | | | 2007 FEB | | | | 2007 MAR | |
| AREA 1: Grid A-H/1-5 | | | | | | | | | | | | | | | | |
| VS-240 | Handover (Tx Rm, LVSR Rm) to ABWF | 0 | | 11-JAN-07 | ● Handover (Tx Rm, LVSR Rm) to ABWF | | | | | | | | | | | |
| VS-245 | Cast Remaining Wall Opening(after eqpt delivery) | 6 | 02-FEB-07 | 08-FEB-07 | Cast Remaining Wall Opening(after eqpt delivery) | | | | | | | | | | | |
| AREA-2: H-L/1-10 & 1/F Plant Rm | | | | | | | | | | | | | | | | |
| VS-280 | Backfill/Subase/Grade slab, + 6.695 | 0 | 28-NOV-06A | 06-DEC-06A | | | | | | | | | | | | |
| VS-285 | Steel Cols+6.696 to +11.7 (canopy area) | 6 | 02-DEC-06A | 27-DEC-06 | Steel Cols+6.696 to +11.7 (canopy area) | | | | | | | | | | | |
| VS-290 | Steel beams + 11.7 (canopy area) | 6 | 28-DEC-06 | 04-JAN-07 | Steel beams + 11.7 (canopy area) | | | | | | | | | | | |
| VS-295 | Steel sheet roofing/cladding, +11.7 (canopy area) | 6 | 05-JAN-07 | 11-JAN-07 | Steel sheet roofing/cladding, +11.7 (canopy area) | | | | | | | | | | | |
| VS-300 | Ceiling installation G/F | 12 | 12-JAN-07 | 25-JAN-07 | Ceiling installation G/F | | | | | | | | | | | |
| VS-305 | Handover to ABWF | 0 | | 11-JAN-07 | ● Handover to ABWF | | | | | | | | | | | |
| VS-320 | Wall 1/F to +13.9 | 0 | 16-NOV-06A | 06-DEC-06A | | | | | | | | | | | | |
| VS-325 | Steel cols, braces, beams to Roof +17.48, 1/F | 6 | 20-DEC-06* | 27-DEC-06 | Steel cols, braces, beams to Roof +17.48, 1/F | | | | | | | | | | | |
| VS-330 | Steel sheet roofing/cladding, +17.4, 1/F | 12 | 28-DEC-06 | 11-JAN-07 | Steel sheet roofing/cladding, +17.4, 1/F | | | | | | | | | | | |
| VS-335 | Ceiling installation 1/F | 12 | 12-JAN-07 | 25-JAN-07 | Ceiling installation 1/F | | | | | | | | | | | |
| VS-340 | Handover 1F Plant Rm to ABWF | 0 | | 11-JAN-07 | ● Handover 1F Plant Rm to ABWF | | | | | | | | | | | |
| VS-345 | Cast Remaining Wall Opening (after AHU delivery) | 6 | 30-JAN-07 | 05-FEB-07 | Cast Remaining Wall Opening (after AHU delivery) | | | | | | | | | | | |
| AREA 3: Grid L-U/1-5 | | | | | | | | | | | | | | | | |
| VS-390 | Backfill/Subase/Grade slab, + 6.695 | 0 | 17-NOV-06A | 09-DEC-06A | | | | | | | | | | | | |
| VS-392 | RC Partitions | 0 | 22-NOV-06A | 01-DEC-06A | | | | | | | | | | | | |
| VS-400 | Steel Truss + lower roof +12.674 | 6 | 20-DEC-06* | 27-DEC-06 | Steel Truss + lower roof +12.674 | | | | | | | | | | | |
| VS-405 | Steel Upper Roof + 13.39 | 6 | 28-DEC-06 | 04-JAN-07 | Steel Upper Roof + 13.39 | | | | | | | | | | | |
| VS-410 | Steel sheet roofing/cladding, +12.6->+13.3 | 12 | 05-JAN-07 | 18-JAN-07 | Steel sheet roofing/cladding, +12.6->+13.3 | | | | | | | | | | | |
| VS-415 | Ceiling installation | 12 | 19-JAN-07 | 01-FEB-07 | Ceiling installation | | | | | | | | | | | |
| VS-420 | Handover to ABWF | 0 | | 18-JAN-07 | ● Handover to ABWF | | | | | | | | | | | |
| Entrance Gate/Building | | | | | | | | | | | | | | | | |
| VS-425 | Excavation/substructure works | 12 | 20-DEC-06* | 04-JAN-07 | Excavation/substructure works | | | | | | | | | | | |
| VS-430 | Ground slab + RC Wall | 12 | 05-JAN-07 | 18-JAN-07 | Ground slab + RC Wall | | | | | | | | | | | |
| VS-435 | Structural steel works | 12 | 19-JAN-07* | 01-FEB-07 | Structural steel works | | | | | | | | | | | |
| VS-440 | Steel sheet roofing/cladding | 6 | 02-FEB-07 | 08-FEB-07 | Steel sheet roofing/cladding | | | | | | | | | | | |
| VS-445 | Ceiling installation | 6 | 09-FEB-07 | 22-FEB-07 | Ceiling installation | | | | | | | | | | | |
| VS-450 | Handover to ABWF | 0 | | 22-FEB-07 | ● Handover to ABWF | | | | | | | | | | | |

File Name:WP22
Start Date:20-DEC-06
Finish Date:17-JUL-07
Filter Name:FL-71 Three Months Rolling I
Lavout Name:Three Months Rolling Progi
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- Current Bar
- Progress Bar
- Critical Activity

China State Const. Eng. (H.K.) Ltd. Sheet 2 of 20
Core Venue Main Construction Contract
(Package CV-2B & CV-2C)- HKSI AREA
FL-71 Three Months Rolling Programme
20 Dec 2006 to 20 Mar 2007

| Prepared by William C | | | | |
|-----------------------|---------------------------------|-------------|----------|--|
| Date | Revision | Checked | Approved | |
| 20-DEC-06 | Extracted from Master Programme | T Lo/T Wong | D Lau | |
| | Version A, | | | |
| | Activities for coming 3 months | | | |
| | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| ABWF & M&E Works in Tx Room | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | 2006 | | 2007 | |
|-------------------------------------|---|---------|-------------|--------------|------|-----|------|-----|
| | | | | | DEC | JAN | FEB | MAR |
| AREA 3: Grid A-E/5-12 | | | | | | | | |
| MB1-420 | Steel sheet roofing/cladding | 9 | 10-JAN-07 | 19-JAN-07 | | | | |
| MB1-425 | Ceiling installation | 9 | 20-JAN-07 | 30-JAN-07 | | | | |
| MB1-430 | Handover to ABWF, Grid A-E/5-12 | 0 | | 19-JAN-07 | | | | |
| Finishes | | | | | | | | |
| ABWF Works | | | | | | | | |
| MB1-010 | Glass/ Aluminum Louvres / Roller Shutters | 21 | 02-FEB-07 | 05-MAR-07 | | | | |
| MB1-015 | Horse Stalls (supply by NSC) | 21 | 02-FEB-07 | 05-MAR-07 | | | | |
| MB1-020 | Wall Partitions, Boxes and Cabinets | 14 | 10-FEB-07 | 05-MAR-07 | | | | |
| MB1-025 | Wall Finishes & Claddings | 30 | 02-FEB-07 | 15-MAR-07 | | | | |
| M&E Services | | | | | | | | |
| M&E Access Dates | | | | | | | | |
| MB1-435 | M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl | 0 | 02-FEB-07 | | | | | |
| MB1-440 | M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl | 0 | 02-FEB-07 | | | | | |
| MB1-445 | M&E Access: Plant Rooms, 1/F Level | 0 | 23-FEB-07 | | | | | |
| MB1-450 | M&E Access: Center, Grid A-E Grd Lvl | 0 | 03-FEB-07 | | | | | |
| M&E Installation | | | | | | | | |
| MB1-095 | 2nd Fix Plumbing and Drainage Installation | 61 | 02-FEB-07 | 21-APR-07 | | | | |
| MB1-100 | 2nd Fix Fire Services Installation | 61 | 02-FEB-07 | 21-APR-07 | | | | |
| MB1-105 | 2nd Fix HVAC Installation | 61 | 02-FEB-07 | 21-APR-07 | | | | |
| MB1-110 | 2nd Fix Electrical Installation | 61 | 02-FEB-07 | 21-APR-07 | | | | |
| MB1-115 | Buidling Management System | 61 | 02-FEB-07 | 21-APR-07 | | | | |
| Main Stable Block No. 2 | | | | | | | | |
| Foundation and Superstructure Works | | | | | | | | |
| AREA 1: Grid F-R / 13-16 | | | | | | | | |
| MB2-165 | Backfill/Subase/Grade slab, + 6.695 | 0 | 18-NOV-06A | 05-DEC-06A | | | | |
| MB2-175 | Steel Truss + lower roof +12.674 | 6 | 26-DEC-06* | 02-JAN-07 | | | | |
| MB2-180 | Steel Upper Roof + 13.39 | 6 | 03-JAN-07 | 09-JAN-07 | | | | |
| MB2-185 | Steel sheet roofing/cladding, +13.39 | 12 | 10-JAN-07 | 23-JAN-07 | | | | |
| MB2-190 | Ceiling installation G/F | 12 | 24-JAN-07 | 06-FEB-07 | | | | |
| MB2-195 | Handover to ABWF, Grid A-R/13-16 | 0 | | 23-JAN-07 | | | | |
| MB2-200 | Wall (G/F to 1/F, 11.125) | 0 | 28-OCT-06A | 25-NOV-06A | | | | |
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| Activity ID | | Activity Description | | Rem Dur | Early Start | Early Finish | 2006 DEC | | 2007 JAN | | 2007 FEB | | 2007 MAR | |
|-------------------------------------|--|----------------------|----|------------|-------------|--------------|----------|--|----------|--|----------|--|----------|--|
| AREA 3: Grid A-E/5-12 | | | | | | | | | | | | | | |
| MB2-420 | Steel sheet roofing/cladding | | 9 | 24-JAN-07 | 02-FEB-07 | | | | | | | | | |
| MB2-425 | Ceiling installation | | 9 | 03-FEB-07 | 20-FEB-07 | | | | | | | | | |
| MB2-430 | Handover to ABWF, Grid A-E/5-12 | | 0 | | 02-FEB-07 | | | | | | | | | |
| Finishes | | | | | | | | | | | | | | |
| ABWF Works | | | | | | | | | | | | | | |
| MB2-010 | Glass/ Aluminum Louvres / Roller Shutters | | 21 | 03-FEB-07 | 06-MAR-07 | | | | | | | | | |
| MB2-015 | Horse Stalls (supply by NSC) | | 21 | 03-FEB-07 | 06-MAR-07 | | | | | | | | | |
| MB2-020 | Wall Partitions, Boxes and Cabinets | | 14 | 19-FEB-07 | 06-MAR-07 | | | | | | | | | |
| MB2-025 | Wall Finishes & Claddings | | 30 | 24-JAN-07 | 06-MAR-07 | | | | | | | | | |
| MB2-030 | Water Points | | 7 | 27-FEB-07 | 06-MAR-07 | | | | | | | | | |
| M&E Services | | | | | | | | | | | | | | |
| M&E Access Dates | | | | | | | | | | | | | | |
| MB2-435 | M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl | | 0 | 07-FEB-07 | | | | | | | | | | |
| MB2-440 | M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl | | 0 | 07-FEB-07 | | | | | | | | | | |
| MB2-445 | M&E Access: Plant Rooms, 1/F Level | | 0 | 29-JAN-07 | | | | | | | | | | |
| MB2-450 | M&E Access: Center, Grid A-E Grd Lvl | | 0 | 24-FEB-07 | | | | | | | | | | |
| M&E Installation | | | | | | | | | | | | | | |
| MB2-095 | 2nd Fix Plumbing and Drainage Installation | | 61 | 07-FEB-07 | 26-APR-07 | | | | | | | | | |
| MB2-100 | 2nd Fix Fire Services Installation | | 61 | 07-FEB-07 | 26-APR-07 | | | | | | | | | |
| MB2-105 | 2nd Fix HVAC Installation | | 61 | 07-FEB-07 | 26-APR-07 | | | | | | | | | |
| MB2-110 | 2nd Fix Electrical Installation | | 61 | 07-FEB-07 | 26-APR-07 | | | | | | | | | |
| MB2-115 | Buidling Management System | | 61 | 07-FEB-07 | 26-APR-07 | | | | | | | | | |
| External Works | | | | | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | |
| MB2-060 | Sand footings to courtyard & sand roll (by NSC) | | 18 | 21-FEB-07 | 13-MAR-07 | | | | | | | | | |
| MB2-080 | External subsoil, stormwater drains and u-channe | | 18 | 24-JAN-07* | 20-FEB-07 | | | | | | | | | |
| Main Stable Block No. 3 | | | | | | | | | | | | | | |
| Foundation and Superstructure Works | | | | | | | | | | | | | | |
| AREA 1: Grid F-R / 13-16 | | | | | | | | | | | | | | |
| MB3-155 | Install underground foul drains/FS pipe/plumbing | | 0 | 14-NOV-06A | 21-NOV-06A | | | | | | | | | |
| MB3-160 | WWO Inspection of FS/plumbing pipes | | 0 | 21-NOV-06A | 21-NOV-06A | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | |
|-----------------------|--|---------|-------------|--------------|--|--|------|--|--|--|------|--|--|--|-----|--|
| | | | | | 2006 | | 2007 | | | | | | | | | |
| | | | | | DEC | | JAN | | | | FEB | | | | MAR | |
| AREA 2: Grid F-R/1-4 | | | | | | | | | | | | | | | | |
| MB3-350 | Cast Remaining Wall Opening (after AHU delivery) | 6 | 01-MAR-07 | 07-MAR-07 | Cast Remaining Wall Opening (after AHU delivery) | | | | | | | | | | | |
| AREA 3: Grid A-E/5-12 | | | | | | | | | | | | | | | | |
| MB3-385 | RC works to wash bay/sand roll | 8 | 28-DEC-06 | 06-JAN-07 | RC works to wash bay/sand roll | | | | | | | | | | | |
| MB3-390 | Install underground foul drains/FS pipe/plumbing | 0 | 01-DEC-06A | 18-DEC-06A | Install underground foul drains/FS pipe/plumbing | | | | | | | | | | | |
| MB3-395 | WVO Inspection of FS/plumbing pipes | 0 | 18-DEC-06A | 18-DEC-06A | WVO Inspection of FS/plumbing pipes | | | | | | | | | | | |
| MB3-400 | Steel columns, +6.695 to+10.2 | 4 | 10-JAN-07* | 13-JAN-07 | Steel columns, +6.695 to+10.2 | | | | | | | | | | | |
| MB3-405 | Backfill/Subase/Grade slab, + 6.695 | 6 | 20-DEC-06 | 27-DEC-06 | Backfill/Subase/Grade slab, + 6.695 | | | | | | | | | | | |
| MB3-410 | Steel Truss + lower roof +12.674 | 4 | 15-JAN-07 | 18-JAN-07 | Steel Truss + lower roof +12.674 | | | | | | | | | | | |
| MB3-415 | Steel Upper Roof + 13.39 | 4 | 19-JAN-07 | 23-JAN-07 | Steel Upper Roof + 13.39 | | | | | | | | | | | |
| MB3-417 | Block wall partitions | 22 | 28-DEC-06 | 23-JAN-07 | Block wall partitions | | | | | | | | | | | |
| MB3-420 | Steel sheet roofing/cladding | 9 | 24-JAN-07 | 02-FEB-07 | Steel sheet roofing/cladding | | | | | | | | | | | |
| MB3-425 | Ceiling installation | 9 | 03-FEB-07 | 20-FEB-07 | Ceiling installation | | | | | | | | | | | |
| MB3-430 | Handover to ABWF, Grid A-E/5-12 | 0 | | 02-FEB-07 | Handover to ABWF, Grid A-E/5-12 | | | | | | | | | | | |
| Finishes | | | | | | | | | | | | | | | | |
| ABWF Works | | | | | | | | | | | | | | | | |
| MB3-010 | Glass/ Aluminum Louvres / Roller Shutters | 21 | 27-JAN-07 | 27-FEB-07 | Glass/ Aluminum Louvres / Roller Shutters | | | | | | | | | | | |
| MB3-015 | Horse Stalls (supply by NSC) | 21 | 27-JAN-07 | 27-FEB-07 | Horse Stalls (supply by NSC) | | | | | | | | | | | |
| MB3-020 | Wall Partitions, Boxes and Cabinets | 14 | 05-FEB-07 | 27-FEB-07 | Wall Partitions, Boxes and Cabinets | | | | | | | | | | | |
| MB3-025 | Wall Finishes & Claddings | 30 | 24-JAN-07 | 06-MAR-07 | Wall Finishes & Claddings | | | | | | | | | | | |
| MB3-030 | Water Points | 7 | 27-FEB-07 | 06-MAR-07 | Water Points | | | | | | | | | | | |
| M&E Services | | | | | | | | | | | | | | | | |
| M&E Access Dates | | | | | | | | | | | | | | | | |
| MB3-435 | M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl | 0 | 01-FEB-07 | | M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl | | | | | | | | | | | |
| MB3-440 | M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl | 0 | 01-FEB-07 | | M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl | | | | | | | | | | | |
| MB3-445 | M&E Access: Plant Rooms, 1/F Level | 0 | 26-FEB-07 | | M&E Access: Plant Rooms, 1/F Level | | | | | | | | | | | |
| MB3-450 | M&E Access: Center, Grid A-E Grd Lvl | 0 | 22-FEB-07 | | M&E Access: Center, Grid A-E Grd Lvl | | | | | | | | | | | |
| M&E Installation | | | | | | | | | | | | | | | | |
| MB3-095 | 2nd Fix Plumbing and Drainage Installation | 54 | 01-FEB-07 | 12-APR-07 | 2nd Fix Plumbing and Drainage Installation | | | | | | | | | | | |
| MB3-100 | 2nd Fix Fire Services Installation | 54 | 01-FEB-07 | 12-APR-07 | 2nd Fix Fire Services Installation | | | | | | | | | | | |
| MB3-105 | 2nd Fix HVAC Installation | 54 | 01-FEB-07 | 12-APR-07 | 2nd Fix HVAC Installation | | | | | | | | | | | |
| MB3-110 | 2nd Fix Electrical Installation | 54 | 01-FEB-07 | 12-APR-07 | 2nd Fix Electrical Installation | | | | | | | | | | | |
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| | | | | | DEC | | JAN | | | | FEB | | | | MAR | |
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File Name:WP22
Start Date:20-DEC-06
Finish Date:17-JUL-07
Filter Name:FL-71 Three Months Rolling I
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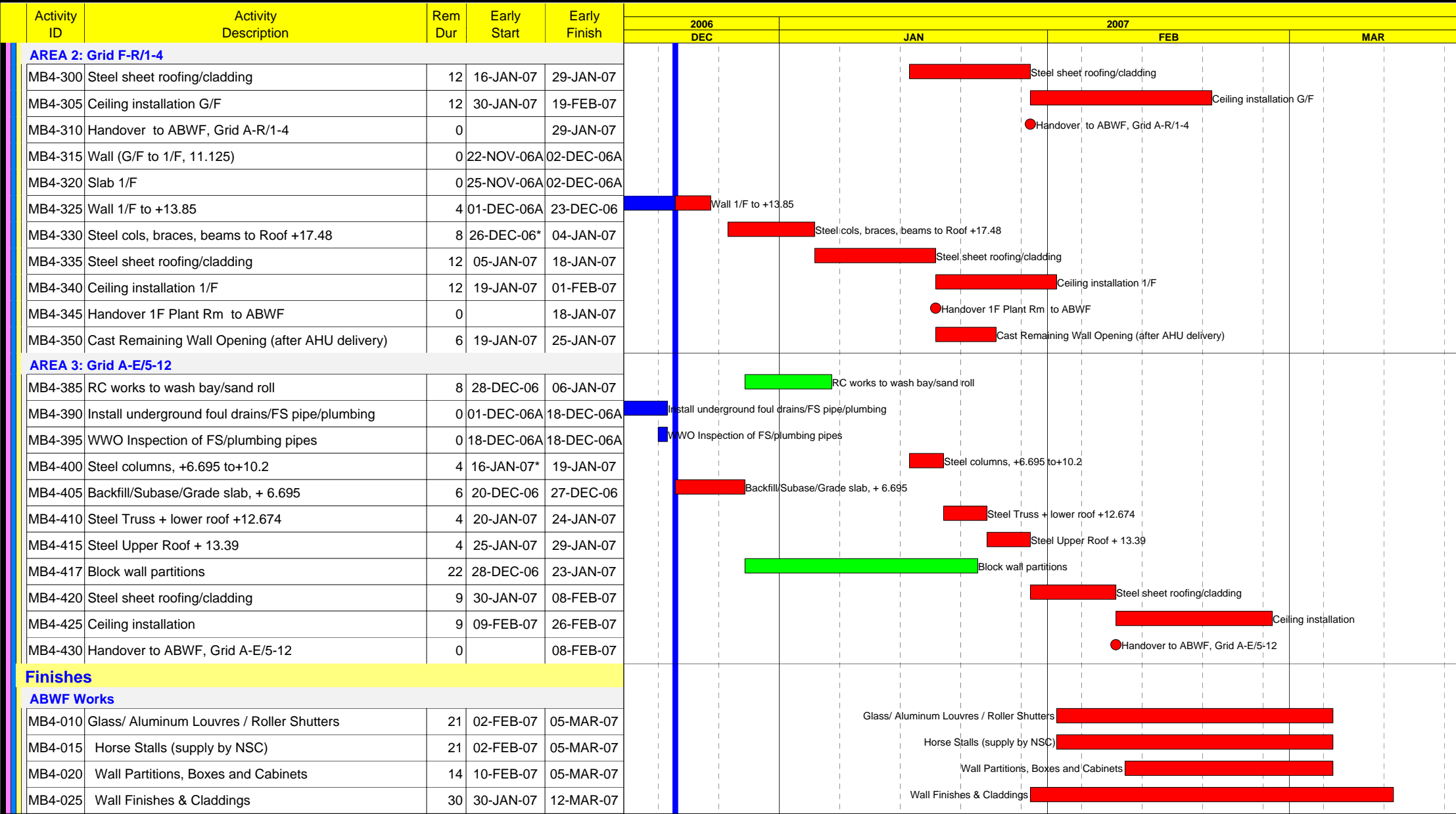
Current Bar

Progress Bar

Critical Activity

| Prepared by William C | | | | |
|-----------------------|---------------------------------|--|-------------|----------|
| Date | Revision | | Checked | Approved |
| 20-DEC-06 | Extracted from Master Programme | | T Lo/T Wong | D Lau |
| | Version A, | | | |
| | Activities for coming 3 months | | | |
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| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | 2006 DEC | | JAN | | 2007 FEB | | | MAR | | |
|-------------------------------------|--|---------|-------------|--------------|-------------|-----|-----|--|-------------|--|--|-----|--|--|
| M&E Installation | | | | | | | | | | | | | | |
| MB3-115 | Buidling Management System | 54 | 01-FEB-07 | 12-APR-07 | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | |
| MB3-060 | Sand footings to courtyard & sand roll (by NSC) | 18 | 21-FEB-07 | 13-MAR-07 | | | | | | | | | | |
| MB3-075 | Stable gate/fence and Lunge Ring fence (by NSC) | 18 | 21-FEB-07 | 13-MAR-07 | | | | | | | | | | |
| MB3-080 | External subsoil, stormwater drains and u-channe | 18 | 24-JAN-07* | 20-FEB-07 | | | | | | | | | | |
| Main Stable Block No. 4 | | | | | | | | | | | | | | |
| Foundation and Superstructure Works | | | | | | | | | | | | | | |
| AREA 1: Grid F-R / 13-16 | | | | | | | | | | | | | | |
| MB4-155 | Install underground foul drains/FS pipe/plumbing | 0 | 18-NOV-06A | 21-NOV-06A | | | | | | | | | | |
| MB4-160 | WWO Inspection of FS/plumbing pipes | 0 | 21-NOV-06A | 21-NOV-06A | | | | | | | | | | |
| MB4-165 | Backfill/Subase/Grade slab, + 6.695 | 4 | 25-NOV-06A | 23-DEC-06 | | | | | | | | | | |
| MB4-175 | Steel Truss + lower roof +12.674 | 6 | 02-JAN-07* | 08-JAN-07 | | | | | | | | | | |
| MB4-180 | Steel Upper Roof + 13.39 | 6 | 09-JAN-07 | 15-JAN-07 | | | | | | | | | | |
| MB4-185 | Steel sheet roofing/cladding | 12 | 16-JAN-07 | 29-JAN-07 | | | | | | | | | | |
| MB4-190 | Ceiling installation G/F | 12 | 30-JAN-07 | 19-FEB-07 | | | | | | | | | | |
| MB4-195 | Handover to ABWF, Grid A-R/13-16 | 0 | | 29-JAN-07 | | | | | | | | | | |
| MB4-200 | Wall (G/F to 1/F, 11.125) | 0 | 22-NOV-06A | 01-DEC-06A | | | | | | | | | | |
| MB4-205 | Slab 1/F | 0 | 25-NOV-06A | 01-DEC-06A | | | | | | | | | | |
| MB4-210 | Wall 1/F to +13.85 | 4 | 02-DEC-06A | 23-DEC-06 | | | | | | | | | | |
| MB4-215 | Steel cols, braces, beams to Roof +17.48 | 8 | 26-DEC-06* | 04-JAN-07 | | | | | | | | | | |
| MB4-220 | Steel sheet roofing/cladding | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | |
| MB4-225 | Ceiling installation 1/F | 12 | 19-JAN-07 | 01-FEB-07 | | | | | | | | | | |
| MB4-230 | Handover 1F Plant Rm to ABWF | 0 | | 18-JAN-07 | | | | | | | | | | |
| MB4-235 | Cast Remaining Wall Opening (after AHU delivery) | 6 | 19-JAN-07 | 25-JAN-07 | | | | | | | | | | |
| AREA 2: Grid F-R/1-4 | | | | | | | | | | | | | | |
| MB4-270 | Install underground foul drains/FS pipe/plumbing | 0 | 18-NOV-06A | 21-NOV-06A | | | | | | | | | | |
| MB4-275 | WWO Inspection of FS/plumbing pipes | 0 | 21-NOV-06A | 21-NOV-06A | | | | | | | | | | |
| MB4-280 | Backfill/Subase/Grade slab, + 6.695 | 4 | 25-NOV-06A | 23-DEC-06 | | | | | | | | | | |
| MB4-290 | Steel Truss + lower roof +12.674 | 6 | 02-JAN-07* | 08-JAN-07 | | | | | | | | | | |
| MB4-295 | Steel Upper Roof + 13.39 | 6 | 09-JAN-07 | 15-JAN-07 | | | | | | | | | | |
| | | | | | DEC | JAN | | | FEB | | | MAR | | |
| | | | | | 2006 | | | | 2007 | | | | | |



File Name:WP22
Start Date:20-DEC-06
Finish Date:17-JUL-07
Filter Name:FL-71 Three Months Rolling I
Lavout Name:Three Months Rolling Progi
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- Current Bar
- Progress Bar
- Critical Activity

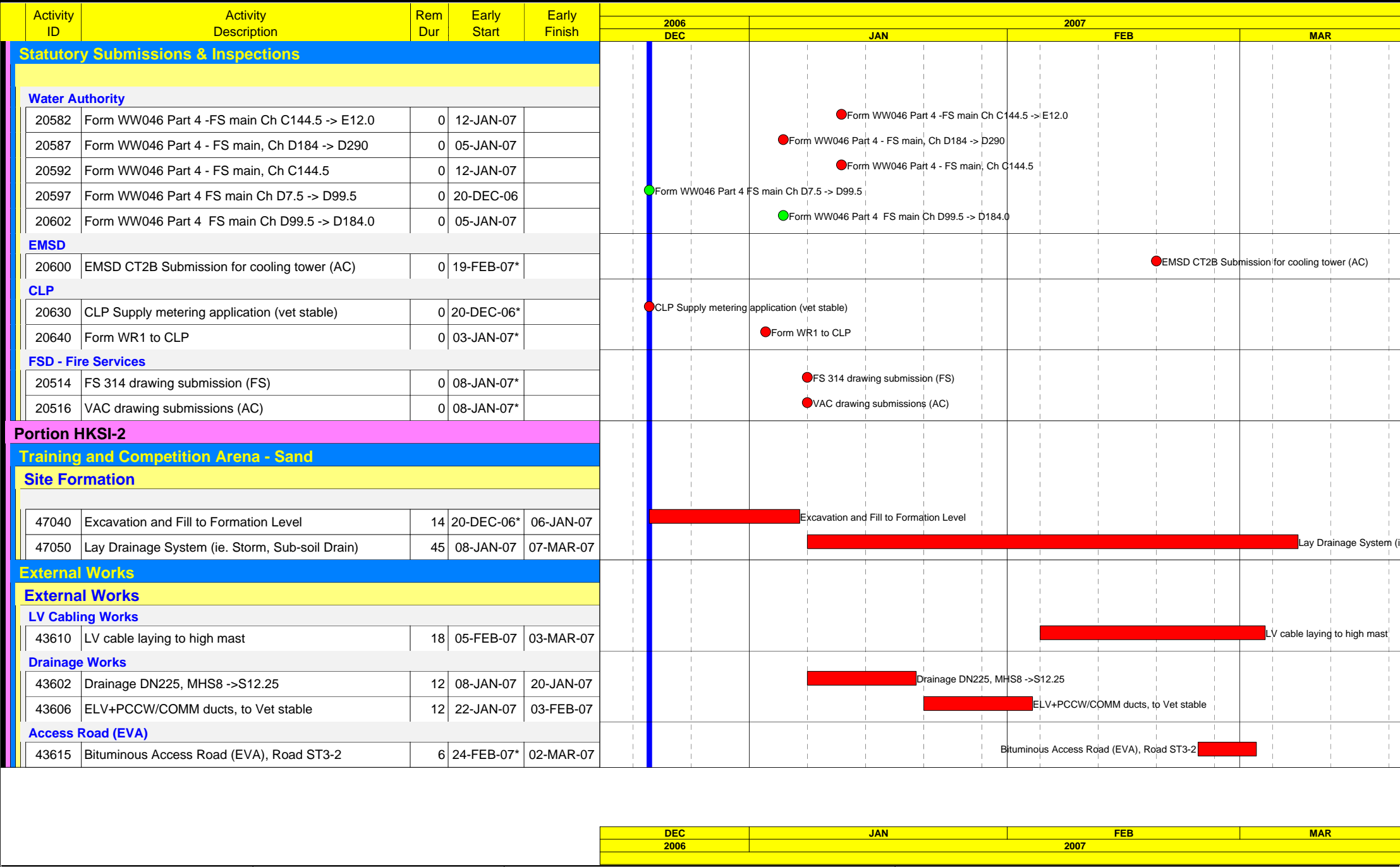
China State Const. Eng. (H.K.) Ltd.
Core Venue Main Construction Contract
(Package CV-2B & CV-2C)- HKSI AREA
FL-71 Three Months Rolling Programme
20 Dec 2006 to 20 Mar 2007

| | | | | | | | |
|----------------|---------------------------------|--|--|-----------------------|----------|--|--|
| Sheet 12 of 20 | | | | Prepared by William C | | | |
| Date | Revision | | | Checked | Approved | | |
| 20-DEC-06 | Extracted from Master Programme | | | T Lo/T Wong | D Lau | | |
| | Version A, | | | | | | |
| | Activities for coming 3 months | | | | | | |
| | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | | | | | |
|--|--|---------|-------------|--------------|---|--|--|--|------|--|--|--|-----|--|--|--|-----|--|--|--|
| | | | | | 2006 | | | | 2007 | | | | | | | | | | | |
| | | | | | DEC | | | | JAN | | | | FEB | | | | MAR | | | |
| M&E Services | | | | | | | | | | | | | | | | | | | | |
| M&E Access Dates | | | | | | | | | | | | | | | | | | | | |
| MB4-435 | M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl | 0 | 07-FEB-07 | | <div><div></div><div>M&E Access: Wing 1, Grid A-R/13-16, Grd Lvl</div></div> | | | | | | | | | | | | | | | |
| MB4-440 | M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl | 0 | 07-FEB-07 | | <div><div></div><div>M&E Access: Wing 2, Grid A-R/1-4, Grd Lvl</div></div> | | | | | | | | | | | | | | | |
| MB4-445 | M&E Access: Plant Rooms, 1/F Level | 0 | 31-JAN-07 | | <div><div></div><div>M&E Access: Plant Rooms, 1/F Level</div></div> | | | | | | | | | | | | | | | |
| MB4-450 | M&E Access: Center, Grid A-E Grd Lvl | 0 | 28-FEB-07 | | <div><div></div><div>M&E Access: Center, Grid A-E Grd Lvl</div></div> | | | | | | | | | | | | | | | |
| M&E Installation | | | | | | | | | | | | | | | | | | | | |
| MB4-095 | 2nd Fix Plumbing and Drainage Installation | 54 | 07-FEB-07 | 18-APR-07 | <div><div></div><div>2nd Fix Plumbing and Drainage Installation</div></div> | | | | | | | | | | | | | | | |
| MB4-100 | 2nd Fix Fire Services Installation | 54 | 07-FEB-07 | 18-APR-07 | <div><div></div><div>2nd Fix Fire Services Installation</div></div> | | | | | | | | | | | | | | | |
| MB4-105 | 2nd Fix HVAC Installation | 54 | 07-FEB-07 | 18-APR-07 | <div><div></div><div>2nd Fix HVAC Installation</div></div> | | | | | | | | | | | | | | | |
| MB4-110 | 2nd Fix Electrical Installation | 54 | 07-FEB-07 | 18-APR-07 | <div><div></div><div>2nd Fix Electrical Installation</div></div> | | | | | | | | | | | | | | | |
| MB4-115 | Buidling Management System | 54 | 07-FEB-07 | 18-APR-07 | <div><div></div><div>Buidling Management System</div></div> | | | | | | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | | | | | | | |
| MB4-060 | Sand footings to courtyard & sand roll (by NSC) | 18 | 21-FEB-07 | 13-MAR-07 | <div><div></div><div>Sand footings to courtyard & sand roll (by NSC)</div></div> | | | | | | | | | | | | | | | |
| MB4-075 | Stable gate/fence and Lunge Ring fence (by NSC) | 18 | 21-FEB-07 | 13-MAR-07 | <div><div></div><div>Stable gate/fence and Lunge Ring fence (by NSC)</div></div> | | | | | | | | | | | | | | | |
| MB4-080 | External subsoil, stormwater drains &d u-channel | 18 | 24-JAN-07* | 20-FEB-07 | <div><div></div><div>External subsoil, stormwater drains &d u-channel</div></div> | | | | | | | | | | | | | | | |
| External Works | | | | | | | | | | | | | | | | | | | | |
| External Utilities/Drainage - Phase 1 | | | | | | | | | | | | | | | | | | | | |
| Utilities between Vet Stable & MB3 | | | | | | | | | | | | | | | | | | | | |
| EXT-095 | DN150 Chilled water main Ch F20->F73 | 18 | 20-DEC-06* | 11-JAN-07 | <div><div></div><div>DN150 Chilled water main Ch F20->F73</div></div> | | | | | | | | | | | | | | | |
| EXT-245 | DN80uPVC, Irrigation Main | 12 | 20-DEC-06 | 04-JAN-07 | <div><div></div><div>DN80uPVC, Irrigation Main</div></div> | | | | | | | | | | | | | | | |
| EXT-247 | ELV+PCCW/COMM ducts | 12 | 20-DEC-06 | 04-JAN-07 | <div><div></div><div>ELV+PCCW/COMM ducts</div></div> | | | | | | | | | | | | | | | |
| Utilities@ Rd ST7 (bet. Warm Up Arena & MB3/MB4) | | | | | | | | | | | | | | | | | | | | |
| EXT-165 | DN400 MHS12.14->S12.13 | 12 | 23-DEC-06* | 08-JAN-07 | <div><div></div><div>DN400 MHS12.14->S12.13</div></div> | | | | | | | | | | | | | | | |
| EXT-170 | DN450 MHS12.13->S12.11 | 12 | 20-DEC-06 | 04-JAN-07 | <div><div></div><div>DN450 MHS12.13->S12.11</div></div> | | | | | | | | | | | | | | | |
| EXT-175 | DN525 MHS12.11->S12.10 | 12 | 27-NOV-06A | 04-JAN-07 | <div><div></div><div>DN525 MHS12.11->S12.10</div></div> | | | | | | | | | | | | | | | |
| EXT-180 | DN300 MHF12.6->F12.5->F12.4->F12.3 | 18 | 27-NOV-06A | 11-JAN-07 | <div><div></div><div>DN300 MHF12.6->F12.5->F12.4->F12.3</div></div> | | | | | | | | | | | | | | | |
| EXT-185 | DN150 Chilled water main Ch F73->F210 | 18 | 12-JAN-07 | 01-FEB-07 | <div><div></div><div>DN150 Chilled water main Ch F73->F210</div></div> | | | | | | | | | | | | | | | |
| EXT-210 | DN150- FS main, Ch C144.5 -> E12.0 | 18 | 12-JAN-07 | 01-FEB-07 | <div><div></div><div>DN150- FS main, Ch C144.5 -> E12.0</div></div> | | | | | | | | | | | | | | | |
| EXT-212 | WWO Inspection- FS main Ch C144.5 -> E12.0 | 1 | 02-FEB-07 | 02-FEB-07 | <div><div></div><div>WWO Inspection- FS main Ch C144.5 -> E12.0</div></div> | | | | | | | | | | | | | | | |
| EXT-214 | Backfill- FS main Ch C144.5 -> E12.0 | 3 | 03-FEB-07 | 06-FEB-07 | <div><div></div><div>Backfill- FS main Ch C144.5 -> E12.0</div></div> | | | | | | | | | | | | | | | |
| | | | | | DEC | | | | JAN | | | | FEB | | | | MAR | | | |
| | | | | | 2006 | | | | 2007 | | | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | |
|--|---|---------|-------------|--------------|------|--|------|--|--|--|-----|--|--|--|-----|--|
| | | | | | 2006 | | 2007 | | | | | | | | | |
| | | | | | DEC | | JAN | | | | FEB | | | | MAR | |
| Utilities@ Rd ST7 (bet. Warm Up Arena & MB3/MB4) | | | | | | | | | | | | | | | | |
| EXT-250 | DN80uPVC, Irrigation Main | 18 | 12-JAN-07 | 01-FEB-07 | | | | | | | | | | | | |
| EXT-252 | ELV+PCCW/COMM ducts, Vet Stable to MB3/MB4 | 18 | 12-JAN-07 | 01-FEB-07 | | | | | | | | | | | | |
| Utilities @ Road ST6 (bet MB2 and Chiller) | | | | | | | | | | | | | | | | |
| EXT-120 | DN450, MHS13.7->S13.8 (@ east of MB1) | 14 | 20-DEC-06* | 06-JAN-07 | | | | | | | | | | | | |
| EXT-130 | DN200, MHF12.18 ->F12.17 | 12 | 20-DEC-06 | 04-JAN-07 | | | | | | | | | | | | |
| EXT-135 | DN150 Chilled water main Ch H703->G161 | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | | | |
| EXT-205 | DN150- FS main, Ch D184 -> D290 | 18 | 05-JAN-07 | 25-JAN-07 | | | | | | | | | | | | |
| EXT-207 | WWO Inspection- FS main, Ch D184 -> D290 | 1 | 26-JAN-07 | 26-JAN-07 | | | | | | | | | | | | |
| EXT-209 | Backfill- FS main Ch D184 -> D290 | 3 | 27-JAN-07 | 30-JAN-07 | | | | | | | | | | | | |
| EXT-220 | DN80uPVC, Irrigation Main | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | | | |
| EXT-222 | ELV+PCCW ducts, MB1/MB2 | 12 | 05-JAN-07 | 18-JAN-07 | | | | | | | | | | | | |
| Utilities at South Side of MB4 | | | | | | | | | | | | | | | | |
| EXT-030 | Sheet pile low flow interceptor | 0 | 28-SEP-06A | 21-NOV-06A | | | | | | | | | | | | |
| EXT-060 | Low flow interceptor | 12 | 22-NOV-06A | 04-JAN-07 | | | | | | | | | | | | |
| EXT-070 | DN825, MHS12.2->S12.2A->S12.2B->STM1 | 0 | 23-OCT-06A | 25-NOV-06A | | | | | | | | | | | | |
| EXT-075 | DN300, MHF12.3->12.2->12.2A->FTM1 | 0 | 23-OCT-06A | 25-NOV-06A | | | | | | | | | | | | |
| EXT-080 | DN225, LFI->F12.1->12.2 | 6 | 25-NOV-06A | 27-DEC-06 | | | | | | | | | | | | |
| EXT-085 | DN225, F12.13->F12.2A | 12 | 28-DEC-06 | 11-JAN-07 | | | | | | | | | | | | |
| EXT-215 | DN150- FS main, Ch C144.5 | 18 | 12-JAN-07 | 01-FEB-07 | | | | | | | | | | | | |
| EXT-217 | WWO Inspection- FS main Ch C144.5 | 1 | 02-FEB-07 | 02-FEB-07 | | | | | | | | | | | | |
| EXT-219 | Backfill - FS main Ch C144.5 | 3 | 03-FEB-07 | 06-FEB-07 | | | | | | | | | | | | |
| EXT-260 | DN80uPVC, Irrigation Main | 12 | 12-JAN-07 | 25-JAN-07 | | | | | | | | | | | | |
| Utilities between MB1 and MB2 | | | | | | | | | | | | | | | | |
| EXT-045 | DN 750, storm MHS13.23 to S13.27 | 6 | 18-NOV-06A | 27-DEC-06 | | | | | | | | | | | | |
| EXT-050 | DN 300 foul drain, MHF12.15->F12.16->F12.17 | 18 | 20-DEC-06 | 11-JAN-07 | | | | | | | | | | | | |
| EXT-055 | DN150 Chilled water main Ch G88->F20 | 12 | 12-JAN-07 | 25-JAN-07 | | | | | | | | | | | | |
| EXT-230 | DN80uPVC, Irrigation Main | 12 | 12-JAN-07 | 25-JAN-07 | | | | | | | | | | | | |
| EXT-232 | ELV+PCCW ducts, Vet Stable to MB1/MB2 | 12 | 12-JAN-07 | 25-JAN-07 | | | | | | | | | | | | |
| Utilities between MB3 and MB4 | | | | | | | | | | | | | | | | |
| EXT-255 | DN80uPVC, Irrigation Main | 12 | 20-DEC-06* | 04-JAN-07 | | | | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | 2006 DEC | JAN | 2007 FEB | MAR |
|--|--|---------|-------------|--------------|-------------|--|--|-----|
| External Utilities/Drainage - Phase 2 | | | | | | | | |
| Utilities between Vet Stable and MB1 | | | | | | | | |
| EXT-105 | DN450,MHS13.21->S12.36 | 12 | 20-DEC-06 | 04-JAN-07 | | DN450,MHS13.21->S12.36 open cut | | |
| EXT-110 | DN300, MHF12.15->F13.1->13.2 | 18 | 05-JAN-07 | 25-JAN-07 | | | DN300, MHF12.15->F13.1->13.2 open cut | |
| EXT-235 | DN80uPVC, Irrigation Main | 12 | 26-JAN-07 | 08-FEB-07 | | | DN80uPVC, Irrigation Main | |
| Utilities bet. Vet Stable and Sand Arena, Rd ST5 | | | | | | | | |
| EXT-195 | DN150- FS main, Ch D7.5 -> D99.5 | 12 | 20-DEC-06* | 04-JAN-07 | | DN150- FS main, Ch D7.5 -> D99.5 | | |
| EXT-197 | WWO Inspection | 1 | 05-JAN-07* | 05-JAN-07 | | WWO Inspection | | |
| EXT-199 | Backfill | 3 | 06-JAN-07* | 09-JAN-07 | | Backfill | | |
| Utilities at Road ST4 | | | | | | | | |
| EXT-200 | DN150- FS main, Ch D99.5 -> D184.0 | 12 | 05-JAN-07 | 18-JAN-07 | | DN150- FS main, Ch D99.5 -> D184.0 | | |
| EXT-202 | WWO Inspection | 1 | 19-JAN-07 | 19-JAN-07 | | WWO Inspection | | |
| EXT-204 | Backfill | 3 | 20-JAN-07 | 23-JAN-07 | | Backfill | | |
| EXT-225 | DN80uPVC, Irrigation Main | 12 | 05-JAN-07 | 18-JAN-07 | | DN80uPVC, Irrigation Main | | |
| Utilities between MB3 and MB2 | | | | | | | | |
| EXT-140 | DN450 MHS12.36->S12.35->S12.34 (bet MB3/MB2) | 14 | 20-DEC-06 | 06-JAN-07 | | DN450 MHS12.36->S12.35->S12.34 (bet MB3/MB2) open cut | | |
| EXT-145 | DN450 MHS12.34->S12.32 (beside MB4) | 16 | 08-JAN-07 | 25-JAN-07 | | | DN450 MHS12.34->S12.32 (beside MB4) open cut | |
| EXT-150 | DN300 MHF12.15->12.9 (bet MB3/MB2) | 16 | 20-DEC-06 | 09-JAN-07 | | DN300 MHF12.15->12.9 (bet MB3/MB2) open cut | | |
| EXT-240 | DN80uPVC, Irrigation Main | 12 | 10-JAN-07 | 23-JAN-07 | | | DN80uPVC, Irrigation Main | |
| External Utilities/Drainage - Phase 3 + Roadwork | | | | | | | | |
| LV Cabling Works | | | | | | | | |
| 43590 | LV cable laying, Vet stable to Chiller Plant Rm | 12 | 10-FEB-07 | 02-MAR-07 | | | LV cable laying, Vet stable to Chiller Plant Rm | |
| 43595 | LV cable laying, Tx Rm Vet stable to MB1 and MB2 | 12 | 10-FEB-07 | 02-MAR-07 | | | LV cable laying, Tx Rm Vet stable to MB1 and MB2 | |
| Access Road (EVA) | | | | | | | | |
| 43630 | Bituminous Access Road (EVA), Road ST4 | 6 | 24-JAN-07 | 30-JAN-07 | | | Bituminous Access Road (EVA), Road ST4 | |
| 43635 | Bituminous Access Road (EVA), Road ST5 | 6 | 31-JAN-07 | 06-FEB-07 | | | Bituminous Access Road (EVA), Road ST5 | |
| 43640 | Bituminous Access Road (EVA), Road ST6 | 6 | 07-FEB-07 | 20-FEB-07 | | | Bituminous Access Road (EVA), Road ST6 | |
| 43645 | Bituminous Access Road (EVA), Road ST7 | 6 | 21-FEB-07 | 27-FEB-07 | | | Bituminous Access Road (EVA), Road ST7 | |
| Interface Works with Employer Direct Contractors | | | | | | | | |
| 60085 | PCCW/HGC Installation - cabling + termination | 48 | 02-FEB-07 | 06-APR-07 | | PCCW/HGC Installation - cabling + termination | | |



| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | | | | | |
|--|---|---------|-------------|--------------|---|--|--|--|------|--|--|--|------|--|--|--|-----|--|--|--|
| | | | | | 2006 | | | | 2007 | | | | | | | | | | | |
| | | | | | DEC | | | | JAN | | | | FEB | | | | MAR | | | |
| Section KD-2 (Portion HKSI-3 to HKSI-6) | | | | | | | | | | | | | | | | | | | | |
| Portion HKSI-3 | | | | | | | | | | | | | | | | | | | | |
| Shing Mun Walkway | | | | | | | | | | | | | | | | | | | | |
| Initial Works | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 66010 | Trial Pit excavation | 0 | 18-NOV-06A | 06-DEC-06A | | | | | | | | | | | | | | | | |
| External Drainage | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 66020 | Drainage Work - Stage 1 (50m) | 16 | 07-DEC-06A | 09-JAN-07 | Drainage Work - Stage 1 (50m) | | | | | | | | | | | | | | | |
| 66030 | Drainage Work - Stage 2 (50m) | 16 | 10-JAN-07 | 27-JAN-07 | Drainage Work - Stage 2 (50m) | | | | | | | | | | | | | | | |
| 66040 | Drainage Work - Stage 3 (50m) | 16 | 29-JAN-07 | 22-FEB-07 | Drainage Work - Stage 3 (50m) | | | | | | | | | | | | | | | |
| 66050 | Drainage Work - Stage 4 (50m) | 16 | 23-FEB-07 | 13-MAR-07 | Drainage Work - Stage 4 (50m) | | | | | | | | | | | | | | | |
| Portion HKSI-4 | | | | | | | | | | | | | | | | | | | | |
| Training and Competition Arenas | | | | | | | | | | | | | | | | | | | | |
| Main Competition Arena | | | | | | | | | | | | | | | | | | | | |
| Initial Works | | | | | | | | | | | | | | | | | | | | |
| 52010 | Condition Survey and Reporting | 12 | 20-DEC-06 | 04-JAN-07 | Condition Survey and Reporting | | | | | | | | | | | | | | | |
| 52020 | Protect Existing Structures & Utilities | 7 | 20-DEC-06 | 28-DEC-06 | Protect Existing Structures & Utilities | | | | | | | | | | | | | | | |
| 52030 | Divert Temporary Utilities/Irrigation | 14 | 20-DEC-06 | 06-JAN-07 | Divert Temporary Utilities/Irrigation | | | | | | | | | | | | | | | |
| 52040 | Site Clearing and Demolition | 5 | 08-JAN-07 | 12-JAN-07 | Site Clearing and Demolition | | | | | | | | | | | | | | | |
| Site Formation, Drainage Works, Mast Footing | | | | | | | | | | | | | | | | | | | | |
| 52050 | Excavation | 10 | 13-JAN-07 | 24-JAN-07 | Excavation | | | | | | | | | | | | | | | |
| 52070 | Fill to Final Formation | 8 | 24-JAN-07 | 01-FEB-07 | Fill to Final Formation | | | | | | | | | | | | | | | |
| 52072 | Lay underground 150uPVC ducts (900mm depth) | 8 | 25-JAN-07 | 02-FEB-07 | Lay underground 150uPVC ducts (900mm depth) | | | | | | | | | | | | | | | |
| 52075 | Lay underground 40DN fresh water main | 8 | 01-MAR-07 | 09-MAR-07 | Lay underground 40DN fresh water main | | | | | | | | | | | | | | | |
| 52080 | Lay Drainage System | 24 | 25-JAN-07 | 28-FEB-07 | Lay Drainage System | | | | | | | | | | | | | | | |
| 52090 | Works to Existing Drainage System | 30 | 26-JAN-07 | 08-MAR-07 | Works to Existing Drainage System | | | | | | | | | | | | | | | |
| 52095 | Footing for 15m high mast (2 nos) | 18 | 25-JAN-07 | 21-FEB-07 | Footing for 15m high mast (2 nos) | | | | | | | | | | | | | | | |
| Landscaping and Roadworks | | | | | | | | | | | | | | | | | | | | |
| 52100 | Main Competition Arena Edges | 30 | 03-FEB-07 | 16-MAR-07 | Main Competition Arena Edges | | | | | | | | | | | | | | | |
| Mini Pile & Pile Cap for 40m High Mast | | | | | | | | | | | | | | | | | | | | |
| 65025 | Site Investigation | 6 | 20-DEC-06* | 27-DEC-06 | Site Investigation | | | | | | | | | | | | | | | |
| 65035 | Utilities diversion | 12 | 28-DEC-06 | 11-JAN-07 | Utilities diversion | | | | | | | | | | | | | | | |
| | | | | | DEC | | | | JAN | | | | FEB | | | | MAR | | | |
| | | | | | 2006 | | | | | | | | 2007 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | 2006 | | 2007 | |
|--|---|---------|-------------|--------------|------|-----|------|---|
| | | | | | DEC | JAN | FEB | MAR |
| Mini Pile & Pile Cap for 40m High Mast | | | | | | | | |
| 65045 | Mini-piles- 32 nos. (2 rigs) | 36 | 12-JAN-07 | 01-MAR-07 | | | | Mini-piles- 32 nos. (2 rigs) |
| 65055 | Load test | 24 | 02-MAR-07 | 29-MAR-07 | | | | Load test |
| 65065 | Pile cap | 36 | 02-MAR-07 | 13-APR-07 | | | | Pile cap |
| Warm Up Arena and Holding Arena | | | | | | | | |
| Initial Works | | | | | | | | |
| 53010 | Condition Survey and Reporting | 14 | 29-DEC-06 | 15-JAN-07 | | | | |
| 53020 | Protect Existing Structures & Utilities | 7 | 29-DEC-06 | 06-JAN-07 | | | | |
| 53030 | Divert Temporary Utilities/irrigation | 21 | 29-DEC-06 | 23-JAN-07 | | | | |
| 53040 | Site Clearing and Demolition | 7 | 24-JAN-07 | 31-JAN-07 | | | | |
| Site Formation, Drainage Works, Mast Footing | | | | | | | | |
| 53050 | Excavation | 14 | 01-FEB-07 | 23-FEB-07 | | | | Excavation |
| 53060 | Dispose Material Off-site | 14 | 05-FEB-07 | 27-FEB-07 | | | | Dispose Material Off-site |
| 53070 | Lay Drainage System | 30 | 03-FEB-07 | 16-MAR-07 | | | | Lay Drainage System |
| 53080 | Works to Existing Drainage System | 30 | 19-FEB-07 | 24-MAR-07 | | | | Works to Existing Drainage System |
| 53085 | Footing for 25m high mast (6 nos), 20m (1 no) | 24 | 24-FEB-07 | 23-MAR-07 | | | | Footing for 25m high mast (6 nos), 20m (1 no) |
| Dressage Training Arena | | | | | | | | |
| Initial Works | | | | | | | | |
| 54010 | Condition Survey and Reporting | 14 | 29-DEC-06 | 15-JAN-07 | | | | |
| 54020 | Protect Existing Structures & Utilities | 7 | 29-DEC-06 | 06-JAN-07 | | | | |
| 54030 | Divert Temporary Utilities/irrigation | 12 | 10-JAN-07 | 23-JAN-07 | | | | |
| 54040 | Site Clearing and Demolition | 7 | 24-JAN-07 | 31-JAN-07 | | | | |
| Site Formation, Drainage Works, Mast Footing | | | | | | | | |
| 54050 | Excavation | 5 | 07-FEB-07 | 19-FEB-07 | | | | Excavation |
| 54060 | Dispose Material Off-site | 5 | 10-FEB-07 | 22-FEB-07 | | | | Dispose Material Off-site |
| 54070 | Lay Drainage System | 21 | 09-FEB-07 | 12-MAR-07 | | | | Lay Drainage System |
| 54080 | Works to Existing Drainage System | 21 | 24-FEB-07 | 20-MAR-07 | | | | Works to Existing Drainage System |
| 54085 | Footing for 20m high mast (2 nos) | 18 | 20-FEB-07 | 12-MAR-07 | | | | Footing for 20m high mast (2 nos) |
| General External Works | | | | | | | | |
| Tree Transplanting | | | | | | | | |
| Initial Works | | | | | | | | |
| 52045 | Tree transplanting (T416...426 group) | 33 | 20-DEC-06* | 29-JAN-07 | | | | Tree transplanting (T416...426 group) |

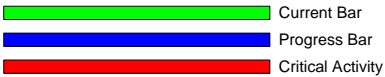
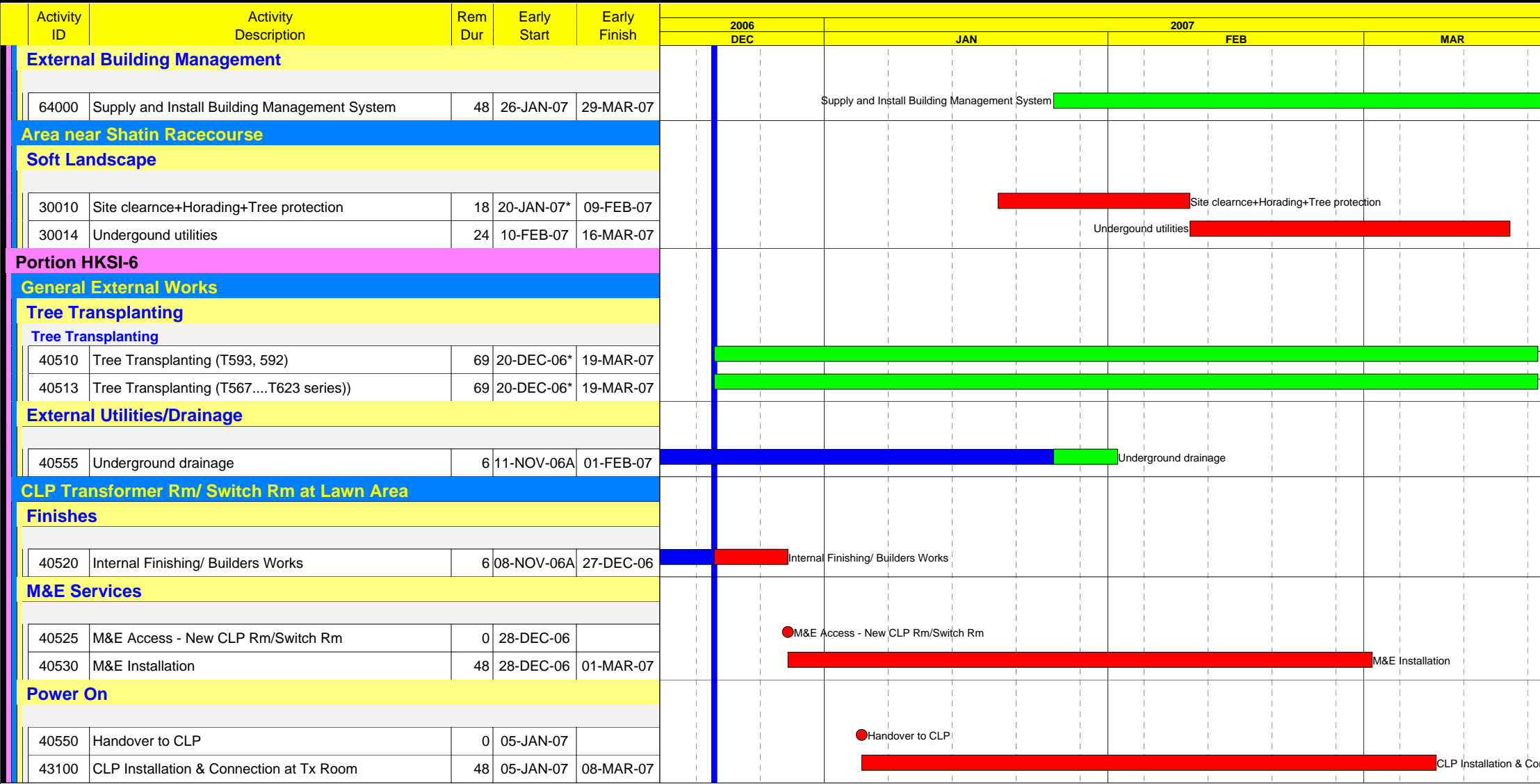
| Activity ID | Activity Description | Rem Dur | Early Start | Early Finish | | | | | | | | | | | | |
|----------------------------------|--|---------|-------------|--------------|--|--|--|-----|--|--|-------------|--|--|-----|--|--|
| | | | | | 2006 DEC | | | JAN | | | 2007 FEB | | | MAR | | |
| Initial Works | | | | | | | | | | | | | | | | |
| 52055 | Tree transplanting (T440...446, T411..413 group) | 35 | 20-DEC-06* | 31-JAN-07 | Tree transplanting (T440...446, T411..413 group) | | | | | | | | | | | |
| 53045 | Tree transplanting (T167..... 182 group) | 35 | 20-DEC-06* | 31-JAN-07 | Tree transplanting (T167..... 182 group) | | | | | | | | | | | |
| 54045 | Tree transplanting (T164 to T167) | 40 | 20-DEC-06* | 06-FEB-07 | Tree transplanting (T164 to T167) | | | | | | | | | | | |
| External Utilities/Drainage | | | | | | | | | | | | | | | | |
| LV Cabling Works | | | | | | | | | | | | | | | | |
| 61085 | Lay LV cable-Tx Rm to 40m HM (P5/P4) | 18 | 20-DEC-06 | 11-JAN-07 | Lay LV cable-Tx Rm to 40m HM (P5/P4) | | | | | | | | | | | |
| 61095 | Lay LV cable-Tx Rm to 15m HM (P11, P11G) | 18 | 12-JAN-07 | 01-FEB-07 | Lay LV cable-Tx Rm to 15m HM (P11, P11G) | | | | | | | | | | | |
| 61100 | Lay LV cable-Tx Rm to 40m HM (P9) + 20m HM(P8A) | 12 | 02-FEB-07 | 22-FEB-07 | Lay LV cable-Tx Rm to 40m HM (P9) + 20m HM(P8A) | | | | | | | | | | | |
| 61105 | Lay LV cable-Tx Rm to 25m HM (PB 11A-C) | 18 | 23-FEB-07 | 15-MAR-07 | Lay LV cable-Tx Rm to 25m HM (PB 11A-C) | | | | | | | | | | | |
| 61110 | Lay LV cable-Tx Rm to 25m HM (PB 14,14A-B) | 18 | 23-FEB-07 | 15-MAR-07 | Lay LV cable-Tx Rm to 25m HM (PB 14,14A-B) | | | | | | | | | | | |
| 61120 | Lay LV cable-Tx Rm to 40m HM (P2/P3) | 12 | 20-DEC-06* | 04-JAN-07 | Lay LV cable-Tx Rm to 40m HM (P2/P3) | | | | | | | | | | | |
| 61125 | Lay LV cable-Tx Rm to 40m HM (P6/P7) | 18 | 05-JAN-07 | 25-JAN-07 | Lay LV cable-Tx Rm to 40m HM (P6/P7) | | | | | | | | | | | |
| 61130 | Lay LV cable-Tx Rm to 40m HM (P1) | 18 | 26-JAN-07 | 22-FEB-07 | Lay LV cable-Tx Rm to 40m HM (P1) | | | | | | | | | | | |
| Drainage Works | | | | | | | | | | | | | | | | |
| 61055 | Drainage - DN750, MHS12.2->S12.3 | 18 | 20-DEC-06* | 11-JAN-07 | Drainage - DN750, MHS12.2->S12.3 | | | | | | | | | | | |
| 61065 | Drainage - DN750, MHS12.3->S12.5 | 18 | 28-DEC-06 | 18-JAN-07 | Drainage - DN750, MHS12.3->S12.5 | | | | | | | | | | | |
| 61075 | Drainage - DN675, MHS12.5->S12.6 | 18 | 05-JAN-07 | 25-JAN-07 | Drainage - DN675, MHS12.5->S12.6 | | | | | | | | | | | |
| 61080 | Drainage - DN300, MHS12.6->S12.20 | 8 | 26-JAN-07 | 03-FEB-07 | Drainage - DN300, MHS12.6->S12.20 | | | | | | | | | | | |
| Fresh Water Mains | | | | | | | | | | | | | | | | |
| 61135 | Fresh water mains - Holding arena area | 18 | 05-FEB-07 | 03-MAR-07 | Fresh water mains - Holding arena area | | | | | | | | | | | |
| 61140 | Fresh water mains- main competition arena area | 18 | 13-JAN-07 | 02-FEB-07 | Fresh water mains- main competition arena area | | | | | | | | | | | |
| External Lighting | | | | | | | | | | | | | | | | |
| 61010 | Erect 15m(2nos) High Light Mast | 18 | 22-FEB-07 | 14-MAR-07 | Erect 15m(2nos) High Light Mast | | | | | | | | | | | |
| External Electrical Installation | | | | | | | | | | | | | | | | |
| 62010 | Install MCB Distribution Board | 48 | 09-FEB-07 | 13-APR-07 | Install MCB Distribution Board | | | | | | | | | | | |
| 62020 | Install MCCB Distribution Board | 48 | 09-FEB-07 | 13-APR-07 | Install MCCB Distribution Board | | | | | | | | | | | |
| 62037 | Install Pillar boxes | 48 | 09-FEB-07 | 13-APR-07 | Install Pillar boxes | | | | | | | | | | | |

File Name:WP22
Start Date:20-DEC-06
Finish Date:17-JUL-07
Filter Name:FL-71 Three Months Rolling I
Lavout Name:Three Months Rolling Progi
© Primavera Systems, Inc.

- Current Bar
- Progress Bar
- Critical Activity

China State Const. Eng. (H.K.) Ltd.
Core Venue Main Construction Contract
(Package CV-2B & CV-2C)- HKSI AREA
FL-71 Three Months Rolling Programme
20 Dec 2006 to 20 Mar 2007

| Sheet 19 of 20 | | | | |
|-----------------------|---------------------------------|-------------|----------|--|
| Prepared by William C | | | | |
| Date | Revision | Checked | Approved | |
| 20-DEC-06 | Extracted from Master Programme | T Lo/T Wong | D Lau | |
| | Version A, | | | |
| | Activities for coming 3 months | | | |
| | | | | |



| Date | Revision | Checked | Approved |
|-----------|---------------------------------|-------------|----------|
| 20-DEC-06 | Extracted from Master Programme | T Lo/T Wong | D Lau |
| | Version A, | | |
| | Activities for coming 3 months | | |
| | | | |

Appendix B

**Monitoring Schedule
for December 2006 and
January 2007**

Monitoring Schedule - December 2006

| December 2006 | | | | | | |
|---------------|--------|-----------------------|-----------|------------------------|-----------------------|----------|
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| | | | | | 1 | 2 |
| 3 | 4 | 5 Landscape Audit | 6 | 7 Noise Monitoring | 8 Site Inspection | 9 |
| 10 | 11 | 12 | 13 | 14 Noise Monitoring | 15 Site Inspection | 16 |
| 17 | 18 | 19 Landscape Audit | 20 | 21 Noise Monitoring | 22 Site Inspection | 23 |
| 24 | 25 | 26 | 27 | 28 Noise Monitoring | 29 Site Inspection | 30 |
| 31 | | | | | | |

Tentative Monitoring Schedule - January 2007

| January 2007 | | | | | | |
|---------------------|---------------|----------------------|-----------------------|------------------------|-----------------------|-----------------|
| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| 1 | 2 | 3 Landscape Audit | 4 Noise Monitoring | 5 Site Inspection | 6 | |
| 7 | 8 | 9 | 10 | 11 Noise Monitoring | 12 Site Inspection | 13 |
| 14 | 15 | 16 | 17 Landscape Audit | 18 Noise Monitoring | 19 Site Inspection | 20 |
| 21 | 22 | 23 | 24 | 25 Noise Monitoring | 26 Site Inspection | 27 |
| 28 | 29 | 30 | 31 | | | |
| | | | | | | |

Appendix C

Environmental Mitigation Implementation Schedule

**Environmental Mitigation Implementation Schedule
Main Arena of 2008 Olympic Equestrian Events**

| EIA Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Who to implement the measures? | Location of the measures | When to implement the measures? | Implementation | What requirements or standards for the measures to achieve? |
|----------|---|--|--------------------------------|--------------------------|---------------------------------|---|--|
| S3.8 | <p>The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation</p> <ul style="list-style-type: none"> Any excavated of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads or streets; The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport should be totally enclosed by impervious sheeting; | Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria. | Contractor | Entire construction site | Construction stage | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>N/A</p> <p>✓</p> | <ul style="list-style-type: none"> To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1-hr and 24hr TSP levels are 500 $\mu\text{g m}^{-3}$ and 260 $\mu\text{g m}^{-3}$, respectively) |

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|----------|---|---|--------------------------------|--------------------------|---------------------------------|---|---|
| S3.8.2 | <p>The Contract shall adopt adequate measures to mitigate the odour impact to acceptable level:</p> <ul style="list-style-type: none"> A sanitary environment will always be maintained in the stable area. The current waste management practices will be extended to cover the new stable area at HKSI. Detailed design of stable will cater for the health, safety and environmental protection considerations in accordance with the HKJC policy and practice; Regular maintenance of the odour removal system, such as carbon filter system will be carried out to maintain the odour removal efficiency; and Enclosed containers, similar to those at the existing stables near HKSI, will be provided for the stockpiling of waste. | minimize the potential odour impact to nearby sensitive receivers | Contractor | Stables | Operational Phase | N/A | <ul style="list-style-type: none"> TM-EIA, Annex 4 5 odour units based on averaging time of 5 seconds |
| S4.8.1.1 | <p>1) Use of good site practices to limit noise emissions by considering the following:</p> <ul style="list-style-type: none"> only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; mobile plant should be sited as far away from NSRs as possible and practicable; material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. | Control construction airborne noise by means of good site practices | Contractor | Entire construction site | Construction stage | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | <ul style="list-style-type: none"> Noise Control Ordinance |

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|----------|--|---|--------------------------------|--------------------------|---------------------------------|----------------|--|
| S4.8.1.2 | 2) Install temporary hoarding of 2.4m high located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period. | Reduce the construction noise levels at low-level zone of NSRs through partial screening. | Contractor | Entire construction site | Construction stage | ✓ | <ul style="list-style-type: none"> • Noise Control Ordinance • Annex 5, TM-EIA • Hoarding should have no openings and a superficial surface density of at least 14kg/m^2. |
| S4.8.1.3 | 3) Install movable noise barriers (typically density @ 14kg/m^2), acoustic mat close to noisy plants including air compressor, water pump, hand-held breaker and pipe pile rigs. | Screen the noisy plant items to be used at all construction sites | Contractor | Entire construction site | Construction stage | ✓ | <ul style="list-style-type: none"> • Noise Control Ordinance • Annex 5, TM-EIA • 75dB(A) for residential premises and 70dB(A) for schools during daytime • The movable barrier should achieve at least 5dB(A) and the full enclosure should be designed to achieve 10dB(A) |

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|-----------------|---|--|---------------------------------------|--|--|-----------------------|--|
| S4.8.1.4 | 4) Liaise with the school representative(s) including, but not limited to Hong Kong Institute of Vocational Education (Shatin), Jockey Club Ti-1 College, International Christian School – Elementary and Leung Kui Kau Primary School to obtain the examination schedule and avoid noisy construction activities during school examination period. | Schedule the construction works outside school examination periods to less intrusive periods | Contractor | Construction sites near the schools such as Hong Kong Institute of Vocational Education (Shatin), Jockey Club Ti-1 College, International Christian School – Elementary and Leung Kui Kau Primary School | Construction stage | N/A | <ul style="list-style-type: none"> • Noise Control Ordinance • Annex 5, TM-EIA • To comply with the daytime construction noise criterion of 65dB(A) at school during the examination periods, |
| S4.8.1.5 | 5) Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards. | Reduce the noise levels of plant items | Contractor | Entire construction site | Construction stage | ✓ | <ul style="list-style-type: none"> • Noise Control Ordinance & its TM • Annex 5, TM-EIA |
| S4.8.1.6 | 6) Sequencing operation of construction plant equipment. | Operate sequentially within the same work site to reduce the construction airborne noise | Contractor | Entire construction site where practicable | Construction stage | ✓ | <ul style="list-style-type: none"> • Noise Control Ordinance • Annex 5, TM-EIA |
| S4.8.4.1 | 1) The Louvres should be orientated away from adjacent NSRs where possible, preferably onto Sha Tin Racecourse which are less sensitive. | Control operational noise from fixed sources | Designers | E&M plant items | Design stage | ✓ | • HKPSG |
| S4.8.4.1 | 2) Adequate direct noise mitigation measures including silencers, acoustic louvers, acoustic enclosures should be allowed for in the design. | Control operational noise from fixed sources | Designers | E&M plant items | Design stage | ✓ | • HKPSG |
| S4.8.4.2 | 3) A cluster of small power rated loudspeakers should be used instead of a few large power rated loudspeakers | Control operational noise from fixed sources | Designers | PA system | Design stage | ✓ | • HKPSG |

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|----------|---|--|--------------------------------|-----------------------------|---------------------------------|----------------|--|
| S4.8.4.2 | 4) Directional loudspeakers should be used and orientated them to point towards the audience and away from the nearby noise sensitive receivers | Control operational noise from fixed sources | Designers | PA system | Design stage | ✓ | • HKPSG |
| S5.6.1 | 1) Follow the site practices outlined in ProPECC PN 1/94 as far as practicable in order to minimise surface runoff and the chance of erosion, and to reduce any suspended solids prior to discharge. | Good site practice to control construction water quality | Contractor | Entire construction site | Construction stage | ✓ | • Requirements laid down in ProPECC PN 1/94 |
| S5.6.1 | <u>Sewage Effluent</u> 1) Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. | Control sewage effluent arising from the sanitary facilities provided for the on-site construction workforce | Contractor | On-site sanitary facilities | Construction stage | ✓ | • ProPECC PN 1/94 • Water Pollution Control Ordinance • Waste Disposal Ordinance |

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|----------|--|--|--------------------------------|--------------------------|---------------------------------|---|--|
| S5.6.1 | <p><u>Construction Runoff and Site Drainage</u></p> <ul style="list-style-type: none"> At the start of site establishment (including the barging facility), 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 (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows. 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 following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas. | Control construction runoff and erosion from site surface, drainage channel, stockpiles, barging facility, wheel washing facilities, etc to minimize water quality during construction stage | Contractor | Entire construction site | Construction stage | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> | <ul style="list-style-type: none"> ProPECC PN 1/94 Water Pollution Control Ordinance |

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Main Arena of 2008 Olympic Equestrian Events**

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|----------|--|---|--------------------------------|--------------------------|---------------------------------|---|---|
| | <ul style="list-style-type: none"> Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m3 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 always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. Precautions to be taken at any time of year when rainstorms are likely, actions to 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 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. 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 bay should be provided at every construction site exit. Wash-water should have sand and silt settled out and removed at least on a weekly basis 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. Oil interceptors should be provided in the site drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain. | | | | | <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>N/A</p> | |

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|----------|--|--|----------------------------------|--------------------------|---------------------------------|---------------------------|---|
| | <ul style="list-style-type: none"> Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. Requirements for solid waste management are detailed in Section 6 of the EIA Report. All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. | | | | | <div>✓</div> <div>✓</div> | |
| S5.6.2.1 | A low flow interceptor drainage system should be constructed to intercept the first foul flush and convey it to a storage tank from where it is pumped to the foul drainage system. The catchment area of the low flow interceptor drainage covers the area of Main Stable Complex. Sand traps will also be provided at the stable to prevent sand from being conveyed into the pipe system. | Control surface runoff | Scheme designers and/or Operator | Drainage system | Design and/or operational stage | B | <ul style="list-style-type: none"> TM-water Water Pollution Control Ordinance |
| S5.6.2.2 | A new 450mm public gravity sewer should be constructed along the pathway of the Shing Mun River and be connected to the existing 450mm public sewer at the southeastern corner of HKSI to collect the sewage from the new Stable Complex and the low flow interceptor system. | Control sewage collection | Scheme designers | Sewage System | Design stage | B | <ul style="list-style-type: none"> Water Pollution Control Ordinance TM-water |
| S6.5.1.1 | 1) The requirements as recommended in ETWB TC 15/2003 Waste Management on Construction Sites and its latest version, and other relevant guidelines, should be included in the Particular Specification as appropriate. | Develop waste management strategies and minimize construction waste disposal | Scheme Designer | Entire construction site | Design stage | ✓ | <ul style="list-style-type: none"> Waste Disposal Ordinance ETWB TC 15/2003 |
| S6.5.1.1 | 2) Prior to the commencement of construction work, the Contractor should prepare a WMP to provide an overall framework for waste management and reduction. | Develop waste management and reduction strategies | Contractor | Entire construction site | Construction stage | ✓ | <ul style="list-style-type: none"> Waste Disposal Ordinance ETWB TC 15/2003 Waste Disposal (Chemical Waste) (General) Regulation ETWBTC 34/2002 |

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| S6.5.1.2 & S6.5.1.3 | <p><u>Construction and Demolition Material</u></p> <ul style="list-style-type: none"> • Opportunity for re-using of fill material for back filling should be optimized. • Excavated materials that cannot be recycled should be transported to public filling areas. • Careful design, planning and good site management can minimise over-ordering and waste materials such as concrete, mortars and cement grouts. The design of formwork should maximise the use of standard wooden panels so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic fencing should be considered to increase the potential for reuse. • The contractor should recycle as much as possible of the construction waste on-site. Proper segregation of wastes on site will increase the feasibility of recycling certain components of the waste stream by recycling contractors. Concrete and masonry can be used as general fill and steel reinforcement bars can be used by scrap steel mills. Different areas should be designated for such segregation and storage wherever site conditions permit. • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement. • Surplus artificial hard materials should be delivered to Tuen Mun Area 38 recycling plant or its successor for recycling into subsequent useful products. • On-site sorting and segregation facility of all type of wastes is considered as one of the best practice in waste management and hence, should be implemented in all projects generating construction waste. The sorted public fill and construction & demolition (C&D) waste should be disposed to public filling areas and landfills, respectively. | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor | Entire construction site | Construction stage | <div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div> | <ul style="list-style-type: none"> • Land (Miscellaneous Provisions) Ordinance • Waste Disposal Ordinance • ETWB TC 15/2003 |

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| | <ul style="list-style-type: none"> Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate. Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified. Implement an enhanced Waste Management Plan similar to ETWB TC(W) No. 15/2003 – “Waste Management on Construction Sites” to encourage on-sitting sorting of C&D materials and to minimize their generation during the course of construction. | | | | | <div>✓</div> <div>✓</div> <div>✓</div> | |
| S6.5.1.4 | <p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD. | Control the chemical waste and ensure proper storage, handling and disposal. | Contractor | Entire construction site | Construction stage | <div>N/A</div> <div>✓</div> <div>✓</div> <div>N/A</div> | <ul style="list-style-type: none"> Waste Disposal (Chemical Waste) General Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste |

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| S6.5.1.6 | <u>Sewage</u> <ul style="list-style-type: none"> Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state, which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly. | Proper handling of sewage from worker to avoid odour, pest and litter impacts | Contractor | Entire construction site | Construction stage | ✓ | • Waste Disposal Ordinance |
| S6.5.1.5 | <u>General Refuse</u> <ul style="list-style-type: none"> General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible. Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor. In addition, waste separation facilities for paper, aluminium cans, plastic bottles etc., should be provided. | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor | Entire construction site | Construction stage | ✓ ✓ ✓ ✓ | • Waste Disposal Ordinance |

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| S6.5.2.1 | <u>Municipal Waste</u> <ul style="list-style-type: none"> Recycling bins will be provided at shops and food service locations to collect cardboard containers. Personnel in office will be provided with bins to recycle office paper. Aluminium can recycling bins will be placed at prominent locations for collection Recycling bins for plastic bottle recovery should be set up at prominent places to facilitate visitors' participation in material recovery activities. The landscaping works will generate a certain amount of grass clippings, leaves, bush and tree trimmings. However, the handling capacity of the existing Sha Ling composting facility is limited and is currently composting livestock wastes. The facility is unlikely to be able to handle the green waste generated from the Project site. Should there be a market or facility which could process the green waste arising from the Project site, the establishment of a recycling programme for green waste should be considered. The venue operator should make arrangements with the laser printer toner cartridge suppliers to collect and recycle used toner cartridges for laser printers to avoid disposal of the cartridge at landfills as far as practicable. | Storage and handing of waste | Operator | Entire project site | Operational stage | <p>B</p> <p>B</p> <p>B</p> <p>N/A</p> <p>B</p> | <ul style="list-style-type: none"> Waste Disposal Ordinance |
| S6.5.2.2 | <u>Waste from Stables</u> <ul style="list-style-type: none"> Waste from horse stables (mainly the horse manure) would be collected on a regular basis following HKJC's sanitary practices. | Storage and handing of waste | Operator | Entire project site | Operational stage | <p>B</p> | <ul style="list-style-type: none"> Waste Disposal Ordinance |

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|-------------|---|---|--------------------------------|--------------------------|---------------------------------|---------------------|---|
| S9.3 & S9.7 | 1) An Independent Environmental Checker needs to be employed as per the EM&A Manual. 2) Establish a telephone hotline which enables the public to raise any matters of concern regarding the project such as complaints, comments, suggestions or requests for information. | Control EM&A Performance | Project Proponent | All construction sites | Construction stage | ✓ ✓ | • EIAO Guidance Note No.4/2002 • TM-EIAO |
| S9.5 | 1) An Environmental Team needs to be employed as per the EM&A Manual. 2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures. 3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with. 4) Real-time reporting of monitoring data for the Project through a dedicated internet website need to be provided and maintained by the Environmental Team | Perform environmental monitoring & auditing | Contractor | All construction sites | Construction stage | ✓ ✓ ✓ | • EIAO Guidance Note No.4/2002 • TM-EIAO |

Note: ✓ - Implemented
 O - Partially implemented
 B - To be implemented
 N/A - Not applicable

Appendix D

Calibration certificates of noise monitoring equipment

Summary of Equipment Calibration Details

| Equipment Type | Model | Serial No. | Last Calibration Date | Next Calibration Date |
|---|--|--------------------|-----------------------|-----------------------|
| Integrating sound level meter with microphone | Brüel & Kjær 2238 Brüel & Kjær 4188 | 2320694 2274284 | 11 Sep 2006 | 10 Sep 2007 |
| | | 2320696 2274286 | 11 Sep 2006 | 10 Sep 2007 |
| | | 2320707 2179479 | 11 Sep 2006 | 10 Sep 2007 |
| Acoustical calibrator | Brüel & Kjær 4230 | 1233887 | 11 Sep 2006 | 10 Sep 2007 |

CERTIFICATE OF CALIBRATION

Issued by: Brüel & Kjær UK Ltd.

Date of Issue: 21 SEP 2005 Certificate Number: 14260



0174

Brüel & Kjær 

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Approved signatory

Name: A. M. HAMM

Signature: 

CALIBRATION OF MULTI FREQUENCY CALIBRATOR TYPE 4226 ("Free Field and Random" version)

Client: ARUP ACOUSTICS
PARKIN HOUSE
8 ST THOMAS STREET
WINCHESTER. SO23 9HE

Calibrator Type 4226, S/No: 1531372

With Coupler UA0915, S/No: 1531372

Client Inventory Number: -

Manufacturer: Brüel & Kjær

Equipment Received on: 16 SEP 2005

Calibration Date: 21 SEP 2005

Brüel & Kjær Reference No: 1-65783810

Measurement Method

The Calibration was performed to Laboratory Procedure TWI-103.

Sound pressure level in the 1/2 inch coupler of the calibrator was measured with a laboratory grade condenser microphone Type 4180, used as a working standard, calibrated by the National Physical Laboratory.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to recognised national standards, and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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Certificate Number

14260

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The measured sound pressure was compared with that generated in the coupler of a working standard pistonphone calibrated by the National Physical Laboratory whose output was cross checked against a reference standard pistonphone, also calibrated by the National Physical Laboratory, using the same microphone and at the same ambient conditions. Appropriate corrections for atmospheric pressure conditions during calibration and for the measurement frequency and level response were taken into account.

Sound pressure level results are the mean of 5 measurements.

Results apply directly to the following settings on the calibrator, pressure, linear, calibration, 94dB, microphone group a, b, c.

Results for frequency and distortion are the result of a single measurement.

Results for 104 and 114dB are only at 125Hz, 1kHz and 8kHz, compared with the output at 94dB.

Calibration results apply at ambient conditions during the process of calibration.

Calibrations marked (Not UKAS Accredited) in this certificate have been included for completeness.

CALIBRATION RESULTS

4226 Settings: Linear, Pressure, 94dB, Microphone Group c.

| Frequency Setting Hz | Sound Pressure Level in dB re 20µPa | Frequency Hz (Not UKAS Accredited) | Distortion % (Not UKAS Accredited) |
|-------------------------|--|--|--|
| 31.5 | 94.12 | 31.63 | 0.5 |
| 63 | 94.02 | 63.13 | 0.2 |
| 125 | 94.01 | 125.9 | 0.1 |
| 250 | 94.01 | 251.3 | 0.1 |
| 500 | 94.00 | 502.5 | 0.2 |
| 1k | 94.05 | 1.005 k | 0.2 |
| 2k | 94.04 | 1.979 k | 0.3 |
| 4k | 94.04 | 3.957 k | 0.5 |
| 8k | 94.11 | 7.915 k | 0.3 |
| 12.5k | 94.08 | 12.66 k | 0.2 |

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Expanded uncertainty of calibration:

Sound Pressure Level: $\pm 0.15\text{dB}$ from 31.5Hz to 2kHz,
 $\pm 0.20\text{dB}$ at 4kHz and 8kHz,
 $\pm 0.25\text{dB}$ at 12.5kHz
Frequency: ± 1 last significant digit reported.
Distortion: $\pm 0.3\%$ distortion.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

ADDITIONAL TESTS

Sound Pressure Levels at Settings of 94, 104 and 114 dB

| Frequency | Difference 104-94dB | Difference 114-94dB |
|-----------|------------------------|------------------------|
| 125 Hz | 9.99 | 19.97 |
| 1kHz | 10.00 | 19.98 |
| 8kHz | 9.96 | 19.93 |

Result of a single measurement, expanded uncertainty $\pm 0.15\text{dB}$

Inverted "A" Weighting, Readings Relative to 1kHz in dB

| Frequency Hz | 31.5 | 63 | 125 | 250 | 500 | 1 k | 2 k | 4 k | 8 k | 12.5 k |
|-----------------|-------|-------|-------|------|------|-----|------|------|------|--------|
| Target Value | +39.4 | +26.2 | +16.1 | +8.6 | +3.2 | 0 | -1.2 | -1.0 | +1.1 | +4.3 |
| Reading | 39.5 | 26.2 | 16.1 | 8.6 | 3.2 | 0.0 | -1.2 | -0.9 | 1.2 | 4.3 |

Target values according to BS EN 60651 - 1994 - results of a single measurement, values rounded to 0.1 dB, expanded uncertainty $\pm 0.3\text{dB}$.

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Free Field and Random settings

| | Free Field Setting | | | | | | Random | |
|----------|--------------------|------------|--------------------|------------|--------------------|------------|--------------------|------------|
| | Microphone Group a | | Microphone Group b | | Microphone Group c | | Microphone Group b | |
| Freq. Hz | Target Value dB | Reading dB | Target Value dB | Reading dB | Target Value dB | Reading dB | Target Value dB | Reading dB |
| 250 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 500 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 1k | +0.15 | 0.14 | +0.20 | 0.19 | +0.10 | 0.09 | +0.05 | 0.03 |
| 2k | +0.50 | 0.49 | +0.45 | 0.44 | +0.35 | 0.34 | +0.10 | 0.08 |
| 4k | +1.35 | 1.34 | +1.05 | 1.04 | +0.95 | 0.92 | +0.15 | 0.14 |
| 8k | +4.50 | 4.46 | +2.80 | 2.77 | +2.60 | 2.58 | +0.40 | 0.38 |
| 12.5k | +7.35 | 7.28 | +5.60 | 5.54 | +5.05 | 5.00 | +1.50 | 1.48 |

Target values as specified in the manufacturer's manual, result of a single measurement, expanded uncertainty ± 0.2 dB.

Ambient conditions during calibration were:

Atmospheric Pressure 101.3 kPa
Temperature 23 °C
Relative Humidity 46 %

Checked by: *MA Fitch*

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Kowloon Tong, Kowloon
HONG KONG

AAc Certificate No. 2006006

Fax: +852 2268 3950

Tel: +852 2268 3216

CERTIFICATE OF CONFORMITY

| <u>Description of Test Instrument</u> | <u>Type No</u> | <u>Serial No</u> |
|---------------------------------------|----------------|------------------|
| Brüel & Kjær Sound Level Meter Kit | 2238 | 2320694 |
| Brüel & Kjær ½ " Microphone Kit | 4188 | 2274284 |

Date of Test: 11 September 2006

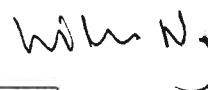
Carried out by: Cissy Chan

Approved by: William Ng

Signature:



Signature:



| Ambient Conditions During Test | |
|--------------------------------|------|
| Atmospheric Pressure: | 1KPa |
| Air Temperature: | 21°C |
| Relative Humidity: | 58% |

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

| <u>Description of Reference Calibrator</u> | <u>Type No</u> | <u>Serial No</u> |
|---|-------------------|------------------|
| Brüel & Kjær Multi Frequency Calibrator | 4226 | 1531372 |
| Brüel & Kjær Coupler | UA0915 | 1531372 |
| Certificate of Calibration Serial No. | 14260 | |
| By Brüel & Kjær (UK) Ltd Calibration Date: | 21 September 2005 | |
| NAMAS Accredited Calibration Laboratory No. | 0174 | |

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

Footnote:

Arup Acoustics is not a registered NAMAS accredited calibration laboratory. This certificate is for internal use only (unless otherwise authorised) and is part of Arup Acoustics development and commitment to QC and QA procedures.

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AAc Certificate No. 2006007

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CERTIFICATE OF CONFORMITY

| <u>Description of Test Instrument</u> | <u>Type No</u> | <u>Serial No</u> |
|---------------------------------------|----------------|------------------|
| Brüel & Kjær Sound Level Meter Kit | 2238 | 2320696 |
| Brüel & Kjær ½ " Microphone Kit | 4188 | 2274286 |

Date of Test: 11 September 2006

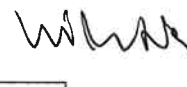
Carried out by: Cissy Chan

Approved by: William Ng

Signature:



Signature:



Ambient Conditions During Test

| | |
|-----------------------|------|
| Atmospheric Pressure: | 1KPa |
| Air Temperature: | 21°C |
| Relative Humidity: | 58% |

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

| <u>Description of Reference Calibrator</u> | <u>Type No</u> | <u>Serial No</u> |
|--|----------------|------------------|
| Brüel & Kjær Multi Frequency Calibrator | 4226 | 1531372 |
| Brüel & Kjær Coupler | UA0915 | 1531372 |

| | |
|---|-------------------|
| Certificate of Calibration Serial No. | 14260 |
| By Brüel & Kjær (UK) Ltd Calibration Date: | 21 September 2005 |
| NAMAS Accredited Calibration Laboratory No. | 0174 |

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

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AAC Certificate No. 2006005

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CERTIFICATE OF CONFORMITY

| <u>Description of Test Instrument</u> | <u>Type No</u> | <u>Serial No</u> |
|---------------------------------------|----------------|------------------|
| Brüel & Kjær Sound Level Meter Kit | 2238 | 2320707 |
| Brüel & Kjær ½ " Microphone Kit | 4188 | 2179479 |

Date of Test: 11 September 2006


Carried out by: Cissy Chan

Approved by: William Ng

Signature:



Signature:



| Ambient Conditions During Test | |
|--------------------------------|------|
| Atmospheric Pressure: | 1KPa |
| Air Temperature: | 21°C |
| Relative Humidity: | 58% |

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

| <u>Description of Reference Calibrator</u> | <u>Type No</u> | <u>Serial No</u> |
|---|-------------------|------------------|
| Brüel & Kjær Multi Frequency Calibrator | 4226 | 1531372 |
| Brüel & Kjær Coupler | UA0915 | 1531372 |
| Certificate of Calibration Serial No. | 14260 | |
| By Brüel & Kjær (UK) Ltd Calibration Date: | 21 September 2005 | |
| NAMAS Accredited Calibration Laboratory No. | 0174 | |

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

Footnote:

Arup Acoustics is not a registered NAMAS accredited calibration laboratory. This certificate is for internal use only (unless otherwise authorised) and is part of Arup Acoustics development and commitment to QC and QA procedures.

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HONG KONG

AAc Certificate No. 2006001

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CERTIFICATE OF CONFORMITY

Description of Test Instrument

Type No

Serial No

Brüel & Kjaer 4230 Acoustic Calibrator

4230

1233887

Date of Test: 11 September 2006

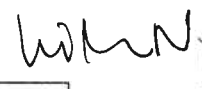
Carried out by: Cissy Chan

Approved by: William Ng

Signature:



Signature:



| Ambient Conditions During Test | |
|--------------------------------|------|
| Atmospheric Pressure: | 1KPa |
| Air Temperature: | 21°C |
| Relative Humidity: | 58% |

This document is to certify that the above Test Instrumentation did conform to the manufacturer's original specification on the date of the test. Any adjustments that were required to bring the instrumentation back into specification are duly noted in this document. The tests were carried out using the reference calibrator described below.

Description of Reference Calibrator

Type No

Serial No

Brüel & Kjær Multi Frequency Calibrator
Brüel & Kjær Coupler

4226
UA0915

1531372
1531372

Certificate of Calibration Serial No.

14260

By Brüel & Kjær (UK) Ltd Calibration Date:

21 September 2005

NAMAS Accredited Calibration Laboratory No.

0174

The reference calibrator, Type 4226, has traceable calibration back to National Measurement Standards. As such it is used as Arup Acoustics own 'Primary Standard' and is used only for controlled laboratory calibration tests on all sound measuring equipment owned by Arup Acoustics.

Footnote:

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Appendix E

**Detailed noise
monitoring results**

Details of Noise Impact Monitoring

| Month | Date | NSR No. | Time periods | | Weather condition | Avg. wind speed (m/s) | Noise Level dB(A) | | | Influencing factors/ Site condition |
|--------|-----------|---------|--------------|--------|-------------------|-----------------------|-------------------|-----------------|-----------------|--|
| | | | Start | Finish | | | L _{eq} | L ₁₀ | L ₉₀ | |
| Sep-06 | 07-Sep-06 | NM1 | 11:15 | 11:45 | Fine | 1.4 | 63.0 | 64.5 | 58.5 | Normal Operation |
| Sep-06 | 07-Sep-06 | NM2 | 13:00 | 13:30 | Fine | 1.6 | 68.0 | 68.2 | 64.0 | Normal Operation |
| Sep-06 | 07-Sep-06 | NM3 | 14:10 | 14:40 | Fine | 1.4 | 59.6 | 61.0 | 57.0 | Normal Operation |
| Sep-06 | 14-Sep-06 | NM1 | 13:45 | 14:15 | Cloudy | 1.9 | 64.1 | 66.0 | 61.5 | Normal Operation |
| Sep-06 | 14-Sep-06 | NM2 | 13:00 | 13:30 | Cloudy | 1.8 | 60.3 | 61.5 | 57.5 | Normal Operation |
| Sep-06 | 14-Sep-06 | NM3 | 14:40 | 15:10 | cloudy | 1.6 | 58.2 | 59.5 | 54.5 | Normal Operation |
| Sep-06 | 21-Sep-06 | NM1 | 14:15 | 14:45 | Sunny | 2.1 | 62.9 | 64.0 | 61.0 | Normal Operation |
| Sep-06 | 21-Sep-06 | NM2 | 13:29 | 13:59 | Sunny | 1.2 | 61.8 | 63.5 | 59.5 | Normal Operation |
| Sep-06 | 21-Sep-06 | NM3 | 15:15 | 15:45 | Sunny | 1.6 | 59.5 | 61.0 | 57.5 | Normal Operation |
| Sep-06 | 28-Sep-06 | NM1 | 09:24 | 09:54 | Sunny | 1.8 | 65.1 | 66.5 | 62.5 | Normal Operation |
| Sep-06 | 28-Sep-06 | NM2 | 10:08 | 10:38 | Sunny | 1.6 | 61.1 | 62.0 | 59.5 | Normal Operation |
| Sep-06 | 28-Sep-06 | NM3 | 11:06 | 11:36 | Sunny | 1.9 | 59.0 | 60.5 | 56.5 | Normal Operation |
| Oct-06 | 05-Oct-06 | NM1 | 14:55 | 15:25 | Fine | 1.5 | 64.8 | 66.0 | 63.0 | Normal Operation |
| Oct-06 | 05-Oct-06 | NM2 | 14:05 | 14:35 | Fine | 1.7 | 62.1 | 64.5 | 60.0 | Normal Operation |
| Oct-06 | 05-Oct-06 | NM3 | 16:05 | 16:35 | Fine | 1.6 | 60.1 | 61.0 | 57.5 | Normal Operation |
| Oct-06 | 13-Oct-06 | NM1 | 15:00 | 15:30 | Fine | 1.6 | 63.2 | 65.5 | 61.5 | Normal Operation |
| Oct-06 | 13-Oct-06 | NM2 | 14:05 | 14:35 | Fine | 1.8 | 65.2 | 67.0 | 61.0 | Normal Operation |
| Oct-06 | 13-Oct-06 | NM3 | 16:10 | 16:40 | Fine | 1.4 | 58.8 | 60.5 | 56.5 | Normal Operation |
| Oct-06 | 19-Oct-06 | NM1 | 14:35 | 15:05 | Fine | 1.4 | 63.3 | 64.5 | 61.5 | Normal Operation |
| Oct-06 | 19-Oct-06 | NM2 | 13:50 | 14:20 | Fine | 1.6 | 62.6 | 64.0 | 60.5 | Normal Operation |
| Oct-06 | 19-Oct-06 | NM3 | 15:45 | 16:15 | Fine | 1.3 | 60.6 | 61.5 | 58.0 | Normal Operation |
| Oct-06 | 26-Oct-06 | NM1 | 14:05 | 14:35 | Sunny | 1.5 | 66.8 | 68.0 | 63.5 | Normal Operation |
| Oct-06 | 26-Oct-06 | NM2 | 13:20 | 13:50 | Sunny | 1.1 | 61.2 | 62.5 | 59.5 | Normal Operation |
| Oct-06 | 26-Oct-06 | NM3 | 15:10 | 15:40 | Sunny | 1.3 | 60.9 | 62.0 | 59.0 | Normal Operation |

Details of Noise Impact Monitoring

| Month | Date | NSR No. | Time periods | | Weather condition | Avg. wind speed (m/s) | Noise Level dB(A) | | | Influencing factors/ Site condition |
|--------|-----------|---------|--------------|--------|-------------------|-----------------------|-------------------|-----------------|-----------------|--|
| | | | Start | Finish | | | L _{eq} | L ₁₀ | L ₉₀ | |
| Nov-06 | 02-Nov-06 | NM1 | 10:10 | 10:40 | Fine | 1.6 | 63.5 | 65.0 | 60.5 | Normal Operation |
| Nov-06 | 02-Nov-06 | NM2 | 09:15 | 09:45 | Fine | 1.7 | 62.3 | 64.5 | 60.0 | Normal Operation |
| Nov-06 | 02-Nov-06 | NM3 | 11:05 | 11:35 | Fine | 1.4 | 60.1 | 62.0 | 58.5 | Normal Operation |
| Nov-06 | 09-Nov-06 | NM1 | 10:15 | 10:45 | Sunny | 1.2 | 66.6 | 68.5 | 62.5 | Normal Operation |
| Nov-06 | 09-Nov-06 | NM2 | 09:30 | 10:00 | Sunny | 1.3 | 60.7 | 61.5 | 59.5 | Normal Operation |
| Nov-06 | 09-Nov-06 | NM3 | 11:28 | 11:58 | Sunny | 1.2 | 56.4 | 58.0 | 54.0 | Normal Operation |
| Nov-06 | 16-Nov-06 | NM1 | 14:10 | 14:40 | Fine | 1.4 | 64.2 | 65.5 | 62.0 | Normal Operation |
| Nov-06 | 16-Nov-06 | NM2 | 13:30 | 14:00 | Fine | 1.2 | 61.6 | 62.5 | 59.5 | Normal Operation |
| Nov-06 | 16-Nov-06 | NM3 | 15:05 | 15:35 | Fine | 1.6 | 58.3 | 59.0 | 55.0 | Normal Operation |
| Nov-06 | 23-Nov-06 | NM1 | 13:55 | 14:25 | cloudy | 1.7 | 65.5 | 67.5 | 62.5 | Normal Operation |
| Nov-06 | 23-Nov-06 | NM2 | 13:15 | 13:45 | cloudy | 1.6 | 62.2 | 63.5 | 60.5 | Normal Operation |
| Nov-06 | 23-Nov-06 | NM3 | 15:10 | 15:40 | cloudy | 1.4 | 59.6 | 60.5 | 56.5 | Normal Operation |
| Nov-06 | 30-Nov-06 | NM1 | 09:55 | 10:25 | Fine | 1.7 | 64.8 | 66.5 | 62.0 | Normal Operation |
| Nov-06 | 30-Nov-06 | NM2 | 09:10 | 09:40 | Fine | 1.8 | 61.8 | 63.0 | 60.0 | Normal Operation |
| Nov-06 | 30-Nov-06 | NM3 | 11:10 | 11:40 | Fine | 1.5 | 59.1 | 60.0 | 56.0 | Normal Operation |
| Dec-06 | 07-Dec-06 | NM1 | 10:25 | 10:55 | Fine | 1.6 | 62.0 | 63.2 | 59.5 | Normal Operation |
| Dec-06 | 07-Dec-06 | NM2 | 11:10 | 11:40 | Fine | 1.6 | 62.5 | 63.5 | 61.0 | Normal Operation |
| Dec-06 | 07-Dec-06 | NM3 | 09:30 | 10:00 | Fine | 1.4 | 57.9 | 58.5 | 56.0 | Normal Operation |
| Dec-06 | 14-Dec-06 | NM1 | 10:15 | 10:45 | Cloudy | 1.9 | 62.5 | 63.5 | 59.5 | Normal Operation |
| Dec-06 | 14-Dec-06 | NM2 | 09:30 | 10:00 | Cloudy | 2.1 | 63.5 | 64.0 | 62.0 | Normal Operation |
| Dec-06 | 14-Dec-06 | NM3 | 11:45 | 12:15 | Cloudy | 2.6 | 58.5 | 59.0 | 57.5 | Normal Operation |
| Dec-06 | 21-Dec-06 | NM1 | 10:50 | 11:20 | Fine | 1.8 | 62.5 | 63.0 | 59.0 | Normal Operation |
| Dec-06 | 21-Dec-06 | NM2 | 11:30 | 12:00 | Fine | 1.7 | 64.0 | 65.2 | 59.5 | Normal Operation |
| Dec-06 | 21-Dec-06 | NM3 | 10:00 | 10:30 | Fine | 1.9 | 56.4 | 57.0 | 55.0 | Normal Operation |
| Dec-06 | 28-Dec-06 | NM1 | 10:00 | 10:30 | Sunny | 3.1 | 63.5 | 65.5 | 60.0 | Normal Operation |
| Dec-06 | 28-Dec-06 | NM2 | 09:15 | 09:45 | Sunny | 2.6 | 62.7 | 64.5 | 60.0 | Normal Operation |
| Dec-06 | 28-Dec-06 | NM3 | 11:08 | 11:38 | Sunny | 1.9 | 58.5 | 57.5 | 53.5 | Normal Operation |

Appendix F

**Landscape and visual
monitoring and audit
report**

1. Monitoring results

1.1 Landscape and Visual

Landscape resource changes related to the site clearance work comprise of the loss of turf and trees. Visual impacts arising from the concrete walls of the stables surrounding construction activities become apparent. This impact is expected to be greatly mitigated and reduced when the stable walls are finished.

1.2 Environmental Site Auditing

Landscape and visual monitoring and site audits were carried out on 5th and 19th December 2006. Stable construction works were undergoing.

All transplanted trees were generally in fair condition. Retained and transplanted trees were protected and fenced off with bamboo fencing. The retained trees were generally in fair condition. More frequent watering is recommended in the dry season.

1.3 Implementation Statuses of Landscape and Visual Impact Measures

The implementation statuses of environmental protection requirements are summarized in the following table.

Table 1.1 Implementation Statuses of Landscape and Visual Impact Measures

| EIA Ref | EM&A Ref | Environmental Protection Measures* | Location / Timing | Implementation Agent | Implementa tion Stages ** | | | Implementation Status | Relevant Legislation & Guidelines |
|--|----------|---|-----------------------|-------------------------|---------------------------------|---|---|--|---|
| | | | | | C | O | R | | |
| Landscape and Visual Impact - Construction Phase | | | | | | | | | |
| Table 7.31 | MC1 | Site offices, construction yard and holding nursery: <ul style="list-style-type: none">• Site offices and the construction yard shall be decommissioned after construction.• Construction roads shall be decommissioned and landscape areas be restored to its original or newly proposed state.• The holding nursery for decorative plants at show jumps shall be decommissioned after the Olympic events. | At concealed location | HKJC's Contractor | x | | x | Construction: To commence. Reinstatement: To commence | Nil. |
| Table 7.31 | MC 2 | Height of site offices: <ul style="list-style-type: none">▪ The height of site offices shall be controlled in order to avoid visual impacts. | At concealed location | HKJC's Contractor | x | | x | Construction: Complied. Reinstatement: To commence. | Nil. |

| | | | | | | | | | |
|---------------|------|---|---|-------------------|---|--|---|---|------|
| Table 7.31 | MC 3 | Hoarding and screening: <ul style="list-style-type: none"> Where practical the site offices areas, construction yards and storage areas shall be screened with decorative hoarding or vegetation around the peripheries until the completion of relevant construction phases. | Site offices, construction yards and storage areas. | HKJC's Contractor | x | | x | Construction: Complied. Reinstatement: To commence | Nil. |
| Table 7.31 | MC 4 | Construction plant and building material: <ul style="list-style-type: none"> Shall be orderly and carefully stored in order to appear neat and avoid visibility from outside where practical; Excess materials shall be removed from site as soon as practical; and All construction plant shall be removed from site upon completion of construction works. | All areas with construction plant and building material | HKJC's Contractor | x | | x | Construction: Complied. Reinstatement: To commence | Nil. |
| Table 7.31 | MC 5 | Construction light: <ul style="list-style-type: none"> To be oriented away from the viewing location of VSRs; and All construction lights shall have frosted diffusers and reflective covers. | All construction lights | HKJC's Contractor | x | | x | No construction lights at present. | Nil. |

| | | | | | | | | | |
|---------------|------|---|--|----------------------|---|--|---|--|------|
| Table 7.31 | MC 6 | Vegetation: <ul style="list-style-type: none"> Temporary construction sites shall be restored to standards as good as, or better than, the original condition; The potential for soil erosion shall be reduced at the construction stage by minimizing the extent of vegetation disturbance on site and by providing a protective cover over exposed ground; and No construction equipment or building materials shall be stored under the dripline of retained trees and no vehicle movement or other construction activities like washing, concrete mixing etc shall be carried out under the dripline of trees. | Affected vegetation areas | HKJC's Contractor | x | | x | Construction: Retain and transplant trees have been fenced off. No material or equivalent are stored under the dripline of tree. Complied. Reinstatement: To commence. | Nil. |
| Table 7.31 | MT 1 | Compensation for losses: <ul style="list-style-type: none"> The tree compensation to tree loss ratio shall be 1:2; and At least 82 new trees of light standard or larger size shall be planted. | At available areas suitable for healthy tree growth | HKJC's Contractor | x | | x | Construction: To commence. Reinstatement: To commence. | Nil. |

| | | | | | | | | | |
|------------|------|--|---|-------------------|---|--|---|---|---|
| Table 7.31 | MT 2 | The majority of compensation species shall comprise of species that already occurs within the LIA boundaries. | General | HKJC's Contractor | x | | x | Construction: To commence. Reinstatement: To commence. | Nil. |
| Table 7.31 | MT 3 | Where practical, trees that require removal shall be transplanted on Site. | At available areas suitable for healthy tree growth | HKJC's Contractor | x | | x | Construction: Some trees have been transplanted. Reinstatement: To commence. | ETWB TCW NO. 2/2004, WBTC No. 3/2006 BD PNAP No. 267 |
| Table 7.31 | MT 4 | Planting Works: <ul style="list-style-type: none"> New trees, bamboos and shrubs shall be planted in groups in order to screen visual impacts and to provide additional shade. | At available areas suitable for healthy tree growth and along approach footpath | HKJC's Contractor | x | | x | Construction: To commence. Reinstatement: To commence. | Nil. |

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| Table 7.31 | MT 5 | <p>Tree Planting on Slopes:</p> <ul style="list-style-type: none"> New slopes with a gradient larger than 30° shall have shrub, groundcover or grass planting. | On affected slopes | HKJC's Contractor | x | | x | <p>Construction: To commence.</p> <p>Reinstatement: To commence</p> | <p>WBTC No. 17/2000</p> <p>WBTC No. 25/93</p> <p>BD PNAP No. 270</p> |
| Table 7.31 | MT 6 | <p>Tree Preservation:</p> <ul style="list-style-type: none"> No tree shall be transplanted or felled without prior approval by relevant Government departments; All trees that are marked for retention shall be fenced off with a 1.2m high fence; and Transplant preparation works shall be carried out as soon as possible after commencement of construction. Rootball and crown pruning shall be carried out over a period of at least 1 month. | At existing locations of retained trees and transplantation areas, which should be suitable for healthy tree growth. | HKJC's Contractor | x | | x | <p>Construction: Tree protection has been recorded.</p> <p>Reinstatement: To commence.</p> | Nil |
| Table 7.31 | MT 7 | Existing shrub and ground cover planting areas that will not be removed shall be maintained in good | All retained planting areas | HKJC's Contractor | x | | x | <p>Construction: Complied.</p> | Nil |

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| | | condition and enhanced where practical. | | HKJC's Contractor HKJC's Contractor | | | | Reinstatement: To commence. | |
| | MS 8 | Site formation works at slopes shall be followed with hydroseeding as soon as practical or be covered with shrubs and groundcovers. | Slope areas | Event Operator HKJC's Contractor | x | | x | Construction: To commence. Reinstatement: To commence | Nil |
| Table 7.31 | MS 9 | Grassing shall be carried out as soon as practical after construction of footing stratum at one of the General Training Arenas. | General Training Arena | Event Operator | x | | | Construction: To commence. Reinstatement: To commence | Nil. |
| Table 7.31 | MF 1 | All floodlight units on the floodlight poles shall be properly aimed at the competition and practice areas of the Main and Warm-up arenas. In this regards, the central light focus of each floodlight unit shall always be aimed on the arena areas and not on any other adjacent area. | Main Arena and Warm-up Arena | HKJC's Contractor | | x | x | Operation: To commence. Reinstatement: To commence. | Nil. |

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| Table 7.31 | MF 2 | Each floodlight unit shall have a built-in anti-glare baffle and visor shield to limit the glare. | Main Arena and Warm-up Arena | HKJC's Contractor | x | | | Construction: To commence. | Nil. |
| Table 7.31 | MF 3 | Operational hours of the floodlights shall be restricted to competition hours only. Floodlights shall be turned off when spectators have left the seating area. | Main Arena and Warm-up Arena | Event Operator | | x | x | Operation: To commence. Reinstatement: To commence. | Nil. |

* All recommendations and requirements resulted during the course of EIA Process, including ACE and/or accepted public comment to the proposed project.

** C=Construction, O=Operation R=Reinstatement

N/A Not applicable

2. Recommendations and Conclusion

More frequent watering of transplanted trees is recommended during the dry season.

Appendix G

Log records and details of environmental complaints

Log Record on Environmental Complaints

| No. | Date of Complaint Received | Description | Investigation Result and Proposed Actions | Completion Date | Remarks |
|-----|----------------------------|---|--|-----------------|--|
| 001 | 28 Aug 2006 | Discharge of muddy water into Shing Mun River | <p>No evidence had shown the source of the muddy water discharge from subjected site. In fact, there were three main contractors working inside the HKSI area and all share the same discharge outlet. However, contractor had carried out the following measures to prevent any further discharge of muddy water from the subject site areas:</p> <ol style="list-style-type: none"> 1. Keep closely checking on the performance of the wastewater treatment system; 2. Closely monitoring of the discharge outlet at Shing Mun River and tracing of the source origin immediately if muddy water was observed; 3. Made use of the shallow ground areas on site to temporary trap stormwater inside the site to prevent any direct discharge; 4. Construction of temporary drainage channel and use of water pump to properly divert the trapped stormwater to the temporary sump pit; 5. Control pumping of all muddy water collected from the sump pit to the wastewater treatment plant within its treatment capacity before discharging. | 1 Sept 2006 | EPD inspected the site drainage system on 1 Sept 2006 and was satisfied. |

| No. | Date of Complaint Received | Description | Investigation Result and Proposed Actions | Completion Date | Remarks |
|-----|----------------------------|---|---|-----------------|---------|
| 002 | 8 Nov 2006 | Construction Noise generated from area at HKSI on 5 Nov 2006 (Sunday) | Rectification action: <ol style="list-style-type: none"> 1. Introduction of the Permit to Work system for works to be carried out during restricted hours. 2. Consider to apply for a more realistic CNP for the construction works. | 12 Nov 2006 | |
| 003 | 9 Nov 2006 | Dust nuisance from construction site of HKSI | Rectification action: <ol style="list-style-type: none"> 1. Avoid stockpile of dusty materials on site. 2. Compact the exposed areas when watering on these areas is not effective. | 9 Nov 2006 | |
| 004 | 15 Nov 2006 | Dump trucks not covering their load were found at the dumping sites | Rectification action: <ol style="list-style-type: none"> 1. Enhancement of the current checking system at vehicular entrance by security personnel. 2. Give warning to subcontractors and establish penalty measures. 3. Give warning to the security company for the site and request them to enhance the checking system for every dump truck leaving the site. | 17 Nov 2006 | |