

Hong Kong Jockey Club

**Main Arena of the 2008
Olympic Equestrian
Event**

Environmental Baseline
Monitoring Report

DRAFT 1

Hong Kong Jockey Club

**Main Arena of the 2008
Olympic Equestrian
Event**

Environmental Baseline
Monitoring Report

July 2006

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

Job number



INDEPENDENT ENVIRONMENTAL CHECKER CHECK CERTIFICATE

**Independent Environmental Checker for
Main Arena of the 2008 Olympic Equestrian Event
Revised Environmental Baseline Monitoring Report**

We confirm having used reasonable skill and care in the preparation of the revised Environmental Baseline Monitoring Report and we certify that we can verify the report.

Signed:

Independent Environmental Checker
H. J. Cochrane
Director and IEC

PP




Date:

13TH JULY 2006

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Contents

	Page
Executive Summary	1
1 Introduction	2
1.1 Project Background	2
1.2 Purpose of this Report	3
2 Baseline Monitoring Methodology	3
2.1 Noise	3
2.2 Landscape and Visual	5
3 Baseline Monitoring Results	5
3.1 Noise	5
3.2 Landscape and Visual	8
4 Action and Limit Levels	9
4.1 Construction Noise	9
4.2 Operational Noise	10
5 Comments and Conclusions	11

Appendices

Appendix A

Calibration certificates for noise monitoring equipment

Appendix B

Baseline Environmental Monitoring Schedule

Appendix C

Detailed noise monitoring results

Appendix D

Figures on Landscape Resources

Appendix E

Figures on Landscape Character Area

Appendix F

Figures on Visual Sensitive Receivers

Executive Summary

The environmental baseline monitoring for the Main Arena of the 2008 Olympic Equestrian Event was conducted between 23 June and 6 July 2006 at three noise monitoring locations. Noise was measured in terms of $L_{eq, 30min}$ dB(A) with L_{10} and L_{90} measurement as reference. The weather during the baseline monitoring period was mainly sunny and fine with occasional rainfall.

Baseline noise monitoring was conducted during daytime (0700-1900) continuously for two consecutive weeks on weekdays and Saturday and at restricted hours (i.e. 1900-2300, 2300-0700 and public holiday including Sunday). The highest noise level was recorded at NM1 during daytime.

The landscape and visual baseline conditions of the site remain largely unchanged in comparison with data recorded in the approved EIA report. Confirmatory monitoring was carried out in June 2006. The condition of trees also remains unchanged as per the August 2005 survey. A tree felling and transplantation application was approved by DLO on 30 May 2006 (ref: (24) in L/M (2) in LND/ST 112/165). Illumination level of floodlights during a normal racing event at the Shatin Racecourse was taken in June 2006.

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:

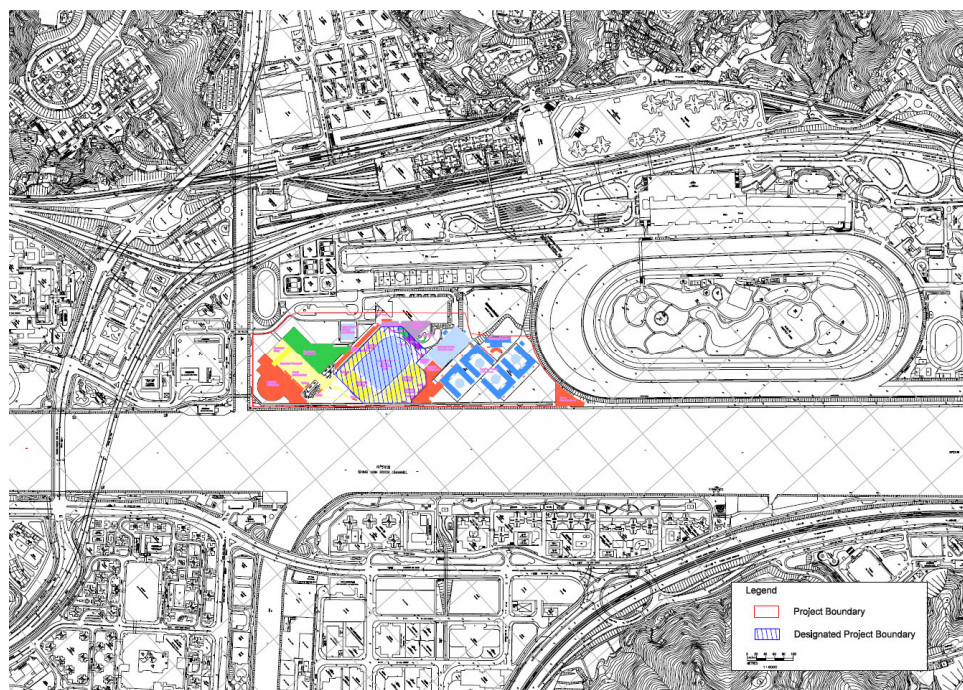
- Main Competition Arena for 20,000 spectators
- Stable Complex
- Training Arenas
- Logistic Compound
- Spectator Entry & Broadcast Compound
- Food & Merchandise

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 shows the site location plan of the project.

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 Purpose of this Report

Environmental baseline monitoring for noise and landscape and visual was undertaken in accordance with the requirements of the approved Environmental Monitoring and Audit (EM&A) Manual (EPD's letter ref: (41) in EP2/N1/O//43 Pt.2) and Permit Conditions as specified in the EP (EP-236/2006) prior to the commencement of any construction activities on site. The purpose of this report is to summarise the findings of the baseline monitoring. This report also provides information on the monitoring methodology, monitoring results, action and limit levels and conclusion.

2 Baseline Monitoring Methodology

2.1 Noise

2.1.1 Methodology, Monitoring Parameters and Equipment

Baseline noise level was measured by sound level meters in terms of A-weighted equivalent continuous sound pressure level (L_{eq}) according to the Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM). L_{10} and L_{90} were recorded as supplementary information for data auditing. The sound level meters and calibrators comply with the International Electrotechnical Commission (IEC) Publication 651:1979 (Type 1) specification in accordance with GW-TM. The calibration certificates for the noise monitoring equipment are given in Appendix A. Table 2-1 summarises the equipment list for baseline noise monitoring.

Table 2-1: Equipment list for baseline noise monitoring

Equipment	Manufacturer & Model No.	Precision Grade	Qty.
Integrated sound level meter	Brüel & Kjær 2238	IEC 651 Type 1	3
Windshield	Brüel & Kjær UA0237	IEC 804 Type 1	3
Acoustical calibrator	Brüel & Kjær 4231	IEC 942 Type 1	1
Acoustical calibrator	Brüel & Kjær 4226		1
LCD wind speed indicator	Kestrel Vane Anemometer	--	1

Noise measurements were omitted in the presence of fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s. The wind speed was checked with a portable meter capable of measurement in m/s. The monitoring station was normally set at a point 1m from the exterior of the sensitive receivers building facade and at 1.2m above the ground.

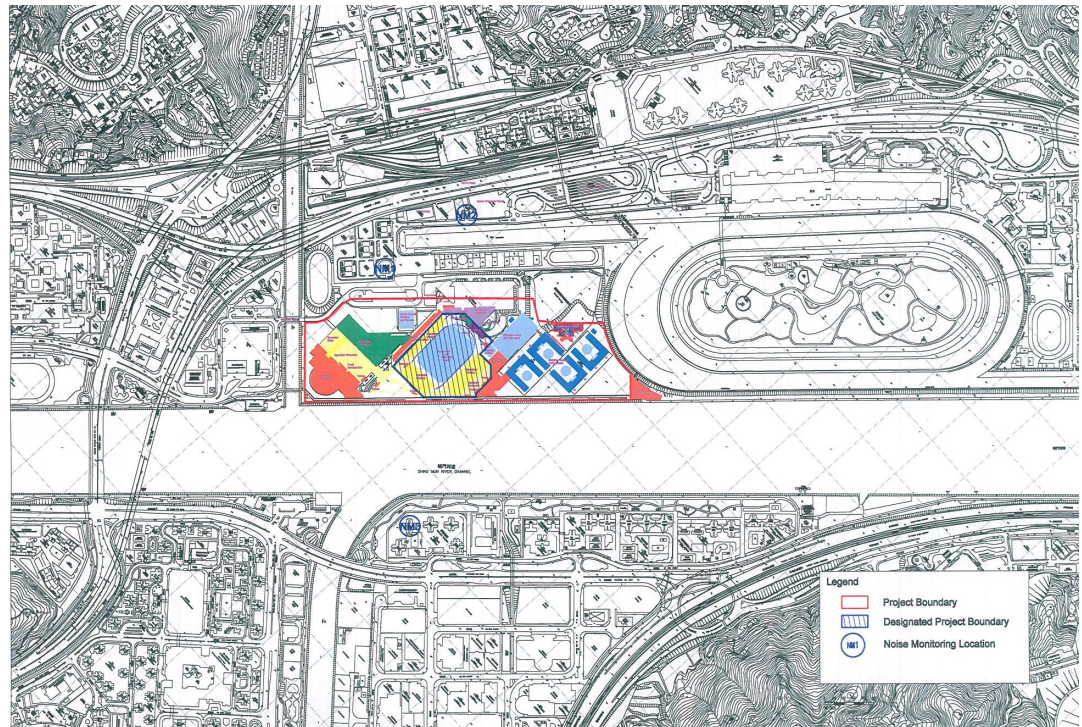
2.1.2 Monitoring Locations

The EM&A Manual specified 3 locations for noise monitoring as summarised in Table 2-2 and shown in Figure 2-1.

Table 2-2: Baseline noise monitoring locations

	Name of Premises	Site Description	Monitoring Period	Equipment Deployed
NM1	Chung Cheung Court, HKJC Staff Quarter	On the roof of Chun Cheung Court	22 June – 6 July	Brüel & Kjær 2238
NM2	Racecourse Villa	On the roof of Racecourse Villa	22 June – 6 July	Brüel & Kjær 2238
NM3	Ravana Garden	On the podium near Block 1	22 June – 6 July	Brüel & Kjær 2238

Figure 2-1: Noise monitoring locations



2.1.3 Monitoring Frequency

Baseline noise monitoring for daytime (0700 – 1900) was conducted continuously for two consecutive weeks on weekdays and Saturday. The measurement parameters were $L_{eq(30min)}$, L_{10} and L_{90} . Monitoring at restricted hours (i.e. 1900 – 2300, 2300 – 0700 and public holiday including Sunday) was conducted in three consecutive 5-minute intervals during each respective period. The measurement parameters were $L_{eq(5min)}$, L_{10} and L_{90} .

The monitoring period was between 23 June and 6 July 2006. The exact dates of the monitoring are summarised in Appendix B.

2.2 Landscape and Visual

Baseline landscape and visual survey comprises field inspection of the landscape character areas (LCAs), landscape resources (LRs), visual sensitive receivers (VSRs) and illumination level measurement of the operating floodlights at the Shatin Racecourse.

Confirmatory site surveys were conducted in June. It was found that the condition of landscape and visual receivers remains unchanged compared to records of the approved EIA. The protection of trees is particularly important and detailed condition data is presented in Appendix D. Illumination levels of the floodlights at the Shatin Racecourse, taken in June 2006 as required under Clause 4.9 of the EP, was measured with a light meter. A total of 26 readings was taken along the pavilion-end of the 1000m chute.

3 Baseline Monitoring Results

3.1 Noise

3.1.1 Weather Conditions and Other Factors

Noise monitoring was conducted between 23 June to 6 July 2006. The weather was mainly sunny and fine with occasional rainfall during the baseline monitoring period. Major noise sources were observed to originate from traffic activities along Tai Po Road – Sha Tin at NM1 and NM2. The noise levels were also occasionally influenced by existing construction activities in HKSI which is outside the boundary of this project.

3.1.2 Summary Results

Noise monitoring results are summarised in Tables 3-1 and 3-2 for different monitoring periods, and details are attached in Appendix C. Graphical presentations are shown in Figures 3-1 to 3-2.

Table 3-1: Summary of baseline noise monitoring results in non-restricted period

Period	Monitoring Station	$L_{eq(30min)}$ - dB(A) Log average (Range)	$L_{10(30min)}$ - dB(A) Log average (Range)	$L_{90(30min)}$ - dB(A) Log average (Range)
0700 - 1900 (Weekday - Daytime)	NM1	66.4 (60.2 - 78.6)	69.0 (60.8 - 83.0)	61.0 (58.7 - 66.7)
	NM2	64.1 (60.7 - 81.4)	65.6 (61.4 - 85.7)	61.2 (58.6 - 67.4)
	NM3	57.9 (53.8 - 79.9)	59.2 (54.5 - 84.1)	55.6 (52.5 - 68.8)

Table 3-2: Summary of baseline noise monitoring results in restricted period

Period	Monitoring Station	$L_{eq(5min)}$ - dB(A) Log average (Range)	$L_{10(5min)}$ - dB(A) Log average (Range)	$L_{90(5min)}$ - dB(A) Log average (Range)
1900 - 2300 (Weekday - Evening)	NM1	60.0 (58.7 - 64.7)	60.9 (59.5 - 68.5)	58.4 (57.5 - 60.0)
	NM2	60.5 (59.3 - 62.2)	61.6 (60.0 - 63.5)	58.6 (57.5 - 59.5)
	NM3	55.8 (54.1 - 58.0)	56.6 (54.5 - 59.0)	54.4 (53.0 - 55.5)

Period	Monitoring Station	$L_{eq(5min)}$ - dB(A) Log average (Range)	$L_{10(5min)}$ - dB(A) Log average (Range)	$L_{90(5min)}$ - dB(A) Log average (Range)
2300 - 0700 (Weekday - Night-time)	NM1	55.3 (53.3 - 58.8)	56.5 (54.0 - 61.0)	53.1 (51.5 - 55.5)
	NM2	57.8 (56.0 - 60.1)	59.1 (57.0 - 61.5)	55.7 (54.0 - 56.5)
	NM3	50.6 (49.1 - 53.5)	51.5 (49.5 - 55.0)	49.4 (48.5 - 51.0)
Sunday & Public Holiday	NM1	60.6 (53.3 - 70.7)	62.2 (54.0 - 75.0)	57.5 (52.0 - 60.5)
	NM2	60.4 (56.7 - 63.6)	61.7 (58.0 - 65.5)	58.2 (55.0 - 60.5)
	NM3	54.2(49.7 - 57.1)	55.0 (50.0 - 59.0)	52.8 (49.0 - 55.5)

Figure 1: Baseline noise monitoring result (weekday-daytime)

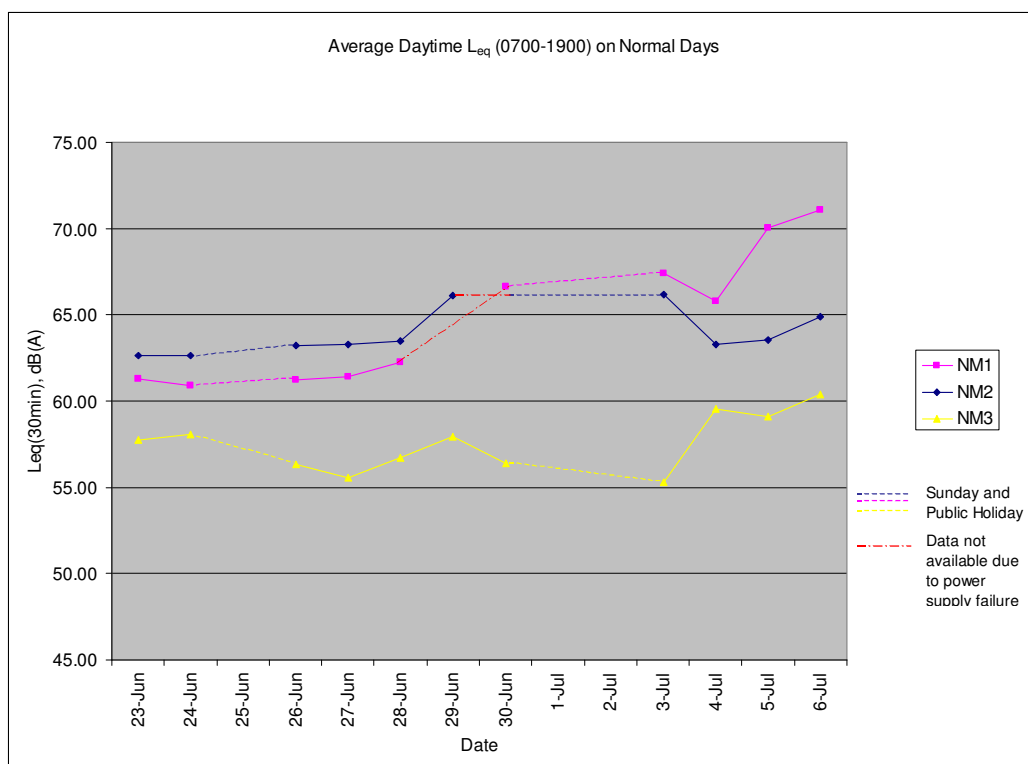


Figure 2: Baseline noise monitoring result (weekday-evening)

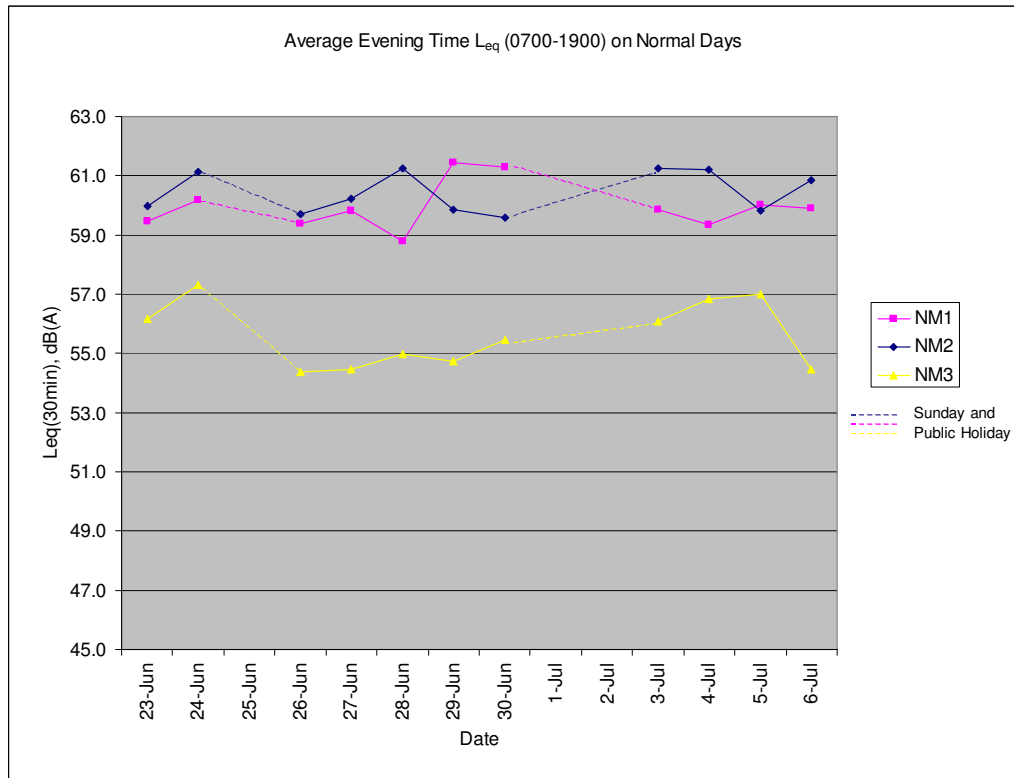


Figure 3: Baseline noise monitoring result (weekday-night-time)

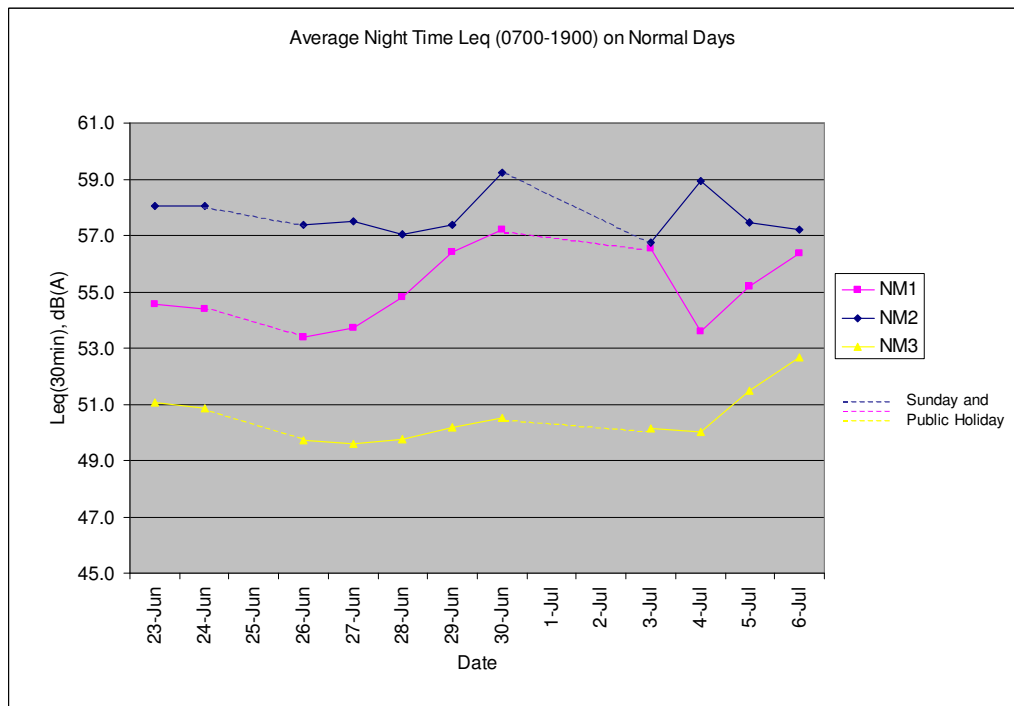
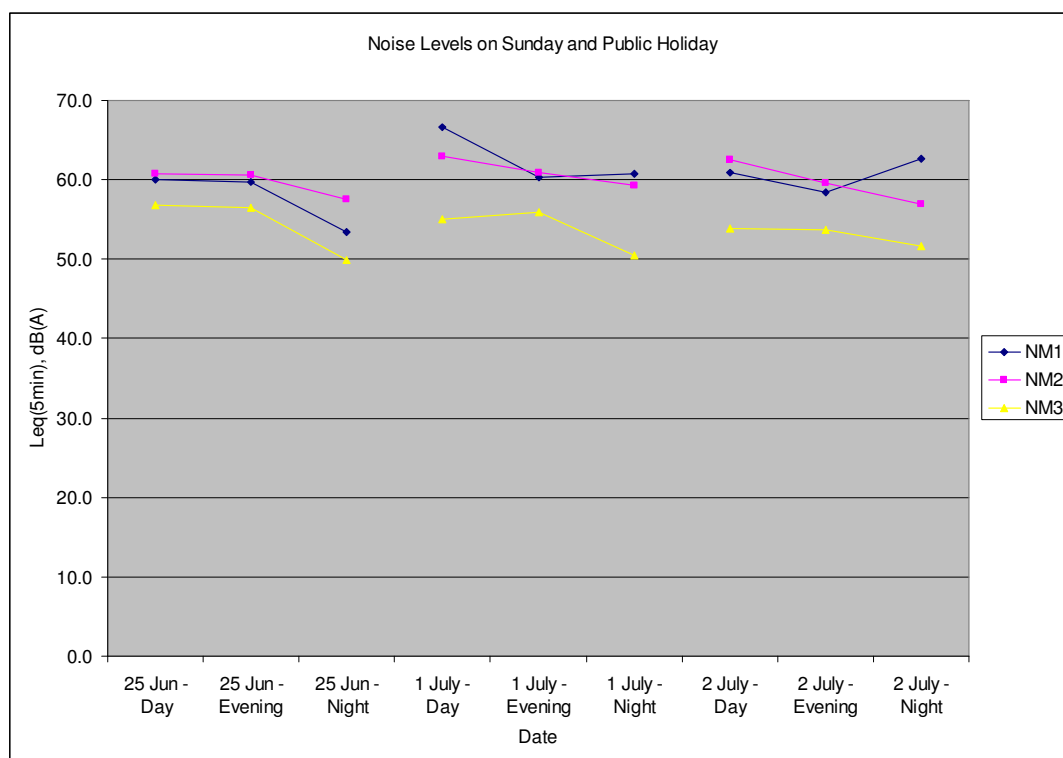


Figure 4: Baseline noise monitoring result (public holiday and Sunday)



3.2 Landscape and Visual

3.2.1 Landscape Resources

The principle landscape resources are mapped on Drawing No. D1 with photographs on Drawing Nos. D2 and D3. Drawing Nos. D4 – D7 illustrates the location and approved treatment of trees. The condition and outlook of these are similar to records in the approved EIA. It should be noted from the schedule that DLO has approved the felling of 26 live trees and 6 dead trees on 30 May 2006. Turf areas at the previous golf driving range were cleared in early 2006 for works associated with a non-DP area of the HKSJ site.

3.2.2 Landscape Character Areas

Landscape Character Areas (LCA) are mapped on Drawing No. E1 and are further illustrated on Drawing Nos. E2 and E3. The outlook of character areas remains largely unchanged compared with records in the approved EIA report, except for LCA 1, the Sports Complex LCA, which has been subject to site formation works at the previous golf driving range, which is not a DP area. Works carried out in this area is for grass and sand training arenas.

3.2.3 Visual Baseline Conditions

Drawing No. F1 illustrates the project boundary, the visual envelope and the location of VSRs. Drawing Nos. F2 and F3 further illustrate the views from these VSRs. The quality and outlook of these views remain unchanged compared with the approved EIA. Works carried out at the previous golf driving range have little effect on the VSRs.

3.2.4 Existing Illumination Level at Shatin Racecourse

The highest recorded illumination level along pavilion-end of the 1000m chute at Shatin Racecourse was 3430 lux and the lowest was 520 lux. The average reading is 860 lux.

4 Action and Limit Levels

4.1 Construction Noise

Action and Limit (A/L) Levels for construction noise are defined in the EM&A Manual and summarised in Table 4-1 below.

Table 4-1: Action and limit levels for construction noise

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB(A)
0700-2300 hrs on holidays; and 1900-2300 hrs on all other days		65 dB(A)
2300-0700 hrs of next day		50 dB(A)

Should non-compliance of the criteria occur, actions in accordance with the Event/Action Plan in Table 4-2 shall be carried out.

Table 4-2: Event/Action plan for airborne construction noise

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 	<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.

Event	Action			
	ET Leader	IEC	ER	Contractor
	additional monitoring 9. Report the results of investigation to the IEC, EPD and ER.			

4.2 Operational Noise

The A/L levels for operational noise were defined in the EM&A Manual. The Limit Levels have been adjusted to account for the measured background noise levels and are summarised in Table 4-3 below.

Table 4-3: Action and limit levels for operational noise

Location	Time Period	Action	Limit Level in EM&A Manual (dB(A))	Average Background Noise Level (dB(A))	Adjusted Limit Level (dB(A)) ⁽¹⁾
NM1	Day & evening	When one documented complaint is received	59	64	67
	Night		50	55	58
NM2	Day & evening		55	63	66
	Night		50	58	61
NM3	Day & evening		57	57	60
	Night		50	51	54

Note: 1. The adjusted Limit Levels were derived by adding 3 dB(A) to the measured background noise levels.

Should non-compliance of the criteria occur, actions in accordance with the Action Plan in Table 4-4 shall be carried out.

Table 4-4: Event/Action plan for operational noise

Event	Action		
	EMA(O)	IEC	Operator
Action Level	<ol style="list-style-type: none"> 1. Notify the operator and IEC within 24 hours of identification of the exceedance. 2. Identify the noise source. 3. Report the results of investigation to IEC and Operator. 4. Discuss with the Operator and formulate remedial measures. 	<ol style="list-style-type: none"> 1. Review with analysed results submitted by EMA(O). 2. Review the proposed remedial measures by the Operator. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. In consultation with IEC, develop proposals for remedial actions within three working days of notification 3. Amend proposals if required by the IEC 4. Implement remedial actions immediately upon agreement with IEC.

Limit Level	<ol style="list-style-type: none"> 1. Identify the source. 2. Notify the IEC, EPD and Operator within 24 hours of identification of the exceedance. 3. In combination with the Operator identify the exact reason for the exceedance 4. Repeat measurement to confirm findings 5. Assess the efficiency of the Operator's remedial actions and keep the Operator, EPD and IEC informed. 6. Report the results of investigation to the IEC, EPD and Operator. 	<ol style="list-style-type: none"> 1. Discuss with EMA(O) and the Operator on the potential remedial actions. 2. Review the Operator's remedial actions whenever necessary to assure their effectiveness. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Advise IEC of remedial proposals within one working day of notification. 3. Amend proposals if required by the IEC. 4. Implement remedial actions immediately upon agreement with IEC. 5. Instruct EMA(O) to assess efficiency of remedial actions.
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5 Comments and Conclusions

Baseline monitoring was carried out between 23 June and 6 July 2006 encompassing 3 noise monitoring locations and a baseline landscape survey. The weather during the baseline monitoring period was generally sunny and fine, with occasional rainfall. The average daytime noise levels at NM1, NM2 and NM3 were 66.4 dB(A), 64.1 dB(A) and 57.9 dB(A) respectively. The average evening time noise levels at NM1, NM2 and NM3 were 60.0 dB(A), 60.5 dB(A) and 55.8 dB(A) respectively. The average night time noise levels at NM1, NM2 and NM3 were 55.3 dB(A), 57.8 dB(A) and 50.6 dB(A) respectively. The average noise levels during Sunday and public holiday at NM1, NM2 and NM3 were 60.6 dB(A), 60.4 dB(A) and 54.2 dB(A) respectively.

It can be concluded from the baseline noise monitoring that NM1 and NM2 have similar daytime, evening time and night time noise levels while the respective noise levels at NM3 are generally lower. The noise levels at NM1 and NM2 are mainly influenced by the traffic flow along Tai Po Road –Shatin and the construction activities within HKSI. No major influencing factor has been identified for NM3.

The quality of landscape and visual environments remains largely unchanged when compared with the approved EIA report.

Appendix A

**Calibration certificates
for noise monitoring
equipment**

CERTIFICATE OF CALIBRATION

Issued by: Brüel & Kjær UK Ltd.

Date of Issue: **21 SEP 2005** Certificate Number: **14260**

0174

Brüel & Kjær 

Bedford House, Rutherford Close, Stevenage.
Hertfordshire. SG1 2ND
Telephone: 01438 739100 Fax.: 01438 739199
E-Mail : ukservice@bksv.com

Page 1 of 4 pages

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

Page 2 of 4 pages

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

CERTIFICATE OF CALIBRATION

UKAS Accredited Calibration Laboratory No. 0174

Certificate Number

14260

Page 3 of 4 pages

Expanded uncertainty of calibration:

Sound Pressure Level: ± 0.15 dB from 31.5 Hz to 2 kHz,
 ± 0.20 dB at 4 kHz and 8 kHz,
 ± 0.25 dB at 12.5 kHz

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 ± 0.15 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 ± 0.3 dB.

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Certificate Number

14260

Page 4 of 4 pages

Free Field and Random settings

Freq. Hz	Free Field Setting						Random	
	Microphone Group a		Microphone Group b		Microphone Group c		Microphone Group b	
	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*



CERTIFICATE OF CALIBRATION

Certificate No. : 2KS050708-1

Page 1 of 2

Calibration of :

Description : Acoustical Calibrator
Manufacture : Brüel & Kjær
Type No. : 4231
Serial No. : 2314016

Client :

ARUP Acoustic Consultant
Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon

Calibration Conditions :

Air Temperature : 23 °C
Air Pressure : 100.9 kPa
Relative Humidity : 56 %

Test Specifications :

The Acoustical Calibrator has been calibrated in accordance with the documented procedures and using standard(s) and instrument(s) which are recommended by Brüel & Kjær, or equivalent. The standard(s) and instrument(s) used in the calibration are traceable to international standard and are calibrated on a schedule which is adjusted to maintain the required accuracy level.

Test Result :

A list of the performed (sub) tests is stated on page 2 of this certificate. Actual Measurement are documented on worksheet.

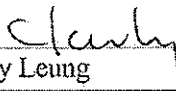
Date of Calibration : 27 July, 2005

Certificate issued : 28 July, 2005

Calibrated By :

Approved signatory :


Fox Ng


Jacky Leung

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.

CERTIFICATE OF CALIBRATION

Certificate No. : 2KS050708-1

Page 2 of 2

Results :

List of performed (sub) test with test status:

“OK” Means the result of the (sub)test is Inside the tolerances stated in the test specifications.

“ - ” Means the result of the (sub)test is Outside these tolerances.

Test :	Subtest :	Status :
SPL	94 dB SPL	OK
	114 dB SPL	OK
Frequency		OK
2nd Harmonic		OK

Calibration Equipment :

<i>Description :</i>	<i>Make & Model :</i>	<i>Serial No. :</i>	<i>Last Cal. Date :</i>	<i>Traceable to:</i>
Digital Multi-meter	Datron 1281	27361	28 Sep., 2004	HKSCS(HOKLAS)
Frequency Counter	Philips PM6671	SM 6043	23 Sep., 2004	HKSCS(HOKLAS)
Acoustical Calibrator	B&K 4226	1843103	11 Jul., 2005	NPL via B&K (DANAK)

Calibrated By : *Paul Ng*
Date : 27 July, 2005

Checked By : *Henry*
Date : 28 July, 2005

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong, Kowloon
HONG KONG

AAc Certificate No. 2005006

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: 26 September 2005

Carried out by: Steven Wong

Approved by: William Ng

Signature: *Steven Wong*

Signature: *William Ng*

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. 2005007

Fax: +852 2268 3950

Tel: +852 2268 3216

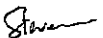
CERTIFICATE OF CONFORMITY

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

Date of Test: 26 September 2005

Carried out by: Steven Wong

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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Kowloon Tong, Kowloon
HONG KONG

AAc Certificate No. 2005005

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	2320707
Brüel & Kjær ½ " Microphone Kit	4188	2179479

Date of Test: 26 September 2005

Carried out by: Steven Wong

Approved by: William Ng

Signature: *Steven Wong*

Signature: *William Ng*

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.

Appendix B

**Baseline Environmental
Monitoring Schedule**

**Main Arena of the 2008 Olympic Equestrian Event
Baseline Environmental Monitoring Schedule**

	Sept								Oct					
	F	S	S	M	T	W	T	F	S	S	M	T	W	T
	23	24	25	26	27	28	29	30	1	2	3	4	5	6
<u>Nosie Monitoring</u>														
NM1 - Chun Cheung Court			■						■					
NM2 - Racecourse Villa			■						■					
NM3 - Ravana Garden			■						■					

■ - Normal Day

■ - Public Holiday and Sunday

Appendix C

**Detailed noise
monitoring results**

Location: NM1 - Chun Cheung Court, HKJC Staff Quarters

Evening Time (1900-2300) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:00	59.6	61.0	58.0	
21:05	59.1	60.0	58.0	
21:10	59.7	61.5	58.0	
Average	59.5	60.8	58.0	
Max	59.7	61.5	58.0	
Min	59.1	60.0	58.0	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:35	59.9	61.0	58.5	
19:40	60.3	61.0	58.5	
19:45	60.3	62.0	58.5	
Average	60.2	61.3	58.5	
Max	60.3	62.0	58.5	
Min	59.9	61.0	58.5	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:45	59.3	59.5	58.5	
20:50	59.4	60.0	58.5	
20:55	59.4	60.0	58.5	
Average	59.4	59.8	58.5	
Max	59.4	60.0	58.5	
Min	59.3	59.5	58.5	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:00	59.9	60.5	59.0	
20:05	59.7	60.5	58.5	
20:10	59.9	60.5	58.5	
Average	59.8	60.5	58.7	
Max	59.9	60.5	59.0	
Min	59.7	60.5	58.5	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:30	59.0	60.0	57.5	
21:35	58.7	59.5	57.5	
21:40	58.7	59.5	57.5	
Average	58.8	59.7	57.5	
Max	59.0	60.0	57.5	
Min	58.7	59.5	57.5	

	Leq	L10	L90
Overall Average	60.0	60.9	58.4
Overall Max	64.7	68.5	60.0
Overall Min	58.7	59.5	57.5

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:25	62.3	62.5	60.0	
20:30	61.2	61.5	59.0	
20:35	60.8	61.0	59.0	
Average	61.4	61.7	59.3	
Max	62.3	62.5	60.0	
Min	60.8	61.0	59.0	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:25	58.9	59.5	57.5	
21:30	60.3	61.5	58.0	
21:35	64.7	68.5	58.0	
Average	61.3	63.2	57.8	
Max	64.7	68.5	58.0	
Min	58.9	59.5	57.5	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:20	60.0	60.0	58.0	
21:25	59.0	59.5	58.0	
21:30	60.6	62.0	58.5	
Average	59.9	60.5	58.2	
Max	60.6	62.0	58.5	
Min	59.0	59.5	58.0	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:40	59.9	61.0	58.0	
21:45	59.0	59.5	58.0	
21:50	59.1	60.0	57.5	
Average	59.3	60.2	57.8	
Max	59.9	61.0	58.0	
Min	59.0	59.5	57.5	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:50	60.2	61.0	59.0	
20:55	60.1	61.0	58.5	
21:00	59.5	60.5	58.5	
Average	60.0	60.8	58.7	
Max	60.2	61.0	59.0	
Min	59.8	60.5	58.5	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:30	60.1	60.5	59.5	
19:35	59.8	60.5	59.0	
19:40	59.8	60.5	59.0	
Average	59.9	60.5	59.2	
Max	60.1	60.5	59.5	
Min	59.8	60.5	59.0	

Location: NM2 - Racecourse Villa

Evening Time (1900-2300) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:00	60.4	61.5	58.5	
21:05	59.5	60.5	58.0	
21:10	60.0	62.0	58.0	
Average	60.0	61.3	58.2	
Max	60.4	62.0	58.5	
Min	59.5	60.5	58.0	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:35	60.3	61.5	58.5	
19:40	62.0	63.5	59.0	
19:45	61.1	63.0	58.5	
Average	61.1	62.7	58.7	
Max	62.0	63.5	59.0	
Min	60.3	61.5	58.5	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:45	59.5	60.5	58.0	
20:50	60.1	61.0	58.5	
20:55	59.5	60.0	58.5	
Average	59.7	60.5	58.3	
Max	60.1	61.0	58.5	
Min	59.5	60.0	58.0	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:00	60.4	61.0	58.5	
20:05	59.6	60.5	58.0	
20:10	60.7	61.5	58.5	
Average	60.2	61.0	58.3	
Max	60.7	61.5	58.5	
Min	59.6	60.5	58.0	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:30	60.9	62.0	59.0	
21:35	61.3	62.5	59.5	
21:40	61.6	62.0	59.0	
Average	61.3	62.2	59.2	
Max	61.6	62.5	59.5	
Min	60.9	62.0	59.0	

	Leq	L10	L90
Overall Average	60.5	61.6	58.6
Overall Max	62.2	63.5	59.5
Overall Min	59.3	60.0	57.5

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:25	59.8	60.5	58.5	
20:30	59.9	61.0	58.0	
20:35	59.9	61.0	58.5	
Average	59.9	60.8	58.3	
Max	59.9	61.0	58.5	
Min	59.8	60.5	58.0	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:25	59.8	61.0	58.0	
21:30	59.3	60.0	58.0	
21:35	59.6	60.5	58.0	
Average	59.6	60.5	58.0	
Max	59.8	61.0	58.0	
Min	59.3	60.0	58.0	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:35	61.1	62.5	59.0	
21:40	61.2	62.5	59.0	
21:45	61.4	62.5	59.5	
Average	61.2	62.5	59.2	
Max	61.4	62.5	59.5	
Min	61.1	62.5	59.0	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:40	60.9	62.0	59.5	
21:45	61.4	62.0	59.0	
21:50	61.3	62.5	59.0	
Average	61.2	62.2	59.2	
Max	61.4	62.5	59.5	
Min	60.9	62.0	59.0	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:50	59.9	61.0	57.5	
20:55	59.6	61.5	57.5	
21:00	59.6	60.5	58.0	
Average	59.8	61.0	57.7	
Max	59.9	61.5	58.0	
Min	59.6	60.5	57.5	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:30	62.2	63.0	59.5	
19:35	60.1	61.0	59.0	
19:40	60.3	61.0	59.0	
Average	60.9	61.7	59.2	
Max	62.2	63.0	59.5	
Min	60.1	61.0	59.0	

Location: NM3 - Ravana Garden

Evening Time (1900-2300) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:00	55.5	56.0	54.5	
21:05	56.1	58.0	54.0	
21:10	56.9	59.0	55.0	
Average	56.2	57.7	54.5	
Max	56.9	59.0	55.0	
Min	55.5	56.0	54.0	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:35	56.9	58.0	55.5	
19:40	58.0	59.0	55.5	
19:45	57.1	59.0	54.5	
Average	57.3	58.7	55.2	
Max	58.0	59.0	55.5	
Min	56.9	58.0	54.5	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:45	54.2	55.0	53.5	
20:50	54.5	55.0	53.5	
20:55	54.4	55.0	53.5	
Average	54.4	55.0	53.5	
Max	54.5	55.0	53.5	
Min	54.2	55.0	53.5	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:00	54.8	55.5	53.0	
20:05	54.5	55.0	53.5	
20:10	54.1	54.5	53.0	
Average	54.5	55.0	53.2	
Max	54.8	55.5	53.5	
Min	54.1	54.5	53.0	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:30	54.9	55.5	54.0	
21:35	55.3	56.0	54.0	
21:40	54.7	55.0	54.0	
Average	55.0	55.5	54.0	
Max	55.3	56.0	54.0	
Min	54.7	55.0	54.0	

	Leq	L10	L90
Overall Average	55.8	56.6	54.4
Overall Max	58.0	59.0	55.5
Overall Min	54.1	54.5	53.0

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:25	55.4	56.0	54.0	
20:30	54.3	55.0	53.5	
20:35	54.5	55.0	53.5	
Average	54.7	55.3	53.7	
Max	55.4	56.0	54.0	
Min	54.3	55.0	53.5	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:25	55.8	56.5	54.5	
21:30	55.2	56.0	54.0	
21:35	55.3	56.0	54.5	
Average	55.4	56.2	54.3	
Max	55.8	56.5	54.5	
Min	55.2	56.0	54.0	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:35	55.9	56.5	55.0	
21:40	56.2	57.0	55.5	
21:45	56.2	56.5	55.5	
Average	56.1	56.7	55.3	
Max	56.2	57.0	55.5	
Min	55.9	56.5	55.0	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
21:40	57.9	59.0	55.5	
21:45	56.4	56.5	55.5	
21:50	56.2	56.5	55.5	
Average	56.8	57.3	55.5	
Max	57.9	59.0	55.5	
Min	56.2	56.5	55.5	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
20:50	57.3	58.0	55.0	
20:55	56.3	57.0	55.0	
21:00	57.4	59.0	55.5	
Average	57.0	58.0	55.2	
Max	57.4	59.0	55.5	
Min	56.3	57.0	55.0	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
19:30	54.7	55.5	53.5	
19:35	54.5	55.5	53.0	
19:40	54.2	55.0	53.0	
Average	54.5	55.3	53.2	
Max	54.7	55.5	53.5	
Min	54.2	55.0	53.0	

Location: NM1 - Chun Cheung Court, HKJC Staff Quarters
Night Time (2300-0700) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	55.0	56.0	53.5	
1:05	54.4	55.5	52.5	
1:10	54.3	55.5	53.0	
Average	54.6	55.7	53.0	
Max	55.0	56.0	53.5	
Min	54.3	55.5	52.5	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	54.1	55.0	52.5	
1:35	55.2	57.0	52.5	
1:40	53.9	55.0	52.0	
Average	54.4	55.7	52.3	
Max	55.2	57.0	52.5	
Min	53.9	55.0	52.0	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	53.4	54.0	52.5	
1:35	53.3	54.0	52.0	
1:40	53.5	54.5	52.0	
Average	53.4	54.2	52.2	
Max	53.5	54.5	52.5	
Min	53.3	54.0	52.0	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	53.6	54.5	52.0	
1:20	54.0	55.0	52.5	
1:25	53.6	54.5	52.5	
Average	53.7	54.7	52.3	
Max	54.0	55.0	52.5	
Min	53.6	54.5	52.0	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:40	54.3	55.0	52.5	
1:45	55.1	56.5	53.0	
1:50	55.0	56.0	53.0	
Average	54.8	55.8	52.8	
Max	55.1	56.5	53.0	
Min	54.3	55.0	52.5	

	Leq	L10	L90
Overall Average	55.3	56.5	53.1
Overall Max	58.8	61.0	55.5
Overall Min	53.3	54.0	51.5

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	56.0	56.5	54.0	
1:20	56.3	57.0	53.5	
1:25	56.9	58.0	55.5	
Average	56.4	57.2	54.3	
Max	56.9	58.0	55.5	
Min	56.0	56.5	53.5	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:10	58.8	61.0	53.0	
1:15	57.1	60.0	52.5	
1:20	55.7	56.0	52.0	
Average	57.2	59.0	52.5	
Max	58.8	61.0	53.0	
Min	55.7	56.0	52.0	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	56.7	57.5	55.0	
1:55	56.6	57.5	55.0	
2:00	56.3	57.5	54.5	
Average	56.5	57.5	54.8	
Max	56.7	57.5	55.0	
Min	56.3	57.5	54.5	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:45	53.9	55.0	52.0	
1:50	53.4	54.5	51.5	
1:55	53.5	54.5	52.5	
Average	53.6	54.7	52.0	
Max	53.9	55.0	52.5	
Min	53.4	54.5	51.5	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	55.8	57.0	54.0	
1:05	54.5	55.5	53.0	
1:10	55.3	56.5	53.5	
Average	55.2	56.3	53.5	
Max	55.8	57.0	54.0	
Min	54.5	55.5	53.0	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	56.8	58.0	52.5	
1:55	55.4	56.5	53.5	
2:00	56.9	59.0	53.0	
Average	56.4	57.8	53.0	
Max	56.9	59.0	53.5	
Min	55.4	56.5	52.5	

Location: NM2 - Racecourse Villa
Night Time (2300-0700) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	58.4	59.5	56.5	
1:05	58.2	59.5	56.5	
1:10	57.5	58.5	55.5	
Average	58.0	59.2	56.2	
Max	58.4	59.5	56.5	
Min	57.5	58.5	55.5	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	57.7	59.0	56.0	
1:35	58.9	60.5	56.5	
1:40	57.5	59.0	56.0	
Average	58.0	59.5	56.2	
Max	58.9	60.5	56.5	
Min	57.5	59.0	56.0	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	57.5	58.5	56.0	
1:35	57.3	58.5	56.0	
1:40	57.4	58.5	56.0	
Average	57.4	58.5	56.0	
Max	57.5	58.5	56.0	
Min	57.3	58.5	56.0	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	57.6	58.5	56.0	
1:20	57.7	59.0	56.0	
1:25	57.2	58.0	56.0	
Average	57.5	58.5	56.0	
Max	57.7	59.0	56.0	
Min	57.2	58.0	56.0	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:40	57.2	58.5	55.5	
1:45	57.4	58.5	55.5	
1:50	56.5	57.5	55.0	
Average	57.0	58.2	55.3	
Max	57.4	58.5	55.5	
Min	56.5	57.5	55.0	

	Leq	L10	L90
Overall Average	57.8	59.1	55.7
Overall Max	60.1	61.5	56.5
Overall Min	56.0	57.0	54.0

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	57.1	58.5	55.5	
1:20	57.5	58.5	56.0	
1:25	57.5	58.5	55.5	
Average	57.4	58.5	55.7	
Max	57.5	58.5	56.0	
Min	57.1	58.5	55.5	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:10	58.6	60.0	56.0	
1:15	59.0	60.5	56.5	
1:20	60.1	61.5	56.5	
Average	59.2	60.7	56.3	
Max	60.1	61.5	56.5	
Min	58.6	60.0	56.0	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	56.2	57.0	55.0	
1:55	57.3	58.5	55.0	
2:00	56.7	57.5	55.0	
Average	56.7	57.7	55.0	
Max	57.3	58.5	55.0	
Min	56.2	57.0	55.0	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
2:30	58.7	61.5	54.5	
2:35	59.4	61.5	55.0	
2:40	58.7	61.0	55.0	
Average	58.9	61.3	54.8	
Max	59.4	61.5	55.0	
Min	58.7	61.0	54.5	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	57.7	59.0	56.0	
1:05	57.4	58.5	56.0	
1:10	57.3	58.5	55.5	
Average	57.5	58.7	55.8	
Max	57.7	59.0	56.0	
Min	57.3	58.5	55.5	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	57.7	58.5	55.5	
1:55	57.9	59.0	55.0	
2:00	56.0	57.5	54.0	
Average	57.2	58.3	54.8	
Max	57.9	59.0	55.5	
Min	56.0	57.5	54.0	

Location: NM3 - Ravana Garden
Night Time (2300-0700) Noise Monitoring Results

23-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	51.3	52.0	50.5	
1:05	51.2	52.5	50.0	
1:10	50.7	51.0	50.0	
Average	51.1	51.8	50.2	
Max	51.3	52.5	50.5	
Min	50.7	51.0	50.0	

24-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	51.8	53.0	50.0	
1:35	50.2	51.0	49.0	
1:40	50.5	51.0	49.5	
Average	50.8	51.7	49.5	
Max	51.8	53.0	50.0	
Min	50.2	51.0	49.0	

26-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:30	49.7	50.0	49.0	
1:35	49.7	50.0	49.0	
1:40	49.7	50.0	49.0	
Average	49.7	50.0	49.0	
Max	49.7	50.0	49.0	
Min	49.7	50.0	49.0	

27-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	49.7	50.5	49.0	
1:20	49.6	50.0	49.0	
1:25	49.5	50.0	49.0	
Average	49.6	50.2	49.0	
Max	49.7	50.5	49.0	
Min	49.5	50.0	49.0	

28-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:40	49.1	49.5	48.5	
1:45	50.5	51.5	48.5	
1:50	49.7	50.5	48.5	
Average	49.8	50.5	48.5	
Max	50.5	51.5	48.5	
Min	49.1	49.5	48.5	

	Leq	L10	L90
Overall Average	50.6	51.5	49.4
Overall Max	53.5	55.0	51.0
Overall Min	49.1	49.5	48.5

29-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:15	50.4	51.0	49.0	
1:20	50.0	50.5	49.0	
1:25	50.1	51.0	49.0	
Average	50.2	50.8	49.0	
Max	50.4	51.0	49.0	
Min	50.0	50.5	49.0	

30-Jun-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:10	51.1	52.5	49.5	
1:15	50.2	51.0	49.0	
1:20	50.2	51.0	49.0	
Average	50.5	51.5	49.2	
Max	51.1	52.5	49.5	
Min	50.2	51.0	49.0	

3-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	50.1	50.5	49.0	
1:55	50.8	52.0	49.0	
2:00	49.5	50.0	48.5	
Average	50.1	50.8	48.8	
Max	50.8	52.0	49.0	
Min	49.5	50.0	48.5	

4-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
2:30	49.9	50.5	49.0	
2:35	50.0	51.0	49.0	
2:40	50.1	51.5	49.0	
Average	50.0	51.0	49.0	
Max	50.1	51.5	49.0	
Min	49.9	50.5	49.0	

5-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:00	52.2	54.0	50.0	
1:05	50.8	51.5	50.0	
1:10	51.5	53.0	50.0	
Average	51.5	52.8	50.0	
Max	52.2	54.0	50.0	
Min	50.8	51.5	50.0	

6-Jul-06				
Time	Leq, (5min)	L10, (5min)	L90, (5min)	
1:50	53.5	55.0	51.0	
1:55	52.2	53.5	50.5	
2:00	52.3	53.0	50.0	
Average	52.7	53.8	50.5	
Max	53.5	55.0	51.0	
Min	52.2	53.0	50.0	

Location: NM1 - Chun Cheung Court, HKJC Staff Quarters
General Holiday Noise Monitoring Results

Day Time (0700-1900)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
15:50	60.5	61.5	59.0
15:55	59.8	61.0	58.5
16:00	59.6	60.5	58.0
Average	60.0	61.0	58.5
Max	60.5	61.5	59.0
Min	59.6	60.5	58.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
13:30	62.7	64.0	59.0
13:35	66.4	70.0	59.5
13:40	70.7	75.0	60.5
Average	66.6	69.7	59.7
Max	70.7	75.0	60.5
Min	62.7	64.0	59.0

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
10:25	60.7	61.5	60.0
10:30	60.9	61.5	60.0
10:35	61.1	61.5	60.0
Average	60.9	61.5	60.0
Max	61.1	61.5	60.0
Min	60.7	61.5	60.0

Evening Time (1900-2300)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:00	59.7	61.0	58.0
21:05	60.2	61.5	58.0
21:10	59.5	60.5	58.0
Average	59.8	61.0	58.0
Max	60.2	61.5	58.0
Min	59.5	60.5	58.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
20:10	60.4	61.5	58.0
20:15	60.3	61.0	58.5
20:20	60.2	61.0	58.5
Average	60.3	61.2	58.3
Max	60.4	61.5	58.5
Min	60.2	61.0	58.0

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:05	59.4	60.0	58.5
21:10	58.2	59.5	56.5
21:15	57.7	58.5	56.5
Average	58.4	59.3	57.2
Max	59.4	60.0	58.5
Min	57.7	58.5	56.5

Night Time (2300-0700)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:25	53.7	54.5	52.5
1:30	53.4	54.0	52.5
1:35	53.3	54.0	52.0
Average	53.5	54.2	52.3
Max	53.7	54.5	52.5
Min	53.3	54.0	52.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
0:45	64.6	68.0	55.5
0:50	58.4	61.0	54.0
0:55	59.4	62.0	53.5
Average	60.8	63.7	54.3
Max	64.6	68.0	55.5
Min	58.4	61.0	53.5

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:15	62.5	65.5	55.5
1:20	62.1	65.5	54.0
1:25	63.2	67.0	52.5
Average	62.6	66.0	54.0
Max	63.2	67.0	55.5
Min	62.1	65.5	52.5

Overall

	Leq, (5min)	L10, (5min)	L90, (5min)
Average	60.6	62.2	57.5
Max	70.7	75.0	60.5
Min	53.3	54.0	52.0

Location: NM2 - Racecourse Villa
General Holiday Noise Monitoring Results

Day Time (0700-1900)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
15:50	60.5	61.5	58.5
15:55	60.2	61.0	59.0
16:00	61.6	62.5	59.5
Average	60.8	61.7	59.0
Max	61.6	62.5	59.5
Min	60.2	61.0	58.5

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
13:30	62.3	63.5	60.5
13:35	63.6	65.5	60.0
13:40	62.8	64.5	60.5
Average	62.9	64.5	60.3
Max	63.6	65.5	60.5
Min	62.3	63.5	60.0

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
10:25	62.6	64.0	60.5
10:30	62.3	63.5	60.5
10:35	62.5	63.5	60.5
Average	62.5	63.7	60.5
Max	62.6	64.0	60.5
Min	62.3	63.5	60.5

Evening Time (1900-2300)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:00	60.5	62.0	58.0
21:05	60.3	61.5	58.0
21:10	61.1	63.5	58.0
Average	60.6	62.3	58.0
Max	61.1	63.5	58.0
Min	60.3	61.5	58.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
20:10	60.3	61.5	58.0
20:15	61.1	62.5	58.5
20:20	61.2	61.0	57.5
Average	60.9	61.7	58.0
Max	61.2	62.5	58.5
Min	60.3	61.0	57.5

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:05	59.7	61.0	58.0
21:10	59.6	60.5	58.0
21:15	59.4	61.0	57.0
Average	59.6	60.8	57.7
Max	59.7	61.0	58.0
Min	59.4	60.5	57.0

Night Time (2300-0700)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:25	57.6	59.0	56.0
1:30	57.5	58.5	56.0
1:35	57.3	58.5	56.0
Average	57.5	58.7	56.0
Max	57.6	59.0	56.0
Min	57.3	58.5	56.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
0:45	58.9	60.5	56.0
0:50	59.8	62.0	56.0
0:55	59.1	61.0	56.5
Average	59.3	61.2	56.2
Max	59.8	62.0	56.5
Min	58.9	60.5	56.0

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:15	57.4	59.0	55.5
1:20	56.7	58.0	55.0
1:25	56.7	58.0	55.0
Average	56.9	58.3	55.2
Max	57.4	59.0	55.5
Min	56.7	58.0	55.0

Overall

	Leq, (5min)	L10, (5min)	L90, (5min)
Average	60.4	61.7	58.2
Max	63.6	65.5	60.5
Min	56.7	58.0	55.0

Location: NM3 - Ravana Garden
General Holiday Noise Monitoring Results

Day Time (0700-1900)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
15:50	56.3	57.0	55.0
15:55	56.9	58.0	55.5
16:00	57.1	58.0	55.5
Average	56.8	57.7	55.3
Max	57.1	58.0	55.5
Min	56.3	57.0	55.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
13:30	55.1	55.5	54.0
13:35	55.1	55.5	54.0
13:40	54.8	55.0	54.0
Average	55.0	55.3	54.0
Max	55.1	55.5	54.0
Min	54.8	55.0	54.0

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
10:25	54.2	55.0	53.0
10:30	53.8	54.5	52.5
10:35	53.6	54.5	52.5
Average	53.9	54.7	52.7
Max	54.2	55.0	53.0
Min	53.6	54.5	52.5

Evening Time (1900-2300)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:00	56.2	57.0	53.0
21:05	57.0	59.0	53.0
21:10	56.2	58.0	53.5
Average	56.5	58.0	53.2
Max	57.0	59.0	53.5
Min	56.2	57.0	53.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
20:10	56.0	56.5	55.0
20:15	55.8	56.5	54.5
20:20	56.0	56.5	55.0
Average	55.9	56.5	54.8
Max	56.0	56.5	55.0
Min	55.8	56.5	54.5

2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
21:05	53.9	54.5	53.0
21:10	53.6	54.5	52.5
21:15	53.8	54.5	53.0
Average	53.8	54.5	52.8
Max	53.9	54.5	53.0
Min	53.6	54.5	52.5

Night Time (2300-0700)

25-Jun-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:25	50.3	51.0	49.5
1:30	49.7	50.0	49.0
1:35	49.7	50.0	49.0
Average	49.9	50.3	49.2
Max	50.3	51.0	49.5
Min	49.7	50.0	49.0

1-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
0:45	50.7	51.5	49.5
0:50	50.5	51.0	49.5
0:55	50.4	51.0	49.5
Average	50.5	51.2	49.5
Max	50.7	51.5	49.5
Min	50.4	51.0	49.5

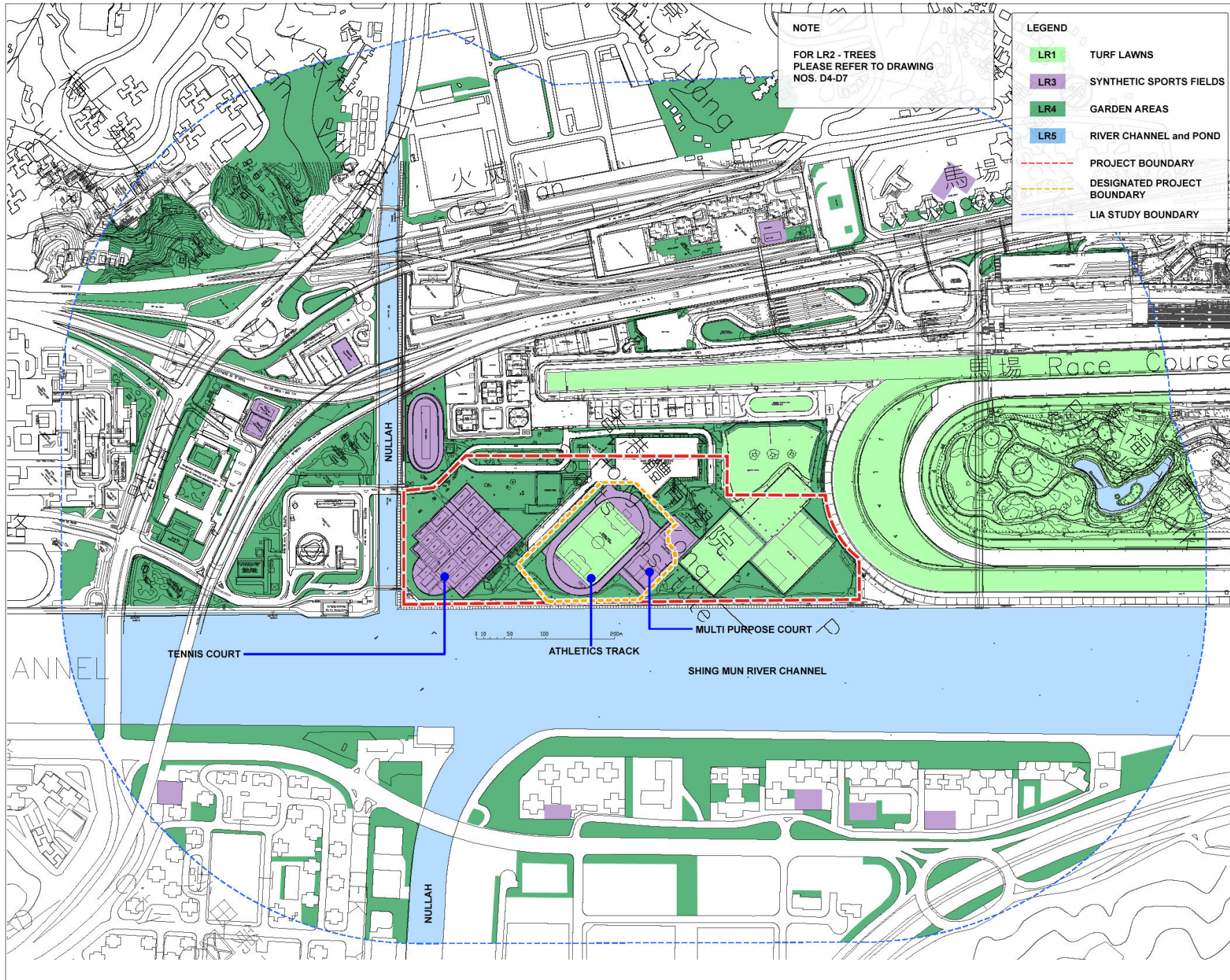
2-Jul-06			
Time	Leq, (5min)	L10, (5min)	L90, (5min)
1:15	51.4	52.0	50.5
1:20	51.9	52.5	51.0
1:25	51.6	52.5	50.5
Average	51.6	52.3	50.7
Max	51.9	52.5	51.0
Min	51.4	52.0	50.5

Overall

	Leq, (5min)	L10, (5min)	L90, (5min)
Average	54.2	55.0	52.8
Max	57.1	59.0	55.5
Min	49.7	50.0	49.0

Appendix D

**Figures on Landscape
Resources**



NOTE
FOR LR2 - TREES
PLEASE REFER TO DRAWING
NOS. D4-D7

- LEGEND**
- LR1 TURF LAWNS
 - LR3 SYNTHETIC SPORTS FIELDS
 - LR4 GARDEN AREAS
 - LR5 RIVER CHANNEL and POND
 - PROJECT BOUNDARY
 - DESIGNATED PROJECT BOUNDARY
 - LIA STUDY BOUNDARY

KEY PLAN

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PROJECT
**2008 OLYMPIC
EQUESTRIAN EVENT**

PACKAGE
SITE

TITLE
LANDSCAPE
RESOURCES PLAN

DWG NO. D1

PROJECT NO. 0008
NTS

PLANT DATE: 29JUN06
DRAWN BY: MVL
CHECKED: MVL
VERIFIED: JSP

Gardens



1. Garden at VIP Entry



2. Garden at VIP Entry



3. View of VIP Entry garden from carpark



4. View of garden at HKSI entry



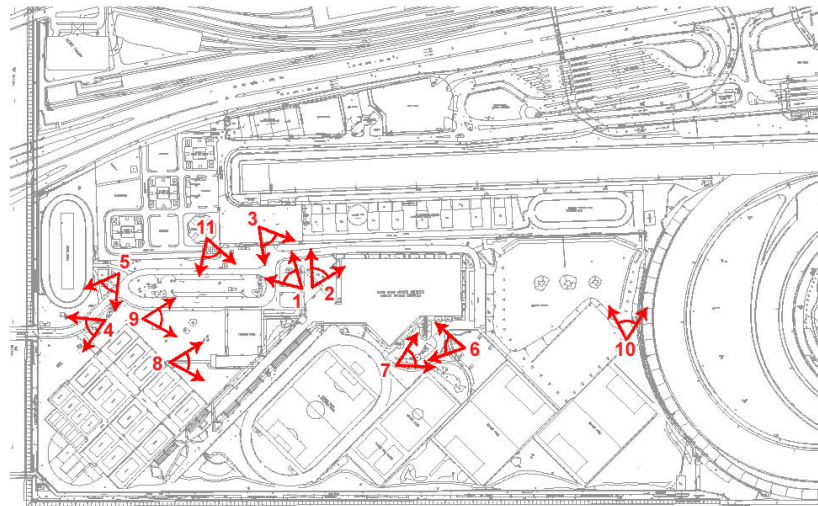
5. View of garden at HKSI entry



6. View of garden adjacent HKSI indoor sports complex



7. View of garden adjacent HKSI indoor sports complex



River



11. View of Shing Mun River Channel

Trees



8. Tress at existing indoor pool



9. Trees next to access road parking



10. View of existing trees along edge of golf driving range

KEY PLAN



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PROJECT
2008 OLYMPIC
EQUESTRIAN EVENT

PACKAGE

SITE

TITLE
PHOTOGRAPHS OF
LANDSCAPE RESOURCES
(SHEET 1 OF 2)

DWG NO. D2 REV. -

PROJECT NO. SCALES

Table with columns: PLOT DATE, DRAWN BY, CHECKED, VERIFIED

Synthetic Sports Fields



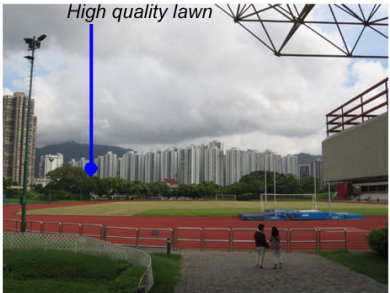
1. Tennis Courts



2. Tennis Courts



3. Sports Pitch and Athletics Track



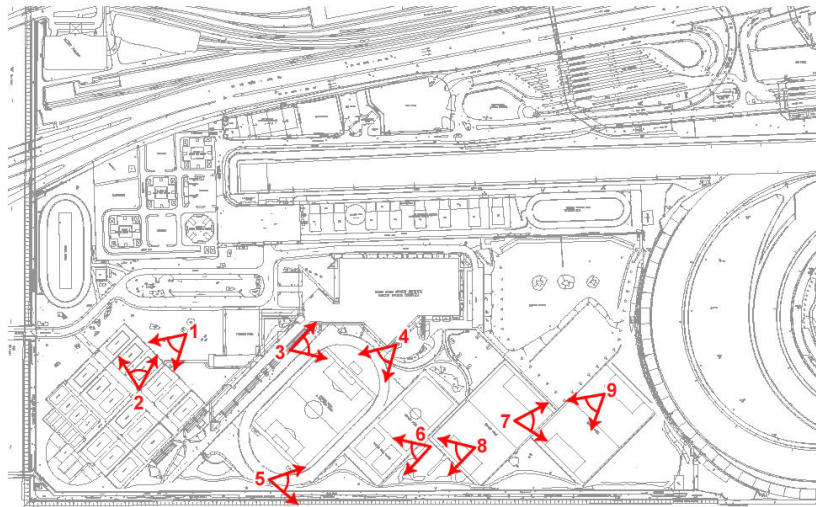
4. Sports Pitch and Athletics Track



5. Athletics Track



6. Basket Ball Court



High quality lawn

Lawns



7. Site of proposed Stable Precinct



8. Site of proposed Logistics Compound



9. Site of proposed Stable Precinct

KEY PLAN 

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PROJECT
2008 OLYMPIC EQUESTRIAN EVENT

PACKAGE

SITE

TITLE
PHOTOGRAPHS OF LANDSCAPE RESOURCES (SHEET 2 OF 2)

DATE: 29 JUN 06
DRAWN BY: MVL
CHECKED: MVL
VERIFIED: JSP

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 - △ TREE TO BE TRANSPLANTED
 - ⊗ TREE TO BE FELLED
 - ⊗ DEAD TREE

MATCHLINE - SEE D6

VIP ENTRY

EXISTING INDOOR POOL

BROADCAST COMPOUND

MAIN COMPETITION ARENA
100x80m

SPECTATOR FORECOURT

FLORAL DISPLAYS

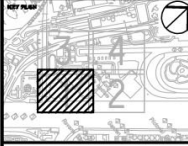
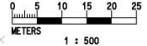
SPECTATOR SEATING AND CIRCULATION AREA REQUIRE TREES TO BE FELLED OR TRANSPLANTED

SPECTATOR SEATING

PROPOSED ACCESS ROAD REQUIRES TREE REMOVAL

PROPOSED FOOTPATH WIDENING REQUIRES TREE REMOVAL

PEDESTRIAN CIRCULATION AREA AND ACCESS ROAD AND SITE FORMATION WORKS REQUIRE TREES TO BE REMOVED



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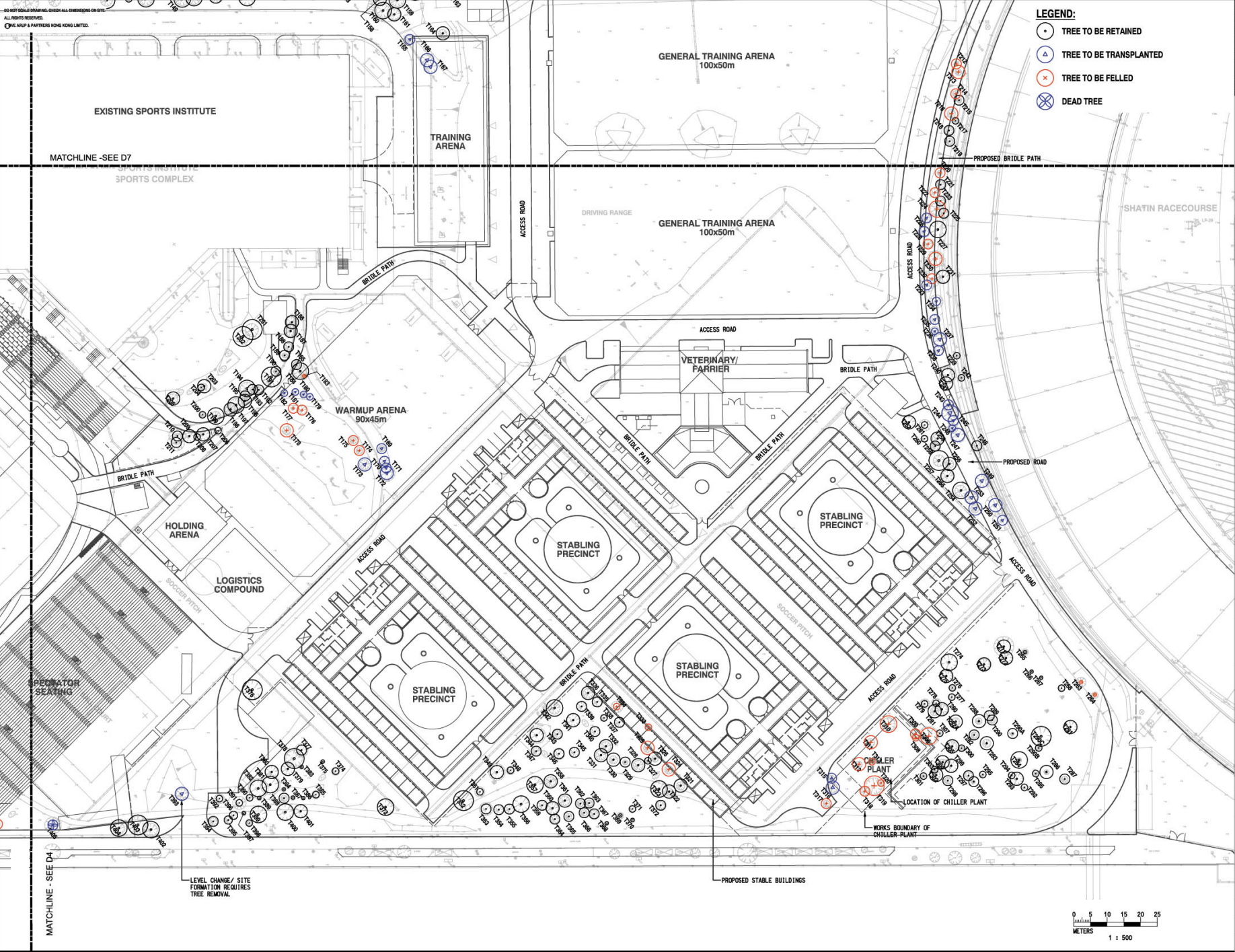
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DWG NO.
D4

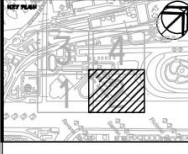
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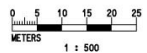
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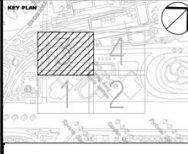
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**TREE VALUE ASSESSMENT
PLAN
(SHEET 2 OF 4)**

OWNING NO.	REV.
D5	-
PROJECT NO.	SCALES
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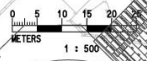
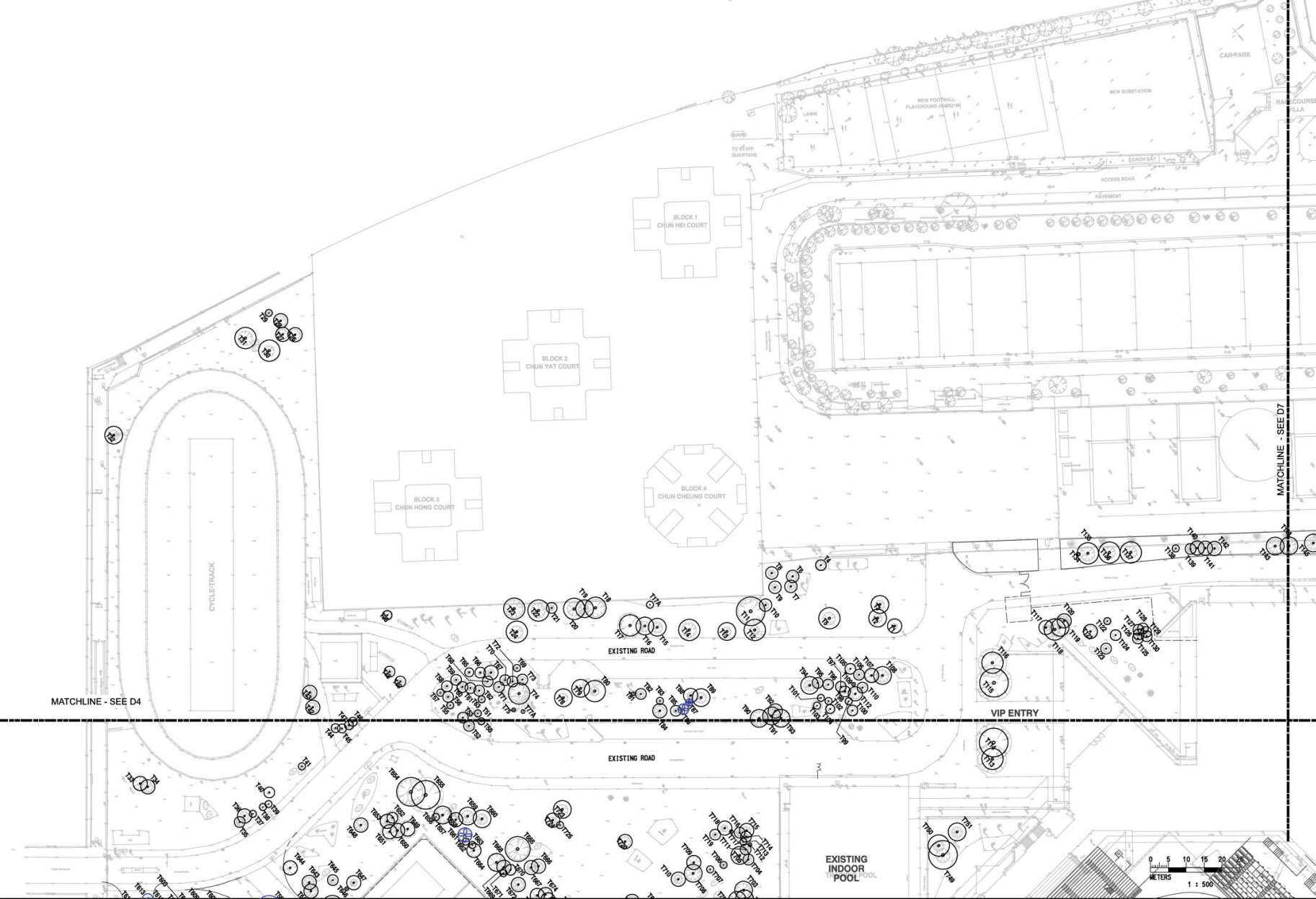
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 D6 -

PROJECT NO. SCALES 1:1000

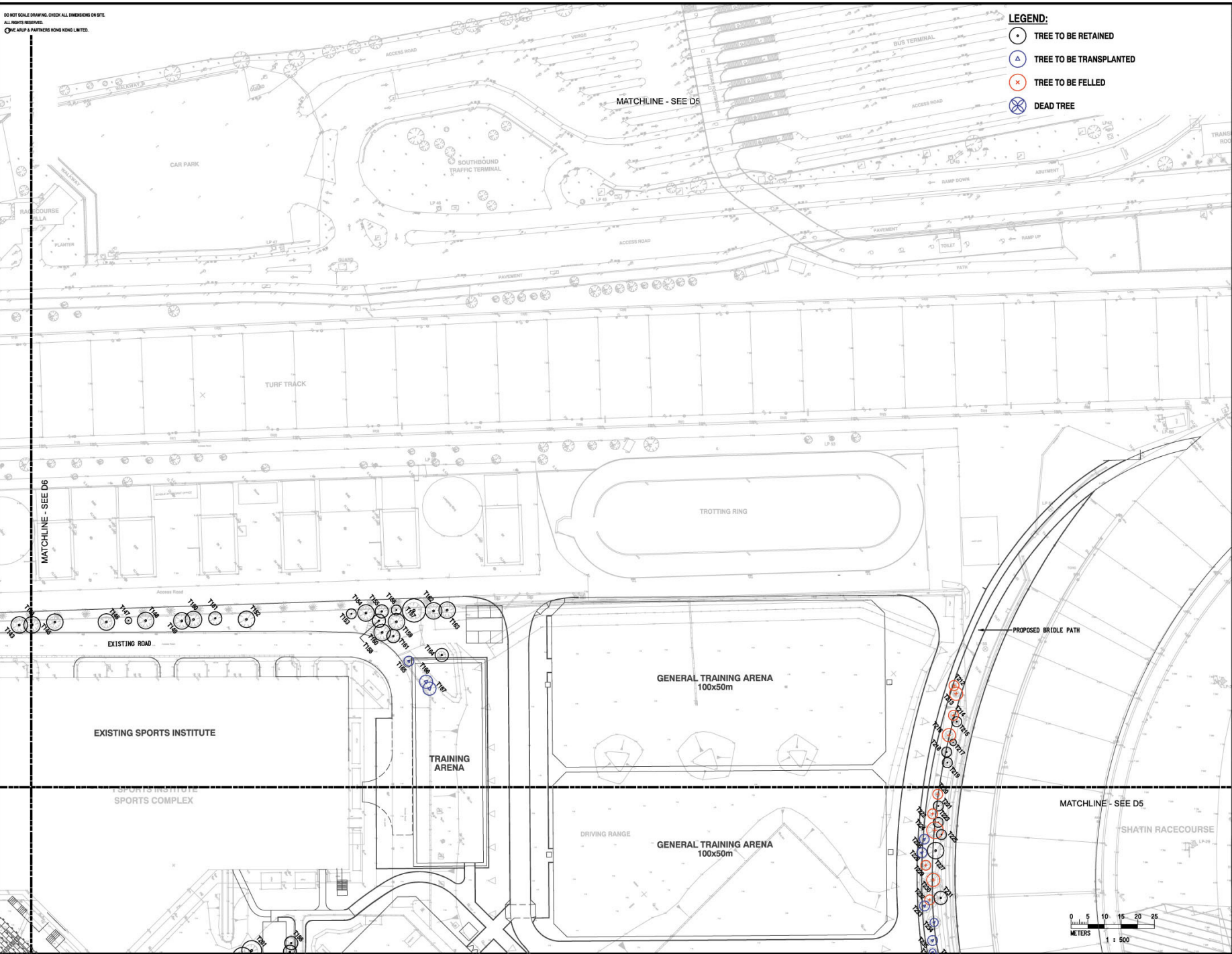
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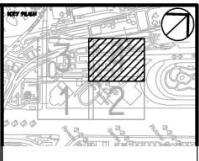
MATCHLINE - SEE D4

MATCHLINE - SEE D7

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PROJECT
**2008 OLYMPIC
 EQUESTRIAN EVENT**

PACKAGE
 SITE

TITLE
**TREE VALUE ASSESSMENT
 PLAN
 (SHEET 4 OF 4)**

DWG NO.
D7

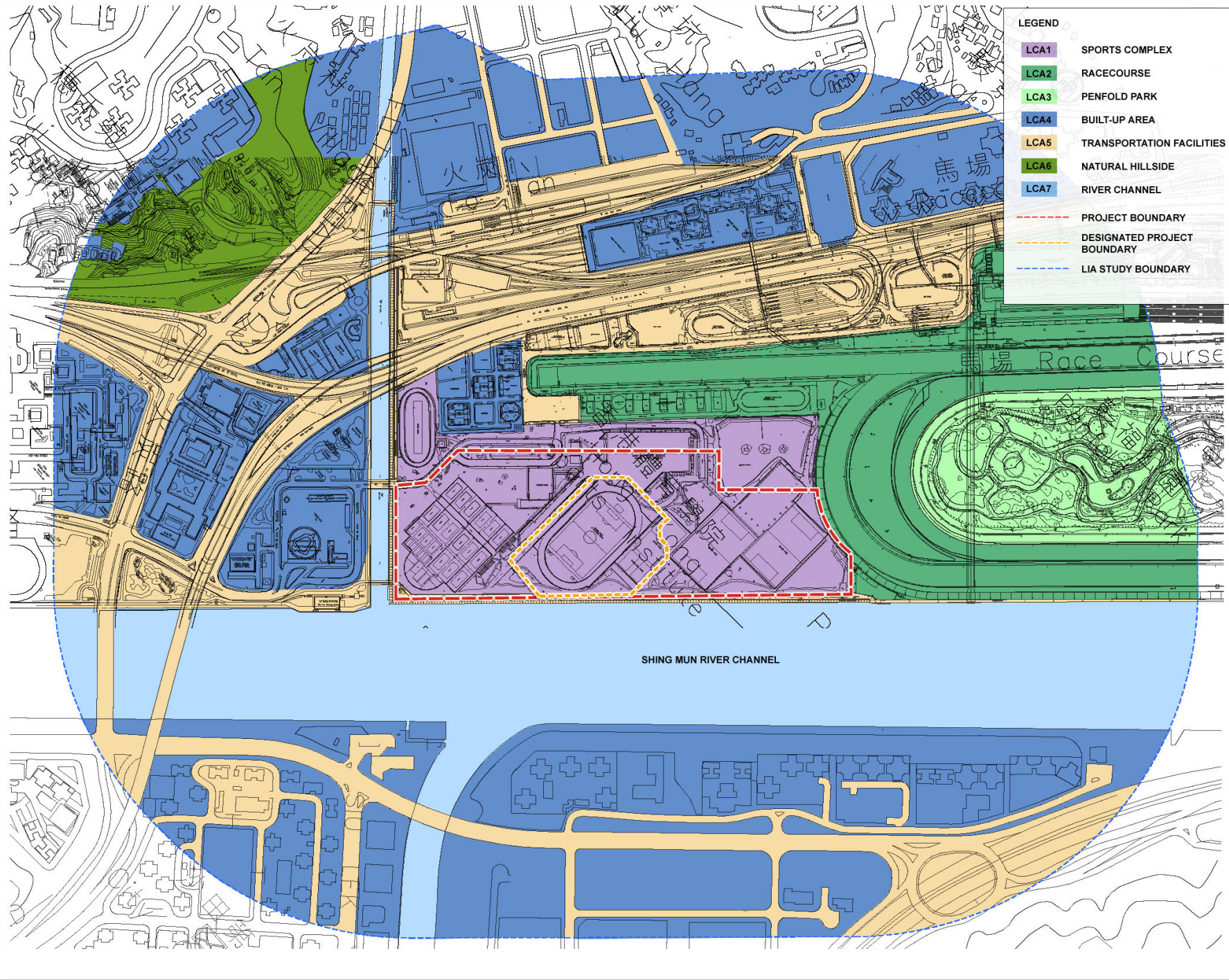
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CHECKED: MWL VERIFIED: JSP



Appendix E

**Figures on Landscape
Character Area**



LEGEND

- LCA1 SPORTS COMPLEX
- LCA2 RACECOURSE
- LCA3 PENFOLD PARK
- LCA4 BUILT-UP AREA
- LCA5 TRANSPORTATION FACILITIES
- LCA6 NATURAL HILLSIDE
- LCA7 RIVER CHANNEL

- PROJECT BOUNDARY
- DESIGNATED PROJECT BOUNDARY
- LIA STUDY BOUNDARY

KEY PLAN

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PROJECT
**2008 OLYMPIC
 EQUESTRIAN EVENT**

PACKAGE

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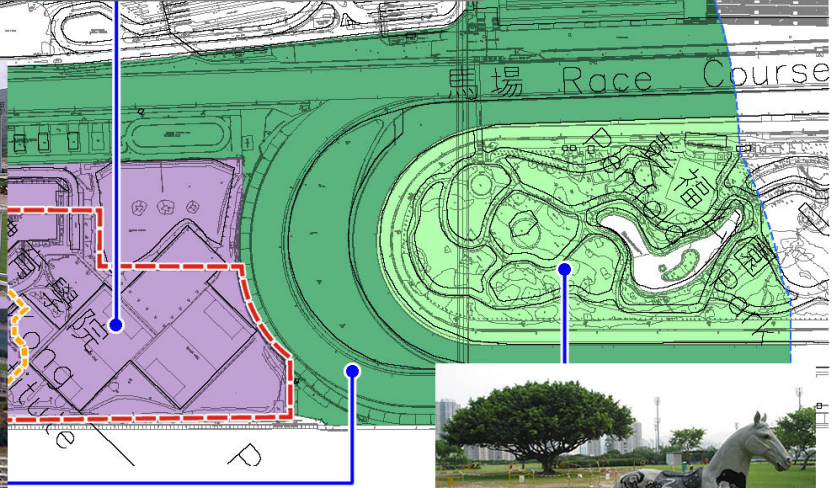
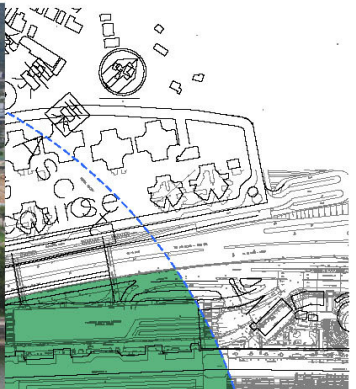
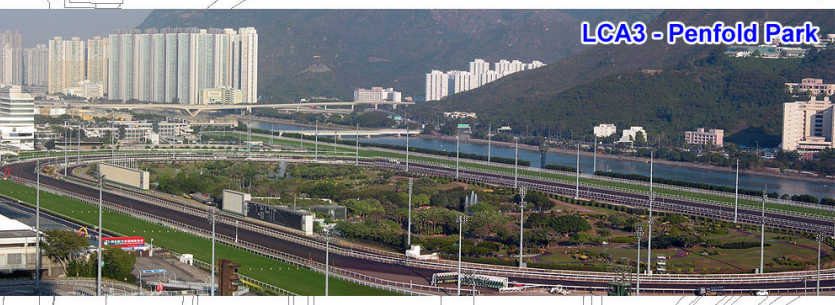
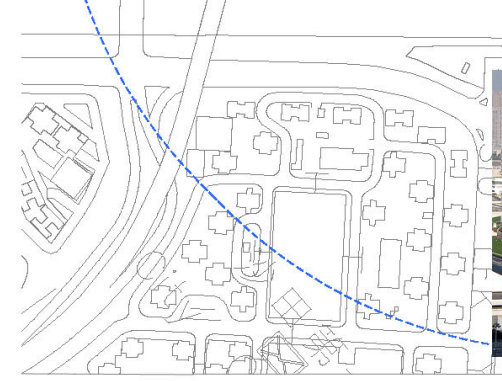
TITLE
**LANDSCAPE
 CHARACTER PLAN**

DWG NO. REV.
 E1 -

PROJECT NO.	SCALE
PLLOT DATE	DRAWN BY
29JUN06	MVL
CHECKED	VERIFIED
MVL	JSP

LEGEND

- LCA1 SPORTS COMPLEX
- LCA2 RACECOURSE
- LCA3 PENFOLD PARK



KEY PLAN

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PROJECT
**2008 OLYMPIC
EQUESTRIAN EVENT**

PACKAGE
SITE

TITLE
**PHOTOGRAPHS OF
LANDSCAPE CHARACTER
AREAS (SHEET 1 OF 2)**

DWG NO.
E2

PROJECT NO. SCALES

DATE	BY	DATE	BY
30 JUN 06	MVL		
MVL	JSP		

LEGEND

- LCA4 BUILT-UP AREAS
- LCA5 TRANSPORTATION FACILITIES
- LCA6 NATURAL HILLSIDE
- LCA7 RIVER CHANNEL

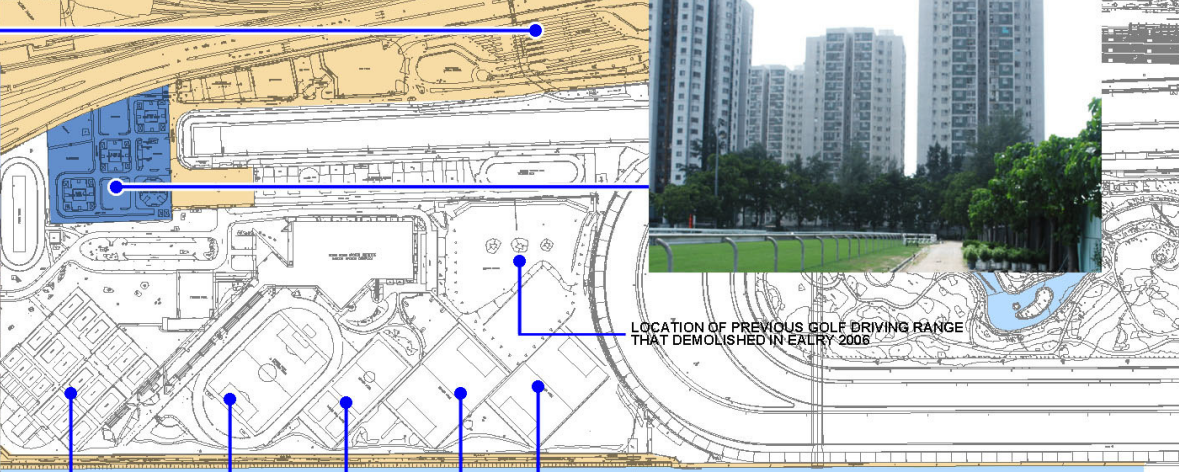


LCA6 - Natural Hillside

LCA4 - Built Up Areas



LCA5 - Transportation Facilities



LOCATION OF PREVIOUS GOLF DRIVING RANGE THAT DEMOLISHED IN EARLY 2006



TENNIS COURT

MULTI PURPOSE COURT

ATHLETICS FIELD

Bus Stop

SOCCER PITCHES



LCA7 - River Channel

KEY PLAN

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REV. NO.	REVISION DESCRIPTION	DATE

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PROJECT
2008 OLYMPIC EQUESTRIAN EVENT

PACKAGE

SITE

TITLE
PHOTOGRAPHS OF LANDSCAPE CHARACTER AREAS (SHEET 2 OF 2)

DWG NO.
E3

PROJECT NO.
E3

SCALE

DATE
30 JUN 06

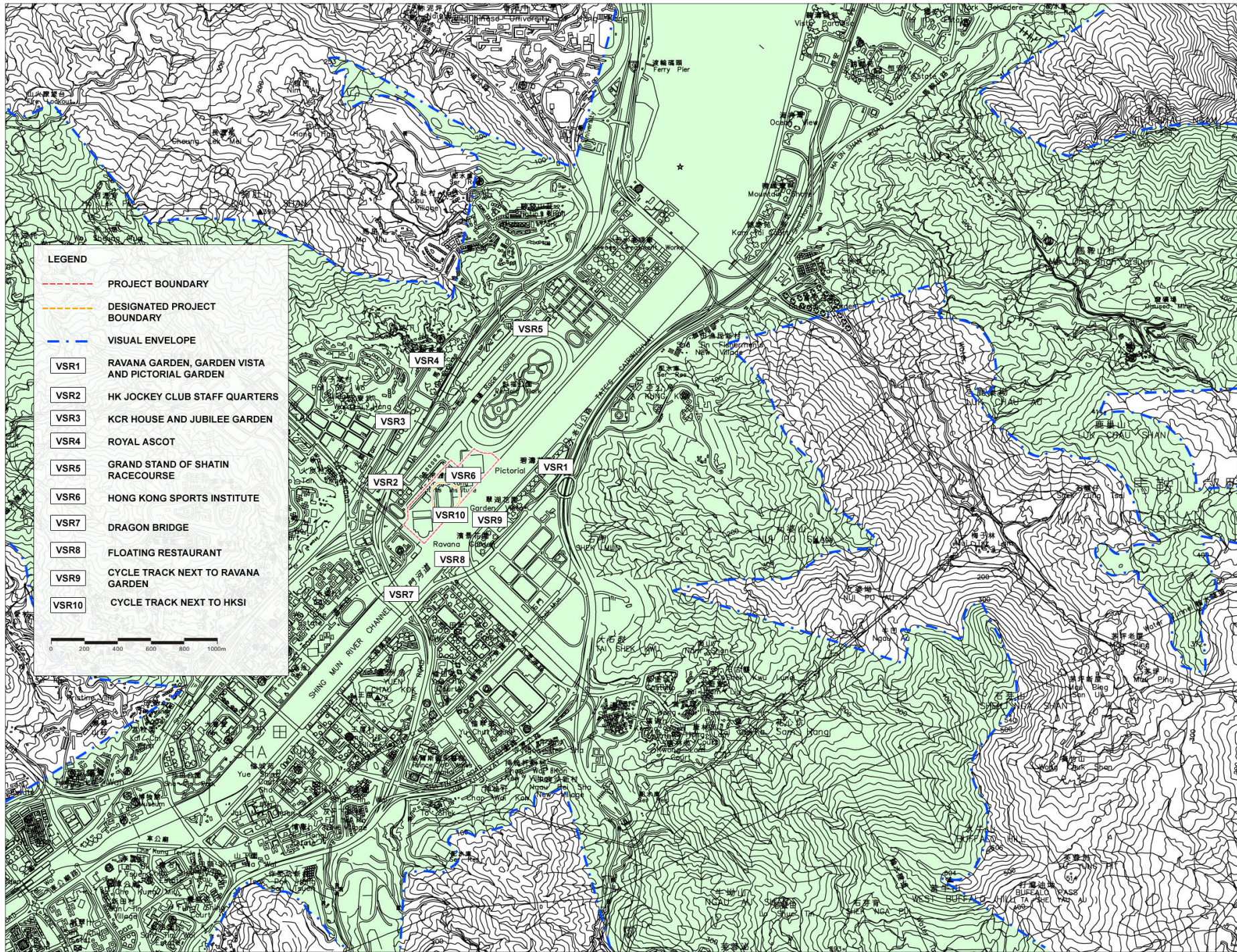
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MVL

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MVL

VERIFIED
JSP

Appendix F

**Figures on Visual
Sensitive Receivers**



LEGEND

- PROJECT BOUNDARY
- DESIGNATED PROJECT BOUNDARY
- VISUAL ENVELOPE

- VSR1** RAVANA GARDEN, GARDEN VISTA AND PICTORIAL GARDEN
- VSR2** HK JOCKEY CLUB STAFF QUARTERS
- VSR3** KCR HOUSE AND JUBILEE GARDEN
- VSR4** ROYAL ASCOT
- VSR5** GRAND STAND OF SHATIN RACECOURSE
- VSR6** HONG KONG SPORTS INSTITUTE
- VSR7** DRAGON BRIDGE
- VSR8** FLOATING RESTAURANT
- VSR9** CYCLE TRACK NEXT TO RAVANA GARDEN
- VSR10** CYCLE TRACK NEXT TO HKSI

0 200 400 600 800 1000m

REV. PLAN

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PROJECT
2008 OLYMPIC EQUESTRIAN EVENT

PACKAGE

W/S

TITLE
 LOCATION OF VISUALLY SENSITIVE RECEIVERS PLAN

DWG NO.
 F1

PROJECT NO.
 SCALES

PLT DATE
 30 JUN 06

CHECKED
 MVL

DRAWN BY
 MVL

VIEWED
 JSP



VSR1 - View from Ravana Garden



VSR2 - View from HKJC staff quarters



VSR3 - View from Jubilee Garden



VSR5 - View from Grand Stand



VSR6 - View from Hong Kong Sports Institute

KEY PLAN



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PROJECT
**2008 OLYMPIC
EQUESTRIAN EVENT**

PACKAGE

SITE

TITLE
VIEWS FROM VSRs
(SHEET 1 of 2)

DWG NO. F2 REV. -

PROJECT NO.	SCALE

PLUT DATE	DRAWN BY
30JUN06	MVVL
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MVVL	JSP

Notes: Access to VSR4 is prohibited, therefore no photo record.



VSR8 - View from floating restaurant



VSR10 - Cycle track next to HKSI



VSR7 - View from Dragon Bridge



VSR9 - View from cycle track next to Ravana Garden

KEY PLAN



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REVISIONS

REV. AMNT	REVISION DESCRIPTION	DATE

香港賽馬會
The Hong Kong Jockey Club

TC & Co.

FOUNDED COLLECT & COMPANY ARCHITECTS
Rooi Kee Inn
100/102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000

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PROJECT
2008 OLYMPIC EQUESTRIAN EVENT

PACKAGE

DATE

TITLE
VIEWS FROM VSRS
(SHEET 2 OF 2)

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PROJECT NO.

SCALE

DATE

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