Airport Management Services Limited

SkyCity Golf Course EM&A Monthly Impact Report

May 2006

10 July 2006

Report no: 01332R0051

Hyder Consulting

Airport Management Services Limited

SkyCity Golf Course EM&A Monthly Impact Report

June 2006

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1 Executive Summary

The purpose of this Project is to construct and operate a 9-hole Golf Course at the east side of the North Commercial District (NCD) on the Airport Island as an interim arrangement prior to the area's future development as a business park (see Figure 1-1). The proposed interim golf facility, known as "SkyCity Golf Course" is intended to serve airport passengers, overseas visitors and airport workers until August 2013.

The Project will be managed by Airport Management Services Limited (AMS) who have employed a Works Contractor, Wing Fat Construction Co. Ltd., to carry out the construction works. Hyder Consulting have been employed as the Environmental Team (ET) for the Construction Period and have engaged ALS Technichem Pty Ltd as the HOKLAS accredited testing laboratory to carry out marine water analysis.

The construction work commenced on 7 March 2006 and it anticipated to last for a period of six to seven months. According to the approved EM&A Manual, impact monitoring during the Construction Period is required for suspended solids, dissolved oxygen and turbidity.

The monthly site audit revealed that there were no significant non-compliances in terms of water, air, noise, waste or landscape and visual, although the Environmental Team made a number of recommendations to the Works Contractor to improve environmental conditions.

Impact monitoring was carried out during June 2006 in accordance with the approved EM&A Manual. Monitoring was carried out on 2, 5, 9, 12, 16, 19, 23, 26 and 20 June. Due to the adverse weather on 9 June, no monitoring was carried out during the mid-ebb tide on 9 June 2006. The monitoring results are detailed in this report, which complies with the reporting requirements stated in the approved EM&A Manual.

There were six exceedances Limit Level for suspended solids during June 2006. Although there were rainfalls, there were no discharges from site during the reporting period. As such, these exceedances cannot be attributed to site activities and so cannot be considered as exceedances in terms of the EM&A programme. No action or follow-up is thus deemed to be necessary. Notwithstanding, future monitoring results will be examined closely and correlations with any discharge from site will be followed up immediately to ensure that no adverse environmental impacts are caused by this Project.

There were no complaints received and no notifications of summons.

Overall, there are no adverse environmental impacts caused by the Works during the reporting month, although there is room for improvement in overall site environmental management – recommendations have been made and will be followed up in due course.

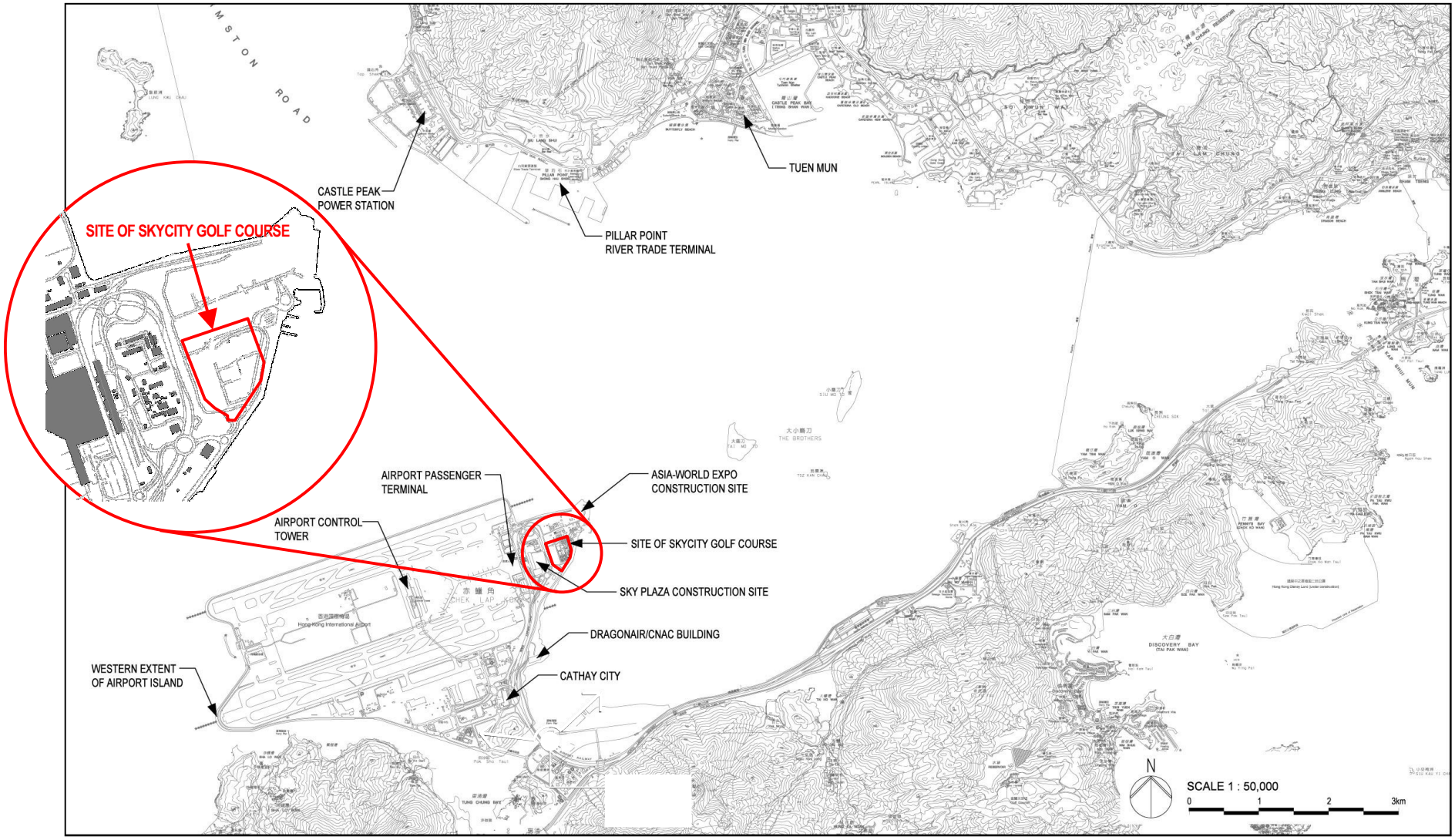

Figure 1-1 Location of SkyCity Golf Course on the Airport Island

2 Site Audit

The monthly site audit examines the implementation status of environmental protection, mitigation and pollution control measures.

Appendix 1 contains the site audit checklist for June 2006. From this the following observations on the implementation status of environmental, mitigation and pollution control measures can be made. Areas for improvement and follow-up are indicated on the checklist and have been highlighted below. The Works Contractor is aware of any shortcomings and has been advised by the ET of any improvements that are required.

2.1 Water Quality

A vehicle wheelwash has been provided at the site egress point. However, the Contractor was reminded to the mud accumulated in the wheel washing bay frequently. The remaining perimeter U-channel of some 20m along the southern part of the site is being constructed.

As indicated by the Contractor, no water has been discharged from the site during the reporting month as rain water are collected in the excavated lake bowls and from there percolate down to replenish the groundwater below the site. Because of this, there is no surface runoff from the site.

It is noted that a Discharge Licence under the Water Pollution Control Ordinance has been issued by EPD to the Contractor. The Contractor is reminded to keep the license on site for inspection. The Contractor has also been reminded to make silt traps/settlement tanks available on site in case these are needed for discharge off-site.

2.2 Air Quality

It was observed that the unpaved areas and haul roads of the entire site area were wet.

An idling backhoe was observed during the site inspection and, however, a worker switched off the backhoe immediately.

The Contractor was also reminded to provide covers for the overnight stockpiles and during the rainstorm.

2.3 Noise

No significant noise problems were noted. The most apparent noise source is overhead aircraft.

2.4 Waste/Chemical Management

Three-colour recycling bins have been placed near to the Contractor's site office. The Contractor has registered as a Waste Producer under the Waste Disposal Ordinance. It was observed that chemical waste storage has been provided.

All diesel storage tanks and oil/lubricant drums have been provided with a drip tray.

2.5 Landscape and Visual

The site is completely surrounded by a hoarding and there are no landscape or visual issues at this time.

2.6 General

The Environmental Permit is displayed at the entrance to the site as required. Although the Contractor has applied and/or received other permits and licences relating to environmental protection, these are not filed in an accessible manner. The Contractor was recommended to ensure that all relevant permits and licences are easily available for inspection, by both the ET and also by EPD.

Overall, the site operation is acceptable from an environmental point of view, but there is room for improvement. The Contractor has been advised of those areas which require immediate attention and this will be followed-up during the next site audit.

3 Marine Water Quality EM&A

Monitoring of Dissolved Oxygen (DO) concentration in mg/ℓ, Suspended Solids (SS) in mg/ℓ and turbidity in NTU, was carried out by the ET to ensure that any deterioration in marine water quality could be readily detected and timely action could be taken to rectify the situation if this was due to site activities. DO and turbidity were measured *in-situ* whilst SS was determined in laboratory.

Other parameters, such as water depth, sea temperature, salinity and DO saturation are recorded for reference, and weather conditions, sea conditions, tidal stage and any particular site activities are recorded for information.

3.1 Monitoring Results

3.1.1 Summary

A summary of monitoring results for the reporting month is provided in Table 3-1, below. Detailed results are provided in Appendix 2, in which exceedances of Action/Limit (A/L) Levels are highlighted.

Station		Temperature (^{O}C)	Salinity (mg/ℓ)	DO Saturation (%age)	DO Concentration (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
C1	**Mean**	27.1	17.2	91.9	6.8	5	6
	Maximum	28.8	23.8	106.0	8.4	7	9
	Minimum	25.3	8.9	82.1	6.0	3	3
C2	**Mean**	26.8	18.2	92.4	6.7	4	6
	Maximum	28.0	24.0	103.0	8.1	6	14
	Minimum	25.5	9.0	81.1	5.9	3	3
M1	**Mean**	26.9	17.4	92.4	6.7	5	7
	Maximum	28.1	23.8	103.0	8.0	7	14
	Minimum	25.5	9.0	81.2	5.8	3	3
M2	**Mean**	26.9	17.6	92.6	6.7	4	7
	Maximum	28.0	23.6	105.0	7.9	6	16
	Minimum	25.4	9.0	80.2	5.8	3	3

Table 3-1 Summary of Impact Monitoring Data

3.1.2 Equipment and Methodology

Because of the relatively shallow water, *in-situ* measurements and water sampling were conducted at only one water depth – the mid-depth. Water samples for all monitoring parameters were collected, stored, preserved and analysed according to *APHA Standard Methods for the Examination of Water and Wastewater, 19th Edition,* #17.

In-situ DO concentration, turbidity (and temperature, salinity and DO saturation) were carried out using a YSI Model 6820 CE-C-M-Y multi-parameter meter:

Parameter	YSI Model 6820 CE-C-M-Y		
	Range	Resolution	Accuracy
DO Concentration	0 to 50 mg/ℓ	0.01 mg/ℓ	0 to 20 mg/ℓ: ±2% of reading or 0.2 mg/ℓ, whichever is greater; 20 to 50 mg/ℓ: ±6% of reading
DO Saturation	0 to 500%	0.1%	0 to 200%: ±2% of reading or 2% air saturation, whichever is greater; 200 to 500%: ±6% of reading
Turbidity	0 to 1,000 NTU	0.1 NTU	±2% of reading or 0.3 NTU, whichever is greater
Temperature	-5 to +70°C	0.01°C	±0.15°C
Salinity	0 to 70 ppt	0.01 ppt	±1% of reading or 0.1 ppt, whichever is greater

Table 3-2 *In-situ* Monitoring Equipment Details

A Kahlisco water sampler was used to obtain the water sample for subsequent SS analysis. Water samples were collected in high density polythene bottles, packed in ice (cooled to 4℃ without being frozen), and delivered to ALS' laboratory (HOKLAS accredited) immediately after completion of monitoring. The analysis follows APHA *Standard Methods #*2540D.

A Global Positioning System (GPS) was used to determine the exact monitoring location and water depth was determined using an echo-sounder.

3.1.3 Maintenance and Calibration

All *in-situ* monitoring instruments are calibrated and certified by ALS at 3-monthly intervals throughout the marine water quality monitoring programme.

For DO, the probe (YSI 6820) is calibrated once per monitoring day by the wet bulb method. Calibration at ALS is carried out once every three months in a water sample of known dissolved oxygen concentration. The sensor is immersed in the water and after thermal equilibration, the known mg/l value is keyed in and the calibration is carried out automatically.

For turbidity, the probe (YSI 6820) is calibrated with a solution of known NTU at ALS once every three months. Calibration as per dissolved oxygen, above.

Calibration details are provided in Appendix 3.

3.1.4 Parameters Monitored

The following parameters are monitored and compared to A/L Levels:

- Dissolved Oxygen (DO)
- Suspended Solids (SS)
- Turbidity

Other parameters, such as water depth, sea temperature, salinity and dissolved oxygen saturation ware recorded for reference, and weather conditions, sea conditions, tidal stage and any particular site activities were recorded for information.

3.1.5 Monitoring Locations

Monitoring locations together with grid references are shown in Figure 3-2. Control Stations are designated C1 and C2 and Monitoring Stations are designated M1 and M2.

3.1.6 Monitoring Date, Time, Frequency and Duration

Monitoring of marine water quality is carried out twice-weekly during mid-ebb and mid-flood tides. Table 3-3, below, provides details of the monitoring dates, times and duration:

Date	Duration of Ebb Tide	Monitoring at Mid-Ebb	Duration of Flood Time	Monitoring at Mid-Flood
2/6/06	12:56 to 21:29	17:12	20:44 to 12:56	04:50
5/6/06	06:27 to 10:59	08:43	10:59 to 16:21	13:40
9/6/06	07:46 to 15:13	11:29	15:13 to 21:34	18:23
12/6/06	09:23 to 17:26	13:24	02:59 to 09:23	06:11
16/6/06	12:28 to 20:32	16:30	05:57 to 12:28	09:12
19/6/06	05:14 to 10:11	07:42	10:11 to 15:59	13:05
23/6/06	07:35 to 15:08	11:21	15:08 to 21:46	18:27
27/6/06	10:08 to 18:16	14:12	03:27 to 18:16	14:12
30/6/06	12:03 to 20:04	16:03	05:31 to 12:03	08:47

Table 3-3 Monitoring Date, Time, Frequency and Duration

3.2 Action/Limit Levels

The A/L Levels for the impact monitoring stations (M1 and M2) were determined in the approved Interim Baseline Monitoring Report and are shown in Table 3-4:

Parameter	Action Level	Limit Level
DO Concentration	5th percentile of baseline data = 7.0 mg/ℓ, or 80% of the upstream control station	4.0 mg/ℓ, or 70% of the upstream control station
Turbidity	95th percentile of baseline data = 9.6 NTU, or 120% of the upstream control station	99th percentile of baseline data = 10.5 NTU, or 130% of the upstream control station
SS	95th percentile of baseline data = 9.4 mg/ℓ, or 120% of the upstream control station	99th percentile of baseline data = 9.9 mg/ℓ, or 130% of the upstream control station

Table 3-4 Action and Limit Levels for Water Monitoring Stations

In case of exceedance of A/L Levels at M1 or M2, the Event/ Action Plan (shown in Table 3-5, below) shall be followed.

Event	Action	
	ET	Works Contractor
Exceedance of Action Level	1. Identify the source(s) of impact. If not from the Project then provide justification and document this 2. If exceedance is caused by the Project then inform Contractor 3. Check monitoring data and Contractor's working methods 4. Discuss possible mitigation measures with Contractor 5. Repeat measurement on next day of exceedance	1. Confirm notification of the exceedance in writing 2. Rectify any unacceptable practice 3. Check all plant and equipment 4. Amend working methods if appropriate 5. Discuss possible mitigation measures with ET 6. Implement the agreed mitigation measures
Exceedance of Limit Level	1. Identify the source(s) of impact. If not from the Project then provide justification and document this in the EM&A Report 2. If exceedance is caused by the Project then inform Contractor 3. Check monitoring data and Contractor's working methods 4. Agree mitigation measures with Contractor 5. Ensure mitigation measures are implemented immediately 6. Increase the monitoring frequency to daily until no further exceedance of Limit Level	1. Confirm notification of the exceedance in writing 2. Rectify any unacceptable practice 3. Check all plant and equipment 4. Amend working methods if appropriate 5. Agree possible mitigation measures with ET 6. Implement the agreed mitigation measures immediately

Table 3-5 Event Action Plan for Marine Water Quality Monitoring

3.3 Summary of Exceedances

3.3.1 Review of Exceedances and Implications

There were six exceedances of Limit Level for suspended solids during March 2006. The Event/Action Plan was implemented.

The first action is to determine the source of the exceedance. There have been rainfalls during the reporting month. However, there was no surface run-off or no discharges from site since rainwater was collected in the excavated lake bowls and from there percolated down to replenish the groundwater below the site. As such, the cause of these exceedances cannot be from site activities.

As such, these exceedances cannot be considered as exceedances in terms of the EM&A programme. No action or follow-up is thus deemed to be necessary.

Notwithstanding, future monitoring results will be examined closely and correlations with any discharge from site will be followed up immediately to ensure that no adverse environmental impacts are caused by this Project.

3.3.2 Action Taken and Follow-up

The exceedances of Limit Level noted during this reporting month are not considered to be exceedances in terms of the EM&A programme and so no action or follow-up is deemed to be necessary.

3.4 Complaints and Notifications of Summons

3.4.1 Complaints

No complaints were received during the reporting month and there are no outstanding follow-up issues to be addressed.

3.4.2 Notifications of Summons

No notifications of summons were received during the reporting month and there are no outstanding follow-up issues to be addressed.

3.5 Works Programme and Future Monitoring Schedule

Appendix 4 shows the current work programme for the works and Appendix 5 provides the future schedule for marine water quality monitoring.

Based on the work to be carried out in future months, no significant impacts to marine water quality are anticipated.

Key

38ha Catchment Area for Outfall No. 8

11.56ha Project Site Boundary

M1-2 Marine Water Quality Monitoring Location (Impact Monitoring)

C1-2 Marine Water Quality Control Stations (Impact Monitoring)

Co-ordinates of Monitoring Locations and Control Stations

	Northing	Easting
M1	22°18'77"	113°56'65"
M2	22°18'94"	113°56'78"
C1	22°18'45"	113°56'50"
C2	22°19'21"	113°56'95"

Note : Co-ordinates based on WGS 1984 datum

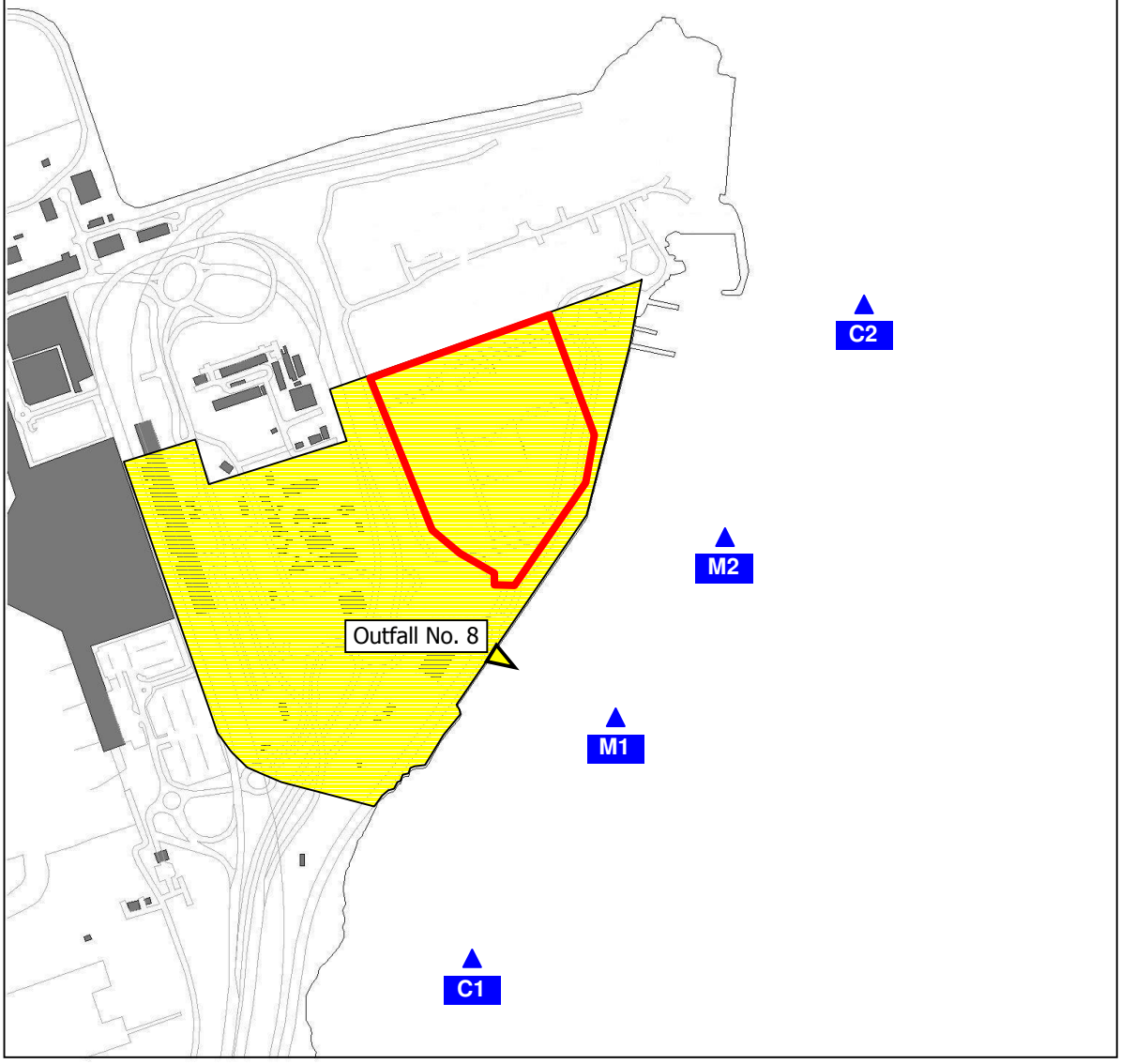

Figure 3-2 Location of Impact Monitoring Stations

4 Comments, Recommendations and Conclusions

The monthly site audit revealed that there were no significant non-compliances in terms of water, air, noise, waste or landscape and visual, although the Environmental Team made a number of recommendations to the Works Contractor to improve environmental conditions.

In terms of marine water quality monitoring, there were no exceedances of A/L Levels during June 2006.

There were no complaints received and no notifications of summons.

Overall, there are no adverse environmental impacts caused by the Works during the reporting month, although there is room for improvement in overall site environmental management – recommendations have been made and will be followed up in due course.

Appendix 1

Site Audit Checklist

SkyCity Golf Course
Environmental Team (ET) for Construction Period
SITE INSPECTION/AUDIT CHECKLIST

Hyder Consulting

Inspection No.

Inspection Date 16/6/06 Time 10:00 Inspected By Client: Robert
Contractor: Kit
ET: Adi Lee

Site SkyCity Golf Course Contractor Wing Fat

Weather

Condition ☐ Sunny ☑ Fine ☐ Overcast ☐ Drizzle ☐ Rain ☐ Storm ☐ Hazy

Temperature 20 °C Humidity ☑ High ☐ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong Direction

		N/A or not observed	Yes	No	Photo/Remarks
1	**Water Quality**				
1.1	Perimeter cut off drains direct off-site water around the site?	☐	☑	☐	Note (c)
1.2	Is all surface runoff directed to silt removal facilities prior to discharge?	☐	☑	☐	
1.3	Channels, earth bunds or sandbags direct surface runoff to silt removal facilities?	☐	☑	☐	
1.4	Is groundwater pumped out from tunnelling and excavations discharged via silt removal facilities?	☑	☐	☐	
1.5	Are there silt removal facilities for settling surface runoff prior to discharge?	☑	☐	☐	
1.5.1	Constructed from pre-formed individual cells or silt traps / basins?	☑	☐	☐	
1.5.2	Adequate capacity?	☑	☐	☐	
1.5.3	Free from silt and sand?	☑	☐	☐	
1.5.4	Inspected and maintained after rain storm?	☑	☐	☐	
1.6	Is drainage system well maintained to prevent flooding and overflow?	☐	☑	☐	
1.7	Is exposed earth stabilized after earthworks have been completed?	☑	☐	☐	
1.8	Are exposed slope surfaces covered (by tarpaulin or other means)?	☑	☐	☐	
1.9	Are open stockpiles of excavated and construction materials covered during rainstorms?	☐	☑	☐	Note (8)
1.10	Any measures to prevent the washing away of excavated and construction materials e.g. sand/silt to drains?	☐	☑	☐	
1.11	Are manholes covered and sealed?	☐	☑	☐	
1.12	Are vehicles and plant cleaned of earth, mud and debris before leaving the site?	☐	☑	☐	
1.13	Are vehicle washing facilities provided at every site exit?	☐	☑	☐	See Note (5)

		N/A or not observed	Yes	No	Photo/Remarks
1.13.1	Wastewater treated in silt removal facility? Silt removal facility emptied of silt regularly?	☐	☑	☐	
1.13.2	Washing area and road exiting from washing facility paved?	☐	☑	☐	
1.13.3	Access road has sufficient backfall toward washing facility or bunded to prevent of untreated wastewater?	☐	☑	☐	
1.14	Equipment oil and lubrication replacements performed only in bunded maintenance area?	☐	☑	☐	
1.15	Drainage from maintenance area discharged via an oil interceptor?	☐	☑	☐	
1.15.1	Oil and grease removed regularly?	☐	☑	☐	
1.16	Toilets that connect to foul sewer or chemical toilets provided?	☐	☑	☐	
1.17	Is debris and rubbish prevented from entering drains?	☐	☑	☐	
1.18	Is Effluent Discharge Licence available for inspection?	☐	☐	☑	see 2.6.2(6)

2 AIR QUALITY

2.1	Are hoarding not less than 2.4m tall provided beside roads or areas with public access?	☐	☑	☐	
2.2	Are the roads and unpaved areas watered regularly to avoid dust generation?	☐	☑	☐	
2.3	Are stockpiles of excavated material covered or regularly watered?	☐	☑	☐	
2.4	Is stockpile of dusty materials kept to not extend beyond the pedestrian barriers, fencing or traffic cones?	☐	☑	☐	
2.5	Is the public road around the site entrance kept clean and free from dust?	☐	☑	☐	
2.6	Do the site vehicles use the vehicle wash facility at the site exits?	☐	☑	☐	
2.7	Are materials transported on trucks covered?	☐	☑	☐	
2.8	Are dusty materials sprayed prior to loading?	☐	☑	☐	
2.9	Are all truck loads to a level within the side and tail boards?	☐	☑	☐	
2.10	Are areas where demolition/site clearance/breaking take place regularly watered?	☑	☐	☐	
2.11	Is every stock of more than 20 bags of cement or day covered entirely by impervious sheeting or placed in an area sheltered on the top and the three sided?	☑	☐	☐	
2.12	Are potentially dusty demolished items/debris covered or placed in a three sided shelter?	☑	☐	☐	
2.12.1	Is the debris sprayed with water/dust suppression chemical to keep wet before it is dumped onto a debris chute?	☑	☐	☐	
2.13	Odorous materials immediately covered and promptly removed from site?	☑	☐	☐	
2.14	Are there enclosures around the main dust-generating activities?	☑	☐	☐	

		N/A or not observed	Yes	No	Photo/Remarks
2.15	Is open burning prohibited?	☐	☑	☐	
2.16	Are completed earthworks sealed and hydroseeded and planted as soon as practicable?	☐	☑	☐	
2.17	Are vehicles and equipment switched off while not in use?	☐	☑	☐	See Note (7)
2.18	Do vehicles and equipment maintained that no excessive smoke or visible vapour emitted?	☐	☑	☐	

Observable dust sources ☑ Wind erosion ☑ Vehicle/equipment movements ☐ Loading/unloading of materials ☐ Others_____

3 Noise

3.1	Are the construction works scheduled to minimise noise nuisance?	☐	☑	☐	
3.2	Are the works or equipment sited to minimize noise nuisance? Mobile plant sited away from NSRs? Noisy plant oriented away from NSRs?	☐	☑	☐	
3.3	Are all plant and equipment well maintained and in good operating condition?	☐	☑	☐	
3.4	Is idle equipment turned off or throttled down?	☐	☑	☐	See Note (7)
3.5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?	☑	☐	☐	
3.6	Are quiet plant used as required?	☑	☐	☐	
3.7	Are silencers/mufflers fitted and maintained?	☑	☐	☐	
3.8	Are mobile/temporary noise barriers used where specified?	☑	☐	☐	
3.9	Do air compressors (≥500kPa of supplying compressed air) and hand held percussive breakers (>10kg in weight) have valid noise labels?	☑	☐	☐	
3.10	Do compressors and generators operate with doors closed?	☐	☑	☐	
3.11	Are Construction Noise Permits available for inspection?	☑	☐	☐	

Major noise source(s) ☐ Traffic ☑ Construction activities inside of site ☐ Construction activities outside of site ☐ Others_____

4 Waste/Chemical Management

4.1 General refuse

4.1.1	Accumulation on-site avoided?	☐	☑	☐	
4.1.2	Receptacles (e.g. rubbish bins) available?	☐	☑	☐	
4.1.3	Disposed of regularly and properly?	☐	☑	☐	
4.1.4	Records of quantities generated/recycled/disposed maintained?	☐	☑	☐	

		N/A or not observed	Yes	No	Photo/Remarks
4.2	Chemical waste				
4.2.1	Stored properly in designated area?	☑	☐	☐	
4.2.2	Storage in accordance with Code of Practice?	☐	☑	☐	
4.2.3	Disposed of properly?	☐	☑	☐	See Note (9)
4.2.4	Trip tickets available for inspection?	☑	☐	☐	
4.3	Chemical/fuel storage				
4.3.1	Is storage area bunded?	☐	☑	☐	
4.3.2	Adequate bund capacity? (>110% of the largest tank)	☐	☑	☐	
4.3.3	Area storage area provided with locks and located on sealed areas?	☐	☑	☐	
4.3.4	Are oil/fuel drums and plant/equipment provided with drip trays to prevent soil contamination?	☐	☑	☐	
4.4	C&D Material				
4.4.1	Reused/recycled where practicable?	☐	☑	☐	
4.4.2	Inert/non inert materials segregated?	☐	☑	☐	
4.4.3	Disposed of properly?	☑	☐	☐	
4.4.4	Records of quantities generated/recycled/disposed maintained?	☑	☐	☐	
4.5	Excavated Material				
4.5.1	Reused where practicable?	☐	☑	☐	
4.5.2	Records of quantities generated/reused/disposed maintained?	☑	☐	☐	
4.6	Are spent bentonite slurries or grouts collected, reconditioned and reused?	☑	☐	☐	
4.7	Is foam, oil, grease, litter or other objectionable matters in water to nearby drain/sewer avoided?	☑	☐	☐	
5	**Landscape and Visual**				
5.1	Are retained trees protected by fencing?	☐	☑	☐	
5.2	Is the work site confined within site boundaries?	☐	☑	☐	
5.3	Is damage to surrounding areas avoided?	☐	☑	☐	

Remarks

(1) Unpaved areas and haul road at entire site are wet. (Obs closed)

(2) No dust emitted from breaking activities. (obs closed)

(3) No empty oil drum was observed. (obs closed)

(4) Perimeter cut off drain at the southern part of the site is being constructed.

(5) Mud accumated in the wheel washing bay should be cleared up frequently.

(6) A file should be created to keep copies of all environmental licenses ~~and~~ permits for inspection.

(7) An idling backhoe not switched off was observed. Worker switched off the backhoe immediately.

(8) ~~It was reminded~~ The Contractor is reminded to provide tarpaulin cover for the overnig stockpiles and during ~~rainfall~~ rainstorms.

Signatures:

ET Inspector	AMS Site Representative	Contractor's Representative
Name: Adila	Name: Pun Wai Hey. (Consultant's Representative)	Name: JHEUNG KWOK KIT
Date: 29/6/06	Date: 29/06/2006.	Date: 29/06/2006

Appendix 2

Marine Water Quality Monitoring Data

Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (℃)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
02-Jun-06	(mid-ebb)	M1	3	6	26.1	19.9	97.1	6.9	7	14
02-Jun-06	(mid-ebb)	M2	3	6	26.0	20.0	97.3	7.0	6	11
02-Jun-06	(mid-ebb)	C1	2	3	25.8	19.2	95.4	6.9	7	9
02-Jun-06	(mid-ebb)	C2	3	6	26.0	20.0	97.1	7.0	5	14
02-Jun-06	(mid-flood)	M1	3	6	25.5	21.0	94.9	6.8	6	**14**
02-Jun-06	(mid-flood)	M2	3	6	25.4	22.4	94.7	6.7	5	**16**
02-Jun-06	(mid-flood)	C1	2	3	25.3	20.3	93.3	6.8	6	9
02-Jun-06	(mid-flood)	C2	3	6	25.5	21.4	94.5	6.7	5	11
05-Jun-06	(mid-ebb)	M1	3	6	26.9	15.8	103.0	7.5	5	3
05-Jun-06	(mid-ebb)	M2	3	6	26.7	15.6	105.0	7.7	5	4
05-Jun-06	(mid-ebb)	C1	2	6	26.7	15.2	106.0	7.7	6	4
05-Jun-06	(mid-ebb)	C2	3	6	26.6	20.1	99.3	7.3	5	4
05-Jun-06	(mid-flood)	M1	3	3	26.5	15.6	102.0	7.4	6	4
05-Jun-06	(mid-flood)	M2	3	3	26.7	15.5	104.0	7.6	5	4
05-Jun-06	(mid-flood)	C1	2	3	26.5	15.9	101.0	7.3	6	4
05-Jun-06	(mid-flood)	C2	3	6	26.4	19.8	103.0	7.4	6	4
09-Jun-06	(mid-flood)	M1	3	6	26.6	9.0	94.7	6.6	4	8
09-Jun-06	(mid-flood)	M2	3	6	26.6	9.0	95.6	6.7	5	6
09-Jun-06	(mid-flood)	C1	2	3	26.6	8.9	95.9	6.7	4	6
09-Jun-06	(mid-flood)	C2	3	6	26.5	9.0	96.5	6.8	4	7
09-Jun-06	(mid-ebb)	M1	No sampling due to increment weather.							
09-Jun-06	(mid-ebb)	M2								
09-Jun-06	(mid-ebb)	C1								
09-Jun-06	(mid-ebb)	C2								

Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (℃)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
12-Jun-06	(mid-ebb)	M1	3	6	25.7	14.7	94.7	6.7	5	**11**
12-Jun-06	(mid-ebb)	M2	3	6	25.8	14.7	93.5	6.6	4	**10**
12-Jun-06	(mid-ebb)	C1	2	3	28.8	14.6	93.9	6.7	3	5
12-Jun-06	(mid-ebb)	C2	3	6	25.8	14.7	96.6	6.6	4	4
12-Jun-06	(mid-flood)	M1	3	6	25.8	14.1	95.9	6.8	5	**12**
12-Jun-06	(mid-flood)	M2	3	6	25.8	14.3	95.7	6.8	5	**11**
12-Jun-06	(mid-flood)	C1	2	6	25.8	14.1	96.8	6.9	5	9
12-Jun-06	(mid-flood)	C2	3	6	25.7	14.2	95.5	6.8	5	9
16-Jun-06	(mid-ebb)	M1	3	6	26.5	17.2	88.2	6.3	4	3
16-Jun-06	(mid-ebb)	M2	3	6	26.6	17.1	88.4	6.3	3	3
16-Jun-06	(mid-ebb)	C1	2	3	26.6	17.4	90.5	6.4	4	3
16-Jun-06	(mid-ebb)	C2	3	6	26.6	17.5	89.7	6.4	4	3
16-Jun-06	(mid-flood)	M1	3	6	26.3	17.2	86.9	6.2	3	4
16-Jun-06	(mid-flood)	M2	3	6	26.2	17.7	86.4	6.1	4	5
16-Jun-06	(mid-flood)	C1	2	3	26.4	17.4	85.3	6.1	3	4
16-Jun-06	(mid-flood)	C2	3	6	26.2	17.5	86.6	6.2	3	4
19-Jun-06	(mid-ebb)	M1	3	6	27.5	23.5	82.8	6.0	3	3
19-Jun-06	(mid-ebb)	M2	3	6	27.5	23.4	83.1	6.0	3	3
19-Jun-06	(mid-ebb)	C1	2	3	27.6	22.7	84.3	6.1	4	3
19-Jun-06	(mid-ebb)	C2	3	6	27.5	24.0	83.6	6.1	4	3
19-Jun-06	(mid-flood)	M1	3	6	27.2	23.8	81.2	5.8	4	4
19-Jun-06	(mid-flood)	M2	3	6	27.2	23.6	80.2	5.8	4	3
19-Jun-06	(mid-flood)	C1	2	3	27.4	23.8	82.1	6.0	5	4
19-Jun-06	(mid-flood)	C2	3	6	27.2	23.8	81.1	5.9	4	3

Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (℃)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
23-Jun-06	(mid-ebb)	M1	3	6	27.7	16.6	97.1	7.2	5	6
23-Jun-06	(mid-ebb)	M2	3	6	27.7	17.0	97.3	7.5	5	7
23-Jun-06	(mid-ebb)	C1	2	3	27.9	16.3	95.4	7.9	6	7
23-Jun-06	(mid-ebb)	C2	3	6	27.6	17.2	97.1	7.4	4	8
23-Jun-06	(mid-flood)	M1	3	6	28.1	16.8	94.9	8.0	5	9
23-Jun-06	(mid-flood)	M2	3	6	28.0	17.1	94.7	7.9	4	8
23-Jun-06	(mid-flood)	C1	2	6	28.3	16.6	93.3	8.4	5	9
23-Jun-06	(mid-flood)	C2	3	6	28.0	17.5	94.5	8.1	4	9
27-Jun-06	(mid-ebb)	M1	3	6	27.8	17.1	93.7	6.7	5	7
27-Jun-06	(mid-ebb)	M2	3	6	27.8	17.4	93.5	6.7	5	9
27-Jun-06	(mid-ebb)	C1	2	3	28.0	17.0	92.7	6.6	4	7
27-Jun-06	(mid-ebb)	C2	3	6	27.8	17.6	93.0	6.6	5	7
27-Jun-06	(mid-flood)	M1	3	6	27.4	17.0	89.9	6.4	5	4
27-Jun-06	(mid-flood)	M2	3	6	27.4	17.3	90.7	6.5	5	5
27-Jun-06	(mid-flood)	C1	2	3	27.6	16.8	89.0	6.4	5	6
27-Jun-06	(mid-flood)	C2	3	6	27.5	17.3	90.2	6.4	4	7
30-Jun-06	(mid-ebb)	M1	3	6	27.8	18.5	88.1	6.3	5	4
30-Jun-06	(mid-ebb)	M2	3	6	27.7	18.8	87.7	6.4	4	4
30-Jun-06	(mid-ebb)	C1	2	6	27.8	18.4	85.3	6.4	3	6
30-Jun-06	(mid-ebb)	C2	3	6	27.7	18.7	87.0	6.4	4	5
30-Jun-06	(mid-flood)	M1	3	6	27.5	18.4	85.0	6.3	3	4
30-Jun-06	(mid-flood)	M2	3	6	27.4	18.6	86.7	6.2	4	3
30-Jun-06	(mid-flood)	C1	2	6	27.5	18.2	82.8	6.3	5	4
30-Jun-06	(mid-flood)	C2	3	6	27.5	18.6	85.8	6.2	4	5

Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (℃)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)

Notes : "-" indicates no data is available

Bold indicates Action Level exceedance

Bold indicates Limit Level exceedance

Mean	26.9	17.6	92.3	6.7	4.6	6.4
Maximum	28.8	24.0	106.0	8.4	7.0	16.0
Minimum	25.3	8.9	80.2	5.8	3.0	3.0

Appendix 3

Equipment Calibration Details

CERTIFICATE OF ANALYSIS

Batch: HK51718
Sub Batch : 0
Date of Issue: 17/05/2006
Client: MAUNSELL ENV MGT CNLT LTD
Client Reference:

Calibration of Tubidimeter

Item : YSI SONDE Environmental Monitoring System

Model No. : 6820-C-M

Serial No. : 00010867

Equipment No. : W-026-27

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B

Date of Calibration : 04 May,2006

Testing Results :

Expected Reading	Recording Reading
0.00 NTU	0.00 NTU
4.00 NTU	4.30 NTU
16.0 NTU	17.4 NTU
80.0 NTU	83.5 NTU
160 NTU	160 NTU
Allowing Deviation	±10%

Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

01-JUN-2006 11:12 ALS TECHNICHEM +852 2610 2021 P.27/31

CERTIFICATE OF ANALYSIS

Batch: HK51718
Sub Batch : 0
Date of Issue: 17/05/2006
Client: MAUNSELL ENV MGT CNLT LTD
Client Reference:

Calibration of Conductivity System

Item : YSI SONDE Environmental Monitoring System

Model No. : 6820-C-M

Serial No. : 00010867

Equipment No. : W-026-27

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2510B

Date of Calibration : 04 May,2006

Testing Results :

Expected Reading	Recording Reading
1412 uS/cm 6667 uS/cm 58670 uS/cm	1387 uS/cm 6781 uS/cm 58910 uS/cm
Allowing Deviation	±10%

Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

01-JUN-2006 11:13 ALS TECHNICHEM +852 2610 2021 P.28/31

CERTIFICATE OF ANALYSIS

Batch: HK51718
Sub Batch : 0
Date of Issue: 17/05/2006
Client: MAUNSELL ENV MGT CNLT LTD
Client Reference:

Calibration of Salinity System

Item : YSI SONDE Environmental Monitoring System

Model No. : 6820-C-M

Serial No. : 00010867

Equipment No. : W-026-27

Calibration Method : This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B

Date of Calibration : 04 May,2006

Testing Results :

Expected Reading	Recording Reading
10.0 g/L 20.0 g/L 30.0 g/L	10.5 g/L 20.9 g/L 30.5 g/L
Allowing Deviation	±10%

Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

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CERTIFICATE OF ANALYSIS

Batch: HK51718
Sub Batch : 0
Date of Issue: 17/05/2006
Client: MAUNSELL ENV MGT CNLT LTD
Client Reference:

Calibration of Thermometer

Item : YSI SONDE Environmental Monitoring System

Model No. : 6820-C-M

Serial No. : 00010867

Equipment No. : W-026-27

Calibration Method : In-house Method

Date of Calibration : 04 May,2006

Testing Results :

Reference Temperature (^{0}C)	Recorded Temperature (^{0}C)
20.5 ^{0}C 24.5 ^{0}C	20.7 ^{0}C 24.7 ^{0}C
Allowing Deviation	±2.0^{0}C

Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

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CERTIFICATE OF ANALYSIS

Batch: HK51718
Sub Batch : 0
Date of Issue: 17/05/2006
Client: MAUNSELL ENV MGT CNLT LTD
Client Reference:

Calibration of DO System

Item : YSI SONDE Environmental Monitoring System

Model No. : 6820-C-M

Serial No. : 00010867

Equipment No. : W-026-27

Calibration Method : This meter was calibrated in accordance with standard method APHA (18th Ed.) 4500-0C & G

Date of Calibration : 04 May,2006

Testing Results :

Expected Reading	Recording Reading
0.00 mg/L 4.32 mg/L 6.79 mg/L 8.98 mg/L	0.00 mg/L 4.47 mg/L 6.59 mg/L 8.83 mg/L
Allowing Deviation	±0.2 mg/L

Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

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TOTAL P.31

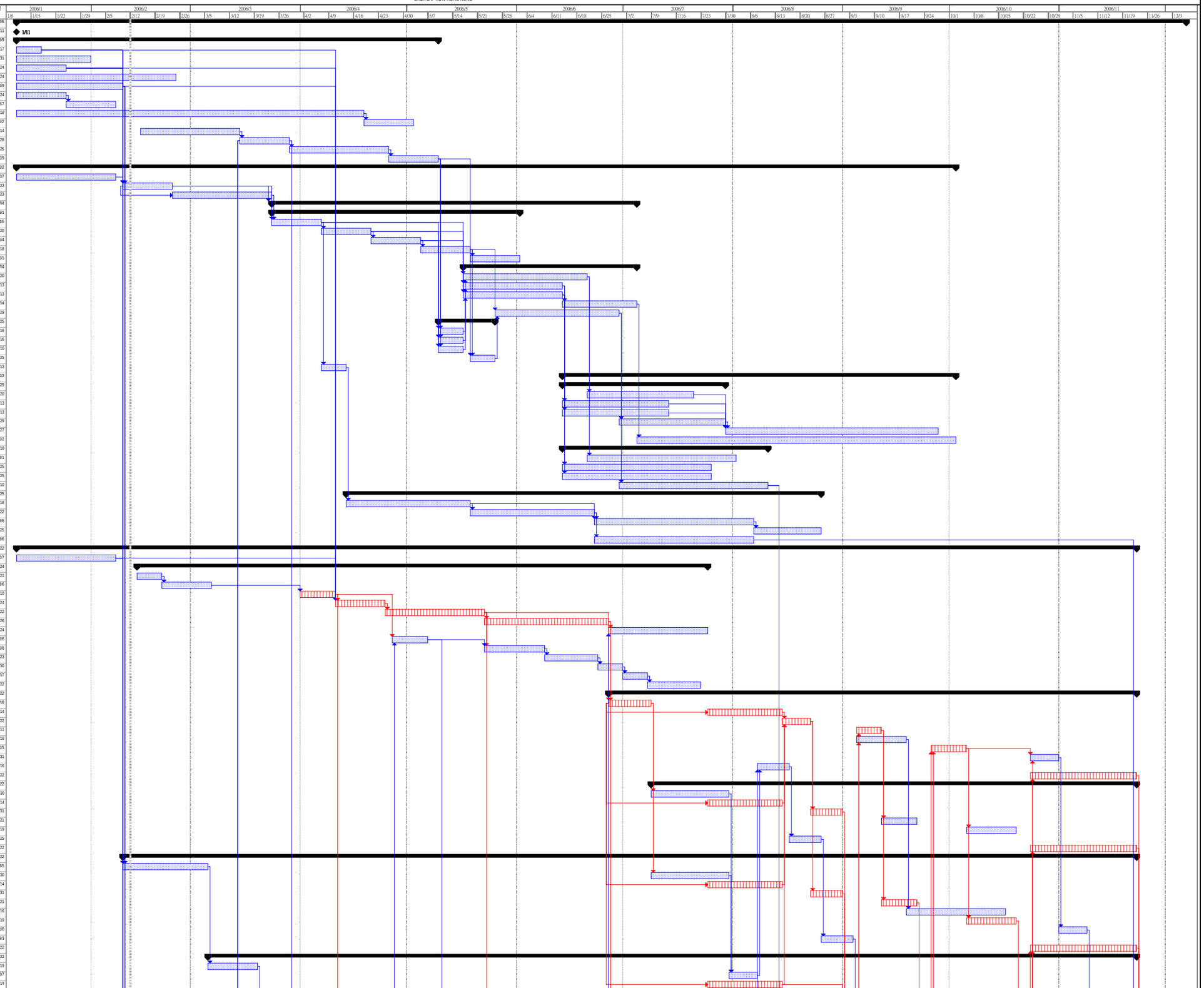
Appendix 4

Works Programme

PROJECT: SKYCITY GOLF COURSE

LOT NO.825, R.P. OF CHEK LAP KOK LOT NO. 1 AND THE EXTENSION THERETO,
CHEK LAP KOK, HONG KONG

識別碼	WBS	任務名稱	工期	開始時間	完成時間
1	1	CONTRACT PERIOD	330 days	2006/1/11	2006/12/6
2	1.1	Project Commencement (Site Handover to Contractor)	0 days	2006/1/11	2006/1/11
3	1.2	Preliminaries	119 days	2006/1/11	2006/5/9
4	1.2.1	Mobilization of Plants and Equipment	7 days	2006/1/11	2006/1/17
5	1.2.2	Site Accommodations (Office Setup, Temporary Power and Water Supplies, etc.)	21 days	2006/1/11	2006/1/31
6	1.2.3	Initial Survey	14 days	2006/1/11	2006/1/24
7	1.2.4	Hoarding/Fencing Erection	45 days	2006/1/11	2006/2/24
8	1.2.5	Site Clearance	30 days	2006/1/11	2006/2/9
9	1.2.6	Technical/Samples Preparation and Submission (Structural)	14 days	2006/1/11	2006/1/24
10	1.2.7	Technical/Samples Approval (Structural)	14 days	2006/1/25	2006/2/7
11	1.2.8	Technical/Shopdrawings/Samples Preparation and Submission (Architectural)	98 days	2006/1/11	2006/4/18
12	1.2.9	Technical/Shopdrawings/Samples Approval (Architectural)	14 days	2006/4/19	2006/5/2
13	1.2.10	Shopdrawings/Samples Preparation and Submission (E&M)	28 days	2006/2/15	2006/3/14
14	1.2.11	Shopdrawings/Samples Approval (E&M)	14 days	2006/3/15	2006/3/28
15	1.2.12	CSD and CBWD preparation and submission	28 days	2006/3/29	2006/4/25
16	1.2.13	CSD and CBWD Approval	14 days	2006/4/26	2006/5/9
17	1.3	Phase 1	265 days	2006/1/11	2006/10/2
18	1.3.1	Approval and Consent obtain from Statutory Authority (Formation and Drainage)	28 days	2006/1/11	2006/2/7
19	1.3.2	Filling, Leveling and Formation Works	14 days	2006/2/10	2006/2/23
20	1.3.3	Approval and Consent obtain from Statutory Authority (Structure)	28 days	2006/2/24	2006/3/23
21	1.3.4	Structural Works	103 days	2006/3/24	2006/7/4
22	1.3.4.1	Buildings' Substructure Construction	70 days	2006/3/24	2006/6/1
23	1.3.4.1.1	Function Room/Changing Rooms/Pump Room Building	14 days	2006/3/24	2006/4/6
24	1.3.4.1.2	Restaurant and Kitchen Building	14 days	2006/4/7	2006/4/20
25	1.3.4.1.3	General Office and Pro Shop Building	14 days	2006/4/21	2006/5/4
26	1.3.4.1.4	Maintenance Building	14 days	2006/5/5	2006/5/18
27	1.3.4.1.5	Cable Trench	14 days	2006/5/19	2006/6/1
28	1.3.4.2	Buildings' Superstructures Construction (including 14-days propping period)	49 days	2006/5/17	2006/7/4
29	1.3.4.2.1	Function Room/Changing Rooms/Pump Room Building	35 days	2006/5/17	2006/6/20
30	1.3.4.2.2	Restaurant and Kitchen Building	28 days	2006/5/17	2006/6/13
31	1.3.4.2.3	General Office and Pro Shop Building	28 days	2006/5/17	2006/6/13
32	1.3.4.2.4	Outdoor Sitting Area, Terrace and Entrance Plaza	21 days	2006/6/14	2006/7/4
33	1.3.4.2.5	Maintenance Building	35 days	2006/5/26	2006/6/29
34	1.3.4.3	Underground Drainage and Ducting Works Installation	16 days	2006/5/10	2006/5/25
35	1.3.4.3.1	Function Room/Changing Rooms/Pump Room Building	7 days	2006/5/10	2006/5/16
36	1.3.4.3.2	Restaurant and Kitchen Building	7 days	2006/5/10	2006/5/16
37	1.3.4.3.3	General Office and Pro Shop Building	7 days	2006/5/10	2006/5/16
38	1.3.4.3.4	Maintenance Building	7 days	2006/5/19	2006/5/25
39	1.3.4.4	Concealing E&M Works Installation	7 days	2006/4/7	2006/4/13
40	1.3.5	Architectural Works	111 days	2006/6/14	2006/10/2
41	1.3.5.1	Internal Finishing Works and Fitting-out by Main Contractor	46 days	2006/6/14	2006/7/29
42	1.3.5.1.1	Function Room/Changing Room/Pump Room Building	30 days	2006/6/21	2006/7/20
43	1.3.5.1.2	Restaurant and Kitchen Building	30 days	2006/6/14	2006/7/13
44	1.3.5.1.3	General Office and Pro Shop Building	30 days	2006/6/14	2006/7/13
45	1.3.5.1.4	Maintenance Building	30 days	2006/6/30	2006/7/29
46	1.3.5.2	Internal Decorations to Clubhouse Buildings by NSC	60 days	2006/7/30	2006/9/27
47	1.3.5.3	External Finishing Works by Main Contractor	90 days	2006/7/5	2006/10/2
48	1.3.5.4	Indoor E&M Works and Fitting-out Installation	58 days	2006/6/14	2006/8/10
49	1.3.5.4.1	Function Room/Changing Room/Pump Room Building	42 days	2006/6/21	2006/8/1
50	1.3.5.4.2	Restaurant and Kitchen Building	42 days	2006/6/14	2006/7/25
51	1.3.5.4.3	General Office and Pro Shop Building	42 days	2006/6/14	2006/7/25
52	1.3.5.4.4	Maintenance Building	42 days	2006/6/30	2006/8/10
53	1.3.6	External Area	134 days	2006/4/14	2006/8/25
54	1.3.6.1	Underground Drainage and Ducting Construction	35 days	2006/4/14	2006/5/18
55	1.3.6.2	Hardlandscaping and Paving Works	35 days	2006/5/19	2006/6/22
56	1.3.6.3	E&M Works and Fitting-out by Main Contractor	45 days	2006/6/23	2006/8/6
57	1.3.6.4	Finishing Works and Fitting-out by Main Contractor	19 days	2006/8/7	2006/8/25
58	1.3.6.5	Irrigation & Softlandscaping Works by NSC	45 days	2006/6/23	2006/8/6
59	1.4	Phase 2	316 days	2006/1/11	2006/11/22
60	1.4.1	Approval and Consent obtain from Statutory Authority (Formation and Drainage)	28 days	2006/1/11	2006/2/7
61	1.4.2	Lake B / Zone H3	161 days	2006/2/14	2006/7/24
62	1.4.2.1	Lake-B Excavation	7 days	2006/2/14	2006/2/21
63	1.4.2.2	Lake-B Edge Retaining Walls Construction	14 days	2006/2/21	2006/3/6
64	1.4.2.3	Erecting of hoarding works at GC/2 Area (Approx. 8.67% handover to MC at late of March 200	10 days	2006/4/1	2006/4/10
65	1.4.2.4	Lake-B Excavation within GC/2 Area	14 days	2006/4/11	2006/4/24
66	1.4.2.5	Lake-B Edge Retaining Walls Construction within GC/2 Area	28 days	2006/4/25	2006/5/22
67	1.4.2.6	Waterproof Lining and Finishing Works to Walls and Lake Bottom	35 days	2006/5/23	2006/6/26
68	1.4.2.7	Watertightness test to Lakes and Reservoir	28 days	2006/6/27	2006/7/24
69	1.4.2.8	Zone H3 Underground Drainage and Ducting Construction	10 days	2006/4/27	2006/5/6
70	1.4.2.9	Zone H3 Filling, Leveling and Formation Works to Profile	17 days	2006/5/23	2006/6/8
71	1.4.2.10	Zone H3 Irrigation System by NSC	15 days	2006/6/9	2006/6/23
72	1.4.2.11	Zone H3 Lighting Fittings	7 days	2006/6/24	2006/6/30
73	1.4.2.12	Zone H3 Sand lying and Final Shaping	7 days	2006/7/1	2006/7/7
74	1.4.2.13	Zone H3 Softlandscaping Works by NSC	15 days	2006/7/8	2006/7/22
75	1.4.3	Zone H4a	149 days	2006/6/27	2006/11/22
76	1.4.3.1	Filing, levelling & formation	12 days	2006/6/27	2006/7/8
77	1.4.3.2	Irrigation pipes laying (NSC)	21 days	2006/7/25	2006/8/14
78	1.4.3.3	Rough shaping	8 days	2006/8/15	2006/8/22
79	1.4.3.4	Surface Drainage System Construction	7 days	2006/9/5	2006/9/11
80	1.4.3.5	Tee Boxes (No.4,13) Construction	14 days	2006/9/5	2006/9/18
81	1.4.3.6	Sand lying and Final Shaping	10 days	2006/9/26	2006/10/5
82	1.4.3.7	Amenity Area Finishing Works by Main Contractor	8 days	2006/10/24	2006/10/31
83	1.4.3.8	Cable Lying and Lighting Fittings	9 days	2006/8/8	2006/8/16
84	1.4.3.9	Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22
85	1.4.4	Zone H5	137 days	2006/7/9	2006/11/22
86	1.4.4.1	Filing, levelling & formation	22 days	2006/7/9	2006/7/30
87	1.4.4.2	Irrigation pipes laying (NSC)	21 days	2006/7/25	2006/8/14
88	1.4.4.3	Rough shaping	9 days	2006/8/23	2006/8/31
89	1.4.4.4	Surface Drainage System Construction	10 days	2006/9/12	2006/9/21
90	1.4.4.5	Sand lying and Final Shaping	14 days	2006/10/6	2006/10/19
91	1.4.4.6	Cable Lying and Lighting Fittings	9 days	2006/8/17	2006/8/25
92	1.4.4.7	Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22
93	1.4.5	Zone H1	286 days	2006/2/10	2006/11/22
94	1.4.5.1	Underground Drainage and Ducting Construction	24 days	2006/2/10	2006/3/5
95	1.4.5.2	Filing, levelling & formation	22 days	2006/7/9	2006/7/30
96	1.4.5.3	Irrigation pipes laying (NSC)	21 days	2006/7/25	2006/8/14
97	1.4.5.4	Rough shaping	9 days	2006/8/23	2006/8/31
98	1.4.5.5	Surface Drainage System Construction	10 days	2006/9/12	2006/9/21
99	1.4.5.6	Tee Boxes (No.1,2,10,11) Construction	28 days	2006/9/19	2006/10/16
100	1.4.5.7	Sand lying and Final Shaping	14 days	2006/10/6	2006/10/19
101	1.4.5.8	Amenity Area Finishing Works by Main Contractor	8 days	2006/11/1	2006/11/8
102	1.4.5.9	Cable Lying and Lighting Fittings	9 days	2006/8/26	2006/9/3
103	1.4.5.10	Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22
104	1.4.6	Zone P	262 days	2006/3/6	2006/11/22
105	1.4.6.1	Underground Drainage and Ducting Construction	14 days	2006/3/6	2006/3/19
106	1.4.6.2	Filing, levelling & formation	8 days	2006/7/31	2006/8/7
107	1.4.6.3	Irrigation pipes laying (NSC)	21 days	2006/7/25	2006/8/14



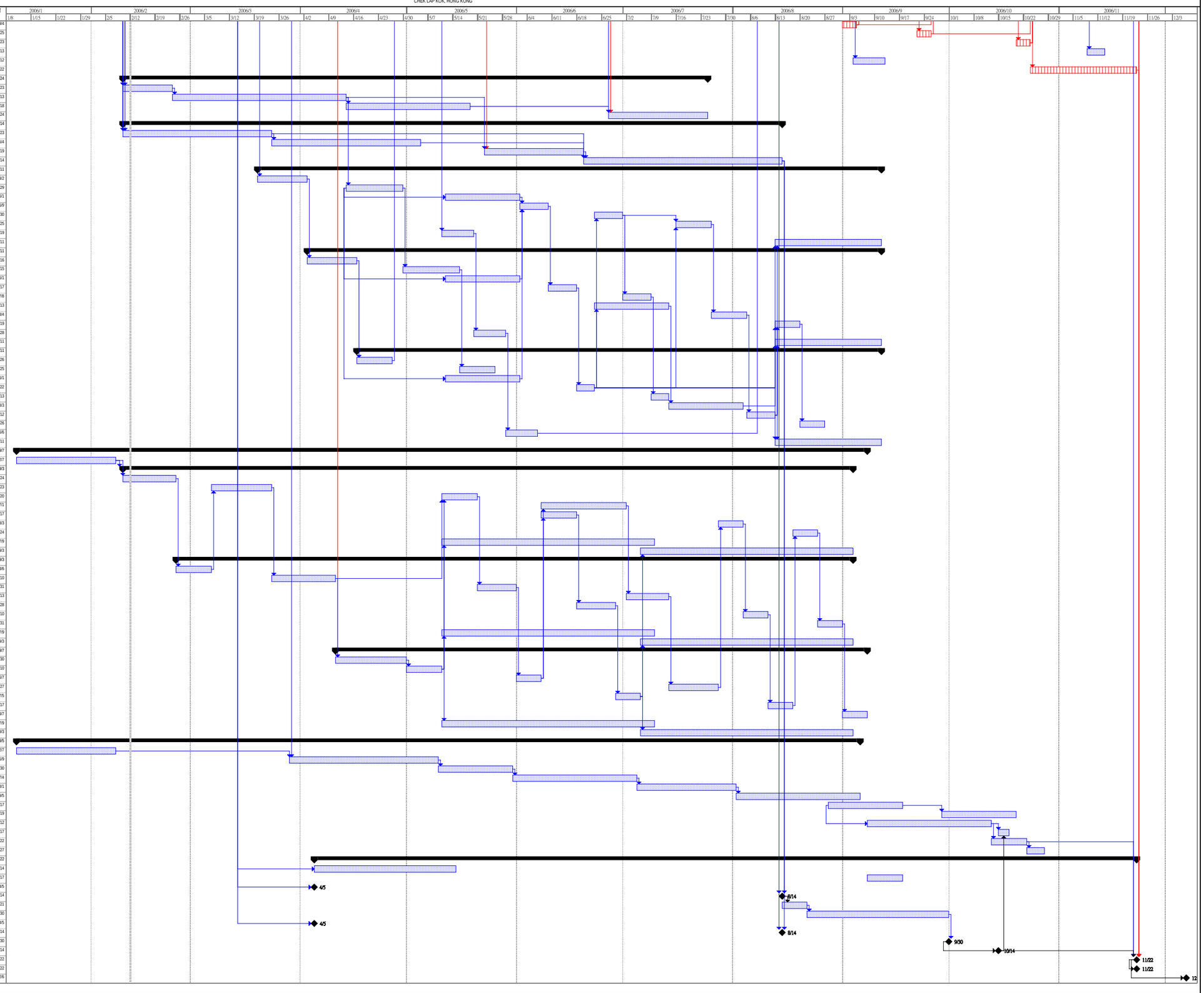
Title: Master Programme Revision 1
Revision Date: 10 Feb 2006

任務 | 要部任務 | 進度 | 里程碑 | 摘要 | 上期型任務 | 上期型要部任務 | 上期型里程碑 | 上期型進度 | 分割 | 外部任務 | 專案摘要 | 摘要群組

PROJECT: SKYCITY GOLF COURSE

LOT NO.825, R.P. OF CHEK LAP KOK LOT NO. 1 AND THE EXTENSION THERETO, CHEK LAP KOK, HONG KONG

識別碼	WBS	任務名稱	工期	開始時間	完成時間
108	1.4.6.4	Rough shaping	4 days	2006/9/1	2006/9/4
109	1.4.6.5	Surface Drainage System Construction	4 days	2006/9/22	2006/9/25
110	1.4.6.6	Sand lying and Final Shaping	4 days	2006/10/20	2006/10/23
111	1.4.6.7	Amenity Area Finishing Works by Main Contractor	5 days	2006/11/9	2006/11/13
112	1.4.6.8	Cable Lying and Lighting Fittings	9 days	2006/9/4	2006/9/12
113	1.4.6.9	Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22
114	1.4.7	Lake A	165 days	2006/2/10	2006/7/24
115	1.4.7.1	Lake-A Excavation	14 days	2006/2/10	2006/2/23
116	1.4.7.2	Lake-A Edge Retaining Walls construction	49 days	2006/2/24	2006/4/13
117	1.4.7.3	Waterproof Lining and Finishing Works to Walls and Lake Bottom	35 days	2006/4/14	2006/5/18
118	1.4.7.4	Watertightness test to Lakes and Reservoir	28 days	2006/6/27	2006/7/24
119	1.4.8	Pump House Construction	186 days	2006/2/10	2006/8/14
120	1.4.8.1	Structural Works (Substructure and Superstructure)	42 days	2006/2/10	2006/3/23
121	1.4.8.2	Finishing Works (Internal and External)	42 days	2006/3/24	2006/5/4
122	1.4.8.3	Piping Works connect to Lakes (A & B)	28 days	2006/5/23	2006/6/19
123	1.4.8.4	E&M Works (including Plants and Equipment Installation)	56 days	2006/6/20	2006/8/14
124	1.4.9	Zone H7	176 days	2006/3/20	2006/9/11
125	1.4.9.1	Underground Drainage and Ducting Construction	14 days	2006/3/20	2006/4/2
126	1.4.9.2	Filling, levelling & formation	16 days	2006/4/14	2006/4/29
127	1.4.9.3	Irrigation pipes laying (NSC)	21 days	2006/5/12	2006/6/1
128	1.4.9.4	Rough Shaping	8 days	2006/6/2	2006/6/9
129	1.4.9.5	Surface Drainage System Construction	8 days	2006/6/23	2006/6/30
130	1.4.9.6	Sand lying and Final Shaping	10 days	2006/7/16	2006/7/25
131	1.4.9.7	Cable Lying and Lighting Fittings	9 days	2006/5/11	2006/5/19
132	1.4.9.8	Softlandscaping Works by NSC	30 days	2006/8/13	2006/9/11
133	1.4.10	Zone H6	162 days	2006/4/3	2006/9/11
134	1.4.10.1	Underground Drainage and Ducting Construction	14 days	2006/4/3	2006/4/16
135	1.4.10.2	Filling, levelling & formation	16 days	2006/4/30	2006/5/15
136	1.4.10.3	Irrigation pipes laying (NSC)	21 days	2006/5/12	2006/6/1
137	1.4.10.4	Rough Shaping	8 days	2006/6/10	2006/6/17
138	1.4.10.5	Surface Drainage System Construction	8 days	2006/7/1	2006/7/8
139	1.4.10.6	Tee Boxes (No.7, 16) Construction	21 days	2006/6/23	2006/7/13
140	1.4.10.7	Sand lying and Final Shaping	10 days	2006/7/26	2006/8/4
141	1.4.10.8	Amenity Area Finishing Works by Main Contractor	7 days	2006/8/13	2006/8/19
142	1.4.10.9	Cable Lying and Lighting Fittings	9 days	2006/5/20	2006/5/28
143	1.4.10.10	Softlandscaping Works by NSC	30 days	2006/8/13	2006/9/11
144	1.4.11	Zone H9	148 days	2006/4/17	2006/9/11
145	1.4.11.1	Underground Drainage and Ducting Construction	10 days	2006/4/17	2006/4/26
146	1.4.11.2	Filling, levelling & formation	10 days	2006/5/16	2006/5/25
147	1.4.11.3	Irrigation pipes laying (NSC)	21 days	2006/5/12	2006/6/1
148	1.4.11.4	Rough Shaping	5 days	2006/6/18	2006/6/22
149	1.4.11.5	Surface Drainage System Construction	5 days	2006/7/9	2006/7/13
150	1.4.11.6	Tee Boxes (No.6,15) Construction	21 days	2006/7/14	2006/8/3
151	1.4.11.7	Sand lying and Final Shaping	8 days	2006/8/5	2006/8/12
152	1.4.11.8	Amenity Area Finishing Works by Main Contractor	7 days	2006/8/20	2006/8/26
153	1.4.11.9	Cable Lying and Lighting Fittings	9 days	2006/5/29	2006/6/6
154	1.4.11.10	Softlandscaping Works by NSC	30 days	2006/8/13	2006/9/11
155	1.5	Phase 3	240 days	2006/1/11	2006/9/7
156	1.5.1	Approval and Consent obtain from Statutory Authority (Formation and Drainage)	28 days	2006/1/11	2006/2/7
157	1.5.2	Zone H8	206 days	2006/2/10	2006/9/3
158	1.5.2.1	Underground Drainage and Ducting Construction	15 days	2006/2/10	2006/2/24
159	1.5.2.2	Filling, Leveling and Formation Works to Profile	17 days	2006/3/7	2006/3/23
160	1.5.2.3	Surface Drainage System Construction	10 days	2006/5/11	2006/5/20
161	1.5.2.4	Tee Boxes No 8, 9, 17, 18 Construction	24 days	2006/6/8	2006/7/1
162	1.5.2.5	Sand lying and Final Shaping	10 days	2006/6/8	2006/6/17
163	1.5.2.6	Finishing Works by Main Contractor	7 days	2006/7/28	2006/8/3
164	1.5.2.7	Lighting Fittings	7 days	2006/8/18	2006/8/24
165	1.5.2.8	Irrigation System by NSC	60 days	2006/5/11	2006/7/9
166	1.5.2.9	Softlandscaping Works by NSC	60 days	2006/7/6	2006/9/3
167	1.5.3	Zone H4	191 days	2006/2/25	2006/9/3
168	1.5.3.1	Underground Drainage and Ducting Construction	10 days	2006/2/25	2006/3/6
169	1.5.3.2	Filling, Leveling and Formation Works to Profile	18 days	2006/3/24	2006/4/10
170	1.5.3.3	Surface Drainage System Construction	11 days	2006/5/21	2006/5/31
171	1.5.3.4	Tee Boxes No 5, 14 Construction	12 days	2006/7/2	2006/7/13
172	1.5.3.5	Sand lying and Final Shaping	11 days	2006/6/18	2006/6/28
173	1.5.3.6	Finishing Works by Main Contractor	7 days	2006/8/4	2006/8/10
174	1.5.3.7	Lighting Fittings	7 days	2006/8/25	2006/8/31
175	1.5.3.8	Irrigation System by NSC	60 days	2006/5/11	2006/7/9
176	1.5.3.9	Softlandscaping Works by NSC	60 days	2006/7/6	2006/9/3
177	1.5.4	Zone H2	150 days	2006/4/11	2006/9/7
178	1.5.4.1	Underground Drainage and Ducting Construction	20 days	2006/4/11	2006/4/30
179	1.5.4.2	Filling, Leveling and Formation Works to Profile	10 days	2006/5/1	2006/5/10
180	1.5.4.3	Surface Drainage System Construction	7 days	2006/6/1	2006/6/7
181	1.5.4.4	Tee Boxes No 3, 12 Construction	14 days	2006/7/14	2006/7/27
182	1.5.4.5	Sand lying and Final Shaping	7 days	2006/6/29	2006/7/5
183	1.5.4.6	Finishing Works by Main Contractor	7 days	2006/8/11	2006/8/17
184	1.5.4.7	Lighting Fittings	7 days	2006/9/1	2006/9/7
185	1.5.4.8	Irrigation System by NSC	60 days	2006/5/11	2006/7/9
186	1.5.4.9	Softlandscaping Works by NSC	60 days	2006/7/6	2006/9/3
187	1.6	Drainage and Manhole Construction Works outside Site Boundary	238 days	2006/1/11	2006/9/5
188	1.6.1	Approval and Consent obtain from Statutory Authority (Formation and Drainage)	28 days	2006/1/11	2006/2/7
189	1.6.2	Application of Temporary Traffic Arrangement from Transport Department	42 days	2006/3/29	2006/5/9
190	1.6.3	Application of Permit from RMO Police & AA	21 days	2006/5/10	2006/5/30
191	1.6.4	Path section OP1 and MH OMH1 Construction	35 days	2006/5/31	2006/7/4
192	1.6.5	Path section OP2 and MH OMH2 Construction	28 days	2006/7/5	2006/8/1
193	1.6.6	Path section OP3 and MH OMH3 Construction	35 days	2006/8/2	2006/9/5
194	1.7	Testing and Commissioning	21 days	2006/8/28	2006/9/17
195	1.8	As-built Drawings Preparation and Submission	21 days	2006/9/29	2006/10/19
196	1.9	Removal & Reinstatement of Hoarding	35 days	2006/9/8	2006/10/12
197	1.10	Final Inspection by Client	3 days	2006/10/15	2006/10/17
198	1.11	Demobilization	10 days	2006/10/13	2006/10/22
199	1.12	Site Clearance	5 days	2006/10/23	2006/10/27
200	1.13	Form Submission and Authorities Inspection	232 days	2006/4/5	2006/11/22
201	1.13.1	Electricity Supply Application (CLP Checking)	40 days	2006/4/5	2006/5/14
202	1.13.2	Power Energizing	10 days	2006/9/8	2006/9/17
203	1.13.3	Form WWO46 Part I & II Submission	0 days	2006/4/5	2006/4/5
204	1.13.4	Form WWO46 Part III & IV Submission	0 days	2006/8/14	2006/8/14
205	1.13.5	WSD Inspection	7 days	2006/8/15	2006/8/21
206	1.13.6	Water Certificate	40 days	2006/8/22	2006/9/30
207	1.13.7	Form FSI/314 1st Submission	0 days	2006/4/5	2006/4/5
208	1.13.8	Form FSI/314 2nd Submission	0 days	2006/8/14	2006/8/14
209	1.13.9	Form FSI/501 submission	0 days	2006/9/30	2006/9/30
210	1.13.10	FSD Inspection	0 days	2006/10/14	2006/10/14
211	1.13.11	BD Inspection	0 days	2006/11/22	2006/11/22
212	1.13.12	Drainage Inspection	0 days	2006/11/22	2006/11/22
213	1.14	Project Completion and Handover to Client	0 days	2006/12/6	2006/12/6



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任務 | 要徑任務 | 進度 | 里程碑 | 摘要 | 上期型任務 | 上期型要徑任務 | 上期型里程碑 | 上期型進度 | 分割 | 外部任務 | 專案摘要 | 摘要群組

Appendix 5

Marine Water Monitoring Schedule for Next Month

Sky City Golf Course EM&A
Tentative Water Quality Monitoring Schedule for July 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	01-Jul
		Mid-Flood 06:47 *03:27* *10:08* Mid-Ebb 14:12 *10:08* *18:16*			Mid-Flood 08:47 *05:31* *12:03* Mid-Ebb 16:03 *12:03* *20:04*	
02-Jul	03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul
	Mid-Flood 11:15 *08:30* *14:01* Mid-Ebb 17:49 *14:01* *21:37*				Mid-Ebb 10:17 *06:16* *14:19* Mid-Flood 17:33 *14:19* *20:48*	
09-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
	Mid-Ebb 12:28 *08:20* *16:36* Mid-Flood 19:58 *16:36* *23:21*				Mid-Flood 08:27 *05:16* *11:39* Mid-Ebb 15:29 *11:39* *19:20*	
16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
	Mid-Flood 11:30 *08:30* *14:30* Mid-Ebb 17:48 *14:30* *21:06*				Mid-Ebb 10:19 *06:20* *14:19* Mid-Flood 17:56 *14:19* *21:34*	
23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
	Mid-Ebb 12:39 *08:38* *16:40* Mid-Flood 19:58 *16:40* *23:16*				Mid-Flood 08:04 *04:53* *11:16* Mid-Ebb 15:03 *11:16* *18:50*	