Airport Management Services Limited

SkyCity Golf Course EM&A

Monthly Impact Report

November 2006

13 December 2006 Report no: 01332R0121



Airport Management Services Limited

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Monthly Impact Report

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Report no:	01332R0121		Date:	13 December 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. According to the approved EM&A Manual, impact monitoring during the Construction Period is required for suspended solids, dissolved oxygen and turbidity.

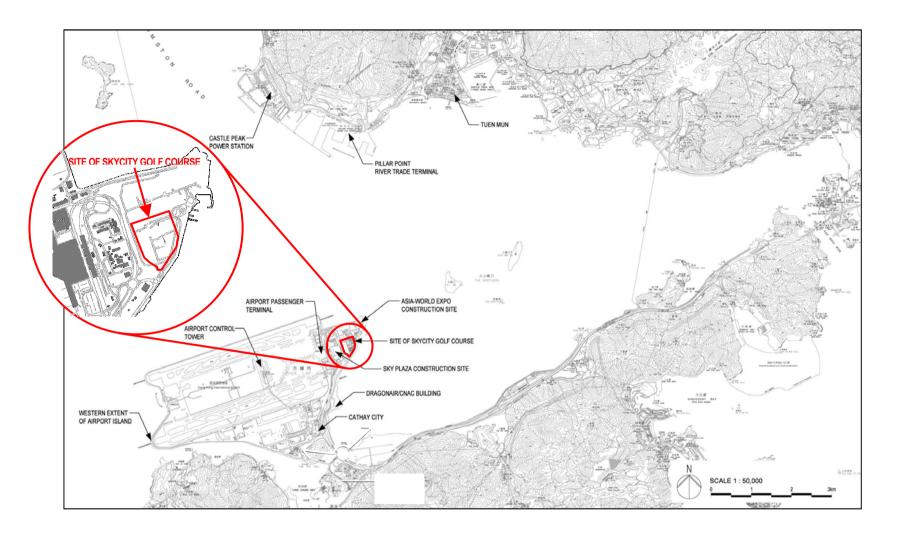
The monthly site audit revealed that there were no significant non-compliances in terms of water, air, noise, waste or landscape and visual, although the Environmental Team made a number of recommendations to the Works Contractor to improve environmental conditions.

Impact monitoring was carried out during November 2006 in accordance with the approved EM&A Manual. Monitoring was carried out on 4, 7, 11, 14, 18, 21, 25 and 28 November. The monitoring results are detailed in this report, which complies with the reporting requirements stated in the approved EM&A Manual. There was no exceedance of Action/Limit Levels of marine water quality monitoring during November 2006.

There were no complaints received and no notifications of summons during the reporting month.

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.







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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 November 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.

As indicated by the Contractor, no water has been discharged from the site during the reporting month. Rainfall occurred occasionally during the reporting month. Rainwater was collected in the excavated lake bowls with impermeable liner.

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.

2.2 Air Quality

It was observed that most of the site areas were covered by turfgrass. All the stockpiles of dusty materials were covered by tarpaulin. No adverse air quality caused by the construction activities was observed.

2.3 Noise

No significant noise problems were noted as noise sensitive receivers are far away from the site.

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

Some oil drums without drip tray standing on the ground near the clubhouse building was observed. The Contractor was reminded to provide drip tray for all oil drums.

Rubbish accumulated around the pump room, water tank room and generator room was observed. As advised by the Contractor, rubbish were generated and



accumulated because scaffoldings of such structures were being dismantled. The accumulated rubbishes would be removed as soon as possible.

2.5 Landscape and Visual

As the construction works of this project is nearly completed. It was observed that site hoardings were being dismantled and fencings were being erected. There were no landscape or visual issues at this time.

2.6 General

The Environmental Permit is displayed at the entrance to the site as required. The Contractor was reminded 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)
	Mean	25.0	32.4	79.7	5.6	8	6
C1	Maximum	26.9	35.3	95.1	6.5	14	12
	Minimum	23.3	31.0	66.7	5.2	4	3
	Mean	25.0	32.5	78.8	5.6	8	6
C2	Maximum	26.6	35.4	91.9	6.3	14	12
	Minimum	23.4	31.2	63.3	5.0	4	2
	Mean	25.0	32.4	79.8	5.7	8	6
M1	Maximum	26.6	35.4	95.9	6.5	14	13
	Minimum	23.3	31.1	65.5	5.1	4	2
	Mean	25.0	32.4	79.9	5.7	8	6
M2	Maximum	26.7	35.5	97.6	6.8	14	11
	Minimum	23.0	31.2	64.6	5.1	4	2

 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:

Deverseter	YSI Model 6820 CE-C-M-Y					
Parameter	Range	Resolution	Accuracy			
DO Concentration	0 to 50 mg/ ł	0.01 mg/ ℓ	0 to 20 mg/ ℓ : \pm 2% of reading or 0.2 mg/ ℓ , whichever is greater; 20 to 50 mg/ ℓ : \pm 6% of reading			
DO Saturation	0 to 500%	0.1%	0 to 200%: \pm 2% of reading or 2% air saturation, whichever is greater; 200 to 500%: \pm 6% of reading			
Turbidity	0 to 1,000 NTU	0.1 NTU	$\pm2\%$ of reading or 0.3 NTU, whichever is greater			
Temperature	-5 to +70°C	0.01 ^o C	±0.15°C			
Salinity	0 to 70 ppt	0.01 ppt	\pm 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°C 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
04/11/06	08:44 to 14:37	11:40	14:37 to 20:52	17:44
07/11/06	11:49 to 16:06	13:57	05:17 to 11:49	08:33
11/11/06	00:10 to 08:54	04:32	08:54 to 00:52	16:53
14/11/06	03:33 to 11:48	07:40	11:48 to 19:50	15:49
18/11/06	08:41 to 14:00	11:20	14:00 to 20:17	17:08
21/11/06	11:06 to 15:12	13:09	15:12 to 21:26	18:19
25/11/06	14:34 to 16:36	15:35	07:27 to 14:34	11:00
28/11/06	18:19 to 21:14	19:46	10:07 to 18:19	14:13

 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:



c	01	15	ul	ti	n	g

Parameter	Action Level	Limit Level		
DO Concentration	5^{th} 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	95 th percentile of baseline data = 9.6 NTU, or 120% of the upstream control station	99 th percentile of baseline data = 10.5 NTU, or 130% of the upstream control station		
SS	95 th percentile of baseline data = 9.4 mg/ℓ, or 120% of the upstream control station	99 th 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	 Identify the source(s) of impact. If not from the Project then provide justification and document this If exceedance is caused by the Project then inform Contractor Check monitoring data and Contractor's working methods Discuss possible mitigation measures with Contractor Repeat measurement on next day of exceedance 	 Confirm notification of the exceedance in writing Rectify any unacceptable practice Check all plant and equipment Amend working methods if appropriate Discuss possible mitigation measures with ET Implement the agreed mitigation measures 					
Exceedance of Limit Level	 Identify the source(s) of impact. If not from the Project then provide justification and document this in the EM&A Report If exceedance is caused by the Project then inform Contractor Check monitoring data and Contractor's working methods Agree mitigation measures with Contractor Ensure mitigation measures are implemented immediately Increase the monitoring frequency to daily until no further exceedance of Limit Level 	 Confirm notification of the exceedance in writing Rectify any unacceptable practice Check all plant and equipment Amend working methods if appropriate Agree possible mitigation measures with ET 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 was no exceedance of Action/Limit Level of marine water quality monitoring during November 2006.

3.3.2 Action Taken and Follow-up

As no exceedance of A/L Levels were recorded during the reporting month, 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.



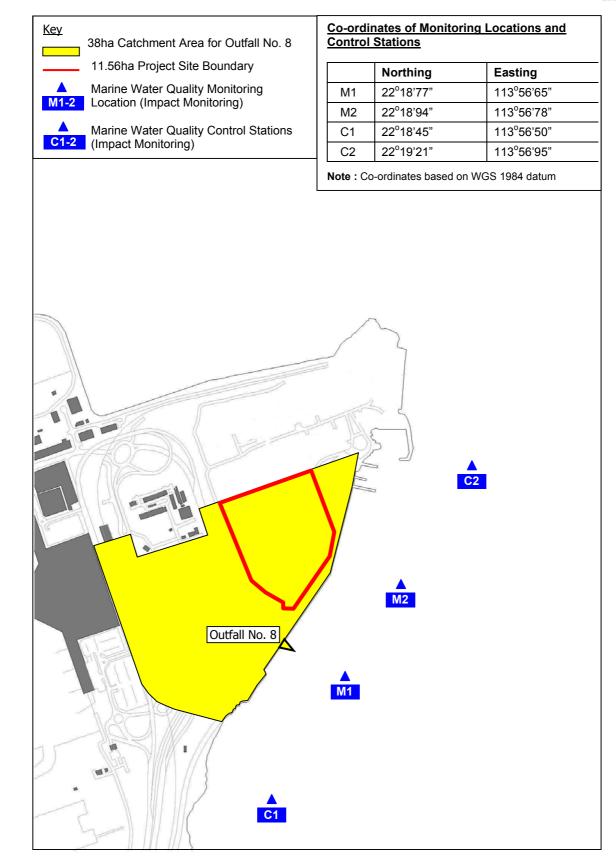


Figure 3-2 Location of Impact Monitoring Stations

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4 Comments, Recommendations and Conclusions

The monthly site audit revealed that there was no significant non-compliance 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 November 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



		Inspection No.	
Inspectic Site	n Date 20 Nov 2006 Time [3:20 Shyling hallowinge Contractor Wing Fact	Inspected By	Client: Contractor: Jol ET: Mill
Weather		[]	
Conditio	Sunny Fine Overcast Drizzle	Rain	Storm Hazy
Tempera	ture 77 °C Humidity High	Moderate	Low
Wind	Calm Light Breeze Strong	Direction	
1 Wa	N/A or not of	oserved Yes	No Photo/Remarks
1.1	Perimeter cut off drains direct off-site water around the site?		
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?	\checkmark	
	1.5.1 Constructed from pre-formed individual cells or silt traps / basins?		
	1.5.2 Adequate capacity?	\checkmark	
	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?		
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?		

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

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		N/A or not observe		erved	Yes	No	Photo/Remarks
		1.13.1	Wastewater treated in silt removal facility? Silt removal facility emptied of silt regularly?		\checkmark		
		1.13.2	Washing area and road exiting from washing facility paved?		\checkmark		
		1.13.3	Access road has sufficient backfall toward washing facility or bunded to prevent of untreated wastewater?		\checkmark		
	1.14	Equipme maintena	nt oil and lubrication replacements performed only in bunded ance area?		\checkmark		
	1.15	Drainage	from maintenance area discharged via an oil interceptor?	\checkmark			
		1.15.1	Oil and grease removed regularly?	V			
	1.16	Toilets th	at connect to foul sewer or chemical toilets provided?		\checkmark		
	1.17	ls debris	and rubbish prevented from entering drains?				
	1.18	ls Effluen	t Discharge Licence available for inspection?		\checkmark		
2	AIF		Ŷ				
	2.1	Are hoard public act	ding not less than 2.4m tall provided beside roads or areas with cess?				
	2.2	Are the ro generatio	bads and unpaved areas watered regularly to avoid dust n?		\checkmark		
	2.3	Are stock	piles of excavated material covered or regularly watered?		\checkmark		
	2.4	ls stockpi barriers, f	le of dusty materials kept to not extend beyond the pedestrian fencing or traffic cones?		V		
	2.5	Is the put dust?	olic road around the site entrance kept clean and free from		\checkmark		
	2.6	Do the sit	e vehicles use the vehicle wash facility at the site exits?		\checkmark		
	2.7	Are mater	rials transported on trucks covered?		\checkmark		
	2.8	Are dusty	materials sprayed prior to loading?		\checkmark		
	2.9	Are all tru	ck loads to a level within the side and tail boards?		\checkmark		
	2.10	Are areas watered?	where demolition/site clearance/breaking take place regularly	\bigvee			
	2.11		tock of more than 20 bags of cement or day covered entirely ious sheeting or placed in an area sheltered on the top and sided?	\checkmark			
			tially dusty demolished items/debris covered or placed in a d shelter?	\checkmark			
		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 r site?	materials immediately covered and promptly removed from	\checkmark			·
	2.14	Are there	enclosures around the main dust-generating activities?				

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



		N/A or no	t 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?		\checkmark		
	2.17	Are vehicles and equipment switched off while not in use?		\checkmark		
	2.18	Do vehicles and equipment maintained that no excessive smoke or visible vapour emitted?		\checkmark		
Oł	serval	ble dust sources Wind erosion	Vehicle	/equipment i	movements	
		Loading/unloading of materials	Others_			
3	No	ise				
	3.1	Are the construction works scheduled to minimise noise nuisance?				
	3.2	Are the works or equipment sited to minimize noise nuisance? Mob plant sited away from NSRs? Noisy plant oriented away from NSRs	ile ?	V		
	3.3	Are all plant and equipment well maintained and in good operating condition?		V		
	3.4	Is idle equipment turned off or throttled down?		\checkmark		••••
	3.5	Are powered mechanical equipment covered or shielded by appropracoustic materials?	riate			
	3.6	Are quiet plant used as required?	\checkmark			
	3.7	Are silencers/mufflers fitted and maintained?	\checkmark			
	3.8	Are mobile/temporary noise barriers used where specified?	\checkmark			
	3.9	Do air compressors (≥500kPa of supplying compressed air) and har held percussive breakers (>10kg in weight) have valid noise labels?	nd	\checkmark		
	3.10	Do compressors and generators operate with doors closed?				
	3.11	Are Construction Noise Permits available for inspection?				•••
Ма	jor nois	e source(s) Traffic	Constr	uction activit	ies inside o	fsite
		Construction activities outside of site	Others			
4	Wa	ste/Chemical Management				······
	4.1	General refuse				
		4.1.1 Accumulation on-site avoided?				See Note @
		4.1.2 Receptacles (e.g. rubbish bins) available?		\checkmark		
		4.1.3 Disposed of regularly and properly?				tore which have been
		4.1.4 Records of quantities generated/recycled/disposed maintaine	ed?			

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

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		N/A or not ob	served	Yes	No	Photo/Remarks
4.2	Chem	ical waste				
	4.2.1	Stored properly in designated area?		\checkmark		ter the second se
	4.2.2	Storage in accordance with Code of Practice?		\checkmark		
	4.2.3	Disposed of properly?		\checkmark		
	4.2.4	Trip tickets available for inspection?		\checkmark		
4.3	Chem	ical/fuel storage				
	4.3.1	Is storage area bunded?		\checkmark		
	4.3.2	Adequate bund capacity? (>110% of the largest tank)		\checkmark		
	4.3.3	Area storage area provided with locks and located on sealed areas?		V		
	4.3.4	Are oil/fuel drums and plant/equipment provided with drip trays to prevent soil contamination?			\checkmark	see Note @
4.4	C&D N	N aterial				
	4.4.1	Reused/recycled where practicable?				
	4.4.2	Inert/non inert materials segregated?		\checkmark		
	4.4.3	Disposed of properly?		\checkmark		
	4.4.4	Records of quantities generated/recycled/disposed maintained?		\checkmark		
4.5	Excava	ated Material				
	4.5.1	Reused where practicable?		\checkmark		
	4.5.2	Records of quantities generated/reused/disposed maintained?		\square		
4.6	Are sp reused	ent bentonite slurries or grouts collected, reconditioned and ?	\checkmark			
4.7	ls foan nearby	n, oil, grease, litter or other objectionable matters in water to v drain/sewer avoided?				
La	ndscap	e and Visual				
5.1	Are ret	ained trees protected by fencing?				
5.2	Is the v	work site confined within site boundaries?				andra da
5.3	ls dam	age to surrounding areas avoided?				

5

And trails on the public road outside the site entrance were cleared up. Last observation closed.

Remarks

- 6 All the dusty stockpiles were covered by Tarpaulin sheets. Last observation closed
- & Some oil alouns standing on the ground without drip tray near the club house building was observed.
- De Auumulated mbbBhes were observed around the pumproom, water tank room and generator room. As advised by the contractor, this was because scafelddings of such buildings were being dismantled and many nibbibles were generated. The rubbBhes would be removed as soon as possible.

ET Inspector A		
	MS Site Representative	Contractor's Representative
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Appendix 2

Marine Water Quality Monitoring Data



Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (°C)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
04-Nov-06	(mid-ebb)	M1	3	6	26.6	33.3	73	5.3	11	13
04-Nov-06	(mid-ebb)	M2	3	6	26.7	33.4	74	5.4	11	11
04-Nov-06	(mid-ebb)	C1	2	3	26.9	33.2	76	5.5	11	12
04-Nov-06	(mid-ebb)	C2	4	7	26.6	33.3	73	5.4	11	12
04-Nov-06	(mid-flood)	M1	3	6	26.6	33.2	72	5.3	11	11
04-Nov-06	(mid-flood)	M2	3	6	26.6	33.2	71	5.2	11	10
04-Nov-06	(mid-flood)	C1	2	3	26.1	33.1	73	5.3	11	10
04-Nov-06	(mid-flood)	C2	3	7	26.4	33.3	70	5.1	10	8
07-Nov-06	(mid-ebb)	M1	3	6	26.3	31.9	89	6.2	6	9
07-Nov-06	(mid-ebb)	M2	3	6	26.4	31.9	90	6.3	6	7
07-Nov-06	(mid-ebb)	C1	2	3	26.4	31.7	90	6.3	6	6
07-Nov-06	(mid-ebb)	C2	3	6	26.4	31.8	90	6.3	6	8
07-Nov-06	(mid-flood)	M1	3	6	26.3	31.9	94	6.4	6	6
07-Nov-06	(mid-flood)	M2	3	6	26.2	31.8	93	6.4	6	7
07-Nov-06	(mid-flood)	C1	2	4	26.3	31.8	95	6.5	6	6
07-Nov-06	(mid-flood)	C2	3	6	26.2	31.8	91	6.3	6	7
11-Nov-06	(mid-ebb)	M1	3	6	25.3	31.2	77	5.5	12	5
11-Nov-06	(mid-ebb)	M2	3	7	25.4	31.3	78	5.6	12	4
11-Nov-06	(mid-ebb)	C1	2	4	25.5	31.1	79	5.7	12	3
11-Nov-06	(mid-ebb)	C2	4	7	25.3	31.2	77	5.5	11	3
11-Nov-06	(mid-flood)	M1	3	7	25.2	31.1	75	5.4	12	3

Monthly Impact Report SkyCity Golf Course EM&A

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Hyder Consulting Ltd COI Number 126012



Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (°C)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
11-Nov-06	(mid-flood)	M2	3	7	25.3	31.2	74	5.4	11	6
11-Nov-06	(mid-flood)	C1	2	4	24.8	31.0	76	5.5	12	4
11-Nov-06	(mid-flood)	C2	4	7	25.1	31.2	73	5.3	11	4
14-Nov-06	(mid-ebb)	M1	3	6	26.0	31.5	95	6.4	4	6
14-Nov-06	(mid-ebb)	M2	3	6	25.9	31.6	87	5.9	4	6
14-Nov-06	(mid-ebb)	C1	2	4	25.9	31.5	88	5.7	4	4
14-Nov-06	(mid-ebb)	C2	3	6	25.9	31.5	91	6.2	4	6
14-Nov-06	(mid-flood)	M1	3	6	25.9	31.5	96	6.5	4	6
14-Nov-06	(mid-flood)	M2	3	6	25.9	31.5	98	6.8	4	7
14-Nov-06	(mid-flood)	C1	2	4	25.9	31.5	84	5.7	4	6
14-Nov-06	(mid-flood)	C2	3	6	25.9	31.6	92	6.3	4	6
18-Nov-06	(mid-ebb)	M1	3	6	24.5	35.4	77	5.5	14	3
18-Nov-06	(mid-ebb)	M2	3	7	24.6	35.5	78	5.6	14	<2
18-Nov-06	(mid-ebb)	C1	2	4	24.7	35.3	79	5.7	14	<2
18-Nov-06	(mid-ebb)	C2	4	7	24.5	35.4	77	5.5	14	2
18-Nov-06	(mid-flood)	M1	3	7	24.5	35.2	75	5.4	14	2
18-Nov-06	(mid-flood)	M2	3	7	24.5	35.3	74	5.4	14	2
18-Nov-06	(mid-flood)	C1	2	4	24.0	35.2	76	5.5	14	3
18-Nov-06	(mid-flood)	C2	4	7	24.3	35.3	73	5.3	13	6
21-Nov-06	(mid-ebb)	M1	3	6	23.5	31.8	67	5.2	8	5
21-Nov-06	(mid-ebb)	M2	4	7	23.4	31.5	68	5.2	8	4

Monthly Impact Report SkyCity Golf Course EM&A

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Hyder Consulting Ltd COI Number 126012



Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (°C)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
21-Nov-06	(mid-ebb)	C1	2	4	23.3	31.7	69	5.3	8	4
21-Nov-06	(mid-ebb)	C2	4	8	23.6	31.8	67	5.2	8	6
21-Nov-06	(mid-flood)	M1	4	7	23.4	31.6	66	5.1	7	4
21-Nov-06	(mid-flood)	M2	3	7	23.0	31.2	65	5.1	7	4
21-Nov-06	(mid-flood)	C1	2	4	23.7	31.9	67	5.2	8	5
21-Nov-06	(mid-flood)	C2	4	7	23.6	31.8	63	5.0	8	7
25-Nov-06	(mid-ebb)	M1	3	6	24.5	32.2	80	5.6	9	4
25-Nov-06	(mid-ebb)	M2	3	6	24.6	32.2	81	5.7	9	2
25-Nov-06	(mid-ebb)	C1	2	3	24.7	32.1	82	5.8	9	3
25-Nov-06	(mid-ebb)	C2	3	7	24.5	32.2	80	5.7	8	2
25-Nov-06	(mid-flood)	M1	3	6	24.5	32.0	79	5.6	9	3
25-Nov-06	(mid-flood)	M2	3	6	24.5	32.1	78	5.5	8	3
25-Nov-06	(mid-flood)	C1	2	3	24.0	31.9	80	5.6	9	3
25-Nov-06	(mid-flood)	C2	3	7	24.3	32.1	76	5.4	8	3
28-Nov-06	(mid-ebb)	M1	3	6	23.4	32.6	86	6.0	5	7
28-Nov-06	(mid-ebb)	M2	3	6	23.5	32.6	82	5.8	5	6
28-Nov-06	(mid-ebb)	C1	2	4	23.4	32.6	86	6.0	5	7
28-Nov-06	(mid-ebb)	C2	3	6	23.4	32.6	89	6.0	5	5
28-Nov-06	(mid-flood)	M1	3	6	23.3	32.7	79	5.4	4	6
28-Nov-06	(mid-flood)	M2	3	6	23.4	32.6	88	5.9	5	7
28-Nov-06	(mid-flood)	C1	2	4	23.4	32.7	76	5.2	5	8

Monthly Impact Report SkyCity Golf Course EM&A

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Hyder Consulting Ltd COI Number 126012

Date	Time	Station	Sample Depth (m)	Water Depth (m)	Sea Temp (°C)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
28-Nov-06	(mid-flood)	C2	3	6	23.4	32.6	81	5.5	4	6
	Notes : "-" indicates no data is available Bold indicates Action Level exceedance Bold indicates Limit Level exceedance			Mean	25.0	32.4	79.6	5.7	8.3	5.7
				Maximum	26.9	35.5	97.6	6.8	14.4	13.0
				Minimum	23.0	31.0	63.3	5.0	3.5	2.0

Monthly Impact Report SkyCity Golf Course EM&A Hyder Consulting Ltd COI Number 126012

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Appendix 3

Equipment Calibration Details

ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

ALS TECHNICHEM (HK) Pty Ltd

Environmental Division



CERTIFICATE OF ANALYSIS

CONTACT: MR EDDIE YANG CLIENT: MAUNSELL ENV MGT CNLT LTD ADDRESS: 11TH FLOOR TOWER II GRAND CENTRAL PLAZA 138 SHATIN RURAL COMMITTEE RD NT ORDER No.:

PROJECT:

Batch: Sub Batch: LABORATORY: DATE RECEIVED: DATE OF ISSUE: SAMPLE TYPE: No. of SAMPLES: HK0605418 0 HONG KONG 25/10/2006 26/10/2006 EQUIPMENT 1

COMMENTS

The calibration procedure used for the analysis has been applied for the calibration of the above instrument.

NOTES

This is the Final Report and supersedes any preliminary report with this batch number. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ISSUING LABORATORY: HONG KONG

Address

ALS Technichem (HK) Pty Ltd

11/F Chung Shun Knitting Centre 1-3 Wing Yip Street Kwai Chung HONG KONG Phone: Fax: Email: 852-2610 1044 852-2610 2021 hongkong@alsenviro.com

Ms Wong Wai Man, Alice Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA

- Brisbane Melbourne Sydney Newcastle
- Hong Kong Singapore Kuala Lumpur Bogor
- Vancouver Santiago Amtofagasta Lima

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Abbreviations: % SPK REC denotes percentage spike recovery CHK denotes duplicate check sample LOR denotes limit of reporting LCS % REC denotes Laboratory Control Sample percentage recovery

ALS Technichem (HK) Pty Ltd

Part of the **ALS Laboratory Group** 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., H.K. **Phone: 852-2610 1044** Fax: 852-2610 2021 www.alsenviro.com *A Campbell Brothers Limited Company* Page 1 of 6



Batch: Sub Batch : Date of Issue: Client: Client Reference:

HK0605418 0 26/10/2006 MAUNSELL ENV MGT CNLT LTD

Calibration of Tubidimeter

Item :	YSI SONDE Environmental Monitoring System
Model No. :	6820-C-M
Serial No. :	00014C7E
Equipment No. :	W-026-33
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B
Date of Calibration :	26 October, 2006

Testing Results :

Recording Reading	0.30 NTU 3.70 NTU 15.8 NTU 79.4 NTU 154 NTU	±10%
Expected Reading	0.00 NTU 4.00 NTU 16.0 NTU 80.0 NTU 160 NTU	Allowing Deviation

1	Alice · - Hong Kong	
	Ms Wong Wa Man, Alice Laboratory Manager - Hong Kong	

ALS Technichem (HK) Pty Ltd





CERTIFICATE OF ANALYSIS

Client Reference: Batch: Sub Batch : Date of Issue: Client:

HK0605418 0 26/10/2006 MAUNSELL ENV MGT CNLT LTD

Calibration of Conductivity System

ltem :	YSI SONDE Environmental Monitoring System
Model No. :	6820-C-M
Serial No. :	00014C7E
Equipment No. :	W-026-33
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2510B
Date of Calibration :	26 October, 2006
: : :	

Testing Results :

Recording Reading	1434 uS/cm 6689 uS/cm 59680 uS/cm	±10%
Expected Reading	1412 uS/cm 6667 uS/cm 58670 uS/cm	Allowing Deviation

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HK0605418 0 26/10/2006 MAUNSELL ENV MGT CNLT LTD

Batch: Sub Batch : Date of Issue: Client:

Calibration of Salinity System

Client Reference:

Item :	YSI SONDE Environmental Monitoring System	
Model No. :	6820-C-M	
Serial No. :	00014C7E	
Equipment No. :	W-026-33	
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B	
Date of Calibration :	26 October, 2006	
Testing Results :		

ס

Recording Reading	9.6 g/L 20.1 g/L 30.8 g/L	±10%	
Expected Reading	10.0 g/L 20.0 g/L 30.0 g/L	Allowing Deviation	

Ms Wong Wai Man, Alice Laboratory Manager - Hong Kong

ALS Environmental



26/10/2006 MAUNSELL ENV MGT CNLT LTD HK0605418 0

Sub Batch : Date of Issue:

Batch:

Calibration of Thermometer

Client Reference:

Client:

YSI SONDE Environmental Monitoring System 26 October, 2006 In-house Method 00014C7E 6820-C-M W-026-33 Calibration Method : Date of Calibration : Equipment No. : Model No. : Serial No. : Item :

Testing Results :

Recorded Temperature (°C)	25.2 °C 37.1 °C	±2.0°C
Reference Temperature (^o C)	25.1 °C 36.8 °C	Allowing Deviation

Laboratory Manager - Hong Kong Ms Wong Wai Man, Alice

ALS Technichem (HK) Pty Ltd

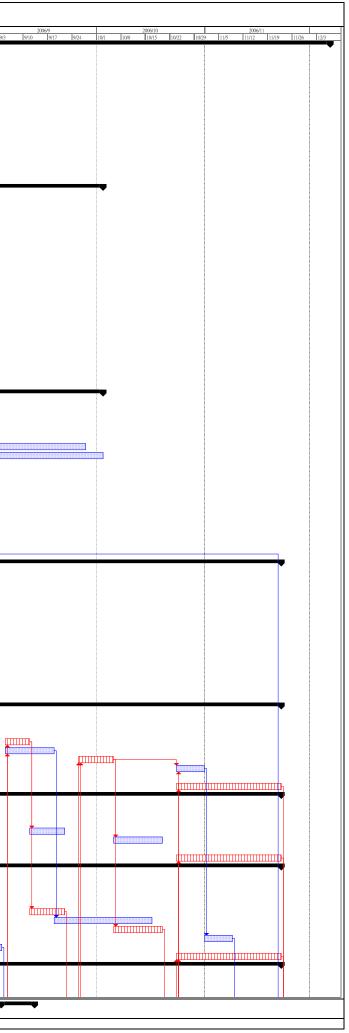
Page 5 of 6



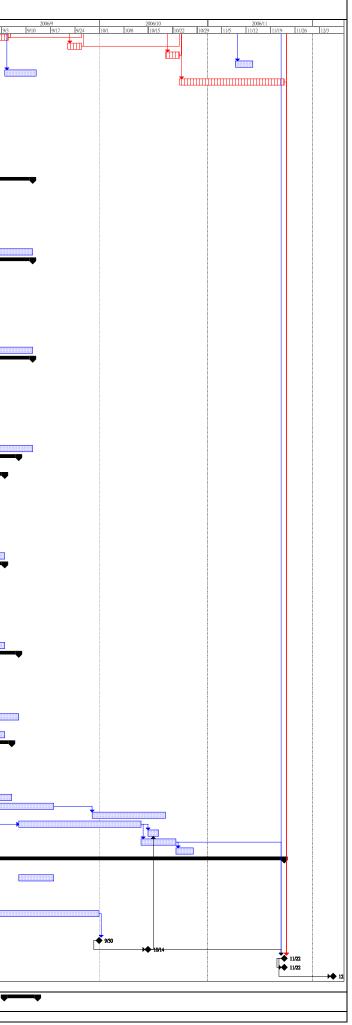
Appendix 4

Works Programme

						PROJECT: SKYCITY GOLF COURSE LOT NO.825, R.P. OF CHEK LAP KOLK 101 OL 1010 THE EXTENSION THERETO, CHEK LAP KOK, HONG KONG
識別碼	WBS 任務名稱	工期 220 days	開始時間	完成時間	2006/1 1/8 1/15 1/22 1/29 2/5	20062 20063 20064 20065 20066 20067 20068 1 2/12 2/19 2/26 3/5 3/12 3/19 3/26 4/2 4/9 4/16 4/23 4/30 5/7 5/14 5/28 6/4 6/11 6/18 6/25 7/2 7/9 7/16 7/23 7/30 8/6 8/13 8/20 8/27 9/3
1 2	CONTRACT PERIOD Original Commencement (Site Handover to Contractor)	330 days 0 days		2006/12/6 2006/1/11	▲ 1/11	
3	Preliminaries Mobilization of Plants and Equipment	119 days 7 days		2006/5/9 2006/1/17		
	1.2.2 Site Accommodations (Office Setup, Temporary Power and Water Supplies, etc.)	21 days	2006/1/11	2006/1/31		
6	12.3 Initial Survey 12.4 Hoarding/Fencing Erection	14 days 45 days		2006/1/24 2006/2/24		
8	1.2.5 Site Clearance	30 days		2006/2/9 2006/1/24		
10	12.6 Technical/Samples Preparation and Submission (Structural) 12.7 Technical/Samples Approval (Structural)	14 days 14 days	2006/1/11 2006/1/25	2006/2/7		
11	12.8 Technical/Shopdrawlogs/Samples Preparation and Submission (Architectural) 12.9 Technical/Shopdrawlogs/Samples Approval (Architectural)	98 days 14 days	2006/1/11 2006/4/19	2006/4/18 2006/5/2		
12	1.2.10 Shopdrawings/Samples Preparation and Submission (E&M)	28 days				
14	1.2.11 Shopdrawings/Samples Approval (E&M) 1.2.12 CSD and CBWD preparation and submission	14 days 28 days		2006/3/28 2006/4/25	5	
	1.2.13 CSD and CBWD Approval	14 days	2006/4/26	2006/5/9	7	
17	I.3 Phase 1 I.3.1 Approval and Consent obtain from Statutory Authority (Formation and Drainage)	265 days 28 days	2006/1/11 2006/1/11	2006/10/2 2006/2/7		
	I.3.2 Filling, Leveling and Formation Works Approval and Consent obtain from Statutory Authority (Structure)	14 days 28 days	2006/2/10			
20	1.3.3 Popular and concern deam nem statutory numbers (Stochary) 1.3.4 Structural Works	103 days		2006/3/23		
	I.3.4.1 Buildings' Substructure Construction 1.3.4.1.1 Function Room/Changing Rooms/Pump Room Building	70 days 14 days		2006/6/1 2006/4/6		
24	1.3.4.1.2 Restaurant and Klitchen Building	14 days	2006/4/7	2006/4/20)	
	1.3.4.1.3 General Office and Pro Shop Building 1.3.4.1.4 Maintenance Building	14 days 14 days	2006/4/21 2006/5/5	2006/5/4 2006/5/18	5	
	13.4.1.5 Cable Trench 13.4.2 Buildings' Superstructures Construction (Including 14-days propping period)	14 days	2006/5/19	2006/6/1 2006/7/4		
	I.3.4.2 Buildings' Superstructures Construction (including 14-days propping period) 1.3.4.2.1 Function Room/Changing Rooms/Pump Room Building	49 days 35 days		2006/7/4 2006/6/20		
	I.3.4.2.2 Restaurant and Kitchen Building I.3.4.2.3 General Office and Pro Shop Building	28 days 28 days		2006/6/13 2006/6/13	8	
32	1.3.4.2.4 Outdoor Sitting Area, Terrace and Entrance Plaza	21 days	2006/6/14	2006/7/4	l l	
	1.3.4.2.5 Maintenance Building 1.3.4.3 Underground Drainage and Ducting Works Installation	35 days 16 days	2006/5/26	2006/6/29 2006/5/25	2	
35	1.3.4.3.1 Function Room/Changing Rooms/Pump Room Building	7 days	2006/5/10	2006/5/16	5	
	1.3.4.3.2 Restaurant and Kitchen Building 1.3.4.3.3 General Office and Pro Shop Building	7 days 7 days	2006/5/10 2006/5/10	2006/5/16 2006/5/16		
38 39	1.3.4.3.4 Maintenance Building 1.3.4.4 Concealing E&M Works Installation	7 days 7 days		2006/5/25 2006/4/13		
40	1.3.5 Architectural Works	111 days	2006/6/14	2006/10/2	2	
	Internal Finishing Works and Fitting-out by Main Contractor 1.3.5.1.1 Function Room/Changing Room/Pump Room Building	46 days 30 days	2006/6/14 2006/6/21	2006/7/29 2006/7/20		
43	1.3.5.1.2 Restaurant and Klitchen Building	30 days	2006/6/14	2006/7/13	8	
44 45	I.3.5.1.3 General Office and Pro Shop Building I.3.5.1.4 Maintenance Building	30 days 30 days	2006/6/14 2006/6/30	2006/7/13 2006/7/29	5	
46	1.3.5.2 Internal Decorations to Clubhouse Buildings by NSC 1.3.5.3 External Finishing Works by Main Contractor	60 days 90 days		2006/9/27 2006/10/2		
48	1.3.5.4 Indoor E&M Works and Fitting-out Installation	58 days		2006/10/2		
	1.3.5.4.1 Function Room/Changing Room/Pump Room Building 1.3.5.4.2 Restaurant and Klichen Building	42 days 42 days		2006/8/1 2006/7/25	5	
51	1.3.5.4.3 General Office and Pro Shop Building	42 days	2006/6/14	2006/7/25	5	
	1.3.5.4.4 Maintenance Building 1.3.6 External Area	42 days 134 days	2006/6/30 2006/4/14	2006/8/10 2006/8/25	5	
54	1.3.6.1 Underground Drainage and Ducting Construction 1.3.6.2 Hardlandscaping and Paving Works	35 days 35 days	2006/4/14 2006/5/19	2006/5/18 2006/6/22		
	1.3.6.3 E&M Works and Fitting-out by Main Contractor	45 days	2006/6/23	2006/8/6	5	
57	1.3.6.4 Finishing Works and Fitting-out by Main Contractor 1.3.6.5 Irrigation & Softlandscaping Works by NSC	19 days 45 days		2006/8/25 2006/8/6	5	
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) 1.4.2 Lake B / Zone H3	28 days 161 days	2006/1/11 2006/2/14	2006/2/7 2006/7/24		
	1.4.2.1 Lake-B Excavation 1.4.2.2 Lake-B Edge Retaining Walks Construction	7 days 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	0 10 days	2006/4/1	2006/4/10		
	1.4.2.4 Lake-B Excavation within GC/2 Area 1.4.2.5 Lake-B Edge Retaining Walls Construction within GC/2 Area		2006/4/11 2006/4/25			
67	1.4.2.6 Waterproof Lining and Finishing Works to Walls and Lake Bottom	35 days	2006/5/23	2006/6/26	5	
	1.4.2.7 Waterlightness test to Lakes and Reservoir 1.4.2.8 Zone H3 Underground Drainage and Ducting Construction	28 days 10 days	2006/6/27 2006/4/27	2006/7/24 2006/5/6	5	
70	1.4.2.9 Zone H3 Filling, Leveling and Formation Works to Profile 1.4.2.10 Zone H3 Irrigation System by NSC	17 days		2006/6/8		
72	1.4.2.11 Zone H3 Lighting Fittings	7 days	2006/6/24	2006/6/30	1	
	I.4.2.12 Zone H3 Sand lying and Final Shaping I.4.2.13 Zone H3 Softlandscaping Works by NSC	7 days 15 days				
75	1.4.3 Zone H4a	149 days	2006/6/27	2006/11/22	2	
	1.4.3.1 Filing, leveling & formation 1.4.3.2 Irrigation pipes laying (NSC)	12 days 21 days	2006/6/27 2006/7/25			
78	1.4.3.3 Rough shaping	8 days	2006/8/15	2006/8/22	2	
	1.4.3.4 Surface Drainage System Construction 1.4.3.5 Tee Boxes (No.4,13) Construction	7 days 14 days				
81	1.4.3.6 Sand lying and Final Shaping	10 days	2006/9/26	2006/10/5		
83	I.4.3.7 Amenity Area Finishing Works by Main Contractor I.4.3.8 Cable Lying and Lighting Fittings	8 days 9 days				
84	1.4.3.9 Softlandscaping Works by NSC 1.4.4 Zone H5	30 days	2006/10/24 2006/7/9			
86	1.4.1 Filing, levelling & formation	22 days	2006/7/9	2006/7/30		
	1.4.4.2 Irrigation pipes laying (NSC) 1.4.4.3 Rough shaping	21 days 9 days				
89	1.4.4.4 Surface Drainage System Construction	10 days	2006/9/12	2006/9/21	Г	
	I.4.4.5 Sand lying and Final Shaping I.4.4.6 Cable Lying and Lighting Fillings	14 days 9 days				
92	1.4.4.7 Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22	2	
94	1.4.5 Zone H1 1.4.5.1 Underground Drainage and Ducting Construction	286 days 24 days	2006/2/10 2006/2/10		1	
	1.4.5.2 Filing, leveling & formation 1.4.5.3 Irrigation pipes laying (NSC)	22 days 21 days				
97	1.4.5.4 Rough shaping	9 days	2006/8/23	2006/8/31	Г	
	1.4.5.5 Surface Drainage System Construction 1.4.5.6 Tee Boxes (No.1,2,10,11) Construction		2006/9/12 2006/9/19			
100	1.4.5.7 Sand lying and Final Shaping	14 days	2006/10/6	2006/10/19	7	
	1.4.5.8 Amenity Area Finishing Works by Main Contractor 1.4.5.9 Cable Lying and Lighting Fittings	8 days 9 days	2006/11/1 2006/8/26			
103	1.4.5.10 Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22	2	
	14.6 Zone P 14.6.1 Underground Drainage and Ducting Construction	262 days 14 days	2006/3/6		2	
106	1.4.6.2 Filing, leveling & formation 1.4.6.3 Irrigation pipes laying (NSC)		2006/7/31 2006/7/25			
Title; Maste	r Programme Revision 1 任務 嬰徑任務 IIIIIII		進度		■ 里程碑 ◆ 指	□



			PROJECT: SKYCITY GOLF COURSE LOT NO 825, R.P. OF CHEKLAP KOK LOT NO. 1 AND THE EXTENSION THE EXTENSION THE EXTENSION THERETO, CHEK LAP KOK, HONG KONG
別碼 WBS	任務名稱	工期 開始時間 完成時間 <u>2006/1</u> 1/8 1/15 1/22 1/29	206/2 206/3 206/4 206/5 206/6 206/7 206/8
08 1.4.6.4	Rough shaping	4 days 2006/9/1 2006/9/4	25 1212 1219 1226 35 312 319 326 142 149 1416 1423 1490 577 1511 1528 164 1611 1618 1625 172 179 1716 1723 1730 186 1813 18
09 1.4.6.5	Surface Drainage System Construction Sand lying and Final Shaping	4 days 2006/9/22 2006/9/25 4 days 2006/10/20 2006/10/23	
11 1.4.6.7	Amenity Area Finishing Works by Main Contractor	5 days 2006/11/9 2006/11/13	
112 1.4.6.8 113 1.4.6.9	Cable Lying and Lighting Fittings	9 days 2006/9/4 2006/9/12 30 days 2006/10/24 2006/11/22	
113 1.4.6.9 114 1.4.7	Softlandscaping Works by NSC Lake A	30 days 2006/10/24 2006/11/22 165 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 1.4.7.3 118 1.4.7.4	Waterproof Lining and Finishing Works to Walls and Lake Bottom Watertightness test to Lakes and Reservoir	35 days 2006/4/14 2006/5/18 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 1.4.8.2 122 1.4.8.3	Finishing Works (Internal and External) Piping Works connect to Lakes (A & B)	42 days 2006/3/24 2006/5/4 28 days 2006/5/23 2006/6/19	
122 1.4.8.3	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 1.4.9.2 127 1.4.9.3	Filling, leveling & formation Irrigation pipes laying (NSC)	16 days 2006/4/14 2006/4/29 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 1.4.9.6 131 1.4.9.7	Sand lying and Final Shaping	10 days 2006/7/16 2006/7/25 9 days 2006/5/11 2006/5/19	
131 1.4.9.7 132 1.4.9.8	Cable Lying and Lighting Fittings Softlandscaping Works by NSC	9 days 2006/5/11 2006/5/19 30 days 2006/8/13 2006/9/11	
132 1.4.98 133 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 1.4.10.2 136 1.4.10.3	Filing, leveling & formation trrigation pipes laying (NSC)	16 days 2006/4/30 2006/5/15 21 days 2006/5/12 2006/6/1	
136 1.4.10.3 137 1.4.10.4	Irrigation pipes laying (NSC) Rough Shaping	21 days 2006/5/12 2006/6/1 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 1.4.10.8 142 1.4.10.9	Amenity Area Finishing Works by Main Contractor Cable Lying and Lighting Fittings	7 days 2006/8/13 2006/8/19 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 1.4.11.2 147 1.4.11.3	Filing, leveling & formation Irrigation pipes laying (NSC)	10 days 2006/5/16 2006/5/25 21 days 2006/5/12 2006/6/1	
48 1.4.11.4	Rough Shaping	5 days 2006/6/18 2006/6/22	
49 1.4.11.5	Surface Drainage System Construction	5 days 2006/7/9 2006/7/13	
150 1.4.11.6 151 1.4.11.7	Tee Boxes (No.6,15) Construction	21 days 2006/7/14 2006/8/3 8 days 2006/8/5 2006/8/12	
151 1.4.11.7 152 1.4.11.8	Sand lying and Final Shaping Amenity Area Finishing Works by Main Contractor	8 days 2006/8/5 2006/8/12 7 days 2006/8/20 2006/8/26	
152 1.4.11.8 153 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	
55 1.5	Phase 3 Anexemption of Concrete elitatin from Statutory Authority (Ecomption and Draleson)	240 days 2006/1/11 2006/9/7 28 days 2006/1/11 2006/2/7	
156 1.5.1 157 1.5.2	Approval and Consent obtain from Statutory Authority (Formation and Drainage) Zone H8	28 days 2006/1/11 2006/2/7 206 days 2006/2/10 2006/9/3	
58 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 1.5.2.3 161 1.5.2.4	Surface Drainage System Construction Tee Boxes No 8, 9, 17, 18 Construction	10 days 2006/5/11 2006/5/20 24 days 2006/6/8 2006/7/1	
161 1.5.2.4 162 1.5.2.5	Sand lying and Final Shaping	24 uays 2006/01 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 1.5.2.8 166 1.5.2.9	Irrigation System by NSC Softlandscaping Works by NSC	60 days 2006/5/11 2006/7/9 60 days 2006/7/6 2006/9/3	
167 1.5.3	Zone H4	191 days 2006/7/2 2006/9/3	
168 1.5.3.1	Underground Drainage and Ducting Construction	10 days 2006/2/25 2006/3/6	
169 1.5.3.2 170 1.5.3.3	Filling, Leveling and Formation Works to Profile Surface Drainage System Construction	18 days 2006/3/24 2006/4/10 11 days 2006/5/21 2006/5/31	
170 1.5.3.3 171 1.5.3.4	Surface Drainage System Construction Tee Boxes No 5, 14 Construction	11 days 2006/5/21 2006/5/31 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 1.5.3.7 175 1.5.3.8	Lighting Fittings Irrigation System by NSC	7 days 2006/8/25 2006/8/31 60 days 2006/5/11 2006/7/9	
175 1.5.3.8 176 1.5.3.9	Softlandscaping Works by NSC	60 days 2006/7/6 2006/7/9 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 1.5.4.2 180 1.5.4.3	Filing, Leveling and Formation Works to Profile Surface Drainage System Construction	10 days 2006/5/1 2006/5/10 7 days 2006/6/1 2006/6/7	
180 1.5.4.3	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	
83 1.5.4.6	Finishing Works by Main Contractor	7 days 2006/8/11 2006/8/17	
1.5.4.7 1.5.4.8	Lighting Fittings Irrigation System by NSC	7 days 2006/9/1 2006/9/7 60 days 2006/5/11 2006/7/9	
86 1.5.4.9	Softlandscaping Works by NSC	60 days 2006/7/6 2006/9/3	
87 1.6	Drainage and Manhole Construction Works outside Site Boundary	238 days 2006/1/11 2006/9/5	
88 1.6.1	Approval and Consent obtain from Statutory Authority (Formation and Drainage) Applications of Temporary Troffic Arconocement from Temporary Department	28 days 2006/1/11 2006/2/7	
89 1.6.2 90 1.6.3	Application of Temporary Traffic Arrangement from Transport Department Application of Permit from RMO Police & AA	42 days 2006/3/29 2006/5/9 21 days 2006/5/10 2006/5/30	
90 1.6.3 91 1.6.4	Path section OP1 and MH OMH1 Construction	21 days 2006/5/0 2006/5/0 35 days 2006/5/31 2006/7/4	
92 1.6.5	Path section OP2 and M/H 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	
94 1.7 195 1.8	Testing and Commissioning As-built Drawings Preparation and Submission	21 days 2006/8/28 2006/9/17 21 days 2006/9/29 2006/10/19	
96 1.9	Removal & Reinstatement of Hoarding	35 days 2006/9/8 2006/10/12	
97 1.10	Final Inspection by Client	3 days 2006/10/15 2006/10/17	
98 1.11	Demobilization	10 days 2006/10/13 2006/10/22	
199 1.12 200 1.13	Site Clearance Form Submission and Authorities Inspection	5 days 2006/10/23 2006/10/27 232 days 2006/4/5 2006/11/22	
200 1.13	Electricity Supply Application (CLP Checking)	40 days 2006/4/5 2006/5/14	
02 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	₩ 45
204 1.13.4 205 1.13.5	Form WWO46 Part III & IV Submission WSD Inspection	0 days 2006/8/14 2006/8/14 7 days 2006/8/15 2006/8/21	
205 1.13.5 206 1.13.6	WSD Inspection Water Certificate	7 days 2006/8/15 2006/8/21 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	→ 45
208 1.13.8	Form FSI/314 2nd Submission	0 days 2006/8/14 2006/8/14	₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩
	Form FSU501 submission	0 days 2006/9/30 2006/9/30	
209 1.13.9	FSD Inspection	0 days 2006/10/14 2006/10/14	
10 1.13.10	BD Inspection	0 days 2006/11/22 2006/11/22	
210 1.13.10	BD Inspection Drainage Inspection	0 days 2006/11/22 2006/11/22 0 days 2006/11/22 2006/11/22 0 days 2006/12/6 2006/12/6	





Appendix 5

Marine Water Monitoring Schedule for Next Month

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

Sunday	Monday	Tuesday		Wednesday	Thursday	Friday	Sature	day
26-Nov	27-Nov	:	28-Nov	29-Nov	30-Nov	01-Dec		02-Dec
		Mid-Flood <i>10:07</i> Mid-Ebb <i>18:19</i>	14:13 <i>18:19</i> 19:46 <i>21:14</i>				Mid-Ebb <i>07:37</i> Mid-Flood <i>13:09</i>	10:23 <i>13:09</i> 16:25 <i>19:41</i>
03-Dec	04-Dec		05-Dec	06-Dec	07-Dec	08-Dec		09-Dec
		Mid-Ebb <i>11:08</i> Mid-Flood <i>14:52</i>	13:00 <i>14:52</i> 18:06 <i>21:20</i>				Mid-Flood <i>07:39</i> Mid-Ebb <i>14:23</i>	11:01 <i>14:23</i> 15:22 <i>16:21</i>
10-Dec	11-Dec		12-Dec	13-Dec	14-Dec	15-Dec		16-Dec
		Mid-Flood <i>09:43</i> Mid-Ebb <i>17:42</i>	13:42 <i>17:42</i> 19:01 <i>20:20</i>				Mid-Ebb <i>07:28</i> Mid-Flood <i>12:06</i>	09:47 <i>12:06</i> 15:32 <i>18:59</i>
17-Dec	18-Dec		19-Dec	20-Dec	21-Dec	22-Dec		23-Dec
		Mid-Ebb <i>10:32</i> Mid-Flood <i>13:50</i>	12:11 <i>13:50</i> 17:06 <i>20:23</i>				Mid-Flood <i>06:33</i> Mid-Ebb <i>13:19</i>	09:56 <i>13:19</i> 14:55 <i>16:31</i>
24-Dec	25-Dec		26-Dec	27-Dec	28-Dec	29-Dec		30-Dec
				Mid-Flood12:5009:1716:23Mid-Ebb18:4816:2321:14			Mid-Ebb <i>06:14</i> Mid-Flood <i>11:19</i>	08:46 <i>11:19</i> 14:51 <i>18:23</i>