Airport Management Services Limited

SkyCity Golf Course EM&A

Monthly Impact Report

August 2006

14 September 2006 Report no: 01332R0071



Airport Management Services Limited

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Monthly Impact Report

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Report no:	01332R0071	Date:	14 September 2006

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August 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 is 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.

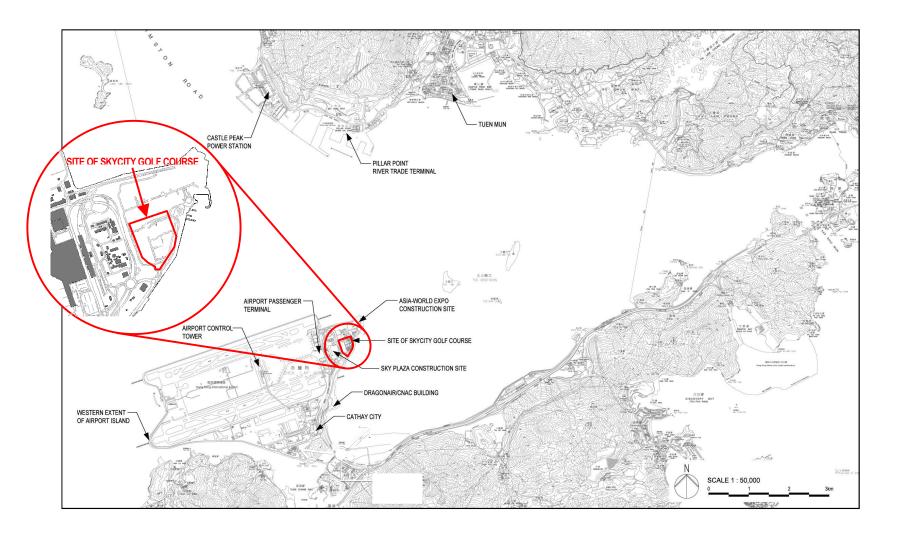
Impact monitoring was carried out during August 2006 in accordance with the approved EM&A Manual. Monitoring was carried out on 4, 7, 11, 14, 18, 21, 25 and 28 August. The monitoring results are detailed in this report, which complies with the reporting requirements stated in the approved EM&A Manual.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

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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 August 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 silt 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. During the site audit, it was observed that the placement of the impermeable liner for the artificial lakes was almost completed. Rainfall was found containing in the lakes. The Contractor was reminded to provide tarpaulin cover for the stockpiles of soil during rainstorms.

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 is 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. No adverse air quality caused by the construction activities as observed.

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. However,



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 except a section where the construction of outfall no. 9 was being undertaken 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)
	Mean	28.0	20.0	84.8	6.4	5	6
C1	Maximum	30.2	24.9	89.9	6.8	6	11
	Minimum	25.8	12.0	73.4	5.5	4	2
	Mean	27.9	20.1	83.4	6.3	4	6
C2	Maximum	30.1	25.0	88.3	6.7	6	13
	Minimum	25.7	12.2	73.9	5.6	3	2
	Mean	27.9	20.1	84.0	6.3	4	6
M1	Maximum	30.2	25.0	88.7	6.7	5	12
	Minimum	25.7	12.2	73.4	5.5	3	2
	Mean	27.9	20.1	84.0	6.3	4	6
M2	Maximum	30.1	25.0	89.3	6.8	5	11
	Minimum	25.7	12.2	74.2	5.6	3	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:

Demonster	YSI Model 6820 CE-C-M-Y				
Parameter	Range Resolution		Accuracy		
DO Concentration	0 to 50 mg/ℓ	0.01 mg/ ł	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°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
4/8/06	04:26 to 13:03	08:44	13:03 to 05:19	21:11
7/8/06	07:10 to 15:36	11:23	15:36 to 22:32	19:04
11/8/06	10:47 to 18:07	14:27	04:28 to 10:47	07:37
14/8/06	13:22 to 19:28	16:45	07:12 to 13:12	10:17
18/8/06	04:38 to 13:12	08:55	13:12 to 05:48	21:30
21/8/06	07:48 to 15:41	11:44	15:41 to 22:28	19:04
25/8/06	10:33 to 17:38	14:05	04:12 to 10:33	07:22
28/8/06	12:15 to 18:32	15:23	06:08 to 12:15	09:11

 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:



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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 August 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.



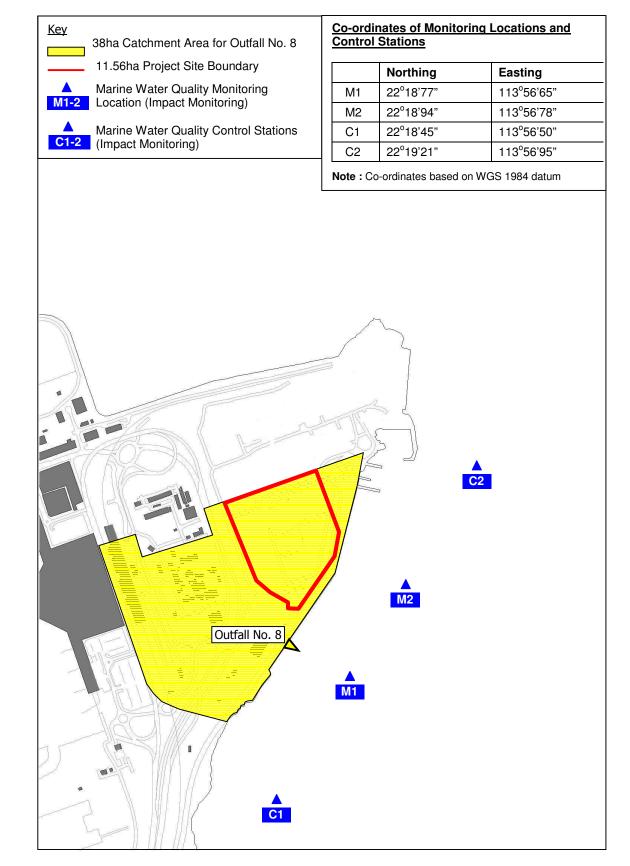


Figure 3-2 Location of Impact Monitoring Stations

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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 August 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



		Inspection No.	
Inspecti Site	on Date 24 Anlob Time (0:00 A.W.) Cheylity GoldCourse Contractor Wing Cal	Inspected By	Client: Contractor: Kei / Kif ET: Milee
Weathe	r		
Conditic	n Sunny Fine Overcast Drizzle	Rain	Storm Hazy
Temper	ature 2,7 °C Humidity High	Moderate	Low
Wind	Calm Light Breeze Strong	Direction	
1 W	N/A or not obs	served 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?	\checkmark	
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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		N/A or not obser		served	Yes	No	Photo/Remarks		
		1.13.1	Wastewater treated in facility emptied of silt	n silt removal facility? regularly?	Silt removal	\square			
		1.13.2	Washing area and ro	ad exiting from washi	ng facility paved?		\checkmark		
		1.13.3	Access road has suff bunded to prevent of	icient backfall toward untreated wastewater	washing facility or ?		\checkmark		
	1.14	Equipme maintena	nt oil and lubrication re ince area?	placements performe	d only in bunded				
	1.15	Drainage	from maintenance are	a discharged via an c	il interceptor?	\checkmark			
		1.15.1	Oil and grease remov	ed regularly?		\checkmark			
	1.16	Toilets th	at connect to foul sewe	er or chemical toilets p	provided?		\checkmark		
	1.17	ls debris	and rubbish prevented	from entering drains?	?		\checkmark		
	1.18	Is Effluer	t Discharge Licence av	vailable for inspection	?		\square		
2	All	R QUALIT	Y						
	2.1	Are hoard public ac	ding not less than 2.4m cess?	tall provided beside i	roads or areas with		\checkmark		
	2.2	Are the ro generatio	oads and unpaved area n?	as watered regularly to	o avoid dust		\checkmark		
	2.3	Are stock	piles of excavated mat	erial covered or regul	arly watered?		\checkmark		See Note
	2.4	ls stockpi barriers, f	le of dusty materials ke encing or traffic cones	ept to not extend beyo ?	nd the pedestrian		V		
	2.5	Is the put dust?	lic road around the site	e entrance kept clean	and free from		\checkmark		
	2.6	Do the sit	e vehicles use the vehi	icle wash facility at the	e site exits?				
	2.7	Are mate	rials transported on true	cks covered?					
	2.8	Are dusty	materials sprayed prio	r to loading?			\Box		
	2.9	Are all tru	ck loads to a level with	in the side and tail bo	ards?		\checkmark		
	2.10	Are areas watered?	where demolition/site	clearance/breaking ta	ke place regularly		\checkmark		
	2.11	Is every s by imperv the three	tock of more than 20 b ious sheeting or placed sided?	ags of cement or day d in an area sheltered	covered entirely on the top and				
	2.12	Are poten three side	tially dusty demolished d shelter?	items/debris covered	or placed in a	\checkmark			
		2.12.1	Is the debris sprayed w keep wet before it is de	vith water/dust suppre umped onto a debris o	ession chemical to chute?	\checkmark			
	2.13	Odorous r site?	naterials immediately c	covered and promptly	removed from	V			
	2.14	Are there	enclosures around the	main dust-generating	activities?	\checkmark			



	N/A or not ob	oserved	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?		\checkmark		
2.18	Do vehicles and equipment maintained that no excessive smoke or visible vapour emitted?		\checkmark		
Observa	ble dust sources Wind erosion	Vehicle	/equipment	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? Mobile plant sited away from NSRs? Noisy plant oriented away from NSRs?		\checkmark		
3.3	Are all plant and equipment well maintained and in good operating condition?		\checkmark		
3.4	Is idle equipment turned off or throttled down?				
3.5	Are powered mechanical equipment covered or shielded by appropriate acoustic materials?				
3.6	Are quiet plant used as required?	\Box			
3.7	Are silencers/mufflers fitted and maintained?	\Box			
3.8	Are mobile/temporary noise barriers used where specified?	\square			
3.9	Do air compressors (≥500kPa of supplying compressed air) and hand held percussive breakers (>10kg in weight) have valid noise labels?	\checkmark			
3.10	Do compressors and generators operate with doors closed?	V			
3.11	Are Construction Noise Permits available for inspection?	\checkmark			
Major noi	se 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?		\checkmark		<u> see Note</u> (3)
	4.1.2 Receptacles (e.g. rubbish bins) available?		\checkmark		
	4.1.3 Disposed of regularly and properly?				
	4.1.4 Records of quantities generated/recycled/disposed maintained?		\square		



		N/A or not ol	oserved	Yes	No	Photo/Remarks
4.2	Chem	ical waste				
	4.2.1	Stored properly in designated area?		\checkmark		
	4.2.2	Storage in accordance with Code of Practice?		\checkmark		
	4.2.3	Disposed of properly?		\overline{V}		terten and a subject of
	4.2.4	Trip tickets available for inspection?		V		
4.3	Chem	ical/fuel storage				
	4.3.1	Is storage area bunded?		\checkmark		inne ay bar
	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 N	/laterial				
	4.4.1	Reused/recycled where practicable?		\checkmark		
	4.4.2	Inert/non inert materials segregated?		\checkmark		
	4.4.3	Disposed of properly?	Zik-	1 Just		
	4.4.4	Records of quantities generated/recycled/disposed maintained?		V		
4.5	Excava	ated Material				
	4.5.1	Reused where practicable?		\checkmark		
	4.5.2	Records of quantities generated/reused/disposed maintained?		\checkmark		
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 drain/sewer avoided?				
Lai	ndscap	e and Visual				
5.1	Are ret	ained trees protected by fencing?				
5.2	Is the v	vork site confined within site boundaries?		$\overline{}$		
5.3	ls dam	age to surrounding areas avoided?		\square		

5



I No site mult flowing ontside the site through the gap between the troaveling and the ground near site entrance as a pit was constructed to retain the site off runoff. The Retained water would soak away through the pit. the Observation of last and it is closed.

\$ The contractor was reminded to provide tarpaulin cover for the stockpiles of soil the which would be stockpiled over night.

(3) Scattered nibbishgeneespecially plastic bottles were found on the ground near the site boundary opposite the pier. Rubbish should be collected to mbbish bins and disposed of properly.

Signatures:

Remarks

ET Inspector

AMS Site Representative

Date: 29 Aug 06

Date: 29/8/2006

In the

Name: HK SHELAG Kurun

Date: 29 Aug 2006

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 (℃)	Salinity (ppt)	DO Sat (%age)	DO Conc (mg/ℓ)	Turbidity (NTU)	SS (mg/ℓ)
04-Aug-06	(mid-ebb)	M1	3	6	25.8	24.8	84	6.5	4	6
04-Aug-06	(mid-ebb)	M2	3	6	25.8	24.8	84	6.4	4	6
04-Aug-06	(mid-ebb)	C1	1	3	25.9	24.8	85	6.5	5	2
04-Aug-06	(mid-ebb)	C2	3	6	25.7	24.9	82	6.4	3	2
04-Aug-06	(mid-flood)	M1	3	6	25.8	25.0	85	6.5	4	6
04-Aug-06	(mid-flood)	M2	3	6	25.9	25.0	84	6.4	5	6
04-Aug-06	(mid-flood)	C1	2	3	25.9	24.9	85	6.5	5	5
04-Aug-06	(mid-flood)	C2	3	6	25.9	25.0	85	6.5	4	4
07-Aug-06	(mid-ebb)	M1	3	6	26.6	15.8	86	6.6	4	2
07-Aug-06	(mid-ebb)	M2	3	6	26.7	15.7	85	6.5	4	2
07-Aug-06	(mid-ebb)	C1	1	3	26.8	15.6	86	6.6	5	5
07-Aug-06	(mid-ebb)	C2	3	6	26.6	15.7	84	6.4	4	3
07-Aug-06	(mid-flood)	M1	3	6	27.4	15.8	88	6.7	4	5
07-Aug-06	(mid-flood)	M2	3	6	27.4	15.9	89	6.8	4	4
07-Aug-06	(mid-flood)	C1	2	3	27.5	15.7	89	6.8	4	3
07-Aug-06	(mid-flood)	C2	3	6	27.5	15.8	88	6.7	5	3
11-Aug-06	(mid-ebb)	M1	3	6	25.7	17.1	85	6.5	5	5
11-Aug-06	(mid-ebb)	M2	3	6	25.7	16.9	85	6.5	4	3
11-Aug-06	(mid-ebb)	C1	2	3	25.8	16.8	86	6.6	5	4
11-Aug-06	(mid-ebb)	C2	3	6	25.7	17.0	84	6.4	3	4
11-Aug-06	(mid-flood)	M1	3	6	27.3	17.0	83	6.4	4	5
11-Aug-06	(mid-flood)	M2	3	6	27.2	17.0	84	6.4	3	6
11-Aug-06	(mid-flood)	C1	2	3	27.3	16.9	85	6.5	4	4
11-Aug-06	(mid-flood)	C2	3	6	27.2	17.1	83	6.3	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)
14-Aug-06	(mid-ebb)	M1	3	6	28.5	22.3	83	6.2	5	5
14-Aug-06	(mid-ebb)	M2	3	6	28.5	22.3	82	6.2	5	7
14-Aug-06	(mid-ebb)	C1	2	3	28.6	22.2	83	6.2	6	5
14-Aug-06	(mid-ebb)	C2	3	6	28.4	22.4	82	6.2	5	4
14-Aug-06	(mid-flood)	M1	3	6	28.3	21.9	81	6.1	4	5
14-Aug-06	(mid-flood)	M2	3	6	28.2	21.9	82	6.2	5	4
14-Aug-06	(mid-flood)	C1	2	3	28.3	21.8	83	6.2	6	4
14-Aug-06	(mid-flood)	C2	3	6	28.2	21.9	80	6.1	6	6
18-Aug-06	(mid-ebb)	M1	3	6	30.1	12.2	87	6.6	3	9
18-Aug-06	(mid-ebb)	M2	3	6	30.1	12.2	87	6.5	4	10
18-Aug-06	(mid-ebb)	C1	2	3	30.1	12.0	89	6.7	5	9
18-Aug-06	(mid-ebb)	C2	3	6	30.1	12.2	86	6.5	4	11
18-Aug-06	(mid-flood)	M1	3	6	30.2	12.3	89	6.7	4	7
18-Aug-06	(mid-flood)	M2	3	6	30.1	12.2	88	6.6	5	9
18-Aug-06	(mid-flood)	C1	2	3	30.2	12.1	90	6.8	4	6
18-Aug-06	(mid-flood)	C2	3	6	30.1	12.4	88	6.6	4	8
21-Aug-06	(mid-ebb)	M1	3	6	28.7	22.5	74	5.6	4	5
21-Aug-06	(mid-ebb)	M2	3	6	28.6	22.4	74	5.6	5	6
21-Aug-06	(mid-ebb)	C1	2	3	28.7	22.4	73	5.5	4	4
21-Aug-06	(mid-ebb)	C2	3	6	28.6	22.5	74	5.6	3	6
21-Aug-06	(mid-flood)	M1	3	6	28.7	22.4	73	5.5	4	5
21-Aug-06	(mid-flood)	M2	3	6	28.7	22.5	74	5.6	4	4
21-Aug-06	(mid-flood)	C1	2	3	28.7	22.4	75	5.6	4	5
21-Aug-06	(mid-flood)	C2	3	6	28.6	22.6	74	5.6	4	5

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Consulting

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)
25-Aug-06	(mid-ebb)	M1	3	6	28.7	23.1	86	6.4	5	12
25-Aug-06	(mid-ebb)	M2	3	6	28.7	23.2	84	6.2	5	11
25-Aug-06	(mid-ebb)	C1	2	3	28.7	23.2	85	6.3	5	11
25-Aug-06	(mid-ebb)	C2	3	6	28.6	23.4	85	6.3	4	13
25-Aug-06	(mid-flood)	M1	3	6	28.4	23.5	84	6.2	4	11
25-Aug-06	(mid-flood)	M2	3	6	28.5	23.5	85	6.3	5	11
25-Aug-06	(mid-flood)	C1	2	3	28.5	23.4	85	6.3	5	11
25-Aug-06	(mid-flood)	C2	3	6	28.4	23.7	86	6.3	4	13
28-Aug-06	(mid-ebb)	M1	3	6	28.4	23.0	88	6.4	5	7
28-Aug-06	(mid-ebb)	M2	3	6	28.5	22.9	89	6.5	5	6
28-Aug-06	(mid-ebb)	C1	2	3	28.6	22.8	88	6.3	5	7
28-Aug-06	(mid-ebb)	C2	3	6	28.5	22.9	88	6.4	5	6
28-Aug-06	(mid-flood)	M1	3	6	28.4	22.9	87	6.3	4	7
28-Aug-06	(mid-flood)	M2	3	6	28.3	23.0	88	6.4	5	7
28-Aug-06	(mid-flood)	C1	2	3	28.4	22.8	89	6.4	6	7
28-Aug-06	(mid-flood)	C2	3	6	28.4	22.9	86	6.3	5	7
	Notes : "-" in	dicates no dat	a is available	Mean	27.9	20.1	84.0	6.3	4.3	6.2
	Bold indicate	es Action Leve	l exceedance	Maximum	30.2	25.0	89.9	6.8	5.7	13.0

25.7

12.0

Minimum

Bold indicates Limit Level exceedance

2.0

5.5

3.1

73.4

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Appendix 3

Equipment Calibration Details



ALS Environmental

SUB-CONTRACT LABORATORY RESULTS COVERSHEET for ALS WORKORDER HK0602101

Client Details

Client	:	MAUNSELL ENVIRONMENTAL MANAGEMENT CONSULTANTS LTD
Project	:	- Not provided -
Order number	1	- Not provided -
C-O-C Number	:	- Not provided -
Site	:	- Not provided -
Sampler	:	- Not provided -

Cr mments

• The attached report contains sub-contracted components of ALS Environmental work order HK0602101. This report has been electronically stored for ALS record purposes and has not been altered in any way.

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MX+##BUZUMDDD

ALS Laboratory Group

ALS TECHNICHEM (HK) Pty Ltd



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: HK0602101 0 HONG KONG 10/08/2006 21/08/2006 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 AME

Brisbane Melbourne Sydney Newcastle

Hong Kong Singapore Kuala Lumpur Bogor

AMERICAS Vancouver Santiago Amtofagasta Lima This report may not be reproduced except with prior written approval from ALS Technichem (HK) Pty Ltd.

Abbreviations: % SPK REC denotes percentage spike recovery CHK denotes duplicate check sample

LOR denotes limit of reporting

ALS Technichem IHRS FEREFORD notes Laboratory Control Sample percentage recovery 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

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ALS

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

HK0602101 0 21/08/2006 MAUNSELL ENV MGT CNLT LTD

Calibration of Tubidimeter

ltem :	YSI SONDE Environmental Monitoring System
Model No. :	6820-C-M
Serial No. :	00013244
Equipment No. :	W-026-29
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2130B
Date of Calibration :	10 August, 2006
Testing Results :	

Recording Reading	0.30 NTU 4.40 NTU 17.3 NTU 72.2 NTU 157 NTU	±10%	
Expected Reading	0.00 NTU 4.00 NTU 16.0 NTU 80.0 NTU 160 NTU	Allowing Deviation	

Ms Wong Wai Man, Alice Laboratory Manager - Hong Kong

ALS Technichem (HK) Pty Ltd **ALS Environmental**



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

0

21/08/2006 MAUNSELL ENV MGT CNLT LTD HK0602101

Calibration of Conductivity System

This meter was calibrated in accordance with standard method APHA (19th Ed.) 2510B YSI SONDE Environmental Monitoring System 6820-C-M 00013244 W-026-29 Calibration Method : Equipment No. : Model No. : Serial No. : Item :

Testing Results :

Date of Calibration :

10 August, 2006

Recording Reading	1482 uS/cm	6874 uS/cm	59900 uS/cm	+10%	
Expected Reading	1412 uS/cm	6667 uS/cm	58670 uS/cm	Allowing Deviation	

Ms Wong Wai Man, Alice Laboratory Manager - Hong Kong



ALS

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

HK0602101 0 21/08/2006 MAUNSELL ENV MGT CNLT LTD

Calibration of Salinity System

Item :	YSI SONDE Environmental Monitoring System
Model No. :	6820-C-M
Serial No. :	00013244
Equipment No. :	W-026-29
Calibration Method :	This meter was calibrated in accordance with standard method APHA (19th Ed.) 2520 A and B
Date of Calibration :	10 August, 2006
:	

Testing Results :

Recording Reading	9.98 g/L 20.0 g/L 29.6 g/L	±10%	
Expected Reading	10.0 g/L 20.0 g/L 30.0 g/L	Allowing Deviation	

ALS Technichem (HK) Pty Ltd



CERTIFICATE OF ANALYSIS

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

0 21/08/2006 MAUNSELL ENV MGT CNLT LTD HK0602101

Calibration of Thermometer

Item :	YSI SONDE Environmental Monitoring System
Model No. :	6820-C-M
Serial No. :	00013244
Equipment No. :	W-026-29
Calibration Method :	In-house Method
Date of Calibration :	10 August, 2006
Testing Results :	

Recorded Temperature (^o C)	23.1 °C 36.1 °C	±2.0°C
Reference Temperature (°C)	21.4 °C 35.1 °C	Allowing Deviation

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Ms Wong Wa Man, Alice Laboratory Manager - Hong Kong

		stem				This meter was calibrated in accordance with standard method APHA (18th Ed.) 4500-0C & G			Recording Reading	0.08 mg/L 2.01 mg/L 5.00 mg/L 7.61 mg/L	±0.2 mg/L	Ms Wong Wai Man, Alice
CER1 HK0602101 0 21/08/2006 MAUNSELL ENV MGT CNLT LTD		YSI SONDE Environmental Monitoring System	6820-C-M	00013244	W-026-29	This meter was calibrated in accordance	10 August, 2006		Expected Reading	0.00 mg/L 1.84 mg/L 5.20 mg/L 7.81 mg/L	Allowing Deviation	
Batch: Sub Batch : Date of Issue: Client: Client Reference:	Calibration of DO System	ltem :	Model No. :	Serial No. :	Equipment No. :	Calibration Method :	Date of Calibration :	Testing Results :	Expec	, , , , , , , , , , , , , , , , , , ,	Allowi	

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ALS Environmental



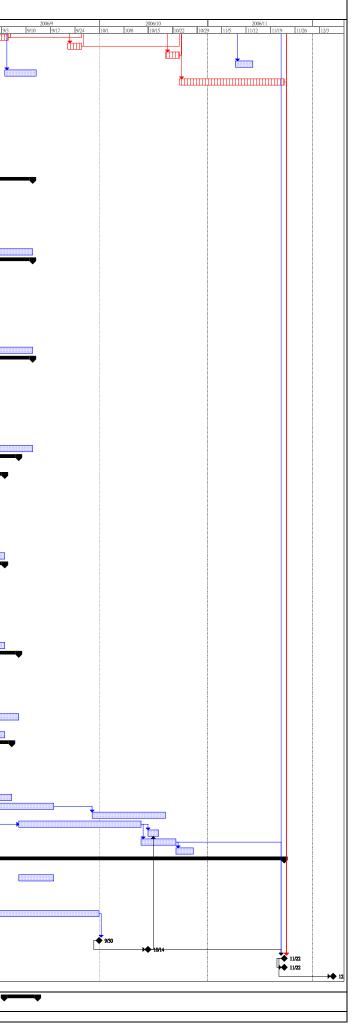
Appendix 4

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 CONTRACT PERIOD In Project Commencement (Site Handover to Contractor)	0 days			◆ 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	1.2.3 Initial Survey 1.2.4 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	1.2.6 Technical/Samples Preparation and Submission (Structural) 1.2.7 Technical/Samples Approval (Structural)	14 days 14 days	2006/1/11 2006/1/25	2006/2/7		
11	12.8 Technical/Shopdrawings/Samples Preparation and Submission (Architectural) 12.9 Technical/Shopdrawings/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			T	
14	1.2.11 Shopdrawings/Samples Approval (E&M) 1.2.12 CSD and CBWD preparation and submission	14 days 28 days				
	1.2.13 CSD and CBWD Approval	14 days	2006/4/26	2006/5/9		
17	1.3 Phase 1 1.3.1 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		
	1.3.2 Filling, Leveling and Formation Works 1.3.3 Approval and Consent obtain from Statutory Authority (Structure)	14 days 28 days	2006/2/10			
20	1.3.3 Popular and consent dealer norm Statutory Pathonny (Statutary) 1.3.4 Structural Works	103 days				
	1.3.4.1 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		
	I.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		
	13.4.1.5 Cable Trench 13.4.2 Buildings' Superstructures Construction (including 14-days propping period)	14 days	2006/5/19 2006/5/17	2006/6/1 2006/7/4		
	1.3.4.2 Buildings' Superstructures Construction (Including 14-days propping period) 1.3.4.2.1 Function Room/Changing Rooms/Pump Room Building	49 days 35 days				
	1.3.4.2.2 Restaurant and Klichen Building 1.3.4.2.3 General Office and Pro Shop Building	28 days 28 days		2006/6/13 2006/6/13		
32	1.3.4.2.4 Outdoor Sitting Area, Terrace and Entrance Plaza	21 days	2006/6/14	2006/7/4		
	1.3.4.2.5 Maintenance Building 1.3.4.3 Underground Drainage and Ducting Works Installation	35 days 16 days	2006/5/26 2006/5/10			
35	1.3.4.3.1 Function Room/Changing Rooms/Pump Room Building	7 days	2006/5/10	2006/5/16		
	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			
38 39	1.3.4.3.4 Maintenance Building 1.3.4.4 Concealing E&M Works Installation	7 days 7 days				
40	1.3.5 Architectural Works	111 days	2006/6/14	2006/10/2		
	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		
44 45	I.3.5.1.3 General Office and Pro Shop Building 1.3.5.1.4 Maintenance Building	30 days 30 days	2006/6/14 2006/6/30			
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			-	
48	1.3.5.4 Indoor E&M Works and Fitting-out Installation	58 days				
	1.3.5.4.1 Function Room/Changing Room/Pump Room Building 1.3.5.4.2 Restaurant and Kitchen Building	42 days 42 days				
51	1.3.5.4.3 General Office and Pro Shop Building	42 days	2006/6/14	2006/7/25		
	1.3.5.4.4 Maintenance Building 1.3.6 External Area	42 days 134 days	2006/6/30 2006/4/14			
· · ·	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			
55 56	1.3.6.2 Particularity counts 1.3.6.3 E&M Works and Fitting-out by Main Contractor	45 days		2006/8/6		
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				
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 Walls Construction	7 days	2006/2/14	2006/2/21		
64	1.4.2.3 Erecting of hoarding works at GC/2 Area (Approx. 8.67% handover to MC at late of March 200	14 days 0 10 days				
	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		
	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			
70	1.4.2.9 Zone H3 Filling, Leveling and Formation Works to Profile 1.4.2.10 Zone H3 Irligation System by NSC	17 days		2006/6/8		
72	1.4.2.11 Zane H3 Lighting Fittings	7 days	2006/6/24	2006/6/30		
	I.4.2.12 Zone H3 Sand lying and Final Shaping 1.4.2.13 Zone H3 Softlandscaping Works by NSC	7 days 15 days				
75	1.4.3 Zone H4a	149 days	2006/6/27	2006/11/22		
	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		
	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	1.4.3.7 Amenity Area Finishing Works by Main Contractor 1.4.3.8 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	1.4.4.1 Filing, levelling & formation	22 days	2006/7/9	2006/7/30		
	1.4.4.2 Imigation 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		
	1.4.4.5 Sand lying and Final Shaping 1.4.4.6 Cable Lying and Lighting Fittings	14 days 9 days				
92	1.4.4.7 Softlandscaping Works by NSC	30 days	2006/10/24	2006/11/22		
94	Zone H1 1.4.5 Zone H1 1.4.5.1 Underground Drainage and Ducting Construction	286 days 24 days	2006/2/10			
	1.4.5.2 Filing, leveling & formation 1.4.5.3 trigation pipes taying (NSC)	22 days 21 days				
97	1.4.5.4 Rough shaping	9 days	2006/8/23	2006/8/31		
	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	2006/9/21 2006/10/16		
100	1.4.5.7 Sand lying and Final Shaping	14 days	2006/10/6	2006/10/19		
	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		
	I.4.6 Zone P 1.4.6.1 Underground Drainage and Ducting Construction	262 days 14 days	2006/3/6			
106	1.4.6.2 Filing, leveling & formation 1.4.6.3 trigation pipes taying (NSC)		2006/7/31 2006/7/25	2006/8/7 2006/8/14		
Title; Maste		21 days				□



		PROJECT: SKYCITY GOLF COURSE LOT NO 82S, P.O. POLK LAP KOK LOT NO. 1 AND THE EXTENSION THERETO, CHECK LAP KOK HONK 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	25 212 219 226 35 312 319 326 42 49 416 423 420 57 514 521 528 64 611 618 625 72 79 716 723 726 86 813 5								
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 Arconocoment 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	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 2006/11/22 2006/11/22 0 days 2006/11/22 2006/11/22									





Appendix 5

Marine Water Monitoring Schedule for Next Month

Sky City Golf Course EM&A Tentative Water Quality Monitoring Schedule for September 2006 (Rev.1)

Sunday	Monday		Tuesday	Wednesday	Thursday	Friday	Saturday	
27-Aug		28-Aug	29-Aug	30-Aug	31-Aug	01-Sep		02-Sep
	Mid-Flood 07:41 <i>06:08</i> Mid-Ebb 13:53	09:11 10:41 <i>12:15</i> 15:23 16:53				Mid-Ebb 06:13 04:43 07:43 02:10 10:17 Mid-Flood 18:41 17:11 20:11		
	12:15	18:32				10:17 03:06		
03-Sep		04-Sep	05-Sep	06-Sep	07-Sep	08-Sep		09-Sep
			Mid-Ebb 11:00 09:30 12:30 06:55 15:06 Mid-Flood 18:32 17:02 20:02 15:06 21:59				Mid-Flood 06:04 <i>04:26</i> Mid-Ebb 12:30 <i>10:43</i>	07:34 09:04 <i>10:43</i> 14:00 15:30 <i>17:18</i>
10-Sep		11-Sep	12-Sep	13-Sep	14-Sep	15-Sep		16-Sep
			Mid-Flood 10:16 08:46 11:46 07:09 13:24 Mid-Ebb 15:57 14:27 17:27 13:24 18:30				Mid-Ebb 06:46 <i>03:43</i> Mid-Flood 19:37 <i>12:49</i>	08:16 09:46 <i>12:49</i> 21:07 22:37 <i>05:26</i>
17-Sep		18-Sep	19-Sep	20-Sep	21-Sep	22-Sep		23-Sep
			Mid-Ebb 11:22 09:52 12:52 07:40 15:05 Mid-Flood 18:25 16:55 19:55 15:05 21:45				Mid-Flood 05:45 04:07 Mid-Ebb 12:03 10:24	07:15 08:45 <i>10:24</i> 13:33 15:03 <i>16:43</i>
24-Sep		25-Sep	26-Sep	27-Sep	28-Sep	29-Sep		30-Sep
			Mid-Flood 09:06 07:36 10:36 05:58 12:14 Mid-Ebb 14:55 13:25 16:25 12:14 17:37				Mid-Ebb 04:03 01:12 Mid-Flood 16:30 09:54	05:33 07:03 <i>09:54</i> 18:00 19:30 <i>02:07</i>