

立法會
Legislative Council

LC Paper No. CB(1)717/09-10
(These minutes have been seen
by the Administration)

Ref : CB1/SS/3/09

**Subcommittee on
Dumping at Sea (Exemption) (Amendment) Order 2009**

**Minutes of the second meeting on
Tuesday, 1 December 2009, at 9:00 am
in Conference Room B of the Legislative Council Building**

Members present : Hon Albert HO Chun-yan (Chairman)
Hon WONG Yung-kan, SBS, JP
Hon Audrey EU Yuet-mee, SC, JP

**Public Officers
attending** : Agenda item II

Mr Benny WONG Yiu-kam
Deputy Director of Environmental Protection (1)

Mr Patrick LEI Chee-kwong
Principal Environmental Protection Officer (Water Policy
& Science)
Environmental Protection Department

Mr Kenneth CHAN Shu-to
Principal Environmental Protection Officer (Territorial
Control)
Environmental Protection Department

Ms Carmen CHU Ying-hung
Senior Government Counsel
Department of Justice

Clerk in attendance : Ms Debbie YAU
Chief Council Secretary (1)6

Staff in attendance : Miss Winnie LO
Assistant Legal Adviser 7

Miss Constance MAN
Senior Council Secretary (1)8

Action

I Confirmation of minutes

(LC Paper No. CB(1)451/09-10 -- Minutes of meeting held on
20 November 2009)

The minutes of the meeting held on 20 November 2009 were confirmed.

II Meeting with the Administration

(L.N. 203 of 2009 -- Dumping at Sea (Exemption)
(Amendment) Order 2009

Ref.: EP 76/3P/57 (21) -- Legislative Council Brief issued
by Environmental Protection
Department

LC Paper No. LS 8/09-10 -- Legal Service Division Report

LC Paper No. CB(1)337/09-10(01) -- Marked-up copy of the
Amendment Order prepared by the
Legal Service Division

LC Paper No. CB(1)337/09-10(02) -- Background brief prepared by the
Legislative Council Secretariat)

2. The Subcommittee deliberated (Index of proceedings attached at
Appendix).

Follow-up actions required to be taken by the Administration

3. In view of members' concerns about the water quality as a result of the contaminated sediment disposal operations at the east of Sha Chau, the Administration was requested to provide information on the extent and time taken for the affected seabed to return to its pre-dredged state for marine organisms, the environmental monitoring and audit results for the Contaminated Mud Pit IV at the east of Sha Chau including the types and frequency of monitoring data collected, and the method of collection.

4. In view of the concern of Tuen Mun District Council (TMDC) relayed by the Chairman about the environmental monitoring of the disposal facility at the east of Sha Chau, the Administration was requested to undertake to provide regular reports on the environmental monitoring results of the disposal facility concerned to TMDC for reference.

Way forward

5. Members supported the Dumping at Sea (Exemption) (Amendment) Order (the Amendment Order) proposed by the Administration and agreed that no further meetings would be required. Subject to members raising no further comments on the supplementary information to be provided by the Administration, the Chairman would report to the House Committee on 18 December 2009.

III Any other business

6. There being no other business, the meeting ended at 9:48 am.

Council Business Division 1
Legislative Council Secretariat
28 December 2009

**Proceedings of the second meeting of
Subcommittee on Dumping at Sea (Exemption) (Amendment) Order 2009
on Tuesday, 1 December 2009, at 9:00 am
in Conference Room B of the Legislative Council Building**

Time marker	Speaker	Subject(s)	Action required
000100 – 000221	Chairman	<p>The Chairman's introductory remarks</p> <p>Confirmation of minutes of the first meeting held on 20 November 2009 (LC Paper No. CB(1)451/09-10)</p>	
000222 – 000618	Chairman Administration	<p><u>Meeting with the Administration</u></p> <p>Briefing by the Administration on the Dumping at Sea (Exemption) (Amendment) Order 2009 (the Amendment Order) which was to apply the regulatory control regime under the Dumping at Sea Ordinance (Cap. 466) (DASO) to the new sediment disposal facility situated in an area to the East of Sha Chau (File Ref.: EP 76/3P/57 (21))</p> <p>In response to the Chairman's enquiry, the Administration's explanation that the Amendment Order was proposed in accordance with the usual practice that if a new sediment disposal facility was not included in Schedule 2 to the Dumping at Sea (Exemption) Order (DAS(E)O), such facility would not be put under regulatory control regime under DASO</p>	
000619 – 001331	Chairman Mr WONG Yung-kan Administration	<p>Mr WONG Yung-kan's in-principle support to the Amendment Order</p> <p>In response to the enquiries of Mr WONG Yung-kan and the Chairman, the Administration's advice that among the 24 reclamation areas listed in Schedule 2 to DAS(E)O, marine dumping operations were being carried out in only five of them, i.e. Nos. 2, 3, 5, 10 and 18, while back filling and dumping activities in other areas had discontinued. Among the five areas still in use, four of them (i.e. Nos. 2, 3 5 and 10) were open sea disposal sites for uncontaminated sediment while No. 18, i.e. the east of Sha Chau, was a dumping site for contaminated sediment which might arise from local projects such as the dredging works at Kai Tak Approach Channel and regular maintenance works at river channels like the Tuen Mun River. The Administration's further advice that as the last pit of the existing sediment disposal facility at the east of Sha Chau would soon be filled up, construction works for a new facility also situated to the east of Sha Chau had commenced in September 2009, with a view to putting it into service in June 2010</p> <p>In response to the Chairman's enquiry on applying chemical treatment to the contaminated sediments before disposal, the Administration's advice that:</p> <p>(a) as the sediments dredged from the sea or river had very high water content, chemical treatment was not practicable in most circumstances;</p>	

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		<p>(b) overseas experiences suggested that the best treatment and disposal option for contaminated sediments, if there was genuine need for their removal and dredging, would be confined marine disposal; and</p> <p>(c) <i>in-situ</i> biological treatment was applied to remove the odour of the contaminated sediments in some river channels, e.g. those in the Shing Mun River</p>	
001332 – 001937	Chairman Mr WONG Yung-kan Administration	<p>Mr WONG Yung-kan's concern about the adverse impacts of the contaminated sediment disposal facility on marine environment and the restoration of the marine ecology</p> <p>In response, the Administration's advice that for contaminated sediment disposal, as in the facility at the east of Sha Chau, a pit of 20 meters deep beneath seabed would be formed at shallow water using conventional dredging method. After the pit was filled with contaminated sediments up to a level of at least 3 meters below the surrounding seabed, it would be capped with a layer of 3–6 meters of clean sediments. A layer of clean sediments of this thickness was sufficient to isolate the contaminated sediments from the surrounding waters and to enable recolonization of marine organisms in the area. The disposal facility at the east of Sha Chau was subject to constant monitoring in the past 14 years, and the results showed that there had been recolonization of deep burrowing animals of different species. Based on the findings, the Administration was confident about the restoration of marine ecology in the area</p> <p>Mr WONG Yung-kan's enquiry whether the Administration had adopted measures to expedite the natural restoration and whether the Advisory Council on the Environment had recommended studies on related issues. The Chairman's sharing about the concern and enquired about the time taken for the affected seabed to return to its pre-dredged state for marine organisms and the extent of restoration</p> <p>The Administration's advice that the findings from studies on the capped pits at the east of Sha Chau showed that the organisms including deep burrowing animals would return to their original habitat, and that both the variety and quantity of species would grow over time. While the exact time taken was yet to be determined, it took about one to two years for the seabed to restore. To facilitate restoration, the four new pits in east of Sha Chau, each of which was about two million cubic metres (m³) in capacity, would be put into use one after another so that the seabed in the vicinity of each pit would be allowed to restore earlier</p> <p>Mr WONG Yung-kan's reiteration of the need for close monitoring as there might be more disposal facilities constructed in the future</p>	The Administration to provide information as required in paragraph 3 of the minutes

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001938 – 002352	Chairman Administration	<p>Noting that most sediment disposal facilities were located in New Territories West (NTW), the Chairman's concern about the adverse impacts on the marine environment both during the dredging and sediment disposal processes. In particular, the Chairman was of view that measures were needed to ensure the contaminated sediments would not spread to adjoining waters during the disposal operation</p> <p>The Administration's explanation that waters in NTW such as the east of Sha Chau was relatively still in comparison to the stronger current in New Territories East waters. In addition, the water of the selected site was comparatively shallow, with water depth of just 5 to 6 m. With this water characteristics, a pit of a surface area as big as 5 000 m² (1 000 m x 500 m) could facilitate the sediments settling within the pit boundary more easily, and the chance of the contaminated sediments spreading to the adjoining waters would thus be greatly reduced</p> <p>As environmental monitoring results could illustrate the severity of impacts, the Chairman's request for the Administration to provide information on the environmental monitoring and audit results for the seabed at the east of Sha Chau (No. 18) including the types and frequency of monitoring data collected, and the method of collection. His further concern whether the Administration could provide regular reports on the monitoring results for the reference of the Tuen Mun District Council (TMDC)</p> <p>The Administration's advice that the construction works of the new disposal facility at the east of Sha Chau were subject to the regulation of the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO). Pursuant to the requirements of EIAO, an Environmental Impact Assessment (EIA) study for the new disposal facility was completed and the EIA report was approved by the Director of Environmental Protection. While the EIA report was available for public access on the Internet, the Administration's agreement to provide information on the requirements under the environmental permit for members' reference</p> <p>The Administration's advice that sediment dumping operations were under the regulation of DASO such that a permit was required to carry out the operations. The permit would specify the amount of sediments to be disposed and the speed of disposal</p>	The Administration to provide information as required in paragraph 3 of the minutes.
002353 – 003110	Chairman Administration	<p>In response to the Chairman's enquiry about environmental monitoring data, the Administration's explanation that environmental monitoring for the contaminated sediment disposal pits in No. 18 were conducted between 1993 and 2007, with field sampling and laboratory testing works carried out for the following areas:</p> <p>(a) quality of sediments outside the facility once every four months where chemical analysis of the sediments showed that the sediment concentrations of most contaminants were</p>	

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		<p>below their respective Lower Chemical Exceedance Level laid down under the "Environment, Transport and Works Bureau Technical Circular (Works) No. 34/2002 – Management of Dredged/Excavated Sediment". In addition, there were no observable trends of increasing contaminant concentrations in sediment and there was no evidence of any adverse environmental impacts to sediment quality as a result of contaminated sediment disposal operations at the east of Sha Chau</p> <p>(b) toxicity of sediments outside the facility twice a year where long-term monitoring result indicated that there was no increase in the toxicity level;</p> <p>(c) contaminant concentrations of target species at least twice a year, where the analysis of samples from the fisheries resources showed that the tissues and the whole body of the samples did not exhibit increasing contaminant concentrations over time;</p> <p>(d) water quality in the adjoining waters once a month, where analysis showed that the water quality was of acceptable standard; and</p> <p>(e) analysis of the human body and ecological risk assessment annually, the results of which showed that the risk for the general public and fishermen to develop chronic diseases resulted from the consumption of marine produce from the area of east of Sha Chau was small and acceptable. Studies also showed that the marine produce in the area did not pose higher risks for the Chinese white dolphins</p> <p>The Administration's advice that reports on the environmental monitoring results were submitted to the Environmental Protection Department (EPD) on a quarterly basis, and similar environmental monitoring in the area of the new disposal facility both before and after the facility being put in service would be conducted</p> <p>In response to the Chairman's enquiry about public access to the environmental monitoring results, the Administration's advice that the results could be provided to individuals and organizations upon request</p>	
003111 – 003738	Chairman Administration	<p>The Chairman's enquiry about details of the regulatory control for disposal operations</p> <p>The Administration's advice that a permit was required before the disposal operation was carried out. The permit was valid for one month and needed to be renewed if the disposal operation was not completed. In applying for the permit, the works operator should produce a detailed chemical and biological analysis of the sediments to be disposed showing their level of contamination and distribution to facilitate classification of the sediment for disposal at the right facility. The permit would bear the name and type of the dumping barge and specify the limit of the quantity of</p>	

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		<p>sediments to be disposed. In addition, the dumping barge was required to be installed with a global positioning system which fed real-time data of the disposal operation including the location of the barge to the control centre of the EPD which monitored all disposal operations round-the-clock. When an anomaly was identified such as disposal at non-designated location, EPD would take action accordingly to rectify the situation</p> <p>Regarding the regulation of the disposal operations within the facility, the "drift disposal" method was adopted. Upon arrival at the facility, the dumping barge would be led by the Civil Engineering Development Department (CEDD)'s guide boat to the designated disposal location, which was selected based on the water current speed and direction. The best disposal location, determined from the water flow data, was at the upstream of the water current within the pit such that the disposed sediments after drifting following the water current direction would settle within the pit boundary. The dumping barge would switch off the engine and be allowed to drift into the designated location before disposing the sediments. It would remain drifting until all disposed sediments were settled into the mud pit. The whole process was monitored by the on-site staff of CEDD, and consideration would be given to cancelling the permit if the operator did not follow the instructions of the on-site staff</p> <p>In response to the Chairman's concern about the surprise inspection conducted by EPD on the operation procedures, the Administration's advice that EPD would conduct a total of around 500 inspections by land, sea and helicopter in a year</p>	
003739 – 004459	Chairman Mr WONG Yung-kan Administration	<p>Mr WONG Yung-kan's indication that as far as NTW was concerned, there had been changes to the marine ecology including a reduction in fisheries resources and a change in the varieties of marine organisms recolonized in the affected seabed as a result of the works carried out in the area. He added that environmental monitoring might not be conducted for works and facilities in other areas. His consideration that environmental monitoring should be conducted both before the dredging and after the capping of the pit with a view to verifying whether the same species had returned to their original habitat</p> <p>The Administration's advice that the reclamation area of No. 18 referred to the Contaminated Mud Pit IV at the east of Sha Chau, the three pits of which were put into service one by one. As such, there was overlapping in the environmental monitoring, for example, the monitoring conducted after capping the second pit could be considered as the pre-dredging monitoring for the third pit. As the disposal facility at the east of Sha Chau commenced operation more than a decade ago, environmental monitoring had been conducted for a long time. On the monitoring of species and marine ecology, data from both within the pit boundary and the adjoining waters were collected for analysis. Long-term monitoring results showed that there were no big differences to the marine environment both in terms of time and proximity to the facility irrespective of the fact that catches were subject to</p>	

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		<p>seasonal changes</p> <p>Mr WONG Yung-kan's reservation about the suggested mild impacts of the disposal facility on the marine environment, and his urge for the Administration to step up environmental monitoring</p> <p>The Chairman's relaying the concern of TMDC about the operation and environmental monitoring of the disposal facility at the east of Sha Chau, and his request for the Administration to provide regular reports on the monitoring results to TMDC for reference.</p>	<p>The Administration to take follow-up action as required in paragraph 4 of the minutes</p>
004500 – 004555	Chairman Administration	Way forward	