

Executive Summary Investigation Report on Bloodworm Incidents in Public Swimming Pools

Background

1. The discovery of bloodworms¹ in public swimming pools from early August to early September 2004 attracted intense media interest. The Leisure and Cultural Services Department ("LCSD"), with the assistance of a number of Government departments and two independent experts, investigated the causes of bloodworms in swimming pools.

2. Since reporting the discovery on 20 August, the media followed the developments closely. On 31 August, the media reported widely that findings (not published) of the Food and Environmental Hygiene Department ("FEHD") had contradicted LCSD assertion that there was insufficient evidence of bloodworms breeding in pools. On 1 September, extensive media reports alleged cover-up by LCSD. On 2 September, there were further media reports of LCSD destroying evidence. These news reports put the credibility of LCSD on the line. Furthermore, inconsistent views between LCSD and FEHD cast doubts over the co-ordination between the two departments.

The Investigation

3. Against this background, The Acting Ombudsman on 3 September initiated a direct investigation to examine:

- (a) actions by LCSD and FEHD since the first report of bloodworms being found in public pools;
- (b) co-ordination between LCSD and FEHD;
- (c) approach adopted by the two departments in the disclosure of information to the public; and
- (d) the appropriateness and effectiveness of the actions by the two departments, including monitoring of hygienic condition of public swimming pools.

¹ Red in colour due to presence of haemoglobin, bloodworms do not harm human beings. Four stages in life cycle are eggs, larvae (bloodworms), pupae and midges.

Methodology

4. Apart from studying information from departments concerned (case files, correspondence between and within departments, statement from the expert and witness statements obtained by the Police) and paying site visits to Kowloon Park, Tai Wan Shan and Hammer Hill Road Swimming Pools, we interviewed a number of officers, including the Director of Leisure and Cultural Services (“DLCS”), the Deputy Director (Leisure Services) (“DDLCS”), the Assistant Director (Leisure Services) (1) (“ADLS”), some LCSD district staff, FEHD consultant and Pest Control Officers.

Inter-departmental Working Group

5. On the discovery of bloodworms in Kowloon Park Swimming Pool, DLCS convened a meeting of relevant departments to consider the need (or not) for closure of the indoor pools. LCSD later regarded this as the Inter-departmental Working Group (“Working Group”). Four Government departments (FEHD, Department of Health (“DH”), Electrical and Mechanical Services Department (“EMSD”) and Water Supplies Department (“WSD”)) assisted in the investigation and attended meetings of the Working Group:

- (a) The Pest Control Advisory Section (“PCAS”) of FEHD was Government's expert for providing professional advice, to the public and Government departments, on prevention of pest infestation.
- (b) The Surveillance and Epidemiology Branch (“SEB”) of DH tracked incidents of potential public health concern and advised Government departments accordingly.
- (c) EMSD, being responsible for regular maintenance of water filtration systems of pools, provided technical support and advice in the examination of the filtration systems of affected pools.
- (d) WSD conducted chemical and bacteriological tests on water samples from pools.

Other Participants

6. In addition, LCSD sought assistance from the Architectural Services Department ("Arch SD"), the Police and a microbiologist. Later, a biologist offered his services.

Significant Events

7. Between August and early September 2004, bloodworms were found in nine public swimming pools. The key events below give insight into LCSD's handling of the incidents.

Kowloon Park

8. On 20 August, after inspection of Kowloon Park Swimming Pool ("Kowloon Park"), PCAS advised ADLS that no obvious breeding ground had been found, but water collected on a vinyl sheet at construction works and drains at the side of pools might encourage breeding of midges (搖蚊). In the afternoon, SEB informed LCSD that presence of bloodworms in pool water might indicate unsatisfactory high concentration of organic matter, caused possibly by faecal contamination. DH suggested to close and empty the pool for thorough cleansing, as prescribed by World Health Organisation guidelines.

9. In the evening, DLCS called an urgent meeting of the Working Group to discuss whether Kowloon Park should be closed and if so, when. After deliberating for about four hours, LCSD finally agreed to close the indoor pools the following day.

10. At the press conference held on 21 August to announce the closure of the indoor pools of Kowloon Park, ADLS indicated that LCSD had endeavoured in vain to ascertain the cause of bloodworms in pools. LCSD would drain away the water for thorough inspection of the sand trap and the filtration system.

Tai Wan Shan

11. On 23 August, staff of Tai Wan Shan Swimming Pool ("Tai Wan Shan") found bloodworms coming out from the base of a turtle water slide ("turtle"). District Leisure Manager ("DLM") was on site that evening and made a report to ADLS at about 10 : 30 pm. Next morning,

the microbiologist allegedly suggested to ADLS on site there could be stagnation of water and breeding of midges inside the "turtle". In the evening, LCSD, Arch SD and the supplier removed the "turtle". Live and dead bloodworms were found at the joint between the "turtle" and the bottom of the pool. Samples of bloodworms and water were taken to WSD, DH and FEHD for examination.

Report to the Police

12. The same evening, a meeting convened by DDLs (acting as DLCS) with ADLS and other LCSD senior staff considered that the bloodworms were likely to have been "foreign objects" and media reporters knew about the bloodworms in Kowloon Park and Tai Wan Shan before LCSD. Consequently, DDLs called in Police assistance that night. The Police agreed on the following day to investigate.

Press Conference on 25 August

13. Before the press conference, DDLs e-mailed Home Affairs Bureau that LCSD had found two experts who would be able to say the swimming pool environment was not conducive to breeding of bloodworms. As LCSD could not rule out human factor, they had called in the Police and would mention this to the press.

14. At the press conference, ADLS said that after consolidating views from experts, LCSD did not rule out the possibility of the bloodworms having been brought in from outside. Police assistance had, therefore, been sought.

FEHD Report

15. On 26 August, in reply to DLM, FEHD advised that poor water circulation at the base of the "turtle" at Tai Wan Shan might have provided suitable environment for the growth of bloodworms.

16. In the afternoon of 27 August, FEHD e-mailed ADLS its interpretation of findings on the presence of bloodworms in Kowloon Park and Tai Wan Shan ("FEHD Report"). In a nutshell, the report advised on the possibility of midges (搖蚊) surviving in the pool water of

Kowloon Park and the “turtle” at Tai Wan Shan providing a favourable breeding place. It reported finding of 31 larvae, 30 pupal cases and 3 adults in the samples collected from Tai Wan Shan and water circulation at the bottom of the “turtle” pool.

17. The Working Group met on 28 August to discuss the FEHD Report and its impact on the re-opening of Kowloon Park in early September. The meeting considered that it would not be able to prove beyond doubt that the pool water was breeding ground. FEHD would check if any larvae would hatch from the sand and carbon samples from Kowloon Park. ADLS suggested to further consider the FEHD Report at the next meeting.

18. On 30 August, TVB evening news reported that the design of the “turtle” at Tai Wan Shan had resulted in breeding of bloodworms and that the Police investigation had found the full life cycle of bloodworms in the water samples.

19. DLCS was concerned and conferred with the Chief Information Officer ("CIO") by phone to formulate a press statement to respond to the TVB news report. She directed CIO to check with ADLS for factual accuracy. The press release, issued close to midnight, stated that tests had proved the water quality at Tai Wan Shan to be up to standard. There was no evidence that bloodworms were bred in the pool. LCSD investigation in some public swimming pools was still underway and findings would be announced as soon as available.

20. On 31 August, many local papers carried the TVB news report. In the morning, ADLS attended two radio phone-in programmes and electronic media interviews stating that samples examined by FEHD had confirmed presence of larvae, but no egg or pupa. He also maintained that water inside the "turtle" was not stagnant and thus not suitable for breeding bloodworms.

21. In the afternoon, the Working Group met again to consider the FEHD Report. There were divergent views and the discussion continued into the evening. Meanwhile, TVB evening news reported that, according to a report from FEHD to LCSD the week before, larvae and pupae had been found in Tai Wan Shan and Kwun Tong. TVB also quoted ADLS maintaining that no egg or pupa had been found, that the water under the “turtle” was not stagnant and thus not suitable for breeding bloodworms, so that human factor (人爲因素) could not be ruled out.

22. DLCS, back from overseas duty since 27 August, joined the meeting in the late evening. She was then briefed and shown a copy of the FEHD Report for the first time. LCSD realised that the incident had turned into a credibility issue.

23. The Working Group meeting concluded that the filtration systems of swimming pools were properly functioning. There was insufficient evidence **to prove beyond doubt** that natural breeding of midges had occurred in the swimming pools. The Working Group also decided to hold a press conference on the following day. In the same evening, Police issued a press statement that there was no evidence to suggest bloodworms had actually bred in pool water.

24. The press conference on 1 September was attended by DLCS, DFEH, ADLS, FEHD Consultant and the two experts. LCSD informed the media that there was no concrete evidence to prove that midges were bred in the leisure pool in Tai Wan Shan. ADLS admitted that he had missed out some details of the Tai Wan Shan findings, but reiterated that water under the “turtle” was not stagnant.

Hammer Hill Road Swimming Pool

25. On 1 September, around 8:55 a.m., lifeguards of Hammer Hill Road Swimming Pool (“Hammer Hill Road”) found bloodworms underneath the artificial turf on the platform next to a rock feature in the middle of the outside leisure pool. LCSD staff pulled away the artificial turf and found more bloodworms. District management staff notified LCSD Headquarters (“LCSDHQ”) around 10:00a.m. Staff cleared away the artificial turf, which was cut into pieces and kept in plastic bags. Samples of bloodworms were collected and sent to FEHD. After the press conference, ADLS instructed district staff to call the Police officer for the bloodworm case.

26. In the afternoon, district staff tried various means to clean the dirt from the rock platform and finally managed to pour it into the surface channels. Their prime concern was to avoid contaminating the pool water. The cleansing process was recorded on CCTV tape. Shortly after 6:00 p.m. the Police arrived at Hammer Hill Road, having received a “999” report from a lifeguard at 5:46 p.m. on the discovery of bloodworms. Meanwhile, the Police officer for the case had learnt of the incident from the news on TV. He then received a call from the district staff. He arrived at the scene at around 7:20 p.m.

27. On 2 September, the media reported prominently bloodworms at Hammer Hill Road, with some headlines alleging LCSD destroying evidence.

28. After a joint inspection by LCSD, FEHD and the Police, LCSD issued a press release in the evening on Hammer Hill Road that preliminary examination by FEHD of the specimens collected revealed about 5,000 larvae, some 300 pupae and about 30 adults. It was believed that there was natural breeding of midges in the pool compound.

Further Development

29. On 4 September, LCSDHQ issued revised guidelines to districts requiring staff to inform the Police of bloodworm discoveries, to close the pool and to protect the original environment.

30. The Working Group met again on 6 September and agreed that there was not sufficient evidence to show that bloodworms could breed or develop in normal swimming pool water. However, for special installations in swimming pools, such as water play equipment and artificial turf, where the flow of water was slow and organic matter could accumulate, bloodworms could breed. Some places within or surrounding swimming pool complexes, such as drains and manholes, could also be breeding ground for bloodworms. LCSD issued a press release on the same day to convey the findings.

The Aftermath

31. Since early September, LCSD had taken actions to re-focus its attention on pool environment, including joint inspections with FEHD of all public pools and special cleansing operations. A Steering Committee chaired by DLCS was established to review the management of public swimming pools. LCSD also undertook to remove or modify play equipment and replace artificial turf with ceramic tiles, organise refresher courses for staff and publicity programmes to enhance public co-operation in maintaining good hygiene of pools.

Observations and Conclusions

32. It was unfortunate that the bloodworm incidents coincided with the LCSD dispute with its lifeguards. LCSD's call for Police assistance and repeated public assertions of bloodworms being due not to faulty systems but possibly to human factor (人爲因素) further complicated matters and fuelled the media's relentless pursuit for the truth. It was, therefore, no surprise that the media's evident access to the FEHD Report, LCSD's responses and the discovery of bloodworms at Hammer Hill Road sparked off questions over the department's credibility. For this Office, the prime concern on the incidents was for transparency in public disclosure, coordination amongst departments, good management and effective monitoring of public hygiene of public swimming pools.

33. We find that LCSD lacked impartiality in its own investigation into the bloodworm incidents and was selective in the reception of views. However, we find no evidence of a cover-up on the part of ADLS. Nor is there any deliberate attempt to destroy evidence at Hammer Hill Road.

34. We consider the bloodworm incidents to have been an administrative and public relations fiasco on the part of LCSD. We see this as a consequence of the following.

Insufficient focus on possibility of natural occurrence

35. LCSD had invited FEHD to visit Kowloon Park and Tai Wan Shan to investigate the causes for bloodworms and identify possible breeding sites. It did not ask for FEHD inspection of the other affected pools until DLCS and DFEH decided on 2 September 2004 to conduct joint inspections of all 36 pools. We see LCSD as not focusing sufficiently on the possibility of bloodworms growing in the natural environment and the need for more thorough examination of the cause of their presence. It was concerned, quite properly, over the inconvenience to the public and chaos from cancellation of bookings. The senior directorate officers were at the time also engaged in pressing commitments, e.g. organisation of the reception of the Hong Kong Olympic team's return from Athens and the impending visit of the gold medallists of the China Olympic team in early September. However, given DH's advice on public health, the FEHD findings and the keen media interest, LCSD should have been alerted to take a more balanced view about the environment of pools and alive to the need for proper public information.

Absence of open mind

36. There could be different causes for bloodworms in different pools. This was echoed by the FEHD Report. DH had pointed out that natural causes for the breeding of bloodworms in the pools should not be ruled out before introducing external factors. Minutes of the two Working Group meetings on 28 and 31 August recorded divergent views on the possibility of bloodworms breeding in the pools.

37. Given the intense media attention on the bloodworm incidents, LCSD should have examined the divergent views within the Working Group with particular care and prudence. It should have kept an open mind about natural causes or human factor (人爲因素) during its investigation. In the face of the divergent views expressed by the various parties concerned, LCSD actions did not give us the impression of an open mind or proper consideration of the balance of probability. Instead, it cast an unfortunate conspiratorial light on the situation.

Gap in communication among LCSD directorate

38. There are problems of communication among LCSD directorate i.e. ADLS, DDLS and DLCS. While ADLS regularly provided DDLS step-by-step reports on progress of the investigation, he did not seem to consider the divergent views among the parties concerned sufficiently critical to warrant consultation with his seniors. DDLS submitted a one-page report to DLCS on the bloodworm incidents on the latter's return on Friday 27 August from overseas duty. DDLS was then already aware of the FEHD Report from ADLS and had even asked for implications on the cause for bloodworms. Given this background, it is odd that DDLS simply accepted ADLS' brief verbal report on 30 August without taking the initiative to ask for more details on the Working Group discussions to brief DLCS more fully.

39. It is particularly odd as on 30 August, DLCS was concerned to respond to the TVB news report. This Office finds it incredible that DLCS was apparently not briefed on the FEHD Report until late evening the day after, 31 August. This shows a lack of alertness for critical issues on the part of ADLS and poor judgment on the part of DDLS in not advising DLCS on the latest update, to ensure her full knowledge of the sensitive situation and to seek a line of response from her.

Undue haste to respond to media requests

40. LCSD explained to this Office that the decision to attend radio phone-in programmes and electronic media interviews on 31 August had been made in haste, to clarify the TVB news report the night before (30 August) that full life cycle of midges (搖蚊) had been found in Tai Wan Shan. The Working Group had yet to hold its second meeting to further discuss the FEHD Report on 31 August. There seems to have been undue haste in responding to media interviews prior to definitive conclusion of Working Group discussions.

Inexperience in media relations and public information

41. During the radio phone-in programmes and electronic media interviews, ADLS had wanted to inform the public of the Working Group conclusion that there was insufficient evidence to prove beyond doubt natural breeding of midges (搖蚊) in the pools. However, as he did not have a copy of the FEHD Report with him, he made a mistake on the number of bloodworms and did not mention the presence of pupal cases. Given the intention of the interviews was to give a "correct picture" to the public on the findings at Tai Wan Shan, we find it inconceivable that ADLS was not fully familiar with the facts. This is particularly strange since the FEHD Report of 27 August had been quite explicit about the findings and by 31 August, LCSD members should have had enough time to digest the findings and rehearse ready responses. It is even more surprising

that ADLS claimed not to have consulted DLCS or even DDLS on the line of response. We find no evidence of a deliberate cover-up on the part of ADLS as he reported progress regularly and faithfully. However, this episode reflects his poor judgement and lack of experience in meeting the media and informing the public.

Insufficient transparency in the release of information

42. LCSD maintained that it had kept the public informed of progress of the investigation by its three press conferences (21, 25 August and 1 September) and frequent attendances at radio programmes and responses to media enquiries. We have examined LCSD's press releases, transcripts of its interviews, press briefing and conferences. LCSD's intentions might well have been to respond quickly but the actual delivery backfired. The general impression was that LCSD had not been sufficiently transparent in the release of information and, worse, that it had been economical with the truth. For example, bloodworms were found in nine pools, but LCSD did not always volunteer the fact about bloodworm discovery in each and every affected pool to the public and in some pools, only a notice of closure was issued. At the press conference on 25 August, ADLS explained at length the reasons for seeking Police assistance and the likelihood of human factor (人爲因素) being involved in the incidents. In media interviews later, ADLS maintained that the water inside the "turtle" at Tai Wan Shan was not stagnant, despite the FEHD's findings and LCSD's internal view of the need to be cautious in future selection of the design of water play equipment. LCSD statements tended to mislead and did not give a balanced picture of the investigation.

Lack of support from LCSDHQ

43. Since 20 August, LCSDHQ had issued several sets of instructions to districts on follow-up actions to be taken immediately on discovery of bloodworms. Unfortunately, after LCSDHQ had called in Police assistance on 25 August, it gave no instructions on how staff should facilitate the Police investigation until 4 September 2004. As a result, some district staff were not aware of the need to report discovery of bloodworms to the Police or the need to preserve the integrity of a suspected crime scene. This was the situation at Hammer Hill Road on 1 September. In view of the intense media interest in the bloodworm incidents and suspicion of human factor (人爲因素) culminating in a report to the Police, we expect an acute sense of urgency and vigilance within LCSD in internal communication of key information. District staff have faithfully reported the incidents, practically blow by blow, to LCSDHQ even amidst their emergency and routine tasks on the ground. However, they have little experience in dealing with high-profile and sensitive media matters and should have extra guidance from LCSDHQ on assisting in Police inquiry.

Co-ordination among parties concerned

44. DLCS was quick to respond to the first sighting of bloodworms, in Kowloon Park. On 20 August, she called a meeting of the relevant expert departments. From the outset, FEHD, DH, EMSD, WSD and Arch SD had rallied to help LCSD in the investigation. We note that each department had done its part in providing prompt assistance and cooperative support to LCSD. In fact, DH had initiated contact with LCSD immediately upon learning of the incidents from the press reports on 20 August 2004.

A Further Note

45. We also find that **FEHD** had done its duty in promptly responding to LCSD's call for assistance and consistently providing frank and professional advice from the pest control perspective. FEHD action was timely and appropriate. FEHD had also been proactive in learning from the experience: issuing guidelines to staff and circularising to operators of private swimming pools in early September to draw their attention to the need for vigilance in complying with the required pool and personal hygiene standards.

Hygienic Condition of Pools

46. There are clear requirements for public hygiene and established practices for water quality assurance. However, during our visits to Tai Wan Shan, Hammer Hill Road and Kowloon Park, we noted that there was insufficient time for proper cleansing around or inside the pools, play equipment and artificial features. Overbooking of swimming pool lanes had made it impossible for cleansing to be done during session breaks.

47. We also note from public complaints that pool staff had not been always vigilant in requiring swimmers to take a shower and footbath before entering the pool. There were also complaints on air of faecal discharge by swimmers (probably small children). All these point to the need for greater vigilance and more vigorous enforcement on the part of LCSD.

48. However, there is also an indictment on inconsiderate users who ignore public hygiene. They forget not only their civic duty but also the risk to their own health. Swimmers have a social obligation to keep the pools clean, both for other users' enjoyment and for their personal hygiene. Parents have an additional responsibility to train young children in good toilet habits and in social ethics.

Recommendations

49. Since 2 September 2004, LCSD has commendably carried out a range of remedial measures to raise the hygienic condition of public swimming pools.

50. Against this background, we make the following recommendations in the hope of assisting DLCS and her staff:

Hygiene of Public Swimming Pools

- (a) increase the sampling frequency for bacteriological and chemical examination of pool water;
- (b) continue with the half-day closure of swimming pools;
- (c) review the schedule and specifications for cleansing operations, taking into account the design of pools and ancillary features;
- (d) review frequency and requirement for cleansing of pools and surrounding areas;
- (e) put in place a monitoring programme of follow-up inspections to ensure that cleansing work has been carried out satisfactorily;
- (f) from time to time, seek FEHD's support in detecting and preventing possible breeding of insects on site;
- (g) provide training to frontline staff to strengthen their knowledge in public hygiene, pest control and sampling techniques;
- (h) review the current booking arrangements to avoid over-booking of swimming lanes during session breaks;
- (i) review and, if necessary, revise the design of pools under planning;
- (j) confer with DH on whether the hygiene standard at public swimming pools should be raised;

Internal and External Communication

- (k) enhance two-way communication between LCSDHQ and frontline staff for a better understanding of the rationale and priorities in the management of swimming pools;
- (l) review the approach and mechanism within LCSD on deciding lines of response for release of information to the public to ensure accuracy and transparency;
- (m) provide media and crisis management training to LCSD senior managerial and directorate staff to enhance their ability to handle media relations and crisis situations; and

Public Education

- (n) publicity and public education programmes on swimmer etiquette and the need for proper hygiene in the use of public swimming pools.

Response from DLCS

51. DLCS' comments essentially centred on the points below:
- (a) a gap in communication among directorate officers;
 - (b) heavy commitments on her part and DDLS;
 - (c) ADLS' inadequate alertness to sensitive or critical issues for the attention of DLCS and DDLS; and
 - (d) her misplaced confidence in ADLS.

Final Remarks from The Ombudsman

52. The Ombudsman notes DLCS' remarks on the gap in communication among the directorate officers. She also notes that inexperience with handling matters of intense public interest and anxiety to present a favourable public image for the department might have clouded the ADLS' judgment. However, The Ombudsman considers the approach taken by LCSD in the investigation into the bloodworm incidents a reflection of the department's overall inadequate crisis management.

53. On the response to the TVB news report on 30 August, attendance at radio phone-in programmes and interviews with the electronic media in the morning of 31 August, we are surprised that DLCS should have relied just on the CIO checking with ADLS on the factual accuracy of the press release and on the judgment of ADLS. He might be a professional expert on leisure services and on swimming pools but here, the issues were media relations and public information. Furthermore, those media appearances had been cleared with DDLs or DLCS. In this case, DLCS had directed the prompt response to the media but somehow stopped short of ascertaining the full facts about the latest development in the investigation and of giving him any steer whatsoever. There seems to have been a lapse in judgment also on the part of DLCS at this juncture. The Ombudsman considers that it would have been better to await definitive conclusion to the Working Group discussions before further media releases.

54. The Ombudsman welcomes the positive response of LCSD to our recommendations and commends its prompt action in implementation.

55. The Ombudsman expresses sincere appreciation for the cooperation and assistance rendered by LCSD, FEHD, DH, EMSD, WSD, Arch SD and the Police in the course of this investigation.

Office of The Ombudsman
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