

**For discussion
on 12 May 2009**

LegCo Panel on Food Safety and Environmental Hygiene

Conversion of Aqua Privies into Flushing Toilets

Purpose

This paper briefs Members on the progress of the first five phases of the conversion programme for aqua privies (APs) as well as the proposal to extend the programme to cover 90 APs in Phase 6 and about 200 remaining APs in the final phase (Phase 7).

Background

2. The Food and Environmental Hygiene Department (FEHD) has since 2005 started to implement a programme to convert some 520 APs in the New Territories and outlying islands into flushing toilets by phases. The initiative has been included in the Policy Agenda since 2007-08 with the target of completing the conversion of all APs by 2012-13. So far, five phases of the conversion programme, involving 227 APs, have been funded.

Progress of the first five phases of the conversion programme

3. The conversion of 97 aqua privies under Phases 1, 2A and 2B was completed in end 2007. For the conversion of 50 APs under Phases 3 and 4, 44 have been completed, the remaining six are expected to be completed by May 2009. With funding approval by the Finance Committee in July 2008, conversion works for 80 APs under Phase 5 have commenced in batches since November 2008 for completion by mid-2010. Upon completion of these five phases, the distribution of the converted APs by nine New Territories districts is listed at **Annex A**. The

outlook of some of the completed projects are at **Annex B**.

Phase 6 of the conversion programme

4. In response to requests from Members at the Public Works Sub-Committee meeting in June 2008 for the Administration to expedite the conversion programme, and to support the Chief Executive's initiative to create jobs, we have reviewed the works programme for about 290 APs remaining and managed to re-schedule the conversion works in two phases, instead of three phases as originally planned through deployment of extra resources, and to advance the commencement of the last phase (Phase 7) by six months from end-2010 to mid-2010. The target completion date of the entire conversion programme is 2012-13.

5. For Phase 6, we propose to convert a total of 90 APs into flushing toilets. A project list has been drawn up in consultation with the relevant District Councils at **Annex C**. In case those on the project list could not proceed as planned for various reasons, there is also a reserve list of APs as replacements for inclusion in this phase.

Scope of works

6. Similar to previous phases, the scope of AP conversion works will cover basic refurbishment including installing toilets with a flushing system, alterations to cubicles and the provision of pedestal or squatting type water closets; replacement of internal / external wall and floor finishes; improvement of hand-washing facilities; and improvement of lighting and ventilation.

7. In addition to the above refurbishment, subject to technical and other site constraints, the underground drains of the converted toilets will be connected to

nearby public sewers where possible. For those which cannot be connected to public sewers (for example, because of a lack of sewerage in the vicinity), we will explore other means, such as introducing bio-treatment system with toilet waste treated under a biological process or converting the existing underground septic tanks into holding tanks for temporary storage of waste supported by frequent desludging. The conversion method recommended for each aqua privy will be reviewed and adjusted according to the ground situation.

Public consultation

8. We consulted the relevant District Councils in February and March 2009 and the District Councils consulted supported the proposed conversion works.

Project Implementation

9. The capital cost for the conversion of 90 APs under Phase 6 into flushing toilets is estimated at \$221.1 million (in Money-of-the-Day prices). We plan to seek funding approval of the Public Works Sub-committee and the Finance Committee in June 2009. If approved, the conversion works will commence in November 2009 for completion by mid-2011.

Phase 7 (the final phase)

10. The last phase of the conversion programme will cover about 200 APs yet to be converted. We have initiated preparatory work for this batch which includes processes for ascertaining land status, land allocation and conducting technical feasibility studies. We aim to commence the conversion programme in mid-2010 and will seek funding approval from the Legislative Council when more details of the project are ready.

APs not feasible for conversion

11. For those APs that are not suitable for conversion due to technical or site constraints (for example, a lack of water and electricity supply), we will conduct *in-situ* refurbishment which will include upgrading the external finishes, installing mosquito traps and provision of air fresheners, odour-arresting agents and hand sanitizers inside the APs.

APs encroaching on private land

12. In the processing of cases under the conversion programme, we have identified a small number of APs which involve land issues, mainly in relation to encroachment onto private land or right of way. In these circumstances, we will ascertain the land status and identify the land owners with a view to seeking their agreement for the conversion project to proceed or for the AP to be retained for *in-situ* refurbishment. If the land owners cannot be reached or if consent is not given, we will consult the local community and the relevant departments to ascertain if the AP could be reprovisioned nearby. We expect that more time would be required to resolve the issue with departments and the land owners concerned. In order not to hold up the overall conversion programme, we will deal with these outside of the conversion programme.

Advice sought

13. Members are invited to note the progress of the AP conversion programme and comment on the proposal to seek funding approval of the Public Works Sub-committee and the Finance Committee for Phase 6 of the AP conversion programme in June 2009.

**Food and Health Bureau
Food and Environmental Hygiene Department
May 2009**

Progress of the AP Conversion Programme by Districts
各區旱廁改建計劃的進展

District 地區	APs converted/ to be converted in Phases 1 - 5 已於 / 將於 第 1 至第 5 期 改建的旱廁 (no.) (個)	APs to be converted in Phase 6 將於第 6 期 改建的旱廁 (no.) (個)	APs to be converted in Phase 7 將於第 7 期 改建的旱廁 (no.) (個)	APs converted/ to be converted in Phases 1 - 7 已於 / 將於 第 1 至第 7 期 改建的旱廁 (no.) (個)	% of APs converted after Phase 5 第 5 期工程完成後 已改建的旱廁 百分率 (%)
Yuen Long 元朗	73	29	66	168	43
North 北區	56	20	46	122	46
Sai Kung 西貢	25	11	24	60	42
Tai Po 大埔	22	10	16	48	46
Islands 離島	20	8	16	44	45
Tuen Mun 屯門	13	6	18	37	35
Tsuen Wan 荃灣	9	4	8	21	43
Sha Tin 沙田	5	1	2	8	63
Kwai Tsing 葵青	4	1	1	6	67
Total 總計:	227	90	197	514	44

Conversion of APs into Flushing Toilets
把旱廁改爲沖水式廁所

廁所改善後的外觀

EXTERIOR VIEW OF TOILET AFTER IMPROVEMENT



廁所改善後的內貌

INTERIOR VIEW OF TOILET AFTER IMPROVEMENT



Conversion of APs into Flushing Toilets – Phase 6
Locations of Aqua Privies to be Converted into Flushing Toilets (Tentative)

把旱廁改爲沖水式廁所 - 第 6 期
 擬改爲沖水式廁所的鄉村旱廁初步地點

	90 APs on Conversion List 首選名單(共 90 個旱廁)	27 APs on Reserve List 候補名單(共 27 個旱廁)
Islands 離島 8 APs on Conversion List 首選(8)	* Ko Long Village, Lamma 南丫島高壆村	-
	* Choi Yuen Tsuen, Lantau 大嶼山菜園村	-
	* Ham Tin Kau Tsuen, Lantau 大嶼山咸田舊村	-
	* Lower Cheung Sha, Lantau 大嶼山下長沙	-
	* Tai Long Wan Village, Lantau 大嶼山大浪灣村	-
	* Tong Fuk Camp Site, Lantau 大嶼山塘福營地	-
	* Ngau Au, Tung Chung 東涌牛凹	-
	* Sham Shek Tsuen, Tung Chung 東涌深石村	-
Kwai Tsing 葵青 1 AP on Conversion List 首選(1)	* Liu To Village, Tsing Yi 青衣寮肚村	-
North 北區 20 APs on Conversion List; 2 APs on Reserve List 首選(20); 候補(2)	* Hok Tau Tsuen, Fanling 粉嶺鶴藪村	Ap Chau (2), Sha Tau Kok 沙頭角鴨洲 (2)
	# Hung Leng, Fanling 粉嶺孔嶺	* Ki Lun Tsuen, Sheung Shui 上水麒麟村
	Kwan Tei Tsuen, Fanling 粉嶺軍地村	-
	# Ma Mei Ha Tsuen, Fanling 粉嶺馬尾下村	-
	* Kuk Po (Lo Wai), Sha Tau Kok 沙頭角谷埔(老圍)	-
	* Shan Tsui, Sha Tau Kok 沙頭角山咀	-
	# Tai Tong Wu, Sha Tau Kok 沙頭角大塘湖	-
	* Kwu Tung (Tin Sum), Sheung Shui 上水古洞田心	-
	Kwu Tung (near Kwu Tung Village Committee Office), Sheung Shui 上水古洞(近村公所)	-
	* Kwu Tung (Shek Tsai Leng), Sheung Shui 上水古洞(石仔嶺)	-
	* Ma Cho Lung Shun Yee Tsuen (2), Sheung Shui 上水馬草壟信義村(2)	-
	* On Po Tsuen, Sheung Shui 上水安圍村	-
	# Tsung Pak Long (North), Sheung Shui 上水松柏朗(北)	-
	* Chow Tin (1), Ta Kwu Ling 打鼓嶺週田 (1)	-
	* Chow Tin (2), Ta Kwu Ling 打鼓嶺週田(2)	-
	* Muk Wu Tsuen, Ta Kwu Ling 打鼓嶺木湖村	-
	# Ping Che Tsuen (2), Ta Kwu Ling 打鼓嶺坪輦村(2)	-
	San Uk Ling, Ta Kwu Ling 打鼓嶺新屋嶺	-
* Ta Kwu Ling San Tsuen 打鼓嶺新村	-	
# Tsung Yuen Ha Tsuen, Ta Kwu Ling 打鼓嶺松園下村	-	

	90 APs on Conversion List 首選名單(共 90 個旱廁)		27 APs on Reserve List 候補名單(共 27 個旱廁)	
Sai Kung 西貢 11 APs on Conversion List; 4 APs on Reserve List 首選(11); 候補(4)	#	Ah Kung Wan 亞公灣	*	Ma Yau Tong 馬游塘
	*	Hung Fa Village (1) 紅花村(1)	#	Man Sau Sun Tsuen 萬壽新村
	#	Mang Kung Uk Lower Village 孟公屋下村	*	Tsak Yue Wu 鯽魚湖
	*	Pak Sha Wan Village (Church) 白沙灣村(教堂)	*	Wong Yi Chau 黃宜州
	*	Pik Shui Sun Tsuen (1) 碧水新村(1)		-
	*	Pik Shui Sun Tsuen (2) 碧水新村(2)		-
	*	Pik Shui Sun Tsuen (3) 碧水新村(3)		-
	#	Po Lo Che Road 菠蘿峯路		-
	*	Sheung Sze Wan 相思灣		-
	*	Shui Bin Tsuen 水邊村		-
*	Tai Wan Tau 大環頭		-	
Sha Tin 沙田 (1 AP on Conversion List) 首選(1)	*	Kwun Yam Shan Village 觀音山村		-
Tai Po 大埔 10 APs on Conversion List; 4 APs on Reserve List 首選(10); 候補(4)		Ping Long Village 坪朗村	*	Lung Ah Pai Village 龍丫排村
		San Uk Tsai Village 新屋仔村		Ma Po Mei Village 麻布尾村
	*	Sheung Pak Ngau Shek Tsuen 上白牛石村		Shui Wo Village 水窩村
	#	Shuen Wan Li Uk 船灣李屋		Tai Mong Che Village 大芒峯村
		Tai Om Village 大庵村		-
		Tai Po Kau Lo Wai II 大埔滘老圍(二)		-
		Tai Po Kau Sun Wai II 大埔滘新圍(二)		-
		Tai Po Mei Village I 大埔尾村(一)		-
	*	Tai Po Tau Village II 大埔頭村(二)		-
*	Tong Min Tsuen 塘面村		-	
Tsuen Wan 荃灣 4 APs on Conversion List; 1 AP on Reserve List 首選(4); 候補(1)	*	Hon Man Lower Village 漢民下村	#	Tsing Fai Tong 清快塘
	*	Kwong Pan Tin Village 光板田村		-
	*	Sheung Kwai Chung Tsuen 上葵涌村		-
	#	Shu On Terrace Village 舒安台村		-
Tuen Mun 屯門 6 APs on Conversion List; 4 APs on Reserve List 首選(6); 候補(4)	*	Pak Long, Lung Kwu Tan 龍鼓灘北朗		Chung Wong Toi 頌皇台
	*	Nai Wai (at side of RCP) 泥圍(垃圾站旁)		Shan Shek Wan Resite Area, Phase 1 散石灣遷徙區 1 座
		Nai Wai (near playground) 泥圍(近遊樂場)		Chan Uk Tsuen, So Kwun Wat 掃管笏陳屋村
		Ching Uk Tsuen, So Kwun Wat 掃管笏程屋村		Tai Lam Chung Tsuen 大欖涌村
	*	Tin Sum San Tsuen 田心新村		-
		To Yuen Wai 桃園圍		-

	90 APs on Conversion List 首選名單(共 90 個旱廁)	27 APs on Reserve List 候補名單(共 27 個旱廁)
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Yuen Long 元朗 29 APs on Conversion List; 12 APs on Reserve List 首選(29) ; 候補(12)	*	Fung Kong Tsuen (Entrance), Ha Tsuen 廈村鳳降村口	*	Tin Sum Tsuen, Ha Tsuen 廈村田心村
	*	Hang Hau Tsuen, Ha Tsuen 廈村坑口村	*	Shek Po Tsuen (Car Park), Hung Shui Kiu 洪水橋石埗村(停車場)
		Hong Mei Tsuen, Ha Tsuen 廈村巷尾村		Pak Nai (Deep Bay Road), Lau Fau Shan 流浮山白泥(深灣道)
	*	San Lei Uk Tsuen, Ha Tsuen 廈村新李屋村	*	Ha Che West, Pat Heung 八鄉下輦西
	*	Kam Hing Wai, Kam Tin 錦田錦慶圍	*	Ku Miu, Cheung Uk Tsuen, Pat Heung 八鄉張屋村古廟
		Sha Po Tsuen, Kam Tin 錦田沙埔村		Sheung Che Tsuen, Pat Heung 八鄉上輦村
		Chung Pak Nai, Lau Fau Shan 流浮山中白泥		Wing Ning Tsuen, Ping Shan 屏山永寧村
	*	Chung Sum Tsuen (Shek Tau Wai), Pat Heung 八鄉中心村(石頭圍)		Kei Lung Shan, San Tin 新田麒麟山
		Ha Che East, Pat Heung 八鄉下輦東		Ngau Tam Mei East, San Tin 新田牛潭尾東
	*	Ng Ka Tsuen, Pat Heung 八鄉吳家村		Tai Sang Wai (1), San Tin 新田大生圍 (1)
	*	San Lung Wai, Pat Heung 八鄉新隆圍	*	Ma Tin Pok, Shap Pat Heung 十八鄉馬田壘
	*	Shui Chan Tin Tsuen, Pat Heung 八鄉水盞田村		Tai Kei Ling, Shap Pat Heung 十八鄉大旗嶺
	*	Shui Kan Shek, Pat Heung 八鄉水澗石		
		Fuk Hing Tsuen, Ping Shan 屏山福慶村		-
		Mong Tseng Tsuen (2), Ping Shan 屏山輞井村(2)		-
	*	Ng Uk Tsuen, Ping Shan 屏山吳屋村		-
	*	Sha Kiu, Ha Wan, Ping Shan 屏山沙橋下灣		-
	*	Shan Ha Tsuen, Ping Shan 屏山山下村		-
		Shing Uk Tsuen, Ping Shan 屏山盛屋村		-
		Chuk Yuen Tsuen, San Tin 新田竹園村		-
	*	Ha Wan Tsuen, San Tin 新田下灣村		-
	*	Mei Po Lung Tsuen, San Tin 新田米埔隴村		-
	*	Tai Sang Wai (2), San Tin 新田大生圍(2)		-
	*	Yan Sau Wai, San Tin 新田仁壽圍		-
	*	Muk Kiu Tau Tsuen, Shap Pat Heung 十八鄉木橋頭村		-
	*	Nam Hang Tsuen, Shap Pat Heung 十八鄉南坑村		-
		Shui Chiu Lo Wai (2), Shap Pat Heung 十八鄉水蕉老圍(2)		-
		Tai Tong Tsuen, Shap Pat Heung 十八鄉大棠村		-
		Yeung Uk Tsuen, Shap Pat Heung 十八鄉楊屋村		-

Type 1 conversion method: Conversion of septic tank into holding tank (24 APs on Conversion List and 15 APs on Reserve List)

第一類改建工程：將化糞池改為貯糞池（24 個首選及 15 個候補旱廁）

* Type 2 conversion method: Installation of bio-treatment system (55 APs on Conversion List and 10 APs on Reserve List)

* 第二類改建工程：加建生物處理污物系統（55 個首選及 10 個候補旱廁）

Type 3 conversion method: Connection to public sewers (11 APs on Conversion List and 2 APs on Reserve List)

第三類改建工程：接駁至公共污水渠（11 個首選及 2 個候補旱廁）