

ARUP	Job	Sheet No.	Rev.
	256383	3	A
Member/Location			
Job Title	Shuen Wan Golf Course		
Calculation	Hydraulic Performance of the Downstream Sewerage System		
Drng. Ref.	Drawing 2.1		
Made by	Date	Chd.	
SY	02/2019	YL	

Table B5 - Hydraulic Performance of Downstream DN600 Sewer

$$u = 1.0E-6 \text{ m}^2/\text{s} \quad ks = 3 \text{ mm}$$

US	DS	Length	Number	Pipe	US GL	DS GL	US IL	DS IL	Gradient	Gradient	Area	Perimeter	R = A/P	(32gRS) ^{0.5}	Velocity at	Total Peak	Design	% Full	Full Flow
MH No.	MH No.	(m)	of Pipe	diameter (mm)	(m MSL)	(m MSL)	(m MSL)	(m MSL)		(1 in X)	(m ²)	(m)	(m)		full bore (m/s)	Flow ⁽¹⁾	Capacity	Flow	% Check
FMH1027325	FMH1027326	70.0	1	600	18.5	16.6	12.10	11.84	0.0037	269	0.2826	1.9	0.15	0.42	1.20	112	338	33%	OK
FMH1027326	FMH1027327	9.0	1	600	16.6	16.6	11.84	11.80	0.0044	225	0.2826	1.9	0.15	0.46	1.31	112	370	30%	OK
FMH1027327	FMH1027328	38.0	1	600	16.6	14.7	11.80	11.67	0.0034	292	0.2826	1.9	0.15	0.40	1.15	112	325	34%	OK
FMH1027328	FMH1027329	5.0	1	600	14.7	14.7	11.67	11.63	0.0080	125	0.2826	1.9	0.15	0.61	1.76	112	497	23%	OK
FMH1027329	FMH1027330	20.0	1	600	14.7	14.7	11.63	11.54	0.0045	222	0.2826	1.9	0.15	0.46	1.32	112	372	30%	OK
FMH1027330	FMH1027331	32.0	1	600	14.7	12.8	11.54	11.42	0.0037	267	0.2826	1.9	0.15	0.42	1.20	112	340	33%	OK
FMH1027331	FMH1027332	35.0	1	600	12.8	12.8	9.12	8.90	0.0063	159	0.2826	1.9	0.15	0.54	1.56	112	440	25%	OK
FMH1027332	FMH1027333	44.0	1	525	12.8	10.0	8.90	8.50	0.0091	110	0.2164	1.6	0.13	0.61	1.72	112	372	30%	OK
FMH1027333	FMH1030320	61.0	1	600	10.0	10.0	7.30	6.80	0.0082	122	0.2826	1.9	0.15	0.62	1.78	151	503	30%	OK
FMH1030320	FMH1005352	13.0	1	600	10.0	8.2	6.80	6.33	0.0362	28	0.2826	1.9	0.15	1.30	3.74	151	1057	14%	OK
FMH1005352	FMH1000080	26.0	1	600	8.2	5.2	1.24	1.16	0.0031	325	0.2826	1.9	0.15	0.38	1.09	151	308	49%	OK
FMH1000080	TKR No. 5 SPS	7.0	1	600	5.2	5.2	1.16	1.14	0.0029	350	0.2826	1.9	0.15	0.37	1.05	151	297	51%	OK

Table B6 - Hydraulic Performance of Downstream TKR No. 5 SPS

Name of Major Facility	Total Peak Flow ⁽¹⁾	Design Capacity	% Full Flow	Full Flow % Check
	(L/s)	(L/s)		
TKR No. 5 SPS	306	400	76%	OK

Table B7 - Hydraulic Performance of Downstream Tai Po Sewage Treatment Works (TPSTW)

ADWF of Proposed Development ⁽¹⁾	Design Capacity TPSTW	Sewage Flow of Proposed Development over Total Capacity of TPSTW
(m ³ /d)	(m ³ /d)	(%)
485	120000	0.4%

Conclusion: the sewage flow from the proposed development is only 0.4% of the total treatment capacity of the TPSTW so no adverse impact to the TPSTW is anticipated arising from the proposed development

Note:

(1) Refer to Table B1, B2, B3 and B4 for the Estimated Total Peak Flow at various locations of the downstream sewerage system