R-Riches
Property Consultants Ltd.

盈卓物業
顧問有限公司

Our Ref. : DD107 Lot 1291
Your Ref. : TPB/A/YL-KTN/1004

The Secretary,
Town Planning Board,
15/F, North Point Government Offices,
333 Java Road,
North Point, Hong Kong

By Email

26 June 2024

Dear Sir,

3rd Further Information

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories

(S.16 Planning Application No. A/YL-KTN/1004)

We are writing to submit further information to address departmental comments of the subject application (**Appendix I**).

Should you require more information regarding the application, please contact our Mr. Christian CHIM at or the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

Louis TSE
Town Planner

cc DPO/FSYLE, PlanD (Attn.: Ms. Andrea YAN email:)
(Attn.: Ms. Olivia NG email:)

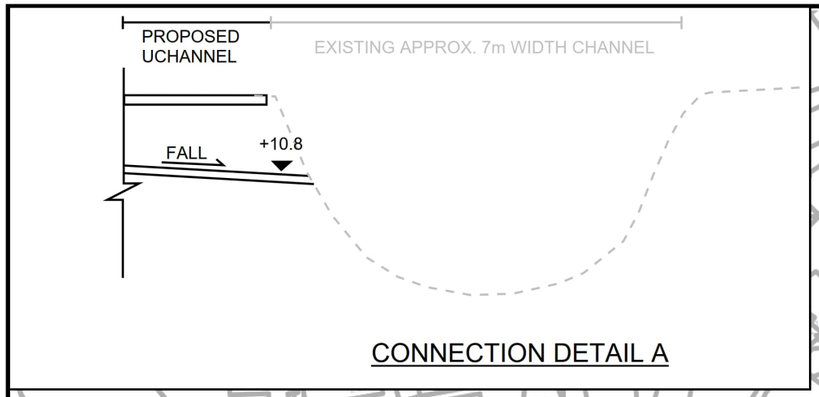
Responses-to-Comments

Proposed Temporary Warehouse (excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in "Agriculture" Zone, Lot 1291 (Part) in D.D. 107, Fung Kat Heung, Kam Tin, Yuen Long, New Territories

(Application No. A/YL-KTN/1004)

(i) A RtoC Table:

Departmental Comments		Applicant's Responses
1. Comments of the Chief Engineer/Mainland North, Drainage Services Department (Contact Person: Mr. Terence TANG; Tel.: 2300 1257)		
(a)	As the 30% paved area is a rough estimate, so that the u-channel 1 capacity has been checked up to 89.24% which is considered underestimated. Please upgrade the u-channel size as appropriate.	The u-channel 1 size is upgraded from 300mm to 375mm. Please refer to revised **Appendix A** and **Figure 3B**.
(b)	Similar to Comment 1, please also upgrade the size of u-channel 6 for conservative approach.	Noted. The u-channel 6 size is upgraded from 600mm to 675mm. Please refer to revised **Appendix A** and **Figure 3B**.
(c)	Previous comment (h) has not been addressed. Please clarify whether any walls or hoarding would be erected along the site boundary. Where walls or hoarding are erected are laid along the site boundary, adequate opening should be provided to intercept the existing overland flow passing through the site.	Noted. 100mm separation opening from ground level along the hoarding wall where it is to be erected.
(d)	Cross sections: Adjacent ground levels should be shown on drawings. The extent of north area in Section 2 should also be included.	Noted. Please refer to the revised **Appendix D**.
(e)	Design Calculation: Please show the detailed calculation steps of proposed u-channels.	Noted. Please refer to the updated **Appendix A**.



CONNECTION DETAIL A

UCHANNEL TYPE
UCHANNEL 1 (UC1) - 375mm, MIN. 1 IN 200
UCHANNEL 2 (UC2) - 450mm, MIN. 1 IN 200
UCHANNEL 3 (UC3) - 300mm, MIN. 1 IN 200
UCHANNEL 4 (UC4) - 450mm, MIN. 1 IN 200
UCHANNEL 5 (UC5) - 450mm, MIN. 1 IN 100
UCHANNEL 6 (UC6) - 675mm, MIN. 1 IN 200

APPLICATION SITE
(FOR INDICATIVE ONLY)

CP1.1 CL +15.8 IL +15.27
CP1.2 CL +15.8 IL +15.24
CP1.3 CL +15.8 IL +15.19
CP1.4 CL +15.8 IL +15.09
CP1.5 CL +15.8 IL +15.04
CP1.6 CL +15.8 IL +14.87
CP1.7 CL +15.8 IL +14.84
CP1.8 CL +15.8 IL +14.78
CP1.9 CL +12.8 IL +12.35
CP1.10 CL +12.8 IL +12.15
CP2.1 CL +15.8 IL +15.33
CP2.2 CL +15.8 IL +15.31
CP2.3 CL +15.8 IL +15.21
CP2.4 CL +15.8 IL +15.16
CP2.5 CL +15.8 IL +15.03
CP2.6 CL +15.8 IL +14.95
CP2.7 CL +15.8 IL +14.90
CP2.8 CL +13.8 IL +13.35
CL +15.8 IL +15.35
CL +15.8 IL +15.43
CL +12.8 IL +12.35
CL +11.4 IL +10.8

UC1 UC2 UC3 UC4 UC5 UG6

CONNECTION DETAIL A

LEGEND:

- APPLICATION SITE BOUNDARY (FOR IDENTIFICATION PURPOSE ONLY)
- EXISTING CHANNEL
- PROPOSED SANDTRAP
- PROPOSED CATCHPIT W/TRAP
- PROPOSED UCHANNEL

NOTES:
1. INVERT LEVEL OF CONNECTION POINT SHOULD BE VERIFIED ON SITE BEFORE CONSTRUCTION.

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REV	DESCRIPTION	DATE

DRAWING TITLE
PROPOSED DRAINAGE SYSTEM

DRAWING NUMBER
FIGURE 3B

Appendix A - Design Calculation

U Channel 1 (Zone A1 + B1)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	360 + 1990 x 0.3 =		957	(m2)
Unpaved Area	1990 x 0.7 =		1393	(m2)
Total Equivalent Area	957 x 0.95 + 1393 x 0.35 =		1397	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 1397 x 206 / 1000000 =		0.080	m3/s

* $i = \frac{a}{(t_d + b)^c}$

U Channel				
Channel Size			375	(mm)
Gradient		1 in	200	
Area	π x 0.38^2 /8 + 0.38 x 0.38/2 =		0.126	(m2)
Wetted Perimeter	π x 0.38 / 2 + 0.38/2 x 2 =		0.964	(m)
R	0.126 / 0.964 =		0.130	(m)
Velocity			1.30	m/s
Capacity			0.163	m3/s

Utilization 0.08 / 0.163 = **49.22** % OK (less than 90%, for 10% siltation allowance)

U Channel 2 (Zone [A1 + B1] +A4)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	957 + 2243 x 1 =		3200	(m2)
Unpaved Area	1393 =		1393	(m2)
Total Equivalent Area	3200 x 0.95 + 1393 x 0.35 =		3528	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 1393 x 206 / 1000000 =		0.202	m3/s

* $i = \frac{a}{(t_d + b)^c}$

U Channel				
Channel Size			450	(mm)
Gradient		1 in	200	
Area	π x 0.45^2 /8 + 0.45 x 0.45/2 =		0.181	(m2)
Wetted Perimeter	π x 0.45 / 2 + 0.45/2 x 2 =		1.157	(m)
R	0.181 / 1.157 =		0.156	(m)
Velocity			1.47	m/s
Capacity			0.265	m3/s

Utilization 0.202 / 0.265 = **76.45** % OK (less than 90%, for 10% siltation allowance)

U Channel 3 (Zone B2)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	2366 x 0.3 =		710	(m2)
Unpaved Area	2366 x 0.7 =		1656	(m2)
Total Equivalent Area	710 x 0.95 + 1656 x 0.35 =		1254	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 1254 x 206 / 1000000 =		0.072	m3/s

* $i = \frac{a}{(t_d + b)^c}$

U Channel (Half round to U)				
Channel Size			300	(mm)
Gradient		1 in	200	
Area	π x 0.3^2 /8 + 0.3 x 0.3/2 =		0.080	(m2)
Wetted Perimeter	π x 0.3 / 2 + 0.3/2 x 2 =		0.771	(m)
R	0.08 / 0.771 =		0.104	(m)
Velocity			1.12	m/s
Capacity			0.090	m3/s

Utilization 0.072 / 0.09 = **80.12** % OK (less than 90%, for 10% siltation allowance)

U Channel 4 (Zone A3 + B2)

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	710 + 1755 =		2465	(m2)
Unpaved Area	1656 =		1656	(m2)
Total Equivalent Area	2465 x 0.95 + 1656 x 0.35 =		2921	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 2921 x 206 / 1000000 =		0.168	m3/s

* $i = \frac{a}{(t_d + b)^c}$

U Channel				
Channel Size			450	(mm)
Gradient		1 in	200	
Area	π x 0.45^2 /8 + 0.45 x 0.45/2 =		0.181	(m2)
Wetted Perimeter	π x 0.45 / 2 + 0.45/2 x 2 =		1.157	(m)
R	0.181 / 1.157 =		0.156	(m)
Velocity			1.47	m/s
Capacity			0.265	m3/s

Utilization 0.168 / 0.265 = **63.31** % OK (less than 90%, for 10% siltation allowance)

U Channel 5 (Zone A2 + [A3 + B2])

Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	2465 + 2210 x 1 =		4675	(m2)
Unpaved Area	1656 =		1656	(m2)
Total Equivalent Area	4675 x 0.95 + 1656 x 0.35 =		5021	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 5021 x 206 / 1000000 =		0.288	mm/hr

* $i = \frac{a}{(t_d + b)^c}$

U Channel				
Channel Size			450	(mm)
Gradient		1 in	100	
Area	π x 0.45^2 /8 + 0.45 x 0.45/2 =		0.181	(m2)
Wetted Perimeter	π x 0.45 / 2 + 0.45/2 x 2 =		1.157	(m)
R	0.181 / 1.157 =		0.156	(m)
Velocity			2.07	m/s
Capacity			0.375	m3/s

Utilization 0.288 / 0.375 = **76.94** % OK (less than 90%, for 10% siltation allowance)

U Channel 6 (Combined: Zone [A1 + A4 + B1] +[A2 + A3 + B2])

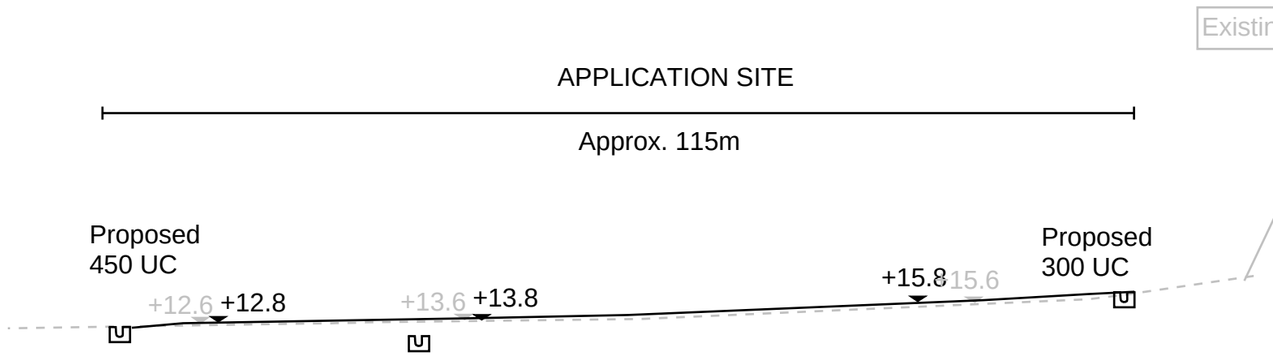
Runoff Estimation				
Design Return Period		1 in	10	years
Paved Area	4675 + 3200 =		7875	(m2)
Unpaved Area	1656 + 1393 =		3049	(m2)
Total Equivalent Area	7875 x 0.95 + 3049 x 0.35 =		8548	(m2)
Rainfall Intensity, I *			206	mm/hr
Design Discharge Rate, Q	0.278 x 8548 x 206 / 1000000 =		0.781	mm/hr

* $i = \frac{a}{(t_d + b)^c}$

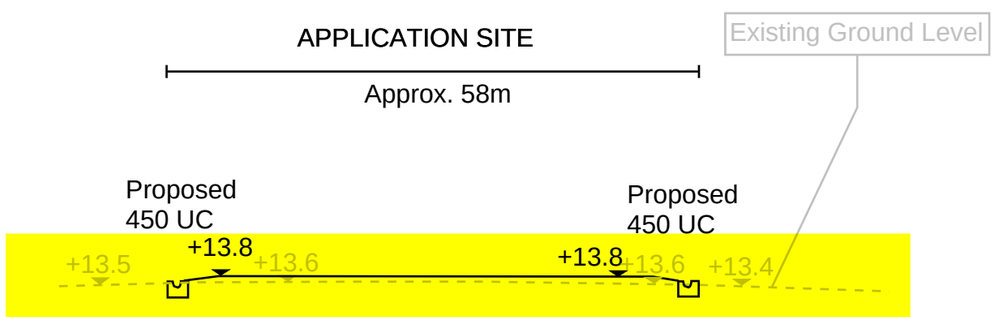
U Channel				
Channel Size			675	(mm)
Gradient		1 in	200	
Area	π x 0.68^2 /8 + 0.68 x 0.68/2 =		0.407	(m2)
Wetted Perimeter	π x 0.68 / 2 + 0.68/2 x 2 =		1.735	(m)
R	0.407 / 1.735 =		0.234	(m)
Velocity			1.92	m/s
Capacity			0.491	m3/s

Utilization 0.781 / 0.491 = **62.83** % OK (less than 90%, for 10% siltation allowance)

PLAN



SECTION 1
NTS



SECTION 2
NTS

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SECTIONS

Appendix D