

S.16 Planning Application

Proposed Temporary Wholesale Trade (Electric Goods)
and Storage with Ancillary Office for a Period of 3 Years
at Lots 2385 (Part) and 2400 (Part) in D.D. 102,
Ngau Tam Mei, Yuen Long, N.T.

Prepared by: Ever United Planning and Development Limited

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Executive Summary

The application site is situated at Lots 2385 (Part) and 2400 (Part) in D.D. 102, Ngau Tam Mei, Yuen Long, N.T. The size of the application site is about 1,660m².

This planning application under S.16 of the Town Planning Ordinance intended to apply the application site for the use of temporary wholesale trade (electronic goods) and storage with ancillary office for a period of 3 years.

According to the San Tin Technopole Outline Zoning Plan (OZP) No. S/STT/2, the application site is currently zoned 'Open Space' ("O") and "Road". The proposed development is temporary in nature and would not jeopardize the long term planning intention of "O" and "Road" zone.

The proposed development is intended to provide fully enclosed structures for wholesale trade and storage with ancillary office use. Besides, the materials being wholesaled and stored are simply electronic goods. No dangerous goods will be stored and no workshop activities is allowed in the site. Therefore, the proposed use of current application is static and no adverse impact is anticipated to the surrounding area.

The adjoining land lots to all directions of the application site are occupied for open storage yards and port back-up activities and temporary warehouses for storage purposes. Significantly numbers of them were either in 'existing use' since the area was previously fall within "OS" zone under previous OZP No. S/YL-NTM/12. Therefore, the proposed development is not incompatible with the surrounding environment.

The operation hours of the proposed development is 9:00 a.m. to 7:00 p.m. from Mondays to Saturdays. No operation on Sundays and public holidays is proposed. Also, no repairing, dismantling, assembling or other workshop activity is proposed. Furthermore, the applicant is willing to provide a number of environmental mitigation measures at the application site to minimize potential environmental impact. The proposed development would not generate significant impact to the surrounding environment. He also committed to fulfill all approval conditions imposed by the Board.

The applicant hereby sincerely submits this planning application to seek the approval by the Town Planning Board for the use of application site for temporary wholesale trade (electronic goods) and storage with ancillary office for a period of 3 years.

行政摘要

申請地點位於新界元朗牛潭尾丈量約份第 102 約地段第 2385 號(部份)及第 2400 號(部份)。
申請地點的面積約為 1,660 平方米。

此申請根據城市規劃條例第 16 條作出規劃許可申請，把申請地點作為期三年的臨時批發行業(電子產品)及貨倉連附屬辦公室用途。

根據新田科技城分區計劃大綱核准圖編號 S/STT/2 中所示，申請地點現時被規劃作「休憩用地」及「道路」用途。擬議項目是臨時性質，因此不會對「休憩用地」及「道路」地帶的規劃意向有長遠影響。

擬議發展旨在提供全封閉構築物作批發行業及貨倉連附屬辦公室用途。此外，批發和儲存的物料只是單純的電子產品。申請範圍內不會存放危險品，亦不准任何工業活動。因此，本申請之擬議用途實屬靜態，預計不會產生任何不良影響。

考慮到地區環境，位於申請地點各方向的毗連地段現時大多用作露天存放及港口後勤用途和臨時倉庫作貯物用途。由於該區域於先前的牛潭尾分區計劃大綱核准圖編號 S/YL-NTM/12 中被規劃寫作「露天貯物」用途，大多位於申請地點附近的露天存放場地及港口後勤用途都屬於“現有用途”。因此，本申請用途與周遭環境並非不協調。

擬議用途的營業時間為星期一至星期六上午九時至下午七時，星期日及公眾假期全日休業。此外，申請地點內不會進行維修、拆卸、組裝及工場用途。再者，申請人願意於申請地點提供多項環境緩解措施以盡量減少對環境的潛在影響。申請用途不會為周圍的環境帶來重大的影響。申請人亦承諾履行所有 貴委員會規定的批准條件。

申請人特此誠意提交此規劃申請，以徵求城市規劃委員會批准把申請地點作為期三年的臨時批發行業(電子產品)及貨倉連附屬辦公室用途。

**Supplementary Planning Statement for Temporary Wholesale Trade
(Electronic Goods) and Storage with Ancillary Office for a Period of 3 Years
at Lots 2385 (Part) and 2400 (Part) in D.D. 102, Ngau Tam Mei, Yuen Long, N.T.**

Section 1 – Background of the Application Site

1.1 Introduction

- 1.1.1 This planning application is submitted by Ever United Planning and Development Limited (恒滙規劃發展有限公司) on behalf of Mr. TSUI Yat Wah (徐日華), the occupier of Lots 2385 (Part) and 2400 (Part) in D.D. 102, Ngau Tam Mei, Yuen Long, N.T. **(Figure 1)**. The applicant would like to solicit the Board's sympathetic consideration for approving the application site for temporary wholesale trade (electronic goods) and storage with ancillary office for a period of 3 years.
- 1.1.2 In this S.16 planning application, the applicant intends to demonstrate that the proposed development would not generate undesirable impacts to the vicinity. Besides, the applicant is willing to provide a number of mitigation measures as explained in the following paragraphs to ensure that the proposed use would generate no adverse nuisance. The applicant wishes that Town Planning Board could give favourable consideration to this planning application.

1.2 Site Particulars

- 1.2.1 The entire site boundary will be erected with site fencing. The surface of application site will be hard paved and possess an area of about 1,660m².
- 1.2.2 The application site is accessible by a vehicular track abutting Kwu Tung Road **(Figure 2)**. The ingress/egress is situated at the northern boundary of the site.
- 1.2.3 The application site is generally surrounded by open storage and port back-up uses. A numerous of warehouses are found to all directions of the application site. It is noteworthy that almost all of them are 'existing use' since the area was previously fall within "OS" zone under previous OZP No. S/YL-NTM/12.

1.3 Lease Conditions

- 1.3.1 The application site is located on Old Schedule agriculture lots held under Block Government Lease. The lease was issued in 1906 to be executed from 1898 with a term of 75 years which was renewable for another term of 24 years less three days. The first term of the lease expired in 1973 and was then statutorily renewed. With reference to the New Territories Lease (Extension) Ordinance 1988, the lease would be further renewed to 2047.
- 1.3.2 The applicant will approach to the Lands Department to apply for Short Term

Waiver to regularize the temporary structures at the application site if this planning application is approved. It shows that the applicant is sincere and due diligence in complying with Government's regulations.

1.4 Planning Context

- 1.4.1 The application site is zoned 'Open Space' ("O") and "Road" according to the Approved San Tin Technopole Outline Zoning Plan (OZP) No. S/STT/2 (**Figure 2**). Referring to the OZP, the "O" zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public.
- 1.4.2 According to the Notes of the aforesaid Outline Zoning Plan, although the applied use is not belonged to neither column 1 nor column 2 of the "O" zone, temporary use not exceeding a period of 3 years may be regularized through the application of planning permission from the Town Planning Board in accordance with the Notes of the aforesaid Outline Zoning Plan. As such, it is the applicant's intention to submit this application to request the Board's favour to this proposed use with the provision of the following justifications.

Section 2 – Development Proposal

2.1 Site Planning

- 2.1.1 The proposed use of current application is temporary wholesale trade (electronic goods) and storage with ancillary office.
- 2.1.2 The application site occupies an area of about 1,660m². The application site will be hard paved for the proposed use.
- 2.1.3 The site ingress/egress is arranged at the northern boundary of the site and abutting Kwu Tung Road.
- 2.1.4 Some temporary structures are proposed to serve the proposed use. The details of these structures are shown in **Figure 3**.
- 2.1.5 To serve the proposed development, 1 loading/unloading bay of 11m x 3.5m for medium/heavy goods vehicle, 2 loading/unloading bays of 7m x 3.5m for light goods vehicle and 1 parking space of 5m x 2.5m for private car are proposed (**Figure 3**).
- 2.1.6 The opening time of the proposed development is 9:00 a.m. to 7:00 p.m. from Mondays to Saturdays. No operation on Sundays and public holidays is proposed.
- 2.1.7 No repairing, dismantling, assembling or other workshop activity are proposed.

- 2.1.8 Sufficient manoeuvring space will be provided within the site boundary to allow turning of vehicle within the application site.
- 2.1.9 2.5m high site fencing will be erected along the site periphery to differentiate the site from adjacent land lots.
- 2.1.10 The proposed layout of the proposed development is illustrated in **Figure 3**.

Section 3 – Planning Justifications

3.1 The Proposed Use is very Static and Harmless to the Surrounding Environment

- 3.1.1 The proposed use of current application is temporary wholesale trade (electronic goods) and storage with ancillary office. The wholesale trade and storage activities of current application will be carried out within a fully enclosed structure. Besides, no workshop activities will be carried in the application site. It just provides a fully enclosed structure for wholesale trade and storage since electronic goods is sensitive to weather change. As a result, the proposed use is very static and no noise or traffic impact will be generated.
- 3.1.2 Besides, many warehouses and open storage uses were found at all directions around the application site. Such uses are ‘existing use’ since the area was previously fall within “OS” zone under previous OZP No. S/YL-NTM/12. As such, the proposed use of the current application is not incompatible with the surrounding environment. Furthermore, impact assessments and proposed mitigation measures discussed in Section 3.4, 3.5, 3.6 and 3.7 below demonstrated that the applied use would generate insignificant traffic, environmental, visual and drainage impact to the surrounding environment. In addition, the applicant will be due diligence in complying with all planning approval conditions imposed by the Board as well.

3.2 The Proposed Development is Temporary in Nature and would not Jeopardize the Long Term Planning Intention of the “O” and “Road” Zone

- 3.2.1 The application site is zoned ‘Open Space’ (“O”) and “Road” according to the Approved San Tin Technopole Outline Zoning Plan (OZP) No. S/STT/2.
- 3.2.2 The planning intention of the “O” zone is intended primarily for the provision of outdoor open-air public space for active and/or passive recreational uses serving the needs of local residents as well as the general public
- 3.2.3 However, it should be emphasized that the proposed development is temporary in nature and it would not jeopardize the long term planning intention of the “O” and “Road” zone. The proposed use will not have permanent or irreversible influence to the land. Besides, the planning intention of the “O” and “Road” would not be

realized within the coming 3 years because the application site is situated in the second phase of San Tin Technopole and the land resumption of the second phase of San Tin Technopole is yet to commence.

- 3.2.4 While the zoning of the land and its planning intention is highly appreciated and it should be upheld, alternative temporary use which generates no significant nuisance should be encouraged in the interim to make economic use of scarce land resources and generation of employment opportunities. It is the applicant's intention to solicit the Board to sympathetically approved this application on a temporary basis.

3.3 The Proposed Development is Compatible with the Surrounding Environment

- 3.3.1 A notable amount of open storage yards and port back-up activities, temporary warehouses for storage purposes and rural industrial workshops were found to all direction surround the application site. Since the area was previously fall within "OS" zone under previous OZP No. S/YL-NTM/12, it is noteworthy that significantly numbers of them are 'existing use' for a period of time. The proposed use of current application [i.e. temporary wholesale trade (electronic goods) and storage with ancillary office] is compatible with the surrounding environment.

- 3.3.2 On the other hand, as mentioned in Section 3.1 above, the proposed development is very static. No noise and traffic impact will be generated. Besides, the site fencing and fully enclosed structure serves as a barrier for providing the screening effect to the environment. It could be considered that the visual impact to the surrounding is minimal. Further details of minimal visual impact are discussed in Section 3.6 below. Furthermore, the applicant has also proposed a good number of practical environmental mitigation measures mentioned in Section 3.5 below. As a result, the proposed development would generate no significant impact to its surrounding.

- 3.3.3 With regards to the findings mentioned above, the proposed development is compatible with the surrounding environments.

3.4 Insignificant Traffic Impact

- 3.4.1 The application site is accessible by a vehicular track abutting Kwu Tung Road. Site ingress/egress is arranged at the northern boundary of the application site. The proposed development is intended for temporary wholesale trade (electronic goods) and storage with ancillary office use so no significant traffic generation will be involved. The estimated average traffic generation rate are as follow:

Type of Vehicle	<u>Average</u> Traffic Generation Rate (pcu/hr)	<u>Average</u> Traffic Attraction Rate (pcu/hr)	Traffic Generation Rate at <u>Peak</u> <u>Hours</u> (pcu/hr)	Traffic Attraction Rate at <u>Peak</u> <u>Hours</u> (pcu/hr)
Private Car	0.2	0.2	0.5	0.5
Light Goods Vehicle	0.8	0.8	2	2
Medium/Heavy Goods Vehicle	0.8	0.8	1	1
Total	1.8	1.8	3.5	3.5

Note 1: The opening hour of the proposed development is restricted to 9:00 a.m. to 7:00 p.m from Mondays to Saturdays. No operation will be held on Sundays and public holidays.

Note 2: The pcu of private car and light goods vehicle are taken as 1. The pcu of medium/heavy goods vehicle is taken as 2.

Note 3: The peak hours are defined as 9:00a.m to 11:00a.m. and 2:00p.m. to 3:00p.m.

3.4.2 As shown in the estimated traffic flow for the applied use above, the traffic generation and attraction in both peak hours and in average are not significant. It is remarkably that the proposed development would generate an insignificant increase in traffic flow. Therefore, the proposed development is deemed to have no significant impact on the traffic conditions of Kwu Tung Road and the vicinity.

3.4.3 In association with the intended purpose, adequate space for manoeuvring of vehicle would be provided within the application site and no queueing up of vehicle would be occurred outside the application site. The applicant would also due diligence in managing the traffic issues of the site to ensure no parking and reverse movement of vehicles on public road.

3.5 Insignificant Environmental Impact

3.5.1 The proposed development is intended for temporary wholesale trade (electronic goods) and storage with ancillary office for a period of 3 years. In light of the static nature of the proposed use, it would generate neither significant environment nor noise disturbance to the environment in the area.

3.5.2 To begin with, the proposed use would not generate excessive noise. The wholesale trade and storage activities are carried out within the enclosed structure and therefore most of the sound generated during operation will be confined within the

fully enclosed structure. Related sound generation activities such as loading and unloading of goods and associated traffic are not frequent and not significant. Besides, similar open storage yards and port back-up activities were found in the vicinity. The proposed development is not incompatible with the surrounding environment. In view of that the application site and the above-mentioned site is basically pertaining to the same environmental setting and the nature of the proposed development is static, favourable consideration could be given to the current application accordingly.

3.5.3 No workshop and industrial activities is allowed within the application site. Furthermore, the proposed development would not generate effluent and dust emission.

3.5.4 Furthermore, being aware of the Government's ambition to upgrade the environmental condition of the area, the applicant would like to propose the following additional ameliorative measures in accordance with the '*Code of Practice on Handling Environmental Aspects of Temporary Uses and Open Storage Sites*' (August 2005) to seek the Environmental Protection Department's consent:

Air

- The surface of the application site and access road will be hard paved to avoid any fugitive dust impact due to vehicle movements.
- Electronic goods being wholesaled and stored at the application site are clean and tidy which will not generate dust to the environment.

Noise

- No operation will be held in-situ during sensitive hours from 7:00 p.m. to 9:00 a.m. next morning. No operation will be held on Sunday and public holidays. No operation will be held in sensitive hours.
- All storage activities within the application site are covered by the fully enclosed structure.
- No repairing, dismantling, assembling or other workshop activity is proposed.
- Only private car and light goods vehicle are permitted to access the site. No medium and heavy goods vehicle, container trailer and tractor will be allowed to access the site.

Sewage

- No effluent and sewage will be generated because of the operation of the proposed development.

3.5.5 The applicant proposed a number of preventive and mitigation measures mentioned

above to avoid degradation of surrounding environment. As such, the applicant's sincerity and conscientious in maintaining the surrounding environmental condition should be appreciated and taken as a merit in assessing the application.

3.6 Minimal Visual Impact

- 3.6.1 The application site is situated to the southeast of Kwu Tung Road. In brief, to all directions of the application site, the vicinity is occupied by considerable amount of open storage yards and port back-up activities, and temporary warehouses for storage purposes.
- 3.6.2 The proposed 2.5m high periphery fencing of the application site has effectively screened the proposed development. Furthermore, since electronic goods is sensitive to the weather changes, all electronic goods will only be wholesaled and stored within the fully enclosed Structure 1 (as shown in **Figure 3**). No goods will be placed in open area. As such, only the site fencing and fully enclosed warehouse could be seen from the outside of the site. This arrangement can enhance the screening effective and avoid any potential influence to the surrounding area. The operations within the application site will not affect the surrounding area and the view from the outside is static. And the visual impact of the proposed development is minimal. Given the nature and layout of the proposed development, the proposed development is in general considered compatible to the surrounding development.
- 3.6.3 In consideration that the application site is not situated in landscape sensitive zone and it will not generate any visual or noise impact to the surrounding area, no extra landscaping is proposed in this application site. Meanwhile, the proposed fully enclosed structures and 2.5m high periphery fencing will be maintained properly to screen the surrounding environment effectively.

3.7 No Adverse Drainage Impact

- 3.7.1 Drainage proposal attached in **Appendix 1** and **Figure 4** are submitted for the consideration of the Board and the concerned departments.
- 3.7.2 The subject site will be hard paved and occupied an area of approximately 1,660m². It has a very gentle gradient sloping from south to north from about +10.2mPD to +9.8mPD. According to the calculations prepared in the drainage proposal shown in **Appendix 1**, the estimated peak runoff will be approximately 0.138m³/s. All the accrued runoff would be intercepted by the proposed 375mm surface U-channel along the inner site periphery as shown in the proposed drainage plan (**Figure 4**). The intercepted surface runoff will then be transported to the proposed 375mm diameter underground pipe at the southwest corner of the application site and finally dissipate to the existing open drain at the immediate west of the application site. With the implementation of drainage facilities, the proposed development has not generated adverse drainage impact.

- 3.7.3 All the proposed drainage facilities will be provided and maintained by the applicant's own expense. Also, surface channel will be cleaned at regular interval to ensure unhindered flow of surface runoff along the channel.

Section 4 – Conclusion

- 4.1 The proposed development aims to provide fully enclosed structures for wholesale trade (electronic goods) and storage with ancillary office use. No workshop activities is allowed within the application site. The simple use of current application which is taken in a fully enclosed structure is very static and no adverse impact is anticipated.
- 4.2 The application site is currently zoned 'Open Space' ("O") and "Road" according to the Approved San Tin Technopole Outline Zoning Plan (OZP) No. S/STT/2. Although the applied use is not belonged to neither column 1 nor column 2 of the "O" zone, temporary use not exceeding a period of 3 years may be regularized through the application of planning permission from the Town Planning Board in accordance with the Notes of the aforesaid Outline Zoning Plan. Alternative temporary use which generates no significant nuisance should be encouraged in the interim to make economic use of scarce land resources and generation of employment opportunities. The applicant wishes to seek Town Planning Board's sympathetic approval for the current planning permission.
- 4.3 The applicant intends to comply with planning regulations so that he submits the current planning application for the consideration of the Town Planning Board. He committed to fulfill all approval conditions imposed by the Board.
- 4.4 The adjoining land lots to all directions of the application site are almost wholly occupied for open storage yards and port back-up activities, and temporary warehouses for storage purposes. It is noteworthy that significantly numbers of them are either 'existing use' since the area was previously fall within "OS" zone under previous OZP No. S/YL-NTM/12. It makes the proposed development compatible with the surrounding environment.
- 4.5 The current proposed use is static. Impact assessments and proposed mitigation measures discussed in Section 3.4, 3.5, 3.6 and 3.7 demonstrated that the applied use would generate insignificant traffic, environmental, visual and drainage impact to the surrounding environment.
- 4.6 The applicant hereby sincerely submits this planning application to sought the approval by the Town Planning Board for the use of Lots 2385 (Part) and 2400 (Part) in D.D. 102, Ngau Tam Mei, Yuen Long, N.T. for temporary wholesale trade (electronic goods) and storage with ancillary office for a period of 3 years.

Appendix 1 Drainage Assessment

A. Site particulars

- 1.1.1 The subject site possesses an area of about 1,660m². The surface of the site will be hard paved. An existing open drain is found to the immediate west of the application site.
- 1.1.2 The application site is accessible by a vehicular track abutting Kwu Tung Road.
- 1.1.3 The adjoining land of the application site is at present mostly occupied for open storage and port back-up uses.

B. Level and gradient of the subject site & proposed surface channel

- 1.1.4 The subject site has a gentle gradient sloping from south to north from about +10.2mPD to +9.8mPD.
- 1.1.5 In order to follow the topography of the application site, the proposed surface channel will be constructed following the gradient of the site. As demonstrated in the calculation in **Appendix 1.3** hereunder, 375mm surface U-channel will be capable to drain all surface runoff accrued at the application site.

C. Catchment area of the proposed drainage provision at the subject site

- 1.1.6 With reference to the survey record and recent site inspection, the site commands a higher level than the adjoining land at the north and east. For the vacant adjoining land at the south, it has a gentle slope directing from north to south. As such, no surface runoff is directed to the subject site. On the other hand, an existing open drain is situated to the immediate west of the application site and no surface runoff will be generated. As such, no external catchment is identified.

D. Particulars of the existing drainage facilities to accept the surface runoff collected at the application site

- 1.1.7 According to recent site inspection, there is an existing open drain located at the immediate west of the application site. A 375mm underground pipe connecting to the open drain is proposed at the southwest corner of the application site. All surface runoff will be collected to this underground pipe and dissipate to the open drain at the west of the application site eventually.

1.2 **Runoff Estimation & Proposed Drainage Facilities**

A. Proposed drainage facilities

- 1.2.1 Subject to the calculation in **Appendix 1.3** below, it is determined that 375mm surface U-channel which is made of concrete along the site periphery is adequate to intercept storm water passing through and generated at the application site.
- 1.2.2 The collected surface runoff will be conveyed to the open drain via the proposed 375mm underground pipe at the southwest of application site and drain all the storm water to the open drain eventually.
- 1.2.3 The provision of the proposed surface channel will follow the gradient of the application site which is about 1:90.
- 1.2.4 All the proposed drainage facilities, including the section of surface channel proposed in between of the subject site to the existing open drain, will be provided and maintained at the application's own expense. Also, channel will be cleaned at regular interval to avoid the accumulation of rubbish/debris which would affect the dissipation of storm water.
- 1.2.5 Prior to the commencement of drainage works, the applicant will inform registered land owners and District Lands Office/Yuen Long (DLO/YL) for drainage works outside the application site.
- 1.2.6 All proposed works at the site periphery would not obstruct the flow of surface runoff from the adjacent areas, the provision of surface channel at site boundary is detailed hereunder:
- (a) Soil excavation at site periphery, although at minimal scale, is inevitably for the provision of surface channel. In the reason that the accumulation of excavated soil at the site periphery would obstruct the free flow of the surface runoff from the surroundings, the soil will be cleared at the soonest possible after the completion of the excavation process.
 - (b) In view of that soil excavation may be continued for several working days, surface U-channel will be dug in short sections and all soil excavated will be cleared before the excavation of another short section.
 - (c) The level of the site periphery will be maintained during and after the works. As such, the works at the site periphery would not either alter or obstructed the flow of surface runoff from adjacent areas.
 - (d) Some holes will be provided at the toe of site hoarding so as to allow unobstructed flow of surface runoff from adjacent area.

1.3 Drainage Calculation for the Application Site

1.3.1 Rational method is adopted for estimated the designed run-off

$$Q = k \times i \times A/3,600$$

Assuming that:

- i. The area of the entire catchment is approximately 1,660m²;
- ii. The application site will be hard paved. It is assumed that the value of run-off co-efficient (k) is taken as 1.

$$\begin{aligned}\text{Difference in Land Datum} &= 10.2\text{m} - 9.8\text{m} = 0.4\text{m} \\ L &= 36\text{m} \\ \therefore \text{Average fall} &= 0.4\text{m in } 36\text{m} \quad \text{or} \quad 1\text{m in } 90\text{m}\end{aligned}$$

According to the Brandsby-Williams Equation adopted from the “Stormwater Drainage Manual – Planning, Design and Management” published by the Drainage Services Department (DSD),

$$\begin{aligned}\text{Time of Concentration (t}_c\text{)} &= 0.14465 [L/(H^{0.2} \times A^{0.1})] \\ t_c &= 0.14465 [36/(1.11^{0.2} \times 1,660^{0.1})] \\ t_c &= 2.43 \text{ minutes}\end{aligned}$$

With reference to the Intensity-Duration-Frequency Curves provided in the abovementioned manual, the mean rainfall intensity (i) for 1 in 50 recurrent flooding period is found to be 300mm/hr.

$$\begin{aligned}\text{By Rational Method, } Q &= 1 \times 300 \times 1,660 / 3,600 \\ \therefore Q &= 138.33 \text{ l/s} = 8,300 \text{ l/min} = 0.138 \text{ m}^3/\text{s}\end{aligned}$$

In accordance with the Chart for the Rapid Design of Channels in “Geotechnical Manual for Slopes”, for an approximate gradient of 1:90, 375mm surface U-channel proposed by the applicant is considered adequate to dissipate all the storm water generated at the application site.