

**Broad Development Parameters of the Indicative  
Development Proposal in Respect of Application No. Y/YL-LFS/14**  
**關乎申請編號 Y/YL-LFS/14 而只作指示用途的擬議發展計劃的概括發展規範**

Revised broad development parameters in view of  
the further information received on 5.4.2024  
因應於 2024 年 4 月 5 日接獲的進一步資料而修訂的概括發展規範

Application No. 申請編號	Y/YL-LFS/14
Location/address 位置／地址	<p>Lots 3 S.A ss.1, 3 S.B, 4, 5 S.A RP, 9, 10 RP, 12 S.A, 12 RP, 13, 14 S.A ss.1 S.A, 14 S.A ss.1 RP, 14 S.A ss.2, 14 S.A RP, 14 S.B ss.1 S.A, 14 S.B ss.1 RP, 14 S.B RP, 14 RP, 15 S.A ss.1, 15 S.A RP, 15 S.B, 15 RP, 16 S.A, 16 S.B, 16 RP, 17 S.A ss.1, 17 S.A RP, 17 S.B, 17 S.C and 17 RP in D.D. 128, Lots 2128, 2129, 2136 RP, 2138 RP, 2148, 2153 S.A and 2388 S.A ss.2 (Part) in D.D. 129, and adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories</p> <p>新界元朗流浮山丈量約份第 128 約地段第 3 號 A 分段第 1 小分段、第 3 號 B 分段、第 4 號、第 5 號 A 分段餘段、第 9 號、第 10 號餘段、第 12 號 A 分段、第 12 號餘段、第 13 號、第 14 號 A 分段第 1 小分段 A 分段、第 14 號 A 分段第 1 小分段餘段、第 14 號 A 分段第 2 小分段、第 14 號 A 分段餘段、第 14 號 B 分段第 1 小分段 A 分段、第 14 號 B 分段第 1 小分段餘段、第 14 號 B 分段餘段、第 14 號餘段、第 15 號 A 分段第 1 小分段、第 15 號 A 分段餘段、第 15 號 B 分段、第 15 號餘段、第 16 號 A 分段、第 16 號 B 分段、第 16 號餘段、第 17 號 A 分段第 1 小分段、第 17 號 A 分段餘段、第 17 號 B 分段、第 17 號 C 分段及第 17 號餘段、第 129 約地段第 2128 號、第 2129 號、第 2136 號餘段、第 2138 號餘段、第 2148 號、第 2153 號 A 分段及第 2388 號 A 分段第 2 小分段(部分)和毗連政府土地</p>
Site area 地盤面積	<p>About 約 20,455 sq. m 平方米 (Includes Government Land of about 包括政府土地 約 4,594 sq. m 平方米)</p>
Plan 圖則	<p style="text-align: center;"><u>Section 12A application 第 12A 條申請</u></p> <p style="text-align: center;">Draft Lau Fau Shan &amp; Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/10 流浮山及尖鼻咀分區計劃大綱草圖編號 S/YL-LFS/10</p> <hr/> <p style="text-align: center;"><u>Further information received 接獲進一步資料</u></p> <p style="text-align: center;">Approved Lau Fau Shan &amp; Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/11 流浮山及尖鼻咀分區計劃大綱核准圖編號 S/YL-LFS/11</p>
Zoning 地帶	<p style="text-align: center;"><u>Section 12A application 第 12A 條申請</u></p> <p style="text-align: center;">"Residential (Group C)" and "Residential (Group D)" 「住宅(丙類)」及「住宅(丁類)」</p> <hr/> <p style="text-align: center;"><u>Further information received 接獲進一步資料</u></p> <p style="text-align: center;">"Residential (Group C)" and "Residential (Group D)" 「住宅(丙類)」及「住宅(丁類)」</p>

Proposed Amendment(s) 擬議修訂	To rezone the application site from "Residential (Group C)" and "Residential (Group D)" to "Residential (Group B)" 把申請地點由「住宅(丙類)」及「住宅(丁類)」地帶改劃為「住宅(乙類)」地帶		
Gross floor area and/or plot ratio 總樓面面積及/或地積比率		sq. m 平方米	Plot ratio 地積比率
	Domestic 住用	About 約 61,365	Not more than 不多於 3
	Non-domestic 非住用	About 約 1,166	About 約 0.057
No. of block 幢數	Domestic 住用	13	
	Non-domestic 非住用	-	
	Composite 綜合用途	1	
Building height/No. of storeys 建築物高度/層數	Domestic 住用	-	m 米
		Not more than 不多於 90	mPD 米(主水平基準上)
		3 - 26	Storey(s) 層
	Non-domestic 非住用	3	Exclude 不包括 Basement 地庫
		-	m 米
		-	mPD 米(主水平基準上)
	Composite 綜合用途	-	Storey(s) 層
		-	m 米
		Not more than 不多於 90	mPD 米(主水平基準上)
	Composite 綜合用途	25	Storey(s) 層
		3	Exclude 不包括 Basement 地庫
		-	m 米
Site coverage 上蓋面積	-		
No. of units 單位數目	1,246 Flats 住宅單位		
Open space 休憩用地	Private 私人	Not less than 不少於 3,489	sq. m 平方米
	Public 公眾	-	sq. m 平方米



No. of parking spaces and loading / unloading spaces 停車位及上落客貨車位數目	Total no. of vehicle spaces 停車位總數	470
	Private Car Parking Spaces 私家車車位	415
	Motorcycle Parking Spaces 電單車車位	13
	Bicycle Parking Spaces 單車停泊位	42
	Total no. of vehicle loading/unloading bays/lay-bys 上落客貨車位／停車處總數	7
	Heavy Goods Vehicle Spaces 重型貨車車位	5
	Lay-by 停車處	2

\* 有關資料是為方便市民大眾參考而提供。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。

The information is provided for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

## Submitted Plans, Drawings and Documents 提交的圖則、繪圖及文件

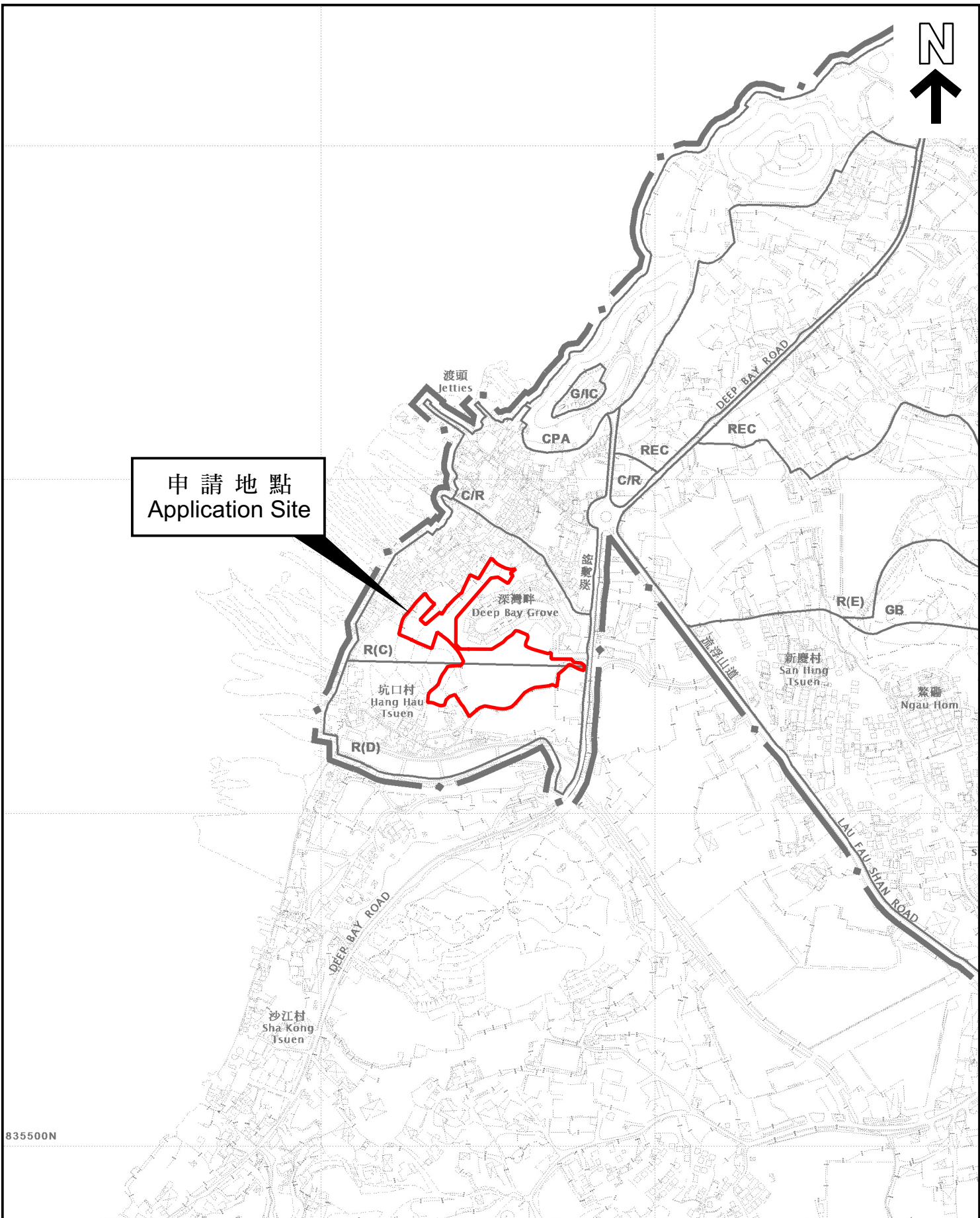
	<u>Chinese</u> 中文	<u>English</u> 英文
<b><u>Plans and Drawings 圖則及繪圖</u></b>		
Master layout plan(s)/Layout plan(s) 總綱發展藍圖／布局設計圖	<input type="checkbox"/>	<input type="checkbox"/>
Block plan(s) 樓宇位置圖	<input type="checkbox"/>	<input type="checkbox"/>
Floor plan(s) 樓宇平面圖	<input type="checkbox"/>	<input type="checkbox"/>
Sectional plan(s) 截視圖	<input type="checkbox"/>	<input type="checkbox"/>
Elevation(s) 立視圖	<input type="checkbox"/>	<input type="checkbox"/>
Photomontage(s) showing the proposed development 顯示擬議發展的合成照片	<input type="checkbox"/>	<input type="checkbox"/>
Master landscape plan(s)/Landscape plan(s) 園境設計總圖／園境設計圖	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify) 其他（請註明）	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Indicative lay-by location plan 指示性停車處位置圖</u>		
<b><u>Reports 報告書</u></b>		
Planning Statement / Justifications 規劃綱領 / 理據	<input type="checkbox"/>	<input type="checkbox"/>
Environmental assessment (noise, air and/or water pollutions) 環境評估（噪音、空氣及／或水的污染）	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on vehicles) 就車輛的交通影響評估	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Traffic impact assessment (on pedestrians) 就行人的交通影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Visual impact assessment 視覺影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Landscape impact assessment 景觀影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Tree Survey 樹木調查	<input type="checkbox"/>	<input type="checkbox"/>
Geotechnical impact assessment 土力影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Drainage impact assessment 排水影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Sewerage impact assessment 排污影響評估	<input type="checkbox"/>	<input type="checkbox"/>
Risk Assessment 風險評估	<input type="checkbox"/>	<input type="checkbox"/>
Others (please specify) 其他（請註明）	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Revised indicative scheme 經修訂的指示性方案</u>		
<u>Revised traffic assessment (sensitivity analysis) 經修訂的交通評估（敏感度分析）</u>		
Note: May insert more than one 「✓」. 註：可在多於一個方格內加上「✓」號		

Note: The information in the Gist of Application above is provided by the applicant for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

註：上述申請摘要的資料是由申請人提供以方便市民大眾參考。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。



申請地點  
Application Site

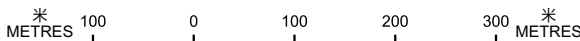


835500N

本摘要圖於2024年4月16日擬備，  
所根據的資料為於2022年4月12日  
核准的分區計劃大綱圖編號 S/YL-LFS/11  
EXTRACT PLAN PREPARED ON 16.4.2024  
BASED ON OUTLINE ZONING PLAN No.  
S/YL-LFS/11 APPROVED ON 12.4.2022

### 位置圖 LOCATION PLAN

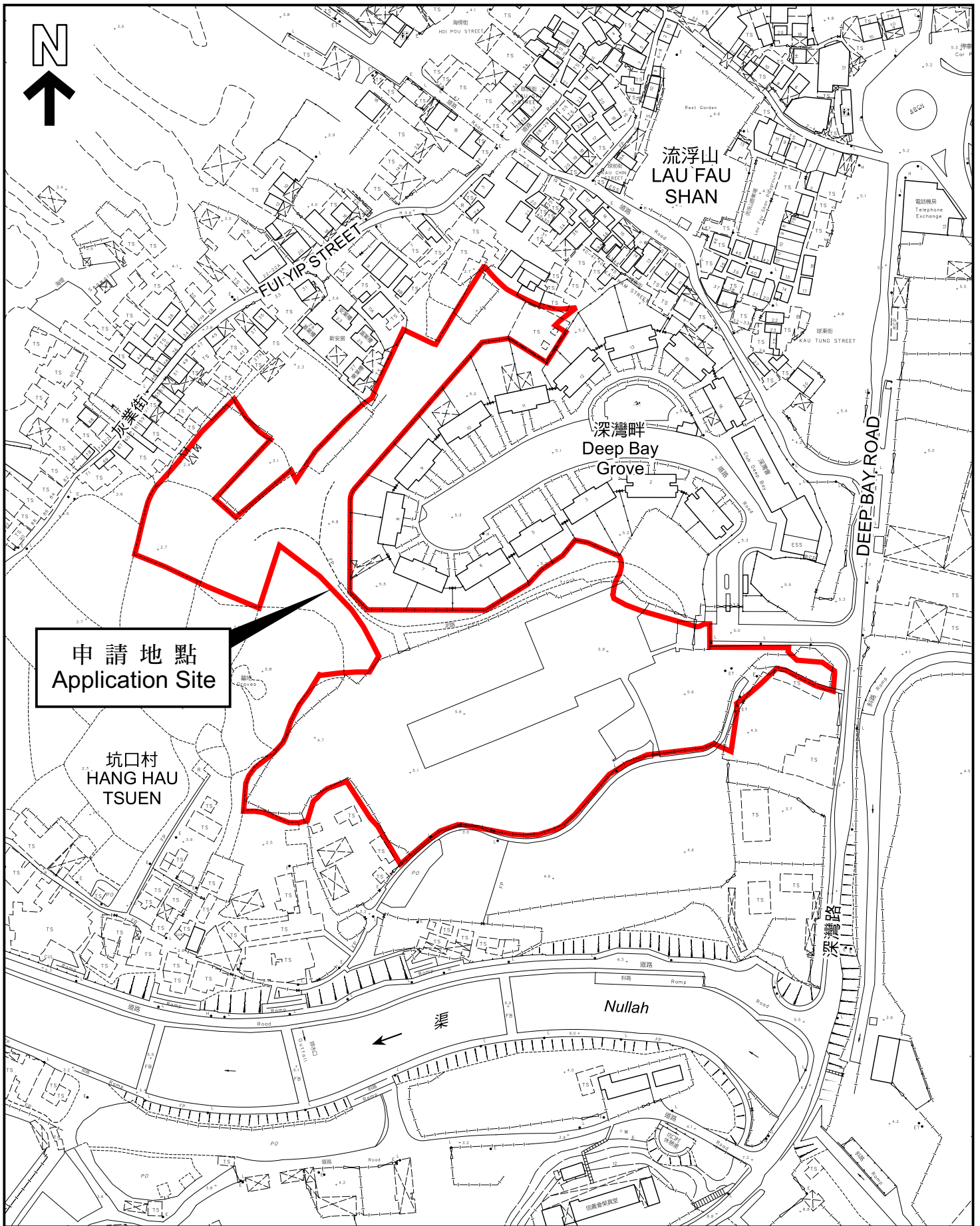
SCALE 1:7 500 比例尺



申請地點界線只作識別用  
APPLICATION SITE BOUNDARY  
FOR IDENTIFICATION PURPOSE ONLY

參考編號  
REFERENCE No.

**Y/YL-LFS/14**



申請地點  
Application Site

坑口村  
HANG HAU  
TSUEN

流浮山  
LAU FAU  
SHAN

深灣畔  
Deep Bay  
Grove

渠  
Nullah

平面圖 SITE PLAN

本摘要圖於2024年4月16日擬備，  
所根據的資料為測量圖編號  
2-SW-21D  
EXTRACT PLAN PREPARED ON 16.4.2024  
BASED ON SURVEY SHEET No.  
2-SW-21D

申請地點界線只作識別用  
APPLICATION SITE BOUNDARY  
FOR IDENTIFICATION PURPOSE ONLY

參考編號  
REFERENCE No.  
Y/YL-LFS/14

**申請編號 Application No. : Y/YL-LFS/14**

**備註 Remarks**

申請人提交進一步資料，以回應路政署及運輸署的意見，並附上經修訂的指示性方案、經修訂的環境評估、經修訂的交通評估 (敏感度分析) 及指示性停車處位置圖。

The applicant submitted Further Information in response to comments of Highways Department and Transport Department, and enclosed revised indicative scheme, revised environmental assessment, revised traffic assessment (sensitivity analysis) and indicative lay-by location plan.

有關資料是為方便市民大眾參考而提供。對於所載資料在使用上的問題及文義上的歧異，城市規劃委員會概不負責。若有任何疑問，應查閱申請人提交的文件。The information is provided for easy reference of the general public. Under no circumstances will the Town Planning Board accept any liabilities for the use of the information nor any inaccuracies or discrepancies of the information provided. In case of doubt, reference should always be made to the submission of the applicant.

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories  
(Planning Application No. Y/YL-LFS/14)  
Responses to Comments

**Comments from Related Departments**

**Page No.**

1. Highways Department, Railway Development Office, dated 12 June 2023..... 2
2. Highways Department, Railway Development Office, dated 27 December 2023..... 2
3. Highways Department, Northern Metropolis Railways Office, dated 6 March 2024..... 4
4. Transport Department, NT Regional Office, Traffic Engineering (NTW) Division, dated 15 March 2024 ... 5

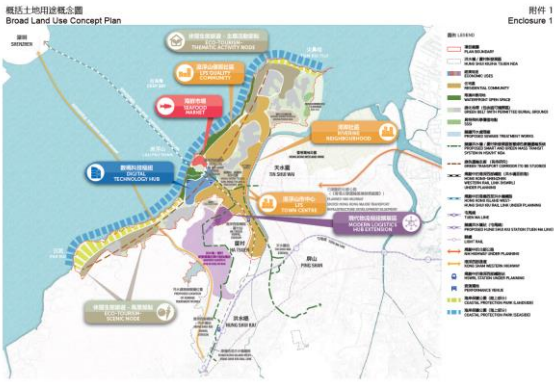
COMMENTS FROM RELATED DEPARTMENTS

No.	Comments	Responses
1.	<p><b>Highways Department, Railway Development Office, dated 12 June 2023</b></p> <p>2. The Hong Kong Special Administrative Region Government and the Shenzhen Municipal People’s Government have been pursuing the Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu - Qianhai) (HSWRL) project through the Task Force for Hong Kong-Shenzhen Co-operation on Cross-Boundary Railway Infrastructure and its Technical Group. The First Stage Study, which established the strategic value and necessity of the project and formulated a preliminarily feasible scheme, had been completed. The Second Stage Study commenced in January 2023 to study the planning, preliminary engineering feasibility, benefits, environmental impact as well as construction and operation arrangements of the project, and is expected to be completed in mid-2024.</p> <p>3. The Transport and Logistics Bureau together with the Highways Department and the Transport Department launched the public consultation exercise for the preliminary findings of the Strategic Studies on Railways and Major Roads beyond 2030 in December 2022. The HSWRL project is one of the proposed railways. The public consultation period ended on 31 March 2023. Full consideration will be given to the public’s views received during the public consultation period.</p> <p>4. Meanwhile, the Government is carrying out a land use review study to examine the development potential for Lau Fau Shan, Tsim Pei Tsui and Pak Nai areas with a view to holistically reviewing the land use planning of the concerned areas.</p>	<p>Noted.</p> <p>Noted.</p> <p>Noted.</p>
2.	<p><b>Highways Department, Railway Development Office, dated 27 December 2023</b></p> <p>I refer to your memo regarding the captioned subject. As the captioned application is related to the railways projects managed by this Office, the</p>	



No.	Comments	Responses
	<p>subject memo addressing to CE/RD2-3 of RDO is referred to this Office for following up, Please distribute the correspondences related to this application to CE/NMR(2) of Northern Metropolis Railways Office (NMRO) in future. We remain our reservation on this application with the following justifications:</p> <p>2. The Hong Kong SAR Government and the Shenzhen Municipal People’s Government have been pursuing the Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu - Qianhai) (HSWRL) project through the Task Force for Hong Kong-Shenzhen Co-operation on Cross-Boundary Railway Infrastructure and its Technical Group. The First Stage Study, which established the strategic value and necessity of the project and formulated a preliminarily feasible scheme, had been completed. The Second Stage Study commenced in January 2023 to study the planning, preliminary engineering feasibility, benefits, environmental impact as well as construction and operation arrangements of the project, and is expected to be completed in mid-2024. The site under the subject application is situated at a critical location to the alignment planning of HSWRL project and the proposed development will induce significant adverse impact to the alignment.</p> <p>3. The Transport and Logistics Bureau together with the Highways Department and the Transport Department launched the public consultation exercise for the preliminary findings of the Strategic Studies on Railways and Major Roads beyond 2030 in December 2022. The HSWRL project is one of the proposed railways and is included in the Major Transport Infrastructure Development Blueprint announced in December 2023. Meanwhile, the government is carrying out a land use review study for Lau Fau Shan, Tsim Pei Tsui and Pak Nai areas with a view to holistically reviewing the land use planning of in the areas concerned with the consideration of HSWRL. The site under the</p>	<p>Noted. Please refer to the response to the comments from Northern Metropolis Railways Office of Highways Department dated 6 March 2024.</p> <p>Noted.</p>



No.	Comments	Responses
	<p>captioned Application is covered in this review study.</p> <p>4. The HSWRL project is still at an early planning stage. The approval of the captioned application at this stage would pre-empt the results of the abovementioned four studies.</p>	<p>Noted. Please refer to the response to the comments from Northern Metropolis Railways Office of Highways Department dated 6 March 2024.</p>
<p>3.</p>	<p><b>Highways Department, Northern Metropolis Railways Office, dated 6 March 2024</b></p> <p>As our previous replies, the strategic value and necessity of the Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu - Qianhai) (HSWRL) has been established under the First Stage Study of the project. The Second Stage Study jointly commissioned by the HKSAR Government and the Shenzhen Municipal People’s Government is expected to be completed in mid-2024. The Governments are finalising the results including the preliminary alignment of the HSWRL.</p> <p>The preliminary alignment of the HSWRL as shown in the recent development proposal of Lau Fau Shan/Tsim Bei Tsui/Pak Nai area presented to the Legislative Council Panel on Development on 27 February 2024 is attached. As the proposed development under the captioned application is anticipated to fall within the proposed railway protection area of the HSWRL, the approval of the captioned application at this stage will pre-empt the development of the HSWRL. As such, our reservation stated previously for the captioned application remains valid.</p>  <p>The map, titled 'Broad Land Use Concept Plan' (附件 1 Enclosure 1), shows a coastal area with various land use zones. A prominent feature is the 'HSWRL' (Hong Kong-Shenzhen Western Rail Link) alignment, shown as a blue line with a red border, running through the area. Other zones include residential, commercial, and public use areas, each color-coded and labeled in both Chinese and English. A legend on the right side of the map provides details for each zone.</p>	<p>Noted.</p> <p>As shown in the quoted Legislative Council paper (LC Paper No. CB(1)228/2024(03)) in your comment and the Enclosure 1 of the TPB Paper No. 10963 for consideration by the Town Planning Board on 8 March 2024, the preliminary alignment of the HSWRL is anticipated to run across the western part of the Application Site. Please refer to <b>Annex A</b> for the plan indicating the preliminary alignment of the Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu - Qianhai) (HSWRL).</p> <p>To demonstrate that the development intensity for the Proposed Residential Development and Social Welfare Facility (Child Care Centre (CCC)) (domestic plot ratio (PR) of 3, a non-domestic GFA of not less than 1,166m<sup>2</sup> for the 100-place CCC (i.e. total PR of about 3.057) and a maximum building height (BH) of 90mPD) could be accommodated with the incorporation of the preliminary alignment of HSWRL, a revised Indicative Scheme has been prepared accordingly. Please refer to <b>Annex B</b> for the Revised Indicative Scheme and <b>Annex C</b> for</p>

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories  
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No.	Comments	Responses
		<p>the corresponding development parameters table.</p> <p>To align with the railway tunnel, no foundation or basement structures are planned to be constructed above the assumed 30m-wide tunnel even making references to stringent XRL specifications. Additionally, all underground structures have been designed to maintain a minimum distance of 5m from the railway tunnel structures. These revisions ensure that the revised Indicative Scheme is in compliance with the requirements and specifications of the preliminary HSWRL alignment.</p> <p>Moreover, the key building design features are not compromised in the revised Indicative Scheme. The stepped BH design, which respected the surrounding planned developments, with the residential towers at the eastern part of the Application Site at 90mPD descending to the houses at 16.65mPD at the western part of the Application Site is maintained. The two wind corridors of not less than 15m-wide (between Towers 3 and 4, and at the pedestrian level of Tower 1) to accommodate the prevailing wind and visual penetration are also maintained. The 10m building setback with the adjacent Deep Bay Grove and the using of basement levels for car parking could also be maintained in the revised Indicative Scheme.</p> <p>A revised Environmental Assessment (<b>Annex D</b>) has also been submitted, with the latest update on fixed noise source, to demonstrate that the revised Indicative Scheme is technically feasible from the environmental point of view and no adverse environmental impact is envisaged.</p>
4.	<p><b>Transport Department, NT Regional Office, Traffic Engineering (NTW) Division, dated 15 March 2024</b></p> <p>I refer to your MUR.</p>	

No.	Comments	Responses
	<p>2. In Table 3.3, it is noted that the reserve capacity of J3 is 11 % in AM peak. Under Tin Wah Road public housing project, right turn from Tin Wah Road westbound to Tin Ying Road northbound will be prohibited. Please review your assessment and propose additional traffic improvement measure to improve the reserve capacity to at least 15%.</p> <p>3. According to the public transport service assessment provided by the consultants, service/frequency enhancement of Bus/GMB would be required to absorb the passenger demand generated from the development. Noting that the applicant suggested a layby to be provided within the site to support the operation of the proposed public transport services, please provide its details and layout plan for TD's consideration.</p>	<p>Noted. The planned junction layout under Tin Wah Road public housing project has been revised accordingly. Please refer to the possible junction layout in Drawing No. 3.2 of the Revised Traffic Review Report (<b>Annex E</b>).</p> <p>Besides, the proposed junction improvement measure has been revised to improve its reserve capacity to more than 15%. Please refer to the revised assessment in Table 3.3 and Drawing No. 3.4 of the Revised Traffic Review Report (<b>Annex E</b>).</p> <p>To meet the public transport demand arising from the proposed development, strengthening of the existing MTR feeder bus service and GMB services at Lau Fau Shan Roundabout is suggested. The actual service enhancement is subject to the Transport Department (TD)'s review at a later stage.</p> <p>Depending on the service enhancement of public transport service, a residents' shuttle bus service, which is subject to approval, is also suggested to run between the proposed development and the nearby station. A layby (12m x 3.5m) would be provided within the site, which is capable for up to 12m long vehicle pick up/ drop off. Adequacy of turning area (hammer head) will be provided within the site for 12m long vehicle manoeuvring. Please refer to the indicative location of the layby on ground floor in Drawing No. 1 for reference (<b>Annex F</b>). Exact location of the layby with details will be submitted to TD at the detailed design stage.</p>

**Annex A**  
**Preliminary**  
**Railway**  
**Alignment Plan**









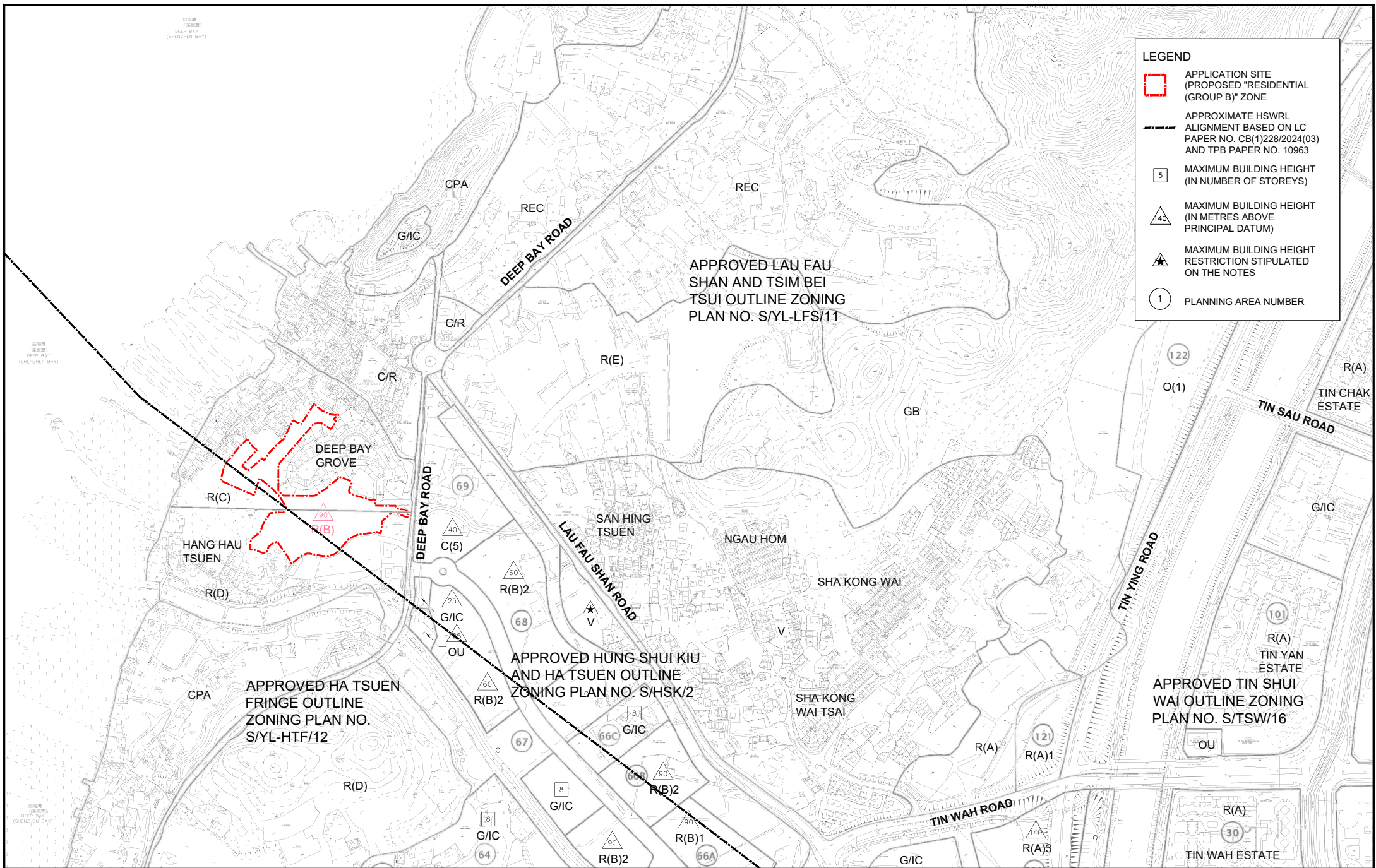
深灣 (深灣)  
DEEP BAY  
(SHENZHEN BAY)

深灣 (深灣)  
DEEP BAY  
(SHENZHEN BAY)

深灣 (深灣)  
DEEP BAY  
(SHENZHEN BAY)

**LEGEND**

-  APPLICATION SITE (PROPOSED "RESIDENTIAL (GROUP B)" ZONE)
-  APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963
-  MAXIMUM BUILDING HEIGHT (IN NUMBER OF STOREYS)
-  MAXIMUM BUILDING HEIGHT (IN METRES ABOVE PRINCIPAL DATUM)
-  MAXIMUM BUILDING HEIGHT RESTRICTION STIPULATED ON THE NOTES
-  PLANNING AREA NUMBER



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## PRELIMINARY ALIGNMENT OF THE HSWRL

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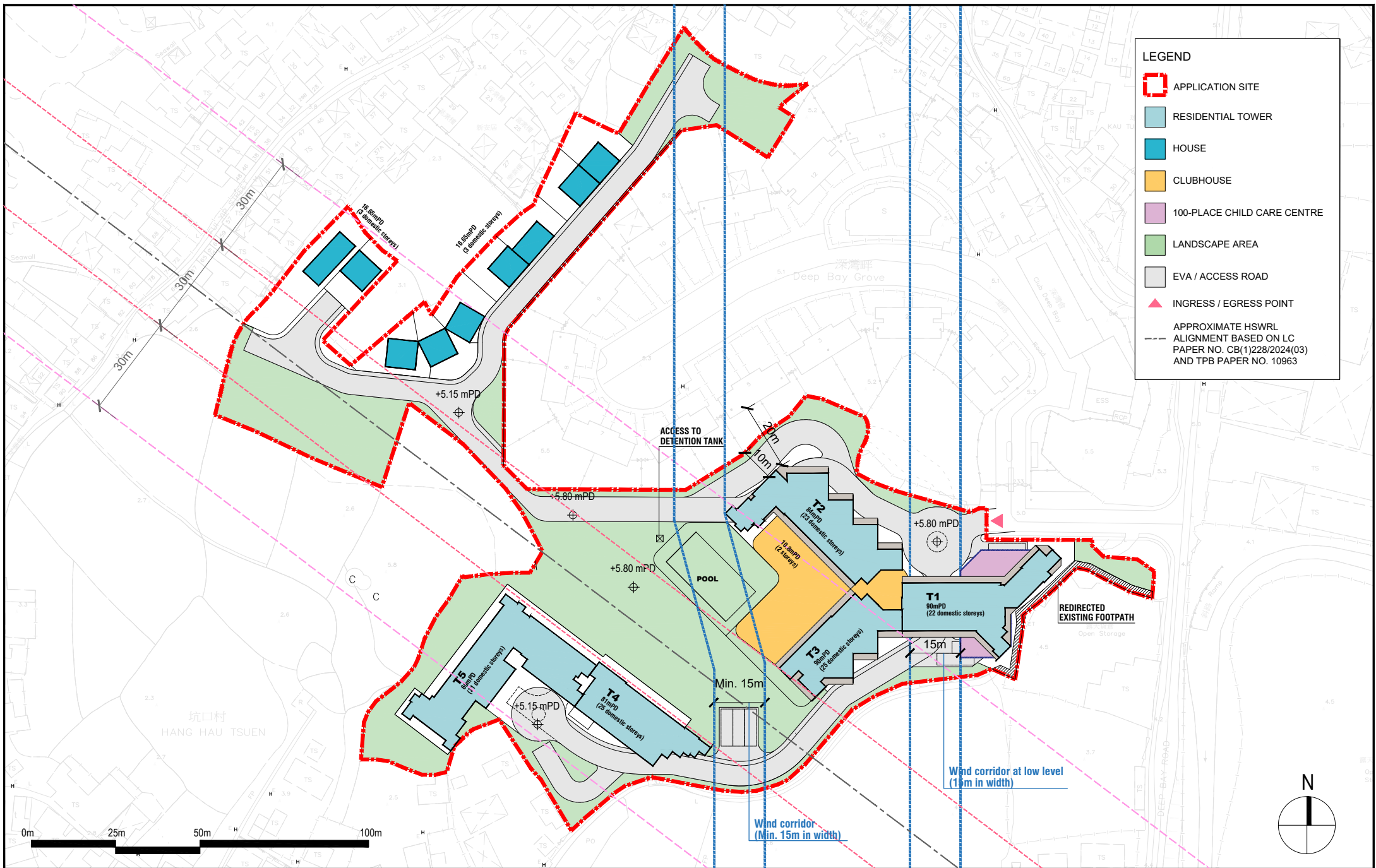




**Annex B**  
**Revised**  
**Indicative Scheme**







**LEGEND**

- APPLICATION SITE
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- ▲ INGRESS / EGRESS POINT
- APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**REVISED SCHEMATIC DESIGN**




MAR 2024  
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LEGEND

 APPLICATION SITE

 CARPARK / E&M

 APPROXIMATE HSWRL  
ALIGNMENT BASED ON LC  
PAPER NO. CB(1)228/2024(03)  
AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories


### INDICATIVE BASEMENT PLAN (B3)



LEGEND

 APPLICATION SITE

 CARPARK / E&M

 APPROXIMATE HSWRL  
ALIGNMENT BASED ON LC  
PAPER NO. CB(1)228/2024(03)  
AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

# INDICATIVE BASEMENT PLAN (B2)



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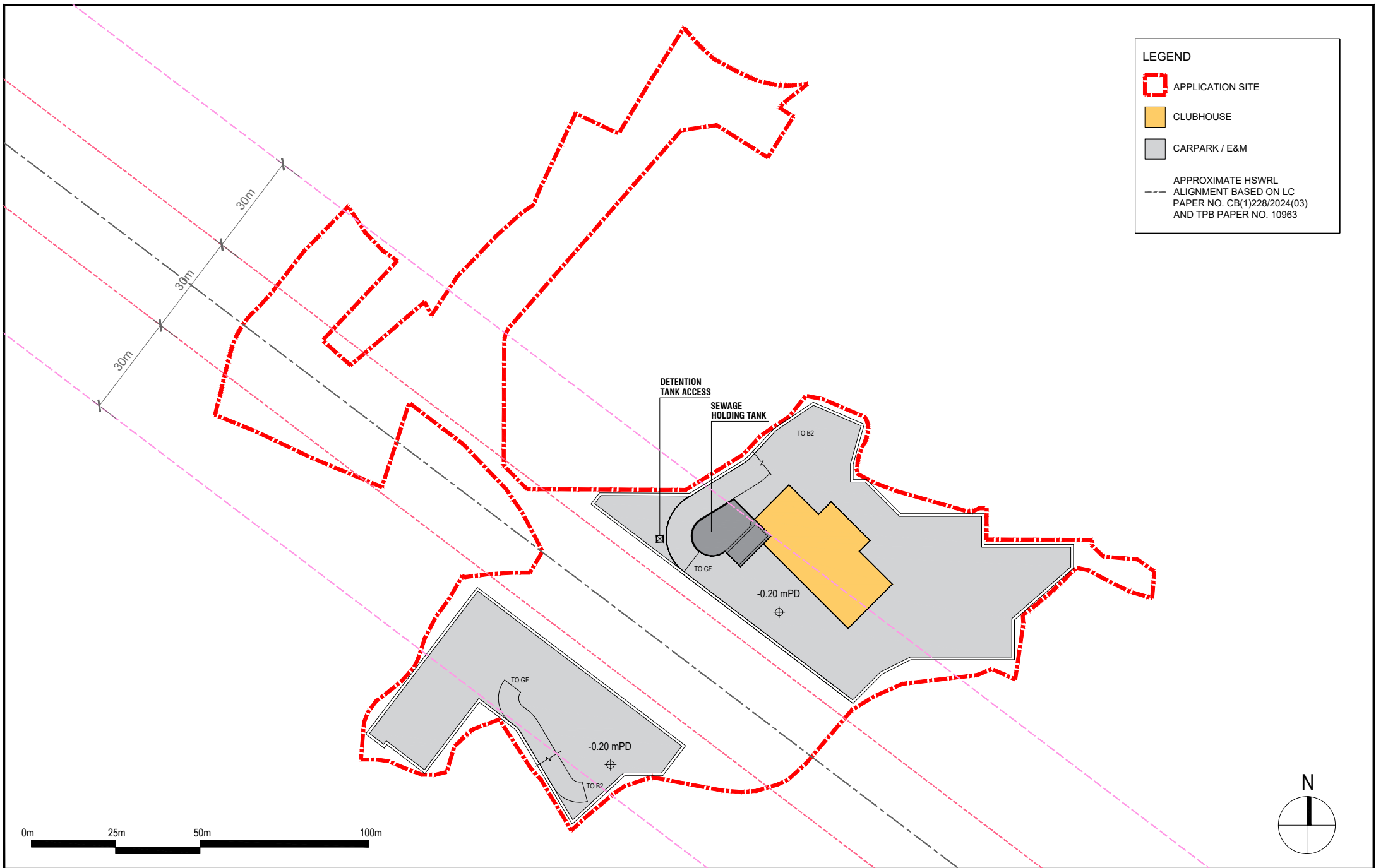
LEGEND

 APPLICATION SITE

 CLUBHOUSE

 CARPARK / E&M

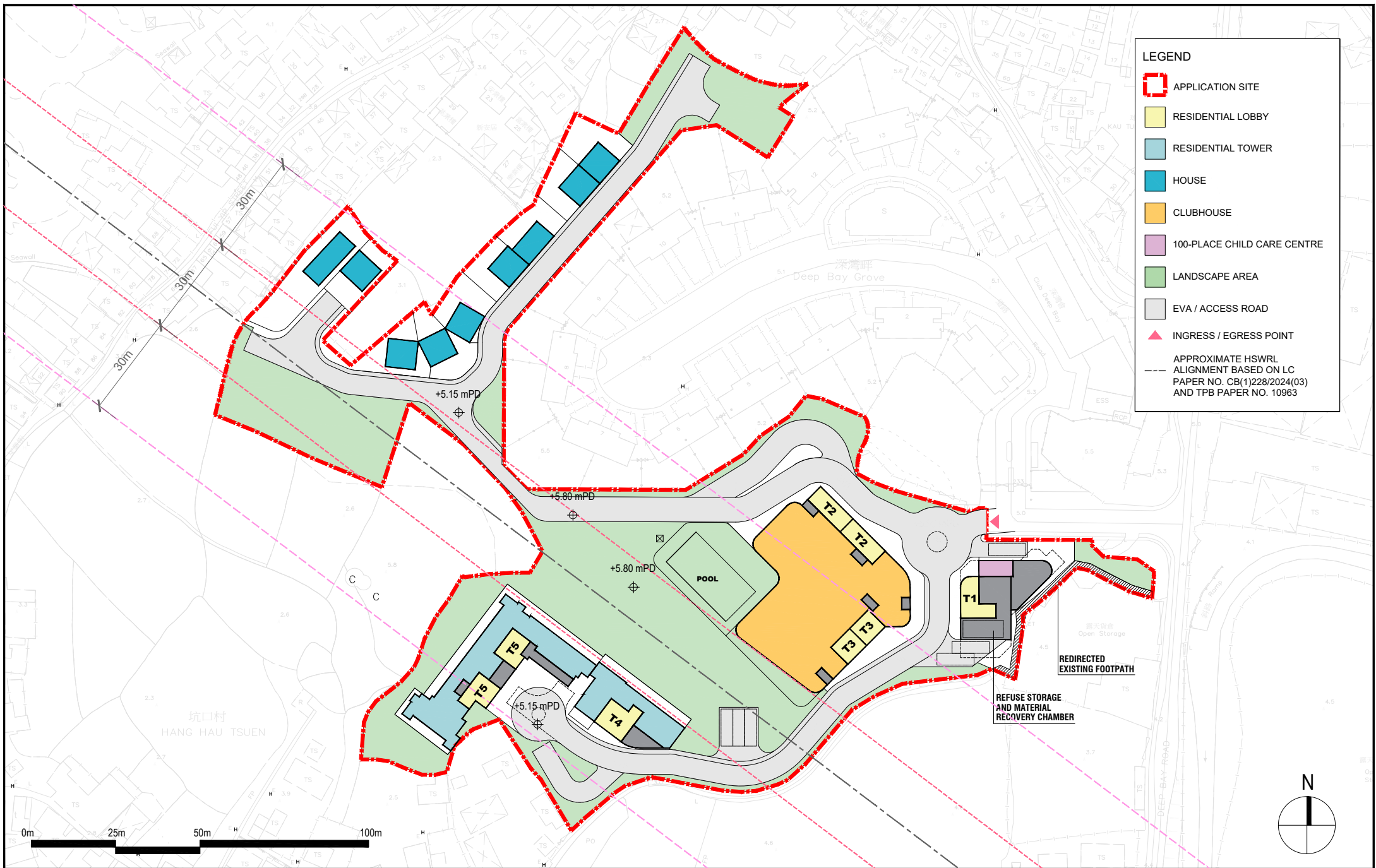
--- APPROXIMATE HSWRL  
--- ALIGNMENT BASED ON LC  
PAPER NO. CB(1)228/2024(03)  
AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

# INDICATIVE BASEMENT PLAN (B1)





**LEGEND**

- APPLICATION SITE
- RESIDENTIAL LOBBY
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT
- APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963

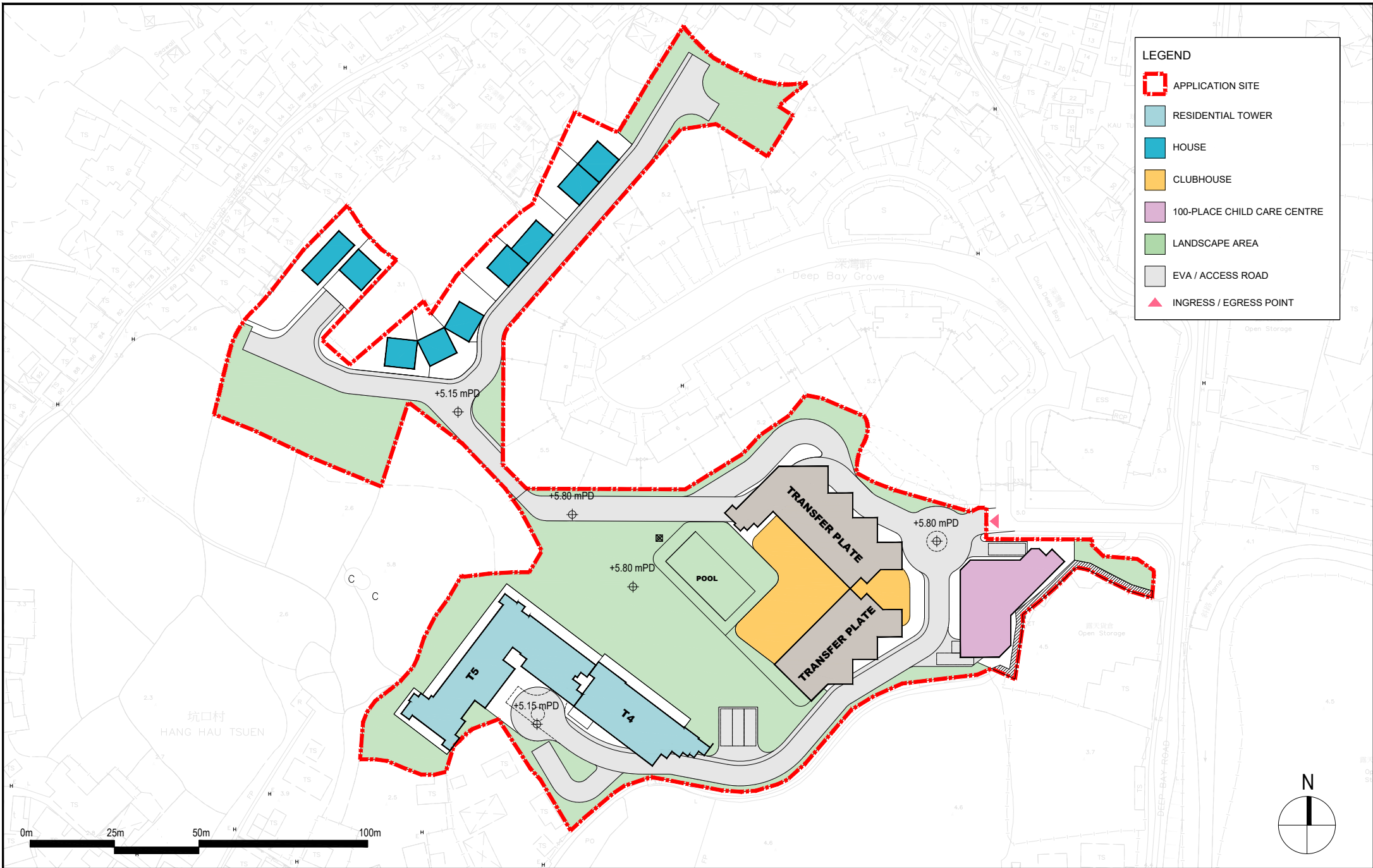
Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## INDICATIVE GROUND FLOOR PLAN

MAR 2024  
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**LEGEND**

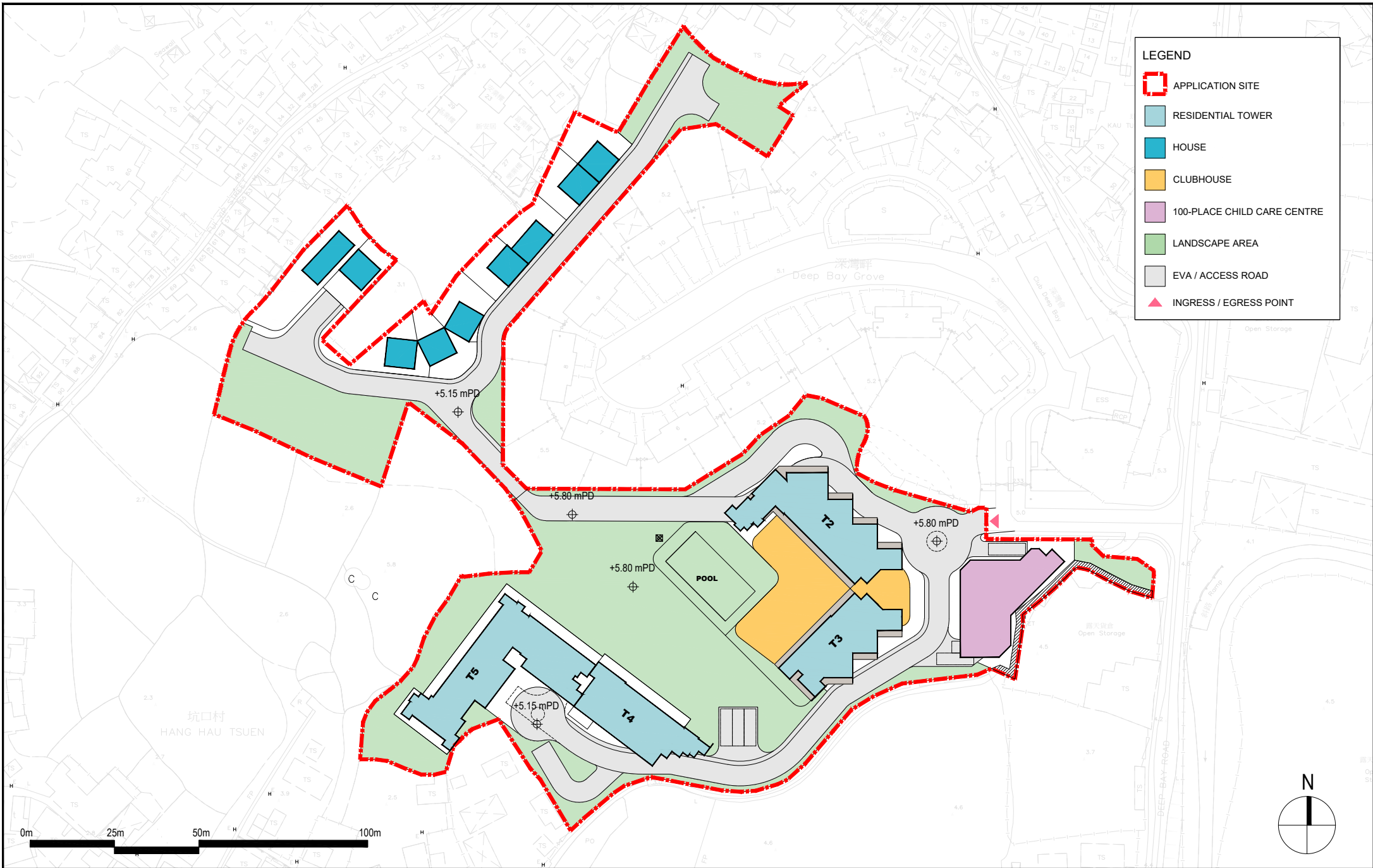
- APPLICATION SITE
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**INDICATIVE FIRST FLOOR PLAN**

MAR 2024  
1:1000 (A3)





**LEGEND**

- APPLICATION SITE
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**INDICATIVE SECOND FLOOR PLAN**

MAR 2024  
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Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

INDICATIVE TYPICAL FLOOR PLAN

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## **Annex C**

### **Revised Development Parameters Table**



## Development Parameters Table of the Revised Indicative Scheme

Proposed Development Parameters		Revised Indicative Scheme
Site Area		About 20,455 m <sup>2</sup> (including about 4,594 m <sup>2</sup> of Government Land)
Proposed Use		Residential Development with a Child Care Centre
Plot Ratio	Domestic PR	Not more than 3
	Non-Domestic PR (100-place CCC)	About 0.057
GFA	Domestic GFA	About 61,365 m <sup>2</sup> (5 Towers: About 59,265 m <sup>2</sup> ; 9 Houses: About 2,100 m <sup>2</sup> )
	Non-Domestic GFA (100-place CCC)	Not less than 1,166 m <sup>2</sup> #
Site Coverage		Not more than 100% (below 15m) (non-domestic) Not more than 66.6% (below 15m) (domestic) Not more than 33.3% (above 15m) (domestic)
Building Height (Main Roof)		Not more than 90mPD
Number of Storeys (excluding 3 storeys of basements)	Domestic	3 – 26
	Composite <sup>^</sup>	25
Number of Residential Towers		5
Number of Houses		9
Number of Residential Units		1,246 (Towers: 1,237 flats; Houses: 9)
Anticipated Population		About 3,489 persons*
Local Open Space		Not less than 3,489 m <sup>2</sup>
Parking Spaces	• Private Car	390 (including 5 disabled parking spaces) (Towers: 372; Houses: 18)
	• Visitor	25
	• Motorcycle	13
	• Bicycle	42

Proposed Development Parameters		Revised Indicative Scheme
<b>Loading/ Unloading Bays</b>	<ul style="list-style-type: none"> <li>• Residential</li> </ul>	5
<b>Lay-by</b>	<ul style="list-style-type: none"> <li>• CCC</li> </ul>	1

Remarks:

# The GFA for the 100-place CCC is calculated based on 2.2 times the NOFA requirement of 530 m<sup>2</sup> for 100-place CCC as stipulated in Chapter 3 of the HKPSG. The figure is indicative only is subject to operational requirements and liaison with Government Departments in detailed design stage

^ Composite tower (Tower 1) with 100-place CCC

\* A Person Per Occupied Flat (PPOF) of 2.8 is assumed based on the 2016 Population By-Census of Yuen Long District

**Annex D**  
**Revised**  
**Environmental**  
**Assessment**





Prepared by

**Ramboll Hong Kong Limited**

**APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION  
12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR  
PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL  
WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS  
LOTS IN D.D. 128 AND D.D. 129, AND ADJOINING  
GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW  
TERRITORIES**

**ENVIRONMENTAL ASSESSMENT**

Date **26 March 2024**

Prepared by **Yoyo Mok**  
**Assistant Environmental Consultant**

Signed



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Approved by

**Katie Yu**  
**Senior Manager**



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Signed

Project Reference

**NWDLFSRDEI00**

Document No.

**R8266\_v6.2.docx**

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Ramboll Hong Kong Limited

21/F, BEA Harbour View Centre  
56 Gloucester Road, Wan Chai, Hong Kong

Tel: (852) 3465 2888  
Fax: (852) 3465 2899  
Email: hkinfo@ramboll.com

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- Appendix 3.2 Road Traffic Noise Impact Assessment Results
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## 1. INTRODUCTION

### 1.1 Background

- 1.1.1 The Applicant proposes amendments to the **Approved** Lau Fau Shan and Tsim Bei Tsui Outline Zoning Plan No. S/YL-LFS/11 ("the OZP") by rezoning the Application Site from "Residential (Group C)" ("R(C)") and "Residential (Group D)" ("R(D)") to a tailor-made "Residential (Group B)" ("R(B)") with a maximum domestic plot ratio ("PR") of 3, a non-domestic gross floor area (GFA) of not less than 1,166 m<sup>2</sup> for a 100 place child care centre, and maximum building height ("BH") of 90 metres above principal datum ("mPD") to facilitate Proposed Residential Development and Social Welfare Facility (Child Care Centre) at the Application Site ("the Proposed Amendment").
- 1.1.2 Ramboll Hong Kong Ltd. has been commissioned by the Applicant to conduct this Environmental Assessment (EA) in support of the Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories.

### 1.2 The Project Location

- 1.2.1 The Application Site is bounded by Deep Bay Grove and Lau Fau Shan Market to the north, Deep Bay Road to the east, Hang Hau Tsuen and its nearby nullah to the south and village houses along Fui Yip Street to the west. **Figure 1.1** shows the location and the environ of the Application Site.
- 1.2.2 The area of the Application Site is about 20,455 m<sup>2</sup>. It is currently designated for the construction of a transitional housing project<sup>1</sup>, which consists of about 2 Blocks four-storey to five-storey residential buildings.

### 1.3 The Project Description

- 1.3.1 The proposed residential development consists of 5 residential towers and a clubhouse in the portion south of Deep Bay Grove while the portion to the west of Deep Bay Grove consists of **2 clusters** of houses and landscape area, with a maximum domestic plot ratio of about 3. A Child Care Centre is proposed under the residential floors of Tower 1, with a non-domestic GFA of not less than 1,166 m<sup>2</sup>.
- 1.3.2 The **maximum** height of the towers is 90 mPD, while the height of houses are at 16.65 mPD. The anticipated completion year of the proposed development is expected to be in 2030. The master layout plan of the proposed development is shown in **Figure 1.2** with details shown in **Appendix 1.1**.

### 1.4 Scope

- 1.4.1 The scope of this EA includes the assessment of the key potential environmental impacts of the proposed development:
- Air quality (including construction dust) impact;
  - Road traffic noise impact; and
  - Industrial noise impact.

<sup>1</sup> Transitional Housing Project at Lau Fau Shan, Yuen Long  
([https://www.hb.gov.hk/eng/policy/housing/policy/transitionalhousing/details\\_96.html](https://www.hb.gov.hk/eng/policy/housing/policy/transitionalhousing/details_96.html))

- 1.4.2 The Project will involve excavation, foundation and superstructure construction works. Potential noise, water quality and waste management impacts arising from the construction activities are expected. Although detailed construction programme and plant inventory are not available at this early planning stage, for projects of this scale, these potential environmental impacts can be controlled with the implementation of proper site practices and pollution control measures stipulated in the Recommended Pollution Control Clauses for Construction Contracts issued by the EPD. As such, no adverse noise, water quality and waste management impact during the construction of the Project is anticipated and have been scoped out from this EA Report.
- 1.4.3 As mentioned in **Section 1.2**, the Application Site is currently **under construction of a transitional housing project which is not considered contaminative**, thus land contamination due to current land use at the site is not anticipated. Also, based on the aerial photos from Lands Department, the majority of the Application Site appeared to be occupied by fishponds/farmlands/vegetated area since 1972 while the vegetation in the southern portion of the Application Site was cleared in 2018 and turned into a hobby farm. **All temporary structures were removed in 2023 and the Application Site has become vacant since then**. All of these uses are not identified with land contamination potential. The selected aerial photos showing the historical conditions of the Application Site are shown in **Appendix 1.2**. Therefore, there would be no land contamination concern associated with development in these areas. Thus, land contamination has been scoped out from this EA Report.
- 1.4.4 As the use of the proposed development is domestic in nature, which is non-polluting, with proper connection of drainage and sewerage system and regular disposal of general refuse, no adverse water quality and waste management impacts are expected during the operation phase. Thus, operation phase water quality and waste management impacts have been scoped out from this EA Report.



## 2. AIR QUALITY

### 2.1 Introduction

2.1.1 This section assesses and addresses the potential air quality impacts associated with the proposed residential development at the Application Site.

### 2.2 Legislation, Standards, Guidelines and Criteria

#### ***Air Pollution Control (Construction Dust) Regulation***

2.2.1 Made under Section 43 of the Air Pollution Control Ordinance (APCO), this Regulation defines notifiable and regulatory works for achieving the purpose of dust control for a number of activities. The Regulation requires that any notifiable work shall give advance notice to EPD, and the Contractors shall ensure that the notifiable and regulatory works are carried out in accordance with the Schedule of the Regulation. Dust control and suppression measures are also provided in the Schedule.

2.2.2 The construction works for the Proposed Development are both regulatory and notifiable works due to activities including material stockpiling and dusty material handling as potential sources of fugitive dust emissions as detailed under Parts I to IV of the Schedule on Dust Control Requirements.

#### ***Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation***

2.2.3 The Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, which aims to control emissions from non-road mobile machinery (NRMMs) to improve air quality, became effective on 1 June 2015. NRMMs include non-road vehicles, as well as mobile machines and equipment (regulated machines) such as crawler cranes, excavators and air compressors.

2.2.4 Under the regulation, regulated machines have to comply with the Stage IIIA emission standards of the European Union (EU). It also requires all regulated machines sold or leased for use in Hong Kong to bear an approval or exemption label issued to them by the EPD, started from 1 September 2015. It restricts specified activities and locations including construction sites, designed waste disposal facilities and specified processes to use only NRMMs that bear an approval or exemption label issued to them by the EPD, with effect from 1 December 2015.

#### ***Hong Kong Planning Standards and Guidelines (HKPSG)***

2.2.5 Table 3.1 of Chapter 9 (Environment) of Hong Kong Planning Standards and Guidelines (HKPSG) (extracted as **Table 2.1** below) set out the minimum horizontal buffer distance required between kerb side of roads and air sensitive uses for different types of road, and the buffer distance required between industrial areas with chimneys or construction activities and air sensitive uses.

**Table 2.1 Guidelines on Usage of Open Space Site**

Pollution Source	Parameter	Buffer Distance	Permitted Uses
Road and Highways	<i>Type of Road</i>		
	Trunk Road and Primary Distributor	>20m	Active and passive recreation uses
		3-20m	Passive recreational uses
	District Distributor	<3m	Amenity areas
	District Distributor	>10m	Active and passive recreation uses
<10m		Passive recreational uses	

Pollution Source	Parameter	Buffer Distance	Permitted Uses
	Local Distributor	>5m	Active and passive recreation uses
		<5m	Passive recreational uses
	Under Flyovers		Passive recreational uses
Industrial Areas	<i>Difference in Height between Industrial Chimney Exit and the Site</i>		
	<20m	>200m	Active and passive recreation uses
		5-200m	Passive recreational uses
	20-30m (*)	>100m	Active and passive recreation uses
		5-100m	Passive recreational uses
	30-40m	>50m	Active and passive recreation uses
		5-50m	Passive recreational uses
>40m	>10m	Active and passive recreation uses	
Construction and earth moving Activities	-	<50m	Passive recreational uses
	-	>50m	Active and passive recreation uses

Remarks:

- In situations where the height of chimneys is not known, use the set of guidelines marked with an asterisk for preliminary planning purpose and refine as and when more information is available.
- The buffer distance is the horizontal, shortest distance from the boundary of the industrial lot, the position of existing chimneys or the edge of road kerb, to the boundary of open space sites.
- The guidelines are generally applicable to major industrial areas but NOT individual large industrial establishments which are likely to be significant air pollution sources. Consult EPD when planning open space sites close to such establishments.
- Amenity areas are permitted in any situation.

2.2.6 Section 3.3.10 of the HKPSG recommends that a buffer distance of at least 200m from air sensitive uses should be provided for odour sources.

### 2.3 Air Sensitive Receivers (ASRs)

2.3.1 Air Sensitive Receivers (ASRs) have been identified in accordance with the HKPSG and Annex 12 of the EIAO-TM.

2.3.2 The existing ASRs are identified with reference to the latest information provided on the survey maps, Outline Zoning Plan, topographic maps, aerial photos and land status. The first layer of existing ASRs located closest to the Application Site have been identified as the representative ASRs. Details of the representative ASRs are summarised in **Table 2.2** and indicated in **Figure 2.1**.

**Table 2.2 Summary of Representative ASRs**

ASR ID	Descriptions	Use	No. of Storeys	Approximate Minimum Horizontal Distance to Project Site (m)
<b>Existing ASRs</b>				
A1	Deep Bay Grove	Residential	3	<5
A2	Village Houses and Temporary Structures along Kau Nam Street and Fui Yip Street	Residential	1-3	<5

ASR ID	Descriptions	Use	No. of Storeys	Approximate Minimum Horizontal Distance to Project Site (m)
A3	Village Houses and Temporary Structures near Hang Hau Tsuen	Residential	1-3	<5
A4	Factory of 浩華	Industrial	N/A	<5
<b>Planned ASR</b>				
A-P1	Proposed Development	Residential	3 – 26	N/A

2.3.3 The proposed development is an air sensitive receiver. The potential air quality impacts affecting the proposed development are identified and discussed below.

## 2.4 Air Quality Impact Assessment

### **Construction Phase**

2.4.1 During the construction of the proposed residential development, potential air quality impact on the nearby existing ASRs is related to dust nuisance from material handling, wind erosion of exposed area, gaseous emissions (sulphur dioxide (SO<sub>2</sub>) and nitrogen dioxide (NO<sub>2</sub>)) and PM emissions (respirable suspended particulates (PM<sub>10</sub>) and fine suspended particulates (PM<sub>2.5</sub>)) from construction equipment and vehicles.

2.4.2 The total area of the Application Site is about 20,455 m<sup>2</sup>. The scale of excavation work due to basement construction and foundation work is small and localised. With the implementation of dust control measures recommended in **Section 2.5**, fugitive dust emissions would be controlled and no adverse dust impact onto the nearby existing ASRs is expected.

2.4.3 Given the limited number of construction plant required on-site for a development of this scale, the associated gaseous and PM emissions are expected to be limited. Nonetheless, requirements stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation will be followed to control potential emissions from non-road mobile machinery during construction phase. Therefore, the air quality impact arising from gaseous and PM emissions by construction plants is considered minimal.

### **Operation Phase**

2.4.4 Since the proposed development is for residential use, there will be no particular air pollution sources anticipated during operation of the proposed development. Proper refuse collection points will be provided and away from residential area as far as possible, and collection by licensed contractor on regular basis. The potential air quality impacts on the proposed development are discussed below.

### **Vehicular Emissions**

2.4.5 Vehicular emissions from the adjacent roads could be a potential source of air pollution affecting the proposed development.

2.4.6 Deep Bay Road and the access road in the immediate vicinity of the Application Site are categorised as Local Distributors (LD). Endorsement record from Transport Department on the road category is appended in **Appendix 2.3**. According to **Table 2.1**, a buffer distance of >5m is required between the kerb side of a LD and the air sensitive uses.

- 2.4.7 Building setback of more than 5m from road kerb of the access road and Deep Bay Road has been incorporated into the design of the proposed development (**Figure 2.2** refers). No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and active recreational uses in the open area, shall be located within the 5m buffer zone. As the Application Site has incorporated adequate setback distance and can satisfy the above-mentioned buffer distance requirement in HKPSG, no adverse air quality impact is therefore anticipated.
- 2.4.8 According to the recommendation of Traffic Impact Assessment of this Application, junction improvement at the junction of Tin Ying Road and Tin Wah Road is proposed (see **Appendix 2.2**). The proposed improvement will modify the turning lanes at the junction and will lead to minor setback of road kerb of westbound Tin Wah Road. According to the approved EIA Report for Hung Shui Kiu Development Area (Register No.: AEIAR-203/2016), Tin Wah Road is categorised as a District Distributor. As the scale of improvement work is small and there are no air sensitive receivers identified within 10m of the road kerb modification location, no adverse air quality impact is anticipated. It should be noted that the junction improvement works is a recommendation and should be subject to further review in view of the ongoing studies for the HSK/HT NDA development and the Tin Wah Road Public Housing Site development carried out by CEDD. The design and responsible party for the improvement work is subject to the findings of the ongoing development studies in the area.

#### ***Odour from Sewage Pumping Station***

- 2.4.9 Lau Fau Shan Sewage Pumping Station (LFS SPS), which is located at approximately 130m to the southeast of the Application Site as shown in **Figure 2.3**, is a source of potential odour impact. Based on the site visits conducted in July 2021, odour was not detected near the LFS SPS or along Deep Bay Road. Odour or air nuisances arising from the nearby brownfield operations, godown, workshops or BBQ site were not identified. As advised by the Drainage Services Department (DSD) (see **Appendix 2.1**), LFS SPS has been installed and operated with a deodorising system at the exhaust outlet with odour removal efficiency of 99.5%. No odour complaint record has been received. Therefore, adverse odour impact on the proposed development is not anticipated.

#### ***Industrial Emissions***

- 2.4.10 A chimney survey was conducted in July 2021. No active chimneys were identified within 200m of the Application Site. Air quality impact related to chimney emissions is not anticipated.

## **2.5 Mitigation Measure and Recommendations**

### ***Construction Phase***

- 2.5.1 Dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation, together with proper site management/practice and good housekeeping are required to mitigate the potential dust impacts on the nearby ASRs. Requirements stipulated in the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation will also be followed to control potential emissions from non-road mobile machinery during construction phase. "Recommended Pollution Control Clauses for Construction Contracts" available on EPD website also contains the recommended control measures to be implemented during construction. The dust control measures

detailed below shall also be incorporated into the Contract Specification where practicable as an integral part of good construction practices:

- All demolished items (including trees, shrubs, vegetation, boulders, poles, pillars, structures, debris, rubbish and other items arising from site clearance) that may dislodge dust particles shall be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition;
- Where a site boundary adjoins a road, streets or other accesses to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit;
- The working area of any excavation or earth moving operation shall be sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation so as to maintain the entire surface wet;
- Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;
- Use of frequent watering for particularly dusty construction areas and areas close to ASRs;
- Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines;
- Open stockpiles (if any) shall be avoided or covered. Prevent placing dusty material storage piles near ASRs;
- Any stockpile of dusty materials shall be either covered entirely by impervious sheeting; placed in an area sheltered on the top and the 3 sides; or sprayed with water or a dust suppression chemical so as to maintain the entire surface wet.
- Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;
- Establishment and use of vehicle wheel and body washing facilities at the exit points of the Site;
- Imposition of speed controls for vehicles on unpaved site roads, 8 km per hour is the recommended limit;
- Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;
- Every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;
- Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high-level alarm which is interlocked with the material filling line and no overfilling is allowed;
- Cement, PFA or any other dusty materials collected by fabric filters or other air pollution control system or equipment shall be disposed of in totally enclosed containers;
- Silos used for the storage of cement or dry pulverized fuel ash shall not be overfilled;

- Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system;
- The electric power supply shall be provided for on-site machinery as far as practicable and diesel generators shall be avoided to minimize the gaseous and PM emissions;
- Locate all the dusty activities away from any nearby ASRs as far as practicable; and
- Erection of higher hoarding at the locations with ASRs in immediate proximity to the project site boundary,

## 2.6 Conclusion

- 2.6.1 With the implementation of mitigation measures as defined in the Air Pollution Control (Construction Dust) regulation and good site practices as stated in **Section 2.5.1**, no adverse construction dust impact is anticipated.
- 2.6.2 Adequate building setback from the road kerb of the access road and Deep Bay Road in accordance with the buffer distance requirements stated in the HKPSG has been incorporated into the design of the proposed development. No air sensitive uses, including openable windows, fresh air intake of mechanical ventilation and active recreational uses in the open area, shall be located within the 5m buffer zone. No unacceptable air quality impact due to vehicular emissions is expected.
- 2.6.3 Considering the separation distance between the Application Site and the LFS SPS, the deodouring system installed and operated at the LFS SPS and no odour complaint record of LFS SPS received by DSD, potential odour impact on the proposed development is not anticipated.

### 3. TRAFFIC NOISE IMPACT ASSESSMENT

#### 3.1 Introduction

3.1.1 This section assesses and addresses the potential traffic noise impact on the proposed residential development at the Application Site.

#### 3.2 Assessment Criteria

3.2.1 Noise standards are recommended in Chapter 9 of the HKPSG for planning against possible road traffic noise impacts. For new residential use, as in the case of the proposed development within the Application Site, the standard for road traffic noise level expressed in terms of  $L_{10}(1 \text{ hr})$  at the typical façades of the proposed development is recommended to be 70 dB(A).

#### 3.3 Noise Sensitive Receivers for Road Traffic Noise Assessment

3.3.1 The planned residential towers within the Application Site are noise sensitive receivers (NSRs) of road traffic noise impact. Representative assessment points have been assigned to the residential units overlooking Deep Bay Road. As the Child Care Centre will be provided with central air conditioning system and does not rely on openable windows for ventilation, it is not considered an NSR for traffic noise impact assessment. The locations and details of the representative NSRs selected for assessment are provided in **Figures 3.2** and **Table 3.1** below, respectively.

**Table 3.1 Representative NSRs for Road Traffic Noise Assessment**

NSR	Description	Number of Domestic Storeys
T1_TN01	Tower 1	22
T1_TN02		
T1_TN03		
T1_TN04		
T1_TN05		
T1_TN06		
T1_TN07		
T1_TN08		
T2_TN01	Tower 2	23
T2_TN02		
T2_TN03		
T2_TN04		
T3_TN01	Tower 3	25
T3_TN02		
T3_TN03		
T4_TN01	Tower 4	25
T4_TN02		
T5_TN01	Tower 5	21
T5_TN02		

#### 3.4 Assessment Methodology

3.4.1 As discussed in **Section 3.1**, according to HKPSG, the standard for road traffic noise level expressed in terms of  $L_{10}(1 \text{ hr})$  at the typical façades of the proposed development is recommended to be 70 dB(A). The assessment is based on the prediction of the maximum  $L_{10}(1 \text{ hr})$  traffic noise level at NSRs of the proposed development due to the projected traffic on the adjacent road network for year 2045, which is considered as the maximum traffic projections within 15 years upon occupation of the proposed

development in 2030. The upgrading of Deep Bay Road project has been taken into consideration in this traffic noise impact assessment. Both traffic forecast and road alignment of the upgraded Deep Bay Road are incorporated to the assessment model. Traffic data was predicted by the project traffic consultant. The traffic forecast includes traffic flow in morning peak 07:30-08:30 and afternoon peak 17:15-18:15 scenarios. Details of information on peak hour traffic volume and percentage of heavy vehicle of the road network within the 300m assessment area provided by the Project traffic consultant is presented in **Appendix 3.1**, which represents the worst-case scenario of the projected traffic flows.

- 3.4.2 The UK Department of Transport's procedures – "Calculation of Road Traffic Noise" (CRTN) has been used in the prediction of the road traffic noise at the representative NSRs of the proposed development within the Application Site. The existing topographic details, such as the existing houses and structures near the Subject Site, have been considered in the assessment.
- 3.4.3 The noise prediction has been carried out using the *Road Noise Module 2.7.2 of Noise Map Enterprise Edition* software, which is a computerised model developed on the basis of the U.K. Department of Transport's CRTN procedures, and is acceptable to the EPD.

### 3.5 Prediction and Evaluation of Noise Impacts

- 3.5.1 With the adopted noise mitigation measures in building layout design as shown in the master layout plan, e.g., building setback and orientation, the predicted traffic noise assessment results under the unmitigated scenario at all representative NSRs would comply with the noise criterion of 70 dB(A). A summary of the predicted road traffic noise levels at the representative NSRs is provided in **Table 3.2** with details provided in **Appendix 3.2**.

**Table 3.2 Predicted Unmitigated Road Traffic Noise Levels at Representative NSRs**

NSR	Predicted Road Traffic Noise Level, L <sub>10</sub> (1-hour), dB(A) (Unmitigated)	
T1_TN01	61	63
T1_TN02	60	62
T1_TN03	61	62
T1_TN04	63	64
T1_TN05	62	64
T1_TN06	61	65
T1_TN07	65	68
T1_TN08	65	68
T2_TN01	59	63
T2_TN02	59	63
T2_TN03	59	63
T2_TN04	61	63
T3_TN01	60	62
T3_TN02	61	62
T3_TN03	60	62
T4_TN01	57	59
T4_TN02	59	61
T5_TN01	55	59
T5_TN02	55	60

- 3.5.2 As the predicted road traffic noise levels at all representative NSRs comply with the noise criterion of 70 dB(A), mitigation measures are not proposed.



- 3.5.3 It is worth to note that the assessment has not taken into account the architectural fins recommended to mitigate industrial noise impact (**Section 4** refers) as a worst-case scenario. Hence, traffic noise impact would be further reduced for residential units recommended with architectural fins.

### **3.6 Conclusion**

- 3.6.1 Noise impacts due to road traffic within 300m radius from the Application Site have been assessed. The predicted road traffic noise levels at all representative NSRs within the Application Site would comply with the noise criterion of 70 dB(A). No adverse traffic noise impact on the proposed development is anticipated.

## 4. INDUSTRIAL NOISE IMPACT ASSESSMENT

### 4.1 Introduction

- 4.1.1 This section assesses and addresses the potential industrial noise impact associated with the proposed residential development at the Application Site.

### 4.2 Government Legislation and Standards

#### Noise Control Ordinance (NCO)

- 4.2.1 The Noise Control Ordinance (NCO) provides the statutory framework for the control of fixed plant. The Technical Memorandum for the Assessment of Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM) sets the criteria, Acceptable Noise Level (ANL), for governing noise from existing fixed plant / industrial noise sources.

#### Hong Kong Planning Standards and Guidelines (HKPSG)

- 4.2.2 The NCO requires that noise impacts from existing fixed plant / industrial sources shall comply with the Acceptable Noise Levels (ANL) laid down in Table 2 of IND-TM, which is influenced by the Area Sensitivity Rating (ASR) determined by the type of area containing the NSR.
- 4.2.3 As the Application Site is located in a rural area without any Influencing Factor defined by the IND-TM, an ASR of "A" has been conservatively adopted and 60 dB(A) will be the noise criteria for day, evening time, and 50 dB(A) for night time. The ANL for ASRs "A" is depicted in **Table 4.1**.

**Table 4.1 Relevant Noise Standard for Fixed Noise Sources**

Criteria in Relevant Time Periods	Acceptable Noise Level (ANL)
Day and Evening (07:00 – 23:00)	60 dB(A)
Night (23:00 – 07:00)	50 dB(A)

- 4.2.4 In future, with the planned commercial and residential development of HSK/HT NDA being constructed along Deep Bay Road, the existing rural area setting will be changed. The type of area containing the Application Site would be considered as "Area other than those above" according to Table 1 of the IND-TM. As such, an ASR of "B", with less stringent ANL, will be more appropriate to represent the future scenario with HSK NDA implemented. Nevertheless, as the occupation of the proposed development is likely to be before the implementation of HSK/HT NDA in the area close to the Application Site, an ASR of "A" has been conservatively adopted for assessment to represent the existing and interim condition.
- 4.2.5 The ASRs proposed in this EA are intended for assessment only. Nothing in the EA shall bind the Noise Control Authority in the context of enforcement against any of the fixed plant / industrial noise sources identified and assessed in the future under the NCO.
- 4.2.6 Since the observed industrial noise sources (**Section 4.3** refers) are existing uses, the ANL criteria is relevant and has been adopted.

### 4.3 Identification of Potential Noise Impacts

#### Existing Industrial Noise Sources

- 4.3.1 Within 300m radius from the boundary of the Application Site, a few existing industrial operations, including logistic centers, warehouses, open storage sites, vehicle repair workshops have been identified as potential sources of industrial noise based on the site surveys conducted in July 2021 and September 2023. Noise is generated by the use of powered mechanical equipments (PMEs). The locations of the existing industrial noise sources are indicated in Figure 4.1a. A summary of the industrial noise sources is presented in Table 4.2 and the details of the industrial noise sources are presented in Appendix 4.1. The type and number of PMEs adopted for the assessment were based on site observation. Although not all PMEs will operate together and some are intermittently used only, the noise assessment assumed all PMEs will be operating simultaneously and continuously as a worst-case scenario. Since on-site noise measurement of the sound power of the PMEs was not permitted by the site operators, the sound power level of the PMEs was referenced from similar equipment adopted in approved planning applications and EIA Reports. According to the latest site survey conducted in September 2023, most of the industrial noise sources do not have night-time operation, except S07, S09 and S13.

**Table 4.2 Summary of potential industrial noise sources**

Noise Source	Description	Operation Hours		Sound power levels, dB(A)
		Daytime/Evening	Night-time	
S01a	Welding at 浩華	Y	N	78
S01b	Forklift at 浩華	Y	N	91
S02a	Lorry movement at Open Storage for Goods	Y	N	99
S02b	Lorry movement at 開利貨倉	Y	N	99
S03a	Forklift at 開利貨倉	Y	N	91
S03b	Welding at 浩洲	Y	N	78
S04a	Forklift at 浩洲	Y	N	91
S04b	Mobile Crane at 浩洲	Y	N	97
S04c	Lorry movement at 千海物流	Y	N	99
S05a	Forklift at 千海物流	Y	N	91
S05b	Forklift at 軒威沙倉	Y	N	91
S06a	Lorry movement at 軒威沙倉	Y	N	99
S06b	Lorry movement at 合權發展(流浮山)有限公司	Y	N	99
S07a	Forklift at 合權發展(流浮山)有限公司	Y	Y	91
S07b	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	Y	Y	99
S08a	Forklift at Hong Kong Changxing Metal Electronic Ltd	Y	N	91
S08b	Lorry movement at 新環球	Y	N	99
S09a	Mobile Crane at 華興重櫃場	Y	Y	97
S09b	Lorry movement at 華興重櫃場	Y	Y	99
S10a	Tyre Pumping at MMC Motor	Y	N	89
S10b	Hammering at MMC Motor	Y	N	87
S11a	Lorry movement at 泓豐	Y	N	99
S11b	Forklift at 泓豐	Y	N	91
S11c	Lorry movement at 全逸	Y	N	99

Noise Source	Description	Operation Hours		Sound power levels, dB(A)
		Daytime/ Evening	Night-time	
S12a	Forklift at 全逸	Y	N	91
S12b	Welding at 浩華	Y	N	78
S13a	Forklift at 浩華	Y	Y	91
S13b	Forklift at Open Storage for Goods	Y	Y	91

4.3.2 Noise was not detected outside Lau Fau Shan Sewage Pumping Station and thus it is not identified as a source for assessment.

4.3.3 As the area bounded by Lau Fau Shan Road and Deep Bay Road falls within the HSK/HT NDA, some of the current industrial operations will be replaced by planned commercial and residential uses in future. Hence, impact from some industrial noise sources identified for assessment in this EA will no longer exist in future following land resumption and development under Hung Shui Kiu/Ha Tsuen NDA Development.

#### Planned Fixed Noise Sources

4.3.4 Central fresh air supply system together with split type air conditioning system would be adopted for the Child Care Centre. Any fresh air supply/exhaust would be designed to face away from noise sensitive receivers at nearby premises (i.e., Deep Bay Grove). The design of any fixed noise source will comply with the noise standards stipulated in Chapter 9 of the HKPSG and the Noise Control Ordinance. However, as the Proposed Development is still at an early stage, the proposed location and design of any planned fixed noise source as well as the required mitigation measures (if any) are subject to further study during the detailed design stage.

#### 4.4 Noise Sensitive Receivers for Industrial Noise Assessment

4.4.1 The planned residential towers within the Application Site are NSRs of potential industrial noise impact. Representative assessment points have been assigned to the residential units overlooking the industrial premises. The NSRs are selected at 1m away from the façade of openable window for ventilation purpose. As the Child Care Centre will be provided with central fresh air supply system together with split type air conditioning system and do not rely on openable windows for ventilation, it is not considered an NSR for industrial noise impact assessment. The locations and details of the representative NSRs selected for assessment are provided in **Figures 4.1b** and **Table 4.3** below, respectively.

**Table 4.3 Representative NSRs for Industrial Noise Assessment**

NSR	Description
FN-T1-01	Tower 1
FN-T1-02	Tower 1
FN-T1-03	Tower 1
FN-T2-01	Tower 2
FN-T2-02	Tower 2
FN-T3-01	Tower 3
FN-T3-02	Tower 3
FN-T4-01	Tower 4
FN-T4-02	Tower 4

## 4.5 Assessment Methodology

- 4.5.1 As the industrial facilities were not accessible for site measurement, information such as types of noise source and Sound Power Levels (SWLs) of noisy equipment were referenced from information of similar operation adopted in approved planning applications and EIA Report (**Appendix 4.1** refers). Some facilities were operating with their gate shut or only a part of their operation could be viewed from outside the facilities. The potential type of noise sources and SWLs were assumed to be same as other facilities of similar operation.
- 4.5.2 To predict the noise level at the future noise sensitive uses, the following correction factors have been accounted for:
- Distance correction: based on the shortest horizontal distance between the identified noise sources and the NSR, the distance correction is projected based on standard acoustical principle for point source;
  - As observed during the site visits, the noise sources were found to operate occasionally. Although it is unlikely that all the identified industrial sources will be in operation simultaneously, to be conservative, it has been assumed that all the identified noise sources are in operation at the same time, which also represents a worst-case scenario. Noise sources are assumed to operate continuously instead of in occasion as observed onsite and all noise sources are regarded as point source;
  - Façade correction: a +3dB(A) correction is applied to account for noise reflection from façade; and
  - Path difference: path difference is considered in the mitigated scenario for NSRs protected by architectural fins, and their line of sight to the noise source can be shielded by the proposed architectural fins under the mitigated scenario. It is calculated based on the barrier corrections stated in ISO 9613.
- 4.5.3 Corrected Noise Level (CNL) at the representative NSRs of the proposed development can be calculated by applying the above corrections to the measured SWL of the noise sources in accordance with the following formula:

$$\text{CNL} = \text{SWL} + \text{C}_{\text{dist}} + \text{C}_{\text{fac}} + \text{C}_{\text{bar}} + \text{C}_{\text{PD}} \text{ (for mitigated scenario only)}$$

Where,

**CNL** is the corrected noise level at the Assessment Point in dB(A)

**SWL** is the sound power level of the industrial plant in dB(A)

**C<sub>dist</sub>** is the distance correction in dB(A) in accordance with the Technical Memorandum on Noise from Construction Works Other than Percussive Piling

**C<sub>fac</sub>** is façade correction, +3 dB(A)

**C<sub>bar</sub>** is screening correction, -5 dB(A) for partial screening and -10 dB(A) for complete screening by structure

**C<sub>PD</sub>** is the path difference offered by the architectural fins for mitigated scenario only.

## 4.6 Prediction and Evaluation of Noise Impacts

### Industrial Noise Assessment Results

4.6.1 Based on the assumptions mentioned above and information of noise sources in **Section 4.3**, noise level estimation for the selected NSRs at the Application Site has been conducted. Noise mitigation measures which have already been incorporated in the design of the layout considered in the unmitigated scenario include the followings:

- Single aspect design for the eastern façade of Tower 1 (adjacent to a steel workshop) to avoid direct line of sight from residential tower to the industrial noise source; and
- Orientate the peripheral façades to be north and south facing to minimise view angle to the industrial noise sources.

4.6.2 The predicted industrial noise levels at the representative NSRs are summarised in **Table 4.4**. The details are presented in **Appendix 4.2**.

**Table 4.4 Predicted Unmitigated Industrial Noise Levels at Representative NSRs**

NSR	Predicted Unmitigated Noise Level, dB(A)	
	Day and Evening (07:00 – 23:00)	Night (23:00 – 07:00)
FN-T1-01	<b>65</b>	<b>51</b>
FN-T1-02	57	46
FN-T1-03	<b>64</b>	48
FN-T2-01	<b>61</b>	<b>53</b>
FN-T2-02	60	<b>52</b>
FN-T3-01	55	47
FN-T3-02	54	47
FN-T4-01	54	<b>52</b>
FN-T4-02	51	47
<b>Criteria</b>	<b>60</b>	<b>50</b>

Note:

(a) Value in **bold** denotes exceedance of criteria.

4.6.3 Exceedance of daytime criteria has been predicted for FN-T1-01, FN-T1-03 and FN-T2-01 while exceedance of night-time criteria has been predicted for FN-T1-01, FN-T2-01, FN-T2-02 and FN-T4-01. Mitigation in the form of 1 and 1.5m architectural fins are recommended. The locations and extents of the architectural fin are indicated in **Figure 4.2**.

4.6.4 Taking into account the provision of architectural fins, the predicted mitigated industrial noise levels at the representative NSRs are summarised in **Table 4.5**. The details are presented in **Appendix 4.2**.

**Table 4.5 Predicted Mitigated Industrial Noise Levels at Representative NSRs**

NSR	Predicted Mitigated Noise Level, dB(A)	
	Day and Evening (07:00 – 23:00)	Night (23:00 – 07:00)
FN-T1-01	54	45
FN-T1-02	57	46
FN-T1-03	53	42

NSR	Predicted Mitigated Noise Level, dB(A)	
	Day and Evening (07:00 – 23:00)	Night (23:00 – 07:00)
FN-T2-01	59	49
FN-T2-02	58	48
FN-T3-01	55	47
FN-T3-02	54	47
FN-T4-01	53	50
FN-T4-02	51	47
<b>Criteria</b>	<b>60</b>	<b>50</b>

- 4.6.5 With the proposed mitigation measures incorporated in the layout, the calculated industrial noise levels at all NSRs comply with the noise criteria. No adverse industrial noise impact is anticipated at the Application Site with the provision of mitigation measures.
- 4.6.6 It is worth noting that following the implementation of HSK/HT NDA, the majority of the existing industrial uses along Deep Bay Road and Lau Fau Shan Road will be removed and replaced by commercial and residential developments. Hence, the noise impact generated by the industrial operations will be reduced in future.

#### 4.7 Conclusion

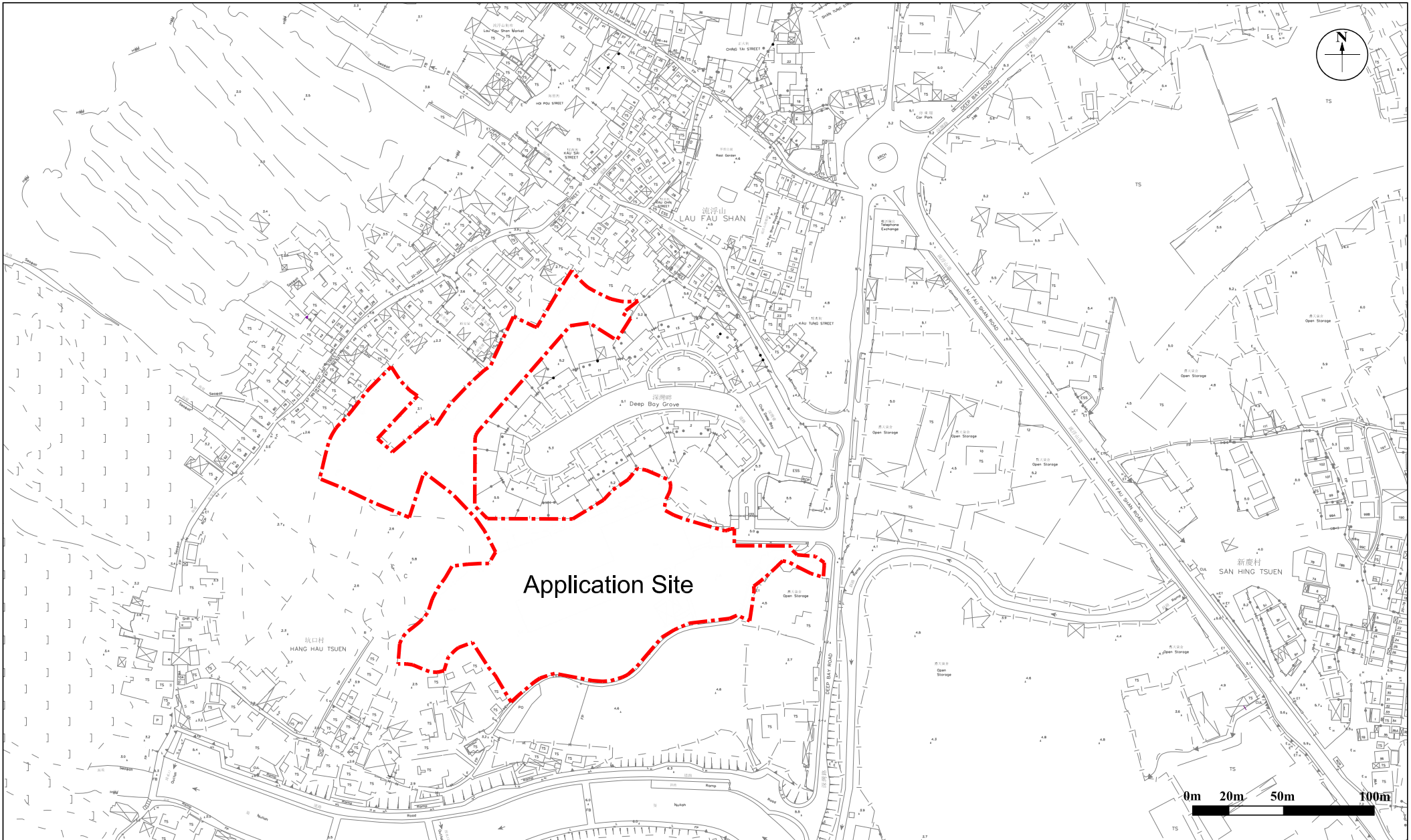
- 4.7.1 Noise impacts due to existing industrial noise sources within 300m radius of the Application Site have been examined. With the implementation of the proposed noise mitigation measures, i.e., acoustic fins, no adverse industrial noise impact on the proposed development is anticipated.
- 4.7.2 Central fresh air supply system together with split type air conditioning system would be adopted for the Child Care Centre. With conformed design and provision of adequate mitigation measures for any planned fixed noise sources (e.g. fresh air supply/exhaust), no adverse noise impact is anticipated from the planned fixed noise sources.

## **5. OVERALL CONCLUSION**

- 5.1.1 The potential air quality and noise impacts that may arise from the proposed development have been assessed.
- 5.1.2 For air quality impact, construction phase impact, vehicular emission impact, odour from the proposed SPS, and industrial emission impact have been reviewed. With mitigation measures, such as dust control measures, proper site management/practice and good housekeeping, peripheral setback from the site boundaries and provision of adequate buffer distances, incorporated into the design of the development, no adverse air quality impact to the proposed development is anticipated.
- 5.1.3 For noise impact, road traffic noise and industrial noise impacts have been reviewed. With the adoption of the proposed noise mitigation measures including single aspect design and provision of architectural fins, the predicted noise levels at the proposed development due to the road traffic and industrial noise can fully comply with the relevant noise criteria, and no unacceptable impact is therefore anticipated. With conformed design and provision of adequate mitigation measures for any planned fixed noise sources, no adverse noise impact is anticipated from the planned fixed noise sources.



## Figures



**Figure:** 1.1

**Title:** Site Location and the Environ

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

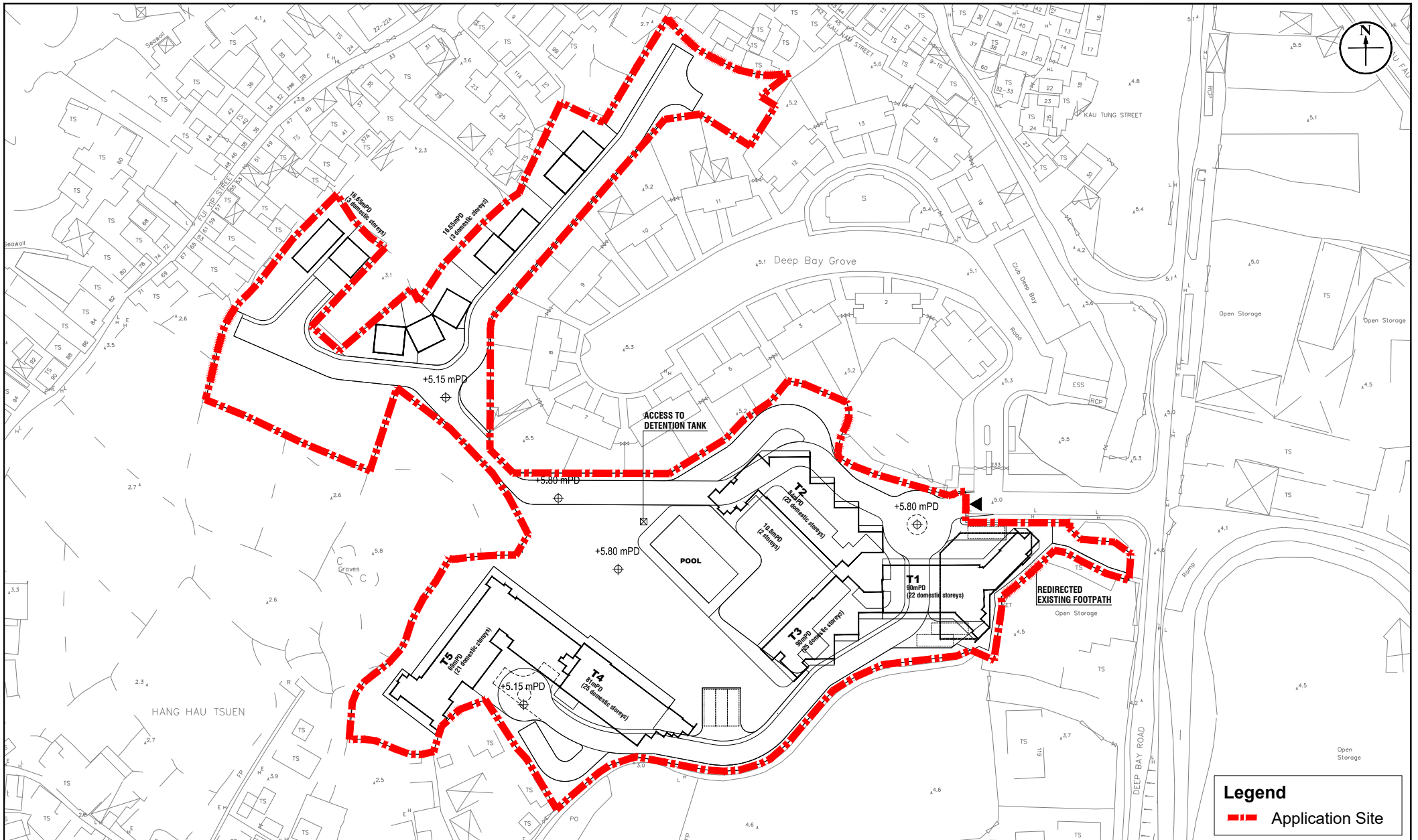


Drawn by: YM

Checked by: KY

Rev.: 2.0

Date: Dec 2021



**Figure:** 1.2

**Title:** Master Layout Plan of Indicative Scheme

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

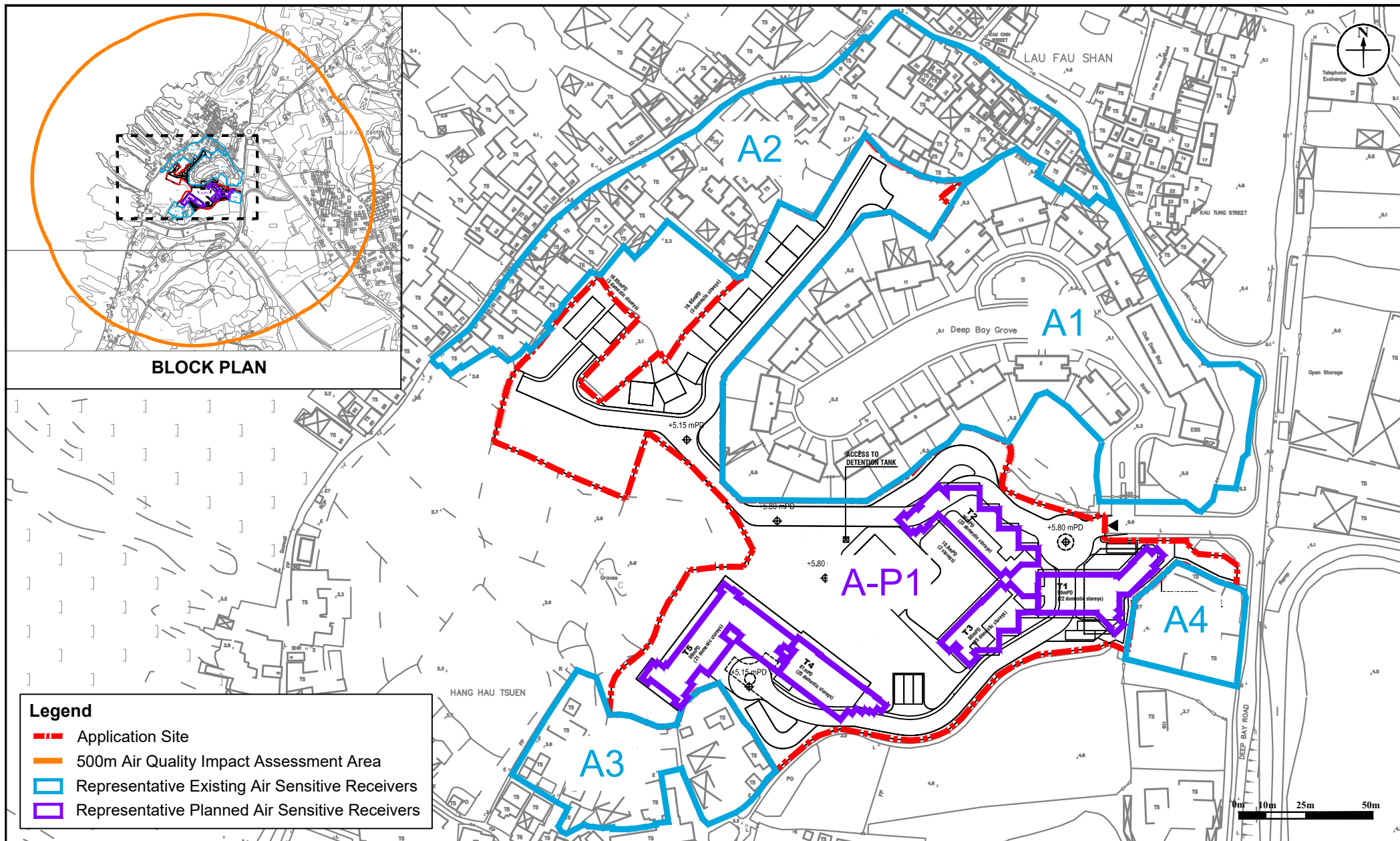
**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Apr 2024



**Figure:** 2.1

**Title:** Location of Representative Air Sensitive Receivers

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

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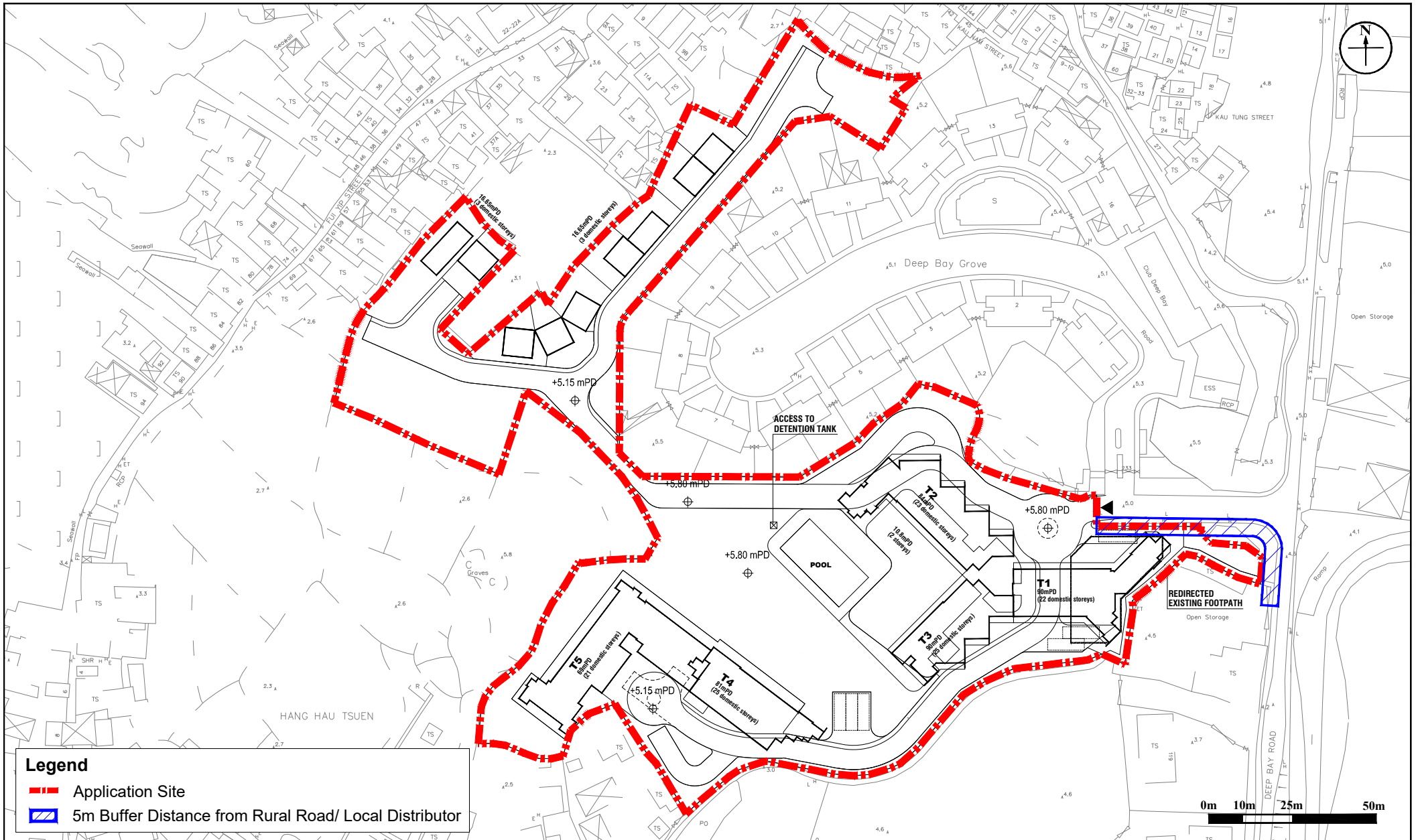
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Date: Apr 2024

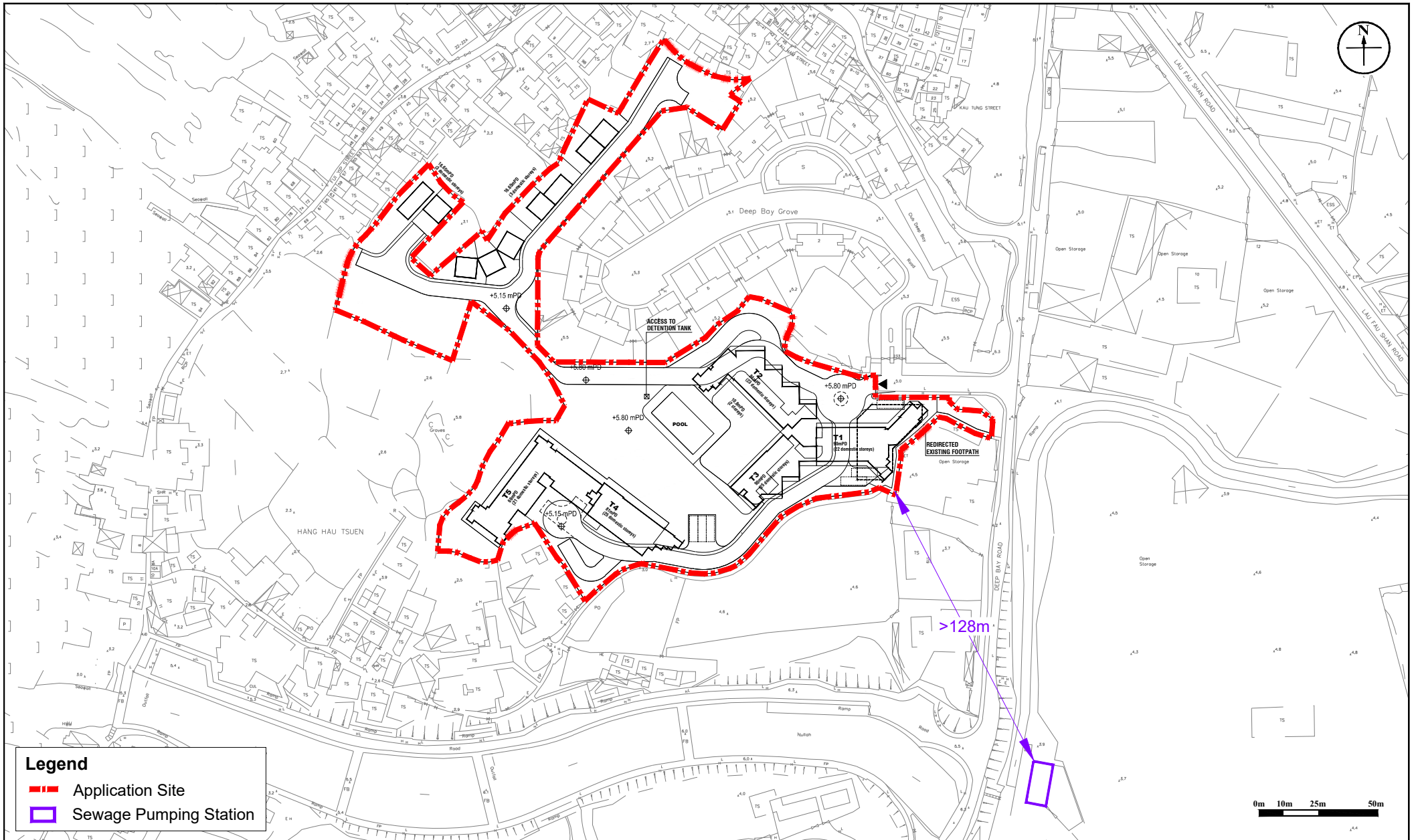




**Legend**

- - - Application Site
- 5m Buffer Distance from Rural Road/ Local Distributor

<b>Figure:</b> 2.2		<b>RAMBOLL</b>
<b>Title:</b> Buffer Distance from Surrounding Road Networks		Drawn by: YM
		Checked by: KY
<b>Project:</b> Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories		Rev.: 6.1
		Date: Apr 2024



**Legend**

- - - Application Site
- Sewage Pumping Station

**Figure:** 2.3

**Title:** Location of Lau Fau Shan Sewage Pumping Station

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

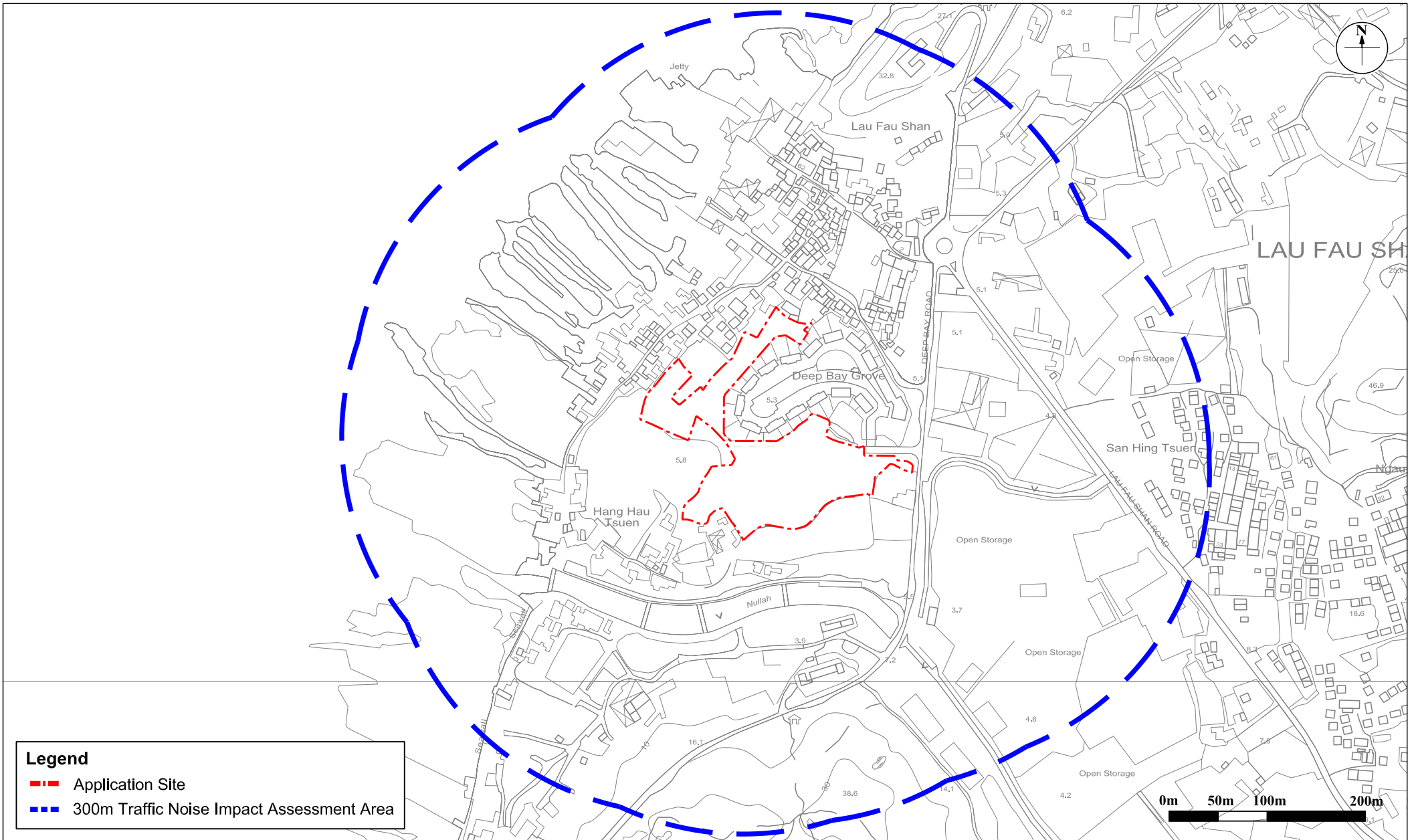
**RAMBOLL**

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Checked by: KY

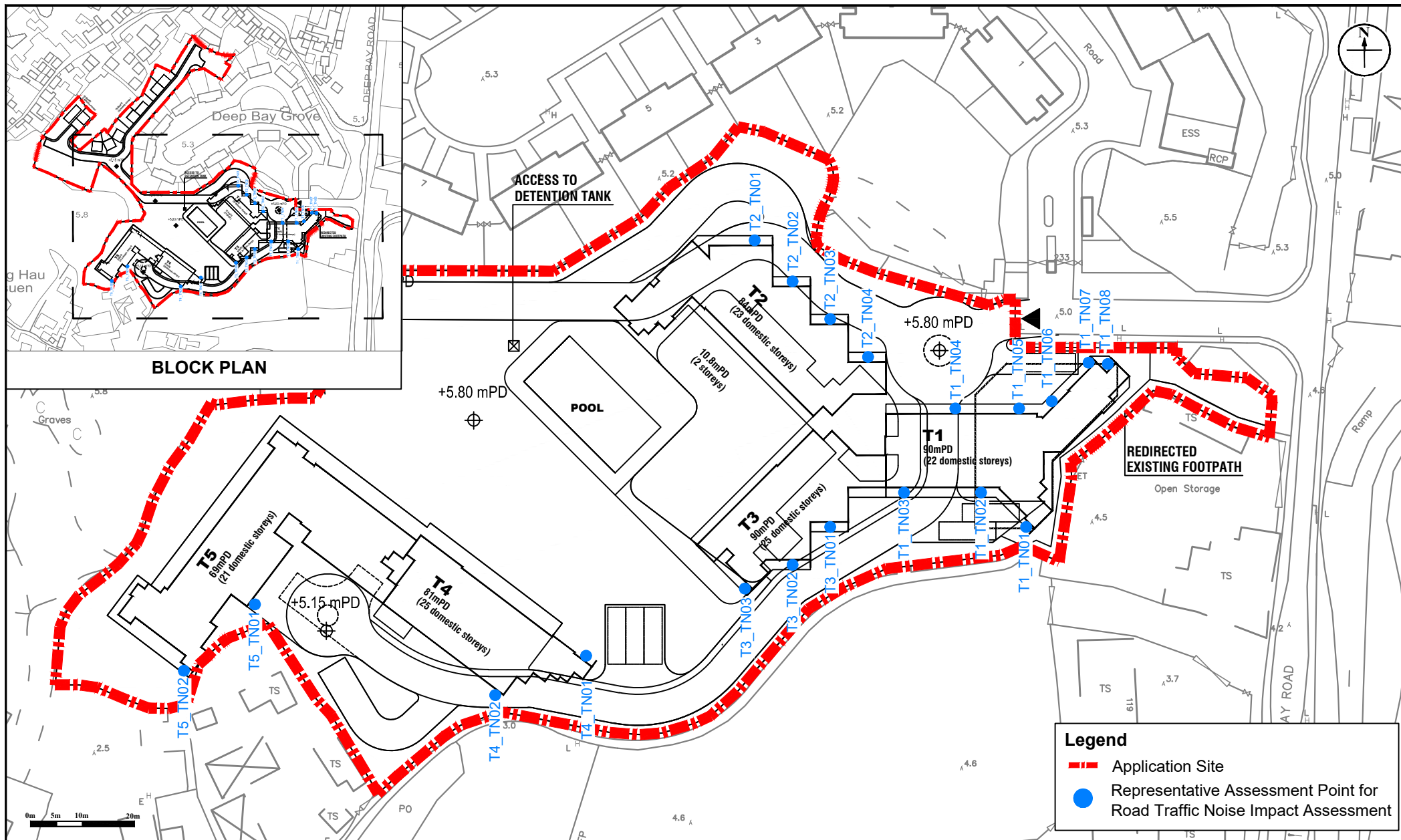
Rev.: 6.1

Date: Apr 2024



<b>Figure:</b> 3.1		<b>RAMBOLL</b>	
<b>Title:</b> Traffic Noise Impact Assessment Area		Drawn by: YM	
		Checked by: KY	
<b>Project:</b> Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories		Rev.: 6.0	
		Date: Mar 2024	





**Figure:** 3.2

**Title:** Representative NSRs for Traffic Noise Impact Assessment

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

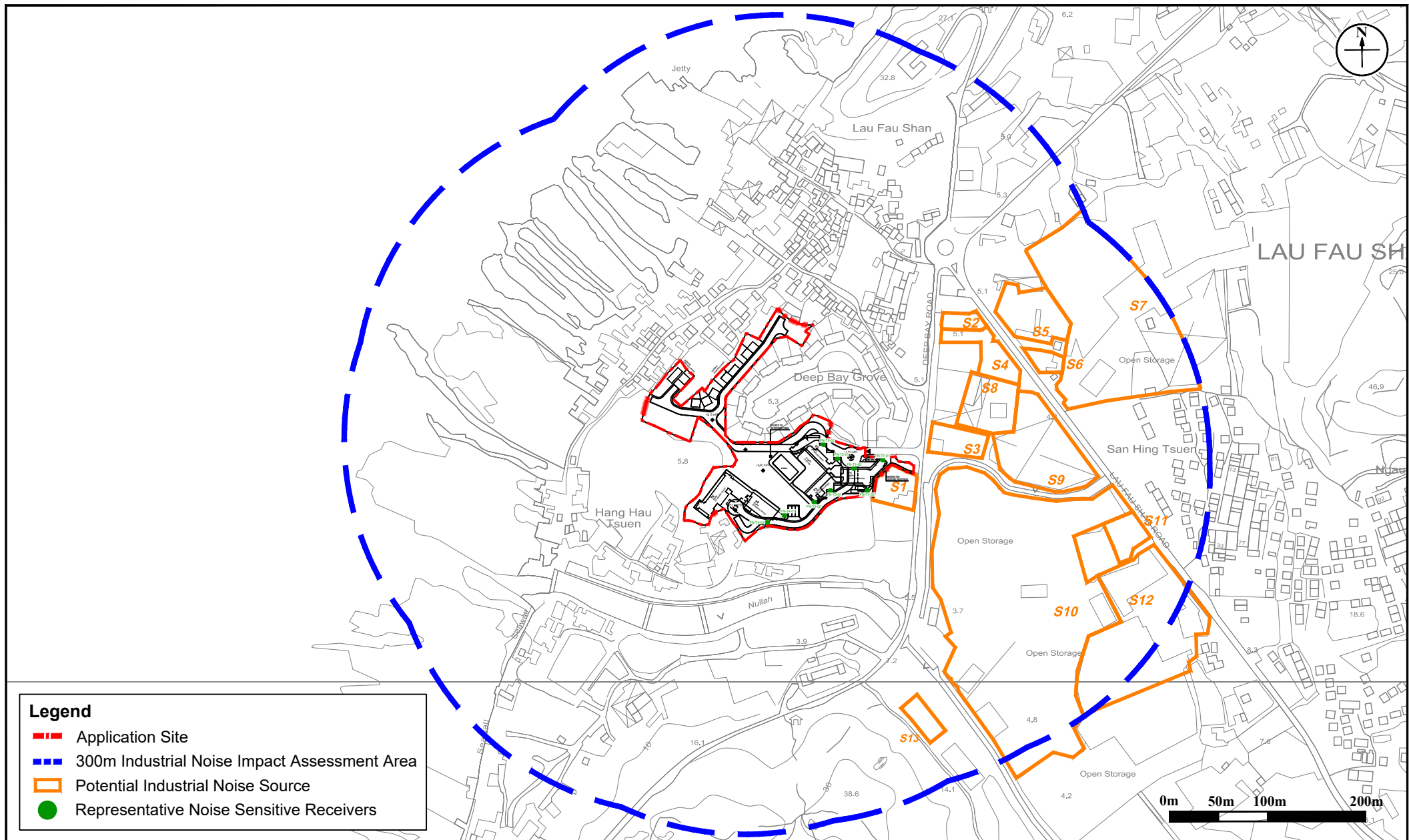
Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Apr 2024





**Legend**

- ▬ Application Site
- - - 300m Industrial Noise Impact Assessment Area
- ▭ Potential Industrial Noise Source
- Representative Noise Sensitive Receivers

**Figure:** 4.1a

**Title:** Location of Industrial Noise Sources and Representative NSRs (Sheet 1 of 2)

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

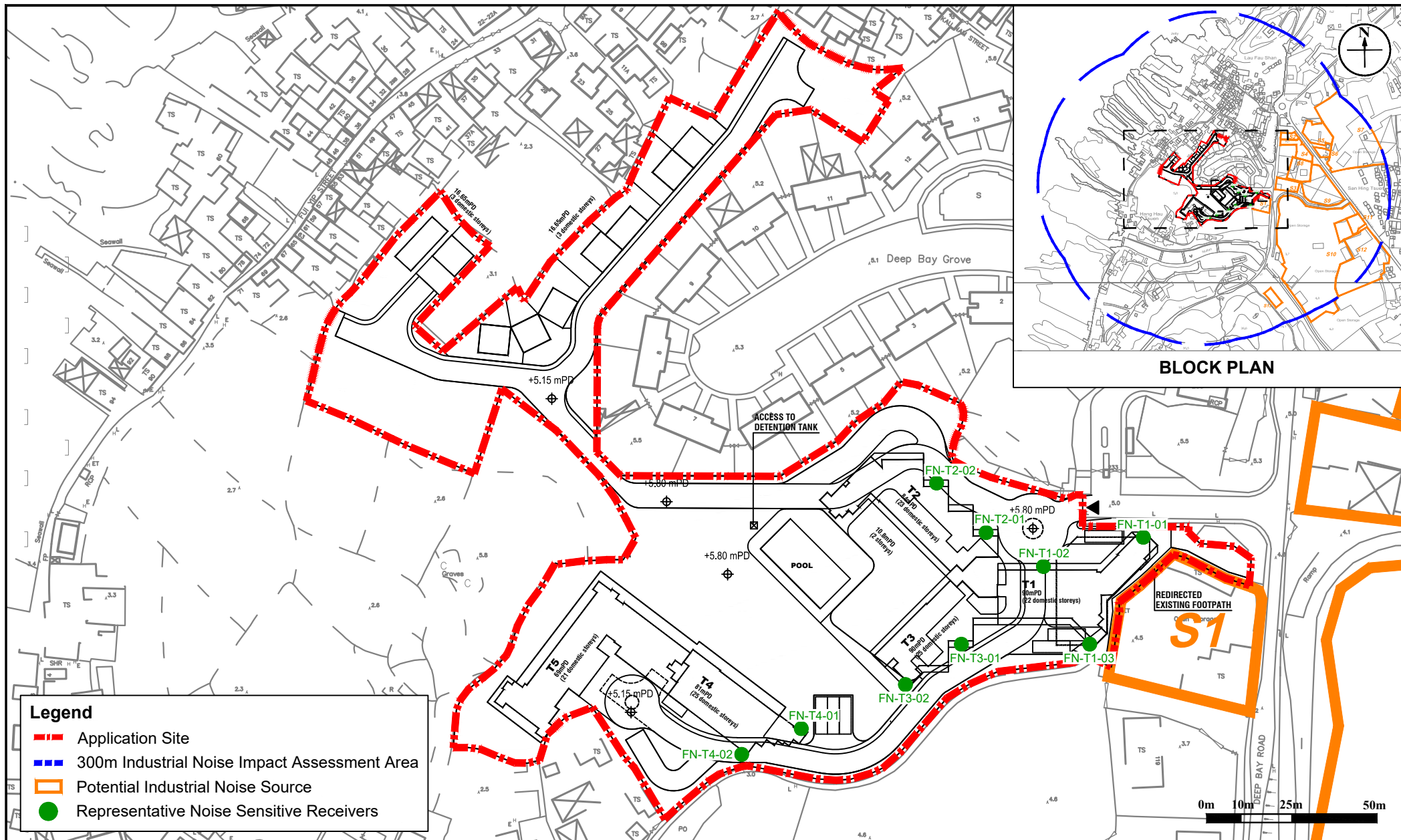
**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Apr 2024



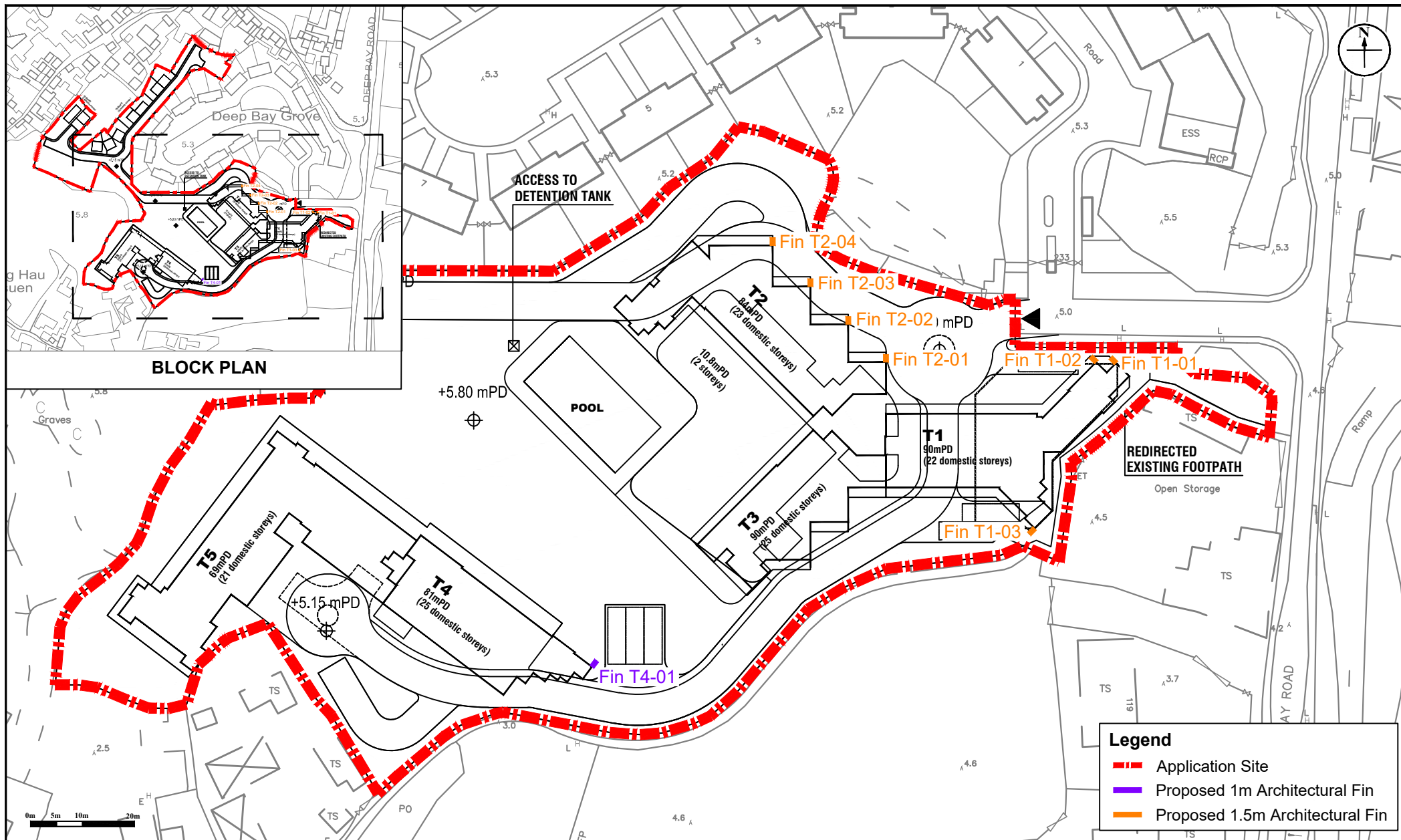
**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Apr 2024



**Figure:** 4.2

**Title:** Recommended Noise Mitigation Measures (Architectural Fins)

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

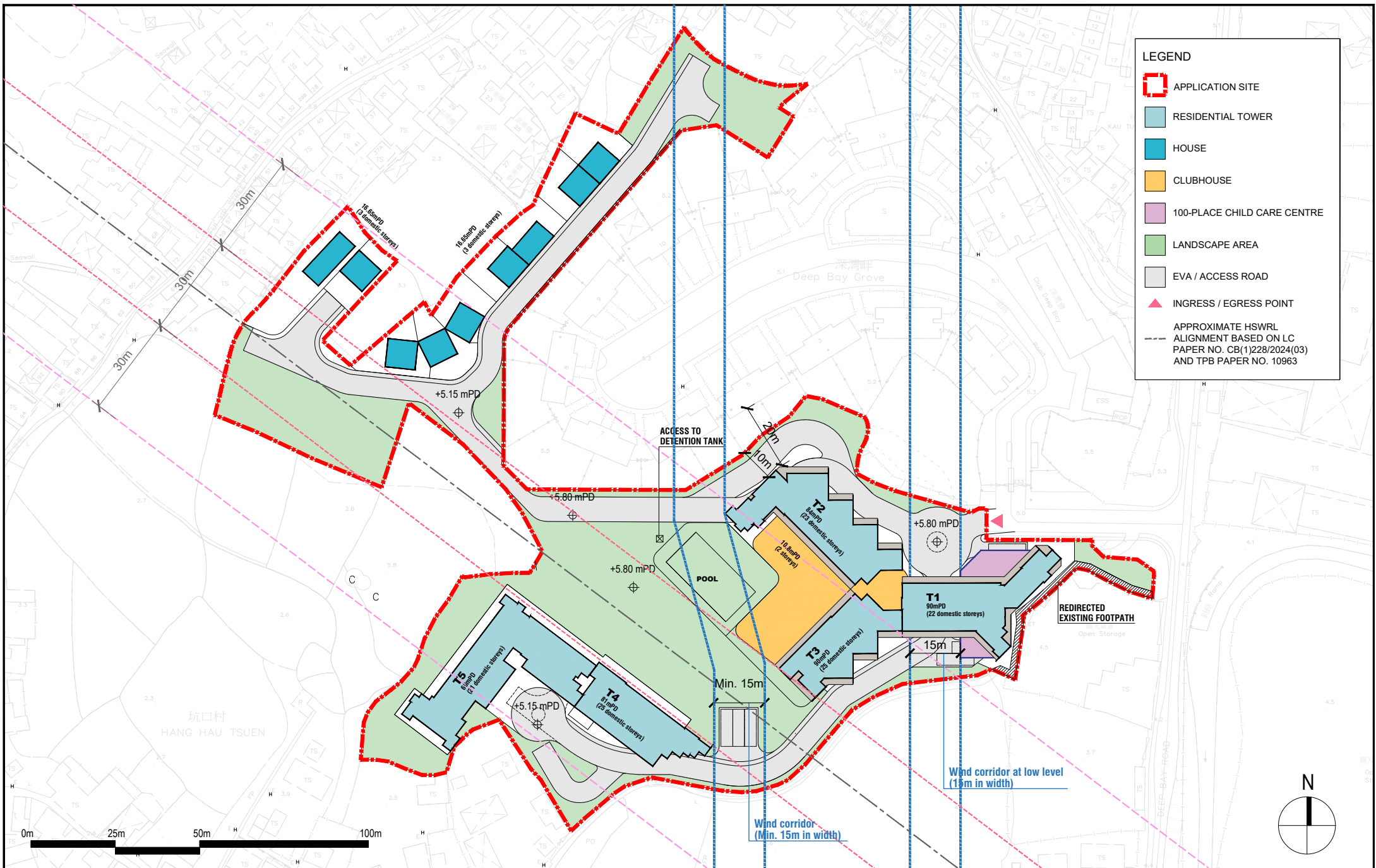
Date: Apr 2024

## Appendices

## **Appendix 1.1**

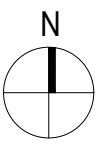
### **Detailed Layout of the Proposed Development**





**LEGEND**

- APPLICATION SITE
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT
- APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## REVISED SCHEMATIC DESIGN




MAR 2024  
1:1000 (A3)

LEGEND

 APPLICATION SITE

 CARPARK / E&M

 APPROXIMATE HSWRL  
ALIGNMENT BASED ON LC  
PAPER NO. CB(1)228/2024(03)  
AND TPB PAPER NO. 10963






Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

### INDICATIVE BASEMENT PLAN (B3)



LEGEND

-  APPLICATION SITE
-  CARPARK / E&M
-  APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

INDICATIVE BASEMENT PLAN (B2)



MAR 2024  
1:1000 (A3)




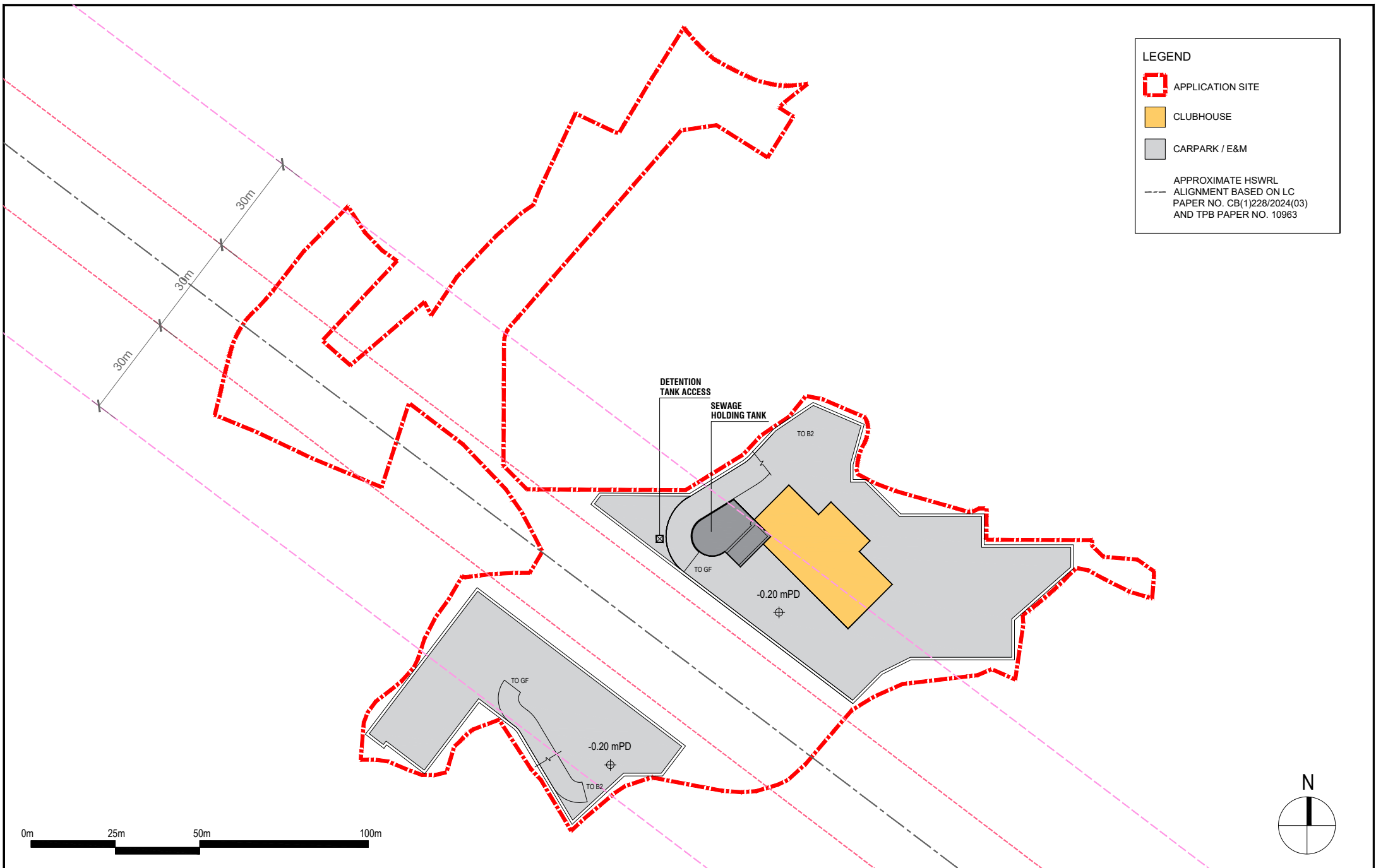
LEGEND

 APPLICATION SITE

 CLUBHOUSE

 CARPARK / E&M

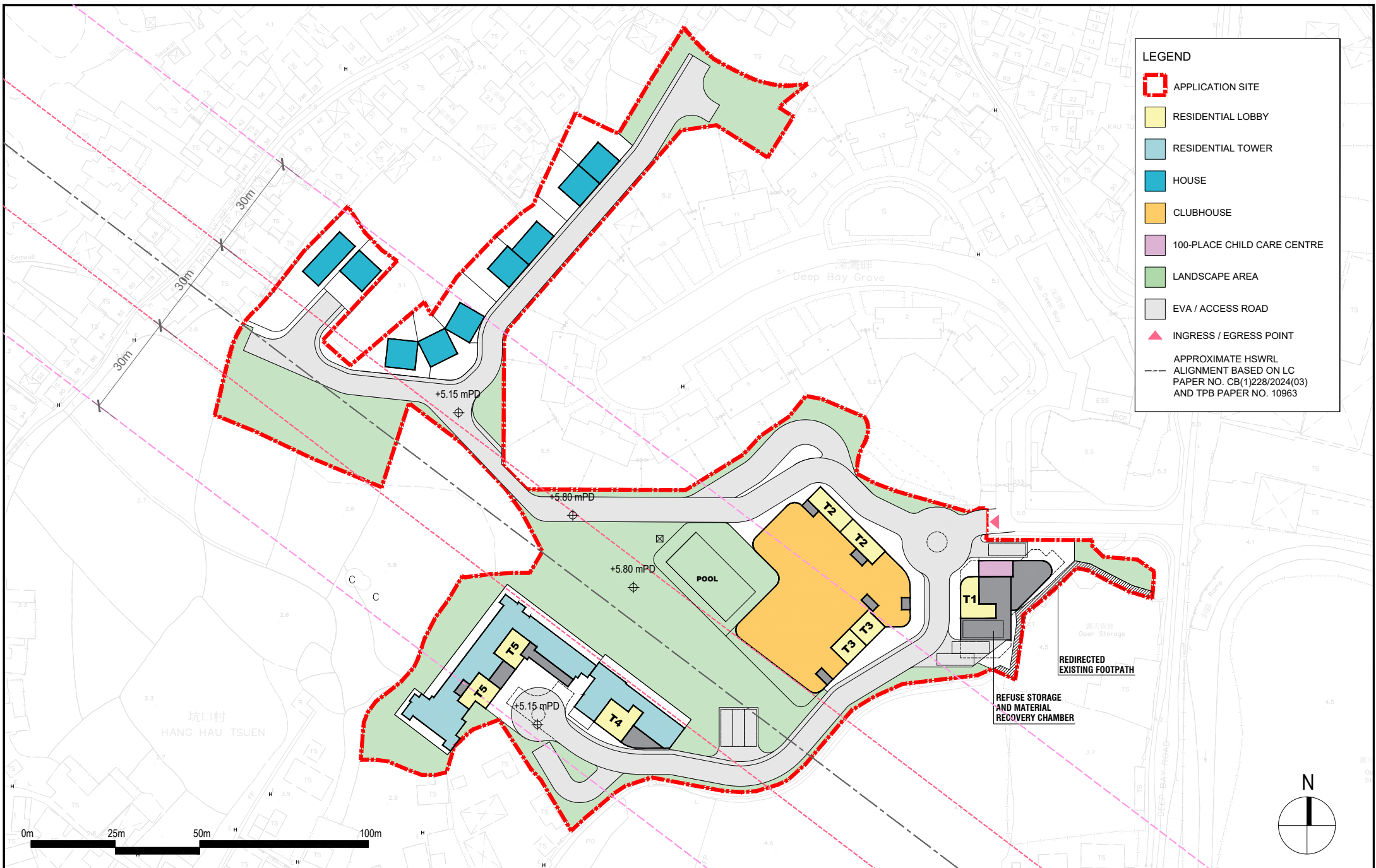
 APPROXIMATE HSWRL  
ALIGNMENT BASED ON LC  
PAPER NO. CB(1)228/2024(03)  
AND TPB PAPER NO. 10963



Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

# INDICATIVE BASEMENT PLAN (B1)





**LEGEND**

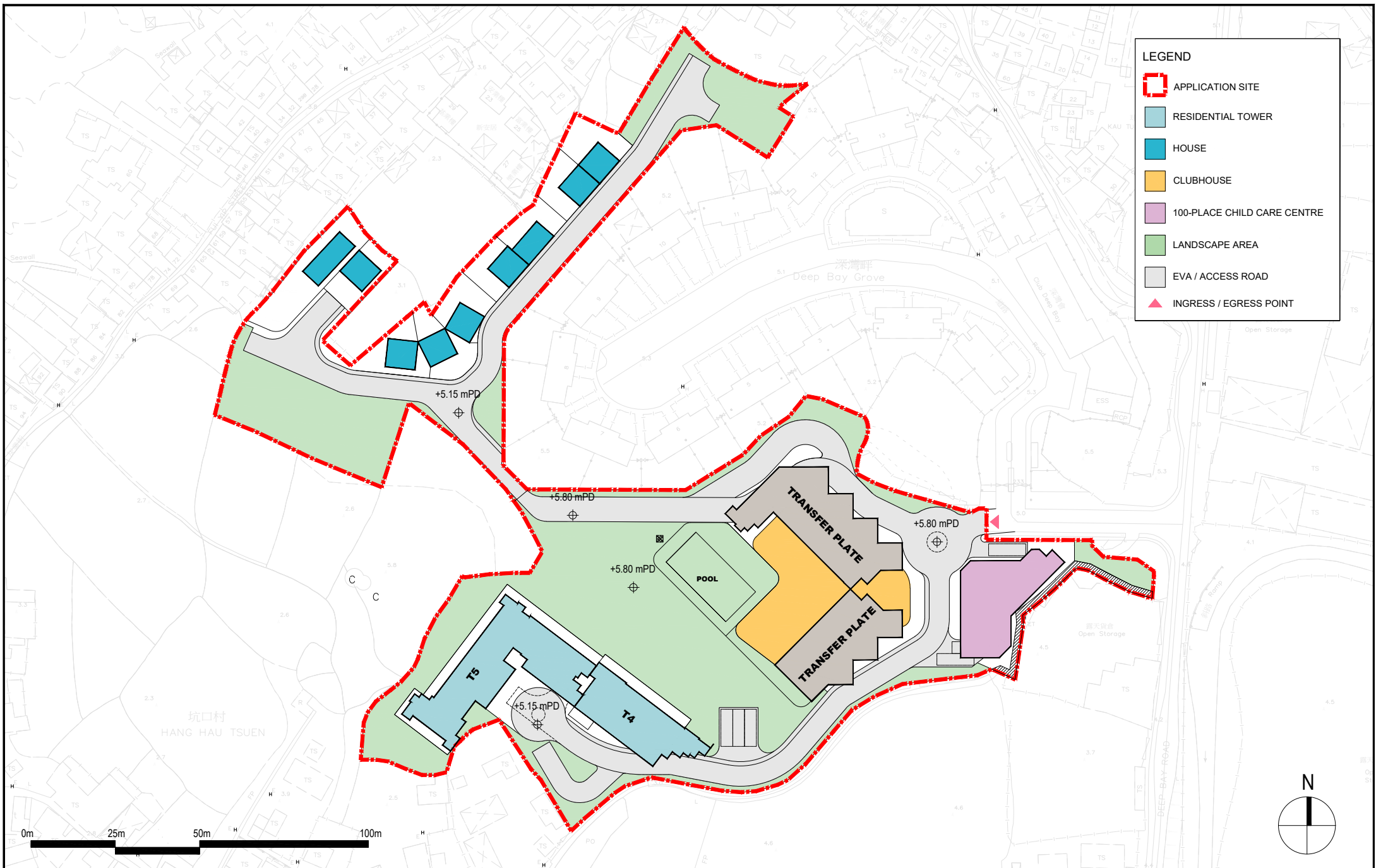
- APPLICATION SITE
- RESIDENTIAL LOBBY
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT
- APPROXIMATE HSWRL ALIGNMENT BASED ON LC PAPER NO. CB(1)228/2024(03) AND TPB PAPER NO. 10963

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## INDICATIVE GROUND FLOOR PLAN



MAR 2024  
1:1000 (A3)



**LEGEND**

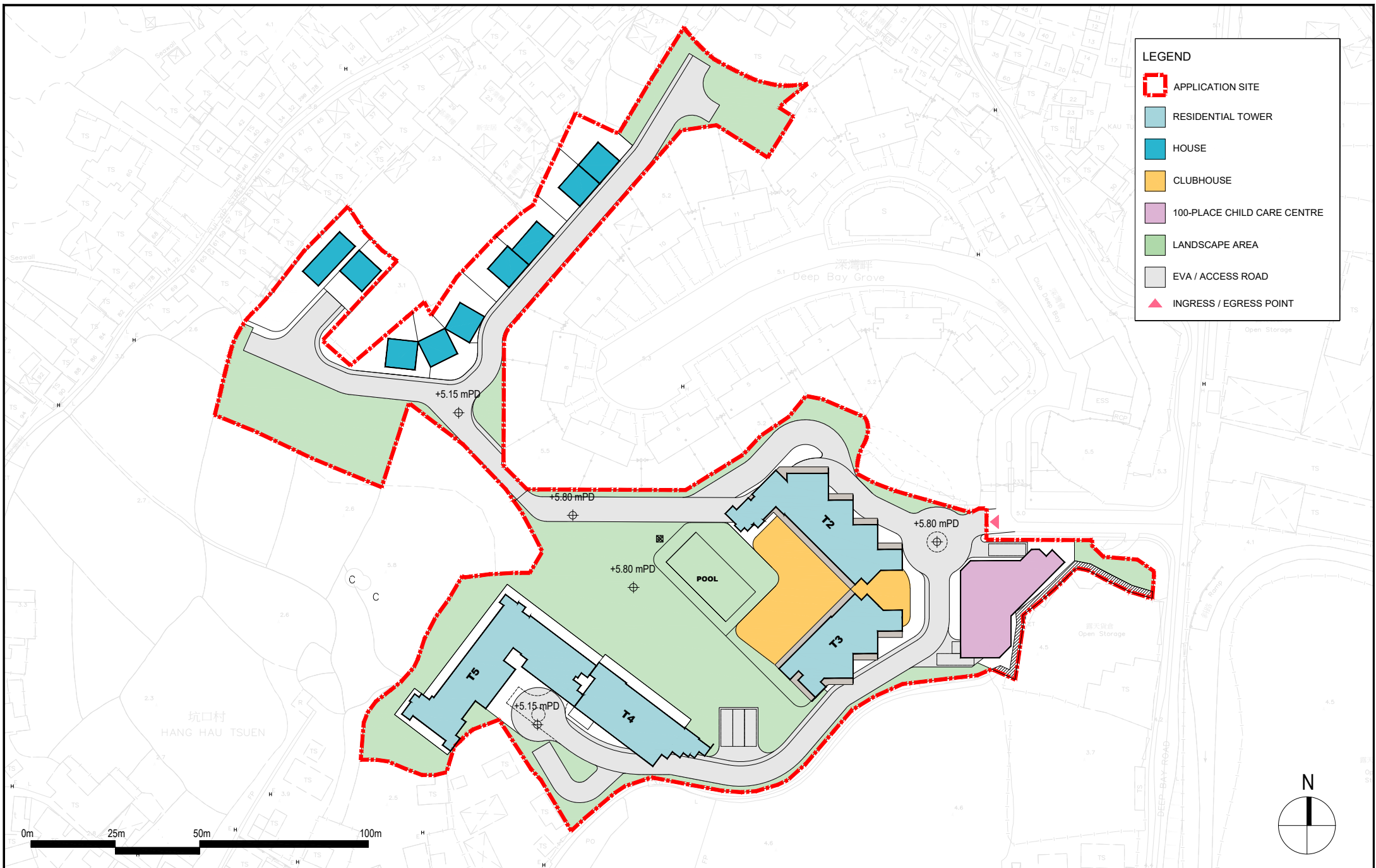
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- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT

Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## INDICATIVE FIRST FLOOR PLAN

MAR 2024  
1:1000 (A3)





**LEGEND**

- APPLICATION SITE
- RESIDENTIAL TOWER
- HOUSE
- CLUBHOUSE
- 100-PLACE CHILD CARE CENTRE
- LANDSCAPE AREA
- EVA / ACCESS ROAD
- INGRESS / EGRESS POINT

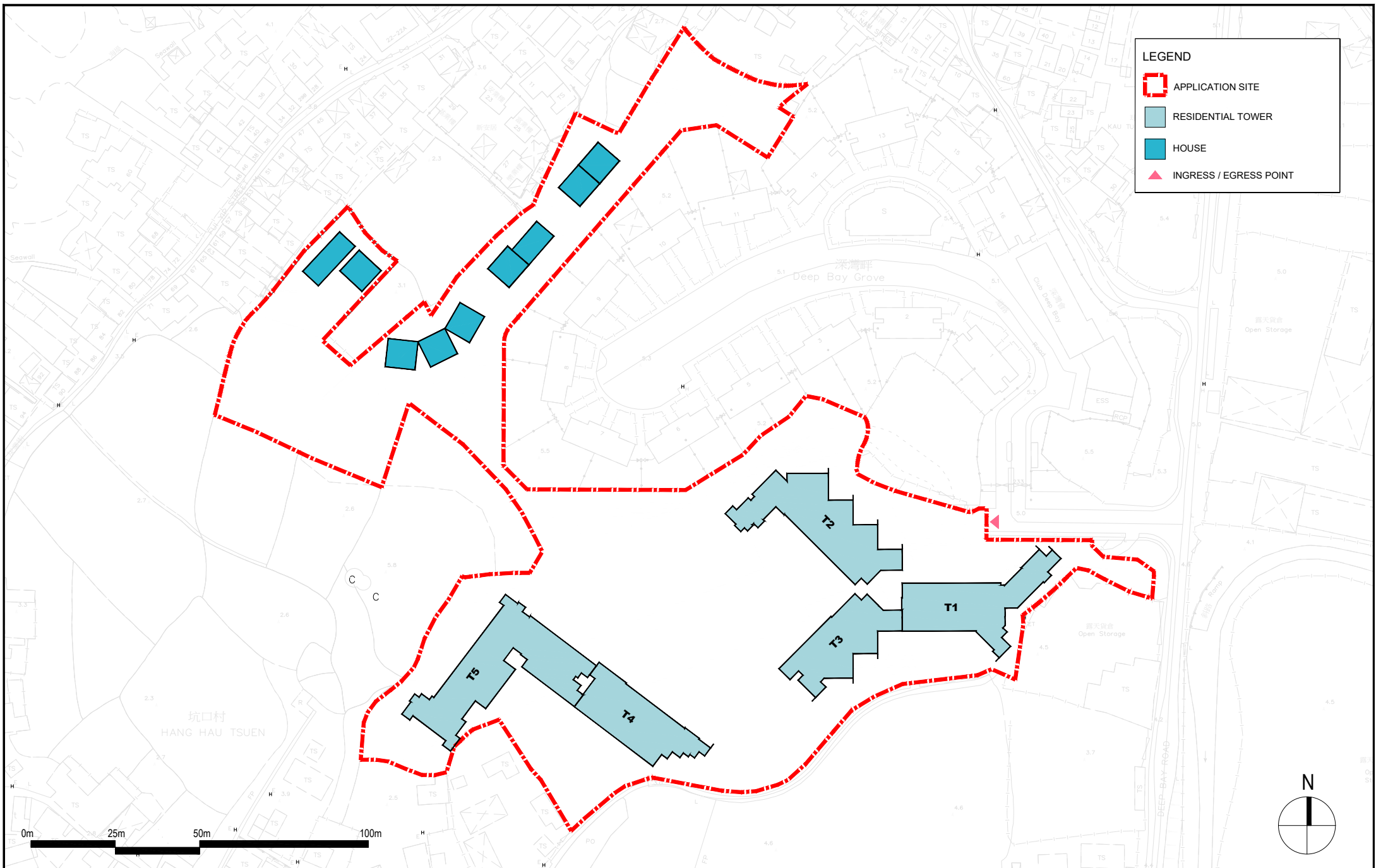
Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## INDICATIVE SECOND FLOOR PLAN

MAR 2024  
1:1000 (A3)





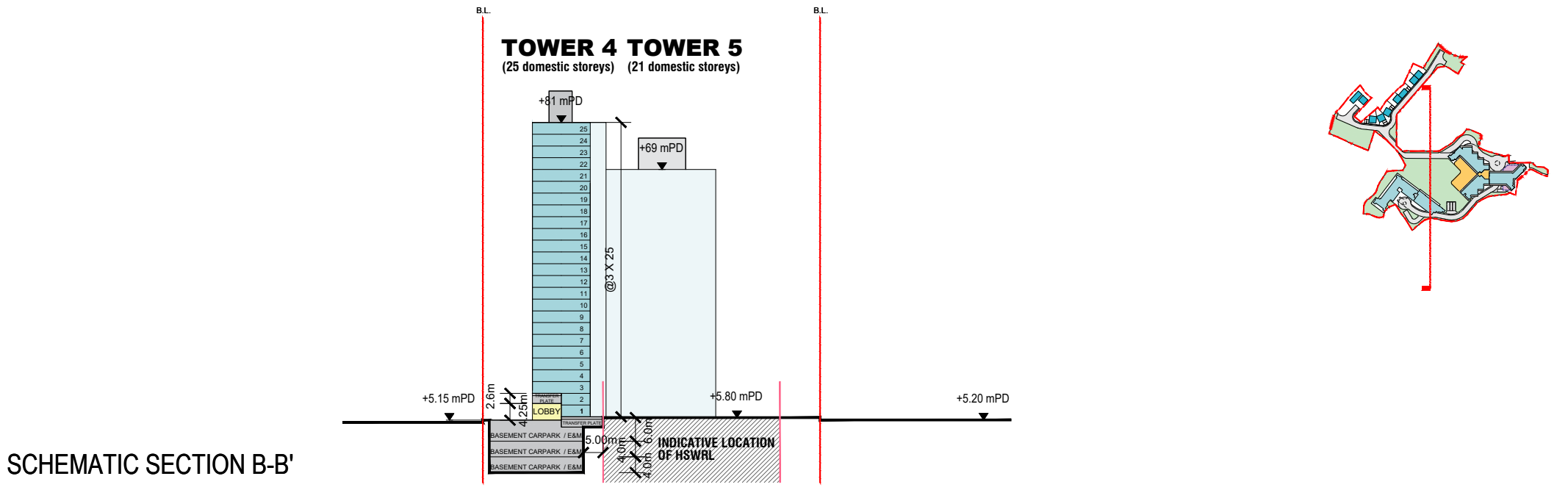
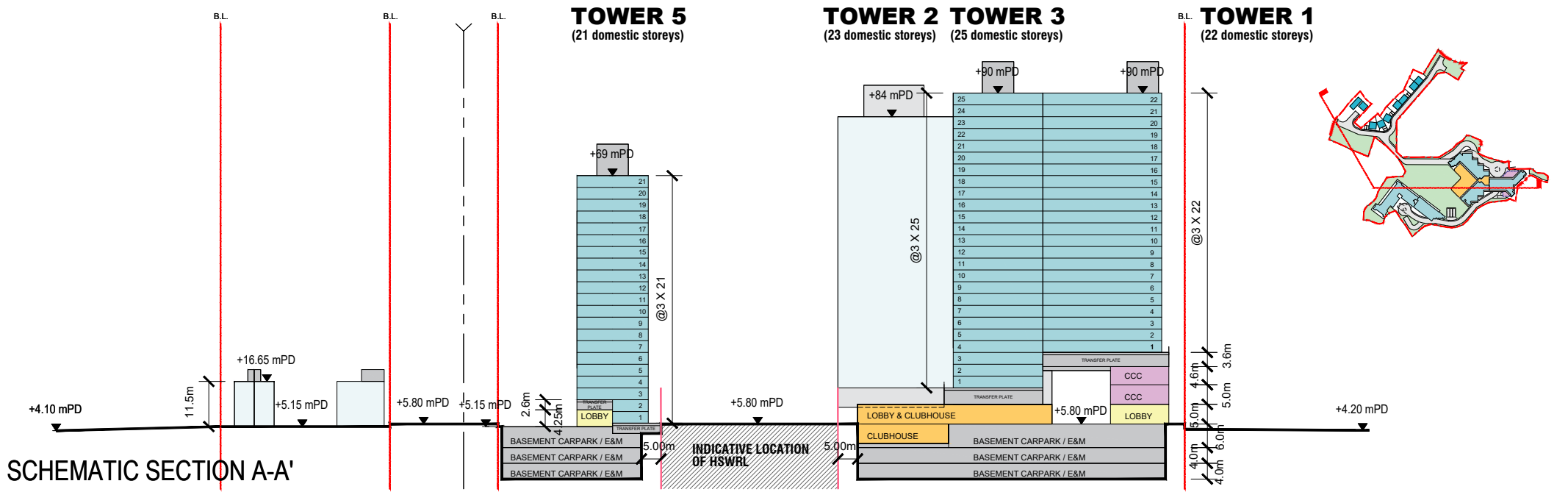


Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

## INDICATIVE TYPICAL FLOOR PLAN

MAR 2024  
1:1000 (A3)





Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**SCHEMATIC SECTIONS**

**Appendix 1.2**

**Aerial Photos Description**



**Appendix 1.2**

**Title:** Aerial Photo 1972

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024





**Appendix 1.2**

**Title:** Aerial Photo 1995

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024





**Appendix 1.2**

**Title:** Aerial Photo 2000

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024





**Appendix 1.2**

**Title:** Aerial Photo 2009

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024





**Appendix 1.2**

**Title:** Aerial Photo 2020

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024





**Appendix 1.2**

**Title:** Aerial Photo 2023

**Project:** Application for Amendment of Plan Under Section 12A of the Town Planning Ordinance (Cap.131) for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

**RAMBOLL**

Drawn by: YM

Checked by: KY

Rev.: 6.1

Date: Mar 2024

<b>Aerial Photo No.</b>	<b>Year</b>	<b>Description</b>
1972_02522	1972	Some of the farmlands had been turned into a pond. The Project Site was occupied by vegetation, farmlands and a pond.
1995_CN12939	1995	All farmlands had been turned into vegetation. The Project Site was mainly occupied by vegetation and a pond with a few scattered village houses along the western boundary.
2000_CN26489	2000	The pond and a large extent of vegetation had been removed. A small portion of vegetation at northern site portion remained in place.
2012_CW93357	2009	Site is largely vegetated with the northern and eastern tip occupied by temporary structures.
2020_E106056C	2018	A large extent of vegetation within the site had been cleared.
1967_1967-5695	2020	Northern portion of site appeared to be vegetation. Some temporary structures for hobby farm had been constructed at Southern Portion of the site.
2023_E187011C	2023	All temporary structures have been removed. The site is mostly vacant.

## **Appendix 2.1**

### **DSD confirmation of no odour complaint record**



## Katie Yu

---

**From:** ssdau@dsd.gov.hk  
**Sent:** 17 September 2021 19:20  
**To:** Katie Yu  
**Subject:** Re: [Internet] RE: [Internet] Request for Information of Lau Fau Shan Sewage Pumping Station  
**Attachments:** 1207B\_Plan View.pdf

Dear Katie,

i) Odour control measures installed/implemented for Lau Fau Shan Sewage Pumping Station. In particular, we would like to know the odour removal efficiency of the odour removal equipment installed in the ventilation system and the ventilation outlet location.

[H2S Removal Efficiency : 99.5%](#)

ii) Record of complaints related to noise and odour nuisance from Lau Fau Shan Sewage Pumping Station in the past five years.

[No complaint record](#)

Regards,

Samitone Au  
EME/ST1/3/2  
Drainage Services Department  
Tel: 28916269 / 91033179



From: Katie Yu <KYU@ramboll.com>  
To: "ssdau@dsd.gov.hk" <ssdau@dsd.gov.hk>  
Date: 10/09/2021 12:41  
Subject: [Internet] RE: [Internet] Request for Information of Lau Fau Shan Sewage Pumping Station  
Serial No.:

---

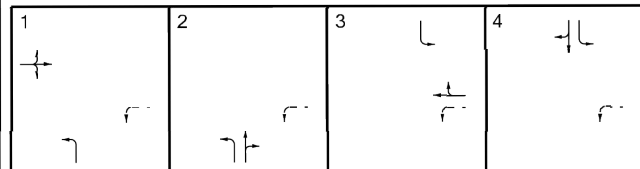
=====  
This email was delivered via Internet which may not be trustworthy.  
You are advised to pay special attention to any embedded URLs or attachments.  
Do not click the URLs or open the attachment unless you know it is safe to do  
=====

Dear Mr Au,

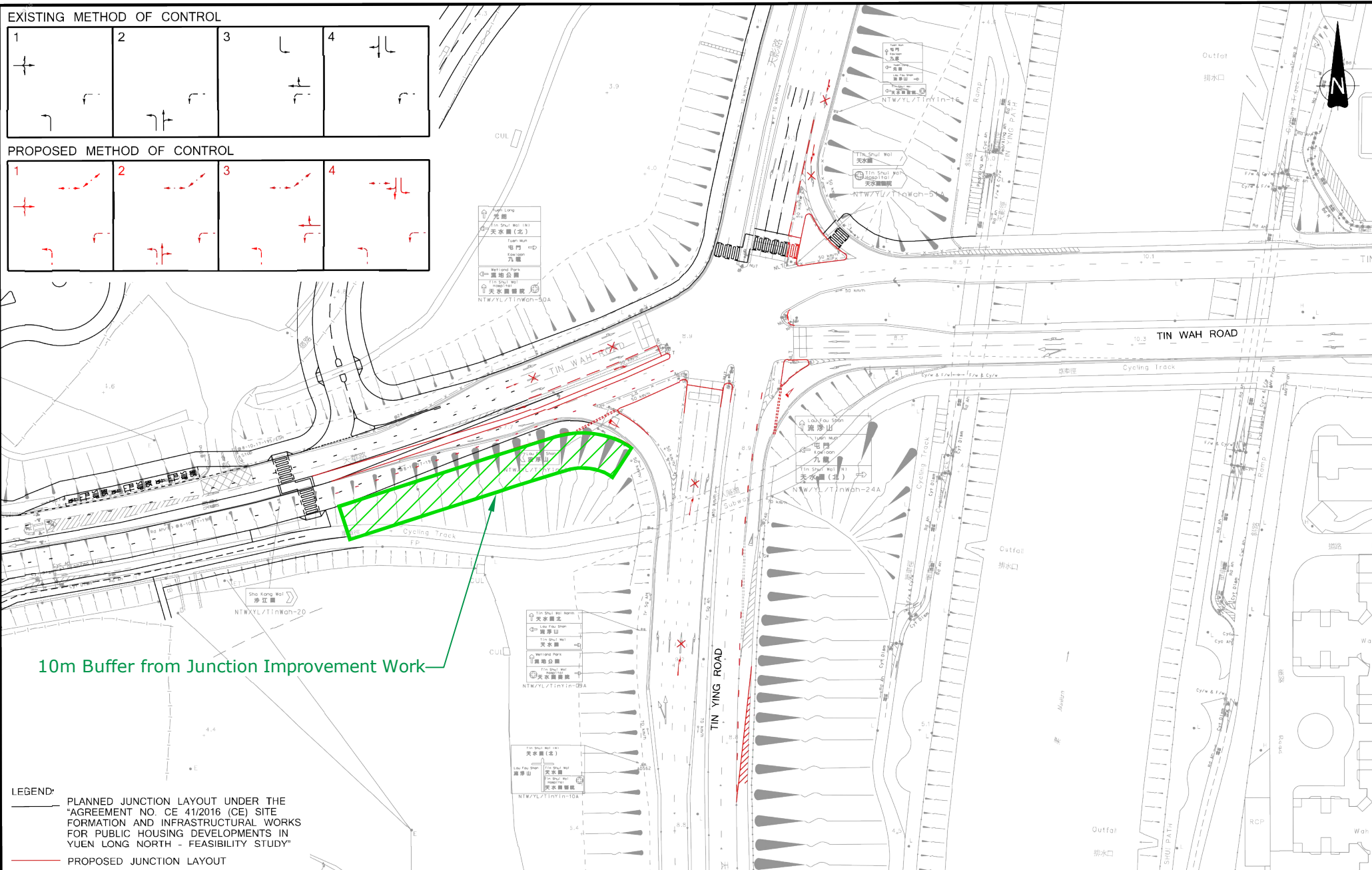
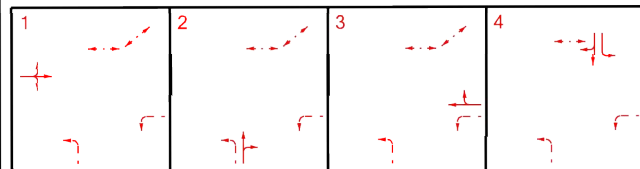


**Appendix 2.2**  
**Junction Improvement at J3**

EXISTING METHOD OF CONTROL



PROPOSED METHOD OF CONTROL



LEGEND:  
 PLANNED JUNCTION LAYOUT UNDER THE "AGREEMENT NO CE 41/2016 (CE) SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY"  
 PROPOSED JUNCTION LAYOUT

Rev.	Description	Checked	Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Project Title  
 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

Drawing Title  
**PROPOSED JUNCTION IMPROVEMENT OF TIN WAH ROAD / TIN YING ROAD (J3)**

Designed LIB Checked PTC Scale 1:1000(A3) Date JAN 2022 Drawing No. **5.4** Rev. -



## **Appendix 2.3**

### **TD Endorsement Letter for Road Type Classification and Traffic Forecast**

By Fax  
2527 8490



本署檔案 Our Ref. : (KLIIR) in TD NR157/161/YLDD-126  
 來函編號 Your Ref. : CHK50627810/PTC/L2200591/sys  
 電話 Tel. : 2399 2422  
 圖文傳真 Fax : 2381 3799  
 電郵 Email : ykma@td.gov.hk

MVA		
Job No.	CHK50627810	
Reg. No.	335045	
Date In	26-8-2022	
Initials	Action Date	Copy Date
PM/	/	
PTC		
PD/		
DIC/		
Duplicate	Filing Clerk	Day File
		26/8
Reply Ref.		
Reply Date		
File No.		

26 August 2022

MVA Hong Kong Limited  
 22/F Genesis  
 33-35 Wong Chuk Hang Road  
 Hong Kong  
 (Attn: Ms. Karen CHAN)

Dear Sir / Madam,

**Section 12A Planning Application for Proposed Residential  
 Development and Social Welfare Facility (Child Care Centre) at Various  
 Lots in D.D.128 and D.D.129 and adjoining Government Land,  
 Lau Fau Shan, Yuen Long (Application No. Y/YL-LFS/14)**

Traffic Note on Long Term Traffic Forecast for Traffic Noise Impact Assessment

I refer to your above-referenced letter regarding the captioned submission.

I have no objection on adopting the estimated traffic flow and the road type classification for your assessment.

Yours faithfully,

(Victor MA)

for Assistant Commissioner for Transport / NT

Mr. MAN Ka Ho, Wilson (Engr/Yuen Long West)  
Transport Department  
Traffic Engineering (NTW) Division  
North West Section  
7/F, Mongkok Government Offices,  
30 Luen Wan Street, Mongkok, Kowloon

Our Ref: CHK50605510/PTC/L2200591/sys

**BY EMAIL & BY HAND**  
(email: wilsonkhman@td.gov.hk)

**Section 12A Planning Application for Proposed Residential  
Development and Social Welfare Facility (Child Care Centre) at Various  
Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau  
Shan, Yuen Long (Application No. Y/YL-LFS/14)**

22<sup>nd</sup> April 2022

**Traffic Note on Long Term Traffic Forecast for  
Traffic Noise Impact Assessment**

Dear Sir,

We refer to the captioned project. Road traffic noise impact assessment (NIA) in support of Section 12A Planning Application has been submitted. To facilitate the approval of NIA, it is necessary to obtain the endorsement on the traffic forecast data from Transport Department. We, as the appointed project traffic consultant, are pleased to submit herewith a traffic note to present the forecasting methodology and the results of long term traffic forecasts adopted in the NIA for your kind consideration.

Should you have any queries or require any further information, please kindly contact the undersigned at 2864 6433 or our Mr. Alan Pun at 2864 6322.

Thank you for your kind attention.

Yours faithfully,



Karen Chan  
Principal Traffic Engineer

encl.

Reference number CHK50605510/PTC/L2200591/sys

**SECTION 12A PLANNING APPLICATION FOR PROPOSED  
RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE  
FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN  
D.D. 128 AND D.D. 129, AND ADJOINING  
GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG  
(APPLICATION NO. Y/YL-LFS/14)**

**TECHNICAL NOTE ON LONG TERM TRAFFIC FORECAST  
FOR ROAD TRAFFIC NOISE IMPACT ASSESSMENT**





## 1. BACKGROUND

- 1.1 The Application site is located at various Lots in D.D.128 and D.D. 129, and adjoining government land, Lau Fau Shan as indicated in **Drawing No. 1.1**. The Applicant proposes to rezone the Application Site to facilitate the proposed residential development and Social Welfare Facility (Child Care Centre).
- 1.2 In order to support the Road Traffic Noise Impact Assessment (NIA) as part of the Environmental Assessment in the S12A rezoning application (Application No. Y/YL-LFS/14), a set of long term traffic forecast is considered necessary.
- 1.3 This technical note aims to present the traffic forecasting methodology to seek the endorsement on the traffic forecast data from Transport Department.

## 2. FORECASTING METHODOLOGY

- 2.1 The methodology of the long term traffic forecast and traffic flow were presented in **Chapters 4 and 7** of the latest submitted TIA report to PlanD dated 14 February 2022 under the S12A planning application of the captioned site. The relevant pages extracted from the TIA report is attached in **Appendix A**.
- 2.2 As extracted from the TIA report, the 2045 long term traffic forecasts together with the vehicle composition breakdown as per the requirements of Environmental Consultant for NIA purpose are summarized in **Table 1**.

**Table 1 2045 Long Tern Traffic Forecasts**

Index <sup>(1)</sup>	Road Name	Year 2045 Two-way Traffic Flows <sup>(2)</sup> (vehs/hr)		Heavy Vehicle Percentage <sup>(3)</sup>	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Access Road	50	100	58%	19%
B	Deep Bay Road	250	250	69%	44%
C	Lau Fau Shan Road	650	750	50%	32%
D	Deep Bay Road	400	500	35%	25%
E	Access Road	50	50	34%	25%
F	Deep Bay Road	400	500	34%	25%
G	Access Road to Deep Bay Grove	200	150	15%	14%
H	Deep Bay Road	200	350	44%	24%
I	Deep Bay Road	200	350	42%	22%
J	Access Road	50	50	42%	22%
K	Deep Bay Road	200	300	42%	22%
L	Access Road	50	50	45%	23%
M	Deep Bay Road	200	300	47%	24%
N	Future Road	550	450	15%	15%

Remarks : (1) Location refer to **TIA Drawing 7.1**.  
 (2) Traffic flows have been rounded up to the nearest 50; and,  
 (3) Category of heavy vehicle includes all motor vehicles except private cars, taxis and motorcycles.



### 3. ROAD TYPE CLASSIFICATION

#### Future Deep Bay Road abutting the Application Site

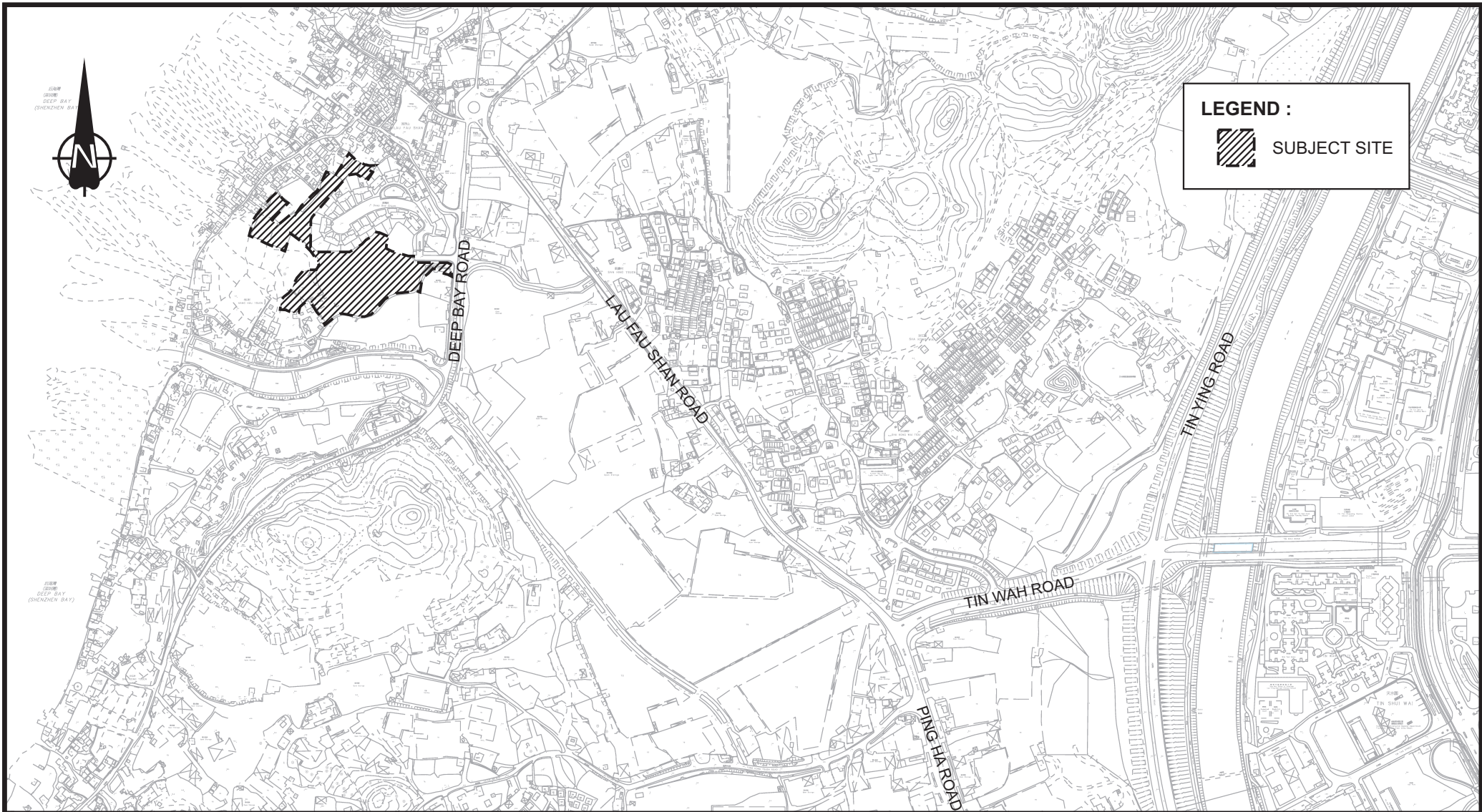
- 3.1 According to Annual Traffic Census (ATC) published by Transport Department, the existing Deep Bay Road (section between Lau Fau Shan Roundabout and Nam Sha Po Road) is classified as Local Distributor. Given the whole Deep Bay Road has similar road configuration and are also served as the local sites, the existing Deep Bay Road abutting the site is considered as local distributor.
- 3.2 Road Upgrading Works at Deep Bay Road has been planned by the Government under PWP Item No. 6878th (Part). The Deep Bay Road abutting the Application site will be widened from single track access road to a single two-lane carriageway. As advised by Highways Department, the upgraded Deep Bay Road will be rural road (**Appendix B**). The future widened Deep Bay Road will also be functioned as local distributor serving the local developments such as village settlements.

#### Access Road abutting the subject site (i.e. Section G)

- 3.3 There is no road type classification for the access road abutting the subject site in ATC. This road section is a single-two lane carriageway serving the Application site and Deep Bay Grove only.
- 3.4 All the above-mentioned road links are serving the local developments only, and therefore should be considered as Local Distributor according to Transport Planning and Design Manual (TPDM).


### 4. CONCLUSION

- 4.1 In view of the above, we would like to seek the endorsement from Transport Department on the Year 2045 long term traffic forecast in order to support the Road Traffic Noise Impact Assessment.



**LEGEND :**

 SUBJECT SITE

-	-	-	-	-	-	-	-	-	-	-	-
Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
Project Title				Drawing Title							
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES				<b>SITE LOCATION</b>							
Designed	LIB	Checked	PTC	Scale	NTS	Date	OCT 2021	Drawing No.	1.1	Rev.	-

# Appendix A – Relevant Pages extracted from TIA

14/02/2022

Reference number CHK50605510/PTC/L2200148/sys

**APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D. 128 AND D.D. 129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES –**

**TRAFFIC IMPACT ASSESSMENT (VERSION NO. 2)**



## 4. TRAFFIC FORECASTING

### 4.1 Design Year

4.1.1 The tentative completion year of the proposed development is year 2030. Hence, the design year of 2033 three years upon operation of the proposed development, has been adopted for traffic forecast and assessment purposes.

### 4.2 Forecasting Assumptions

4.2.1 According to the Legislative Council Paper No. CB(1)230/19-20(03) "Funding Applications for Hung Shui Kiu/Ha Tsuen New Development Area", the Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA) will be developed in phases. Phase 1 and Phase 2 developments are scheduled to be completed by 2032 whilst the Phase 3 development is scheduled to be completed in 2037/2038.

4.2.2 Phase 1 and Phase 2 developments of HSK/HT NDA would be completed before the design year 2033 and has been considered in this traffic forecast. Nevertheless, taking into consideration that the Phases 1 & 2 developments are not in close proximity to the identified study area, their traffic impact would be limited on the identified study area. Therefore, the 2033 reference traffic flows were derived by adopting an appropriate growth rate onto the observed traffic flows.

#### Traffic Growth Rate from 2021 to 2031

#### **Historical Trend**

4.2.3 Annual Traffic Census (ATC) traffic count stations are available in the vicinity of the development. The annual traffic counts reported in the latest Annual Traffic Census (ATC) report published by Transport Department (TD) over a period between Year 2016 and Year 2020 are summarised in **Table 4.1**.

**Table 4.1 ATC Traffic Counts between Year 2016 to Year 2020**

Station No.	Road Name	Average Annual Daily Traffic (AADT)					Annual Growth Rate (p.a.)
		2016	2017	2018	2019	2020	
5686	Tin Wah Road (Tin Ying Road- Tin Shui Road)	17,600	17,330*	17,760*	17,630*	20,520	3.91%
5707	Tin Shui Road (Tin Wah Road - Wetland Park Road)	9,620	9,470*	9,700*	9,630*	11,370	4.27%
5858	Ping Ha Road & Lau Fau Shan Road (Tin Ha Road - Deep Bay Road)	14,580	12,370	12,680*	12,590*	12,070*	-4.61%
5886	Tin Wah Road (Tin Shui Road - Tin Shing Road)	10,190	10,420	10,680*	10,610*	10,170*	-0.05%
6081	Tin Wah Road (Tin Shing Road - Tin Kwai Road)	8,780*	8,540	8,710	8,650*	8,290*	-1.43%
6603	Deep Bay Road (Lau Fau Shan Road- Nam Sha Po)	2,170	2,330	2,920	2,320	2,380	2.34%
Total		62,940	60,460	62,450	61,430	64,800	<b>+0.73%</b>

Remark: (\*) AADT estimated by Growth Factor.



4.2.4 As shown in **Table 4.1**, the average annual traffic growth pattern shows a positive growth trend with rate of 0.73% per annum over the past 5 years.

**Planning Data**

4.2.5 Besides, reference has been made to the latest available 2019-Based Territorial Population and Employment Data Matrices (TPEDM) published by Planning Department for determination of traffic growth rate. The average annual growth rates in terms of population and employment from year 2019 to 2031 in Tin Shui Wai Area are illustrated in **Table 4.2**.

**Table 4.2 2019 and 2031 Population and Employment Growths in Tin Shui Wai District**

District	Population			Employment		
	2019	2031	Growth Rate per annum 2019/2031	2019	2031	Growth Rate per annum 2019/2031
Tin Shui Wai	279,950	276,050	-0.12%	35,050	31,950	-0.77%

4.2.6 As indicated in **Table 4.2**, the average growth rate of population and employment in Tin Shui Wai area from year 2019 to 2031 is -0.12% p.a. and -0.77% p.a. respectively.

4.2.7 Having reviewed the historical growth trend and planning data, a traffic growth rate of +0.73% p.a. was adopted for producing the traffic forecast from Year 2021 up to Year 2031.

Traffic Growth Rate from 2031 to 2033

4.2.8 For the long-term traffic growth rate from Year 2031 up to 2033, reference has been made to the Hong Kong Resident Population extracted from “Hong Kong Population Projections 2019-2069” published by Census and Statistics Department. The average annual growth from year 2031 to 2033 is illustrated in **Table 4.3**.

**Table 4.3 Hong Kong Resident Population for Years 2031-2033**

	Year 2031	Year 2033	Growth Rate per annum 2031/2033
Hong Kong Population	7,945,800	7,998,400	+0.33%

4.2.9 As indicated in **Table 4.3**, the average growth rate of Hong Kong Resident Population is +0.33% p.a. from year 2031 to 2033, which was adopted to project the year 2031 traffic flows up to year 2033 traffic flows.

Adjacent Planned/Committed Developments

4.2.10 According to the latest available information from public domain, there are planned developments located in the vicinity of the development that are expected to be completed by year 2033 and the estimated trip generations of these planned developments would be considered in the traffic forecast. The locations of planned/committed developments in the vicinity are indicated in **Drawing 4.1**. The details of these committed developments and the estimated traffic flows are listed in **Table 4.4** and **Table 4.5** respectively.

**Table 4.4 Committed/Approved Developments**

Ref. (1)	Committed/Approved Developments	Parameter
1	Proposed Public Housing Development nearby Tin Wah Road	4390 flats with 14580m <sup>2</sup> retail GFA, 2906m <sup>2</sup> GIC GFA and proposed ancillary facilities/carpark
2	Proposed Residential Development at Tin Shui Wai Area 112	2031 flats with 8403m <sup>2</sup> retail GFA
3	Proposed Residential Development at Tin Shui Wai Area 115	1727 flats with 1858m <sup>2</sup> retail GFA
4	Proposed Residential Development at Tin Shui Wai Area 33	1938 flats with 205m <sup>2</sup> retail GFA

Remark: (1) Locations refer to **Drawing No. 4.1**.

**Table 4.5 Estimated Trips for other Committed/Approved Developments**

Ref. (1)	Committed/Approved Developments	Trip Generations (pcu/hr)			
		AM Peak		PM Peak	
		Gen	Attr	Gen	Attr
1	Proposed Public Housing Development nearby Tin Wah Road <sup>(2)</sup>	400	287	232	341
2	Proposed Residential Development at Tin Shui Wai Area 112 <sup>(3)</sup>	176	124	109	119
3	Proposed Residential Development at Tin Shui Wai Area 115	128	78	55	71
4	Proposed Residential Development at Tin Shui Wai Area 33	139	82	56	73

Remarks: (1) Locations refer to **Drawing No. 4.1**.

(2) Trip Generations are based on its TIA report under RNTPC Paper No.4/21.

(3) Included the trips of Public Vehicle Park (90 car parking, 45 coach parking & 9 motorcycle parking).

## 4.3 Development Traffic Generations

4.3.1 In order to estimate the traffic trips for the proposed development, reference has been made to the trip rates in Transport Planning Design Manual (TPDM) published by TD. **Table 4.6** summarises the estimated trip generations of the proposed development.

**Table 4.6 Estimated Trip Generation of Proposed Development**

		AM Peak		PM Peak	
		Gen	Attr	Gen	Attr
Residential	Trip Rates (pcu/hr/flat) <sup>(1)</sup>	0.0718	0.0425	0.0286	0.037
	No. of Unit	1246			
	Proposed Development (pcu/hr)	89	53	36	46
G/IC	Child Care Centre (pcu/hr) <sup>(2)</sup>	20	20	20	20
<b>Total</b>		109	73	56	66

Remarks: (1) Trip rates extracted from TPDM mean trip rates for Private Housing R(A) Average Flat Size of 60sqm.

(2) Nominal Trips.

4.3.2 As indicated in **Table 4.6**, the proposed development would generate a two-way total of 182pcu/hr and 122 pcu/hr during the morning and evening peak hour periods respectively.



- 4.3.3 To meet the public transport demand arising from the proposed development, strengthening of the existing MTR feeder bus service and GMB services at Lau Fau Shan Roundabout is suggested. Details will be further discussed in **Section 6**. Additional bus/GMB trips as suggested in **Section 6** was included in the traffic forecast.
- 4.3.4 According to the above, the anticipated 2033 peak hour reference traffic flows are obtained by applying the adopted growth rates to the 2021 traffic flows and superimposing the estimated trip generations of the planned developments. The 2033 reference peak-hour traffic flows are shown in **Drawing 4.2**.
- 4.3.5 The estimated development traffic trips as derived in **Table 4.6** are superimposed onto the year 2033 reference traffic flows, to produce the anticipated year 2033 peak hour design traffic flows. The year 2033 design peak-hour traffic flows are shown in **Drawings 4.3**.

## 7. LONG TERM TRAFFIC FORECASTS

### 7.1 Design Year

- 7.1.1 Taking into consideration that the anticipated completion year of the proposed development is year 2030, the design year 2045 traffic forecasts (i.e. 15 years after the completion) was adopted for the Noise Impact Assessment.

### 7.2 Identified Road Sections

- 7.2.1 The long term traffic forecast exercise covers the road links within the 300m radius catchment of the proposed development site.
- 7.2.2 As mentioned in **Section 4**, Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA) is scheduled to be completed in 2037/2038. Under the HSK/HT NDA project, a new road has been proposed within 300m radius catchment of the proposed development, which will be included in this traffic forecast exercise.
- 7.2.3 As mentioned in **Section 5.2.2**, road upgrading works at Deep Bay Road has been planned by the Government. A section of Deep Bay Road between Lau Fau Shan Roundabout and Nim Wan Road will be widened from a single track access road to a single two-lane carriageway. The upgraded Deep Bay Road will be included in this traffic forecast exercise.
- 7.2.4 According to the above, a total of 14 road sections were identified and illustrated in **Drawing 7.1**.

### 7.3 Road Type Classification

#### Future Deep Bay Road abutting the Application Site

- 7.3.1 According to Annual Traffic Census (ATC) published by Transport Department, the existing Deep Bay Road abutting the site is classified as Local Distributor. With the abovementioned government's planned road upgrading works at Deep Bay Road, this road section will be widened to a single two-lane carriageway. Given the upgraded Deep Bay Road is only serving the local developments such as village settlements, and therefore should also be classified as Local Distributor according to Transport Planning and Design Manual (TPDM).

#### Access Road abutting the subject site (i.e. Section G)

- 7.3.2 There is no road type classification for the access road abutting the subject site in ATC. Nevertheless, this road section is a single-two lane carriageway serving the Application site and Deep Bay Grove only. This road section should be considered as Local Distributor according to TPDM.

### 7.4 Traffic Forecast Methodology

- 7.4.1 To derive the 2045 future traffic forecast data, the year 2033 design traffic flows as discussed in **Section 4** have been used as basis.
- 7.4.2 For the long-term traffic growth rate from Year 2033 up to 2045, reference has been made to the Hong Kong Resident Population extracted from "Hong Kong Population Projections 2019-2069" published by Census and Statistics Department. The average annual growth from years 2033 to 2045 is illustrated in **Table 7.1**.

**Table 7.1 Hong Kong Resident Population for Years 2033-2045**

	2033	2045	Annual Growth Rate (2033- 2045)
Hong Kong Population	7,998,400	8,093,600	0.10%

7.4.3 As shown in **Table 7.1**, Hong Kong population shows a positive growth trend with rate of +0.10% per annum from 2033 to 2045, which was adopted for projecting the year 2033 traffic flows up to year 2045.

7.4.4 The traffic generated from the subject site and other committed/approved developments as derived in the **Section 4** would also be included in the traffic forecast. In addition, the Hung Shui Kiu New Development Area was also included in the traffic forecast.

## 7.5 Year 2045 Traffic Forecasts

7.5.1 The 2045 long term traffic forecasts together with the vehicle composition breakdown as per the requirements of Environmental Consultant for NIA purpose are summarized in **Table 7.2**.

**Table 7.2 2045 Long Tern Traffic Forecasts**

Index <sup>(1)</sup>	Road Name	Year 2045 Two-way Traffic Flows <sup>(2)</sup> (vehs/hr)		Heavy Vehicle Percentage <sup>(3)</sup>	
		AM Peak	PM Peak	AM Peak	PM Peak
A	Access Road	50	100	58%	19%
B	Deep Bay Road	250	250	69%	44%
C	Lau Fau Shan Road	650	750	50%	32%
D	Deep Bay Road	400	500	35%	25%
E	Access Road	50	50	34%	25%
F	Deep Bay Road	400	500	34%	25%
G	Access Road to Deep Bay Grove	200	150	15%	14%
H	Deep Bay Road	200	350	44%	24%
I	Deep Bay Road	200	350	42%	22%
J	Access Road	50	50	42%	22%
K	Deep Bay Road	200	300	42%	22%
L	Access Road	50	50	45%	23%
M	Deep Bay Road	200	300	47%	24%
N	Future Road	550	450	15%	15%

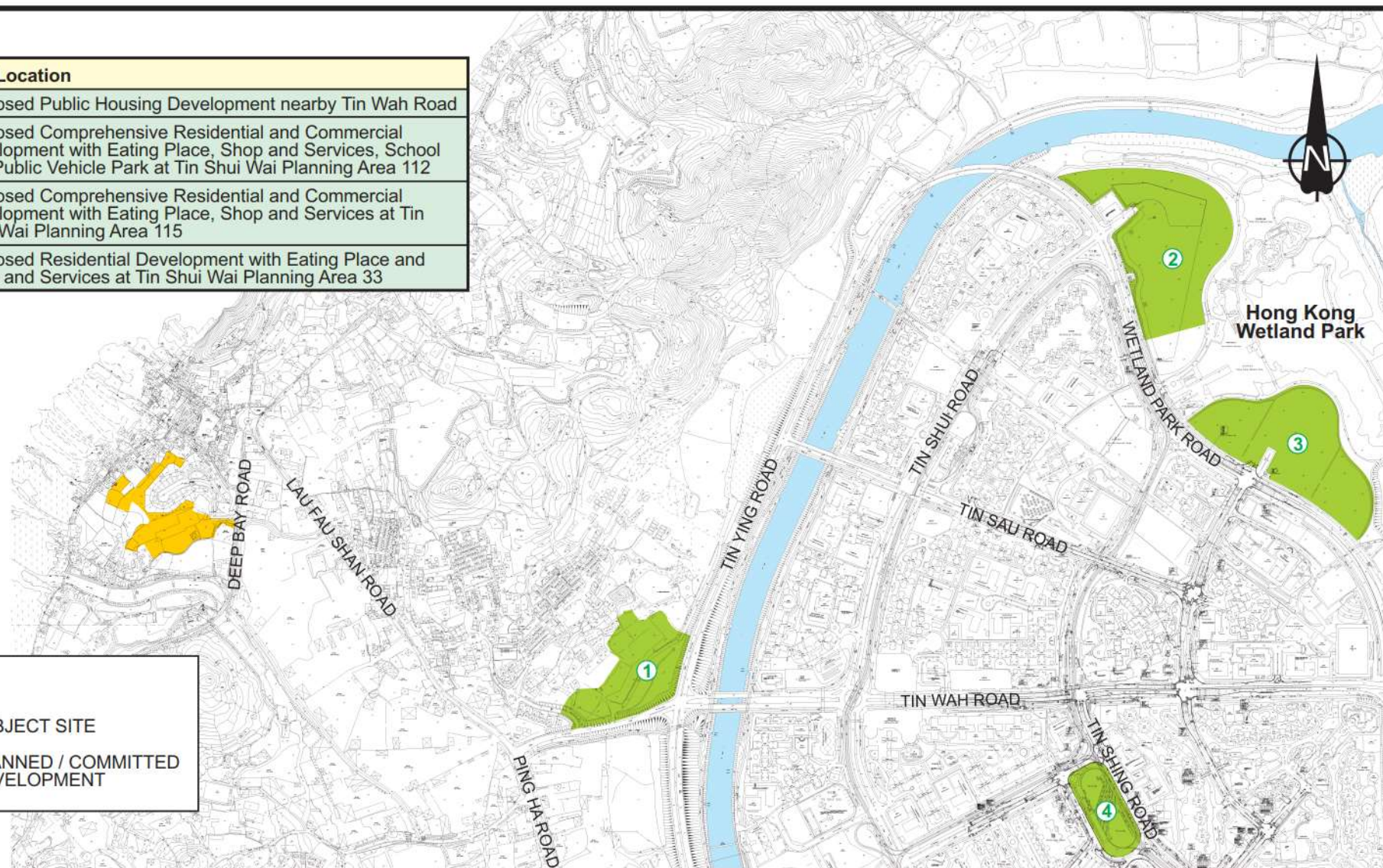
Remarks : (1) Location refer to **Drawing 7.1**.

(2) Traffic flows have been rounded up to the nearest 50; and,

(3) Category of heavy vehicle includes all motor vehicles except private cars, taxis and motorcycles.



Ref. No.	Site Location
①	Proposed Public Housing Development nearby Tin Wah Road
②	Proposed Comprehensive Residential and Commercial Development with Eating Place, Shop and Services, School and Public Vehicle Park at Tin Shui Wai Planning Area 112
③	Proposed Comprehensive Residential and Commercial Development with Eating Place, Shop and Services at Tin Shui Wai Planning Area 115
④	Proposed Residential Development with Eating Place and Shop and Services at Tin Shui Wai Planning Area 33



**LEGEND :**

- SUBJECT SITE
- PLANNED / COMMITTED DEVELOPMENT

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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Project Title  
**APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRORIES**

**PLANNED / COMMITTED DEVELOPMENTS**

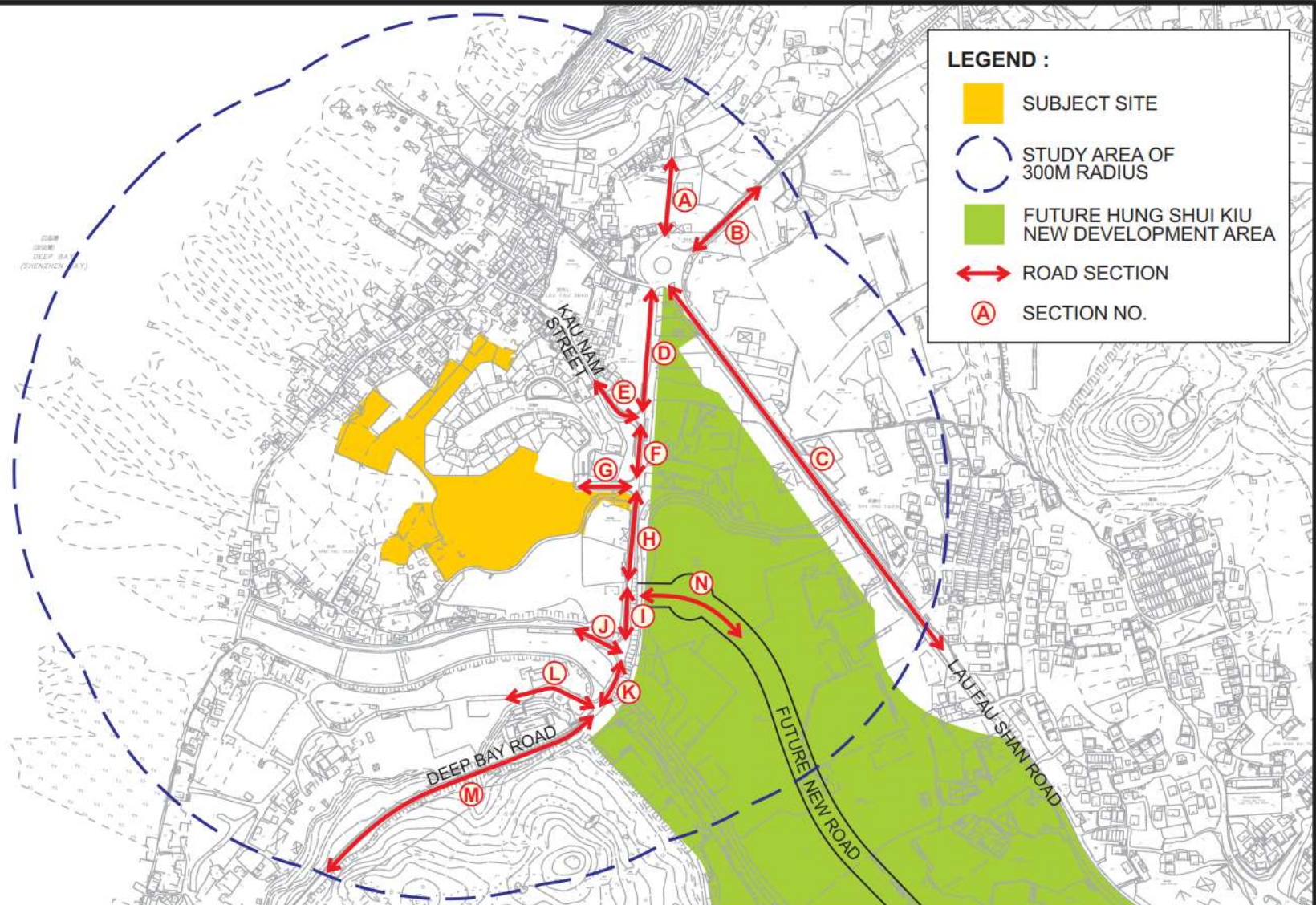
Designed	LIB	Checked	PTC	Scale	NTS	Date	OCT 2021	Drawing No.	<b>4.1</b>	Rev.	-
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深灣  
DEEP BAY  
(SHENHAY)



**LEGEND :**

- SUBJECT SITE
- STUDY AREA OF 300M RADIUS
- FUTURE HUNG SHUI KIU NEW DEVELOPMENT AREA
- ROAD SECTION
- A SECTION NO.

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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**Project Title**  
 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

**Drawing Title**

**INDEX PLAN**



Designed	LIB	Checked	PTC	Scale	NTS	Date	OCT 2021	Drawing No.	<b>7.1</b>	Rev.	-
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## **Appendix B – Reply Email from Highways Department**

## CHAN Karen PT

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**From:** e1db.mw@hyd.gov.hk  
**Sent:** Thursday, 21 April 2022 11:13 AM  
**To:** CHAN Karen PT  
**Cc:** PUN Alan; spcdb.mw@hyd.gov.hk; pc3db.mw@hyd.gov.hk  
**Subject:** Re: (@@Suspected Spam@@) S12A Application for Development in Lau Fau Shan (Application No Y/YL-LFS/14) - Road Type of Future Widened Deep Bay Road

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Karen,

Further to the query under your email below, the widened Deep Bay Road is classified as rural road.

Regards,  
Rebecca PANG  
E1/DB, MWPMO, HyD  
2762 3634



[www.hyd.gov.hk](http://www.hyd.gov.hk)

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---

From: "CHAN Karen PT" <KarenPT.CHAN@mvaasia.com>  
To: "e1db.mw@hyd.gov.hk" <e1db.mw@hyd.gov.hk>  
Cc: "PUN Alan" <Alan.PUN@mvaasia.com>  
Date: 21/04/2022 10:13  
Subject: (@@Suspected Spam@@) S12A Application for Development in Lau Fau Shan (Application No Y/YL-LFS/14) - Road Type of Future Widened Deep Bay Road

---

Dear Rebecca,

We refer to our telephone conversation yesterday regarding the captioned.

We are the traffic consultant of the S12A rezoning application (Application No Y/YL-LFS/14). During the application, we received comments from EPD with regards to air quality assessment. Referring to one of the comments, EPD queried about the road types of future widened Deep Bay Road, and requested us to seek the confirmation from the Government. In this regard, we would like to seek your advice on the road type of the future widened Deep Bay Road under PWP item No. 6878<sup>th</sup> (Part) – Upgrading of Deep Bay Road for our further process on the application.

Should you have any queries, please do not hesitate to contact the undersigned at 2864 6433.

Thank you for your kind assistance.

**Karen Chan**

Principal Traffic Engineer

Tel: +852 2864 6433 (Direct Line) • Gen: +852 2529 7037 • Fax: +852 2527 8490



22nd Floor • Genesis • 33-35 Wong Chuk Hang Road • Hong Kong

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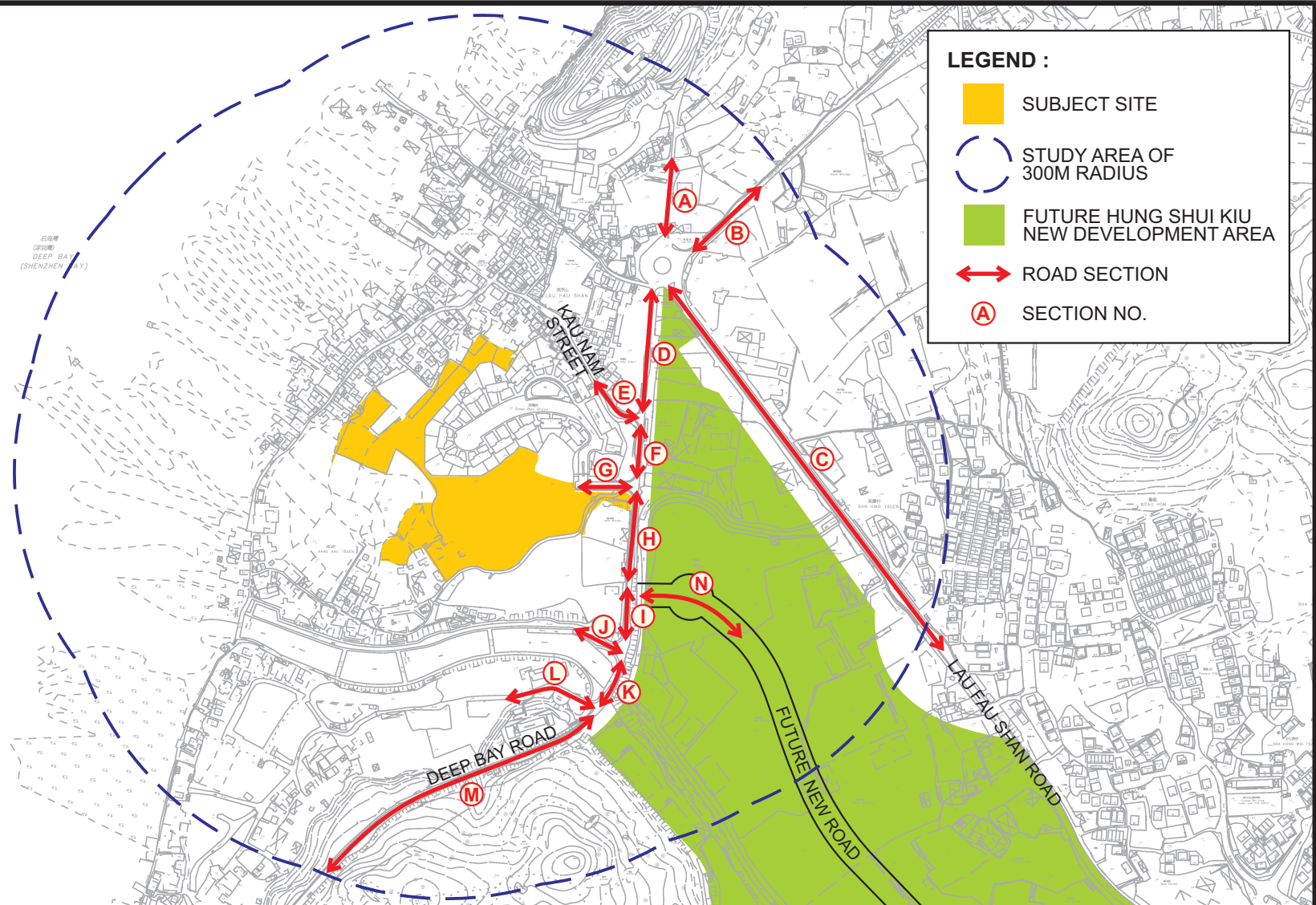
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**Appendix 3.1**  
**Traffic Forecast**



后海湾  
DEEP BAY  
(SHENZHEN BAY)



**LEGEND :**

- SUBJECT SITE
- STUDY AREA OF 300M RADIUS
- FUTURE HUNG SHUI KIU NEW DEVELOPMENT AREA
- ROAD SECTION
- A SECTION NO.

-	-	-	-
Rev.	Description	Checked	Date
Project Title		Drawing Title	
SECTION 12A PLANNING APPLICATION FOR PROPOSED RESIDENTIAL DEVELOPMENT AT VARIOUS LOTS IN D.D. 128 AND D.D. 129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG		<b>INDEX PLAN</b>	
Designed	Checked	Scale	Date
LIB	PTC	NTS	SEP 2021
		Drawing No.	Rev.
		1	-





**Proposed Residential Development at Lau Fau Shan**

**Preliminary Year 2045 Traffic Forecast**

Section	Road Name	Flow (veh/hr) <sup>(2)</sup>		HV% <sup>(3)</sup>	
		AM	PM	AM	PM
<b>A</b>	Access Road	50	100	58%	19%
<b>B</b>	Deep Bay Road	250	250	69%	44%
<b>C</b>	Lau Fau Shan Road	650	750	50%	32%
<b>D</b>	Deep Bay Road	400	500	35%	25%
<b>E</b>	Access Road	50	50	34%	25%
<b>F</b>	Deep Bay Road	400	500	34%	25%
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<b>H</b>	Deep Bay Road	200	350	44%	24%
<b>I</b>	Deep Bay Road	200	350	42%	22%
<b>J</b>	Access Road	50	50	42%	22%
<b>K</b>	Deep Bay Road	200	300	42%	22%
<b>L</b>	Access Road	50	50	45%	23%
<b>M</b>	Deep Bay Road	200	300	47%	24%
<b>N</b>	Future Road	550	450	15%	15%

Remark:

(1) Please refer to the Index Plan attached.

(2) Traffic flows have been rounded up to the nearest 50; and,

(3) Category of heavy vehicle includes all motor vehicles except private cars, taxis and

## **Appendix 3.2**

### **Road Traffic Noise Impact Assessment Results**

**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN01	Tower 1	01	24.0	70	63	N
T1_TN01	Tower 1	02	27.0	70	63	N
T1_TN01	Tower 1	03	30.0	70	63	N
T1_TN01	Tower 1	04	33.0	70	63	N
T1_TN01	Tower 1	05	36.0	70	63	N
T1_TN01	Tower 1	06	39.0	70	63	N
T1_TN01	Tower 1	07	42.0	70	63	N
T1_TN01	Tower 1	08	45.0	70	63	N
T1_TN01	Tower 1	09	48.0	70	63	N
T1_TN01	Tower 1	10	51.0	70	63	N
T1_TN01	Tower 1	11	54.0	70	63	N
T1_TN01	Tower 1	12	57.0	70	62	N
T1_TN01	Tower 1	13	60.0	70	62	N
T1_TN01	Tower 1	14	63.0	70	62	N
T1_TN01	Tower 1	15	66.0	70	62	N
T1_TN01	Tower 1	16	69.0	70	62	N
T1_TN01	Tower 1	17	72.0	70	62	N
T1_TN01	Tower 1	18	75.0	70	62	N
T1_TN01	Tower 1	19	78.0	70	62	N
T1_TN01	Tower 1	20	81.0	70	62	N
T1_TN01	Tower 1	21	84.0	70	62	N
T1_TN01	Tower 1	22	87.0	70	62	N
T1_TN02	Tower 1	01	24.0	70	62	N
T1_TN02	Tower 1	02	27.0	70	62	N
T1_TN02	Tower 1	03	30.0	70	62	N
T1_TN02	Tower 1	04	33.0	70	62	N
T1_TN02	Tower 1	05	36.0	70	62	N
T1_TN02	Tower 1	06	39.0	70	62	N
T1_TN02	Tower 1	07	42.0	70	62	N
T1_TN02	Tower 1	08	45.0	70	62	N
T1_TN02	Tower 1	09	48.0	70	62	N
T1_TN02	Tower 1	10	51.0	70	62	N
T1_TN02	Tower 1	11	54.0	70	62	N
T1_TN02	Tower 1	12	57.0	70	62	N
T1_TN02	Tower 1	13	60.0	70	62	N
T1_TN02	Tower 1	14	63.0	70	61	N
T1_TN02	Tower 1	15	66.0	70	61	N
T1_TN02	Tower 1	16	69.0	70	61	N
T1_TN02	Tower 1	17	72.0	70	61	N
T1_TN02	Tower 1	18	75.0	70	61	N
T1_TN02	Tower 1	19	78.0	70	61	N
T1_TN02	Tower 1	20	81.0	70	61	N
T1_TN02	Tower 1	21	84.0	70	61	N
T1_TN02	Tower 1	22	87.0	70	61	N
T1_TN03	Tower 1	01	24.0	70	62	N
T1_TN03	Tower 1	02	27.0	70	62	N
T1_TN03	Tower 1	03	30.0	70	62	N
T1_TN03	Tower 1	04	33.0	70	62	N
T1_TN03	Tower 1	05	36.0	70	62	N
T1_TN03	Tower 1	06	39.0	70	62	N
T1_TN03	Tower 1	07	42.0	70	62	N
T1_TN03	Tower 1	08	45.0	70	62	N
T1_TN03	Tower 1	09	48.0	70	62	N
T1_TN03	Tower 1	10	51.0	70	62	N
T1_TN03	Tower 1	11	54.0	70	62	N
T1_TN03	Tower 1	12	57.0	70	62	N
T1_TN03	Tower 1	13	60.0	70	61	N
T1_TN03	Tower 1	14	63.0	70	61	N
T1_TN03	Tower 1	15	66.0	70	61	N
T1_TN03	Tower 1	16	69.0	70	61	N
T1_TN03	Tower 1	17	72.0	70	61	N
T1_TN03	Tower 1	18	75.0	70	61	N
T1_TN03	Tower 1	19	78.0	70	61	N
T1_TN03	Tower 1	20	81.0	70	61	N
T1_TN03	Tower 1	21	84.0	70	61	N
T1_TN03	Tower 1	22	87.0	70	61	N
T1_TN04	Tower 1	01	24.0	70	64	N
T1_TN04	Tower 1	02	27.0	70	64	N
T1_TN04	Tower 1	03	30.0	70	64	N
T1_TN04	Tower 1	04	33.0	70	64	N
T1_TN04	Tower 1	05	36.0	70	64	N
T1_TN04	Tower 1	06	39.0	70	64	N
T1_TN04	Tower 1	07	42.0	70	64	N
T1_TN04	Tower 1	08	45.0	70	64	N
T1_TN04	Tower 1	09	48.0	70	64	N
T1_TN04	Tower 1	10	51.0	70	64	N
T1_TN04	Tower 1	11	54.0	70	64	N

**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN04	Tower 1	12	57.0	70	64	N
T1_TN04	Tower 1	13	60.0	70	64	N
T1_TN04	Tower 1	14	63.0	70	64	N
T1_TN04	Tower 1	15	66.0	70	64	N
T1_TN04	Tower 1	16	69.0	70	64	N
T1_TN04	Tower 1	17	72.0	70	63	N
T1_TN04	Tower 1	18	75.0	70	63	N
T1_TN04	Tower 1	19	78.0	70	63	N
T1_TN04	Tower 1	20	81.0	70	63	N
T1_TN04	Tower 1	21	84.0	70	63	N
T1_TN04	Tower 1	22	87.0	70	63	N
T1_TN05	Tower 1	01	24.0	70	64	N
T1_TN05	Tower 1	02	27.0	70	64	N
T1_TN05	Tower 1	03	30.0	70	64	N
T1_TN05	Tower 1	04	33.0	70	64	N
T1_TN05	Tower 1	05	36.0	70	64	N
T1_TN05	Tower 1	06	39.0	70	64	N
T1_TN05	Tower 1	07	42.0	70	64	N
T1_TN05	Tower 1	08	45.0	70	64	N
T1_TN05	Tower 1	09	48.0	70	64	N
T1_TN05	Tower 1	10	51.0	70	64	N
T1_TN05	Tower 1	11	54.0	70	64	N
T1_TN05	Tower 1	12	57.0	70	64	N
T1_TN05	Tower 1	13	60.0	70	63	N
T1_TN05	Tower 1	14	63.0	70	63	N
T1_TN05	Tower 1	15	66.0	70	63	N
T1_TN05	Tower 1	16	69.0	70	63	N
T1_TN05	Tower 1	17	72.0	70	63	N
T1_TN05	Tower 1	18	75.0	70	63	N
T1_TN05	Tower 1	19	78.0	70	63	N
T1_TN05	Tower 1	20	81.0	70	63	N
T1_TN05	Tower 1	21	84.0	70	63	N
T1_TN05	Tower 1	22	87.0	70	63	N
T1_TN06	Tower 1	01	24.0	70	65	N
T1_TN06	Tower 1	02	27.0	70	64	N
T1_TN06	Tower 1	03	30.0	70	64	N
T1_TN06	Tower 1	04	33.0	70	64	N
T1_TN06	Tower 1	05	36.0	70	64	N
T1_TN06	Tower 1	06	39.0	70	64	N
T1_TN06	Tower 1	07	42.0	70	64	N
T1_TN06	Tower 1	08	45.0	70	64	N
T1_TN06	Tower 1	09	48.0	70	63	N
T1_TN06	Tower 1	10	51.0	70	63	N
T1_TN06	Tower 1	11	54.0	70	63	N
T1_TN06	Tower 1	12	57.0	70	63	N
T1_TN06	Tower 1	13	60.0	70	63	N
T1_TN06	Tower 1	14	63.0	70	63	N
T1_TN06	Tower 1	15	66.0	70	63	N
T1_TN06	Tower 1	16	69.0	70	63	N
T1_TN06	Tower 1	17	72.0	70	63	N
T1_TN06	Tower 1	18	75.0	70	63	N
T1_TN06	Tower 1	19	78.0	70	62	N
T1_TN06	Tower 1	20	81.0	70	62	N
T1_TN06	Tower 1	21	84.0	70	62	N
T1_TN06	Tower 1	22	87.0	70	62	N
T1_TN07	Tower 1	01	24.0	70	68	N
T1_TN07	Tower 1	02	27.0	70	68	N
T1_TN07	Tower 1	03	30.0	70	68	N
T1_TN07	Tower 1	04	33.0	70	68	N
T1_TN07	Tower 1	05	36.0	70	67	N
T1_TN07	Tower 1	06	39.0	70	67	N
T1_TN07	Tower 1	07	42.0	70	67	N
T1_TN07	Tower 1	08	45.0	70	67	N
T1_TN07	Tower 1	09	48.0	70	67	N
T1_TN07	Tower 1	10	51.0	70	67	N
T1_TN07	Tower 1	11	54.0	70	67	N
T1_TN07	Tower 1	12	57.0	70	67	N
T1_TN07	Tower 1	13	60.0	70	66	N
T1_TN07	Tower 1	14	63.0	70	66	N
T1_TN07	Tower 1	15	66.0	70	66	N
T1_TN07	Tower 1	16	69.0	70	66	N
T1_TN07	Tower 1	17	72.0	70	66	N
T1_TN07	Tower 1	18	75.0	70	66	N
T1_TN07	Tower 1	19	78.0	70	66	N
T1_TN07	Tower 1	20	81.0	70	66	N
T1_TN07	Tower 1	21	84.0	70	66	N

**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN07	Tower 1	22	87.0	70	66	N
T1_TN08	Tower 1	01	24.0	70	68	N
T1_TN08	Tower 1	02	27.0	70	68	N
T1_TN08	Tower 1	03	30.0	70	68	N
T1_TN08	Tower 1	04	33.0	70	68	N
T1_TN08	Tower 1	05	36.0	70	68	N
T1_TN08	Tower 1	06	39.0	70	67	N
T1_TN08	Tower 1	07	42.0	70	67	N
T1_TN08	Tower 1	08	45.0	70	67	N
T1_TN08	Tower 1	09	48.0	70	67	N
T1_TN08	Tower 1	10	51.0	70	67	N
T1_TN08	Tower 1	11	54.0	70	67	N
T1_TN08	Tower 1	12	57.0	70	67	N
T1_TN08	Tower 1	13	60.0	70	67	N
T1_TN08	Tower 1	14	63.0	70	66	N
T1_TN08	Tower 1	15	66.0	70	66	N
T1_TN08	Tower 1	16	69.0	70	66	N
T1_TN08	Tower 1	17	72.0	70	66	N
T1_TN08	Tower 1	18	75.0	70	66	N
T1_TN08	Tower 1	19	78.0	70	66	N
T1_TN08	Tower 1	20	81.0	70	66	N
T1_TN08	Tower 1	21	84.0	70	66	N
T1_TN08	Tower 1	22	87.0	70	66	N
T2_TN01	Tower 2	01	15.0	70	59	N
T2_TN01	Tower 2	02	18.0	70	59	N
T2_TN01	Tower 2	03	21.0	70	59	N
T2_TN01	Tower 2	04	24.0	70	60	N
T2_TN01	Tower 2	05	27.0	70	61	N
T2_TN01	Tower 2	06	30.0	70	62	N
T2_TN01	Tower 2	07	33.0	70	62	N
T2_TN01	Tower 2	08	36.0	70	62	N
T2_TN01	Tower 2	09	39.0	70	63	N
T2_TN01	Tower 2	10	42.0	70	63	N
T2_TN01	Tower 2	11	45.0	70	63	N
T2_TN01	Tower 2	12	48.0	70	63	N
T2_TN01	Tower 2	13	51.0	70	63	N
T2_TN01	Tower 2	14	54.0	70	63	N
T2_TN01	Tower 2	15	57.0	70	63	N
T2_TN01	Tower 2	16	60.0	70	63	N
T2_TN01	Tower 2	17	63.0	70	63	N
T2_TN01	Tower 2	18	66.0	70	63	N
T2_TN01	Tower 2	19	69.0	70	63	N
T2_TN01	Tower 2	20	72.0	70	63	N
T2_TN01	Tower 2	21	75.0	70	63	N
T2_TN01	Tower 2	22	78.0	70	63	N
T2_TN01	Tower 2	23	81.0	70	63	N
T2_TN02	Tower 2	01	15.0	70	60	N
T2_TN02	Tower 2	02	18.0	70	60	N
T2_TN02	Tower 2	03	21.0	70	60	N
T2_TN02	Tower 2	04	24.0	70	61	N
T2_TN02	Tower 2	05	27.0	70	61	N
T2_TN02	Tower 2	06	30.0	70	62	N
T2_TN02	Tower 2	07	33.0	70	62	N
T2_TN02	Tower 2	08	36.0	70	63	N
T2_TN02	Tower 2	09	39.0	70	63	N
T2_TN02	Tower 2	10	42.0	70	63	N
T2_TN02	Tower 2	11	45.0	70	63	N
T2_TN02	Tower 2	12	48.0	70	63	N
T2_TN02	Tower 2	13	51.0	70	63	N
T2_TN02	Tower 2	14	54.0	70	63	N
T2_TN02	Tower 2	15	57.0	70	63	N
T2_TN02	Tower 2	16	60.0	70	63	N
T2_TN02	Tower 2	17	63.0	70	63	N
T2_TN02	Tower 2	18	66.0	70	63	N
T2_TN02	Tower 2	19	69.0	70	63	N
T2_TN02	Tower 2	20	72.0	70	63	N
T2_TN02	Tower 2	21	75.0	70	63	N
T2_TN02	Tower 2	22	78.0	70	63	N
T2_TN02	Tower 2	23	81.0	70	63	N
T2_TN03	Tower 2	01	15.0	70	59	N
T2_TN03	Tower 2	02	18.0	70	60	N
T2_TN03	Tower 2	03	21.0	70	60	N
T2_TN03	Tower 2	04	24.0	70	61	N
T2_TN03	Tower 2	05	27.0	70	62	N
T2_TN03	Tower 2	06	30.0	70	62	N
T2_TN03	Tower 2	07	33.0	70	63	N
T2_TN03	Tower 2	08	36.0	70	63	N
T2_TN03	Tower 2	09	39.0	70	63	N
T2_TN03	Tower 2	10	42.0	70	63	N



**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T2_TN03	Tower 2	11	45.0	70	63	N
T2_TN03	Tower 2	12	48.0	70	63	N
T2_TN03	Tower 2	13	51.0	70	63	N
T2_TN03	Tower 2	14	54.0	70	63	N
T2_TN03	Tower 2	15	57.0	70	63	N
T2_TN03	Tower 2	16	60.0	70	63	N
T2_TN03	Tower 2	17	63.0	70	63	N
T2_TN03	Tower 2	18	66.0	70	63	N
T2_TN03	Tower 2	19	69.0	70	63	N
T2_TN03	Tower 2	20	72.0	70	63	N
T2_TN03	Tower 2	21	75.0	70	63	N
T2_TN03	Tower 2	22	78.0	70	63	N
T2_TN03	Tower 2	23	81.0	70	63	N
T2_TN04	Tower 2	01	15.0	70	61	N
T2_TN04	Tower 2	02	18.0	70	62	N
T2_TN04	Tower 2	03	21.0	70	62	N
T2_TN04	Tower 2	04	24.0	70	62	N
T2_TN04	Tower 2	05	27.0	70	63	N
T2_TN04	Tower 2	06	30.0	70	63	N
T2_TN04	Tower 2	07	33.0	70	63	N
T2_TN04	Tower 2	08	36.0	70	63	N
T2_TN04	Tower 2	09	39.0	70	63	N
T2_TN04	Tower 2	10	42.0	70	63	N
T2_TN04	Tower 2	11	45.0	70	63	N
T2_TN04	Tower 2	12	48.0	70	63	N
T2_TN04	Tower 2	13	51.0	70	63	N
T2_TN04	Tower 2	14	54.0	70	63	N
T2_TN04	Tower 2	15	57.0	70	63	N
T2_TN04	Tower 2	16	60.0	70	63	N
T2_TN04	Tower 2	17	63.0	70	63	N
T2_TN04	Tower 2	18	66.0	70	63	N
T2_TN04	Tower 2	19	69.0	70	63	N
T2_TN04	Tower 2	20	72.0	70	63	N
T2_TN04	Tower 2	21	75.0	70	63	N
T2_TN04	Tower 2	22	78.0	70	63	N
T2_TN04	Tower 2	23	81.0	70	63	N
T3_TN01	Tower 3	01	15.0	70	61	N
T3_TN01	Tower 3	02	18.0	70	61	N
T3_TN01	Tower 3	03	21.0	70	62	N
T3_TN01	Tower 3	04	24.0	70	62	N
T3_TN01	Tower 3	05	27.0	70	62	N
T3_TN01	Tower 3	06	30.0	70	62	N
T3_TN01	Tower 3	07	33.0	70	62	N
T3_TN01	Tower 3	08	36.0	70	62	N
T3_TN01	Tower 3	09	39.0	70	62	N
T3_TN01	Tower 3	10	42.0	70	62	N
T3_TN01	Tower 3	11	45.0	70	62	N
T3_TN01	Tower 3	12	48.0	70	62	N
T3_TN01	Tower 3	13	51.0	70	62	N
T3_TN01	Tower 3	14	54.0	70	62	N
T3_TN01	Tower 3	15	57.0	70	62	N
T3_TN01	Tower 3	16	60.0	70	62	N
T3_TN01	Tower 3	17	63.0	70	62	N
T3_TN01	Tower 3	18	66.0	70	62	N
T3_TN01	Tower 3	19	69.0	70	62	N
T3_TN01	Tower 3	20	72.0	70	61	N
T3_TN01	Tower 3	21	75.0	70	61	N
T3_TN01	Tower 3	22	78.0	70	61	N
T3_TN01	Tower 3	23	81.0	70	61	N
T3_TN01	Tower 3	24	84.0	70	61	N
T3_TN01	Tower 3	25	87.0	70	61	N
T3_TN02	Tower 3	01	15.0	70	62	N
T3_TN02	Tower 3	02	18.0	70	62	N
T3_TN02	Tower 3	03	21.0	70	62	N
T3_TN02	Tower 3	04	24.0	70	62	N
T3_TN02	Tower 3	05	27.0	70	62	N
T3_TN02	Tower 3	06	30.0	70	62	N
T3_TN02	Tower 3	07	33.0	70	62	N
T3_TN02	Tower 3	08	36.0	70	62	N
T3_TN02	Tower 3	09	39.0	70	62	N
T3_TN02	Tower 3	10	42.0	70	62	N
T3_TN02	Tower 3	11	45.0	70	62	N
T3_TN02	Tower 3	12	48.0	70	62	N
T3_TN02	Tower 3	13	51.0	70	62	N
T3_TN02	Tower 3	14	54.0	70	62	N
T3_TN02	Tower 3	15	57.0	70	62	N
T3_TN02	Tower 3	16	60.0	70	62	N
T3_TN02	Tower 3	17	63.0	70	62	N
T3_TN02	Tower 3	18	66.0	70	62	N

**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T3_TN02	Tower 3	19	69.0	70	62	N
T3_TN02	Tower 3	20	72.0	70	62	N
T3_TN02	Tower 3	21	75.0	70	62	N
T3_TN02	Tower 3	22	78.0	70	62	N
T3_TN02	Tower 3	23	81.0	70	62	N
T3_TN02	Tower 3	24	84.0	70	62	N
T3_TN02	Tower 3	25	87.0	70	62	N
T3_TN03	Tower 3	01	15.0	70	61	N
T3_TN03	Tower 3	02	18.0	70	61	N
T3_TN03	Tower 3	03	21.0	70	61	N
T3_TN03	Tower 3	04	24.0	70	62	N
T3_TN03	Tower 3	05	27.0	70	62	N
T3_TN03	Tower 3	06	30.0	70	62	N
T3_TN03	Tower 3	07	33.0	70	62	N
T3_TN03	Tower 3	08	36.0	70	62	N
T3_TN03	Tower 3	09	39.0	70	62	N
T3_TN03	Tower 3	10	42.0	70	62	N
T3_TN03	Tower 3	11	45.0	70	62	N
T3_TN03	Tower 3	12	48.0	70	62	N
T3_TN03	Tower 3	13	51.0	70	62	N
T3_TN03	Tower 3	14	54.0	70	62	N
T3_TN03	Tower 3	15	57.0	70	62	N
T3_TN03	Tower 3	16	60.0	70	62	N
T3_TN03	Tower 3	17	63.0	70	61	N
T3_TN03	Tower 3	18	66.0	70	61	N
T3_TN03	Tower 3	19	69.0	70	61	N
T3_TN03	Tower 3	20	72.0	70	61	N
T3_TN03	Tower 3	21	75.0	70	61	N
T3_TN03	Tower 3	22	78.0	70	61	N
T3_TN03	Tower 3	23	81.0	70	61	N
T3_TN03	Tower 3	24	84.0	70	61	N
T3_TN03	Tower 3	25	87.0	70	61	N
T4_TN01	Tower 4	01	5.8	70	58	N
T4_TN01	Tower 4	02	8.8	70	58	N
T4_TN01	Tower 4	03	11.8	70	58	N
T4_TN01	Tower 4	04	14.8	70	58	N
T4_TN01	Tower 4	05	17.8	70	59	N
T4_TN01	Tower 4	06	20.8	70	59	N
T4_TN01	Tower 4	07	23.8	70	59	N
T4_TN01	Tower 4	08	26.8	70	59	N
T4_TN01	Tower 4	09	29.8	70	59	N
T4_TN01	Tower 4	10	32.8	70	59	N
T4_TN01	Tower 4	11	35.8	70	59	N
T4_TN01	Tower 4	12	38.8	70	59	N
T4_TN01	Tower 4	13	41.8	70	59	N
T4_TN01	Tower 4	14	44.8	70	59	N
T4_TN01	Tower 4	15	47.8	70	59	N
T4_TN01	Tower 4	16	50.8	70	59	N
T4_TN01	Tower 4	17	53.8	70	59	N
T4_TN01	Tower 4	18	56.8	70	59	N
T4_TN01	Tower 4	19	59.8	70	59	N
T4_TN01	Tower 4	20	62.8	70	59	N
T4_TN01	Tower 4	21	65.8	70	59	N
T4_TN01	Tower 4	22	68.8	70	59	N
T4_TN01	Tower 4	23	71.8	70	59	N
T4_TN01	Tower 4	24	74.8	70	59	N
T4_TN01	Tower 4	25	77.8	70	59	N
T4_TN02	Tower 4	01	5.8	70	60	N
T4_TN02	Tower 4	02	8.8	70	60	N
T4_TN02	Tower 4	03	11.8	70	60	N
T4_TN02	Tower 4	04	14.8	70	61	N
T4_TN02	Tower 4	05	17.8	70	61	N
T4_TN02	Tower 4	06	20.8	70	61	N
T4_TN02	Tower 4	07	23.8	70	61	N
T4_TN02	Tower 4	08	26.8	70	61	N
T4_TN02	Tower 4	09	29.8	70	61	N
T4_TN02	Tower 4	10	32.8	70	61	N
T4_TN02	Tower 4	11	35.8	70	61	N
T4_TN02	Tower 4	12	38.8	70	61	N
T4_TN02	Tower 4	13	41.8	70	61	N
T4_TN02	Tower 4	14	44.8	70	61	N
T4_TN02	Tower 4	15	47.8	70	61	N
T4_TN02	Tower 4	16	50.8	70	61	N
T4_TN02	Tower 4	17	53.8	70	61	N
T4_TN02	Tower 4	18	56.8	70	61	N
T4_TN02	Tower 4	19	59.8	70	61	N
T4_TN02	Tower 4	20	62.8	70	61	N
T4_TN02	Tower 4	21	65.8	70	61	N
T4_TN02	Tower 4	22	68.8	70	61	N

**Predicted Road Traffic Noise Levels at Representative NSRs For AM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T4_TN02	Tower 4	23	71.8	70	61	N
T4_TN02	Tower 4	24	74.8	70	61	N
T4_TN02	Tower 4	25	77.8	70	61	N
T5_TN01	Tower 5	01	5.8	70	56	N
T5_TN01	Tower 5	02	8.8	70	58	N
T5_TN01	Tower 5	03	11.8	70	58	N
T5_TN01	Tower 5	04	14.8	70	59	N
T5_TN01	Tower 5	05	17.8	70	59	N
T5_TN01	Tower 5	06	20.8	70	59	N
T5_TN01	Tower 5	07	23.8	70	59	N
T5_TN01	Tower 5	08	26.8	70	59	N
T5_TN01	Tower 5	09	29.8	70	59	N
T5_TN01	Tower 5	10	32.8	70	59	N
T5_TN01	Tower 5	11	35.8	70	59	N
T5_TN01	Tower 5	12	38.8	70	59	N
T5_TN01	Tower 5	13	41.8	70	59	N
T5_TN01	Tower 5	14	44.8	70	59	N
T5_TN01	Tower 5	15	47.8	70	59	N
T5_TN01	Tower 5	16	50.8	70	59	N
T5_TN01	Tower 5	17	53.8	70	59	N
T5_TN01	Tower 5	18	56.8	70	59	N
T5_TN01	Tower 5	19	59.8	70	59	N
T5_TN01	Tower 5	20	62.8	70	59	N
T5_TN01	Tower 5	21	65.8	70	59	N
T5_TN02	Tower 5	01	5.8	70	56	N
T5_TN02	Tower 5	02	8.8	70	58	N
T5_TN02	Tower 5	03	11.8	70	59	N
T5_TN02	Tower 5	04	14.8	70	59	N
T5_TN02	Tower 5	05	17.8	70	60	N
T5_TN02	Tower 5	06	20.8	70	60	N
T5_TN02	Tower 5	07	23.8	70	60	N
T5_TN02	Tower 5	08	26.8	70	60	N
T5_TN02	Tower 5	09	29.8	70	60	N
T5_TN02	Tower 5	10	32.8	70	60	N
T5_TN02	Tower 5	11	35.8	70	60	N
T5_TN02	Tower 5	12	38.8	70	60	N
T5_TN02	Tower 5	13	41.8	70	60	N
T5_TN02	Tower 5	14	44.8	70	60	N
T5_TN02	Tower 5	15	47.8	70	60	N
T5_TN02	Tower 5	16	50.8	70	60	N
T5_TN02	Tower 5	17	53.8	70	60	N
T5_TN02	Tower 5	18	56.8	70	60	N
T5_TN02	Tower 5	19	59.8	70	60	N
T5_TN02	Tower 5	20	62.8	70	60	N
T5_TN02	Tower 5	21	65.8	70	60	N

**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN01	Tower 1	01	24.0	70	62	N
T1_TN01	Tower 1	02	27.0	70	62	N
T1_TN01	Tower 1	03	30.0	70	62	N
T1_TN01	Tower 1	04	33.0	70	62	N
T1_TN01	Tower 1	05	36.0	70	62	N
T1_TN01	Tower 1	06	39.0	70	62	N
T1_TN01	Tower 1	07	42.0	70	62	N
T1_TN01	Tower 1	08	45.0	70	62	N
T1_TN01	Tower 1	09	48.0	70	62	N
T1_TN01	Tower 1	10	51.0	70	62	N
T1_TN01	Tower 1	11	54.0	70	62	N
T1_TN01	Tower 1	12	57.0	70	62	N
T1_TN01	Tower 1	13	60.0	70	62	N
T1_TN01	Tower 1	14	63.0	70	62	N
T1_TN01	Tower 1	15	66.0	70	62	N
T1_TN01	Tower 1	16	69.0	70	62	N
T1_TN01	Tower 1	17	72.0	70	62	N
T1_TN01	Tower 1	18	75.0	70	62	N
T1_TN01	Tower 1	19	78.0	70	61	N
T1_TN01	Tower 1	20	81.0	70	61	N
T1_TN01	Tower 1	21	84.0	70	61	N
T1_TN01	Tower 1	22	87.0	70	61	N
T1_TN02	Tower 1	01	24.0	70	61	N
T1_TN02	Tower 1	02	27.0	70	61	N
T1_TN02	Tower 1	03	30.0	70	61	N
T1_TN02	Tower 1	04	33.0	70	61	N
T1_TN02	Tower 1	05	36.0	70	61	N
T1_TN02	Tower 1	06	39.0	70	61	N
T1_TN02	Tower 1	07	42.0	70	61	N
T1_TN02	Tower 1	08	45.0	70	61	N
T1_TN02	Tower 1	09	48.0	70	61	N
T1_TN02	Tower 1	10	51.0	70	61	N
T1_TN02	Tower 1	11	54.0	70	61	N
T1_TN02	Tower 1	12	57.0	70	61	N
T1_TN02	Tower 1	13	60.0	70	61	N
T1_TN02	Tower 1	14	63.0	70	61	N
T1_TN02	Tower 1	15	66.0	70	61	N
T1_TN02	Tower 1	16	69.0	70	61	N
T1_TN02	Tower 1	17	72.0	70	61	N
T1_TN02	Tower 1	18	75.0	70	61	N
T1_TN02	Tower 1	19	78.0	70	61	N
T1_TN02	Tower 1	20	81.0	70	61	N
T1_TN02	Tower 1	21	84.0	70	60	N
T1_TN02	Tower 1	22	87.0	70	60	N
T1_TN03	Tower 1	01	24.0	70	61	N
T1_TN03	Tower 1	02	27.0	70	61	N
T1_TN03	Tower 1	03	30.0	70	61	N
T1_TN03	Tower 1	04	33.0	70	61	N
T1_TN03	Tower 1	05	36.0	70	61	N
T1_TN03	Tower 1	06	39.0	70	61	N
T1_TN03	Tower 1	07	42.0	70	61	N
T1_TN03	Tower 1	08	45.0	70	61	N
T1_TN03	Tower 1	09	48.0	70	61	N
T1_TN03	Tower 1	10	51.0	70	61	N
T1_TN03	Tower 1	11	54.0	70	61	N
T1_TN03	Tower 1	12	57.0	70	61	N
T1_TN03	Tower 1	13	60.0	70	61	N
T1_TN03	Tower 1	14	63.0	70	61	N
T1_TN03	Tower 1	15	66.0	70	61	N
T1_TN03	Tower 1	16	69.0	70	61	N
T1_TN03	Tower 1	17	72.0	70	61	N
T1_TN03	Tower 1	18	75.0	70	61	N
T1_TN03	Tower 1	19	78.0	70	61	N
T1_TN03	Tower 1	20	81.0	70	61	N
T1_TN03	Tower 1	21	84.0	70	61	N
T1_TN03	Tower 1	22	87.0	70	61	N
T1_TN04	Tower 1	01	24.0	70	63	N
T1_TN04	Tower 1	02	27.0	70	63	N
T1_TN04	Tower 1	03	30.0	70	63	N
T1_TN04	Tower 1	04	33.0	70	63	N
T1_TN04	Tower 1	05	36.0	70	63	N
T1_TN04	Tower 1	06	39.0	70	63	N
T1_TN04	Tower 1	07	42.0	70	63	N
T1_TN04	Tower 1	08	45.0	70	63	N
T1_TN04	Tower 1	09	48.0	70	63	N
T1_TN04	Tower 1	10	51.0	70	63	N
T1_TN04	Tower 1	11	54.0	70	63	N

**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN04	Tower 1	12	57.0	70	63	N
T1_TN04	Tower 1	13	60.0	70	63	N
T1_TN04	Tower 1	14	63.0	70	63	N
T1_TN04	Tower 1	15	66.0	70	63	N
T1_TN04	Tower 1	16	69.0	70	63	N
T1_TN04	Tower 1	17	72.0	70	63	N
T1_TN04	Tower 1	18	75.0	70	63	N
T1_TN04	Tower 1	19	78.0	70	63	N
T1_TN04	Tower 1	20	81.0	70	63	N
T1_TN04	Tower 1	21	84.0	70	63	N
T1_TN04	Tower 1	22	87.0	70	63	N
T1_TN05	Tower 1	01	24.0	70	64	N
T1_TN05	Tower 1	02	27.0	70	64	N
T1_TN05	Tower 1	03	30.0	70	64	N
T1_TN05	Tower 1	04	33.0	70	64	N
T1_TN05	Tower 1	05	36.0	70	63	N
T1_TN05	Tower 1	06	39.0	70	63	N
T1_TN05	Tower 1	07	42.0	70	63	N
T1_TN05	Tower 1	08	45.0	70	63	N
T1_TN05	Tower 1	09	48.0	70	63	N
T1_TN05	Tower 1	10	51.0	70	63	N
T1_TN05	Tower 1	11	54.0	70	63	N
T1_TN05	Tower 1	12	57.0	70	63	N
T1_TN05	Tower 1	13	60.0	70	63	N
T1_TN05	Tower 1	14	63.0	70	63	N
T1_TN05	Tower 1	15	66.0	70	63	N
T1_TN05	Tower 1	16	69.0	70	63	N
T1_TN05	Tower 1	17	72.0	70	63	N
T1_TN05	Tower 1	18	75.0	70	62	N
T1_TN05	Tower 1	19	78.0	70	62	N
T1_TN05	Tower 1	20	81.0	70	62	N
T1_TN05	Tower 1	21	84.0	70	62	N
T1_TN05	Tower 1	22	87.0	70	62	N
T1_TN06	Tower 1	01	24.0	70	64	N
T1_TN06	Tower 1	02	27.0	70	64	N
T1_TN06	Tower 1	03	30.0	70	63	N
T1_TN06	Tower 1	04	33.0	70	63	N
T1_TN06	Tower 1	05	36.0	70	63	N
T1_TN06	Tower 1	06	39.0	70	63	N
T1_TN06	Tower 1	07	42.0	70	63	N
T1_TN06	Tower 1	08	45.0	70	63	N
T1_TN06	Tower 1	09	48.0	70	63	N
T1_TN06	Tower 1	10	51.0	70	63	N
T1_TN06	Tower 1	11	54.0	70	62	N
T1_TN06	Tower 1	12	57.0	70	62	N
T1_TN06	Tower 1	13	60.0	70	62	N
T1_TN06	Tower 1	14	63.0	70	62	N
T1_TN06	Tower 1	15	66.0	70	62	N
T1_TN06	Tower 1	16	69.0	70	62	N
T1_TN06	Tower 1	17	72.0	70	62	N
T1_TN06	Tower 1	18	75.0	70	62	N
T1_TN06	Tower 1	19	78.0	70	62	N
T1_TN06	Tower 1	20	81.0	70	62	N
T1_TN06	Tower 1	21	84.0	70	62	N
T1_TN06	Tower 1	22	87.0	70	61	N
T1_TN07	Tower 1	01	24.0	70	68	N
T1_TN07	Tower 1	02	27.0	70	67	N
T1_TN07	Tower 1	03	30.0	70	67	N
T1_TN07	Tower 1	04	33.0	70	67	N
T1_TN07	Tower 1	05	36.0	70	67	N
T1_TN07	Tower 1	06	39.0	70	67	N
T1_TN07	Tower 1	07	42.0	70	67	N
T1_TN07	Tower 1	08	45.0	70	66	N
T1_TN07	Tower 1	09	48.0	70	66	N
T1_TN07	Tower 1	10	51.0	70	66	N
T1_TN07	Tower 1	11	54.0	70	66	N
T1_TN07	Tower 1	12	57.0	70	66	N
T1_TN07	Tower 1	13	60.0	70	66	N
T1_TN07	Tower 1	14	63.0	70	66	N
T1_TN07	Tower 1	15	66.0	70	66	N
T1_TN07	Tower 1	16	69.0	70	66	N
T1_TN07	Tower 1	17	72.0	70	65	N
T1_TN07	Tower 1	18	75.0	70	65	N
T1_TN07	Tower 1	19	78.0	70	65	N
T1_TN07	Tower 1	20	81.0	70	65	N
T1_TN07	Tower 1	21	84.0	70	65	N



**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T1_TN07	Tower 1	22	87.0	70	65	N
T1_TN08	Tower 1	01	24.0	70	68	N
T1_TN08	Tower 1	02	27.0	70	68	N
T1_TN08	Tower 1	03	30.0	70	67	N
T1_TN08	Tower 1	04	33.0	70	67	N
T1_TN08	Tower 1	05	36.0	70	67	N
T1_TN08	Tower 1	06	39.0	70	67	N
T1_TN08	Tower 1	07	42.0	70	67	N
T1_TN08	Tower 1	08	45.0	70	67	N
T1_TN08	Tower 1	09	48.0	70	66	N
T1_TN08	Tower 1	10	51.0	70	66	N
T1_TN08	Tower 1	11	54.0	70	66	N
T1_TN08	Tower 1	12	57.0	70	66	N
T1_TN08	Tower 1	13	60.0	70	66	N
T1_TN08	Tower 1	14	63.0	70	66	N
T1_TN08	Tower 1	15	66.0	70	66	N
T1_TN08	Tower 1	16	69.0	70	66	N
T1_TN08	Tower 1	17	72.0	70	65	N
T1_TN08	Tower 1	18	75.0	70	65	N
T1_TN08	Tower 1	19	78.0	70	65	N
T1_TN08	Tower 1	20	81.0	70	65	N
T1_TN08	Tower 1	21	84.0	70	65	N
T1_TN08	Tower 1	22	87.0	70	65	N
T2_TN01	Tower 2	01	15.0	70	59	N
T2_TN01	Tower 2	02	18.0	70	59	N
T2_TN01	Tower 2	03	21.0	70	59	N
T2_TN01	Tower 2	04	24.0	70	60	N
T2_TN01	Tower 2	05	27.0	70	60	N
T2_TN01	Tower 2	06	30.0	70	61	N
T2_TN01	Tower 2	07	33.0	70	62	N
T2_TN01	Tower 2	08	36.0	70	62	N
T2_TN01	Tower 2	09	39.0	70	62	N
T2_TN01	Tower 2	10	42.0	70	62	N
T2_TN01	Tower 2	11	45.0	70	62	N
T2_TN01	Tower 2	12	48.0	70	63	N
T2_TN01	Tower 2	13	51.0	70	63	N
T2_TN01	Tower 2	14	54.0	70	63	N
T2_TN01	Tower 2	15	57.0	70	63	N
T2_TN01	Tower 2	16	60.0	70	63	N
T2_TN01	Tower 2	17	63.0	70	63	N
T2_TN01	Tower 2	18	66.0	70	63	N
T2_TN01	Tower 2	19	69.0	70	63	N
T2_TN01	Tower 2	20	72.0	70	63	N
T2_TN01	Tower 2	21	75.0	70	63	N
T2_TN01	Tower 2	22	78.0	70	63	N
T2_TN01	Tower 2	23	81.0	70	63	N
T2_TN02	Tower 2	01	15.0	70	59	N
T2_TN02	Tower 2	02	18.0	70	59	N
T2_TN02	Tower 2	03	21.0	70	60	N
T2_TN02	Tower 2	04	24.0	70	60	N
T2_TN02	Tower 2	05	27.0	70	61	N
T2_TN02	Tower 2	06	30.0	70	62	N
T2_TN02	Tower 2	07	33.0	70	62	N
T2_TN02	Tower 2	08	36.0	70	62	N
T2_TN02	Tower 2	09	39.0	70	63	N
T2_TN02	Tower 2	10	42.0	70	63	N
T2_TN02	Tower 2	11	45.0	70	63	N
T2_TN02	Tower 2	12	48.0	70	63	N
T2_TN02	Tower 2	13	51.0	70	63	N
T2_TN02	Tower 2	14	54.0	70	63	N
T2_TN02	Tower 2	15	57.0	70	63	N
T2_TN02	Tower 2	16	60.0	70	63	N
T2_TN02	Tower 2	17	63.0	70	63	N
T2_TN02	Tower 2	18	66.0	70	63	N
T2_TN02	Tower 2	19	69.0	70	63	N
T2_TN02	Tower 2	20	72.0	70	63	N
T2_TN02	Tower 2	21	75.0	70	63	N
T2_TN02	Tower 2	22	78.0	70	63	N
T2_TN02	Tower 2	23	81.0	70	63	N
T2_TN03	Tower 2	01	15.0	70	59	N
T2_TN03	Tower 2	02	18.0	70	59	N
T2_TN03	Tower 2	03	21.0	70	60	N
T2_TN03	Tower 2	04	24.0	70	61	N
T2_TN03	Tower 2	05	27.0	70	61	N
T2_TN03	Tower 2	06	30.0	70	62	N
T2_TN03	Tower 2	07	33.0	70	62	N
T2_TN03	Tower 2	08	36.0	70	62	N
T2_TN03	Tower 2	09	39.0	70	63	N
T2_TN03	Tower 2	10	42.0	70	63	N

**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T2_TN03	Tower 2	11	45.0	70	63	N
T2_TN03	Tower 2	12	48.0	70	63	N
T2_TN03	Tower 2	13	51.0	70	63	N
T2_TN03	Tower 2	14	54.0	70	63	N
T2_TN03	Tower 2	15	57.0	70	63	N
T2_TN03	Tower 2	16	60.0	70	63	N
T2_TN03	Tower 2	17	63.0	70	63	N
T2_TN03	Tower 2	18	66.0	70	63	N
T2_TN03	Tower 2	19	69.0	70	63	N
T2_TN03	Tower 2	20	72.0	70	63	N
T2_TN03	Tower 2	21	75.0	70	63	N
T2_TN03	Tower 2	22	78.0	70	63	N
T2_TN03	Tower 2	23	81.0	70	63	N
T2_TN04	Tower 2	01	15.0	70	61	N
T2_TN04	Tower 2	02	18.0	70	61	N
T2_TN04	Tower 2	03	21.0	70	61	N
T2_TN04	Tower 2	04	24.0	70	62	N
T2_TN04	Tower 2	05	27.0	70	62	N
T2_TN04	Tower 2	06	30.0	70	63	N
T2_TN04	Tower 2	07	33.0	70	63	N
T2_TN04	Tower 2	08	36.0	70	63	N
T2_TN04	Tower 2	09	39.0	70	63	N
T2_TN04	Tower 2	10	42.0	70	63	N
T2_TN04	Tower 2	11	45.0	70	63	N
T2_TN04	Tower 2	12	48.0	70	63	N
T2_TN04	Tower 2	13	51.0	70	63	N
T2_TN04	Tower 2	14	54.0	70	63	N
T2_TN04	Tower 2	15	57.0	70	63	N
T2_TN04	Tower 2	16	60.0	70	63	N
T2_TN04	Tower 2	17	63.0	70	63	N
T2_TN04	Tower 2	18	66.0	70	63	N
T2_TN04	Tower 2	19	69.0	70	63	N
T2_TN04	Tower 2	20	72.0	70	63	N
T2_TN04	Tower 2	21	75.0	70	63	N
T2_TN04	Tower 2	22	78.0	70	63	N
T2_TN04	Tower 2	23	81.0	70	63	N
T3_TN01	Tower 3	01	15.0	70	60	N
T3_TN01	Tower 3	02	18.0	70	61	N
T3_TN01	Tower 3	03	21.0	70	61	N
T3_TN01	Tower 3	04	24.0	70	61	N
T3_TN01	Tower 3	05	27.0	70	61	N
T3_TN01	Tower 3	06	30.0	70	61	N
T3_TN01	Tower 3	07	33.0	70	61	N
T3_TN01	Tower 3	08	36.0	70	61	N
T3_TN01	Tower 3	09	39.0	70	61	N
T3_TN01	Tower 3	10	42.0	70	61	N
T3_TN01	Tower 3	11	45.0	70	61	N
T3_TN01	Tower 3	12	48.0	70	61	N
T3_TN01	Tower 3	13	51.0	70	61	N
T3_TN01	Tower 3	14	54.0	70	61	N
T3_TN01	Tower 3	15	57.0	70	61	N
T3_TN01	Tower 3	16	60.0	70	61	N
T3_TN01	Tower 3	17	63.0	70	61	N
T3_TN01	Tower 3	18	66.0	70	61	N
T3_TN01	Tower 3	19	69.0	70	61	N
T3_TN01	Tower 3	20	72.0	70	61	N
T3_TN01	Tower 3	21	75.0	70	61	N
T3_TN01	Tower 3	22	78.0	70	61	N
T3_TN01	Tower 3	23	81.0	70	61	N
T3_TN01	Tower 3	24	84.0	70	61	N
T3_TN01	Tower 3	25	87.0	70	61	N
T3_TN02	Tower 3	01	15.0	70	61	N
T3_TN02	Tower 3	02	18.0	70	61	N
T3_TN02	Tower 3	03	21.0	70	61	N
T3_TN02	Tower 3	04	24.0	70	61	N
T3_TN02	Tower 3	05	27.0	70	61	N
T3_TN02	Tower 3	06	30.0	70	61	N
T3_TN02	Tower 3	07	33.0	70	61	N
T3_TN02	Tower 3	08	36.0	70	61	N
T3_TN02	Tower 3	09	39.0	70	61	N
T3_TN02	Tower 3	10	42.0	70	61	N
T3_TN02	Tower 3	11	45.0	70	61	N
T3_TN02	Tower 3	12	48.0	70	61	N
T3_TN02	Tower 3	13	51.0	70	61	N
T3_TN02	Tower 3	14	54.0	70	61	N
T3_TN02	Tower 3	15	57.0	70	61	N
T3_TN02	Tower 3	16	60.0	70	61	N
T3_TN02	Tower 3	17	63.0	70	61	N
T3_TN02	Tower 3	18	66.0	70	61	N

**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T3_TN02	Tower 3	19	69.0	70	61	N
T3_TN02	Tower 3	20	72.0	70	61	N
T3_TN02	Tower 3	21	75.0	70	61	N
T3_TN02	Tower 3	22	78.0	70	61	N
T3_TN02	Tower 3	23	81.0	70	61	N
T3_TN02	Tower 3	24	84.0	70	61	N
T3_TN02	Tower 3	25	87.0	70	61	N
T3_TN03	Tower 3	01	15.0	70	60	N
T3_TN03	Tower 3	02	18.0	70	60	N
T3_TN03	Tower 3	03	21.0	70	61	N
T3_TN03	Tower 3	04	24.0	70	61	N
T3_TN03	Tower 3	05	27.0	70	61	N
T3_TN03	Tower 3	06	30.0	70	61	N
T3_TN03	Tower 3	07	33.0	70	61	N
T3_TN03	Tower 3	08	36.0	70	61	N
T3_TN03	Tower 3	09	39.0	70	61	N
T3_TN03	Tower 3	10	42.0	70	61	N
T3_TN03	Tower 3	11	45.0	70	61	N
T3_TN03	Tower 3	12	48.0	70	61	N
T3_TN03	Tower 3	13	51.0	70	61	N
T3_TN03	Tower 3	14	54.0	70	61	N
T3_TN03	Tower 3	15	57.0	70	61	N
T3_TN03	Tower 3	16	60.0	70	61	N
T3_TN03	Tower 3	17	63.0	70	61	N
T3_TN03	Tower 3	18	66.0	70	61	N
T3_TN03	Tower 3	19	69.0	70	61	N
T3_TN03	Tower 3	20	72.0	70	61	N
T3_TN03	Tower 3	21	75.0	70	61	N
T3_TN03	Tower 3	22	78.0	70	61	N
T3_TN03	Tower 3	23	81.0	70	61	N
T3_TN03	Tower 3	24	84.0	70	61	N
T3_TN03	Tower 3	25	87.0	70	61	N
T4_TN01	Tower 4	01	5.8	70	57	N
T4_TN01	Tower 4	02	8.8	70	57	N
T4_TN01	Tower 4	03	11.8	70	57	N
T4_TN01	Tower 4	04	14.8	70	58	N
T4_TN01	Tower 4	05	17.8	70	58	N
T4_TN01	Tower 4	06	20.8	70	58	N
T4_TN01	Tower 4	07	23.8	70	58	N
T4_TN01	Tower 4	08	26.8	70	59	N
T4_TN01	Tower 4	09	29.8	70	59	N
T4_TN01	Tower 4	10	32.8	70	59	N
T4_TN01	Tower 4	11	35.8	70	59	N
T4_TN01	Tower 4	12	38.8	70	59	N
T4_TN01	Tower 4	13	41.8	70	59	N
T4_TN01	Tower 4	14	44.8	70	59	N
T4_TN01	Tower 4	15	47.8	70	59	N
T4_TN01	Tower 4	16	50.8	70	59	N
T4_TN01	Tower 4	17	53.8	70	59	N
T4_TN01	Tower 4	18	56.8	70	59	N
T4_TN01	Tower 4	19	59.8	70	59	N
T4_TN01	Tower 4	20	62.8	70	59	N
T4_TN01	Tower 4	21	65.8	70	59	N
T4_TN01	Tower 4	22	68.8	70	59	N
T4_TN01	Tower 4	23	71.8	70	59	N
T4_TN01	Tower 4	24	74.8	70	59	N
T4_TN01	Tower 4	25	77.8	70	59	N
T4_TN02	Tower 4	01	5.8	70	59	N
T4_TN02	Tower 4	02	8.8	70	59	N
T4_TN02	Tower 4	03	11.8	70	59	N
T4_TN02	Tower 4	04	14.8	70	60	N
T4_TN02	Tower 4	05	17.8	70	60	N
T4_TN02	Tower 4	06	20.8	70	60	N
T4_TN02	Tower 4	07	23.8	70	60	N
T4_TN02	Tower 4	08	26.8	70	60	N
T4_TN02	Tower 4	09	29.8	70	60	N
T4_TN02	Tower 4	10	32.8	70	60	N
T4_TN02	Tower 4	11	35.8	70	60	N
T4_TN02	Tower 4	12	38.8	70	60	N
T4_TN02	Tower 4	13	41.8	70	60	N
T4_TN02	Tower 4	14	44.8	70	60	N
T4_TN02	Tower 4	15	47.8	70	60	N
T4_TN02	Tower 4	16	50.8	70	60	N
T4_TN02	Tower 4	17	53.8	70	60	N
T4_TN02	Tower 4	18	56.8	70	60	N
T4_TN02	Tower 4	19	59.8	70	60	N
T4_TN02	Tower 4	20	62.8	70	60	N
T4_TN02	Tower 4	21	65.8	70	60	N
T4_TN02	Tower 4	22	68.8	70	60	N

**Predicted Road Traffic Noise Levels at Representative NSRs For PM Peak Hour (Unmitigated Scenario)**

NSR Information					Year 2045 Design Traffic Flow	Mitigation Measures Required [Y/N]
NAP ID	NAP Description	Floor	mPD*	Criteria	With Development Noise Level (dB(A))	
T4_TN02	Tower 4	23	71.8	70	60	N
T4_TN02	Tower 4	24	74.8	70	60	N
T4_TN02	Tower 4	25	77.8	70	60	N
T5_TN01	Tower 5	01	5.8	70	55	N
T5_TN01	Tower 5	02	8.8	70	57	N
T5_TN01	Tower 5	03	11.8	70	57	N
T5_TN01	Tower 5	04	14.8	70	58	N
T5_TN01	Tower 5	05	17.8	70	58	N
T5_TN01	Tower 5	06	20.8	70	58	N
T5_TN01	Tower 5	07	23.8	70	58	N
T5_TN01	Tower 5	08	26.8	70	58	N
T5_TN01	Tower 5	09	29.8	70	58	N
T5_TN01	Tower 5	10	32.8	70	58	N
T5_TN01	Tower 5	11	35.8	70	58	N
T5_TN01	Tower 5	12	38.8	70	58	N
T5_TN01	Tower 5	13	41.8	70	58	N
T5_TN01	Tower 5	14	44.8	70	58	N
T5_TN01	Tower 5	15	47.8	70	58	N
T5_TN01	Tower 5	16	50.8	70	58	N
T5_TN01	Tower 5	17	53.8	70	58	N
T5_TN01	Tower 5	18	56.8	70	58	N
T5_TN01	Tower 5	19	59.8	70	58	N
T5_TN01	Tower 5	20	62.8	70	58	N
T5_TN01	Tower 5	21	65.8	70	58	N
T5_TN02	Tower 5	01	5.8	70	55	N
T5_TN02	Tower 5	02	8.8	70	57	N
T5_TN02	Tower 5	03	11.8	70	58	N
T5_TN02	Tower 5	04	14.8	70	58	N
T5_TN02	Tower 5	05	17.8	70	58	N
T5_TN02	Tower 5	06	20.8	70	59	N
T5_TN02	Tower 5	07	23.8	70	59	N
T5_TN02	Tower 5	08	26.8	70	59	N
T5_TN02	Tower 5	09	29.8	70	59	N
T5_TN02	Tower 5	10	32.8	70	59	N
T5_TN02	Tower 5	11	35.8	70	59	N
T5_TN02	Tower 5	12	38.8	70	59	N
T5_TN02	Tower 5	13	41.8	70	59	N
T5_TN02	Tower 5	14	44.8	70	59	N
T5_TN02	Tower 5	15	47.8	70	59	N
T5_TN02	Tower 5	16	50.8	70	59	N
T5_TN02	Tower 5	17	53.8	70	59	N
T5_TN02	Tower 5	18	56.8	70	59	N
T5_TN02	Tower 5	19	59.8	70	59	N
T5_TN02	Tower 5	20	62.8	70	59	N
T5_TN02	Tower 5	21	65.8	70	59	N

**Appendix 4.1**

**Inventory of Potential Industrial Noise Sources**


Source ID	Name	Description	Source ID	Name	Description
S01	浩華	Steel Engineering Company	S02	Open Storage for Goods	Open Storage for Goods
					
Source ID	Name	Description	Source ID	Name	Description
S03	開利貨倉	Logistics Centre	S04	浩洲	Steel Engineering Company
					
Source ID	Name	Description	Source ID	Name	Description
S05	千海物流	Logistics Centre	S06	軒威沙倉	Open Storage for Goods/Containers
					



Source ID	Name	Description	Source ID	Name	Description
S07	合權發展(流浮山)有限公司	Logistics Centre	S08	Hong Kong Changxing Metal Electronic Ltd	Storage for Materials
					
Source ID	Name	Description	Source ID	Name	Description
S09	新環球	Logistics Centre	S10	華興重櫃場	Open Storage for Goods/Containers
					
Source ID	Name	Description	Source ID	Name	Description
S11	MMC Motor	Vehicle Repair Workshop	S12	泓豐	Logistics Centre
					

EA

S12A for Proposed Residential Development and Social Welfare Facility (Child Care Centre) at Various Lots in D.D. 128 and D.D. 129, and Adjoining Government Land, Lau Fau Shan, Yuen Long, New Territories

Source ID	Name	Description	
S13	全逸	Logistics Centre	
			

Noise Source ID	Description of Noise Sources	Sources		Measured SPL, dB(A) (free-field)	Distance from Source (m)	SWL, dB(A)				Source Location			Directivity Factor (Q)	No. of Plant
		Nature of Business	Existing/Planned			Daytime & Evening Time (0700-2300)	Ref	Nighttime (2300-0700)	Ref	X	Y	Z, mPD		
S01a	Welding at 浩華	Steel Engineering Company	Existing	-	-	78	[4]	OFF	[4]			0.0	2	1
S01b	Forklift at 浩華	Steel Engineering Company	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S02a	Forklift at Open Storage for Goods	Open Storage for Goods	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S02b	Lorry movement at Open Storage for Goods	Open Storage for Goods	Existing	-	-	99	[2]	OFF	[2]			0.0	2	1
S03a	Lorry movement at 開利貨倉	Logistics Centre	Existing	-	-	99	[2]	OFF	[2]			0.0	2	3
S03b	Forklift at 開利貨倉	Logistics Centre	Existing	-	-	91	[3]	OFF	[3]			0.0	2	2
S04a	Welding at 浩洲	Steel Engineering Company	Existing	-	-	78	[4]	OFF	[4]			0.0	2	1
S04b	Forklift at 浩洲	Steel Engineering Company	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S04c	Mobile Crane at 浩洲	Steel Engineering Company	Existing	-	-	97	[2]	OFF	[2]			0.0	2	1
S05a	Lorry movement at 千海物流	Logistics Centre	Existing	-	-	99	[2]	OFF	[2]			0.0	2	1
S05b	Forklift at 千海物流	Logistics Centre	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S06a	Forklift at 軒威沙倉	Open Storage for Goods	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S06b	Lorry movement at 軒威沙倉	Open Storage for Goods	Existing	-	-	99	[2]	OFF	[2]			0.0	2	1
S07a	Lorry movement at 合權發展(流浮山)有限公司	Logistics Centre	Existing	-	-	99	[2]	99	[2]			0.0	2	3
S07b	Forklift at 合權發展(流浮山)有限公司	Logistics Centre	Existing	-	-	91	[3]	91	[3]			0.0	2	3
S08a	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	Storage for Materials	Existing	-	-	99	[2]	OFF	[2]			0.0	2	1
S08b	Forklift at Hong Kong Changxing Metal Electronic Ltd	Storage for Materials	Existing	-	-	91	[3]	OFF	[3]			0.0	2	1
S09a	Lorry movement at 新環球	Logistics Centre	Existing	-	-	99	[2]	99	[2]			0.0	2	2
S09b	Forklift at 新環球	Logistics Centre	Existing	-	-	91	[3]	91	[3]			0.0	2	2
S10a	Mobile Crane at 華興重禮場	Open Storage for Goods/Containers	Existing	-	-	97	[2]	OFF	[2]			0.0	1	1
S10b	Lorry movement at 華興重禮場	Open Storage for Goods/Containers	Existing	-	-	99	[2]	OFF	[2]			0.0	2	1
S11a	Pneumatic Screwdriver at MMC Motor	Vehicle Repair Workshop	Existing	-	-	97	[1]	OFF	[1]			0.0	1	1
S11b	Tyre Pumping at MMC Motor	Vehicle Repair Workshop	Existing	-	-	89	[1]	OFF	[1]			0.0	1	1
S11c	Hammering at MMC Motor	Vehicle Repair Workshop	Existing	-	-	87	[1]	OFF	[1]			0.0	1	1
S12a	Lorry movement at 泓豐	Logistics Centre	Existing	-	-	99	[2]	OFF	[2]			0.0	2	2
S12b	Forklift at 泓豐	Logistics Centre	Existing	-	-	91	[3]	OFF	[3]			0.0	2	2
S13a	Lorry movement at 全逸	Logistics Centre	Existing	-	-	99	[2]	99	[2]			0.0	2	1
S13b	Forklift at 全逸	Logistics Centre	Existing	-	-	91	[3]	91	[3]			0.0	2	1

**Notes:**

[1] Reference is made to an approved planning application A/YL-KTN/501.

[2] Reference is made to the approved EIA report for "Proposed Residential Cum Recreation Development within "Recreation" Zone and "Residential (Group C) Zone at Variou Lots in D104, Yuen Long, N.T." (AEIA-182/2014).

[3] Reference is made to an approved planning application A/TM- LTY/273.

[4] Reference is made to an approved EIA Report of Hong Kong Section of Guangzhou-Shenzhen-Hong Kong Express Rail Link.

## **Appendix 4.2**

### **Industrial Noise Impact Assessment Results**

Prediction of Unmitigated Fixed Noise Source Impact on Planned NSR (Unmitigated Scenario)

NSR Labels	Descriptions	Nature of Use	Existing/Planned Uses	Location		ASR	Noise Criteria (ANL) <sub>L<sub>eq</sub></sub> (30 min)		Noise Source ID	Description of Noise Sources	SWL, dB(A)		Notional Source Location <sup>(4)</sup>		Directivity Factor (Q)	No. of Plant	Distance to NSR, d (m)	Correction for, dB(A)					Noise Impact at NSR, dB(A)										
				X	Y		Daytime & Evening Time (0700-2300)	Nighttime (2300-0700)			Daytime & Evening Time (0700-2300)	Nighttime (2300-0700)	X	Y				Distance	No.	Screening by Features <sup>(1)</sup>	Fin	Facade	Daytime & Evening Period	Night-time									
																									Total	65	51						
FN-T1-01	Tower 1	Residential	Planned	816363	836227	A	60	50	S02a	Forklift at Open Storage for Goods	91	OFF	816442	836364	2	1	159	-52.0	0	0	0	3	42.0	N.A.									
									S02b	Lorry movement at Open Storage for Goods	99	OFF	816442	836364	2	1	159	-52.0	0	0	0	3	50.0	N.A.									
									S03a	Lorry movement at 開利貨倉	99	OFF	816424	836242	2	3	63	-44.0	5	0	0	3	62.8	N.A.									
									S03b	Forklift at 開利貨倉	91	OFF	816424	836242	2	2	63	-44.0	3	0	0	3	53.0	N.A.									
									S04a	Welding at 浩洲	78	OFF	816466	836333	2	1	148	-51.4	0	0	0	3	29.6	N.A.									
									S04b	Forklift at 浩洲	91	OFF	816466	836333	2	1	148	-51.4	0	0	0	3	42.6	N.A.									
									S04c	Mobile Crane at 浩洲	97	OFF	816466	836333	2	1	148	-51.4	0	0	0	3	48.6	N.A.									
									S05a	Lorry movement at 千海物流	99	OFF	816506	836366	2	1	199	-54.0	0	0	0	3	48.0	N.A.									
									S05b	Forklift at 千海物流	91	OFF	816506	836366	2	1	199	-54.0	0	0	0	3	40.0	N.A.									
									S06a	Forklift at 軒威沙倉	91	OFF	816525	836325	2	1	189	-53.5	0	0	0	3	40.5	N.A.									
									S06b	Lorry movement at 軒威沙倉	99	OFF	816525	836325	2	1	189	-53.5	0	0	0	3	48.5	N.A.									
									S07a	Lorry movement at 合權發展(流浮山)有限公司	99	99	816573	836356	2	3	246	-55.8	5	-5	0	3	46.0	46.0									
									S07b	Forklift at 合權發展(流浮山)有限公司	91	91	816573	836356	2	3	246	-55.8	5	-5	0	3	38.0	38.0									
									S08a	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	99	OFF	816455	836275	2	1	104	-48.3	0	0	0	3	53.7	N.A.									
									S08b	Forklift at Hong Kong Changxing Metal Electronic Ltd	91	OFF	816455	836275	2	1	104	-48.3	0	0	0	3	45.7	N.A.									
S09a	Lorry movement at 新環球	99	99	816502	836236	2	2	139	-50.9	3	-5	0	3	49.1	49.1																		
S09b	Forklift at 新環球	91	91	816502	836236	2	2	139	-50.9	3	-5	0	3	41.1	41.1																		
																		<b>Total</b>	<b>65</b>	<b>51</b>													
FN-T1-02	Tower 1	Residential	Planned	816333	836218	A	60	50	S02a	Forklift at Open Storage for Goods	91	OFF	816442	836364	2	1	182	-53.2	0	0	0	3	40.8	N.A.									
									S02b	Lorry movement at Open Storage for Goods	99	OFF	816442	836364	2	1	182	-53.2	0	0	0	3	48.8	N.A.									
									S04a	Welding at 浩洲	78	OFF	816466	836333	2	1	176	-52.9	0	0	0	3	28.1	N.A.									
									S04b	Forklift at 浩洲	91	OFF	816466	836333	2	1	176	-52.9	0	0	0	3	41.1	N.A.									
									S04c	Mobile Crane at 浩洲	97	OFF	816466	836333	2	1	176	-52.9	0	0	0	3	47.1	N.A.									
									S05a	Lorry movement at 千海物流	99	OFF	816506	836366	2	1	227	-55.1	0	0	0	3	46.9	N.A.									
									S05b	Forklift at 千海物流	91	OFF	816506	836366	2	1	227	-55.1	0	0	0	3	38.9	N.A.									
									S06a	Forklift at 軒威沙倉	91	OFF	816524	836325	2	1	219	-54.8	0	0	0	3	39.2	N.A.									
									S06b	Lorry movement at 軒威沙倉	99	OFF	816524	836325	2	1	219	-54.8	0	0	0	3	47.2	N.A.									
									S07a	Lorry movement at 合權發展(流浮山)有限公司	99	99	816573	836357	2	3	276	-56.8	5	-5	0	3	45.0	45.0									
									S07b	Forklift at 合權發展(流浮山)有限公司	91	91	816573	836357	2	3	276	-56.8	5	-5	0	3	37.0	37.0									
									S08a	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	99	OFF	816456	836276	2	1	135	-50.6	0	0	0	3	51.4	N.A.									
									S08b	Forklift at Hong Kong Changxing Metal Electronic Ltd	91	OFF	816456	836276	2	1	135	-50.6	0	0	0	3	43.4	N.A.									
																											<b>Total</b>	<b>57</b>	<b>46</b>				
									FN-T1-03	Tower 1	Residential	Planned	816347	836196	A	60	50	S01a	Welding at 浩華	78	OFF	816360	836190	2	1	14	-31.0	0	0	0	3	50.0	N.A.
S01b	Forklift at 浩華	91	OFF	816360	836190	2	1	14										-31.0	0	0	0	3	63.0	N.A.									
S10a	Mobile Crane at 華興重機場	97	OFF	816459	836109	1	1	141										-54.0	0	-5	0	3	41.0	N.A.									
S10b	Lorry movement at 華興重機場	99	OFF	816459	836109	2	1	141										-51.0	0	-5	0	3	46.0	N.A.									
S11a	Pneumatic Screwdriver at MMC Motor	97	OFF	816602	836152	1	1	259										-59.2	0	0	0	3	40.8	N.A.									
S11b	Tyre Pumping at MMC Motor	89	OFF	816602	836152	1	1	259										-59.2	0	0	0	3	32.8	N.A.									
S11c	Hammering at MMC Motor	87	OFF	816602	836152	1	1	259										-59.2	0	0	0	3	30.8	N.A.									
S12a	Lorry movement at 泓豐	99	OFF	816616	836056	2	2	303										-57.6	3	0	0	3	47.4	N.A.									
S12b	Forklift at 泓豐	91	OFF	816616	836056	2	2	303										-57.6	3	0	0	3	39.4	N.A.									
S13a	Lorry movement at 全逸	99	99	816402	835974	2	1	228										-55.1	0	0	0	3	46.9	46.9									
S13b	Forklift at 全逸	91	91	816402	835974	2	1	228										-55.1	0	0	0	3	38.9	38.9									
																		<b>Total</b>	<b>64</b>	<b>48</b>													
FN-T2-01	Tower 2	Residential	Planned	816317	836228	A	60	50										S02a	Forklift at Open Storage for Goods	91	OFF	816441	836364	2	1	184	-53.3	0	0	0	3	40.7	N.A.
																		S02b	Lorry movement at Open Storage for Goods	99	OFF	816441	836364	2	1	184	-53.3	0	0	0	3	48.7	N.A.
																		S03a	Lorry movement at 開利貨倉	99	OFF	816424	836244	2	3	109	-48.7	5	0	0	3	58.1	N.A.
									S03b	Forklift at 開利貨倉	91	OFF	816424	836244	2	2	109	-48.7	3	0	0	3	48.3	N.A.									
									S04a	Welding at 浩洲	78	OFF	816466	836334	2	1	183	-53.2	0	0	0	3	27.8	N.A.									
									S04b	Forklift at 浩洲	91	OFF	816466	836334	2	1	183	-53.2	0	0	0	3	40.8	N.A.									
									S04c	Mobile Crane at 浩洲	97	OFF	816466	836334	2	1	183	-53.2	0	0	0	3	46.8	N.A.									
									S05a	Lorry movement at 千海物流	99	OFF	816505	836367	2	1	234	-55.4	0	0	0	3	46.6	N.A.									
									S05b	Forklift at 千海物流	91	OFF	816505	836367	2	1	234	-55.4	0	0	0	3	38.6	N.A.									
									S06a	Forklift at 軒威沙倉	91	OFF	816524	836326	2	1	229	-55.2	0	0	0	3	38.8	N.A.									
									S06b	Lorry movement at 軒威沙倉	99	OFF	816524	836326	2	1	229	-55.2	0	0	0	3	46.8	N.A.									
									S07a	Lorry movement at 合權發展(流浮山)有限公司	99	99	816573	836358	2	3	287	-57.2	5	-5	0	3	44.6	44.6									
									S07b	Forklift at 合權發展(流浮山)有限公司	91	91	816573	836358	2	3	287	-57.2	5	-5	0	3	36.6	36.6									
									S08a	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	99	OFF	816456	836278	2	1	148	-51.4	0	0	0	3	50.6	N.A.									
									S08b	Forklift at Hong Kong Changxing Metal Electronic Ltd	91	OFF	816456	836278	2	1	148	-51.4	0	0	0	3	42.6	N.A.									
S09a	Lorry movement at 新環球	99	99	816502	836236	2	2	186	-53.4	3	0	0	3	51.6	51.6																		
S09b	Forklift at 新環球	91	91	816502	836236	2	2	186	-53.4	3	0	0	3	43.6	43.6																		
																		<b>Total</b>	<b>61</b>	<b>53</b>													
FN-T2-02	Tower 2	Residential	Planned	816302	836243	A	60	50	S02a	Forklift at Open Storage for Goods	91	OFF	816440	836365	2	1	184	-53.3	0	0	0	3	40.7	N.A.									
									S02b	Lorry movement at Open Storage for Goods	99	OFF	816440	836365	2	1	184	-53.3	0	0	0	3	48.7	N.A.									
									S03a	Lorry movement at 開利貨倉	99	OFF	816425	836246	2	3	123	-49.8	5	0	0	3	57.0	N.A.									
									S03b	Forklift at 開利貨倉	91	OFF	816425	836246	2	2	123	-49.8	3	0	0	3	47.2	N.A.									
									S04a	Welding at 浩洲	78	OFF	816466	836334	2	1	188	-53.5	0	0	0	3	27.5	N.A.									
									S04b	Forklift at 浩洲	91	OFF	816466	836334	2	1	188	-53.5	0	0	0	3	40.5	N.A.									
									S04c	Mobile Crane at 浩洲	97	OFF	816466	836334	2	1	188	-53.5	0	0	0	3	46.5	N.A.									
									S05a	Lorry movement at 千海物流	99	OFF	816504	836368	2	1	238	-55.5	0	0	0	3	46.5	N.A.									
									S05b	Forklift at 千海物流	91	OFF	816504	836368	2	1	238	-55.5	0	0	0	3	38.5	N.A.									
									S06a	Forklift at 軒威沙倉	91	OFF	816524	836326	2	1	237	-55.5	0	0	0	3	38.5	N.A.									
									S06b	Lorry movement at 軒威沙倉	99	OFF	816524	836326	2	1	237	-55.5	0	0	0	3	46.5	N.A.									
									S07a	Lorry movement at 合權發展(流浮山)有限公司	99	99	816573	836360	2	3	296	-57.4	5	-5	0	3	44.4	44.4									
									S07b	Forklift at 合權發展(流浮山)有限公司	91	91	816573	836360	2	3	296	-57.4	5	-5	0	3	36.4	36.4									
									S08a	Lorry movement at Hong Kong Changxing Metal Electronic Ltd	99	OFF	816457	836280	2	1	159	-52.0	0	0	0	3	50.0	N.A.									
									S08b	Forklift at Hong Kong Changxing Metal Electronic Ltd	91	OFF	816457	836280	2	1	159	-52.0	0	0	0	3	42.0	N.A.									
S09a	Lorry movement at 新環球	99	99	816502																													



**Prediction of Unmitigated Fixed Noise Source Impact on Planned NSR (Unmitigated Scenario)**

NSR Labels	Descriptions	Nature of Use	Existing/Planned Uses	Location		ASR	Noise Criteria (ANL), $L_{eq}$ (30 min)		Noise Source ID	Description of Noise Sources	SWL, dB(A)		Notional Source Location <sup>(4)</sup>		Directivity Factor (Q)	No. of Plant	Distance to NSR, d (m)	Correction for, dB(A)					Noise Impact at NSR, dB(A)							
				X	Y		Daytime & Evening Time (0700-2300)	Nighttime (2300-0700)			Daytime & Evening Time (0700-2300)	Nighttime (2300-0700)	X	Y				Distance	No.	Screening by Features <sup>(1)</sup>	Fin	Facade	Daytime & Evening Period	Night-time						
																									Total =	Total =				
FN-T3-01	Tower 3	Residential	Planned	816309	836195	A	60	50	S01a	Welding at 浩華	78	OFF	816360	836189	2	1	51	-42.2	0	0	0	3	38.8	N.A.						
									S01b	Forklift at 浩華	91	OFF	816360	836189	2	1	51	-42.2	0	0	0	3	51.8	N.A.						
									S10a	Mobile Crane at 華興畫樓場	97	OFF	816458	836103	1	1	175	-55.9	0	-5	0	3	39.1	N.A.						
									S10b	Lorry movement at 華興畫樓場	99	OFF	816458	836103	2	1	175	-52.8	0	-5	0	3	44.2	N.A.						
									S11a	Pneumatic Screwdriver at MMC Motor	97	OFF	816602	836151	1	1	296	-60.4	0	0	0	3	39.6	N.A.						
									S11b	Tyre Pumping at MMC Motor	89	OFF	816602	836151	1	1	296	-60.4	0	0	0	3	31.6	N.A.						
									S11c	Hammering at MMC Motor	87	OFF	816602	836151	1	1	296	-60.4	0	0	0	3	29.6	N.A.						
									S12a	Lorry movement at 泓豐	99	OFF	816616	836055	2	2	337	-58.5	3	0	0	3	46.5	N.A.						
									S12b	Forklift at 泓豐	91	OFF	816616	836055	2	2	337	-58.5	3	0	0	3	38.5	N.A.						
									S13a	Lorry movement at 全逸	99	99	816400	835974	2	1	240	-55.6	0	0	0	3	46.4	46.4						
									S13b	Forklift at 全逸	91	91	816400	835974	2	1	240	-55.6	0	0	0	3	38.4	38.6						
																												<b>Total =</b>	55	47
									FN-T3-02	Tower 3	Residential	Planned	816293	836184	A	60	50	S01a	Welding at 浩華	78	OFF	816360	836187	2	1	67	-44.5	0	0	0
S01b	Forklift at 浩華	91	OFF	816360	836187	2	1	67										-44.5	0	0	0	3	49.5	N.A.						
S10a	Mobile Crane at 華興畫樓場	97	OFF	816458	836098	1	1	186										-56.4	0	-5	0	3	38.6	N.A.						
S10b	Lorry movement at 華興畫樓場	99	OFF	816458	836098	2	1	186										-53.4	0	-5	0	3	43.6	N.A.						
S11a	Pneumatic Screwdriver at MMC Motor	97	OFF	816602	836151	1	1	311										-60.9	0	0	0	3	39.1	N.A.						
S11b	Tyre Pumping at MMC Motor	89	OFF	816602	836151	1	1	311										-60.9	0	0	0	3	31.1	N.A.						
S11c	Hammering at MMC Motor	87	OFF	816602	836151	1	1	311										-60.9	0	0	0	3	29.1	N.A.						
S12a	Lorry movement at 泓豐	99	OFF	816615	836055	2	2	347										-58.8	3	0	0	3	46.2	N.A.						
S12b	Forklift at 泓豐	91	OFF	816615	836055	2	2	347										-58.8	3	0	0	3	38.2	N.A.						
S13a	Lorry movement at 全逸	99	99	816399	835973	2	1	236										-55.4	0	0	0	3	46.6	46.6						
S13b	Forklift at 全逸	91	91	816399	835973	2	1	236										-55.4	0	0	0	3	38.6	38.6						
																			<b>Total =</b>	54	47									
FN-T4-01	Tower 4	Residential	Planned	816262	836171	A	60	50										S01a	Welding at 浩華	78	OFF	816360	836187	2	1	99	-47.9	0	0	0
									S01b	Forklift at 浩華	91	OFF	816360	836187	2	1	99	-47.9	0	0	0	3	46.1	N.A.						
									S09a	Lorry movement at 新環球	99	99	816503	836232	2	2	248	-55.9	3	0	0	3	49.1	49.1						
									S09b	Forklift at 新環球	91	91	816503	836232	2	2	248	-55.9	3	0	0	3	41.1	41.1						
									S10a	Mobile Crane at 華興畫樓場	97	OFF	816458	836093	1	1	211	-57.5	0	-5	0	3	37.5	N.A.						
									S10b	Lorry movement at 華興畫樓場	99	OFF	816458	836093	2	1	211	-54.5	0	-5	0	3	42.5	N.A.						
									S11a	Pneumatic Screwdriver at MMC Motor	97	OFF	816602	836150	1	1	341	-61.6	0	0	0	3	38.4	N.A.						
									S11b	Tyre Pumping at MMC Motor	89	OFF	816602	836150	1	1	341	-61.6	0	0	0	3	30.4	N.A.						
									S11c	Hammering at MMC Motor	87	OFF	816602	836150	1	1	341	-61.6	0	0	0	3	28.4	N.A.						
									S12a	Lorry movement at 泓豐	99	OFF	816614	836054	2	2	370	-59.4	3	0	0	3	45.6	N.A.						
									S12b	Forklift at 泓豐	91	OFF	816614	836054	2	2	370	-59.4	3	0	0	3	37.6	N.A.						
									S13a	Lorry movement at 全逸	99	99	816398	835972	2	1	241	-55.6	0	0	0	3	46.4	46.4						
									S13b	Forklift at 全逸	91	91	816398	835972	2	1	241	-55.6	0	0	0	3	38.4	38.4						
																			<b>Total =</b>	54	52									
FN-T4-02	Tower 4	Residential	Planned	816245	836163	A	60	50	S01a	Welding at 浩華	78	OFF	816361	836187	2	1	119	-49.5	0	-5	0	3	26.5	N.A.						
									S01b	Forklift at 浩華	91	OFF	816361	836187	2	1	119	-49.5	0	-5	0	3	39.5	N.A.						
									S10a	Mobile Crane at 華興畫樓場	97	OFF	816458	836090	1	1	225	-58.1	0	-5	0	3	36.9	N.A.						
									S10b	Lorry movement at 華興畫樓場	99	OFF	816458	836090	2	1	225	-55.0	0	-5	0	3	42.0	N.A.						
									S11a	Pneumatic Screwdriver at MMC Motor	97	OFF	816603	836150	1	1	358	-62.1	0	0	0	3	37.9	N.A.						
									S11b	Tyre Pumping at MMC Motor	89	OFF	816603	836150	1	1	358	-62.1	0	0	0	3	29.9	N.A.						
									S11c	Hammering at MMC Motor	87	OFF	816603	836150	1	1	358	-62.1	0	0	0	3	27.9	N.A.						
									S12a	Lorry movement at 泓豐	99	OFF	816613	836054	2	2	384	-59.7	3	0	0	3	45.3	N.A.						
									S12b	Forklift at 泓豐	91	OFF	816613	836054	2	2	384	-59.7	3	0	0	3	37.3	N.A.						
									S13a	Lorry movement at 全逸	99	99	816397	835971	2	1	245	-55.8	0	0	0	3	46.2	46.2						
									S13b	Forklift at 全逸	91	91	816397	835971	2	1	245	-55.8	0	0	0	3	38.2	38.2						
																												<b>Total =</b>	51	47

**Notes:**

- <sup>(1)</sup> Screening by structures resulting in rough noise attenuation of 10 dB(A) for full screening and 5 dB(A) for partial screening.
- <sup>(2)</sup> All S07 is given a noise attenuation of 5 dB(A) due to the presence of screening structures at the facility.
- <sup>(3)</sup> All S10 is given a noise attenuation of 5 dB(A) due to screening provided by stacked storage containers.
- <sup>(4)</sup> FN-T1-01 to S09 and FN-T4-02 to S01 are given a rough noise attenuation of 5 dB(A) due to partial screening by building structure of the proposed development.
- <sup>(5)</sup> It is considered that all noise sources on-site are steady, and will not generate sudden noise impulse. Impulsive noise correction are therefore not applicable in the calculation.
- <sup>(6)</sup> Cells highlighted in red denote exceedance of the relevant criteria.
- <sup>(7)</sup> Notional source locations of S01 to the NSRs are determined by considering their visible area, taking into account the worst-case scenario.





Prediction of Mitigated Fixed Noise Source Impact on Planned NSR (Mitigated Scenario)

Table with columns: NSR Labels, Descriptions, Nature of Use, Existing/Planned Uses, Location (X, Y, ASR), Noise Criteria (Daytime & Evening Time, Nighttime), Noise Source ID, Description of Noise Sources, SWL, dB(A), Notional Source Location, Directionality, No. of Plant, Distance to NSR, Barrier Correction (Fm, Fm, Fm, Slant distance, Slant distance, Slant distance, Path difference, Angle between Source and Barrier, Angle between Source and NSR, Shadow Zone, Sound attenuation), Correction for, dB(A) (Distance, No., Screening by Features, Fm, Facade), Noise Impact at NSR, dB(A) (Daytime & Evening Period, Night-time).

- Footnotes 1) through 6) providing details on screening by structures, noise attenuation, noise source locations, and barrier correction calculations.

D2 = 10 lg [ 3 + (C2/lambda) C3 Kmet ]

C2 is equal to 20, an includes the effect of ground reflections; C3 is equal to 1 for single diffraction

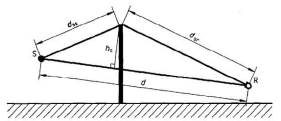
Kmet = exp [ - (Y2000) sqrt(d55 dgr d / (Z2)) ] for z > 0

lambda is the wavelength of sound (in metres) at the nominal midband frequency f (in hertz) of the octave band ( lambda = 340 m/s / f );

r = [ (d55 + dgr)^2 + a^2 ]^1/2 - d

where d55 is the distance from the source to the (first) diffraction edge, in metres; dgr is the distance from the (second) diffraction edge to the receiver, in metres; a is the component distance parallel to the barrier edge between source and receiver, in metres.

Frequency of 500Hz is assumed for calculation of barrier corrections for the concerned plants



**Proposed Fin**

NSR Label	Fin Label	Length of Fin (m)	Tip of the Fin	
			x Easting	y Northing
FN-T1-01	Fin T1-01	1.5	816364	836228
FN-T1-03	Fin T1-03	1.5	816348	836194
FN-T2-01	Fin T2-01	1.5	816320	836229
FN-T2-02	Fin T2-03	1.5	816306	836243
FN-T4-01	Fin T4-01	1	816264	836169

## **Annex E**

### **Revised Traffic Review Report**



Reference number CHK50605510/PTC/L2400509/sys

**APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D. 128 AND D.D. 129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES (PLANNING APPLICATION NO. Y/YL-LFS/14)**

**TRAFFIC REVIEW**





# 1. INTRODUCTION

## 1.1 Background

- 1.1.1 The Application site is located at various Lots in D.D.128 and D.D. 129, and adjoining government land, Lau Fau Shan as indicated in **Drawing No. 1.1**. A section 12A application (Planning Application No. Y/YL-LFS/14) has been submitted to the Government to rezone the Application site for the proposed residential development and Social Welfare Facility (Child Care Centre).
- 1.1.2 The tentative completion year of the proposed development is 2030. A traffic impact assessment (TIA) report for the design year of 2033 was submitted to the Government in support of the application. During the application, a proposed temporary transitional housing, being located at the subject rezoning site, was approved by Town Planning Board in 2022 (Application No. A/YL-LFS/425). In this regard, a sensitivity test for another assessment year has been requested by Transport Department (TD) to assess in case there is a later development completion year.
- 1.1.3 In response to TD’s request and taking into account of the planned operation period of transitional housing, a sensitivity test for the design year of 2036 was conducted by assuming that the completion year of the proposed development to be in year 2033. This traffic review is to review the traffic impact to the surrounding road network if the completion year of the proposed development is assumed to be in year 2033.

# 2. TRAFFIC FORECSATING

## 2.1 Design Year for Sensitivity Test

- 2.1.1 By assuming that the completion year of the proposed development to be in year 2033, the design year of 2036, three years upon operation of the proposed development, has been adopted for sensitivity test.

## 2.2 Identified Road Junction and Links

- 2.2.1 Same as previously submitted TIA report, a total of five junctions/road links, as listed in **Table 2.1**, have been identified for assessment purposes in accordance with the major ingress/egress routes. The locations of the identified junctions and road links are indicated in **Drawing 2.1**.

**Table 2.1 Identified Key Junctions**

Ref. <sup>(1)</sup>	Key Junction/Road Links	Type	Drawing No.
<b>Junction</b>			
J1	Lau Fau Shan Road / Deep Bay Road	Roundabout	<b>2.2</b>
J2	Tin Wah Road/Lau Fau Shan Road/Ping Ha Ro	Priority	<b>2.3</b>
J3	Tin Wah Road/Tin Ying Road	Signal	<b>2.4</b>
<b>Road Link</b>			
L1	Deep Bay Road (section between Lau Fau Shan Roundabout and the subject site)	Single Track Access Road	<b>2.1</b>
L2	Lau Fau Shan Road	Single-2	<b>2.1</b>

Remark: (1) Refer to **Drawing 2.1** for locations.

## 2.3 Forecasting Assumptions

- 2.3.1 According to the Legislative Council Paper No. CB(1)230/19-20(03) “Funding Applications for Hung Shui Kiu/Ha Tsuen New Development Area”, the Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA) will be developed in phases. Phase 1 and Phase 2 developments are scheduled to be completed by 2032 whilst the Phase 3 development is scheduled to be completed in 2037/2038.
- 2.3.2 Phase 1 and Phase 2 developments of HSK/HT NDA would be completed before the design year 2036 and has been considered in this traffic forecast. Nevertheless, taking into consideration that the Phases 1 & 2 developments are not in close proximity to the identified study area, their traffic impact would be limited on the identified study area. Therefore, same as the previously submitted TIA report, the 2036 reference traffic flows were derived by adopting appropriate growth rates onto the observed traffic flows.
- 2.3.3 To derive the 2036 reference traffic flows for sensitivity test, the year 2033 reference flows in the previously submitted TIA report are adopted as basis.

### Traffic Growth Rate from 2033 to 2036

- 2.3.4 For the long-term traffic growth rate from Year 2033 up to 2036, reference has been made to the Hong Kong Resident Population extracted from “Hong Kong Population Projections 2022-2046” published by Census and Statistics Department. The average annual growth from year 2033 to 2036 is illustrated in **Table 2.2**.

**Table 2.2 Hong Kong Resident Population for Years 2033-2036**

	Year 2033 (ppl)	Year 2036 (ppl)	Growth Rate per annum (2033/2036)
Hong Kong Population	7,903,600	8,022,400	+0.50%

- 2.3.5 As indicated in **Table 2.2**, the average growth rate of Hong Kong Resident Population is +0.5% p.a. from year 2033 to 2036, which was adopted to project the year 2033 traffic flows up to year 2036 traffic flows.

### Adjacent Planned/Committed Developments

- 2.3.6 The planned/committed developments in the vicinity of the development that are expected to be completed by year 2036 will be included in the traffic forecast. The details of these committed developments and the estimated traffic flows are listed in **Table 2.3** and **Table 2.4** respectively. The locations of planned/committed developments in the vicinity are indicated in **Drawing 2.5**.

**Table 2.3 Committed/Approved Developments**

Ref. (1)	Committed/Approved Developments	Parameter
1	Proposed Public Housing Development nearby Tin Wah Road	4390 flats with 14580m <sup>2</sup> retail GFA, 2906m <sup>2</sup> GIC GFA and proposed ancillary facilities/carpark
2	Proposed Residential Development at Tin Shui Wai Area 112	2031 flats with 8403m <sup>2</sup> retail GFA
3	Proposed Residential Development at Tin Shui Wai Area 115	1727 flats with 1858m <sup>2</sup> retail GFA
4	Proposed Residential Development at Tin Shui Wai Area 33	1938 flats with 205m <sup>2</sup> retail GFA

Remark: (1) Locations refer to **Drawing No. 2.5**.

**Table 2.4 Estimated Trips for other Committed/Approved Developments**

Ref. (1)	Committed/Approved Developments	Trip Generations (pcu/hr)			
		AM Peak		PM Peak	
		Gen	Attr	Gen	Attr
1	Proposed Public Housing Development nearby Tin Wah Road <sup>(2)</sup>	400	287	232	341
2	Proposed Residential Development at Tin Shui Wai Area 112 <sup>(3)</sup>	176	124	109	119
3	Proposed Residential Development at Tin Shui Wai Area 115	128	78	55	71
4	Proposed Residential Development at Tin Shui Wai Area 33	139	82	56	73

Remarks: (1) Locations refer to **Drawing No. 2.5**.

(2) Trip Generations are based on its TIA report under RNTPC Paper No.4/21.

(3) Included the trips of Public Vehicle Park (90 car parking, 45 coach parking & 9 motorcycle parking).

## 2.4 Development Traffic Generations

2.4.1 The subject site is proposed to be developed into a residential development of 1,246 unit with average flat size of about 50m<sup>2</sup> with a 100-place child care center. The traffic generated from the proposed development as derived from the previously submitted TIA would be included for traffic forecasting. The estimated trip generation of the proposed development extracted from TIA report is listed in **Table 2.5**.

**Table 2.5 Estimated Trip Generation of Proposed Development**

		AM Peak		PM Peak	
		Gen	Attr	Gen	Attr
Residential	Trip Rates (pcu/hr/flat) <sup>(1)</sup>	0.0718	0.0425	0.0286	0.037
	No. of Unit	1246			
	Proposed Development (pcu/hr)	89	53	36	46
G/IC	Child Care Centre (pcu/hr) <sup>(2)</sup>	20	20	20	20
<b>Total</b>		<b>109</b>	<b>73</b>	<b>56</b>	<b>66</b>

Remarks: (1) Trip rates extracted from TPDM mean trip rates for Private Housing R(A) Average Flat Size of 60sqm.

(2) Nominal Trips.

## 2.5 Year 2036 Traffic Flows

- 2.5.1 According to the above, the anticipated 2036 peak hour reference traffic flows are obtained by applying the adopted growth rates to the 2033 traffic flows and superimposing the estimated trip generations of the planned developments. The 2036 reference peak-hour traffic flows are shown in **Drawing 2.6**.
- 2.5.2 The estimated development traffic trips as derived in **Table 2.5** are superimposed onto the year 2036 reference traffic flows, to produce the anticipated year 2036 peak hour design traffic flows. The year 2036 design peak-hour traffic flows are shown in **Drawings 2.7**.

## 3. TRAFFIC IMPACT ASSESSMENT FOR SENSITIVITY TEST

### 3.1 Junction Assessment

- 3.1.1 To investigate the traffic impact of the proposed development on the surrounding road network at the design year 2036, operational performance of the identified key local junctions and critical links have been assessed for both reference and design scenarios.

**Government's Planned Junction Improvement Work at Tin Wah Road/Lau Fau Shan Road/Ping Ha Road (J2) and Road Widening Works at Tin Wah Road**

- 3.1.2 The Government gazetted on 18 November 2022 the road works for PWP Item No. B847CL Site Formation and Infrastructure works for Public Housing Development at Tin Wah Road, Lau Fau Shan. Under the Gazette Plan, the existing priority junction at Tin Wah Road/Lau Fau Shan Road/Ping Ha Road (J2) will be converted to a roundabout, and a section of Tin Wah Road between Tin Ying Road and Lau Fau Shan Road will be widened to a dual 2-lane road. The possible planned layout for junction and road improvement works are shown in **Drawing No. 3.1** and **Drawing No. 3.2** respectively. The works are scheduled to commence in March 2024 and will take about 46 months to complete. The planned schematic improvement layouts were adopted for assessment.

**Junction Operation Performance**

- 3.1.3 Based on the existing/planned layouts, the junction assessment results for the 2036 reference and design scenarios are summarized in **Table 3.1**. The junction calculation sheets are attached in **Annex A**.

**Table 3.1 Year 2036 Junction Operational Performance**

Ref. (1)	Junction	Type	RC/RFC <sup>(2)</sup>			
			Reference Case		Design Case	
			AM Peak	PM Peak	AM Peak	PM Peak
J1	Lau Fau Shan Road / Deep Bay Road	Roundabout	0.40	0.34	0.49	0.46
J2	Planned Junction of Tin Wah Road/Lau Fau Shan Road/Ping Ha Road <sup>(2)</sup>	Roundabout <sup>(2)</sup>	0.72	0.81	0.76	0.84
J3	Planned Junction of Tin Wah Road/Tin Ying Road <sup>(3)</sup>	Signal	-5%	10%	-6%	10%

Remarks: (1) Refer to **Drawing 2.1** for junction locations.

(2) Based on the planned junction improvement works on **Drawing No. 3.1**.

(3) Based on the planned road improvement works on **Drawing No. 3.2**.

(4) RC = reserved capacity for signal junction, RFC = ratio-of-flow to capacity for roundabout junction.

3.1.4 The assessment results in **Table 3.1** revealed that among the identified key junctions, the planned junction Tin Wah Road/Ting Ying Road (J3) would be operated with over-capacity under both reference and design cases. That is, the planned junction would be operated with over-capacity even without the proposed development.

### 3.2 Road Link Assessment

3.2.1 Apart from junction capacity assessment, the road link operation performance was also undertaken for both reference and design scenarios.

#### **PWP Item No. 6878th (Part)- Government's Planned Upgrading Works at Deep Bay Road**

3.2.2 The Government gazetted on 10 December 2021 the widening works at a section of Deep Bay between Lau Fau Shan Roundabout and Nim Wan Road from a single track access road to a single two-lane carriageway to serve the traffic demand in the area. Under the Gazette Plan, a section of Deep Bay Road abutting the subject site will be widened to around 7m with footpath as illustrated in **Drawing No. 3.3**. The road widening works is anticipated to be completed in phases by around 2029 according to the LegCo Paper (No. CB(1)177/2022(05)). This road layout was adopted for assessment.

#### **Link Operational Performance**

3.2.3 Based on the existing/planned layouts with traffic forecast, the results of the assessment are summarized in **Table 3.2**.

**Table 3.2 Year 2036 Road Link Operational Performance**

Ref. (1)	Road Link	Capacity (veh/hr)	Reference Case				Design Case			
			Two-way Traffic Flows (veh/hr)		Volume to Capacity Ratio (V/C)		Two-way Traffic Flows (veh/hr)		Volume to Capacity Ratio (V/C)	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
L1	Upgraded Deep Bay Road <sup>(2)</sup>	1400 <sup>(3)</sup>	205	320	0.15	0.23	375	435	0.27	0.31
L2	Lau Fau Shan Road	1400 <sup>(3)</sup>	390	525	0.28	0.38	565	640	0.40	0.46

Remarks: (1) Refer to **Drawing 2.1** for locations.

(2) Based on the planned road layout as shown in **Drawing No. 3.3**.

(3) According to TPDM Volume 2 Section.2.4.1, road capacity of single 2-lane carriageway with the road width of 6.75m, the peak hourly flow of 1400 veh/hr for both directions under district distributor.

3.2.4 The assessment result in **Table 3.2** revealed that all the identified key road links will operate with ample capacity under both reference and design cases.

### 3.3 Improvement Proposal

#### Proposed Junction Improvement at Tin Wah Road/Tin Ying Road (J3)

- 3.3.1 To resolve the foreseeable traffic problems, a local junction improvement measure has been proposed for the planned junction Tin Wah Road/Tin Ying Road (J3). It is proposed to convert the straight crossing at Tin Ying Road southbound into staggered crossing, convert the left-turn lane at Tin Ying Road southbound to straight and left-turn, widen the traffic lane at Tin Wah Road westbound by setting back the existing traffic island and modify the road markings at Tin Ying Road northbound. Detail of junction improvement scheme is shown in **Drawing No. 3.4**.
- 3.3.2 The operational performance of the junction of Tin Wah Road/Tin Ying Road (J3) was re-assessed based on the proposed improvement scheme. The result is summarized in **Table 3.3**.

**Table 3.3 Year 2036 Junction Operational Performance with Proposed Improvement Scheme**

Ref.	Junction	Type	Reserve Capacity	
			AM Peak	PM Peak
J3	Tin Wah Road/Tin Ying Road <sup>(1)</sup>	Signal	16%	31%

Remark : (1) Based on the proposed junction improvement works on **Drawing 3.4**.

- 3.3.3 The junction assessment results shown in **Table 3.3** indicates that the junction Tin Wah Road/Tin Ying Road (J3) could be alleviated with the proposed improvement scheme at the design year 2036.

## 4. CONCLUSION

### 4.1 Summary

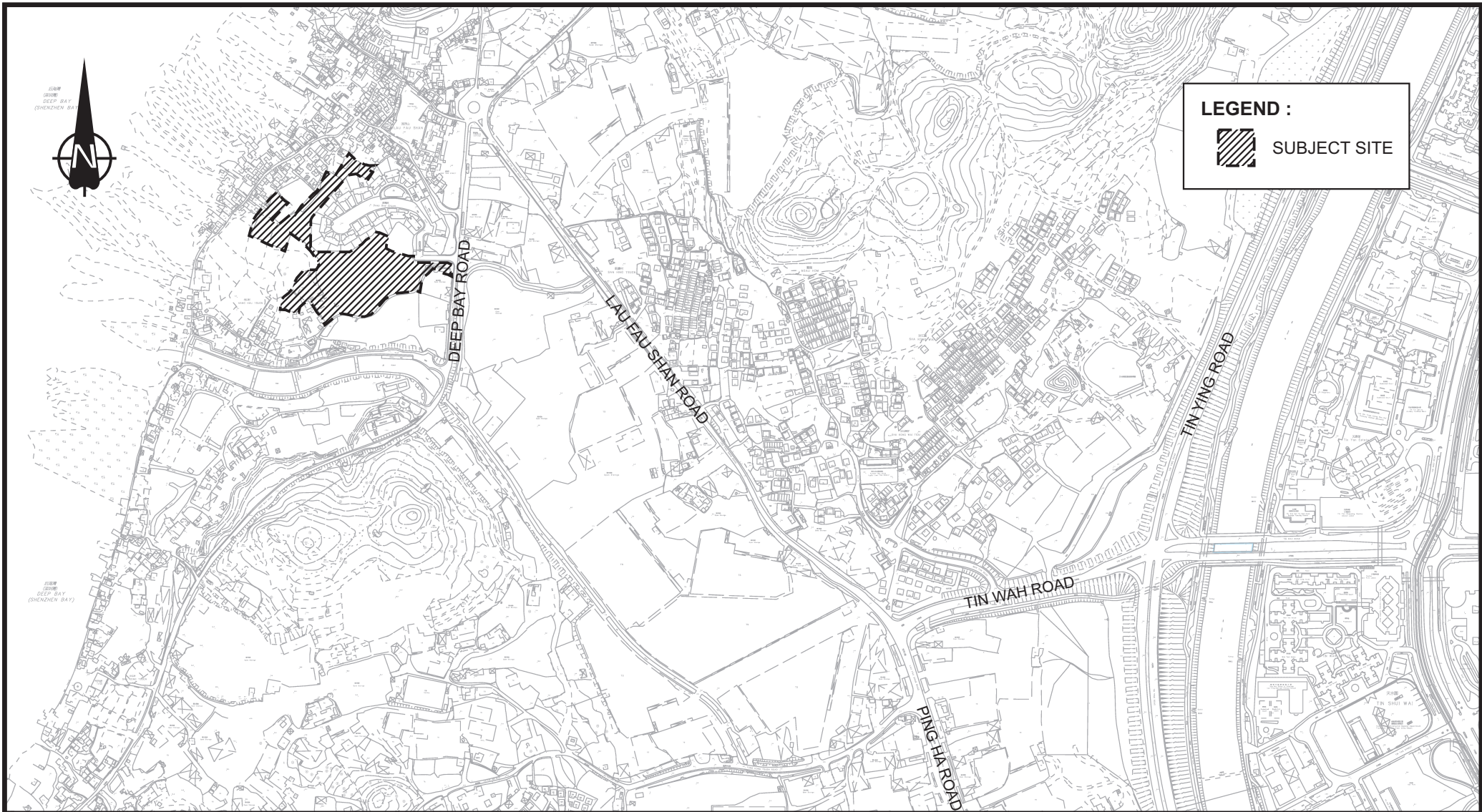
- 4.1.1 The Application site is located at various Lots in D.D.128 and D.D. 129, and adjoining government land, Lau Fau Shan as indicated in **Drawing No. 1.1**. A section 12A application (Planning Application No. Y/YL-LFS/14) has been submitted to the Government to rezone the Application site for the proposed residential development and Social Welfare Facility (Child Care Centre).
- 4.1.2 The tentative completion year of the proposed development is 2030. A traffic impact assessment (TIA) report for the design year of 2033 was submitted to the Government in support of the application. During the application, a proposed temporary transitional housing, being located at the subject rezoning site, was approved by Town Planning Board in 2022 (Application No. A/YL-LFS/425). In this regard, a sensitivity test for another assessment year has been requested by Transport Department (TD) to assess in case there is a later development completion year. In response to TD's request and taking into account of the planned operation period of transitional housing, a sensitivity test for the design year of 2036 was conducted by assuming that the completion year of the proposed development to be in year 2033.




- 4.1.3 The Government gazetted on 10 December 2021 the widening works at a section of Deep Bay between Lau Fau Shan Roundabout and Nim Wan Road from a single track access road to a single two-lane carriageway to serve the traffic demand in the area. Under the Gazette Plan, a section of Deep Bay Road abutting the subject site will be widened to around 7m with footpath as illustrated in **Drawing No. 3.3**. The road widening works is anticipated to be completed in phases by around 2029 according to the LegCo Paper. This planned road layout was adopted for assessment.
- 4.1.4 Peak-hour traffic forecast for year 2036 were generated based on the same methodology in the previously submitted TIA report. Operational performance of the identified local junctions and road links have been assessed based on the anticipated year 2036 traffic flows and the existing/planned layouts. The assessment results revealed that all identified key junctions and road links will operate with ample capacity, except the planned junction Tin Wah Road/Tin Ying Road (J3).
- 4.1.5 To resolve the foreseeable traffic problems, a local junction improvement measure has been proposed for the planned junction Tin Wah Road/Tin Ying Road (J3). According to the junction assessment result, the junction Tin Wah Road/Tin Ying Road (J3) can operate within capacity under the proposed improvement scheme at the design year 2036.


## 4.2 Conclusion

- 4.2.1 In conclusion, the result of the sensitivity test has demonstrated that even if the project completion year is postponed to 2033, the development traffic generation by the subject site can still be absorbed by the nearby road network and would not cause any adverse traffic impact (with the proposed local junction improvement).

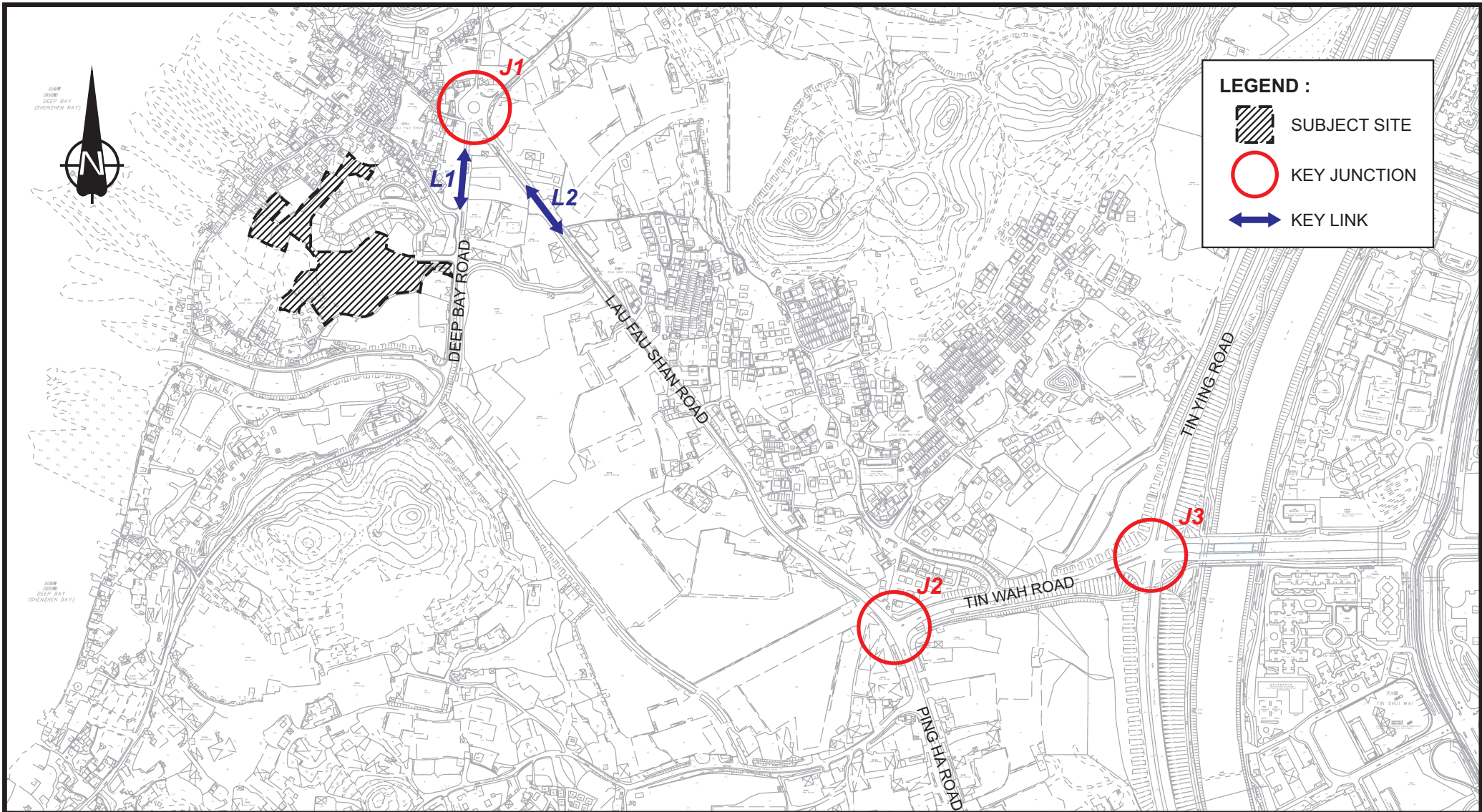


**LEGEND :**




 SUBJECT SITE


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Project Title				Drawing Title											
APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES				<b>SITE LOCATION</b>											
Designed	FSC	Checked	PTC	Scale	NTS	Date	NOV 2023	Drawing No.	1.1	Rev.	-				

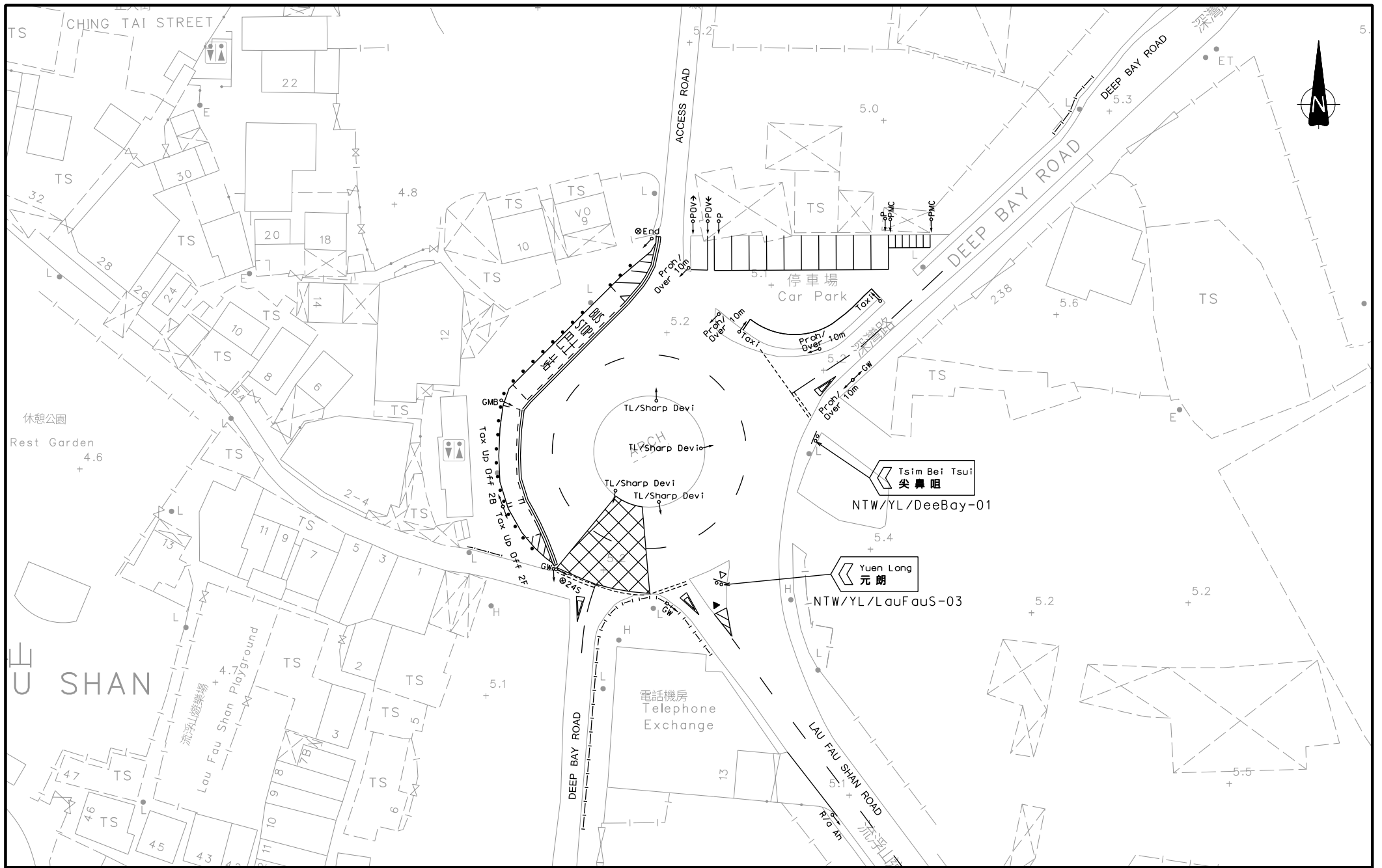




**LEGEND :**

-  SUBJECT SITE
-  KEY JUNCTION
-  KEY LINK

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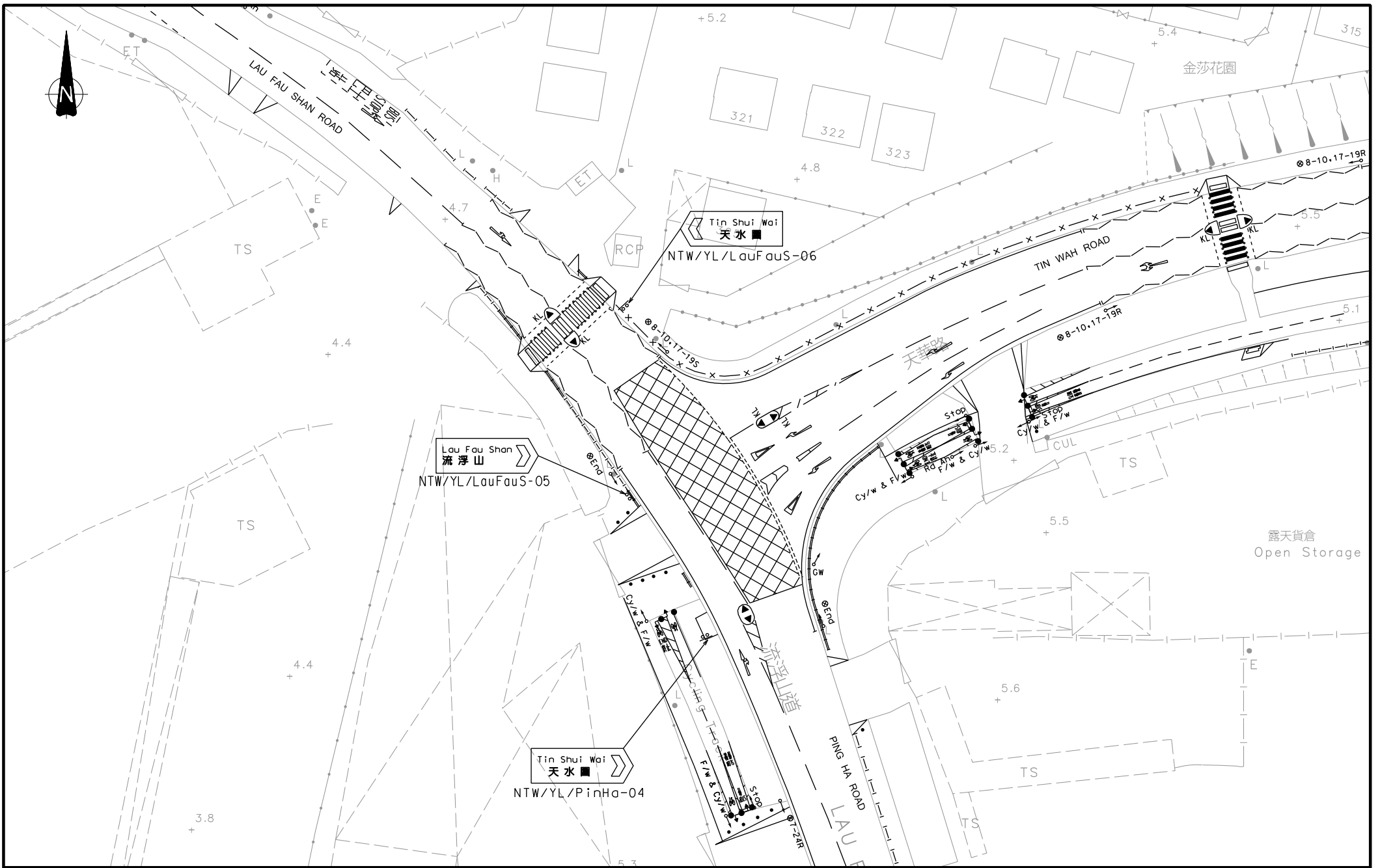
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Drawing Title  
**EXISTING JUNCTION LAYOUT OF LAU FAU SHAN ROAD / DEEP BAY ROAD (J1)**

Designed	FSC	Checked	PTC	Scale	1:500(A3)	Date	NOV 2023	Drawing No.	<b>2.2</b>	Rev.	-
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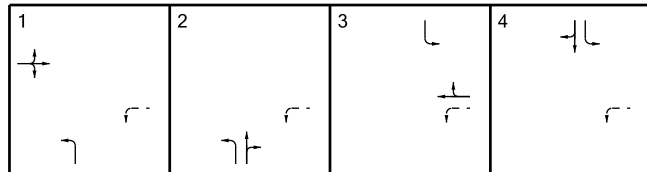
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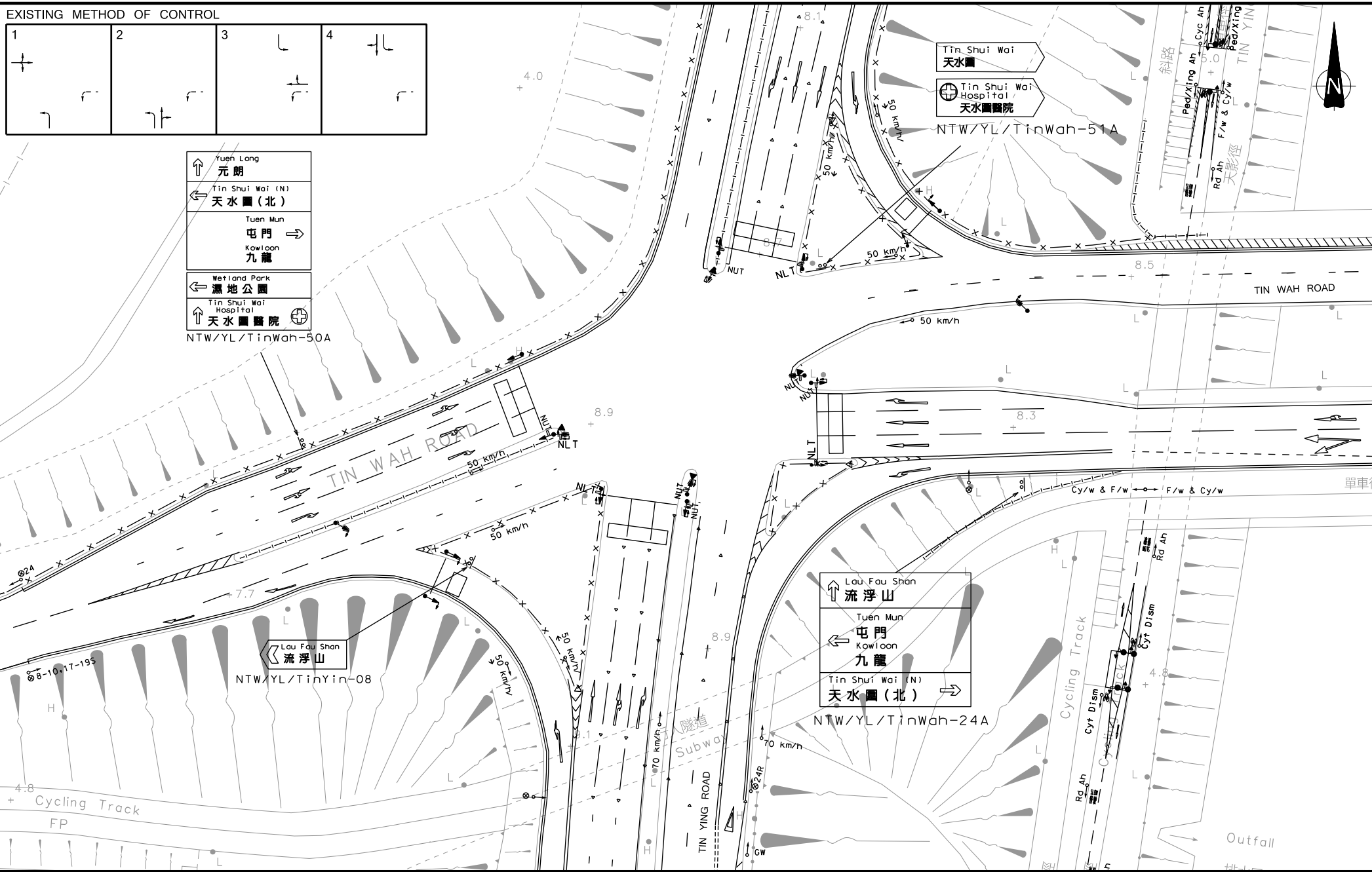
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Designed	FSC	Checked	PTC
Scale	1:500(A3)	Date	NOV 2023
Drawing No.	<b>2.3</b>	Rev.	-



EXISTING METHOD OF CONTROL



NTW/YL/TinWah-50A



Rev.	Description	Checked	Date
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Project Title  
 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

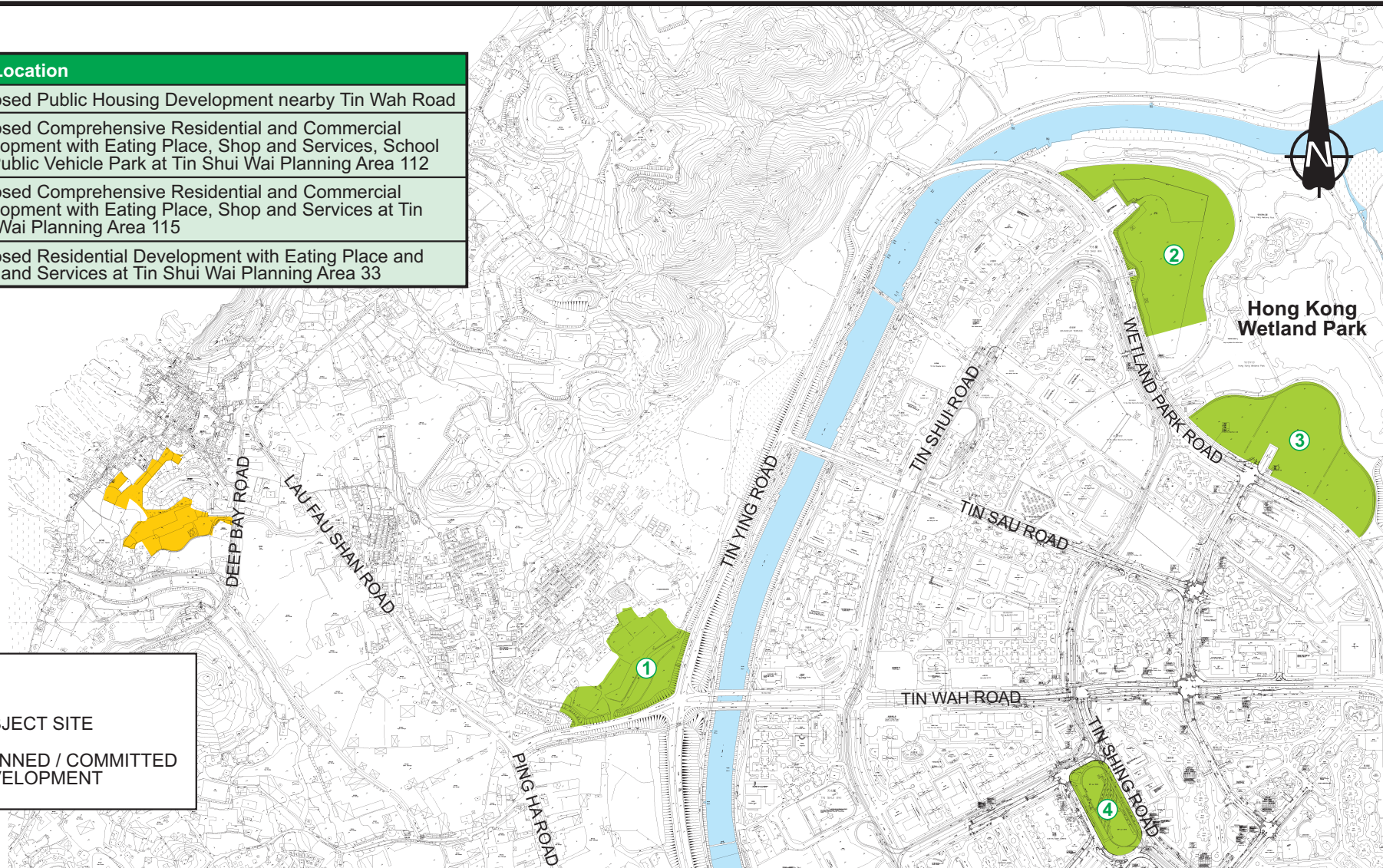
Drawing Title  
**EXISTING JUNCTION LAYOUT OF TIN WAH ROAD / TIN YING ROAD (J3)**

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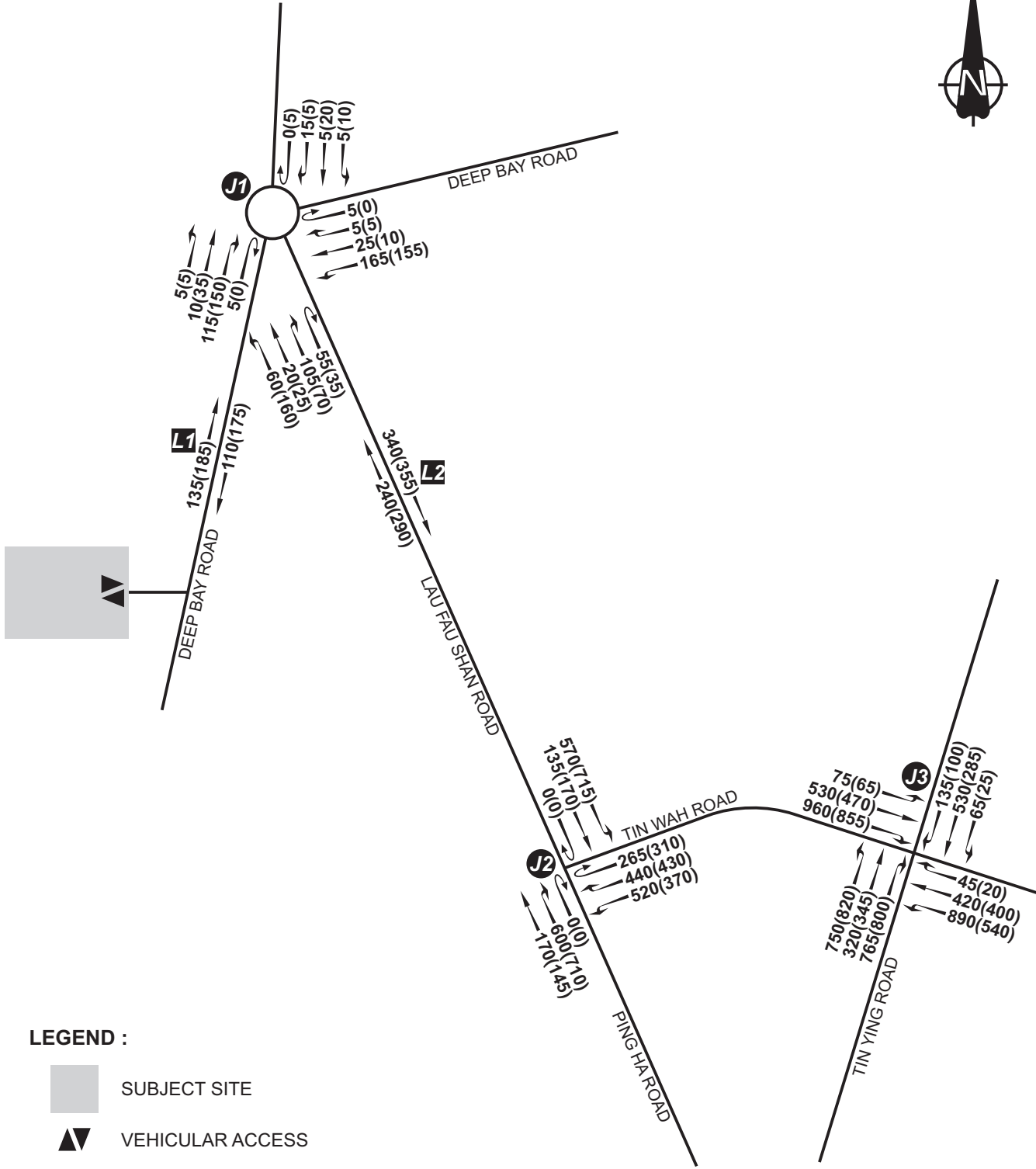
Ref. No.	Site Location
①	Proposed Public Housing Development nearby Tin Wah Road
②	Proposed Comprehensive Residential and Commercial Development with Eating Place, Shop and Services, School and Public Vehicle Park at Tin Shui Wai Planning Area 112
③	Proposed Comprehensive Residential and Commercial Development with Eating Place, Shop and Services at Tin Shui Wai Planning Area 115
④	Proposed Residential Development with Eating Place and Shop and Services at Tin Shui Wai Planning Area 33



**LEGEND :**

- SUBJECT SITE
- PLANNED / COMMITTED DEVELOPMENT

Rev.	Description	Checked	Date	Rev.	Description	Checked	Date	Rev.	Description	Checked	Date
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Project Title				Drawing Title							
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Designed	FSC	Checked	PTC	Scale	NTS	Date	NOV 2023	Drawing No.	2.5	Rev.	-



**LEGEND :**



SUBJECT SITE



VEHICULAR ACCESS

420(400) AM(PM) PEAK TRAFFIC FLOW (PCU/HR)

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Rev.	Description	Checked	Date	Rev.	Description	Checked	Date

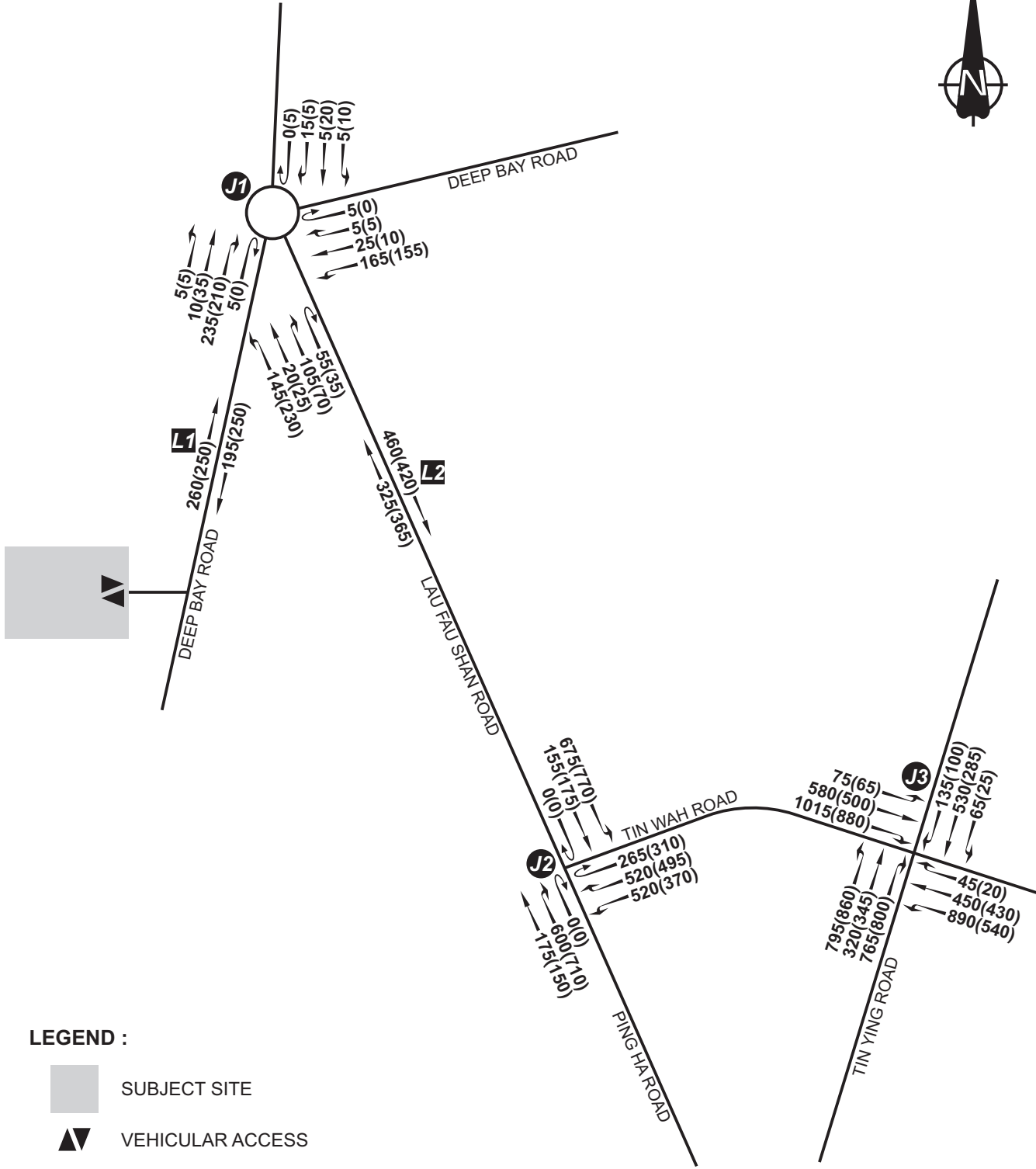
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 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129 AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

Drawing Title

**2036 REFERENCE TRAFFIC FLOWS**



Designed	FSC	Checked	PTC	Scale	NTS	Date	NOV 2023	Drawing No.	2.6	Rev.	-
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**LEGEND :**



SUBJECT SITE



VEHICULAR ACCESS

450(430) AM(PM) PEAK TRAFFIC FLOW (PCU/HR)

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Rev.	Description	Checked	Date	Rev.	Description	Checked	Date

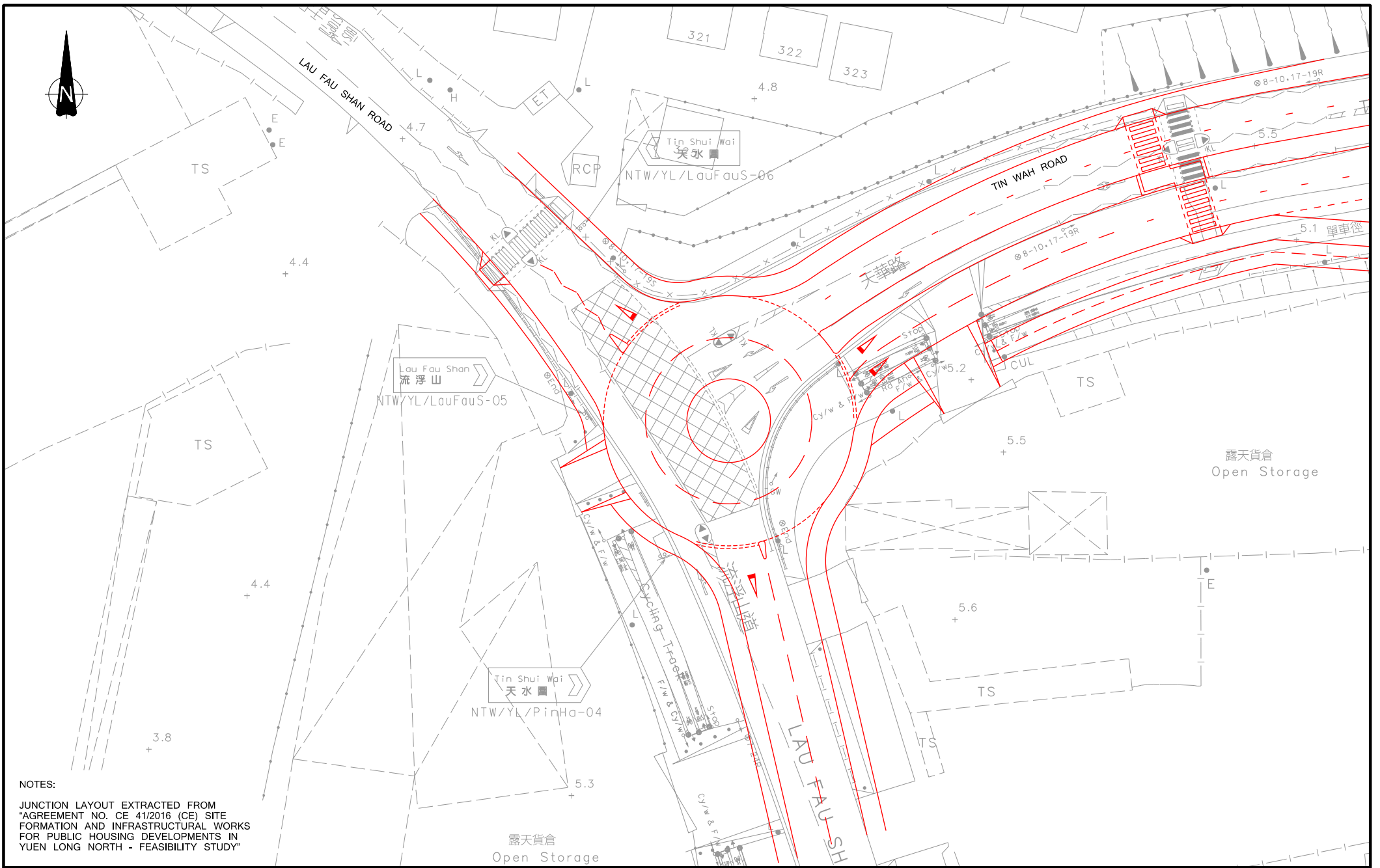
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Drawing Title

**2036 DESIGN TRAFFIC FLOWS**



Designed	FSC	Checked	PTC	Scale	NTS	Date	NOV 2023	Drawing No.	2.7	Rev.	-
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NOTES:  
 JUNCTION LAYOUT EXTRACTED FROM  
 "AGREEMENT NO. CE 41/2016 (CE) SITE  
 FORMATION AND INFRASTRUCTURAL WORKS  
 FOR PUBLIC HOUSING DEVELOPMENTS IN  
 YUEN LONG NORTH - FEASIBILITY STUDY"

Rev.	Description	Checked	Date
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**Project Title**  
 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

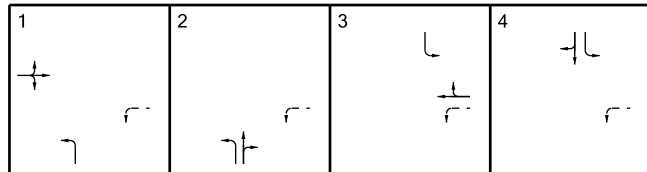
**Drawing Title**  
**PLANNED JUNCTION IMPROVEMENT WORK AT TIN WAH ROAD / LAU FAU SHAN ROAD / PING HA ROAD (J2) AND ROAD WIDENING WORKS AT TIN WAH ROAD**

Designed	FSC	Checked	PTC	Scale	1:500(A3)	Date	NOV 2023	Drawing No.	<b>3.1</b>	Rev.	-
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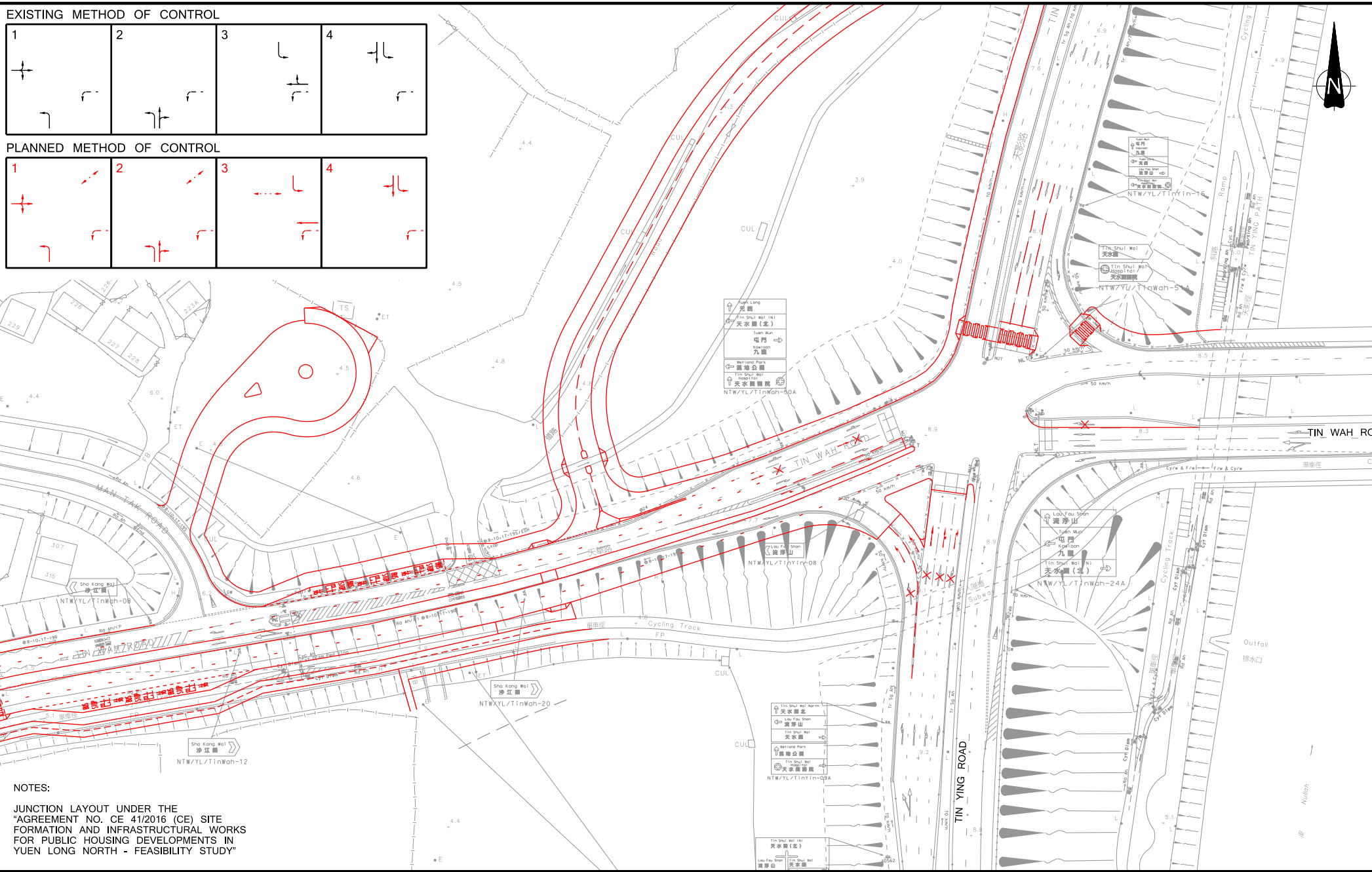
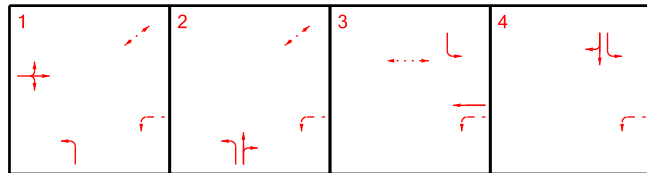




EXISTING METHOD OF CONTROL



PLANNED METHOD OF CONTROL



NOTES:  
 JUNCTION LAYOUT UNDER THE  
 "AGREEMENT NO. CE 41/2016 (CE) SITE  
 FORMATION AND INFRASTRUCTURAL WORKS  
 FOR PUBLIC HOUSING DEVELOPMENTS IN  
 YUEN LONG NORTH - FEASIBILITY STUDY"

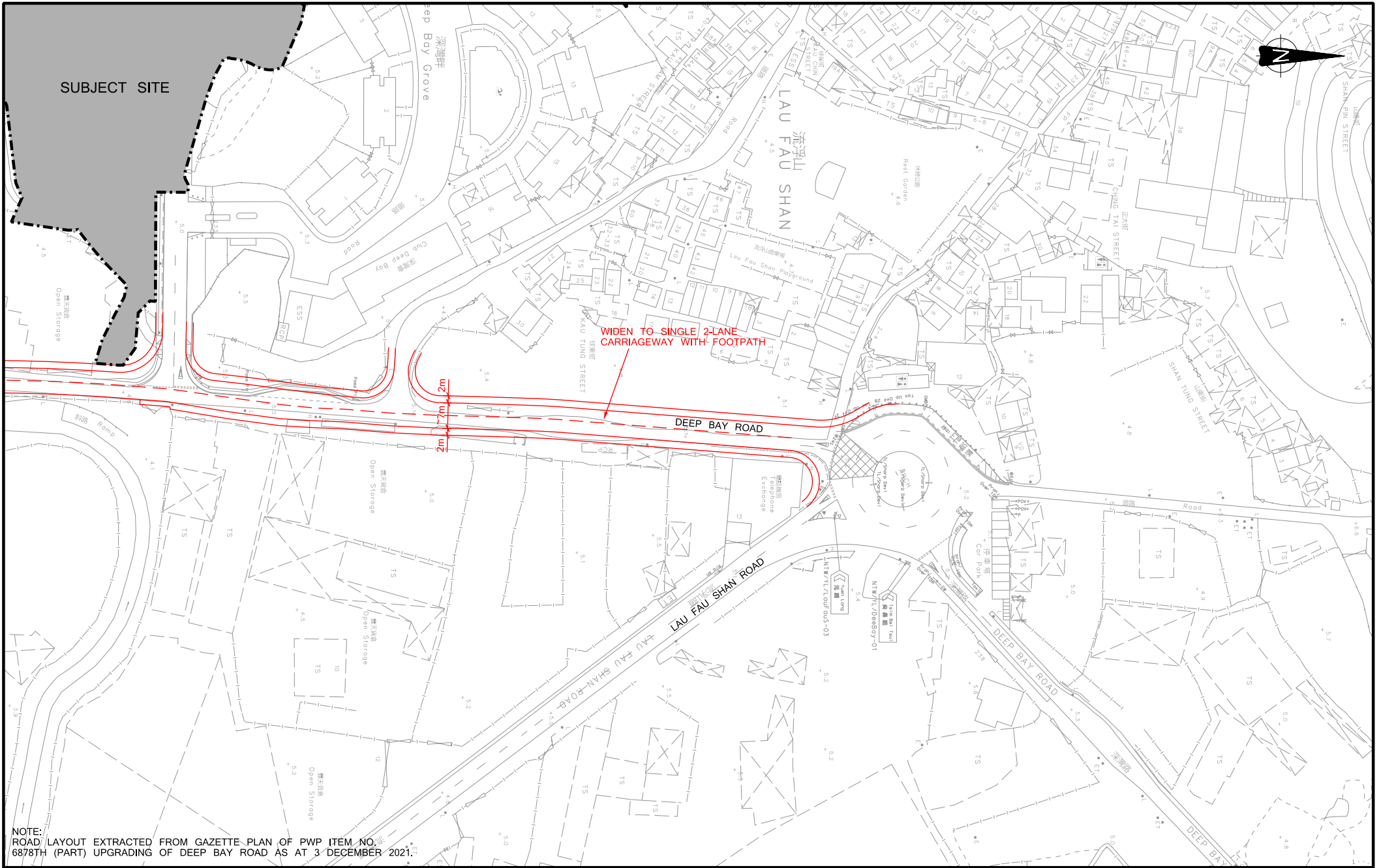
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A	MINOR AMENDMENT	PTC	03JAN24

Project Title  
 APPLICATION FOR AMENDMENT OF PLAN UNDER SECTION 12A OF THE TOWN PLANNING ORDINANCE (CAP.131) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND SOCIAL WELFARE FACILITY (CHILD CARE CENTRE) AT VARIOUS LOTS IN D.D.128 AND D.D.129, AND ADJOINING GOVERNMENT LAND, LAU FAU SHAN, YUEN LONG, NEW TERRITORIES

Drawing Title  
**PLANNED JUNCTION IMPROVEMENT WORK AT TIN WAH ROAD / TIN YING ROAD (J3) AND ROAD WIDENING WORKS AT TIN WAH ROAD**

Designed WHC | Checked PTC | Scale 1:1000(A3) | Date NOV 2023 | Drawing No. **3.2** | Rev. B





NOTE:  
ROAD LAYOUT EXTRACTED FROM GAZETTE PLAN OF PWP ITEM NO. 6878TH (PART) UPGRADING OF DEEP BAY ROAD AS AT 3 DECEMBER 2021.

Rev.	Description	Checked	Date
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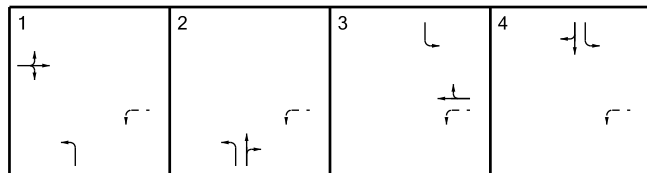
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<b>Drawing Title</b>							
<b>PLANNED UPGRADING WORKS AT DEEP BAY ROAD</b>							
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						Rev.	-

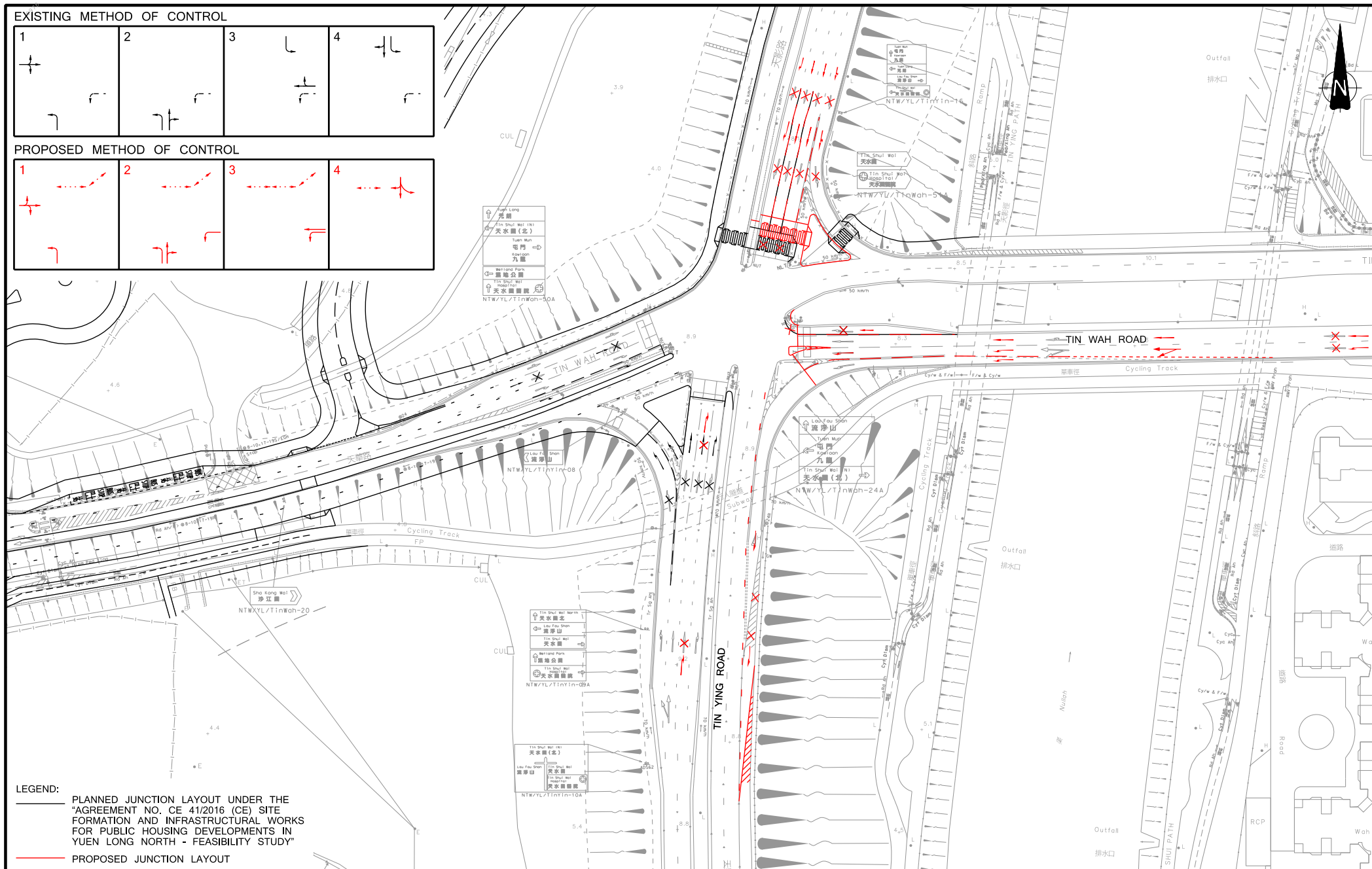
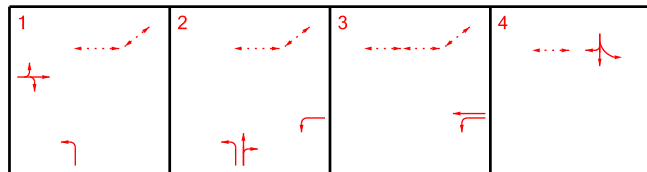




EXISTING METHOD OF CONTROL



PROPOSED METHOD OF CONTROL



LEGEND:  
 — PLANNED JUNCTION LAYOUT UNDER THE "AGREEMENT NO. CE 41/2016 (CE) SITE FORMATION AND INFRASTRUCTURAL WORKS FOR PUBLIC HOUSING DEVELOPMENTS IN YUEN LONG NORTH - FEASIBILITY STUDY"  
 - - - PROPOSED JUNCTION LAYOUT

Rev.	Description	Checked	Date
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A	MINOR AMENDMENT	PTC	03JAN24

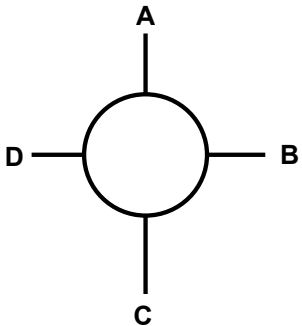
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Designing	WHC	Checked	PTC	Scale	1:1000(A3)	Date	JAN 2024	Drawing No.	<b>3.4</b>	Rev.	B
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# Annex A – Junction Calculation Sheets

# Roundabout Capacity Calculation

Job Title: Section 12A Application for Proposed Residential Development in DD128 and DD129 Lau Fau Shan										
Junction: J1 - Deep Bay Road / Lau Fau Shan Road					Ref. No.: J1					
Scheme: 2036 - Reference					Ref. No.:					
Year: 2036			Job No.: CHK50605510			Rev.:				
AM	PM	Weekend								
ARM A: Deep Bay Road SB approach										
ARM B: Lau Fau Shan Road										
ARM C: Deep Bay Road NB approach										
ARM D: Access Road										
										
<b>GEOMETRY</b>										
ARM	v	e	L	r	D	Phi	S			
A	1.50	4.10	2.3	46	38	52	1.81			
B	3.20	4.20	1.5	7.4	38	19.5	1.07			
C	1.90	3.70	1.8	7.5	38	51	1.60			
D	1.50	1.50	1	14	38	42	0.00			
<b>AM FLOWS</b>										
from \ to	A	B	C	D	Circ		Entry			
A	5	165	27	5	198		203			
B	104	55	60	22	60		242			
C	11	115	5	5	192		137			
D	5	5	16	0	297		27			
<b>PM FLOWS</b>										
from \ to	A	B	C	D	Circ		Entry			
A	0	154	11	5	214		170			
B	71	33	159	27	27		291			
C	33	148	0	5	143		187			
D	11	22	5	5	286		44			
<b>CALCULATIONS</b>										
ARM	K	X <sub>2</sub>	M	F	t <sub>D</sub>	f <sub>c</sub>	Q <sub>E</sub>		RFC	
							AM	PM	AM	PM
A	0.95	2.06	0.11	625	1.45	0.43	514	507	0.40	0.34
B	0.95	3.52	0.11	1066	1.45	0.52	986	1003	0.25	0.29
C	0.85	2.33	0.11	706	1.45	0.45	524	543	0.26	0.34
D	0.94	1.50	0.11	455	1.45	0.40	316	320	0.09	0.14
<b>Critical Arm:</b>									A	A
<b>RFC:</b>									0.40	0.34
									AM	PM

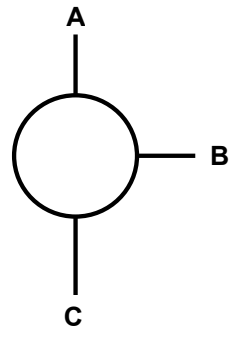
- In accordance with TPDM V2.4 & V2.Appendix 2

Calculated by: FSC	Date: Jan 2024	Checked by: PTC
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# Roundabout Capacity Calculation

Job Title: Section 12A Application for Proposed Residential Development in DD128 and DD129 Lau Fau Shan			
Junction: J2 - Deep Bay Road / Lau Fau Shan Road		Ref. No.: J2	
Scheme: 2036 - Reference (with planned layout)		Ref. No.:	
Year: 2036	Job No.: CHK50605510	Rev.:	

AM PM Weekend  
 ARM A: Lau Fau Shan Road SB approach  
 ARM B: Tin Wah Road WB approach  
 ARM C: Lau Fau Shan Road NB approach



## GEOMETRY

ARM	v	e	L	r	D	Phi	S
A	5.50	7.50	15.6	11	36	65	0.21
B	7.30	7.30	1	15	36	30	0.00
C	5.20	6.50	2.1	15	36	66	0.99
D							

## AM FLOWS

from \ to	A	B	C	Circ	Entry
A	0	571	137	869	709
B	440	267	522	137	1229
C	170	602	0	707	773
				1479	0

## PM FLOWS

from \ to	A	B	C	Circ	Entry
A	0	714	170	1017	885
B	429	308	368	170	1105
C	143	709	0	736	852
				1588	0

## CALCULATIONS

ARM	K	X <sub>2</sub>	M	F	t <sub>D</sub>	f <sub>c</sub>	Q <sub>E</sub>		RFC	
							AM	PM	AM	PM
A	0.84	6.92	0.09	2096	1.46	0.73	1226	1135	0.58	0.78
B	0.98	7.30	0.09	2212	1.46	0.75	2074	2050	0.59	0.54
C	0.86	5.64	0.09	1708	1.46	0.65	1071	1055	0.72	0.81

**Critical Arm:** C C  
**RFC:** 0.72 0.81  
**AM PM**

- In accordance with TPDM V2.4 & V2. Appendix 2

Calculated by: FSC	Date: Jan 2024	Checked by: PTC
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**TRAFFIC SIGNALS CALCULATION**

Job No.: CHK50605510

MVA HONG KONG LIMITED

Junction: J3 - Tin Ying Road / Tin Wah Road

Design Year: 2036

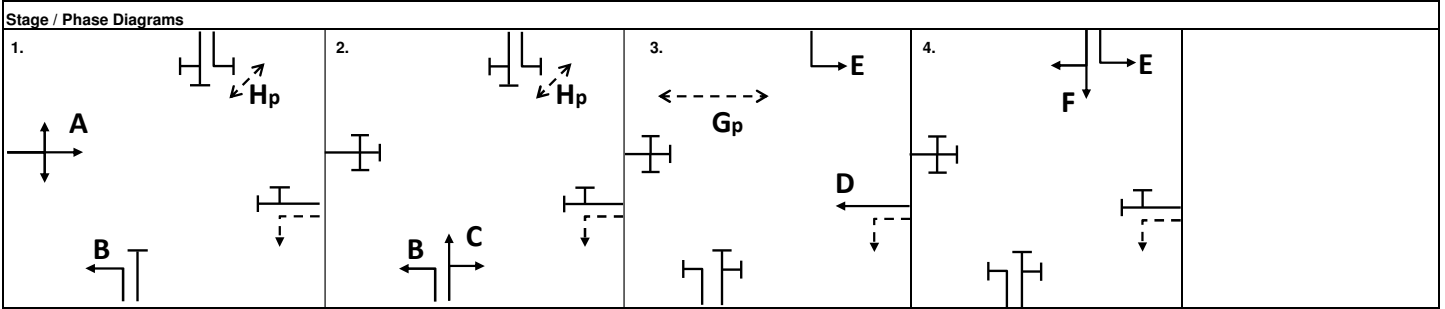
Description: 2036 - Reference (with planned layout)

Designed By: FSC

Checked By: PTC

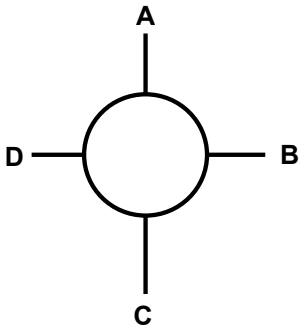
Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tin Wah Road (EB)	↕	A	1	3.500	25			27%	26%	1935	1935	290	0.150	0.249	257	0.133	0.221
	→	A	1	3.500						2105	2105	316	0.150		280	0.133	
	↔	A	1	3.500	18	1945		1945	483	0.248	430	0.221					
	↔	A	1	3.500	15	1915		1915	476	0.249	424	0.221					
Tin Ying Road (NB) *	↕	B	1,2	5.000	25			100%	100%	2025	2025	748	0.369	0.191	819	0.404	0.199
	↕	C	2	3.400						2095	2095	322	0.154		343	0.164	
	↔	C	2	3.400	35	2010		2010	383	0.191	400	0.199					
	↔	C	2	3.400	30	1995		1995	381	0.191	398	0.199					
Tin Wah Road (WB)	←	D	3	3.300						2085	2085	210	0.101		201	0.096	
	←	D	3	3.300				2085	2085	210	0.101	200	0.096				
Tin Ying Road (SB)	↕	E	3,4	3.300	25					1835	1835	66	0.036	0.128	27	0.015	0.068
	↕	F	4	3.300				2085	2085	266	0.128	142	0.068				
	↕	F	4	3.300				2085	2085	265	0.127	143	0.068				
	↕	F	4	3.300	45	2020		2020	137	0.068	99	0.049					
Pedestrian Crossing		Gp	3	Min. Green + Flash =			9	+	17	=	26		*				*
		Hp	1,2	Min. Green + Flash =			5	+	5	=	10						

<b>Notes:</b> * 30 pcu/hr has been added to the saturation flows due to flared approach	<b>Flow: (pcu/hr)</b> 		<b>Group</b>	A,C,D,F	A,C,Gp,F	<b>Group</b>	A,C,D,F	A,C,Gp,F
	<b>y</b>	0.668	0.567	<b>y</b>	0.586	0.489		
	<b>L (sec)</b>	19	48	<b>L (sec)</b>	19	48		
	<b>C (sec)</b>	120	120	<b>C (sec)</b>	120	120		
	<b>y pract.</b>	0.758	0.540	<b>y pract.</b>	0.758	0.540		
	<b>R.C. (%)</b>	13%	-5%	<b>R.C. (%)</b>	29%	10%		



I/G= 8		I/G= 5		I/G= 9	26	I/G= 3		I/G=	
I/G= 8		I/G= 5		I/G= 9	26	I/G= 3		I/G=	
Date: MAR, 2024							Junction: J3 Tin Ying Road / Tin Wah Road		

# Roundabout Capacity Calculation

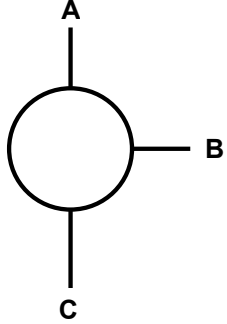
Job Title: Section 12A Application for Proposed Residential Development in DD128 and DD129 Lau Fau Shan											
Junction: J1 - Deep Bay Road / Lau Fau Shan Road					Ref. No.: J1						
Scheme: 2036 - Design					Ref. No.:						
Year: 2036			Job No.: CHK50605510			Rev.:					
AM	PM	Weekend									
ARM A: Deep Bay Road SB approach											
ARM B: Lau Fau Shan Road											
ARM C: Deep Bay Road NB approach											
ARM D: Access Road											
											
<b>GEOMETRY</b>											
ARM	v	e	L	r	D	Phi	S				
A	1.50	4.10	2.3	46	33	52	1.81				
B	3.20	4.20	1.5	7.4	33	19.5	1.07				
C	1.90	3.70	1.8	7.5	33	51	1.60				
D	1.50	1.50	1	14	33	42	0.00				
<b>AM FLOWS</b>											
from \ to	A	B	C	D	Circ		Entry				
A	5	165	27	5	319		203				
B	104	55	145	22	60		327				
C	11	236	5	5	192		258				
D	5	5	16	0	418		27				
<b>PM FLOWS</b>											
from \ to	A	B	C	D	Circ		Entry				
A	0	154	11	5	276		170				
B	71	33	231	27	27		363				
C	33	210	0	5	143		249				
D	11	22	5	5	348		44				
<b>CALCULATIONS</b>											
ARM	K	X <sub>2</sub>	M	F	t <sub>D</sub>	f <sub>c</sub>	Q <sub>E</sub>		RFC		
A	0.95	2.06	0.07	625	1.47	0.44	AM	PM	AM	PM	
B	0.95	3.52	0.07	1066	1.47	0.53	463	480	0.44	0.35	
C	0.85	2.33	0.07	706	1.47	0.45	986	1003	0.33	0.36	
D	0.94	1.50	0.07	455	1.47	0.40	523	542	0.49	0.46	
							269	295	0.10	0.15	
								<b>Critical Arm:</b>		<b>C</b>	<b>C</b>
								<b>RFC:</b>		<b>0.49</b>	<b>0.46</b>
										<b>AM</b>	<b>PM</b>

- In accordance with TPDM V2.4 & V2.Appendix 2

Calculated by: FSC	Date: Jan 2024	Checked by: PTC
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# Roundabout Capacity Calculation

Job Title: Section 12A Application for Proposed Residential Development in DD128 and DD129 Lau Fau Shan										
Junction: J2 - Deep Bay Road / Lau Fau Shan Road					Ref. No.: J2					
Scheme: 2036 - Design (with planned layout)					Ref. No.:					
Year: 2036			Job No.: CHK50605510			Rev.:				
AM	PM	Weekend								
ARM A: Lau Fau Shan Road SB approach										
ARM B: Tin Wah Road WB approach										
ARM C: Lau Fau Shan Road NB approach										
										
<b>GEOMETRY</b>										
ARM	v	e	L	r	D	Phi	S			
A	5.50	7.50	15.6	11	36	65	0.21			
B	7.30	7.30	1	15	36	30	0.00			
C	5.20	6.50	2.1	15	36	66	0.99			
D										
<b>AM FLOWS</b>										
from \ to	A	B	C	Circ			Entry			
A	0	677	153	869			830			
B	519	267	522	153			1308			
C	175	602	0	786			778			
				1564			0			
<b>PM FLOWS</b>										
from \ to	A	B	C	Circ			Entry			
A	0	769	177	1017			947			
B	494	308	368	177			1170			
C	149	709	0	802			858			
				1660			0			
<b>CALCULATIONS</b>										
ARM	K	X <sub>2</sub>	M	F	t <sub>D</sub>	f <sub>c</sub>	Q <sub>E</sub>		RFC	
							AM	PM	AM	PM
A	0.84	6.92	0.09	2096	1.46	0.73	1226	1135	0.68	0.83
B	0.98	7.30	0.09	2212	1.46	0.75	2063	2044	0.63	0.57
C	0.86	5.64	0.09	1708	1.46	0.65	1027	1018	0.76	0.84
<b>Critical Arm:</b>									<b>C</b>	<b>C</b>
<b>RFC:</b>									<b>0.76</b>	<b>0.84</b>
									<b>AM</b>	<b>PM</b>

- In accordance with TPDM V2.4 & V2.Appendix 2

Calculated by: FSC	Date: Jan 2024	Checked by: PTC
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**TRAFFIC SIGNALS CALCULATION**

Job No.: CHK50605510

MVA HONG KONG LIMITED

Junction: J3 - Tin Ying Road / Tin Wah Road

Design Year: 2036

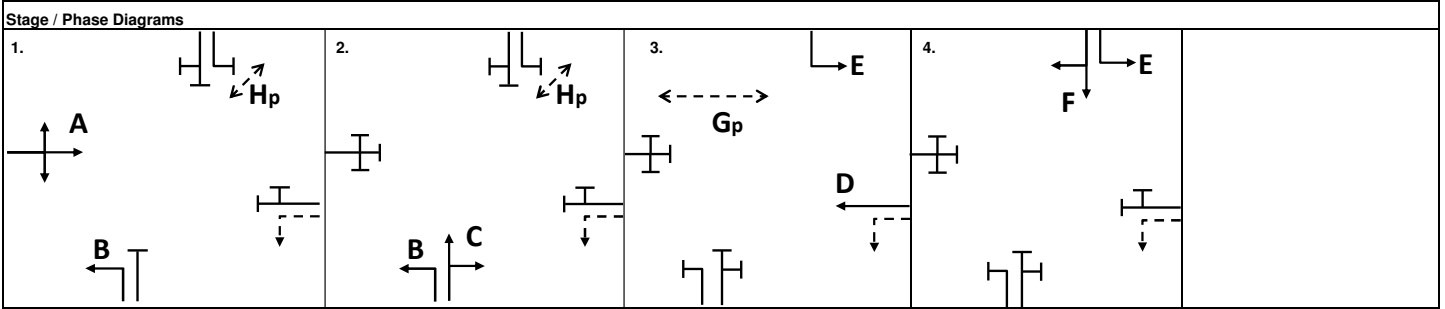
Description: 2036 - Design (with planned layout)

Designed By: FSC

Checked By: PTC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak			
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y	
					Tin Wah Road (EB)	↔ → ↘ ↙		A A A A	1 1 1 1	3.500 3.500 3.500 3.500	25			24%	24%	1935 2105 1945 1915	1935 2105 1945 1915	315 342 511 503
Tin Ying Road (NB) *	↕ ↑ ↗ ↖	B C C C	1,2 2 2 2	5.000 3.400 3.400 3.400	25			100%	100%	2025 2095 2010 1995	2025 2095 2010 1995	796 322 383 381	0.393 0.154 0.190 0.191	0.191	858 343 400 398	0.424 0.164 0.199 0.199	0.199	
Tin Wah Road (WB)	← ←	D D	3 3	3.300 3.300						2085 2085	2085 2085	226 226	0.108 0.108		214 214	0.103 0.102		
Tin Ying Road (SB)	↕ ↓ ↓ ↓	E F F F	3,4 4 4 4	3.300 3.300 3.300 3.300	25					1835 2085 2085 2020	1835 2085 2085 2020	66 266 265 137	0.036 0.128 0.127 0.068	0.128	27 142 143 99	0.015 0.068 0.068 0.049	0.068	
Pedestrian Crossing		Gp Hp	3 1,2	Min. Green + Flash = Min. Green + Flash =		9 5	+	17 5	=	26 10				*				*

<b>Notes:</b> * 30 pcu/hr has been added to the saturation flows due to flared approach	<b>Flow: (pcu/hr)</b> 		<b>Group</b> A,C,D,F		<b>Group</b> A,C,Gp,F		<b>Group</b> A,C,D,F		<b>Group</b> A,C,Gp,F	
	<b>y</b>	0.690	0.581	<b>y</b>	0.599	0.497				
	<b>L (sec)</b>	19	47	<b>L (sec)</b>	19	47				
	<b>C (sec)</b>	120	120	<b>C (sec)</b>	120	120				
	<b>y pract.</b>	0.758	0.548	<b>y pract.</b>	0.758	0.548				
	<b>R.C. (%)</b>	10%	-6%	<b>R.C. (%)</b>	26%	10%				



I/G= 7	I/G= 5	I/G= 9	26	I/G= 3	I/G=
I/G= 7	I/G= 5	I/G= 9	26	I/G= 3	I/G=
				Date: MAR, 2024	Junction: J3 Tin Ying Road / Tin Wah Road

**TRAFFIC SIGNALS CALCULATION**

Job No.: CHK50605510

MVA HONG KONG LIMITED

Junction: J3 - Tin Ying Road / Tin Wah Road

Design Year: 2036

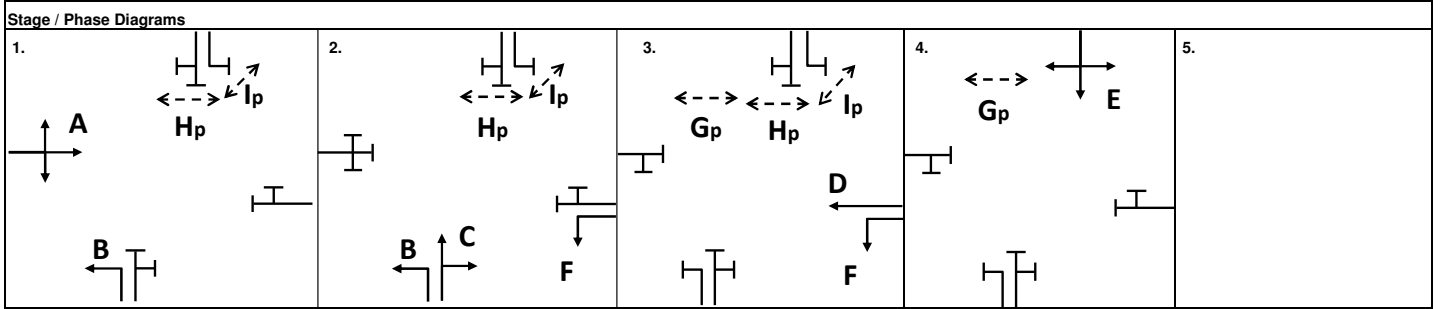
Description: 2036 - Design (Proposed Improvement on planned layout)

Designed By: FSC

Checked By: PTC

Approach	Movements	Phase	Stage	Width (m)	Radius (m)		Gradient (%)	Pro. Turning (%)		Revised Saturation Flow (pcu/hr)		AM Peak			PM Peak		
					Left	Right		AM	PM	AM	PM	Flow (pcu/hr)	y Value	Critical y	Flow (pcu/hr)	y Value	Critical y
Tin Wah Road (EB)	↕	A	1	3.500	25			24%	24%	1935	1935	315	0.163		270	0.140	
	→	A	1	3.500						2105	2105	342	0.162		294	0.140	
	↘	A	1	3.500	18					1945	1945	511	0.263	0.263	444	0.228	0.228
	↙	A	1	3.500	15					1915	1915	503	0.263		438	0.229	
Tin Ying Road (NB) *	↕	B	1,2	5.000	25					2025	2025	796	0.393		858	0.424	
	↑	C	2	3.400						2095	2095	322	0.154		343	0.164	
	↘	C	2	3.400	35					2010	2010	383	0.191		401	0.200	0.200
	↙	C	2	3.400	30					1995	1995	381	0.191	0.191	397	0.199	
Tin Wah Road (WB)	←	D	3	3.300						2085	2085	226	0.108	0.108	214	0.103	0.103
	↖	D	3	3.300						2085	2085	226	0.108		214	0.102	
	↙	F	2,3	3.200	25					1960	1960	461	0.235		280	0.143	
	↘	F	2,3	3.200	25					1825	1825	429	0.235		260	0.142	
Tin Ying Road (SB)	↕	E	4	3.300	25			35%	28%	1905	1915	187	0.098		98	0.051	
	↓	E	4	3.300						2085	2085	205	0.098		107	0.051	
	↘	E	4	3.300						2085	2085	205	0.098	0.098	107	0.051	0.051
	↙	E	4	3.300	45					2020	2020	137	0.068		99	0.049	
Pedestrian Crossing	Gp	3,4	Min. Green + Flash =		5	+	7	=	12								
	Hp	1,2,3	Min. Green + Flash =		12	+	6	=	18								
	lp	1,2,3	Min. Green + Flash =		5	+	5	=	10								

<b>Notes:</b> * 30 pcu/hr has been added to the saturation flows due to flared approach	<b>Flow: (pcu/hr)</b> 				<b>Group</b>		A,C,D,E	<b>Group</b>		A,C,D,E
	<b>y</b>		0.661	<b>y</b>		0.582				
	<b>L (sec)</b>		18	<b>L (sec)</b>		18				
	<b>C (sec)</b>		120	<b>C (sec)</b>		120				
	<b>y pract.</b>		0.765	<b>y pract.</b>		0.765				
		<b>R.C. (%)</b>	16%	<b>R.C. (%)</b>		31%				

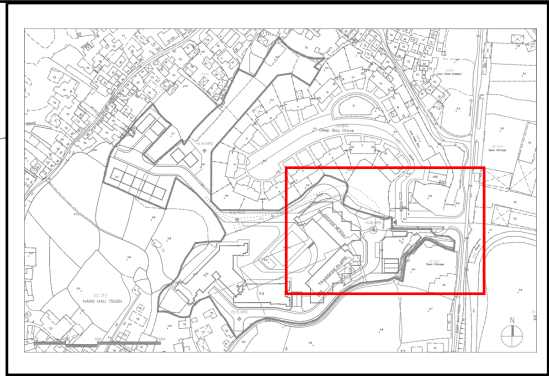


I/G= 7	I/G= 5	I/G= 5	I/G= 5	I/G= 5	I/G= 5	I/G=	Junction: <u>J3</u>
I/G= 7	I/G= 5	I/G= 5	I/G= 5	I/G= 5	I/G=	Date: <u>MAR, 2024</u>	Junction: <u>Tin Ying Road / Tin Wah Road</u>

## **Annex F**

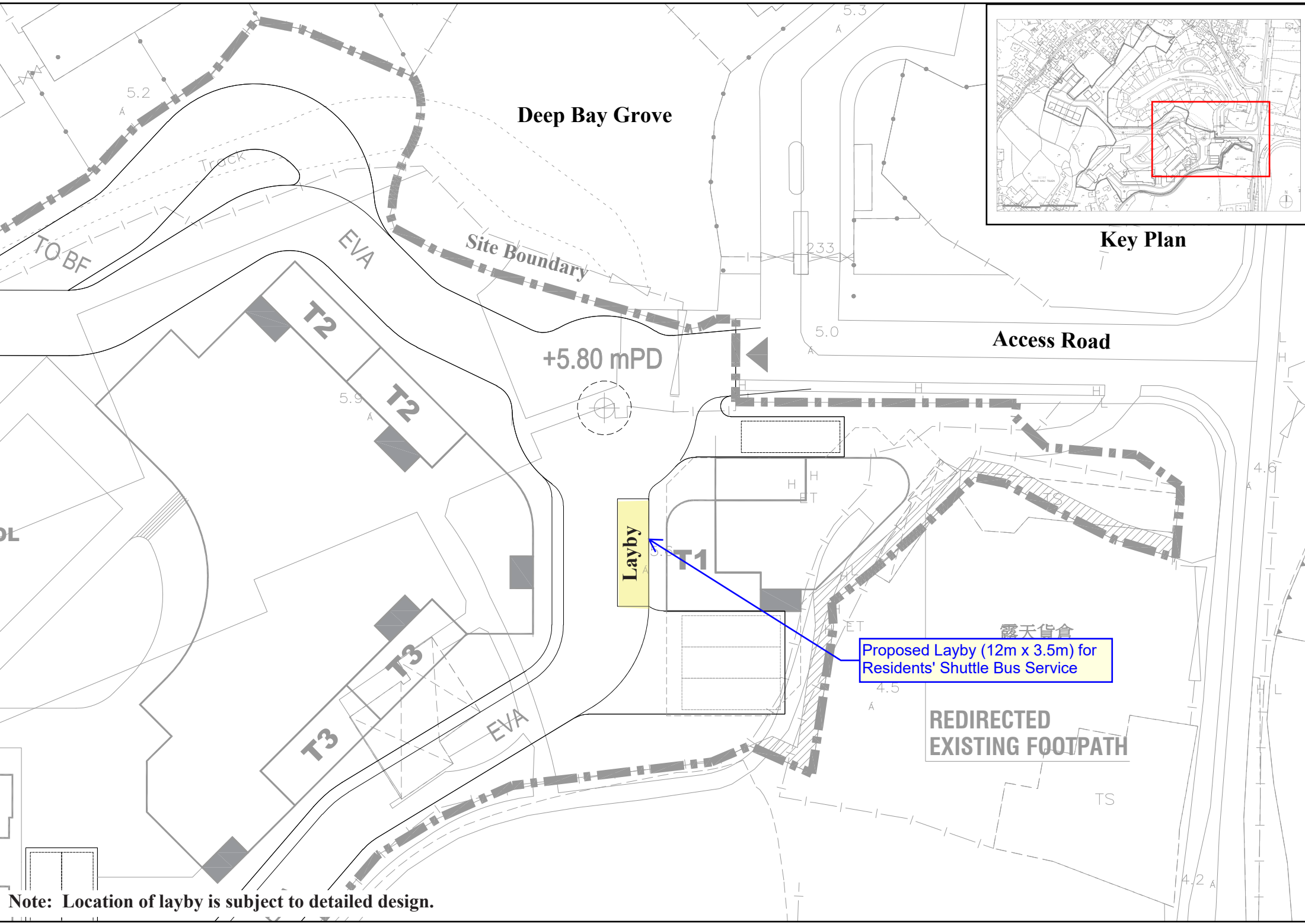
### **Indicative Lay-by Location Plan**





**Key Plan**

**Deep Bay Grove**



**Note: Location of layby is subject to detailed design.**