Annex E

Air Ventilation Assessment – Initial Study

ARUP
80 YEARS

S.12A Application for Amendment to the Approved Kam Tin South Outline Zoning Plan No. S/YL-KTS/15, to rezone the Application Site from "Comprehensive Development Area" to "Residential (Group A)" in Lot 2160 RP (Part) in D.D. 106, and Adjoining Government Land, Kam Sheung Road, Kam Tin, Yuen Long

Air Ventilation Assessment - Initial Study

Issue 2 | September 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Contents

1.	Introduction	1
1.1	Background	1
1.2	Objective of the Study	1
2.	Application Site	2
2.1	Characteristic of Application Site and its Surrounding Area	2
2.2	Studied Schemes	4
3.	Methodology	14
3.1	Wind Availability Data	14
3.2	Assessment and Surrounding Area	17
3.3	Technical Details for CFD Simulation	23
3.4	AVA Indicators	25
3.5	Locations of Test Points	26
4.	Result and Discussion – Initial Study	32
4.1	Overall Pattern of Ventilation Performance under Annual Wind Condition	32
4.2	Overall Pattern of Ventilation Performance under Summer Wind Condition	35
4.3	Directional Analysis	37
4.4	Review of Revised Cumulative Scheme	55
4.5	Focus Areas	56
5.	Conclusion	64
5.1	Overview	64

Appendices

Appendix A A-1
Layout Plans of Baseline Scheme, Cumulative Scheme and Revised Cumulative Scheme A-1

Appendix B B-1
Layout Plans of Planned/Work-in-Progress (WIP) Developments B-1

Appendix C C-1
Contour Plots of VR C-1

Appendix D D-1
Vector Plots of VR D-1

Appendix E E-1
VR of Test Points E-1

1. Introduction

1.1 Background

1.1.1 Arup Hong Kong Limited was instructed to conduct an Air Ventilation Assessment (AVA) for the two Planning Applications under Section 12A of the Town Planning Ordinance (Cap. 131). The application pertains to the Amendment of Plan for Proposed Residential Development in Kam Sheung Road, which are located at Lot 2160 RP (Part) in D.D. 106, and adjoining Government Land in Kam Tin, Yuen Long, New Territories.

1.1.2 The *Technical Guide for Air Ventilation Assessment for the Developments in Hong Kong (Annex A of Technical Circular No.1/06 for Air Ventilation Assessments)* [1] *(termed as AVA Technical Circular hereafter)* dated 19 July 2006 lay down the foundation of this method statement.

1.1.3 Considering the irregular configuration of the application site boundary, it is proposed with a rationalised boundary for conducting sensitivity test. This approach aims to evaluate the technical impacts associated with the potential rezoning area while ensuring design and development flexibility for future considerations.

1.2 Objective of the Study

1.2.1 The Applicant proposes amendments to the Approved Kam Tin South Outline Zoning Plan No. S/YL-KTS/15 (the OZP). The Kam Sheung Road Site is proposed to be rezoned from "Comprehensive Development Area" ("CDA") zone to "Residential (Group A)" ("R(A)"), with a maximum PR of not more than 3 and a maximum BH of +69mPD (including roof-top structures) to facilitate the proposed residential development at the Application Site.

1.2.2 An AVA Initial Study was conducted by using Computational Fluid Dynamic (CFD) techniques. It aims to achieve the following tasks:

- Initially assess the characteristics of the wind availability of the site;
- Give a general pattern and a rough quantitative estimation of the wind performance at the pedestrian level reported using Velocity Ratio (VR);
- Identify the air paths within the site and ascertain their effectiveness; and
- Identify good design features and problem areas, if any, and recommend mitigation measures.

1.2.3 Another concurrent application for Proposed Amendment to the OZP was under preparation at the Application Site – Kong Ha Wai, i.e. to rezone the Application Site from "Residential (Group D)" ("R(D)") and "Agriculture" ("AGR") zones to "Residential (Group A)1" ("R(A)"1), with a maximum Plot Ratio (PR) of not more than 2.41 and a maximum BH of +69mPD.

1.2.4 According to the AVA technical circular, the categories does not applicable to Application Site – Kam Sheung Road, as its GFA is less than 100,000 sqm and overall plot ratio less than 5, Hence, individual AVA is considered not necessary for the Application Site. Nevertheless, given the close proximity of both Application Sites, the cumulative impacts arising from both applications have been considered in the same set of technical assessment model adopted in this AVA report.

2. Application Site

2.1 Characteristic of Application Site and its Surrounding Area

2.1.1 The Kam Sheung Road Site (The Application Site) and Kong Ha Wai Site (Another S12A Application under preparation) are located in Kam Tin South, Yuen Long. The site generally features flat topography, with Kam Sheung Road Site and Kong Ha Wai Site formed at approximately +5mPD and +9mPD respectively. It is surrounded by several prominent mountains: Kai Kung Shan (~+370mPD) to the north, Kai Kung Leng (~+570mPD) to the north-northeast, Tai To Yan (~+560mPD) to the east, Tsuen Kam Au (~+490mPD) to the southeast, Tseng Hang Shan (~+230mPD) to the southwest, Cheung Ngau Shan (~+220mPD) to the west, and Ho Hok Shan (~+150mPD) to the northwest.

2.1.2 The Kam Sheung Road Site is located near Kam Sheung Road Station, bounded by Kam Po Road, Tung Wui Road and Kam Tin River (adjacent to Kam Po Road). To the immediate north and northeast is the low-rise village clusters. To the immediate southeast to south is the proposed high-rise public housing developments and Kam Sheung Road Site 1 (refer to Section 3.2 and Figure 3.2.7). To the immediate southwest is the planned high-rise Kam Sheung Road Station Phase 2 Site (refer to Section 3.2 and Figure 3.2.7). The Kong Ha Wai Site is located in Kong Ha Wai, adjacent to Kam Sheung Road and Kam Shui South Road, the site is surrounded by the low-rise developments such as village clusters, open storage and factories (+8 to 23mPD).

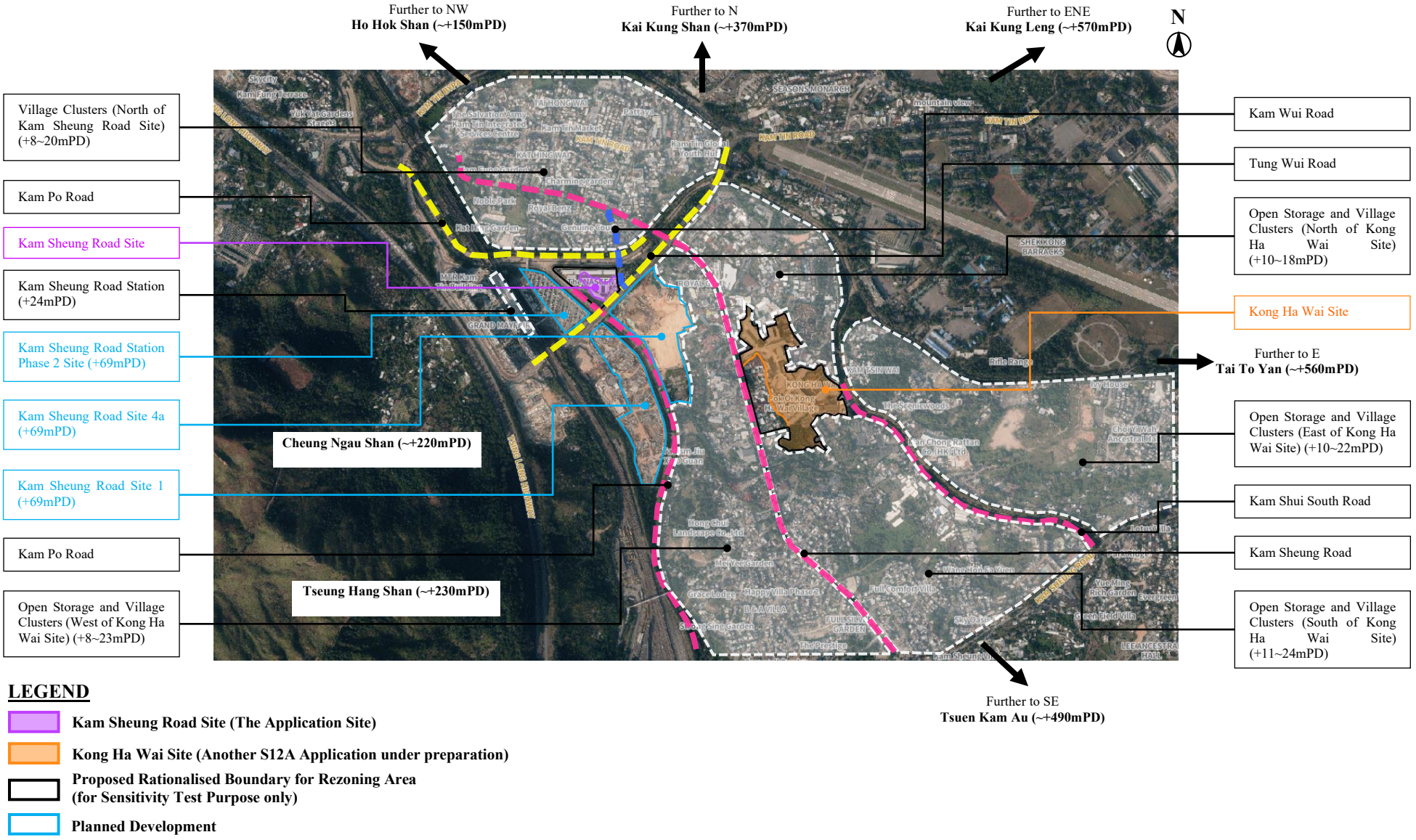


Figure 2.1.1 Site Location and Surrounding Developments (Source: GeoInfo Map)

2.2 Studied Schemes

2.2.1 Three schemes, namely Baseline Scheme, Cumulative Scheme and Revised Cumulative Scheme, were studied under this AVA – Initial Study. The Baseline Scheme represents the existing conditions of the Kam Sheung Road Site and Kong Ha Wai Site, whereas the Cumulative Scheme incorporates the proposed developments at both Sites to evaluate their combined effects on the surrounding wind environment. The Baseline Scheme and Cumulative Scheme are assessed quantitatively using the methodology described in Section 3. Subsequently, following design refinements to the Master Layout Plan of the Kam Sheung Road Site, a Revised Cumulative Scheme has been subsequently developed from the Cumulative Scheme and reviewed qualitatively in Section 4.4 to examine its potential implications on the air ventilation performance. Each of the studied schemes is described in following sub-sections.

Baseline Scheme

2.2.2 Existing condition of both Application Sites are adopted as the Baseline Scheme. The low-rise nature of the existing developments generally allows better wind penetration and contributes to a more permeable built environment.

2.2.3 For Kam Sheung Road Site, the Baseline Scheme is identified with low-rise buildings of The NASCENT (+11.4~20.1mPD), and Sewage Treatment Plant (+11.2mPD).

2.2.4 For Kong Ha Wai Site, the Baseline Scheme is identified with low-rise buildings of Pok Oi Kong Ha Wai Village (+13.2~23.2mPD), and some village houses.

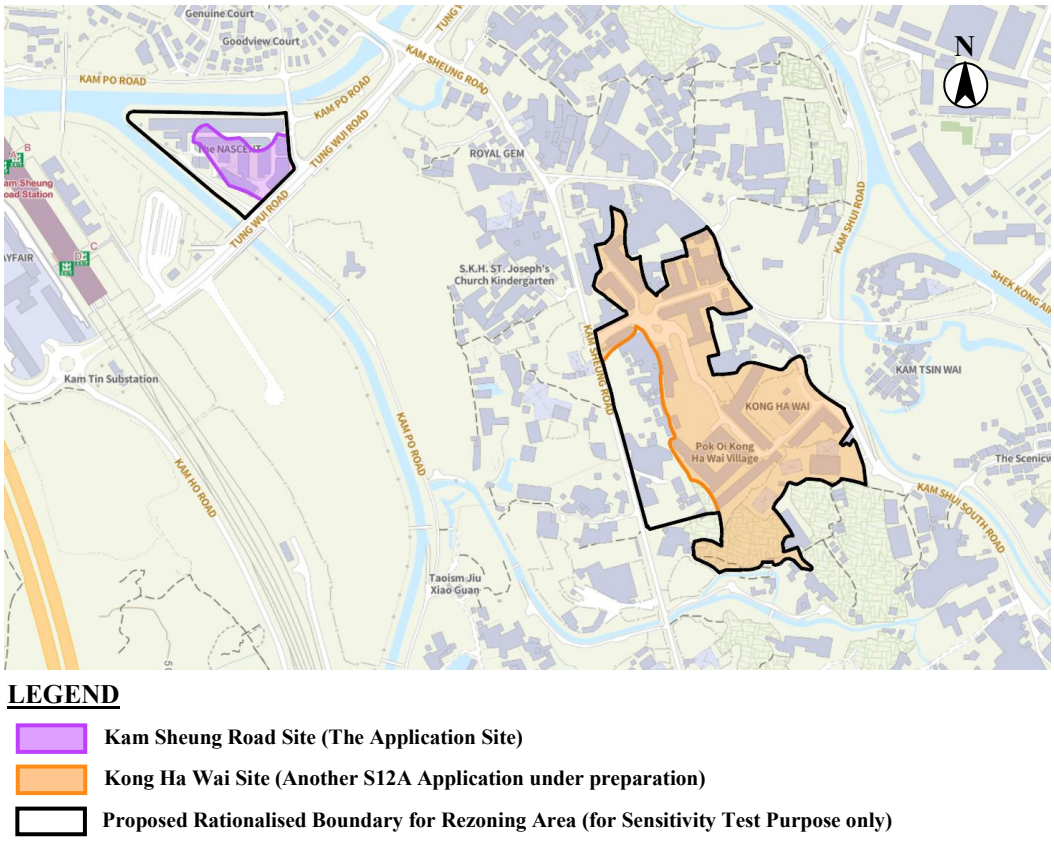


Figure 2.2.1 Baseline Scheme - Existing Conditions (Source: GeoInfo Map)

2.2.5 The directional view for the 3D model of Baseline Scheme is shown in Figure 2.2.2 to Figure 2.2.5.

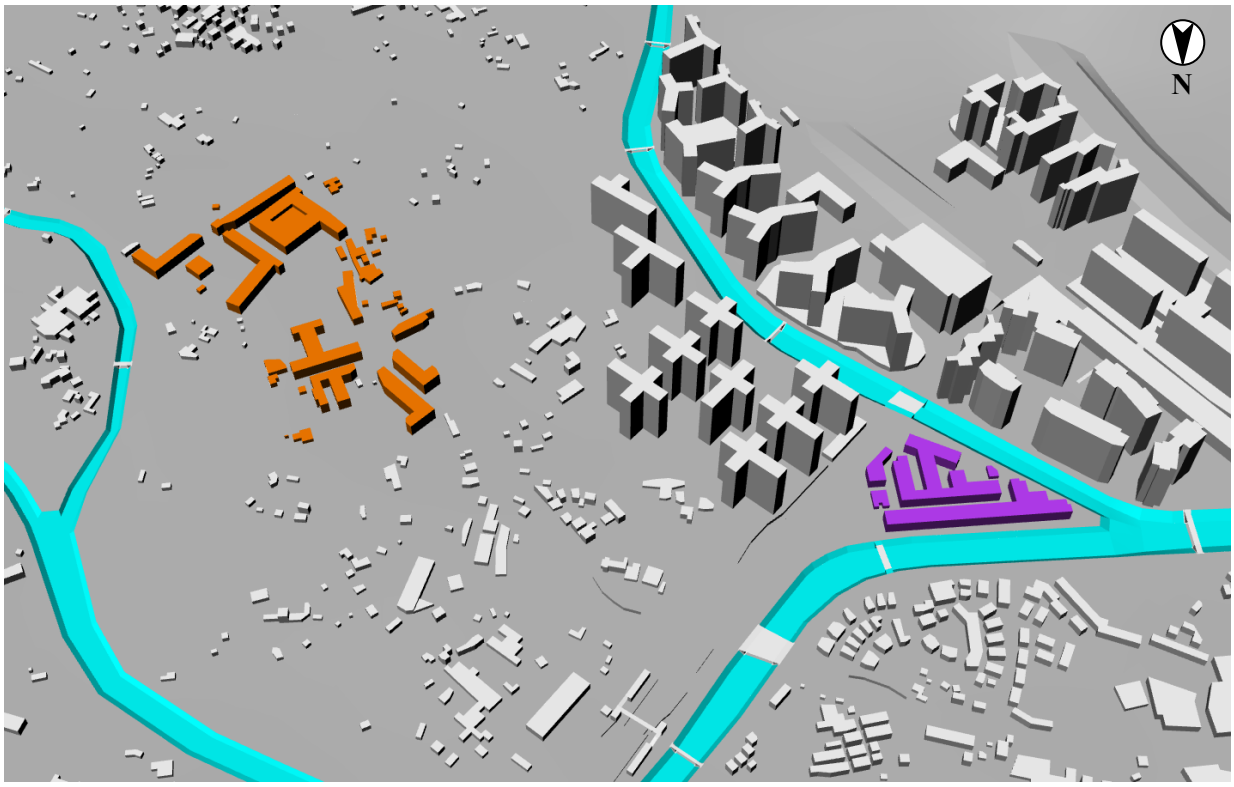


Figure 2.2.2 Northerly View of Baseline Scheme

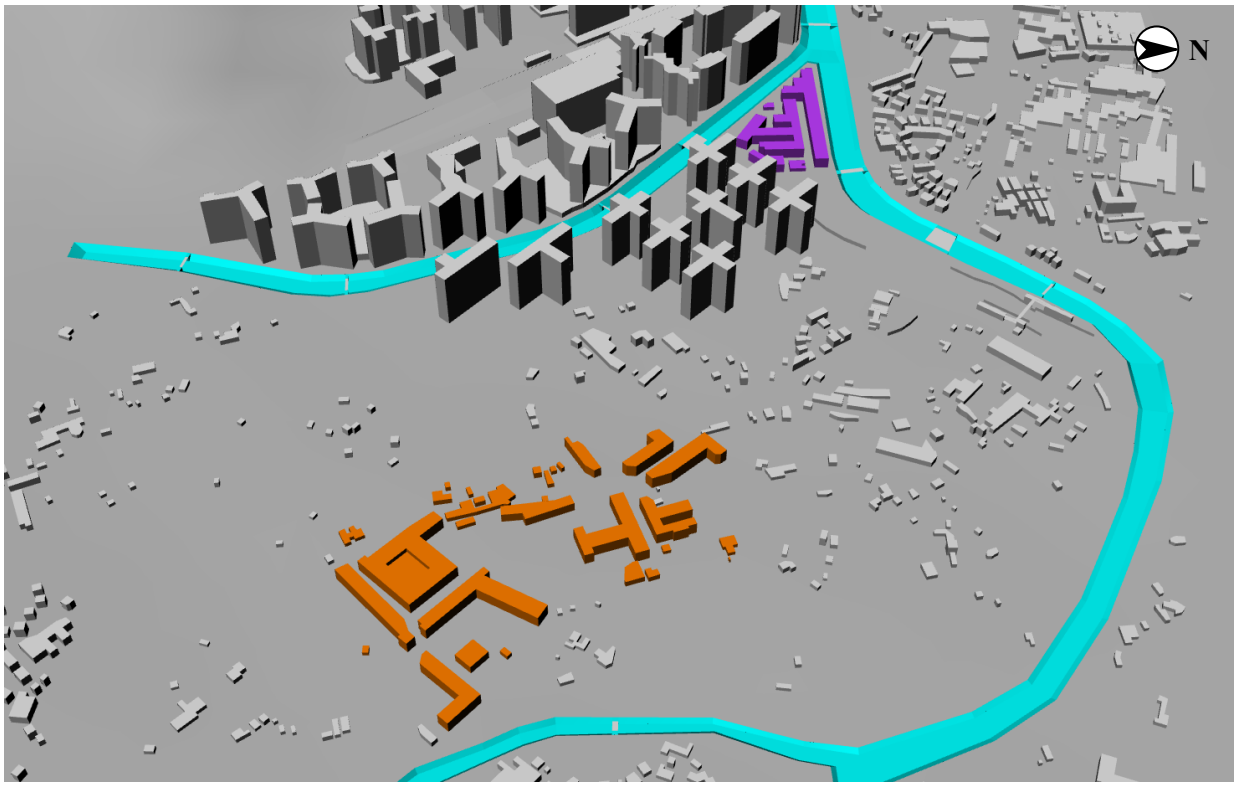


Figure 2.2.3 Easterly View of Baseline Scheme

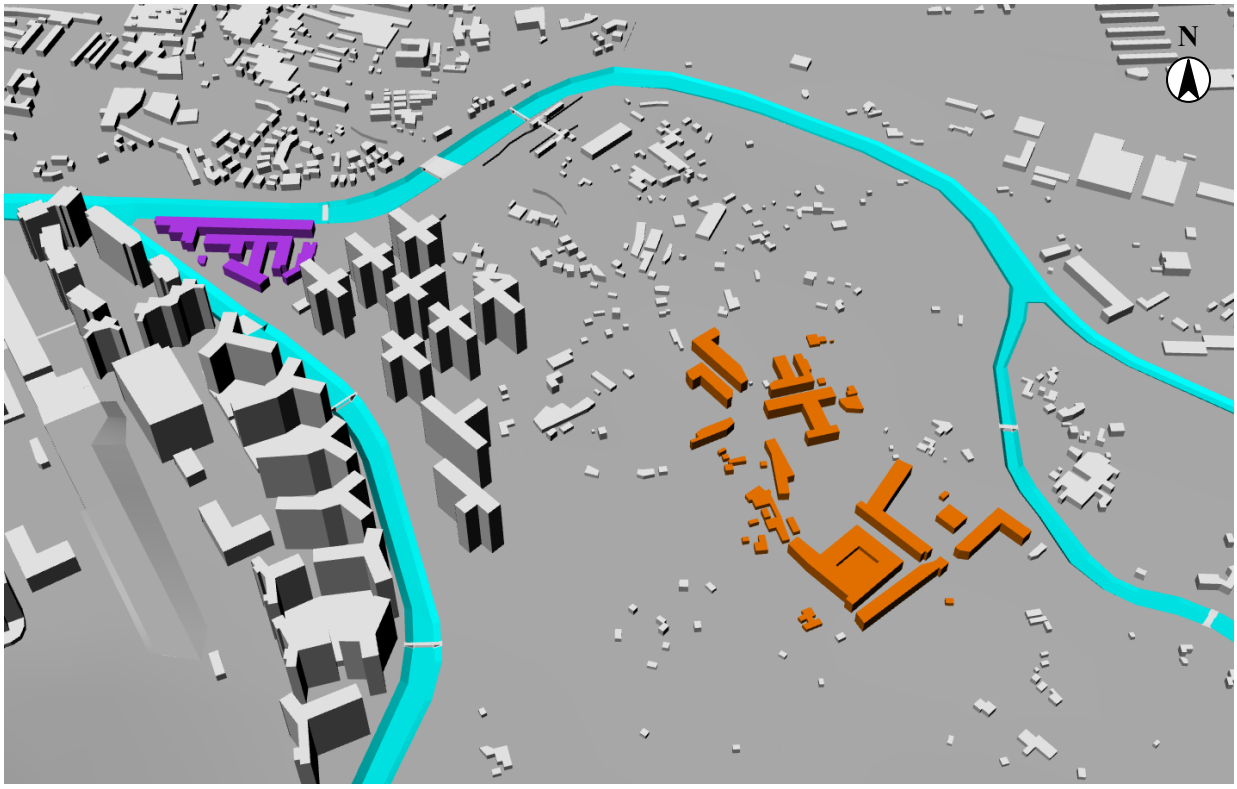


Figure 2.2.4 Southerly View of Baseline Scheme

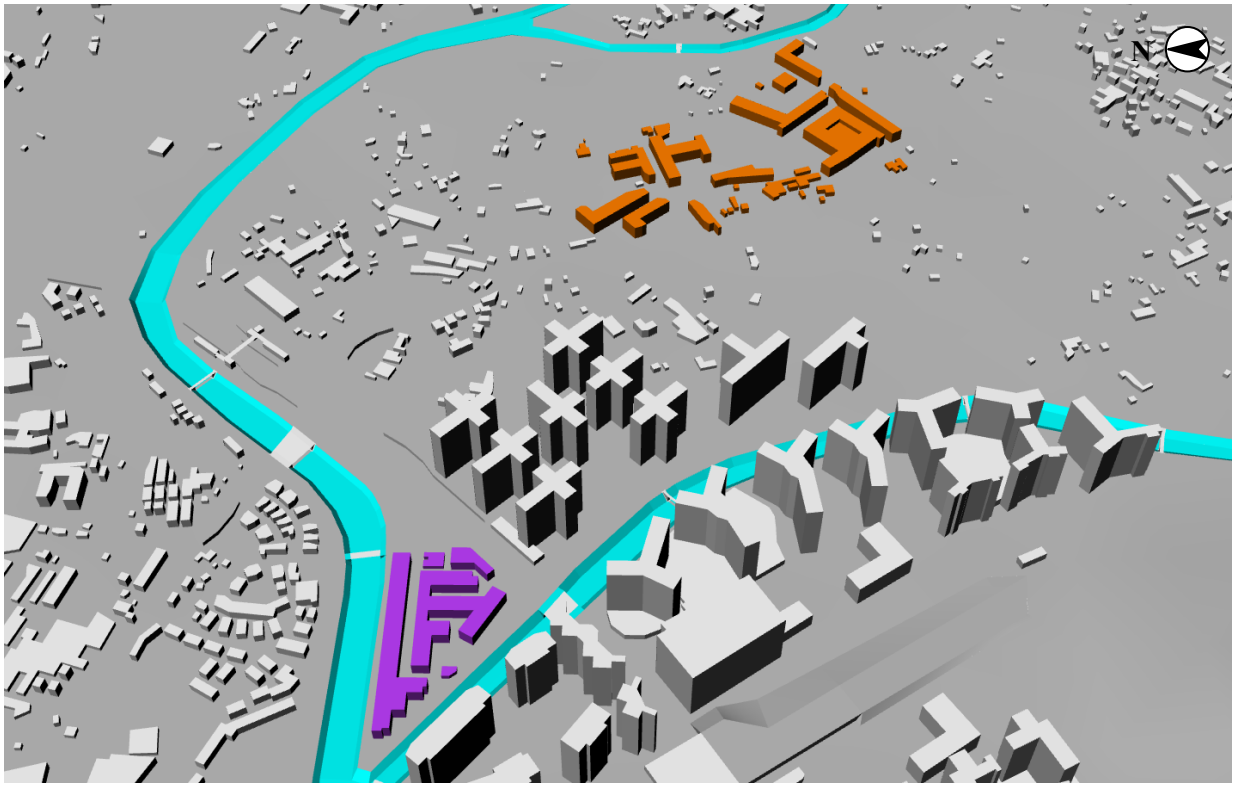


Figure 2.2.5 Westerly View of Baseline Scheme

Cumulative Scheme

2.2.6 In the Cumulative Scheme, Kam Sheung Road Site comprises of 2 towers with building height of +69.00mPD; and Kong Ha Wai Site comprises of 32 towers with building height ranged from +28.05 to +69.00mPD, and 18 houses with building height of +19.95mPD, within the Proposed Development. To address the initial comments from DPO, Sensitivity Test Area with additional towers have been included in the AVA-IS, there are 7 towers with building height ranged from +59.55 to +69.00mPD and +50.10 to +56.40mPD in Kam Sheung Road Site and Kong Ha Wai Site respectively. The Master Layout Plans of the Cumulative Scheme of Kam Sheung Road Site and Kong Ha Wai Site are shown in Figure 2.2.8 to **Error! Reference source not found.** and Appendix A. The Development Parameter is summarised in Table 2.2.1.

Table 2.2.1 Development Parameters of the Cumulative Scheme

	Development Parameters	Proposed Development	Sensitivity Test Area
Kam Sheung Road Site	Building Blocks	2 nos. of high-rise Towers	7 nos. of high-rise Towers
	Building Height	+69.00mPD for Towers	+59.55 to +69.00mPD For Towers
	Plot Ratio	3.0	3.0
Kong Ha Wai Site	Building Blocks	32 nos. of high-rise Towers 18 nos. of Houses	7 nos. of high-rise Towers
	Building Height	+26.05 to +69.00mPD for Towers +19.95mPD for Houses	+50.10 to +56.40mPD for Towers
	Plot Ratio	2.41 (Domestic: 2.30, Non-domestic: 0.11)	2.41 (Domestic: 2.30, Non-domestic: 0.11)

2.2.7 Wind enhancement features have been provided to alleviate the ventilation impact created by the Cumulative Scheme of Kong Ha Wai Site. These features are listed as below and marked in Figure 2.2.8.

- #1 - 1 nos. 15m (width) air path aligned with ENE-WSW direction with no more than 15-degree turn
- #2 - 1 nos. 15m (width) air path aligned with ENE-W direction with no more than 15-degree turn.
- #3 - 1 nos. 30m (width) air path aligned with NE-WSW direction with no more than 15-degree turn.

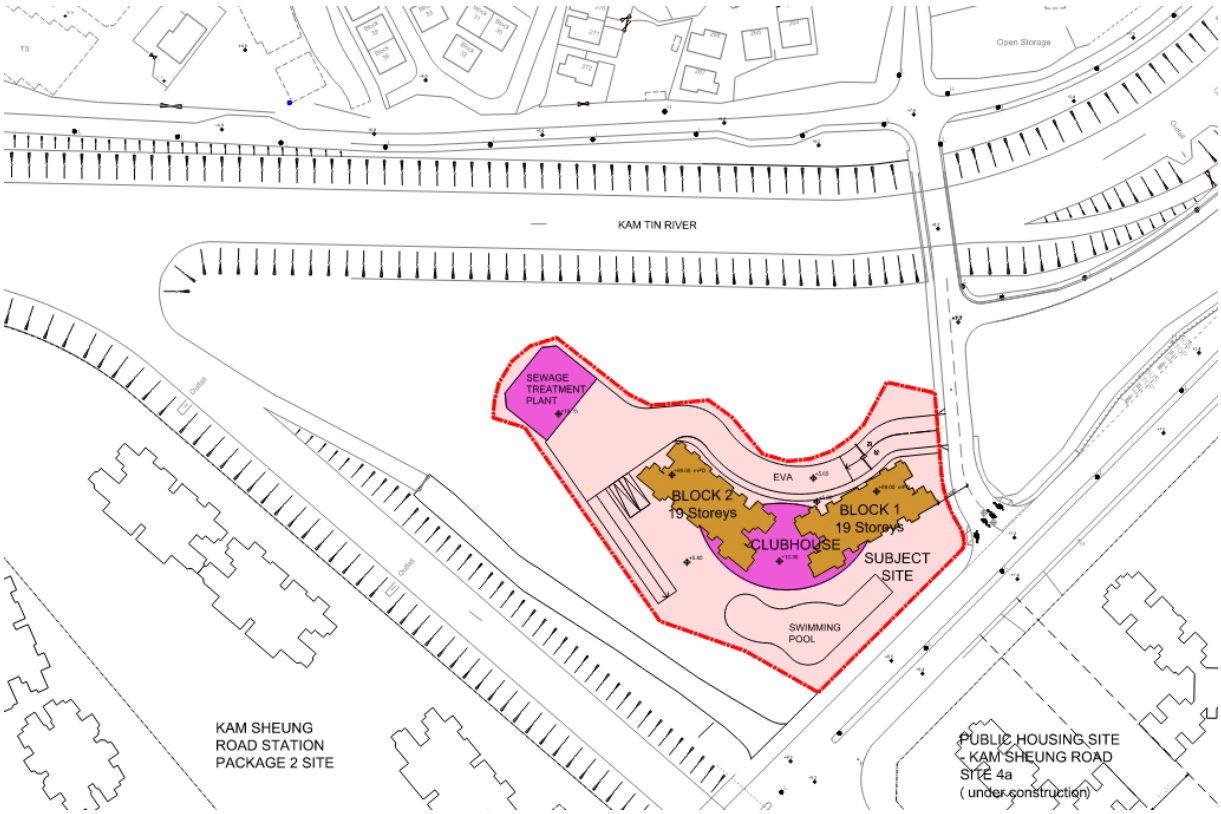


Figure 2.2.6 Cumulative Scheme – Master Layout Plan of Application Site (Kam Sheung Road Site)



Figure 2.2.7 Cumulative Scheme – Master Layout Plan with Sensitivity Test Area (Kam Sheung Road Site)

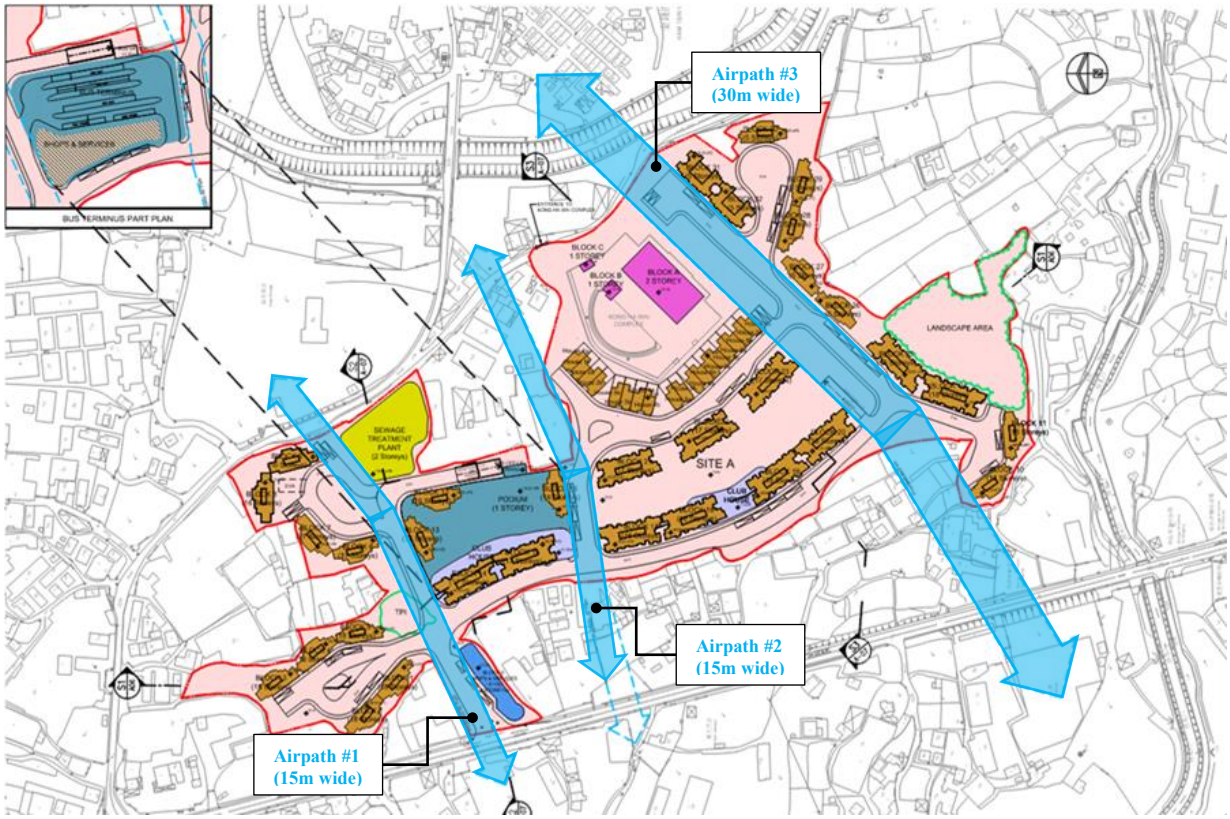


Figure 2.2.8 Cumulative Scheme – Master Layout Plan of Application Site (Kong Ha Wai Site)

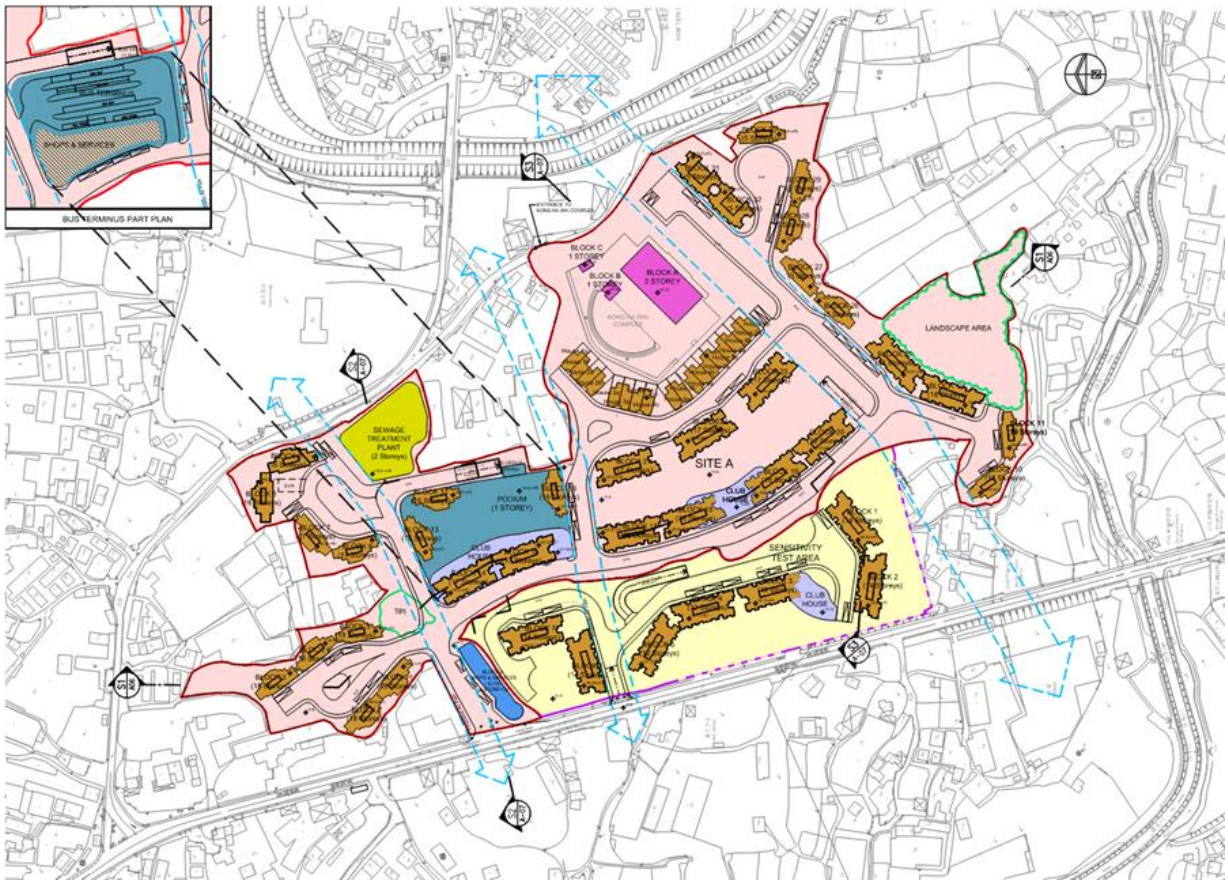


Figure 2.2.9 Cumulative Scheme – Master Layout Plan with Sensitivity Test Area (Kong Ha Wai Site)

2.2.8 The directional view for the 3D model of Cumulative Scheme is shown in Figure 2.2.10 to Figure 2.2.13.

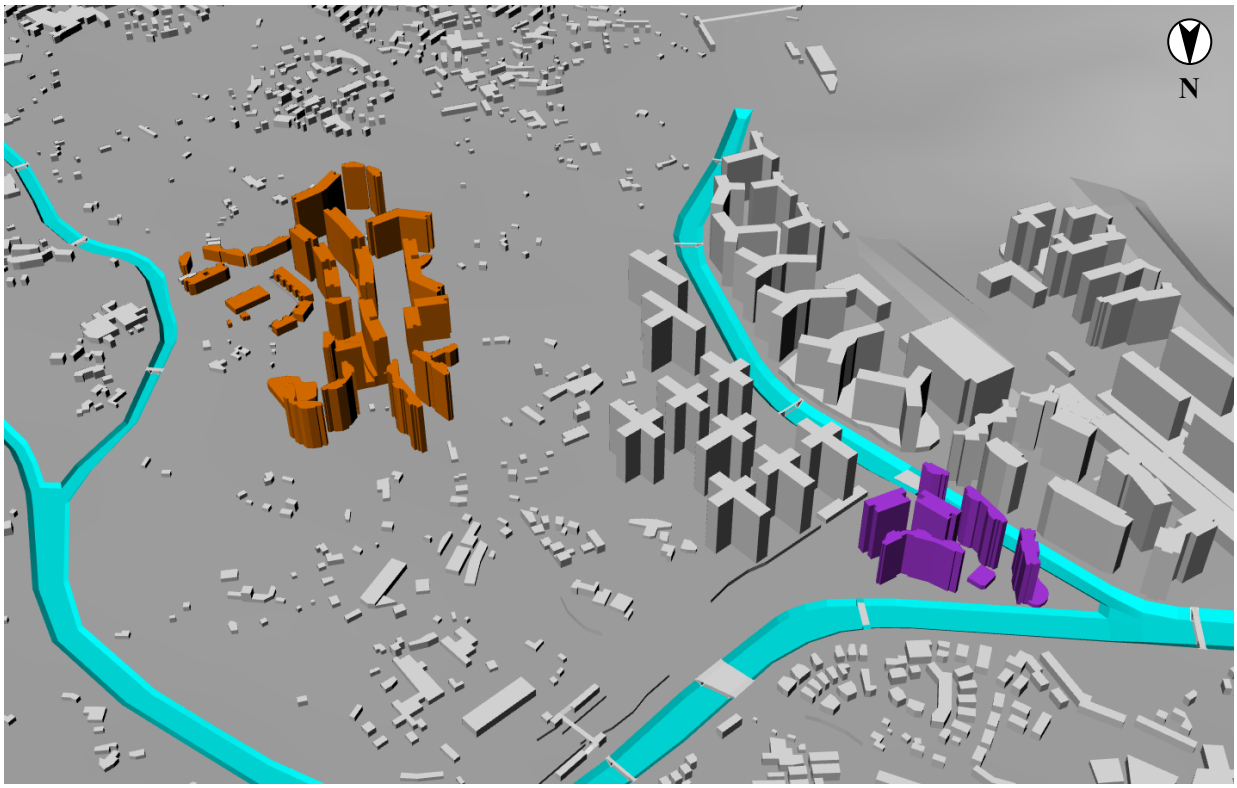


Figure 2.2.10 Northerly View of Cumulative Scheme

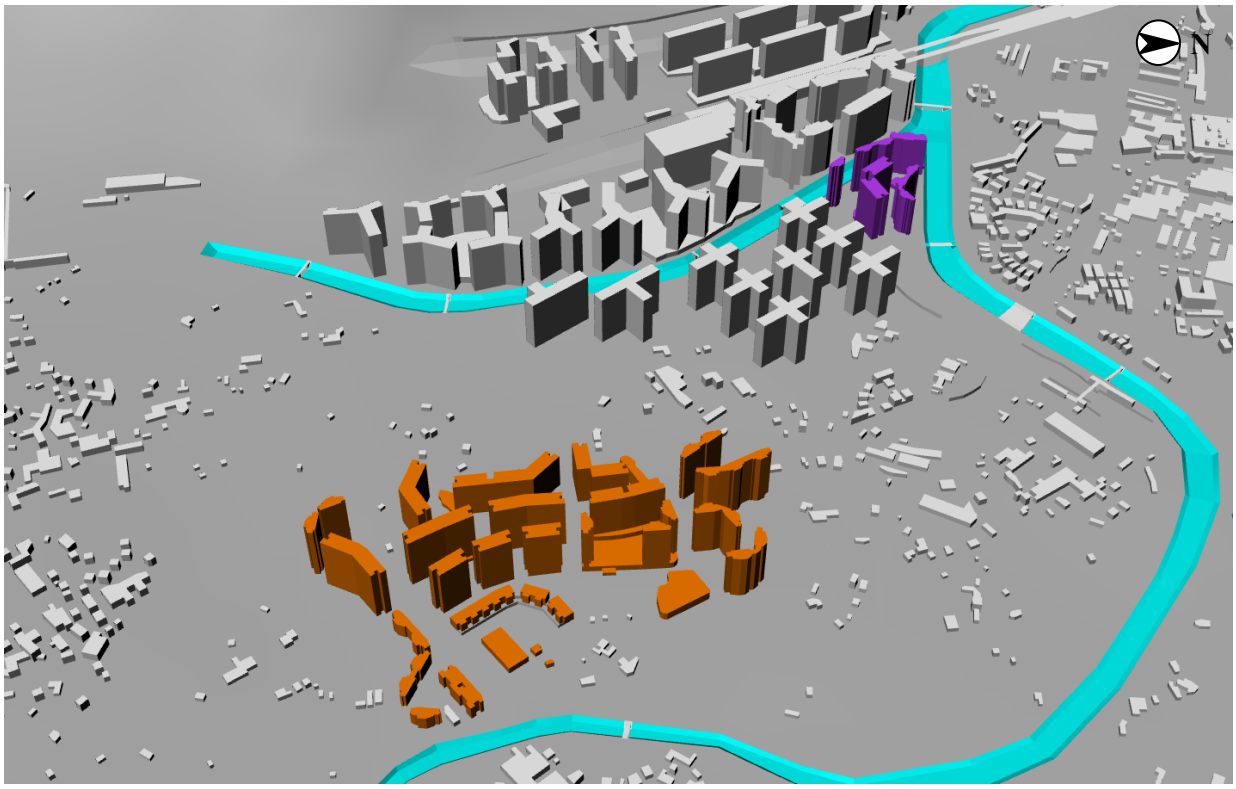


Figure 2.2.11 Easterly View of Cumulative Scheme

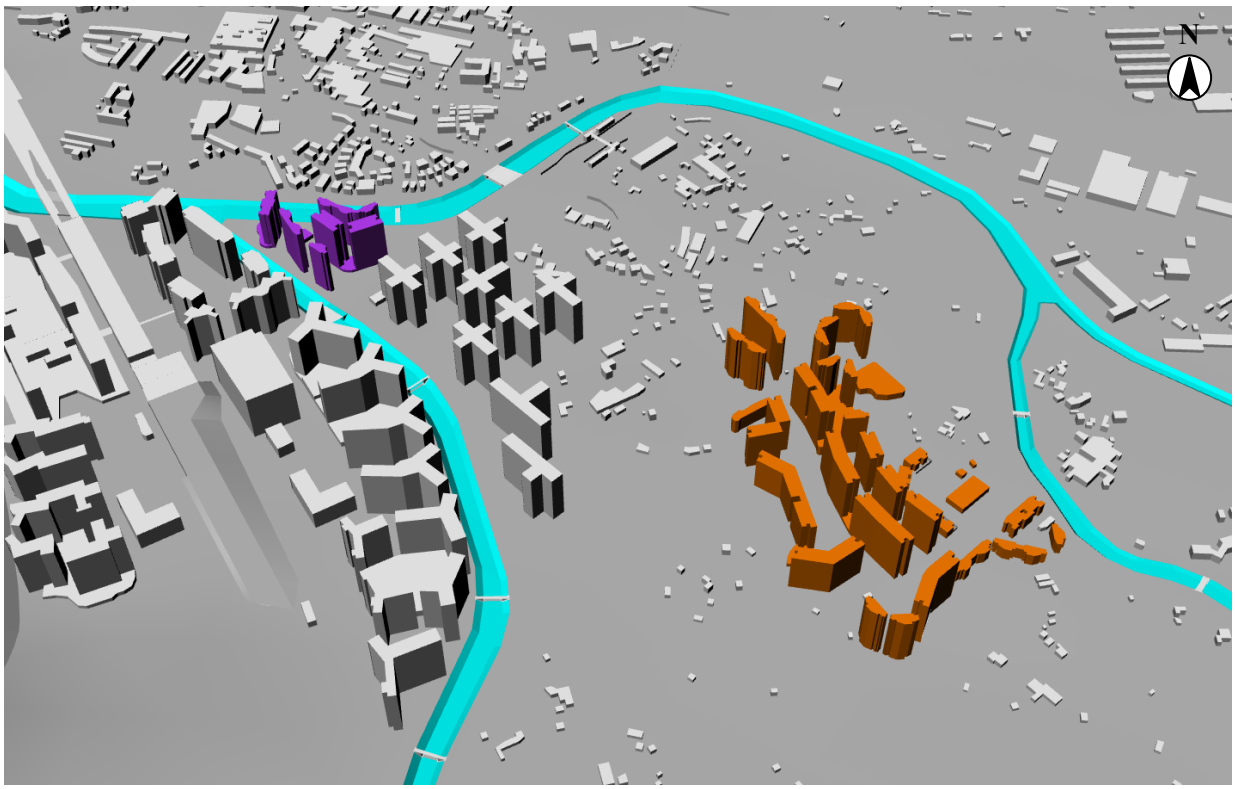


Figure 2.2.12 Southerly View of Cumulative Scheme

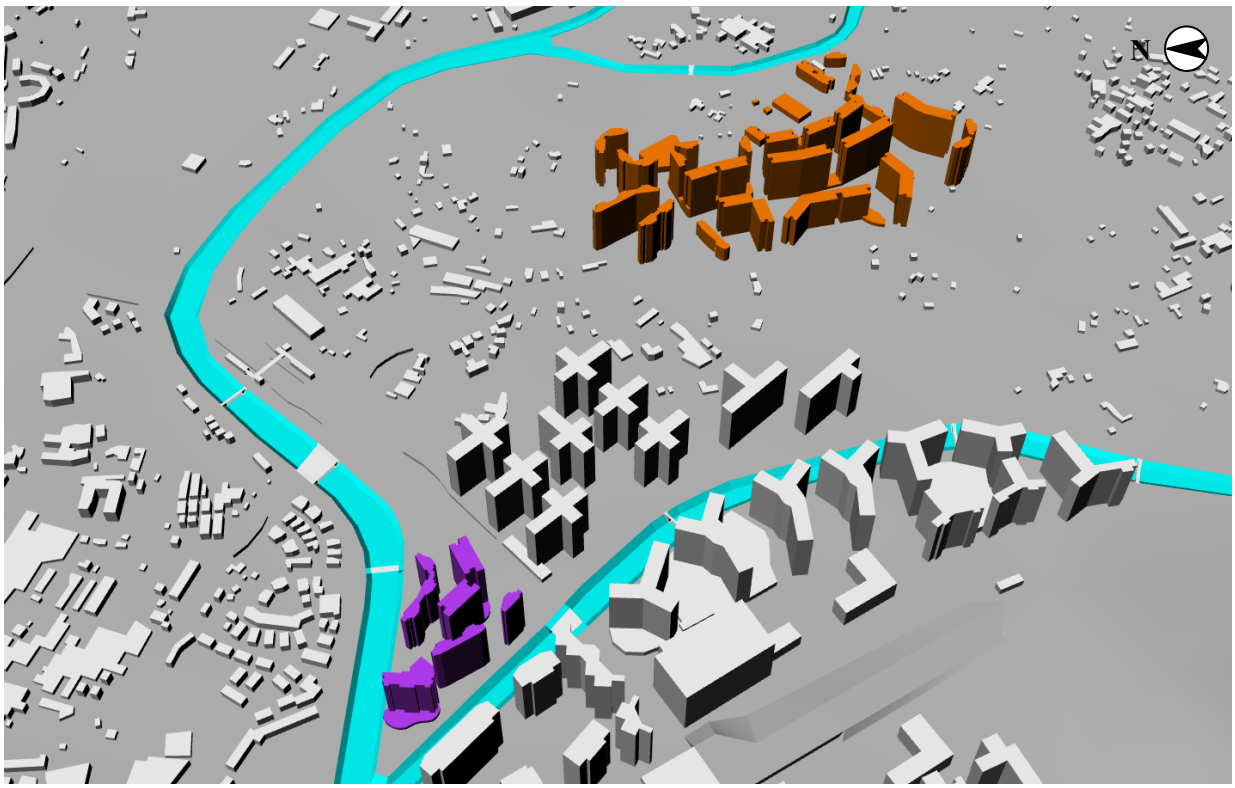


Figure 2.2.13 Westerly View of Cumulative Scheme

Revised Cumulative Scheme

2.2.9 In the Revised Cumulative Scheme, a revised Master Layout Plan for the Kam Sheung Road Site has been adopted in the current assessment. Compared with the Cumulative Scheme, the towers and podium are repositioned and building heights are revised. The Kam Sheung Road Site comprises 2 towers with building height of +63.70mPD within the Application Site. The Sensitivity Test Area with additional towers have been included in the AVA-IS, there are 7 towers with building height ranging from +60.60 to +69.00mPD in Kam Sheung Road Site. The Master Layout Plans of the Revised Cumulative Scheme of Kam Sheung Road Site are shown in Figure 2.2.14 and Figure 2.2.15, and Appendix A. The Development Parameter is summarised in Table 2.2.2.

2.2.10 The Kong Ha Wai Site remains unchanged from the Cumulative Scheme, comprises 32 towers with building height ranged from +28.05 to +69.00mPD, and 18 houses with building height of +19.95mPD. The Sensitivity Test Area with additional towers of 7 towers with building height ranged from +50.10 to +56.40mPD in Kong Ha Wai Site.

Table 2.2.2 Development Parameters of the Revised Cumulative Scheme

	Development Parameters	Proposed Development	Sensitivity Test Area
Kam Sheung Road Site	Building Blocks	2 nos. of high-rise Towers	7 nos. of high-rise Towers
	Building Height	+63.70mPD for Towers	+60.60 to +69.00mPD For Towers
	Plot Ratio	3.0	3.0
Kong Ha Wai Site	Building Blocks	32 nos. of high-rise Towers 18 nos. of Houses	7 nos. of high-rise Towers
	Building Height	+26.05 to +69.00mPD for Towers +19.95mPD for Houses	+50.10 to +56.40mPD for Towers
	Plot Ratio	2.41 (Domestic: 2.30, Non-domestic: 0.11)	2.41 (Domestic: 2.30, Non-domestic: 0.11)

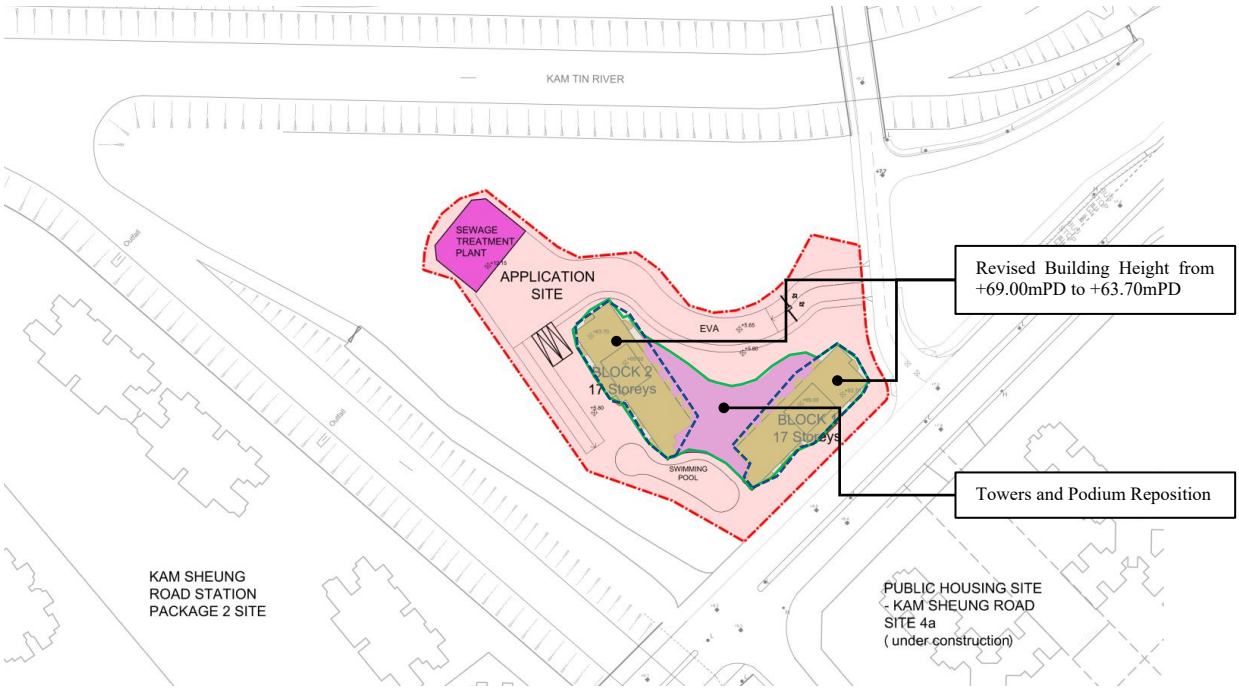


Figure 2.2.14 Revised Cumulative Scheme – Master Layout Plan of Application Site (Kam Sheung Road Site)



Figure 2.2.15 Revised Cumulative Scheme – Master Layout Plan with Sensitivity Test Area (Kam Sheung Road Site)

3. Methodology

3.1 Wind Availability Data

3.1.1 The site wind availability data for the Application Site and its surrounding is an essential parameter for AVA. As stipulated in the AVA Technical Circular, the site wind availability data would be presented by using appropriate mathematical models. Planning Department (PlanD) has set up a set of simulated meso-scale data of Regional Atmospheric Modelling System (RAMS) for the territory for AVA Study, which can be downloaded from Planning Department Website[1].

3.1.2 As indicated in Figure 3.1.1, the location of Kong Ha Wai Site and Kam Sheung Road Site falls within the three location grids (x: 058, y: 068; x: 059, y: 068; x: 059, y: 067) in the RAMS database. The grid of **x: 059, y: 067** is selected as it is considered to be more representative with the largest proportion of site coverage among the three grids. The annual and summer wind roses at 500m of the selected grid are shown in Figure 3.1.2, with which the prevailing wind directions were identified.

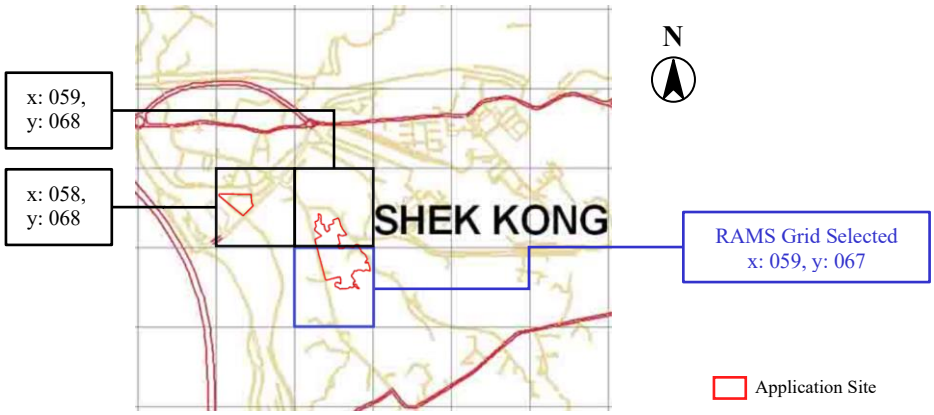


Figure 3.1.1 RAMS Grid and Location of Application Site



Figure 3.1.2 Wind Roses at 500m – Annual Wind Rose (Left); Summer Wind Rose (Right)

[1] Planning Department - Site Wind Availability Data

3.1.3 As per the AVA Technical Circular, at least 75% of the time in a typical reference year (frequency of occurrence) would be studied under both annual and summer wind conditions.

Annual Prevailing Wind Directions

3.1.4 According to the selected set of wind data from the RAMS, eight prevailing wind directions were considered in this AVA Study, which covers 76.4% of the total annual wind frequency. They are north-easterly (10.0%), east-north-easterly (11.9%), easterly (15.7%), east-south-easterly (9.4%), south-easterly (8.7%), south-south-westerly (6.5%), south-westerly (6.7%) and south-south-westerly (7.5%), as highlighted in red in Table 3.1.1.

Table 3.1.1 Annual Wind Frequency

Wind Direction	N	NNE	NE	ENE	E	ESE	SE	SSE	
Frequency	2.3%	5.6%	10.0%	11.9%	15.7%	9.4%	8.7%	6.5%	
Wind Direction	**S**	**SSW**	**SW**	**WSW**	**W**	**WNW**	**NW**	**NNW**	**Sum**
Frequency	6.7%	7.5%	5.9%	2.9%	2.6%	1.6%	1.4%	1.3%	76.4%

Summer Prevailing Wind Directions

3.1.5 Seven prevailing wind directions were considered in this AVA Study which covers 75.2% of the total summer wind frequency. They are easterly (6.9%), east-south-easterly (8.6%), south-easterly (7.5%), south-south-westerly (8.7%), south-westerly (13.6%), south-south-westerly (16.0%) and south-westerly (13.9%), as highlighted in red in Table 3.1.2.

Table 3.1.2 Summer Wind Frequency

Wind Direction	N	NNE	NE	ENE	E	ESE	SE	SSE	
Frequency	1.3%	1.7%	1.5%	2.7%	6.9%	8.6%	7.5%	8.7%	
Wind Direction	**S**	**SSW**	**SW**	**WSW**	**W**	**WNW**	**NW**	**NNW**	**Sum**
Frequency	13.6%	16.0%	13.9%	6.3%	5.1%	2.5%	2.0%	1.4%	75.2%

Wind Profile

3.1.6 The vertical wind profiles from the RAMS data are extracted and inputted into CFD model. The exact profiles are extracted and modelled for each corresponding wind direction to be studied. For wind data above 500m height, the velocity is assumed to be the same as the data at 500m. The vertical wind profile for all wind directions to be studied are shown in Figure 3.1.3 to Figure 3.1.5.

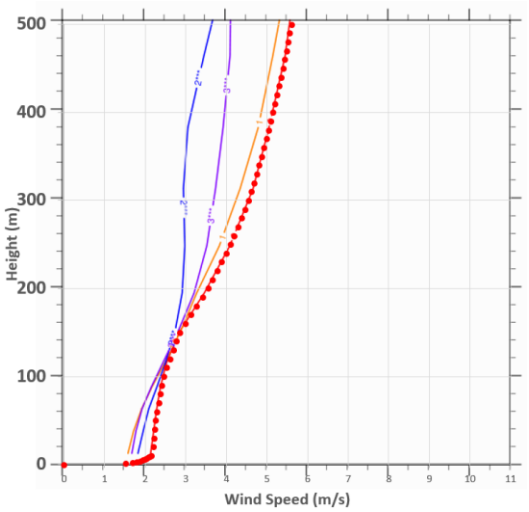


Figure 3.1.3 Vertical Wind Profile of 22.5˚ – 112.4˚ Winds

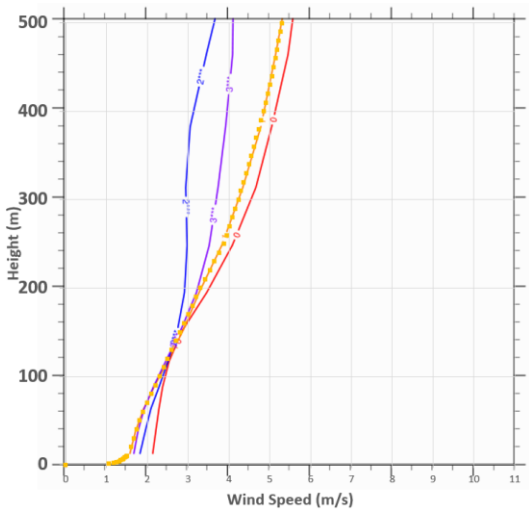


Figure 3.1.4 Vertical Wind Profile of 112.5˚ – 202.4˚ Winds

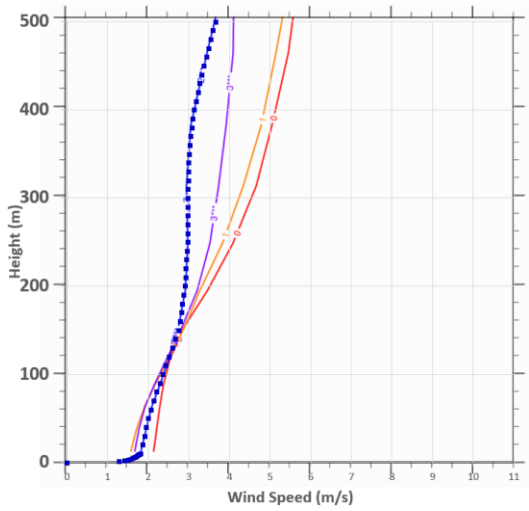


Figure 3.1.5 Vertical Wind Profile of 202.5˚ – 292.4˚ Winds

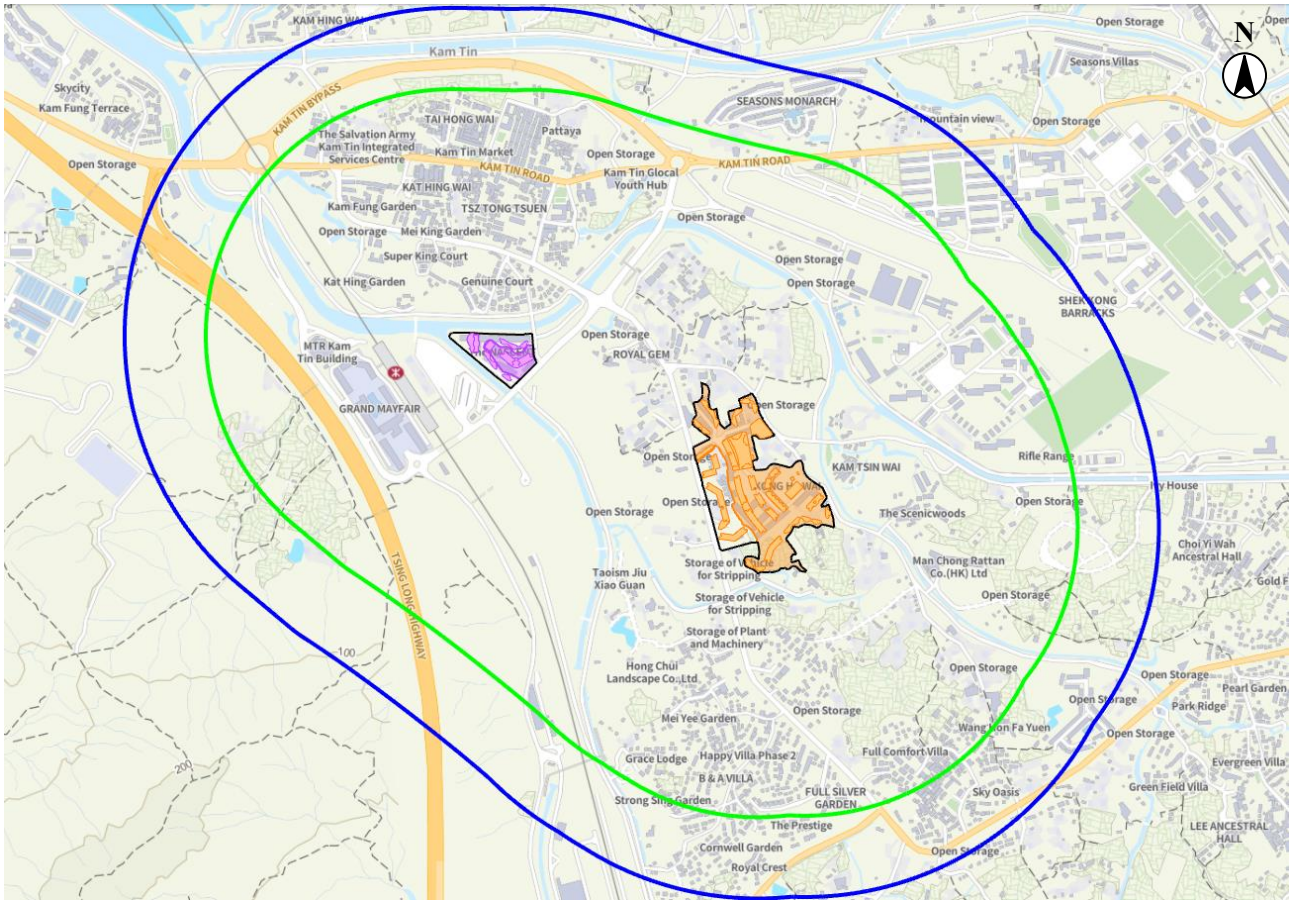
3.2 Assessment and Surrounding Area

3.2.1 With reference to the AVA Technical Circular, the assessment should include all areas within the Application Site, as well as a belt up to 1H, where H is the height of the tallest building, i.e., 69m, within the Application Site, around the site boundary. H is defined as 70m for the assessment.

3.2.2 In order to capture the influence zone of the Application Site, the Assessment Area and Surrounding Area are extended to be 630m (9H) and 840m (12H) away from the site boundary of the Application Site respectively, as indicated in Figure 3.2.1. The computational domain is about 6800m (L) x 7800m (W) x 3000m (H), as shown in Figure 3.2.2.

3.2.3 Four directional views of the 3D model of the Surrounding Area are shown in Figure 3.2.3 to Figure 3.2.6.

3.2.4 According to the GIS Data, Town Planning Board and GeoInfo Map, there are 10 nos. planned developments within the surrounding area as identified in Table 3.2.1. This planned development has also been considered and modelled in this AVA – Initial Study. The locations of these planned developments are shown in Figure 3.2.7. The sources for each of the planned developments are summarized in Table 3.2.1. The detailed layout of the planned developments can refer to Appendix B.



LEGEND

- Kam Sheung Road Site (The Application Site)
- Kong Ha Wai Site (Another S12A Application under preparation)
- Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)
- Assessment Area (9H)
- Surrounding Area (12H)

Figure 3.2.1 Application Site (orange and purple), Assessment Area (green) and Surrounding Area (blue)

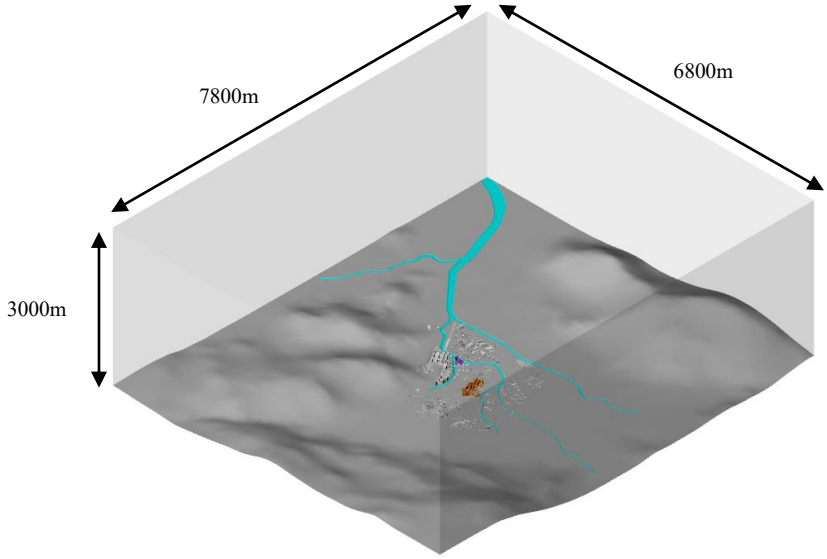


Figure 3.2.2 3D View of the Domain



Figure 3.2.3 Northerly View of Surrounding Area

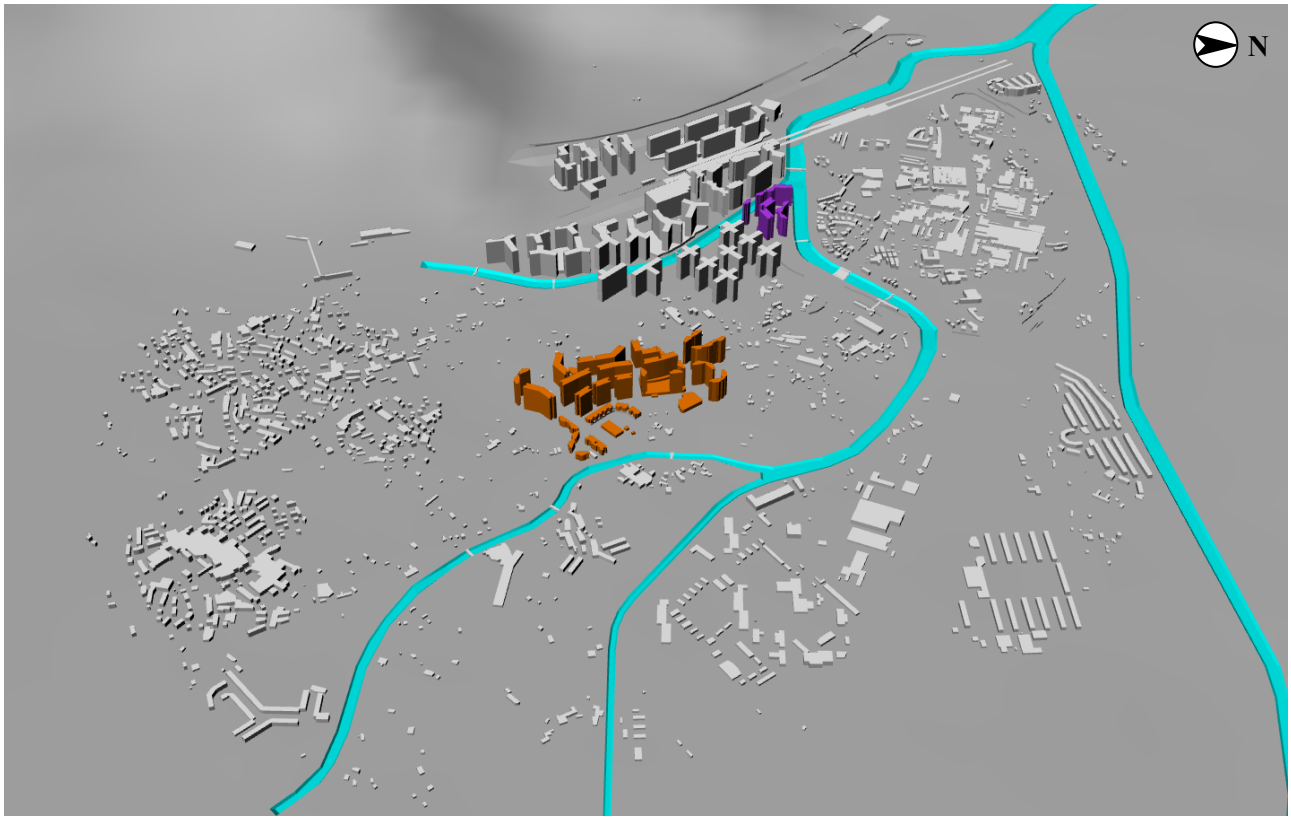


Figure 3.2.4 Easterly View of Surrounding Area

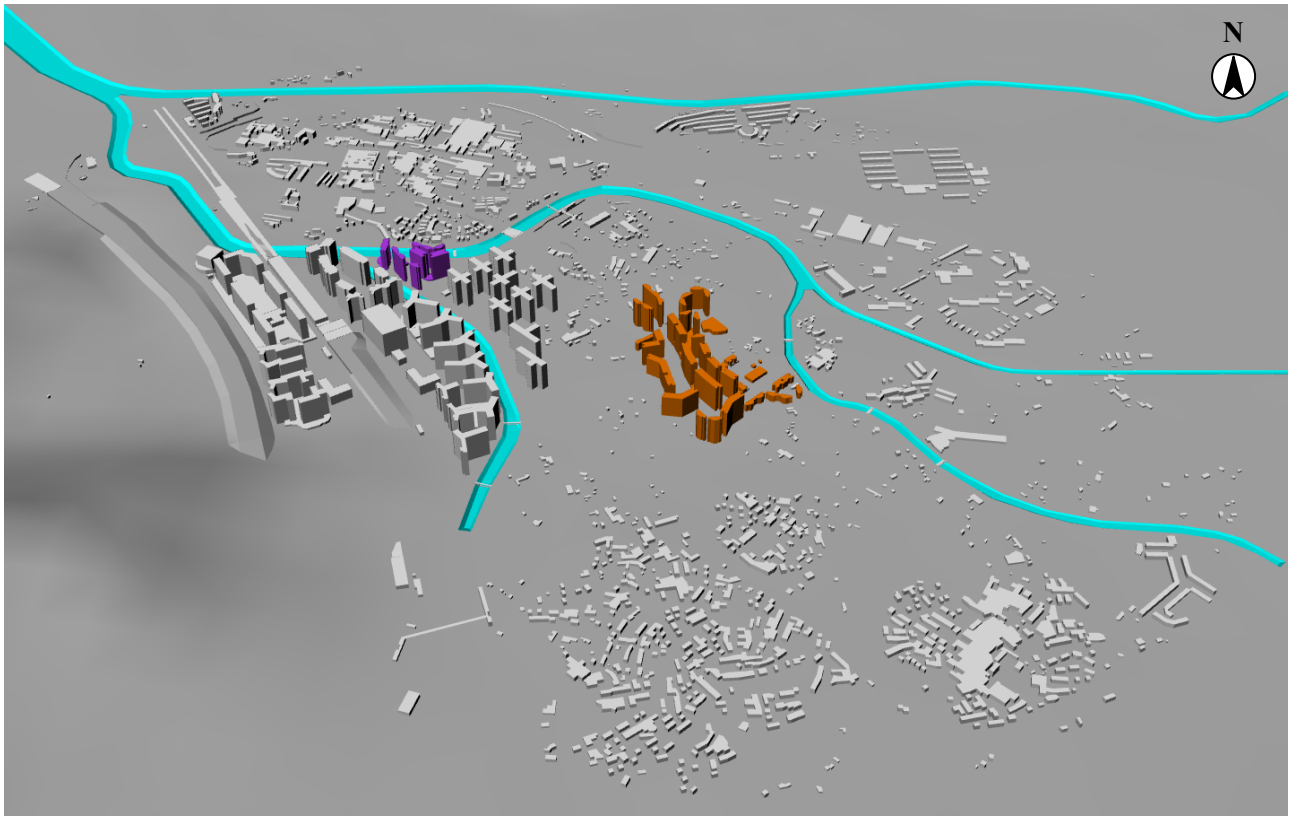


Figure 3.2.5 Southerly View of Surrounding Area



Figure 3.2.6 Westerly View of Surrounding Area

Table 3.2.1 Sources of Planned Developments in Surrounding Area

	Planned Development	Building Height
1	Kam Sheung Road Station Phase 2 Site	+69mPD (Refer to OZP Statutory Plans No. S/YL-KTS/15)
2	Kam Sheung Road Site 1	+69mPD (Refer to OZP Statutory Plans No. S/YL-KTS/15)
3	Kam Sheung Road Site 4a	+69mPD (Refer to OZP Statutory Plans No. S/YL-KTS/15)
4	Kam Sheung Road Site 6	+69mPD (Refer to OZP Statutory Plans No. S/YL-KTS/15)
5	Proposed Primary School (Site 1)	+30mPD (Assumption found in AVA-EE of Site 1, Site 4a and Site 6)
6	Proposed Primary School (Site 6)	+30mPD (Assumption found in AVA-EE of Site 1, Site 4a and Site 6)
7	Proposed Joint User Complex (Site 1)	+66mPD (Information provided by DPO)
8	Proposed Electric Substation Site	15.4m (Assumption made with reference to Shing Kai Road Substation)
9	Proposed Houses at Kam Shek Road	3-storey (8.23m) (Refer to OZP Statutory Plans No. S/YL-KTS/15)
10	Proposed Residential Development at Kam Tai Road	+26.3mPD (Refer to OZP Statutory Plans No. S/YL-KTN/9)

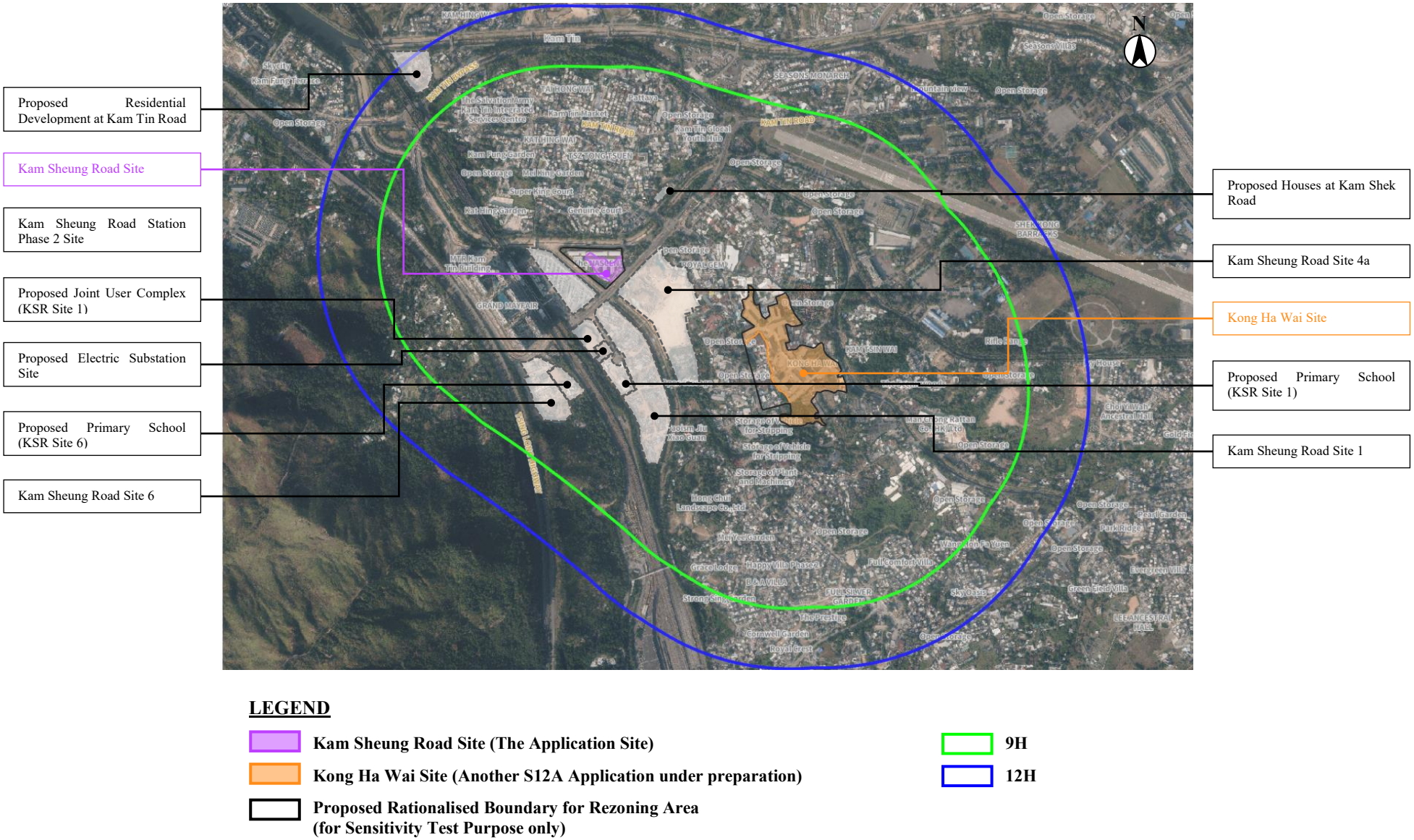


Figure 3.2.7 Planned Developments in Surrounding Area (Source: GeoInfo Map)

3.3 Technical Details for CFD Simulation

Assessment Tool

3.3.1 Computational Fluid Dynamics (CFD) technique is adopted for the AVA Initial Study. A well-recognised commercial CFD package ANSYS ICEM-CFD and Ansys-Fluent are used. Both software are widely used in the industry for AVA studies. With the use of three-dimensional CFD method, the local airflow distribution can be visualised in detail. The air velocity distribution within the flow domain, being affected by the site-specific design and the surrounding buildings, is simulated under the prevailing wind condition in a year.

Mesh Setup

3.3.2 Body-fitted unstructured grid technique is used to fit the geometry to reflect the complexity of the Application Site geometry. Prism layers of 3m above ground (totally 6 layers and each layer is 0.5m) are incorporated in the meshing to better capture the approaching wind as shown in Figure 3.3.1. The expansion ratio is 1.3 while the maximum blockage ratio is 3%.

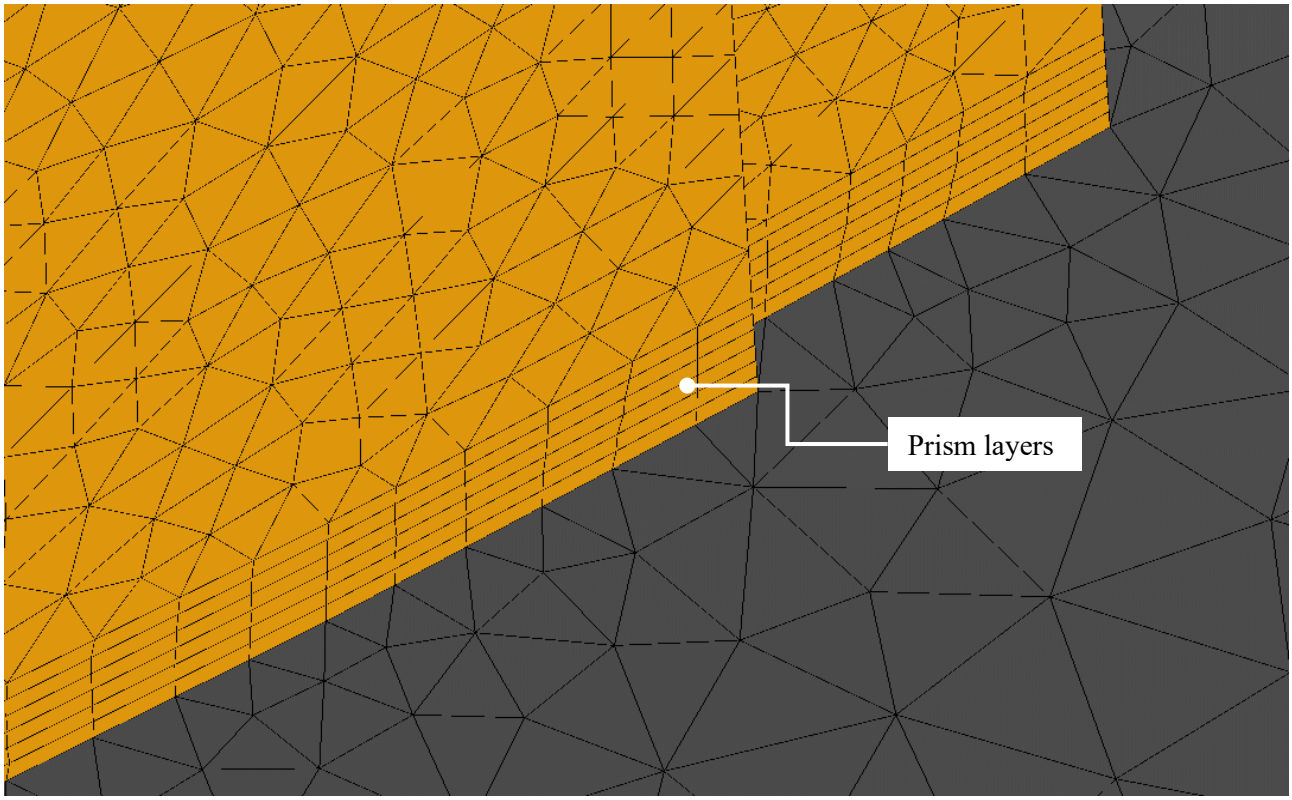


Figure 3.3.1 Prism Layers Near Pedestrian Level

Finer grid system is applied to the most concerned area based on preliminary judgement, while coarse grid system is applied to the area of surrounding buildings for better computational performance while maintaining satisfactory result. The mesh for the computational model is shown in Figure 3.3.2.

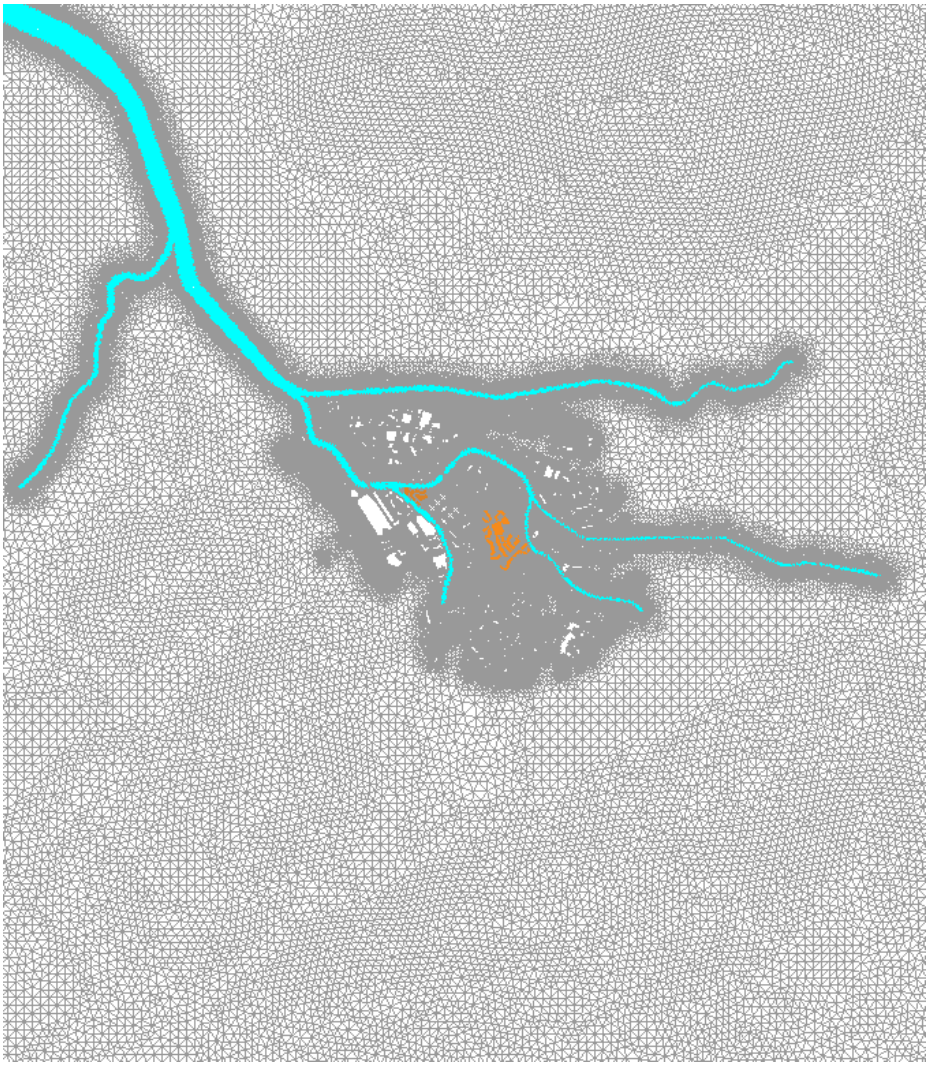


Figure 3.3.2 Mesh of the Computational Model

Turbulence Model

3.3.3 As highlighted in the recent academic and industrial research literatures by CFD practitioners, the widely used Standard k - ε turbulence model technique may not adequately model the effects of large-scale turbulences around buildings and ignored the wind gusts leading to the relatively poor prediction in their circulation regions around buildings. Therefore, in this CFD simulation, realizable k – ε turbulence modelling method is applied. This technique provides more accurate representation of the levels of turbulence that can be expected in an urban environment.

Calculation Method

3.3.4 The Segregated Flow model solves the flow equations in a segregated manner. The linkage between the momentum and continuity equations is based on the predictor-corrector approach. A collocated variable arrangement and a Rhie-and-Chow-type pressure-velocity coupling combined with a SIMPLE-type algorithm is adopted. A higher order differencing scheme is applied to discretize the governing equations. The convergence criterion is set to 0.0001 on mass conservation. The calculation repeat until the solution satisfies this convergence criterion.

3.3.5 The prevailing wind directions are set to inlet boundaries of the model with wind profile as detailed in Section 3.1. The downwind boundaries are set to pressure with value of atmospheric pressure. The top and side boundaries are set to symmetry. In addition, to eliminate the boundary effects, the computational domain is built beyond the Surrounding Area as required in the *AVA Technical Circular*.

Table 3.3.1 Development parameter of Baseline Scheme

CFD Model	
Model Scale	1:1 to real environment
Model Details	Only include Topography, building blocks, streets/highways. No landscape feature is included.
Domain	7800m(length) x 6800m(width) x 3000m(height)
Assessment Area	210m from site boundary of Application Site
Surrounding Area	420m from site boundary of Application Site
Grid Expansion Ratio	The grid should satisfy the grid resolution requirement with maximum expansion ratio = 1.3
Prismatic Layer	6 layers of prismatic layers and 0.5m each (i.e. total 3m above ground)
Inflow Boundary Condition	Incoming wind profiles from RAMS
Outflow Boundary Condition	Pressure boundary condition with dynamic pressure equal to zero
Wall Boundary Condition	Logarithmic law boundary
Solving Algorithms	Rhie and Chow SIMPLE for momentum equation Hybrid model for all other equations Realizable k-ε turbulence model
Blockage Ratio	< 3%
Convergence Criteria	Below $1x10^{-4}$

3.4 AVA Indicators

3.4.1 The wind Velocity Ratio (VR) as defined in *AVA Technical Circular* was employed to assess the ventilation performance of the Cumulative Scheme and surrounding area. The calculation of VR is given by the following formula:

$$VR = \frac{V_p}{V_\infty}$$

where V_p is the wind speed at the pedestrian height (2m above ground) and

V_∞ is the wind speed at the top of the boundary layer (defined as the height where wind is unaffected by urban roughness and determined by the topographical studies)

3.4.2 Higher VR implies that less impact due to Cumulative Scheme on ventilation performance. The average VR is defined as the weighted average VR with respect to the percentage of occurrence of all considered wind directions, which gives a general idea of the ventilation performance at the considered location under both annual and summer wind conditions. Site spatial average velocity ratio (SVR) and Local spatial average velocity ratio (LVR) are determined as show in Table 3.4.1.

Table 3.4.1 Terminology of the AVA Initial Study

Terminology	Description
Velocity Ratio (VR)	The velocity ratio (VR) represents the ratio of the air speed at the measurement position to the value at the reference points.
Site spatial average velocity ratio (SVR)	The SVR represent the average VR of all perimeter test points at the Kam Sheung Road Site boundary which identified in the report.
Local spatial average velocity ratio (LVR)	The LVR represent the average VR of all points, i.e. perimeter and overall test points at the Kam Sheung Road Site boundary which identified in the report.

3.5 Locations of Test Points

3.5.1 As per the technical circular, three types of test points – perimeter test points, overall test points and special test points will be adopted to assess the wind performance. The allocation of these test points will be distributed evenly as per the requirement stated in the *AVA Technical Circular*.

Perimeter Test Points

3.5.2 A total number of 12 and 31 perimeter test points (**Brown spots**), namely P points, are positioned at intervals of around 50m along the Application Site boundary for Kam Sheung Road Site and Kong Ha Wai Site respectively, at 2m above ground level. The locations of the perimeter test points are shown in Figure 3.5.1.

Overall Test Points

3.5.3 A total number of 641 overall test points (**Blue spots**), namely O points, are evenly distributed in open areas at 2m above street level within the Assessment Area, such as the streets and places where pedestrian frequently access, and their locations are shown in Figure 3.5.1.

Special Test Points

3.5.4 A total number of 10 and 29 special test points (**Pink spots**) for Kam Sheung Road Site and Kong Ha Wai Site respectively, namely S points, are evenly distributed in open areas at 2m above street level within the Application Site. Special attentions are paid to the proposed air path and pedestrian walkway. The locations of special test points are shown in Figure 3.5.2 to Figure 3.5.5.

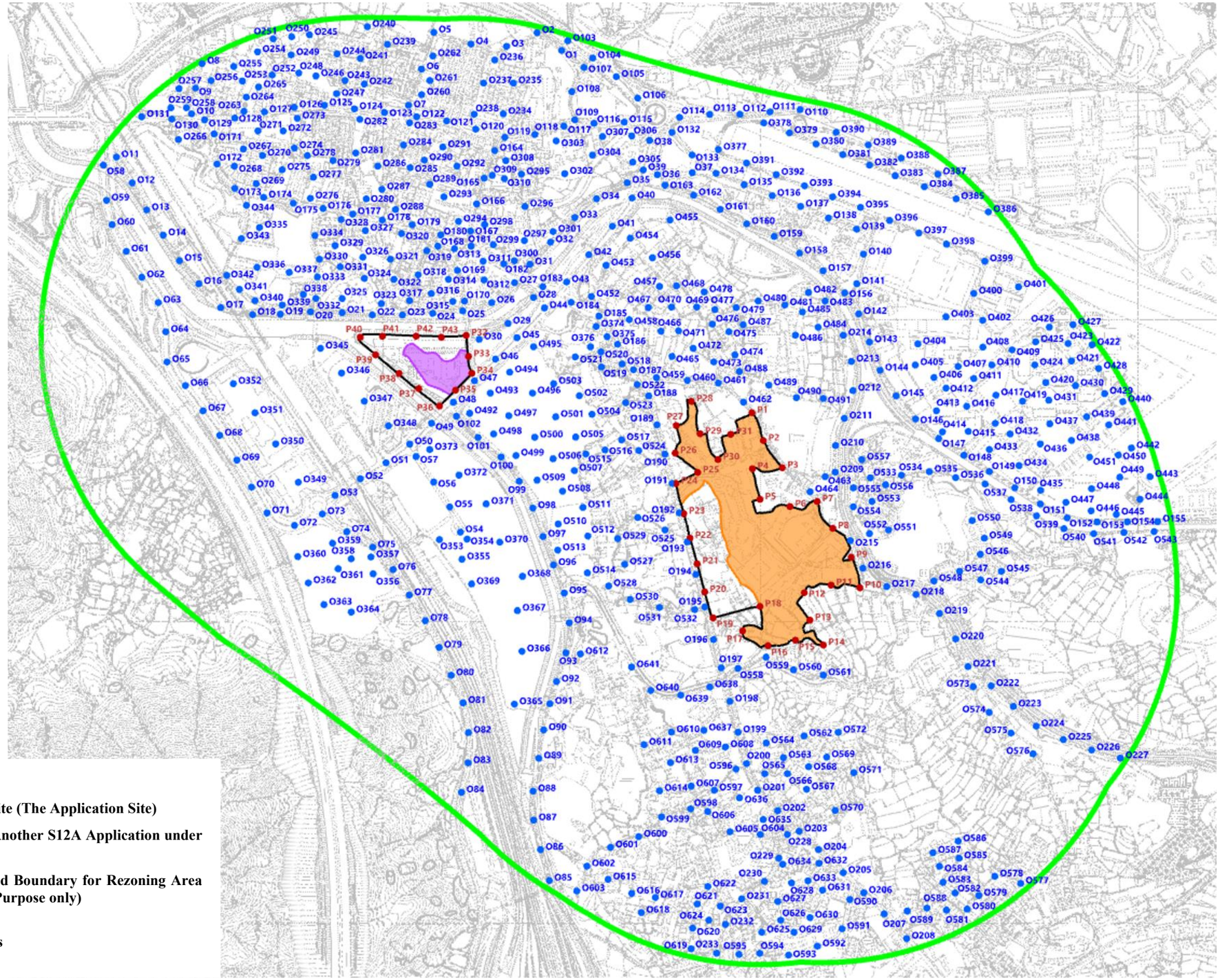
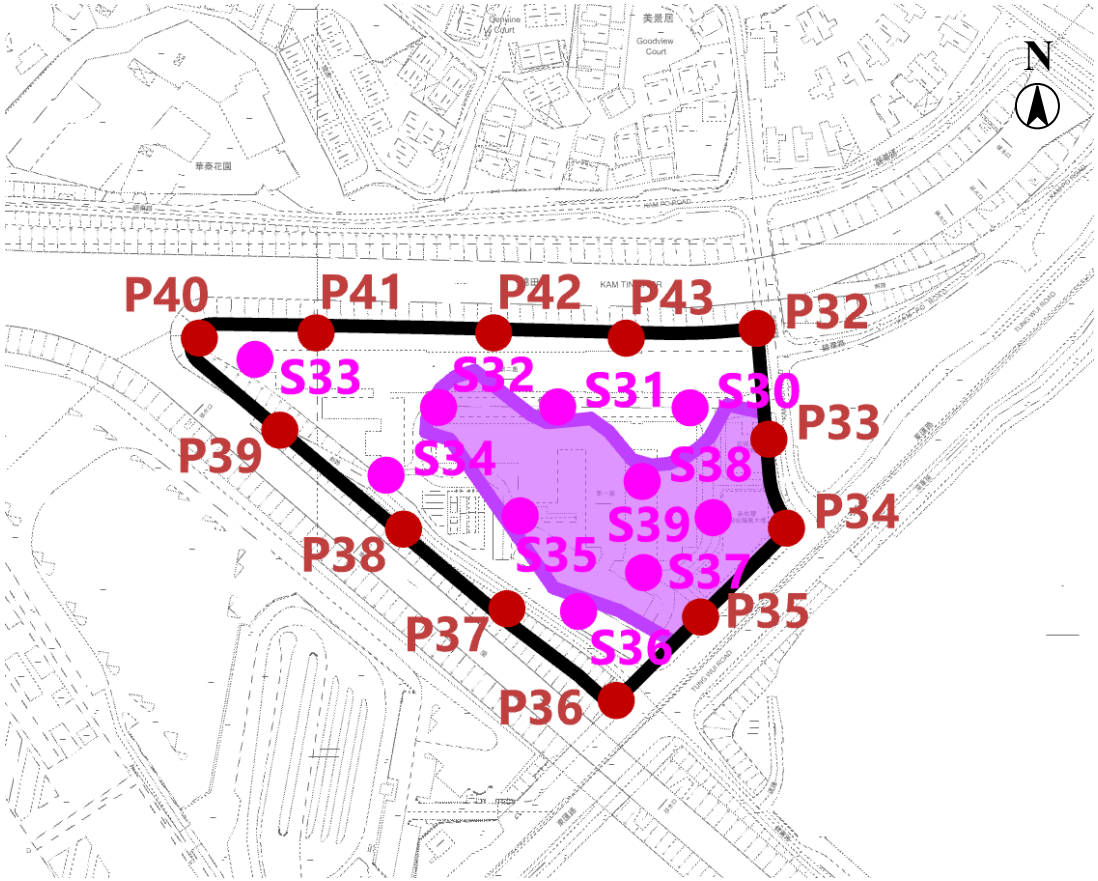


Figure 3.5.1 Location of Perimeter and Overall Test Points



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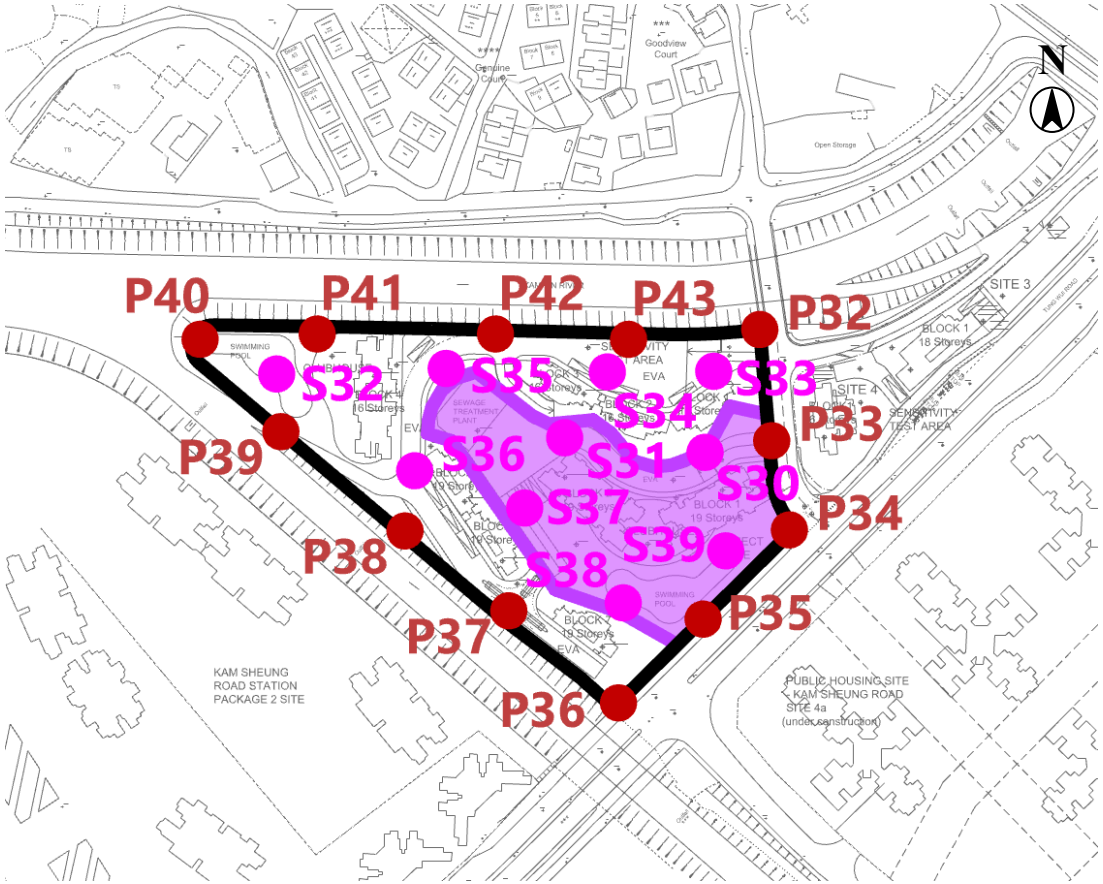
Kam Sheung Road Site (The Application Site)

Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)

P1 Perimeter Test Points

S1 Special Test Points

Figure 3.5.2 Location of Special Test Points for Baseline Scheme (Kam Sheung Road Site)



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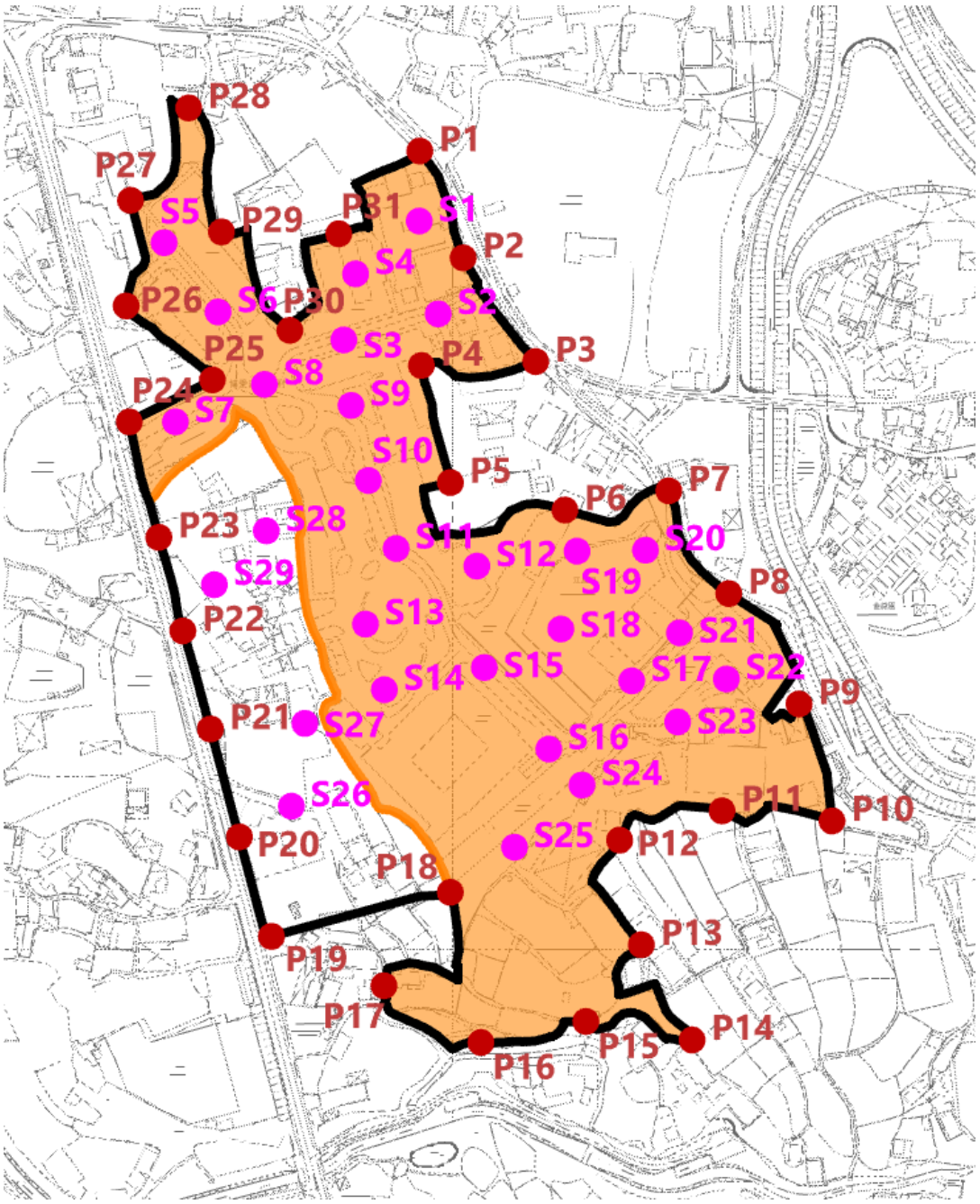
Kam Sheung Road Site (The Application Site)

Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)

P1 Perimeter Test Points

S1 Special Test Points

Figure 3.5.3 Location of Special Test Points for Cumulative Scheme (Kam Sheung Road Site)



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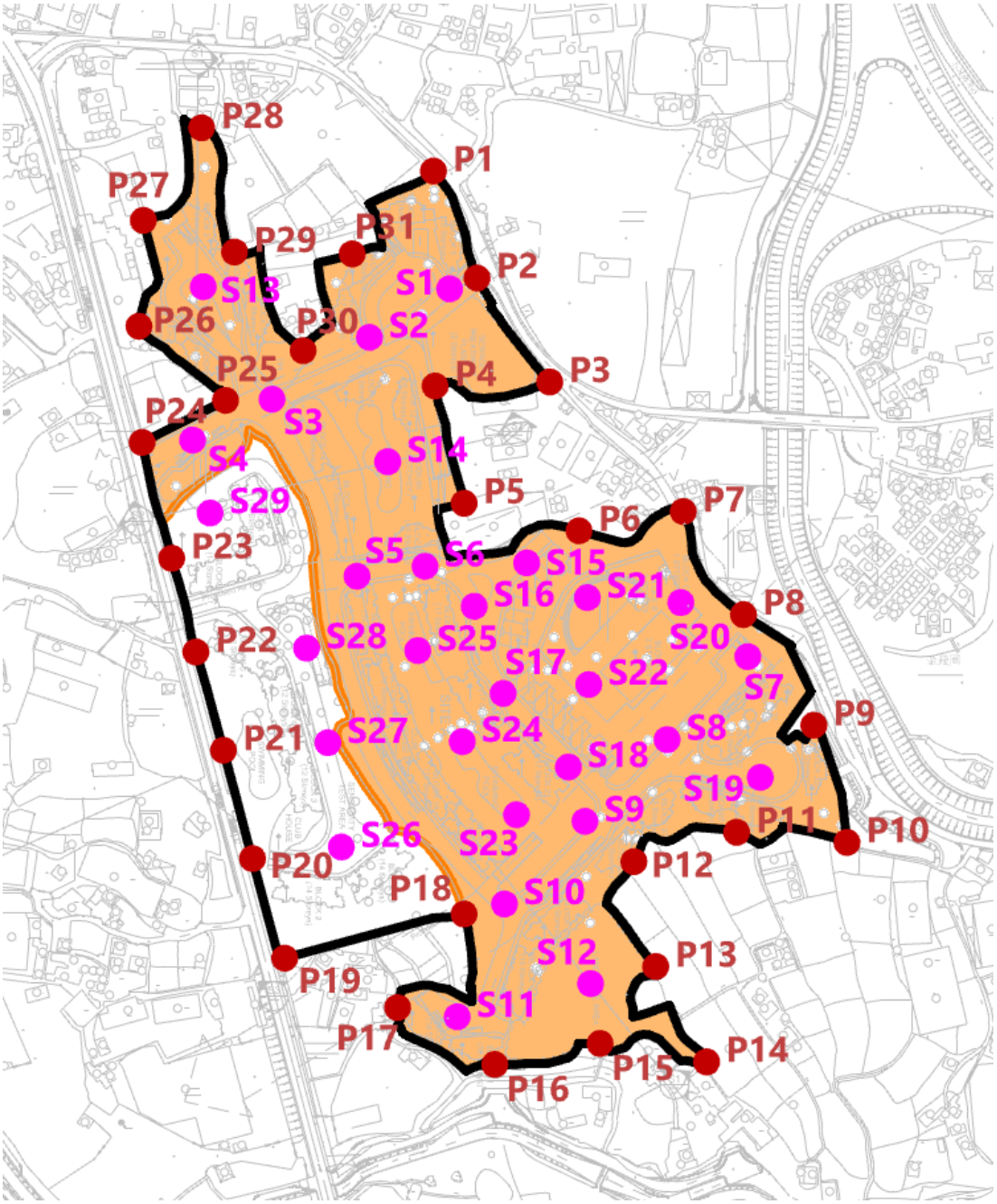
Kong Ha Wai Site (Another S12A Application under preparation)

Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)

P1 Perimeter Test Points

S1 Special Test Points

Figure 3.5.4 Location of Special Test Points for Baseline Scheme (Kong Ha Wai Site)



LEGEND

- Kong Ha Wai Site
- Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)
- P1 Perimeter Test Points
- S1 Special Test Points

Figure 3.5.5 Location of Special Test Points for Cumulative Scheme (Kong Ha Wai Site)

4. Result and Discussion – Initial Study

4.1 Overall Pattern of Ventilation Performance under Annual Wind Condition

4.1.1 The SVR and LVR are summarized in Table 4.1.1. The contour plots of Baseline Scheme and Cumulative Scheme under annual wind condition are shown in Figure 4.1.1 and Figure 4.1.2 respectively.

4.1.2 For Kam Sheung Road Site, a similar SVR is achieved, indicating a similar wind environment along the site boundary. For Kong Ha Wai Site, lower SVR is achieved, indicating that a calmer wind environment would be observed along the site boundary, as compared with Baseline Scheme.

4.1.3 Moreover, a similar LVR, as compared with Baseline Scheme, indicating that the Cumulative Scheme would achieve similar ventilation performance in the surrounding area, as compared with Baseline Scheme.

Table 4.1.1 Annual SVR and LVR for Baseline and Cumulative Schemes

		Baseline Scheme	Cumulative Scheme
SVR	**Kam Sheung Road Site**	0.11	0.12
	Kong Ha Wai Site	0.19	0.16
LVR	**Cumulative**	0.16	0.15

4.1.4 Under annual condition, majority of the incoming winds come from ENE and E directions. Under ENE and E quadrants prevailing winds, the incoming wind would be able to reach the Kam Sheung Road Site and Kong Ha Wai Site freely.

4.1.5 Under ENE and E directions, the incoming wind would skim over the low-rise village clusters and reach Kam Sheung Road Site. The downwash effect is induced at the facade of high-rise towers in Kam Sheung Road Site under Cumulative Scheme. The downwashed wind would be diverted to enter Kam Sheung Road Site and around Kam Sheung Road Site along Tung Wui Road. Hence, the wind environment near southeastern boundary of Kam Sheung Road Site would be enhanced, resulting in a slightly higher SVR for Kam Sheung Road Site. However, the wind reaching Kam Po Road – 2 would be limited, result in slightly lower VR.

4.1.6 The surrounding area is dominated by high-rise residential clusters, including Kam Sheung Road Station Phase 2 Site, Kam Sheung Road Site 1. Hence the overall ventilation performance would be similar, as compared with Baseline Scheme.

4.1.7 The wind environment near the northern and southern boundary of Kong Ha Wai Site would be enhanced due to the downwash effect under Cumulative Scheme. Nevertheless, the high-rise towers of Kong Ha Wai Site in Cumulative Scheme would impose some wind shadow area in the leeward side at its western site boundary as well as further distance, such as Kam Po Road – 2, Kam Sheung Road Site 4a, the Open Storage and Village Clusters (West of Kong Ha Wai Site) and Kam Sheung Road.

4.1.8 In addition, the air paths provided with Kong Ha Wai Site aligned with NE-WSW and ENE-W direction would facilitate wind penetration across the site and help to alleviate the wind shadow at the immediate west of Kong Ha Wai Site, such as the northern part of Village Cluster and Open Storage (West of Kong Ha Wai Site), ELCHK Kam Sheung Life Lutheran Church and S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church (red arrows in Figure 4.1.2).

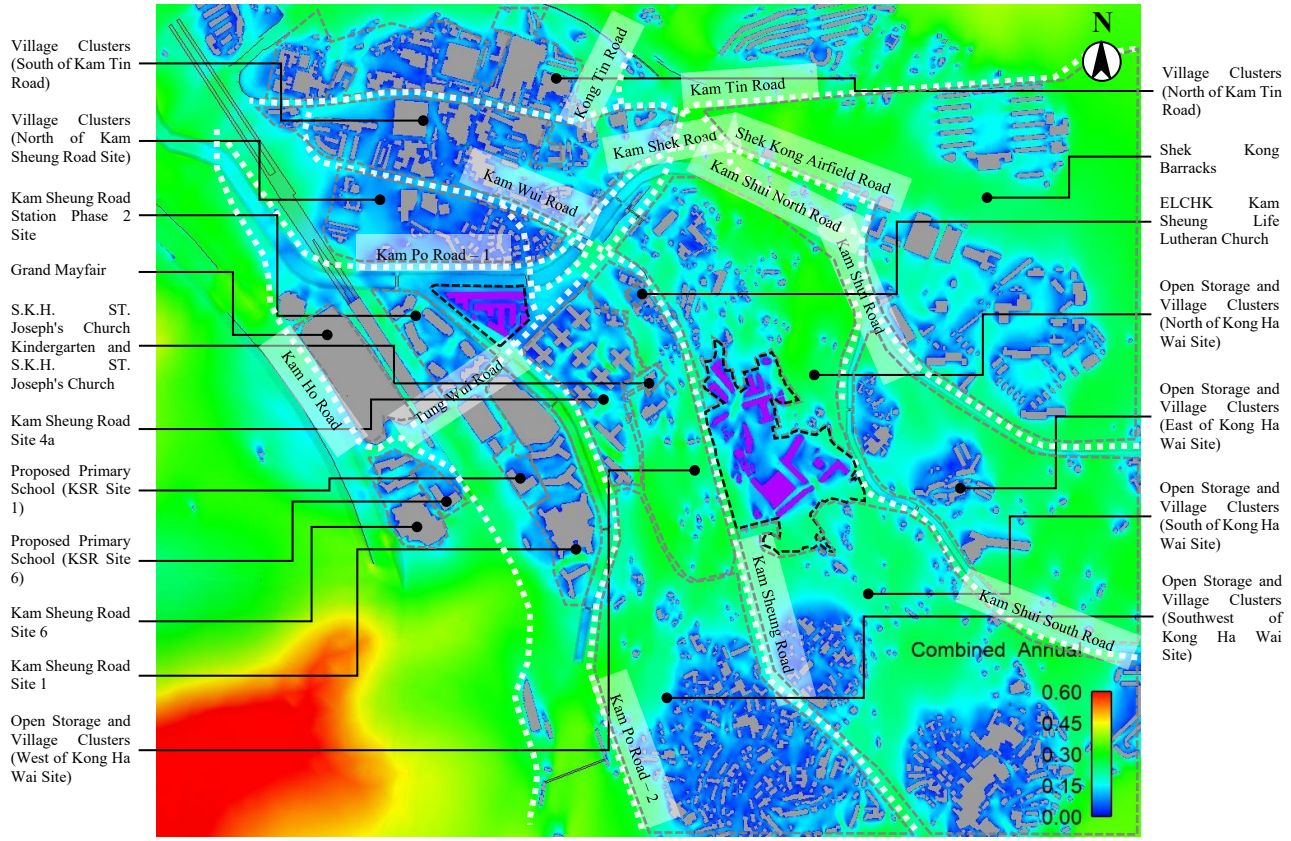


Figure 4.1.1 Contour Plot of Baseline Scheme under Annual Prevailing Wind

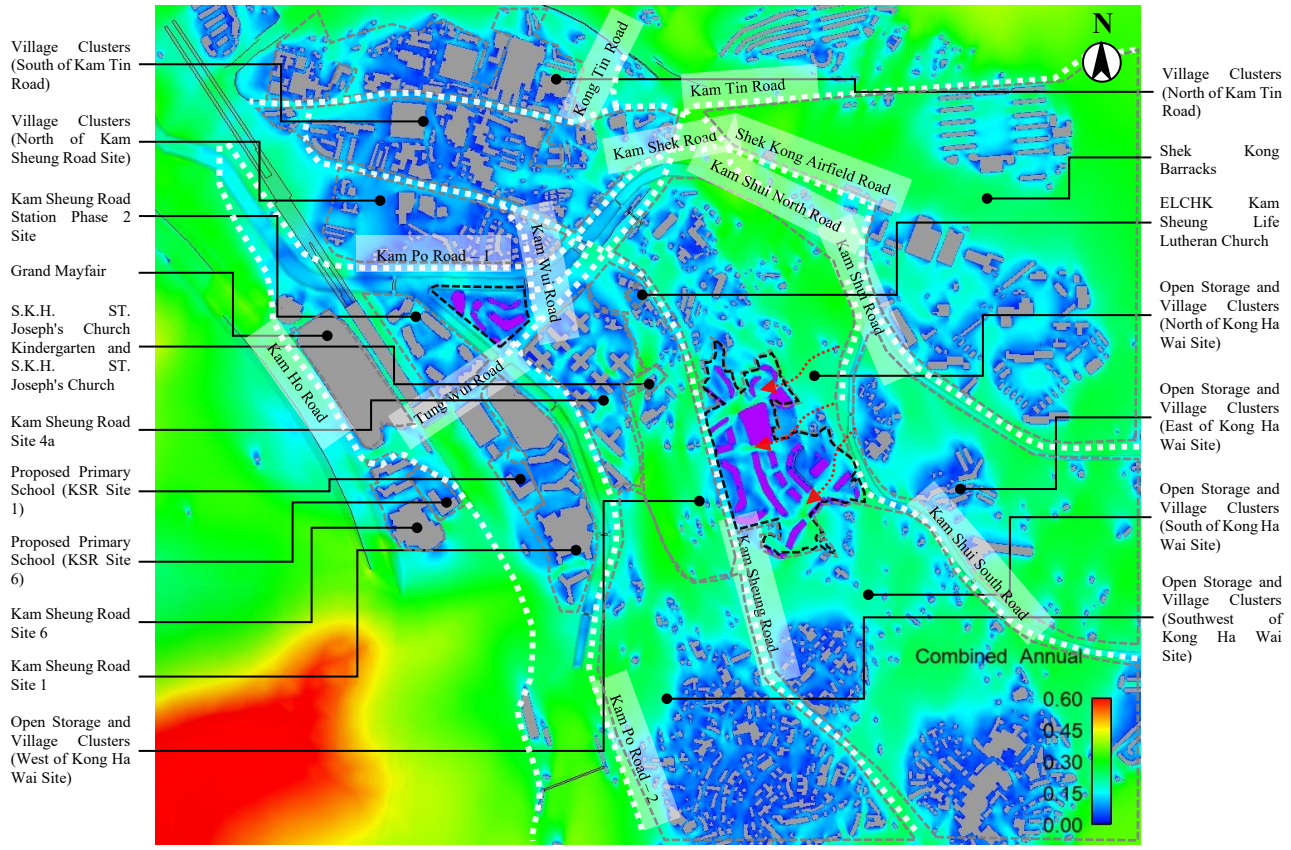


Figure 4.1.2 Contour Plot of Cumulative Scheme under Annual Prevailing Wind

4.2 Overall Pattern of Ventilation Performance under Summer Wind Condition

4.2.1 The SVR and LVR are summarized in Table 4.2.1. The contour plots of Baseline Scheme and Cumulative Scheme under summer wind condition are shown in Figure 4.2.1 and Figure 4.2.2 respectively.

4.2.2 For Kam Sheung Road Site, Cumulative Scheme achieves similar SVR, indicating a similar wind environment along the site boundary. For Kong Ha Wai Site, the Cumulative Scheme results in lower SVR, indicating that a calmer wind environment would be observed along the site boundary, as compared with Baseline Scheme.

4.2.3 Moreover, a similar LVR is achieved, as compared with Baseline Scheme, indicating that the Cumulative Scheme would achieve similar ventilation performance in the surrounding area, as compared with Baseline Scheme.

Table 4.2.1 Summer SVR and LVR for Baseline and Cumulative Schemes

		Baseline Scheme	Cumulative Scheme
SVR	**Kam Sheung Road Site**	0.09	0.10
	Kong Ha Wai Site	0.24	0.20
LVR	**Cumulative**	0.19	0.18

4.2.4 Under summer condition, majority of the incoming comes from SW quadrants.

4.2.5 The incoming wind would be able to reach Kam Sheung Road Site freely from Tung Wui Road. Due the building setback from the southeastern boundary of Kam Sheung Road Site, it would allow more wind to enter Tung Wui Road and hence the wind environment would be enhanced along the southeastern boundary of Kam Sheung Road Site at Tung Wui Road to Kam Wui Road at the immediate east of Kam Sheung Road Site. Further at the downwind side, such as Kam Shek Road, the wind would be shielded by Kam Sheung Road Site and result in a lower VR.

4.2.6 In addition, under Cumulative Scheme, the incoming wind would be able to penetrate Kam Sheung Road Site through its building separation and reach the immediate north of Kam Sheung Road Site, which is Kam Po Road – 1 and Village Clusters (North of Kam Sheung Road Site), and help to alleviate the wind shadow at the leeward side slightly.

4.2.7 With the open space in the Open Storage and Village Clusters (West of Kong Ha Wai Site), the incoming wind could be captured by the façade of high-rise tower in Kong Ha Wai Site under Cumulative Scheme. Due to the downwash effect from the Cumulative Scheme, wind environment at the immediate west of Kong Ha Wai Site, such as S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church would be enhanced. However, the incoming wind would be shielded by the high-rise towers in Kong Ha Wai Site under Cumulative Scheme, hence lower the VR of the focus areas in the leeward side, such as Shek Kong Airfield Road, Kam Shui North Road, Kam Shui Road, Shek Kong Barracks, Open Storage and Village Clusters (North of Kong Ha Wai Site), Open Storage and Village Clusters (East of Kong Ha Wai Site).

4.2.8 Within Kong Ha Wai Site, the air paths aligned with NE-WSW and ENE-W direction and the building separation would increase the site permeability to maintain and enhance the wind environment in surrounding area slightly.

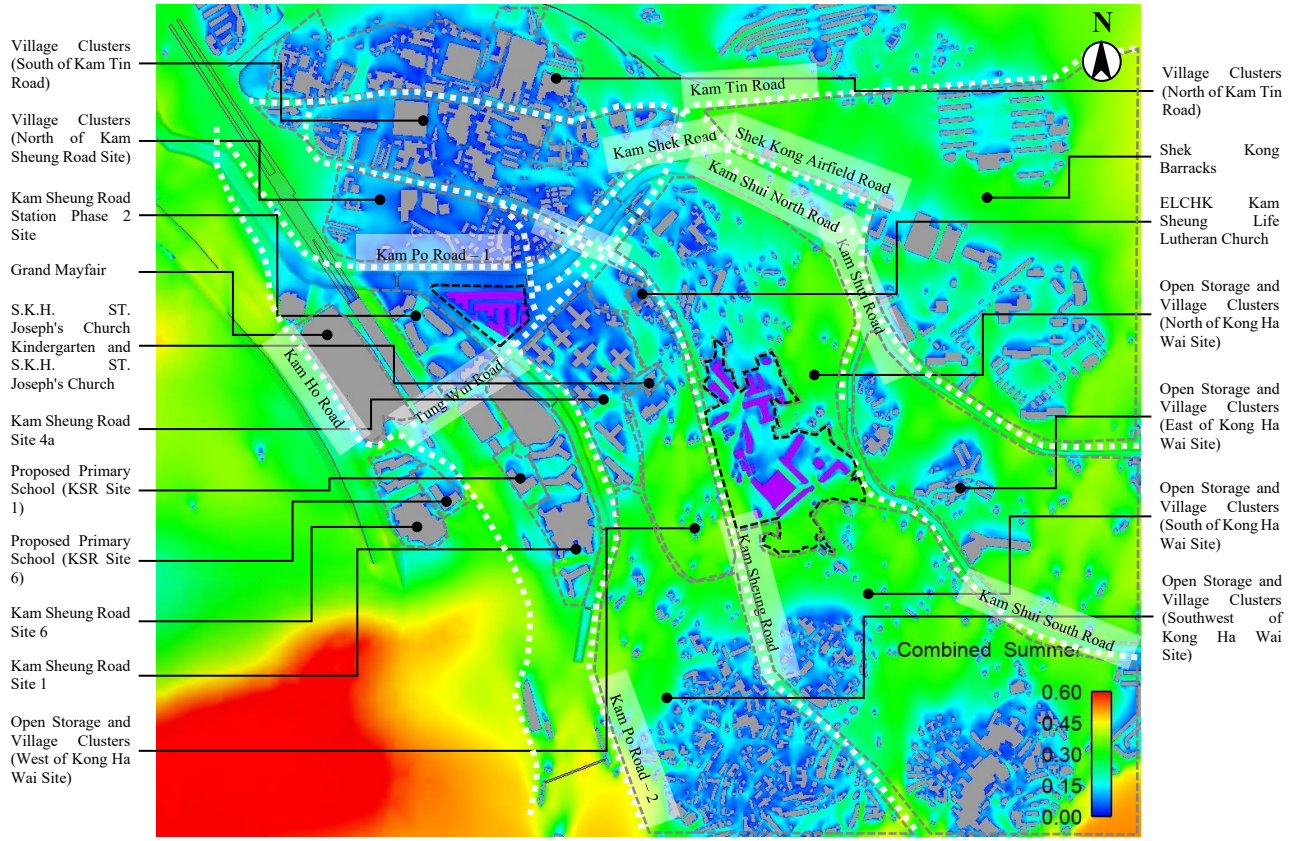


Figure 4.2.1 Contour Plot of Baseline Scheme under Summer Prevailing Wind

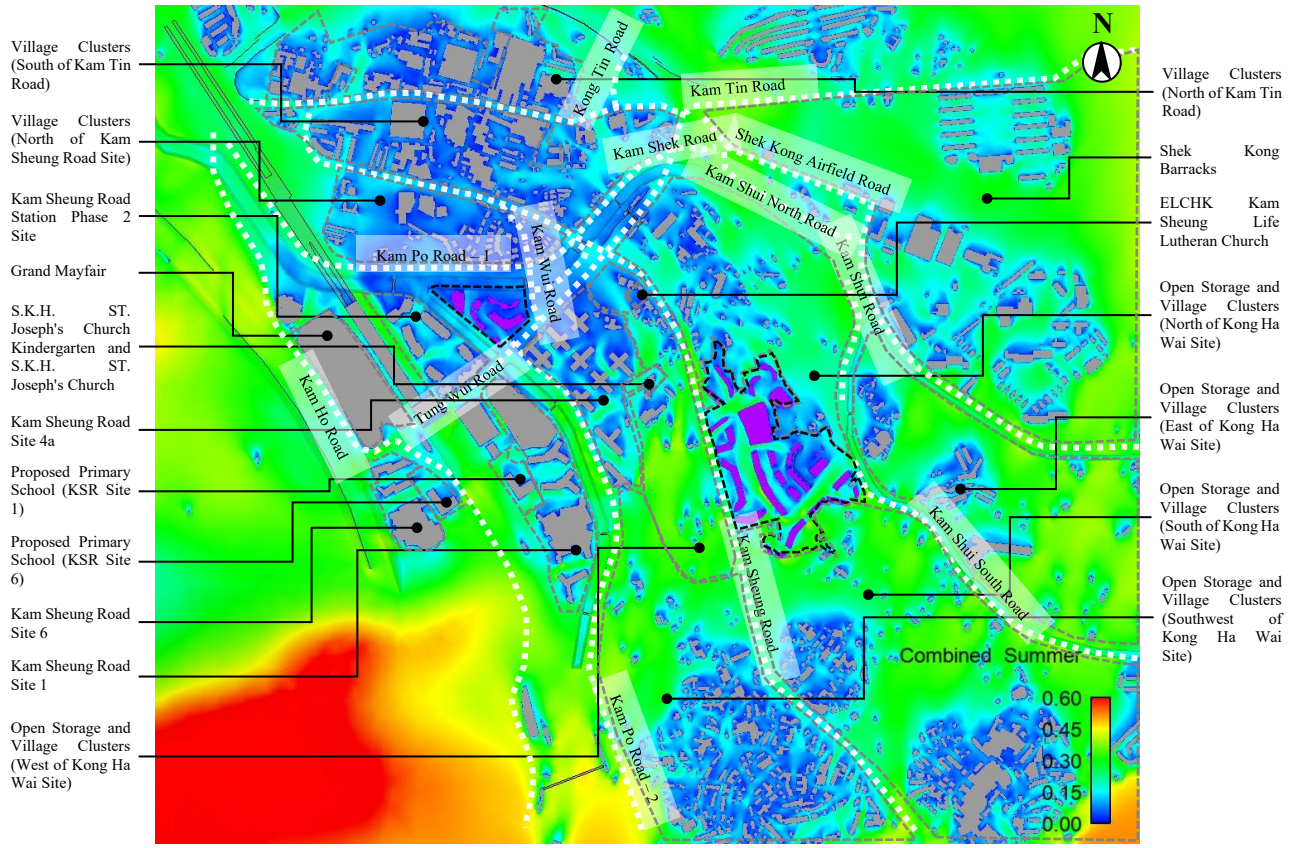


Figure 4.2.2 Contour Plot of Cumulative Scheme under Summer Prevailing Wind

4.3 Directional Analysis

NE Wind

4.3.1 The occurrence of NE wind is 10.0% under annual condition. The wind performance of Baseline and Cumulative Schemes under NE wind are presented in Figure 4.3.1 and Figure 4.3.2 respectively.

4.3.2 The NE wind would reach the Application Site and the surrounding area from the flat topography.

4.3.3 The Village Clusters (North of Kam Sheung Road Site), Kam Po Road – 1 and Tung Wui Road to the northeast of Kam Sheung Road Site would act as the wind entrance, allowing the incoming wind to enter the site. The wind environment of Village Clusters (North of Kam Sheung Road Site) at the upwind location would be similar under Baseline and Cumulative Schemes. Moreover, the incoming wind would skim over the Open Storage and Village Clusters (North of Kong Ha Wai Site and East of Kong Ha Wai Site) and enter the site and the surrounding area. Most of the wind would travel through the open space between Kam Sheung Road Site 4a and Kong Ha Wai Site to ventilate the leeward side, Open Storage and Village Clusters (West of Kong Ha Wai Site).

4.3.4 Under Baseline Scheme, some of the winds would be diverted by the low-rise buildings in Kam Sheung Road Site to continuously travel along Kam Po Road – 2 and Tung Wui Road. With the building height difference between the Kam Sheung Road Station Phase 2 Site and the Kam Shung Road Site, the wind would be downwash to the pedestrian level at the southwest boundary. The high-rise buildings in planned surrounding developments would channel the wind to travel along Tung Wui Road and Kam Po Road – 1.

4.3.5 Furthermore, the wind would then flow atop the low-rise buildings within Kong Ha Wai Site. With the low-rise nature of the buildings, the incoming wind would recover quickly over the Open Storage and Village Clusters (West of Kong Ha Wai Site) at its southwest, the wind environment at the leeward side has negligible impact from the low-rise buildings within Kong Ha Wai Site.

4.3.6 Under Cumulative Scheme, the westmost tower at Kam Sheung Road Site create a setback from the boundary, which would act as wind entrance for more NE wind to enter the site and Kam Po Road – 1 subsequently. The strong channelling effect induced by the high-rise buildings at Kam Sheung Road Station Phase 2 Site and Kam Sheung Road Site would continue to accelerate the wind along the southwestern boundary (illustrated in black arrow in Figure 4.3.2).

4.3.7 In addition, the high-rise towers in Kam Sheung Road Site would limit the wind coming from Kam Wui Road / Tung Wui Road. Hence the wind downwashed by eastern facade of Kam Sheung Road Site would be diverted to join Kam Po Road – 2, where the wind continues to be channel southwards. Higher VR would be observed at the northern part of Kam Po Road – 2 while leaving a lower VR at the western part of Tung Wui Road.

4.3.8 On the other hand, the proposed high-rise buildings in Kong Ha Wai Site under Cumulative Scheme would limit the incoming NE wind to travel further towards the leeward side. The combined effect of high-rise Kong Ha Wai Site and Kam Sheung Road Site result in less high-level wind to travel along NE direction, resulting in more air to be diverted by Grand Mayfair to travel along NW direction (Pink arrow in Figure 4.3.2). These two counterflows from eastern and western portion of Grand Mayfair meet at Kam Sheung Road Site 1 (illustrate with white dotted arrow in Figure 4.3.1 and Figure 4.3.2), Proposed Primary School (KSR Site 1 and Site 6), where lower VR would be observed.

4.3.9 Nevertheless, the high-rise tower in Kong Ha Wai Site would induce strong downwash effect and ventilate the pedestrian level within the site and at the north to east side, which would enhance the wind environment at Kam Shui South Road. The Air Paths #1 and #2 provided within Kong Ha Wai Site (illustrated with black dashed arrows in Figure 4.3.2) would allow wind to penetrate across and ventilate S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church. The height profile created with low-rise villa in the eastern part of Kong Ha Wai Site and the permeability within Kong Ha Wai Site would induce downwash effect to promote the ventilation performance at the pedestrian level within Kong Ha Wai Site, especially at Air Path #3 (illustrated with white circle in Figure 4.3.2). However, the high-rise buildings in Kong Ha Wai Site would limit the incoming NE wind to travel further towards the leeward side, hence lower VR would be observed at Open Storage and Village Clusters (West of Kong Ha Wai Site) under Cumulative Scheme (illustrated with black circle in Figure 4.3.1 and Figure 4.3.2).

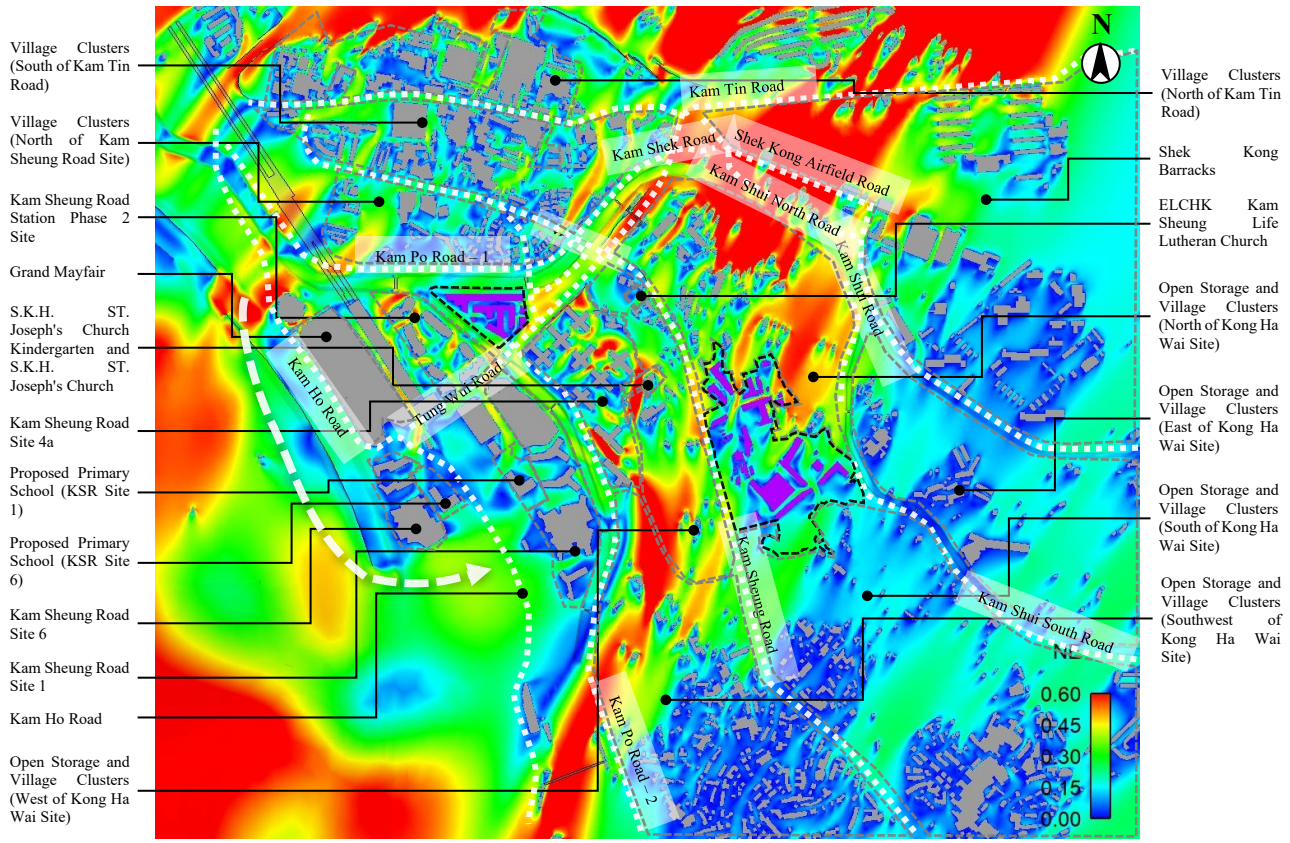


Figure 4.3.1 Wind Environment under NE Wind under Baseline Scheme

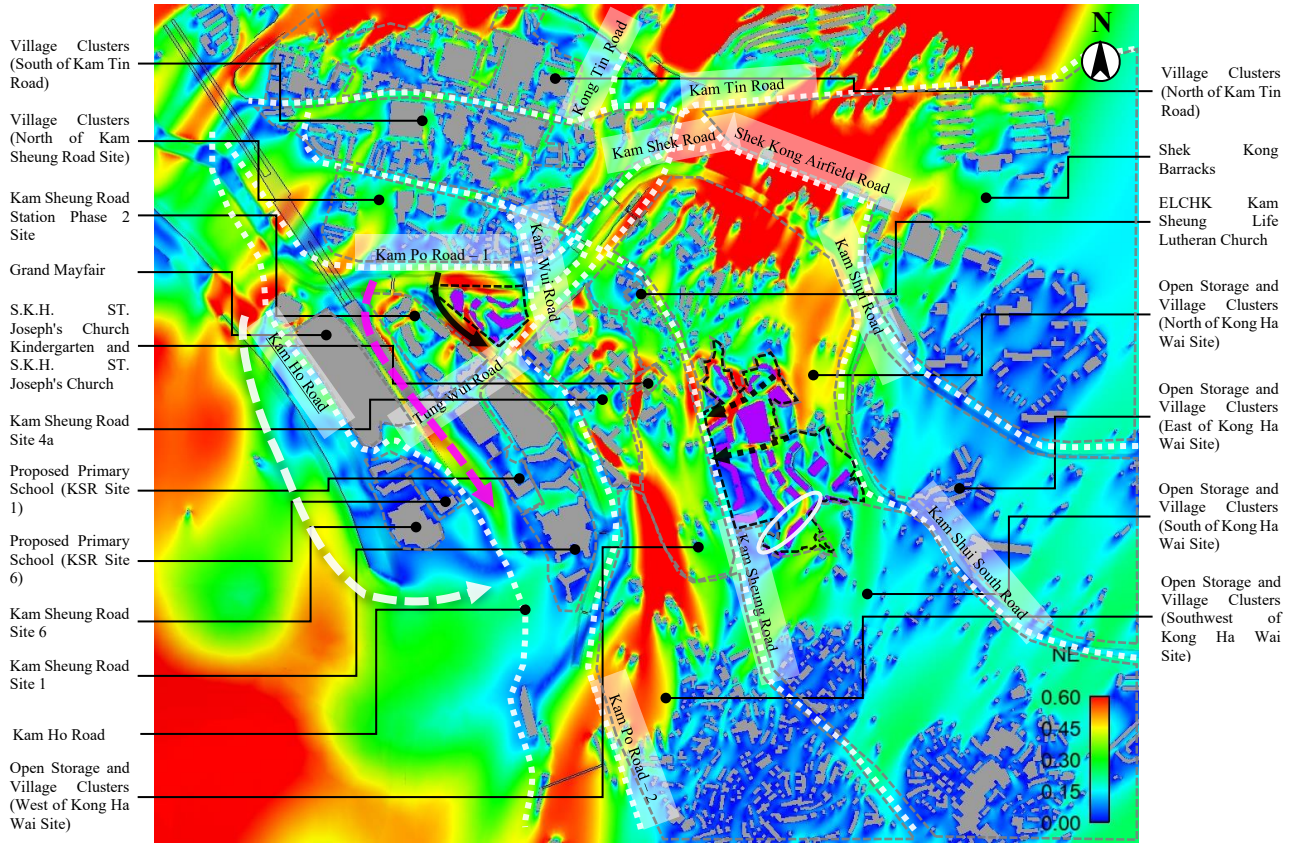


Figure 4.3.2 Wind Environment under NE Wind under Cumulative Scheme

ENE Wind

4.3.10 The occurrence of ENE wind is 11.9% under annual condition. The wind performance of Baseline and Cumulative Schemes under ENE wind are presented in Figure 4.3.3 and Figure 4.3.4 respectively.

4.3.11 Although the topography is flat at the immediate upwind location, the Kai Kung Leng (+570mPD) at further ENE would partially shield the incoming wind, result in relatively calmer wind environment in general. The dense developments in Kam Sheung Road Site 4a, Site 1, Kam Sheung Road Station Phase 2 Site would dominate the wind environment in the surrounding area. The overall ventilation performance would be similar for majority of the space under both schemes.

4.3.12 Similar to NE wind, the ENE wind reaching Kam Sheung Road Site through the wind entrance at its northeast, which is Kam Po Road – 1 and Tung Wui Road. The wind environment of Village Clusters (North of Kam Sheung Road Site) and Kam Wui Road at the upwind location would not be affected by Kam Sheung Road Site. Moreover, the ENE wind would skim over the Open Storage and Village Clusters (North and East of Kong Ha Wai Site) to reach the site. The wind environment at Open Storage and Village Clusters (North, East and South of Kong Ha Wai Site) at the upwind location would not be affected by Kong Ha Wai Site and similar wind environment would be achieved under both schemes.

4.3.13 Under Baseline Scheme, the incoming wind would flow atop the low-rise buildings in Kam Sheung Road Site towards Kam Sheung Road Station Phase 2 Site. The high-rise façade at Kam Sheung Road Station Phase 2 Site would capture wind towards the pedestrian level, promoting the ventilation performance at localized area along Kam Sheung Road and within Kam Sheung Road Station Phase 2 Site. In addition, the wind would flow atop the low-rise buildings with Kong Ha Wai Site and subsequently ventilate the Open Storage and Village Clusters (West of Kong Ha Wai Site) at its southwest. The façade of Kam Sheung Road Site 1 would capture the incoming wind and divert the wind to travel along Kam Po Road – 2.

4.3.14 Under Cumulative Scheme, the high-rise towers in Kam Sheung Road Site would induce downwash effect to ventilate Kam Po Road – 1, where slightly higher VR would be observed. The tower layout would enhance the site permeability by allowing the incoming wind penetrating across the site, resulting in a better VR in the open space of Kam Sheung Road Site. Nevertheless, the high-rise towers within Kam Sheung Road Site would limit the incoming wind reaching Kam Sheung Road Station Phase 2 Site, hence relatively calmer environment would be observed at the leeward side especially Kam Sheung Road Station Phase 2 Site.

4.3.15 Furthermore, the high-rise towers at the northern portion of Kong Ha Wai Site would induce downwash wind, as compared with the Baseline Scheme. The VR along the northern boundary would be slightly enhanced. The building separation within Kong Ha Wai Site, such as Air Paths #1 and #2 (illustrated with red dashed arrow in Figure 4.3.4), would allow some downwashed wind penetration and alleviate the wind shadow at Open Storage and Village Clusters (West of Kong Ha Wai Site). Moreover, the height profile created with low-rise villa in the eastern part of Kong Ha Wai Site and the permeability within Kong Ha Wai Site would induce downwash effect to promote the ventilation performance at the pedestrian level within Kong Ha Wai Site, especially at Air Path #3 (illustrated with white circle in Figure 4.3.4). Relatively higher VR are observed in the Air Paths as compared with the surrounding area.

4.3.16 However, the high-level wind would be affected by the high-rise towers in Kong Ha Wai Site, which is more dominant to the wind environment in Open Storage and Village Clusters (West of Kong Ha Wai Site), wind shadow and lower VR would be observed at the leeward side (black circle in Figure 4.3.3 and Figure 4.3.4), as compared with the Baseline Scheme. In addition, the similar height of Kong Ha Wai Site and Kam Sheung Road Site 4a would divert the incoming wind to travel southwards and ventilate the central part of Open Storage and Village Clusters (West of Kong Ha Wai Site) while reduced the wind reaching Kam Sheung Road Site 1 and leaving a calmer wind environment on Kam Po Road – 2, as compared with Baseline Scheme.

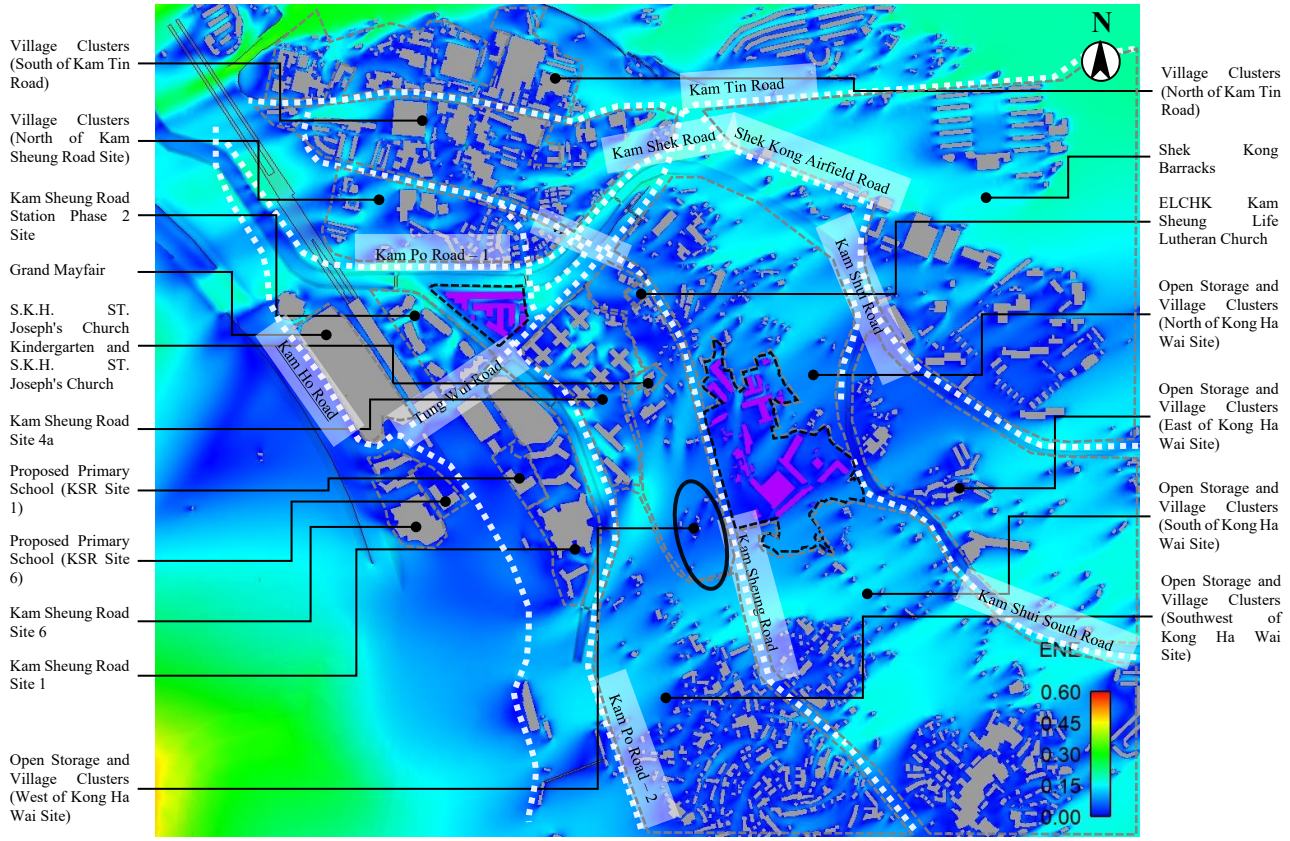


Figure 4.3.3 Wind Environment under ENE Wind under Baseline Scheme

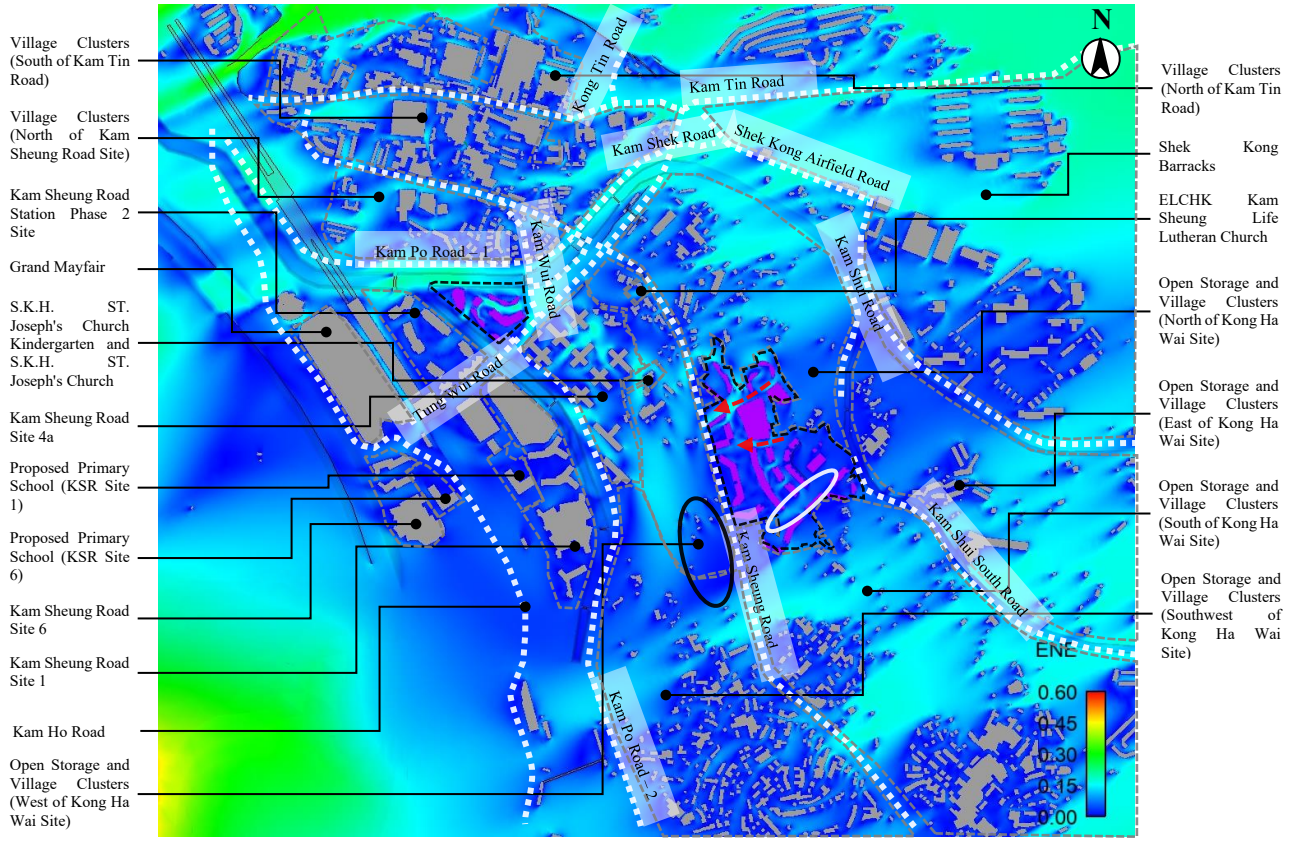


Figure 4.3.4 Wind Environment under ENE Wind under Cumulative Scheme

E Wind

4.3.17 The occurrence of E wind is 15.7% and 6.9% under annual and summer conditions respectively. The wind performance of Baseline and Cumulative Schemes under E wind are presented in Figure 4.3.5 and Figure 4.3.6 respectively.

4.3.18 Although the Kam Sheung Road Site and Kong Ha Wai Site and the surrounding area are located at the flat topography in the southwestern part of Kai Kung Leng, the incoming wind would be dominated by Kai Kung Leng and partially shielded for the Application Site and the surrounding area. The dense developments in Kam Sheung Road Site 4a, Site 1, Kam Sheung Road Station Phase 2 Site would dominate the wind environment in the surrounding area. The overall ventilation performance would be similar for majority of the space under both schemes.

4.3.19 The incoming wind would skim over the Open Storage and Village Clusters (East and South of Kong Ha Wai Site) to reach the site. The wind travel around Kong Ha Wai Site would cross Open Storage and Village Clusters (West of Kong Ha Wai Site) along the southern boundary of Kong Ha Wai Site and reach Kam Sheung Road Site 1 (illustrated with white arrows in Figure 4.3.5 and Figure 4.3.6), which would divert the wind to enter Kam Po Road – 1 towards Kam Sheung Road Site. The wind environment of Kam Shui Road, Kam Shui South Road, Open Storage and Village Clusters (North and East of Kong Ha Wai Site) at the upwind location would not be affected by Kong Ha Wai Site and similar wind environment would be achieved under both schemes. The incoming wind would travel from the junction of Kam Sheung Road and Tung Wui Road after skimming over the Open Storage and Village Clusters (North and West of Kong Ha Wai Site). Another stream of air would travel along Kam Po Road – 2 and reach the southern portion of the Kam Sheung Road Site, as discussed above. The high-rise buildings surrounding Kam Sheung Road Site would dominate the wind environment of the surrounding area. The ventilation performance of the surrounding area would remain similar under both schemes with some localized different wind pattern discussed below.

4.3.20 Under Baseline Scheme, the incoming wind would flow over the low-rise buildings of Kong Ha Wai Site and reach the façade of Kam Sheung Road Site 4a at the leeward side, where some high-level wind would be captured and slightly enhanced the VR within Site 4a and in the northern part of Open Storage and Village Clusters (West of Kong Ha Wai Site). The wind environment within Kong Ha Wai Site would remain calm due to the unaligned building separation with the wind direction. Moreover, due to the larger building footprint of Kam Sheung Road Site, the incoming wind would not be able to penetrate across the site, resulting in a calm wind environment within the site. The wind from Kam Po Road – 1 would continue to travel northwards along the western boundary and ventilate Kam Po Road – 2.

4.3.21 Under Cumulative Scheme, the height profile created with low-rise villa in the eastern part of Kong Ha Wai Site would induce downwash effect to promote the ventilation performance at the pedestrian level within Kong Ha Wai Site, especially at Air Path #1, #2 and #3 (illustrated with white circle in Figure 4.3.6) and southern boundary (illustrated with black circle in Figure 4.3.5 and Figure 4.3.6). Relatively higher VR are observed in the Air Paths as compared with the surrounding area. Subsequently, the incoming wind would be diverted by nearby morphology to reach the site from Kam Po Road – 2. With the reduced building footprint, the incoming wind from Kam Po Road – 2 would be diverted to penetrate across the site through the building separation (illustrated with red dashed arrow in Figure 4.3.6), slightly enhance the ventilation performance within Kam Sheung Road Site.

4.3.22 The wake zone with relatively lower pressure created to the western side of Kong Ha Wai Site would attract the wind to be recirculated towards the western side (illustrated with black arrow in Figure 4.3.6) and hence the wind shadow at Open Storage and Village Clusters (West of Kong Ha Wai Site) and S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church would be slightly alleviated. In addition, the high-rise towers within Kong Ha Wai Site would shield high-level from reaching the leeward side, resulting in a lower VR in Kam Sheung Road Site 4a.

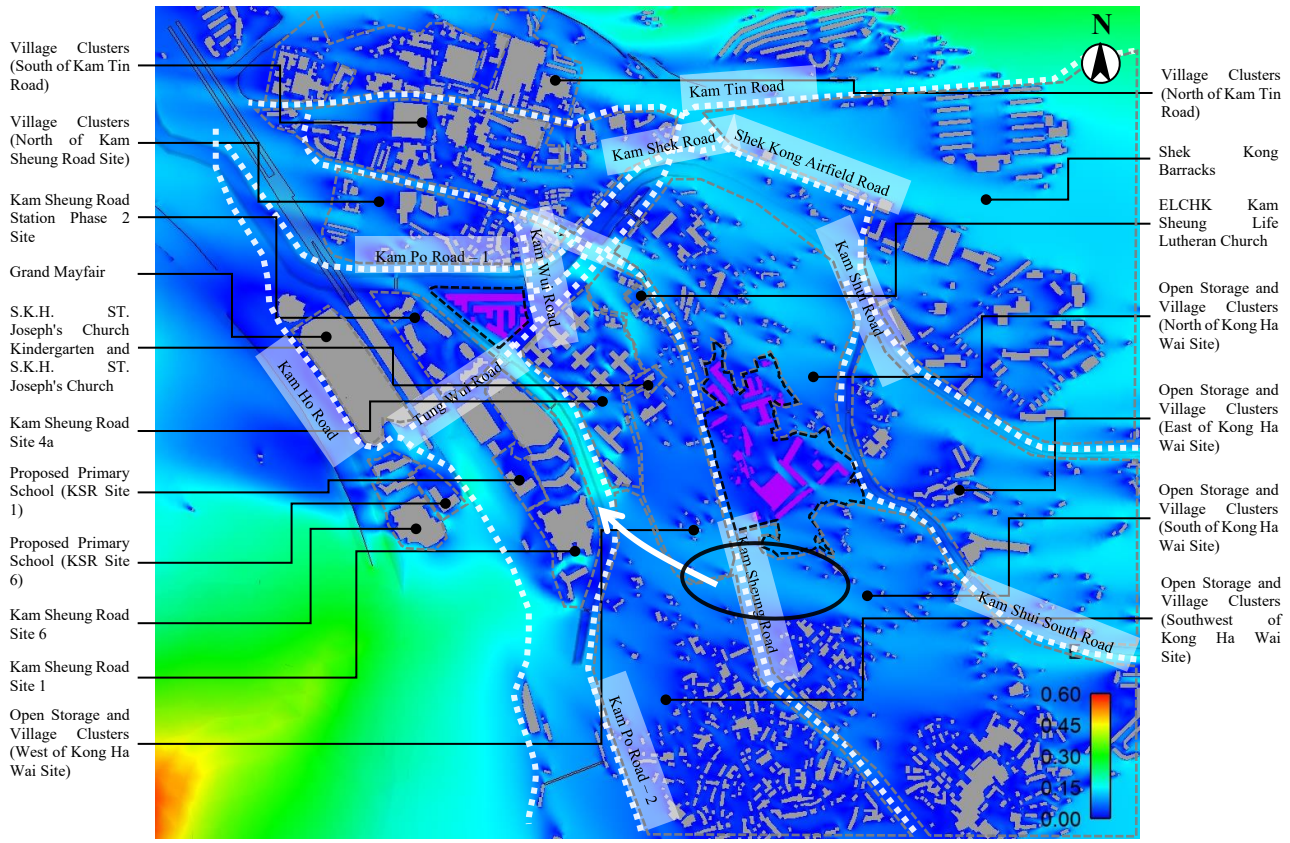


Figure 4.3.5 Wind Environment under E Wind under Baseline Scheme

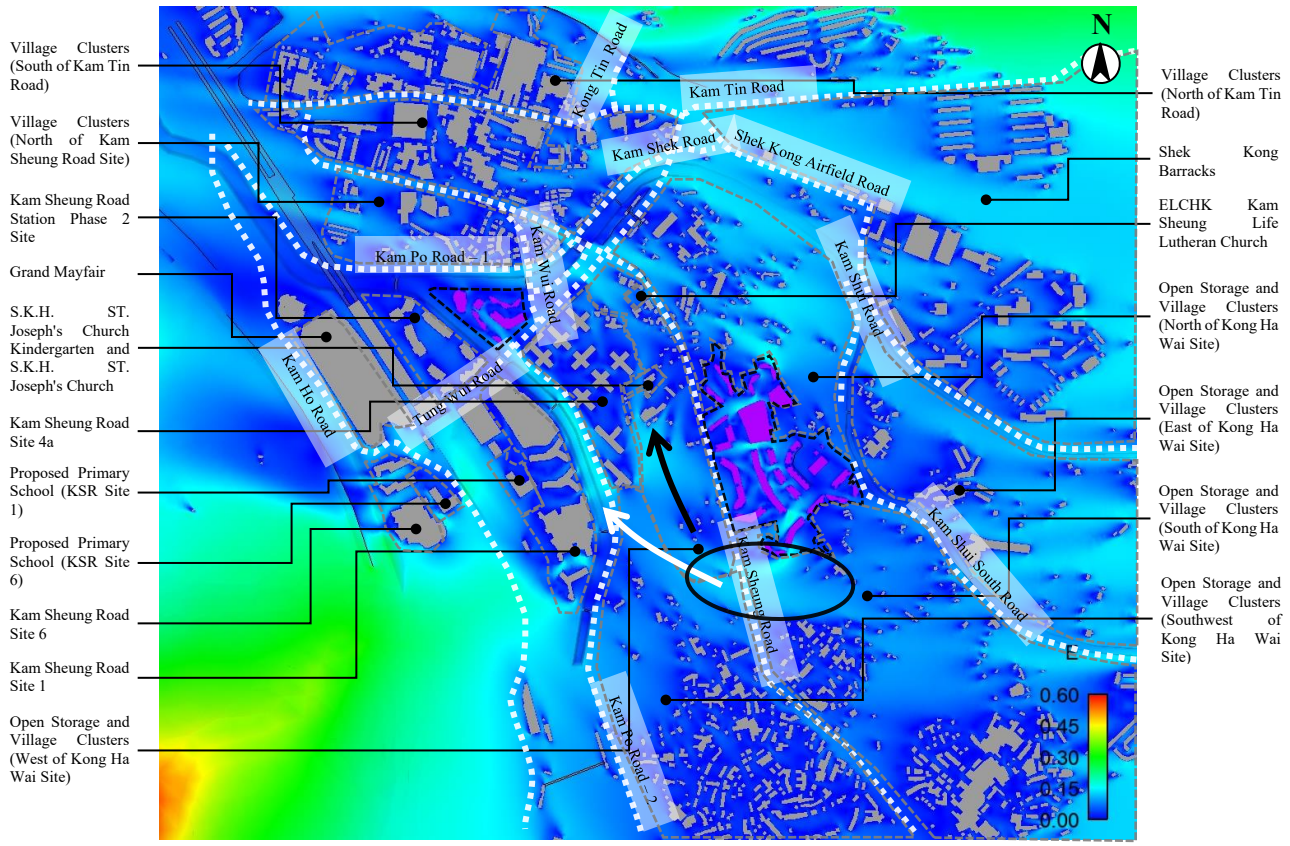


Figure 4.3.6 Wind Environment under E Wind under Cumulative Scheme

ESE/SE Wind

4.3.23 The occurrence of ESE wind is 9.4% under annual condition and 8.6% under summer condition. The occurrence of SE wind is 8.7% under annual condition and 7.5% under summer condition. The wind performance under ESE and SE winds are similar apart from some difference in localized area. Hence, they would be discussed together under this section. The wind performance of Baseline and Cumulative Schemes under ESE and SE winds are presented in Figure 4.3.7 to Figure 4.3.10.

4.3.24 The incoming ESE and SE winds would travel down the Tsuen Kam Au to reach the Application Site and the surrounding area from the southeast direction. The overall wind environment under ESE wind is more dominant by Tsuen Kam Au than that under SE wind.

4.3.25 The incoming wind would be diverted by nearby morphology to reach the Kam Sheung Road Site from Kam Po Road – 2. The high-rise buildings surrounding Kam Sheung Road Site would dominate the wind environment of the surrounding area. The ventilation performance of the surrounding area would remain similar under both schemes with some localized different wind pattern discussed below. Another portion of the incoming wind would skim over the Open Storage and Village Clusters (South of Kong Ha Wai Site) to reach the Kong Ha Wai Site. The development within the Kong Ha Wai Site would divert the incoming wind to travel along the eastern and western boundaries (illustrated with grey arrows in Figure 4.3.7 to Figure 4.3.10). The wind environment at Kam Shui Road, Kam Shui South Road, Open Storage and Village Clusters (North, East and South of Kong Ha Wai Site) at the upwind location would not be affected by Kong Ha Wai Site and similar wind environment would be achieved under both schemes.

4.3.26 Under Baseline Scheme, due to the larger building coverage of Kam Sheung Road Site, the prevailing wind reaching its southern end would tend to deflect and continue along the southwestern boundary. The building configuration would limit site permeability, resulting in a relatively calm wind environment within the site. Moreover, with the open space near southern and southeastern boundary, the wind environment would be better herein. In addition, high-level wind would skim atop the low-rise building and reach the leeward side, such as Open Storage and Village Clusters (North of Kong Ha Wai Site).

4.3.27 Under Cumulative Scheme, the building separation of Kam Sheung Road Site would facilitate incoming wind to penetrate across the Site (illustrated with red dashed arrows in Figure 4.3.8 and Figure 4.3.10), resulting in slightly higher VR within the Application Site. However, the high-rise buildings within Kam Sheung Road Site would shield the incoming wind from reaching the leeward side, resulting in a slightly calmer wind environment at Kam Po Road – 1 and Village Clusters (North of Kam Sheung Road Site). In addition, the frontal area and additional buildings in the southern part of Kong Ha Wai Site would divert the incoming wind to reach the façade of Kam Sheung Road Site 4a, where more wind would be diverted to ventilate S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church and higher VR would be observed. The height profile and permeability provided within Kong Ha Wai Site, especially at Air Path #1, #2 and #3, would facilitate air movement within site. However, the reduced provision of open space in the southern part, combined with increased building height, would result in lower VR along Kam Sheung Road and the Open Storage and Village Clusters at the immediate north of Kong Ha Wai Site.

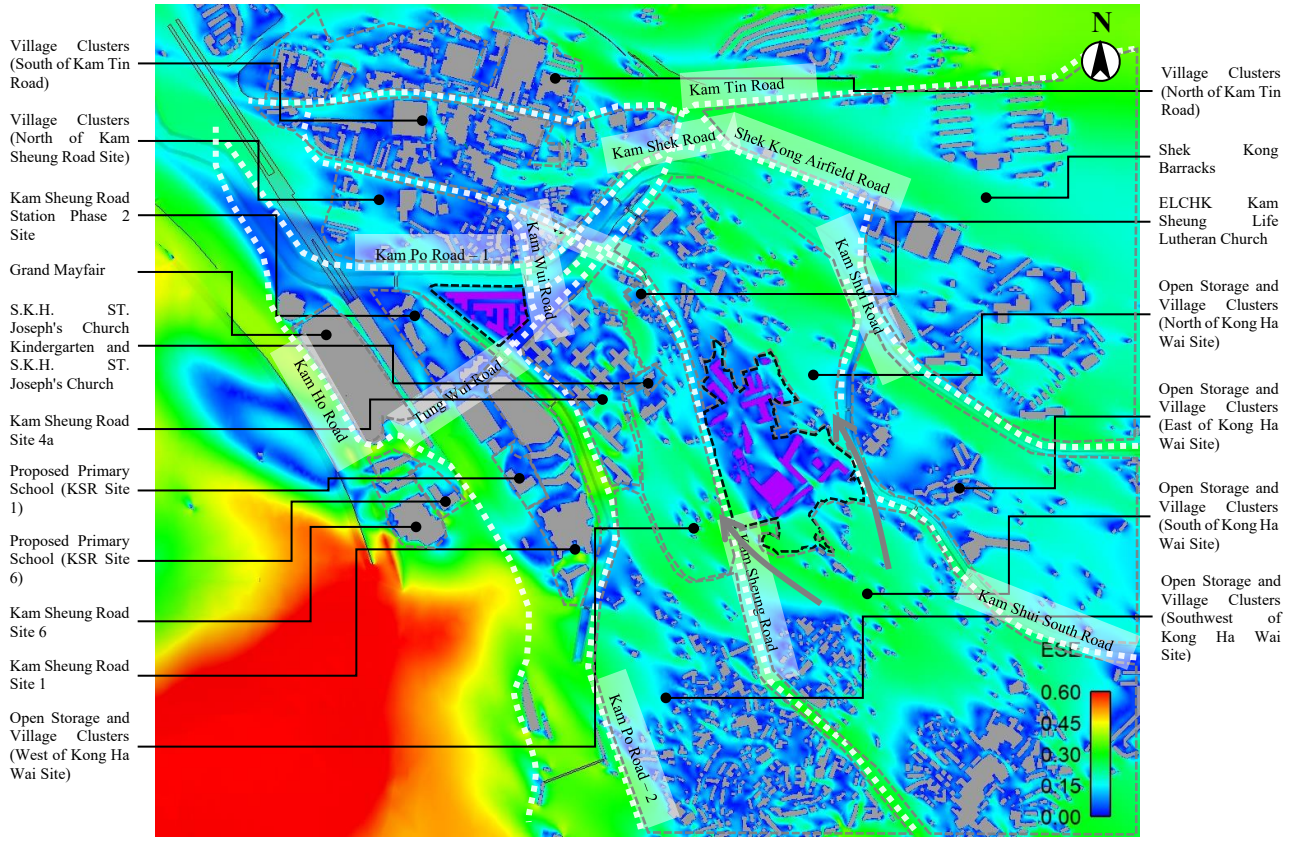


Figure 4.3.7 Wind Environment under ESE Wind under Baseline Scheme

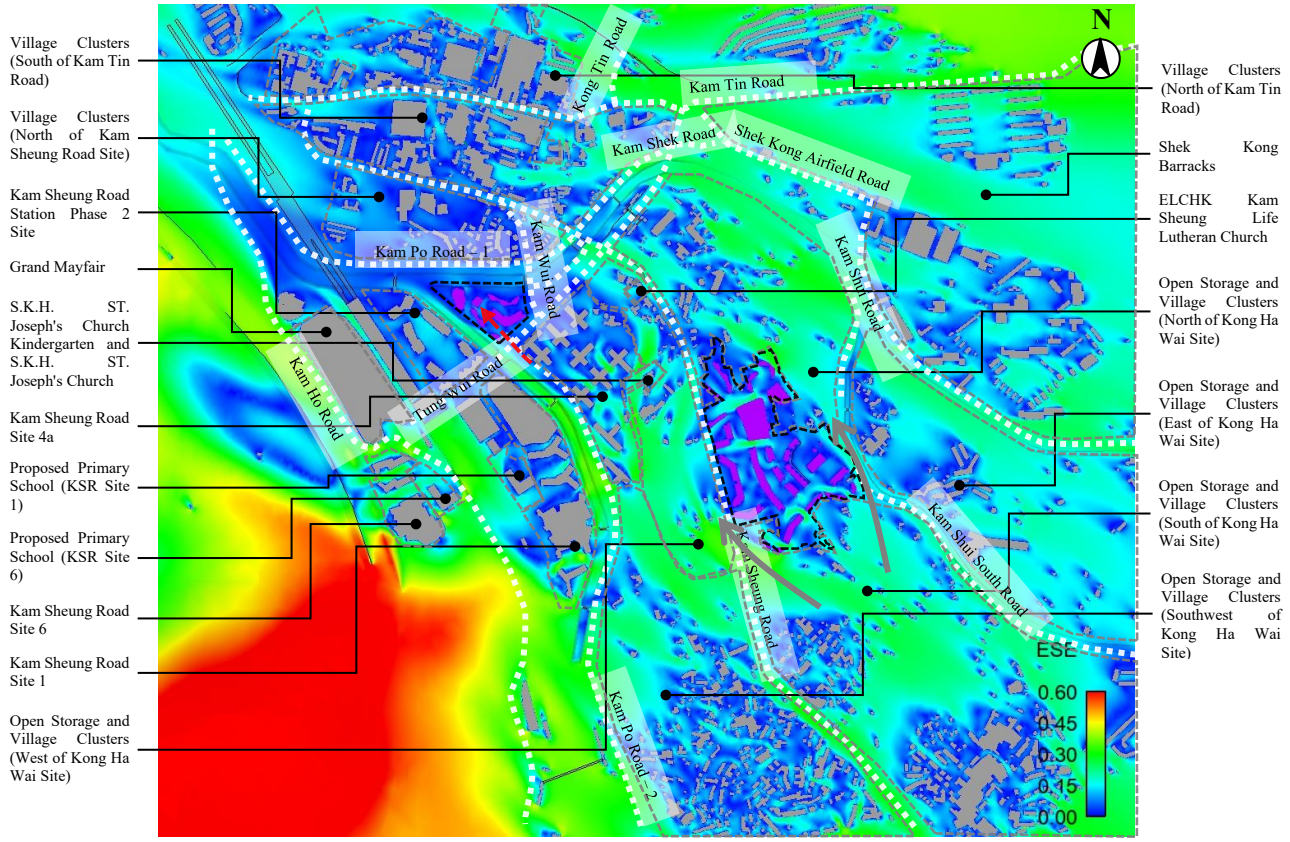


Figure 4.3.8 Wind Environment under ESE Wind under Cumulative Scheme

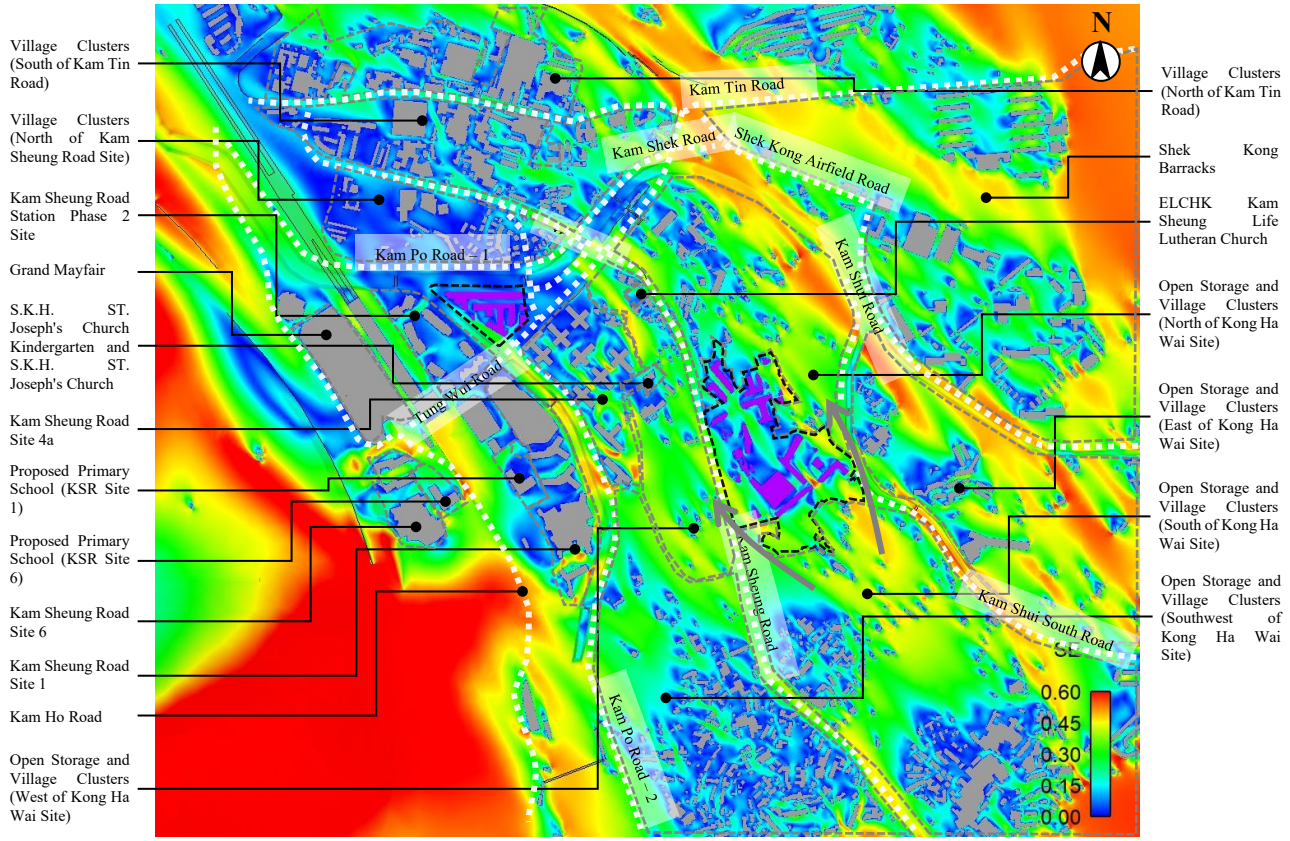


Figure 4.3.9 Wind Environment under SE Wind under Baseline Scheme

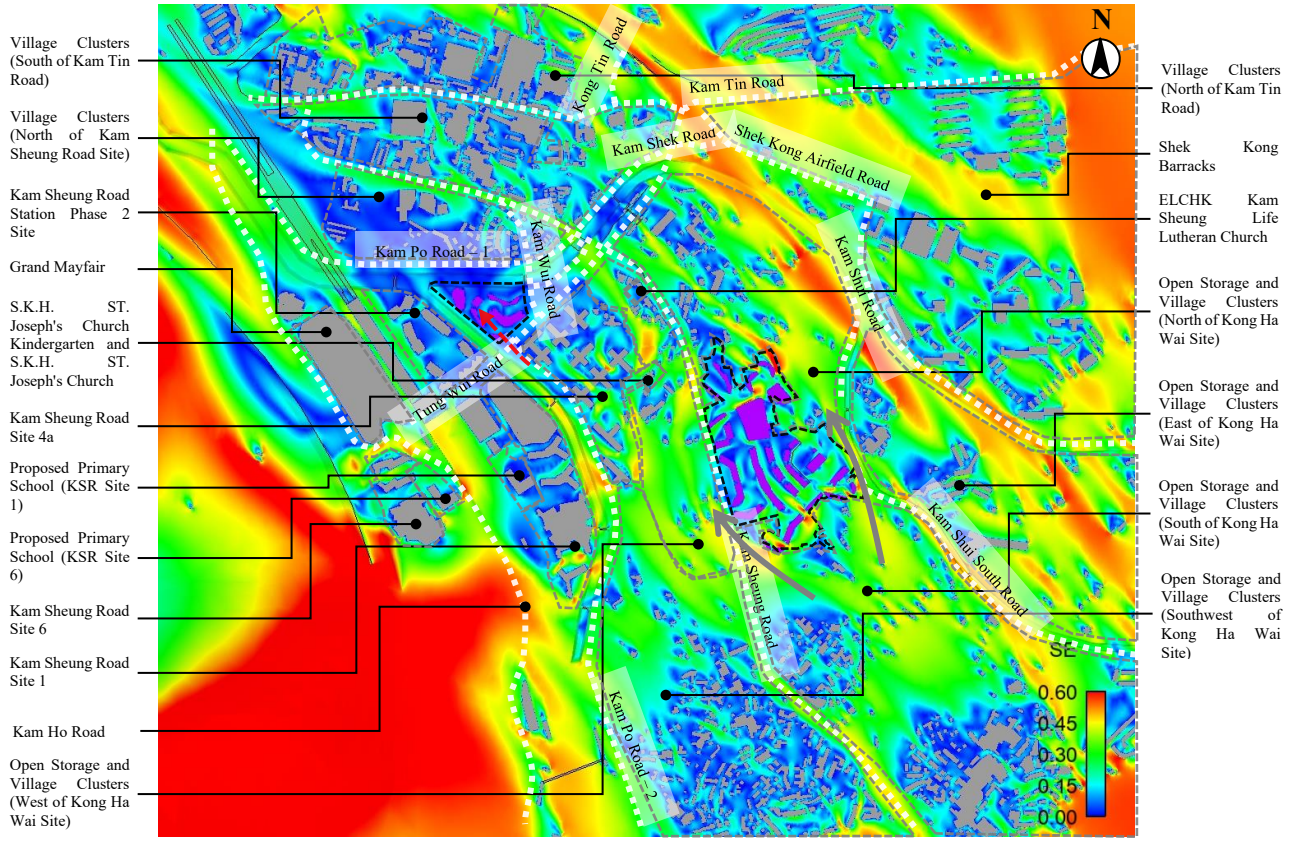


Figure 4.3.10 Wind Environment under SE Wind under Cumulative Scheme

SSE / S Wind

4.3.28 The occurrence of SSE wind is 6.5% under annual condition and 8.7% under summer condition. The occurrence of S wind is 6.7% under annual condition and 13.6% under summer condition. The wind performance under SSE and S winds are similar apart from some difference in localized area. Hence, they would be discussed together under this section. The wind performance of Baseline and Cumulative Schemes under E wind are presented in Figure 4.3.11 to Figure 4.3.14.

4.3.29 The incoming wind would travel down the Tsuen Kam Au at the southeast of the Application Site and surrounding area and enter the flat topography.

4.3.30 The wind environment would be dominated by the high-rise buildings located at the southeast to southwest of the Kam Sheung Road Site, including Kam Sheung Road Site 1, Kam Sheung Road Site 4a and Kam Sheung Road Station Phase 2 Site, while some of the SSE and S winds would travel along the Kam Po Road – 2 to reach the site. The wind environment in the surrounding area would remain similar under Baseline and Cumulative Schemes with some localized difference. Additionally, the incoming wind would reach the southern portion of Kong Ha Wai Site from Open Storage and Village Clusters (South of Kong Ha Wai Site). The development within Kong Ha Wai Site would divert the incoming wind to travel along the eastern and western boundaries. The wind environment at Kam Shui Road, Kam Shui South Road, Open Storage and Village Clusters (East and South of Kong Ha Wai Site) at the upwind location would not be affected by Kong Ha Wai Site and similar wind environment would be achieved under both schemes.

4.3.31 Under Baseline Scheme, the large building footprint of the Application Site would limit the site wind permeability, the wind from Kam Po Road – 2 would tend to travel along the southwestern boundary of the site towards Kam Po Road – 1 and Village Clusters (North of Kam Sheung Road Site). Relatively calmer wind environment is expected to be observed at the leeward locations, which is the northern portion of the Application Site. In addition, the low-rise buildings within the Kong Ha Wai Site would allow the majority of incoming wind to flow atop at high-level and ventilate the Open Storage and Village Clusters (North of Kong Ha Wai Site).

4.3.32 Under Cumulative Scheme, the wind from Kam Po Road – 2 would enter the Application Site through the building separation (illustrated with red arrows in Figure 4.3.12 and Figure 4.3.14), enhancing the wind environment within the site, and facilitating the ventilation performance of Kam Po Road – 1 at the downwind location slightly. The additional buildings in the southern part of Kong Ha Wai Site, combined with high-rise buildings within the site, would shield some of the incoming wind along Kam Sheung Road and create a wind shadow in Open Storage and Village Clusters (North of Kong Ha Wai Site), illustrated with black circle in Figure 4.3.12 and Figure 4.3.14. However, although the air paths do not align with the incoming wind direction, the building separation facilitates some air movement within Kong Ha Wai Site.

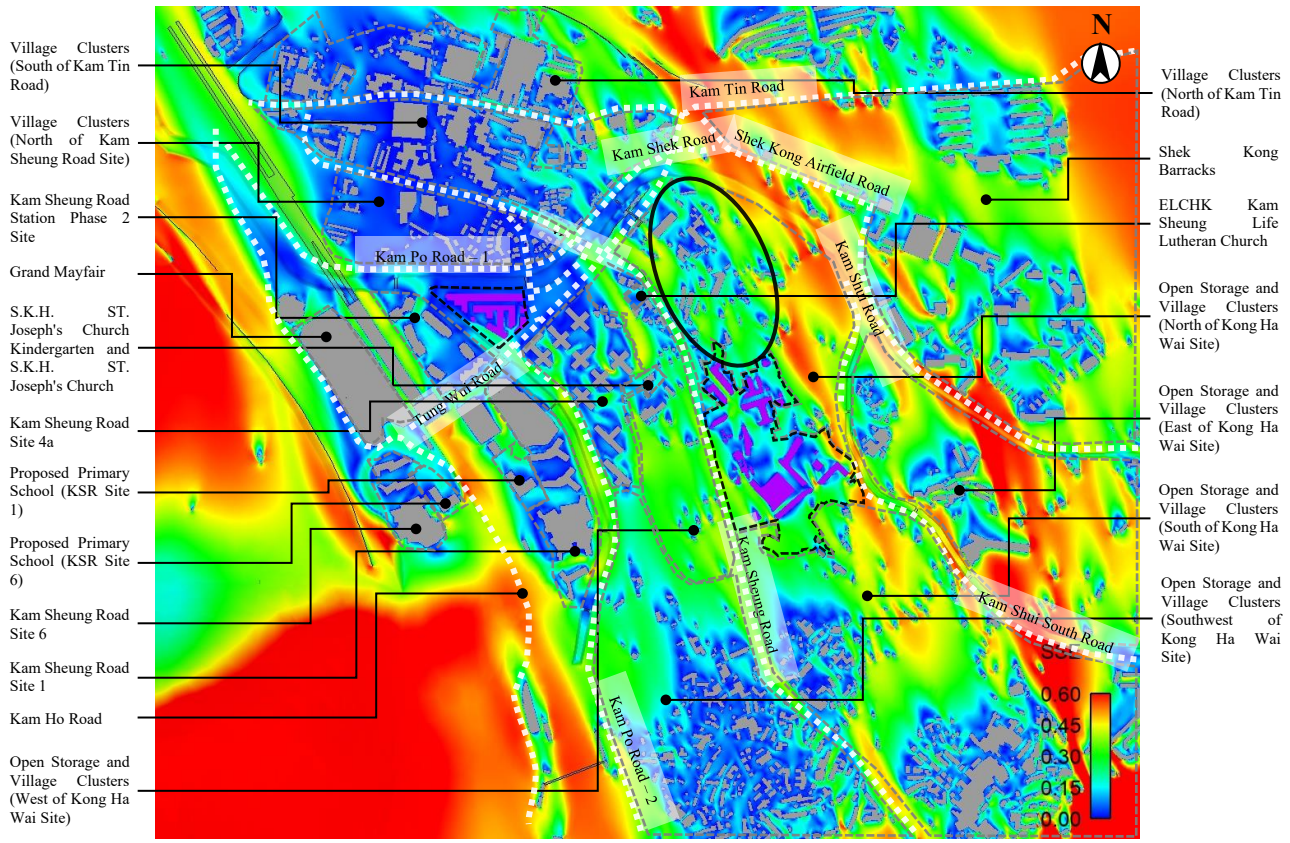


Figure 4.3.11 Wind Environment under SSE Wind under Baseline Scheme

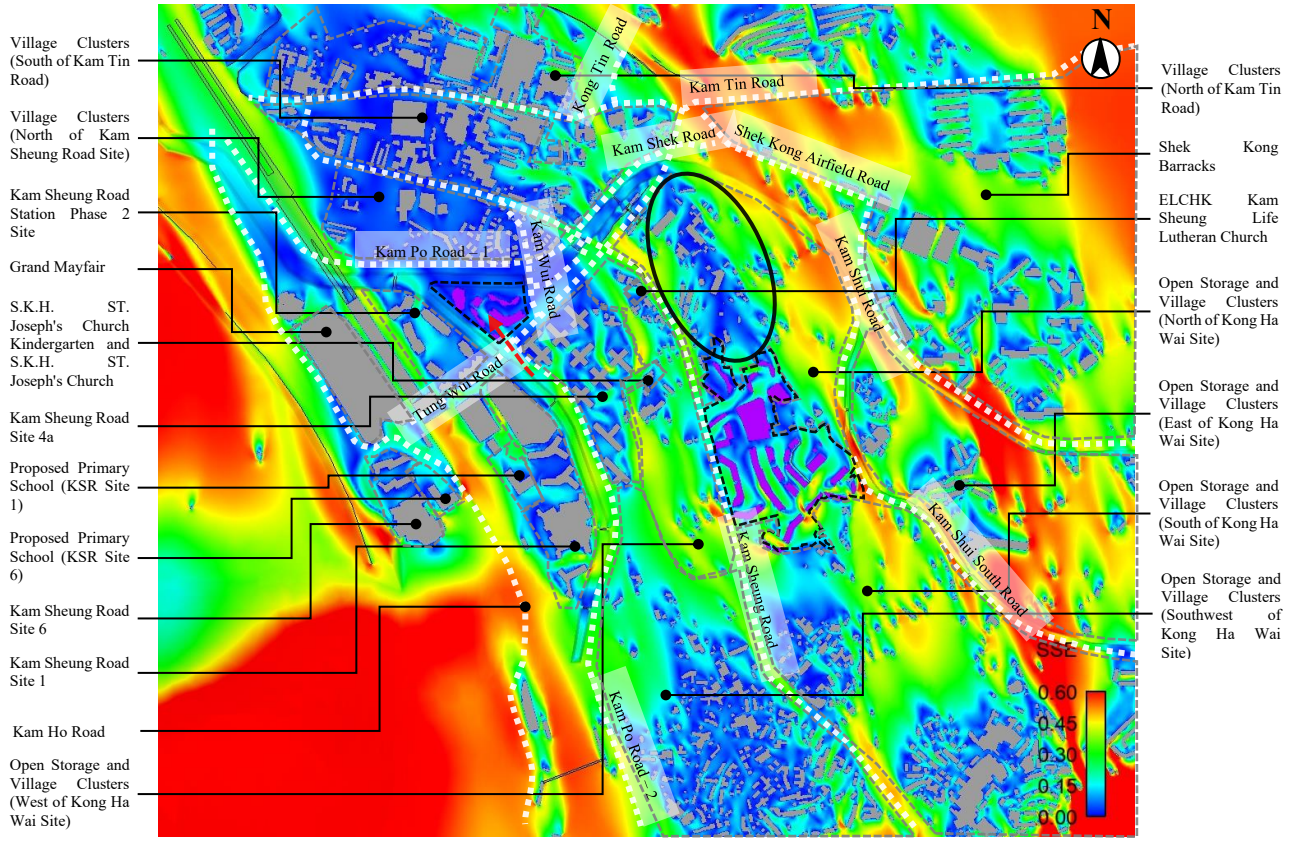


Figure 4.3.12 Wind Environment under SSE Wind under Cumulative Scheme

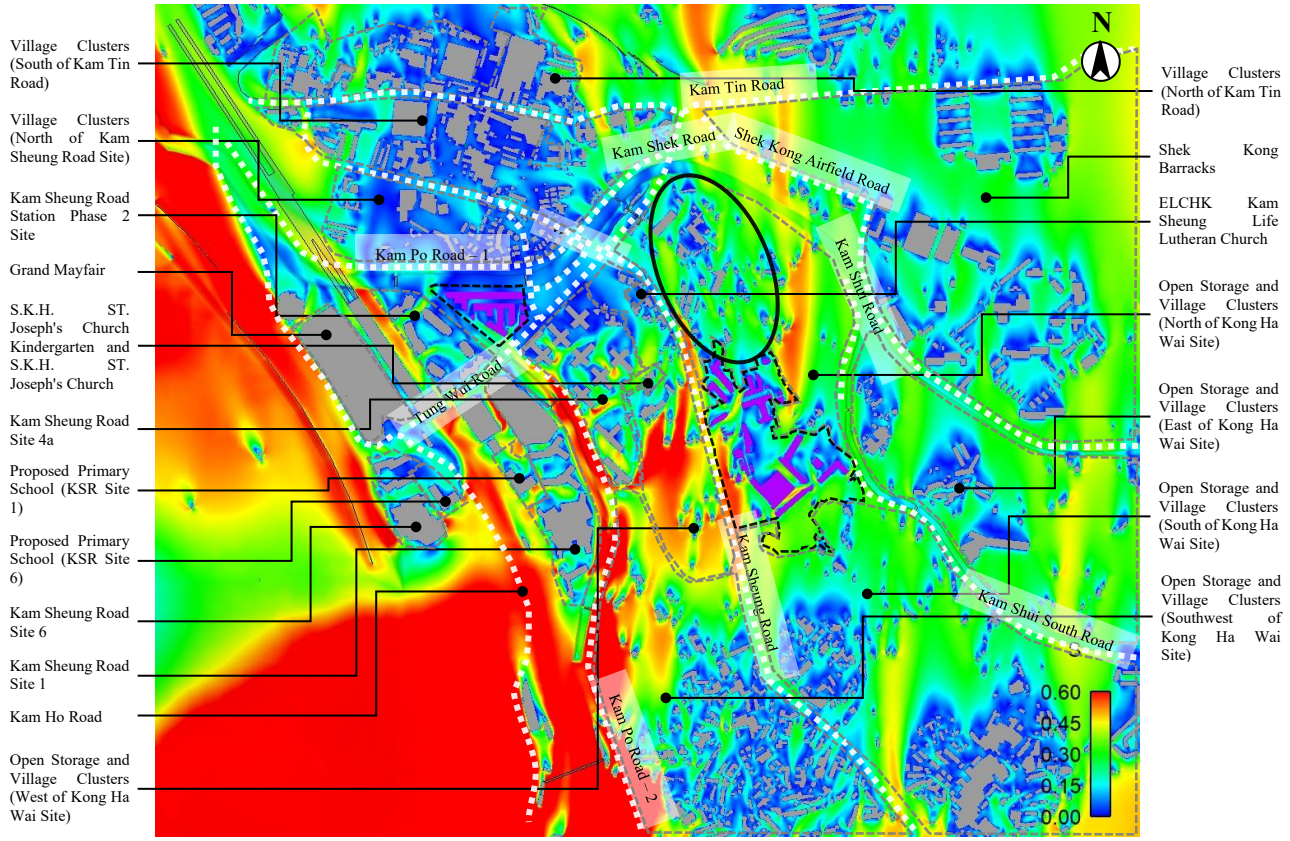


Figure 4.3.13 Wind Environment under S Wind under Baseline Scheme

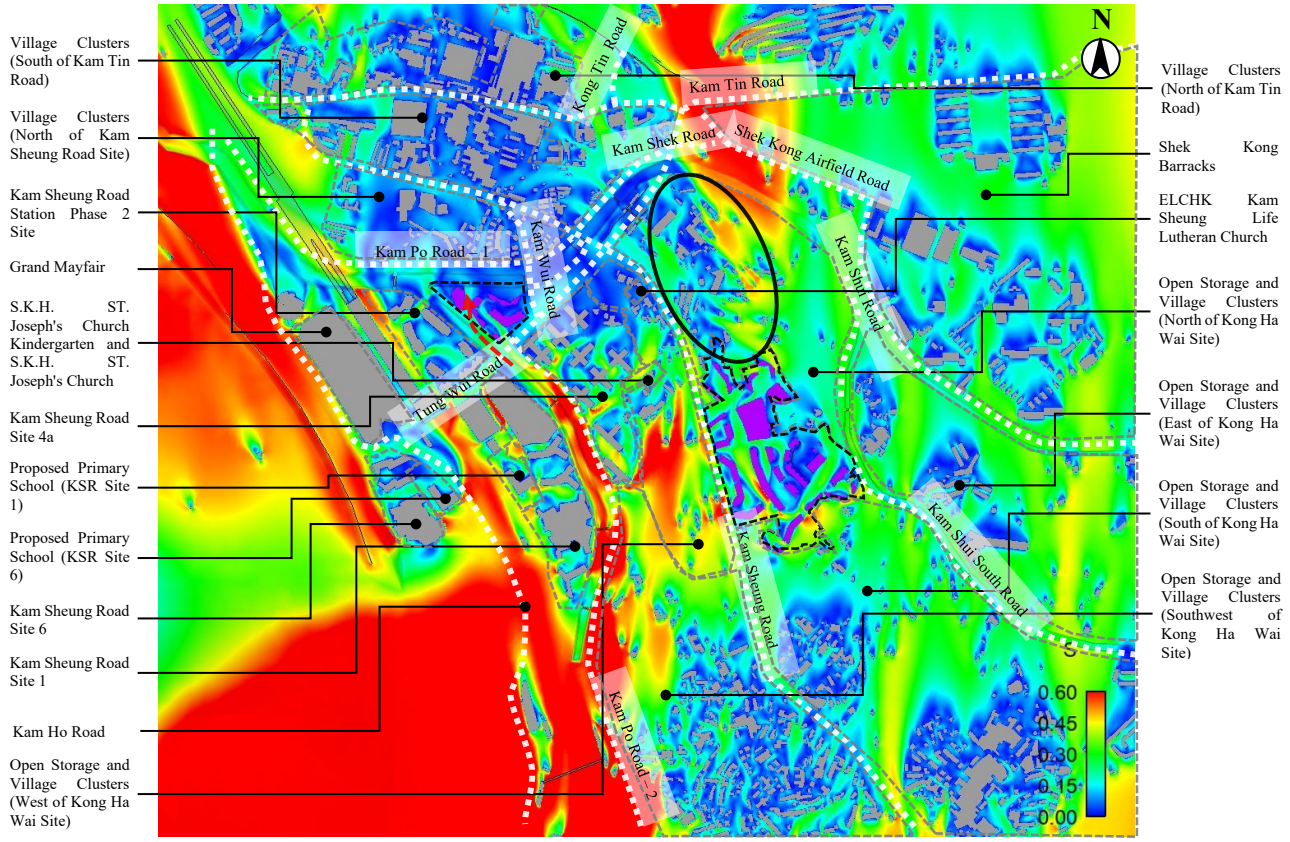


Figure 4.3.14 Wind Environment under S Wind under Cumulative Scheme

SSW / SW Wind

4.3.33 The occurrence of SSW wind is 7.5% under annual condition and 16.0% under summer condition. The occurrence of SW wind is 13.9% under summer condition. The wind performance under SSW and SW winds are similar apart from some difference in localized area. Hence, they would be discussed together under this section. The wind performance of Baseline and Cumulative Schemes under SSW and SW winds are presented in Figure 4.3.15 to Figure 4.3.18.

4.3.34 The Application Site and surrounding area is located at the leeward side of Cheung Ngau Shan under SSW and SW winds. The incoming wind would travel down the hill of Cheung Ngau Shan and reach the site.

4.3.35 The incoming wind would flow from Open Storage and Village Clusters (South and West of Kong Ha Wai Site) and reach the Kong Ha Wai Site. The wind environment would be largely dominated by the high-rise buildings at its south to west side, including Kam Sheung Road Site 1 and Kam Sheung Road Station Phase 2 Site, as a result the wind environment of Kam Sheung Road Site at the downwind location would be relatively calmer. The overall wind environment remains similar under Baseline and Cumulative Schemes. Nevertheless, small portion of wind would still be able to penetrate through the building separations of the high-rise buildings and reach the southeastern to southwestern boundary of the site.

4.3.36 Under the Baseline Scheme, the large building footprint within Kam Sheung Road would reduce its wind permeability and limit internal ventilation performance, resulting in diminished wind availability at the leeward side further. In addition, the low-rise building within Kong Ha Wai Site would generally allow the incoming wind to flow atop and around the site smoothly, result in higher VR in both windward and leeward sides, such as Open Storage and Village Clusters (South, West and North of Kong Ha Wai Site).

4.3.37 Under Cumulative Scheme, the wind from Kam Sheung Road Station Phase 2 Site would enter the Kam Sheung Road Site through the building separation, and slightly alleviate the wind shadow at the leeward side, such as Village Clusters (North of Kam Sheung Road Site) and Kam Po Road – 1. Moreover, the incoming wind would be diverted by the array of high-rise towers abutting Kam Sheung Road to travel northwards, along Kam Sheung Road (illustrate with grey arrows in Figure 4.3.16 and Figure 4.3.18), with localized VR improvement at Kam Sheung Road and Open Storage and Village Clusters (West and North of Kong Ha Wai Site). The building separation within Kong Ha Wai Site, such as Air Paths #3 (illustrated with black dashed arrow in Figure 4.3.16 and Figure 4.3.18), aligned with incoming wind direction, would allow wind penetration and alleviate the wind shadow at Open Storage and Village Clusters (East of Kong Ha Wai Site). The height profile and the permeability within Kong Ha Wai Site would allow downwashed wind to ventilate the pedestrian level within the Site, especially at Air Path #1 and #2. Relatively higher VR are observed in the Air Paths as compared with the surrounding area.

4.3.38 Nevertheless, the high-rise nature of Cumulative Scheme would limit the wind availability and result in the calmer wind environment at the leeward side, especially in Kam Shui Road.

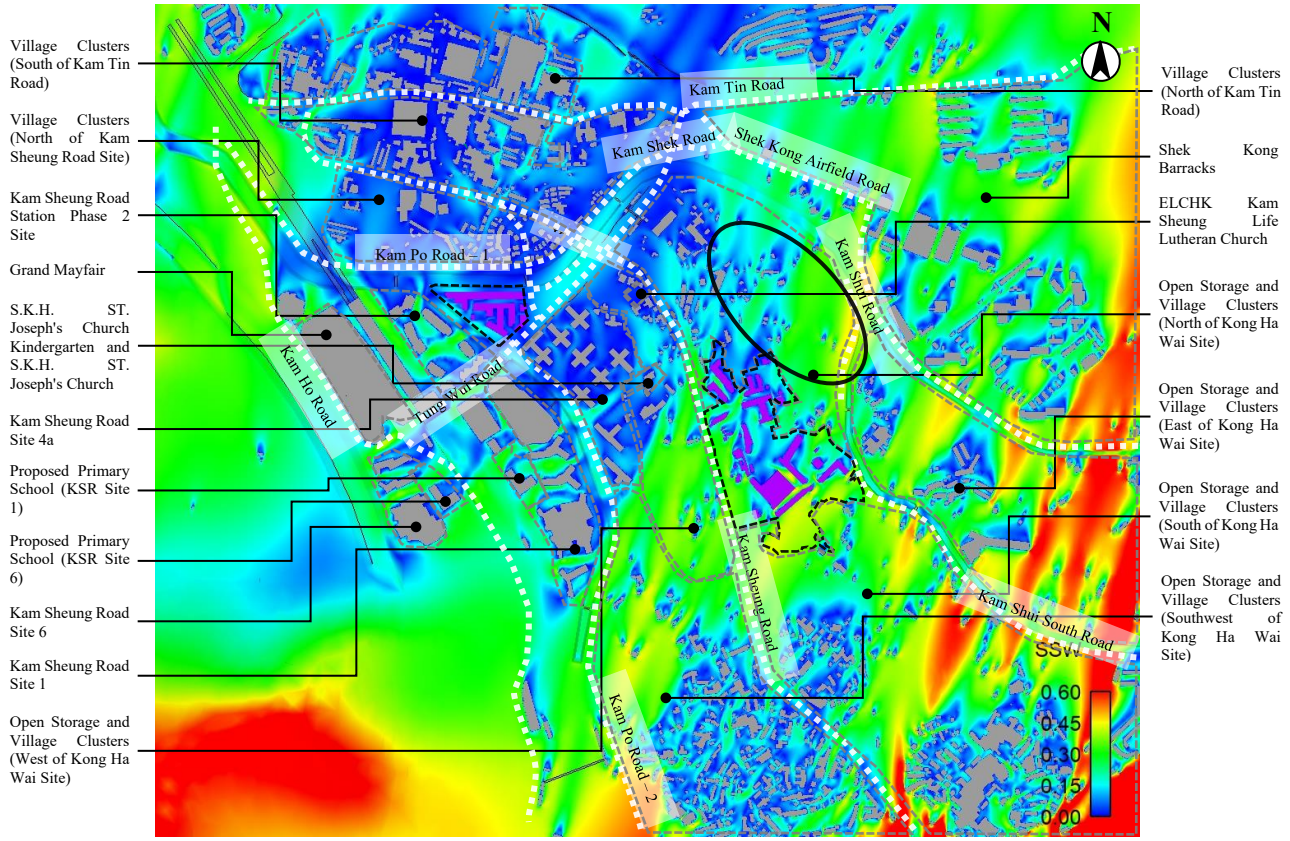


Figure 4.3.15 Wind Environment under SSW Wind under Baseline Scheme

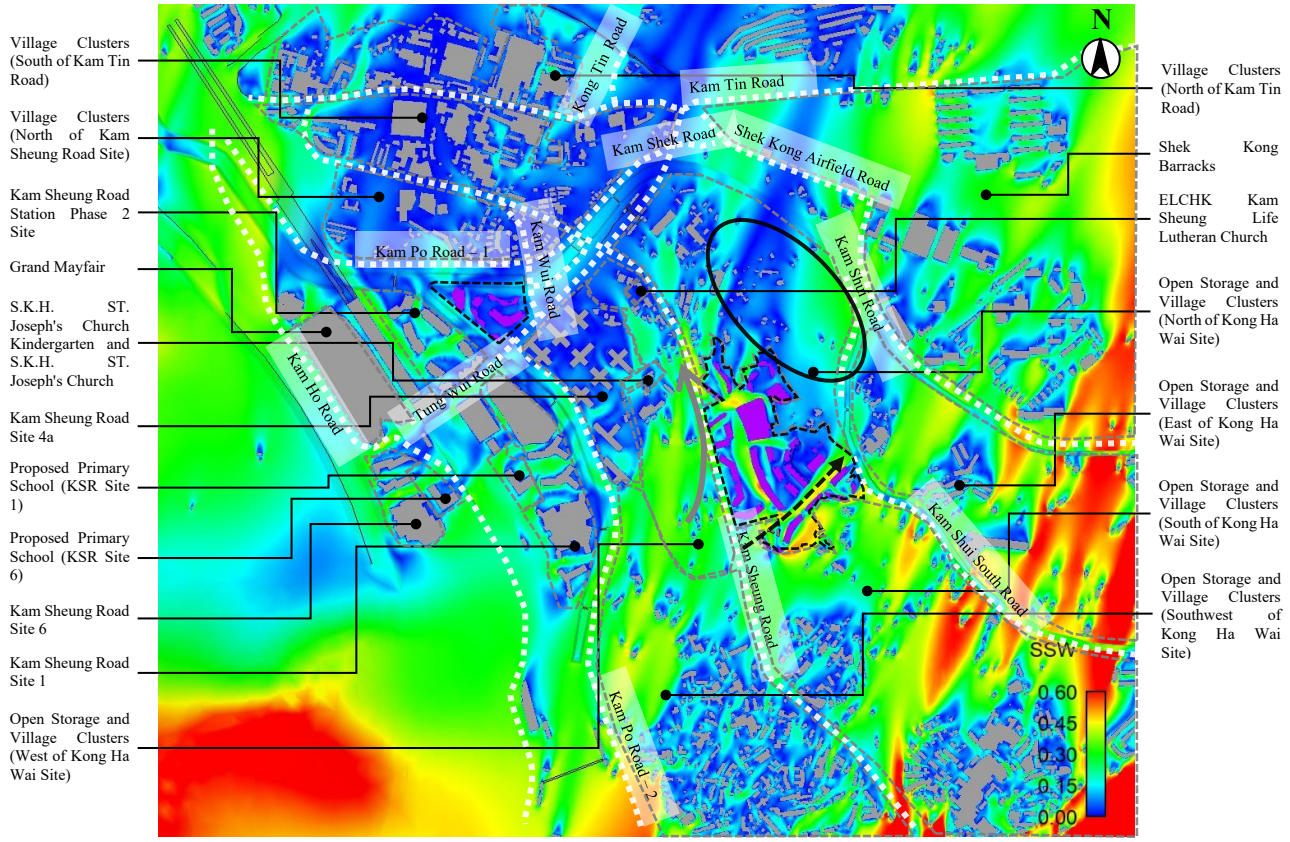


Figure 4.3.16 Wind Environment under SSW Wind under Cumulative Scheme

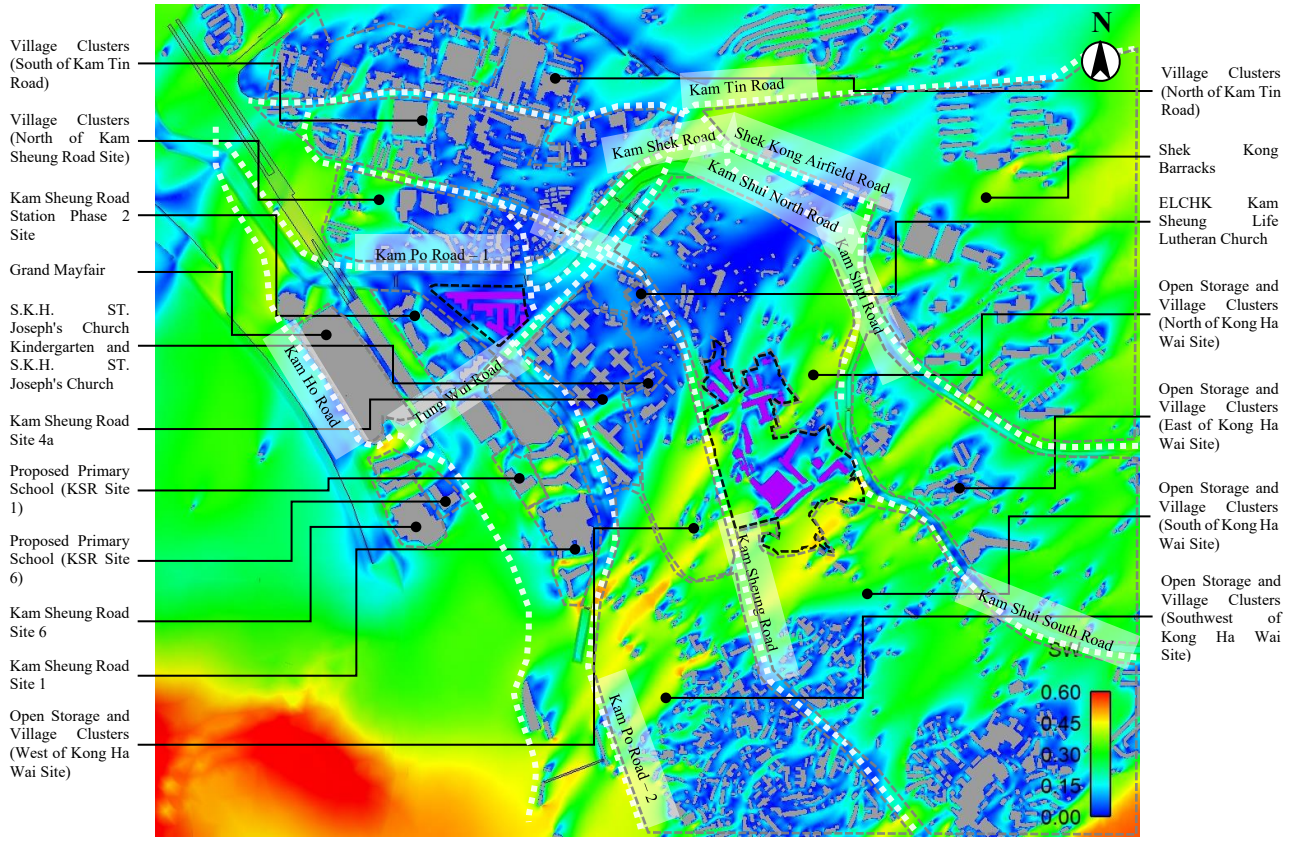


Figure 4.3.17 Wind Environment under SW Wind under Baseline Scheme

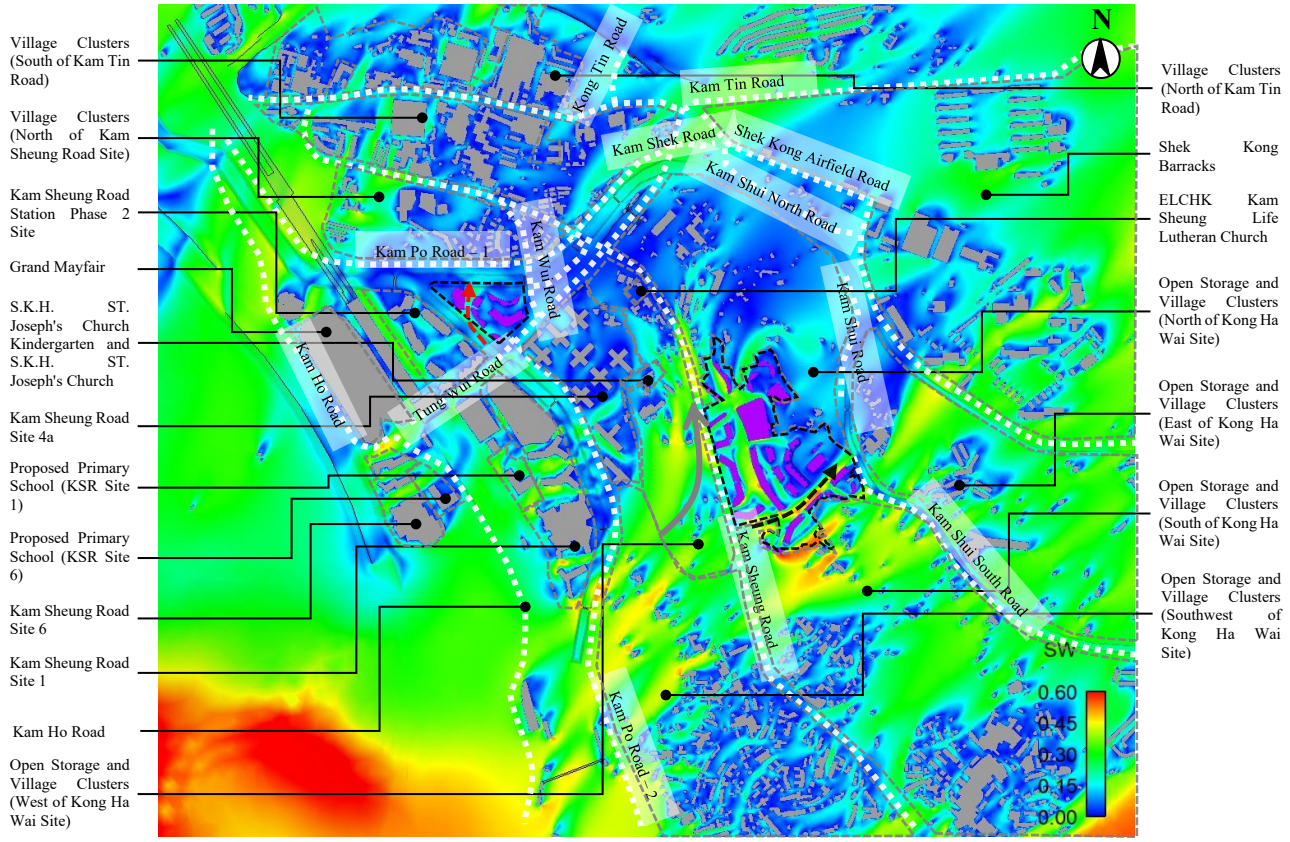


Figure 4.3.18 Wind Environment under SW Wind under Cumulative Scheme

4.4 Review of Revised Cumulative Scheme

4.4.1 As compared to the Cumulative Scheme, the building height of 2 towers (i.e. Blocks 1, 2) within the application site is revised from +69.00mPD to +63.70mPD, while that of 4 towers (i.e. Blocks 1 - 4) within the Sensitivity Test Area from +59.55mPD to +60.60mPD. Given the relatively minor magnitude of these height adjustments, no significant change to the surrounding wind environment is anticipated.

4.4.2 Moreover, due to the relocation of the towers and podium within the Kam Sheung Road Site, the wider tower separation between Block 1 and Block 2 would further enhance wind penetration through the site and facilitate airflow reaching the downwind areas under the NE and SW quadrant winds, resulting in reduction of wind shadow effect and improvement in ventilation performance.

4.4.3 Besides, although Block 1 is repositioned towards the southeastern side of the Kam Sheung Road Site, resulting in a reduced building setback from the southeastern site boundary and a marginally narrower wind entrance at Tung Wui Road, the change is considered negligible in terms of the surrounding wind environment.

4.4.4 In general, as the Kam Sheung Road Site occupies a relatively small portion of the wider assessment area, and no designated airpath is affected by the relocation of towers in the Kam Sheung Road Site, the revisions to the building layout, including the adjustment in building height, tower repositioning and modification of building setback, are expected to result in only localized changes to the wind environment. Therefore, no significant change to the surrounding wind environment is anticipated, and the overall ventilation performance is expected to remain comparable to that of the Cumulative Scheme.

4.5 Focus Areas

4.5.1 The average Velocity Ratios of all test points are determined and extracted. As shown in Figure 4.5.2, a total of 41 focus areas were identified within the Assessment Area, and 1 no. of focus area were identified within Kam Sheung Road Site for both Baseline and Cumulative Schemes. The associated test points and averaged VR for focus areas are tabulated in Table 4.5.1 and Table 4.5.2 respectively.

4.5.2 Under annual and summer conditions, majority of the focus areas achieve similar or slightly less VR due to the lower permeability by the high-rise towers within the Sites, while some focus areas at the windward side of Kong Ha Wai Site achieve similar or better VR due to the downwash effect from the high-rise towers at Kam Sheung Road Site.

4.5.3 Under annual condition, the Kam Shui Road is located adjacent to Kong Ha Wai Site and would be affected by the shielding effect of the high-rise towers, particularly when the focus area is on the downwind side. Moreover, the high-rise towers would shield the incoming wind from reaching southwestern boundary of Kam Sheung Road Site and entering Kam Po Road – 2, lower VR would be observed at Kam Po Road – 2.

4.5.4 On the other hand, the buildings in Kong Ha Wai Site would divert the wind to travel along the boundary and facilitate the wind environment, resulting in higher VR at S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church located adjacent to Kong Ha Wai Site.

4.5.5 In addition, the focus areas including Kam Kong Road, Kam Tin Shi Street, Kam Po Road – 1, Kam Shek Road, Tung Wui Road, Road (adjacent to KSR Site 1), Kam Ho Road, Kam Tin Bypass, Kong Tin Road, Kam Tin Road, Shek Kong Airfield Road, Kam Shui North Road, Po Tei Road, Kam Wui Road, Kam Sheung Road, Kam Shui South Road, Shek Tin Road, Village Clusters (North of Kam Tin Road), Kam Tin Mung Yeung Public School, Tung Tak School, The Salvation Army Kam Tin Integrated Service Centre, Village Clusters (South of Kam Tin Road), S.K.H. St. Joseph's Primary School, Village Clusters (North of Kam Sheung Road Site), Kam Sheung Road Station Phase 2 Site, Grand Mayfair, Proposed Primary School (KSR Site 1), Proposed Primary School (KSR Site 6), Kam Sheung Road Site 6, Kam Sheung Road Site 1, ELCHK Kam Sheung Life Lutheran Church, Shek Kong Barracks, Open Storage and Village Clusters (North of Kong Ha Wai Site), Kam Sheung Road Site 4a, Open Storage and Village Clusters (West of Kong Ha Wai Site), Open Storage and Village Clusters (East of Kong Ha Wai Site), Open Storage and Village Clusters (South of Kong Ha Wai Site) and Open Storage and Village Clusters (Southwest of Kong Ha Wai Site) achieve similar VRs in baseline and cumulative schemes, indicating that there would be no significant impact on ventilation performance and pedestrian comfort would remain largely unaffected.

4.5.6 Under summer condition, Kong Tin Road at the leeward side would be shielded by the high-rise towers in Kam Sheung Road Site, resulting in lower VRs.

4.5.7 As the surrounding area is mostly dominated by high-rise residential towers, such as Kam Sheung Road Station Phase 2 Site, Kam Sheung Road Site 1, Kam Sheung Road Site 4a, Kam Sheung Road Site 6, Grand Mayfair, the majority of the focus area achieve similar VRs in baseline and Cumulative schemes, including Kam Kong Road, Kam Tin Shi Street, Kam Po Road – 1, Kam Shek Road, Tung Wui Road, Road (adjacent to KSR Site 1), Kam Ho Road, Kam Po Road – 2, Kam Tin Bypass, Kam Tin Road, Shek Kong Airfield Road, Kam Shui North Road, Po Tei Road, Kam Wui Road, Kam Sheung Road, Kam Shui South Road, Shek Tin Road, Village Clusters (North of Kam Tin Road), Kam Tin Mung Yeung Public School, Tung Tak School, The Salvation Army Kam Tin Integrated Service Centre, Village Clusters (South of Kam Tin Road), S.K.H. St. Joseph's Primary School, Village Clusters (North of Kam Sheung Road Site), Kam Sheung Road Station Phase 2 Site, Grand Mayfair, Proposed Primary School (KSR Site 1), Proposed Primary School (KSR Site 6), Kam Sheung Road Site 6, Kam Sheung Road Site 1, ELCHK Kam Sheung Life Lutheran Church, Shek Kong Barracks, Kam Sheung Road Site 4a, Open Storage and Village Clusters (West of Kong Ha Wai Site), Open Storage and Village Clusters (South of Kong Ha Wai Site), Open Storage and Village Clusters (Southwest of Kong Ha Wai Site), which indicates that there would be no significant impact on ventilation performance due to Kam Sheung Road Site and pedestrian comfort would remain largely unaffected.

4.5.8 The VR at the wind enhancement feature identified, including Air Path #1 - #3 within Kong Ha Wai Site, majority achieve similar VR as compared with the Baseline Scheme, which indicated that the wind enhancement features are efficient in promoting air penetration and minimize the ventilation impact from the Cumulative Scheme.

Table 4.5.1 Focus Areas and Corresponding Test Points

	Focus Areas	Test Points
1	Kam Kong Road	O1-O7
2	Kam Tin Shi Street	O8-O10
3	Kam Po Road – 1	O11-O30
4	Kam Shek Road	O31-O37
5	Tung Wui Road	O38-O53
6	Road (adjacent to KSR Site 1)	O54-O57
7	Kam Ho Road	O58-O84
8	Kam Po Road – 2	O85-O102
9	Kam Tin Bypass	O103-O106
10	Kong Tin Road	O107-O109
11	Kam Tin Road	O110-O131
12	Shek Kong Airfield Road	O132-O155
13	Kam Shui North Road	O156-O163
14	Po Tei Road	O164-O167
15	Kam Wui Road	O168-O170
16	Kam Sheung Road	O171-O208
17	Kam Shui Road	O209-O214
18	Kam Shui South Road	O215-O227
19	Shek Tin Road	O228-O233
20	Village Clusters (North of Kam Tin Road)	O234-O256
21	Kam Tin Mung Yeung Public School	O257-O259
22	Tung Tak School	O260-O262
23	The Salvation Army Kam Tin Integrated Service Centre	O263-O265
24	Village Clusters (South of Kam Tin Road)	O266-O307
25	S.K.H. St. Joseph's Primary School	O308-O310
26	Village Clusters (North of Kam Sheung Road Site)	O311-O344
27	Kam Sheung Road Station Phase 2 Site	O345-O348
28	Grand Mayfair	O349-O352
29	Proposed Primary School (KSR Site 1)	O353-O355
30	Proposed Primary School (KSR Site 6)	O356-O359
31	Kam Sheung Road Site 6	O360-O364
32	Kam Sheung Road Site 1	O365-O373
33	ELCHK Kam Sheung Life Lutheran Church	O374-O376
34	Shek Kong Barracks	O377-O451
35	Open Storage and Village Clusters (North of Kong Ha Wai Site)	O452-O491
36	Kam Sheung Road Site 4a	O492-O514
37	S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church	O515-O517
38	Open Storage and Village Clusters (West of Kong Ha Wai Site)	O518-O532
39	Open Storage and Village Clusters (East of Kong Ha Wai Site)	O533-O557
40	Open Storage and Village Clusters (South of Kong Ha Wai Site)	O558-O591
41	Open Storage and Village Clusters (Southwest of Kong Ha Wai Site)	O592-O641

	Focus Areas	Test Points
42	Perimeter of Kong Ha Wai Site	P1-P31
43	Perimeter of Kam Sheung Road Site	P32-P43
44	Open Space within Kong Ha Wai Site for Baseline Scheme	S1-S29
45	Open Space within Kam Sheung Road Site for Baseline Scheme	S30-S39
46	Air Path #1 at Kong Ha Wai Site for Cumulative Scheme	S1-S4
47	Air Path #2 at Kong Ha Wai Site for Cumulative Scheme	S5-S6
48	Air Path #3 at Kong Ha Wai Site for Cumulative Scheme	S7-S10
49	Open Space within Kong Ha Wai Site for Cumulative Scheme	S11-S29
50	Open Space within Kam Sheung Road Site for Cumulative Scheme	S30-S39

Table 4.5.2 Focus Areas and Corresponding Test Points

	Focus Areas	Annual Average VR		Summer Average VR	
		Baseline	Cumulative	Baseline	Cumulative
1	Kam Kong Road	0.16	0.15	0.16	0.15
2	Kam Tin Shi Street	0.11	0.11	0.12	0.13
3	Kam Po Road – 1	0.16	0.15	0.16	0.15
4	Kam Shek Road	0.20	0.21	0.21	0.20
5	Tung Wui Road	0.16	0.16	0.15	0.14
6	Road (adjacent to KSR Site 1)	0.13	0.12	0.16	0.17
7	Kam Ho Road	0.22	0.22	0.29	0.29
8	Kam Po Road – 2	0.25	0.23	0.31	0.31
9	Kam Tin Bypass	0.25	0.25	0.23	0.23
10	Kong Tin Road	0.16	0.15	0.17	0.15
11	Kam Tin Road	0.17	0.17	0.18	0.18
12	Shek Kong Airfield Road	0.23	0.23	0.29	0.28
13	Kam Shui North Road	0.29	0.29	0.29	0.28
14	Po Tei Road	0.11	0.11	0.10	0.10
15	Kam Wui Road	0.06	0.06	0.05	0.05
16	Kam Sheung Road	0.18	0.17	0.21	0.20
17	Kam Shui Road	0.25	0.23	0.32	0.24
18	Kam Shui South Road	0.23	0.23	0.32	0.31
19	Shek Tin Road	0.09	0.09	0.12	0.12
20	Village Clusters (North of Kam Tin Road)	0.11	0.11	0.09	0.09
21	Kam Tin Mung Yeung Public School	0.09	0.09	0.14	0.14
22	Tung Tak School	0.07	0.07	0.06	0.05
23	The Salvation Army Kam Tin Integrated Service Centre	0.09	0.09	0.10	0.10
24	Village Clusters (South of Kam Tin Road)	0.10	0.10	0.09	0.09
25	S.K.H. St. Joseph's Primary School	0.08	0.08	0.08	0.08
26	Village Clusters (North of Kam Sheung Road Site)	0.09	0.08	0.09	0.08
27	Kam Sheung Road Station Phase 2 Site	0.10	0.10	0.10	0.10

	Focus Areas	Annual Average VR		Summer Average VR	
		Baseline	Cumulative	Baseline	Cumulative
28	Grand Mayfair	0.12	0.13	0.14	0.14
29	Proposed Primary School (KSR Site 1)	0.10	0.09	0.15	0.15
30	Proposed Primary School (KSR Site 6)	0.10	0.10	0.14	0.14
31	Kam Sheung Road Site 6	0.12	0.12	0.18	0.18
32	Kam Sheung Road Site 1	0.14	0.13	0.20	0.19
33	ELCHK Kam Sheung Life Lutheran Church	0.10	0.10	0.07	0.07
34	Shek Kong Barracks	0.19	0.19	0.24	0.23
35	Open Storage and Village Clusters (North of Kong Ha Wai Site)	0.19	0.18	0.19	0.17
36	Kam Sheung Road Site 4a	0.15	0.14	0.14	0.14
37	S.K.H. ST. Joseph's Church Kindergarten and S.K.H. ST. Joseph's Church	0.14	0.16	0.13	0.16
38	Open Storage and Village Clusters (West of Kong Ha Wai Site)	0.19	0.19	0.22	0.22
39	Open Storage and Village Clusters (East of Kong Ha Wai Site)	0.16	0.16	0.23	0.21
40	Open Storage and Village Clusters (South of Kong Ha Wai Site)	0.12	0.11	0.16	0.15
41	Open Storage and Village Clusters (Southwest of Kong Ha Wai Site)	0.11	0.11	0.14	0.14
42	Perimeter of Kong Ha Wai Site	0.19	0.16	0.24	0.20
43	Perimeter of Kam Sheung Road Site	0.11	0.12	0.09	0.10
44	Open Space within Kong Ha Wai Site for Baseline Scheme	0.13	/	0.17	/
45	Open Space within Kam Sheung Road Site for Baseline Scheme	0.06	/	0.06	/
46	Air Path #1 at Kong Ha Wai Site for Cumulative Scheme	/	0.21	/	0.19
47	Air Path #2 at Kong Ha Wai Site for Cumulative Scheme	/	0.18	/	0.16
48	Air Path #3 at Kong Ha Wai Site for Cumulative Scheme	/	0.19	/	0.27
49	Open Space within Kong Ha Wai Site for Cumulative Scheme	/	0.11	/	0.14
50	Open Space within Kam Sheung Road Site for Cumulative Scheme	/	0.11	/	0.08

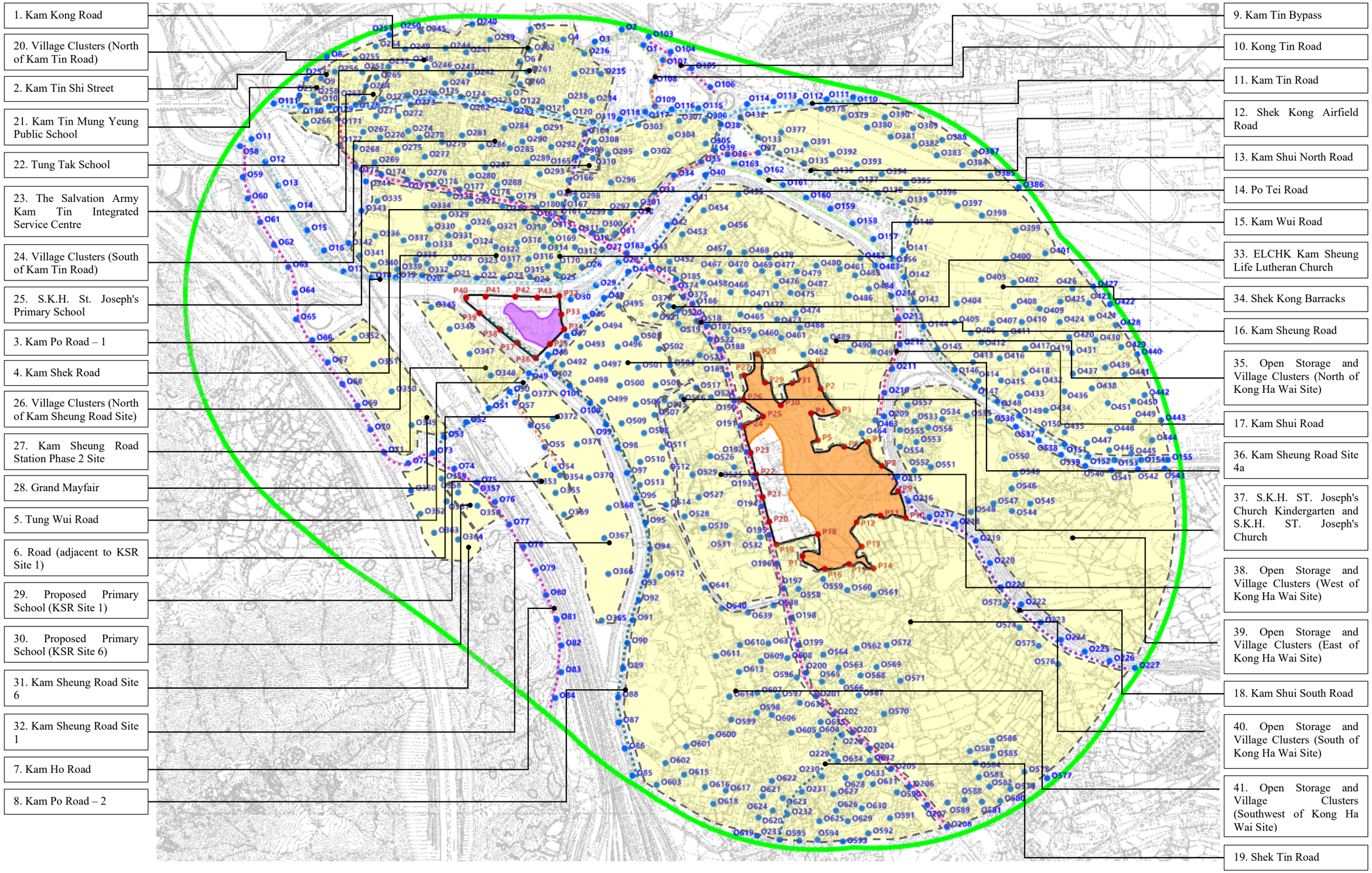
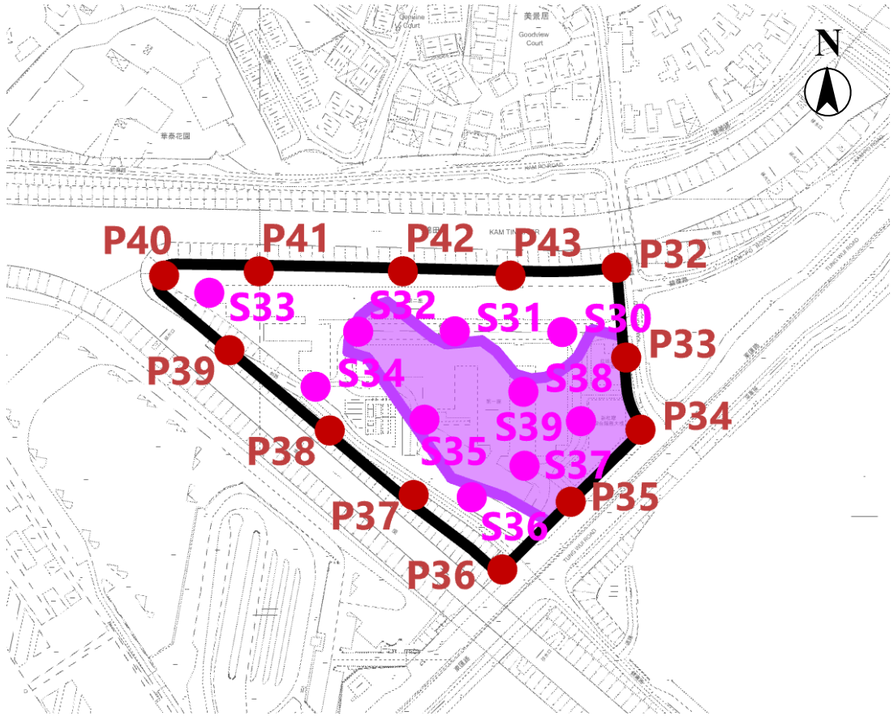
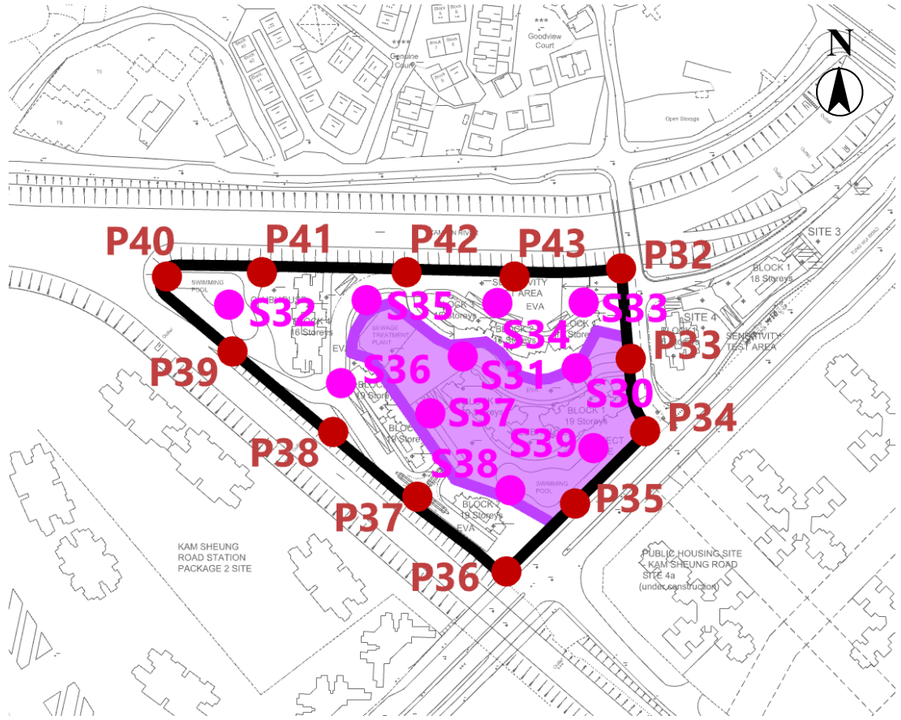


Figure 4.5.1 Location of Focus Areas



Baseline Scheme

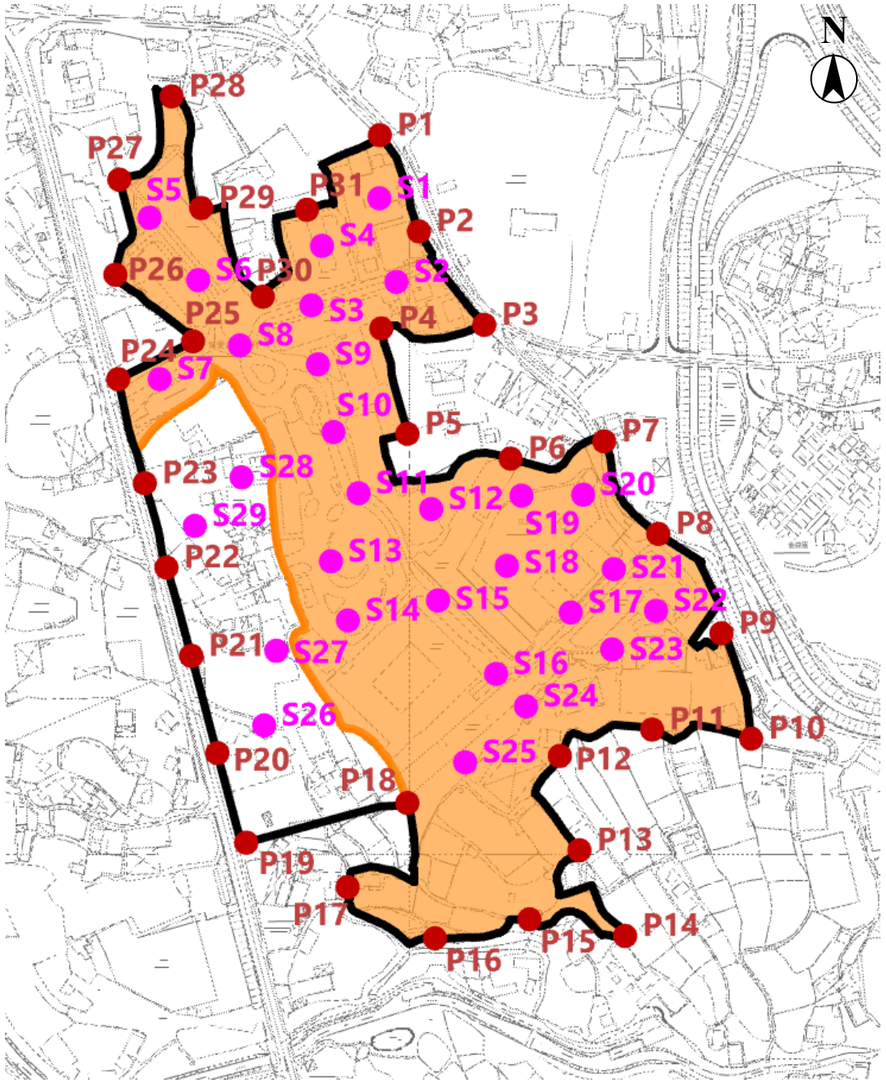


Cumulative Scheme

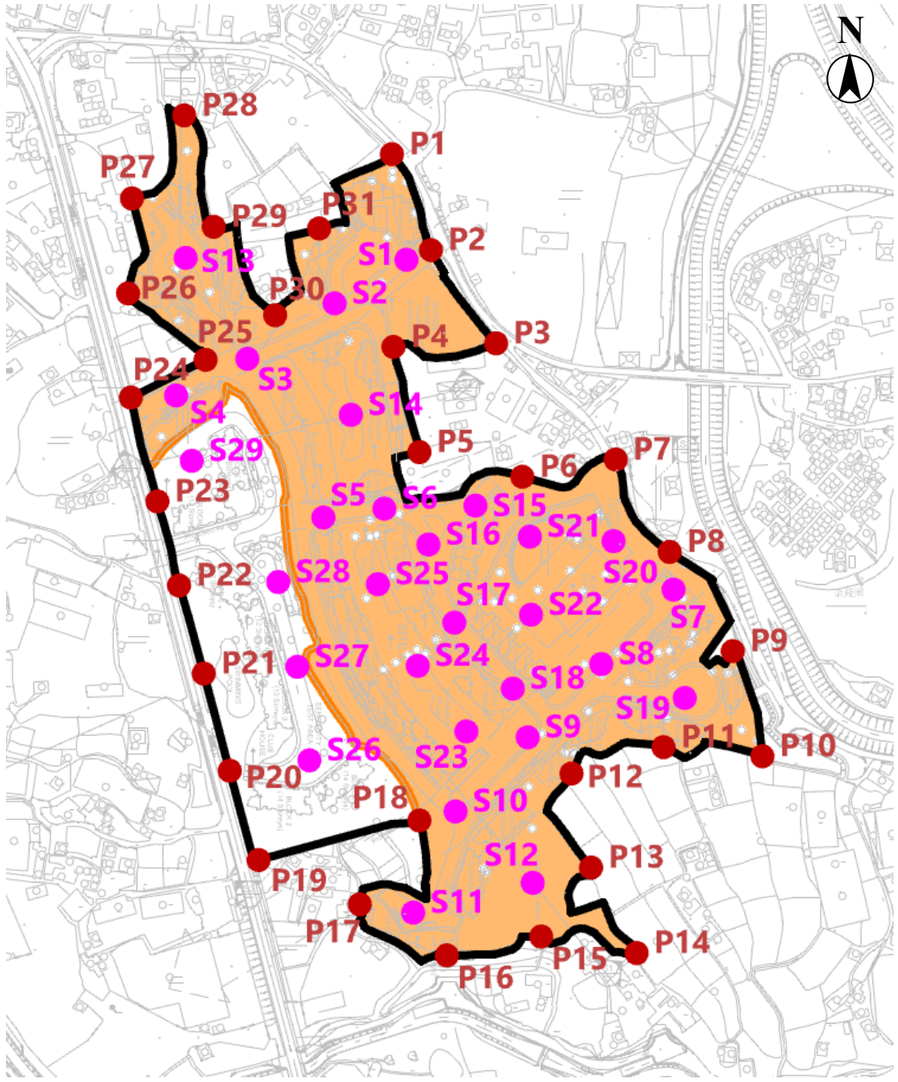
LEGEND

- Kam Sheung Road Site (The Application Site)
- Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)
- P1 Perimeter Test Points
- S1 Special Test Points

Figure 4.5.2 Location of Focus Areas within Kam Sheung Road Site



Baseline Scheme



Cumulative Scheme

LEGEND

- Kong Ha Wai Site (Another S12A Application under preparation)
- Proposed Rationalised Boundary for Rezoning Area (for Sensitivity Test Purpose only)
- P1 Perimeter Test Points
- S1 Special Test Points

Figure 4.5.3 Location of Focus Areas within Kong Ha Wai Site

5. Conclusion

5.1 Overview

5.1.1 An Air Ventilation Assessment (AVA) – Initial Study was conducted to assess the ventilation performance of Baseline Scheme and Cumulative Development Scheme in accordance to the *AVA Technical Circular*.

5.1.2 Three schemes were assessed, namely Baseline Scheme, Cumulative Scheme and Revised Cumulative Scheme, in this AVA – Initial Study. The Baseline Scheme and Cumulative Scheme were assessed using Computational Fluid Dynamics (CFD) techniques. A series CFD simulations using Realizable k-ε turbulence model were performed under annual and summer wind conditions with reference to the *AVA Technical Circular*. For annual wind condition, NE, ENE, E, ESE, SE, SSE, S and SSW were selected which gives total wind frequency of 76.4% over a year while E, ESE, SE, SSE, S, SSW and SW were selected for summer condition, which gives total wind frequency of 75.2%. A qualitative analysis has been used to evaluate the difference in ventilation performance of Revised Cumulative Scheme as compared with Cumulative Scheme.

5.1.3 The Velocity Ratio (VR) as proposed by the AVA Technical Circular was employed to assess the ventilation performance under different schemes and its impact to the surroundings. With reference to the AVA Technical Circular, a total of 12 and 31 perimeter test points for Kam Sheung Road Site and Kong Ha Wai Site respectively, and 641 overall test points were allocated to assess the overall ventilation performance in the Assessment Area. Additional 10 and 29 special test points for Kam Sheung Road Site and Kong Ha Wai Site were allocated to assess the wind environment at the air paths and internal road area within the Application Sites.

5.1.4 Under annual condition, as compared with Baseline Scheme, Cumulative Scheme achieved similar SVR (0.11 vs. 0.12) for Kam Sheung Road Site while a slightly lower SVR (0.19 vs. 0.16) for Kong Ha Wai Site. In addition, the Cumulative Scheme achieved a similar LVR (0.16 vs. 0.15), as compared with Baseline Scheme. The result indicated that Cumulative Scheme would achieve a similar ventilation performance along the Site Boundary for Kam Sheung Road Site, and a relatively calmer wind environment along the Site Boundary for Kong Ha Wai Site, and a similar ventilation performance in the surrounding area, as compared with Baseline Scheme.

5.1.5 Under summer condition, as compared with Baseline Scheme, Cumulative Scheme achieved similar SVR (0.09 vs. 0.10) for Kam Sheung Road Site while a slightly lower SVR (0.24 vs. 0.20) for Kong Ha Wai Site. In addition, the Cumulative Scheme achieved a similar LVR (0.19 vs. 0.18), as compared with Baseline Scheme. The result indicated that Cumulative Scheme would achieve a similar ventilation performance along the Site Boundary for Kam Sheung Road Site, and a relatively calmer wind environment along the Site Boundary for Kong Ha Wai Site, and a similar ventilation performance in the surrounding area, as compared with Baseline Scheme.

5.1.6 Under both annual and summer conditions, the high-rise towers would induce downwash effect near the Application Sites. The downwash effect from Kam Sheung Road Site would bring strong wind to significant portion of the site boundary at the upwind location to compensate the mild wind shadow at the downwind location, resulting in similar SVR of Kam Sheung Road Site under Cumulative Scheme, as compared with Baseline Scheme. The strong downwash effect from the Kong Ha Wai Site would enhance the wind environment along the part of site boundary at the windward side, however, the reduced open space in the southern part and western part of Kong Ha Wai Site would create wind shadow near the boundary, as compared with Baseline Scheme.

5.1.7 While limiting the incoming wind to travel further towards the leeward side, wind shadow and relatively calmer wind environment would be observed at nearby focus areas only, together with the high-rise developed residential sites, such as Kam Sheung Road Site 1, Kam Sheung Road Site 4a, Kam Sheung Road Site 6 and Kam Sheung Road Station Phase 2 Site, dominating the surrounding area, similar ventilation performance is achieved under Cumulative Scheme.

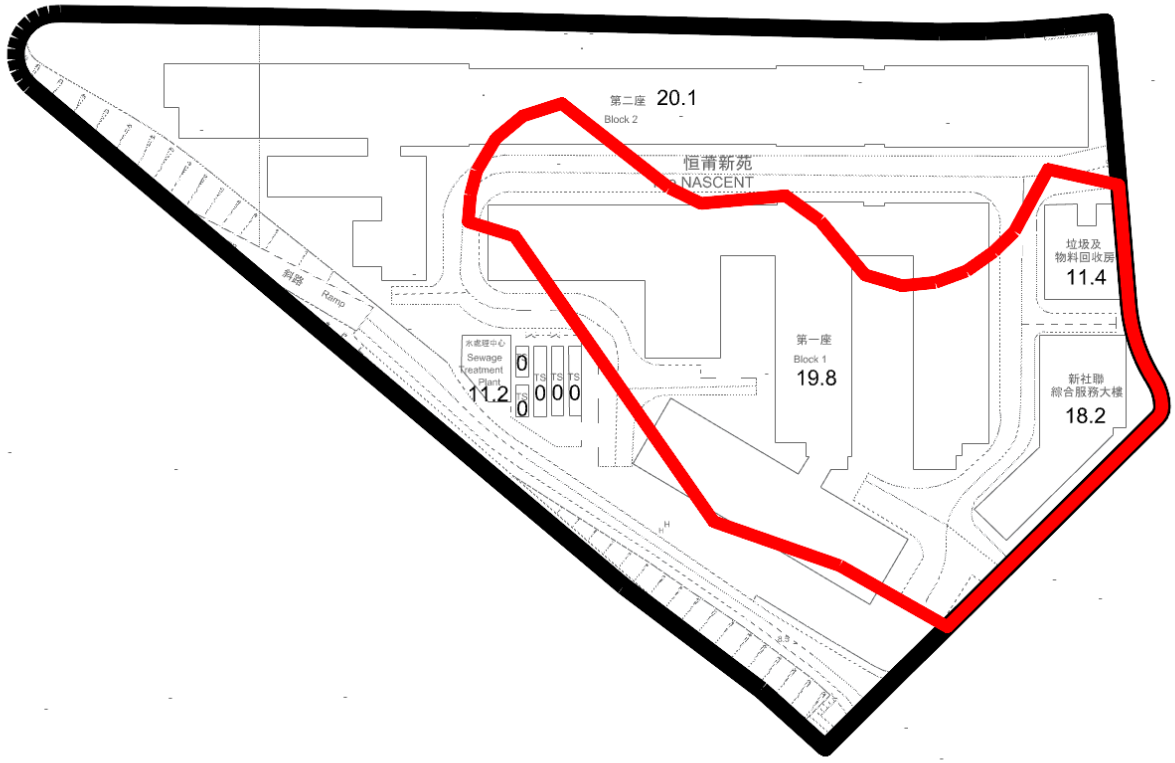
5.1.8 Nevertheless, the airpaths and building separation within the Sites would enhance the site permeability and facilitate the air movement across the Sites, in particular the ENE, E, SSW, SW quadrants winds, resulting in good wind environment at the pedestrian level within the site and alleviate the ventilation impact under annual and summer conditions. Overall, there would be no adverse ventilation impact induced by the Cumulative Scheme.

5.1.9 Following the assessment of the Cumulative Scheme, a Revised Cumulative Scheme was developed based on the revised design. Given that the overall building form, building separation and development parameters remain broadly comparable to those of the Cumulative Scheme, the findings of the previous quantitative assessment have been referenced, and the qualitative analysis has been reviewed and supplemented based on the revised design. In general, no significant change in the overall ventilation performance is anticipated under the Revised Cumulative Scheme as compared with the Cumulative Scheme.

Appendix A

Layout Plans of Baseline Scheme, Cumulative Scheme and Revised Cumulative Scheme

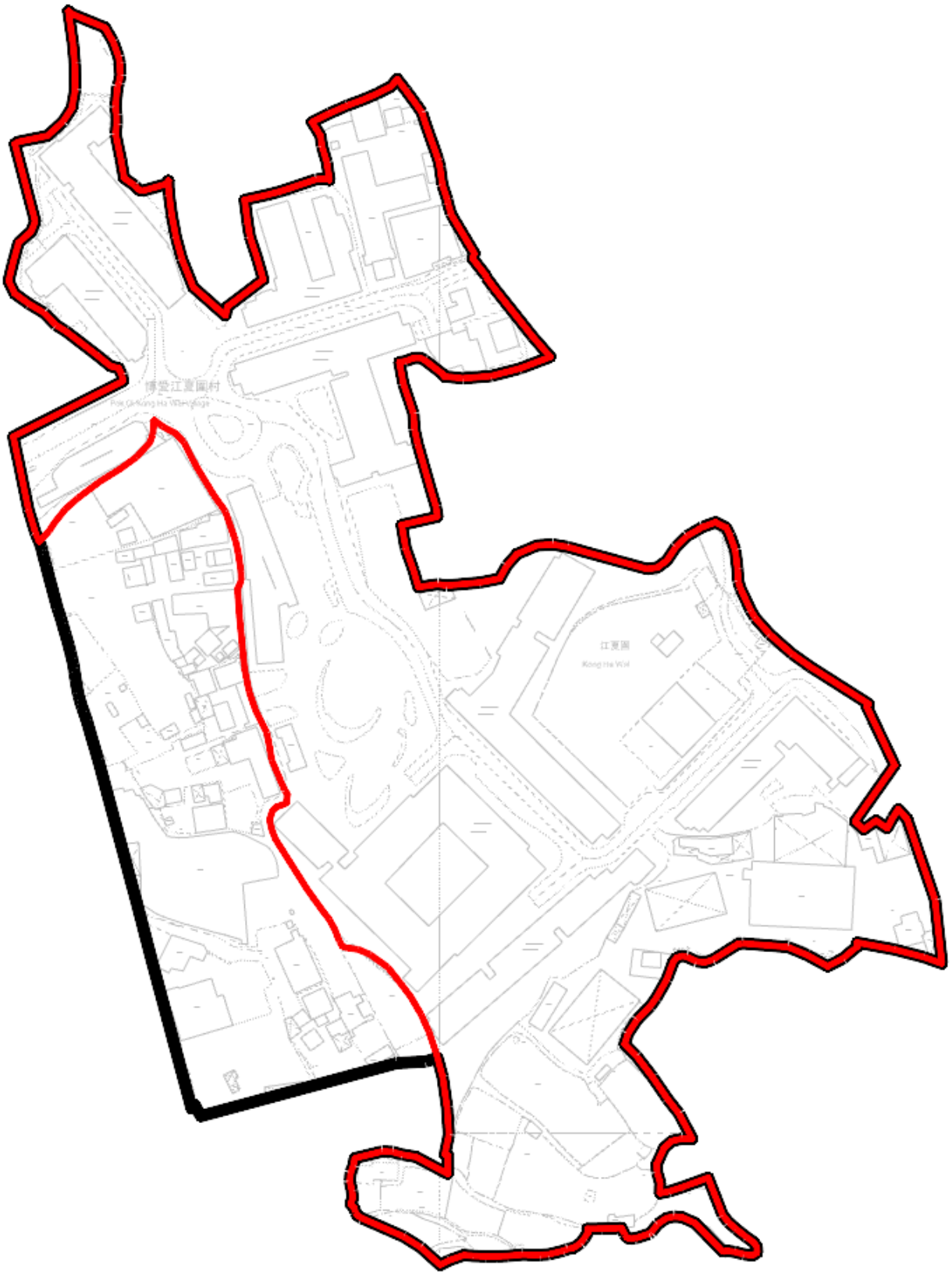
A.1 Baseline Scheme – Kam Sheung Road Site



Application Site

Proposed Rationalised Boundary for Rezoning Area
(for Sensitivity Test Purpose only)

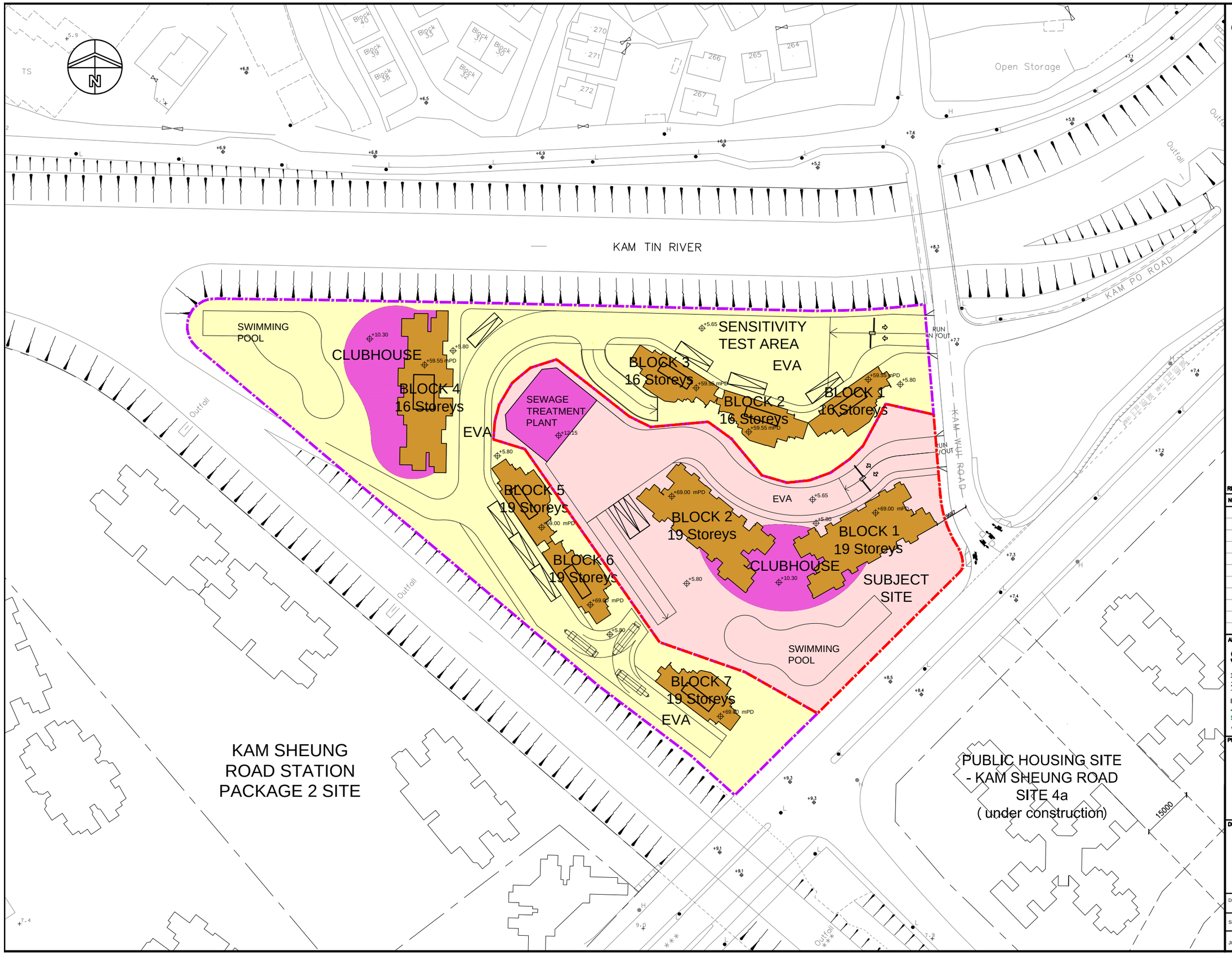
A.2 Baseline Scheme – Kong Ha Wai Site



Application Site

Proposed Rationalised Boundary for Rezoning Area
(for Sensitivity Test Purpose only)

A.3 Cumulative Scheme – Kam Sheung Road Site



NOTES :

DO NOT SCALE DRAWINGS.

LAYOUT LEGEND:

- SUBJECT SITE B
- PROPOSED RATIONALIZED BOUNDARY FOR REZONING AREA (FOR SENSITIVITY TEST PURPOSE ONLY)

REVISION

NO.	DATE	DESCRIPTION

ARCHITECT

STUDIO | RCA

18/F | Xiu Hua Commercial Building
211-213 Jaffe Road | Wan Chai | HK
Tel: 3583-2000 | Fax: 2120-5030
Email: mail@studiorca.com

STUDIO | RAYMOND CHAU | ARCHITECTURE | LIMITED

PROJECT NAME

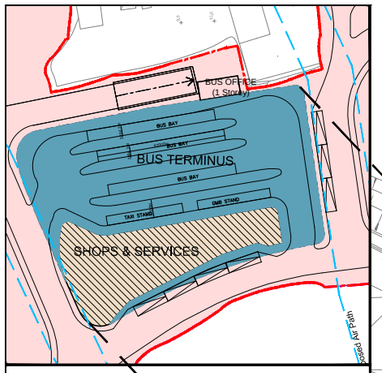
PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT 2160 RP IN D.D. 106 AND
ADJOINING GOVERNMENT LAND,
KAM TIN, NEW TERRITORIES

DRAWING TITLE

MASTER LAYOUT PLAN

DRAWN BY	CC	CHECKED BY	RC
SCALE	1:1000	DATE	2025.11.18
JOB No.	2526	DRAWING No.	A-02A

A.4 Cumulative Scheme – Kong Ha Wai Site



BUS TERMINUS PART PLAN

NOTES:

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ALL DIMENSIONS MUST BE VERIFIED AT THE WORK BY THE CONTRACTOR.

ALL PRINTS, SPECIFICATIONS AND THEIR COPYRIGHT ARE THE PROPERTY OF THE ARCHITECTS AND SHALL BE RETURNED AT THE COMPLETION OF THE WORK.

LAYOUT LEGEND:

- SUBJECT SITE A
- PROPOSED RATIONALIZED BOUNDARY FOR REZONING AREA (FOR SENSITIVITY TEST PURPOSE ONLY)
- BLOCK D (SHOPS & SERVICES / ICYSC)
- SEWAGE TREATMENT PLANT
- KONG HA WAI COMPLEX
- RESIDENTIAL CLUBHOUSE
- PUBLIC TRANSPORT INTERCHANGE

REVISION

NO	DATE	DESCRIPTION

ARCHITECT

STUDIO | RCA

18/F | Xiu Hua Commercial Building
211-213 Jaffe Road | Wan Chai | HK
Tel: 3583-2000 | Fax: 2120-5030
Email: mail@studiorca.com

STUDIO | RAYMOND CHAU | ARCHITECTURE | LIMITED

PROJECT NAME

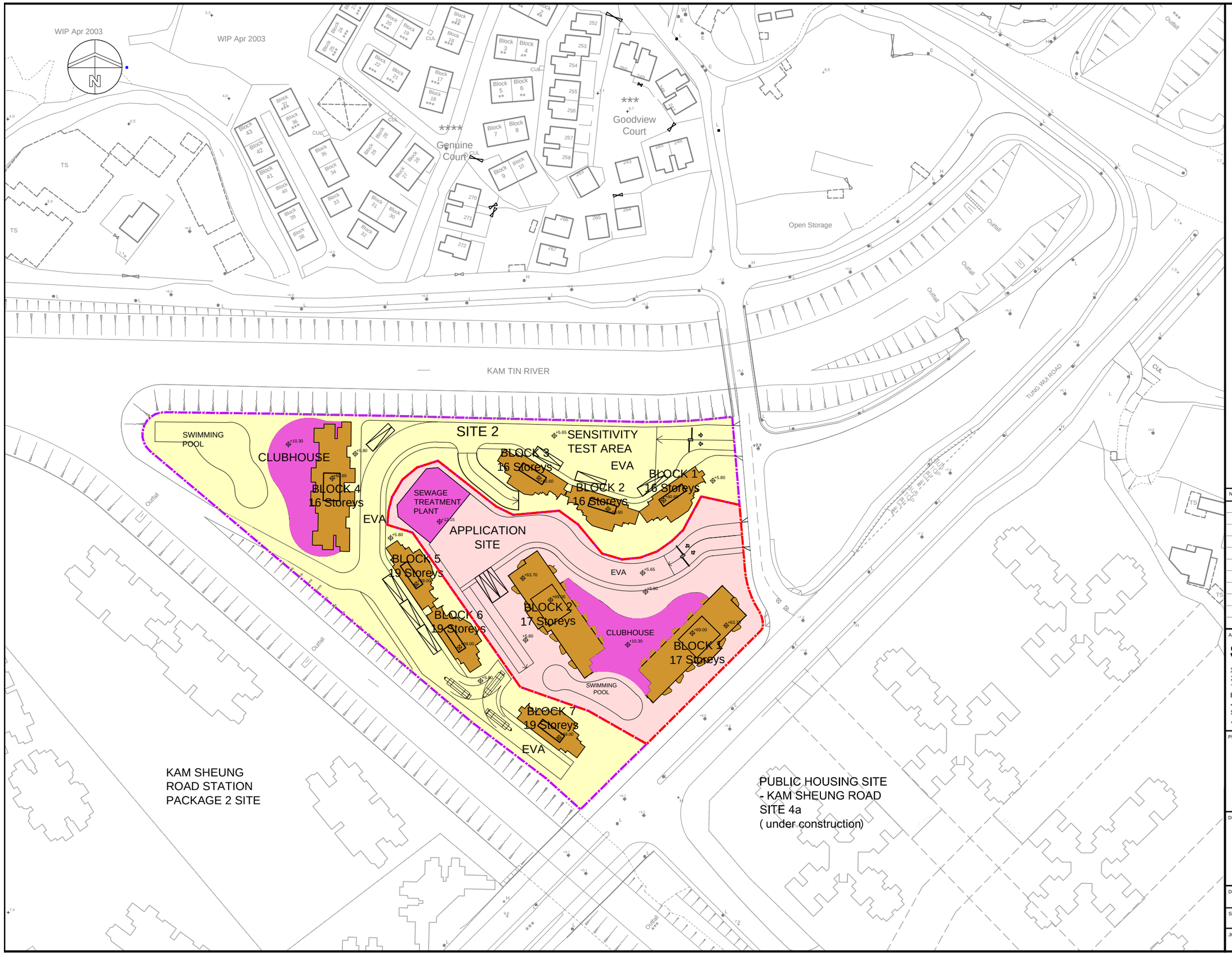
PROPOSED RESIDENTIAL DEVELOPMENT WITH COVERED TRANSPORT INTERCHANGE, SOCIAL WELFARE FACILITIES, SHOPS AND SERVICES, AND UTILITY INSTALLATION FOR PRIVATE PROJECTS AT VARIOUS LOTS, D.D. 106 AND ADJOINING GOVERNMENT LAND, KAM TIN, NEW TERRITORIES

DRAWING TITLE

MASTER LAYOUT PLAN
(SENSITIVITY TEST AREA)

DRAWN BY: CC	CHECKED BY: RC
SCALE: 1:2000	DATE: 2026.03.03
JOB No.: 2525	DRAWING No.: A-02A

A.5 Revised Cumulative Scheme – Kam Sheung Road Site



NOTES:

DO NOT SCALE DRAWINGS.

LAYOUT LEGEND:

APPLICATION SITE

NO	DATE	DESCRIPTION

ARCHITECT

STUDIO | RCA

18/F | Xiu Hua Commercial Building
211-213 Jaffe Road | Wan Chai | HK
Tel: 3583-2000 | Fax: 2120-5030
Email: mail@studiorca.com

STUDIO | RAYMOND CHAU | ARCHITECTURE | LIMITED

PROJECT NAME

PROPOSED RESIDENTIAL DEVELOPMENT AT
LOT 2160 R.P. (PART)
IN D.D. 106 AND ADJOINING GOVERNMENT LAND,
KAM SHEUNG ROAD, KAM TIN,
YUEN LONG, NEW TERRITORIES

DRAWING TITLE

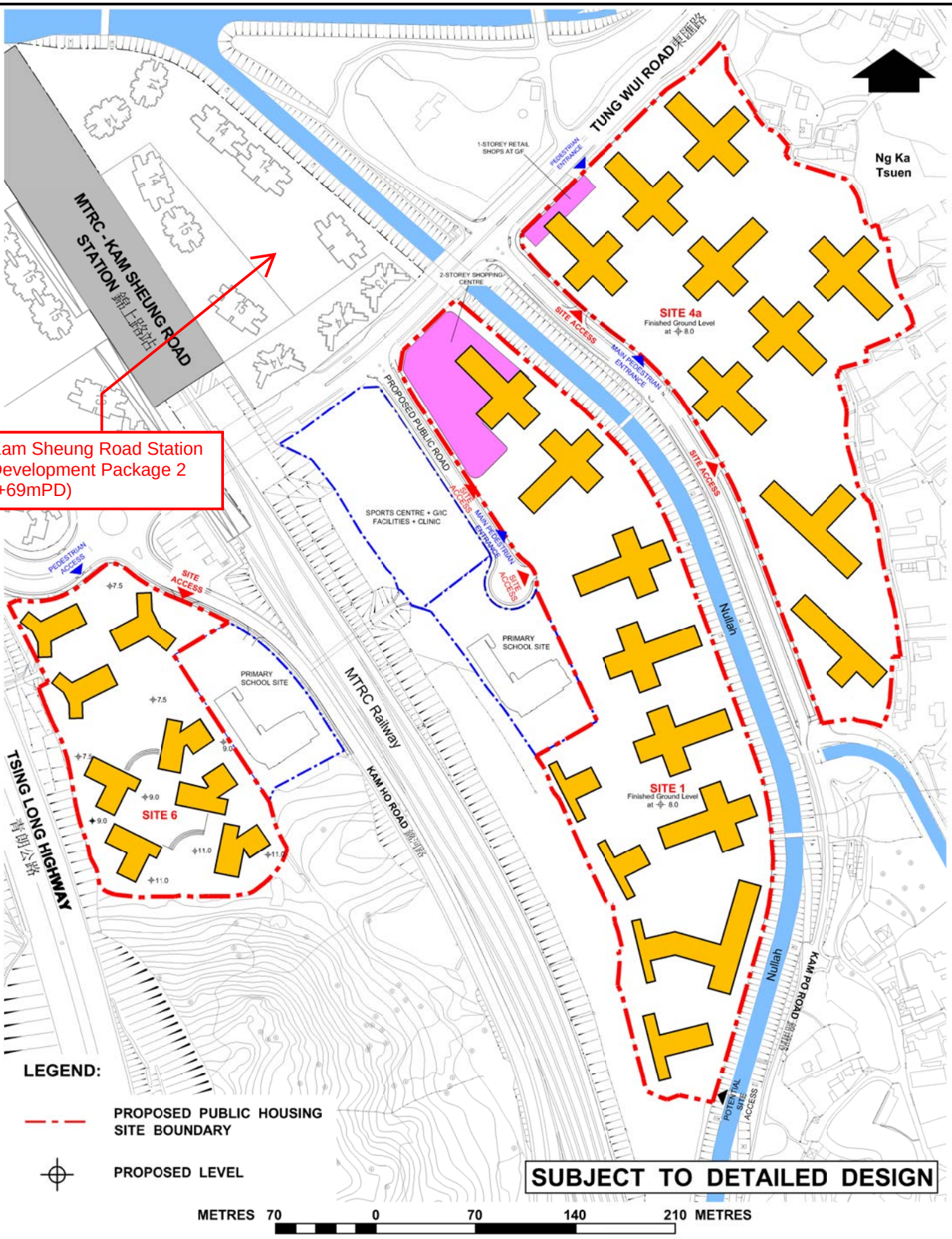
MASTER LAYOUT PLAN

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SCALE: 1:1250	DATE: 2026.10.09
JOB No.: 2526	DRAWING No.: A-03

Appendix B

Layout Plans of Planned/Work-in-Progress (WIP) Developments

(1) Kam Sheung Road Station Development Package 2



本摘要圖於2018年7月16日擬備
資料來源:房屋署
EXTRACT PLAN PREPARED ON 16.7.2018
DATA SOURCE : HOUSING DEPARTMENT

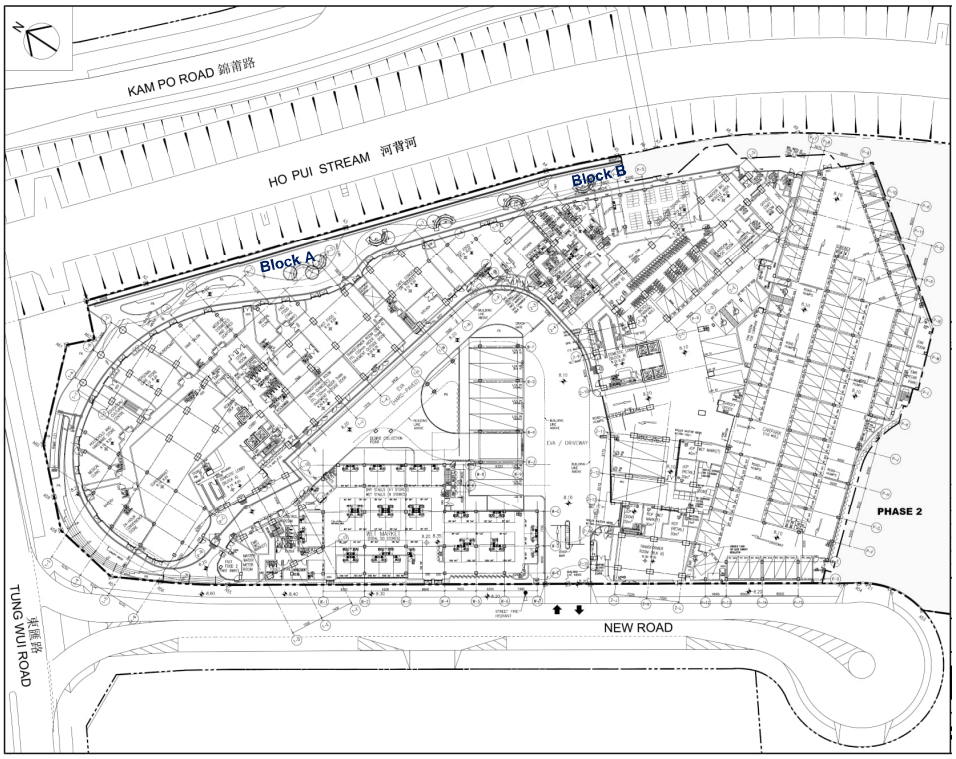
3 幅公營房屋用地的概念設計圖
CONCEPTUAL LAYOUT PLAN OF THE THREE PUBLIC HOUSING SITES

規劃署
PLANNING DEPARTMENT

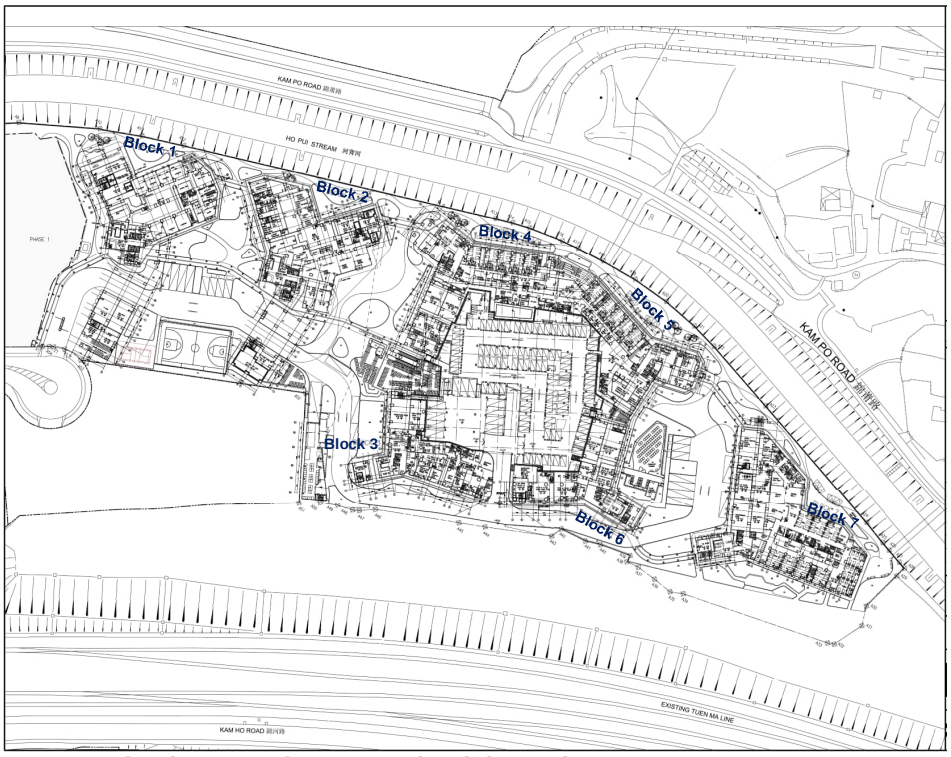
參考編號
REFERENCE No.
R/S/YL-KTS/14

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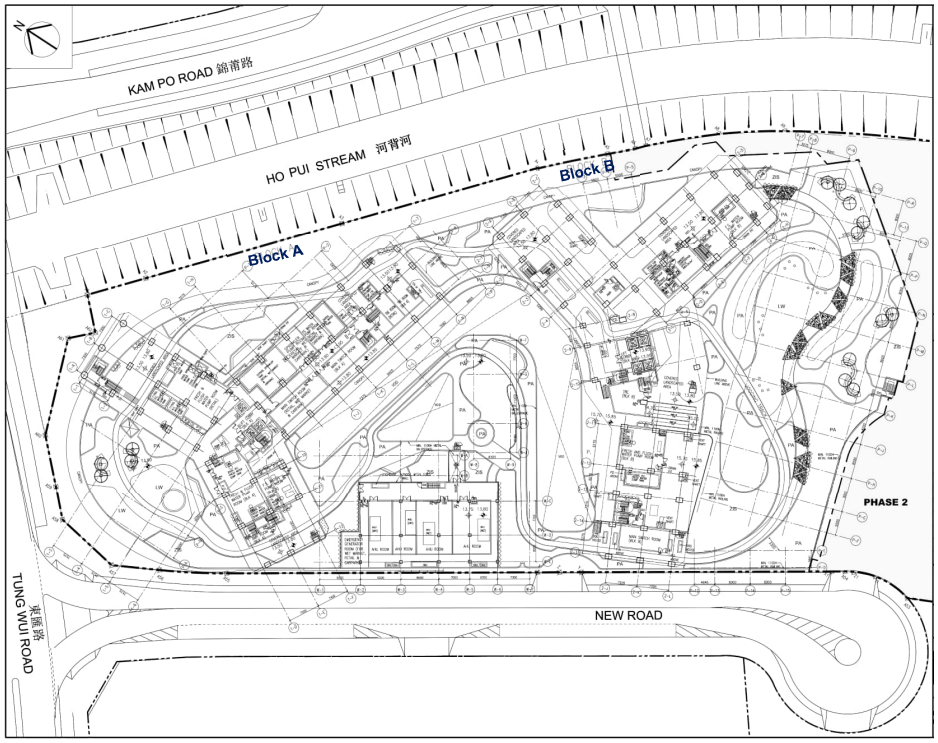
(2) Kam Sheung Road Site 1



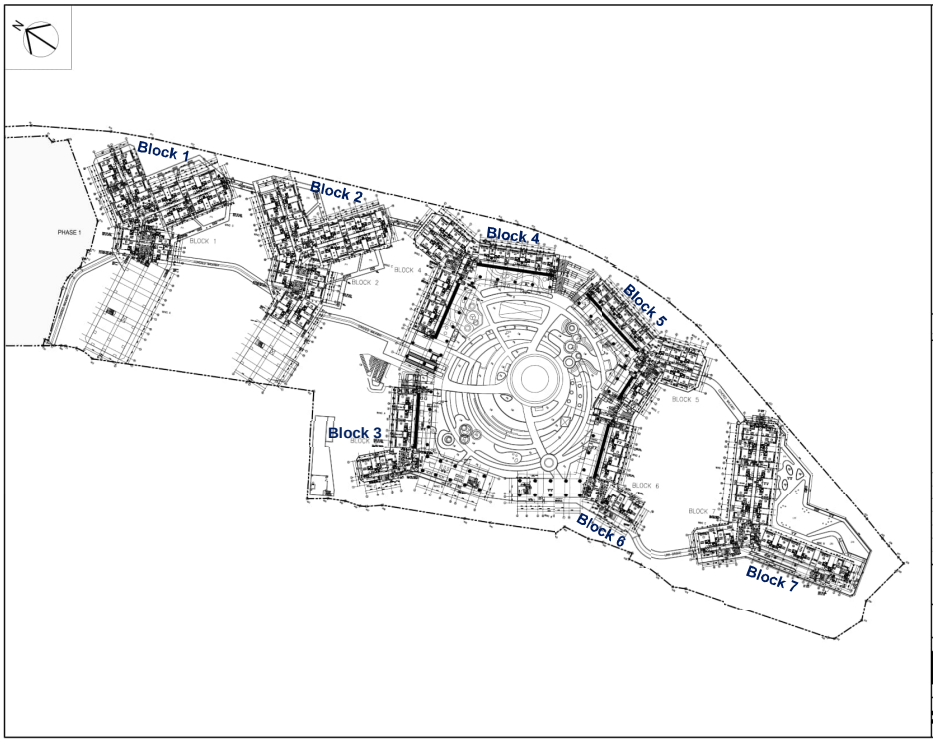
Proposed Scheme – G/F Layout Plan (Phase 1)



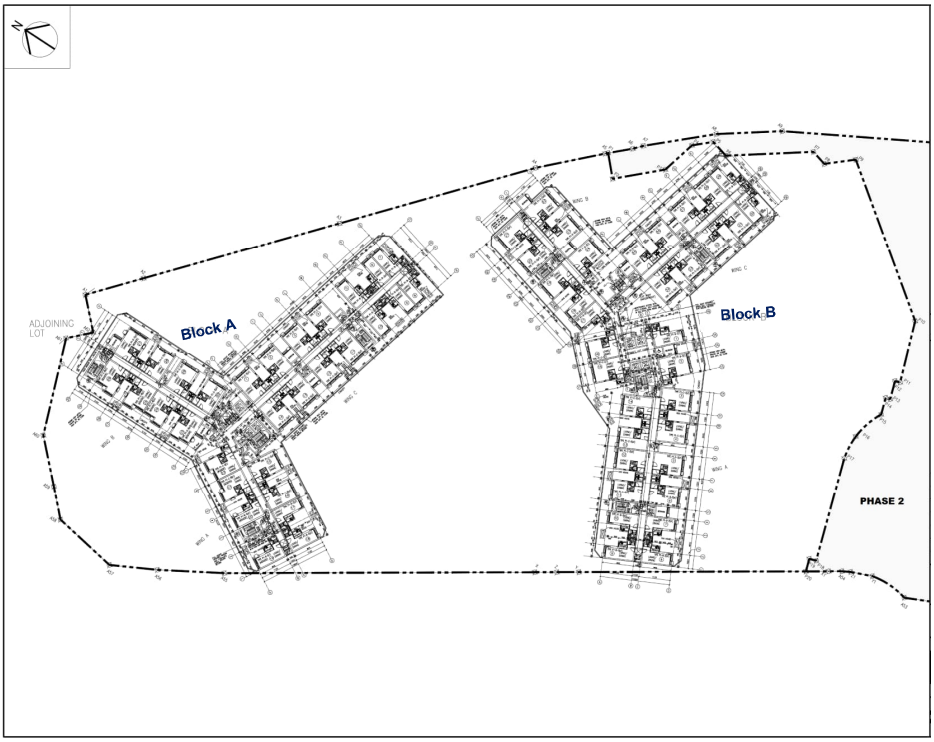
Proposed Scheme – G/F Layout Plan (Phase 2)



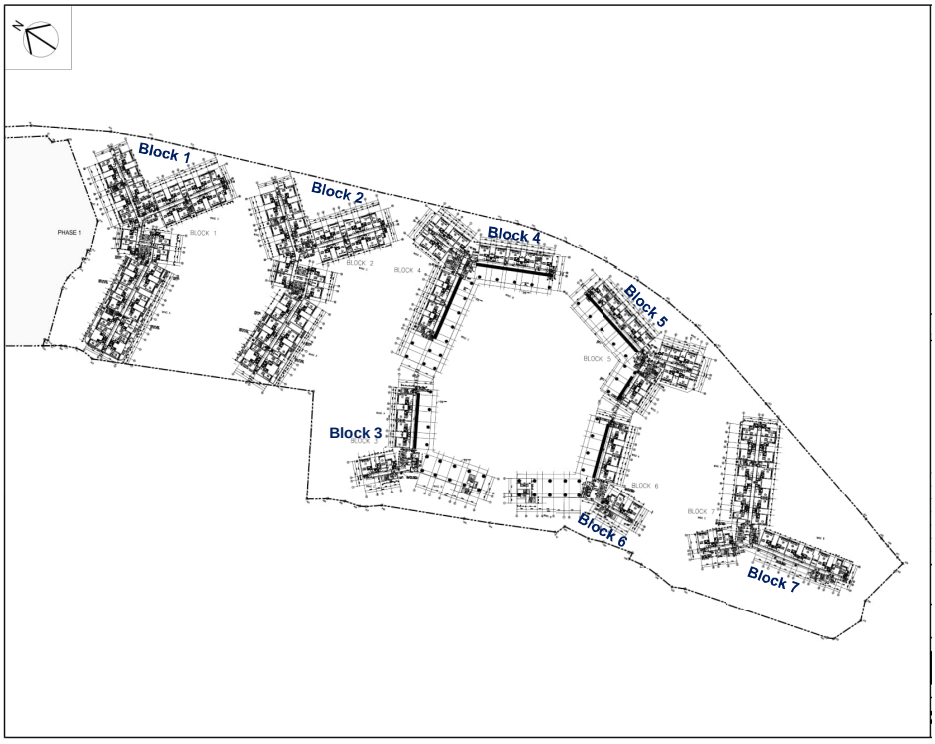
Proposed Scheme – 1/F Layout Plan (Phase 1)



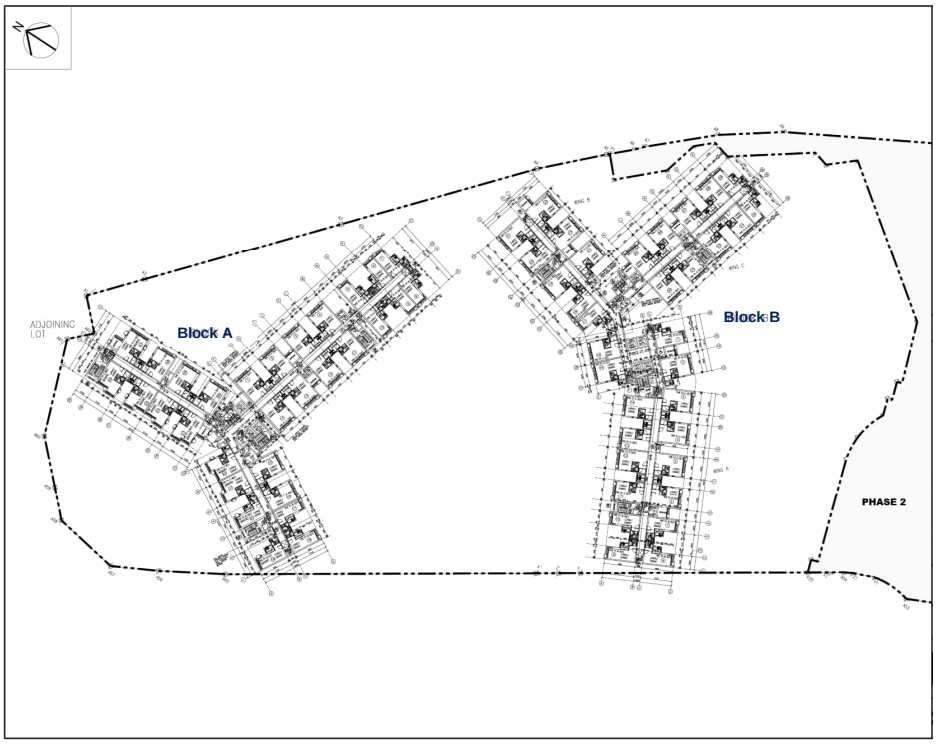
Proposed Scheme – 1/F Layout Plan (Phase 2)



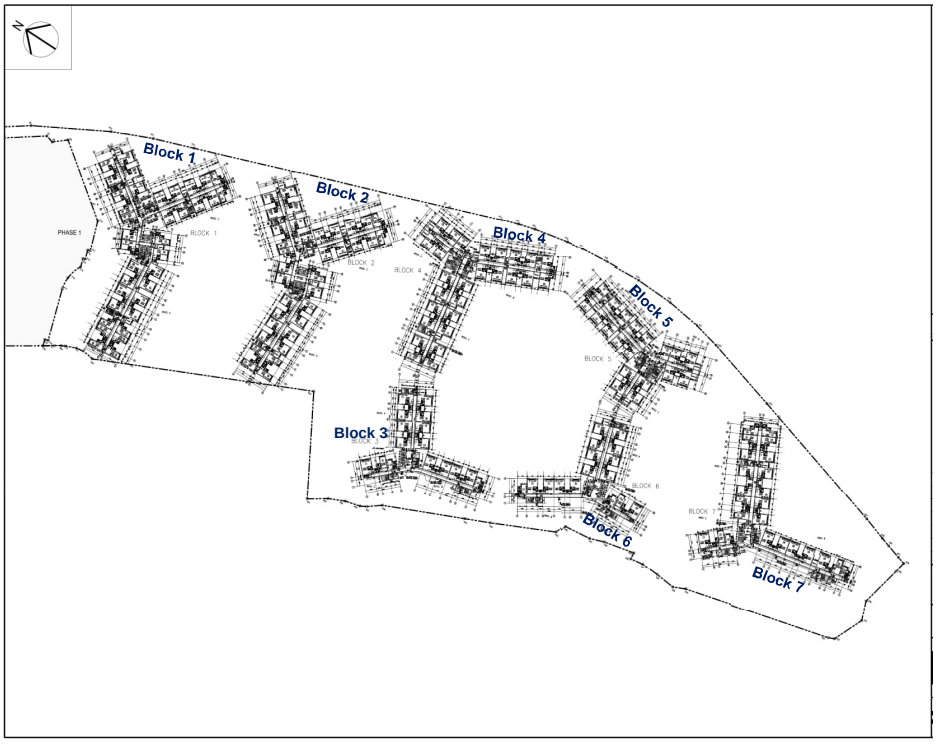
Proposed Scheme – 2/F Layout Plan (Phase 1)



Proposed Scheme – 2/F Layout Plan (Phase 2)

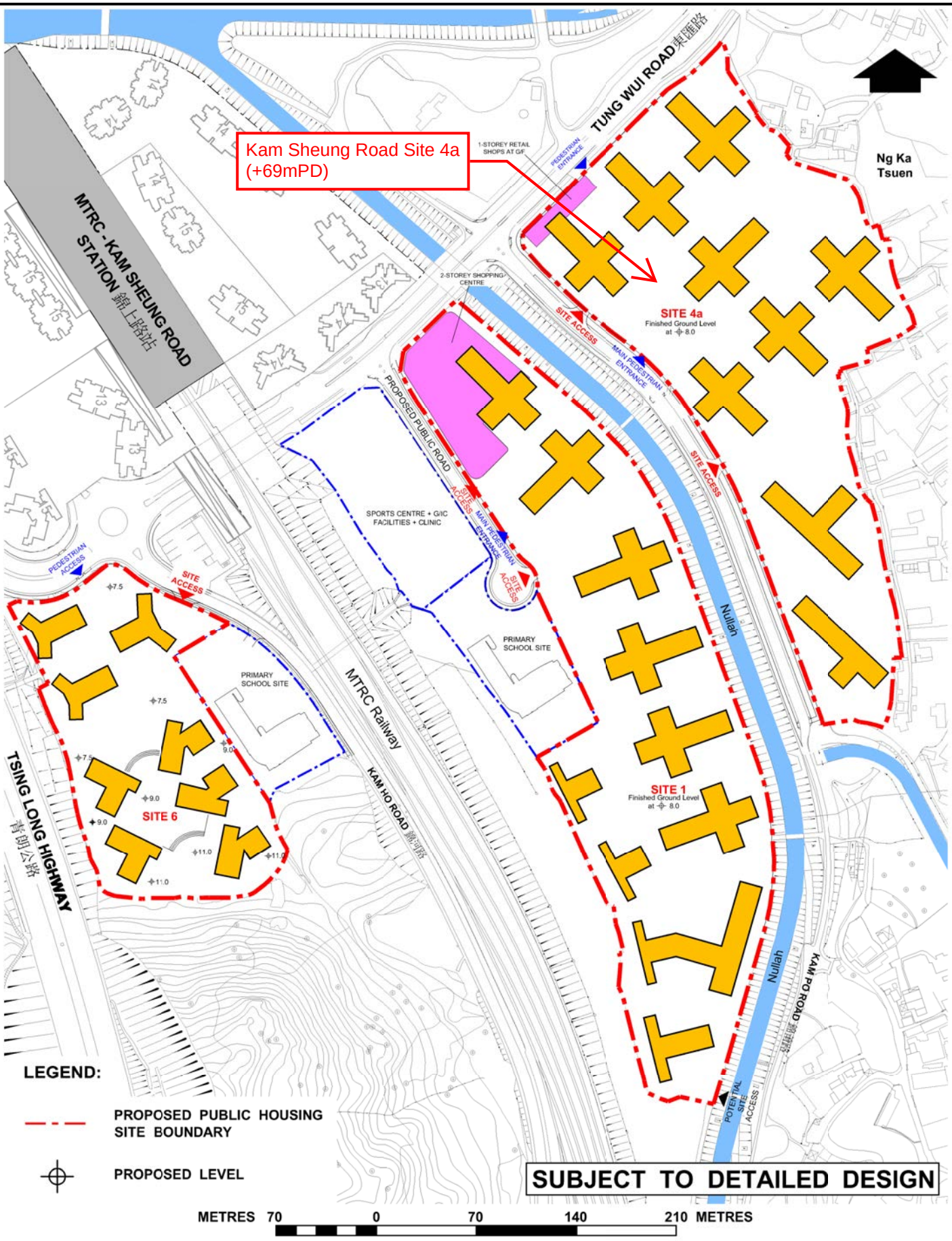


Proposed Scheme – Typical Floor Layout Plan (Phase 1)



Proposed Scheme – Typical Floor Layout Plan (Phase 2)

(3) Kam Sheung Road Site 4a



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資料來源:房屋署
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DATA SOURCE : HOUSING DEPARTMENT

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PLANNING DEPARTMENT

參考編號
REFERENCE No.
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圖 PLAN
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(4) Kam Sheung Road Site 6

Proposed Scheme

3.8 The Proposed Scheme comprises 5 blocks of 14 to 15 domestic storeys, sitting on 2 to 3-storey podiums with welfare facilities and carpark. Landscape, open space, main domestic lift lobbies, and other ancillary facilities are located on the G/F and UG/F as shown in **Figure 3.5 to Figure 3.10**. The proposed good design features includes the air permeable spaces under the residential blocks at podium levels, a 30m width Eco-corridor maintained between residential Block B and Block C which aligns in the ENE-WSW direction, 15m width building gap between each building blocks, building setback from the site boundary and nearby major roads is considered to reduce wind impact, and the truncated design under Block C to improve air permeability.

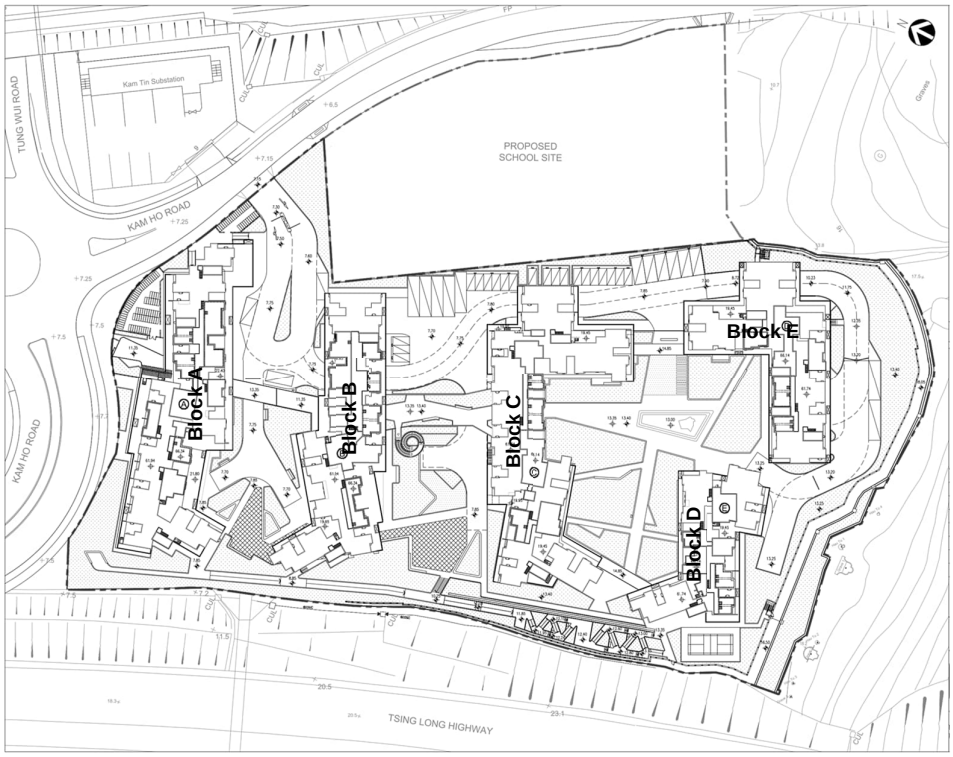


Figure 3.4 Proposed Scheme – Master Layout Plan

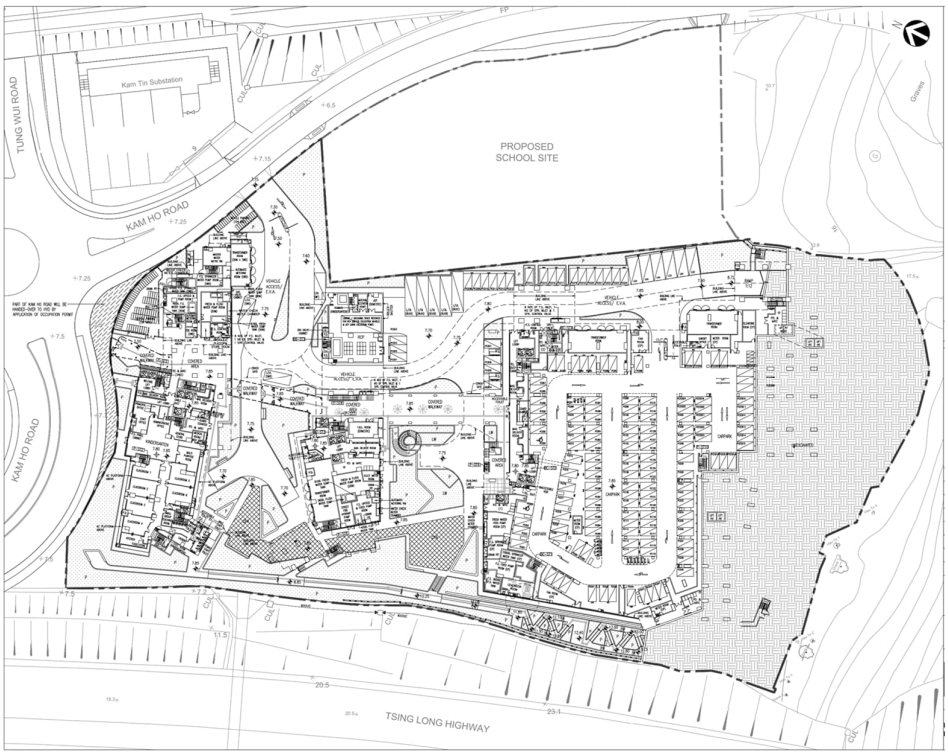


Figure 3.5 Proposed Scheme – Ground Floor Layout

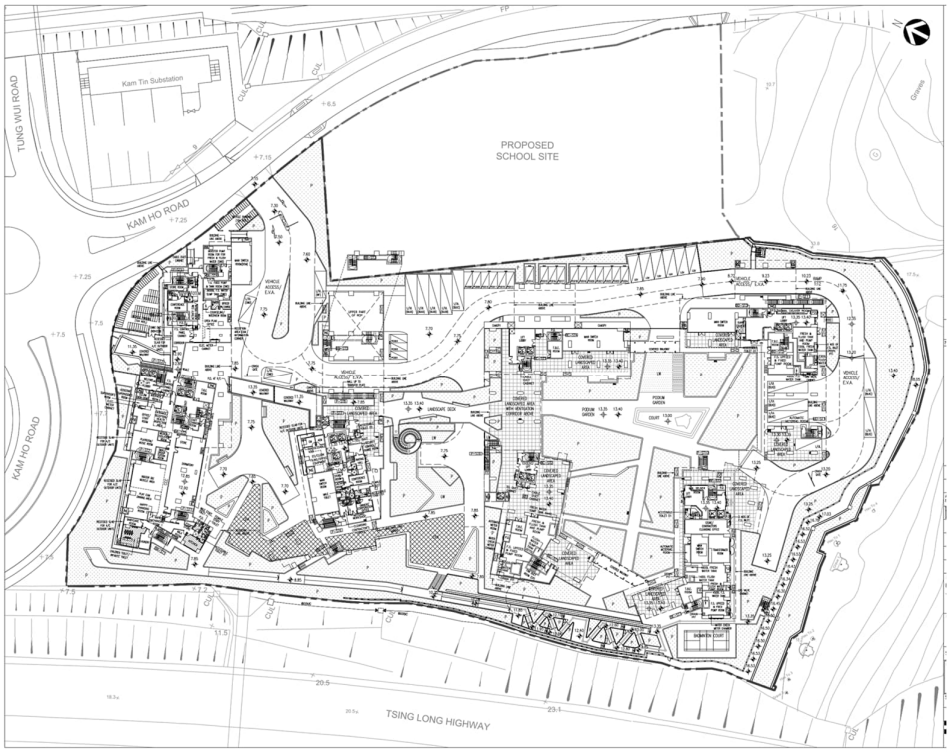


Figure 3.6 Proposed Scheme – First Floor Layout for Block A and Upper Ground Floor Layout for Block B, C, D & E



Figure 3.7 Proposed Scheme – Second Floor Layout for Block A and First Floor Layout for Block B, C, D & E



Figure 3.8 Proposed Scheme –Typical Floor Layout for Block A, B, D & E and Block C (1-4/F)

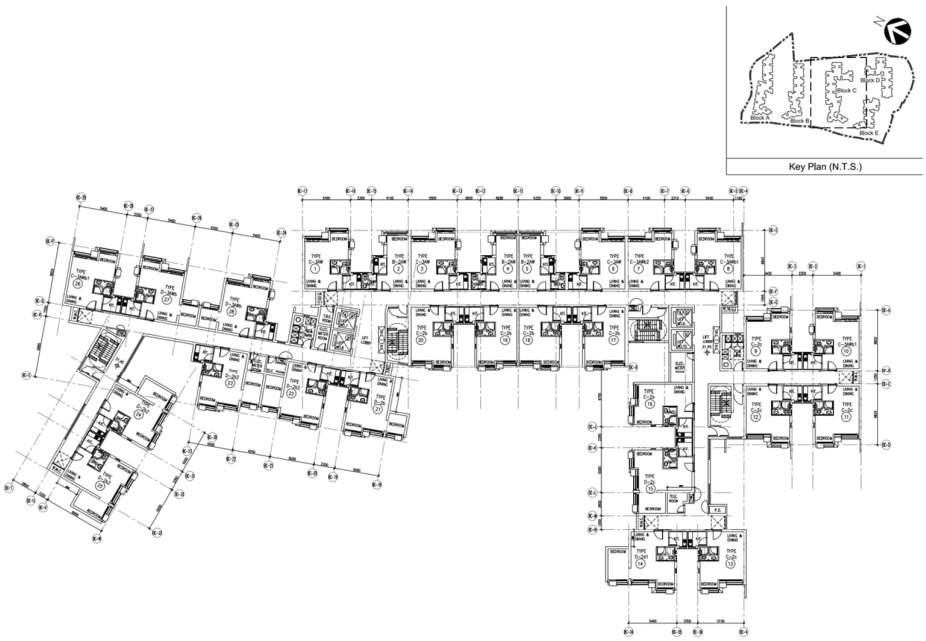


Figure 3.9 Proposed Scheme – Typical Floor Layout for Block C (5/F)

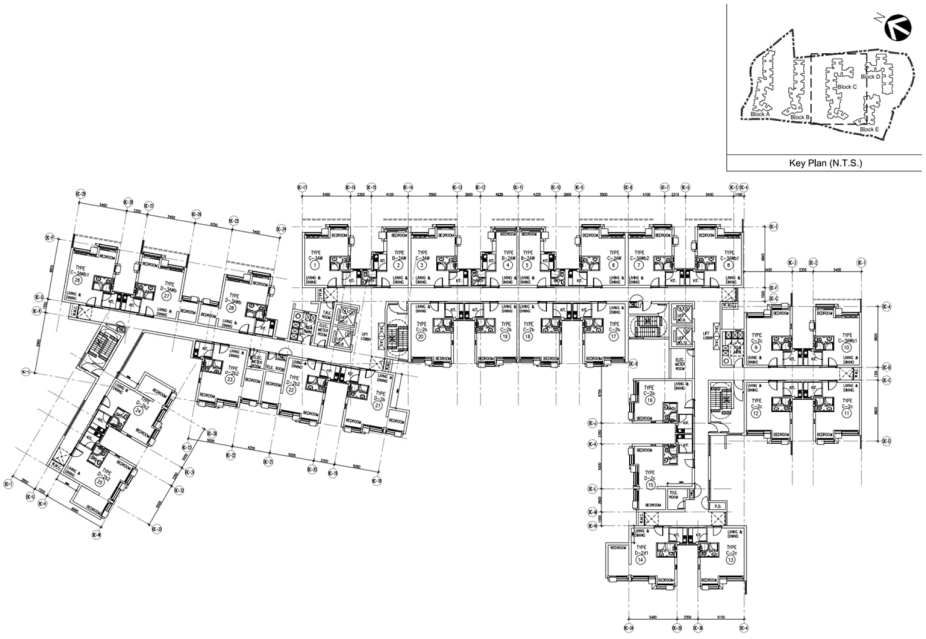
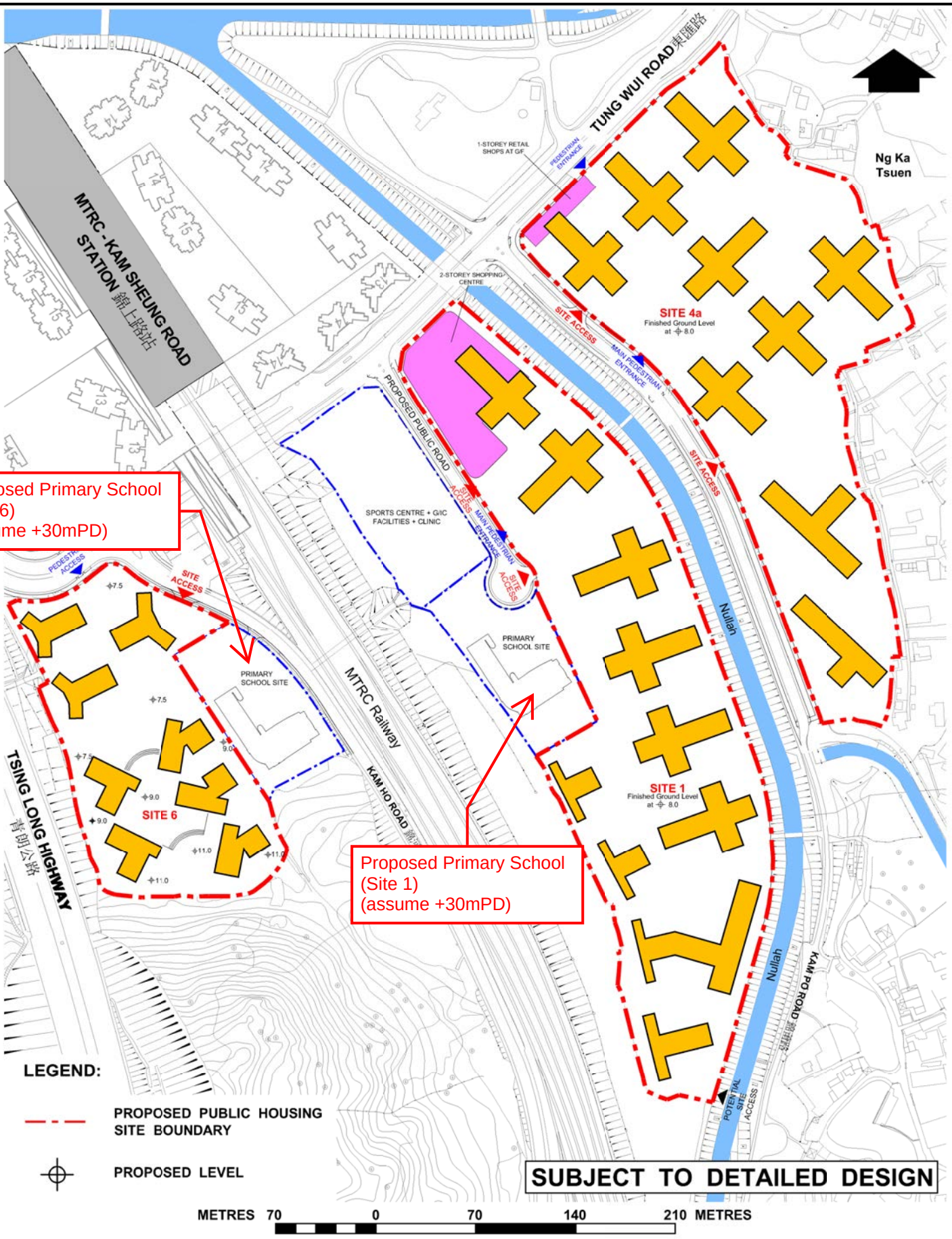


Figure 3.10 Proposed Scheme – Typical Floor Layout for Block C (6-15/F)

(5) Proposed Primary School (Site 1)
(6) Proposed Primary School (Site 6)



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資料來源:房屋署
EXTRACT PLAN PREPARED ON 16.7.2018
DATA SOURCE : HOUSING DEPARTMENT

3 幅公營房屋用地的概念設計圖
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PLANNING DEPARTMENT

參考編號
REFERENCE No.
R/S/YL-KTS/14

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H-9

AECOM

Hong Kong Housing Authority

Proposed Public Housing Development at Kam Sheung Road Site 1, Site 4a and Site 6 Air Ventilation Assessment

Expert Evaluation – Final Report

September 2016

	Name	Signature
Prepared & Checked:	Karl An	
Reviewed & Approved:	Kenneth Lam	

Version: Final Version 8 Date: 12th September 2016

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This Expert Evaluation – Final Report is prepared for Housing Authority and is given for its sole benefit in relation to and pursuant to Kam Sheung Road Development and may not be disclosed to, quoted to or relied upon by any person other than Housing Authority / identified recipient as requested under the Agreement with Housing Authority without our prior written consent. No person (other than Housing Authority) into whose possession a copy of this Expert Evaluation –Final Report comes may rely on this Expert Evaluation – Final Report without our express written consent and Housing Authority may not rely on it for any purpose other than as described above.

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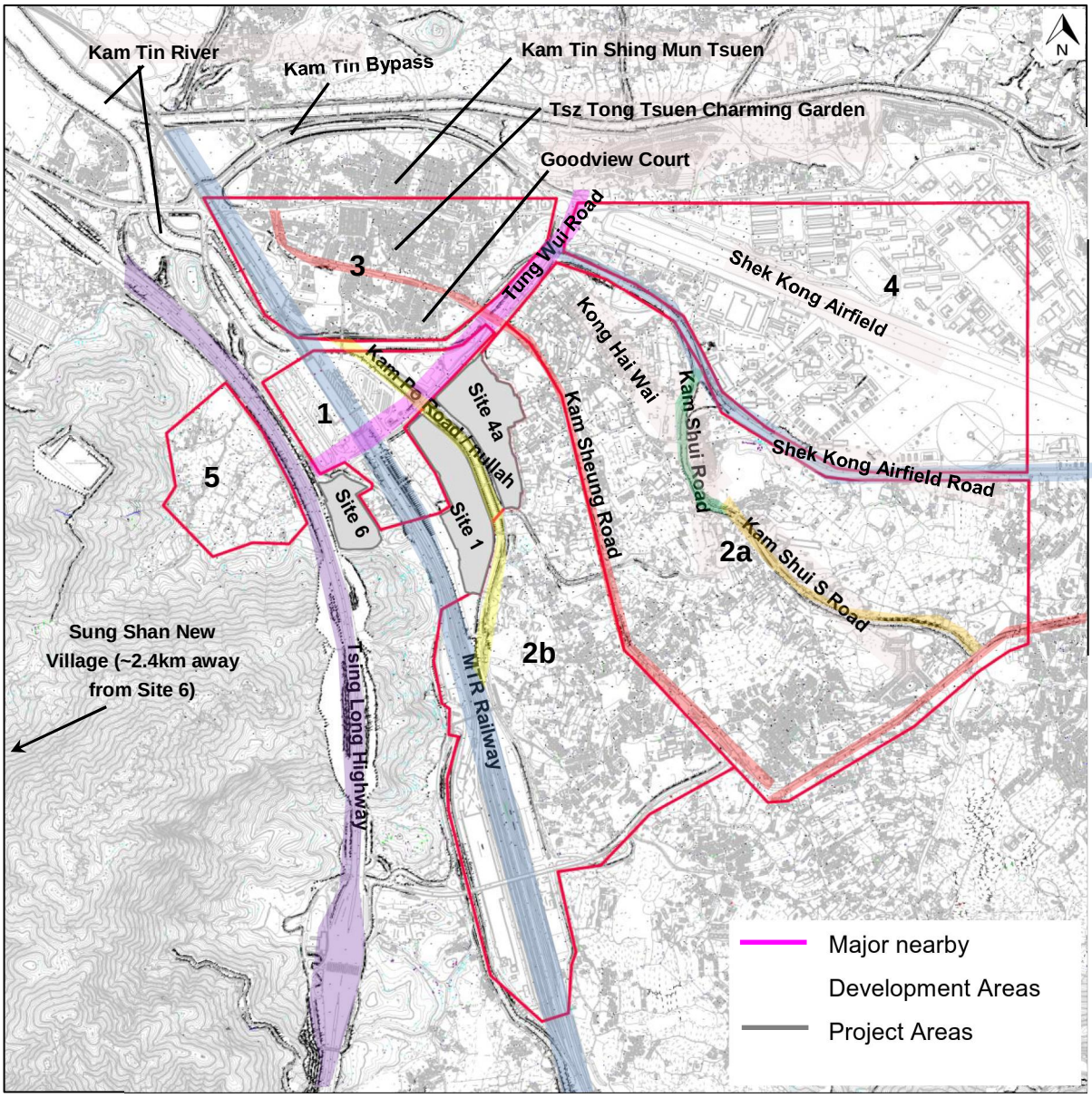


Figure 4.4 Major Groups of Developments

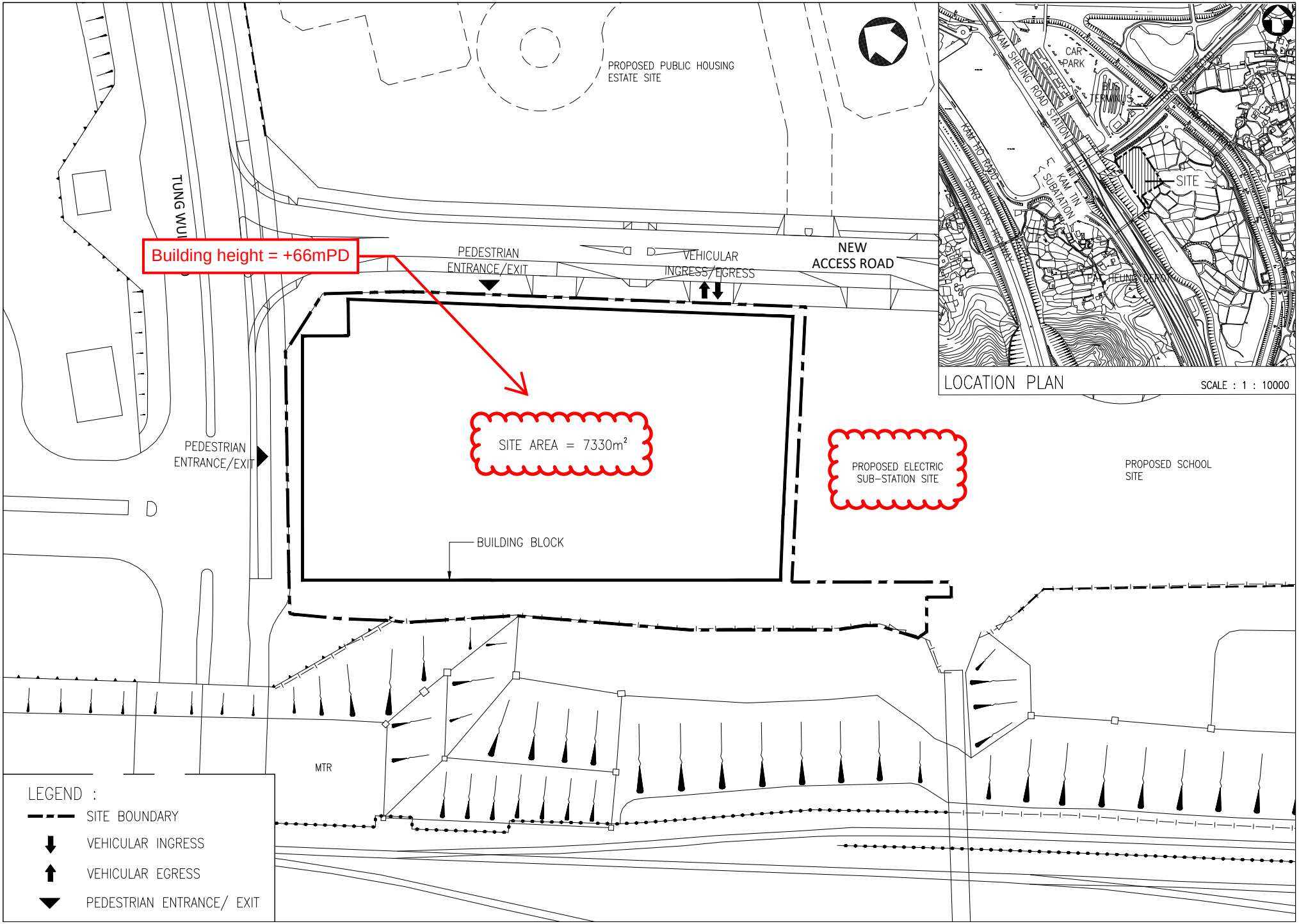
4.6 Region 1 is located at the immediate north / north-northwest of the Project Areas, which are mainly the potential KSRS Development Site. Within Region 1 are mid-rise potential residential developments with height ranging from 65 to 79mPD, and the existing Kam Sheung Road MTR Station with its elevated railway. While the portion of Region 1 that sandwiched between Project Areas (Site 1 and Site 6), are proposed to be developed into mid-rise G/IC facilities such as clinic / sports centre and primary schools (with assumed building height of around 30 mPD).

4.7 Region 2a is located to the east to the Project Areas (Site 4a, Site 1 and Site 6). The current condition of this region consists of low-rise village type developments and storage houses which mainly belongs to Ng Ka Tsuen, and Kong Ha Wai. There are also potential mid-rise developments in this region, with maximum building height of 64mPD.

4.8 The Region 2b is located to the immediate east and south of the Project Areas, th San Tsuen is located within this region. The committed development within the Re around 65-79mPD in height. It is also noticed that the proposed developments of We Heung Maintenance Centre is located further south within Region 2b, with building height of around 95+mPD.

Assuming the building height of primary schools is +30mPD

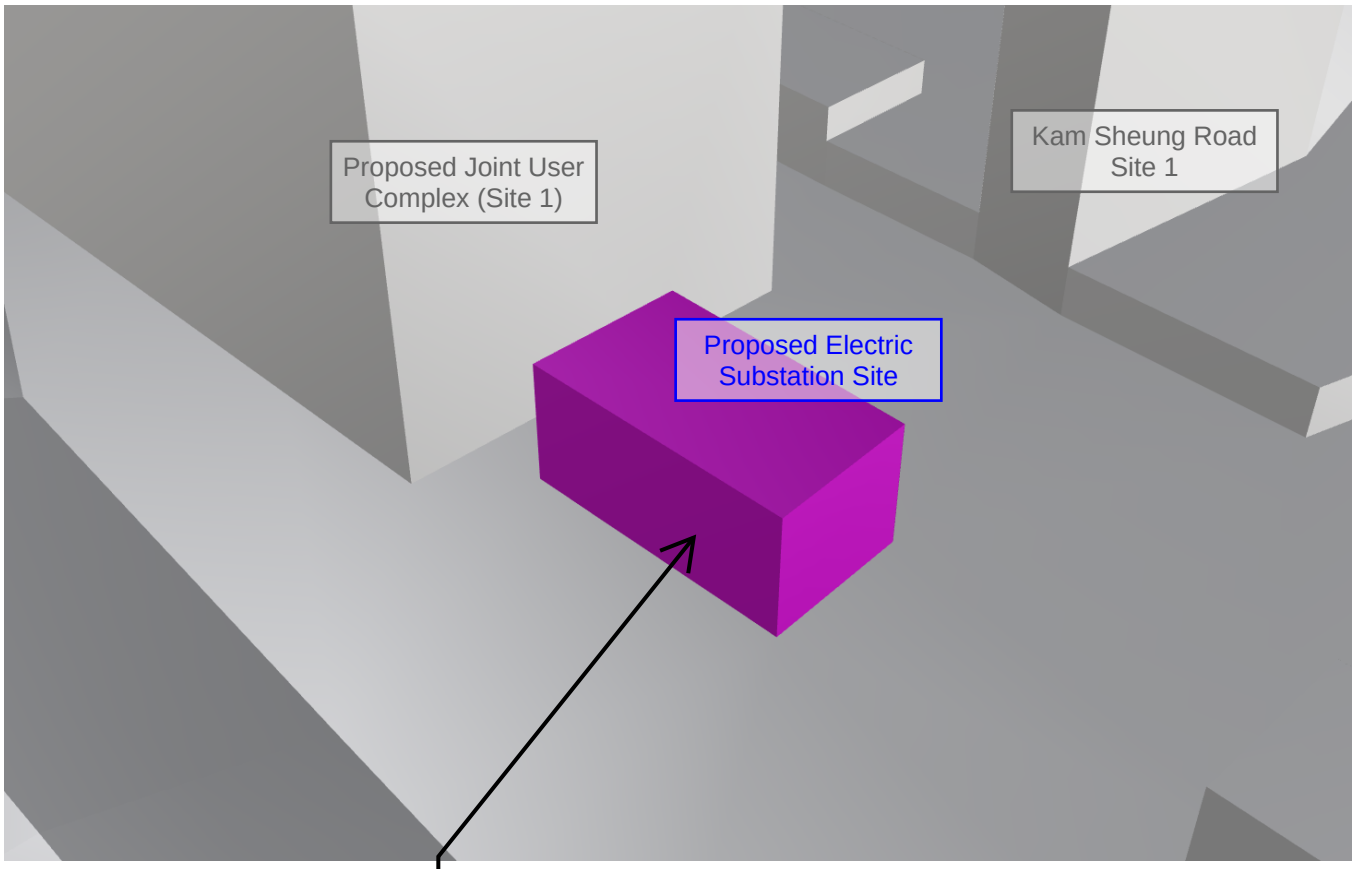
(7) Proposed Joint User Complex (Site 1)
(8) Proposed Electric Substation Site



8707-JUC AT KAM TIN SOUTH

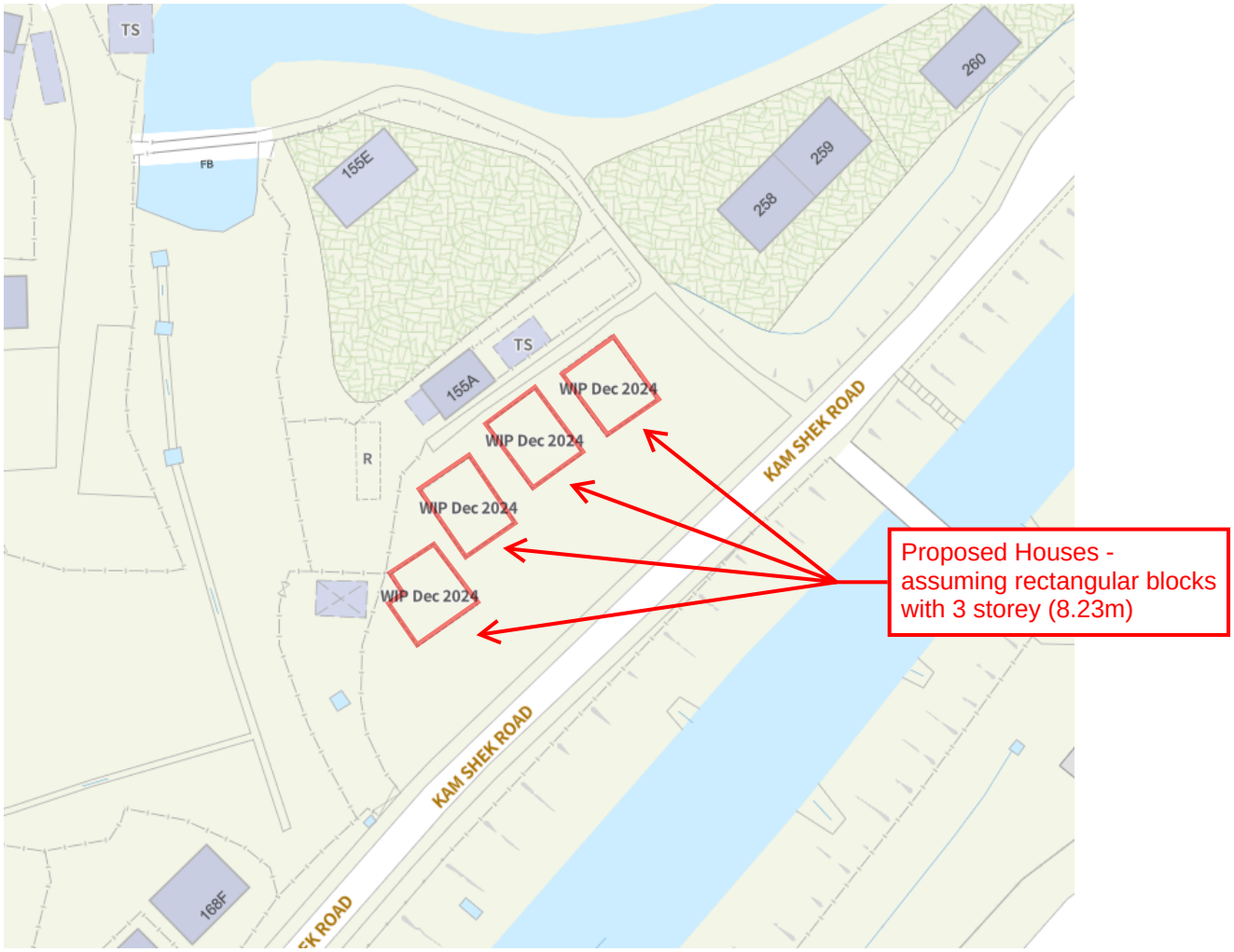
BLOCK PLAN (1:1000@A4)

Nov 2025



Indicative layout of **Proposed Electric Substation**
- Building Footprint: ~2600 sq. m
- Building Height : 15.4 m

(9) Proposed Houses at Kam Shek Road



VILLAGE TYPE DEVELOPMENT (cont'd)

Planning Intention

The planning intention of this zone is to reflect existing recognized and other villages, and to provide land considered suitable for village expansion and reprovisioning of village houses affected by Government projects. Land within this zone is primarily intended for development of Small Houses by indigenous villagers. It is also intended to concentrate village type development within this zone for a more orderly development pattern, efficient use of land and provision of infrastructures and services. Selected commercial and community uses serving the needs of the villagers and in support of the village development are always permitted on the ground floor of a New Territories Exempted House. Other commercial, community and recreational uses may be permitted on application to the Town Planning Board.

Remarks

(a) No new development, or addition, alteration and/or modification to or redevelopment of an existing building (except development or redevelopment to those annotated with #) shall result in a total development and/or redevelopment in excess of a maximum building height of 3 storeys (8.23m) or the height of the building which was in existence on the date of the first publication in the Gazette of the notice of the interim development permission area plan, whichever is the greater.

Building height

(10) Proposed Residential Development at Kam Tai Road

KAM TAI ROAD

KAM HING ROAD

LANDSCAPE AREA

TOWER 1

TOWER 2

PEDESTRIAN ACCESS

VEHICULAR ACCESS

+4.6

+5.2

+4.84

+4.825

+3.000

EVA

50m SET-BACK

MTR (WEST RAIL LINE)

MTR (WEST RAIL LINE)

RAMP DOWN TO BASEMENT CARPARK

RAMP DOWN TO BASEMENT CARPARK 1:10

CYCLING TRACK

KAM TIN BYPASS

LEGEND :

APPLICATION SITE

TOWER

HOUSE

申請編號 Application No. : A/YL-KTN/791

此頁摘自申請人提交的文件。

This page is extracted from applicant's submitted documents.

PROPOSED RESIDENTIAL DEVELOPMENT AT LOT 2206 IN DD 109 ON KAM TAI ROAD IN KAM TIN

MASTER LAYOUT PLAN

Scale : 1:600 (A3)

Dwg. No. :
Date : 2021-08-20
File Path :

For illustration Purpose only



Site Area: 15,978m²
Private Open Space for residents: 924m² for estimated population of 924 people

Legend

- Site Boundary
- 1.1m High Railing
- Green Wall
- Lawn
- Green Roof
- Seating Bench
- Children's Play Area
- +4.825 Level
- Pedestrian Entrance/Exit
- Vehicular Entrance/Exit
- Trellis
- Hobby Farm
- Decorative Paving
- Footpath/Fire Escape
- New Tree Planting (150 nos.)
- Amenity Planting (Lawn and 102 New Trees) in Private Garden
- Preserved Tree (14nos.)

1. Drainage Reserve (DR) is designated at the northern periphery of the site abutting to Kam Tai Road under the Lease. Existing trees with better form and condition will be preserved in-situ. Remaining DR area will be reinstated with lawn/shrub planting and hard paved area. In addition to tree preservation and new plantings within the site and existing planning outside the site, planting in private gardens of proposed houses will also contribute in maintaining the plantation corridor along Kam Tai Road and Kam Tin River, forming a transition from riverside to residential landscape.
2. Entrance threshold to the proposed residential development is designed with feature paving to create identity and character for the development.
3. EVA and Fire Escape for emergency between proposed houses aligned with shrub and tree planting to disguise their functional appearance and contributes to the streetscape of proposed development.
4. Courtyard garden, Hobby Farm and Children's Play Area are framed and shaded by new tree plantings that would provide passive recreational facilities and sitting- out area for the enjoyment of future residents.
5. Planting in private gardens and new tree planting extends along the eastern periphery of the site to soften the development edge.
6. 3m high boundary wall with aesthetic treatment provides screening to conservation areas outside the site.
7. Clubhouse facilities is located at the basement.
8. 12m wide planting buffer with 4 rows of tree planting (8m high) screening any potential disturbance to the conservation area.
9. Planting buffer with tree planting (8m high) screening any potential disturbance to the conservation area.
10. 9.8m high wall screening any potential disturbance to the conservation area and mitigated the railway noise. Use of green wall (proprietary system product) and hedge planting at the bottom enhanced the green amenity to the conservation area and to disguise its functional appearance.
11. Vertical greening – Cable Wiring Type applied on the façade of car ramp structure to soften the development edge.

申請編號 Application No. : A/YL-KTN/791
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This page is extracted from applicant's submitted documents.

Proposed Residential Development at Lot 2206 in DD 109 on Kam Tai Road in Kam Tin

Landscape Proposal

SCALE	AS SHOWN	DATE	AUG 2021
CHECKED	ELK	DRAWN	TEAM
FIGURE NO.	Figure 1.0	REV	-

ADI LIMITED
LANDSCAPE ARCHITECTURE, URBAN DESIGN AND MASTER PLANNING
10/F BANGKOK BANK BUILDING, 18 BONHAM STRAND WEST, HONG KONG
[redacted]

Appendix C

Contour Plots of VR

C.1 Baseline Scheme – Assessment Area

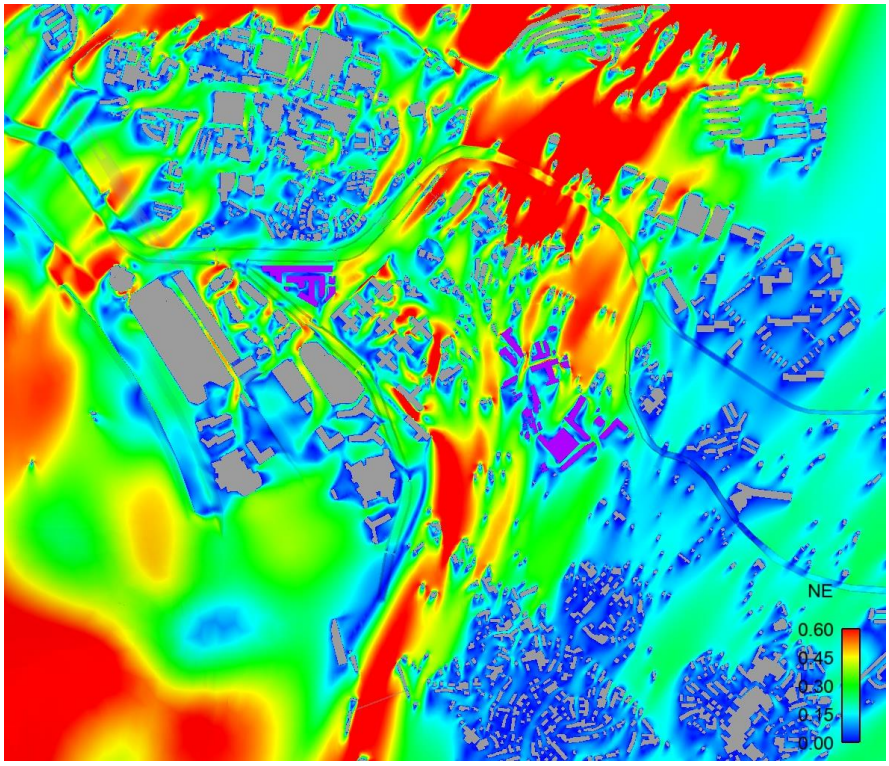


Figure C-1 Contour Plot of VR under NE Wind

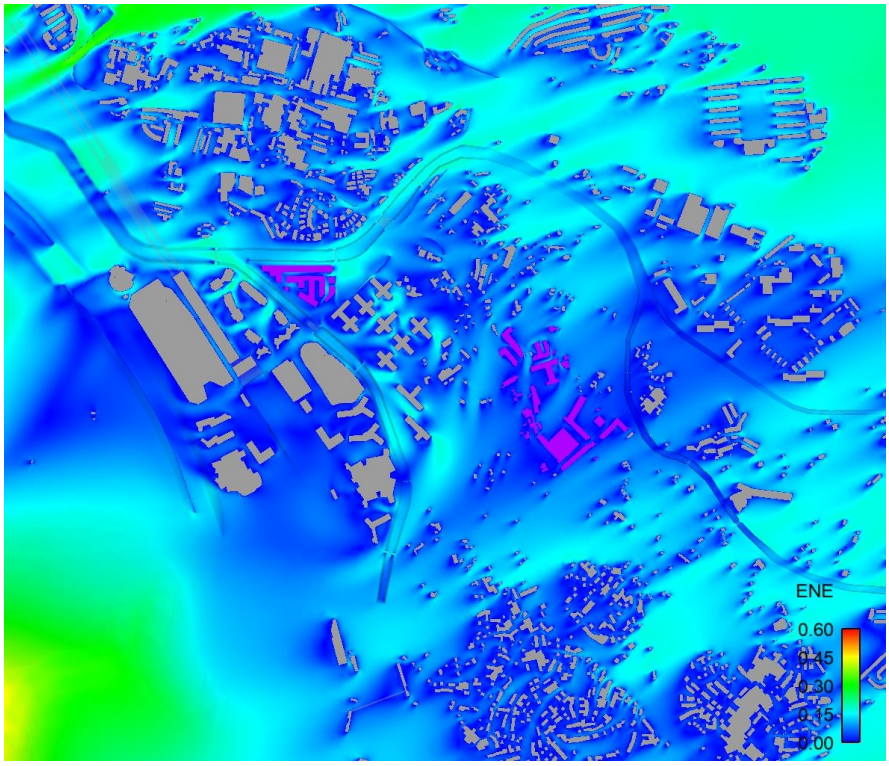


Figure C-2 Contour Plot of VR under ENE Wind

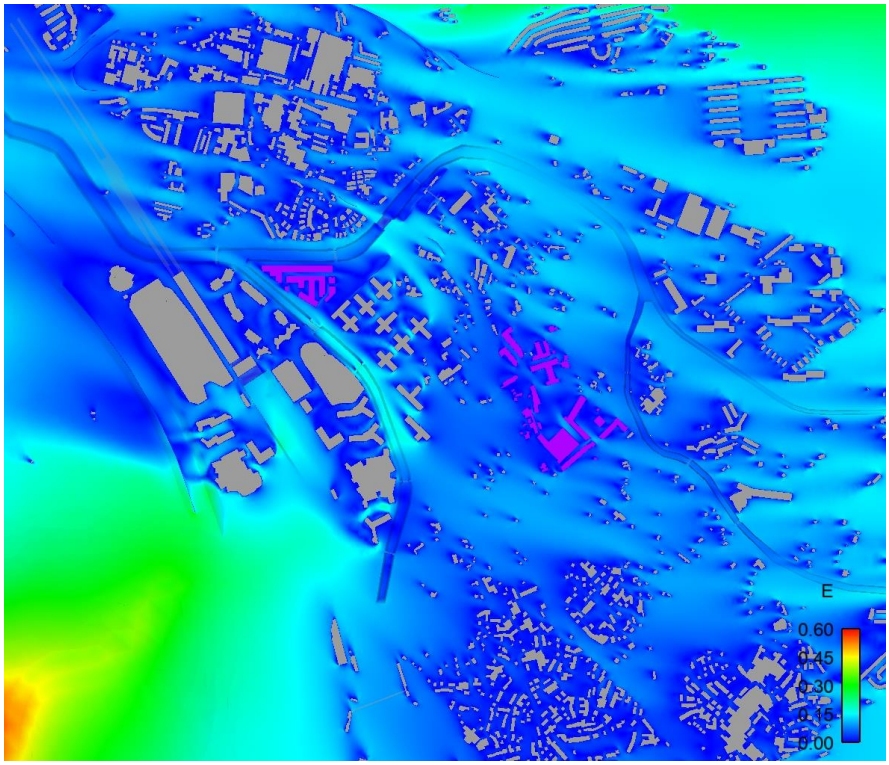


Figure C-3 Contour Plot of VR under E Wind

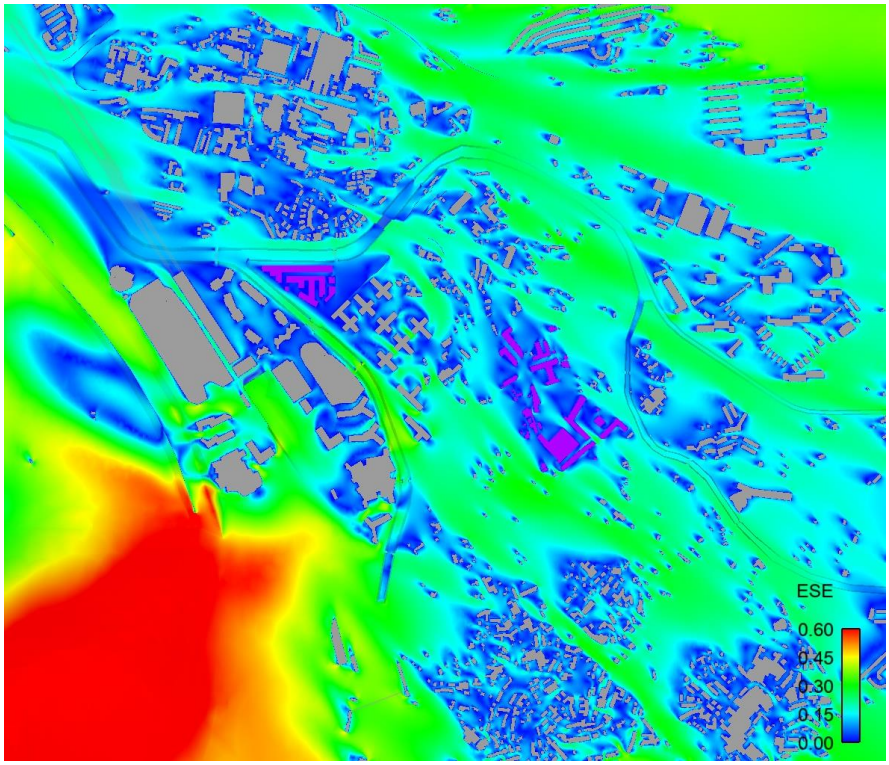


Figure C-4 Contour Plot of VR under ESE Wind

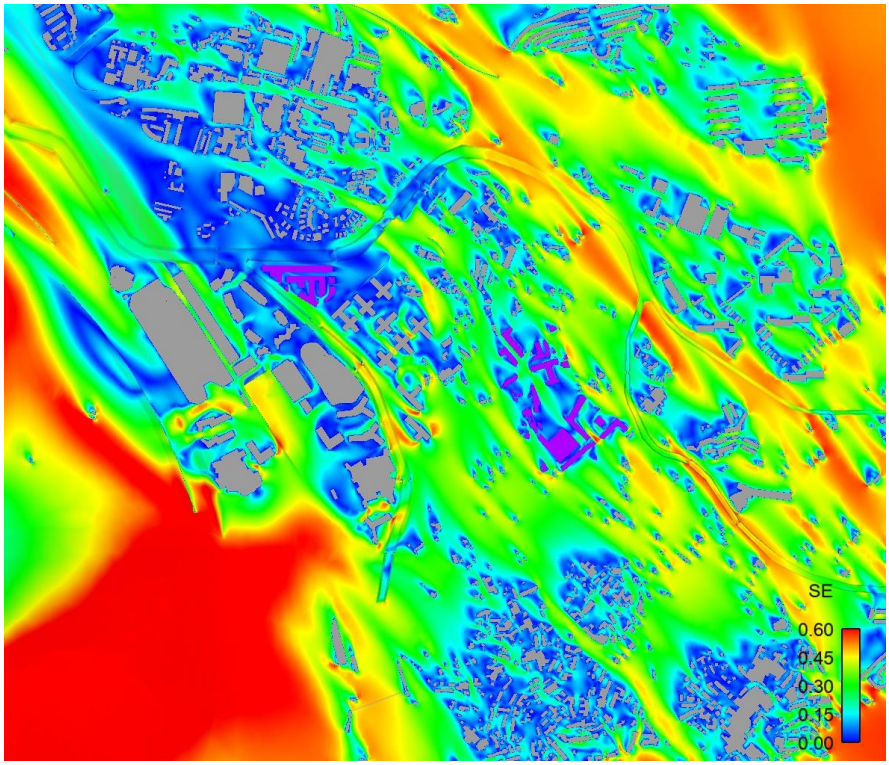


Figure C-5 Contour Plot of VR under SE Wind

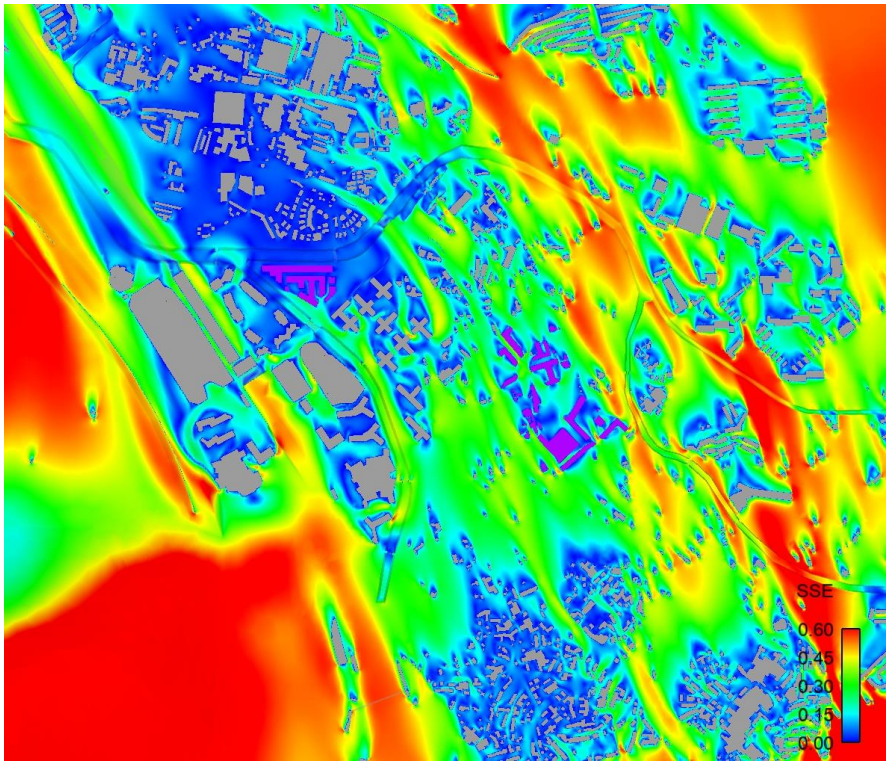


Figure C-6 Contour Plot of VR under SSE Wind

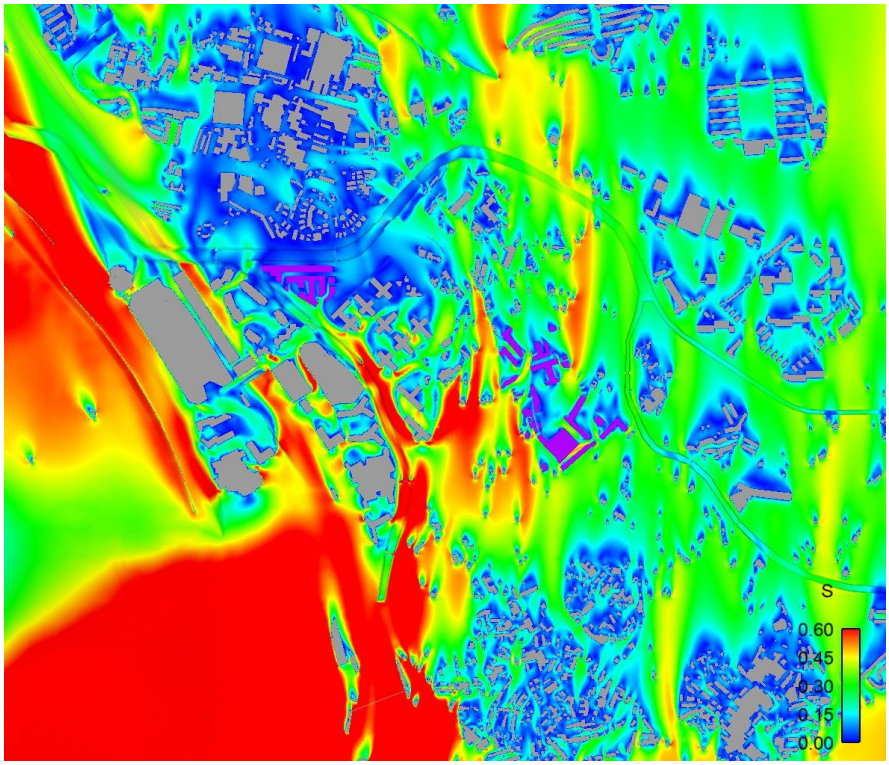


Figure C-7 Contour Plot of VR under S Wind

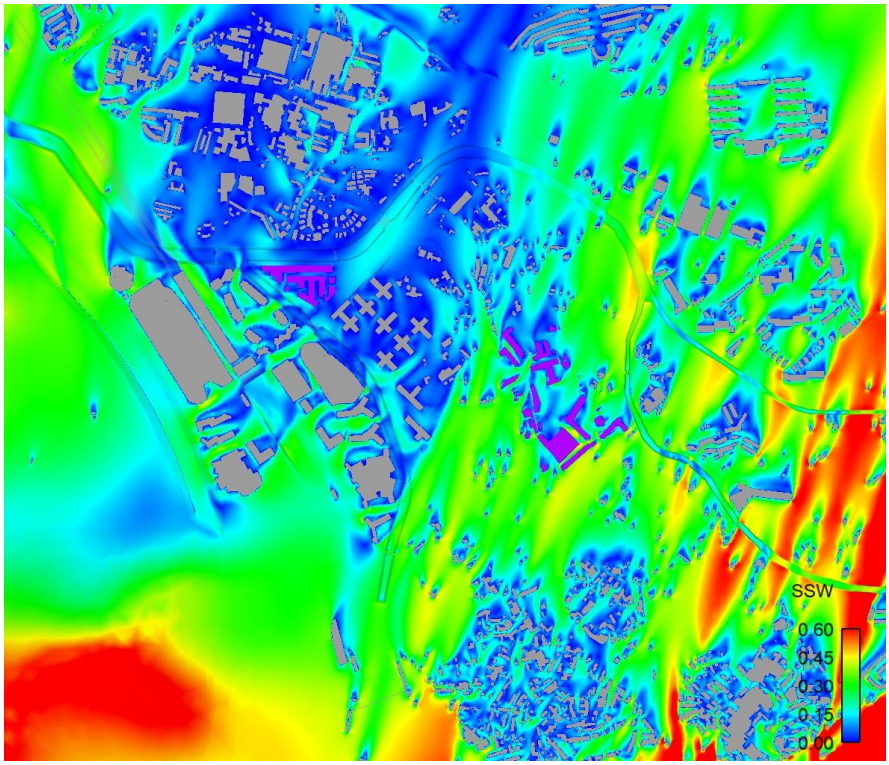


Figure C-8 Contour Plot of VR under SSW Wind

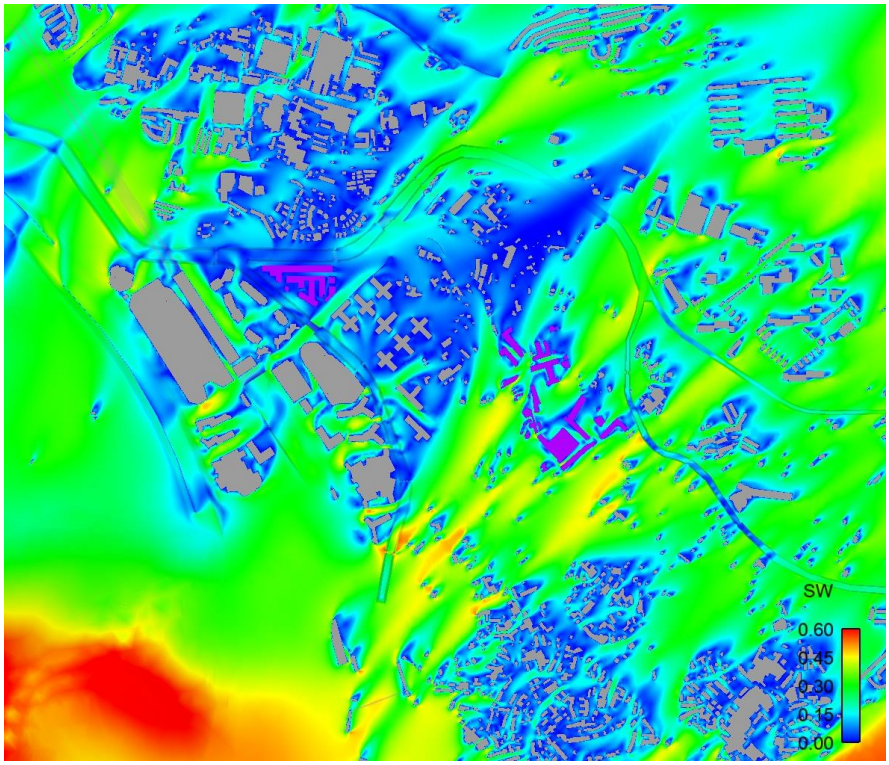


Figure C-9 Contour Plot of VR under SW Wind

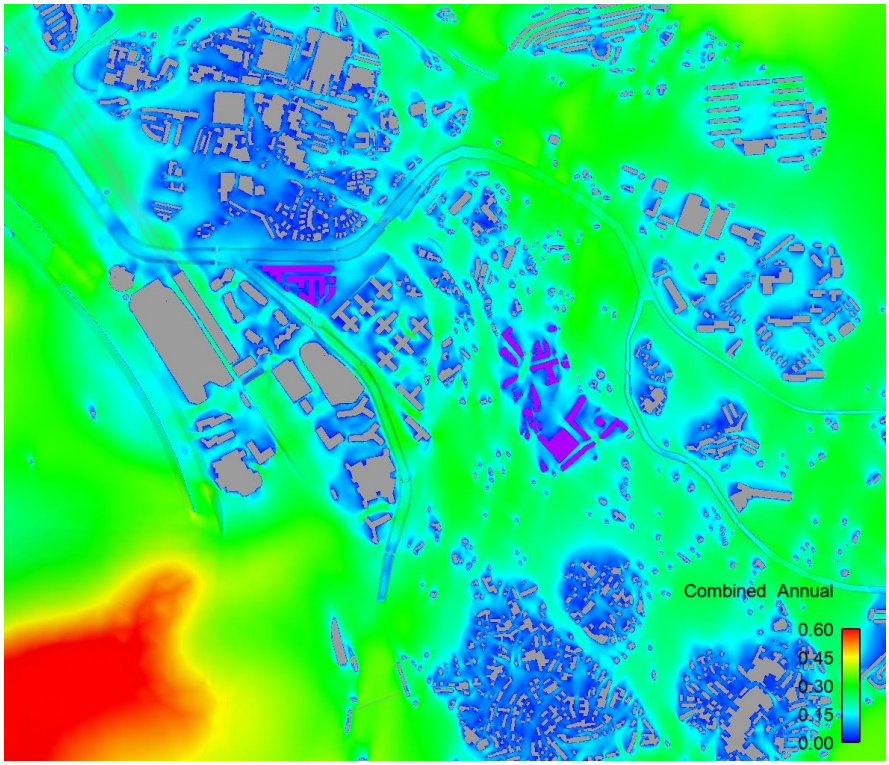


Figure C-10 Annual Weighted Average Contour Plot of VR

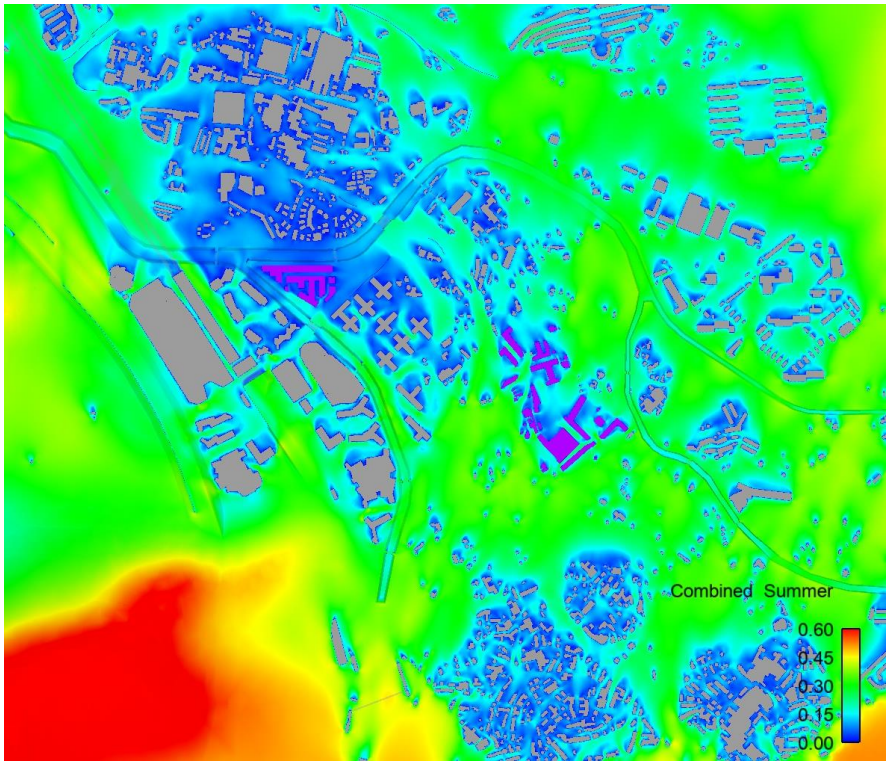


Figure C-11 Summer Weighted Average Contour Plot of VR

C.2 Cumulative Scheme – Assessment Area

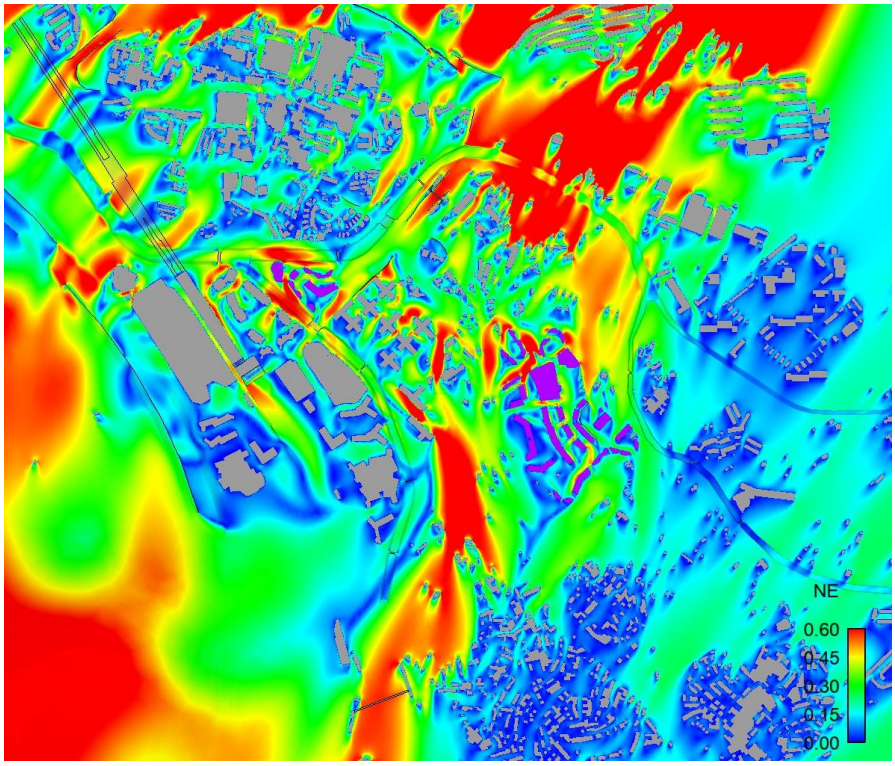


Figure C-12 Contour Plot of VR under NE Wind

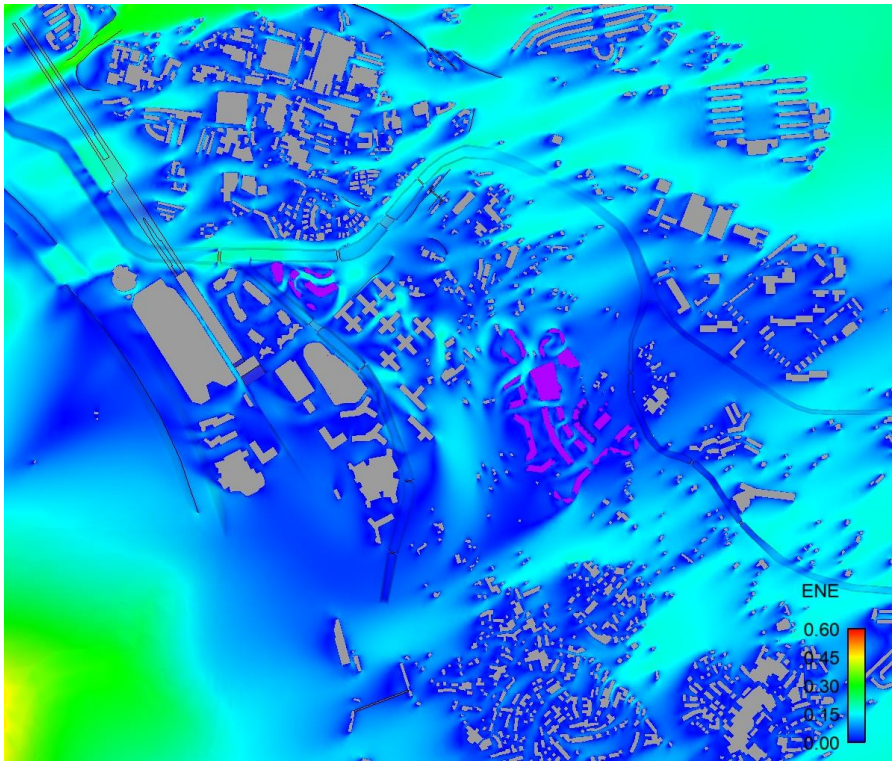


Figure C-13 Contour Plot of VR under ENE Wind

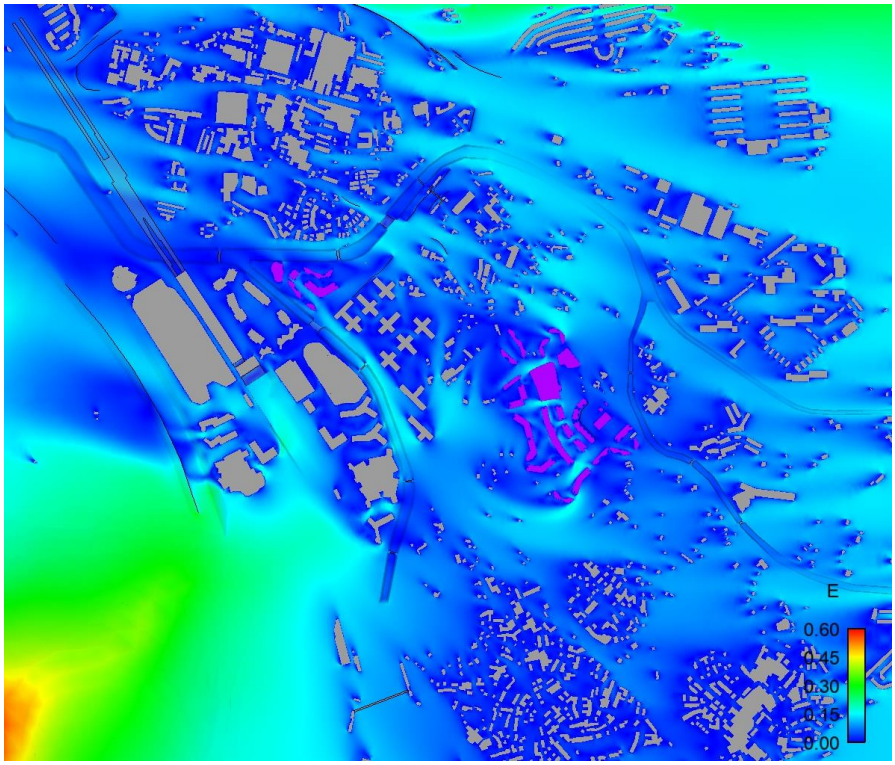


Figure C-14 Contour Plot of VR under E Wind

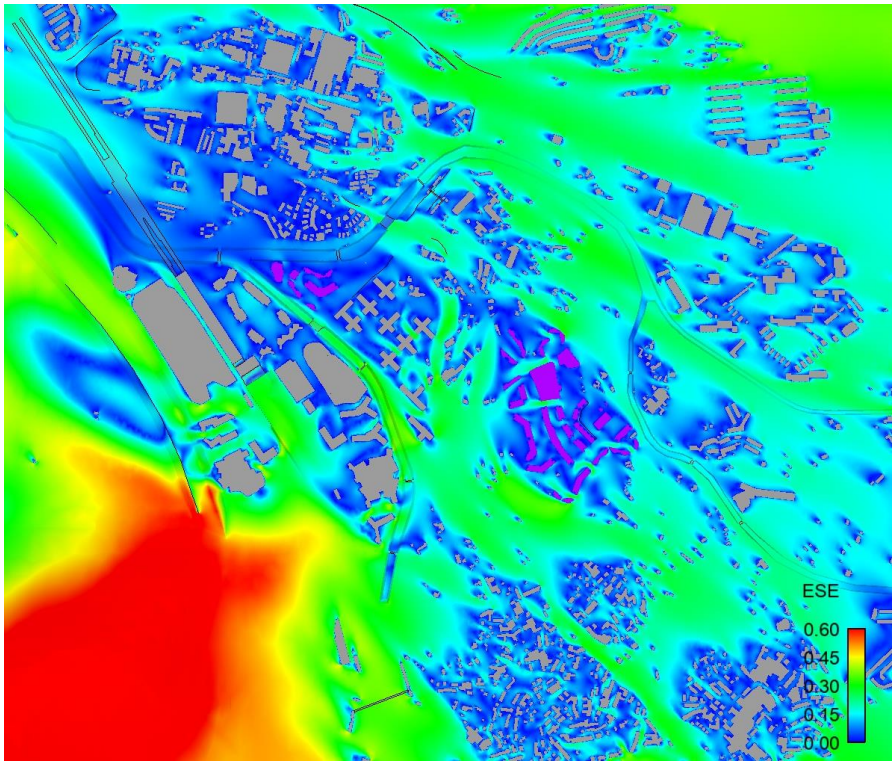


Figure C-15 Contour Plot of VR under ESE Wind

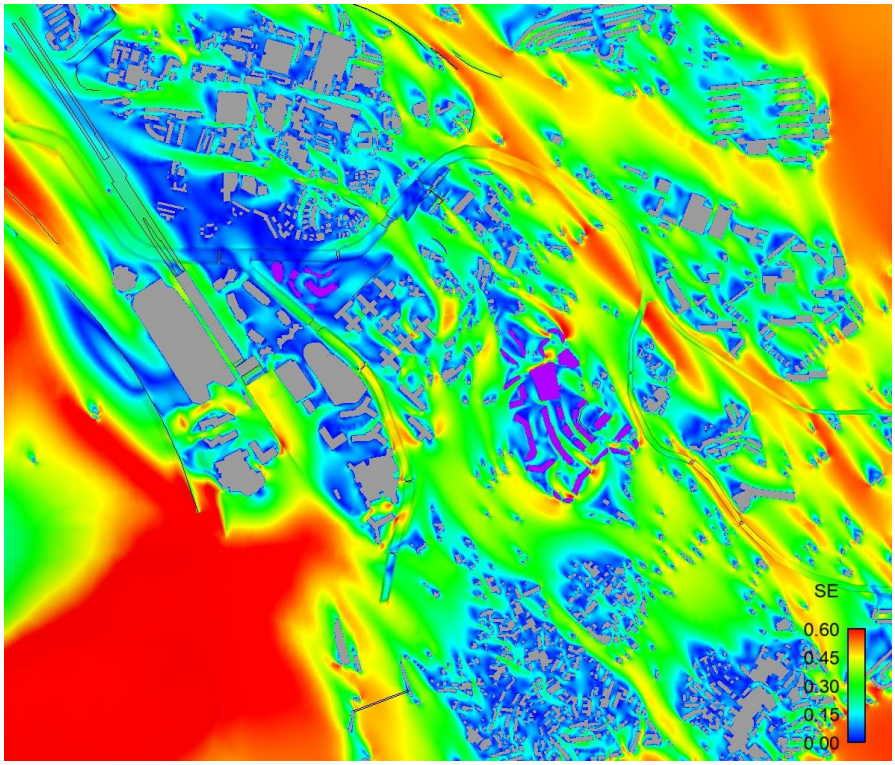


Figure C-16 Contour Plot of VR under SE Wind

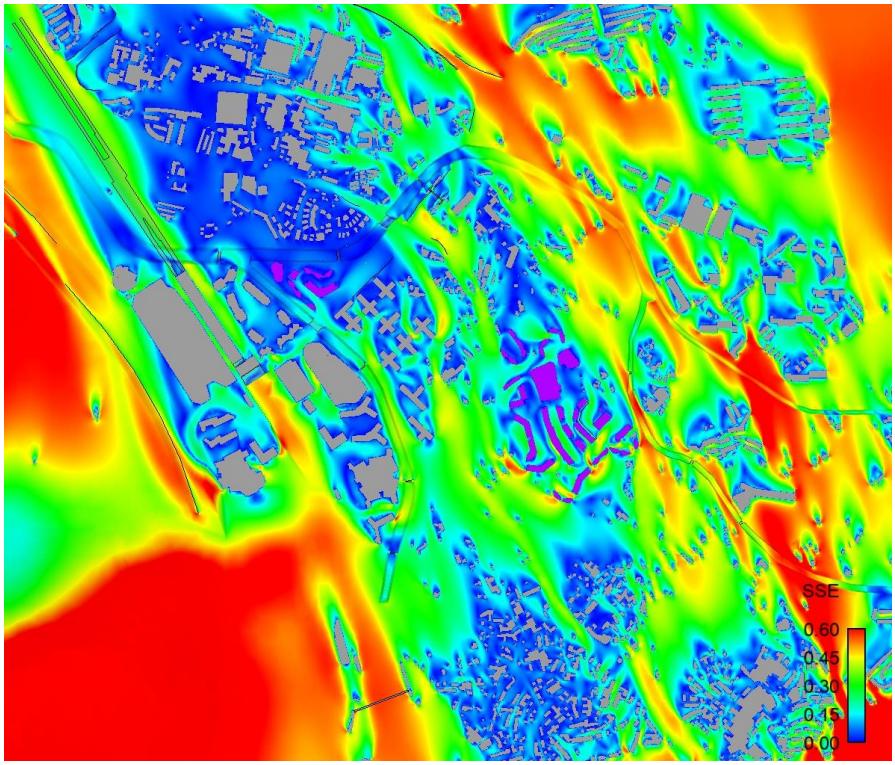


Figure C-17 Contour Plot of VR under SSE Wind

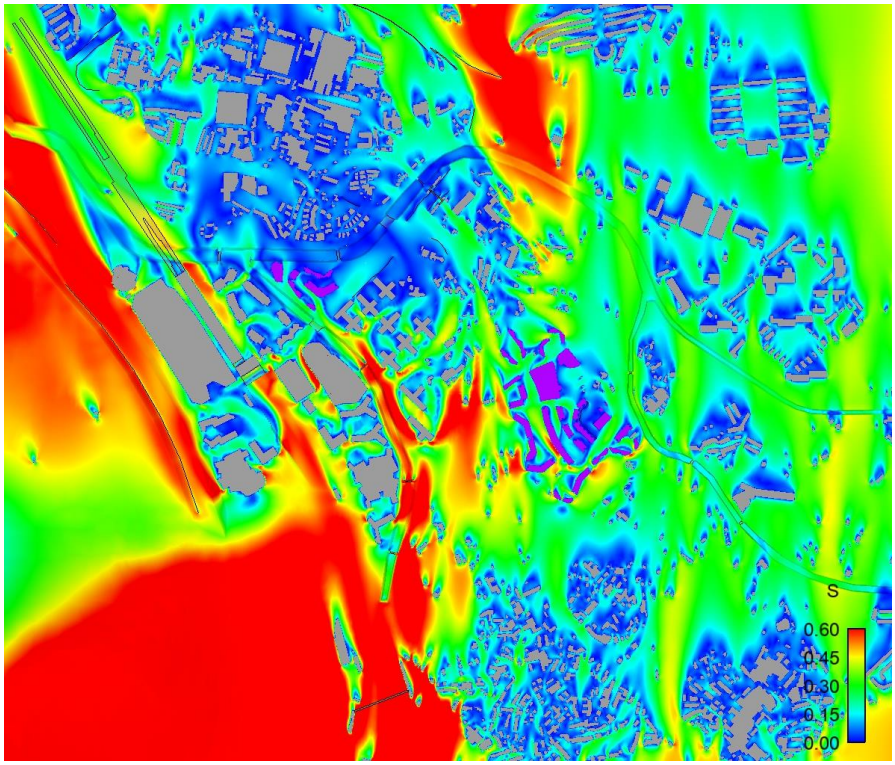


Figure C-18 Contour Plot of VR under S Wind

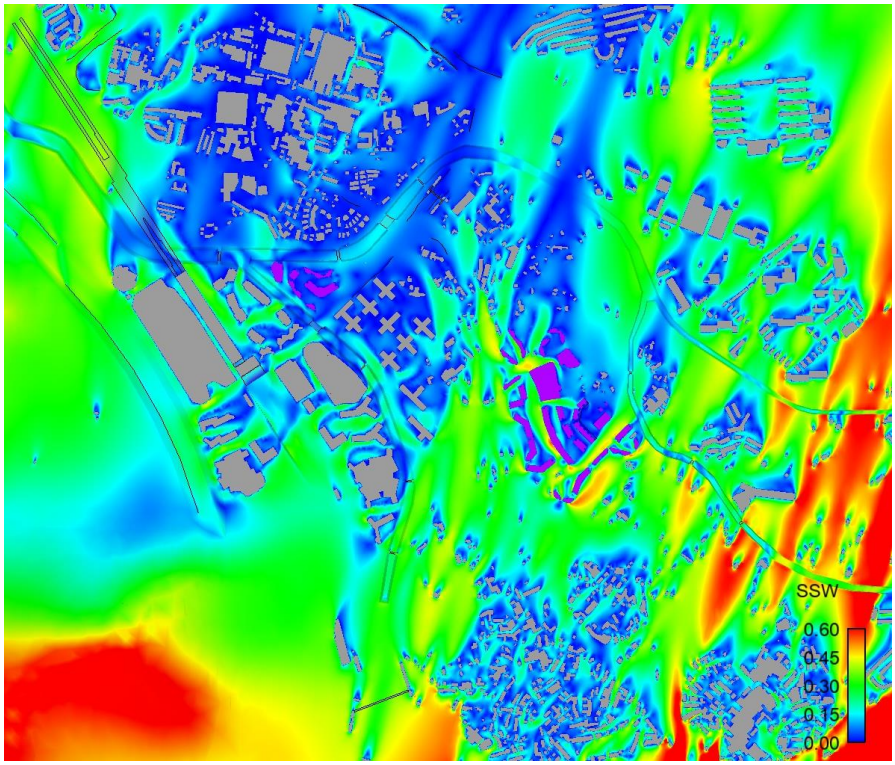


Figure C-19 Contour Plot of VR under SSW Wind

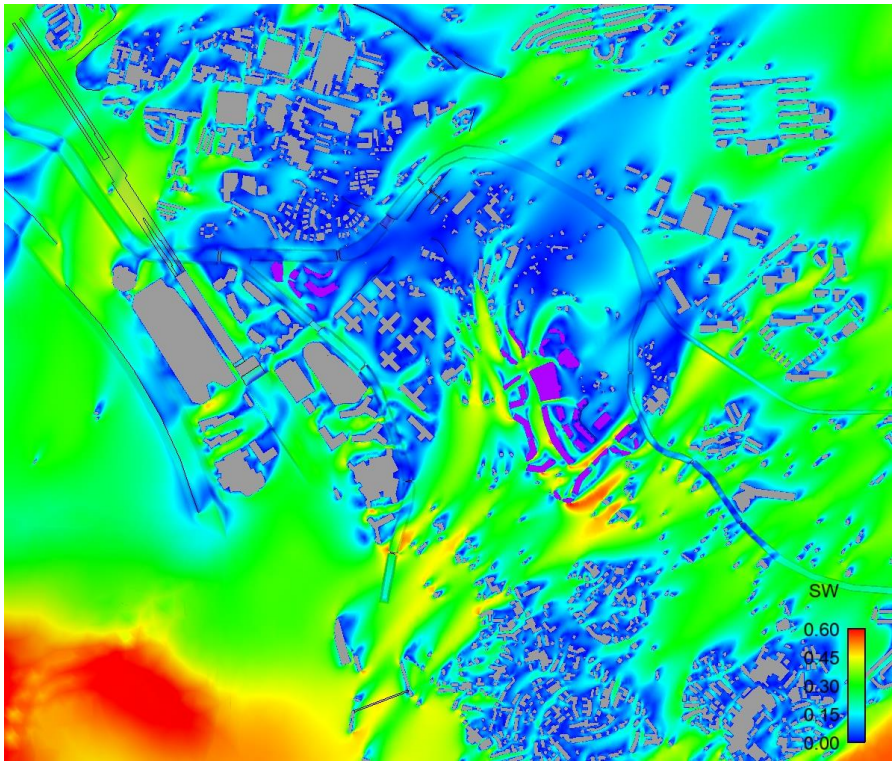


Figure C-20 Contour Plot of VR under SW Wind

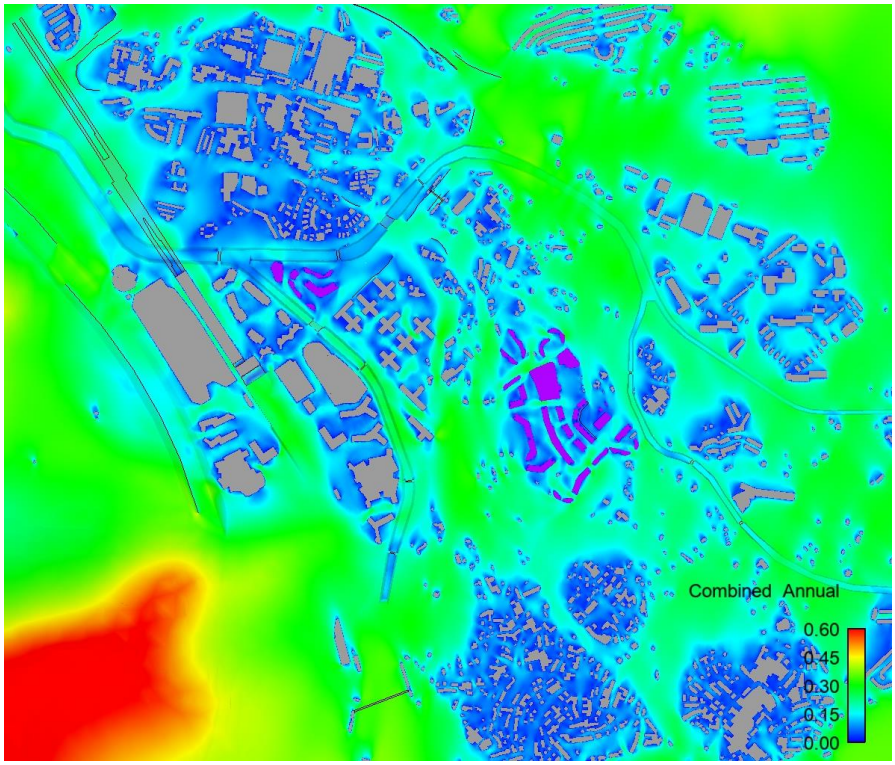


Figure C-21 Annual Weighted Average Contour Plot of VR

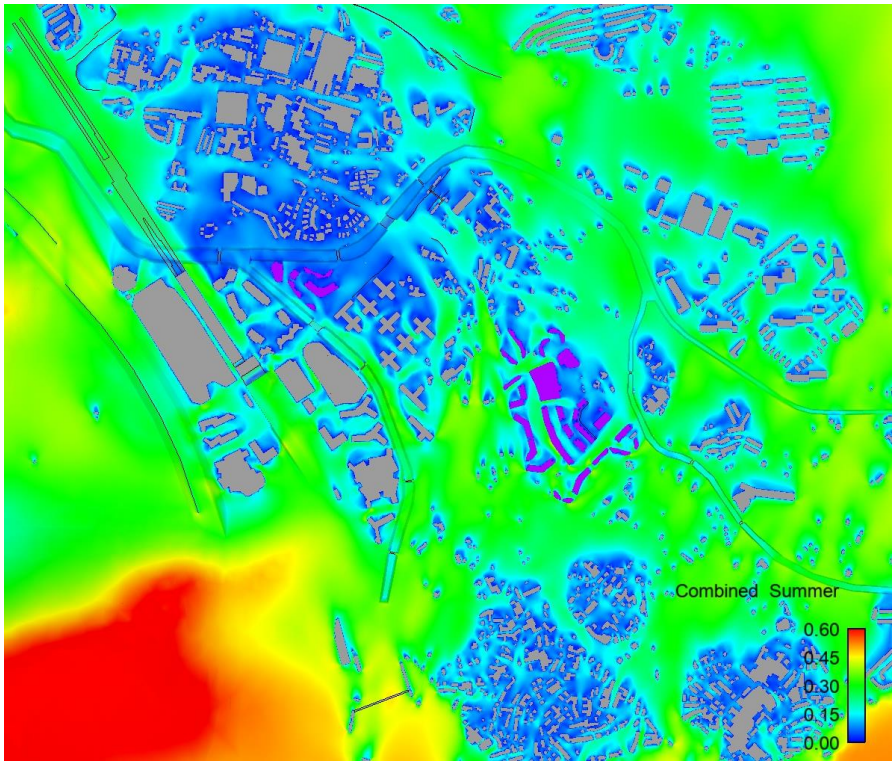


Figure C-22 Summer Weighted Average Contour Plot of VR

C.3 Baseline Scheme – Domain Area

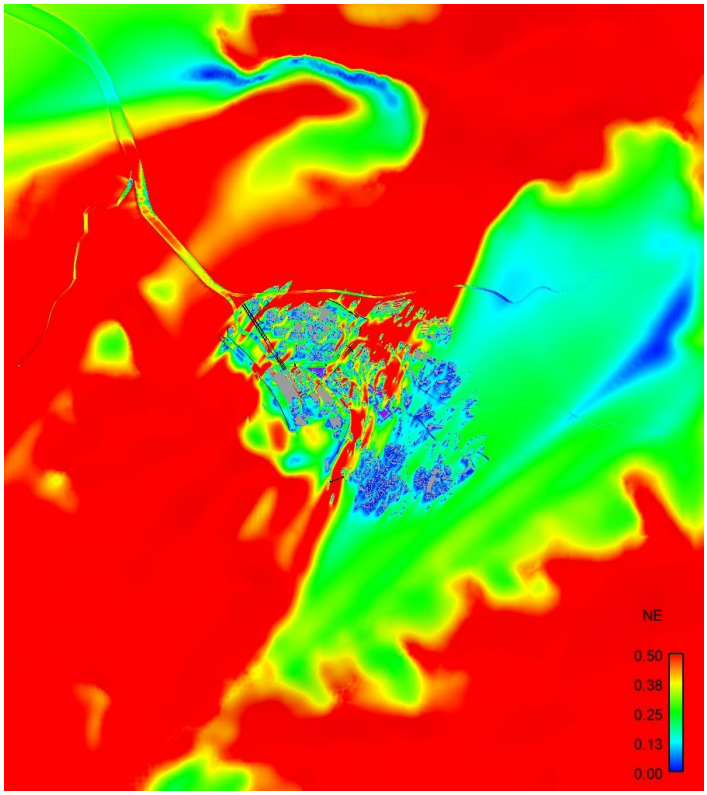


Figure C-23 Contour Plot of VR under NE Wind

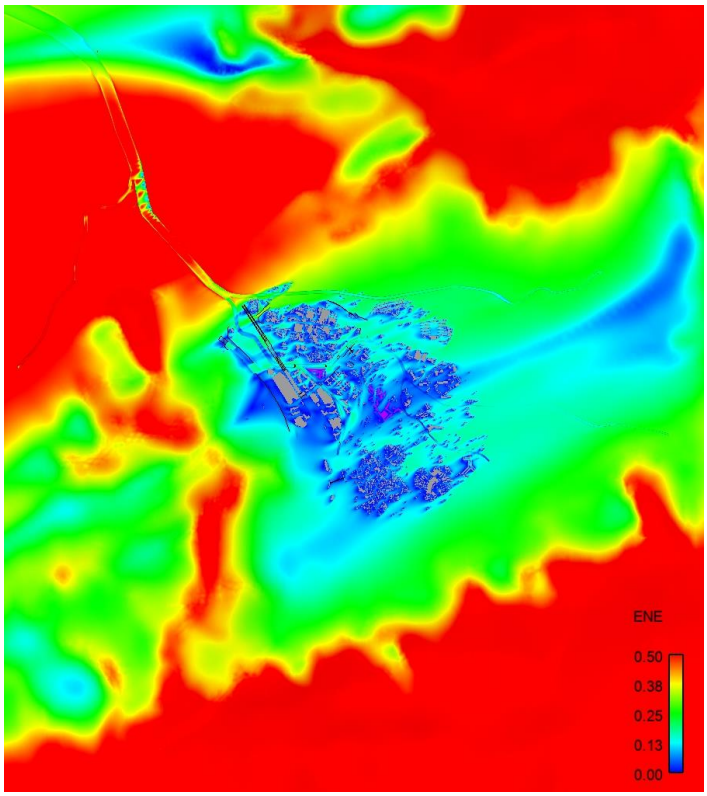


Figure C-24 Contour Plot of VR under ENE Wind

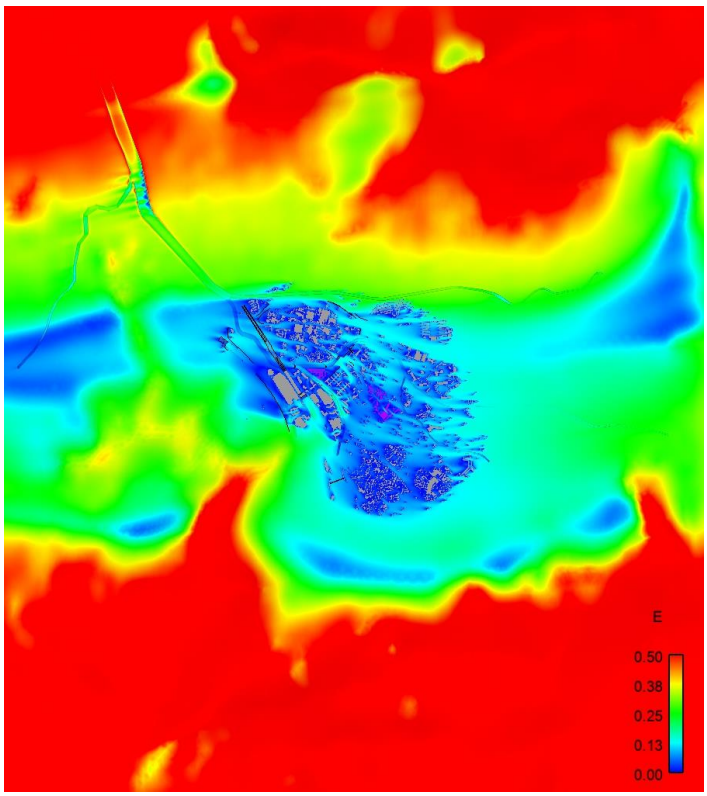


Figure C-25 Contour Plot of VR under E Wind

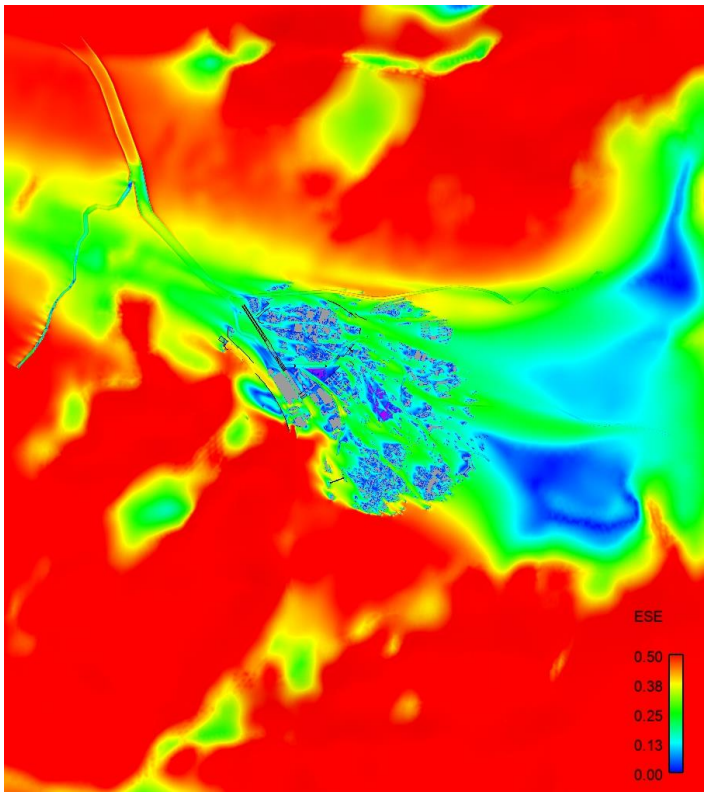


Figure C-26 Contour Plot of VR under ESE Wind

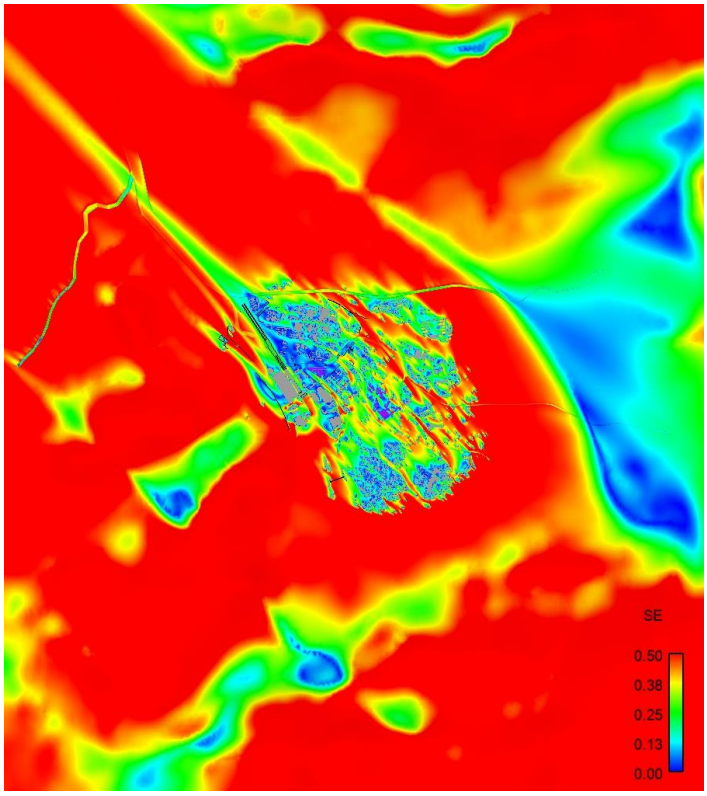


Figure C-27 Contour Plot of VR under SE Wind

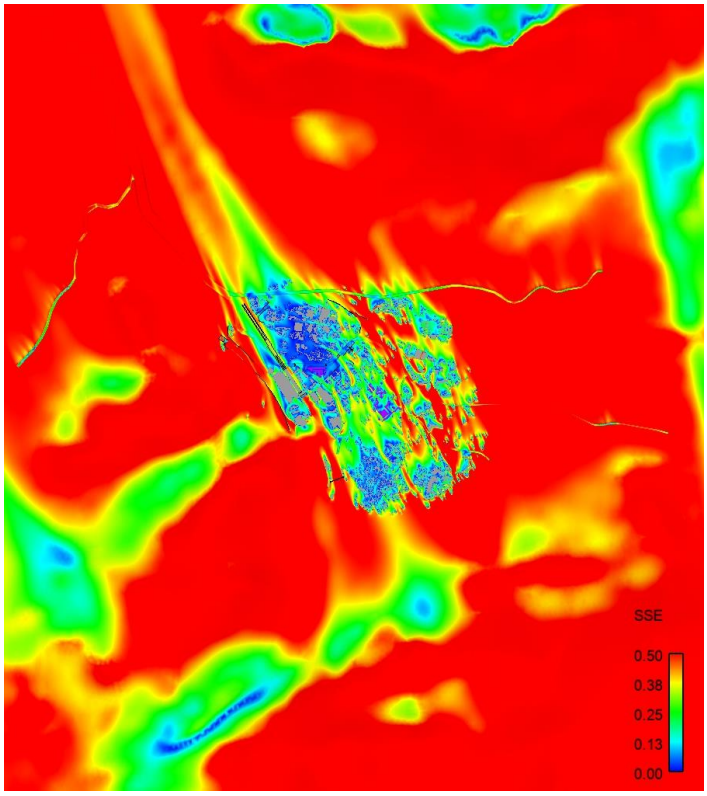


Figure C-28 Contour Plot of VR under SSE Wind

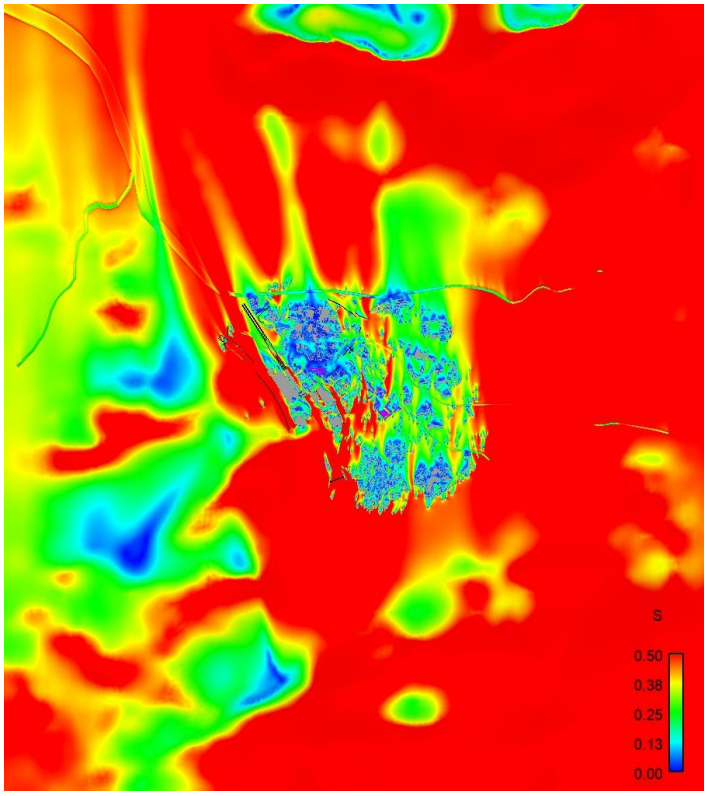


Figure C-29 Contour Plot of VR under S Wind

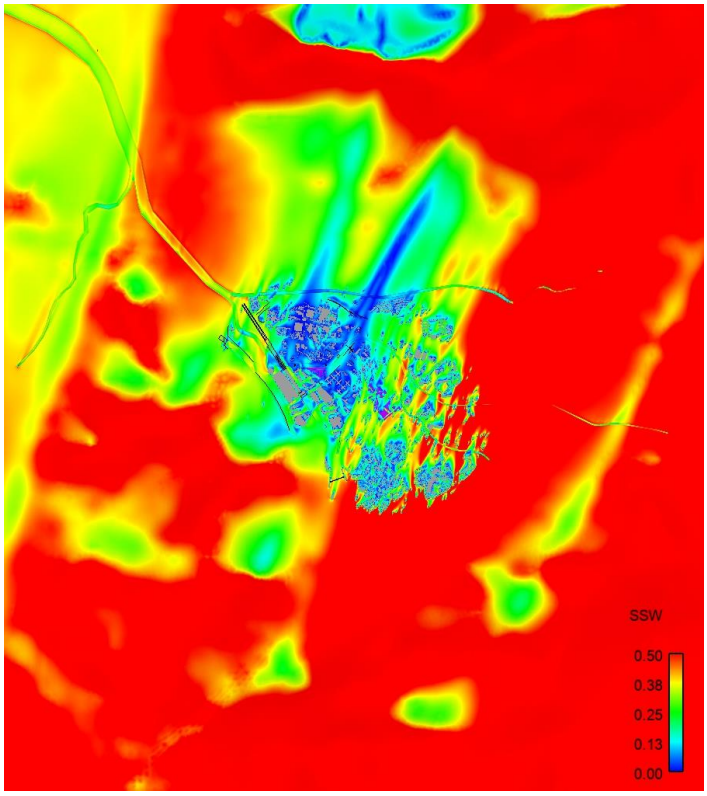


Figure C-30 Contour Plot of VR under SSW Wind

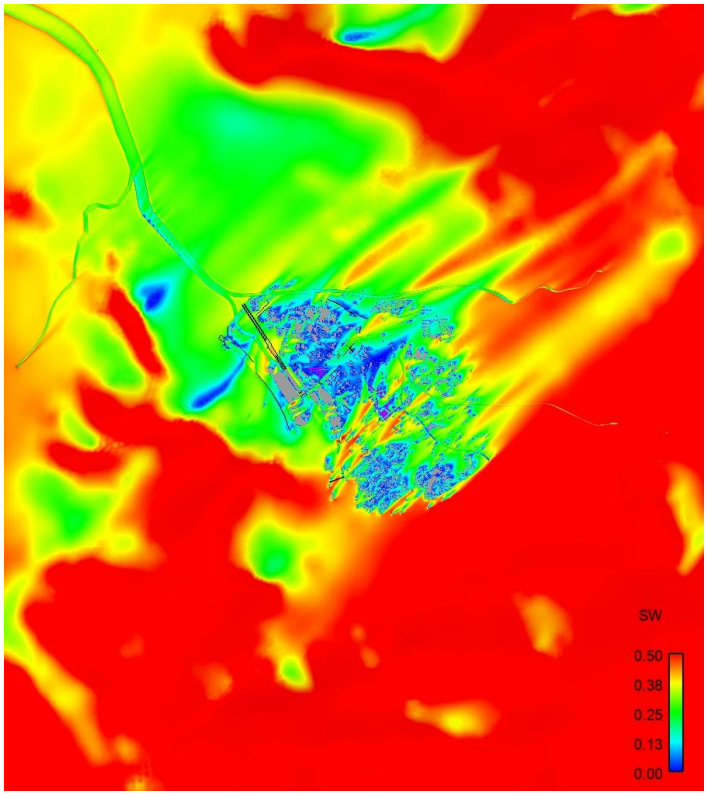


Figure C-31 Contour Plot of VR under SW Wind

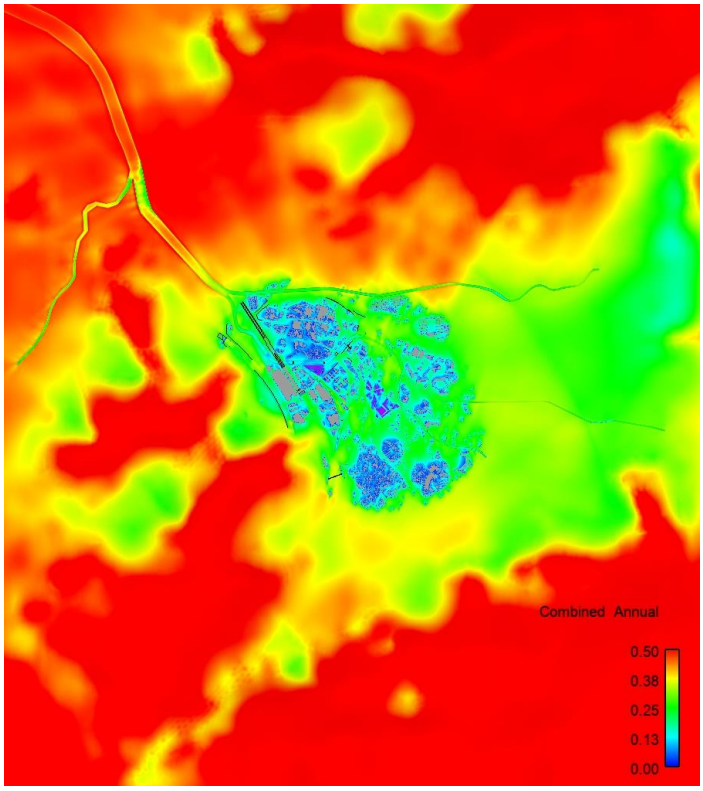


Figure C-32 Annual Weighted Average Contour Plot of VR

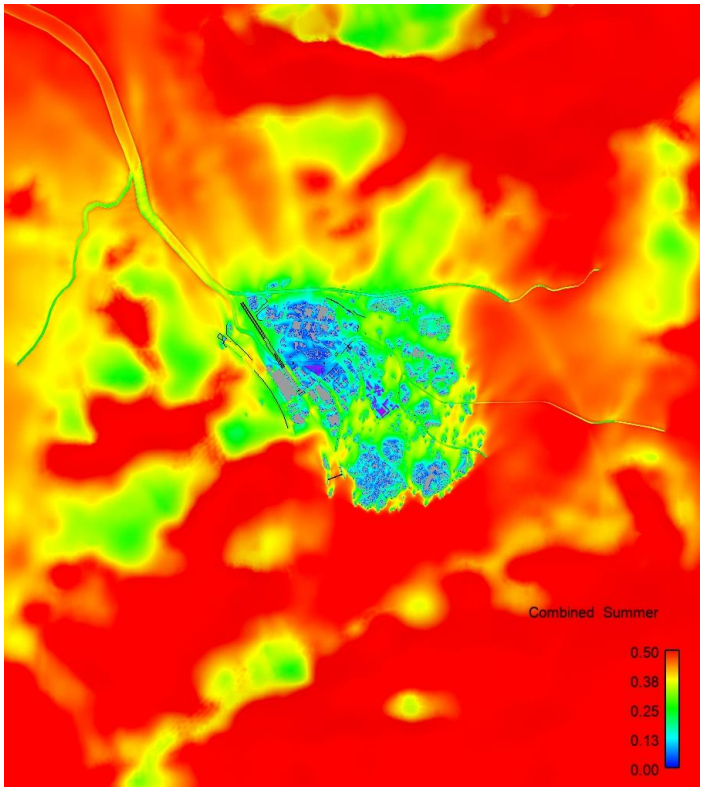


Figure C-33 Summer Weighted Average Contour Plot of VR

C.4 Cumulative Scheme – Domain Area

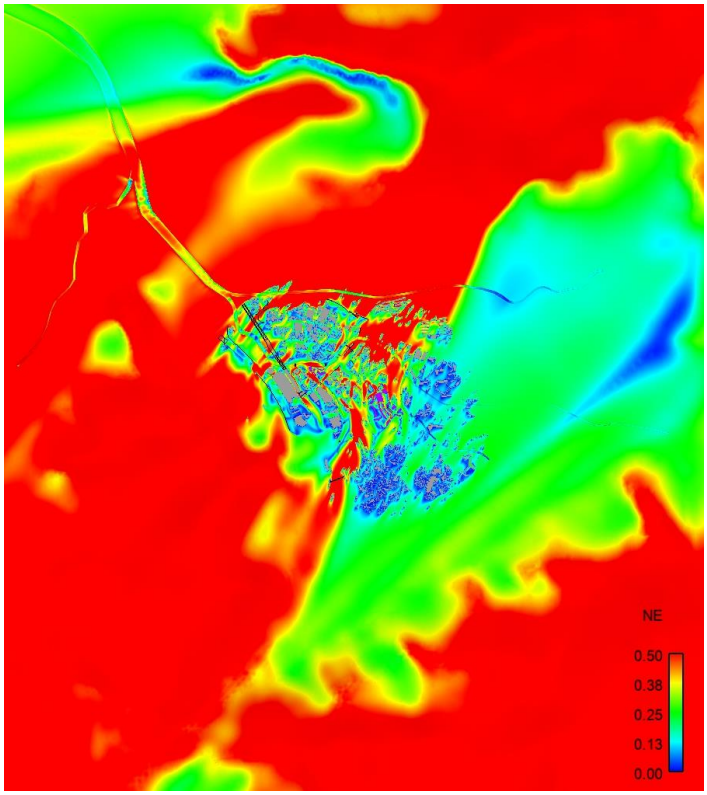


Figure C-34 Contour Plot of VR under NE Wind

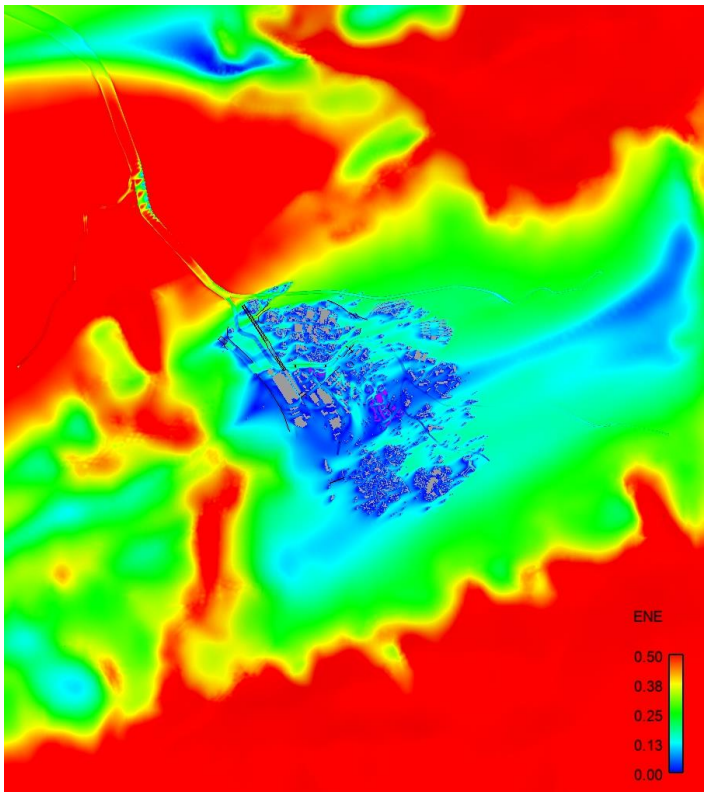


Figure C-35 Contour Plot of VR under ENE Wind

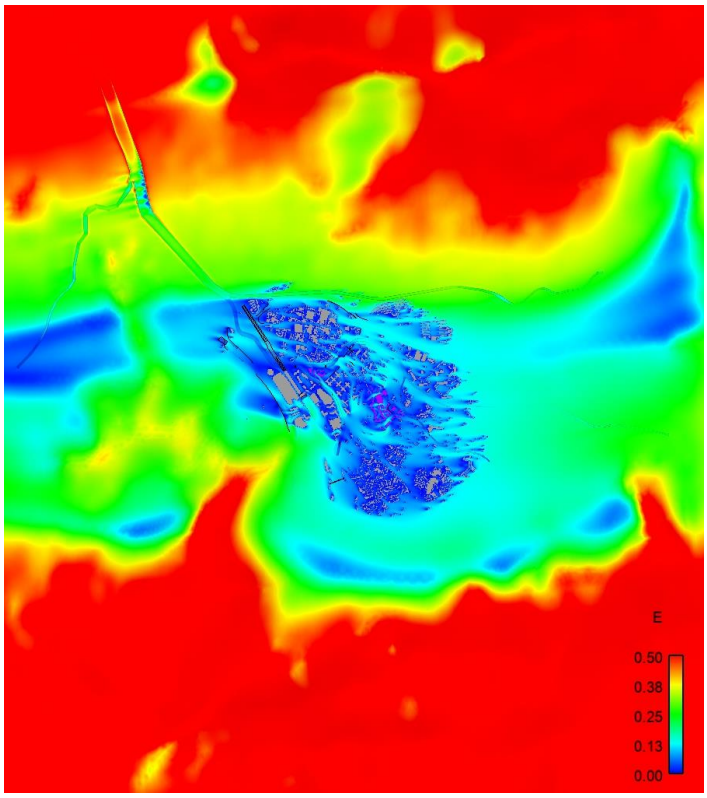


Figure C-36 Contour Plot of VR under E Wind

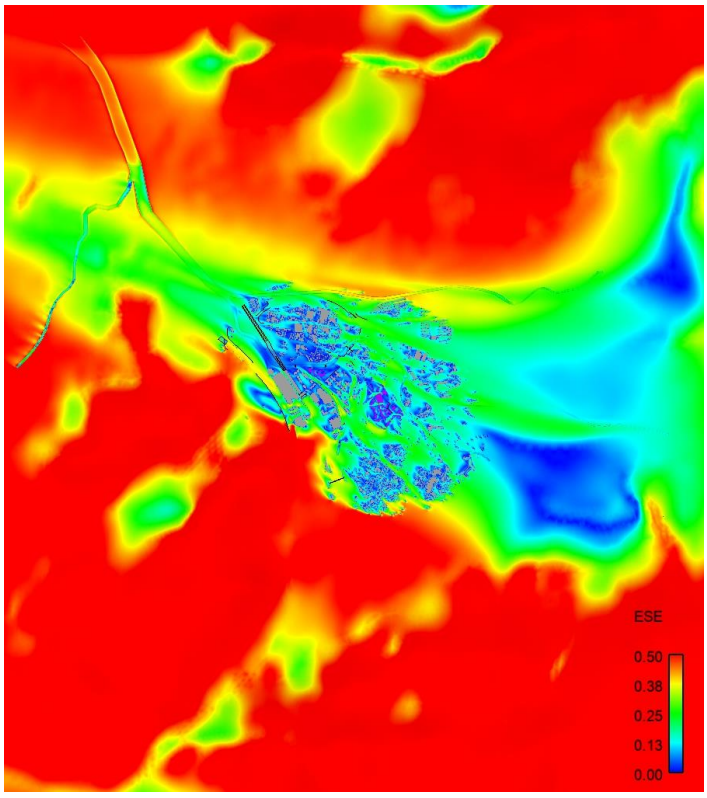


Figure C-37 Contour Plot of VR under ESE Wind

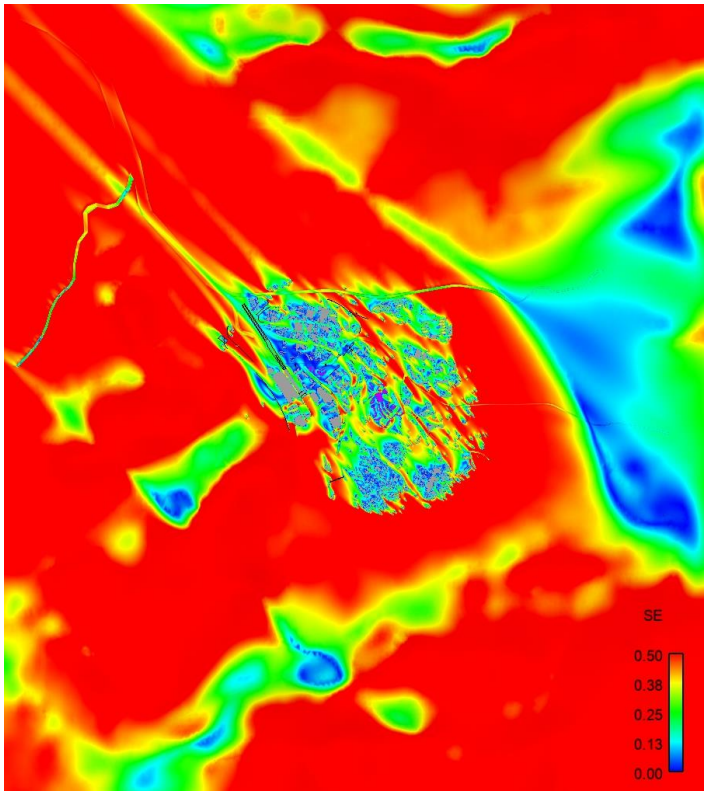


Figure C-38 Contour Plot of VR under SE Wind

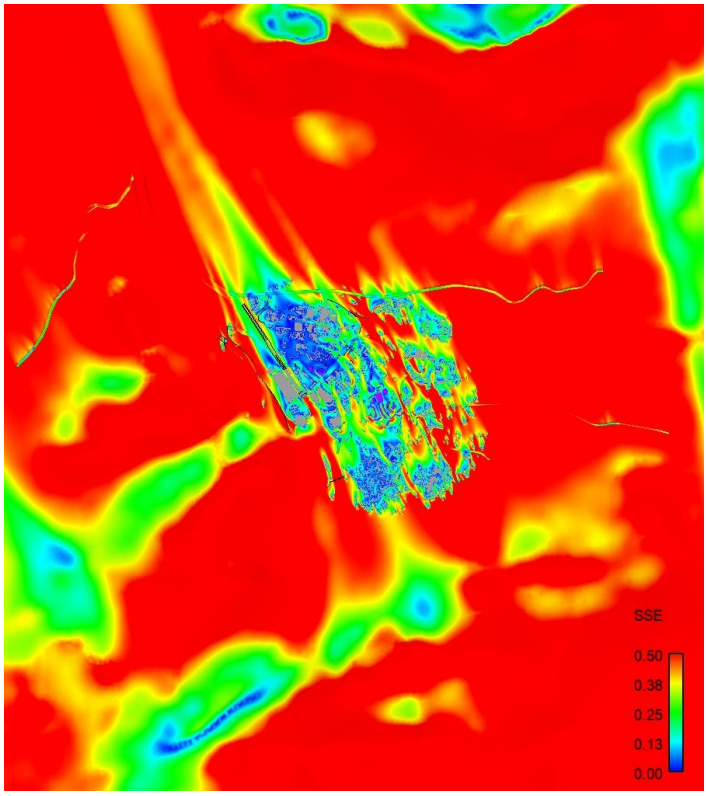


Figure C-39 Contour Plot of VR under SSE Wind

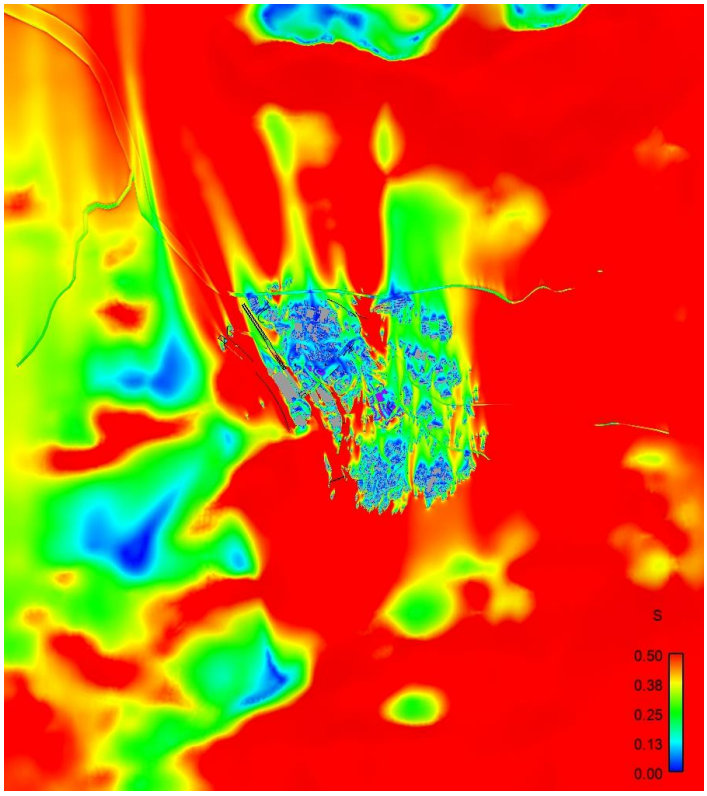


Figure C-40 Contour Plot of VR under S Wind

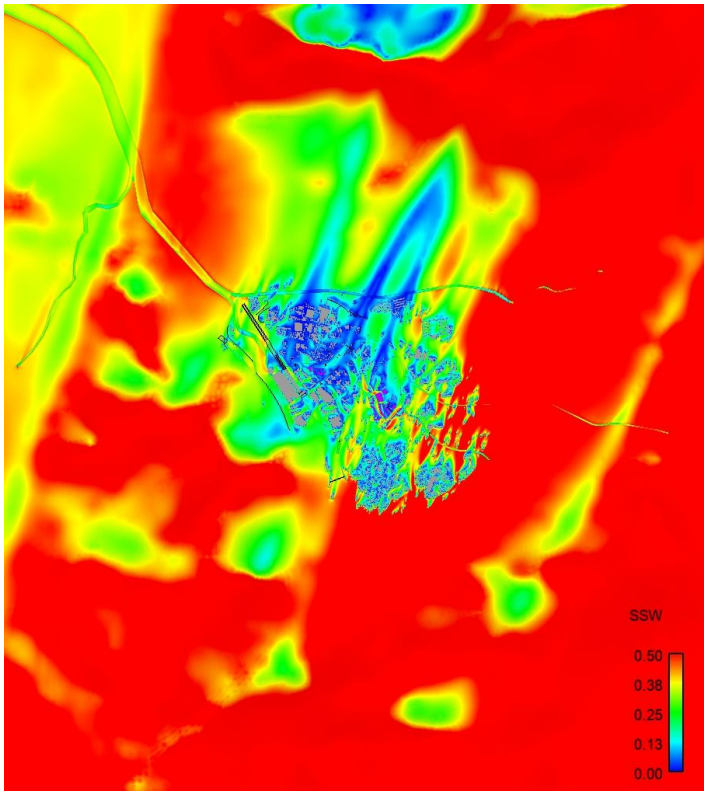


Figure C-41 Contour Plot of VR under SSW Wind

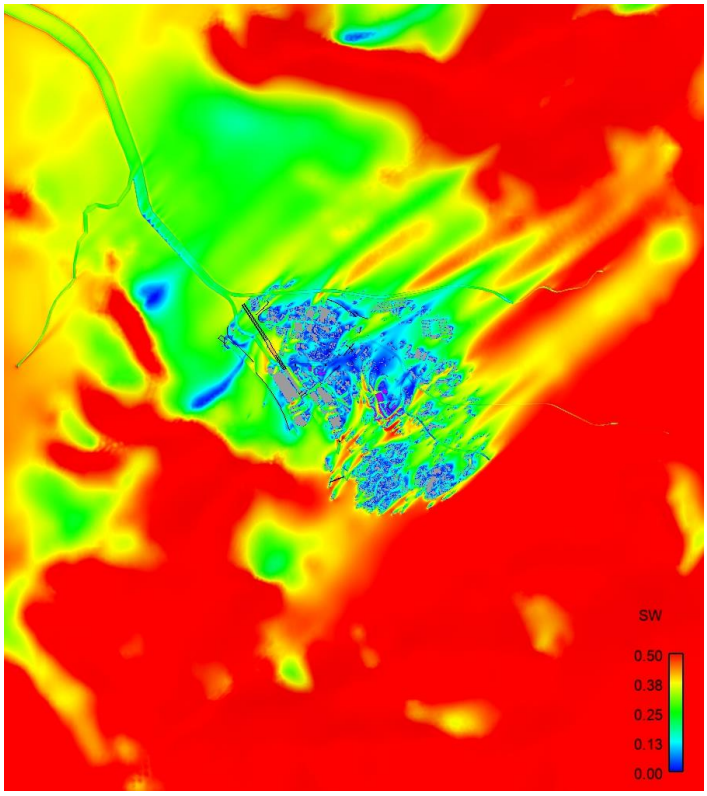


Figure C-42 Contour Plot of VR under SW Wind

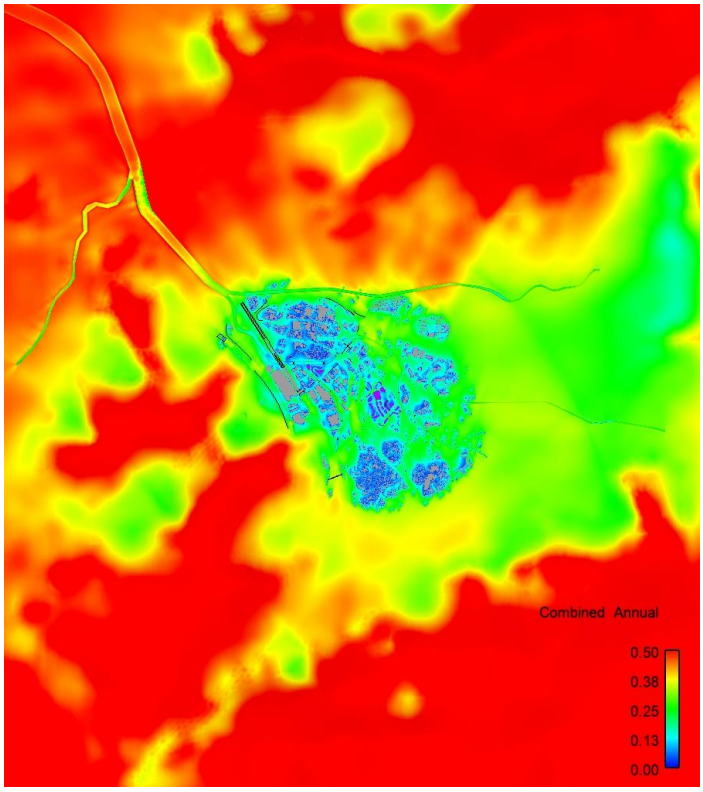


Figure C-43 Annual Weighted Average Contour Plot of VR

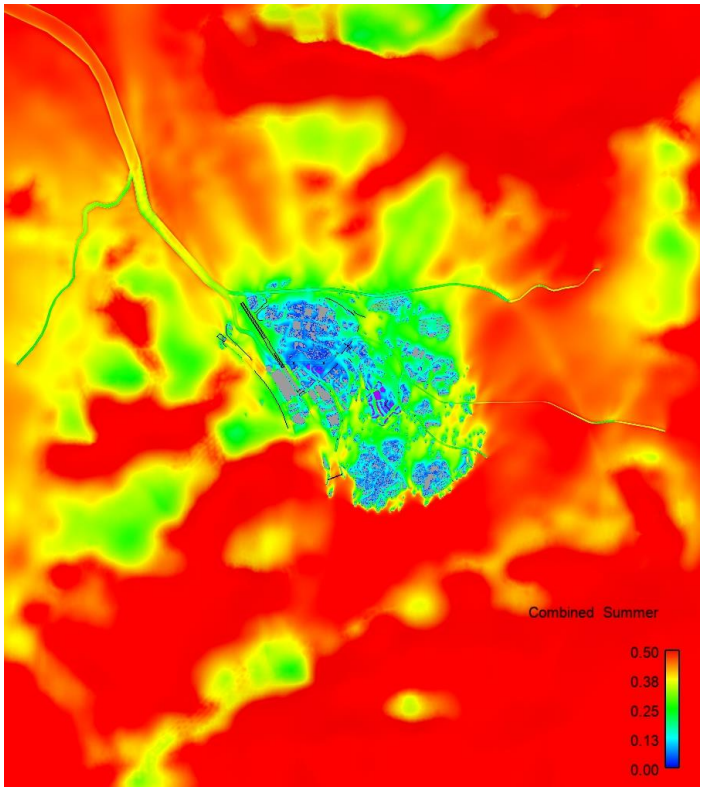


Figure C-44 Summer Weighted Average Contour Plot of VR

Appendix D

Vector Plots of VR

D.1 Baseline Scheme – Assessment Area

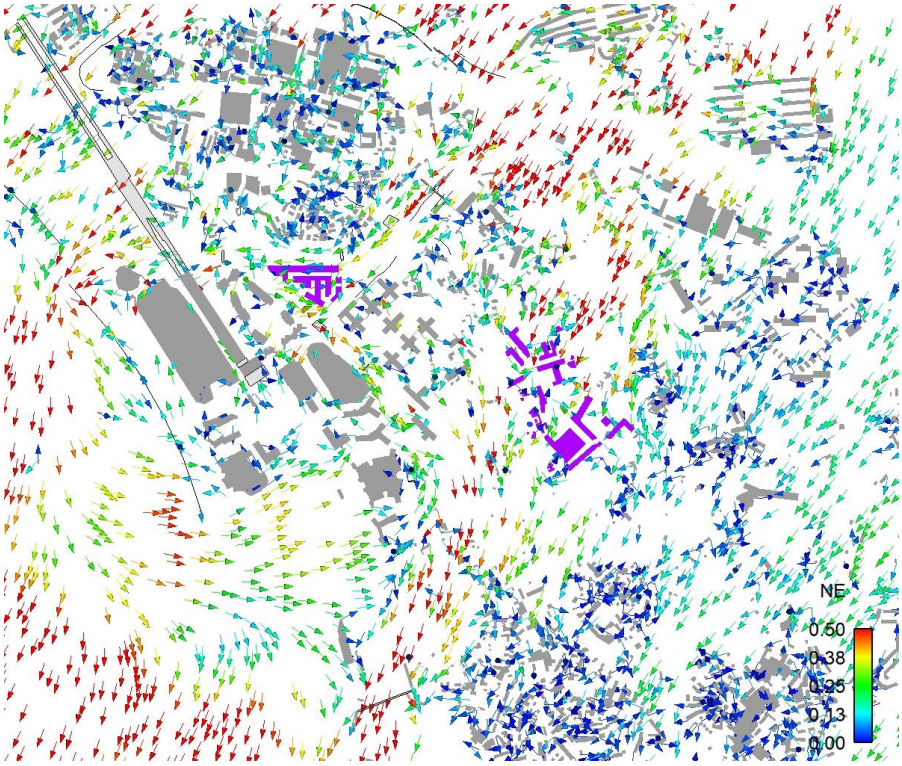


Figure D-1 Vector Plot of VR under NE Wind

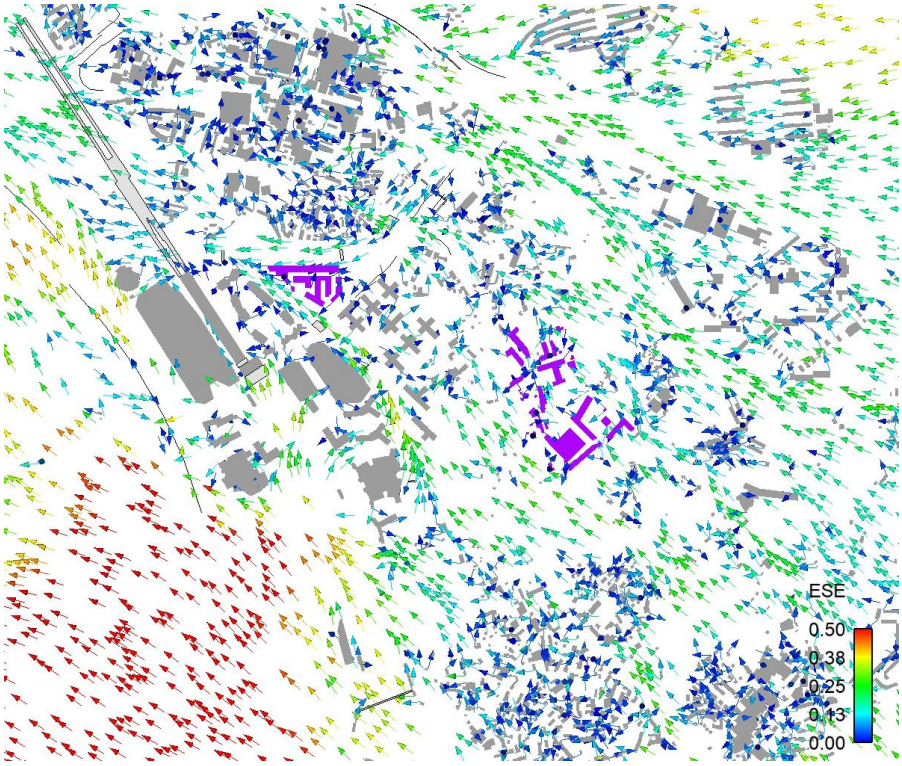


Figure D-2 Vector Plot of VR under ENE Wind

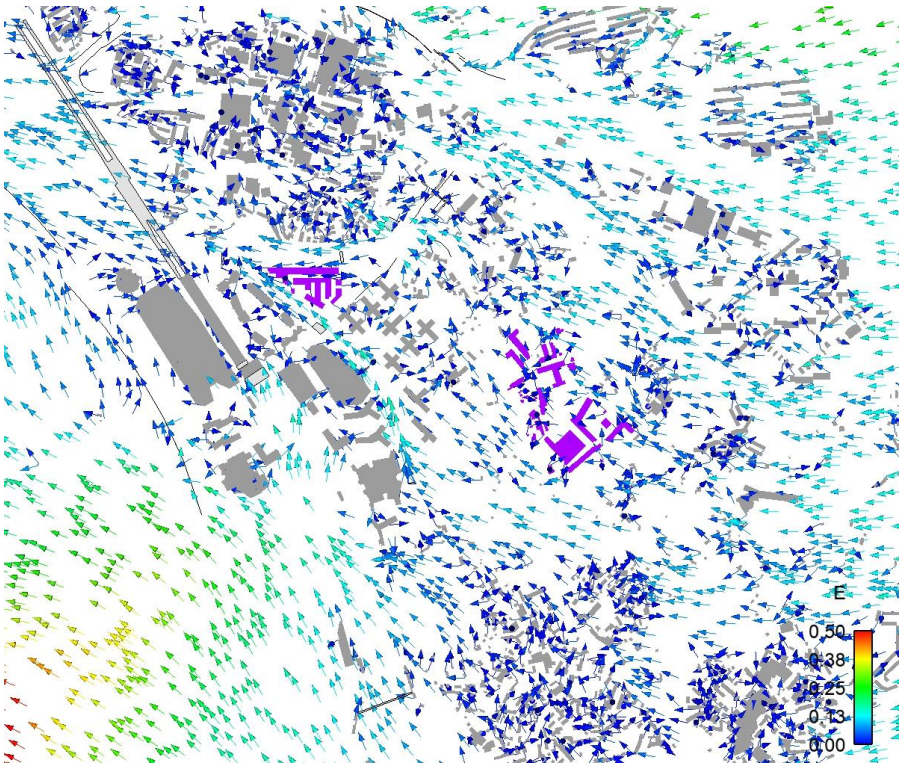


Figure D-3 Vector Plot of VR under E Wind

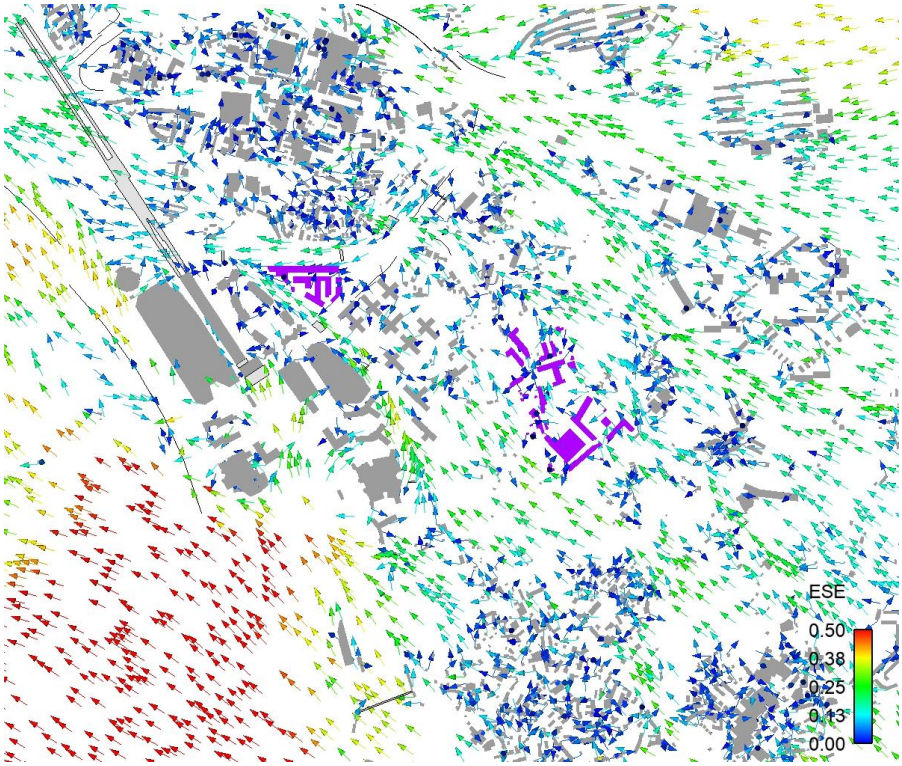


Figure D-4 Vector Plot of VR under ESE Wind

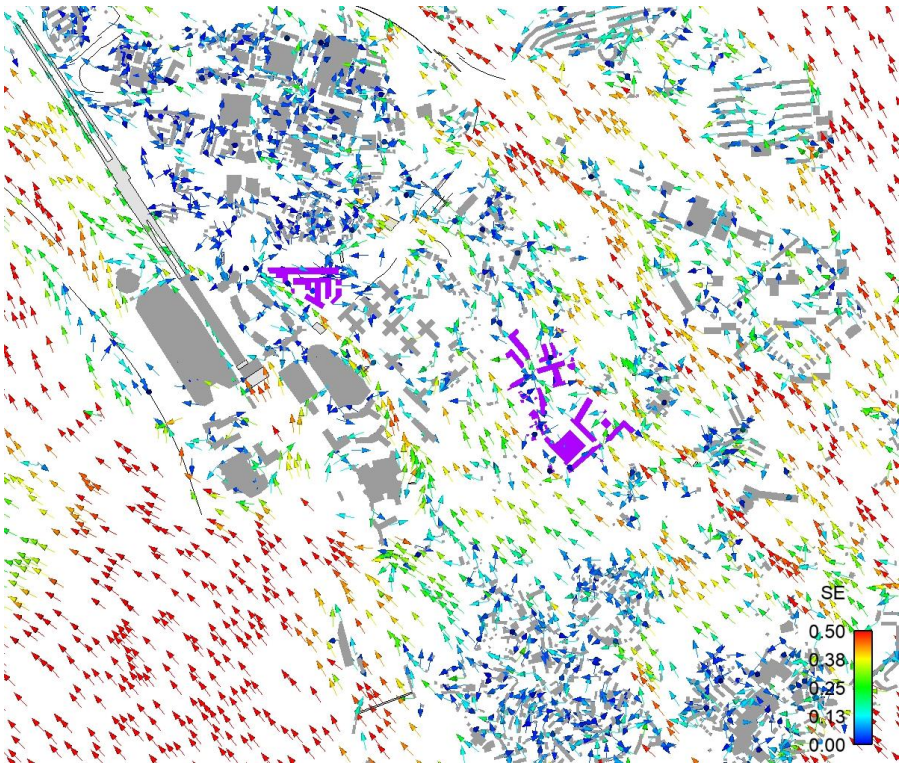


Figure D-5 Vector Plot of VR under SE Wind

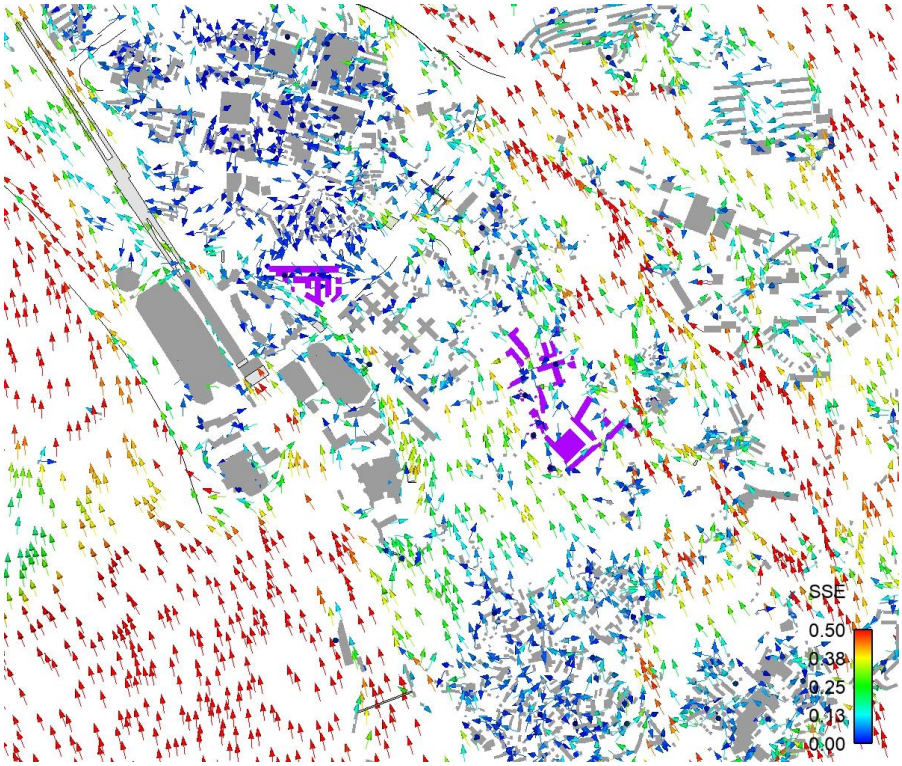


Figure D-6 Vector Plot of VR under SSE Wind

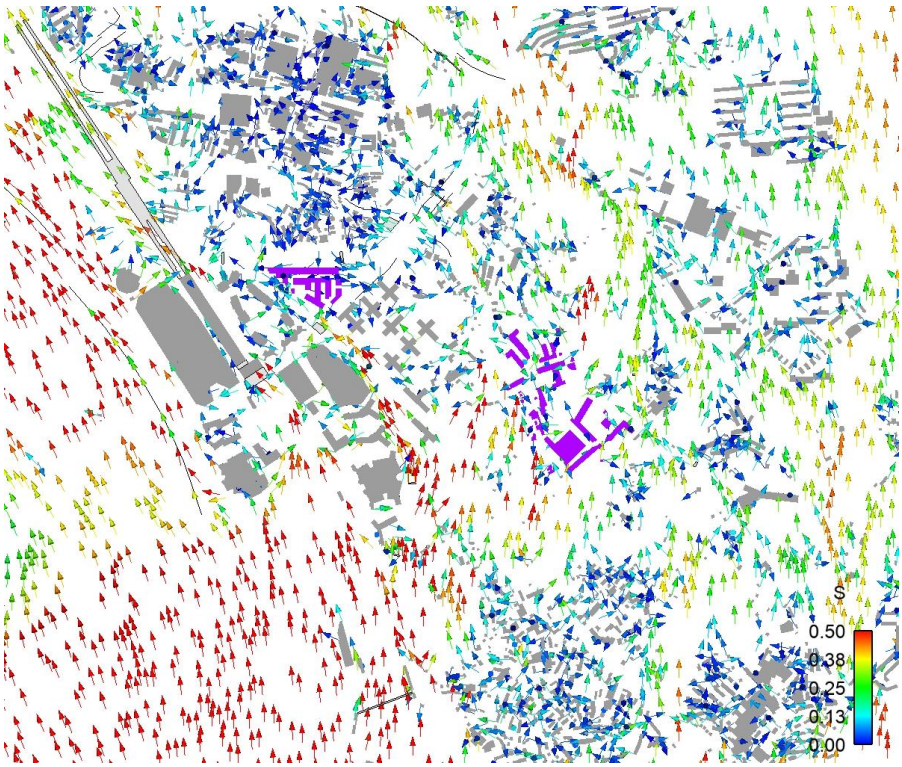


Figure D-7 Vector Plot of VR under S Wind

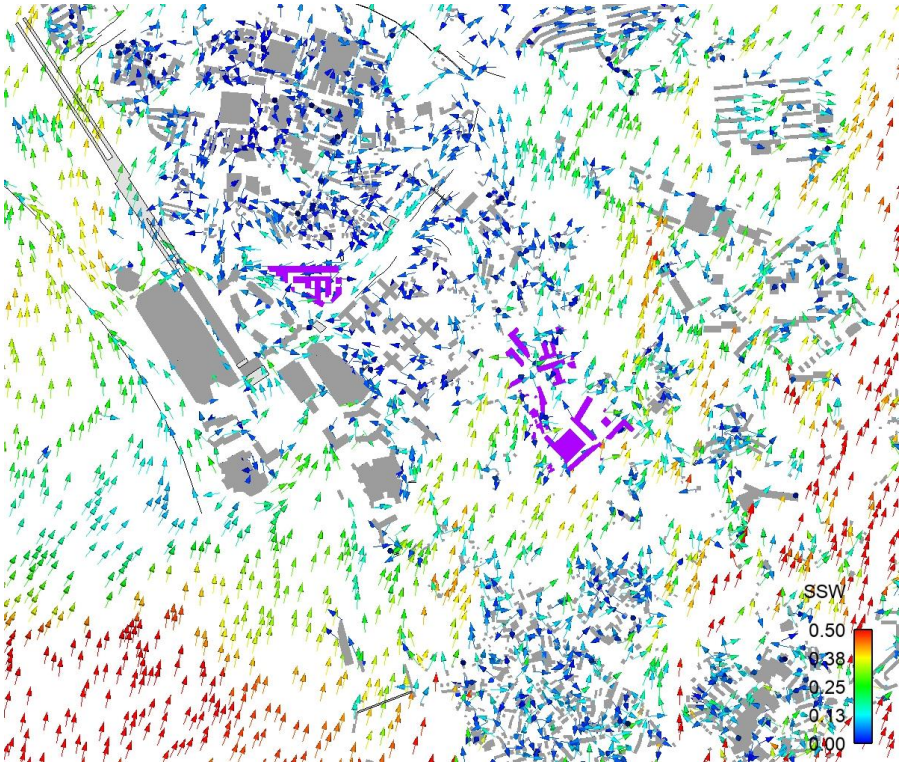


Figure D-8 Vector Plot of VR under SSW Wind

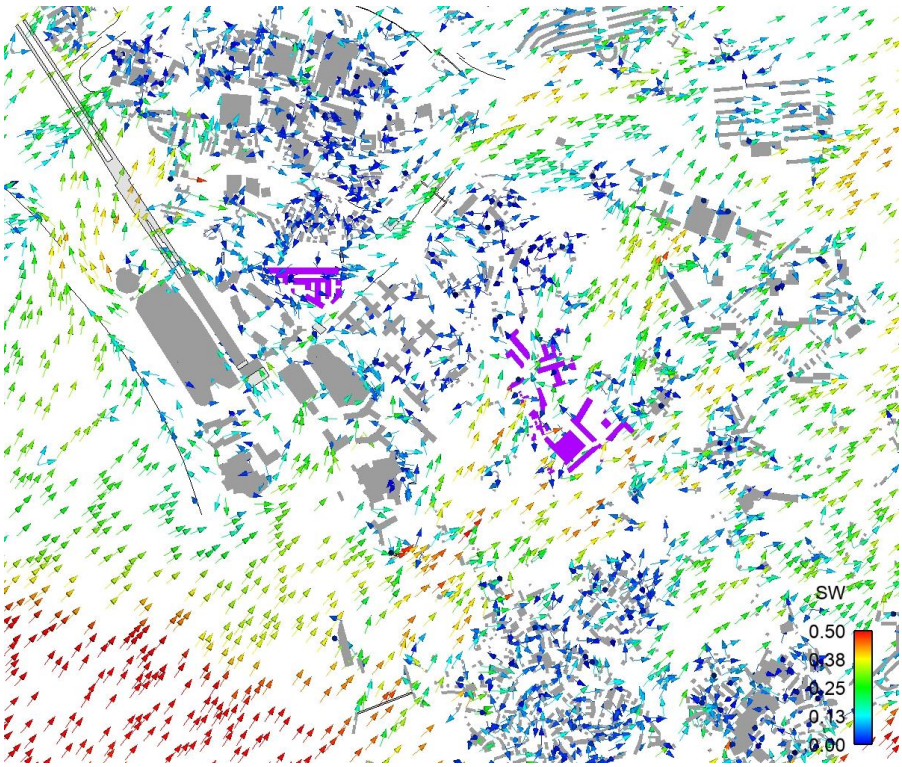


Figure D-9 Vector Plot of VR under SW Wind

D.2 Cumulative Scheme – Assessment Area

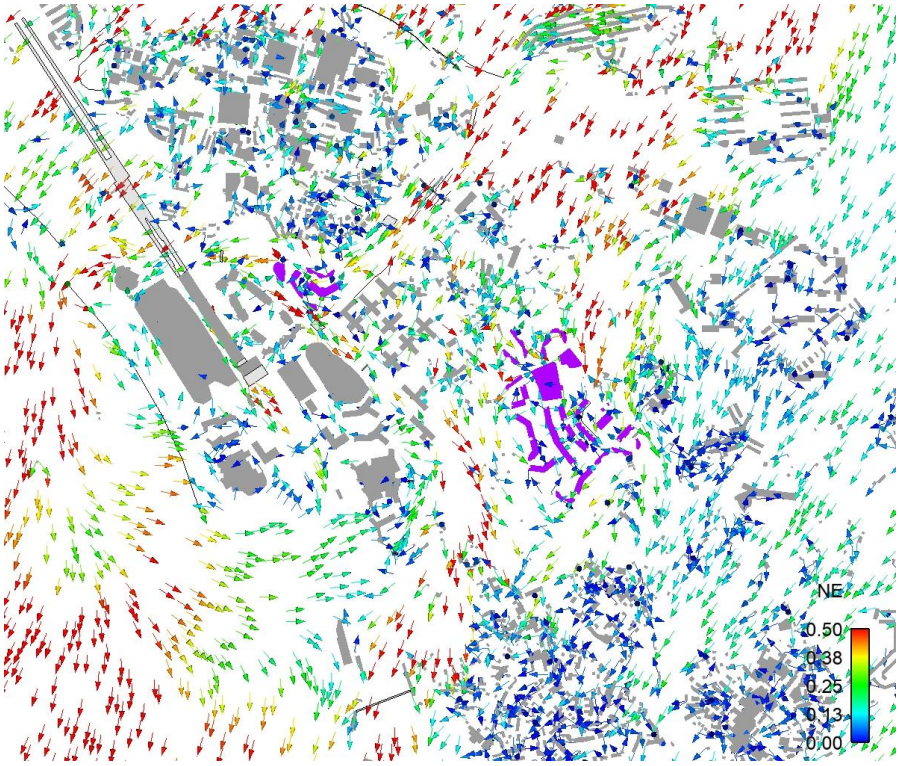


Figure D-10 Vector Plot of VR under NE Wind

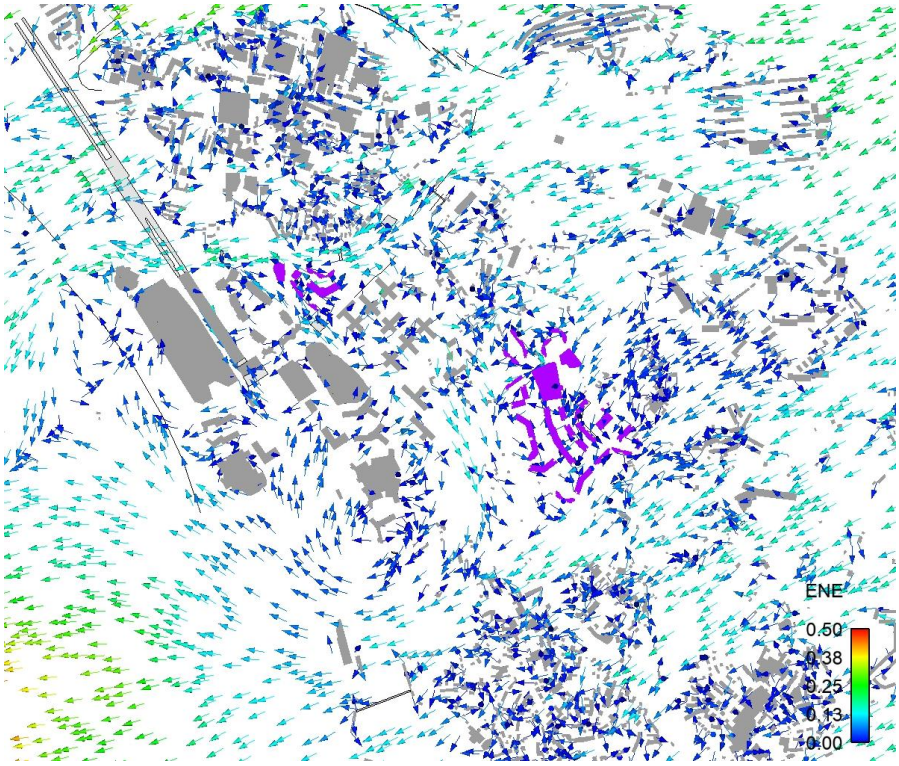


Figure D-11 Vector Plot of VR under ENE Wind

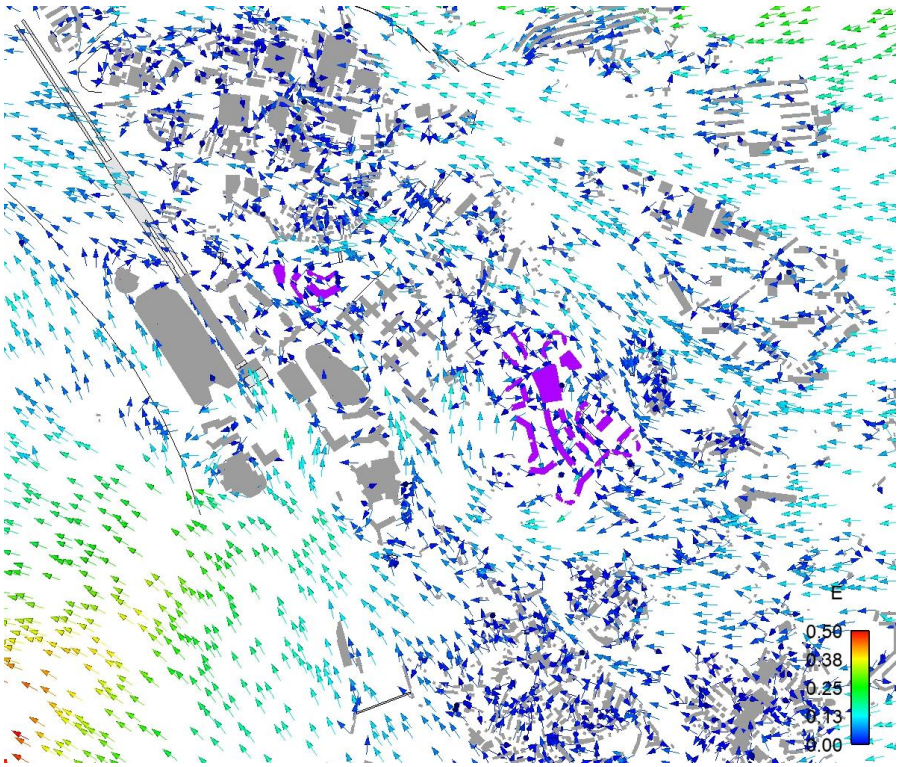


Figure D-12 Vector Plot of VR under E Wind

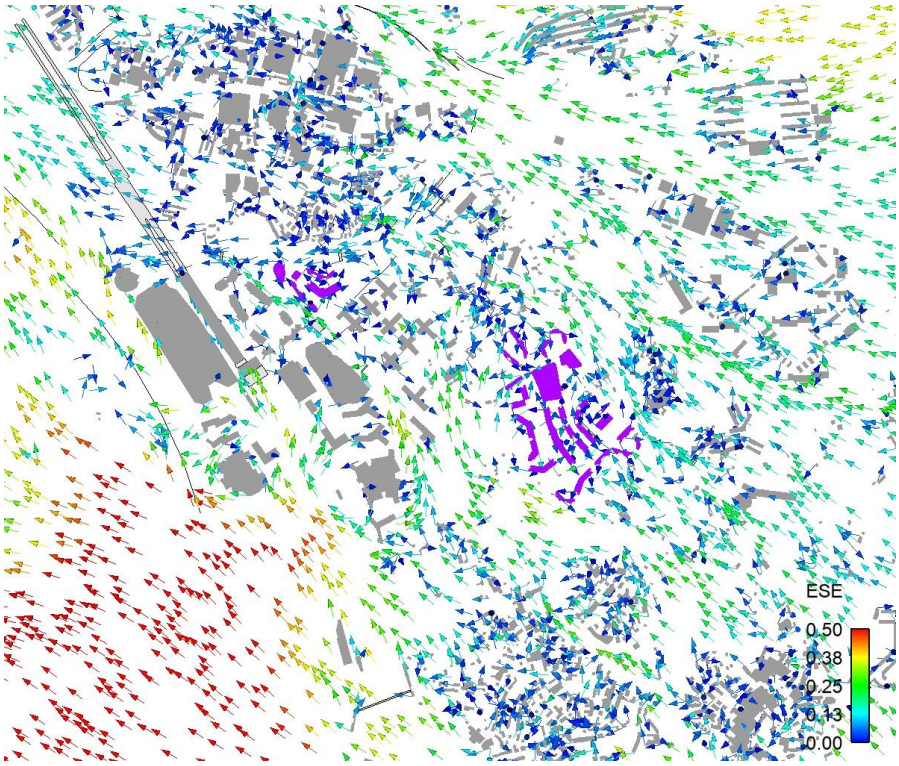


Figure D-13 Vector Plot of VR under ESE Wind

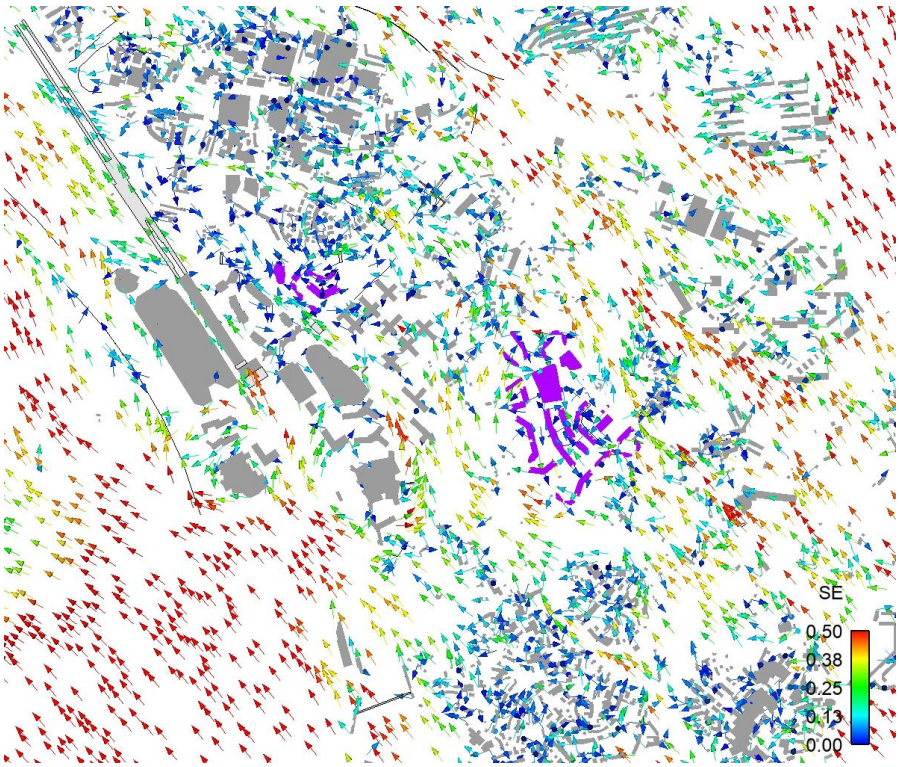


Figure D-14 Vector Plot of VR under SE Wind

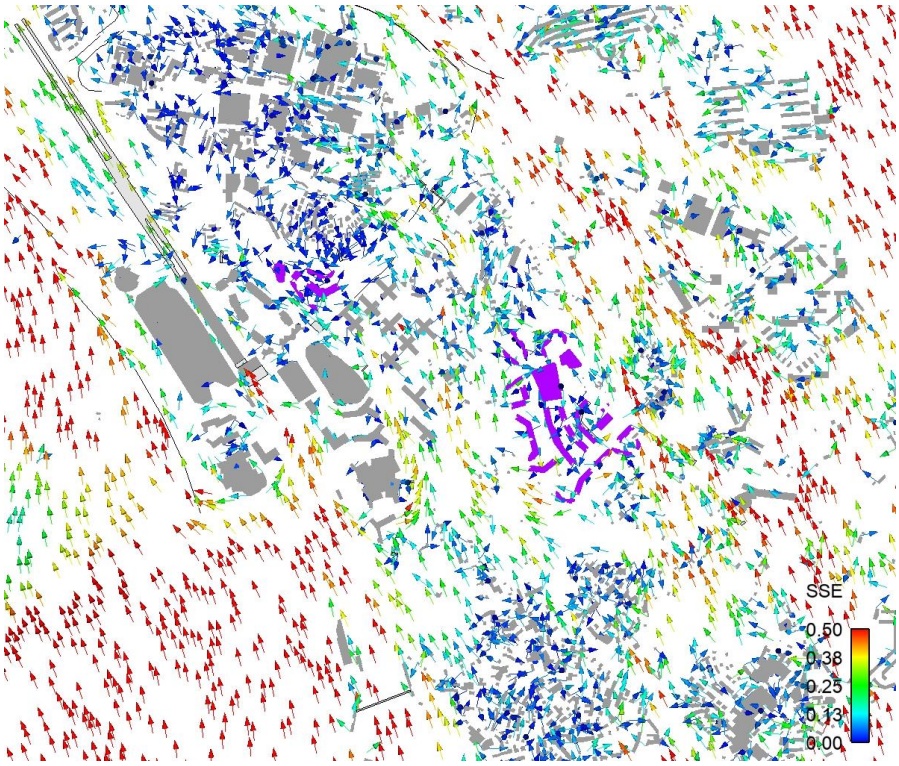


Figure D-15 Vector Plot of VR under SSE Wind

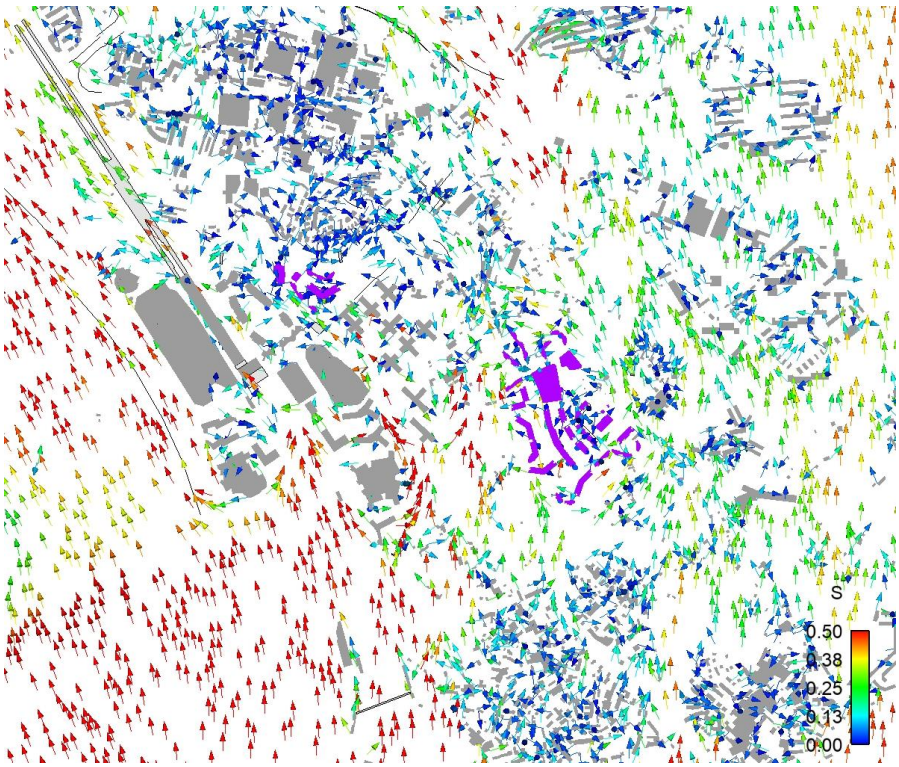


Figure D-16 Vector Plot of VR under S Wind

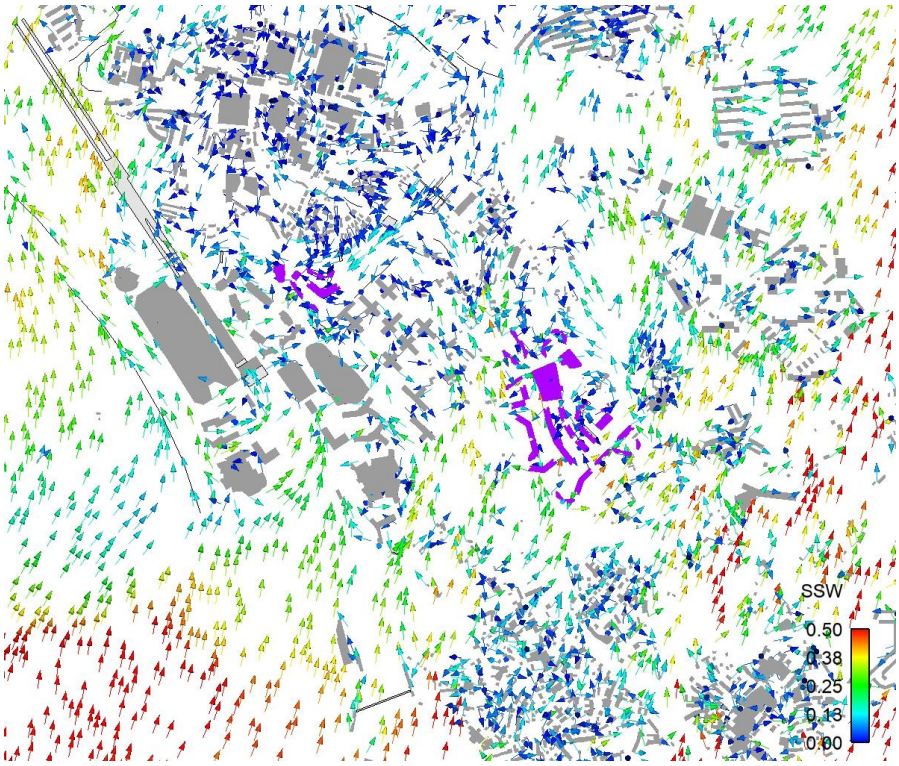


Figure D-17 Vector Plot of VR under SSW Wind

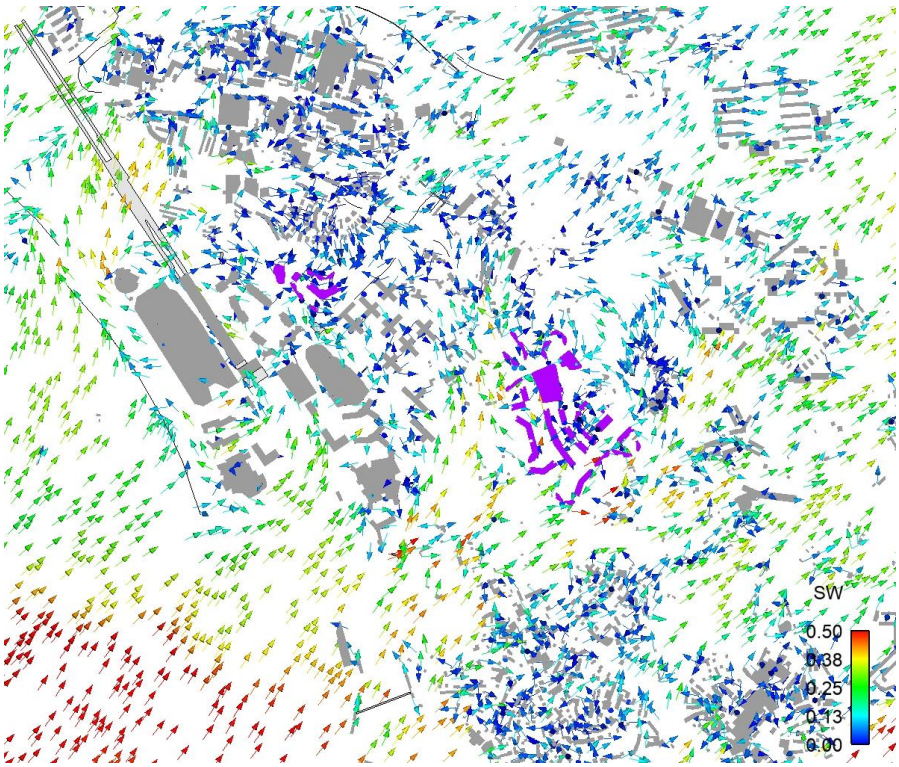


Figure D-18 Vector Plot of VR under SW Wind

D.3 Baseline Scheme – Domain Area

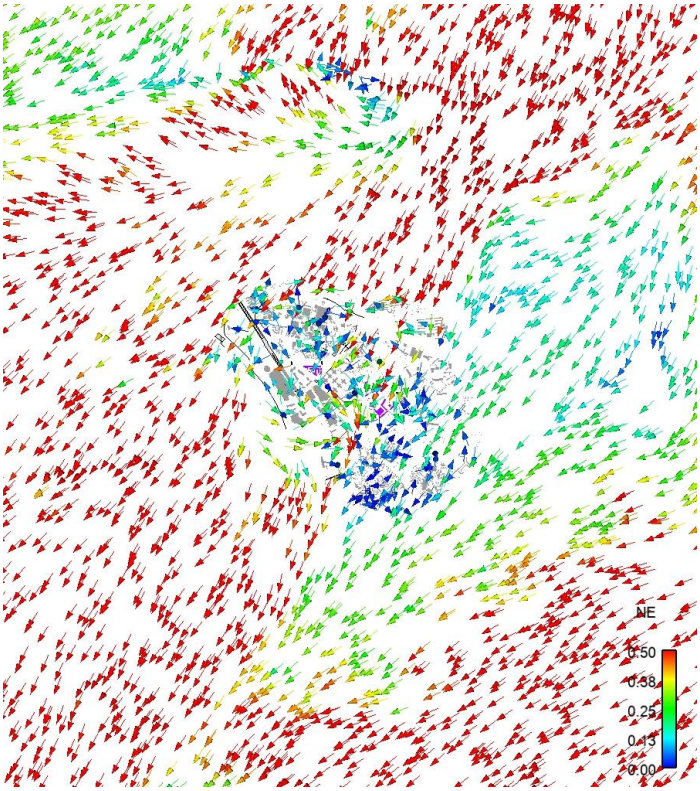


Figure D-19 Vector Plot of VR under NE Wind

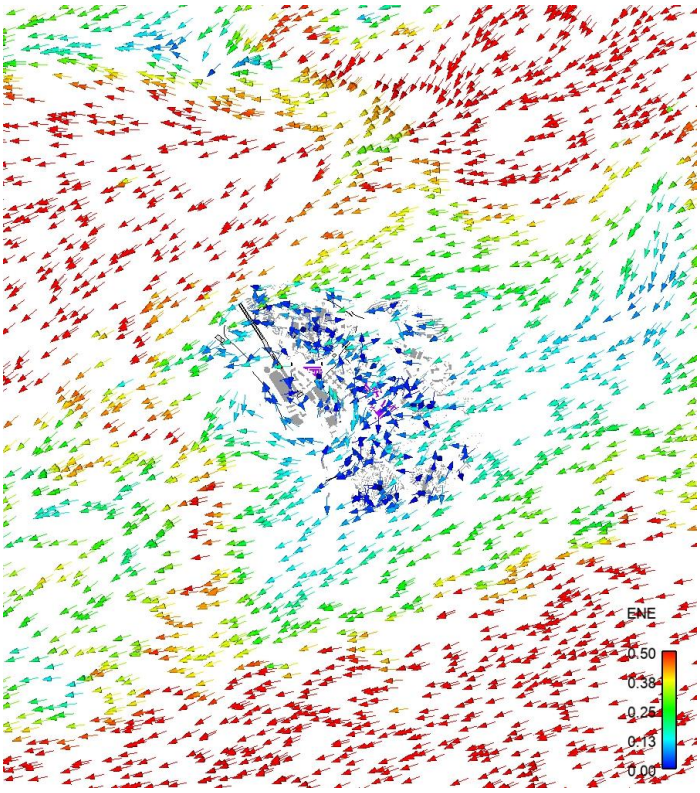


Figure D-20 Vector Plot of VR under ENE Wind

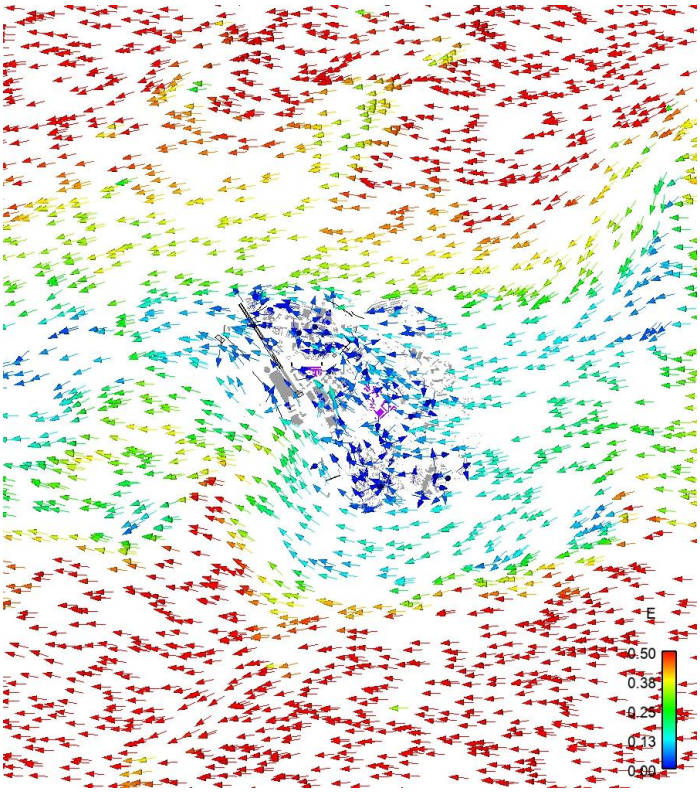


Figure D-21 Vector Plot of VR under E Wind

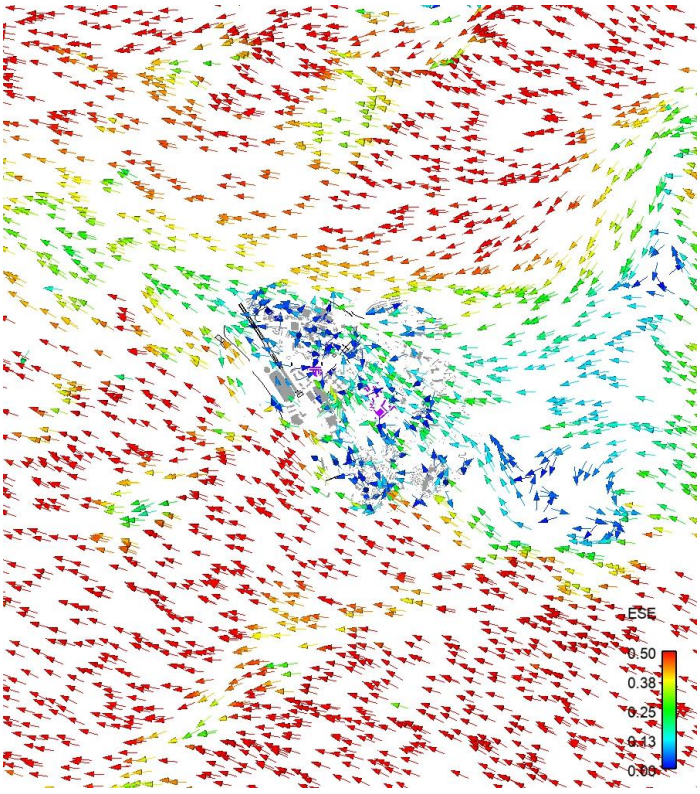


Figure D-22 Vector Plot of VR under ESE Wind

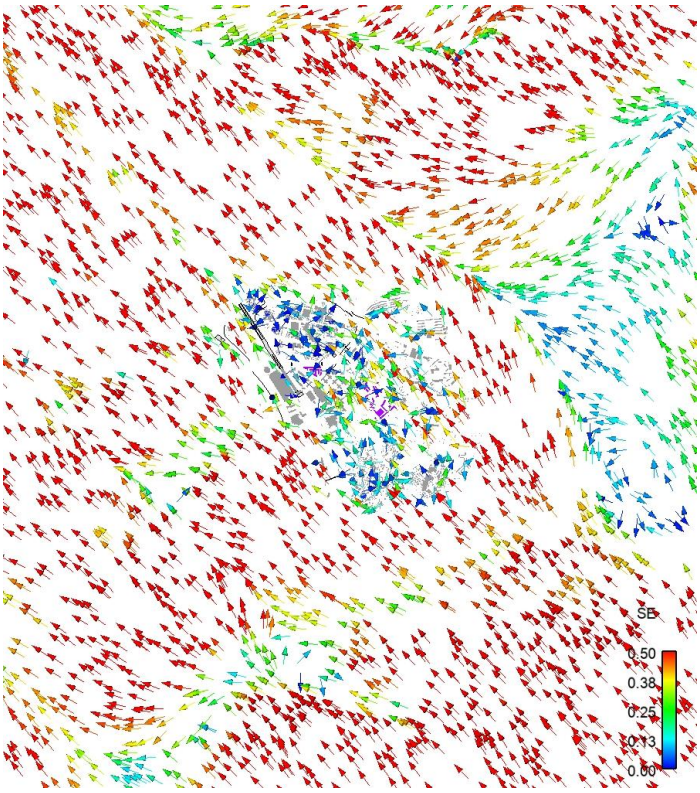


Figure D-23 Vector Plot of VR under SE Wind

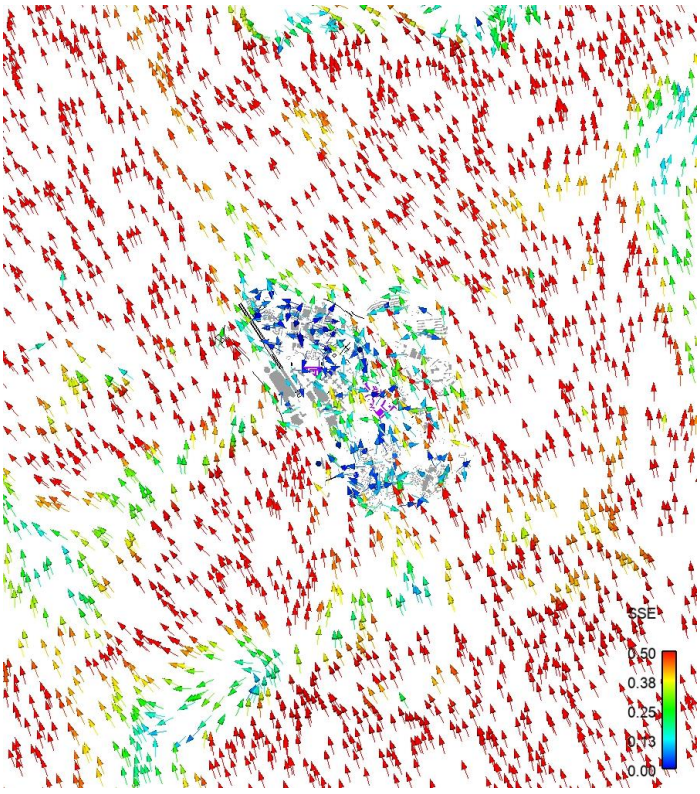


Figure D-24 Vector Plot of VR under SSE Wind

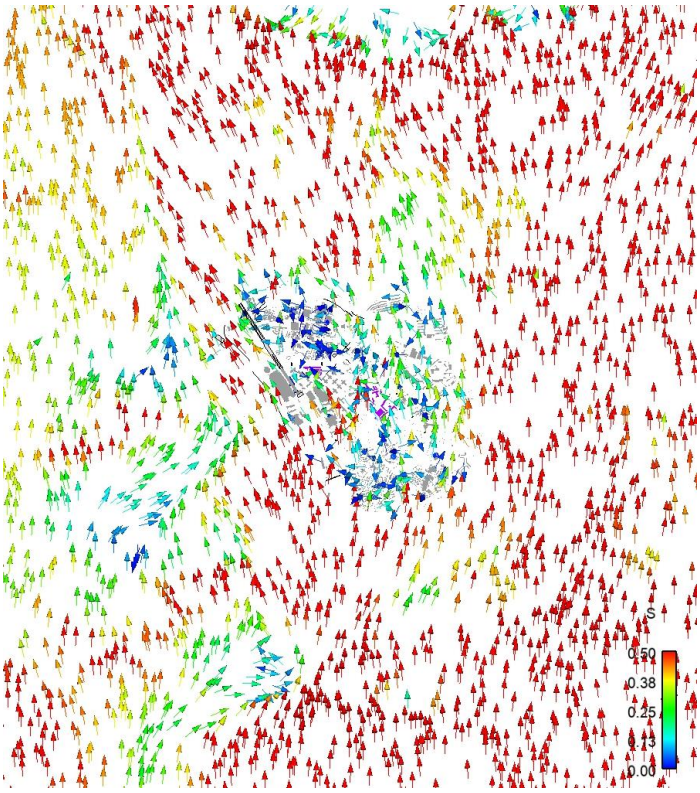


Figure D-25 Vector Plot of VR under S Wind

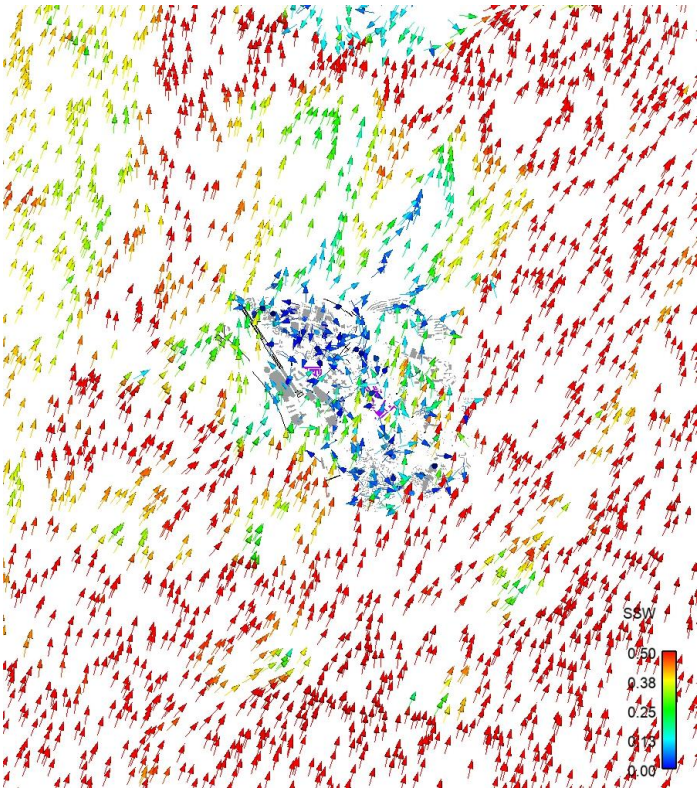


Figure D-26 Vector Plot of VR under SSW Wind

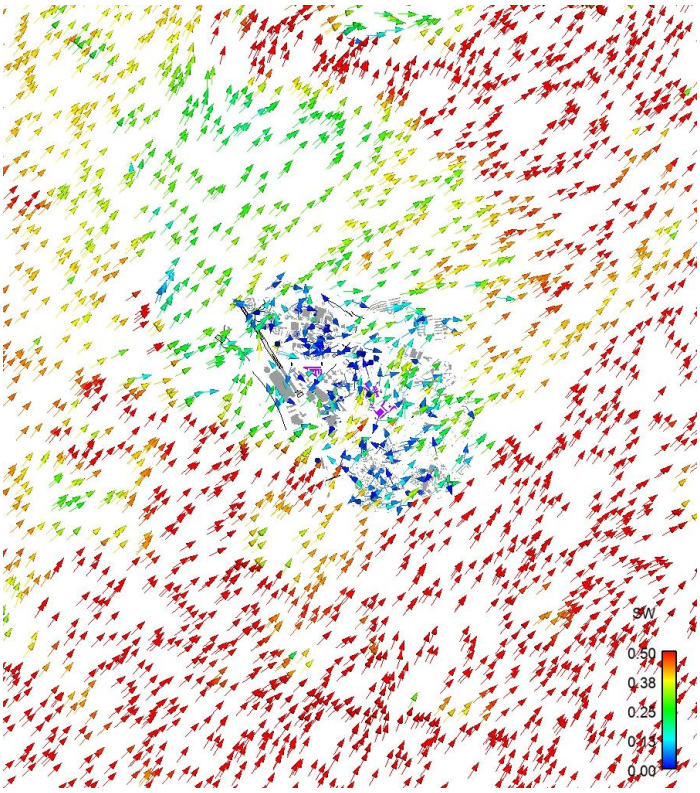


Figure D-27 Vector Plot of VR under SW Wind

D.4 Cumulative Scheme – Domain Area

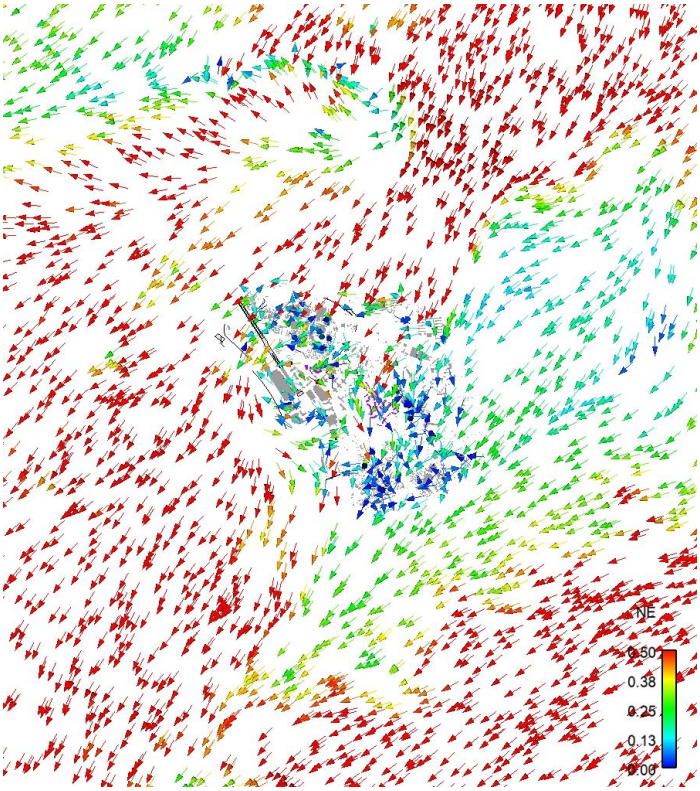


Figure D-28 Vector Plot of VR under NE Wind

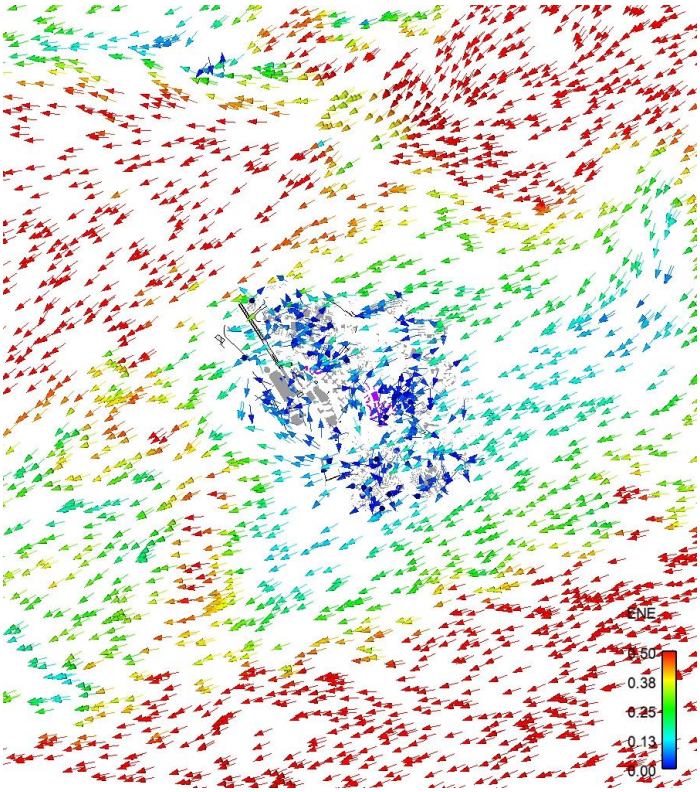


Figure D-29 Vector Plot of VR under ENE Wind

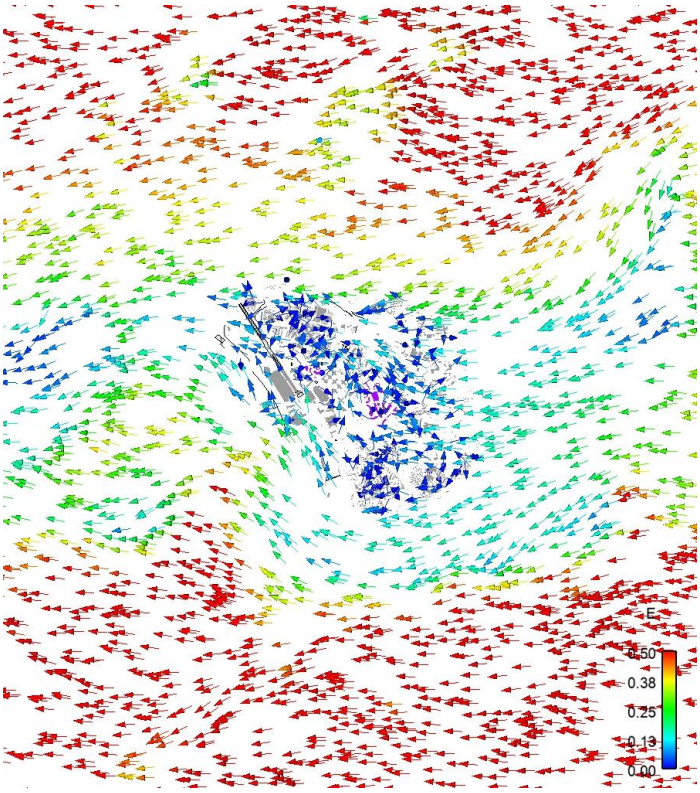


Figure D-30 Vector Plot of VR under E Wind

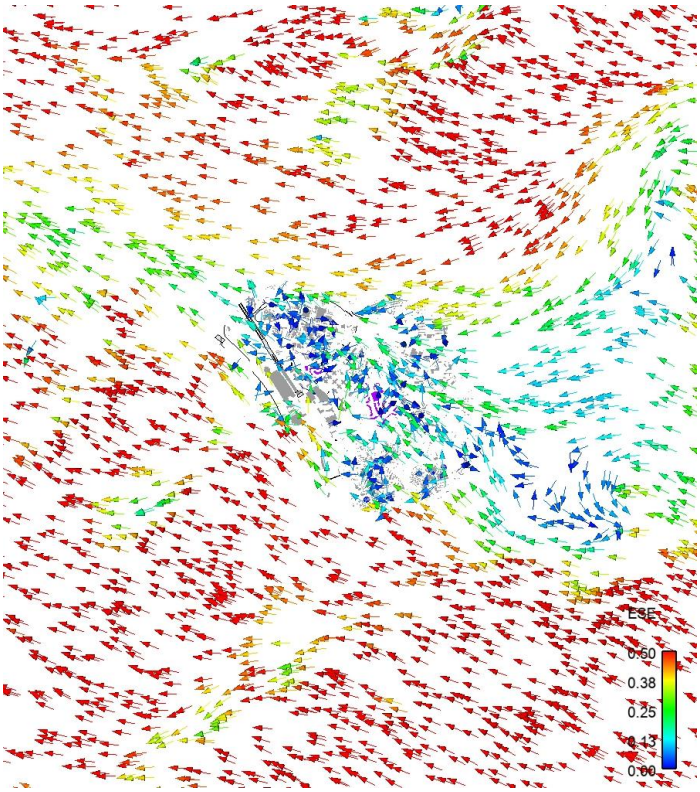


Figure D-31 Vector Plot of VR under ESE Wind

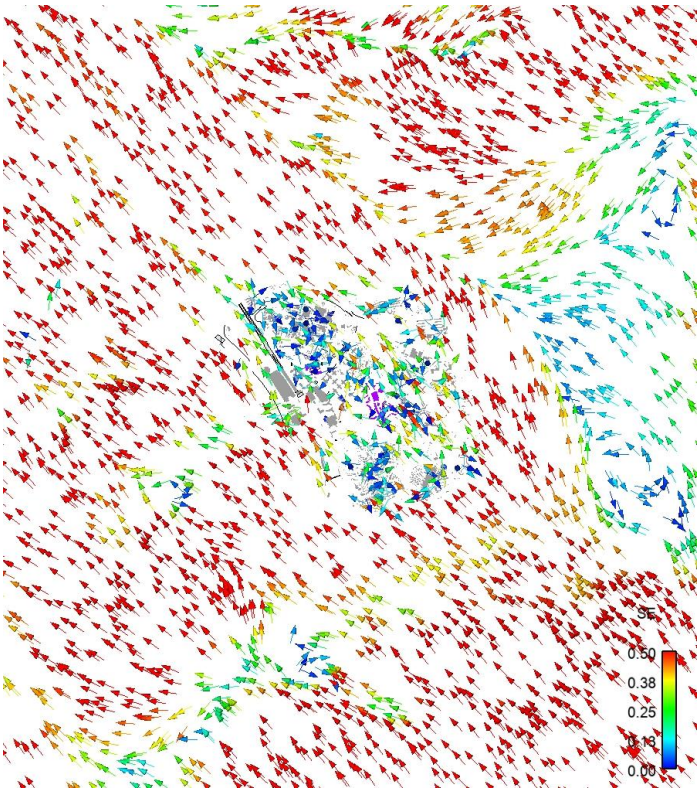


Figure D-32 Vector Plot of VR under SE Wind

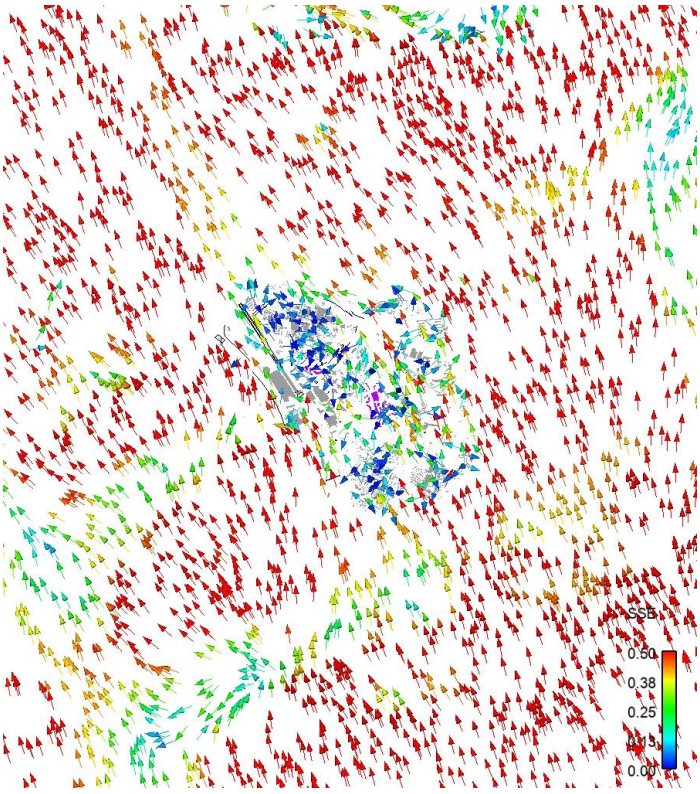


Figure D-33 Vector Plot of VR under SSE Wind

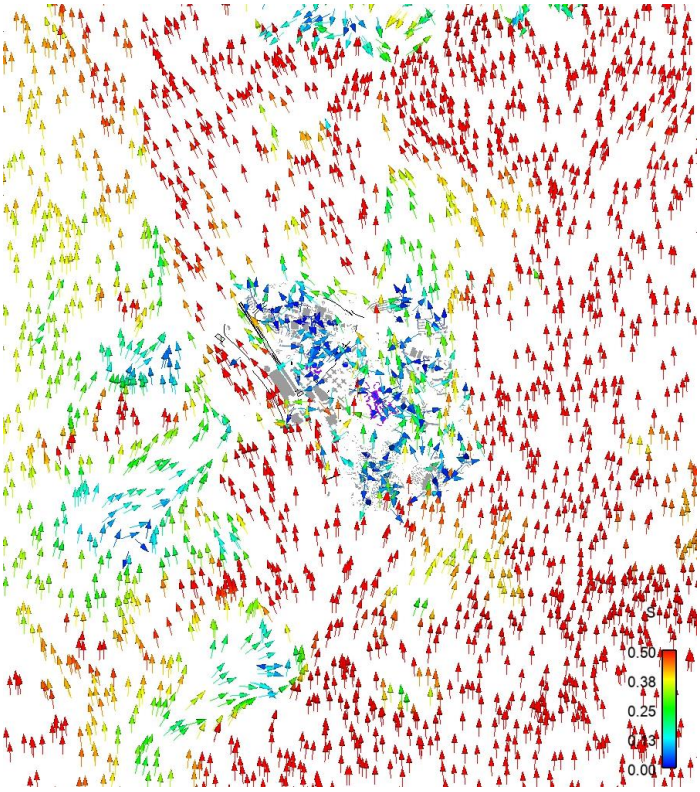


Figure D-34 Vector Plot of VR under S Wind

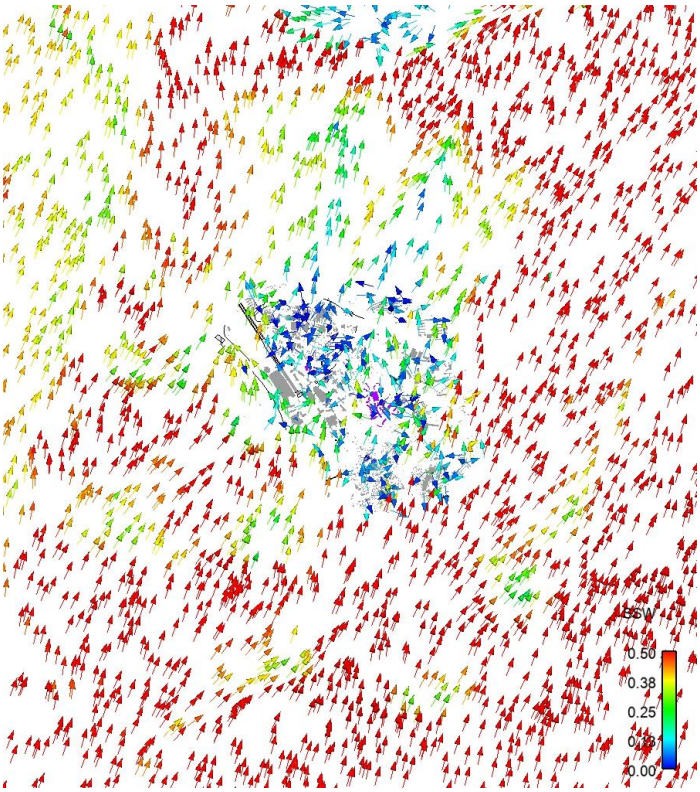


Figure D-35 Vector Plot of VR under SSW Wind

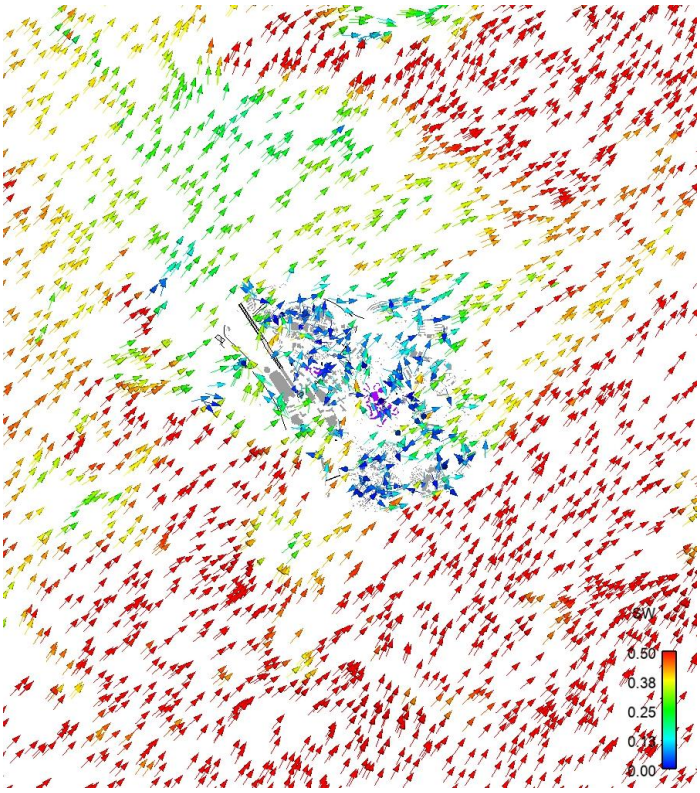


Figure D-36 Vector Plot of VR under SW Wind

Appendix E

VR of Test Points

E.1 Baseline Scheme

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
P1	0.22	0.10	0.11	0.22	0.37	0.20	0.21	0.09	0.06
P2	0.54	0.09	0.09	0.18	0.44	0.23	0.34	0.19	0.03
P3	0.52	0.08	0.06	0.14	0.42	0.23	0.45	0.27	0.39
P4	0.31	0.04	0.02	0.04	0.15	0.04	0.15	0.14	0.16
P5	0.44	0.08	0.04	0.07	0.04	0.22	0.29	0.16	0.36
P6	0.21	0.01	0.08	0.16	0.26	0.06	0.11	0.07	0.08
P7	0.15	0.01	0.07	0.17	0.40	0.54	0.17	0.30	0.12
P8	0.27	0.04	0.09	0.18	0.41	0.52	0.10	0.21	0.32
P9	0.10	0.06	0.02	0.06	0.21	0.35	0.30	0.41	0.37
P10	0.16	0.08	0.09	0.18	0.46	0.52	0.32	0.32	0.20
P11	0.16	0.09	0.06	0.12	0.26	0.26	0.34	0.41	0.44
P12	0.25	0.09	0.07	0.11	0.20	0.32	0.33	0.38	0.37
P13	0.24	0.08	0.06	0.24	0.38	0.32	0.27	0.36	0.46
P14	0.15	0.07	0.09	0.20	0.29	0.22	0.27	0.35	0.42
P15	0.28	0.09	0.06	0.21	0.35	0.31	0.31	0.36	0.45
P16	0.27	0.10	0.09	0.26	0.35	0.31	0.37	0.40	0.39
P17	0.10	0.07	0.08	0.27	0.34	0.34	0.37	0.12	0.10
P18	0.15	0.06	0.09	0.26	0.42	0.41	0.31	0.29	0.30
P19	0.29	0.05	0.08	0.28	0.36	0.33	0.55	0.32	0.40
P20	0.42	0.03	0.07	0.26	0.35	0.32	0.54	0.37	0.30
P21	0.37	0.05	0.05	0.22	0.44	0.37	0.54	0.32	0.20
P22	0.21	0.06	0.06	0.15	0.35	0.37	0.47	0.31	0.38
P23	0.12	0.04	0.06	0.13	0.30	0.33	0.42	0.30	0.43
P24	0.46	0.07	0.03	0.07	0.08	0.07	0.50	0.28	0.28
P25	0.13	0.02	0.05	0.07	0.19	0.24	0.35	0.26	0.24
P26	0.45	0.09	0.05	0.10	0.23	0.16	0.45	0.29	0.27
P27	0.33	0.09	0.02	0.05	0.23	0.33	0.17	0.17	0.05
P28	0.32	0.04	0.07	0.13	0.21	0.28	0.25	0.02	0.01
P29	0.09	0.02	0.04	0.07	0.02	0.06	0.20	0.04	0.11
P30	0.39	0.11	0.03	0.06	0.12	0.18	0.45	0.23	0.28
P31	0.19	0.09	0.03	0.07	0.14	0.26	0.14	0.08	0.10
P32	0.32	0.18	0.05	0.11	0.10	0.04	0.08	0.06	0.12
P33	0.33	0.11	0.01	0.06	0.04	0.01	0.04	0.04	0.02
P34	0.44	0.09	0.01	0.05	0.08	0.08	0.07	0.07	0.12
P35	0.27	0.05	0.02	0.02	0.06	0.11	0.07	0.05	0.11
P36	0.39	0.04	0.11	0.20	0.31	0.20	0.25	0.08	0.11
P37	0.26	0.07	0.11	0.17	0.26	0.17	0.17	0.15	0.15
P38	0.24	0.07	0.10	0.15	0.21	0.14	0.12	0.13	0.05
P39	0.11	0.06	0.10	0.14	0.12	0.04	0.08	0.16	0.05
P40	0.14	0.10	0.07	0.11	0.13	0.02	0.25	0.07	0.09

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
P41	0.23	0.11	0.04	0.13	0.09	0.03	0.03	0.14	0.09
P42	0.29	0.14	0.04	0.14	0.08	0.03	0.07	0.06	0.03
P43	0.24	0.14	0.03	0.11	0.04	0.04	0.03	0.05	0.05
O1	0.18	0.07	0.09	0.22	0.26	0.27	0.35	0.15	0.09
O2	0.19	0.11	0.09	0.24	0.43	0.37	0.46	0.05	0.17
O3	0.06	0.08	0.09	0.25	0.35	0.33	0.34	0.09	0.13
O4	0.16	0.14	0.07	0.16	0.32	0.28	0.16	0.06	0.18
O5	0.55	0.10	0.06	0.15	0.14	0.06	0.03	0.10	0.27
O6	0.39	0.08	0.01	0.01	0.17	0.16	0.03	0.09	0.29
O7	0.31	0.09	0.04	0.11	0.12	0.07	0.03	0.06	0.17
O8	0.47	0.17	0.04	0.10	0.02	0.06	0.05	0.17	0.16
O9	0.15	0.04	0.01	0.04	0.07	0.06	0.04	0.12	0.15
O10	0.15	0.08	0.05	0.10	0.11	0.13	0.31	0.23	0.22
O11	0.22	0.14	0.10	0.22	0.33	0.26	0.27	0.32	0.24
O12	0.16	0.17	0.10	0.22	0.33	0.24	0.28	0.36	0.28
O13	0.42	0.20	0.10	0.20	0.34	0.22	0.32	0.40	0.30
O14	0.45	0.19	0.10	0.16	0.30	0.17	0.30	0.39	0.37
O15	0.60	0.12	0.06	0.07	0.32	0.17	0.37	0.21	0.39
O16	0.08	0.09	0.09	0.10	0.28	0.15	0.37	0.11	0.37
O17	0.41	0.15	0.07	0.12	0.24	0.16	0.35	0.08	0.29
O18	0.50	0.15	0.07	0.12	0.28	0.38	0.48	0.23	0.08
O19	0.14	0.18	0.10	0.12	0.03	0.03	0.10	0.06	0.15
O20	0.22	0.18	0.08	0.14	0.08	0.13	0.19	0.07	0.10
O21	0.27	0.14	0.08	0.16	0.10	0.12	0.14	0.05	0.07
O22	0.18	0.10	0.07	0.18	0.06	0.04	0.10	0.14	0.12
O23	0.14	0.09	0.08	0.19	0.02	0.03	0.03	0.04	0.08
O24	0.26	0.08	0.11	0.21	0.07	0.02	0.03	0.02	0.05
O25	0.10	0.11	0.11	0.20	0.11	0.05	0.03	0.03	0.08
O26	0.18	0.16	0.12	0.18	0.24	0.07	0.06	0.03	0.16
O27	0.22	0.12	0.09	0.19	0.23	0.16	0.12	0.07	0.14
O28	0.39	0.12	0.14	0.21	0.34	0.29	0.13	0.16	0.19
O29	0.43	0.16	0.08	0.16	0.09	0.09	0.13	0.15	0.15
O30	0.46	0.17	0.04	0.08	0.09	0.07	0.12	0.10	0.06
O31	0.20	0.16	0.06	0.12	0.25	0.16	0.13	0.06	0.22
O32	0.17	0.17	0.06	0.12	0.12	0.05	0.15	0.07	0.21
O33	0.28	0.17	0.07	0.18	0.12	0.15	0.22	0.11	0.26
O34	0.32	0.17	0.13	0.24	0.28	0.19	0.18	0.11	0.31
O35	0.38	0.17	0.13	0.26	0.44	0.26	0.28	0.05	0.35
O36	0.57	0.17	0.11	0.21	0.49	0.42	0.31	0.06	0.35
O37	0.59	0.17	0.12	0.24	0.51	0.55	0.40	0.17	0.27
O38	0.54	0.15	0.11	0.23	0.46	0.45	0.35	0.02	0.14
O39	0.61	0.16	0.11	0.20	0.47	0.37	0.28	0.03	0.39

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O40	0.37	0.15	0.12	0.20	0.27	0.11	0.05	0.03	0.26
O41	0.58	0.12	0.08	0.19	0.13	0.18	0.26	0.05	0.20
O42	0.60	0.11	0.02	0.11	0.05	0.09	0.07	0.09	0.17
O43	0.53	0.09	0.12	0.19	0.36	0.29	0.18	0.12	0.17
O44	0.39	0.10	0.13	0.20	0.34	0.30	0.12	0.14	0.15
O45	0.27	0.08	0.01	0.04	0.05	0.07	0.07	0.14	0.11
O46	0.46	0.12	0.02	0.03	0.09	0.04	0.09	0.14	0.17
O47	0.44	0.05	0.01	0.04	0.04	0.06	0.03	0.07	0.21
O48	0.36	0.05	0.05	0.02	0.19	0.21	0.14	0.08	0.23
O49	0.54	0.07	0.04	0.04	0.08	0.12	0.24	0.15	0.29
O50	0.32	0.09	0.03	0.05	0.06	0.11	0.19	0.21	0.26
O51	0.35	0.09	0.03	0.06	0.19	0.30	0.38	0.22	0.25
O52	0.12	0.04	0.02	0.08	0.15	0.06	0.15	0.10	0.17
O53	0.21	0.07	0.08	0.16	0.18	0.04	0.17	0.24	0.31
O54	0.12	0.04	0.03	0.05	0.06	0.24	0.42	0.09	0.18
O55	0.36	0.04	0.03	0.07	0.04	0.23	0.25	0.09	0.08
O56	0.43	0.04	0.03	0.06	0.07	0.34	0.61	0.15	0.13
O57	0.32	0.05	0.05	0.07	0.09	0.15	0.21	0.16	0.11
O58	0.15	0.14	0.10	0.21	0.42	0.19	0.27	0.37	0.26
O59	0.21	0.18	0.11	0.18	0.47	0.20	0.44	0.38	0.18
O60	0.27	0.17	0.10	0.09	0.41	0.29	0.51	0.36	0.30
O61	0.37	0.15	0.09	0.08	0.32	0.26	0.45	0.36	0.31
O62	0.36	0.10	0.08	0.11	0.24	0.19	0.32	0.39	0.33
O63	0.40	0.14	0.05	0.09	0.15	0.09	0.13	0.39	0.38
O64	0.58	0.17	0.01	0.21	0.28	0.27	0.41	0.38	0.40
O65	0.20	0.08	0.03	0.35	0.40	0.46	0.61	0.39	0.39
O66	0.09	0.10	0.03	0.34	0.29	0.35	0.53	0.28	0.26
O67	0.30	0.03	0.02	0.38	0.30	0.32	0.55	0.25	0.17
O68	0.19	0.01	0.02	0.35	0.17	0.23	0.53	0.24	0.19
O69	0.22	0.02	0.02	0.32	0.17	0.12	0.47	0.20	0.09
O70	0.23	0.03	0.01	0.21	0.04	0.05	0.44	0.18	0.09
O71	0.25	0.04	0.06	0.26	0.10	0.08	0.36	0.15	0.11
O72	0.14	0.07	0.09	0.37	0.49	0.18	0.28	0.32	0.43
O73	0.08	0.07	0.11	0.33	0.47	0.21	0.23	0.15	0.38
O74	0.14	0.03	0.10	0.25	0.36	0.20	0.16	0.04	0.15
O75	0.06	0.02	0.06	0.20	0.29	0.12	0.18	0.25	0.18
O76	0.09	0.03	0.14	0.33	0.47	0.42	0.21	0.06	0.16
O77	0.16	0.04	0.13	0.24	0.35	0.39	0.45	0.25	0.26
O78	0.34	0.05	0.12	0.23	0.36	0.42	0.46	0.23	0.28
O79	0.32	0.07	0.13	0.32	0.45	0.46	0.50	0.21	0.27
O80	0.34	0.07	0.17	0.42	0.54	0.53	0.58	0.23	0.27
O81	0.32	0.05	0.17	0.42	0.54	0.55	0.62	0.26	0.29

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O82	0.27	0.09	0.15	0.39	0.51	0.55	0.58	0.28	0.33
O83	0.21	0.10	0.14	0.35	0.47	0.47	0.48	0.26	0.37
O84	0.16	0.08	0.09	0.28	0.27	0.18	0.37	0.32	0.39
O85	0.48	0.03	0.08	0.31	0.31	0.51	0.75	0.37	0.27
O86	0.68	0.10	0.08	0.31	0.35	0.47	0.76	0.34	0.37
O87	0.59	0.14	0.09	0.26	0.30	0.40	0.65	0.32	0.42
O88	0.44	0.13	0.11	0.30	0.41	0.35	0.57	0.31	0.37
O89	0.25	0.12	0.10	0.27	0.34	0.33	0.63	0.31	0.35
O90	0.06	0.09	0.09	0.24	0.25	0.29	0.66	0.32	0.35
O91	0.06	0.11	0.04	0.13	0.24	0.23	0.65	0.29	0.47
O92	0.16	0.13	0.05	0.10	0.25	0.22	0.57	0.37	0.47
O93	0.20	0.13	0.05	0.12	0.28	0.32	0.66	0.35	0.16
O94	0.24	0.10	0.07	0.15	0.29	0.35	0.60	0.29	0.25
O95	0.23	0.05	0.10	0.23	0.28	0.32	0.44	0.07	0.07
O96	0.32	0.15	0.16	0.35	0.48	0.38	0.55	0.19	0.14
O97	0.37	0.14	0.16	0.35	0.43	0.39	0.74	0.14	0.07
O98	0.14	0.10	0.13	0.29	0.31	0.36	0.69	0.15	0.18
O99	0.14	0.16	0.14	0.29	0.43	0.36	0.64	0.18	0.08
O100	0.12	0.02	0.12	0.21	0.36	0.26	0.55	0.07	0.09
O101	0.19	0.09	0.13	0.19	0.40	0.20	0.39	0.07	0.17
O102	0.42	0.07	0.13	0.16	0.40	0.26	0.42	0.14	0.12
O103	0.44	0.14	0.15	0.22	0.47	0.37	0.36	0.10	0.04
O104	0.31	0.17	0.09	0.24	0.56	0.46	0.25	0.07	0.08
O105	0.48	0.05	0.10	0.27	0.55	0.52	0.41	0.01	0.06
O106	0.19	0.10	0.12	0.29	0.53	0.53	0.28	0.05	0.14
O107	0.20	0.05	0.05	0.13	0.12	0.11	0.09	0.17	0.21
O108	0.32	0.12	0.13	0.29	0.42	0.32	0.29	0.16	0.19
O109	0.23	0.16	0.09	0.14	0.14	0.11	0.10	0.09	0.14
O110	0.62	0.14	0.12	0.22	0.43	0.53	0.33	0.26	0.35
O111	0.60	0.11	0.11	0.21	0.46	0.47	0.47	0.20	0.37
O112	0.40	0.11	0.11	0.23	0.48	0.52	0.42	0.24	0.39
O113	0.46	0.15	0.12	0.25	0.43	0.49	0.45	0.19	0.40
O114	0.45	0.17	0.13	0.28	0.45	0.57	0.47	0.09	0.30
O115	0.18	0.17	0.13	0.24	0.09	0.14	0.22	0.08	0.10
O116	0.40	0.14	0.10	0.19	0.26	0.21	0.24	0.03	0.08
O117	0.41	0.17	0.02	0.08	0.18	0.13	0.20	0.10	0.13
O118	0.38	0.18	0.07	0.13	0.14	0.13	0.11	0.14	0.12
O119	0.17	0.07	0.05	0.10	0.10	0.14	0.17	0.14	0.13
O120	0.24	0.09	0.07	0.12	0.18	0.12	0.17	0.05	0.09
O121	0.24	0.03	0.07	0.13	0.24	0.19	0.13	0.05	0.15
O122	0.17	0.08	0.07	0.14	0.22	0.17	0.05	0.05	0.10
O123	0.18	0.09	0.07	0.11	0.23	0.11	0.05	0.02	0.17

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O124	0.31	0.08	0.07	0.13	0.21	0.08	0.02	0.02	0.04
O125	0.22	0.09	0.05	0.15	0.19	0.05	0.09	0.02	0.09
O126	0.27	0.10	0.07	0.17	0.13	0.01	0.16	0.10	0.14
O127	0.37	0.12	0.08	0.14	0.23	0.08	0.20	0.16	0.17
O128	0.26	0.09	0.09	0.15	0.20	0.08	0.07	0.20	0.20
O129	0.21	0.08	0.10	0.18	0.19	0.18	0.29	0.09	0.21
O130	0.08	0.10	0.08	0.14	0.12	0.14	0.35	0.19	0.20
O131	0.10	0.11	0.10	0.15	0.09	0.39	0.26	0.27	0.22
O132	0.50	0.16	0.13	0.27	0.50	0.57	0.47	0.08	0.33
O133	0.56	0.16	0.12	0.24	0.49	0.56	0.41	0.16	0.36
O134	0.68	0.15	0.11	0.22	0.47	0.55	0.44	0.23	0.28
O135	0.12	0.04	0.12	0.24	0.37	0.38	0.32	0.14	0.21
O136	0.71	0.16	0.12	0.22	0.33	0.39	0.46	0.27	0.19
O137	0.72	0.17	0.12	0.21	0.36	0.50	0.30	0.13	0.15
O138	0.66	0.08	0.09	0.17	0.37	0.32	0.32	0.27	0.06
O139	0.10	0.06	0.04	0.08	0.31	0.36	0.26	0.29	0.03
O140	0.37	0.13	0.04	0.07	0.06	0.14	0.15	0.35	0.31
O141	0.36	0.05	0.09	0.15	0.24	0.26	0.25	0.37	0.31
O142	0.22	0.09	0.12	0.19	0.28	0.33	0.29	0.45	0.34
O143	0.45	0.11	0.02	0.08	0.27	0.26	0.24	0.48	0.44
O144	0.17	0.03	0.05	0.19	0.26	0.46	0.24	0.31	0.30
O145	0.14	0.03	0.04	0.12	0.25	0.47	0.31	0.23	0.17
O146	0.07	0.07	0.08	0.17	0.45	0.45	0.32	0.23	0.28
O147	0.05	0.06	0.09	0.19	0.49	0.55	0.25	0.35	0.27
O148	0.12	0.04	0.07	0.19	0.52	0.61	0.25	0.43	0.33
O149	0.12	0.06	0.08	0.20	0.48	0.65	0.26	0.31	0.39
O150	0.12	0.06	0.10	0.24	0.52	0.59	0.31	0.24	0.26
O151	0.07	0.12	0.11	0.23	0.49	0.56	0.32	0.51	0.27
O152	0.16	0.15	0.12	0.21	0.51	0.39	0.33	0.37	0.31
O153	0.21	0.15	0.13	0.21	0.29	0.32	0.28	0.53	0.29
O154	0.20	0.14	0.12	0.24	0.41	0.42	0.40	0.46	0.29
O155	0.16	0.10	0.12	0.26	0.28	0.22	0.30	0.59	0.31
O156	0.49	0.07	0.09	0.19	0.34	0.46	0.35	0.36	0.32
O157	0.43	0.15	0.10	0.19	0.42	0.53	0.32	0.34	0.18
O158	0.15	0.09	0.10	0.20	0.45	0.51	0.36	0.24	0.04
O159	0.55	0.12	0.09	0.17	0.48	0.52	0.45	0.21	0.09
O160	0.54	0.18	0.10	0.19	0.44	0.51	0.40	0.21	0.17
O161	0.77	0.14	0.11	0.21	0.49	0.51	0.42	0.22	0.21
O162	0.67	0.13	0.12	0.24	0.52	0.53	0.37	0.18	0.26
O163	0.61	0.14	0.12	0.24	0.51	0.42	0.37	0.09	0.32
O164	0.28	0.07	0.08	0.16	0.17	0.06	0.09	0.17	0.12
O165	0.22	0.02	0.05	0.13	0.12	0.14	0.05	0.08	0.03

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O166	0.11	0.11	0.10	0.21	0.28	0.17	0.11	0.11	0.13
O167	0.11	0.03	0.03	0.06	0.11	0.07	0.08	0.04	0.05
O168	0.07	0.04	0.03	0.05	0.11	0.01	0.04	0.05	0.05
O169	0.14	0.07	0.01	0.03	0.09	0.04	0.10	0.05	0.03
O170	0.19	0.06	0.04	0.08	0.06	0.04	0.03	0.04	0.05
O171	0.43	0.16	0.08	0.12	0.06	0.05	0.19	0.25	0.25
O172	0.05	0.04	0.04	0.15	0.10	0.12	0.47	0.20	0.30
O173	0.22	0.07	0.10	0.15	0.12	0.11	0.36	0.18	0.30
O174	0.32	0.14	0.11	0.17	0.15	0.10	0.08	0.08	0.08
O175	0.11	0.05	0.09	0.15	0.13	0.04	0.07	0.05	0.33
O176	0.17	0.11	0.08	0.12	0.15	0.03	0.08	0.05	0.34
O177	0.21	0.12	0.09	0.13	0.20	0.04	0.13	0.04	0.23
O178	0.15	0.10	0.06	0.08	0.19	0.06	0.11	0.09	0.08
O179	0.23	0.09	0.06	0.07	0.22	0.06	0.12	0.06	0.15
O180	0.17	0.10	0.07	0.10	0.22	0.08	0.15	0.12	0.11
O181	0.08	0.07	0.10	0.13	0.31	0.20	0.10	0.07	0.06
O182	0.29	0.12	0.13	0.14	0.41	0.27	0.05	0.05	0.09
O183	0.43	0.10	0.14	0.23	0.40	0.29	0.18	0.17	0.20
O184	0.36	0.08	0.13	0.22	0.35	0.19	0.15	0.09	0.14
O185	0.14	0.05	0.12	0.21	0.38	0.28	0.13	0.04	0.10
O186	0.37	0.07	0.10	0.17	0.32	0.26	0.11	0.07	0.06
O187	0.27	0.04	0.09	0.18	0.37	0.30	0.27	0.14	0.02
O188	0.36	0.05	0.07	0.16	0.35	0.29	0.46	0.15	0.10
O189	0.41	0.09	0.06	0.13	0.29	0.24	0.52	0.25	0.19
O190	0.50	0.11	0.05	0.13	0.23	0.22	0.44	0.30	0.27
O191	0.48	0.08	0.04	0.09	0.19	0.21	0.51	0.22	0.25
O192	0.38	0.05	0.07	0.14	0.33	0.35	0.45	0.33	0.43
O193	0.22	0.06	0.05	0.18	0.40	0.37	0.42	0.31	0.39
O194	0.38	0.05	0.05	0.26	0.40	0.35	0.50	0.28	0.19
O195	0.42	0.04	0.08	0.26	0.35	0.35	0.53	0.36	0.41
O196	0.24	0.08	0.10	0.29	0.36	0.35	0.53	0.30	0.42
O197	0.29	0.11	0.10	0.22	0.31	0.33	0.44	0.31	0.33
O198	0.31	0.13	0.07	0.17	0.29	0.32	0.31	0.38	0.35
O199	0.32	0.14	0.05	0.17	0.27	0.33	0.32	0.23	0.24
O200	0.24	0.06	0.05	0.16	0.25	0.38	0.32	0.23	0.23
O201	0.08	0.06	0.06	0.25	0.38	0.34	0.23	0.25	0.09
O202	0.09	0.01	0.07	0.28	0.41	0.40	0.28	0.17	0.07
O203	0.03	0.09	0.08	0.29	0.38	0.12	0.08	0.08	0.11
O204	0.10	0.06	0.08	0.30	0.36	0.24	0.11	0.16	0.10
O205	0.18	0.14	0.08	0.28	0.31	0.08	0.10	0.10	0.07
O206	0.18	0.12	0.07	0.28	0.45	0.38	0.15	0.07	0.05
O207	0.18	0.07	0.04	0.27	0.45	0.47	0.34	0.24	0.15

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O208	0.09	0.05	0.04	0.27	0.43	0.46	0.42	0.62	0.21
O209	0.41	0.05	0.05	0.14	0.27	0.41	0.27	0.37	0.19
O210	0.38	0.07	0.06	0.12	0.27	0.35	0.29	0.41	0.26
O211	0.34	0.06	0.10	0.20	0.30	0.32	0.34	0.44	0.39
O212	0.30	0.04	0.08	0.18	0.49	0.38	0.29	0.44	0.40
O213	0.52	0.09	0.09	0.26	0.45	0.46	0.34	0.48	0.37
O214	0.39	0.12	0.07	0.24	0.42	0.49	0.36	0.39	0.36
O215	0.19	0.02	0.07	0.18	0.37	0.46	0.34	0.26	0.07
O216	0.18	0.09	0.06	0.17	0.34	0.52	0.34	0.35	0.44
O217	0.09	0.07	0.09	0.17	0.30	0.39	0.30	0.34	0.35
O218	0.03	0.07	0.09	0.21	0.51	0.31	0.37	0.23	0.26
O219	0.10	0.12	0.09	0.20	0.56	0.47	0.25	0.40	0.22
O220	0.14	0.10	0.06	0.22	0.52	0.48	0.22	0.20	0.31
O221	0.10	0.11	0.10	0.23	0.44	0.48	0.17	0.15	0.25
O222	0.15	0.14	0.10	0.24	0.47	0.46	0.33	0.54	0.33
O223	0.20	0.15	0.09	0.24	0.51	0.38	0.15	0.33	0.36
O224	0.19	0.12	0.09	0.23	0.50	0.58	0.29	0.57	0.26
O225	0.15	0.13	0.11	0.22	0.46	0.69	0.25	0.43	0.32
O226	0.19	0.13	0.11	0.20	0.37	0.61	0.42	0.47	0.36
O227	0.24	0.15	0.13	0.17	0.31	0.52	0.42	0.52	0.29
O228	0.06	0.10	0.07	0.20	0.22	0.26	0.19	0.14	0.01
O229	0.07	0.09	0.02	0.06	0.13	0.11	0.27	0.18	0.07
O230	0.07	0.08	0.04	0.12	0.05	0.04	0.07	0.04	0.19
O231	0.07	0.05	0.03	0.13	0.17	0.06	0.03	0.13	0.22
O232	0.07	0.04	0.02	0.05	0.06	0.11	0.15	0.25	0.20
O233	0.10	0.06	0.03	0.08	0.11	0.13	0.15	0.11	0.18
O234	0.08	0.02	0.02	0.05	0.04	0.04	0.04	0.13	0.06
O235	0.29	0.11	0.10	0.22	0.39	0.37	0.34	0.08	0.14
O236	0.26	0.04	0.08	0.20	0.23	0.17	0.10	0.10	0.09
O237	0.17	0.05	0.04	0.10	0.12	0.12	0.09	0.20	0.14
O238	0.17	0.03	0.03	0.08	0.12	0.09	0.07	0.08	0.05
O239	0.30	0.09	0.05	0.11	0.17	0.10	0.08	0.02	0.16
O240	0.17	0.08	0.02	0.05	0.10	0.08	0.03	0.00	0.04
O241	0.24	0.06	0.02	0.06	0.07	0.06	0.07	0.00	0.07
O242	0.19	0.11	0.03	0.10	0.18	0.12	0.08	0.03	0.08
O243	0.08	0.02	0.01	0.05	0.05	0.02	0.04	0.01	0.09
O244	0.09	0.02	0.02	0.05	0.13	0.08	0.11	0.03	0.04
O245	0.65	0.16	0.05	0.12	0.10	0.01	0.05	0.07	0.14
O246	0.06	0.06	0.06	0.12	0.22	0.06	0.10	0.03	0.05
O247	0.10	0.07	0.01	0.03	0.09	0.02	0.07	0.01	0.09
O248	0.07	0.06	0.06	0.12	0.18	0.05	0.08	0.08	0.07
O249	0.26	0.06	0.01	0.04	0.06	0.01	0.14	0.09	0.05

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O250	0.60	0.23	0.05	0.10	0.08	0.02	0.12	0.14	0.11
O251	0.11	0.06	0.05	0.12	0.16	0.05	0.16	0.12	0.14
O252	0.25	0.04	0.06	0.16	0.28	0.12	0.41	0.17	0.09
O253	0.21	0.05	0.02	0.05	0.06	0.06	0.18	0.08	0.03
O254	0.31	0.14	0.05	0.13	0.24	0.07	0.06	0.16	0.14
O255	0.37	0.15	0.06	0.15	0.15	0.04	0.23	0.07	0.06
O256	0.37	0.14	0.05	0.12	0.05	0.03	0.10	0.11	0.08
O257	0.08	0.05	0.01	0.07	0.05	0.10	0.19	0.20	0.18
O258	0.04	0.05	0.02	0.06	0.02	0.04	0.15	0.17	0.19
O259	0.06	0.08	0.04	0.11	0.11	0.15	0.36	0.18	0.06
O260	0.42	0.06	0.01	0.05	0.08	0.08	0.01	0.05	0.11
O261	0.37	0.04	0.02	0.06	0.07	0.07	0.02	0.08	0.20
O262	0.10	0.01	0.01	0.02	0.04	0.03	0.01	0.02	0.05
O263	0.15	0.07	0.07	0.12	0.20	0.11	0.16	0.16	0.15
O264	0.02	0.02	0.02	0.08	0.11	0.05	0.10	0.06	0.06
O265	0.18	0.06	0.04	0.07	0.15	0.04	0.08	0.11	0.08
O266	0.19	0.08	0.05	0.06	0.03	0.04	0.13	0.23	0.22
O267	0.23	0.09	0.03	0.05	0.03	0.04	0.09	0.06	0.13
O268	0.09	0.04	0.01	0.03	0.01	0.04	0.18	0.04	0.03
O269	0.31	0.13	0.03	0.13	0.11	0.10	0.27	0.19	0.34
O270	0.20	0.10	0.04	0.04	0.03	0.10	0.24	0.10	0.21
O271	0.29	0.16	0.08	0.13	0.16	0.05	0.06	0.05	0.08
O272	0.32	0.14	0.06	0.08	0.20	0.04	0.06	0.05	0.06
O273	0.28	0.13	0.05	0.10	0.09	0.02	0.19	0.08	0.13
O274	0.38	0.06	0.02	0.02	0.06	0.04	0.20	0.03	0.31
O275	0.39	0.09	0.01	0.06	0.04	0.07	0.20	0.03	0.22
O276	0.08	0.03	0.08	0.12	0.14	0.01	0.05	0.04	0.35
O277	0.09	0.06	0.04	0.09	0.09	0.01	0.07	0.03	0.30
O278	0.10	0.05	0.04	0.06	0.16	0.01	0.06	0.01	0.14
O279	0.21	0.05	0.01	0.02	0.11	0.01	0.08	0.02	0.16
O280	0.19	0.05	0.04	0.07	0.10	0.03	0.05	0.02	0.05
O281	0.31	0.11	0.05	0.13	0.12	0.03	0.06	0.00	0.14
O282	0.17	0.04	0.04	0.13	0.10	0.02	0.10	0.02	0.19
O283	0.16	0.03	0.02	0.08	0.17	0.08	0.04	0.04	0.12
O284	0.05	0.06	0.02	0.07	0.11	0.03	0.06	0.05	0.05
O285	0.03	0.01	0.03	0.04	0.12	0.04	0.05	0.04	0.02
O286	0.10	0.02	0.03	0.09	0.13	0.04	0.05	0.02	0.03
O287	0.06	0.01	0.01	0.02	0.03	0.02	0.05	0.06	0.04
O288	0.18	0.07	0.05	0.10	0.18	0.05	0.08	0.12	0.07
O289	0.19	0.04	0.01	0.04	0.05	0.02	0.05	0.16	0.05
O290	0.18	0.03	0.04	0.10	0.15	0.08	0.01	0.05	0.02
O291	0.06	0.04	0.06	0.11	0.12	0.10	0.03	0.15	0.07

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O292	0.22	0.06	0.06	0.17	0.15	0.10	0.03	0.05	0.07
O293	0.23	0.07	0.09	0.17	0.23	0.12	0.12	0.08	0.09
O294	0.23	0.07	0.03	0.04	0.12	0.05	0.10	0.04	0.03
O295	0.21	0.02	0.06	0.16	0.19	0.13	0.11	0.01	0.02
O296	0.26	0.16	0.08	0.17	0.15	0.12	0.15	0.11	0.09
O297	0.53	0.07	0.08	0.15	0.17	0.08	0.18	0.02	0.13
O298	0.11	0.05	0.02	0.07	0.07	0.05	0.04	0.09	0.01
O299	0.07	0.01	0.02	0.05	0.11	0.06	0.04	0.07	0.03
O300	0.45	0.09	0.04	0.07	0.32	0.25	0.04	0.05	0.13
O301	0.07	0.15	0.04	0.10	0.12	0.10	0.12	0.02	0.09
O302	0.37	0.15	0.12	0.24	0.30	0.33	0.30	0.06	0.09
O303	0.46	0.07	0.07	0.16	0.36	0.43	0.49	0.04	0.03
O304	0.37	0.16	0.04	0.06	0.26	0.32	0.31	0.04	0.12
O305	0.21	0.06	0.04	0.11	0.39	0.32	0.27	0.04	0.08
O306	0.32	0.18	0.06	0.12	0.18	0.17	0.11	0.06	0.12
O307	0.31	0.02	0.01	0.02	0.06	0.03	0.03	0.02	0.02
O308	0.07	0.08	0.08	0.18	0.18	0.08	0.10	0.06	0.10
O309	0.12	0.07	0.04	0.14	0.13	0.07	0.08	0.11	0.06
O310	0.09	0.03	0.02	0.03	0.06	0.10	0.02	0.05	0.04
O311	0.29	0.15	0.12	0.20	0.29	0.12	0.03	0.07	0.01
O312	0.12	0.03	0.03	0.05	0.07	0.04	0.05	0.03	0.04
O313	0.11	0.03	0.06	0.09	0.15	0.01	0.09	0.03	0.04
O314	0.04	0.02	0.01	0.02	0.02	0.02	0.06	0.01	0.03
O315	0.10	0.02	0.04	0.07	0.03	0.03	0.01	0.01	0.01
O316	0.06	0.02	0.04	0.08	0.03	0.03	0.03	0.05	0.04
O317	0.03	0.03	0.06	0.10	0.03	0.04	0.02	0.07	0.07
O318	0.07	0.07	0.02	0.05	0.08	0.04	0.04	0.09	0.08
O319	0.19	0.06	0.05	0.07	0.12	0.04	0.07	0.12	0.03
O320	0.22	0.02	0.03	0.06	0.11	0.05	0.16	0.16	0.12
O321	0.19	0.04	0.02	0.03	0.01	0.03	0.05	0.03	0.09
O322	0.13	0.04	0.03	0.05	0.02	0.03	0.07	0.07	0.11
O323	0.25	0.07	0.07	0.12	0.08	0.03	0.02	0.14	0.13
O324	0.06	0.03	0.04	0.08	0.09	0.01	0.04	0.03	0.11
O325	0.10	0.13	0.09	0.17	0.09	0.04	0.12	0.07	0.13
O326	0.18	0.11	0.07	0.08	0.07	0.05	0.09	0.06	0.10
O327	0.15	0.06	0.04	0.09	0.07	0.03	0.07	0.03	0.03
O328	0.18	0.12	0.06	0.12	0.08	0.03	0.12	0.03	0.04
O329	0.16	0.03	0.03	0.04	0.05	0.06	0.05	0.05	0.06
O330	0.16	0.05	0.06	0.13	0.09	0.02	0.04	0.03	0.24
O331	0.08	0.03	0.05	0.09	0.10	0.01	0.10	0.02	0.15
O332	0.16	0.15	0.08	0.16	0.05	0.07	0.14	0.05	0.08
O333	0.06	0.06	0.05	0.09	0.03	0.05	0.04	0.05	0.07

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O334	0.18	0.06	0.02	0.06	0.04	0.03	0.01	0.05	0.10
O335	0.32	0.10	0.08	0.16	0.02	0.09	0.22	0.09	0.34
O336	0.06	0.06	0.09	0.15	0.02	0.06	0.21	0.06	0.26
O337	0.46	0.10	0.09	0.15	0.06	0.04	0.06	0.10	0.17
O338	0.07	0.11	0.08	0.13	0.03	0.03	0.04	0.01	0.04
O339	0.10	0.09	0.08	0.10	0.06	0.03	0.03	0.09	0.13
O340	0.50	0.13	0.09	0.10	0.19	0.28	0.35	0.17	0.13
O341	0.28	0.14	0.09	0.11	0.27	0.35	0.42	0.13	0.25
O342	0.02	0.05	0.07	0.08	0.28	0.38	0.42	0.07	0.35
O343	0.06	0.05	0.06	0.11	0.02	0.05	0.25	0.11	0.32
O344	0.31	0.13	0.04	0.06	0.03	0.03	0.26	0.15	0.35
O345	0.42	0.06	0.02	0.03	0.02	0.05	0.05	0.02	0.02
O346	0.25	0.07	0.03	0.14	0.06	0.12	0.06	0.23	0.17
O347	0.17	0.09	0.03	0.11	0.12	0.14	0.20	0.24	0.20
O348	0.21	0.02	0.03	0.07	0.06	0.05	0.16	0.05	0.08
O349	0.18	0.05	0.08	0.23	0.33	0.22	0.20	0.26	0.21
O350	0.15	0.04	0.03	0.05	0.06	0.02	0.14	0.08	0.08
O351	0.52	0.07	0.04	0.12	0.08	0.04	0.18	0.11	0.11
O352	0.22	0.04	0.03	0.06	0.10	0.10	0.23	0.20	0.26
O353	0.25	0.03	0.04	0.18	0.25	0.14	0.20	0.28	0.23
O354	0.22	0.02	0.03	0.08	0.05	0.18	0.32	0.19	0.25
O355	0.09	0.02	0.02	0.02	0.02	0.03	0.06	0.08	0.12
O356	0.06	0.01	0.03	0.09	0.10	0.09	0.08	0.07	0.03
O357	0.06	0.01	0.03	0.16	0.23	0.17	0.18	0.20	0.05
O358	0.11	0.01	0.04	0.19	0.25	0.10	0.11	0.26	0.32
O359	0.09	0.03	0.05	0.17	0.26	0.13	0.03	0.13	0.28
O360	0.04	0.07	0.14	0.35	0.41	0.10	0.11	0.26	0.34
O361	0.10	0.06	0.07	0.24	0.23	0.03	0.25	0.34	0.36
O362	0.05	0.05	0.12	0.27	0.19	0.08	0.21	0.32	0.34
O363	0.04	0.01	0.04	0.05	0.10	0.15	0.19	0.04	0.17
O364	0.09	0.01	0.04	0.11	0.11	0.07	0.06	0.08	0.08
O365	0.19	0.06	0.15	0.35	0.42	0.35	0.30	0.09	0.32
O366	0.29	0.07	0.14	0.31	0.43	0.37	0.23	0.31	0.40
O367	0.28	0.09	0.04	0.12	0.18	0.14	0.25	0.08	0.15
O368	0.20	0.06	0.06	0.06	0.05	0.12	0.36	0.09	0.20
O369	0.17	0.03	0.03	0.17	0.15	0.10	0.45	0.29	0.39
O370	0.16	0.02	0.03	0.06	0.07	0.06	0.11	0.30	0.41
O371	0.08	0.12	0.07	0.11	0.09	0.23	0.55	0.27	0.30
O372	0.07	0.03	0.02	0.02	0.13	0.18	0.30	0.12	0.19
O373	0.24	0.02	0.01	0.02	0.07	0.08	0.13	0.06	0.09
O374	0.14	0.05	0.03	0.06	0.11	0.07	0.06	0.01	0.03
O375	0.34	0.10	0.10	0.16	0.29	0.22	0.10	0.03	0.05

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O376	0.09	0.05	0.06	0.10	0.10	0.06	0.06	0.02	0.08
O377	0.57	0.16	0.13	0.26	0.36	0.47	0.45	0.23	0.34
O378	0.66	0.15	0.11	0.23	0.47	0.49	0.47	0.19	0.36
O379	0.69	0.17	0.11	0.23	0.46	0.47	0.39	0.26	0.31
O380	0.67	0.13	0.12	0.23	0.44	0.51	0.29	0.23	0.25
O381	0.59	0.14	0.11	0.22	0.42	0.52	0.27	0.27	0.21
O382	0.62	0.15	0.11	0.21	0.44	0.51	0.25	0.27	0.14
O383	0.44	0.14	0.11	0.21	0.46	0.50	0.27	0.34	0.13
O384	0.31	0.11	0.11	0.22	0.48	0.41	0.26	0.37	0.23
O385	0.37	0.13	0.12	0.22	0.44	0.36	0.27	0.22	0.26
O386	0.27	0.14	0.12	0.21	0.46	0.42	0.26	0.34	0.30
O387	0.24	0.07	0.06	0.13	0.32	0.31	0.30	0.38	0.23
O388	0.47	0.13	0.09	0.18	0.44	0.49	0.28	0.34	0.15
O389	0.53	0.13	0.10	0.19	0.47	0.53	0.26	0.27	0.20
O390	0.41	0.12	0.11	0.20	0.43	0.51	0.25	0.23	0.26
O391	0.76	0.16	0.14	0.27	0.26	0.26	0.13	0.14	0.30
O392	0.69	0.13	0.13	0.26	0.40	0.49	0.45	0.27	0.17
O393	0.73	0.16	0.13	0.26	0.40	0.43	0.31	0.19	0.19
O394	0.67	0.17	0.13	0.25	0.35	0.34	0.21	0.28	0.11
O395	0.54	0.15	0.13	0.25	0.31	0.38	0.19	0.19	0.06
O396	0.41	0.16	0.13	0.25	0.24	0.32	0.15	0.17	0.19
O397	0.51	0.16	0.13	0.23	0.27	0.28	0.09	0.35	0.24
O398	0.34	0.14	0.13	0.22	0.30	0.33	0.17	0.14	0.08
O399	0.26	0.14	0.12	0.22	0.42	0.29	0.22	0.28	0.09
O400	0.22	0.03	0.02	0.04	0.10	0.18	0.23	0.28	0.21
O401	0.19	0.15	0.13	0.21	0.22	0.31	0.20	0.13	0.18
O402	0.12	0.08	0.08	0.14	0.36	0.30	0.28	0.31	0.28
O403	0.22	0.09	0.10	0.17	0.19	0.43	0.14	0.31	0.25
O404	0.28	0.07	0.07	0.13	0.28	0.52	0.22	0.22	0.06
O405	0.21	0.05	0.08	0.13	0.26	0.29	0.12	0.18	0.09
O406	0.12	0.03	0.04	0.07	0.11	0.18	0.08	0.05	0.12
O407	0.10	0.11	0.09	0.16	0.12	0.31	0.15	0.22	0.29
O408	0.15	0.12	0.07	0.11	0.23	0.16	0.25	0.34	0.20
O409	0.09	0.07	0.08	0.11	0.15	0.23	0.27	0.32	0.25
O410	0.12	0.05	0.05	0.10	0.18	0.18	0.10	0.18	0.25
O411	0.13	0.07	0.05	0.07	0.07	0.13	0.14	0.17	0.20
O412	0.05	0.10	0.04	0.10	0.31	0.16	0.14	0.23	0.27
O413	0.09	0.03	0.06	0.18	0.12	0.06	0.07	0.17	0.24
O414	0.04	0.05	0.09	0.19	0.46	0.53	0.20	0.28	0.26
O415	0.07	0.04	0.08	0.21	0.09	0.40	0.23	0.41	0.25
O416	0.09	0.04	0.05	0.09	0.31	0.27	0.10	0.05	0.21
O417	0.12	0.07	0.10	0.13	0.25	0.38	0.23	0.28	0.18

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O418	0.13	0.04	0.05	0.13	0.27	0.57	0.28	0.32	0.27
O419	0.13	0.06	0.08	0.12	0.10	0.12	0.21	0.30	0.33
O420	0.12	0.06	0.09	0.17	0.30	0.19	0.13	0.22	0.30
O421	0.09	0.06	0.07	0.12	0.23	0.25	0.23	0.31	0.33
O422	0.03	0.03	0.01	0.03	0.09	0.06	0.20	0.28	0.31
O423	0.10	0.04	0.06	0.12	0.24	0.30	0.26	0.27	0.18
O424	0.02	0.02	0.06	0.12	0.24	0.21	0.13	0.09	0.05
O425	0.07	0.06	0.05	0.09	0.11	0.04	0.07	0.12	0.20
O426	0.04	0.06	0.07	0.16	0.33	0.31	0.15	0.09	0.20
O427	0.16	0.10	0.05	0.05	0.18	0.23	0.27	0.31	0.25
O428	0.09	0.09	0.11	0.13	0.21	0.11	0.19	0.08	0.12
O429	0.02	0.06	0.07	0.10	0.14	0.10	0.14	0.24	0.12
O430	0.05	0.04	0.08	0.14	0.23	0.15	0.10	0.13	0.28
O431	0.10	0.05	0.07	0.11	0.18	0.05	0.05	0.10	0.17
O432	0.07	0.04	0.04	0.08	0.18	0.18	0.26	0.32	0.35
O433	0.12	0.05	0.07	0.13	0.43	0.54	0.27	0.38	0.29
O434	0.09	0.04	0.06	0.13	0.37	0.56	0.31	0.26	0.32
O435	0.03	0.07	0.10	0.24	0.49	0.51	0.32	0.46	0.24
O436	0.11	0.05	0.09	0.20	0.23	0.18	0.18	0.23	0.22
O437	0.06	0.04	0.08	0.18	0.34	0.23	0.17	0.24	0.26
O438	0.06	0.04	0.08	0.19	0.34	0.29	0.13	0.36	0.28
O439	0.05	0.02	0.04	0.12	0.42	0.31	0.27	0.18	0.16
O440	0.07	0.03	0.02	0.09	0.17	0.14	0.27	0.28	0.22
O441	0.11	0.05	0.04	0.16	0.50	0.34	0.25	0.08	0.23
O442	0.17	0.12	0.14	0.22	0.48	0.36	0.40	0.53	0.33
O443	0.20	0.14	0.12	0.20	0.46	0.36	0.34	0.54	0.35
O444	0.21	0.13	0.08	0.22	0.40	0.36	0.38	0.53	0.33
O445	0.21	0.14	0.11	0.26	0.44	0.45	0.35	0.32	0.31
O446	0.19	0.15	0.11	0.24	0.35	0.35	0.34	0.45	0.31
O447	0.10	0.13	0.11	0.25	0.40	0.40	0.30	0.38	0.34
O448	0.07	0.13	0.13	0.25	0.36	0.30	0.29	0.34	0.37
O449	0.19	0.14	0.12	0.24	0.43	0.43	0.40	0.52	0.33
O450	0.15	0.12	0.13	0.23	0.47	0.40	0.39	0.53	0.30
O451	0.06	0.11	0.13	0.24	0.41	0.36	0.18	0.17	0.13
O452	0.16	0.07	0.13	0.21	0.42	0.36	0.20	0.06	0.14
O453	0.27	0.09	0.06	0.11	0.29	0.36	0.22	0.05	0.10
O454	0.27	0.12	0.07	0.20	0.15	0.09	0.15	0.02	0.17
O455	0.56	0.13	0.13	0.22	0.38	0.31	0.28	0.13	0.13
O456	0.29	0.03	0.03	0.09	0.15	0.13	0.12	0.04	0.12
O457	0.10	0.02	0.01	0.04	0.03	0.03	0.03	0.02	0.06
O458	0.41	0.09	0.10	0.17	0.33	0.39	0.33	0.14	0.09
O459	0.08	0.02	0.05	0.05	0.14	0.15	0.38	0.15	0.06

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O460	0.24	0.11	0.07	0.11	0.22	0.27	0.26	0.18	0.08
O461	0.38	0.12	0.11	0.22	0.40	0.32	0.24	0.19	0.10
O462	0.28	0.06	0.12	0.22	0.39	0.21	0.24	0.06	0.19
O463	0.40	0.06	0.06	0.16	0.38	0.50	0.22	0.36	0.15
O464	0.14	0.06	0.04	0.12	0.35	0.41	0.18	0.32	0.07
O465	0.40	0.04	0.03	0.06	0.18	0.26	0.18	0.17	0.06
O466	0.34	0.06	0.10	0.18	0.17	0.11	0.08	0.07	0.03
O467	0.11	0.05	0.02	0.05	0.06	0.06	0.12	0.06	0.06
O468	0.31	0.10	0.05	0.14	0.08	0.08	0.05	0.02	0.05
O469	0.63	0.09	0.03	0.04	0.12	0.11	0.20	0.12	0.01
O470	0.35	0.16	0.03	0.09	0.20	0.28	0.23	0.15	0.04
O471	0.24	0.10	0.05	0.10	0.23	0.26	0.28	0.17	0.01
O472	0.38	0.09	0.08	0.12	0.29	0.24	0.25	0.14	0.05
O473	0.17	0.11	0.08	0.14	0.25	0.24	0.24	0.15	0.03
O474	0.42	0.13	0.11	0.20	0.22	0.19	0.26	0.26	0.15
O475	0.42	0.05	0.11	0.24	0.38	0.38	0.29	0.15	0.01
O476	0.10	0.08	0.05	0.09	0.13	0.11	0.15	0.13	0.02
O477	0.58	0.14	0.07	0.11	0.33	0.35	0.21	0.08	0.00
O478	0.60	0.16	0.09	0.24	0.29	0.26	0.16	0.14	0.02
O479	0.32	0.08	0.07	0.22	0.12	0.25	0.21	0.18	0.01
O480	0.41	0.10	0.08	0.22	0.36	0.25	0.15	0.11	0.01
O481	0.17	0.13	0.09	0.24	0.48	0.46	0.47	0.21	0.04
O482	0.45	0.14	0.10	0.15	0.35	0.45	0.34	0.32	0.20
O483	0.47	0.10	0.11	0.18	0.44	0.53	0.32	0.34	0.30
O484	0.50	0.10	0.09	0.27	0.51	0.54	0.32	0.33	0.32
O485	0.48	0.12	0.10	0.26	0.52	0.53	0.43	0.34	0.23
O486	0.53	0.11	0.10	0.28	0.51	0.48	0.47	0.34	0.25
O487	0.08	0.07	0.08	0.16	0.39	0.41	0.29	0.18	0.05
O488	0.52	0.09	0.01	0.03	0.10	0.13	0.23	0.19	0.24
O489	0.29	0.05	0.07	0.18	0.42	0.60	0.49	0.23	0.08
O490	0.59	0.11	0.10	0.20	0.38	0.50	0.43	0.30	0.27
O491	0.52	0.09	0.04	0.04	0.17	0.28	0.26	0.38	0.40
O492	0.05	0.01	0.02	0.01	0.11	0.02	0.04	0.06	0.16
O493	0.20	0.03	0.05	0.11	0.18	0.26	0.30	0.02	0.13
O494	0.10	0.07	0.09	0.08	0.04	0.01	0.03	0.03	0.15
O495	0.58	0.10	0.10	0.14	0.08	0.04	0.04	0.06	0.07
O496	0.38	0.14	0.09	0.11	0.07	0.08	0.13	0.04	0.08
O497	0.41	0.12	0.05	0.06	0.19	0.20	0.36	0.06	0.10
O498	0.21	0.10	0.07	0.08	0.08	0.24	0.47	0.04	0.09
O499	0.06	0.04	0.02	0.08	0.08	0.33	0.28	0.03	0.05
O500	0.26	0.09	0.07	0.16	0.34	0.18	0.24	0.04	0.09
O501	0.41	0.13	0.08	0.18	0.33	0.31	0.34	0.05	0.05

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O502	0.38	0.06	0.08	0.06	0.07	0.08	0.09	0.01	0.09
O503	0.22	0.13	0.05	0.09	0.05	0.22	0.10	0.07	0.04
O504	0.48	0.11	0.09	0.17	0.31	0.26	0.20	0.04	0.06
O505	0.23	0.07	0.05	0.04	0.06	0.13	0.39	0.05	0.02
O506	0.29	0.08	0.07	0.12	0.25	0.22	0.27	0.03	0.04
O507	0.13	0.05	0.08	0.17	0.31	0.20	0.33	0.03	0.24
O508	0.30	0.05	0.03	0.05	0.13	0.12	0.13	0.05	0.05
O509	0.19	0.15	0.12	0.12	0.16	0.09	0.26	0.16	0.09
O510	0.62	0.16	0.14	0.27	0.46	0.06	0.40	0.07	0.10
O511	0.29	0.08	0.05	0.16	0.23	0.11	0.22	0.07	0.08
O512	0.27	0.07	0.06	0.21	0.42	0.22	0.23	0.12	0.17
O513	0.16	0.10	0.13	0.33	0.24	0.31	0.64	0.11	0.12
O514	0.20	0.08	0.08	0.14	0.22	0.13	0.41	0.15	0.14
O515	0.38	0.08	0.05	0.12	0.06	0.19	0.29	0.06	0.03
O516	0.30	0.06	0.02	0.10	0.12	0.13	0.27	0.05	0.04
O517	0.31	0.09	0.05	0.10	0.22	0.18	0.32	0.14	0.04
O518	0.29	0.11	0.03	0.07	0.12	0.08	0.06	0.03	0.10
O519	0.17	0.05	0.03	0.06	0.13	0.19	0.19	0.05	0.08
O520	0.29	0.04	0.05	0.09	0.09	0.10	0.09	0.01	0.06
O521	0.20	0.01	0.13	0.24	0.44	0.34	0.10	0.07	0.10
O522	0.34	0.05	0.06	0.08	0.12	0.14	0.08	0.05	0.07
O523	0.24	0.02	0.05	0.09	0.13	0.09	0.22	0.12	0.04
O524	0.39	0.07	0.05	0.11	0.16	0.08	0.07	0.04	0.03
O525	0.27	0.05	0.07	0.22	0.39	0.30	0.49	0.36	0.41
O526	0.27	0.09	0.06	0.21	0.28	0.35	0.63	0.35	0.32
O527	0.48	0.13	0.06	0.19	0.32	0.32	0.55	0.31	0.32
O528	0.64	0.16	0.07	0.20	0.37	0.28	0.41	0.30	0.28
O529	0.34	0.12	0.06	0.20	0.34	0.36	0.65	0.33	0.24
O530	0.58	0.11	0.06	0.20	0.38	0.32	0.52	0.36	0.40
O531	0.47	0.06	0.05	0.18	0.27	0.26	0.45	0.38	0.32
O532	0.44	0.04	0.08	0.28	0.37	0.38	0.51	0.37	0.40
O533	0.15	0.05	0.04	0.01	0.09	0.12	0.04	0.22	0.25
O534	0.11	0.04	0.11	0.20	0.48	0.35	0.06	0.06	0.08
O535	0.13	0.06	0.11	0.24	0.44	0.37	0.32	0.37	0.25
O536	0.13	0.06	0.11	0.25	0.37	0.45	0.20	0.47	0.41
O537	0.11	0.06	0.11	0.25	0.49	0.59	0.22	0.29	0.37
O538	0.12	0.09	0.11	0.23	0.49	0.64	0.32	0.20	0.21
O539	0.10	0.13	0.12	0.22	0.48	0.59	0.32	0.53	0.30
O540	0.16	0.15	0.12	0.21	0.48	0.47	0.39	0.39	0.27
O541	0.20	0.15	0.09	0.11	0.30	0.46	0.38	0.59	0.29
O542	0.17	0.12	0.13	0.16	0.47	0.48	0.43	0.48	0.16
O543	0.16	0.12	0.13	0.18	0.29	0.29	0.35	0.62	0.36

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O544	0.03	0.04	0.05	0.10	0.32	0.12	0.18	0.13	0.11
O545	0.09	0.11	0.06	0.11	0.28	0.41	0.15	0.18	0.22
O546	0.03	0.08	0.10	0.16	0.39	0.37	0.12	0.15	0.09
O547	0.07	0.00	0.05	0.05	0.17	0.30	0.17	0.22	0.11
O548	0.04	0.04	0.02	0.04	0.05	0.33	0.15	0.28	0.29
O549	0.04	0.02	0.02	0.04	0.14	0.14	0.03	0.02	0.14
O550	0.07	0.01	0.04	0.10	0.28	0.20	0.14	0.04	0.06
O551	0.11	0.07	0.05	0.07	0.12	0.29	0.26	0.38	0.35
O552	0.04	0.02	0.08	0.16	0.38	0.32	0.24	0.24	0.22
O553	0.04	0.01	0.01	0.02	0.05	0.09	0.07	0.09	0.14
O554	0.11	0.03	0.02	0.06	0.05	0.13	0.32	0.31	0.30
O555	0.18	0.03	0.03	0.11	0.21	0.25	0.28	0.20	0.33
O556	0.21	0.02	0.02	0.04	0.19	0.26	0.10	0.08	0.19
O557	0.09	0.03	0.02	0.04	0.07	0.05	0.15	0.21	0.28
O558	0.28	0.11	0.10	0.23	0.29	0.24	0.37	0.40	0.35
O559	0.29	0.10	0.09	0.27	0.29	0.30	0.35	0.38	0.40
O560	0.15	0.12	0.09	0.27	0.33	0.25	0.26	0.29	0.44
O561	0.09	0.13	0.09	0.27	0.42	0.29	0.19	0.26	0.36
O562	0.07	0.04	0.03	0.07	0.12	0.18	0.13	0.14	0.07
O563	0.04	0.01	0.02	0.08	0.12	0.12	0.10	0.12	0.07
O564	0.04	0.01	0.03	0.10	0.15	0.08	0.07	0.16	0.30
O565	0.02	0.02	0.03	0.13	0.15	0.10	0.09	0.14	0.11
O566	0.02	0.03	0.01	0.06	0.07	0.07	0.04	0.05	0.13
O567	0.08	0.06	0.04	0.16	0.15	0.02	0.06	0.09	0.14
O568	0.02	0.04	0.04	0.16	0.21	0.20	0.17	0.14	0.05
O569	0.08	0.04	0.01	0.10	0.16	0.20	0.18	0.20	0.17
O570	0.04	0.05	0.04	0.16	0.20	0.21	0.09	0.07	0.07
O571	0.10	0.07	0.02	0.14	0.25	0.24	0.22	0.28	0.18
O572	0.08	0.07	0.04	0.09	0.21	0.26	0.10	0.08	0.07
O573	0.09	0.04	0.08	0.20	0.36	0.49	0.22	0.13	0.09
O574	0.19	0.15	0.08	0.19	0.35	0.51	0.32	0.44	0.26
O575	0.06	0.09	0.10	0.25	0.42	0.45	0.15	0.12	0.09
O576	0.18	0.15	0.12	0.22	0.37	0.34	0.24	0.52	0.27
O577	0.05	0.01	0.03	0.12	0.18	0.08	0.06	0.17	0.06
O578	0.07	0.01	0.01	0.04	0.04	0.11	0.08	0.20	0.07
O579	0.05	0.02	0.03	0.10	0.03	0.15	0.10	0.04	0.07
O580	0.04	0.02	0.01	0.05	0.17	0.17	0.03	0.08	0.08
O581	0.06	0.03	0.02	0.02	0.02	0.14	0.21	0.09	0.14
O582	0.05	0.04	0.04	0.15	0.05	0.16	0.09	0.09	0.08
O583	0.06	0.02	0.05	0.17	0.14	0.25	0.19	0.06	0.06
O584	0.05	0.02	0.03	0.10	0.16	0.23	0.14	0.05	0.07
O585	0.08	0.04	0.01	0.09	0.03	0.05	0.07	0.03	0.11

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O586	0.11	0.06	0.03	0.10	0.15	0.18	0.05	0.09	0.09
O587	0.12	0.06	0.02	0.04	0.09	0.12	0.07	0.35	0.11
O588	0.04	0.04	0.01	0.13	0.11	0.13	0.08	0.20	0.27
O589	0.09	0.02	0.02	0.07	0.05	0.08	0.26	0.58	0.26
O590	0.26	0.14	0.04	0.09	0.15	0.15	0.23	0.39	0.19
O591	0.15	0.06	0.01	0.09	0.07	0.37	0.22	0.40	0.18
O592	0.07	0.05	0.04	0.17	0.11	0.12	0.21	0.30	0.14
O593	0.09	0.07	0.04	0.16	0.24	0.17	0.26	0.18	0.10
O594	0.04	0.06	0.04	0.18	0.20	0.20	0.21	0.20	0.05
O595	0.07	0.03	0.02	0.11	0.22	0.08	0.17	0.15	0.05
O596	0.27	0.08	0.05	0.19	0.28	0.15	0.09	0.09	0.26
O597	0.20	0.08	0.02	0.07	0.05	0.05	0.03	0.09	0.17
O598	0.16	0.07	0.01	0.04	0.04	0.04	0.10	0.21	0.27
O599	0.11	0.04	0.01	0.10	0.14	0.06	0.22	0.25	0.15
O600	0.05	0.06	0.04	0.13	0.13	0.10	0.07	0.12	0.12
O601	0.34	0.08	0.04	0.09	0.22	0.19	0.18	0.35	0.18
O602	0.38	0.07	0.03	0.06	0.08	0.07	0.22	0.33	0.28
O603	0.36	0.05	0.07	0.29	0.36	0.42	0.61	0.35	0.24
O604	0.08	0.09	0.02	0.09	0.11	0.08	0.08	0.12	0.08
O605	0.07	0.04	0.02	0.09	0.11	0.09	0.12	0.12	0.03
O606	0.12	0.03	0.02	0.07	0.11	0.08	0.18	0.07	0.07
O607	0.07	0.03	0.03	0.10	0.15	0.12	0.15	0.12	0.07
O608	0.25	0.12	0.06	0.22	0.28	0.13	0.08	0.10	0.09
O609	0.23	0.14	0.03	0.10	0.09	0.03	0.08	0.10	0.32
O610	0.44	0.13	0.07	0.14	0.16	0.18	0.20	0.18	0.21
O611	0.44	0.11	0.02	0.05	0.05	0.03	0.14	0.21	0.27
O612	0.21	0.13	0.06	0.10	0.24	0.24	0.65	0.34	0.37
O613	0.07	0.08	0.04	0.14	0.22	0.14	0.15	0.19	0.43
O614	0.05	0.02	0.01	0.04	0.07	0.03	0.05	0.03	0.17
O615	0.14	0.05	0.02	0.08	0.10	0.10	0.20	0.23	0.29
O616	0.10	0.03	0.04	0.13	0.20	0.08	0.31	0.27	0.22
O617	0.07	0.04	0.03	0.02	0.14	0.10	0.15	0.12	0.29
O618	0.05	0.03	0.03	0.08	0.14	0.10	0.07	0.03	0.27
O619	0.02	0.03	0.03	0.12	0.20	0.14	0.05	0.11	0.10
O620	0.01	0.04	0.02	0.04	0.15	0.08	0.13	0.10	0.14
O621	0.02	0.04	0.02	0.03	0.08	0.12	0.12	0.12	0.13
O622	0.04	0.03	0.02	0.11	0.14	0.10	0.08	0.05	0.05
O623	0.01	0.02	0.01	0.07	0.08	0.04	0.03	0.05	0.04
O624	0.02	0.02	0.01	0.06	0.06	0.05	0.12	0.08	0.07
O625	0.02	0.02	0.02	0.13	0.13	0.09	0.05	0.05	0.02
O626	0.07	0.03	0.01	0.04	0.10	0.06	0.05	0.09	0.11
O627	0.13	0.05	0.03	0.12	0.15	0.08	0.10	0.14	0.05

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O628	0.05	0.02	0.02	0.07	0.07	0.07	0.04	0.06	0.07
O629	0.05	0.03	0.02	0.04	0.15	0.04	0.04	0.02	0.06
O630	0.07	0.05	0.02	0.11	0.12	0.04	0.06	0.15	0.05
O631	0.09	0.06	0.05	0.07	0.09	0.32	0.14	0.28	0.21
O632	0.08	0.09	0.05	0.14	0.11	0.07	0.12	0.19	0.07
O633	0.08	0.10	0.05	0.16	0.06	0.20	0.15	0.19	0.09
O634	0.12	0.08	0.03	0.08	0.13	0.15	0.27	0.17	0.13
O635	0.08	0.03	0.06	0.22	0.20	0.13	0.10	0.13	0.05
O636	0.13	0.06	0.03	0.13	0.10	0.07	0.04	0.06	0.06
O637	0.20	0.15	0.07	0.22	0.27	0.14	0.34	0.14	0.30
O638	0.34	0.12	0.09	0.19	0.36	0.37	0.46	0.27	0.31
O639	0.45	0.12	0.07	0.22	0.31	0.25	0.39	0.27	0.31
O640	0.36	0.10	0.08	0.26	0.32	0.26	0.34	0.23	0.23
O641	0.58	0.07	0.09	0.26	0.33	0.23	0.42	0.34	0.42
S1	0.10	0.10	0.09	0.17	0.35	0.21	0.24	0.14	0.08
S2	0.47	0.08	0.04	0.12	0.28	0.06	0.03	0.06	0.14
S3	0.39	0.04	0.04	0.10	0.06	0.12	0.12	0.09	0.22
S4	0.23	0.06	0.02	0.06	0.10	0.15	0.03	0.02	0.11
S5	0.17	0.02	0.04	0.08	0.23	0.34	0.14	0.19	0.05
S6	0.09	0.02	0.05	0.09	0.23	0.31	0.20	0.18	0.21
S7	0.23	0.01	0.03	0.05	0.08	0.09	0.11	0.15	0.14
S8	0.48	0.08	0.05	0.10	0.28	0.33	0.43	0.26	0.28
S9	0.08	0.02	0.04	0.07	0.10	0.11	0.10	0.19	0.07
S10	0.18	0.03	0.07	0.10	0.25	0.21	0.16	0.14	0.20
S11	0.16	0.07	0.03	0.10	0.22	0.13	0.15	0.09	0.25
S12	0.38	0.05	0.03	0.06	0.09	0.19	0.24	0.13	0.14
S13	0.22	0.07	0.03	0.10	0.04	0.03	0.08	0.05	0.15
S14	0.17	0.04	0.04	0.07	0.09	0.08	0.12	0.05	0.12
S15	0.19	0.03	0.09	0.12	0.09	0.15	0.39	0.28	0.08
S16	0.23	0.02	0.05	0.07	0.14	0.06	0.43	0.42	0.13
S17	0.11	0.01	0.03	0.10	0.24	0.20	0.07	0.19	0.12
S18	0.23	0.04	0.02	0.02	0.16	0.10	0.11	0.16	0.19
S19	0.21	0.05	0.02	0.04	0.13	0.05	0.22	0.15	0.04
S20	0.28	0.04	0.08	0.16	0.40	0.25	0.08	0.24	0.13
S21	0.25	0.03	0.04	0.06	0.09	0.15	0.05	0.19	0.27
S22	0.10	0.02	0.02	0.05	0.19	0.12	0.17	0.18	0.12
S23	0.11	0.03	0.04	0.09	0.11	0.16	0.30	0.28	0.33
S24	0.10	0.04	0.04	0.04	0.11	0.16	0.29	0.39	0.26
S25	0.13	0.06	0.04	0.04	0.11	0.05	0.32	0.41	0.15
S26	0.23	0.01	0.03	0.19	0.37	0.37	0.49	0.33	0.33
S27	0.26	0.04	0.03	0.09	0.25	0.33	0.44	0.34	0.32
S28	0.20	0.06	0.02	0.08	0.11	0.10	0.27	0.17	0.30

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
S29	0.22	0.05	0.05	0.09	0.21	0.23	0.53	0.33	0.37
S30	0.09	0.07	0.05	0.06	0.07	0.03	0.04	0.06	0.10
S31	0.03	0.03	0.03	0.05	0.06	0.02	0.05	0.08	0.04
S32	0.10	0.07	0.04	0.03	0.08	0.03	0.12	0.04	0.03
S33	0.07	0.03	0.01	0.03	0.06	0.06	0.06	0.05	0.05
S34	0.17	0.05	0.03	0.03	0.08	0.01	0.08	0.05	0.06
S35	0.08	0.04	0.03	0.03	0.10	0.06	0.06	0.04	0.04
S36	0.30	0.03	0.08	0.06	0.29	0.23	0.26	0.14	0.08
S37	0.09	0.02	0.02	0.03	0.08	0.07	0.12	0.04	0.04
S38	0.08	0.02	0.01	0.01	0.04	0.04	0.06	0.01	0.03
S39	0.07	0.12	0.04	0.01	0.08	0.09	0.13	0.03	0.02

E.2 Cumulative Scheme

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
P1	0.17	0.10	0.15	0.29	0.57	0.11	0.41	0.06	0.02
P2	0.55	0.09	0.04	0.08	0.20	0.15	0.17	0.10	0.04
P3	0.54	0.08	0.05	0.12	0.32	0.13	0.11	0.11	0.11
P4	0.34	0.05	0.04	0.07	0.04	0.09	0.05	0.23	0.20
P5	0.39	0.07	0.07	0.07	0.05	0.09	0.06	0.08	0.06
P6	0.42	0.04	0.04	0.11	0.37	0.19	0.12	0.08	0.06
P7	0.14	0.01	0.06	0.17	0.16	0.22	0.30	0.09	0.07
P8	0.35	0.03	0.06	0.12	0.12	0.12	0.21	0.30	0.06
P9	0.11	0.03	0.03	0.08	0.21	0.11	0.27	0.11	0.12
P10	0.27	0.07	0.07	0.16	0.41	0.45	0.29	0.30	0.24
P11	0.29	0.01	0.06	0.08	0.20	0.10	0.27	0.26	0.13
P12	0.14	0.01	0.01	0.14	0.45	0.48	0.43	0.30	0.16
P13	0.33	0.06	0.03	0.13	0.21	0.23	0.40	0.45	0.47
P14	0.32	0.07	0.06	0.14	0.12	0.11	0.33	0.41	0.46
P15	0.38	0.09	0.07	0.07	0.17	0.05	0.36	0.44	0.53
P16	0.18	0.08	0.15	0.28	0.37	0.21	0.39	0.52	0.59
P17	0.12	0.02	0.02	0.05	0.26	0.40	0.52	0.51	0.36
P18	0.07	0.08	0.08	0.03	0.18	0.23	0.23	0.37	0.26
P19	0.10	0.02	0.04	0.16	0.36	0.33	0.26	0.17	0.19
P20	0.16	0.03	0.05	0.02	0.12	0.14	0.35	0.32	0.26
P21	0.12	0.02	0.07	0.08	0.10	0.19	0.29	0.19	0.19
P22	0.04	0.01	0.04	0.08	0.16	0.06	0.44	0.37	0.45
P23	0.06	0.02	0.01	0.14	0.29	0.22	0.36	0.34	0.34
P24	0.21	0.04	0.02	0.06	0.30	0.19	0.23	0.31	0.16
P25	0.47	0.12	0.09	0.17	0.14	0.22	0.30	0.39	0.31
P26	0.32	0.04	0.03	0.05	0.30	0.27	0.39	0.41	0.40
P27	0.38	0.13	0.01	0.02	0.12	0.07	0.09	0.10	0.07
P28	0.18	0.04	0.04	0.03	0.16	0.06	0.06	0.06	0.11
P29	0.37	0.06	0.03	0.03	0.03	0.06	0.12	0.06	0.08
P30	0.78	0.12	0.05	0.11	0.12	0.17	0.23	0.38	0.33
P31	0.20	0.02	0.03	0.07	0.11	0.24	0.38	0.08	0.04
P32	0.16	0.14	0.04	0.05	0.03	0.05	0.09	0.13	0.08
P33	0.31	0.11	0.04	0.05	0.05	0.05	0.10	0.08	0.04
P34	0.53	0.18	0.07	0.09	0.13	0.10	0.15	0.10	0.11
P35	0.29	0.02	0.02	0.05	0.09	0.07	0.12	0.03	0.05
P36	0.19	0.05	0.06	0.17	0.11	0.17	0.23	0.05	0.05
P37	0.54	0.08	0.07	0.16	0.15	0.18	0.27	0.15	0.21
P38	0.52	0.04	0.02	0.05	0.18	0.06	0.18	0.14	0.20
P39	0.46	0.03	0.05	0.09	0.16	0.08	0.17	0.18	0.13
P40	0.27	0.09	0.03	0.01	0.16	0.07	0.19	0.09	0.08

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
P41	0.39	0.03	0.02	0.02	0.05	0.04	0.05	0.10	0.06
P42	0.56	0.13	0.01	0.04	0.01	0.06	0.02	0.09	0.15
P43	0.54	0.13	0.02	0.07	0.08	0.06	0.07	0.10	0.05
O1	0.17	0.07	0.09	0.21	0.26	0.24	0.26	0.15	0.10
O2	0.18	0.10	0.09	0.24	0.43	0.26	0.33	0.06	0.15
O3	0.07	0.09	0.09	0.25	0.33	0.30	0.30	0.08	0.12
O4	0.15	0.13	0.07	0.16	0.30	0.26	0.16	0.05	0.18
O5	0.56	0.10	0.06	0.16	0.14	0.05	0.06	0.10	0.22
O6	0.36	0.08	0.01	0.01	0.10	0.16	0.01	0.09	0.25
O7	0.34	0.09	0.04	0.10	0.07	0.10	0.05	0.05	0.15
O8	0.46	0.17	0.04	0.09	0.04	0.05	0.07	0.18	0.16
O9	0.17	0.04	0.01	0.04	0.10	0.05	0.06	0.12	0.15
O10	0.15	0.08	0.05	0.11	0.20	0.11	0.30	0.23	0.22
O11	0.21	0.14	0.10	0.17	0.28	0.23	0.27	0.33	0.23
O12	0.15	0.16	0.09	0.15	0.30	0.21	0.29	0.36	0.29
O13	0.43	0.20	0.11	0.14	0.32	0.19	0.33	0.40	0.31
O14	0.45	0.19	0.10	0.09	0.29	0.15	0.31	0.39	0.38
O15	0.60	0.11	0.06	0.05	0.30	0.14	0.38	0.21	0.40
O16	0.11	0.09	0.05	0.07	0.26	0.12	0.36	0.11	0.37
O17	0.34	0.13	0.04	0.08	0.23	0.14	0.33	0.07	0.28
O18	0.53	0.11	0.04	0.08	0.25	0.36	0.48	0.22	0.08
O19	0.10	0.14	0.03	0.06	0.03	0.03	0.13	0.06	0.11
O20	0.21	0.18	0.03	0.06	0.06	0.11	0.19	0.07	0.02
O21	0.35	0.17	0.04	0.05	0.13	0.07	0.17	0.08	0.08
O22	0.36	0.19	0.07	0.08	0.03	0.07	0.06	0.19	0.10
O23	0.45	0.17	0.09	0.09	0.01	0.04	0.06	0.12	0.14
O24	0.26	0.13	0.12	0.09	0.03	0.03	0.09	0.03	0.10
O25	0.11	0.11	0.12	0.11	0.19	0.03	0.05	0.05	0.09
O26	0.15	0.16	0.12	0.12	0.25	0.02	0.04	0.06	0.09
O27	0.17	0.12	0.10	0.21	0.29	0.15	0.04	0.09	0.07
O28	0.36	0.12	0.13	0.21	0.37	0.25	0.02	0.13	0.04
O29	0.38	0.13	0.09	0.08	0.15	0.05	0.09	0.13	0.02
O30	0.33	0.15	0.02	0.04	0.07	0.02	0.08	0.12	0.05
O31	0.16	0.16	0.06	0.13	0.23	0.19	0.10	0.09	0.17
O32	0.14	0.17	0.06	0.12	0.07	0.10	0.13	0.09	0.18
O33	0.26	0.17	0.08	0.18	0.13	0.20	0.13	0.10	0.21
O34	0.32	0.17	0.13	0.25	0.32	0.19	0.15	0.06	0.27
O35	0.36	0.18	0.13	0.26	0.44	0.26	0.17	0.04	0.30
O36	0.56	0.18	0.11	0.21	0.49	0.42	0.49	0.11	0.28
O37	0.59	0.17	0.12	0.24	0.52	0.52	0.60	0.22	0.19
O38	0.54	0.15	0.11	0.23	0.47	0.45	0.46	0.06	0.08
O39	0.61	0.16	0.11	0.20	0.46	0.37	0.37	0.07	0.33

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O40	0.37	0.15	0.13	0.21	0.26	0.05	0.06	0.02	0.20
O41	0.58	0.12	0.07	0.18	0.21	0.25	0.16	0.05	0.12
O42	0.59	0.12	0.02	0.10	0.07	0.05	0.05	0.03	0.08
O43	0.52	0.10	0.12	0.20	0.22	0.37	0.14	0.07	0.04
O44	0.38	0.09	0.12	0.18	0.36	0.25	0.04	0.08	0.04
O45	0.27	0.09	0.02	0.03	0.04	0.08	0.12	0.07	0.04
O46	0.46	0.15	0.05	0.05	0.14	0.13	0.17	0.03	0.11
O47	0.53	0.17	0.06	0.07	0.10	0.07	0.14	0.06	0.15
O48	0.53	0.07	0.11	0.06	0.02	0.15	0.10	0.05	0.03
O49	0.44	0.08	0.02	0.05	0.11	0.14	0.25	0.14	0.24
O50	0.08	0.08	0.01	0.08	0.03	0.13	0.18	0.17	0.23
O51	0.20	0.06	0.03	0.05	0.19	0.30	0.34	0.22	0.25
O52	0.15	0.01	0.03	0.10	0.17	0.08	0.22	0.12	0.15
O53	0.12	0.04	0.07	0.14	0.17	0.05	0.16	0.24	0.30
O54	0.15	0.03	0.03	0.08	0.10	0.24	0.41	0.10	0.17
O55	0.19	0.04	0.03	0.04	0.05	0.23	0.26	0.07	0.06
O56	0.20	0.03	0.01	0.06	0.07	0.35	0.63	0.20	0.17
O57	0.30	0.01	0.02	0.10	0.12	0.10	0.29	0.11	0.09
O58	0.15	0.14	0.10	0.16	0.40	0.17	0.27	0.37	0.26
O59	0.23	0.17	0.11	0.13	0.46	0.21	0.45	0.38	0.22
O60	0.27	0.17	0.10	0.09	0.40	0.30	0.52	0.36	0.31
O61	0.38	0.15	0.08	0.11	0.32	0.27	0.46	0.37	0.31
O62	0.36	0.10	0.07	0.13	0.24	0.20	0.33	0.40	0.34
O63	0.43	0.14	0.04	0.11	0.16	0.09	0.13	0.39	0.39
O64	0.56	0.18	0.02	0.21	0.28	0.28	0.41	0.38	0.40
O65	0.24	0.07	0.04	0.34	0.41	0.46	0.60	0.39	0.39
O66	0.26	0.10	0.05	0.33	0.30	0.35	0.53	0.28	0.26
O67	0.22	0.05	0.07	0.36	0.31	0.32	0.54	0.25	0.17
O68	0.12	0.01	0.08	0.34	0.17	0.24	0.53	0.24	0.19
O69	0.29	0.01	0.11	0.32	0.17	0.12	0.47	0.20	0.10
O70	0.13	0.04	0.11	0.21	0.05	0.05	0.43	0.19	0.10
O71	0.13	0.04	0.11	0.25	0.10	0.07	0.37	0.16	0.11
O72	0.10	0.07	0.11	0.35	0.46	0.17	0.26	0.30	0.41
O73	0.23	0.07	0.12	0.31	0.45	0.21	0.20	0.16	0.36
O74	0.05	0.04	0.10	0.24	0.36	0.20	0.17	0.04	0.15
O75	0.11	0.03	0.08	0.19	0.28	0.12	0.18	0.24	0.18
O76	0.06	0.04	0.16	0.31	0.46	0.42	0.25	0.06	0.15
O77	0.10	0.05	0.13	0.24	0.37	0.39	0.45	0.25	0.25
O78	0.04	0.06	0.13	0.23	0.38	0.43	0.46	0.23	0.27
O79	0.07	0.06	0.14	0.32	0.46	0.47	0.50	0.21	0.26
O80	0.19	0.05	0.17	0.42	0.54	0.53	0.59	0.23	0.27
O81	0.22	0.04	0.17	0.42	0.54	0.55	0.62	0.26	0.28

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O82	0.18	0.04	0.16	0.39	0.50	0.53	0.58	0.27	0.33
O83	0.14	0.05	0.14	0.35	0.48	0.47	0.47	0.25	0.37
O84	0.08	0.03	0.09	0.27	0.27	0.17	0.37	0.31	0.39
O85	0.48	0.04	0.08	0.31	0.32	0.51	0.74	0.36	0.27
O86	0.61	0.07	0.09	0.30	0.36	0.47	0.76	0.35	0.36
O87	0.51	0.13	0.09	0.25	0.30	0.40	0.64	0.31	0.42
O88	0.42	0.10	0.11	0.30	0.41	0.35	0.56	0.30	0.37
O89	0.29	0.06	0.11	0.27	0.34	0.33	0.59	0.30	0.34
O90	0.10	0.05	0.10	0.23	0.27	0.30	0.64	0.31	0.34
O91	0.12	0.04	0.07	0.16	0.22	0.23	0.63	0.27	0.47
O92	0.21	0.03	0.03	0.13	0.26	0.22	0.55	0.36	0.46
O93	0.23	0.01	0.05	0.16	0.30	0.32	0.64	0.35	0.17
O94	0.17	0.04	0.06	0.18	0.31	0.35	0.58	0.32	0.24
O95	0.20	0.07	0.09	0.23	0.28	0.32	0.43	0.13	0.06
O96	0.30	0.07	0.14	0.34	0.46	0.38	0.53	0.21	0.14
O97	0.30	0.07	0.14	0.33	0.43	0.39	0.73	0.17	0.06
O98	0.19	0.06	0.14	0.28	0.29	0.36	0.68	0.17	0.24
O99	0.15	0.15	0.15	0.27	0.23	0.34	0.62	0.23	0.12
O100	0.12	0.05	0.11	0.17	0.09	0.23	0.54	0.14	0.17
O101	0.18	0.08	0.13	0.14	0.16	0.17	0.38	0.11	0.21
O102	0.30	0.02	0.12	0.13	0.10	0.21	0.40	0.14	0.18
O103	0.43	0.14	0.15	0.22	0.48	0.38	0.24	0.09	0.04
O104	0.29	0.16	0.09	0.24	0.55	0.48	0.18	0.06	0.06
O105	0.48	0.05	0.10	0.26	0.55	0.53	0.26	0.01	0.06
O106	0.18	0.10	0.12	0.29	0.53	0.52	0.49	0.05	0.17
O107	0.20	0.05	0.04	0.12	0.13	0.10	0.06	0.16	0.20
O108	0.32	0.12	0.13	0.29	0.42	0.21	0.23	0.15	0.18
O109	0.23	0.17	0.10	0.14	0.13	0.12	0.11	0.08	0.10
O110	0.61	0.14	0.11	0.22	0.43	0.54	0.27	0.08	0.24
O111	0.59	0.12	0.11	0.21	0.46	0.47	0.48	0.18	0.29
O112	0.42	0.11	0.11	0.23	0.49	0.52	0.52	0.25	0.32
O113	0.46	0.15	0.12	0.25	0.44	0.49	0.63	0.23	0.34
O114	0.45	0.17	0.13	0.28	0.44	0.56	0.63	0.15	0.29
O115	0.15	0.17	0.13	0.25	0.10	0.13	0.16	0.07	0.17
O116	0.41	0.15	0.10	0.19	0.24	0.14	0.16	0.02	0.05
O117	0.40	0.17	0.02	0.07	0.17	0.06	0.08	0.10	0.10
O118	0.39	0.18	0.06	0.13	0.14	0.16	0.12	0.13	0.12
O119	0.16	0.08	0.05	0.10	0.15	0.11	0.10	0.14	0.13
O120	0.27	0.10	0.07	0.13	0.20	0.22	0.14	0.05	0.08
O121	0.24	0.03	0.07	0.14	0.18	0.27	0.11	0.03	0.14
O122	0.18	0.07	0.07	0.14	0.16	0.21	0.03	0.05	0.09
O123	0.19	0.09	0.06	0.11	0.14	0.12	0.07	0.03	0.16

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O124	0.32	0.07	0.06	0.13	0.15	0.09	0.06	0.02	0.11
O125	0.20	0.08	0.04	0.13	0.24	0.06	0.09	0.02	0.10
O126	0.27	0.10	0.07	0.15	0.17	0.03	0.17	0.10	0.14
O127	0.37	0.12	0.08	0.12	0.28	0.05	0.20	0.17	0.17
O128	0.26	0.07	0.09	0.14	0.33	0.07	0.06	0.20	0.21
O129	0.22	0.08	0.09	0.17	0.35	0.13	0.28	0.09	0.19
O130	0.08	0.10	0.08	0.13	0.26	0.13	0.34	0.18	0.17
O131	0.11	0.11	0.09	0.12	0.23	0.39	0.28	0.27	0.21
O132	0.49	0.16	0.13	0.27	0.50	0.55	0.61	0.13	0.28
O133	0.56	0.16	0.12	0.24	0.49	0.54	0.61	0.21	0.29
O134	0.68	0.15	0.11	0.22	0.46	0.55	0.62	0.23	0.18
O135	0.18	0.04	0.11	0.22	0.35	0.37	0.39	0.11	0.08
O136	0.71	0.17	0.12	0.22	0.33	0.38	0.46	0.05	0.11
O137	0.72	0.17	0.12	0.21	0.37	0.49	0.20	0.12	0.08
O138	0.66	0.08	0.09	0.17	0.38	0.33	0.33	0.26	0.11
O139	0.17	0.07	0.04	0.09	0.29	0.35	0.26	0.30	0.07
O140	0.37	0.12	0.04	0.07	0.06	0.14	0.15	0.27	0.17
O141	0.35	0.04	0.09	0.15	0.26	0.27	0.24	0.30	0.15
O142	0.21	0.10	0.11	0.17	0.26	0.33	0.28	0.35	0.18
O143	0.44	0.10	0.03	0.10	0.26	0.27	0.21	0.34	0.17
O144	0.16	0.03	0.07	0.20	0.27	0.47	0.25	0.18	0.02
O145	0.17	0.02	0.05	0.12	0.28	0.48	0.33	0.15	0.10
O146	0.05	0.06	0.08	0.14	0.44	0.44	0.32	0.24	0.05
O147	0.04	0.05	0.08	0.19	0.49	0.53	0.24	0.32	0.36
O148	0.12	0.03	0.08	0.19	0.52	0.60	0.26	0.40	0.36
O149	0.13	0.05	0.08	0.20	0.48	0.65	0.27	0.29	0.30
O150	0.11	0.06	0.10	0.23	0.52	0.60	0.32	0.24	0.28
O151	0.06	0.11	0.11	0.21	0.50	0.56	0.32	0.51	0.27
O152	0.14	0.14	0.12	0.19	0.52	0.40	0.33	0.37	0.28
O153	0.20	0.15	0.12	0.19	0.29	0.31	0.27	0.53	0.30
O154	0.20	0.14	0.12	0.22	0.41	0.42	0.41	0.46	0.29
O155	0.16	0.10	0.12	0.25	0.28	0.22	0.29	0.58	0.31
O156	0.48	0.07	0.10	0.19	0.33	0.46	0.35	0.33	0.14
O157	0.43	0.15	0.11	0.20	0.40	0.54	0.33	0.28	0.10
O158	0.11	0.09	0.11	0.20	0.43	0.50	0.21	0.17	0.08
O159	0.53	0.13	0.09	0.17	0.47	0.50	0.42	0.05	0.08
O160	0.54	0.17	0.10	0.19	0.45	0.52	0.56	0.08	0.11
O161	0.75	0.15	0.11	0.21	0.50	0.48	0.57	0.23	0.12
O162	0.67	0.13	0.12	0.24	0.54	0.50	0.57	0.20	0.16
O163	0.60	0.14	0.12	0.24	0.51	0.42	0.53	0.13	0.23
O164	0.24	0.07	0.07	0.14	0.05	0.13	0.11	0.14	0.08
O165	0.20	0.02	0.05	0.13	0.13	0.10	0.10	0.07	0.04

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O166	0.11	0.12	0.10	0.21	0.13	0.26	0.11	0.10	0.10
O167	0.07	0.02	0.04	0.06	0.31	0.05	0.05	0.03	0.04
O168	0.06	0.05	0.03	0.04	0.24	0.03	0.08	0.06	0.05
O169	0.18	0.07	0.01	0.03	0.15	0.03	0.08	0.03	0.02
O170	0.07	0.03	0.04	0.04	0.08	0.03	0.03	0.04	0.05
O171	0.42	0.15	0.07	0.12	0.22	0.06	0.19	0.26	0.28
O172	0.05	0.04	0.04	0.09	0.05	0.06	0.47	0.20	0.31
O173	0.21	0.06	0.10	0.10	0.19	0.07	0.36	0.18	0.30
O174	0.32	0.14	0.11	0.13	0.25	0.07	0.09	0.07	0.08
O175	0.11	0.05	0.09	0.07	0.28	0.02	0.11	0.05	0.31
O176	0.17	0.11	0.08	0.07	0.30	0.05	0.11	0.04	0.33
O177	0.22	0.12	0.09	0.09	0.32	0.02	0.14	0.02	0.19
O178	0.13	0.10	0.06	0.07	0.29	0.07	0.13	0.06	0.10
O179	0.28	0.09	0.05	0.07	0.32	0.07	0.08	0.04	0.16
O180	0.14	0.09	0.07	0.10	0.29	0.11	0.05	0.10	0.08
O181	0.08	0.08	0.09	0.13	0.31	0.18	0.08	0.05	0.05
O182	0.29	0.10	0.11	0.14	0.34	0.25	0.04	0.04	0.09
O183	0.41	0.10	0.13	0.25	0.38	0.26	0.12	0.12	0.07
O184	0.35	0.08	0.11	0.23	0.20	0.28	0.10	0.06	0.03
O185	0.13	0.05	0.11	0.22	0.17	0.37	0.11	0.06	0.03
O186	0.38	0.08	0.10	0.17	0.25	0.35	0.09	0.06	0.02
O187	0.25	0.05	0.08	0.09	0.21	0.32	0.16	0.14	0.08
O188	0.36	0.07	0.05	0.06	0.19	0.36	0.33	0.29	0.38
O189	0.51	0.13	0.03	0.14	0.37	0.35	0.37	0.39	0.41
O190	0.61	0.02	0.03	0.20	0.42	0.29	0.33	0.37	0.39
O191	0.24	0.04	0.01	0.08	0.31	0.18	0.38	0.32	0.31
O192	0.21	0.04	0.02	0.16	0.30	0.21	0.50	0.39	0.42
O193	0.02	0.00	0.05	0.11	0.16	0.10	0.38	0.30	0.38
O194	0.18	0.03	0.07	0.04	0.11	0.06	0.42	0.23	0.17
O195	0.16	0.03	0.05	0.16	0.35	0.50	0.45	0.33	0.19
O196	0.20	0.02	0.04	0.34	0.45	0.38	0.38	0.22	0.30
O197	0.17	0.01	0.13	0.28	0.37	0.26	0.29	0.21	0.25
O198	0.21	0.13	0.11	0.19	0.28	0.24	0.24	0.32	0.28
O199	0.32	0.14	0.06	0.17	0.25	0.27	0.28	0.21	0.26
O200	0.24	0.06	0.05	0.16	0.22	0.35	0.29	0.20	0.23
O201	0.13	0.06	0.06	0.25	0.37	0.34	0.22	0.25	0.09
O202	0.06	0.02	0.07	0.28	0.40	0.38	0.25	0.14	0.04
O203	0.02	0.09	0.07	0.29	0.39	0.10	0.06	0.08	0.11
O204	0.08	0.07	0.08	0.30	0.36	0.19	0.10	0.11	0.08
O205	0.17	0.15	0.08	0.28	0.32	0.08	0.11	0.08	0.07
O206	0.18	0.11	0.07	0.28	0.45	0.38	0.14	0.07	0.05
O207	0.18	0.07	0.05	0.27	0.45	0.47	0.33	0.23	0.15

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O208	0.08	0.05	0.04	0.27	0.43	0.47	0.41	0.63	0.19
O209	0.38	0.04	0.05	0.15	0.29	0.49	0.26	0.15	0.12
O210	0.38	0.06	0.06	0.13	0.27	0.36	0.29	0.19	0.14
O211	0.36	0.06	0.08	0.14	0.27	0.31	0.31	0.23	0.06
O212	0.32	0.02	0.09	0.20	0.49	0.37	0.27	0.27	0.07
O213	0.50	0.08	0.10	0.26	0.49	0.46	0.33	0.33	0.15
O214	0.38	0.12	0.08	0.26	0.43	0.49	0.35	0.32	0.17
O215	0.24	0.02	0.06	0.20	0.45	0.39	0.21	0.10	0.10
O216	0.29	0.06	0.04	0.15	0.44	0.56	0.43	0.44	0.30
O217	0.16	0.07	0.08	0.13	0.29	0.49	0.29	0.36	0.36
O218	0.05	0.06	0.08	0.20	0.41	0.31	0.37	0.23	0.15
O219	0.10	0.12	0.09	0.19	0.53	0.44	0.32	0.39	0.23
O220	0.13	0.10	0.05	0.21	0.50	0.46	0.20	0.21	0.32
O221	0.12	0.11	0.10	0.21	0.41	0.44	0.14	0.13	0.25
O222	0.15	0.14	0.10	0.22	0.46	0.46	0.33	0.56	0.34
O223	0.19	0.15	0.09	0.23	0.50	0.38	0.16	0.34	0.37
O224	0.20	0.12	0.09	0.22	0.49	0.59	0.29	0.57	0.27
O225	0.15	0.13	0.11	0.21	0.46	0.68	0.25	0.42	0.31
O226	0.19	0.12	0.10	0.19	0.37	0.61	0.41	0.46	0.36
O227	0.24	0.15	0.12	0.16	0.32	0.52	0.41	0.54	0.29
O228	0.06	0.10	0.07	0.21	0.22	0.24	0.18	0.14	0.02
O229	0.07	0.10	0.02	0.05	0.12	0.11	0.24	0.17	0.07
O230	0.05	0.07	0.04	0.11	0.06	0.05	0.07	0.05	0.12
O231	0.06	0.03	0.03	0.13	0.16	0.05	0.06	0.15	0.19
O232	0.06	0.04	0.02	0.05	0.05	0.10	0.15	0.26	0.20
O233	0.08	0.05	0.03	0.09	0.11	0.12	0.19	0.09	0.18
O234	0.10	0.03	0.02	0.06	0.05	0.04	0.05	0.12	0.06
O235	0.30	0.12	0.10	0.21	0.37	0.33	0.29	0.07	0.14
O236	0.25	0.04	0.07	0.19	0.22	0.16	0.10	0.08	0.09
O237	0.17	0.05	0.04	0.10	0.13	0.08	0.10	0.20	0.13
O238	0.18	0.03	0.03	0.08	0.12	0.13	0.04	0.08	0.05
O239	0.29	0.08	0.05	0.11	0.14	0.14	0.07	0.01	0.17
O240	0.19	0.07	0.02	0.04	0.07	0.08	0.04	0.01	0.05
O241	0.25	0.06	0.02	0.05	0.02	0.04	0.08	0.01	0.08
O242	0.20	0.10	0.02	0.08	0.11	0.11	0.04	0.03	0.08
O243	0.07	0.02	0.01	0.05	0.05	0.02	0.06	0.01	0.11
O244	0.10	0.02	0.02	0.05	0.08	0.07	0.11	0.03	0.06
O245	0.65	0.15	0.05	0.12	0.06	0.02	0.05	0.07	0.15
O246	0.07	0.06	0.05	0.11	0.19	0.07	0.09	0.03	0.05
O247	0.10	0.07	0.01	0.04	0.09	0.02	0.05	0.01	0.07
O248	0.07	0.05	0.06	0.12	0.25	0.05	0.09	0.07	0.08
O249	0.27	0.06	0.01	0.05	0.10	0.02	0.16	0.09	0.07

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O250	0.61	0.21	0.05	0.10	0.09	0.02	0.13	0.14	0.11
O251	0.11	0.06	0.05	0.11	0.30	0.04	0.17	0.12	0.12
O252	0.25	0.05	0.06	0.15	0.40	0.06	0.42	0.17	0.12
O253	0.21	0.05	0.02	0.06	0.09	0.05	0.17	0.08	0.03
O254	0.30	0.13	0.05	0.12	0.35	0.04	0.06	0.16	0.12
O255	0.37	0.14	0.06	0.14	0.24	0.03	0.23	0.08	0.04
O256	0.37	0.14	0.05	0.11	0.08	0.03	0.09	0.11	0.08
O257	0.08	0.05	0.01	0.07	0.11	0.08	0.18	0.19	0.16
O258	0.05	0.05	0.02	0.05	0.07	0.04	0.15	0.17	0.19
O259	0.06	0.08	0.05	0.11	0.18	0.14	0.36	0.18	0.08
O260	0.38	0.06	0.01	0.05	0.07	0.07	0.01	0.05	0.10
O261	0.30	0.04	0.02	0.06	0.08	0.09	0.01	0.07	0.19
O262	0.09	0.01	0.01	0.02	0.04	0.04	0.01	0.02	0.04
O263	0.16	0.07	0.07	0.12	0.27	0.10	0.16	0.15	0.15
O264	0.02	0.02	0.02	0.07	0.13	0.05	0.09	0.06	0.05
O265	0.16	0.05	0.03	0.06	0.17	0.04	0.13	0.09	0.06
O266	0.18	0.07	0.04	0.06	0.13	0.05	0.13	0.22	0.22
O267	0.21	0.09	0.03	0.04	0.08	0.04	0.09	0.06	0.12
O268	0.09	0.04	0.01	0.01	0.02	0.03	0.18	0.04	0.04
O269	0.31	0.13	0.03	0.09	0.04	0.07	0.27	0.17	0.36
O270	0.19	0.09	0.04	0.03	0.12	0.06	0.25	0.09	0.21
O271	0.29	0.16	0.08	0.13	0.27	0.05	0.06	0.05	0.08
O272	0.32	0.14	0.06	0.08	0.27	0.01	0.05	0.05	0.06
O273	0.28	0.12	0.05	0.09	0.10	0.02	0.21	0.07	0.14
O274	0.36	0.07	0.02	0.03	0.11	0.02	0.22	0.03	0.31
O275	0.39	0.08	0.01	0.03	0.08	0.03	0.22	0.04	0.22
O276	0.09	0.04	0.08	0.08	0.26	0.05	0.09	0.04	0.34
O277	0.08	0.05	0.04	0.07	0.15	0.04	0.10	0.03	0.28
O278	0.13	0.06	0.04	0.07	0.24	0.03	0.06	0.01	0.12
O279	0.22	0.05	0.00	0.01	0.18	0.02	0.10	0.02	0.16
O280	0.21	0.05	0.04	0.05	0.14	0.05	0.06	0.02	0.05
O281	0.30	0.11	0.05	0.11	0.20	0.04	0.07	0.00	0.14
O282	0.19	0.04	0.03	0.10	0.12	0.03	0.08	0.02	0.13
O283	0.14	0.04	0.03	0.08	0.13	0.08	0.05	0.04	0.10
O284	0.06	0.06	0.02	0.07	0.24	0.04	0.08	0.04	0.04
O285	0.04	0.01	0.03	0.02	0.06	0.04	0.06	0.04	0.02
O286	0.08	0.02	0.03	0.08	0.25	0.03	0.07	0.02	0.02
O287	0.07	0.01	0.01	0.02	0.05	0.02	0.06	0.04	0.04
O288	0.14	0.08	0.05	0.09	0.28	0.06	0.09	0.11	0.09
O289	0.18	0.05	0.02	0.05	0.19	0.05	0.06	0.15	0.06
O290	0.15	0.06	0.04	0.09	0.12	0.09	0.03	0.04	0.02
O291	0.07	0.04	0.05	0.09	0.08	0.11	0.06	0.13	0.06

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O292	0.19	0.06	0.06	0.16	0.10	0.14	0.05	0.05	0.09
O293	0.26	0.07	0.09	0.16	0.24	0.17	0.02	0.09	0.10
O294	0.18	0.07	0.03	0.04	0.10	0.03	0.08	0.04	0.01
O295	0.20	0.02	0.06	0.15	0.16	0.17	0.09	0.02	0.03
O296	0.26	0.16	0.08	0.17	0.11	0.17	0.14	0.09	0.05
O297	0.51	0.07	0.08	0.13	0.11	0.15	0.15	0.03	0.13
O298	0.11	0.06	0.03	0.07	0.08	0.05	0.07	0.03	0.04
O299	0.07	0.02	0.01	0.04	0.10	0.05	0.04	0.02	0.03
O300	0.43	0.09	0.04	0.08	0.41	0.21	0.04	0.04	0.12
O301	0.09	0.15	0.04	0.11	0.14	0.10	0.09	0.03	0.06
O302	0.37	0.15	0.13	0.24	0.36	0.29	0.22	0.04	0.15
O303	0.44	0.08	0.07	0.16	0.35	0.41	0.34	0.03	0.04
O304	0.37	0.15	0.04	0.06	0.26	0.21	0.23	0.06	0.20
O305	0.21	0.06	0.04	0.10	0.35	0.29	0.17	0.03	0.08
O306	0.33	0.18	0.06	0.13	0.18	0.17	0.17	0.03	0.20
O307	0.32	0.02	0.01	0.03	0.06	0.03	0.03	0.03	0.04
O308	0.07	0.08	0.08	0.17	0.11	0.18	0.10	0.06	0.11
O309	0.13	0.07	0.04	0.14	0.16	0.13	0.07	0.09	0.03
O310	0.09	0.02	0.02	0.03	0.07	0.10	0.04	0.05	0.03
O311	0.28	0.15	0.11	0.19	0.22	0.13	0.07	0.02	0.02
O312	0.07	0.02	0.03	0.05	0.05	0.02	0.08	0.02	0.02
O313	0.08	0.04	0.05	0.09	0.17	0.03	0.07	0.02	0.06
O314	0.11	0.02	0.01	0.02	0.04	0.02	0.03	0.02	0.02
O315	0.08	0.01	0.04	0.03	0.05	0.01	0.02	0.01	0.04
O316	0.12	0.02	0.04	0.02	0.06	0.03	0.04	0.04	0.03
O317	0.05	0.03	0.06	0.03	0.03	0.04	0.08	0.02	0.08
O318	0.03	0.06	0.02	0.02	0.17	0.07	0.11	0.04	0.01
O319	0.16	0.05	0.05	0.06	0.21	0.06	0.03	0.06	0.03
O320	0.21	0.03	0.03	0.04	0.17	0.05	0.12	0.14	0.14
O321	0.23	0.05	0.02	0.02	0.07	0.06	0.06	0.03	0.09
O322	0.14	0.03	0.03	0.02	0.03	0.04	0.09	0.05	0.04
O323	0.21	0.06	0.07	0.05	0.02	0.07	0.04	0.19	0.06
O324	0.05	0.03	0.03	0.04	0.01	0.05	0.06	0.14	0.08
O325	0.15	0.12	0.08	0.07	0.09	0.05	0.14	0.07	0.10
O326	0.20	0.12	0.07	0.07	0.15	0.04	0.12	0.05	0.11
O327	0.15	0.07	0.04	0.05	0.16	0.06	0.08	0.03	0.05
O328	0.18	0.11	0.06	0.07	0.24	0.06	0.12	0.02	0.03
O329	0.15	0.02	0.03	0.03	0.03	0.07	0.05	0.03	0.04
O330	0.20	0.02	0.06	0.09	0.05	0.05	0.05	0.04	0.22
O331	0.09	0.02	0.04	0.06	0.02	0.03	0.06	0.08	0.13
O332	0.14	0.13	0.06	0.07	0.07	0.05	0.13	0.05	0.05
O333	0.09	0.06	0.05	0.06	0.01	0.05	0.02	0.03	0.09

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O334	0.21	0.08	0.02	0.04	0.03	0.06	0.03	0.04	0.11
O335	0.33	0.09	0.08	0.11	0.05	0.05	0.23	0.09	0.34
O336	0.07	0.06	0.08	0.08	0.02	0.06	0.21	0.05	0.26
O337	0.46	0.08	0.09	0.08	0.06	0.04	0.05	0.08	0.17
O338	0.05	0.08	0.06	0.05	0.01	0.01	0.02	0.01	0.04
O339	0.10	0.04	0.04	0.04	0.05	0.03	0.05	0.07	0.09
O340	0.49	0.12	0.05	0.07	0.17	0.28	0.37	0.16	0.13
O341	0.25	0.11	0.07	0.08	0.24	0.34	0.44	0.15	0.23
O342	0.03	0.05	0.06	0.07	0.25	0.37	0.44	0.05	0.35
O343	0.05	0.04	0.06	0.09	0.04	0.03	0.25	0.11	0.32
O344	0.31	0.12	0.04	0.04	0.08	0.02	0.25	0.15	0.34
O345	0.40	0.08	0.02	0.03	0.01	0.06	0.05	0.02	0.03
O346	0.23	0.04	0.05	0.13	0.07	0.15	0.10	0.22	0.18
O347	0.22	0.05	0.05	0.12	0.12	0.15	0.19	0.24	0.19
O348	0.15	0.02	0.04	0.08	0.05	0.08	0.16	0.05	0.07
O349	0.33	0.04	0.09	0.21	0.32	0.22	0.20	0.27	0.21
O350	0.08	0.04	0.02	0.05	0.07	0.02	0.13	0.08	0.08
O351	0.52	0.12	0.01	0.12	0.09	0.05	0.18	0.11	0.11
O352	0.23	0.05	0.02	0.06	0.10	0.10	0.23	0.20	0.26
O353	0.04	0.03	0.05	0.17	0.24	0.16	0.24	0.27	0.23
O354	0.06	0.01	0.02	0.12	0.07	0.18	0.35	0.19	0.25
O355	0.08	0.01	0.01	0.04	0.02	0.02	0.06	0.08	0.11
O356	0.02	0.02	0.03	0.09	0.10	0.10	0.09	0.07	0.04
O357	0.02	0.02	0.04	0.15	0.23	0.16	0.18	0.21	0.08
O358	0.05	0.01	0.04	0.19	0.25	0.10	0.10	0.26	0.32
O359	0.09	0.04	0.05	0.16	0.26	0.12	0.03	0.13	0.28
O360	0.08	0.08	0.14	0.33	0.39	0.10	0.09	0.26	0.34
O361	0.02	0.07	0.08	0.24	0.23	0.06	0.24	0.34	0.36
O362	0.05	0.06	0.12	0.26	0.19	0.08	0.21	0.31	0.32
O363	0.05	0.02	0.04	0.05	0.11	0.15	0.19	0.04	0.17
O364	0.05	0.02	0.04	0.11	0.07	0.07	0.06	0.08	0.08
O365	0.13	0.04	0.15	0.36	0.43	0.35	0.30	0.08	0.32
O366	0.16	0.02	0.11	0.27	0.41	0.34	0.21	0.23	0.33
O367	0.31	0.04	0.05	0.12	0.17	0.13	0.24	0.08	0.15
O368	0.23	0.03	0.05	0.05	0.06	0.13	0.35	0.09	0.20
O369	0.15	0.04	0.03	0.14	0.12	0.10	0.40	0.27	0.37
O370	0.09	0.02	0.03	0.09	0.10	0.05	0.13	0.29	0.38
O371	0.04	0.12	0.04	0.14	0.10	0.24	0.55	0.26	0.29
O372	0.07	0.05	0.02	0.06	0.14	0.18	0.31	0.13	0.19
O373	0.14	0.02	0.02	0.02	0.06	0.08	0.15	0.06	0.08
O374	0.13	0.05	0.03	0.06	0.07	0.09	0.04	0.03	0.01
O375	0.33	0.11	0.10	0.16	0.19	0.28	0.07	0.02	0.01

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O376	0.07	0.08	0.07	0.11	0.13	0.05	0.06	0.04	0.04
O377	0.57	0.17	0.13	0.26	0.35	0.46	0.62	0.24	0.26
O378	0.65	0.15	0.11	0.23	0.47	0.50	0.50	0.19	0.27
O379	0.69	0.17	0.12	0.23	0.46	0.48	0.35	0.08	0.17
O380	0.67	0.13	0.12	0.22	0.44	0.52	0.27	0.14	0.11
O381	0.59	0.14	0.11	0.22	0.42	0.53	0.28	0.21	0.11
O382	0.63	0.15	0.11	0.21	0.45	0.50	0.23	0.31	0.14
O383	0.43	0.14	0.11	0.21	0.46	0.49	0.24	0.36	0.16
O384	0.31	0.11	0.11	0.21	0.49	0.40	0.25	0.39	0.19
O385	0.38	0.13	0.11	0.21	0.45	0.37	0.27	0.21	0.25
O386	0.27	0.13	0.11	0.20	0.45	0.42	0.27	0.28	0.30
O387	0.23	0.07	0.06	0.13	0.32	0.32	0.30	0.39	0.20
O388	0.46	0.13	0.10	0.18	0.45	0.48	0.25	0.38	0.17
O389	0.53	0.14	0.11	0.19	0.47	0.52	0.25	0.30	0.13
O390	0.41	0.11	0.11	0.20	0.44	0.52	0.28	0.18	0.10
O391	0.75	0.16	0.14	0.27	0.27	0.25	0.15	0.16	0.16
O392	0.69	0.14	0.13	0.26	0.41	0.50	0.45	0.06	0.11
O393	0.73	0.17	0.13	0.25	0.41	0.43	0.24	0.13	0.10
O394	0.67	0.17	0.13	0.25	0.35	0.34	0.24	0.20	0.12
O395	0.54	0.15	0.13	0.25	0.30	0.40	0.19	0.22	0.08
O396	0.40	0.16	0.13	0.24	0.24	0.30	0.13	0.18	0.13
O397	0.50	0.16	0.13	0.22	0.27	0.27	0.08	0.33	0.24
O398	0.36	0.14	0.12	0.22	0.30	0.32	0.17	0.08	0.09
O399	0.27	0.14	0.12	0.21	0.43	0.31	0.21	0.26	0.07
O400	0.23	0.03	0.02	0.04	0.11	0.18	0.22	0.26	0.13
O401	0.19	0.15	0.12	0.20	0.23	0.31	0.20	0.13	0.12
O402	0.11	0.08	0.08	0.14	0.35	0.30	0.27	0.28	0.16
O403	0.22	0.09	0.10	0.16	0.19	0.33	0.13	0.24	0.12
O404	0.28	0.07	0.07	0.12	0.29	0.52	0.20	0.11	0.04
O405	0.22	0.04	0.08	0.13	0.26	0.30	0.08	0.07	0.03
O406	0.13	0.03	0.04	0.07	0.14	0.17	0.08	0.05	0.06
O407	0.10	0.10	0.09	0.15	0.12	0.29	0.16	0.23	0.13
O408	0.15	0.11	0.07	0.12	0.22	0.16	0.23	0.31	0.16
O409	0.08	0.07	0.08	0.11	0.14	0.19	0.20	0.26	0.18
O410	0.11	0.04	0.05	0.09	0.19	0.20	0.10	0.16	0.14
O411	0.13	0.06	0.04	0.05	0.06	0.12	0.12	0.16	0.13
O412	0.06	0.09	0.04	0.10	0.27	0.19	0.12	0.22	0.10
O413	0.10	0.03	0.06	0.17	0.12	0.05	0.06	0.16	0.11
O414	0.02	0.04	0.08	0.16	0.46	0.52	0.19	0.26	0.29
O415	0.07	0.03	0.06	0.16	0.11	0.37	0.22	0.36	0.37
O416	0.07	0.03	0.04	0.08	0.25	0.24	0.11	0.04	0.06
O417	0.12	0.06	0.09	0.13	0.25	0.38	0.25	0.27	0.22

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O418	0.13	0.04	0.05	0.12	0.31	0.56	0.31	0.28	0.29
O419	0.12	0.06	0.08	0.12	0.08	0.12	0.19	0.29	0.39
O420	0.11	0.06	0.09	0.16	0.30	0.19	0.13	0.21	0.35
O421	0.09	0.05	0.07	0.11	0.24	0.25	0.23	0.31	0.41
O422	0.02	0.03	0.01	0.04	0.10	0.06	0.19	0.27	0.39
O423	0.10	0.03	0.06	0.12	0.24	0.30	0.25	0.28	0.27
O424	0.02	0.02	0.06	0.12	0.25	0.21	0.13	0.09	0.05
O425	0.06	0.06	0.05	0.09	0.12	0.04	0.06	0.12	0.09
O426	0.03	0.06	0.07	0.16	0.33	0.32	0.16	0.10	0.05
O427	0.15	0.09	0.04	0.06	0.19	0.24	0.26	0.32	0.27
O428	0.08	0.08	0.11	0.12	0.21	0.12	0.17	0.08	0.16
O429	0.02	0.06	0.06	0.09	0.12	0.09	0.13	0.24	0.12
O430	0.04	0.03	0.08	0.13	0.23	0.16	0.09	0.13	0.26
O431	0.10	0.04	0.07	0.11	0.17	0.05	0.05	0.10	0.15
O432	0.05	0.03	0.03	0.07	0.17	0.22	0.23	0.30	0.29
O433	0.11	0.04	0.07	0.13	0.42	0.54	0.28	0.35	0.25
O434	0.07	0.04	0.05	0.12	0.38	0.57	0.32	0.26	0.33
O435	0.05	0.06	0.10	0.23	0.51	0.52	0.33	0.46	0.23
O436	0.09	0.05	0.09	0.19	0.21	0.18	0.18	0.22	0.23
O437	0.05	0.04	0.08	0.17	0.34	0.23	0.16	0.24	0.23
O438	0.05	0.04	0.07	0.18	0.34	0.29	0.13	0.35	0.30
O439	0.04	0.03	0.05	0.14	0.41	0.30	0.25	0.18	0.17
O440	0.07	0.03	0.02	0.09	0.19	0.13	0.25	0.28	0.25
O441	0.10	0.04	0.04	0.16	0.48	0.33	0.23	0.09	0.20
O442	0.16	0.11	0.13	0.22	0.47	0.37	0.41	0.53	0.33
O443	0.20	0.14	0.12	0.20	0.45	0.37	0.34	0.53	0.34
O444	0.20	0.13	0.08	0.21	0.40	0.36	0.39	0.53	0.33
O445	0.20	0.14	0.11	0.24	0.44	0.44	0.34	0.32	0.31
O446	0.18	0.15	0.11	0.23	0.35	0.35	0.33	0.45	0.29
O447	0.09	0.12	0.11	0.23	0.41	0.40	0.29	0.39	0.34
O448	0.07	0.11	0.12	0.24	0.36	0.29	0.27	0.34	0.35
O449	0.18	0.13	0.12	0.24	0.43	0.43	0.40	0.52	0.32
O450	0.14	0.11	0.13	0.23	0.48	0.40	0.40	0.53	0.30
O451	0.05	0.10	0.13	0.23	0.40	0.37	0.17	0.16	0.12
O452	0.16	0.07	0.13	0.22	0.29	0.45	0.16	0.08	0.01
O453	0.27	0.10	0.05	0.10	0.37	0.23	0.24	0.09	0.05
O454	0.27	0.13	0.07	0.19	0.19	0.08	0.05	0.07	0.10
O455	0.56	0.14	0.13	0.24	0.37	0.30	0.31	0.16	0.07
O456	0.38	0.04	0.03	0.08	0.17	0.06	0.09	0.09	0.05
O457	0.10	0.02	0.01	0.04	0.03	0.03	0.02	0.03	0.05
O458	0.42	0.10	0.10	0.17	0.27	0.38	0.25	0.20	0.09
O459	0.12	0.04	0.08	0.11	0.13	0.28	0.20	0.26	0.24

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O460	0.27	0.12	0.08	0.13	0.09	0.06	0.09	0.21	0.07
O461	0.37	0.09	0.13	0.24	0.46	0.05	0.41	0.12	0.06
O462	0.08	0.09	0.15	0.27	0.53	0.09	0.41	0.06	0.21
O463	0.40	0.05	0.06	0.17	0.40	0.37	0.23	0.13	0.13
O464	0.17	0.04	0.05	0.14	0.13	0.25	0.24	0.09	0.09
O465	0.42	0.06	0.03	0.06	0.10	0.19	0.11	0.22	0.23
O466	0.30	0.06	0.11	0.17	0.34	0.08	0.09	0.05	0.10
O467	0.11	0.05	0.03	0.06	0.12	0.10	0.09	0.10	0.07
O468	0.31	0.11	0.05	0.13	0.09	0.04	0.04	0.06	0.08
O469	0.62	0.10	0.02	0.04	0.11	0.10	0.17	0.13	0.10
O470	0.34	0.17	0.05	0.08	0.10	0.06	0.10	0.11	0.17
O471	0.19	0.09	0.04	0.09	0.18	0.09	0.15	0.17	0.17
O472	0.34	0.10	0.08	0.11	0.22	0.02	0.24	0.23	0.10
O473	0.22	0.13	0.09	0.13	0.24	0.06	0.36	0.06	0.04
O474	0.36	0.12	0.12	0.18	0.23	0.16	0.40	0.10	0.02
O475	0.37	0.05	0.13	0.22	0.39	0.33	0.50	0.07	0.01
O476	0.14	0.08	0.07	0.11	0.12	0.11	0.24	0.06	0.05
O477	0.55	0.13	0.08	0.11	0.32	0.30	0.41	0.03	0.03
O478	0.59	0.16	0.11	0.23	0.28	0.27	0.46	0.15	0.11
O479	0.42	0.09	0.08	0.20	0.10	0.16	0.25	0.05	0.03
O480	0.26	0.10	0.12	0.27	0.39	0.25	0.22	0.04	0.03
O481	0.17	0.12	0.10	0.26	0.49	0.45	0.30	0.12	0.03
O482	0.45	0.14	0.10	0.17	0.36	0.43	0.20	0.19	0.09
O483	0.47	0.09	0.11	0.20	0.44	0.53	0.32	0.28	0.12
O484	0.49	0.10	0.10	0.29	0.54	0.52	0.25	0.26	0.11
O485	0.47	0.11	0.11	0.28	0.55	0.52	0.23	0.21	0.09
O486	0.51	0.11	0.13	0.27	0.51	0.47	0.24	0.19	0.09
O487	0.13	0.09	0.10	0.17	0.37	0.39	0.42	0.04	0.02
O488	0.38	0.08	0.02	0.04	0.09	0.09	0.13	0.04	0.04
O489	0.23	0.04	0.11	0.22	0.47	0.46	0.31	0.05	0.18
O490	0.52	0.08	0.11	0.20	0.41	0.47	0.21	0.18	0.19
O491	0.46	0.06	0.03	0.07	0.18	0.27	0.18	0.19	0.13
O492	0.06	0.04	0.06	0.03	0.05	0.03	0.05	0.06	0.15
O493	0.29	0.06	0.04	0.11	0.21	0.23	0.31	0.05	0.14
O494	0.25	0.07	0.05	0.03	0.03	0.03	0.08	0.04	0.16
O495	0.57	0.10	0.07	0.10	0.10	0.04	0.06	0.04	0.03
O496	0.39	0.14	0.05	0.07	0.09	0.09	0.17	0.04	0.08
O497	0.41	0.13	0.03	0.09	0.19	0.21	0.37	0.03	0.10
O498	0.19	0.09	0.08	0.08	0.17	0.22	0.46	0.14	0.10
O499	0.10	0.03	0.04	0.05	0.09	0.30	0.26	0.11	0.09
O500	0.28	0.07	0.03	0.12	0.25	0.16	0.20	0.09	0.09
O501	0.44	0.13	0.03	0.21	0.39	0.32	0.31	0.08	0.06

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O502	0.40	0.04	0.04	0.08	0.16	0.10	0.10	0.03	0.03
O503	0.24	0.15	0.06	0.08	0.10	0.20	0.08	0.01	0.07
O504	0.44	0.11	0.04	0.12	0.26	0.17	0.14	0.13	0.06
O505	0.30	0.08	0.02	0.08	0.10	0.15	0.23	0.14	0.06
O506	0.21	0.09	0.03	0.13	0.27	0.18	0.24	0.04	0.03
O507	0.08	0.05	0.04	0.19	0.28	0.17	0.29	0.05	0.17
O508	0.29	0.07	0.04	0.12	0.12	0.12	0.12	0.05	0.07
O509	0.17	0.16	0.04	0.07	0.13	0.10	0.27	0.11	0.10
O510	0.59	0.13	0.08	0.23	0.37	0.13	0.40	0.13	0.13
O511	0.26	0.08	0.05	0.15	0.24	0.11	0.21	0.09	0.05
O512	0.29	0.07	0.05	0.22	0.38	0.21	0.23	0.16	0.16
O513	0.12	0.05	0.13	0.32	0.37	0.31	0.63	0.15	0.12
O514	0.23	0.04	0.06	0.13	0.20	0.15	0.40	0.22	0.17
O515	0.26	0.06	0.04	0.14	0.24	0.26	0.31	0.16	0.09
O516	0.38	0.12	0.06	0.16	0.19	0.14	0.24	0.06	0.05
O517	0.26	0.09	0.05	0.19	0.30	0.12	0.31	0.14	0.15
O518	0.23	0.11	0.05	0.07	0.10	0.13	0.06	0.04	0.06
O519	0.20	0.07	0.02	0.07	0.30	0.17	0.18	0.13	0.07
O520	0.31	0.03	0.06	0.06	0.10	0.08	0.08	0.04	0.02
O521	0.22	0.03	0.09	0.08	0.28	0.29	0.06	0.07	0.09
O522	0.32	0.06	0.08	0.07	0.15	0.09	0.07	0.09	0.04
O523	0.27	0.04	0.01	0.07	0.21	0.11	0.19	0.17	0.13
O524	0.49	0.13	0.01	0.05	0.09	0.13	0.10	0.09	0.14
O525	0.27	0.05	0.08	0.16	0.28	0.25	0.43	0.32	0.35
O526	0.20	0.08	0.11	0.23	0.31	0.30	0.64	0.40	0.43
O527	0.56	0.14	0.10	0.23	0.33	0.39	0.55	0.34	0.36
O528	0.68	0.12	0.09	0.22	0.36	0.32	0.41	0.26	0.31
O529	0.45	0.13	0.13	0.25	0.36	0.41	0.62	0.35	0.33
O530	0.66	0.13	0.08	0.23	0.37	0.39	0.52	0.37	0.37
O531	0.30	0.06	0.03	0.20	0.28	0.29	0.40	0.30	0.27
O532	0.21	0.03	0.04	0.25	0.45	0.45	0.50	0.28	0.27
O533	0.14	0.04	0.01	0.01	0.07	0.11	0.03	0.12	0.03
O534	0.15	0.03	0.09	0.19	0.45	0.36	0.13	0.05	0.05
O535	0.12	0.05	0.10	0.20	0.46	0.39	0.33	0.35	0.41
O536	0.13	0.05	0.10	0.22	0.35	0.43	0.20	0.42	0.37
O537	0.12	0.06	0.11	0.22	0.49	0.56	0.23	0.27	0.31
O538	0.11	0.08	0.11	0.21	0.49	0.66	0.33	0.19	0.22
O539	0.09	0.12	0.11	0.19	0.48	0.59	0.32	0.53	0.30
O540	0.14	0.14	0.11	0.18	0.48	0.48	0.38	0.40	0.24
O541	0.19	0.14	0.09	0.11	0.31	0.47	0.38	0.59	0.29
O542	0.17	0.12	0.12	0.16	0.47	0.47	0.43	0.47	0.16
O543	0.16	0.12	0.12	0.17	0.28	0.28	0.35	0.61	0.35

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O544	0.06	0.03	0.05	0.11	0.30	0.15	0.20	0.15	0.15
O545	0.04	0.10	0.06	0.12	0.28	0.41	0.16	0.17	0.21
O546	0.05	0.08	0.09	0.16	0.38	0.38	0.11	0.17	0.09
O547	0.09	0.01	0.04	0.03	0.15	0.29	0.19	0.23	0.10
O548	0.03	0.04	0.01	0.03	0.06	0.32	0.17	0.26	0.29
O549	0.03	0.02	0.02	0.04	0.14	0.18	0.03	0.02	0.14
O550	0.07	0.02	0.03	0.08	0.29	0.22	0.15	0.04	0.07
O551	0.07	0.06	0.04	0.07	0.17	0.28	0.25	0.37	0.35
O552	0.08	0.01	0.06	0.15	0.35	0.35	0.24	0.22	0.16
O553	0.03	0.01	0.02	0.02	0.05	0.08	0.06	0.04	0.05
O554	0.17	0.02	0.03	0.07	0.10	0.21	0.32	0.26	0.19
O555	0.19	0.02	0.04	0.11	0.22	0.22	0.30	0.24	0.12
O556	0.25	0.02	0.01	0.05	0.19	0.25	0.09	0.05	0.01
O557	0.09	0.02	0.01	0.02	0.07	0.05	0.11	0.16	0.04
O558	0.12	0.07	0.13	0.29	0.38	0.29	0.22	0.26	0.24
O559	0.30	0.13	0.15	0.27	0.39	0.24	0.20	0.30	0.41
O560	0.29	0.10	0.09	0.23	0.31	0.14	0.22	0.32	0.47
O561	0.20	0.12	0.08	0.24	0.35	0.20	0.21	0.31	0.46
O562	0.13	0.05	0.01	0.04	0.03	0.13	0.11	0.14	0.07
O563	0.04	0.01	0.02	0.06	0.10	0.09	0.07	0.13	0.07
O564	0.09	0.01	0.03	0.11	0.13	0.08	0.06	0.15	0.29
O565	0.04	0.02	0.04	0.12	0.13	0.08	0.08	0.14	0.13
O566	0.03	0.03	0.01	0.06	0.08	0.08	0.04	0.07	0.13
O567	0.06	0.06	0.04	0.15	0.13	0.02	0.06	0.10	0.12
O568	0.04	0.04	0.03	0.15	0.19	0.18	0.15	0.13	0.05
O569	0.11	0.05	0.02	0.10	0.15	0.19	0.19	0.21	0.18
O570	0.03	0.04	0.03	0.15	0.21	0.21	0.08	0.07	0.07
O571	0.10	0.07	0.03	0.13	0.23	0.22	0.21	0.26	0.18
O572	0.10	0.07	0.05	0.09	0.17	0.22	0.06	0.08	0.07
O573	0.10	0.04	0.07	0.19	0.35	0.47	0.19	0.15	0.07
O574	0.18	0.15	0.08	0.17	0.35	0.51	0.32	0.45	0.27
O575	0.05	0.09	0.10	0.24	0.43	0.44	0.15	0.12	0.09
O576	0.17	0.15	0.12	0.21	0.38	0.34	0.24	0.52	0.27
O577	0.04	0.01	0.03	0.12	0.17	0.07	0.06	0.17	0.06
O578	0.05	0.02	0.01	0.02	0.04	0.11	0.08	0.19	0.07
O579	0.06	0.02	0.02	0.11	0.03	0.14	0.10	0.04	0.12
O580	0.04	0.02	0.01	0.05	0.17	0.17	0.03	0.08	0.12
O581	0.05	0.03	0.02	0.02	0.02	0.13	0.18	0.13	0.12
O582	0.04	0.03	0.03	0.14	0.03	0.14	0.07	0.11	0.09
O583	0.06	0.03	0.04	0.17	0.14	0.24	0.18	0.06	0.06
O584	0.06	0.01	0.03	0.09	0.16	0.21	0.12	0.08	0.07
O585	0.07	0.04	0.01	0.07	0.03	0.07	0.06	0.04	0.11

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O586	0.10	0.05	0.03	0.10	0.15	0.13	0.06	0.07	0.06
O587	0.12	0.07	0.02	0.05	0.10	0.13	0.07	0.38	0.12
O588	0.05	0.05	0.01	0.13	0.11	0.12	0.08	0.20	0.28
O589	0.08	0.01	0.02	0.07	0.05	0.08	0.25	0.59	0.27
O590	0.25	0.14	0.04	0.09	0.15	0.15	0.24	0.35	0.19
O591	0.14	0.06	0.01	0.08	0.09	0.35	0.21	0.35	0.17
O592	0.06	0.05	0.04	0.13	0.08	0.10	0.21	0.33	0.15
O593	0.09	0.07	0.04	0.15	0.23	0.17	0.25	0.25	0.10
O594	0.03	0.06	0.04	0.16	0.20	0.19	0.16	0.17	0.07
O595	0.07	0.03	0.02	0.10	0.19	0.09	0.16	0.14	0.07
O596	0.27	0.08	0.06	0.20	0.30	0.19	0.08	0.08	0.25
O597	0.21	0.08	0.02	0.07	0.05	0.04	0.03	0.08	0.18
O598	0.14	0.07	0.01	0.04	0.05	0.05	0.09	0.19	0.27
O599	0.11	0.04	0.01	0.10	0.14	0.05	0.19	0.22	0.14
O600	0.17	0.07	0.04	0.13	0.13	0.11	0.07	0.07	0.11
O601	0.49	0.06	0.04	0.08	0.19	0.18	0.20	0.28	0.16
O602	0.47	0.06	0.03	0.07	0.07	0.08	0.36	0.22	0.24
O603	0.40	0.04	0.08	0.29	0.38	0.42	0.61	0.35	0.24
O604	0.13	0.08	0.01	0.08	0.10	0.08	0.07	0.10	0.09
O605	0.07	0.05	0.02	0.09	0.11	0.09	0.11	0.11	0.03
O606	0.12	0.02	0.02	0.06	0.10	0.07	0.18	0.08	0.08
O607	0.09	0.03	0.04	0.08	0.13	0.10	0.13	0.11	0.05
O608	0.28	0.12	0.07	0.21	0.28	0.19	0.08	0.08	0.09
O609	0.15	0.13	0.03	0.09	0.10	0.08	0.09	0.09	0.26
O610	0.46	0.11	0.07	0.16	0.16	0.16	0.19	0.14	0.20
O611	0.24	0.09	0.01	0.05	0.05	0.03	0.14	0.20	0.26
O612	0.07	0.03	0.04	0.12	0.26	0.24	0.64	0.32	0.38
O613	0.09	0.07	0.05	0.14	0.21	0.15	0.12	0.17	0.37
O614	0.07	0.02	0.01	0.04	0.06	0.03	0.06	0.04	0.18
O615	0.22	0.04	0.02	0.07	0.09	0.09	0.18	0.24	0.29
O616	0.13	0.03	0.04	0.13	0.20	0.09	0.30	0.26	0.18
O617	0.08	0.04	0.03	0.03	0.13	0.09	0.15	0.13	0.29
O618	0.05	0.04	0.03	0.08	0.14	0.10	0.04	0.03	0.23
O619	0.04	0.03	0.03	0.11	0.18	0.12	0.07	0.08	0.10
O620	0.02	0.04	0.03	0.05	0.13	0.08	0.14	0.08	0.14
O621	0.03	0.04	0.03	0.04	0.08	0.12	0.10	0.11	0.14
O622	0.06	0.02	0.02	0.11	0.11	0.08	0.11	0.06	0.06
O623	0.02	0.02	0.02	0.07	0.08	0.04	0.04	0.04	0.03
O624	0.02	0.02	0.01	0.06	0.06	0.04	0.12	0.09	0.06
O625	0.03	0.02	0.02	0.11	0.12	0.07	0.05	0.04	0.03
O626	0.07	0.03	0.01	0.04	0.10	0.07	0.04	0.10	0.12
O627	0.11	0.05	0.03	0.13	0.15	0.08	0.08	0.14	0.05

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
O628	0.05	0.02	0.02	0.06	0.06	0.06	0.04	0.07	0.07
O629	0.05	0.03	0.02	0.04	0.15	0.04	0.04	0.03	0.06
O630	0.07	0.05	0.01	0.09	0.10	0.06	0.04	0.16	0.04
O631	0.09	0.06	0.05	0.07	0.08	0.31	0.15	0.31	0.22
O632	0.07	0.09	0.05	0.17	0.13	0.08	0.12	0.15	0.07
O633	0.08	0.10	0.06	0.16	0.06	0.19	0.14	0.15	0.10
O634	0.09	0.08	0.03	0.07	0.12	0.13	0.25	0.15	0.11
O635	0.12	0.04	0.06	0.22	0.22	0.14	0.09	0.12	0.04
O636	0.16	0.06	0.03	0.13	0.12	0.07	0.04	0.06	0.07
O637	0.11	0.14	0.09	0.23	0.30	0.18	0.29	0.13	0.27
O638	0.11	0.06	0.12	0.22	0.34	0.33	0.38	0.20	0.25
O639	0.37	0.03	0.09	0.23	0.33	0.28	0.36	0.22	0.28
O640	0.59	0.05	0.09	0.27	0.36	0.25	0.32	0.20	0.20
O641	0.64	0.09	0.09	0.27	0.36	0.26	0.40	0.30	0.39
S1	0.35	0.10	0.01	0.03	0.24	0.16	0.14	0.11	0.05
S2	0.29	0.02	0.11	0.21	0.59	0.28	0.29	0.05	0.06
S3	0.69	0.16	0.13	0.19	0.33	0.15	0.22	0.45	0.31
S4	0.62	0.14	0.08	0.13	0.15	0.15	0.22	0.22	0.22
S5	0.46	0.13	0.14	0.24	0.14	0.04	0.20	0.17	0.09
S6	0.45	0.09	0.10	0.16	0.05	0.08	0.21	0.28	0.16
S7	0.29	0.04	0.03	0.06	0.14	0.15	0.15	0.38	0.29
S8	0.17	0.04	0.02	0.08	0.21	0.35	0.35	0.41	0.23
S9	0.47	0.08	0.09	0.17	0.24	0.38	0.26	0.35	0.35
S10	0.17	0.08	0.15	0.14	0.27	0.28	0.39	0.43	0.38
S11	0.16	0.04	0.06	0.19	0.45	0.41	0.19	0.23	0.20
S12	0.35	0.06	0.06	0.05	0.38	0.27	0.39	0.47	0.25
S13	0.12	0.07	0.02	0.03	0.02	0.06	0.22	0.15	0.33
S14	0.13	0.03	0.06	0.06	0.23	0.06	0.10	0.10	0.09
S15	0.27	0.04	0.06	0.05	0.05	0.05	0.05	0.12	0.12
S16	0.34	0.05	0.08	0.08	0.13	0.20	0.09	0.04	0.09
S17	0.29	0.05	0.05	0.04	0.23	0.13	0.08	0.03	0.06
S18	0.38	0.06	0.03	0.02	0.29	0.18	0.03	0.03	0.04
S19	0.19	0.02	0.03	0.14	0.32	0.31	0.15	0.10	0.14
S20	0.16	0.02	0.02	0.02	0.14	0.09	0.13	0.03	0.09
S21	0.16	0.05	0.03	0.05	0.14	0.26	0.09	0.06	0.10
S22	0.24	0.03	0.04	0.10	0.11	0.22	0.06	0.07	0.07
S23	0.11	0.02	0.06	0.05	0.39	0.21	0.15	0.07	0.19
S24	0.19	0.03	0.07	0.10	0.20	0.28	0.13	0.06	0.23
S25	0.12	0.02	0.03	0.09	0.12	0.23	0.28	0.17	0.16
S26	0.11	0.02	0.04	0.08	0.16	0.20	0.21	0.02	0.09
S27	0.03	0.03	0.03	0.09	0.11	0.16	0.11	0.12	0.30
S28	0.21	0.04	0.07	0.09	0.14	0.06	0.39	0.30	0.33

Points	NE	ENE	E	ESE	SE	SSE	S	SSW	SW
S29	0.09	0.02	0.02	0.05	0.16	0.15	0.08	0.08	0.10
S30	0.47	0.20	0.02	0.02	0.09	0.03	0.03	0.06	0.09
S31	0.47	0.18	0.03	0.04	0.07	0.03	0.03	0.04	0.04
S32	0.40	0.05	0.02	0.04	0.10	0.03	0.07	0.07	0.09
S33	0.42	0.10	0.02	0.04	0.09	0.05	0.09	0.09	0.05
S34	0.32	0.03	0.03	0.03	0.05	0.02	0.04	0.06	0.09
S35	0.31	0.03	0.02	0.02	0.05	0.03	0.11	0.03	0.23
S36	0.80	0.12	0.05	0.08	0.05	0.04	0.19	0.14	0.16
S37	0.27	0.03	0.09	0.07	0.10	0.14	0.12	0.04	0.10
S38	0.13	0.04	0.10	0.08	0.07	0.19	0.30	0.06	0.09
S39	0.14	0.05	0.06	0.05	0.08	0.09	0.08	0.05	0.03