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Causeway Bay

Annex D

**Replacement Pages of
Air Ventilation Assessment**

7 Conclusion

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

Two schemes were assessed using Computational Fluid Dynamics (CFD) techniques. A series CFD simulation 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, NNE, NE, ENE, E, ESE, S, SSW and SW were selected which gives total wind frequency of 78.5% over a year while E, ESE, SE, SSE, S, SSW, SW and WSW were selected for summer condition, which gives total wind frequency of 80.6%.

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*, 42 perimeter test points and 198 overall test points and 28 special test points were allocated to assess the ventilation performance in the Application Site and Assessment Area.

Although a minor amendment will be made to the Proposed Scheme, the simulation results of this report would remain valid as discussed in Section 6. The simulation results show the Proposed Scheme would achieve similar ventilation performance as Baseline along the Application Site boundary and in the Surrounding Area under both annual and summer conditions. Also, the surrounding wind environment are dominated by densely built-up area of Causeway Bay and hilly terrain at the southern side.

Major wind enhancement features are maintained with similar performance as Baseline Scheme including:

- #1: T1 – 15m (W) x 8.5m (H) elevated design of T1 on G/F, and
- #3: T3 – Approximately 16~21m (W) x 13.4m (H) elevated design with additional void of approximately 5m (W) x 7.4m (H) above extended lift lobby of T3 on podium level, and
- #4: T1 – Building setback of approximate 5m on average from the south-western boundary, and
- #5: T2 – Building setback of 4m at grade from north-eastern boundary, and
- #6: T3 – Building setback of 7.5m above 2F from the south-western boundary abutting the district court site, and
- #7: T1 – Min. 6m internal street of T1 on G/F.

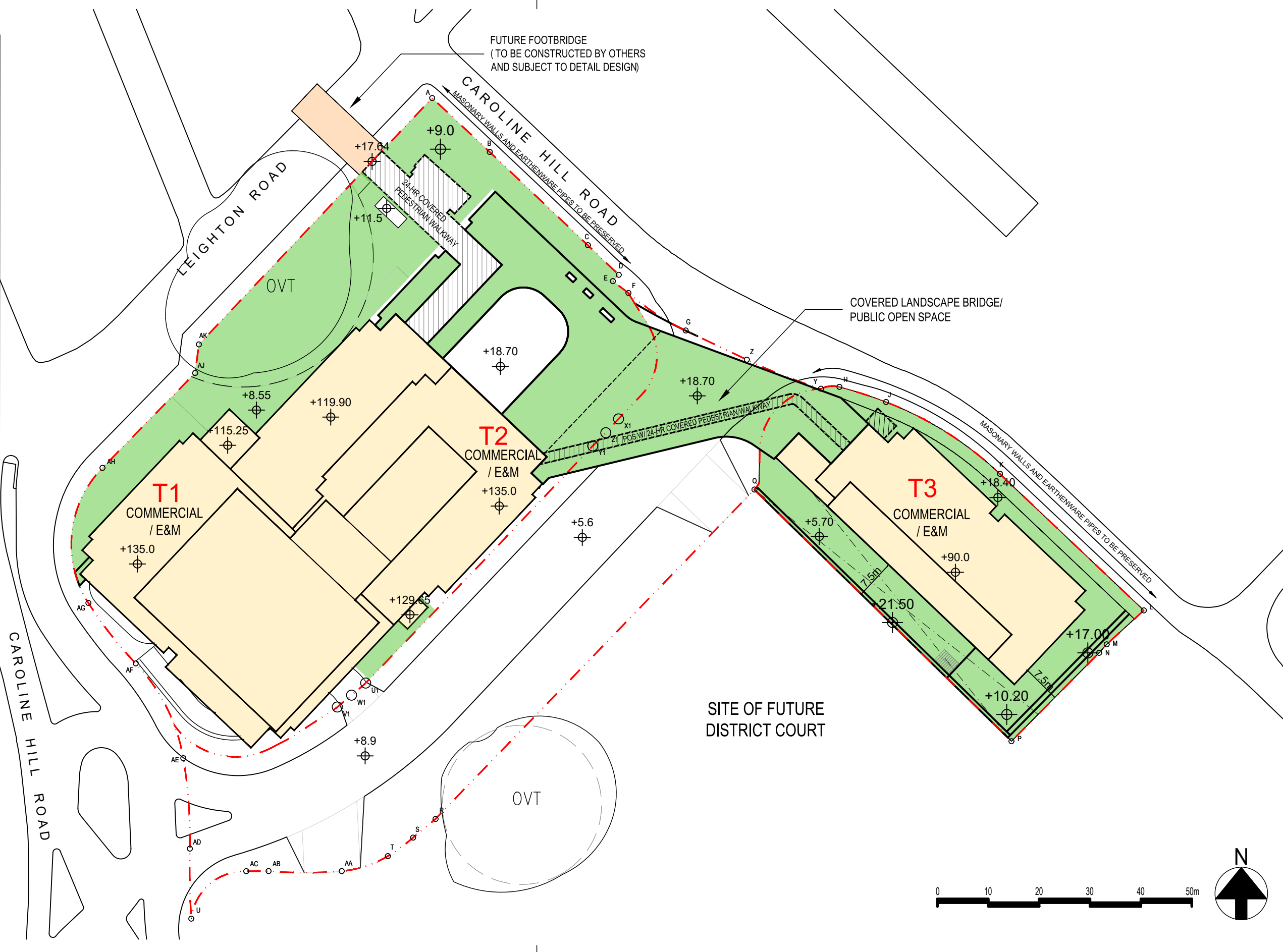
Although the enclosed T2-T3 footbridge reduced the permeability across the Application Site, following major wind enhancement feature improved wind permeability across T2 podium to mitigate the ventilation impact:

- #2: 36m building setback from north-eastern site boundary above 2/F

A2 Layout Plan of Proposed Scheme

LEGEND

- APPLICATION SITE
- PINK HATCHED BLUE
NO STRUCTURE ERECTED ABOVE OR
WITHIN 4M BELOW GROUND LEVEL
- PUBLIC OPEN SPACE
- COMMERCIAL/E&M
- G.I.C. FACILITIES
- FUTURE FOOTBRIDGE
- LIGHT BUSES LAYBYS
- CARPARK (PVP)
- CARPARK (PRIVATE)
- CARPARK
(G.I.C. FACILITIES)
- ACCESS ROAD
- LOADING & UNLOADING
CARPARK (PVP)
- UNEXCAVATED
- 24-HR PEDESTRIAN
WALKWAY
- PUBLIC OPEN SPACE
WITH 24-HR
PEDESTRIAN WALKWAY
- PEDESTRIAN LINK
- E&M
- CIRCULATION/
E&M



Rev.	Description	Drawn	Checked	Approved	Date
-	1st SUBMISSION				13-2022
A	1st AMENDMENT				9-2023
B	2nd AMENDMENT				1-2024

Rev.	Description	Drawn	Checked	Approved	Date

Check all measurements on site.
Do not scale off drawings.

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F.S.D. Ref.	
D.L.O. Ref.	
Drawn	Date 1-2024
Checked	Date 1-2024
Approved	Date 1-2024
Cad File No.	

 **RONALD LU & PARTNERS**

呂元祥建築師事務所

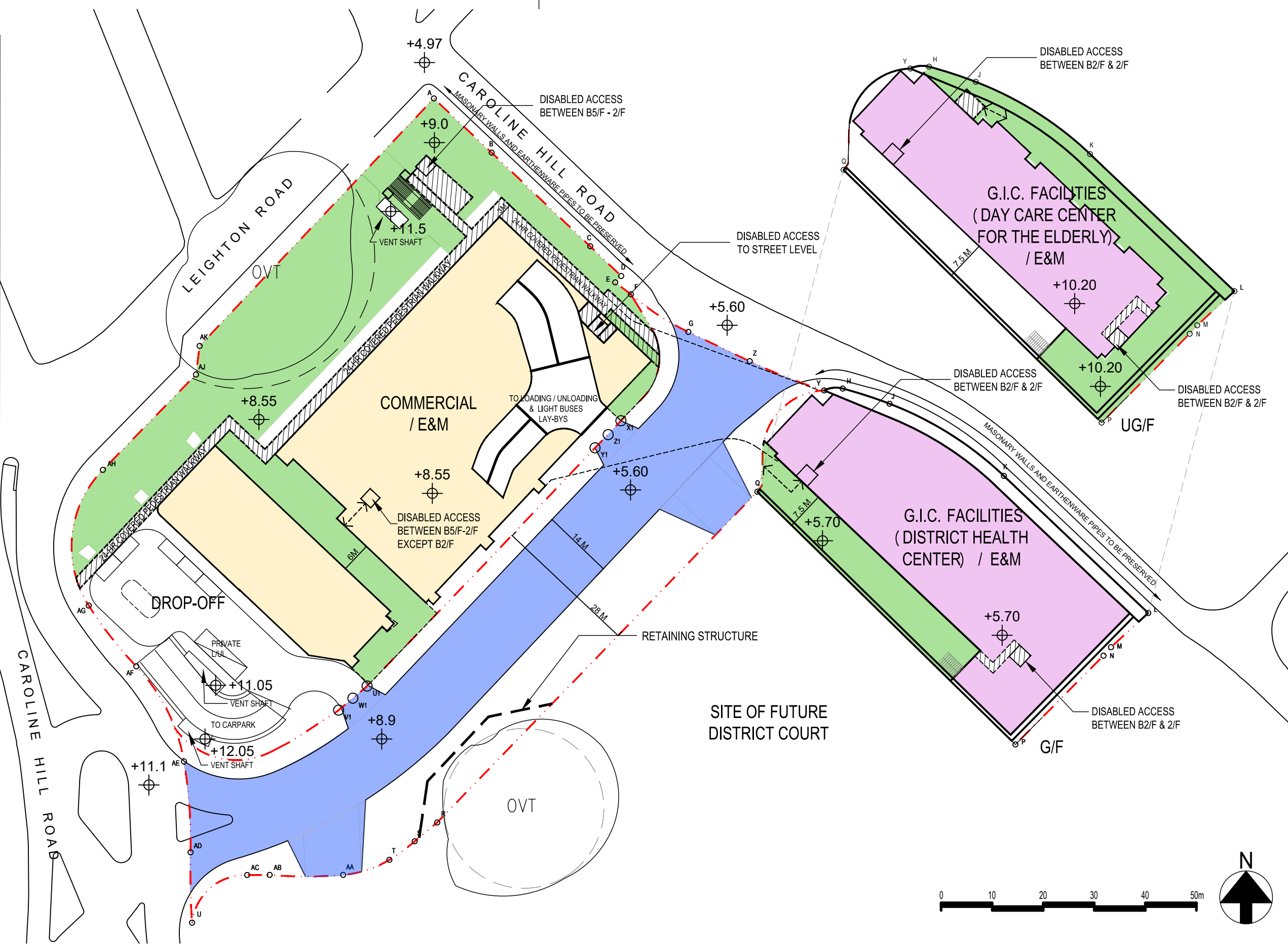
Project Title
PROPOSED COMMERCIAL
DEVELOPMENT ON IL NO.8945
AT CAROLINE HILL ROAD,
CAUSEWAY BAY, HONG KONG

Drawing Title	LAYOUT PLAN (ALL LEVELS)
Project No.	21105HK
Scale	1:750 (A3)
Issue Date	Sept 2024
Drawing No.	MLP-001

Drawing Purpose

LEGEND

- APPLICATION SITE
- PINK HATCHED BLUE
NO STRUCTURE ERECTED ABOVE OR
WITHIN 4M BELOW GROUND LEVEL
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- G.I.C. FACILITIES
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- E&M
- CIRCULATION/
E&M



Rev.	Description	Drawn	Checked	Approved	Date
-	11st SUBMISSION				1-2022
A	11st AMENDMENT				9-2023
B	2nd AMENDMENT				1-2024

Rev.	Description	Drawn	Checked	Approved	Date

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Drawn	Date 1-2024
Checked	Date 1-2024
Approved	Date 1-2024
Cad File No.	

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Project Title
PROPOSED COMMERCIAL
DEVELOPMENT ON IL NO.8945
AT CAROLINE HILL ROAD,
CAUSEWAY BAY, HONG KONG

Drawing Title	GROUND FLOOR PLAN
Project No.	21105HK
Scale	1:750 (A3)
Issue Date	Sept 2024
Drawing No.	MLP-006

Drawing Purpose

LEGEND

- APPLICATION SITE
- PINK HATCHED BLUE
NO STRUCTURE ERECTED ABOVE OR
WITHIN 4M BELOW GROUND LEVEL
- PUBLIC OPEN SPACE
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