

寄件者: Louis Tse [REDACTED]
寄件日期: 2024年09月26日星期四 16:53
收件者: tpbpd/PLAND
副本: Andrea Wing Yin YAN/PLAND; Olivia Lam Yan NG/PLAND; Bon Tang; Matthew Ng; Christian Chim; Danny Ng; Grace Wong
主旨: [FI] S.16 Application No. A/YL-KTN/1023 - FI to address departmental comments
附件: FI1 for A_YL-KTN_1023 (20240926).pdf
類別: Internet Email

Dear Sir,

Attached herewith the FI to address departmental comments of the subject application.

Should you require more information, please do not hesitate to contact me. Thank you for your kind attention.

Kind Regards,

Louis TSE | Town Planner
R-riches Group (HK) Limited

R-riches Property Consultants Limited | R-riches Planning Limited | R-riches Construction Limited

[REDACTED]

Our Ref. : DD107 Lot 1512 & VL
Your Ref. : TPB/A/YL-KTN/1023

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

By Email

26 September 2024

Dear Sir,

1st Further Information

**Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities
for a Period of 3 Years and Associated Filling of Land and Pond in “Agriculture” Zone,
Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long**

(S.16 Planning Application No. A/YL-KTN/1023)

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

Should you require more information regarding the application, please contact our Mr. Danny NG at [REDACTED] or the undersigned at your convenience. Thank you for your kind attention.

Yours faithfully,

For and on behalf of
R-riches Property Consultants Limited

Louis TSE
Town Planner

cc DPO/FSYLE, PlanD (Attn.: Ms. Andrea YAN email: awyyan@pland.gov.hk)
(Attn.: Ms. Olivia NG email: olyng@pland.gov.hk)

Responses-to-Comments

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond in “Agriculture” Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Yuen Long

(Application No. A/YL-KTN/1023)

- (i) Revised plans showing the layout, filling of land and swept path analysis of the application site (the Site) are provided (**Plans 1 to 3 and Annex I**).
- (ii) The Site (i.e. 15,822m²) is proposed to be filled wholly with concrete and soil of not more than 1.5m, with site level ranging from +5.7mPD to +6.2mPD for site formation and circulation space (**Plan 2 and Annex I**). The existing 0.3m-deep dried pond (i.e. 9m²) within the Site is proposed to be filled with soil to facilitate a flat ground surface, and then not more than 1.5m of additional soil is proposed to be filled on top of the filled pond, in order to meet the surrounding site level. The proposed filling of land and pond is intended to facilitate the proposed development and has been kept to minimal. The applicant will strictly follow the proposed scheme, and no further filling of land and pond will be carried out during the planning approval period.
- (iii) A RtoC Table:

| Departmental Comments | Applicant’s Responses |
|--|---|
| 1. Comments of the Director of Environmental Protection (DEP) (Contact Person: Mr. Kelvin WONG; Tel.: 2835 1117) | |
| (a) EPD does not support the application as it involves the use of heavy vehicles and there are sensitive uses (i.e. residential buildings) within 100m from the Site, environmental nuisance on the nearby residential uses could be generated by the proposed use. | <p>Fencing will be erected along the whole Site to mitigate potential nuisances to the surrounding areas. Restricted operation hours (i.e. from 09:00 to 19:00 Monday to Saturday, no operation on Sunday and public holiday) will take place at the Site during the planning approval period.</p> <p>The proposed warehouses are intended for storage of miscellaneous goods. No dangerous goods and workshop activities will be stored/conducted at the Site at any time during the planning approval period.</p> <p>A landscape proposal is submitted by the applicant to provide landscape mitigation measures for the proposed development (Annex IV). <u>7</u> new trees (N1 to N7) are proposed to be planted along the southwest periphery</p> |

| | | |
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| | | <p>boundary of the Site as a landscape buffer to minimise adverse visual impact to the adjoining sensitive receivers. A drainage impact assessment (DIA) report and a fire service installations (FSIs) proposal are also provided to demonstrate that sufficient drainage and fire services facilities will be provided within the Site (Annexes II to III). Therefore, adverse impacts generated by the proposed development to the nearby residential uses should <u>not</u> be anticipated.</p> |
| <p>2. Comments of the Director of Fire Services (D of FS) (Contact Person: Mr. CHEUNG Wing-hei; Tel.:2733 7737)</p> | | |
| (a) | <p>Based on the proposed access route, it is noted that the nearest available street fire hydrant is more than 500m away from the application site. In this regard, street fire hydrant system with adequate flow, pressure and size of water tank shall be provided in the site.</p> | <p>A FSIs proposal, with provision of street fire hydrant system with adequate flow, pressure and size of water tank has been provided by the applicant (Annex II)</p> |
| (b) | <p>In consideration of the design/nature of the proposal, FSIs are anticipated to be required. Therefore, the applicant is advised to submit relevant layout plans incorporated with the proposed FSIs to his department for approval. In addition, the applicant should also be advised on the following points:</p> <p>(i) The layout plans should be drawn to scale and depicted with dimensions and nature of occupancy; and</p> <p>(ii) The location of proposed FSIs to be installed should be clearly marked on the layout plans.</p> | |
| <p>3. Comments of the Chief Engineer/Mainland North, Drainage Services Department (CE/MN, DSD) (Contact Person: Mr. Terence TANG; Tel.: 2300 1257)</p> | | |
| (a) | <p>Please be advised that a Drainage Impact Assessment (DIA) is required for this application.</p> | <p>A DIA report is submitted by the applicant to review the drainage arrangements for the proposed development (Annex III). The</p> |

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| | | <p>proposed filling of land and pond works have already been taken into consideration of the submitted DIA. The increase in surface runoff generated by the proposed development is estimated to be minimal and will be collected by the proposed drainage systems and discharged into the existing drains via the underground pipe. Based on the DIA, it is concluded that <u>no adverse drainage impact</u> is anticipated (Annex III).</p> |
| <p>4. Comments of the District Planning Officer/Fanling, Sheung Shui and Yuen Long East, Planning Department (DPO/FSYLE, PlanD) (Contact Person: Mr. Samuel HUI / Ms. Olivia NG; Tel.: 3565 3957 /3168 4045)</p> | | |
| (a) | <p>According to the proposed layout, the proposed structure, parking space and land filling work maybe in conflict with the existing trees. The applicant shall provide detailed information on the involved tree-felling, and any mitigation measures to be carried out.</p> | <p>A landscape proposal is submitted by the applicant to provide landscape mitigation measures for the proposed development (Annex IV). <u>7</u> new trees (N1 to N7) are proposed to be planted along the southwest periphery boundary of the Site as a landscape buffer to minimise adverse visual impact to the adjoining receivers. All these new trees within the Site will be maintained by the applicant during the planning approval period.</p> |
| (b) | <p>Noting that active farming is observed within the application site, there is concern that approval of the application would alter the landscape character of the "AGR" zone. Please clarify if any active farming activities would be affected by the proposed use; and</p> | <p>The current farmland occupiers are planning to cease the farming activities within the Site due to the expiration of the tenancy agreement. The proposed development is intended to utilize the abandoned land resources to support the local warehousing industry as well as to facilitate the relocation of the warehouse operators in the New Territories due to the development of various New Development Areas by the Government. The applicant will reinstate the Site to a state that is suitable for agricultural use after the planning approval period.</p> |
| (c) | <p>As per the proposed layout and paving plan, the applicant shall justify the use of the open area and the necessity of the proposed filling of land and pond.</p> | <p>Since the applied use mainly involves 'warehouse (excluding dangerous goods godown)' operation, particularly related to logistic and storage activities, often involves large-scale production processes. These operations require adequate open space to accommodate machinery, equipment, parking</p> |

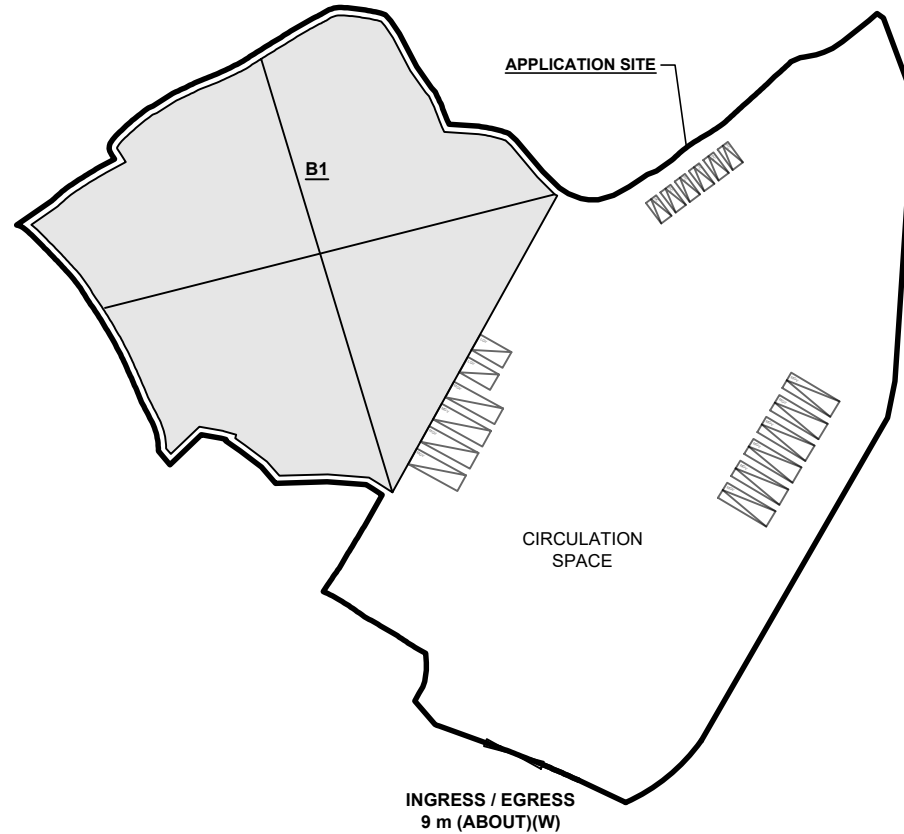
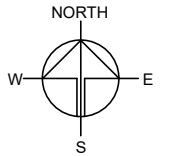
| | | |
|--|---|---|
| | | <p>and loading/unloading facilities, and production lines. Therefore, the Site with a large open area allows for the efficient layout and organization of these components. In addition, the proposed development requires specialized facilities in support of the daily operations (i.e. drainage facilities and fire service installations), having a larger space allows for the incorporation of these specialized facilities to support the operational needs.</p> <p>As heavy loading of structures and vehicles would compact the existing soiled ground and weaken the ground surface, concrete site formation is required to meet the operational needs and that has been kept to minimal for the operation of the proposed development. The applicant will reinstate the Site to a state that is suitable for farming after the planning approval period.</p> |
| <p>5. Comments of the Director of Agriculture, Fisheries and Conservation (DAFC) (Contact Person: Ms. WONG Cheuk-ling; Tel.: 2150 6933)</p> | | |
| <p>(a)</p> | <p>There is a watercourse located to the north of the subject site. The applicant shall clarify whether any measure will be implemented to avoid disturbance to the watercourse nearby during land filling and operation.</p> | <p>2.5m boundary fencing will be placed along the Site during the planning approval period to avoid adverse impact. The boundary fencing will be installed properly by licensed contractor and maintenance will be conducted regularly to prevent misalignment of walls and to ensure that there is no gap or silt on the boundary fencing.</p> <p>All the proposed works will be carried out at least 3m away from the top bank of the existing watercourse that is located at the north of the Site. Fencing will be erected along the site boundary to avoid the watercourse from reaching.</p> <p>A DIA report is submitted by the applicant to review the drainage arrangements for the proposed development, and the DIA concluded that adverse drainage impact from the proposed development should <u>not</u> be anticipated (Annex III). During the operation of the proposed development, surface run-off will be discharged</p> |

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| | | <p>into storm drains through appropriately designed sand/silt removal facilities such as sand traps, silt traps and sediments basins. Silt removal facilities, channels, and manholes will be maintained, and the deposited silt and grit will be removed on a regular basis, at the start and end of each rainstorm, to ensure that these facilities are always operational. Therefore, adverse impact on the nearby watercourse should <u>not</u> be anticipated.</p> |
|--|--|---|

DEVELOPMENT PARAMETERS

| | | |
|-----------------------|-------------------------|---------|
| APPLICATION SITE AREA | : 15,822 m ² | (ABOUT) |
| COVERED AREA | : 5,648 m ² | (ABOUT) |
| UNCOVERED AREA | : 10,174 m ² | (ABOUT) |
| | | |
| PLOT RATIO | : 0.36 | (ABOUT) |
| SITE COVERAGE | : 36 % | (ABOUT) |
| | | |
| NO. OF STRUCTURE | : 1 | |
| DOMESTIC GFA | : NOT APPLICABLE | |
| NON-DOMESTIC GFA | : 5,648 m ² | (ABOUT) |
| TOTAL GFA | : 5,648 m ² | (ABOUT) |
| | | |
| BUILDING HEIGHT | : 13 m | (ABOUT) |
| NO. OF STOREY | : 1 | |

| STRUCTURE | USE | COVERED AREA | GFA | BUILDING HEIGHT |
|--------------|--|------------------------------------|------------------------------------|------------------------|
| B1 | WAREHOUSE (EXCLUDING D.G.G.) SITE OFFICE AND WASHROOM | 5,648 m ² (ABOUT) | 5,648 m ² (ABOUT) | 13 m (ABOUT)(1-STOREY) |
| TOTAL | | 5,648 m² (ABOUT) | 5,648 m² (ABOUT) | |



PARKING AND LOADING/UNLOADING PROVISION

| | |
|---|------------------------|
| NO. OF PRIVATE CAR PARKING SPACE | : 6 |
| DIMENSION OF PARKING SPACE | : 5 m (L) X 2.5 m (W) |
| | |
| NO. OF MEDIUM GOODS VEHICLE PARKING SPACE | : 6 |
| DIMENSION OF PARKING SPACE | : 5 m (L) X 2.5 m (W) |
| | |
| NO. L/UL SPACE FOR LIGHT GOODS VEHICLE | : 2 |
| DIMENSION OF LOADING/UNLOADING SPACE | : 7 m (L) X 3.5 m (W) |
| | |
| NO. L/UL SPACE FOR MEDIUM GOODS VEHICLE | : 4 |
| DIMENSION OF L/UL SPACE | : 11 m (L) X 3.5 m (W) |

LEGEND

| | |
|--|---------------------|
| | APPLICATION SITE |
| | STRUCTURE |
| | PARKING SPACE (PC) |
| | PARKING SPACE (MGV) |
| | L/UL SPACE (LGV) |
| | L/UL SPACE (MGV) |
| | INGRESS / EGRESS |

PLANNING CONSULTANT



PROJECT

PROPOSED WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

SITE LOCATION

VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 1500 @ A4

| | |
|-------------|-----------|
| DRAWN BY | DATE |
| MN | 2.5.2024 |
| REVISED BY | DATE |
| LT | 15.7.2024 |
| APPROVED BY | DATE |

DWG. TITLE

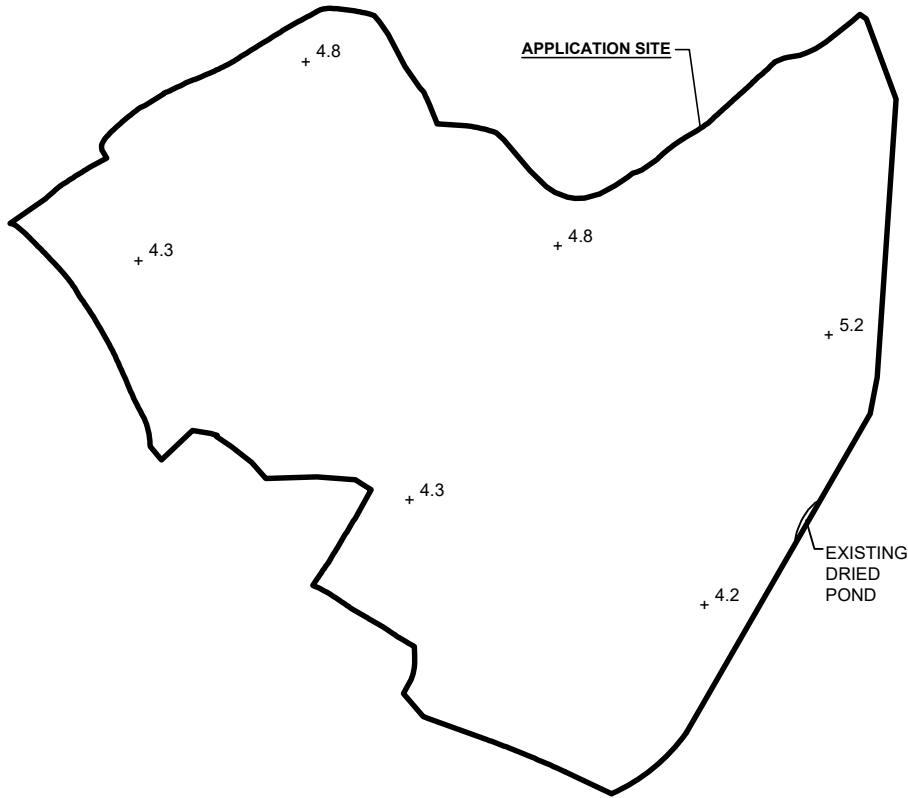
LAYOUT PLAN

| | |
|---------|------|
| DWG NO. | VER. |
| PLAN 1 | 001 |

EXISTING CONDITION OF THE APPLICATION SITE

| | | |
|--------------------------|-------------------------|---------|
| APPLICATION SITE AREA | : 15,822 m ² | (ABOUT) |
| EXISTING SITE SURFACE | : SOILED GROUND | (ABOUT) |
| EXISTING SITE LEVELS | : +4.2 mPD TO +5.2 mPD | (ABOUT) |
| EXISTING DRIED POND AREA | : 9 m ² | (ABOUT) |
| DEPTH OF DRIED POND | : 0.3 m | (ABOUT) |

SITE LEVELS ARE FOR INDICATIVE PURPOSE ONLY.



EXISTING SITE LEVEL OF THE APPLICATION SITE
(INDICATIVE ONLY)

LEGEND

- APPLICATION SITE
- +3.3 EXISTING SITE LEVEL

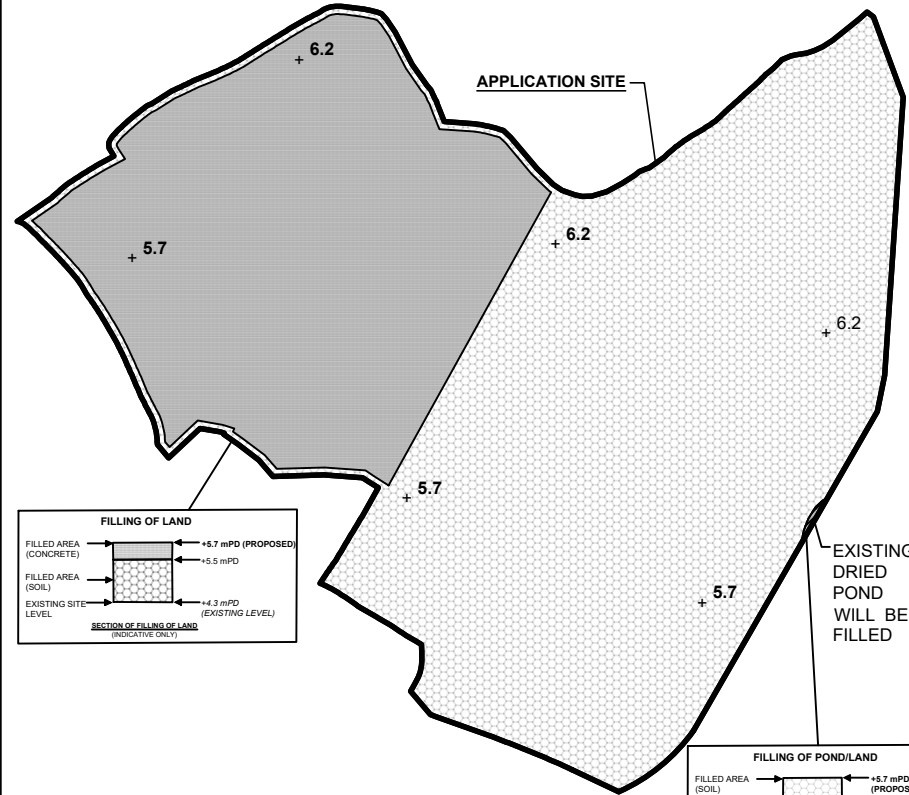
PROPOSED FILLING OF LAND AREA OF THE APPLICATION SITE

| | | |
|-------------------------------|-------------------------|---------|
| APPLICATION SITE AREA | : 15,822 m ² | (ABOUT) |
| PROPOSED FILLING OF LAND AREA | : 15,822 m ² | (ABOUT) |
| DEPTH OF LAND FILLING | : NOT MORE THAN 1.5 m | |
| PROPOSED SITE LEVELS | : +5.7 mPD TO +6.2 mPD | (ABOUT) |

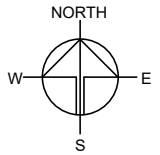
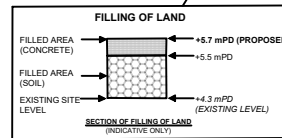
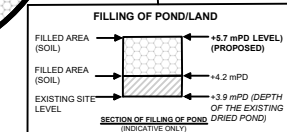
MATERIAL OF LAND FILLING : CONCRETE AND SOIL
PURPOSE OF LAND FILLING : SITE FORMATION OF STRUCTURE# AND CIRCULATION SPACE

| | | |
|--------------------------------|---------------------|---------|
| PROPOSED FILLING OF POND AREA | : 9 m ² | (ABOUT) |
| PROPOSED DEPTH OF POND FILLING | : 0.3 m | (ABOUT) |
| MATERIAL OF POND FILLING | : SOIL | |
| PURPOSE OF POND FILLING | : CIRCULATION SPACE | |

0.2m OF CONCRETE WILL BE FILLED ON TOP OF THE FILLED LAND TO FACILITATE A FLAT SURFACE FOR SITE FORMATION OF STRUCTURES



PROPOSED SITE LEVEL OF THE APPLICATION SITE
(INDICATIVE ONLY)



PLANNING CONSULTANT



PROJECT

PROPOSED WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

SITE LOCATION

VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 1500 @ A4

DRAWN BY MN DATE 2.5.2024

REVISED BY LT DATE 20.9.2024

APPROVED BY DATE

DWG. TITLE

FILLING OF LAND AREA

DWG NO. PLAN 2

VER. 001

SWEPT PATH ANALYSIS

TYPE OF VEHICLE : MEDIUM GOODS VEHICLE
 DIMENSION OF VEHICLE : 2.5 m (W) X 11 m (L)

SWEPT PATHS GENERATED BY AUTODESK VEHICLE TRACKING

B1

INGRESS / EGRESS
 9 m (ABOUT)(W)

FROM MEI FUNG ROAD TO
 THE APPLICATION SITE

APPLICATION SITE








B1

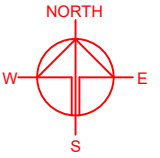
INGRESS / EGRESS
 9 m (ABOUT)(W)

FROM THE APPLICATION SITE
 TO MEI FUNG ROAD

APPLICATION SITE

LEGEND

-  APPLICATION SITE
-  STRUCTURE
-  PARKING SPACE
-  LOADING / UNLOADING SPACE
-  INGRESS / EGRESS
-  MEDIUM GOODS VEHICLE
-  SWEPT PATH OF VEHICLE



PLANNING CONSULTANT



PROJECT

PROPOSED WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

SITE LOCATION

VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

SCALE

1 : 1000 @ A4

| | |
|----------------|------------------|
| DRAWN BY MN | DATE 2.5.2024 |
|----------------|------------------|

| | |
|------------------|-------------------|
| REVISED BY LT | DATE 15.7.2024 |
|------------------|-------------------|

| | |
|-------------|------|
| APPROVED BY | DATE |
|-------------|------|

DWG TITLE
 SWEPT PATH ANALYSIS

| | |
|-------------------|-------------|
| DWG NO. PLAN 3 | VER. 001 |
|-------------------|-------------|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|--------------------------------|---|----------------|--------------------------------|---|---------------------|--------------------------------|---|-----------------|--------------------------------|---|---------------|--------------------------------|---|--------------------------|--------------------------------|---|-------------------------|--------------------------------|---|-------------------|--------------------------------|---|----------------------|--------------------------------|---|----------------------------------|--------------------------------|---|
| Proposed operating hours 擬議營運時間 09:00 to 19:00 from Monday to Saturday. No operation on Sunday and public holiday. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (d) Any vehicular access to the site/subject building? 是否有車路通往地盤/ 有關建築物? | <p>Yes 是 <input checked="" type="checkbox"/> There is an existing access. (please indicate the street name, where appropriate) 有一條現有車路。(請註明車路名稱(如適用))</p> <p>Mei Fung Road via a local access</p> <p>No 否 <input type="checkbox"/> There is a proposed access. (please illustrate on plan and specify the width) 有一條擬議車路。(請在圖則顯示，並註明車路的闊度)</p> <p><input type="checkbox"/></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (e) Impacts of Development Proposal 擬議發展計劃的影響 (If necessary, please use separate sheets to indicate the proposed measures to minimise possible adverse impacts or give justifications/reasons for not providing such measures. 如需要的話，請另頁註明可盡量減少可能出現不良影響的措施，否則請提供理據/理由。) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (i) Does the development proposal involve alteration of existing building? 擬議發展計劃是否包括現有建築物的改動? | <p>Yes 是 <input type="checkbox"/> Please provide details 請提供詳情</p> <p>No 否 <input checked="" type="checkbox"/></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (ii) Does the development proposal involve the operation on the right? 擬議發展是否涉及右列的工程? | <p>Yes 是 <input checked="" type="checkbox"/> (Please indicate on site plan the boundary of concerned land/pond(s), and particulars of stream diversion, the extent of filling of land/pond(s) and/or excavation of land) (請用地盤平面圖顯示有關土地/池塘界線，以及河道改道、填塘、填土及/或挖土的細節及/或範圍)</p> <p><input type="checkbox"/> Diversion of stream 河道改道</p> <p><input checked="" type="checkbox"/> Filling of pond 填塘 Area of filling 填塘面積 9 sq.m 平方米 <input checked="" type="checkbox"/> About 約 Depth of filling 填塘深度 0.3 m 米 <input checked="" type="checkbox"/> About 約</p> <p><input checked="" type="checkbox"/> Filling of land 填土 Area of filling 填土面積 15,822 sq.m 平方米 <input checked="" type="checkbox"/> About 約 Depth of filling 填土厚度 ..not more than 1.5. m 米 <input checked="" type="checkbox"/> About 約</p> <p><input type="checkbox"/> Excavation of land 挖土 Area of excavation 挖土面積..... sq.m 平方米 <input type="checkbox"/> About 約 Depth of excavation 挖土深度m 米 <input type="checkbox"/> About 約</p> <p>No 否 <input type="checkbox"/></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (iii) Would the development proposal cause any adverse impacts? 擬議發展計劃會否造成不良影響? | <table border="0"> <tr> <td>On environment 對環境</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On traffic 對交通</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On water supply 對供水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On drainage 對排水</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>On slopes 對斜坡</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Affected by slopes 受斜坡影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Landscape Impact 構成景觀影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Tree Felling 砍伐樹木</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Visual Impact 構成視覺影響</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> <tr> <td>Others (Please Specify) 其他 (請列明)</td> <td>Yes 會 <input type="checkbox"/></td> <td>No 不會 <input checked="" type="checkbox"/></td> </tr> </table> <p>.....</p> | On environment 對環境 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On traffic 對交通 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On water supply 對供水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On drainage 對排水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | On slopes 對斜坡 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Affected by slopes 受斜坡影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Landscape Impact 構成景觀影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Tree Felling 砍伐樹木 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Visual Impact 構成視覺影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | Others (Please Specify) 其他 (請列明) | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> |
| On environment 對環境 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On traffic 對交通 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On water supply 對供水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On drainage 對排水 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| On slopes 對斜坡 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Affected by slopes 受斜坡影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Landscape Impact 構成景觀影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tree Felling 砍伐樹木 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Visual Impact 構成視覺影響 | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Others (Please Specify) 其他 (請列明) | Yes 會 <input type="checkbox"/> | No 不會 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

FIRE SERVICES NOTES

1. HOSE REEL SYSTEM
 - 1.1 HOSE REEL SHALL BE PROVIDED AT POSITIONS OF THE WAREHOUSE AS INDICATED ON PLANS.
 - 1.2 WATER SUPPLY FOR THE MODIFIED HOSE REEL SYSTEM TO BE SINGLE END FEED FROM THE GOVERNMENT TOWN MAIN.
 - 1.3 A MODIFIED HOSE REEL SYSTEM OF 2,000 LITRES WATER TANK TO BE PROVIDED FOR THE PREMISES AS INDICATED ON PLAN.
 - 1.4 TWO HOSE REEL PUMPS (ONE DUTY & ONE STANDBY) SHALL TO BE PROVIDED AT FS PUMP ROOM.
 - 1.5 NO FIRE SERVICES INLET TO BE PROVIDED FOR THE MODIFIED HOSE REEL SYSTEM.
 - 1.6 SUFFICIENT HOSE REELS SHALL BE PROVIDED TO THE PREMISES. HOSE REELS SHALL BE PROVIDED TO ENSURE THAT EVERY PART OF THE BUILDING CAN BE REACHED BY A LENGTH OF NOT MORE THAN 30 M OF HOSE REEL TUBING. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE TO BE LOCATED AT EACH HR POINT.
2. SPRINKLER SYSTEM
 - 2.1 THE CLASSIFICATION OF THE AUTOMATIC SPRINKLER INSTALLATION TO BE ORDINARY HAZARD GROUP 3.
 - 2.2 AUTOMATIC SPRINKLER SYSTEM SHALL SUPPLIED BY A 135,000L SPRINKLER WATER TANK AND COVERED TO THE ENTIRE WAREHOUSE IN ACCORDANCE WITH LPC RULES INCORPORATING BS EN12845 : 2015 AND FSD CIRCULAR LETTER 5/2020. THE SPRINKLER WATER TANK, SPRINKLER PUMP ROOM, SPRINKLER INLET AND SPRINKLER CONTROL VALVE GROUP SHALL BE AS INDICATED ON PLANS.
 - 2.3 ALL INSTALLED SPRINKLER SHOULD BE CONVENTIONAL TYPE AND THE TEMPERATURE RATING OF SPRINKLER HEAD SHALL BE 68°C UNLESS OTHERWISE SPECIFIED.
 - 2.4 ALL SPRINKLER PIPE SIZE SHOULD BE Ø32MM UNLESS SPECIFY.
 - 2.5 STORAGE BLOCK SHOULD BE SEPARATED BY AISLES NO LESS THAN 2.4M WIDE.
 - 2.6 THE MAXIMUM STORAGE AREA SHALL BE 50m² FOR ANY SINGLE BLOCK.
 - 2.7 TYPE OF STORAGE METHOD FOR THE BUILDINGS ARE AS FOLLOWS:
 - i) STORAGE CATEGORY : CATEGORY (III)
 - ii) STORAGE HEIGHT : NOT EXCEEDING 2.1M
 - iii) STORAGE : ST1
3. FIRE ALARM SYSTEM
 - 3.1 FIRE ALARM SYSTEM SHALL BE PROVIDED THROUGHOUT THE ENTIRE COVERED AREA OF WAREHOUSE IN ACCORDANCE WITH BS 5839-1 : 2017 AND FSD CIRCULAR LETTER 6/2021. ONE ACTUATING POINT AND ONE AUDIO WARNING DEVICE SHOULD BE LOCATED AT EACH HOSE REEL POINT. THE ACTUATION POINT SHOULD INCLUDE FACILITIES FOR HOSE REEL PUMP START AND AUDIO / VISUAL WARNING DEVICE INITIATION.
 - 3.2 AN ADDRESSABLE TYPE FIRE ALARM PANEL TO BE PROVIDED AND LOCATED IN FRONT OF THE MAIN ENTRANCE OF WAREHOUSE ON G/F.
4. EMERGENCY LIGHTING
 - 4.1 SUFFICIENT EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THE COVERED AREA OF WAREHOUSE IN ACCORDANCE WITH BS 5266-1:2016 AND BS EN 1838:2013 AND FSD CIRCULAR LETTER 4/2021.
 - 4.2 SELF-CONTAINED TYPE EMERGENCY LIGHTING SYSTEM COMPLYING WITH H.K.F.S.D.'S CODE OF PRACTICE AS WELL AS BS 5266-1 : 2011 + BS EN 1838 : 2013 WILL BE PROVIDED, AND PERMANENTLY MAINTAINED IN EFFECTIVE WORKING ORDER FROM NORMAL SUPPLY & TO BE PROVIDED.
 - 4.3 EMERGENCY LIGHTING SHALL BE PROVIDED THROUGHOUT THE ENTIRE WAREHOUSE AND ALL EXIT ROUTES LEADING TO EXIT OF BUILDING.
5. EXIT SIGN
 - 5.1 SUFFICIENT SELF-CONTAINED TYPE DIRECTIONAL AND EXIT SIGNS TO ENSURE THAT ALL EXIT ROUTES FROM ANYWHERE WITHIN THE WAREHOUSE ARE CLEARLY INDICATED AS REQUIRED BY THE CONFIGURATION OF EXIT ROUTE SERVING THE BUILDING.
6. EMERGENCY GENERATOR
 - 6.1 NO EMERGENCY GENERATOR TO BE PROVIDED FOR SERVING THE EMERGENCY POWER. A.C. SUPPLY SOURCE WITH SECONDARY SUPPLY SHALL FEED BEFORE MAIN SWITCH.
 - 6.2 DUPLICATED POWER SUPPLIES FOR ALL FIRE SERVICES INSTALLATIONS COMPRISING A CABLE CONNECTED FROM ELECTRICITY MAINS DIRECTLY BEFORE THE MAIN SWITCH.
- 7 PORTABLE HAND-OPERATED APPROVED APPLIANCE
 - 7.1 PORTABLE FIRE EXTINGUISHER WITH SPECIFIED TYPE AND CAPACITY TO BE PROVIDED AT LOCATIONS AS INDICATED ON PLANS.
- 8 STATIC OR DYNAMIC SMOKE EXTRACTION SYSTEM
 - 8.1 SMOKE EXTRACTION SYSTEM SHALL NOT BE PROVIDED AS NO COMPARTMENT EXCEEDING 7000 CU.M IN THE PREMISES.
- 9 VENTILATION/AIR CONDITIONING CONTROL SYSTEM
 - 9.1 WHEN A VENTILATION/ AIR CONDITIONING CONTROL SYSTEM TO A BUILDING IS PROVIDED, IT SHALL STOP MECHANICALLY INDUCED AIR MOVEMENT WITHIN A DESIGNATED FIRE COMPARTMENT.

LEGEND (FOR LAYOUT PLAN)

- HOSE REEL W/ LOCKABLE GLASS FRONTED NOZZLE BOX, STRIKER, C/W FIRE ALARM BELL & BREAK GLASS UNIT
- 150mm FIRE ALARM BELL
- BREAK GLASS UNIT
- SPRINKLER HEAD
- FLOW SWITCH
- MONITORED GATE VALVE
- SPRINKLER ZONE SUBSIDIARY CONTROL VALVE ASSEMBLY INCLUDES ZONE SUBSIDIARY CONTROL VALVE, FLOW SWITCH, TEST GATE VALVE AND DRAIN VALVE
- GATE VALVE
- NON RETURN VALVE
- VORTEX INHIBITOR
- BALL FLOAT VALVE
- PRESSURE SWITCH
- PRESSURE GAUGE WITH COCK
- SPRINKLER PIPE
- HOSE REEL PIPE
- SPRINKLER CONTROL VALVE SET
- CHECK METER POSITION
- SPRINKLER / F.S. INLET
- 5Kg CO2 TYPE FIRE EXTINGUISHER
- 4Kg DRY POWDER TYPE FIRE EXTINGUISHER
- PUMP
- 150mm WATER ALARM GONG
- EMERGENCY LIGHTING
- EXIT SIGN
- FIRE ALARM PANEL
- PUMP CONTROL PANEL
- SELF-CONTAINED EMERGENCY FLUORESCENT LIGHTING UNIT
- F. S. INSTALLTION
- FLASH LIGHT

ABBREVIATION

- SPR. SPRINKLER
- F.H. FIRE HYDRANT
- H.R. HOSE REEL
- F.E. FIRE EXTINGUISHER
- CO₂ CARBON DIOXIDE
- L.P.C. LOSS PREVENTION COUNCIL
- F.S.I. FIRE SERVICES INSTALLATION
- H/L HIGH LEVEL
- M/L MID LEVEL
- L/L LOW LEVEL
- F/A FROM ABOVE
- F/B FROM BELOW
- T/A TO ABOVE
- T/B TO BELOW
- U/G UNDERGROUND
- F.S. FIRE SERVICES

LEGEND (FOR SCHEMATIC DIAGRAM)

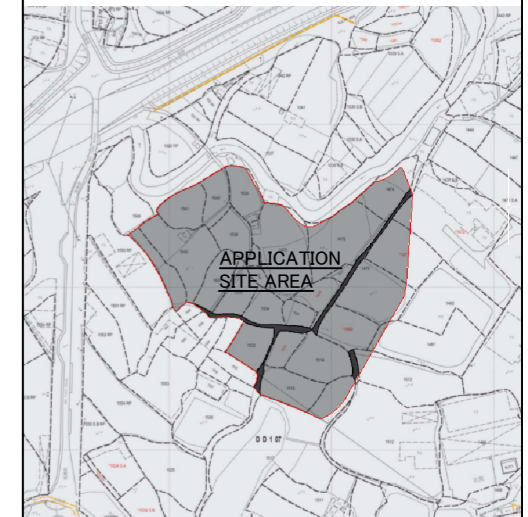
- HOSE REEL W/ LOCKABLE GLASS FRONTED NOZZLE BOX, STRIKER, C/W FIRE ALARM BELL & BREAK GLASS UNIT
- 150mm FIRE ALARM BELL
- BREAK GLASS UNIT
- FAST RESPONSE TYPE SPRINKLER HEAD
- FLOW SWITCH
- MONITORED GATE VALVE
- SPRINKLER ZONE SUBSIDIARY CONTROL VALVE ASSEMBLY INCLUDES ZONE SUBSIDIARY CONTROL VALVE, FLOW SWITCH, TEST GATE VALVE AND DRAIN VALVE
- GATE VALVE
- NON RETURN VALVE
- VORTEX INHIBITOR
- BALL FLOAT VALVE
- PRESSURE SWITCH
- PRESSURE GAUGE WITH COCK
- AUTOMATIC AIR VENT WITH COCK
- SPRINKLER / HOSE REEL PIPE
- SPRINKLER CONTROL VALVE SET
- LEVEL SWITCH (HIGH LEVEL SIGNAL & LOW LEVEL SIGNAL)
- FLEXIBLE CONNECTOR
- CHECK METER POSITION
- PLUG
- Y-STRAINER
- SPRINKLER / F.S. INLET
- SPRINKLER PROVING PIPE
- F. S. INSTALLTION
- PUMP SET

DRAWING LIST

| DRAWING NO | DESCRIPTION |
|-----------------|--|
| YL-KTN1023-FS01 | FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST |
| YL-KTN1023-FS02 | FIRE SERVICES INSTALLATION LAYOUT PLAN G/F LAYOUT PLAN |
| YL-KTN1023-FS03 | SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM |
| YL-KTN1023-FS04 | SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM |

COLOUR CODE

| PIPE SIZES | COLOUR |
|------------|-------------|
| Ø25mm | LIGHT GREEN |
| Ø32mm | RED |
| Ø40mm | PURPLE |
| Ø50mm | YELLOW |
| Ø65mm | BLUE |
| Ø80mm | GREEN |
| Ø100mm | LIGHT BROWN |
| Ø150mm | DEEP BROWN |



BLOCK PLAN

| REV | DESCRIPTION | DATE | BY |
|-----|----------------|------------|----|
| 0 | TPB SUBMISSION | 05-08-2024 | LH |

FSI CONTRACTOR
East Power Engineering Limited
 Flat A, 7/F., Hop Shing Commercial Building
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 Fax. : 2394-3772 Tel. : 2397-3238

PROJECT
 PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND AT VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

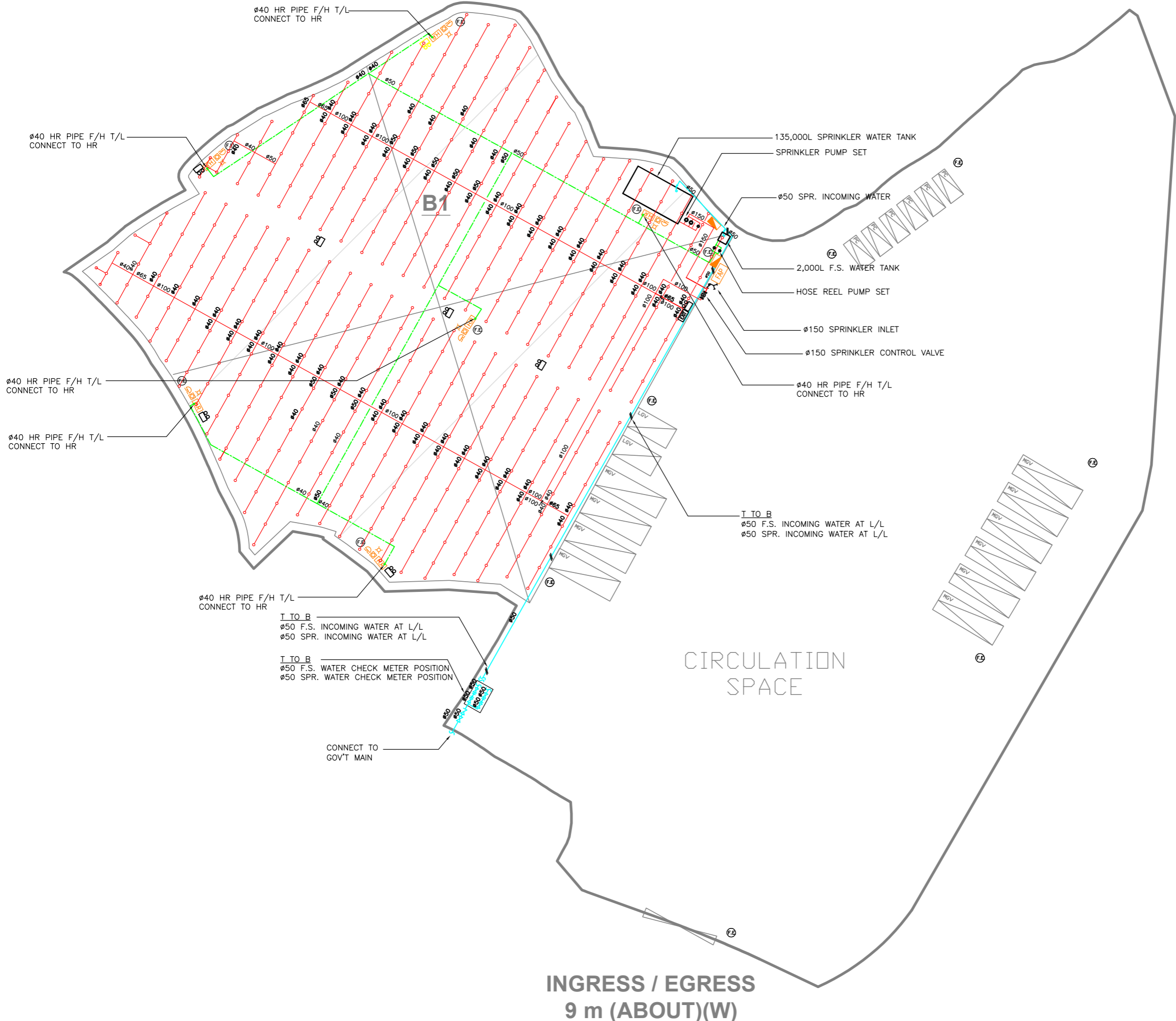
DRAWING TITLE
 FS NOTES, LEGEND, ABBREVIATIONS AND DRAWING LIST

| | INITIAL | DESIGNATION | DATE |
|-------------|---------|-------------|------------|
| DRAWN BY | HY | Eng.T | 05-08-2024 |
| DESIGNED BY | HY | Eng.T | 05-08-2024 |
| CHECKED BY | CM | PM | 05-08-2024 |
| APPROVED BY | - | - | - |

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|-------------|---------------|------------|-------|
| PROJECT NO. | A_YL-KTN_1023 | | |
| PAPER SIZE | A3 | PLOT SCALE | 1 : 1 |


DRAWING NO.
YL-KTN1023-FS01

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| SCALE | N. T. S. | REVISION | 0 |
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| REV | DESCRIPTION | DATE | BY |
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| 0 | TPB SUBMISSION | 05-08-2024 | LH |

FSI CONTRACTOR
East Power Engineering Limited

 Flat A, 7/F., Hop Shing Commercial Building
 41 Chi Kiang Street, Tokwawan, Kowloon
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PROJECT
 PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND AT VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

DRAWING TITLE
 FIRE SERVICES INSTALLATION LAYOUT PLAN-
 G/F LAYOUT PLAN

| | INITIAL | DESIGNATION | DATE |
|-------------|---------|-------------|------------|
| DRAWN BY | HY | Eng.T | 05-08-2024 |
| DESIGNED BY | HY | Eng.T | 05-08-2024 |
| CHECKED BY | CM | PM | 05-08-2024 |
| APPROVED BY | - | - | - |

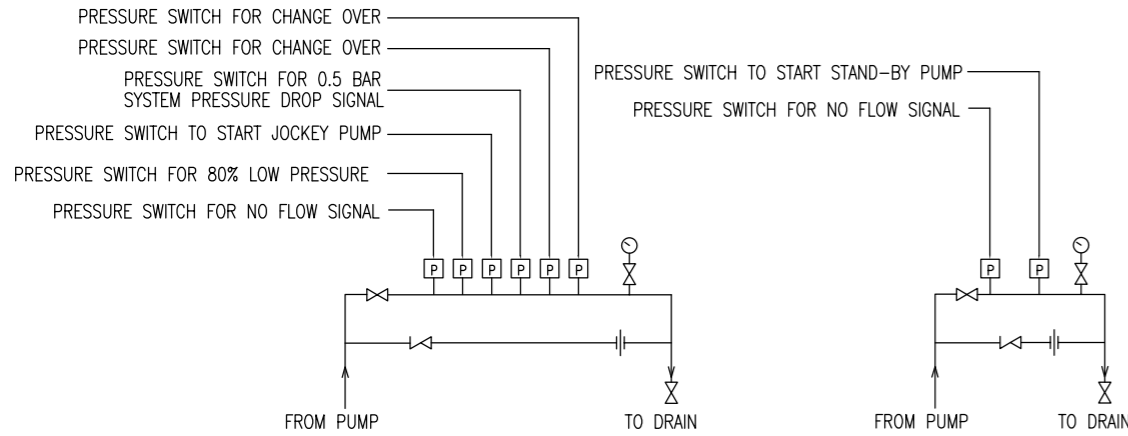
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| PROJECT NO. | A_YL-KTN_1023 | | |
| PAPER SIZE | A3 | PLOT SCALE | 1 : 1 |

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|--------------------------------|---------|----------|---|
| DRAWING NO. YL-KTN1023-FS02 | | | |
| SCALE | 1 : 600 | REVISION | 0 |

**INGRESS / EGRESS
9 m (ABOUT)(W)**

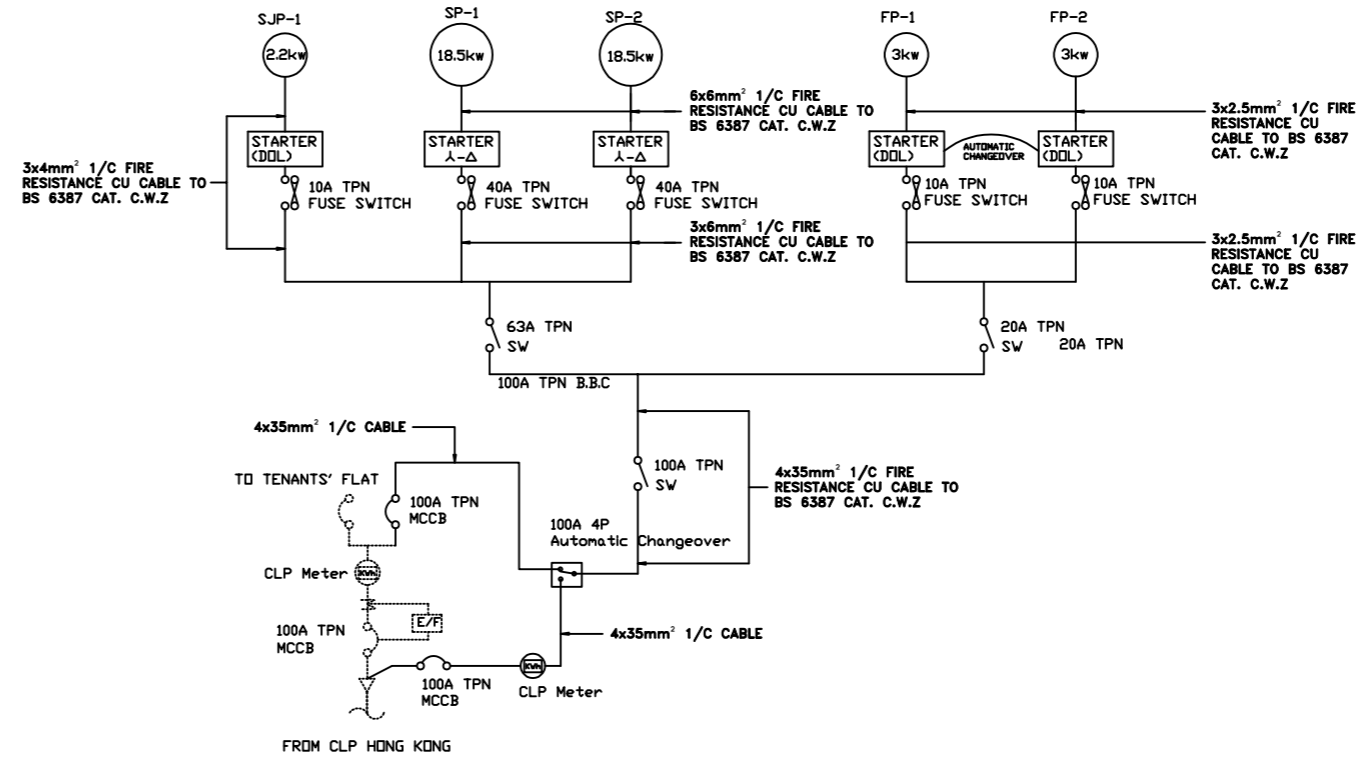
PUMP SCHEDULE

| DESCRIPTION | PRESSURE (BAR) | FLOW (L/MIN.) | PUMP SPEED (RPM) | PUMP RATING (KW) | POWER SUPPLY (volts/phases/Hz) |
|--|-----------------|--------------------|------------------|------------------|--------------------------------|
| SPRINKLER JOCKEY PUMP (SJP-1) | 5 | 60 | 2900 MAXIMUM | 2.2 KW | 380/3/50 |
| TWO SPRINKLER PUMPS (SP-1 AS DUTY & SP-2 AS STAND-BY PUMP) | 1.4 / 2.9 / 3.2 | 2250 / 1350 / 1100 | 2900 MAXIMUM | 18.5 KW | 380/3/50 |

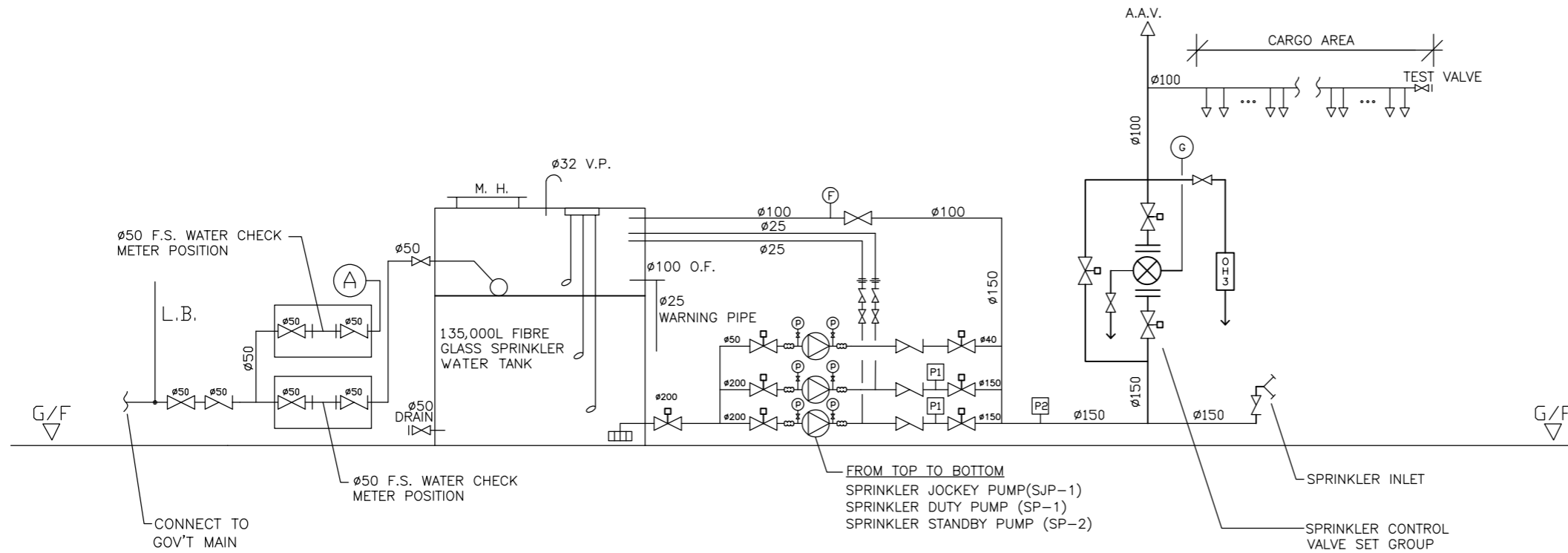


DETAIL ARRANGEMENT FOR 'P2'

DETAIL ARRANGEMENT FOR 'P1'



POWER DISTRIBUTION DIAGRAM FOR SPRINKLER AND FIRE SERVICE PUMPS



SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM

| REV | DESCRIPTION | DATE | BY |
|-----|----------------|------------|----|
| 0 | TPB SUBMISSION | 05-08-2024 | LH |

FSI CONTRACTOR
East Power Engineering Limited
 Flat A, 7/F., Hop Shing Commercial Building
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 PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND AT VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES

DRAWING TITLE
 SCHEMATIC DIAGRAM FOR SPRINKLER SYSTEM

| | INITIAL | DESIGNATION | DATE |
|-------------|---------|-------------|------------|
| DRAWN BY | HY | Eng.T | 05-08-2024 |
| DESIGNED BY | HY | Eng.T | 05-08-2024 |
| CHECKED BY | CM | PM | 05-08-2024 |
| APPROVED BY | - | - | - |

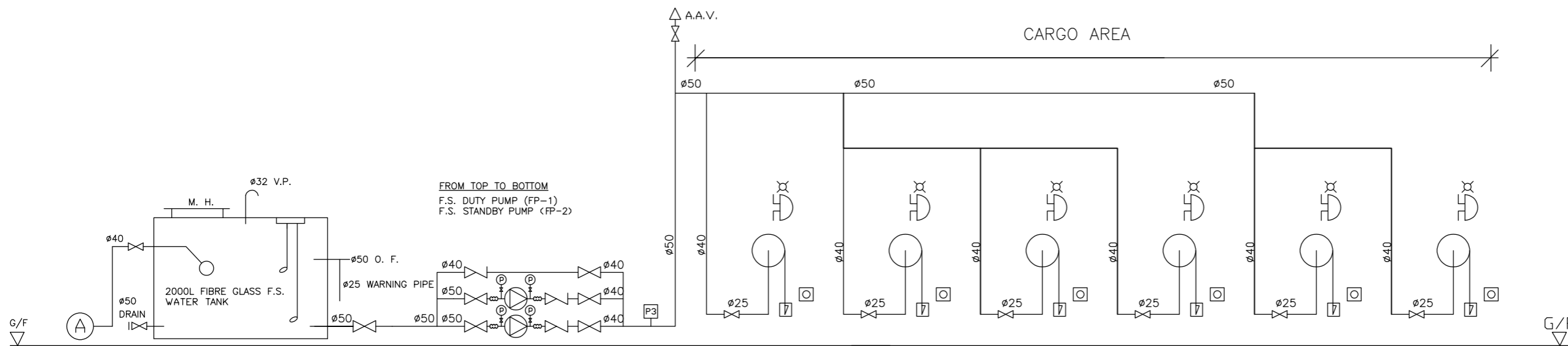
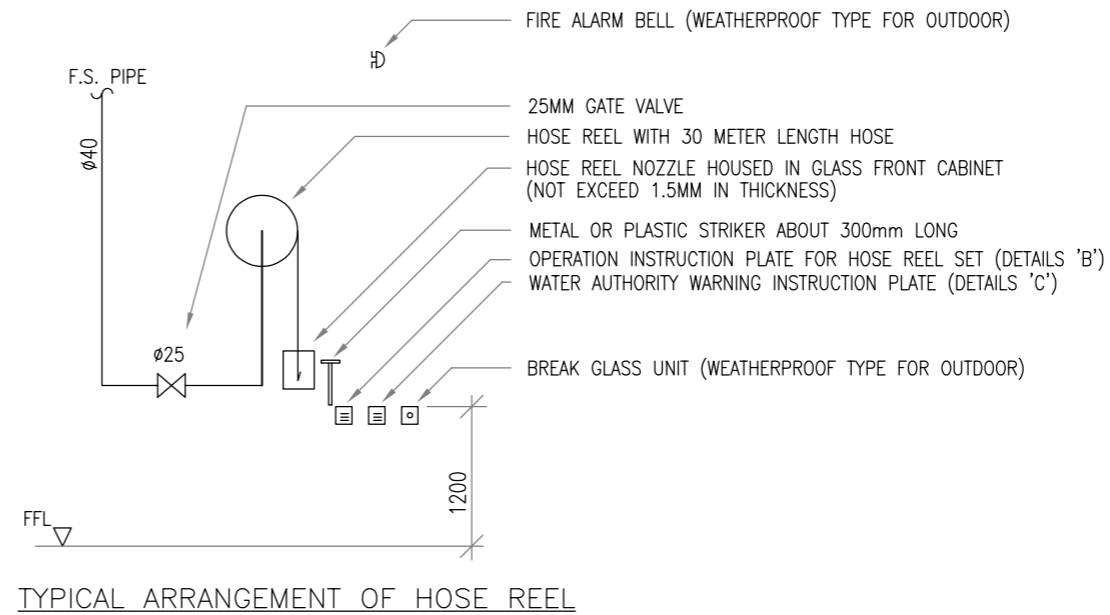
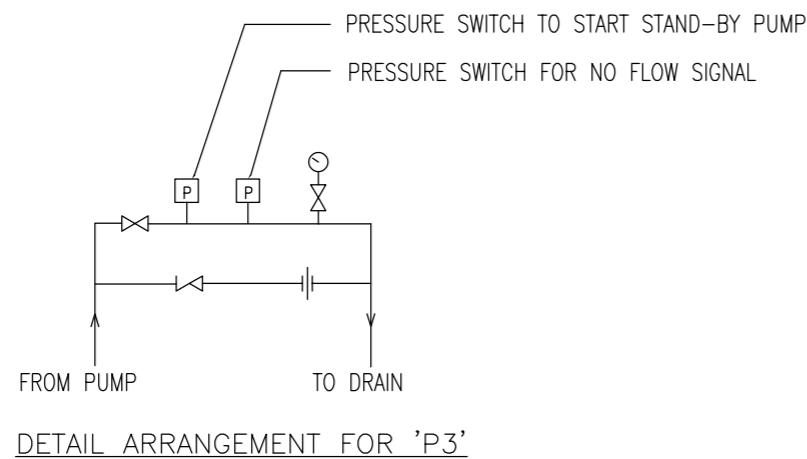
PROJECT NO. A_YL-KTN_1023
 PAPER SIZE A3 PLOT SCALE 1 : 1

DRAWING NO.
 YL-KTN1023-FS03

| SCALE | N. T. S. | REVISION | 0 |
|-------|----------|----------|---|
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PUMP SCHEDULE

| DESCRIPTION | PRESSURE (BAR) | FLOW (L/MIN.) | PUMP SPEED (RPM) | PUMP RATING (KW) | POWER SUPPLY (volts/phases/Hz) |
|---|----------------|---------------|------------------|------------------|--------------------------------|
| TWO FIRE SERVICES PUMPS (FP-1 AS DUTY & FP-2 AS STANDBY PUMP) | 5 | 60 | 2900 MAXIMUM | 2.2KW | 380/3/50 |



| REV | DESCRIPTION | DATE | BY |
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| 0 | TPB SUBMISSION | 05-08-2024 | LH |

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 41 Chi Kiang Street, Tokwawan, Kowloon
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PROJECT
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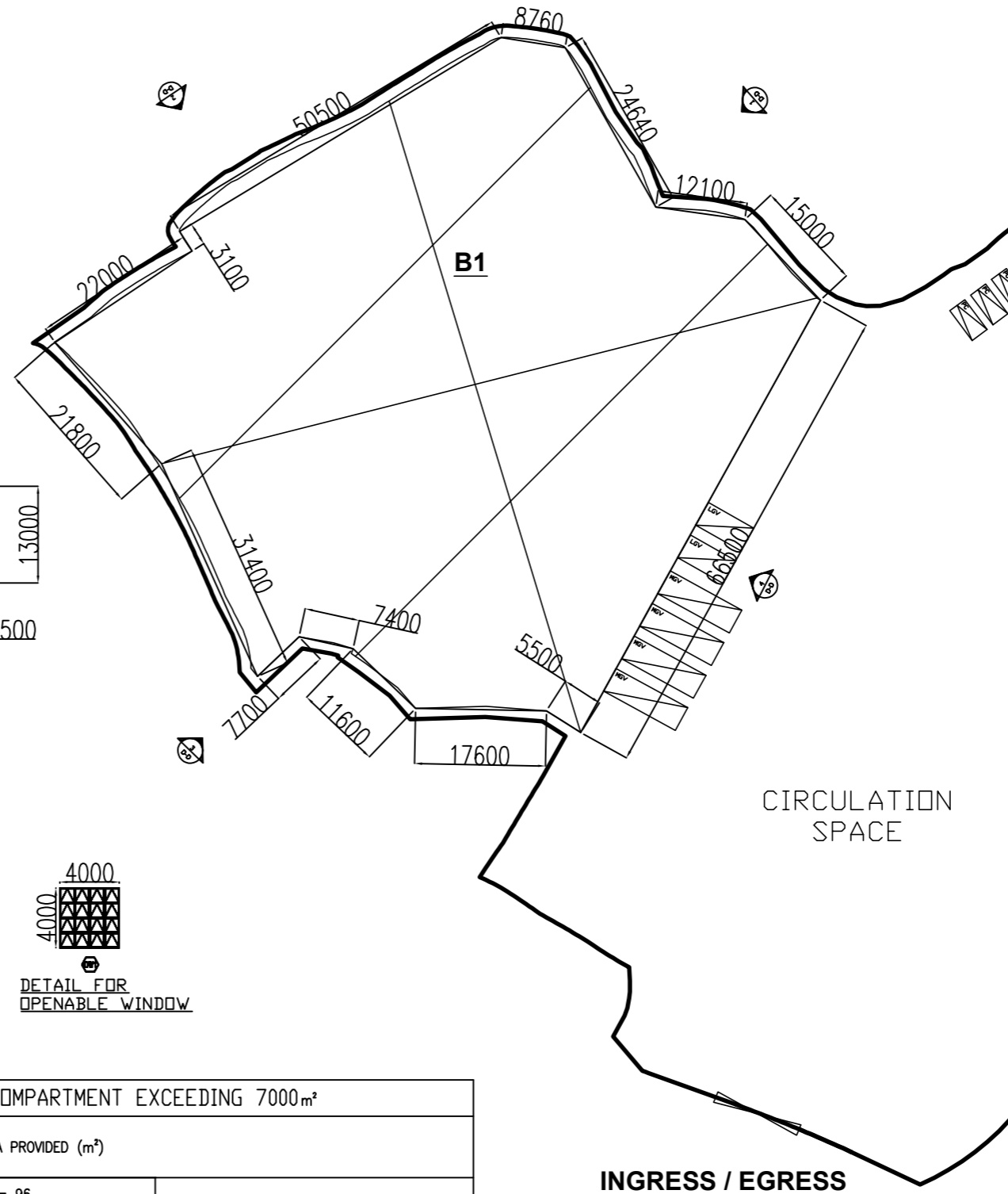
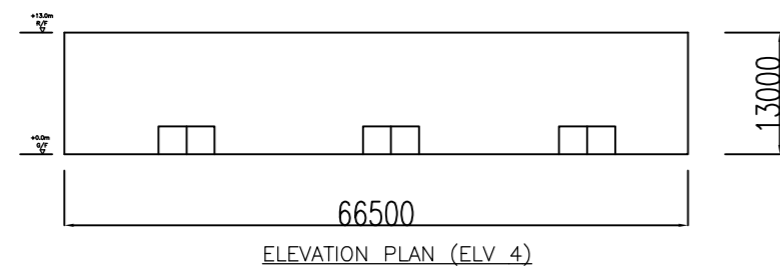
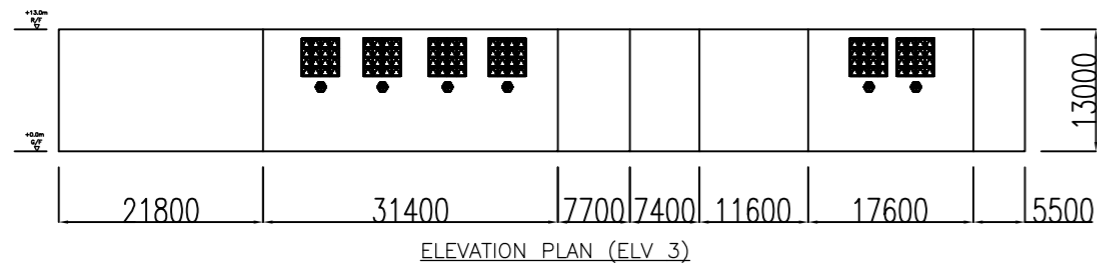
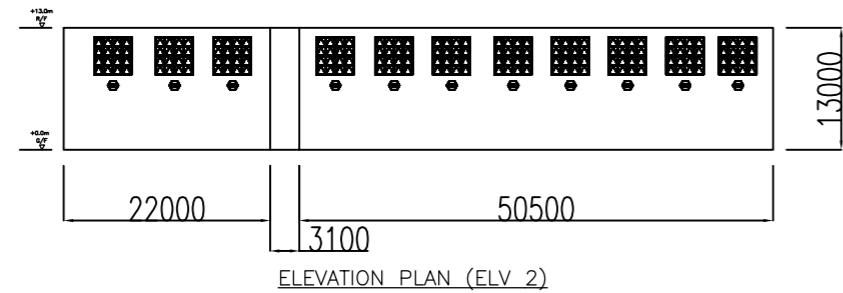
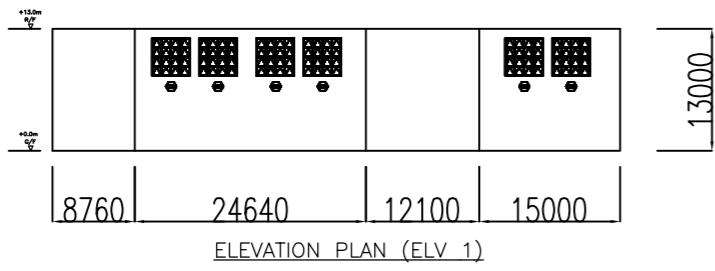
DRAWING TITLE
 SCHEMATIC DIAGRAM FOR HOSE REEL SYSTEM

| | INITIAL | DESIGNATION | DATE |
|-------------|---------|-------------|------------|
| DRAWN BY | HY | Eng.T | 05-08-2024 |
| DESIGNED BY | HY | Eng.T | 05-08-2024 |
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| APPROVED BY | - | - | - |

PROJECT NO. A_YL-KTN_1023
 PAPER SIZE A3 PLOT SCALE 1 : 1

DRAWING NO.
 YL-KTN1023-FS04

| SCALE | N. T. S. | REVISION | 0 |
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| OPENABLE WINDOW AREA CALCULATION UNDER F.S.D. REQUIREMENT FOR COMPARTMENT EXCEEDING 7000m ² | | | | |
|--|-----------------------------------|---|--|-------------------|
| LOCATION | USABLE FL. AREA (m ²) | OPENABLE WINDOW AREA REQUIRED (m ²) | OPENABLE WINDOW AREA PROVIDED (m ²) | |
| STRUCTURE B1 | 5648 | 5648 X 6.25% = 353 | REFER TO ELEVATION 1 = 96 REFER TO ELEVATION 2 = 176 REFER TO ELEVATION 3 = 96 | TOTAL = 368 > 353 |

| REV | DESCRIPTION | DATE | BY |
|-----|----------------|------------|----|
| 0 | TPB SUBMISSION | 05-08-2024 | LH |

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DRAWING TITLE
 OPENABLE WINDOW AREA CALCULATION FOR STRUCTURE

| | INITIAL | DESIGNATION | DATE |
|-------------|-------------------|-------------|------------|
| DRAWN BY | HY | Eng.T | 05-08-2024 |
| DESIGNED BY | HY | Eng.T | 05-08-2024 |
| CHECKED BY | CM | PM | 05-08-2024 |
| APPROVED BY | - | - | - |
| PROJECT NO. | A_YL-KTN_1023 | | |
| PAPER SIZE | A3 | PLOT SCALE | 1 : 1 |
| DRAWING NO. | A_YL-KTN1023 FS05 | | |
| SCALE | 1 : 800 | REVISION | |

Excel Link Development Limited

Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in “Agriculture” Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1023)**



Document No. V1094/01
Issue 1

September 2024

V1094/01
Issue 1
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Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond and in “Agriculture” Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1023)**

| | |
|------------------------|-------------------|
| Approved for Issue by: | |
| ----- | |
| Bryan LEUNG | |
| Position: | Project Manager |
| ----- | |
| Date: | 23 September 2024 |
| ----- | |

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Proposed Temporary Warehouse (Excluding Dangerous Goods Godown) with Ancillary Facilities for a Period of 3 Years and Associated Filling of Land and Pond and in “Agriculture” Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories

**Drainage Impact Assessment
(Section 16 Planning Application No. A/YL-KTN/1023)**

| Issue | Prepared by | Reviewed by | Date |
|--------------|--------------------|--------------------|-------------|
| 1 | BH | BLE | 23 Sep 2024 |
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Abbreviations

- D.D. Demarcation District
- DSD Drainage Services Department
- SDM Stormwater Drainage Manual



1.0 Introduction

- 1.1 This submission presents the drainage impact assessment of the proposed temporary warehouse (excluding dangerous goods godown) with ancillary facilities for a period of 3 years and associated filling of land and pond at various lots in D.D. 107 and the adjoining government land at Fung Kat Heung, Kam Tin, Yuen Long, New Territories (“Site”)
- 1.2 The Site has an area of about 15,822m² and it is currently covered in grassland with few temporary structures. A 1-storey structure is proposed at the Site for temporary warehouse with total GFA of about 5,648 m². The general layout plan and cross sections of the Site are shown on the **Drawing Nos. V1094/001 and V1094/002** enclosed in **Appendix A**.
- 1.3 Due to the concerns of possible drainage impact arising from the change of uses, Mannings (Asia) Consultants Limited (MACL) was appointed by the Excel Link Development Limited to undertake a Drainage Impact Assessment (DIA) to demonstrate the acceptability of drainage impact upon the surrounding environment.



2.0 Site Condition

- 2.1 The topography of the Site is generally flat and currently situated with levels ranging from +4.2 mPD to +5.2 mPD. In general, the direction of existing surface runoff flows from north to south. After completion of the project, the finished ground level of the Site will be raised to approximately +5.7 mPD to +6.2 mPD. Part of the unpaved areas is proposed to be occupied by a new covered structures whilst the remaining unpaved area would be unchanged in regards of the finished surface and continued to be an opened space area. In addition, some of these unpaved opened areas are proposed to be served as access road and parking spaces. The catchment plan after upon completion of the proposed development is demonstrated on the **Drawing No. V1094/005** enclosed in **Appendix A**.
- 2.2 According to the site survey and observation, there are two existing outfalls located at the north of the Site flowing from south to north and connecting to a 7m wide open channel. The runoff from the Site after development will be discharged into this open channel through the two existing outfall pipes. The photo records of the existing drainage are presented in **Appendix C**.



3.0 Design Methodology and Assumptions

Design Code

3.1 The below design codes are to be followed for this design assessment:

- Stormwater Drainage Manual (DSD) - Fifth Edition, January 2018;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 1/2022;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 1/2024;
- Stormwater Drainage Manual (DSD) - Corrigendum No. 2/2024;
- BS 5911 Code of Practice for Precast Concrete Pipe Design
- DSD Standard Drawings

Design Parameters

3.2 Design Parameters

a) Runoff Coefficient

Table 3-1 Runoff Coefficients

| Surface Characteristic | Runoff Coefficient, C |
|-----------------------------|-----------------------|
| Roof of Structure | 1.00 |
| Grassland (heavy soil) Flat | 0.25 |

Roughness Coefficient for pipe flow $k_s=3$

b) Minimum Pipeline Cover and Manhole Spacing Requirements

Table 3-2 Minimum Pipeline Cover and Manhole Spacing Requirements

| Minimum pipeline cover | |
|------------------------------|--------|
| In Roads | 0.9 m |
| In footways and verges | 0.45 m |
| Manhole spacing requirements | |
| D < 675 mm | 80 m |
| 675 < D < 1050 | 100 m |
| D > 1050 | 120 m |

c) Bedding factors

- Granular bedding : 1.9
- Plain concrete bedding : 2.6
- Reinforced concrete bedding with allowance : 3.4
for minimum steel area
- Concrete Surround : 4.5



d) Design Flow Velocity

- Minimum : 1 m/s
- Maximum : 3 m/s (desirable)
- : 6 m/s (absolute)

3.3 The return period of 1 in 50 years is to be adopted for the drainage impact assessment.

3.4 Description of Analysis Method

a) Rational method is to be adopted for calculation of the peak runoff. The formula is extracted from Section 7.5.2(a) of Stormwater Drainage Manual (SDM) which is to estimate the stormwater runoff as shown below:

$$Q_p = 0.278 CiA$$

- Where
- Q_p = peak runoff in m³/s
 - C = runoff coefficient (dimensionless)
 - i = rainfall intensity in mm/hr
 - A = catchment area in km²

b) 10% reduction of the flow area is allowed taken into account of the decomposition of siltation as per DSD’s SDM 2018.

c) The time of concentration used for determining the duration of the design storm is considered by the time of entry and the time of flow,

$$t_c = t_o + t_f \quad t_f = L/V$$

- where
- t_o =inlet time (time taken for flow from the remotest point to reach the most upstream point of the urban drainage system)
 - t_f = flow time
 - L = Length of drain
 - V = flow velocity

e) The time of entry or time of flow in the hinterland is calculated using the Bransby William’s Equation.

$$t_e = \frac{0.14465L}{A^{0.1}H^{0.2}}$$

- Where
- t_e = time of concentration (min)
 - L = catchment length (m)
 - A = catchment area (m²)
 - H = average catchment slope (m/100m)



- f) The rainfall intensity is extracted from the Section 4.3.2 of SDM which is to estimate the Intensity-Duration –Frequency (IDF) Relationship.

$$i = a / (t_d + b)^c$$

Where i = extreme mean intensity in mm/hr
 t_d = duration in minutes ($t_d < 240$), and
 a, b, c = storm constants given in table 3 of SDM as below

Table 3-3 Storm Constant of SDM – Corrigendum No.1/2024

| | |
|-------------------------|-------|
| Return Period T (years) | 50 |
| a | 505.5 |
| b | 3.29 |
| c | 0.355 |

- g) Colebrook-White Equation is used in hydraulic design for pipe flow.

$$V = -\sqrt{(32gRs)} \log \left(\frac{k_s}{14.8R} + \frac{1.255v}{R\sqrt{(32gRs)}} \right)$$

Where:

V = mean velocity (m/s)
 g = gravitational acceleration (m/s^2)
 R = hydraulic radius (m)
 D = pipe diameter (m)
 k_s = equivalent sand roughness (m)
 v = kinematic viscosity of fluid (m^2/s)
 s = frictional slope (energy gradient due to frictional loss)



4.0 Drainage Assessment

- 4.1 The runoff from the unpaved area in the Site (i.e. Catchment Area Nos. D) would be collected by u-channels and drain to outfall 1 by gravity via 450mm dia. drainage pipes. Drainage layout plan and details of drainage are shown in **Drawing Nos. V1094/003 and V1094/006** in **Appendix A**.
- 4.2 The runoff from the structure roofing (i.e. Catchment C) would be collected by 375mm width roof ditches and 375mm dia. and 450mm dia. elevated drainage pipes mounted on the structures. Then, the runoff would drain a 525mm dia. downpipe which is mounted on the structure with a 90-degree bend connected to the 525mm dia. elevated drainage pipe to manhole MH3. The proposed 525mm dia. elevated drainage pipe are installed at the side of the existing footbridge across the northern stream of the Site. The 525mm dia. drainage pipe are embedded underground from MH3 to outfall 2. Drainage layout plan and details of drainage are shown in **Drawing Nos. V1094/004 and V1094/006** in **Appendix A**.
- 4.3 The proposed U-channels and drainage pipes are designed to have sufficient capacities for the estimated runoff from the unpaved area and structure roofing in the Site. Details of the calculation are enclosed in **Appendix B**.
- 4.4 For the existing drainage system, the two existing outfall pipes located at the north of the Site are checked. Both outfall pipes have sufficient capacities to cater for the additional runoff upon completion of the proposed development. The estimated runoffs and capacities after development are summarized in Table 4-1.

Table 4-1 Estimated Runoff and Capacities of Existing Drainage

| Existing Drainage | Estimated runoff (m ³ /s) | Capacity (m ³ /s) | Utilization |
|-------------------|---|---------------------------------|-------------|
| Outfall 1 | 0.330 | 0.429 | 0.77 |
| Outfall 2 | 0.374 | 0.418 | 0.88 |



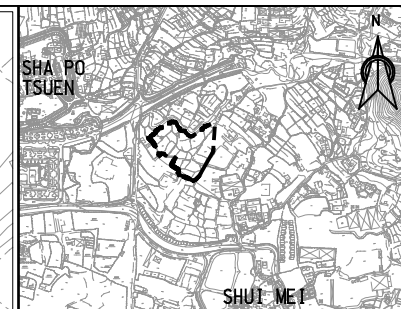
5.0 Conclusion

- 5.1 A Drainage Impact Assessment has been conducted for the proposed land use changes in Fung Kat Heung. The existing drainage system has been checked for the updated runoff from the catchment area and based on our assessment, the existing drainage system would provide sufficient capacity to cater for this additional stormwater. No adverse drainage impact shall be aroused due to the development.



Appendix A

Drawings



KEY PLAN
SCALE 1:20000

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN MPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- PROPOSED SITE LEVEL

| Rev. | Description of Revision | Date | Ckd. |
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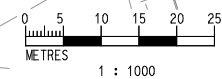
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| Approved KTC | Date SEP 2024 | Date SEP 2024 |

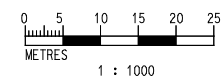
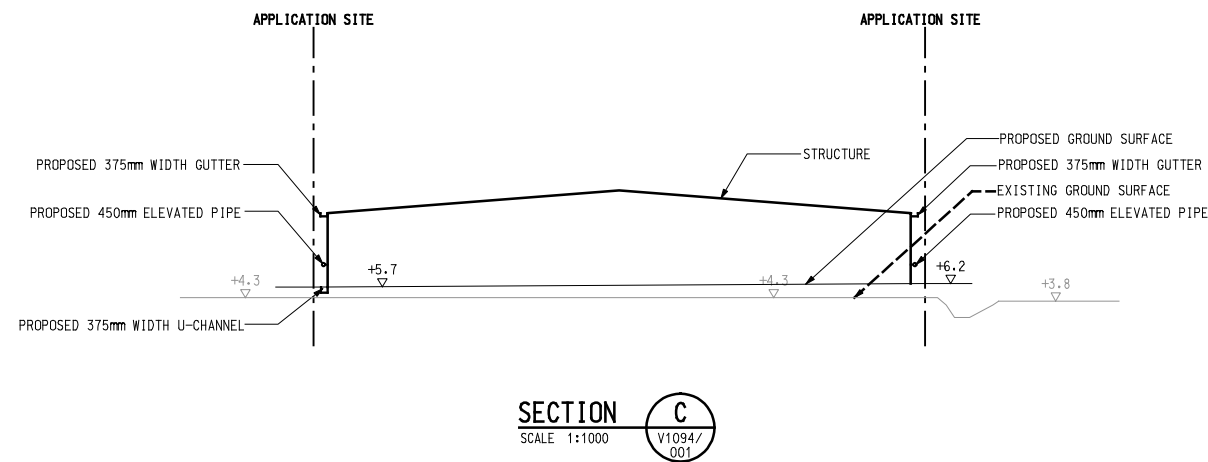
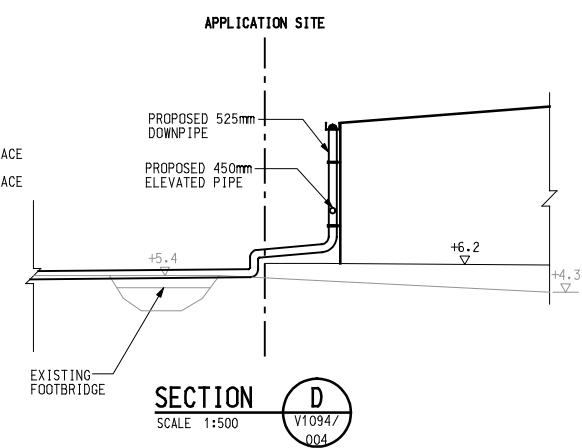
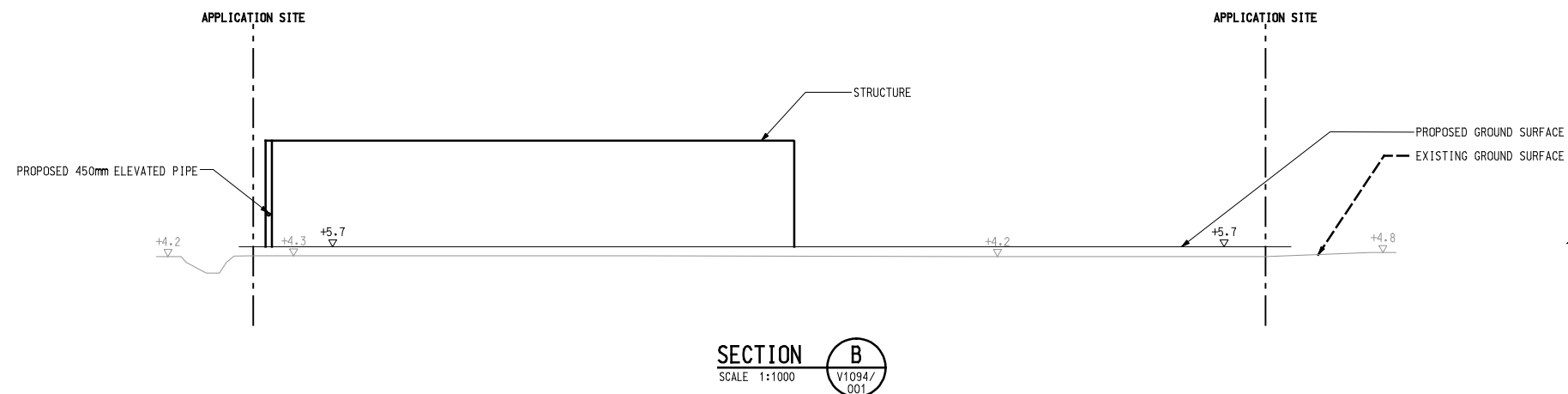
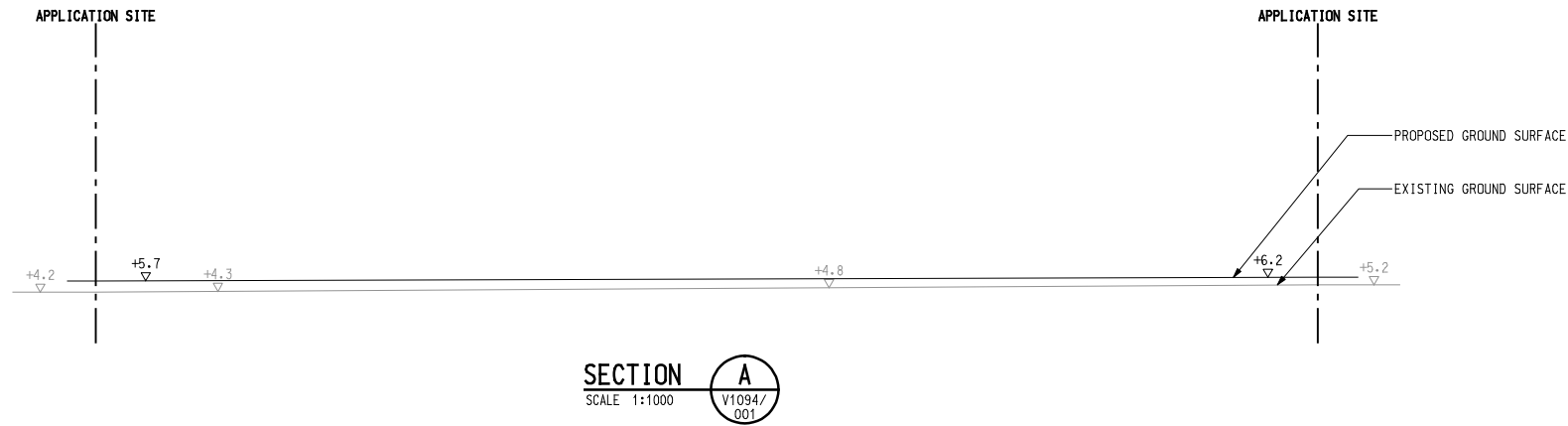
Project
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title
LAYOUT PLAN

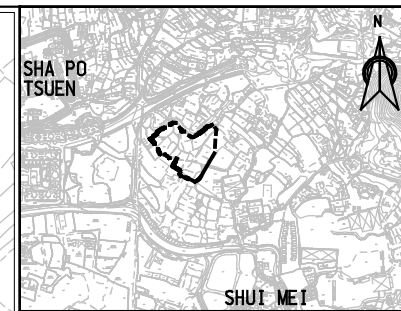
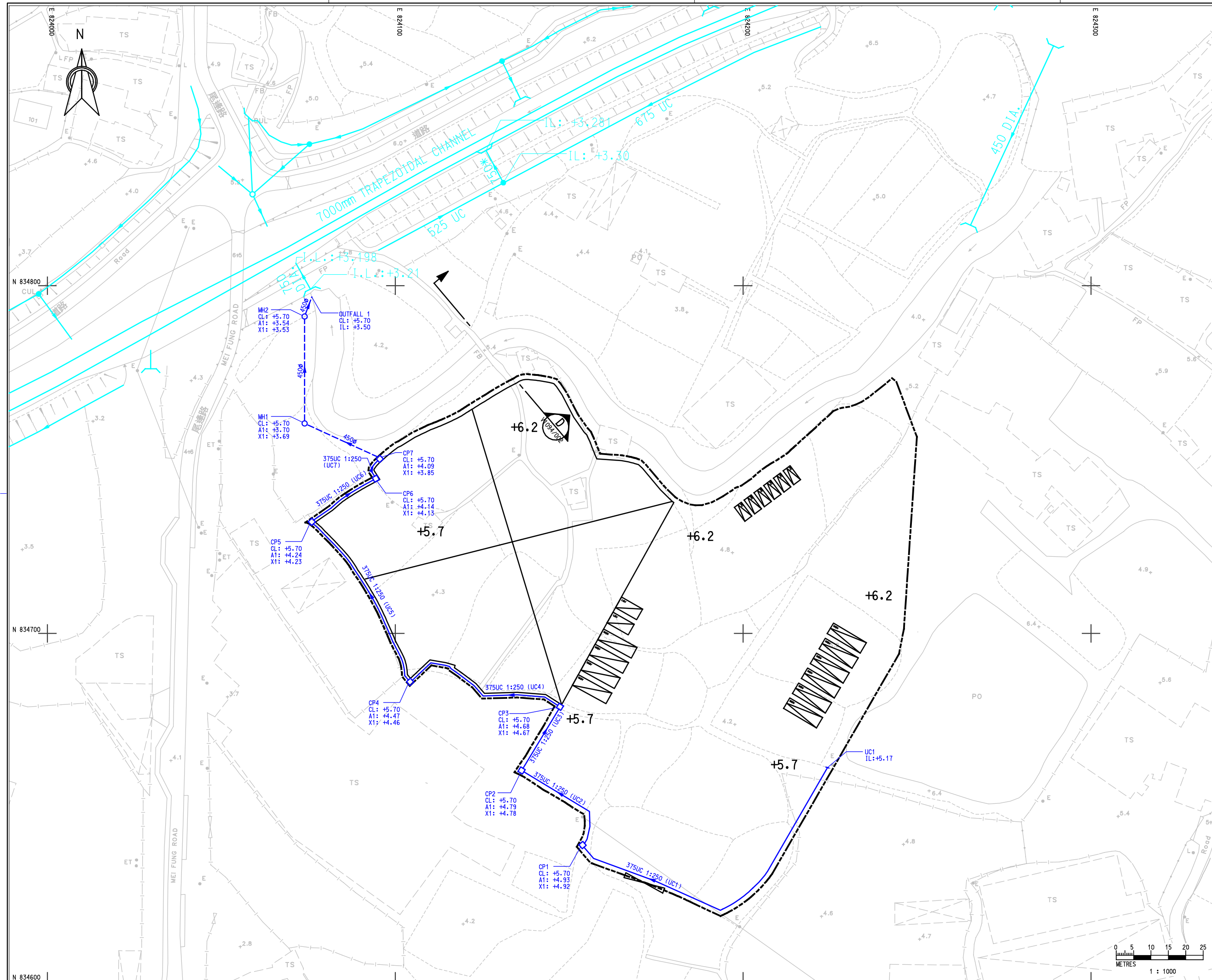
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| Drawing No. V1094/001 | Stage P | Rev. - |
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| Title | | | |
| CROSS SECTION | | | |
| Drawing No. V1094/002 | | Stage P | Rev. - |



KEY PLAN
SCALE 1:20000

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LEGEND :

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE
- L/UJ SPACE
- INGRESS / EGRESS
- PROPOSED U-CHANNEL
- PROPOSED PIPE
- EXISTING DRAINAGE PIPE/ U-CHANNEL
- PROPOSED CATCHPIT
- PROPOSED MANHOLE
- EXISTING MANHOLE

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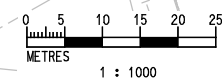
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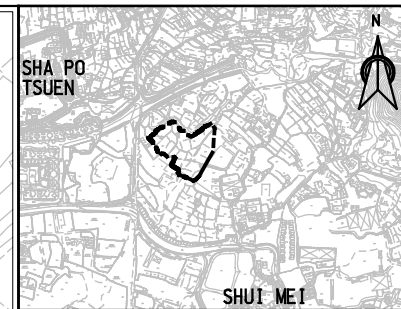
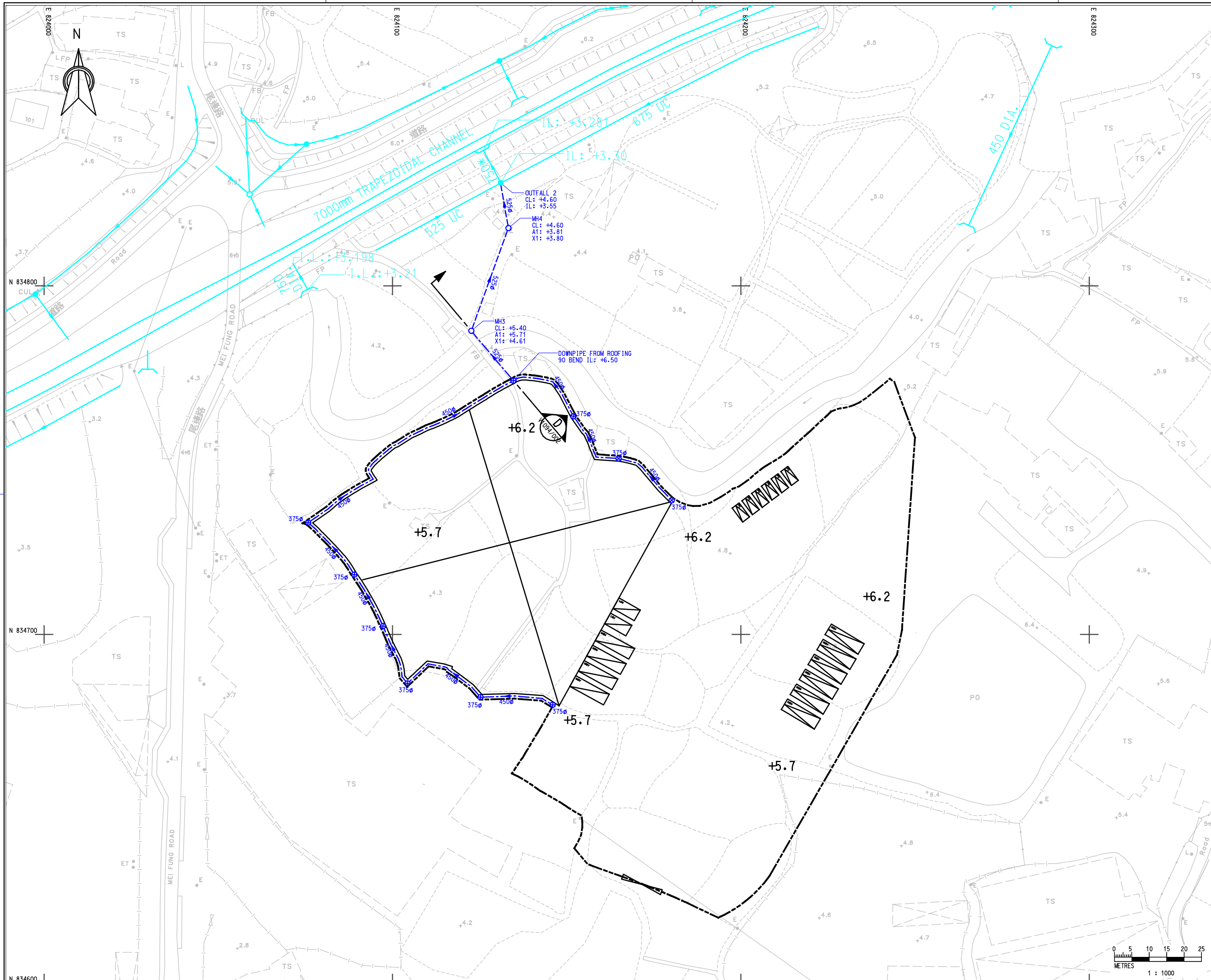
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| Approved KTC | Date SEP 2024 | |

Project
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title
DRAINAGE LAYOUT PLAN - UNPAVED AREA

| | | |
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| Drawing No. V1094/003 | Stage P | Rev. - |
|---------------------------------|-------------------|------------------|





KEY PLAN
SCALE 1:20000

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- LEGEND :**
- APPLICATION SITE
 - ▭ STRUCTURE
 - ▭ PARKING SPACE
 - ▭ L/UL SPACE
 - ▭ INGRESS / EGRESS
 - PROPOSED ELEVATED PIPE
 - PROPOSED PIPE
 - EXISTING DRAINAGE PIPE/ U-CHANNEL
 - ⊙ PROPOSED DOWNPIPE
 - PROPOSED MANHOLE
 - EXISTING MANHOLE

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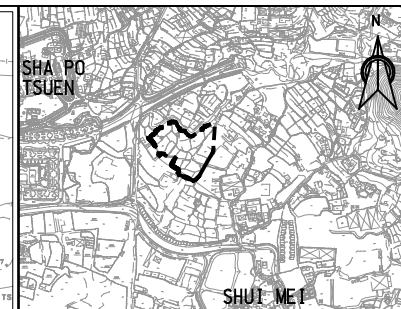
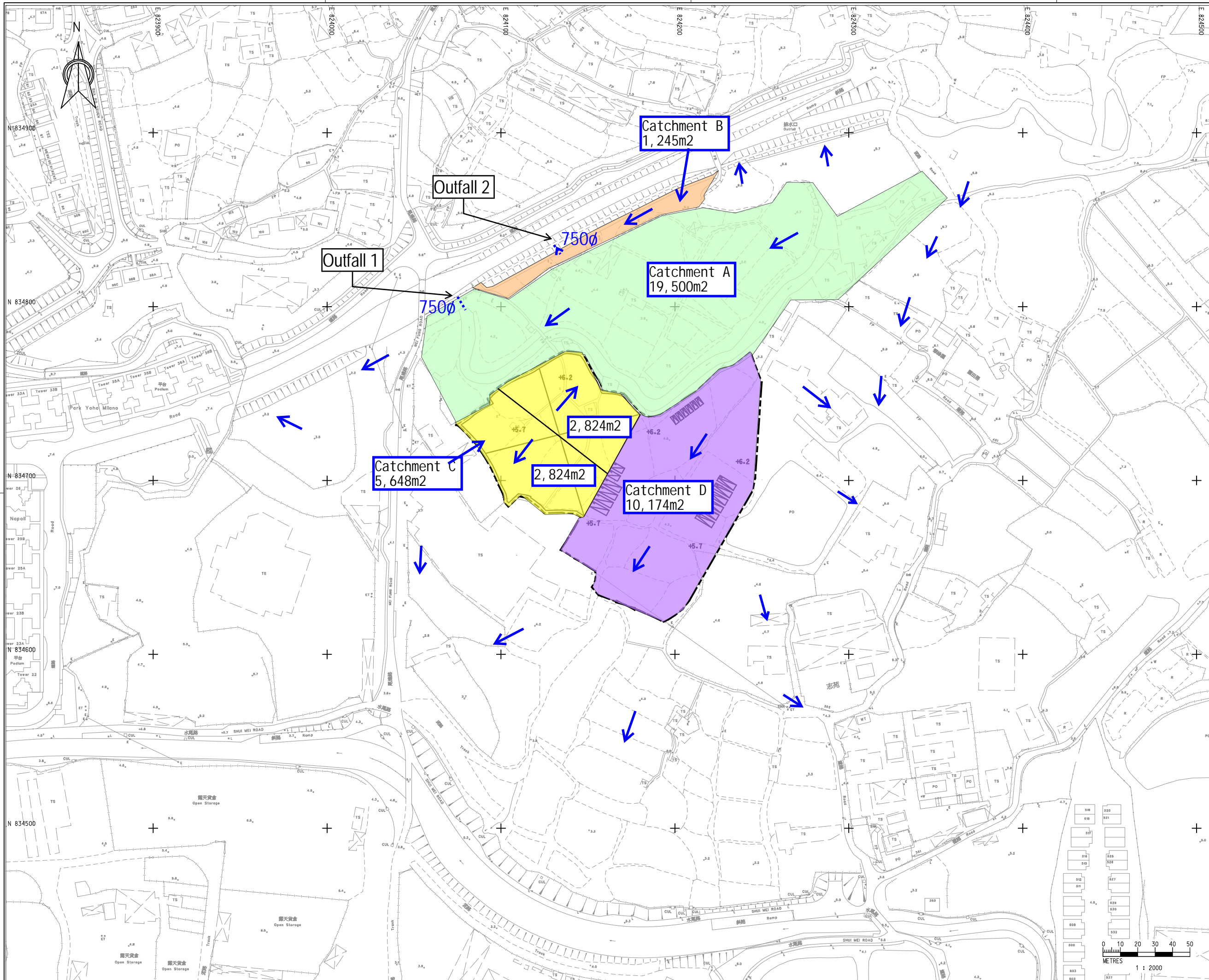
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Project
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title
DRAINAGE LAYOUT PLAN - STRUCTURE ROOFING

| | | |
|---------------------------------|-------------------|------------------|
| Drawing No. V1094/004 | Stage P | Rev. - |
|---------------------------------|-------------------|------------------|



KEY PLAN
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- LEGEND :**
- APPLICATION SITE
 - ▭ STRUCTURE
 - ▭ PARKING SPACE
 - ▭ L/UL SPACE
 - ▭ INGRESS / EGRESS
 - +6.4 PROPOSED SITE LEVEL
 - ➔ RUNOFF DIRECTION

| Rev. | Description of Revision | Date | Ckd. |
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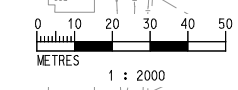
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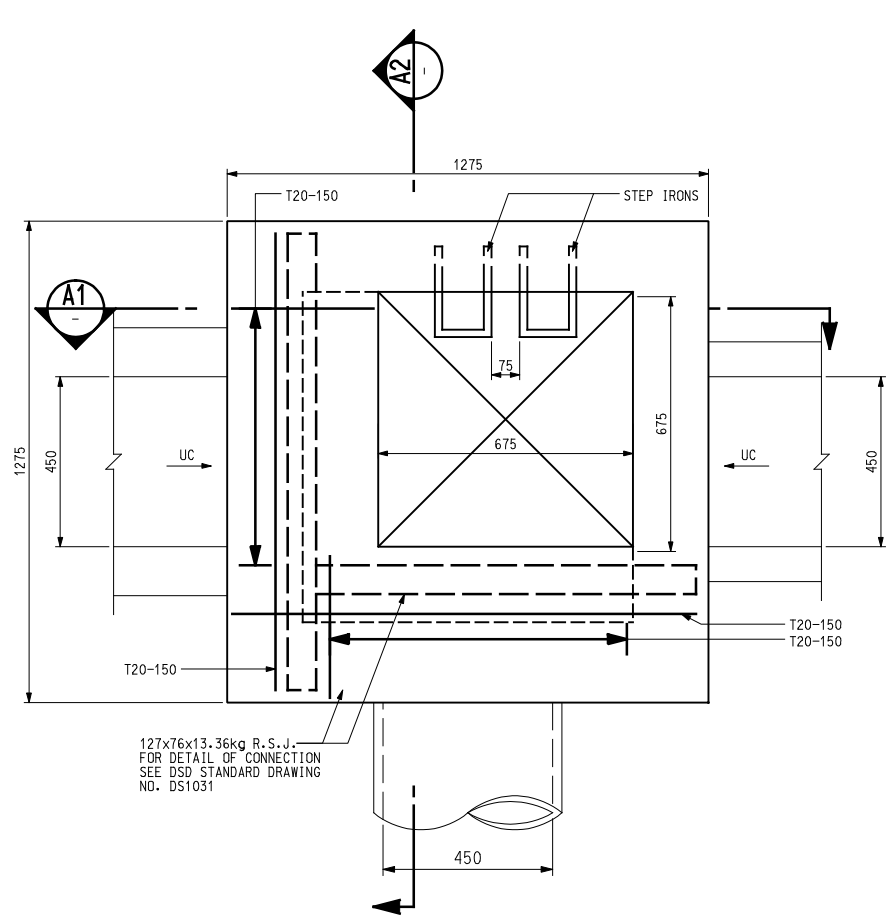
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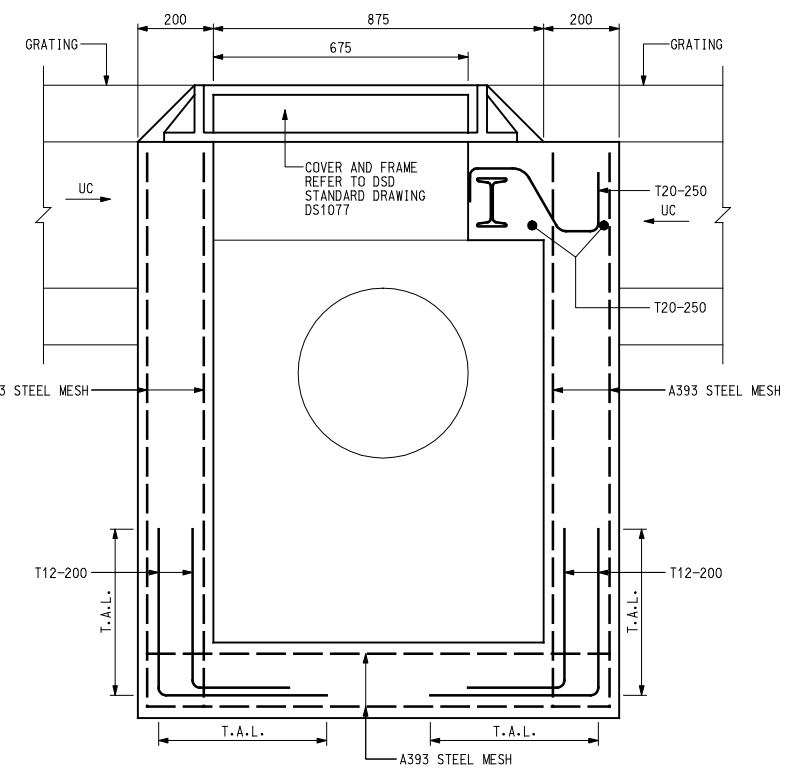
Title
CATCHMENT PLAN

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| Drawing No. V1094/005 | Stage P | Rev. - |
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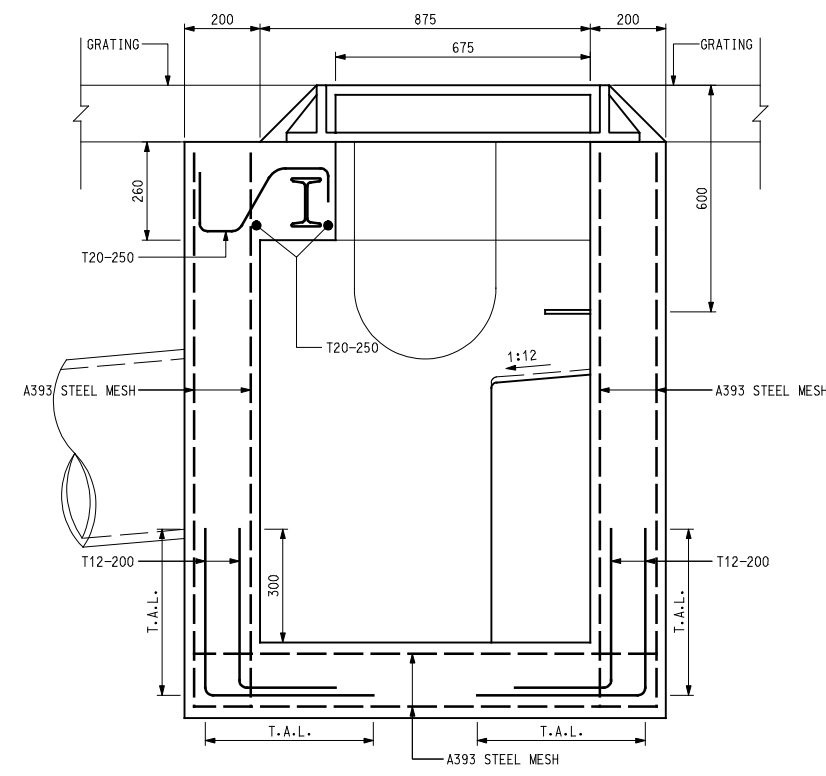




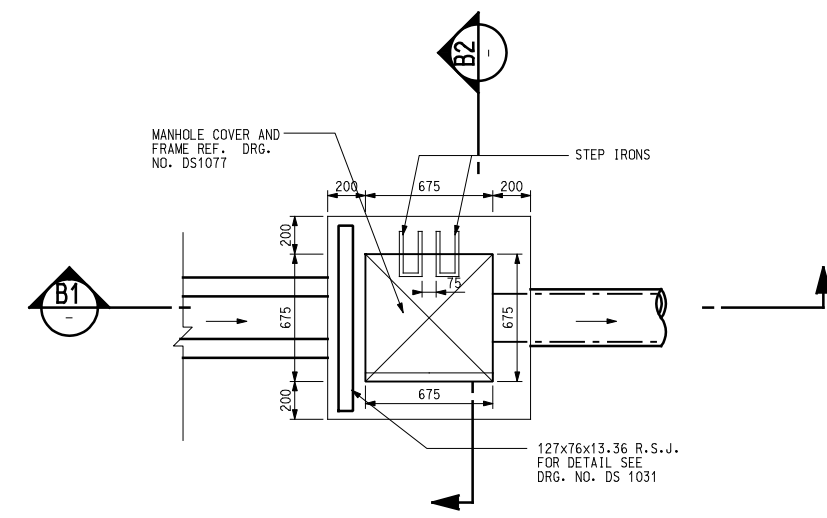
TYPICAL DETAILS OF CATCHPIT TYPE A
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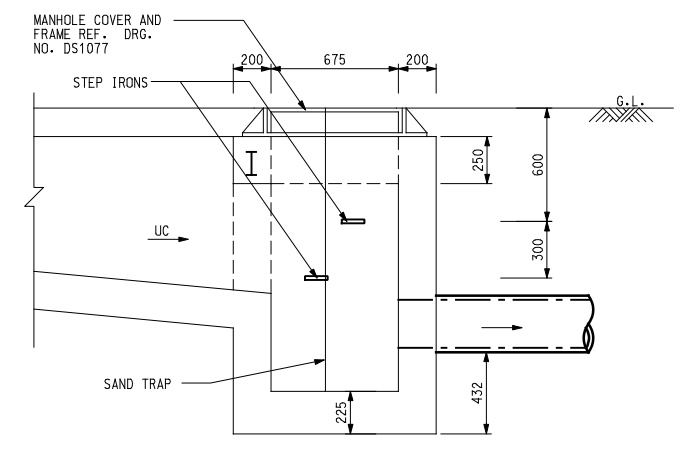
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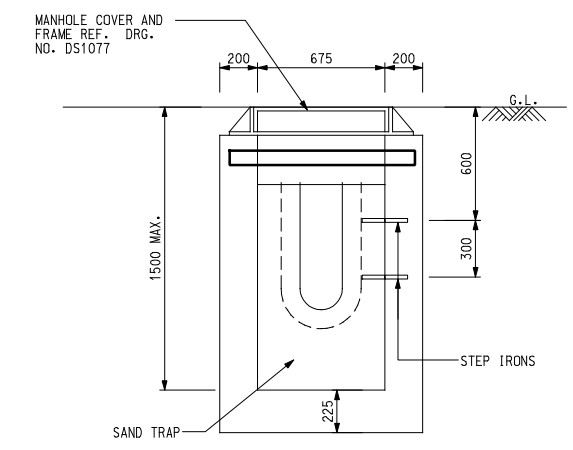
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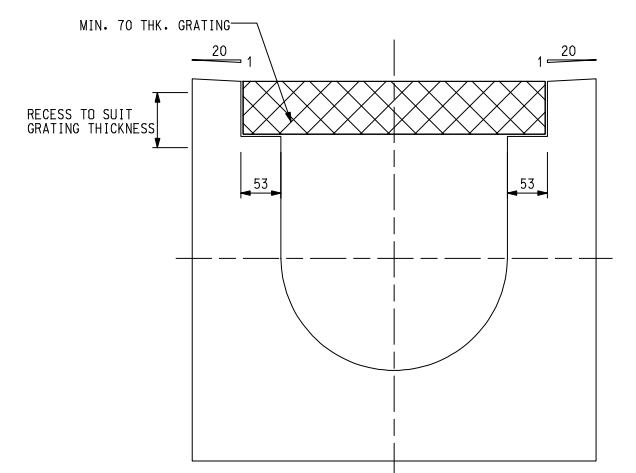
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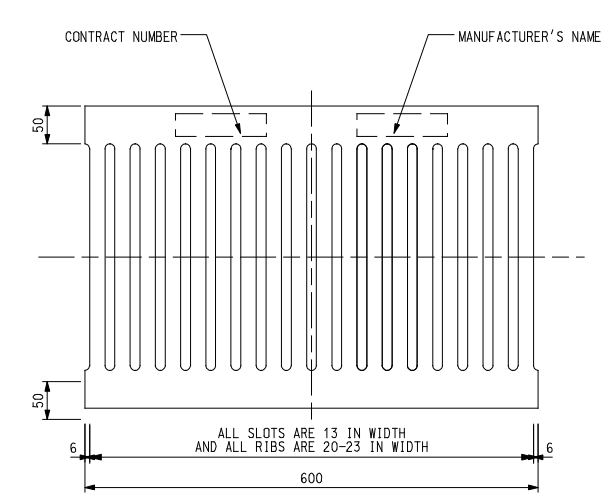
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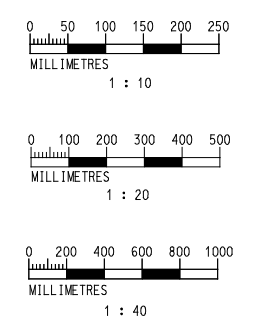
SECTION B2
SCALE 1:40



TYPICAL CROSS SECTION OF CHANNEL
SCALE 1:10



TYPICAL GRATING
SCALE 1:10



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| PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND | | | |
| Title | | | |
| TYPICAL DETAILS OF DRAINAGE | | | |
| Drawing No. V1094/006 | | Stage P | Rev. - |



Appendix B

Design Calculations

| | | | | |
|---|--|-------------------|-----------|------|
| Mannings (Asia) Consultants Ltd. | | Job No. | Sheet No. | Rev. |
| Calculation Sheet | | Member / Location | | |
| Job Title: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories | | Drg. Ref. | | |
| | | Made By | NHL | Date |
| | | | | Chd. |

The drainage design is referring to DSD's SDM 2018 & Corrigendum No. 1/2022 and Corrigendum No. 1/2024
1 in 50 year design return period is taken.

Rational method is used for calculation of the peak runoff. The formula is extracted from Section 7.5.2 (a) of SDM.

$$Q_p = 0.278 C i A$$

Where Q_p = peak runoff in m^3/s

i = rainfall intensity in mm/hr

A = catchment area in km^2

Runoff Estimation

| U-Channel | Natural Catch. (m^2) | Longest flow path (m) | Gradient (m per 100m) | t_o (min) = $0.14465L / (H^{0.2}A^{0.1})$ | Length of U-Channel (m) | $t_f = L/v$ (min) | $t_c = t_o + t_f$ (min) | Runoff coeff. | Total Catch. Area (m^2) | 50 year Intensity (mm/hr) | 50 year design runoff = $0.278CiA$ (m^3/s) |
|-------------|--------------------------|-----------------------|-----------------------|---|-------------------------|-------------------|-------------------------|---------------|-----------------------------|---------------------------|--|
| UC1 to UC 2 | 10174 | 130 | 0.014 | 17.48 | 90 | 1.29 | 18.77 | 0.25 | 10174 | 168.55 | 0.119 |
| UC3 to UC 7 | 0 | - | - | - | 160 | 2.30 | 21.07 | 0.25 | 10174 | 162.72 | 0.115 |

Runoff Estimation (Structure Roofing)

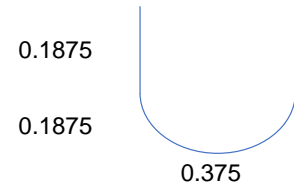
| Roofing | Natural Catch. (m^2) | Longest flow path (m) | Gradient (m per 100m) | t_o (min) = $0.14465L / (H^{0.2}A^{0.1})$ | Length of Ditch (m) | $t_f = L/v$ (min) | $t_c = t_o + t_f$ (min) | Runoff coeff. | Total Catch. Area (m^2) | 50 year Intensity (mm/hr) | 50 year design runoff = $0.278CiA$ (m^3/s) |
|----------------|--------------------------|-----------------------|-----------------------|---|---------------------|-------------------|-------------------------|---------------|-----------------------------|---------------------------|--|
| Roofing Gutter | 2824 | 26 | 0.010 | 4.27 | 180 | 1.63 | 5.90 | 1 | 2824 | 229.99 | 0.181 |

| | | | |
|---|-------------------|-----------|------|
| Mannings (Asia) Consultants Ltd. | Job No. | Sheet No. | Rev. |
| | | | |
| Calculation Sheet | Member / Location | | |
| Job Title: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories | Drg. Ref. | | |
| | | Made By | Chd. |
| | | NHL | Date |

Checking of Capacity (UC1 and UC2)

Input Data

Width of UC = 0.375 m
 Height of UC = 0.375 m
 Design Runoff = 0.119 m³/s
 (Q_{discharge})



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m²) = 0.125536 m²
 r = hydraulic radius (m)
 s = slope of the water surface or the linear hydraulic head loss (m/m)
 n = Manning coefficient of roughness

Hydraulic radius

$r = \frac{A}{P}$
 p = wetted perimeter (m) = 0.96 m
 r = 0.13 m

Slope

s = 0.004 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.146 m³/s > Design runoff, OK!

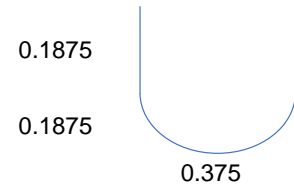
V = Q/A = 1.16 m/s

| | | | |
|---|-------------------|-----------|------|
| Mannings (Asia) Consultants Ltd. | Job No. | Sheet No. | Rev. |
| | | | |
| Calculation Sheet | Member / Location | | |
| Job Title: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories | Drg. Ref. | | |
| | | Made By | Chd. |
| | | NHL | Date |

Checking of Capacity (UC3 to UC7)

Input Data

Width of UC = 0.375 m
 Height of UC = 0.375 m
 Design Runoff = 0.115 m³/s
 (Q_{discharge})



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m²) = 0.125536 m²
 r = hydraulic radius (m)
 s = slope of the water surface or the linear hydraulic head loss (m/m)
 n = Manning coefficient of roughness

Hydraulic radius

$r = \frac{A}{P}$
 p = wetted perimeter (m) = 0.96 m
 r = 0.13 m

Slope

s = 0.004 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.146 m³/s > Design runoff, OK!

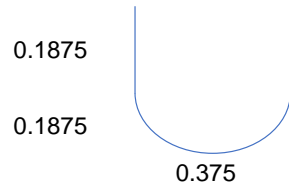
V = Q/A = 1.16 m/s

| | | | |
|---|-------------------|-----------|------|
| Mannings (Asia) Consultants Ltd. | Job No. | Sheet No. | Rev. |
| | | | |
| Calculation Sheet | Member / Location | | |
| Job Title: Proposed Temporary Warehouse(Excluding Dangerous Goods Godown) with Ancillary Facilities for A Period of 3 Years and Associated Filling of Land and Pond and in "Agriculture" Zone, Various Lots in D.D. 107 and Adjoining Government Land, Fung Kat Heung, Kam Tin Yuen Long, New Territories | Drg. Ref. | | |
| | | Made By | Chd. |
| | | NHL | Date |

Checking of Capacity (Gutter)

Input Data

Width of UC = 0.375 m
 Height of UC = 0.375 m
 Design Runoff = 0.181 m³/s
 (Q_{discharge})



Flow capacity, Q

$$Q = \frac{A \times r^{2/3} \times s^{1/2}}{n}$$

where A = cross sectional area of flow (m²) = 0.125536 m²
 r = hydraulic radius (m)
 s = slope of the water surface or the linear hydraulic head loss (m/m)
 n = Manning coefficient of roughness

Hydraulic radius

$r = \frac{A}{P}$
 p = wetted perimeter (m) = 0.96 m
 r = 0.13 m

Slope

s = 0.010 m/m

Manning coefficient of roughness

n = 0.014

Therefore,

Q = 0.230 m³/s > Design runoff, OK!

V = Q/A = 1.84 m/s

Stormwater Drainage Design

| Manhole | | Catchment Area | | Length (m) | Nominal Diameter (mm) | Gradient, S _f | | Roughness Coefficient (m) | Velocity (m/s) | Time of Flow (min) | Rainfall Duration (min) | 50 year Intensity (mm/hr) | Runoff Coeff. | 50 year Runoff (m ³ /s) | Total Flow (m ³ /s) | Capacity (m ³ /s) | Adjusted Capacity > Total Flow ? | Cover Level | | Invert Level | |
|-------------------------------|---------------|-----------------------------|-------------------------|------------|-----------------------|--------------------------|-------|---------------------------|----------------|--------------------|-------------------------|---------------------------|---------------|------------------------------------|--------------------------------|------------------------------|----------------------------------|-------------|----------|--------------|----------|
| From | To | Increment (m ²) | Accu. (m ²) | | | (%) | 1 in | | | | | | | | | | | From (mPD) | To (mPD) | From (mPD) | To (mPD) |
| Unpaved Area | | | | | | | | | | | | | | | | | | | | | |
| CP7 | MH 1 | 0 | 10174 | 30 | 450 | 0.5 | 200.0 | 3.0 | 1.093 | 0.46 | 21.53 | 161.65 | 0.25 | 0.114 | 0.114 | 0.156 | Yes | 5.70 | 4.30 | 3.85 | 3.70 |
| | | 0 | 0 | | | | | | | | | | 1.00 | 0.000 | | | | | | | |
| MH 1 | MH 2 | 0 | 10174 | 30 | 450 | 0.5 | 200.0 | 3.0 | 1.093 | 0.46 | 21.98 | 160.61 | 0.25 | 0.114 | 0.114 | 0.156 | Yes | 4.30 | 4.30 | 3.69 | 3.54 |
| | | 0 | 0 | | | | | | | | | | 1.00 | 0.000 | | | | | | | |
| MH 2 | Outfall 1 | 0 | 10174 | 6 | 450 | 0.5 | 200.0 | 3.0 | 1.093 | 0.09 | 22.08 | 160.40 | 0.25 | 0.113 | 0.113 | 0.156 | Yes | 4.30 | 5.20 | 3.53 | 3.50 |
| | | 0 | 0 | | | | | | | | | | 1.00 | 0.000 | | | | | | | |
| Checking Existing Pipe | | | | | | | | | | | | | | | | | | | | | |
| Outfall 1 | Existing Pipe | 19500 | 29674 | 8 | 750 | 0.3 | 400.0 | 3.0 | 1.079 | 0.12 | 22.20 | 160.13 | 0.25 | 0.330 | 0.330 | 0.429 | Yes | 4.30 | 5.20 | 3.21 | 3.19 |
| | | | 0 | | | | | | | | | | 1.00 | 0.000 | | | | | | | |
| Structure Roofing | | | | | | | | | | | | | | | | | | | | | |
| 450 Elevated Pipe | 525 DOWNPIPE | 0 | 0 | 45 | 450 | 0.5 | 200.0 | 0.06 | 1.683 | 0.45 | 3.45 | 256.83 | 0.25 | 0.000 | 0.202 | 0.241 | Yes | 6.20 | 5.20 | - | - |
| | | 2824 | 2824 | | | | | | | | | | 1.00 | 0.202 | | | | | | | |
| 525 DOWNPIPE | MH 3 | 0 | 0 | 18 | 525 | 4.4 | 22.8 | 0.06 | 5.809 | 0.05 | 5.95 | 229.53 | 0.25 | 0.000 | 0.360 | 1.195 | Yes | 6.20 | 5.40 | 6.50 | 5.71 |
| | | 5648 | 5648 | | | | | | | | | | 1.00 | 0.360 | | | | | | | |
| MH 3 | MH 4 | 0 | 0 | 32 | 525 | 2.5 | 40.0 | 3.0 | 2.709 | 0.20 | 6.15 | 227.82 | 0.25 | 0.000 | 0.358 | 0.528 | Yes | 5.40 | 4.60 | 4.61 | 3.81 |
| | | 0 | 5648 | | | | | | | | | | 1.00 | 0.358 | | | | | | | |
| MH 4 | Outfall 2 | 0 | 0 | 14 | 525 | 1.8 | 56.0 | 3.0 | 2.289 | 0.10 | 6.25 | 226.95 | 0.25 | 0.000 | 0.356 | 0.446 | Yes | 4.60 | 4.60 | 3.80 | 3.55 |
| | | 0 | 5648 | | | | | | | | | | 1.00 | 0.356 | | | | | | | |
| Checking Existing Pipe | | | | | | | | | | | | | | | | | | | | | |
| Outfall 2 | Existing Pipe | 1245 | 1245 | 8 | 750 | 0.2 | 421.1 | 3.0 | 1.052 | 0.13 | 6.38 | 225.89 | 0.25 | 0.020 | 0.374 | 0.418 | Yes | 4.30 | 5.20 | 3.30 | 3.28 |
| | | 0 | 5648 | | | | | | | | | | 1.00 | 0.355 | | | | | | | |

Mean Velocity is calculated by Colebrook- White equation

Where:

\bar{V} =Mean Velocity (m/s)

R =Hydraulic Diameter (m)

Ks =Surface Roughness (m)

ν =Kinematic viscosity (kg/ms)

S_f =Slope of Hydraulic Gradient

g =Gravity (m/s²)

The Roughness Coefficient Ks is assumed to be 3 for concrete.

Peak Runoff is estimated using rational method according to SDM.

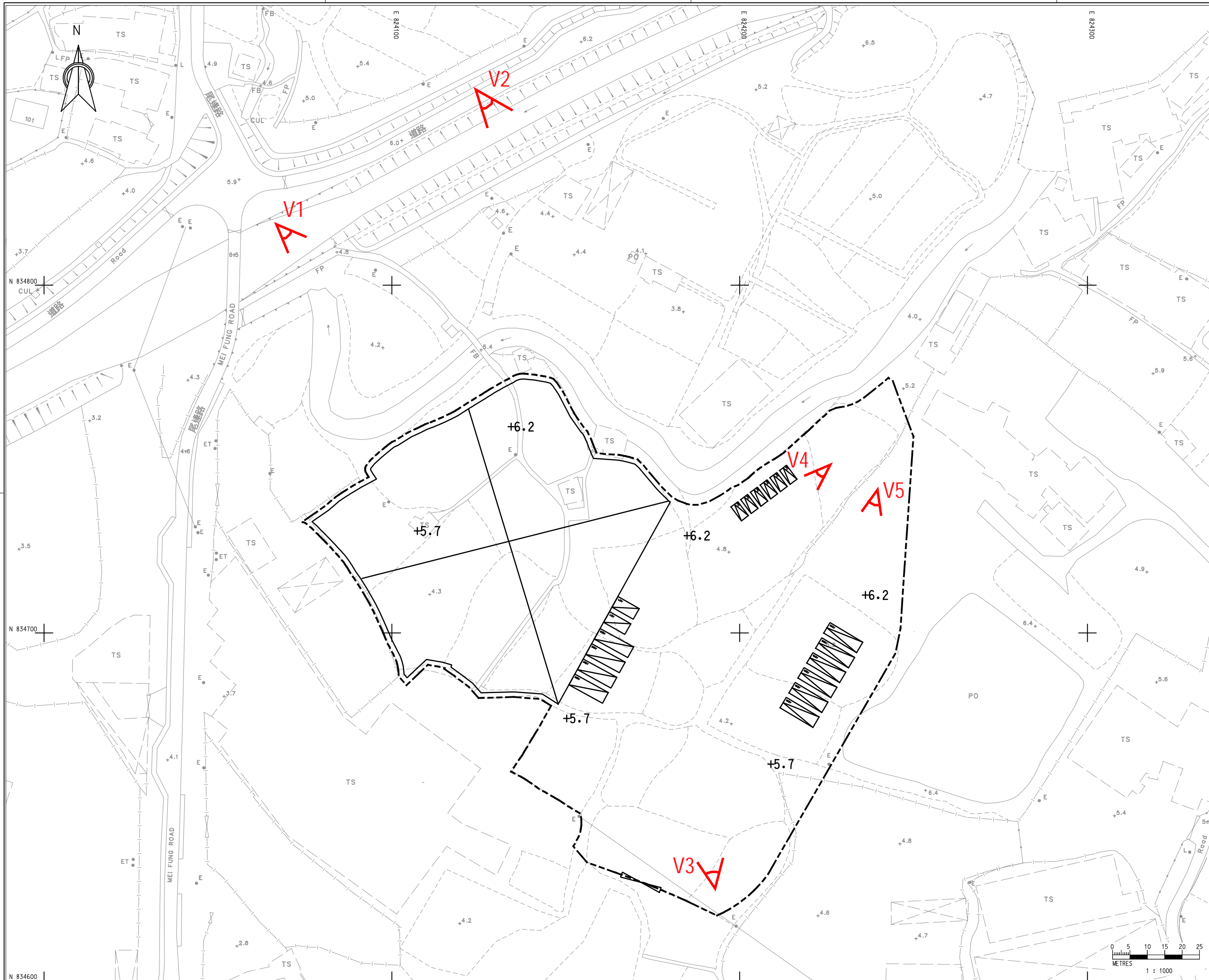
$$\bar{V} = -\sqrt{32gRS_f} \log \left[\frac{k_s}{14.8R} + \frac{1.255\nu}{R\sqrt{32gRS_f}} \right]$$

The Roughness Coefficient Ks is assumed to be 3 for concrete, 0.06 for uPVC pipe.



Appendix C

Site Photos



KEY PLAN
SCALE 1:20000

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL LEVELS ARE IN MPD METRE ABOVE HONG KONG PRINCIPAL DATUM.

LEGEND :

- APPLICATION SITE
- STRUCTURE
- PARKING SPACE
- L/UL SPACE
- INGRESS / EGRESS
- +6.4** PROPOSED SITE LEVEL

| Rev. | Description of Revision | Date | Ckd. |
|------|-------------------------|------|------|
| | | | |

Client
EXCEL LINK DEVELOPMENT LIMITED

Consultants
MANNINGS (Asia) Consultants Limited

| | | |
|-----------------------|---------------|---------------|
| Scale 1/A3 AS SHOWN | Date SEP 2024 | |
| Designed EM | Drawn KAM | Checked BLE |
| Design Team Leader SC | Date SEP 2024 | Date SEP 2024 |
| Approved KTC | Date SEP 2024 | Date SEP 2024 |

Project
PROPOSED TEMPORARY WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND

Title
SITE PHOTO PLAN

| | | |
|-------------|-------|------|
| Drawing No. | Stage | Rev. |
| - | P | - |

Photo V1



Photo V2



Photo V3



Photo V4





Photo V5

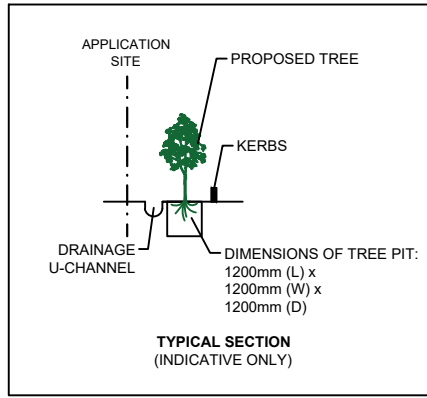
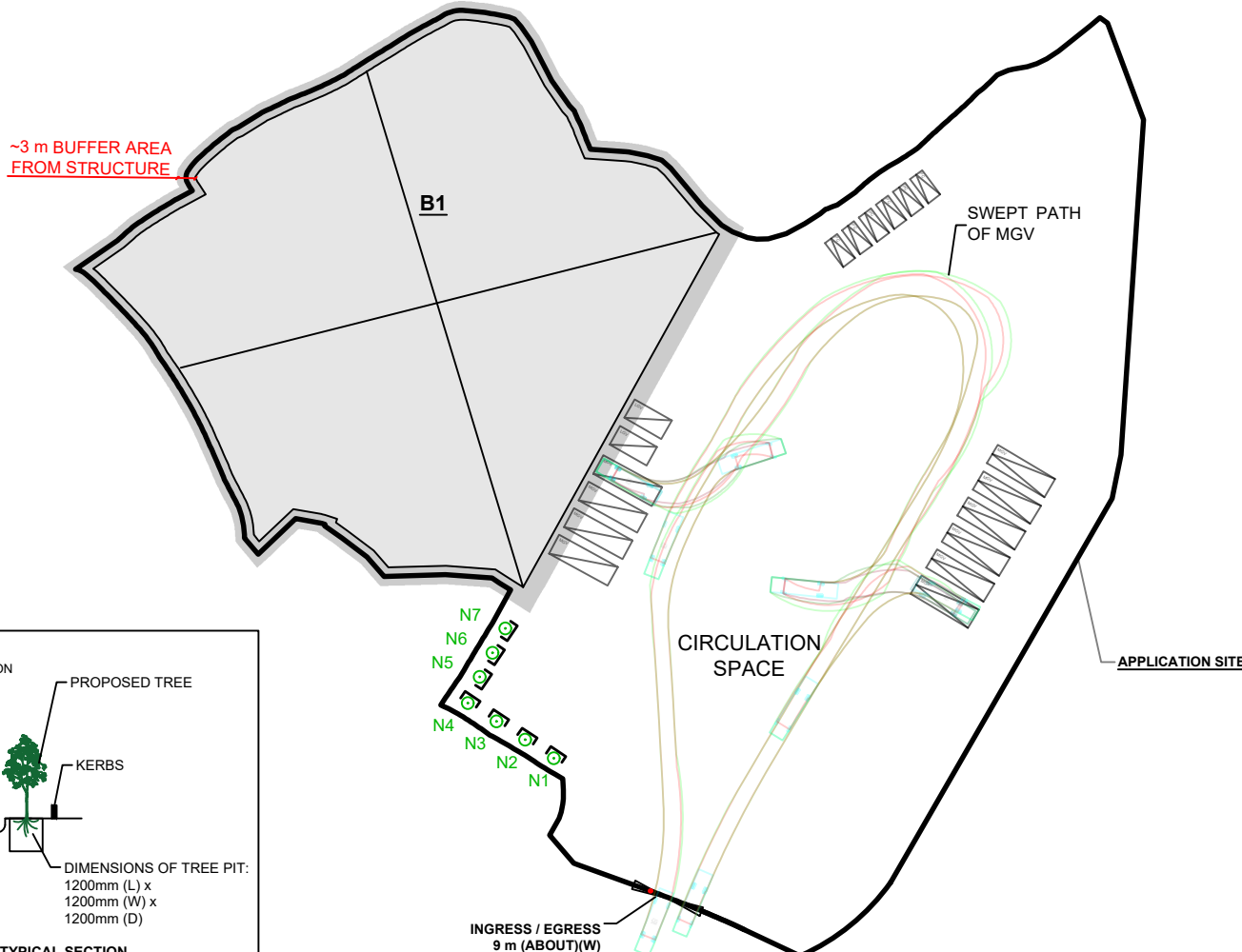
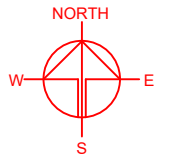


LANDSCAPE PROPOSAL

| | | |
|-----------------------|-------------------------|---------|
| APPLICATION SITE AREA | : 15,822 m ² | (ABOUT) |
| COVERED AREA | : 5,648 m ² | (ABOUT) |
| UNCOVERED AREA | : 10,174 m ² | (ABOUT) |

| | | |
|----------------------------------|-------------------------------------|------------|
| NO. OF NEW TREES WILL BE PLANTED | : 7 | (N1 TO N7) |
| SPECIES OF NEW TREES | : <i>FICUS MICROCARPA</i> | |
| HEIGHT OF NEW TREES | : NO LESS THAN 2.75 m | |
| SPACING OF NEW TREES | : NOT LESS THAN 4 m | |
| DIMENSION OF TREE PITS | : 1.2 m (W) X 1.2 m (L) X 1.2 m (D) | |

| STRUCTURE | USE | COVERED AREA | GFA | BUILDING HEIGHT |
|--------------|--|------------------------------------|------------------------------------|------------------------|
| B1 | WAREHOUSE (EXCLUDING D.G.G.) SITE OFFICE AND WASHROOM | 5,648 m ² (ABOUT) | 5,648 m ² (ABOUT) | 13 m (ABOUT)(1-STOREY) |
| TOTAL | | 5,648 m² (ABOUT) | 5,648 m² (ABOUT) | |



LEGEND

| | |
|----------|-----------------------|
| [Symbol] | APPLICATION SITE |
| [Symbol] | STRUCTURE |
| [Symbol] | PARKING SPACE (PC) |
| [Symbol] | L/UL SPACE (LGV) |
| [Symbol] | L/UL SPACE (MGV) |
| [Symbol] | INGRESS / EGRESS |
| [Symbol] | MEDIUM GOODS VEHICLE |
| [Symbol] | SWEPT PATH OF VEHICLE |
| [Symbol] | PROPOSED NEW TREES |

- NOTES:**
- 1) THE APPLICANT WILL MAINTAIN TREES IN GOOD CONDITION DURING THE PLANNING APPROVAL PERIOD.
 - 2) THE APPLICANT WILL REPLACE TREES WHICH ARE DYING OR DEAD DURING THE PLANNING APPROVAL PERIOD.
 - 3) THE APPLICANT WILL PROVIDE ADEQUATE IRRIGATION FOR TREES.

| | |
|---|--|
| PLANNING CONSULTANT | |
| | |
| PROJECT | |
| PROPOSED WAREHOUSE (EXCLUDING DANGEROUS GOODS GODOWN) WITH ANCILLARY FACILITIES FOR A PERIOD OF 3 YEARS AND ASSOCIATED FILLING OF LAND AND POND | TEMPORARY GOVERNMENT (GOVERNMENT DANGEROUS GOODS GODOWN) |
| SITE LOCATION | |
| VARIOUS LOTS IN D.D. 107 AND ADJOINING GOVERNMENT LAND, FUNG KAT HEUNG, KAM TIN, YUEN LONG, NEW TERRITORIES | |
| SCALE | |
| 1 : 1200 @ A4 | |
| DRAWN BY | DATE |
| LT | 16.7.2024 |
| REVISED BY | DATE |
| APPROVED BY | DATE |
| DWG. TITLE | |
| LANDSCAPE PROPOSAL | |
| DWG NO. | VER. |
| ANNEX IV | 001 |