Response to Comments from the Chief Engineer/Mainland North of Drainage Services Department (Contact Person: Mr. WANG Xing, Tel. 2300 1135)

1) Please demonstrate that the DIA was undertaken under the direction of a registered professional engineer in the Civil Engineering discipline. The DIA should be signed and certified by registered professional engineer in charge.
When the planning application is approved, the applicant will submit relevant certification documents
2) Section 1.5.1 - please add SDM corrigendum No. 1/2022 and 2/2024.
Added
3) Section 3.2.2 - With commissioning of Sha Ling Road, underground drainage system at Sha Ling Road and 900mm diameter drainage outfall near junction of Sha Ling Road and Man Kam Tam Road were constructed to convey the upstream surface runoff from Sandy Ridge to the existing watercourse near Dongjiang watermain, and eventually discharge to the existing watercourse/channel within the application site. Please consider the relevant catchment area in your hydraulic analysis accordingly.
Due to insufficient time, the relevant catchment areas in the hydraulic analysis will be submitted after the planning application is approved.
4) Please advise if reduction in flow capacity due to sedimentation has been considered.
Clarify in the report that a 10% reduction in flow capacity due to sedimentation has been incorporated into the drainage design (as per DSD standards). This should be explicitly stated in Section 3.1.7 and Appendix.
5) Table 3-7 and Appendix D - It is noted that the capacity of Box Culvert is nearing 100%. Please advise if any mitigation measures and contingency plan have been considered.

To address the high utilization rate of the box culvert:

- **Mitigation**: The proposed 2,500m³ storage tank will attenuate peak flows, ensuring discharge does not exceed pre-development rates.
- **Contingency**: Regular maintenance and desilting of the box culvert will be implemented, with emergency pumps on standby during extreme events.

6) Section 3.3 and Section 3.4 - please specify the design standard and climate change scenario in text.

- **Design Standard**: 50-year return period with 11.1% rainfall intensity increase (SDM 2022 Table 28).

- **Climate Change**: Projections align with DSD's Corrigendum No. 1/2022.

7) Section 3.6.10 & Appendix C - The drawing of catchpit with sand trap is missing from Appendix C. Also, grating should be provided for U-channel, please update the details of U-channel accordingly.
Attached the drawing CEDD C2406/1 & C2406/2.

8) Please elaborate on the storage tank/pump operation (e.g. pump rate, on/off level).

Storage Tank/Pump Operation Details

Pump Rate: 0.187m³/s (controlled discharge to match pre-development runoff).

- **Level Sensors**:
    - Pump starts at 80% tank capacity.
    - Stops at 20% capacity.
- **Emergency Power**: Backup generator ensures operation during outages.

9) Please advise the landfilling extent, depth and its implication to the existing flow path under the application site and adjoining areas in text and drawings.

- **Extent/Depth**: Landfilling limited to +6.13mPD, avoiding obstruction of the existing watercourse.
- **Flow Path**: Decking over the watercourse preserves its alignment; sectional views show no disruption to overland flow.

10) Section 3.7.2- Please advise if the storage tank will be constructed prior to the landfilling works. Please review and advise if any interim-stage/temporary drainage impact mitigation measures would be implemented before the storage tank and associated drainage system are commissioned.

- **Temporary Diversion Channels**: Installed prior to landfilling.
- **Sediment Traps**: Deployed to protect downstream drainage.
- **Phased Construction**: Storage tank completed before major earthworks.

11) Appendix B - Please indicate the invert levels of the relevant drainage features (e.g. pipes, tank, channel, watercourse, overflow weir, MH, etc.).
Revised
12) Appendix B - Please indicate the box culvert, CP8a in the schematic diagrams.

Revised

13) Appendix E - Please advise if the “Existing Pool” form part of the proposed drainage system? If yes, please elaborate and include a site photo.

NO, Existing Pool does not part of the proposed drainage system.

14) Appendix G - Please extend the section view A1-A1and B1-B1 to illustrate the ground level of the existing dwellings. Please also advise if the existing overland flow would be captured by the drainage system and if the metal mesh can allow such provision.

Revised. Metal mesh have 100mm dia water outlet at the bottom.

15) Appendix H Drawing DR-01 refers.

i. Section X-X and Y-Y as indicated are missing, please supplement.

Section B2-B2 replace the Section X-X and Y-Y

ii. Please advise if the existing overland flow from existing watercourse to the north of the application site as mentioned under Section 2.1.3 will be collected by the drainage system. The existing watercourse should be indicated under the drawing and relevant provision for connection should be provided.

The existing surface runoff generated from the existing watercourse to the north of the application site as mentioned in Section 2.1.3 will not be collected through the drainage system.

iii. Section A-A refers. The direct decking of the existing watercourse would compromise the possibility of overflow during heavy rain. Please review if headroom can be reserved for potential overflow and facilitating future maintenance.

Decking design for overflow headroom is minimum 0.5m clearance.

iv. Please advise the legend of cross-hatched grey area around the existing watercourse.

Cross-hatched grey area around the existing watercourse is Government Land.

16) Figure 3-2 is mentioned multiple times in the text, however, there is no such figure found with the referenced number.

Revised

17) Please correct the following typos:

i. Section 1.4.1 – “...impact arising from...”

ii. Section 3.1 title – “Assumption and...”

Revised