

**Application for Approval of Environmental Impact Assessment Report -
Relocation of Diamond Hill Fresh Water and Salt Water Service Reservoirs to
Caverns**

(Application No. EIA-271/2021) -

Further information to EPD

(a) Elaboration and clarification on the discrepancies in records of watercourse within the project area between different chapters of the above EIA report, in particular, the chapters of water quality impact and ecological impact;

The discrepancy in records of watercourses between Chapter 5 (Water Quality Impact) and Chapter 8 (Ecological Impact Assessment) is mainly due to the two chapters are serving different purposes and referring to different types of area for assessment.

The majority of caverns and access tunnel of our Project will be constructed underground, habitats loss would mainly arise from the above-ground construction of tunnel portal, ancillary building and water mains laying. In the context of Chapter 8, the evaluation of habitats and species of ecological importance and results are presented into Project Area and Study Area (exclude Project Area). For the Project Area, it refers to the above-ground works only. The ground layer above the underground tunnel and cavern footprint refers to Study Area (exclude Project Area). Thus, S.8.6.20 of the EIA report was stated that "*no watercourse is found within the Project Area*".

The ecological survey habitat mapping (Figure 8.1) aims to present all representative habitats which could constitute notable ecological function to the environment within the Study Area. Micro-habitats, due to their small size and/or insignificant ecological function, are usually screened out. Most of those watercourses including WSR 2a, 2b, 2c and 2d did not present in Chapter 8 were observed as seasonal streams/flow paths. Thus, some of the watercourses, which are regarded as micro-habitats under the ecological baseline study/survey due to they being lack of distinguishing ecological function, are not shown. Omission of them due to their insignificant ecological importance is a rather common practice in ecological impact assessment.

For Chapter 5, the watercourses such as flow path and seasonal watercourses are also counted as water sensitive receivers, thus, the identified watercourses within the Study

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Area in the Chapter 5 is more than the watercourses showing in Chapter 8. Apart from Chapter 5 and Chapter 8, there is no discrepancy in records of watercourse in other chapters of the EIA report.

(b) Detailed assessment and justifications for not conducting ecological surveys at some of the watercourses in the project area, in particular the water sensitive receivers (WSR 2a, 2b 2c and 2d).

Ecological impact assessment is focused on the assessment of ecological impact on the habitats with ecological functions and importance within the Study Area in the EIA report. We carried out an initial assessment on the watercourses at the beginning of the Project to identify the potential watercourses within the Study Area. For the watercourses has representative ecological importance (such as those with waterflow in dry season) within the Study Area, detailed in-depth ecological survey have been assigned and carried out after the initial assessment. The ecological survey methodology paper has been prepared and agreed with AFCD in accordance with the Technical Memorandum and EIA study brief, the survey transects cover all representative habitats recorded within the Study Area.

In the context of the ecology chapter, the ground layer above the underground tunnel and cavern footprint is not counted as Project Area as direct impact is not expected. The majority of caverns and access tunnel of our Project will be constructed underground, habitats loss would mainly arise from the above-ground construction of tunnel portal, ancillary building and water mains laying. The survey results (Section 8.6) and evaluation of habitats and species of ecological importance (Section 8.7) are presented into two categories including (1) Project Area and (2) Study Area (exclude Project Area). For the Project Area, it refers to the above-ground works only. For the proposed underground access caverns and access tunnel works, it refers to Study Area (exclude Project Area). The three representative streams, namely watercourses S1, S2 and S3, which are located within the Study Area but outside the Project Area, have been evaluated in Table 8.6 of Chapter 8. The ecological values of these watercourses are evaluated as low-moderate. Thus, all watercourses with significant ecological values/functions within the Study Area (exclude Project Area) have been fully addressed in the EIA report.

Construction of rock caverns and tunnel may only cause minor infiltration of groundwater when compared to excavation of soft ground. The rock itself has low permeability and thus form a natural barrier which could prevent potential groundwater drawdown in any soil and aquifer layers above the rock stratum. Thus, it should not affect the groundwater level within the soil layer as well as the water level of the streams locating on ground. In the EIA report, the potential direct impact to the nearby watercourses in the ecological impact assessment (In fact, no encroachment of watercourse) has been evaluated. The indirect impact to the nearby watercourses arising from the construction of underground cavern and access tunnel has been considered where potential drawdown of groundwater has been addressed in Section 8.8.16. The control of groundwater infiltration as outlined in

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Section 8.9 which would be implemented to control and minimise groundwater infiltration during construction phase.