

Miss TSE Siu Wa, Janice, JP
Director of Environmental Protection
(E-mail: eiaocomment@epd.gov.hk)

By email only

15 June 2022

Dear Ms. TSE,

**Comments on the Environmental Impact Assessment Report for Tuen Mun South
Extension (EIA-279/2022)**

The Hong Kong Bird Watching Society (HKBWS) would like to express our concerns regarding the environmental impact assessment (EIA) report for the Tuen Mun South Extension.

Direct impacts on ardeid day-roosting site

It is mentioned in Section 8.5.18 that “*roosting behaviour of Black-crowned Night Heron was also recorded during daytime at the eastern edge of the artificial lake in Tuen Mun Park*”. Based on our observation, the vegetation at the sides of TMRC has also been utilized for day roosting by Black-crowned Night Herons (Figure 1). However, the ecological baseline surveys did not adequately identify the extent and distribution of the day-roosting sites. More importantly, it is proposed to remove the existing trees at the river banks near Pui To Road (South) Rest Garden as indicated in Figure no. C1502/C/TME/ACM/M57/121. Potential direct loss in roosting ground is thus anticipated.

Besides, there is no information showing their number and flight paths. We are concerned the impacts of obstruction of flight lines on the roosting ardeids are seriously underestimated or even ignored. We consider the proponent should re-assess the impacts on day-roosting ardeids and provide measures to avoid and minimize the impacts on them.

Obstruction of flight paths of the night-roosting ardeids

The alignment of TME just 30m next to the ardeid night roost site, which is utilized by three ardeid species and with a peak count of 300 individuals in January 2021 recorded by the proponent. During the construction of the viaduct and operation of the Tuen Mun South Extension (TME) project, obstruction of flight lines of night-roosting ardeids along the alignment is anticipated due to the construction of foundation, installation of piles, pile cap and aboveground structures. In Figure no. C1502/C/TME/ACM/M56/105 of the EIA report (Figure 2), it is very clear that about 92% of the night-roosting ardeids would use the flight line 1, 2 and 3 to return to the roost, which overlap/intercept with the proposed alignment of the TME. We consider that would have significant impacts on night-roosting ardeids due to the obstruction of their major flight lines.

However, the proponent pointed out in Section 8.7.18 that “*within Zone C, the ardeids showed a range of flight heights between 0 to 30 m, with about 22% of the ardeids flying at 15 to 25 m*”. We are concerned this kind of presentation would result in a false impression that only 22% of ardeids, which fly at 15-25m would be potentially affected and would eventually underestimate the impacts on them. The total height of the structures (i.e. foundation, piles and viaduct structures) for the section of TME particularly near the Tuen Mun Park night roost is up to about 28mPD. It is expected that all flight lines close to the project alignment and with flight heights below 30mPD would be potentially impacted during both construction and operation phase, and should be properly assessed. In Appendix 8.4 Time of Return and Flight Height of Night Roosting Ardeids, 100% of the flight lines within Zone C were recorded below 30m. We consider the anticipated **impacts** on their flight lines are **moderate to high** and we do not agree that “*the potential flight line obstruction arising from the proposed viaduct alignment on the roosting ardeids is anticipated to be minor*” as stated in section 8.7.30.

The proponent explained that “*during the construction and operation of the Project, ardeids are anticipated to fly at a greater height or closer to the surface of TMRC, or adopt alternative flight lines to avoid the construction activities and the aboveground structures*”. A recent study was also quoted, suggesting that “*the effect of road bridge*

may affect night-roosting ardeids by changing their flight behaviour (e.g. erratic flight or altered flight height), but the ardeids still proceeded to the roosting site, as a re-grouped flock or separated into smaller groups when passing through the obstructing structures (Stanton and Klick, 2018)". We would like to remind the proponent that this flight modifications study focuses on the changes in flying behavior of birds in response to the levels of traffic on **an existing bridge**, instead of comparing the changes before and after a new structure was constructed. Moreover, the studied road bridge (i.e. Ap Lei Chau Road Bridge) is about 280m away from the ardeid night roosting site in Southern Hong Kong. It is 9 times farther than the distance between Tuen Mun Park night roost from the proposed viaduct structure of TME (i.e. approximately 30m). We consider that the study is **invalid** to prove "the potential flight line obstruction arising from the proposed aboveground structures on the roosting ardeids is anticipated to be minor".

Direct and temporary loss in ardeid foraging grounds

The Tuen Mun Egretty, which is located about 800m away from the proposed construction site, supporting 18 nests of Little Egret based on the egretty survey conducted by the project proponent. In Section 8.5.16 of the EIA report, Tuen Mun River Channel (TMRC) is "one of the foraging habitats for the breeding ardeids as some of them were found landing and foraging along the Channel". Besides, the big trees in Tuen Mun Park next to the TMRC and TUM Station are used as night roosting site, while "some of these ardeids were regularly recorded to land along TMRC".

According to the methodology of the flight line surveys for the breeding ardeids, apart from the flight lines of ardeid individuals, "their landing locations were also recorded, as far as possible", but in Figure no. C1502/C/TME/ACM/M56/104, the map only indicates two major flight directions and there is not any landing point being marked to show the bird usage within TMRC for foraging. As it is stated that "temporary loss of modified watercourse (4.87 ha) would arise from the construction activities and temporary bridge platforms along the Project alignment", it is unclear how the proponent could conclude that "no unacceptable ecological impact is anticipated from the loss of ardeid foraging ground".



Incomprehensive EM&A for terrestrial ecology

According to the EM&A Manual, “*monthly monitoring of the existing ardeid night roost in Tuen Mun Park should be conducted when the construction works are conducted within 100m of the night roost, and during dry season in the first year of the operational phase*”. We consider that monitoring surveys for the day roost should also be conducted before, during and after the construction phase, to monitor any change in location of the roost within the study area of this EIA, and to implement remedial measures when adverse impacts on them are identified.

The HKBWS hopes that our comments would be taken into consideration. Thank you for your kind attention.

Yours sincerely,
Wong Suet Mei
Conservation Officer
The Hong Kong Bird Watching Society



Figure 1. The map below was extracted from Figure no. C1502/C/TME/ACM/M56/108. Apart from the day roost site identified by the proponent, the vegetation at river banks especially near Pui To Road (South) Rest Garden has also been utilized by Black-crowned Night Herons for day roosting based on our observation. However, the ecological baseline surveys did not adequately identify the extent of the day-roosting sites. More importantly, the proponent proposed to remove the existing trees near Pui To Road (South) Rest Garden. Potential direct loss in roosting ground is thus anticipated.

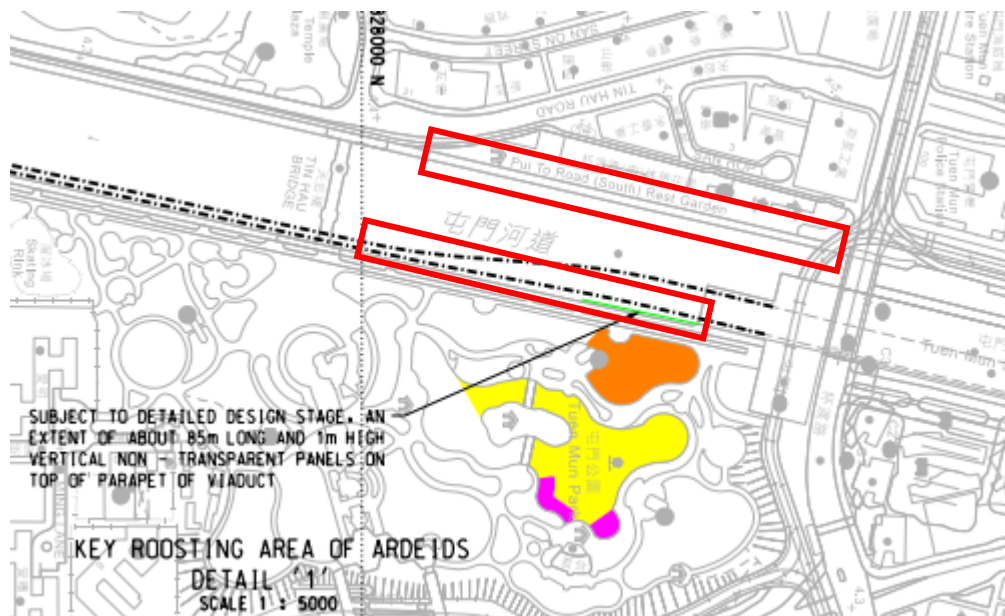


Figure 2. According to Figure no. C1502/C/TME/ACM/M56/105, it is very clear that about 92% of the night-roosting ardeids would use the flight line 1, 2 and 3 to return to the roost, which overlap/intercept with the proposed alignment of the TME. We consider that would have significant impacts on night-roosting ardeids due to the obstruction of their major flight lines.

