



世界自然基金會  
香港分會

WWF-Hong Kong

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04 June 2026

Dr. CHUI Ho Kwong, Samuel, JP  
Director of Environmental Protection  
16/F, East Wing, Central Government Offices,  
2 Tim Mei Avenue, Tamar, Hong Kong  
(Email: eiaocomment@epd.gov.hk)

By email only

Dear Dr. Chui,

**RE: Northern Metropolis Highway – San Tin Section**  
**(EIA-322/2026)**

WWF would like to provide the following comments and recommendations to the captioned EIA report (hereafter as EIA Report) on the proposed development “Northern Metropolis Highway – San Tin Section” (the Project).

**Impacts to recognised biodiversity hotspot and associated at-risk species**

The Project is located within the globally-recognised **Inner Deep Bay and Shenzhen River Catchment Area Key Biodiversity Area (KBA)**<sup>1</sup> and **Important Bird Area (IBA)**<sup>2</sup>, which support a wide range of wetland-dependent species, of which many are globally-threatened. In addition, WWF-Hong Kong, in association with a group of local experts, published a report titled “**The State of Hong Kong Biodiversity 2025**” in March 2025, together with the “**Hong Kong Terrestrial Biodiversity Hotspot Map 2025**”<sup>3</sup> (hereinafter as **the Report**). The Report concluded that 26% (232 out of 886) of the assessed terrestrial and freshwater species in Hong Kong are at risk of local extinction. The Report also identified a total of 27 biodiversity hotspots in Hong Kong, one of which is the “Inner Deep Bay”, Which ranks top among all hotspots with the richest bird diversity and abundance across Hong Kong.

The Project will interfere directly and indirectly with the KBA and IBA, as well as the “Inner Deep Bay” hotspot identified in the Report. Data and information from our expert group

<sup>1</sup> <https://www.keybiodiversityareas.org/site/factsheet/16078>

<sup>2</sup> <https://datazone.birdlife.org/site/factsheet/inner-deep-bay-and-shenzhen-river-catchment-area>

<sup>3</sup> <https://www.wwf.org.hk/en/biodiversity/hkbiodiversity2025/>

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have shown that the “Inner Deep Bay” hotspot support at least **158 species of High or Moderate Risk of local extinction, including the Eurasian Otter (*Lutra lutra*)**.

While WWF is pleased to see that the Report has been referenced in this EIA, we are disappointed to see that the conservation significance of some of these at-risk species and their associated habitats were largely overlooked and underestimated in the EIA Report. The Report already stated clearly that open country habitats including grassland and shrubland are rapidly diminishing in the territory, leading to the drastic decline of many species dependent on these habitat types.

A clear example is the rating of “low to moderate” ecological value assigned to grassland and shrubland habitats. These habitats support a suite of species that are not recorded anywhere else within the Study Area, such as Small Three-ring, rendering them irreplaceable in the local context. Assigning them the same ecological value as plantation or village/orchard habitat — which is typically dominated by exotic species and offers low biodiversity value — fails to reflect their distinct conservation importance and understates the potential ecological impacts of the proposed development.

Subsequently, in the EIA Report, the direct losses of 41.92ha of grassland and shrubland were regarded as of low significance, while the direct permanent loss of 16.63ha of woodland is considered to be of low to moderate significance, and would thus require compensation. Further to that, the woodland compensation site is located on an existing open grassland/shrubland area near Lok Ma Chau Loop, meaning that further loss of this threatened wildlife habitat would occur through secondary impact of habitat loss, something not addressed in the EIA Report.

Our view is that, despite referencing our Report in the EIA Study, the overall impacts to open country at-risk species and their habitats have not been thoroughly considered and addressed in this EIA process, and that no specific measures have been proposed to mitigate these impacts.

### **Ecological Mitigation Measures for Drill-and-Blast Tunnelling**

It is noted that the EIA Report identifies the drill-and-blast (D&B) method as the preferred tunnelling approach; however, this method may result in greater environmental disturbances, including ground-borne noise, vibration, potential groundwater contamination, and surface water dewatering, which may adversely affect nearby habitats, flora and fauna, and disrupt local ecosystems. While noise and vibration control measures are addressed in the EIA Report, these are primarily framed in terms of compliance with human noise sensitive receivers and do not fully address ecological sensitivities. To minimise potential impacts on ecological resources, it is recommended that additional mitigation measures be implemented, including but not limited to:

- Adopt smooth wall blasting (pre-splitting techniques) to minimise overbreak and reduce shockwave damage, thereby helping to maintain the structural integrity of adjacent rock and associated habitats.

- Install temporary acoustic barriers, such as acoustic blankets, soil berms, or hoarding around tunnel portals and ventilation shafts, to attenuate blast overpressure and airborne noise that may disturb or harm wildlife.
- Establish continuous vibration monitoring stations near ecologically sensitive areas to measure Peak Particle Velocity (PPV). Where established thresholds are exceeded, blasting design and excavation parameters should be adjusted accordingly.
- Restrict blasting schedules to avoid critical breeding, nesting, or migratory periods of sensitive fauna, particularly avifauna, to minimise ecological disturbance.
- Retain natural vegetation buffers around construction sites and portal areas for as long as practicable, as these serve as natural noise and dust barriers and provide refuge for wildlife.
- Implement pre-blast grouting measures to seal rock fractures, thereby preventing groundwater loss, protecting nearby streams, and maintaining aquatic and riparian habitats.

### **Supplementary Requirements for Translocation of *Motschulsky's Starworm***

According to Section 8.11.3.10 of the EIA Report, a population of *Motschulsky's Starworm* was recorded within woodland habitat located within the Project Boundary. To minimise potential direct impacts arising from the loss or disturbance of this habitat, a pre-construction translocation exercise will be undertaken. In addition to the translocation framework proposed in the EIA Report, the following key requirements should be incorporated into the Translocation Proposal to enhance the likelihood of successful relocation and long-term population viability:

- The recipient site should closely replicate the environmental conditions of the donor habitat, including the availability of suitable microhabitats and adequate food resources to support all life stages. A habitat suitability assessment should be conducted prior to translocation to confirm that these conditions are met.
- To minimise the risk of translocation failure due to population incompatibility, assessments should be carried out to confirm genetic compatibility between donor and recipient populations, where practicable.
- Post-release monitoring should include peak season surveys to assess survival rates, population establishment, and evidence of breeding. Monitoring results should be reviewed annually, and adaptive management measures should be implemented where necessary to improve habitat conditions or address any observed constraints.

### **Measure to mitigate water quality impacts on the Deep Bay catchment**

The Project Site falls within the Deep Bay catchment and thus any discharge from the development would increase the pollution loading, thus the water quality of the Deep Bay. As such, the Proponent must not discharge surface runoff into the natural/semi-natural/modified watercourses within or near the development site, which are hydrologically connected to the Deep Bay. Surface runoff must be directed into sand/silt

removal facilities before discharging into storm drains. Sediments, soil, excavated materials should not be stockpiled in close proximity to any watercourses to prevent runoff during rainstorms. Such conditions should be incorporated into the specifications of the works contract.

### **Hillfire risk at the compensation woodland–burial ground interface**

The proposed woodland compensation area at Tai Law Hau is located in close proximity to two existing permitted burial areas to its east and west, both of which are recognised as having elevated hillfire susceptibility, particularly during the dry season and grave-sweeping periods. Ritual burning activities within the burial ground may act as potential ignition sources, creating a risk of fire spreading to the adjacent compensation woodland, or vice versa. To minimise this potential risk, the provision of a defensible buffer zone and/or the establishment of firebreaks between the woodland compensation area and the burial ground is recommended.

### **Assessment and mitigation of viaduct shading effects on proposed Wetland Compensation Area**

In the EIA Report, the proposed alignment over the wetland compensation site will be constructed as viaducts approximately 13 m in width, with a minimum separation distance of about 20 m between adjacent structures (please refer to Section 4.3.8 of the Draft Habitat Compensation and Management Plan). To minimise potential impacts on the ecological functions of the compensation wetlands, the viaduct design should incorporate adequate headroom (vertical clearance), which is currently not specified in the EIA Report, in relation to the deck width, in order to achieve a favourable height-to-width (H/W) ratio. Such a design approach would facilitate sufficient sunlight penetration and air circulation beneath the structures.

### **Regulating and monitoring disposal operations against eco-vandalism**

Given the distance between the proposed alignment and the five recognised sites of conservation importance i.e. Lam Tsuen Country Park, “Conservation Area” of the S/YL-NTM/15 – Ngau Tam Mei and S/STT/2 – San Tin Technopole are within the project boundary, Part of the Wetland Buffer Area is situated within the Project Boundary along the San Tin Highway., Wetland Conservation Area lies directly adjacent to the Project Boundary to the west of Sha Po, we recommend that specific “no-go” areas of significant ecological importance, particularly those located outside the project site boundary, be designated with entry restrictions for all dump trucks involved in waste transportation and disposal under the Project. This measure aims to protect sensitive habitats from illegal dumping and the filling of construction and demolition materials. An automated alarm system should be installed to detect and immediately alert the Proponent if any dump truck enters these restricted areas. Additionally, all dump trucks should be equipped with a Global Navigation Satellite System (GNSS), such as the Global Positioning System or an equivalent automatic identification system, to enable real-time tracking and monitoring of their routes and locations.

### **Continuous consultation on the Habitat Creation and Management Plan (HCMP)**

According to Appendix 8.6 of the EIA Report, only a broadbrush HCMP is currently provided for public inspection. The detailed design of the wetland compensation site, along with the full HCMP, will be made available in the later version of the HCMP which is nevertheless not open to any public member for comments. We believe that a comprehensive habitat management plan should be made publicly available for comment or at least consult with relevant concerned environmental groups such as WWF prior to the approval of the EIA report and the issue of the Environmental Permit for the development. Early dialogue allows for the identification of potential issues in the HCMP, enabling these issues to be addressed early on, leading to more effective solutions to improve and enhance the design of the HCMP.

### **Novel Approach for Wetland Compensation Design and Management**

It is noted that a 5ha site located west of the Ngau Tam Mei Water Treatment Works has been preliminarily selected as a compensatory wetland to offset the 2.81 ha of wetland habitat loss arising from the Project. Currently, the site consists of a series of ponds primarily used for commercial koi farming. Our site observations indicate that these ponds hold notable ecological value, supporting a variety of waterbirds including Pied Kingfisher, Little Heron, ducks, and waders. In addition, the site plays an important role in preserving Hong Kong's ornamental fish aquaculture industry—particularly koi farming—which is disappearing from the territory. Earlier in March 2026, WWF and the Hong Kong Institute of Landscape Architects (HKILA) have jointly recommended the Government to retain this existing koi farm area and transform it into a thematic Koi Park<sup>4</sup>. This could create public open space, conserve wetland habitats, preserve Hong Kong's ornamental fish aquaculture industry, and also promote nature-themed rural tourism. Since the wetland habitats subject to loss are considered to be of limited ecological value, we believe the Project Proponent could be considered adopting a more innovative approach in developing this compensatory wetland under a theme of distinctive local characteristics and opening it to the public as an educational and recreational resource.

### **Integrated Wetland Compensation for Improved Ecological Connectivity and Value**

As other sections of the NMH are currently subject to separate assessments, opportunities to coordinate and potentially combine their respective wetland compensation areas with the area adjoining the proposed compensation site under the San Tin Section should be examined within those parallel studies. Where practicable, such integration could enhance overall ecological value and help establish a larger, more continuous wetland system.

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<sup>4</sup> <https://www.wwf.org.hk/en/news/?26623/Hong-Kong-Institute-of-Landscape-Architects-HKILA-in-collaboration-with-WWF-Hong-Kong-Proposed-Four-Enhancement-Recommendations-to-transform-Ngam-Tam-Mei-into-an-iconic-rural-ecotourism-township-in-the-Northern-Metropolis>

Thank you very much for your kind attention and consideration.

Kind regards,

A handwritten signature in black ink, appearing to read 'Tobi Lau'. The signature is written in a cursive style with a large initial 'T'.

Mr. Tobi Lau  
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WWF Hong Kong  
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