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17/F East Wing, Central Government Offices,  
2 Tim Mei Avenue, Tamar, Hong Kong  
(E-mail: [landac@devb.gov.hk](mailto:landac@devb.gov.hk))

**By E-mail ONLY**

Dear Sir/Madam,

**Re: Public Engagement of Lantau Development**

We would like to express our serious concerns and our objection to certain proposals in relation to “Lantau Development”. Our detailed comments and recommendations are as follows:

**1. Not in line with the planning vision and the planning principle**

Lantau is the largest offshore island in Hong Kong with largely intact environment, providing diverse habitats for many species of wildlife. “*Lantau – Hong Kong’s Jewel*”<sup>1</sup>, a biodiversity study of Lantau, has highlighted the notable biodiversity and identified a number of importance sites, e.g. natural streams at Tung Chung and Tai Ho, wetlands in Pui O and Shui Hau, mangroves and seagrass beds along the Lantau’s coasts, etc. Lantau, the surrounding waters and islands also have many species of high conservation value, such as Chinese white dolphin, Romer’s tree frog, Bogadek’s legless lizard, two species of horseshoe crabs and Chinese grassbird. Indeed Lantau and the surrounding islands are a recognized Key Biodiversity Area within the Indo-Burma Biodiversity

<sup>1</sup> Yip, P. & Noffke, C. (2015) Lantau – Hong Kong’s Jewel. [https://issuu.com/conservation\\_lantau/docs/lantau-hong\\_kong\\_s\\_jewel\\_publish](https://issuu.com/conservation_lantau/docs/lantau-hong_kong_s_jewel_publish)

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Hotspot<sup>2</sup>. In addition, Lantau also serves as an outdoor recreation venue for Hong Kong citizens and tourists. The popular hiking trails that crisscross the mountains and skirt the coasts attract numerous hikers to enjoy the scenic views and magnificent natural landscapes. Therefore, we believe that a holistic Lantau development plan with active measures to conserve the unprotected important habitats and the species within should be formulated in order to achieve a balanced sustainable development.

However, WWF finds that the Proposed Development Strategy for Lantau is not in line with this planning vision and the planning principle and will not be able to achieve sustainable development. According to the “Lantau Development Public Engagement Digest – Space For All”, the planning vision of Lantau Development is “balancing and enhancing development and conservation, with a view to developing Lantau into a smart and low-carbon community for living, work, business, leisure and study.”<sup>3</sup> The First Term Work Report produced by the Lantau Development Advisory Committee has also confirmed areas of ecological importance on Lantau, e.g. natural woodlands, uncontaminated streams and coastal waters, and stated “appropriate measures should be taken to enhance conservation”. We consider that the planning direction of Lantau development should include active actions to enhance the conservation value of Lantau. Therefore we expect additional, proactive conservation measures to be incorporated into the Lantau Development Plan.

However, we are deeply disappointed that the First Term Work Report and the consultation digest are heavy on development proposals but have no additional active measures to conserve the valuable biodiversity and splendid natural landscape and waters of Lantau.

Worse, the proposed plans would seriously threaten important marine life such as Chinese white dolphins (CWDs), corals and some valuable fish species that inhabit the surrounding waters. The ongoing and planned Lantau development will involve a number of reclamation works which would remove at least 2,400 hectares of seabed areas (Table 1). The proposed construction works would lead to the permanent loss of fishing grounds and the destruction of dolphin habitats.

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<sup>2</sup> Critical Ecosystem Partnership Fund (2011) Indo-Burma Biodiversity Hotspot – Ecosystem Profile.

Table 1. The ongoing and planned development projects in Lantau waters.

<b>Timeline</b>	<b>Project involving reclamation</b>	<b>Reclamation area/ Water areas affected</b>	<b>Habitat/species affected</b>
2012-2016	Hong Kong Boundary Crossing Facilities	130 ha	Permanent loss of fishing ground; habitats of Chinese white dolphins
2017 – 2023	Third Runway System	650 ha	Permanent loss of fishing ground; habitats of Chinese white dolphins
2017 – 2023	Tung Chung New Town Development	145 ha*	Permanent loss of fishing ground; disturbance to Tai Ho Bay (i.e. mudflat, mangrove, seagrass, coral); habitats of Chinese white dolphins
Unknown	Siu Ho Wan Development	100-150 ha	Permanent loss of fishing ground / habitats of Chinese white dolphins
Unknown	Sunny Bay	60-100 ha	Permanent loss of fishing ground / habitats of Chinese white dolphins
Unknown	Lung Kwu Tan	200-300 ha	Permanent loss of fishing ground / habitats of Chinese white dolphins
Unknown	Eastern Waters Metropolis (Kau Yi Chau, Hei Ling Chau)	1000 ha	Permanent loss of fishing ground / disturbance to habitats of Bogadek's Burrowing Lizard
	Total	2,400 ha	

\*145ha of seabed will be lost due to 129 ha of reclamation

## **2. The East Lantau Metropolis (ELM) and the associated transport infrastructure should be withdrawn**

According to population growth estimates by the Census and Statistics Department and information from the Development Bureau, the medium- and long-term supply of housing units is more than the projected increase in household numbers. According to the latest “Hong Kong Domestic Household Projections”, the number of households will only increase by 482,700 units over the next 35 years (2015-2049) and the population will actually start to drop after 2043. When combining all short-, medium- and long-term measures, a total of 508,041 housing units will be provided in the coming two decades or so, surpassing the growth in the number of households (Figure 1). Therefore, we have strong doubts about the need of the ELM which aims to accommodate a population of about 400,000 to 700,000, which is inconsistent with the Census and Statistics Department estimates when one takes into account other developments underway across Hong Kong.

Large sea areas will need to be reclaimed for the proposed ELM and its associated transport infrastructures. However, as shown above, there is no justification for such a housing need, while it will cause irreversible damage to the marine environment. Therefore, we strongly urge the government to withdraw the ELM and the associated infrastructure proposal. Instead, the government should first conduct a strategic needs assessment to ascertain the needs before looking into such a proposal.

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<sup>3</sup> P. 3 of the “Lantau Development Public Engagement Digest – Space For All”

	圖示 Legend	土地供應項目	Land Supply Plan	面積 Area (公頃 ha)	可提供房屋單位 Housing Unit
短中期 (2014年及以後) Short to Medium Term (From 2014 and after)	●	151幅具潛力作房屋發展用地	151 Potential Housing Sites	約 ca. 300	> 210,000
	1	啟德發展區	Kai Tak Development	323	41,000
	2	鑽石山綜合發展區	Diamond CDA Site	7.18	4,050
	3	前茶果嶺高嶺土礦場	Ex-Cha Kwo Ling Kaolin Mine	3.29	2,200
	4	安達臣道石礦場	Anderson Road Quarry	40	9,410
	5	前南丫石礦場	Ex-Lamma Quarry	20	1,900
	*	鐵路物業發展 (短中期)	Railway Property Developments (Short to Medium Term)	31	18,500
中長期 (2023年及以後) Medium to Long Term (From 2023 and after)	*	市區重建局重建項目	Urban Renewal Authority Redevelopments Projects	2.24	2,621
	6	古洞北和粉嶺北新發展區	Kwu Tung North and Fanling North NDAs	320	60,000
	7	東涌新市鎮擴展	Tung Chung New Town Extension	133	49,400
	8	洪水橋新發展區	Hung Shui Kiu NDA	442	60,100
	9	元朗南	Yuen Long South	183	26,100
	10	錦田南	Kam Tin South	60	16,700
長期及正在研究項目 Long Term and under study	*	鐵路物業發展 (長期)	Railway Property Developments (Long Term)	24	6,060
	11	新界北發展潛力研究地區	NTN Potential Development Area	未有公佈數字 No data	
	12	馬料水	Ma Liu Shui		
	13	青衣西南	Tsing Yi South West		
	14	欣澳	Sunny Bay		
	15	小蠔灣	Siu Ho Wan		
	16	龍鼓灘	Lung Kwu Tan		
	17	西貢污水處理廠	Sai Kung Sewage Treatment Works		
	18	沙田污水處理廠	Sha Tin Sewage Treatment Works		
	19	鑽石山食水及海水配水庫	Diamond Hill Fresh Water and Salt Water Service Reservoirs		
	20	深井污水處理廠	Sham Tseng Sewage Treatment Works		
總計 (未計算長期及正研究項目) Total (Not Including Long Term and Plan Under Study)				約1,890公頃 ca. 1,890 ha	最少 508,041 個單位 最少 508,041 units

\* 該項目未有位置資料  
\* No location information  
資料來源：發展局  
Data Source: Development Bureau

Figure 1. The number of housing units provided under short-, medium- and long-term land supply plans<sup>4</sup>

### 3. Formulate transport and traffic strategy that is compatible with the planning vision

#### 3.1 Railway

According to the consultation document, the internal and external Lantau transport connection is suggested to be enhanced through the construction of new railway systems, road systems and strengthening of water transport etc. A railway is recommended to be

<sup>4</sup> WWF's Response to a Report on Hong Kong's Land and Housing Supply

built between the Hong Kong Border Crossing Facility (HKBCF) Island and Tuen Mun so as to connect Lantau with the NWNT. However it should be noted that, if such a railway is to be built, it would be inside the Marine Park compensated for the Third Runway project (to be designated by 2023) (Figure 2). This railway would transverse through the traveling corridor of the Chinese white dolphins moving between NE and N Lantau waters, and both the construction and operation phase of this railway can cause serious disturbance to the dolphins using the areas.



Figure 2. The proposed railway between the Hong Kong Border Crossing Facility (HKBCF) Island and Tuen Mun would cut across the traveling corridor of the Chinese white dolphins moving between NE and N Lantau.

The marine traffic generated by the work barges during the construction period of the railway would likely cause serious impacts to the marine environment inside the Marine

Parks (The Brothers and the Third Runway Marine Parks), and would make the already congested marine traffic in the area even worse. We are also concerned that the work vessels may travel freely in and out of the Marine Parks. Although the speed of vessels will be restricted down to 10 knots, the high volume and frequency of vessels crossing the Marine Parks could cause significant disturbances to dolphins and undermine the effectiveness of these two marine protected areas.

The Hong Kong-Zhuhai-Macao Bridge (HZMB) project has already demonstrated that large-scale construction project would pose adverse impacts to the dolphins inhabiting the area. The two-year EM&A data showed that there was a sharp decline of dolphins using the NE Lantau waters (Figure 3) since the HZMB-associated construction works (including the reclamation works of HKBCF and HKLR as well as bored piling activities of TMCLKL) commenced. No dolphins were recorded in the vicinity of HZMB project site for over 1.5 years. The construction of the proposed railway will erode the integrity and weakening the conservation performance of the Brothers Island and Third Runway Marine Park, and will hamper the recovery of the Chinese white dolphins inside these compensated protected areas and also in Hong Kong waters.

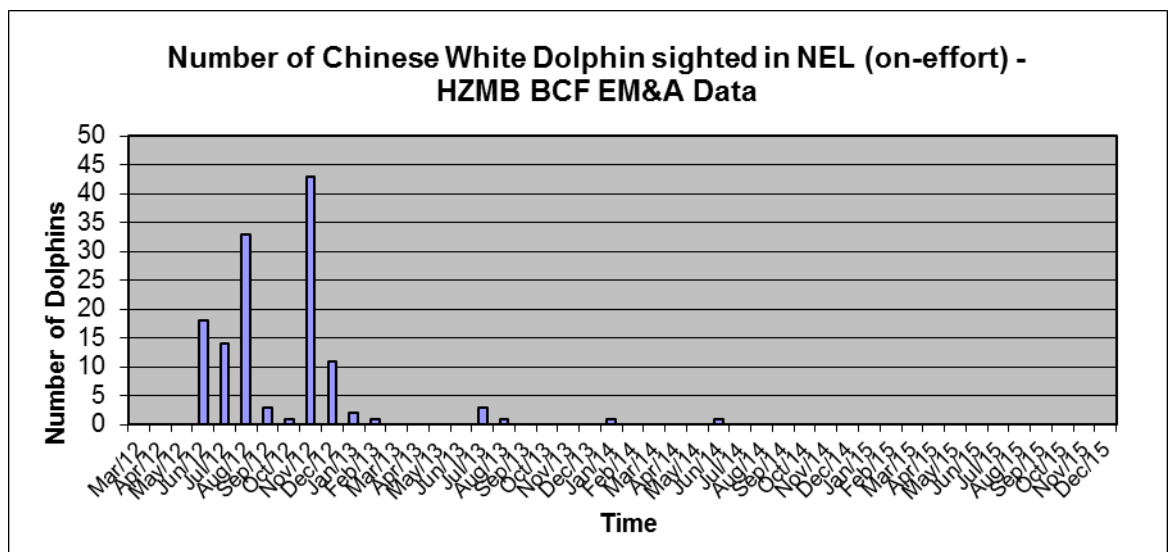


Figure 3. The number of Chinese white dolphin sighted in northeast Lantau (on-effort) – EM&A data of the Hong Kong Zhuhai-Macao Bridge Border Crossing Facility project.

The Brothers Marine Park and the Third Runway Marine Park are planned to be designated in 2016 and 2023 as compensation measures for the large scale development projects. It is unacceptable to plan development into these two protected areas which are incompatible with their conservation purpose.

### 3.2 Road

The consultation document recommended further relaxation of the closed roads in Lantau to meet the demand and facilitating development on Lantau Island. WWF is deeply concerned that the relaxation of traffic restrictions on closed roads will increase the development pressure at ecologically sensitive private land, especially those not covered by a Development Permission Area (DPA) Plan. Without traffic control, it is anticipated that there will be many locally-driven developments on the private land adjacent to the road such as car parks and container storage. These will cause significant and irreversible impacts to areas of high ecological and landscape value in South Lantau. For example the retreat of the Tung Chung Road Control Station from Wong Lung Hang to Shek Mun Kap in 2007 had already led to uncontrollable land filling and dumping of C&D waste in the ecologically sensitive Tung Chung Valley.

In February 2016, the 1<sup>st</sup> stage of relaxation of traffic restrictions of South Lantau Road has been launched by the government to promote tourism in South Lantau. However, we consider that relaxation of traffic restrictions of South Lantau Road is not in line with the Spatial Planning and Land Use of South Lantau where it is for “*Conservation, Leisure, Culture and Green Tourism*”<sup>5</sup>. Further traffic relaxation will no doubt cause adverse environmental impacts such as air and noise pollution, because of the increase in traffic flow, and elevate the risk of eco-vandalism (e.g. illegal dumping) in South Lantau. It should be noted that unenforceable eco-vandalism cases have already been observed on private lands in South Lantau where there is no DPA Plan, such as the dumping in the ecologically important wetlands at Pui O (Fig. 2). Therefore, we urge the government to maintain the traffic restriction of closed roads in order to reduce eco-vandalism in ecologically sensitive areas. Construction vehicles and machinery should also need permission to enter Tung Chung Valley, Tung Chung Bay and South Lantau so as to prevent illegal dumping in these

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<sup>5</sup> Page 9 of the consultation document



sensitive areas. The government should instead promote and enhance environment-friendly public transport to cope with the transport needs on Lantau.

### **3.3 Water Transport**

The marine traffic surrounding the Lantau waters has increased significantly over the last decade. Reduced sea space as a result of reclamations and increasing demand on vessel transport will intensify marine traffic and cause higher disturbance and collision risk to cetaceans (Chinese White Dolphins and finless porpoises).

Both mobile and idle vessels will generate underwater noise. The increased marine traffic also poses threats such as obscuring sounds and acoustic communication, also interfering with the echolocation by dolphins and porpoises. High levels of vessel noise can lead to injuries or disturbance, as manifested by changes in behaviour and the use of acoustic signaling.

The government needs to be very careful when planning to increase vessel routes around Lantau so as not to overestimate the marine traffic carrying capacity in the area, which may result in eroding the integrity of the nearby Marine Parks and even posing safety risks. According to Figure 3 (P. 17 of the consultation document), a possible ferry route may be introduced between Tung Chung and Sunny Bay (a marina is proposed to be built in Sunny Bay as well). The ferries will need to travel across The Brothers Marine Park to Tung Chung, and the extent of impacts to the marine life inside the protected area would depend on the route and vessel frequency. In view of this, a comprehensive marine traffic and carrying capacity assessment is deemed necessary if any new sea-based routes are considered.

Transporting via walla-walla is the most common type of transport used by the local residents (e.g. fishermen) and tourists (e.g. dolphin watching) in the west Lantau waters which is also the prime habitat of CWDs. However, this business is currently not regulated and they are suspected to be one of the threats in causing injuries or mortality to dolphins due to their high speed and travelling in core dolphin habitats.

In the consultation document, water taxis are proposed to be introduced in Lantau waters. There is a concern that if this business is not regulated and if no code of conduct is

provided and followed, they will certainly increase the risk of causing disturbance and injuries to dolphins.

#### **4. Recreation and Tourism proposals**

##### **4.1 Marina at Sunny Bay**

A marina is proposed to be built at Sunny Bay. The facility will bring in a substantial number of vessels (likely including a significant number with powerful motors that generate much underwater noise and pose high collision risk to dolphins) visiting and mooring both inside and outside the marina area. This will result in an increase in marine traffic in the already busy North Lantau waters. The increased levels of vessel movement and the underwater noise will disturb the dolphins in the nearby habitat and cause behavioral change in dolphins as well as driving them away from the preferred habitat. The rise in the number of pleasure boats moving in and out of the marina may also increase the risk of dolphins being killed or injured in vessel collisions.

##### **4.2 Spa at Sokos**

WWF has serious concerns regarding the proposed spa facility on Soko Islands. Sokos will be designated as a Marine Park and it is the only location where both Chinese white dolphins and finless porpoise can be found in Hong Kong. A spa facility usually uses huge amounts of water which will then be discharged. The discharge of such a large amount of used water may affect the health of fish and other animals (this highly depends on the water treatment approach taken), and may eventually deteriorate the water quality inside the Soko Islands Marine Park and pose impact to the cetaceans and fisheries resources inside and even adjacent to the marine protected area.

In addition, marine traffic around Sokos will be increased as more boats will travel to Sokos for the spa treatment, causing disturbance to the cetaceans in the area. Hence, a proper ecological impact assessment will need to be conducted before the proposal should be considered.

#### **4. Cover DPA Plans at ecologically sensitive areas without statutory protection**

As mentioned in the previous section, some ecologically sensitive areas on Lantau do not receive any statutory protection which leads to uncontrollable eco-vandalism, especially at South Lantau. Although the entire South Lantau area has been covered by an Outline Zoning Plan, there is no DPA Plan and thus Planning Department has no enforcement power against eco-vandalism on private lands.

Pui O is one of the blackspots of land filling and dumping of Construction & Development (C&D) waste in South Lantau. The wetlands in Pui O are of significant ecological value and supports high diversity of wildlife, e.g. 39 species of aquatic macroinvertebrates, more than 180 resident and visiting avifauna species<sup>6</sup>. Pui O marsh is also identified as an amphibian hotspot by the Agriculture, Fisheries and Conservation Department due to high species richness<sup>7</sup>. Various species of conservation interest were recorded in and near the freshwater marsh, e.g. brown fish owl, three-striped grass frog and Chinese bullfrog<sup>8</sup>. Pui O wetland is also the largest remaining Water Buffalo field in Hong Kong. Under the South Lantau Coast OZP, Pui O wetlands and their vicinities are zoned as Coastal Protection Areas (CPA). However, the lack of a DPA Plan has already led to rampant dumping of C&D waste in CPA zones and caused significant ecological degradation to the Pui O wetlands (Figure 4).

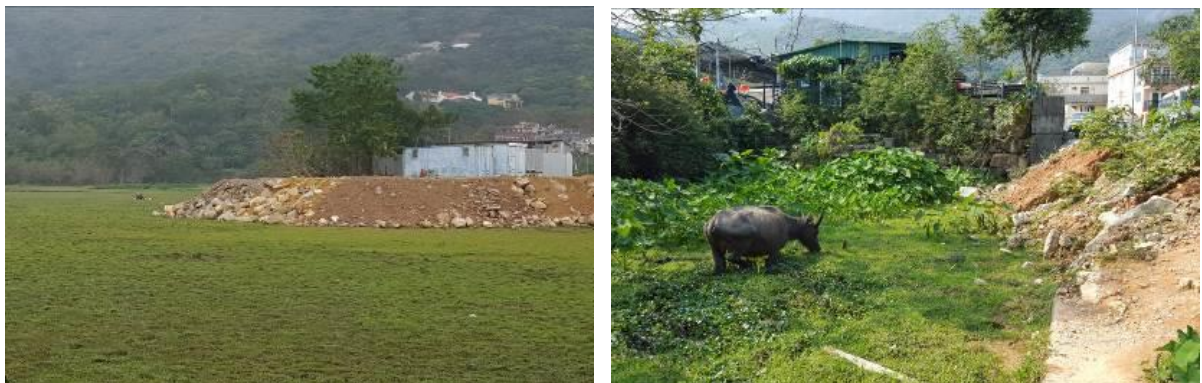


Figure 4. Dumping of C&D waste in Pui O.

<sup>6</sup> Noffke, C. & Yip, P. (2014). *Lantau – The Hong Kong Jewel*. [https://issuu.com/conservation\\_lantau/docs/lantau-hong\\_kong\\_s\\_jewel\\_publish](https://issuu.com/conservation_lantau/docs/lantau-hong_kong_s_jewel_publish)

<sup>7</sup> [http://www.epd.gov.hk/epd/english/boards/advisory\\_council/files/ncsc\\_paper04\\_2009.pdf](http://www.epd.gov.hk/epd/english/boards/advisory_council/files/ncsc_paper04_2009.pdf)

<sup>8</sup> *Ibid*

If the government does not fix this planning loophole in South Lantau as well as other unprotected ecological important sites on the island, any development proposals, even for green tourism, will spur landowners to destroy the valuable habitats in the hope of developing their land. Therefore, we urge the government to cover areas without statutory protection by a DPA Plan for South Lantau and Wong Lung Hang as soon as possible to prevent further ecological destruction caused by development pressure arising from the Lantau Development Plan. Effective planning control in these areas is crucial to safeguard the biodiversity and landscape value and to ensure the success of the proposed and/or future cultural and green tourism.

#### **5. Lantau development plans should be reviewed under the forthcoming “Hong Kong 2030+” Study**

The Planning Department is conducting the “Hong Kong 2030+: Toward a Planning Vision and Strategy Transcending 2030” (“Hong Kong 2030+”) to provide an updated spatial planning framework and broad planning directions for Hong Kong’s future development beyond 2030 based on the latest needs. It is logical to review all the Lantau development plans and proposals under “Hong Kong 2030+” and their necessities should be assessed considering the latest needs of Hong Kong, the updated spatial planning framework and other feasible development options identified in “Hong Kong 2030+”. To achieve sustainable development of Lantau, detailed Strategic Environmental Assessment (SEA) should also be carried out for all proposed and planned developments on Lantau to identify and assess the cumulative ecological and environmental impacts at an early planning stage. Developments should be avoided in all areas of high conservation interest and alternatives should be identified.

#### ***WWF key asks:***

1. The government should take active measures to conserve the biodiversity of Lantau in order to achieve sustainable development. The top priorities include designating the offshore waters of Tai O and Yi O as a new West Lantau Marine Park (Figure 5) in order to provide a connected marine protected area network for the declining Chinese white

dolphin.

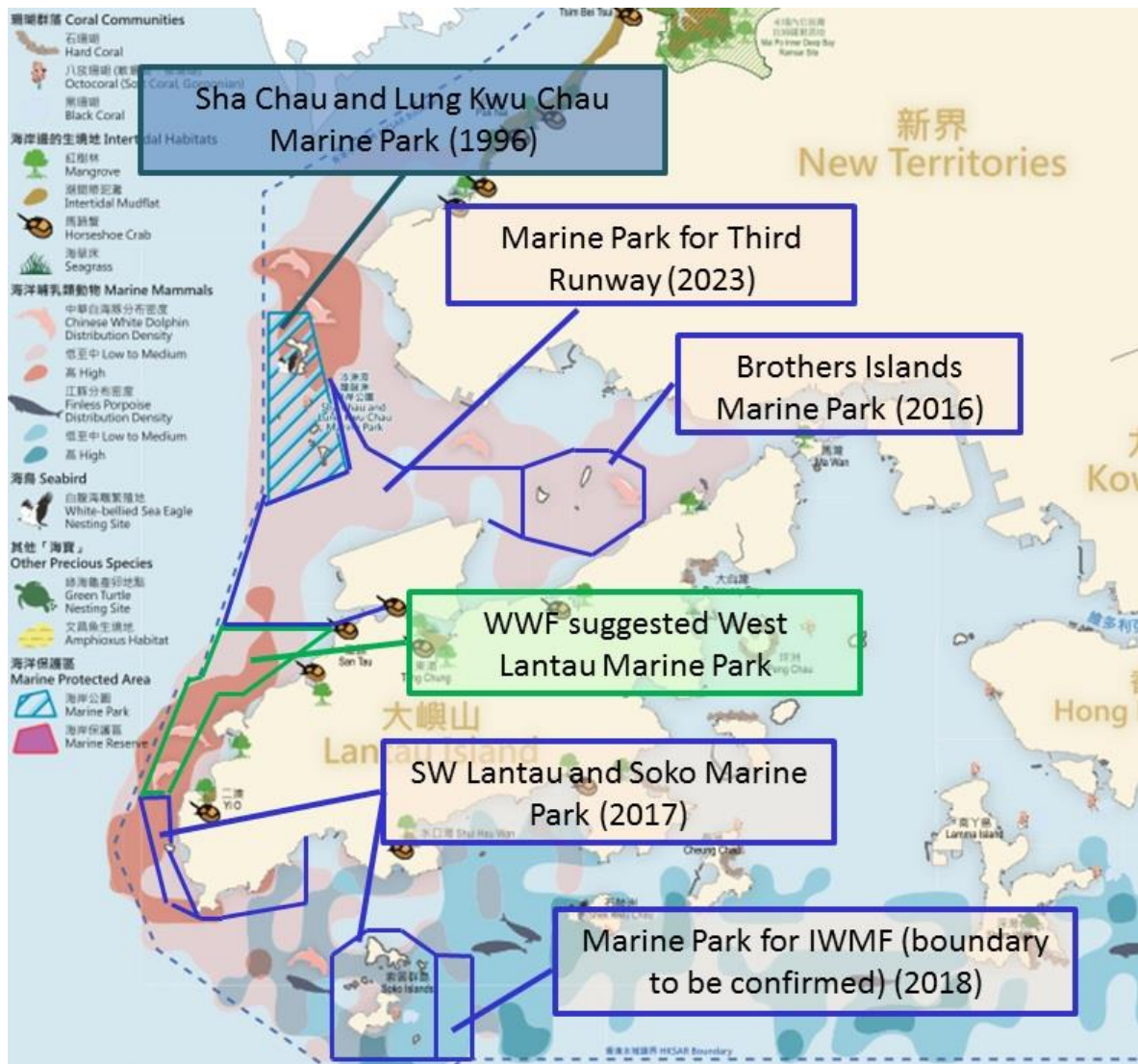


Figure 5. Location of the recommended West Lantau Marine Park

2. The proposed East Lantau Metropolis and the associated transport infrastructures should be withdrawn and a strategic needs assessment should be carried out to determine whether it is needed in Hong Kong;
3. All ecologically important sites on Lantau and their vicinities should be protected with active management (refer to Appendix 1). Infrastructure and development should be avoided at these ecologically sensitive areas. Only conservation, research, education and well-managed eco-tourism and the associated uses should be allowed at these NO-

GO areas and their adjoining vicinities;

4. Formulate a comprehensive transport and traffic strategy and maintain the traffic restriction of closed roads in order to reduce eco-vandalism at ecologically sensitive areas. Construction vehicles and machinery should be required to apply for permission to enter Tung Chung Valley, Tung Chung Bay and South Lantau so as to prevent illegal dumping at these sensitive areas. Environment-friendly public transport should be promoted to cope with the transport needs of Lantau;
5. Cover areas without statutory protection by DPA Plans such as South Lantau and Wong Lung Hang as soon as possible to prevent ecological destruction caused by development pressure arising from the Lantau Development Plan;
6. All the Lantau development proposals should be reviewed under "Hong Kong 2030+". Their necessities should be assessed with the consideration of the latest needs of Hong Kong, the updated spatial planning framework and other feasible development options identified in "Hong Kong 2030+";
7. Strategic Environmental Assessment (SEA) should be carried out for all proposed and planned developments on Lantau to identify and assess the cumulative ecological and environmental impacts at an early planning stage. Plans to comprehensively mitigate these impacts should be in place before any development occurs.

We would be grateful that our concerns and comments will be duly considered.

Yours faithfully,



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WWF-Hong Kong



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WWF-Hong Kong