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The Hong Kong Institute of Architects

Response of the Hong Kong Institute of Architects on the Legislative Council Panel on Development Paper on Study on the Artificial Island in the Central Waters

1. The Hong Kong Institute of Architects (HKIA) generally welcomes the initiatives put forth in the Government's interim report for discussion at the Legislative Council (LegCo). We support the creation of a substantial and long-term land bank at Kau Yi Chau for Hong Kong, adopting a more holistic approach and providing a buffer for the city's overall development strategy, taking into account the Northern Metropolis and urban renewal policies.
2. HKIA recognises the infrastructure-led development will need strong and multiple connectivity to ensure convenience and traffic-free accessibility with the rest of the city. However, to truly attain the people-first concept and considering this new metropolis being constructed anew, along with the new mobility technologies such as autonomous vehicles and other last mile devices, the feasibility of a pedestrian focus metropolis could be explored. This is a basic important assumption that needs to be studied as there is currently no such study on the implication of parking, charging, and storage provision for autonomous vehicles.
3. HKIA hopes the new development area can become a regulatory and technology sandbox to experiment with new regulatory framework, new smart contract (block chain technology) lease and ownership framework, and smart city technologies from inception to operation. We also hope to see a stronger industry-led planning approach to ensure sufficient and diversified localised employment opportunities being well supported by a more balanced and self-sufficient mix of commercial, residential, agricultural and manufacturing (such as 3D printing centre) developments. Overall, the project should adopt a human-centric approach with a low carbon lifestyle that has a more liveable and wellness focus.
4. We understand that, with the new reclamation development, there will be significant carbon footprint. As such, we hope the Government would explore alternative reclamation materials that can address both embodied and operating carbon as so to achieve carbon neutrality goals. We also would like to see further study on impact to marine life and flooding provision due to climate change and greater transparency on environmental impact studies.
5. Biodiversity is an important area which should be included as a planning requirement. The area should improve the Marine biodiversity of the new coast line as well as the landscape green area to ensure an ecologically-balanced new area of development.



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6. Our members look forward to assisting in the further development of the proposal. We hereby list out our detailed comments in response to the relevant points put forth in the interim report.

Background of the Study

7. ***Reviewing the extent of development*** - The study on the Kau Yi Chau Artificial Islands (KYCAI) was first introduced in the Policy Address 2018 for addressing our land shortage, housing crisis and the growing population. Since then, the Northern Metropolis initiative has been pushed forward with the intent to resume brownfield sites and land held by developers without the need of reclamation and construction of infrastructure. Under the new KYCAI proposal, the plan of reclamation has been reduced from 1700ha to 1000ha. While we support creation of land bank in principle, as stated above, it presents an opportunity to explore development taking into account blue-green infrastructure, and sponge city concepts. If circumstances really call for reclaiming the island sites, the impact to the environment shall be minimised. An incremental approach for reclamation is therefore advisable, so that we build only what is needed to ease the financial burden.

8. ***Reviewing the timeframe of development*** - The projected population growth in Hong Kong has dropped when comparing the 2017 and 2020 projections with 8.2 million peaking in 2043 changing to 8.1 million peaking in 2041. In fact, our population has not risen but fallen by 1.6% to 7.29 million within one year in the latest figure released. The Government may review the timeframe for development from time to time according to the change in population.

Strategic Positioning and Planning Objectives

9. ***Inter-district Relationship*** – KYCAI proposes to connect the underdeveloped Penny's Bay at Lantau with the overcrowded Kennedy Town on Hong Kong Island. A more comprehensive planning study should be carried out to study the inter-district relationships and how they can create synergy. A more detailed study should be carried out on the exact landing point of the road and rail linkages to benefit the existing developments.

10. ***Positioning of KYCAI*** – A clearer positioning with specific economic and cultural drivers will put KYCAI in a better position to succeed in becoming a new CBD and the Gateway to GBA. How the proposed KYCAI can serve as the expansion of the current CBD on Hong Kong Island or as a separate nucleus should be explored. The positioning of KYCAI should be distinctive and different from the existing CBDs and should not be seen as a suburb or a land bank for decanting purpose.

11. ***Diversity brings vibrancy and prosperity*** – Diversity, i.e. mixed-use neighbourhoods, bring vibrancy and prosperity. Unsuccessful CBDs around the globe, e.g. Downtown Los Angeles, become deserted after dark mostly due to their planned singularity on business use. We encourage KYCAI to consider bold mixed-use planning for the islands, mixing business, hospitality, GIC and residential uses all



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together. In certain areas, radical mixed-use, especially in the vicinity of the MTR station, should be considered.

12. **Green and liveable pedestrian first CBD** – HKIA welcomes the people first concept. To make this concept work, traditional petrol car-first city planning should be abandoned. Sustainable transport network & system should be considered. Tseung Kwan O is a typical car first community where more lands are used on infrastructure than for developments. Many European and Australian cities are banning cars in their CBDs, freeing the most important urban spaces for people rather than cars. Since KYCAI comprises newly constructed islands, cars can be easily planned to go to underground carparks immediately after their arrival. Passengers and goods can be transported to their destinations via walking, bicycles or other smart motorised alternatives or autonomous vehicles, robots, etc.

13. **Forward-looking, innovative and self-sustainability** – With Hong Kong being committed to carbon neutrality by 2050, the interim report on KYCAI has little information on how this can be achieved. Will there be mass sustainable energy generation facilities on the islands? Will potable water resources be self-sustained on the islands? These are all questions that the project team shall answer in their 2nd stage report.

14. **More data and information needed** – HKIA welcomes the concepts of more islands, carbon neutrality through SGR, connection with GBA, and mixed-use neighbourhoods for liveable and work-live-play communities/CBD. However, there is little information in the interim report illustrating the data or logic behind such concepts. We hope the Government can release more information to the professional institutes so that we can give more constructive comments on the study.

Number of Islands

15. Generally, we welcome the Government's current proposal of having 3 islands compared to 2 islands in the previous proposal. However, more data and reasoning for having 3 instead of more islands should be revealed for the public to judge if 3 islands would be the best approach. Environmental consideration, i.e. impacts on habitats, water life and wind and water flows, should be priorities but incremental reclamation and pedestrianisation should also be considered as of equal importance.

Broad Land Use Concepts

16. **A "True" Diversity brings Work-live-play** – True implementation of mixed-uses will bring a "work-live-play" metropolis. We hope that the Government will be true to this concept. CBD2 has been turned into a "live-live-live" with little "work" and "play" area after the Government succumbed to pressure of attaining more lands for residential use. Besides, segregation of business and residential uses dominates CBD2 planning as well. We urge the Government to abandon the traditional mode of segregation of uses while adopting a more radical mixed-use concept, at least for the



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various nodal points of this new metropolis. The introduction of streetscapes will also create a more vibrant and energetic community.

17. **GBA-wide Cultural and Event Facilities** – Since KYCAI is designated as the gateway to the GBA, its cultural and event facilities should be the cultural and event facilities for the whole GBA. They should be planned at a higher standard than normal cultural and event facilities.

18. **Seven liveable communities planned with 15-minute neighbourhood concept** – HKIA generally welcomes the concept but with cautions, as problems are encountered in overseas examples. We suggest the Government to release more information on the composition and detailed planning concept of each of the neighbourhood and their proposed business activities. In general, there should be hierarchical difference between CBD core and these communities. Each of the community should also have its own character. With connections between Lantau and the Hong Kong Island, it will be inevitable that some residents may need to commute for work at other districts.

19. **Blue-green network for promoting healthy living and biodiversity** – HKIA generally welcomes the concept of Blue green Network and SGR Strategy. From the very limited information presented in Enclosure 3, the green and blue network is primarily in the peripheral of the islands. As the peripheral is facing the open waters, we believe having the green and blue network along the central axis of the islands might be more meaningful.

Major Development Parameters

20. **High Plot Ratio** - PR of 7 for residential use and PR of 15 for commercial use seem to be very high. With such high plot ratios, territory-wide air-movement, quantity and quality of open spaces and daylighting studies are of utmost important. To ensure liveability of the new metropolis, these studies and the logic behind the recommendation of having such high plot ratios should be carefully scrutinised and made public. Areas reserved for internal roads within the residential area is also on the high side.

21. **Reduce Land Use % for Infrastructure** - We believe there are rooms for improvement as to dedicating 25% of land for infrastructure. The islands should be designed with no petrol-powered vehicles in mind so that most roads and carparking and logistic facilities can go underground, freeing these land for open space and greenery.

22. **Professional Institutes' Participation** – HKIA welcomes the idea of setting up a platform for professional institutes to advise on the urban design and master planning of the islands. We would like to have more information on this platform so that we can prepare for our participation.



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Strategic Transport Infrastructure

23. **Strategic Linkages** – We are encouraged that there are major railways connecting to Central District, the airport and Qianhai (thus other parts of the GBA) and passing through the islands. Since KYCAI is identified as the gateway to the GBA, it is essential that the road and rail network has major stops and stations within KYCAI. However, a traffic impact study should be carried out on how the potential linkages will impact the existing developments at the landing points, especially on the congested Hong Kong Island side.

24. **Underground passing and TODs at KYCAI** – to enhance walkability and livability, major highways and railways that pass through the islands should be underground as far as possible, with major transit-oriented developments (TODs) planned on top and around the planned stations.

25. **Pedestrianisation and Location of the Station** – According to “The Study of Pedestrian Accessibility to Rail Transit Stations Based on KLP Model” by Rongrong Yang et al.: “based on 85% percentile, pedestrians would accept time range within about 12 minutes. 800-1 000 meters can be estimated, depending on the results of acceptable time by the walking speed equal to 4-5 km/h, which fits to the walking distance limits value of 1km.” This will mean that, if the mass transit station be located in the centre of Island A, it can be served by one station and all can reach their destinations on foot, not to say by other smart transportation means.

26. **Satellite and Centralised Carparking and Logistic Facilities** – With advancement in transportation technologies such as community autonomous vehicles and logistic robots, the Government might consider common centralised carparking facilities and loading/unloading hubs. Centralised facilities are more efficient than individually built carparking and L/UL facilities. If they can be accessed directly from the highways, traffic and noise disturbance to the communities will be greatly minimised.

27. **New Transportation Technologies at KYCAI** – Whilst we have no objection to the proposed green mass transit system serving the neighbourhood, we would like the Government to study the feasibility of adopting new transportation technologies available or soon-to-be available so that transportation within and between the islands would be more effective with less disturbance to the urban and park spaces.

Possible Financial Options

28. **Estimate Land Price according to accessibility** - Given the lack of accessibility, the proposed KYCAI has connections only to the Tung Chung and Island lines in their most remote stations. It should be pointed out that the islands are not connected to any parts of Kowloon or eastern New Territories, which would have major impacts on the estimated land price adopted in the financial analysis.

29. **Adopting Block Chain and Tokenization of the land asset**- A more detailed consideration should be given to adopting a new economic model to enable the



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ownership and transparency of the transactions of future land/ real estate at KYCAI. This is an opportunity to enable more Hong Kong residents to own part of this new development. The existing regulation of planning control and the land premium model should be revisited to enable an alternative capitalisation model which enables Hong Kong to lead the world in Web3 economy and also allows local residents to participate in the project.

30. **More Information Needed on their Assumptions** – The assumed land sale price per square meter of residential and commercial land shall be provided for a clearer picture in arriving at the estimate of \$750 billion. While it is stated that the KYCAI development will span across 20 years, the study does not mention whether such development period considers all the three islands or just one of them. The estimated construction cost of \$580 billion does not specify whether they refer to infrastructural and reclamation cost only. The cost for the construction of GIC and public open space projects for KYCAI should also be provided.