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The Hong Kong Institute of Architects

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By Fax and By Post
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Mr Raymond W M Wong
Acting Deputy Director of Planning / Territorial
Planning Department
16/F North Point Government Offices
333 Java Road North Point
Hong Kong

Dear Mr Wong

**Stage Two Public Engagement for
The Planning and Engineering Study on Development of Lok Ma Chau Loop**

Thank you your letter dated 25 May 2012 informing the commencement of the captioned public engagement exercise, and also for delivering a briefing on the same to our members on 28 June 2012.

The Institute is pleased to deliver our views and comments regarding the public engagement exercise. Please find enclosed our written submission for your consideration.

Thank you for your kind attention.

Yours sincerely

Robert Lam FHKIA RA
Vice President

Encl

c.c. Project Manager, New Territories North and West Development Office, CEDD
(Attn : Mr Wong Ming To) by fax : 2693 2918



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**Position Paper of the Hong Kong Institute of Architects
Stage Two Public Engagement on
Planning and Engineering Study on Development of Lok Ma Chau Loop**

The Hong Kong Institute of Architects (HKIA) would like to thank you for your Project Team's presentation at our discussion forum on 28 June 2012 regarding the captioned Study. The HKIA welcomes the proposed development of the Lok Ma Chau (LMC) Loop between Hong Kong and Shenzhen, which aims to fully utilize the land resources of the LMC Loop to meet future development needs of the two cities. It is believed that the proposed development will be beneficial to both cities with their strategic locations binding each other. Our comments on the Initial Study findings are given below for your coconsideration and follow up actions :

(A) Aims & Objectives

The proposed development of the Lok Ma Chau (LMC) Loop between Hong Kong and Shenzhen, which aims to fully utilize the land resources of the LMC Loop to meet future development needs of the two cities, is welcomed. The proposed development will be beneficial to both cities with their strategic locations next to each other.

In addition, the Institute acknowledged the agreement between Hong Kong and Shenzhen Government as well as the public views collected in 2008 that the LMC Loop shall be developed with higher education as the leading land use, complemented by high-tech research and development (R&D) and cultural and creative (C&C) industries.

(B) Overall Planning & Land Use

General and Overall Planning

First, historically the LMC loop serves as a buffer between the two cities. A sharp contrast exists between the undeveloped and natural landscape in Hong Kong and the densely developed urban area in Shenzhen. There are limited activities on the Hong Kong side, whereas the city is buzzing on the Shenzhen side.

Given the strategic locations and scale of the development, the planning of LMC loop should be considered as a whole rather than in a piecemeal or separate manner, and the planning on the Hong Kong side should be considered together with our counterpart in Shenzhen. The development on either side should have interaction and connection with the other to ensure that the proposal works. Aside from the "View Corridor" connection, the planning detail and surrounding land use should also be well co-ordinated.



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Holistic Development of Study Area A, B & C

Second, our Institute recognizes the Study is confined to LMC Loop (Study Area A) and the adjoining areas in Hong Kong (Study Area B) with participation from Shenzhen. A separate planning study is commissioned by the Shenzhen authorities for the adjacent area in Shenzhen (Study Area C). The Institute considers that there should be a holistic planning of the entire region including Study Area A, B and C despite we aware the focus of the Study is Study Area A.

At present, there is limited information on the planning and development of Study Area B. For Study Area C, there is no information given at all. Without an integrated planning and land use for the overall development in Study Area A, B and C, we are concerned whether the overall development of LMC Loop can be transformed into a meaningful and vibrant place of high-tech education, research and development as well as a platform for cultural and creative industries in future.

Planning and Connectivity

Third, the planning and connectivity to other parts of Hong Kong and Shenzhen such as the related infrastructure, land use and development should be carefully considered. This is to ensure that the proposal is viable, suitable and connected to the rest of Hong Kong and Shenzhen for creating and supporting the proposed vibrant community. To this end, proper phasing for implementing the works is essential.

On the proposal of “*External Connectivity and Local Improvements*”¹ as given in Stage Two Public Engagement, there are only two traffic connection points between Study Area A and B. We are of the view that the connection points have not been well designed. Pure vehicular traffic connection at the two ends of Study Area A may not enable the people, activities and various educational, cultural or infra-structural developments in the two Study Areas to integrate holistically in multi-dimensions.

There is only one connection point between Study Area A and C indicated as “*Possible Linkage*” with no information available on planning and design. We opine that such vital connection point between Study Area A and C across the border between Shenzhen and Hong Kong is fundamental in overall planning and strategic development. Without any development of such possible link being considered in urban planning and design, the ideal integration and connection between Shenzhen and Hong Kong may be doubtful.

¹ Hong Kong Planning Department, Hong Kong Civil Engineering and Development Department, Urban Planning, Land and Resources Commission of Shenzhen Municipality and Arup, “*Planning and Engineering Study on Development of Lok Ma Chau Loop – Stage 2 Public Engagement Digest*”, page 24, May, 2012.



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Respect of Existing Character of the Site

The LMC loop is currently an undisturbed piece of land surrounded by farm land and natural reserve with wetlands of international significance. All steps should be taken to ensure that the character of the area is maintained and that any development will not adversely affect the inhabitants and natural reserve nearby.

(C) Plot Ratio and Major Development Parameters

Development Density

Density of the site should be generally low in principle, with plenty of green and open space, to maintain the character of the surrounding area. Consideration should be given to the very green landscape to the south and a more built-up neighbourhood to the north, but creating an “extension” of the densely developed area from Shenzhen should be avoided. The perimeter “high fence” along the Shenzhen River side is also problematic. While there are practical security needs, there could be better ways to resolve the issue technically with a better urban design character.

Plot Ratio & Development Parameters

We note that the overall plot ratio is 1.37. Further, the maximum number of students is 24,000 and the number of employment opportunities is 29,000. In addition, the maximum gross floor area (GFA) is 1,200,000 square metres including 720,000 square metres for education use, 411,000 square metres for “high-tech R&D or C&C industries” as well as 60,000 square metres for commercial use.

We are concerned that the GFA allocated for education or “high-tech R&D or C&C industries” may not be adequate to accommodate two universities or high-tech institutes. Indeed, the Preliminary Outline Development Plan (PODP) as shown has not allowed for any sports facilities like football fields, sports hall, tennis court, swimming pools etc. that are fundamental to the planning of an university or high-tech institute. We recommend PlanD to enquire the views of some universities or potential high-tech institutes as the stakeholder or user in the early stage to ensure the GFA as allowed will be realistic and practical to suit the needs and long term development of such universities / institutes.

(D) Layout Design and Land Use

The Institute acknowledges and support the three key principles proposed, namely :-



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- 1) Allow interchangeability of “high-tech R&D” and “C&C” uses;
- 2) Reduce maximum building height without affecting overall development intensity;
- 3) Enhance open space and landscape design to encourage interaction among users.²

However, we are of the opinion that the planning and land use design may not have sufficiently achieved these three key principles. Our views are kindly summarized as follows :-

Two-Dimensional Urban Planning vs Three-Dimensional Urban Design

First, we are of the opinion that the overall design is only a two-dimensional urban planning. We consider that the overall urban design should be made in a three-dimensional manner in response to the nature and ecosystems, the building fabric in Shenzhen as well as the adjacent infrastructure and transport interchange.

Second, we consider that limiting the maximum building heights to 9 storeys, 10 storeys and 12 storeys for commercial, education and high-tech R&D / C&C industries can be too restrictive to facilitate good quality urban design and architectural design of the buildings. In effect, we object such types of “birthday cake design” of building blocks. It may indirectly result in building blocks being unnecessarily densely located to hinder natural air movement across campus of the universities or high-tech institutes.

We are of the view that a more relaxed approach should be adopted to allow a diversity of building height and dynamics. Additional studies like visual impact assessment, air ventilation assessment and/or social impact assessment may all help to minimize any adverse impact to the surrounding environment whilst giving adequate flexibility to good quality urban and architectural design.

Building Height

It is acknowledged that the proposed height control limit will, again, result in a “flat-top” urban setting. From sustainability perspective, it may be beneficial to concentrate GFA on a few higher blocks to induce down draughts from the prevailing wind to help ventilate pedestrian level. While it is appreciated that environmental groups may have a concern for migrating birds hitting into tall buildings, such could actually be easily overcome by mandatory “green roofs” or the like to address the concern.

² Hong Kong Planning Department, Hong Kong Civil Engineering and Development Department, Urban Planning, Land and Resources Commission of Shenzhen Municipality and Arup, “*Planning and Engineering Study on Development of Lok Ma Chau Loop – Stage 2 Public Engagement Digest*”, page 12 - 17, May, 2012.



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Connectivity among Study Area A, B and C

In general, the connection points between Study Area A and B or Study Area C are merely vehicular traffic connection points. These three key connection points are merely planned as G/IC sites or car-park spaces. They should be planned three-dimensionally to segregate the vehicular traffic from the pedestrian movement to facilitate pedestrian movement, cultural or educational interaction and connectivity among the three Areas.

Besides, we suggest these essential connection points can be designed by means such as urban plaza, waterfront promenade, landmark buildings or landscaping features to form a significant eye-catching entrance to Study Area A (i.e. as the campus entrance of the future universities or high-tech institutes etc.). Also, they can be planned and integrated with the “*Visual Corridor*” at the centre strategically and holistically by extending the two connection points along the “*Landscape Buffer*” (i.e. as shown in the site section) adjacent to Shenzhen River. Indeed, the “*Landscape Buffer*” can be designed as a vibrant waterfront promenade or landscaped area with appropriate water activities.

Urban Design

The development targets to be vibrant and creative. However, the proposals shown in the study with rectangular grids of clusters of buildings do not reflect the expected vibrancy of a “high-tech” and “creative” environment. It resembles an industrial estate more than a university campus. One would expect more exciting planning with interesting built forms and plenty of spaces for interaction. The development would be a showcase to the world and every opportunity should be explored. Putting in yet another “new town” there should be avoided.

An alternative planning arrangement such as a single-storey podium with a green roof sloping up from the Hong Kong side to the Shenzhen side (similar in concept to the Hong Kong Wetland Park Visitor Centre), with structures on top, could be considered. This arrangement would also provide sheltered passageways connecting all buildings, while reducing the visible bulk.

Ribbon Park / Ecological Zone (Wetland) / Old Shenzhen River

In general, the Institute is in support of the planning proposal to develop a “*Ribbon Park*”, an “*Ecological Zone (with Wetland)*” and the preservation of “*Old Shenzhen River*”. However, we are of the view that the existing layout and planning design has not captured the opportunities of such wonderful landscaping and nature features.



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The housing blocks design as shown in the “Open Space Design and Draft Master Landscape Plan” indicates that the orientation or layout of these building blocks cannot sufficiently capture the tremendous views, wonderful landscape and natural features in the “*Ecological Zone (Wetland)*” and “*Ribbon Park*” or the opportunities in water activities or enjoyment of water features along the “*Old Shenzhen River*” enclosing the entire Study Area A under the PODP. We recommend Planning Department to invite early involvement of architects, landscape architects or urban designers to make use of the site opportunities to develop a better Master Layout Plan or Master Landscape Plan for the entire region.

“Pedestrian Boulevard” – Vibrant Activity Corridor

The “Open Space Design and Draft Master Landscape Plan” and the site section shows that there is a “*Pedestrian Boulevard*” with surrounding podium landscapes. From the limited information given, it seems difficult to comprehend how such spatial quality can be established since the surrounding buildings are merely built above the individual planning / land lot assigned in the PODP.

We consider that detail design on edges of the entire “*Pedestrian Boulevard*” is necessary in Stage Three Public Engagement to ensure it can provide a platform for users vibrant interaction and knowledge / cultural exchange. A three-dimensional study on the spatial quality of the *Pedestrian Boulevard* is recommended to analyse the relationship among the Boulevard, the surrounding podium structures and the building blocks above.

(E) Low Carbon and Green Community

The Institute strongly supports the low carbon design construction, green community and sustainable design initiatives as shown in the Stage Two Public Engagement given :-

- 1) Establishment of 12.8 hectares “*Ecological Area*” (i.e. 15% of the total site area);
- 2) Non-reflective buildings;
- 3) Healthy indoor conditions;
- 4) View / green corridors;
- 5) Wind corridors;
- 6) Use of renewable energy sources;
- 7) Electrical vehicles, footpaths and cycling tracks;
- 8) Use of water efficient fixtures and irrigation system;
- 9) Use of recycled construction materials;
- 10) Reuse of soil for earth filling and site formation.



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However, the Institute considers that it is more important to look into aspects or measures how these green initiatives will be implemented. For instance, for Government buildings, will these requirements or initiatives be imposed or to what extent they will be implemented? For buildings of the private sector, we are concerned whether such requirements will be stipulated in the Lease Conditions or the Explanatory Notes of the future Outline Zoning Plan.

For the proposed “*District Cooling System*”³, the Institute supports the sustainability and low-carbon incentives. However, this new system is still in the process of implementation and testing in the Kai Tak Development. Further studies and in-depth analysis will be required to ensure the proposal is both environmental-friendly as well as financially and technically viable in the context of LMC Loop, taking into account the sensitive site context and the surrounding natural environment. We are of the view that early feasibility studies on the use of District Cooling System may be necessary.

(F) Public Transport Interchange and Major Civil Structures

PTI and Major Structures

Firstly, the necessity to construct major infrastructure at the eastern part of the Study Area B (between Ma Tso Lung and Lok Ma Chau) should be further studied. The area is currently agricultural land, unlike the western part of Study Area B, which is already a developing piece of land. It would be more economical and practical to upgrade and extend the connection and activities along the western part than to create another connection in the east.

Secondly, the proposed development will generate lots of traffic and environmental disturbance during and after the construction. Environmental mitigation measures should be enforced to ensure that the natural reserve is kept intact. Impact to the existing ecology should be kept to a minimum by developing low carbon-emission public transport, with limitation on private cars and carbon emissions. The same should apply to our counterpart in Shenzhen to ensure that the area is “clean” and “green”. The option of constructing the PTI outside the island on Hong Kong side should also be explored.

Eastern Connection Road, Widening of Ha Wan Tsuen Road and Possible Linkage

The Stage Two Public Engagement indicates an intended “*Eastern Connection Road*”. Its design has “*optimized with a section of underpass-cum-depressed road under old*

³ Hong Kong Planning Department, Hong Kong Civil Engineering and Development Department, Urban Planning, Land and Resources Commission of Shenzhen Municipality and Arup, “*Planning and Engineering Study on Development of Lok Ma Chau Loop – Stage 2 Public Engagement Digest*”, page 20, May, 2012.



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Shenzhen River meander and fishponds respectively, to minimize impacts on fish ponds, potential visual impacts and bird flight path disturbance. In addition, animal passage will be provided to minimize ecological impact on terrestrial animals.”⁴

The Institute welcomes this innovative roadwork connection between Study Area A and B. We welcome similar approach or initiatives to be used in the other two connection points in relation to “*Widening of Ha Wan Tsuen Road*” between Study Area A and B and “*Possible Linkage*” between Study Area A and C. The latter two essential connection roadworks similarly will need to interact with the historic Shenzhen River and some fishponds or natural features in the south-east portion of Study Area A.

(G) Opportunities

Campus Planning

The proposal is to develop the Study Area A into a place for cross-border higher education, high-tech R&D and cultural and creative industries. The size of Study Area A of 88 ha is just sufficient for a university campus development and supporting facilities (compared with 60 ha for the Hong Kong University of Science and Technology and 137 ha for the Chinese University of Hong Kong). The ambition to put three activities into the area should be further reviewed. Accommodating more than one university is considered remote. As such would significantly affect the faculty space planning and dormitory space requirement estimation, Planning Department is recommended to take a more practicable approach.

Mixed-Used and Commercial Developments

Mixed-use developments could be considered and encouraged. It is an international trend to promote mixing of developments to foster cross-over innovation opportunities. As a 21st century academic precinct, the conventional land lot use designation practice by Planning Department should be critically reviewed. There is currently no significant residential element and this will make the area a deserted place in the evening. It will also make serious researchers, who are known to be dedicated and working late, hard to adapt to such segregated neighbourhood. Careful planning of the surrounding areas should be reviewed to support this development in terms of residential area and supporting facilities.

In general, the Institute considers that the maximum GFA of 60,000 square metres for commercial use in comparison to the overall maximum GFA of 1,200,000 square metres

⁴ Hong Kong Planning Department, Hong Kong Civil Engineering and Development Department, Urban Planning, Land and Resources Commission of Shenzhen Municipality and Arup, “*Planning and Engineering Study on Development of Lok Ma Chau Loop – Stage 2 Public Engagement Digest*”, page 24-25, May, 2012.



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may not be sufficient to enable vibrant commercial and retail facilities within the campus or Study Area A to support various interesting concepts such as “*Pedestrian Boulevard*” or to capture the “*Development Opportunities in Study Area B or Surrounding Areas.*” Indeed, we opined that the artist impression at the Stage Two Public Engagement Digest seem to suggest an overall image of an “industrial estate” instead of an unique, innovative and creative environment for educational, high-tech or cultural / creative activities.

Communal Facilities

For a targeted population of 47,000, we are of the opinion that the communal facilities, such as day care centre, nurseries or even kindergarten, clinics, town-hall, etc. shall be planned at least in accordance with Hong Kong Planning Standards & Guidelines.

Sports Facilities

A major sports facility, such as a stadium or football ground, should be included. Such may however strain the space planning even further.

Waterfront Planning

While the site is completely surrounded by water, the current campus plan does not allow much direct waterfront engagement and activity zone. The campus precinct seems to be “rounded up” by an outer ring of other uses, which negates potentials for the university to acquire a unique character of being close by water amongst all other universities in Hong Kong. A better waterfront planning should be considered.

Riverside Environment

There is also opportunity to upgrade the riverside of the Shenzhen River. The proposals to revitalize the Shenzhen River by creating river-side promenades and parks to be enjoyed by the public are welcome.

Integration with Shenzhen

Albeit technically difficult at the present stage, but as a master plan the proposal should allow for buffer zones for future infrastructural connection directly to Shenzhen when the border control issues are resolved in the future. Such zones can take the form of riverside amenities or parks at present.



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(H) Outline Zoning Plan – Plan for Extension?

We are of the opinion that the whole loop can be considered as one single CDA (or maybe 2-3 CDAs should the Government considers that there will be more than 1 tertiary institutions and other research facilities). With regard to the size of the entire Study Area A, a single or multiple-CDA approach will allow flexibility in design and planning. Those controls on prudent planning such as building heights, parks, plazas, PTI, treatment of water edge conditions can be detailed in the footnotes and the Explanatory Notes of the Outline Zoning Plan. The way how the current concept plan dictates building heights, sub-divisions of lots, designation of functions seems problematic. As such, we have stated our views and comments in the preceding paragraphs. Indeed, a lot of these parameters cannot be ascertained at present when the Government still not even know how many institutions will be allocated there. Consideration should be taken into what would be included into the area, with allowance for any future extension.

(I) Conclusion

The LMC loop is currently an undisturbed piece of land surrounded by farm land and natural reserve with wetlands of international significance. All steps should be taken to ensure that the character of the area is maintained and that any development will not adversely affect the inhabitants and natural reserve nearby. The Institute welcomes Planning Department to further review and refine the overall planning and land use design in response to the public consultation. We shall continue give our views and expert opinions to Planning Department and other Departments in the coming Stage Three Public Engagement in relation to urban planning, land use and architectural design aspects.

**The Hong Kong Institute of Architects
July 2012**