

## **ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE**

### **HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT**

#### **54QJ – New facilities building of the Hong Kong Sports Institute**

Members are invited to recommend to the Finance Committee the upgrading of remainder of **54QJ** (i.e. main works for the new facilities building of the Hong Kong Sports Institute) to Category A at an estimated cost of \$986.6 million in money-of-the-day prices.

#### **PROBLEM**

We need to carry out the main works for the new facilities building of the Hong Kong Sports Institute (HKSI).

#### **PROPOSAL**

2. The HKSI proposes to construct a new facilities building and renovate the vacated spaces of the existing HKSI sports complex within the current HKSI campus. The Secretary for Home Affairs, on the advice of the Director of Architectural Services, proposes to upgrade the main works of **54QJ** to Category A at an estimated cost of \$986.6 million in money-of-the-day (MOD) prices.

**/PROJECT .....**

## PROJECT SCOPE AND NATURE

3. The HKSI is located at Yuen Wo Road, Sha Tin. The project, located within the current HKSI campus, comprises a new facilities building and the renovation of the vacated spaces of the existing HKSI sports complex. The new facilities building is located between the rowing centre to the South and the swimming complex to the North with a site area of about 8 370 square metres (m<sup>2</sup>)<sup>1</sup>. It is expected to be three-storey high<sup>2</sup>, which is of similar height to the swimming complex, with a net operating floor area (NOFA)<sup>3</sup> of about 8 935 m<sup>2</sup>. The major facilities to be provided are as follows –

- (a) an around 1 400 m<sup>2</sup> multi-purpose column-free training hall suitable for a number of current and potential future sports, for example, table tennis, fencing, basketball, handball and futsal;
- (b) an around 400 m<sup>2</sup> multi-purpose training venue suitable for a number of current and potential future sports, for example, karatedo, judo, taekwondo, sanda and dance sports;
- (c) an around 3 330 m<sup>2</sup> scientific conditioning centre including two fitness training venues, an environmental chamber and a scientific assessment laboratory, which will be 169% larger than the existing area;
- (d) an around 850 m<sup>2</sup> sports medicine centre including treatment rooms, functional and mobility assessment

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<sup>1</sup> The site area would be 6 700 m<sup>2</sup> if greenery areas related to the project are excluded.

<sup>2</sup> The new facilities building will include Ground Floor, Mezzanine Floor, First Floor and Second Floor.

<sup>3</sup> NOFA is the floor area allocated to the users of a building for carrying out the intended activities. Unlike the construction floor area (CFA) which takes into account all areas within the building structure envelope, NOFA does not include areas for the basic facilities (if any) such as toilets, lift lobbies, stair halls, public or shared corridors, stairwells, escalators and lift shafts, pipe or services ducts, barrier-free access facilities, gender mainstreaming facilities, refuse rooms, flat roofs, car parking spaces, loading and unloading areas and mechanical plant rooms, etc.

and training areas as well as recovery facilities, which will be 29% larger than the existing area;

- (e) an around 180 m<sup>2</sup> sport psychology centre including a psychological and electroencephalogram testing laboratory as well as consultation rooms, which will be 47% larger than the existing area;
- (f) an around 370 m<sup>2</sup> sport biomechanics centre including both motion analysis and technology innovation laboratories, which will be 155% larger than the existing area;
- (g) an around 285 m<sup>2</sup> sport nutrition and monitoring centre including consultation rooms, a biochemistry laboratory and a DEXA (dual energy X-ray absorptiometry) body composition assessment room, which will be 149% larger than the existing area;
- (h) a 50-room sports residence area for visiting teams/exchange programmes, including 5 rooms for persons with disabilities; and
- (i) around 810 m<sup>2</sup> general offices.

4. In addition, as the facilities in the new facilities building will replace existing facilities on strength and conditioning, sports science and sports medicine in the sports complex, the HKSI will renovate and repurpose the vacated parts of the sports complex and provide a NOFA of around 2 935 m<sup>2</sup>. The major facilities to be provided are as follows –

- (a) an around 425 m<sup>2</sup> day rest room for athletes not living in the athletes' hostel, with a capacity for around 50 athletes at any one time;
- (b) an around 1 012 m<sup>2</sup> sports venue for athletes with disabilities;

/(c) .....

- (c) an around 402 m<sup>2</sup> multi-sports venue;
- (d) an around 154 m<sup>2</sup> seminar room (partitionable to two 75 m<sup>2</sup> rooms) with a full capacity of 100 people;
- (e) an around 71 m<sup>2</sup> meeting room (partitionable into two 35 m<sup>2</sup> rooms) with a full capacity of 40 people; and
- (f) around 871 m<sup>2</sup> general offices, storage space and changing rooms to accommodate current inadequate staff office and projected future staffing and operational needs.

5. The site plan, artist's impressions and floor plans of the new facilities building are at **Enclosures 1, 2 and 3** respectively.

6. The HKSI plans to commence the main works upon obtaining the Finance Committee (FC)'s funding approval for completion in around four years. The HKSI will strive to complete the new facilities building in mid-2024 and complete renovating and repurposing the vacated parts of the sports complex in mid-2025.

## JUSTIFICATION

7. The Government fully supports elite sports development. We established the Elite Athletes Development Fund (EADF) in 2011-12 to provide annual funding to the HKSI to train elite athletes in Hong Kong. With long-term and comprehensive support services, the overall performance of Hong Kong athletes has improved greatly in recent years. There have been remarkable achievements in various sports. The Hong Kong, China Delegation performed with distinction at the 2020 Tokyo Olympic Games (OG), achieving the best results of one gold, two silver and three bronze medals in Hong Kong history, with a number of athletes breaking Hong Kong records or attaining personal best results. The entire community was lifted by the excellent performance of our

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athletes. The facilities and support provided by the HKSI to elite athletes should stay abreast of the latest developments to continuously take forward elite sports development in Hong Kong effectively.

*(a) Significant increase in number of athletes*

8. The total number of athletes at the HKSI has almost doubled from 651 in 2007-08 to around 1 300 currently. In particular, the number of full-time athletes has increased from 153 in 2007-08 to 547 in 2021-22 (as at August 2021), representing an increase of about 258%. This is significant to the development of elite sports in Hong Kong because full-time athletes<sup>4</sup> have a higher chance in winning medals in major events.

9. In recent years, secondary schools and tertiary institutions have been providing more flexible education support to study athletes while “national sports associations” (NSAs) have been training young athletes in a more in-depth and comprehensive manner. These have helped us identify more junior athletes with potential and build a stronger feeder system to provide sufficient new forces to elite sports in Hong Kong. Over the past decade, there has been a significant upward trend in the number of junior elite athletes joining the feeder system as it has almost doubled from 206 in 2007-08 to 406 in 2021-22 (as at August 2021). Meanwhile, the number of full-time junior athletes has increased by 452% from 23 in 2007-08 to 127 in 2021-22 (as at August 2021).

10. In addition, the HKSI provides accommodation to elite athletes to ensure that they have full access to an elite sport lifestyle including speedy recovery after regular training and competitions. There are currently 211 rooms in the athletes’ hostel, providing around 446 hostel places in total. The HKSI converted 26 rooms of the 74 rooms for guest accommodation at the sports residence for use as athletes’ hostel. Since it is necessary for the HKSI to accommodate training partners and international teams during their training and exchange with elite athletes in Hong Kong, further conversion of guest accommodation for athletes’ use will not be feasible. Under the COVID-19 epidemic, coaches and support staff of the HKSI were accommodated at the sports residence if needed to enable full-time athletes to continue to actively

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<sup>4</sup> For example, all 46 athletes participating in the 2020 Tokyo OG were full-time athletes.

prepare for the OG and receive comprehensive support services during closed camps of the HKSI. It is proposed that the new facilities building will provide a 50-room guest residence. Upon its completion, the remaining rooms of the existing sports residence will be converted for use as athletes' hostel on a need basis.

*(b) Increase in number of elite sports*

11. The number of elite sports has increased from 11 in 2007-08 to the current 20 Tier A elite sports and 13 Tier B elite sports. To meet the needs arisen from the new elite sports, it is necessary for the HKSI to develop new training facilities. As sports will continue to enter and leave the elite system due to their performance in the international arena, any development of new training facilities must include multi-functionality.

12. The Government has implemented the long-term support system for elite disability sports in 2019-20. With the increased requirements for disability sports and the continuing increase in full-time able-bodied and disabled athletes, the HKSI must add appropriate facilities to meet such needs.

*(c) Support on Sports Science and Sports Medicine*

13. The outstanding achievements of Hong Kong athletes hinge on the provision of professional training and support services. As quite a number of Hong Kong athletes have successfully attained higher world rankings, the relevant sports science and sports medicine support services become more crucial in enhancing the effectiveness of training, avoiding injuries and enabling speedy recovery after competitions for athletes. Support on sports science and sports medicine is very critical to helping our top athletes boost their performance to increase their chances to attain medals in major international games such as the OG and the Asian Games. The HKSI has also rolled out dedicated medical support for elite sports.

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14. The existing sports complex originally built in 1982 was refurbished in 2009 using the existing structural framework. However, the structure built around 40 years ago has restricted the introduction of facilities related to sports science and sports medicine and limited the HKSI's provision of sports science and sports medicine support to athletes. Meanwhile, the significant increase in the number of elite athletes and elite sports has increased the demand for sports science and sports medicine, which has resulted in a 242% increase in the number of sports science and medicine servicing sessions provided to athletes from 23 660 in 2007 to 80 813 in 2020. The HKSI will need the construction of the new facilities building to meet the spacing and building requirements of the sports science and sports medicine facilities.

## FINANCIAL IMPLICATIONS

15. The HKSI estimates the capital cost of this project to be \$986.6 million in MOD prices, broken down as follows –

	<b>\$ million (in MOD prices)</b>
(a) Foundation	84.4
(b) Building <sup>5</sup>	439.2
(c) Building services <sup>6</sup>	239.5
(d) Drainage	11.8
(e) External and landscaping works	5.4
(f) Energy conservation, green and recycled features	13.4

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<sup>5</sup> Building works cover construction of superstructure of the new facilities building and the renovation and repurposing works at the sports complex.

<sup>6</sup> Building services works cover electrical installations, ventilation and air-conditioning installations, fire services installations, lift installations and other installations of professional equipment.

		<b>\$ million (in MOD prices)</b>
(g)	Furniture and equipment	75.4
(h)	Consultants' fees for	13.5
	(i) contract administration	12.2
	(ii) management of resident site staff (RSS)	1.3
(i)	Remuneration of RSS	12.6
(j)	Contingencies	91.4
Total		986.6

16. The HKSI will engage consultants to undertake contract administration, RSS management and site supervision of the project. A detailed breakdown of the estimates for consultants' fees and RSS costs by man-months is at **Enclosure 4**.

17. The construction floor area (CFA) of this project is approximately 18 557 m<sup>2</sup>. The estimated construction unit cost, represented by the building and building services costs, is around \$36,574 per m<sup>2</sup> of CFA in MOD prices. We consider that the estimated construction unit cost is reasonable as compared with similar projects built by the Government.

18. Subject to funding approval, the HKSI plans to phase the expenditure as follows –

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Year	\$ million (in MOD prices)
2022-23	86.8
2023-24	309.3
2024-25	450.4
2025-26	130.7
2026-27	9.4
Total	986.6

19. The HKSI has derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period of 2022 to 2027. As the HKSI can clearly define the scope of the works in advance, it will deliver the construction works through a lump-sum contract. The contract will provide terms for price adjustment.

20. The HKSI will absorb the additional recurrent costs associated with this project. The proposal will not increase the recurrent financial burden of the Government.

## **PUBLIC CONSULTATION**

21. The project will be conducted within the HKSI campus. There are no residential developments in the immediate vicinity of the project. The project will not affect residents nearby. In April to June 2017, the HKSI held numerous meetings to listen to the views of stakeholders in the sports sector, including the Sports Federation and Olympic Committee of Hong Kong, China, NSAs, coaches and athletes. These views have been given full consideration by the HKSI in preparing for the new facilities building.

22. With the support of the Panel on Home Affairs and upon the recommendation of the Public Works Subcommittee (PWSC), the FC approved on 2 July 2020 the funding allocation pertaining to the pre-construction activities.

23. On 10 August 2021, the Chief Executive announced various measures conducive to the sustainable development of sports in Hong Kong, including expediting the new facilities building project of the HKSI. The Government will consult the PWSC and strive to have the funding approved by the FC before the current term of the Legislative Council ends in late October 2021, so that works can commence as early as possible. The related measures are well received and generally supported by the sports sector and members of the public.

24. We consulted the Panel on Home Affairs on the related main works on 27 August 2021. Members supported submitting the funding proposal to the PWSC for consideration.

## **ENVIRONMENTAL IMPLICATIONS**

25. This project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The HKSI completed a Preliminary Environmental Review for the project and concluded that the project will not cause long-term environmental impacts. The HKSI has included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts during construction.

26. The HKSI will make provisions in the relevant contract, requiring contractors to adopt suitable mitigating measures during construction in order to control noise, dust and site run-off nuisances to within established standards and guidelines. These measures include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and provision of wheel-washing facilities to prevent dust nuisance, and proper treatment of site runoff to avoid illegal effluent discharge.

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27. At the planning and design stages, the HKSI has considered measures to reduce the generation of construction waste where possible. These measures include the use of metal site hoarding and signboards, which can be reused in other construction projects or recycled. In addition, the HKSI will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities<sup>7</sup>. The HKSI will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

28. At the construction stage, the HKSI will require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. The HKSI will ensure that the day-to-day operations on site comply with the approved plan. The HKSI will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. The HKSI will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

29. The HKSI estimates that the project will generate in total 13 100 tonnes of construction waste. Of these, 2 620 tonnes (20.0%) of the inert construction waste will be reused on site and 8 515 tonnes (65.0%) of inert construction waste will be delivered to public fill reception facilities for subsequent reuse. The HKSI will dispose of the remaining 1 965 tonnes (15.0%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at public fill reception facilities and landfill sites is estimated to be \$1 million for this project (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills as

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<sup>7</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

### **HERITAGE IMPLICATIONS**

30. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

### **LAND ACQUISITION**

31. This project does not require any land acquisition.

### **ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES**

32. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular –

- (a) variable speed drive for chillers;
- (b) heat pumps;
- (c) demand control of supply air;
- (d) energy reclaim of exhaust air;
- (e) photovoltaic system; and
- (f) solar hot water system.



33. The total estimated additional cost for adopting the above features is around \$13.4 million (including the \$6 million for energy efficient features), which has been included in the cost estimate for this project. The energy efficient features will achieve 12.0% energy savings in the annual energy consumption with a payback period of about eight years.

34. For greening features, the HKSI would follow the master landscape plan of the HKSI campus in its planning, design and implementation. Greening would be provided in the vicinity of the new facilities building to complement the overall planning of greening features in the campus.

## BACKGROUND INFORMATION

35. On 2 July 2020, the FC approved the upgrading of part of **54QJ**, entitled “Pre-construction activities for new facilities building of the Hong Kong Sports Institute” to Category A at an approved project estimate of \$54.7 million in MOD prices.

36. There are 104 trees within the site boundary of this project. None of these trees are important trees<sup>8</sup>. 34 trees will be preserved and 46 trees will be transplanted to other areas within the HKSI campus and other facilities of the Leisure and Cultural Services Department. 24 trees will need to be felled due to the assessment results. The HKSI will incorporate planting proposals as part of this project, including planting 24 trees, and laying around 630 m<sup>2</sup> of grassed area and grass pavers.

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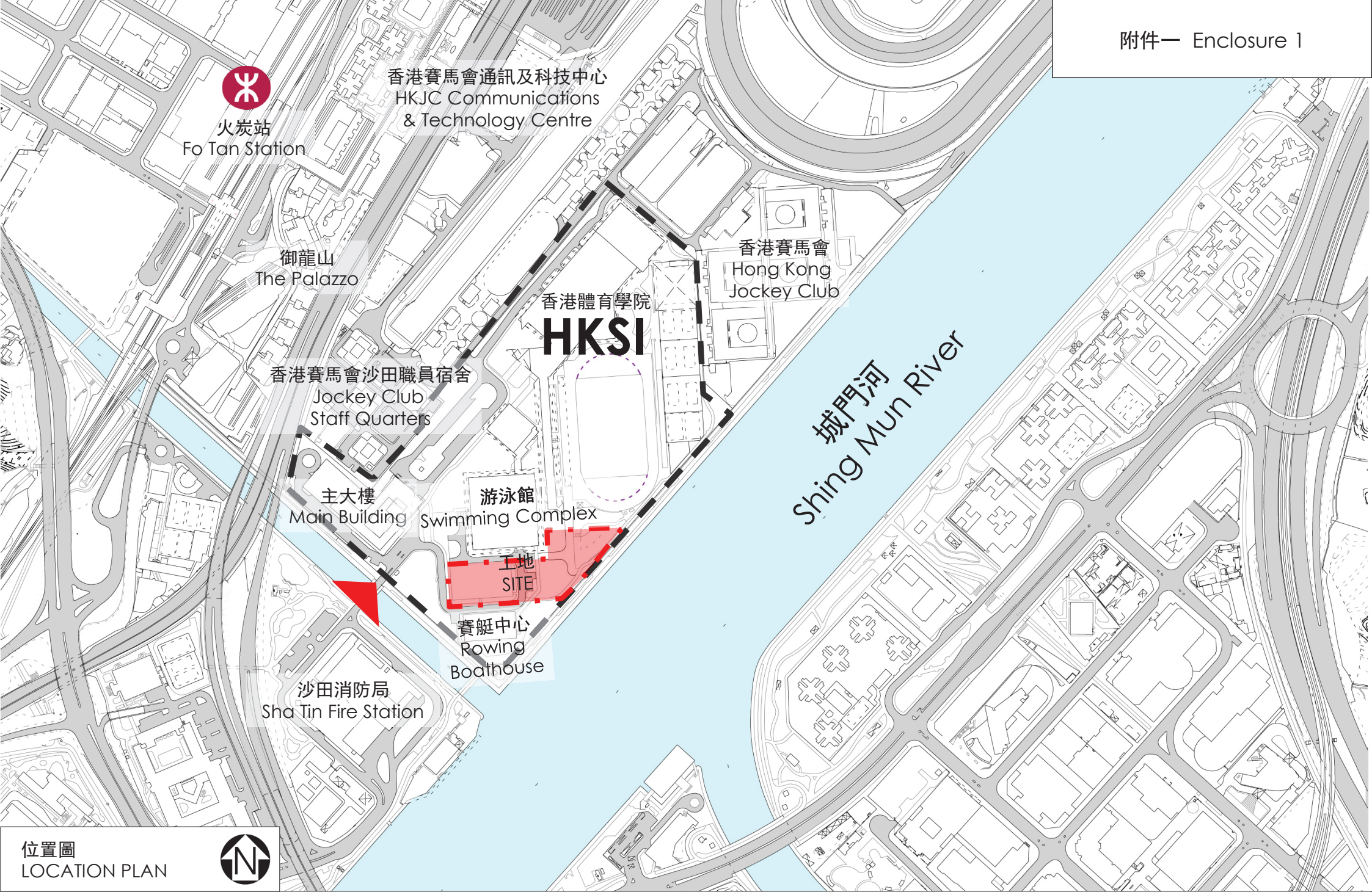
<sup>8</sup> “Important tree” refers to trees set out in the Register of Old and Valuable Trees, or any other tree that meets one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding forms (taking account of overall tree sizes, shape and any special feature), e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal to or exceeding 1.0 metre (measured at 1.3 metres above ground level), or with height/canopy spread of or exceeding 25 metres.

37. We estimate that the proposed main works will create about 310 jobs (270 for labourers and 40 for professional or technical staff) providing a total employment of 5 350 man-months.

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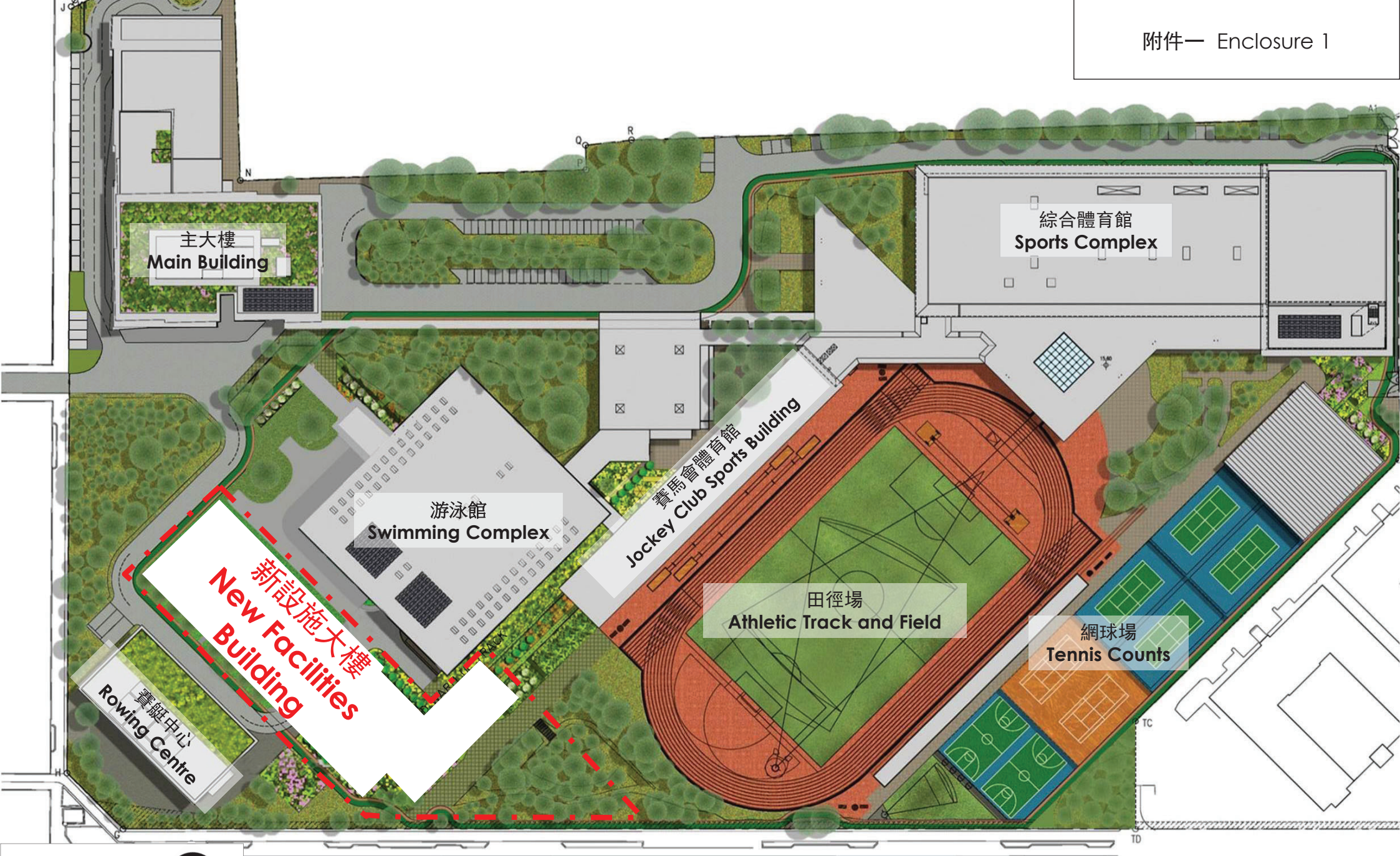
**Home Affairs Bureau  
September 2021**



位置圖  
LOCATION PLAN







工地平面圖  
SITE PLAN







從城門河岸望向大樓的構思圖  
PERSPECTIVE VIEW FROM SHING MUN RIVERBANK (ARTIST'S IMPRESSION)

540J 香港體育學院新設施大樓  
NEW FACILITIES BUILDING OF THE HONG KONG SPORTS INSTITUTE

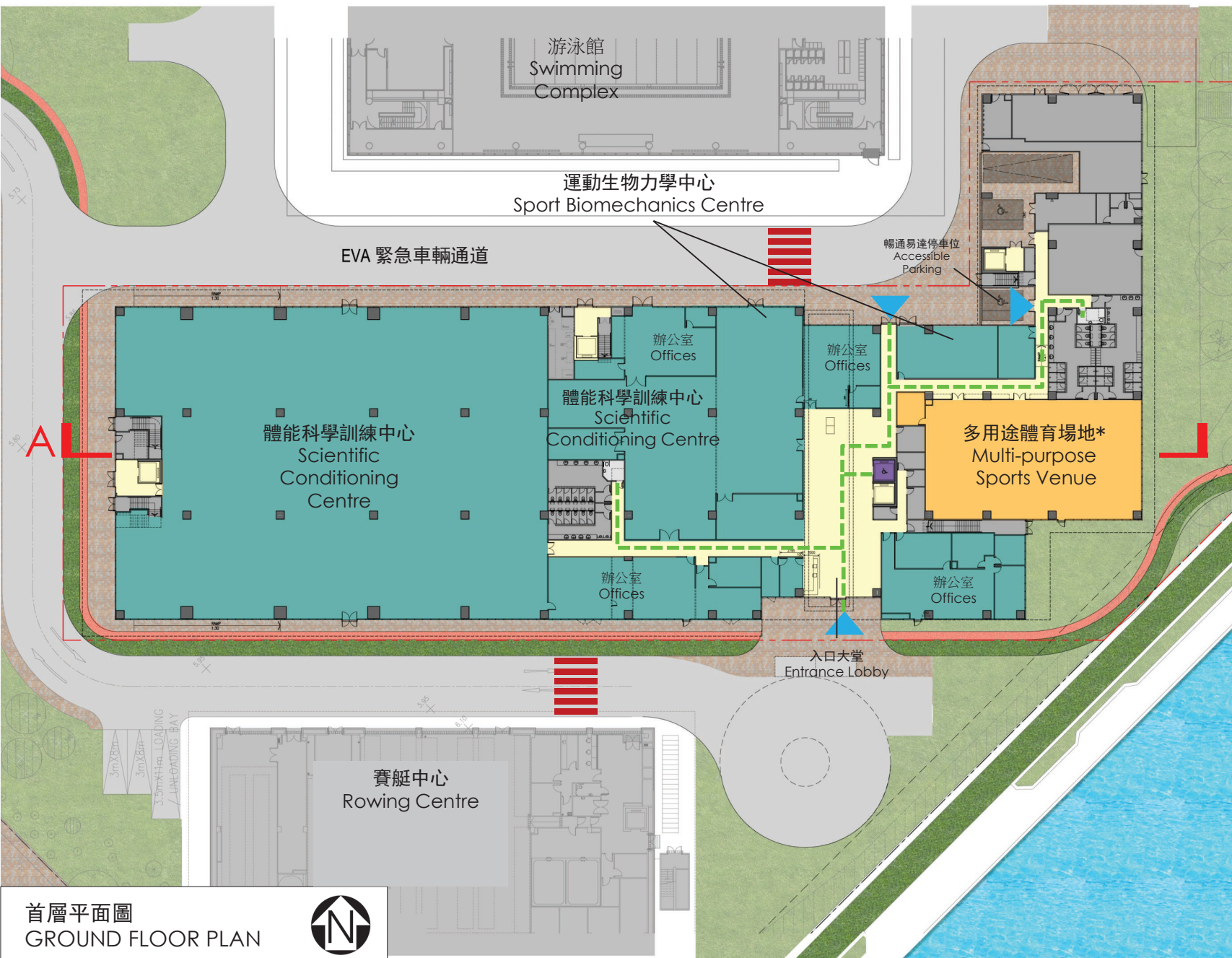




從主大樓望向大樓的構思圖  
PERSPECTIVE VIEW FROM MAIN BUILDING (ARTIST'S IMPRESSION)

540J 香港體育學院新設施大樓  
NEW FACILITIES BUILDING OF THE HONG KONG SPORTS INSTITUTE





LEGEND 圖例

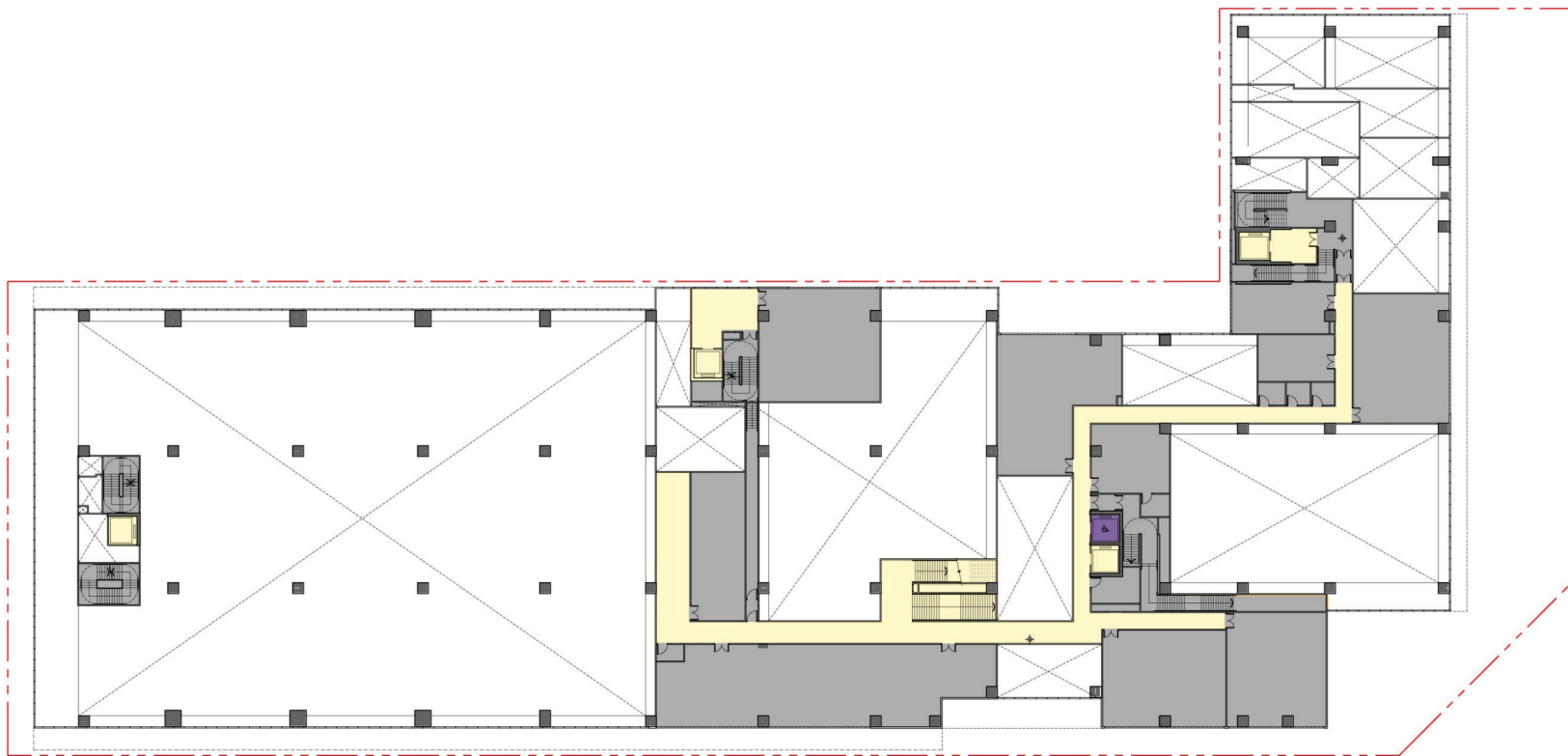
- ▲ 無障礙出入口  
Barrier-Free Entrance/Exit
- 園景綠化  
Landscaped Area
- 工地界線  
Site Boundary
- 車道  
Driveway
- 行人過路處  
At-grade Pedestrian Crossing
- 訓練用地  
Sports Training
- 精英訓練科技科  
Elite Training Science & Technology Division
- 走廊/升降機  
Corridor/Lifts
- 機房/後勤配套  
Plant Rooms/Support Areas
- 暢通易達更衣室及洗手間  
& Toilet
- 暢通易達升降機  
Accessible Lift
- 無障礙通道  
Barrier-Free Access

首層平面圖  
GROUND FLOOR PLAN

\* 多用途體育場地適合供多種現有和未來可能發展的體育項目使用，例如空手道、柔道、跆拳道、散打及體育舞蹈  
Multi-purpose Sports Venue is suitable for a number of current and potential future sports, for example, karatedo, judo, taekwondo, sanda and dance sports

LEGEND 圖例

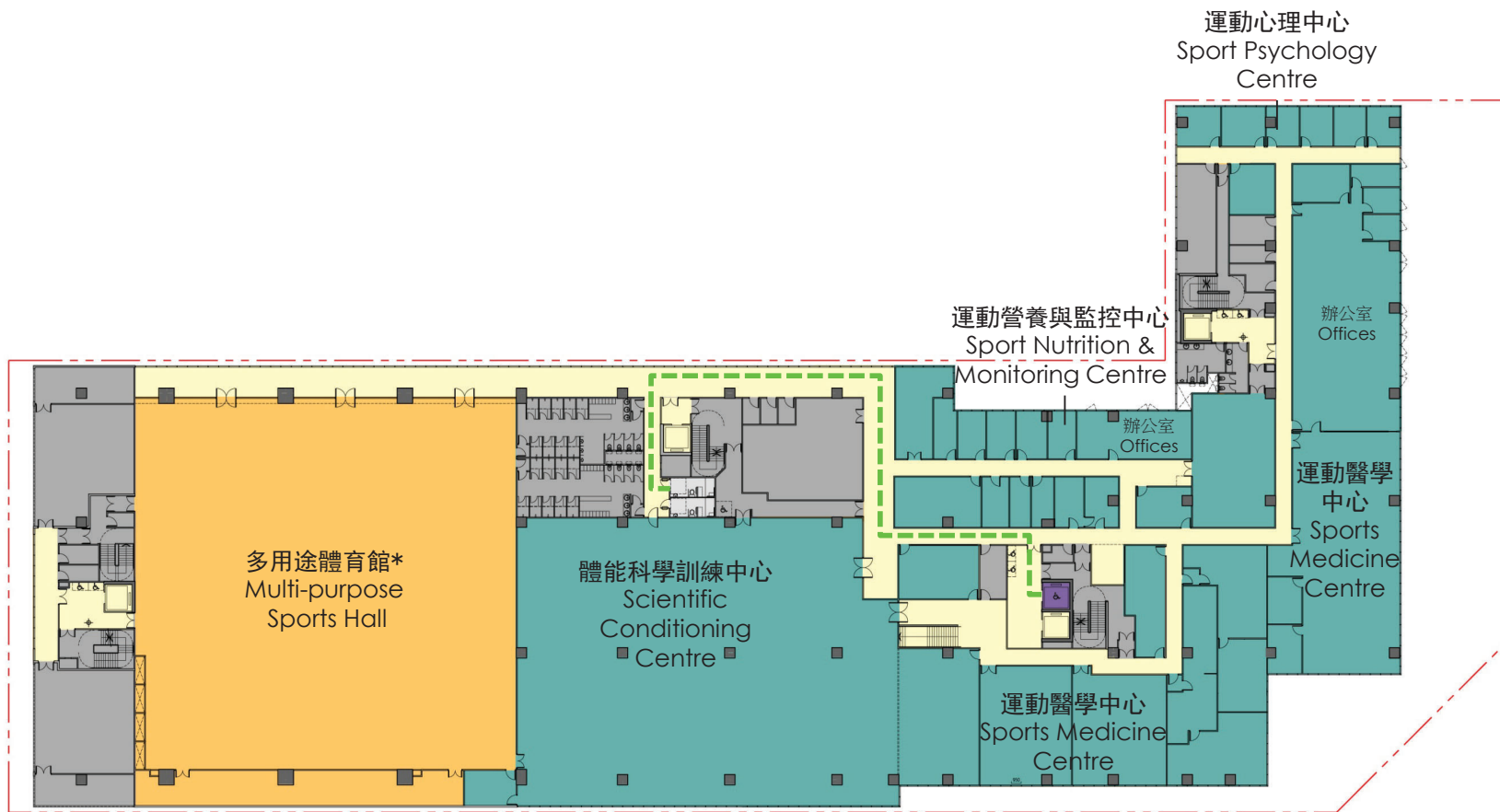
-  工地界線  
Site Boundary
-  走廊/升降機  
Corridor/Lifts
-  機房/後勤配套  
Plant Rooms/Support Areas
-  高淨空房間的上面空間  
Empty Space Above High  
Headroom Space
-  暢通易達升降機  
Accessible Lift



夾層平面圖  
MEZZANINE FLOOR PLAN







LEGEND 圖例

- - - 工地界線  
Site Boundary
- 訓練用地  
Sports Training
- 精英訓練科技科  
Elite Training Science & Technology Division
- 走廊/升降機  
Corridor/Lifts
- 機房/後勤配套  
Plant Rooms/Support Areas
- 暢通易達更衣室及洗手間  
Accessible Changing Room & Toilet
- 暢通易達升降機  
Accessible Lift
- - - 無障礙通道  
Barrier-Free Access

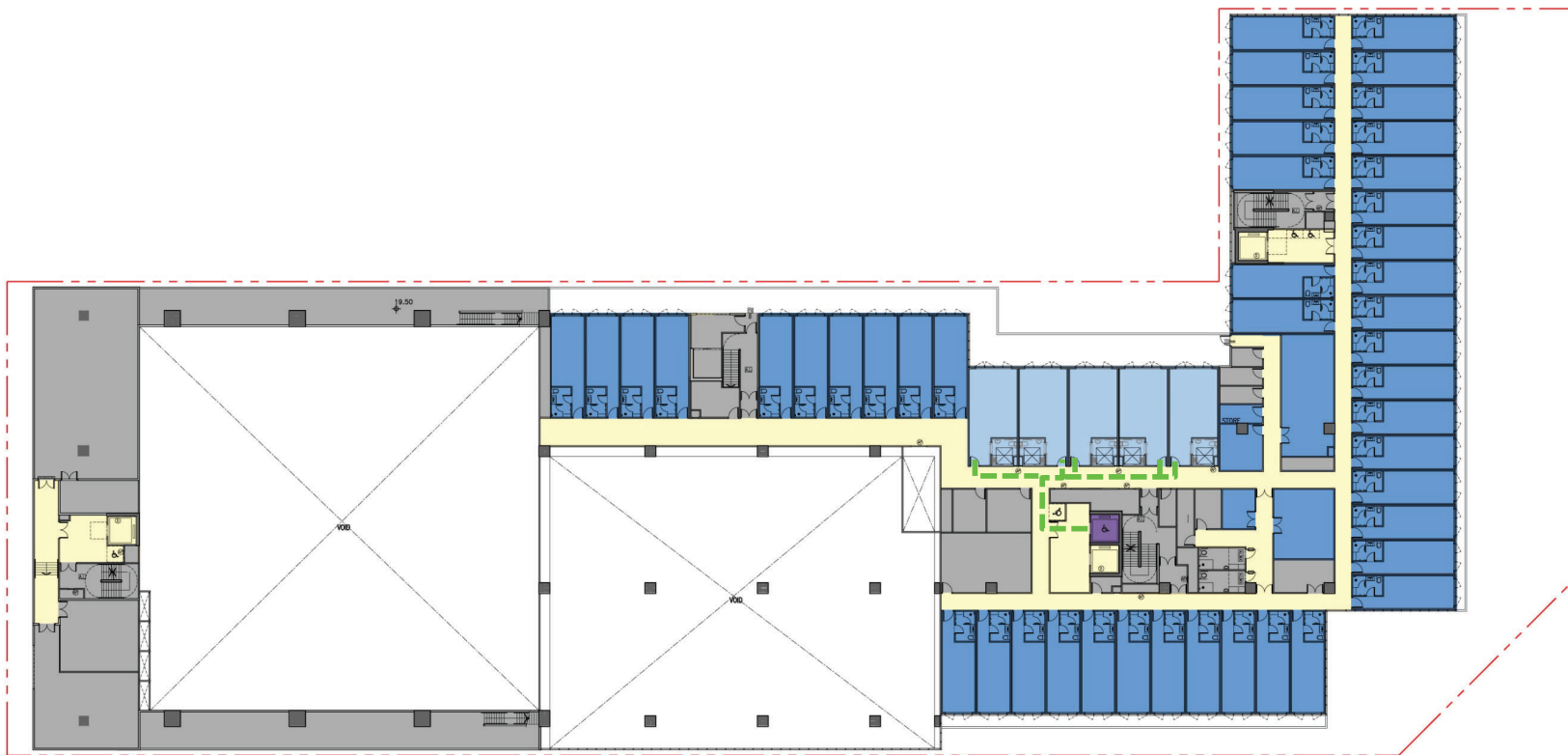
一層平面圖  
FIRST FLOOR PLAN



\* 多用途體育館適合供多種現有和未來可能發展的體育項目使用，例如乒乓球、劍擊、籃球、手球及五人足球  
Multi-purpose Sports Hall is suitable for a number of current and potential future sports, for example, table tennis, fencing, basketball, handball and futsal

LEGEND 圖例

- - - 工地界線  
Site Boundary
- 體育旅舍  
Sports Residence
- 暢通易達體育旅舍  
Accessible Sports Residence
- 走廊/升降機  
Corridor/Lifts
- 機房/後勤配套  
Plant Rooms/Support Areas
- 高淨空房間的上面空間  
Empty Space Above High Headroom Space
- 暢通易達升降機  
Accessible Lift
- - - 無障礙通道  
Barrier-Free Access

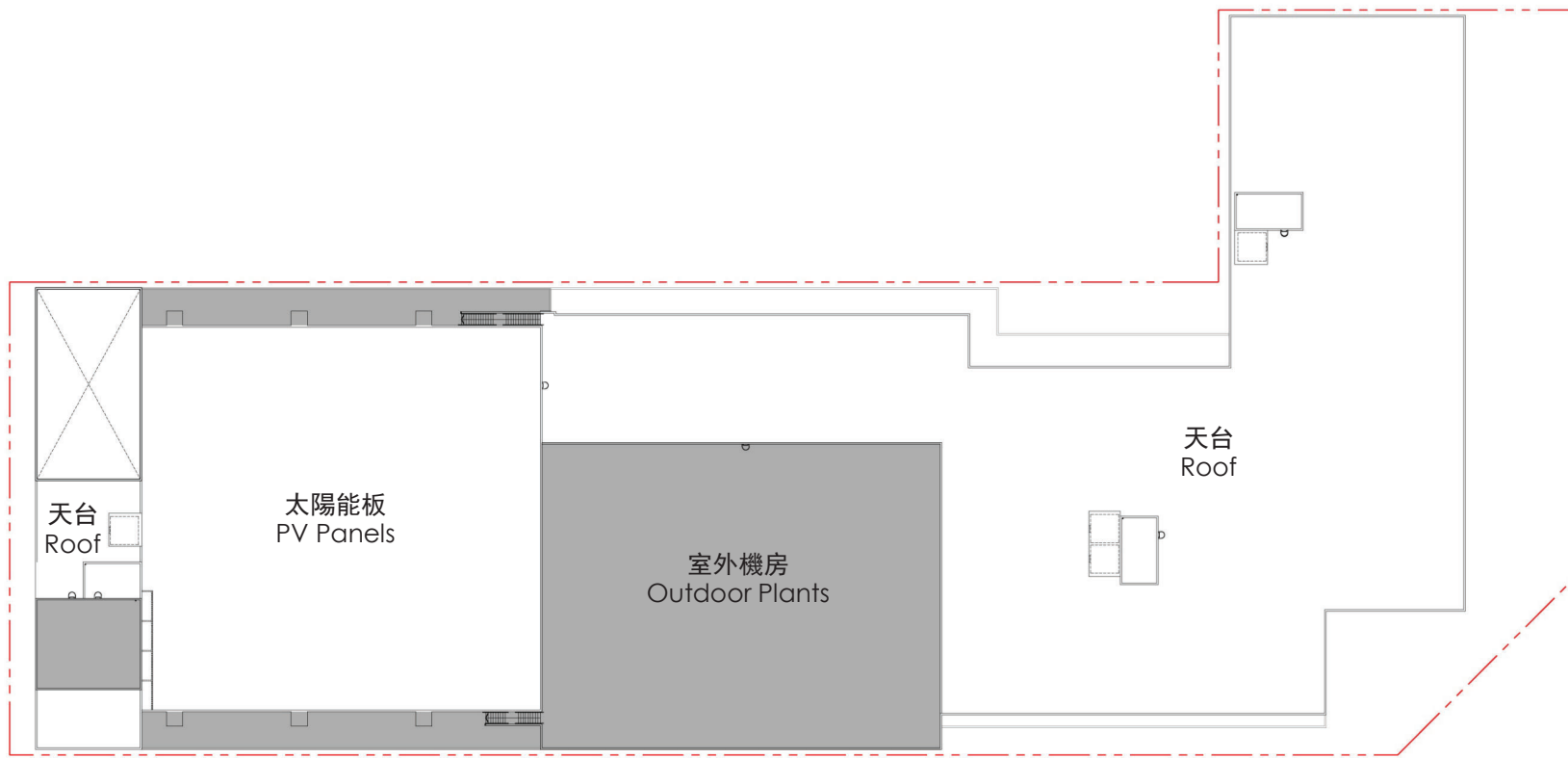


二層平面圖  
SECOND FLOOR PLAN



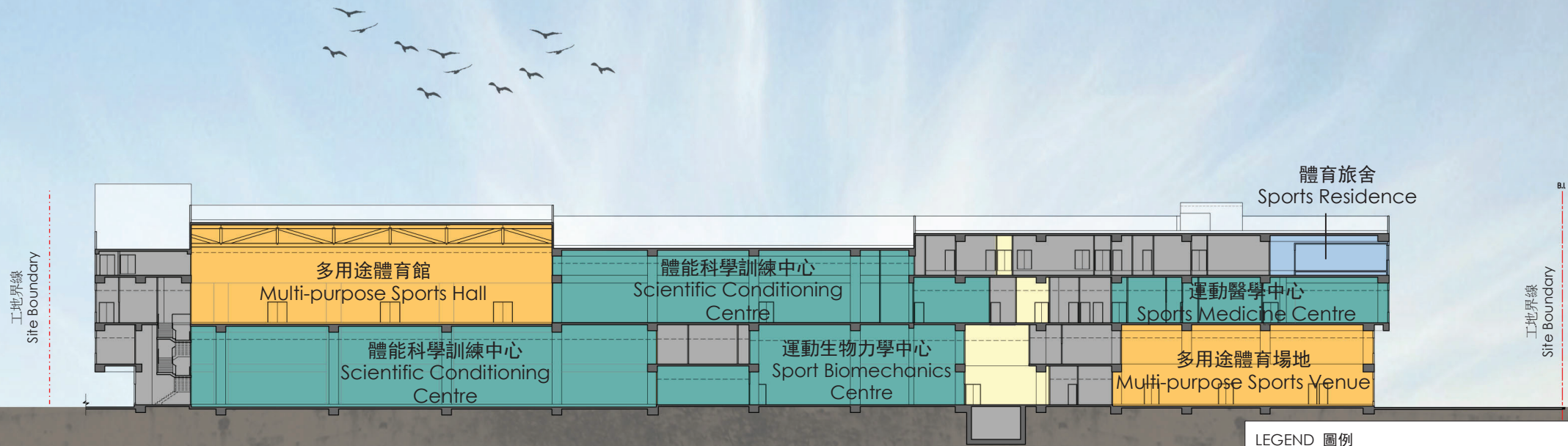
LEGEND 圖例

- 工地界線  
Site Boundary
- 機房  
Plant Rooms



天台平面圖  
ROOF FLOOR PLAN





A-A 剖面圖  
SECTION A-A

540J 香港體育學院新設施大樓  
NEW FACILITIES BUILDING OF THE HONG KONG SPORTS INSTITUTE

LEGEND 圖例

- 訓練用地  
Sports Training
- 精英訓練科技科  
Elite Training Science & Technology Division
- 體育旅舍  
Sports Residence
- 走廊/升降機  
Corridor/Lifts
- 機房/後勤配套  
Plant Rooms/Support Areas

### 54QJ – New facilities building of the Hong Kong Sports Institute

#### Breakdown of estimates for consultants' fees and resident site staff costs (in September 2021 prices)

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' staff costs <sup>(Note 2)</sup>	Professional	-	-	-	7.1
	Technical	-	-	-	3.7
				Sub-total	10.8#
(b) Resident site staff (RSS) costs <sup>(Note 3)</sup>	Professional	-	-	-	-
	Technical	252	14	1.6	12.2
				Sub-total	12.2
Comprising –					
(i) Consultants' fees for management of RSS				1.1#	
(ii) Remuneration of RSS				11.1#	
				Total	<u>23.0</u>

\* MPS = Master Pay Scale

#### Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of RSS supplied by the consultants (as at now, MPS point 14 = \$30,235 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **56QJ** (i.e. pre-construction activities for the HKSI new facilities building). The assignment will only be executed subject to the Finance Committee's funding approval to upgrade **54QJ** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.

#### Remarks

The figures in this Enclosure are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 15.