

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Education – Primary

272ES – A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong

Members are invited to recommend to the Finance Committee the upgrading of **272ES** to Category A at an estimated cost of \$434.8 million in money-of-the-day prices.

PROBLEM

We need to construct a secondary school at the Development at Anderson Road of Kwun Tong for the reprovisioning of Maryknoll Secondary School (MSS).

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education (SED), proposes to upgrade **272ES** to Category A at an estimated cost of \$434.8 million in money-of-the-day (MOD) prices for the construction of a secondary school premises at the Development at Anderson Road of Kwun Tong for the reprovisioning of MSS.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of works comprises —
- (a) 30 classrooms;
 - (b) three small group teaching rooms;
 - (c) six special rooms, comprising a music room, a visual arts room, a computer assisted learning room, a multi-purpose room and two integrated science laboratories;
 - (d) 11 equipment-based multi-purpose rooms, comprising a biology laboratory, a preparation room for biology laboratory, a physics laboratory, a chemistry laboratory, a preparation room for physics and chemistry laboratory, a dark room for physics, a design and technology workshop, a needlework room, a home management room, a geography room and a computer room;
 - (e) a library-cum-language room;
 - (f) a guidance activity room;
 - (g) two interview rooms;
 - (h) a staff room and a staff common room;
 - (i) a conference room;
 - (j) an assembly hall;
 - (k) a student activity centre;
 - (l) a covered playground;
 - (m) a multi-purpose area;
 - (n) two basketball courts;
 - (o) a running track¹;

/(p)

¹ A 78-metre running track will be provided to make optimal use of campus space.

- (p) a green corner²; and
- (q) ancillary facilities including an accessible/fireman's lift, facilities for the disabled, a tuck shop-cum-central portioning area, stores and toilets, etc.

4. The proposed new school premises, with a site area of about 7 500 square metres (m²), will meet the planning target of providing 2 m² of open space per student. The site and location plans, floor plans, sectional drawings, an artist's impression and a barrier-free access plan for the project are at Enclosures 1 to 5.

5. Subject to the funding approval of the Finance Committee (FC), we plan to commence construction works in the third quarter of 2019 the earliest for completion in the second quarter of 2022.

JUSTIFICATION

6. It is the Government's plan to, based on the needs of the schools, improve the physical conditions and facilities of school premises not built according to the prevailing standards through reprovisioning and redevelopment projects. MSS, currently occupying a site area of about 2 800 m² at 45 Choi Ha Road, Ngau Tau Kok, Kowloon, was built in 1966. The school currently does not have separate biology laboratory, needlework room, guidance activity room, career master's office and multi-purpose area. Some of the existing facilities such as the integrated science laboratory, design and technology workshop, staff room, and staff common room are undersized according to prevailing standards. Due to site constraints, the school does not have the additional space required for infrastructure upgrading or in-situ redevelopment. Reprovisioning is considered to be the most effective way to upgrade the facilities of the school and improve the teaching and learning environment for teachers and students.

7. Upon completion of the proposed capital works project, MSS, which currently operates 24 classes, may operate up to 30 classes in the new school premises.

/8.

² A green corner is a designated area inside the campus to encourage students to develop an interest in horticulture and natural environment. The green corner may include planting beds.

8. MSS shall cease to occupy its existing premises at 45 Choi Ha Road, Ngau Tau Kok, Kowloon after reprovisioning. In line with the prevailing reprovisioning arrangement, the school sponsoring body of MSS shall then surrender the land together with the existing school premises to the Government, which will be handled according to the established mechanism. The Education Bureau (EDB) will consider factors including the size, location, physical conditions, etc. of the to-be-vacant premises, and the educational needs and relevant policy initiatives with a view to assessing whether the premises is needed to be reallocated for school or other educational use. Once it is confirmed that the premises is no longer required by EDB for reallocation for school uses, EDB would inform the Planning Department and other relevant departments (such as Lands Department) for consideration of suitable alternative long-term uses in accordance with the central clearing house mechanism.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$434.8 million in MOD prices, broken down as follows -

	\$million (in MOD prices)
(a) Foundation	22.2
(b) Building ³	219.0
(c) Building services	81.5
(d) Drainage	16.4
(e) External works	39.8
(f) Additional energy conservation, green and recycled features	8.3

/(g)

³ Building works cover construction works of superstructure of the building.

(g)	Furniture and equipment (F&E) ⁴	6.6
(h)	Consultants' fees for contract administration	1.5
(i)	Contingencies	39.5
Total:		<u>434.8</u>

10. We propose to engage consultants to undertake contract administration of the project. A detailed breakdown of the estimate for consultants' fees is at Enclosure 6. The construction floor area (CFA) of the project is about 13 300 m². The estimated construction unit cost, represented by the building and building services costs, is \$22,594 per m² of CFA in MOD prices. We consider this comparable to that of similar projects built by the Government.

11. Subject to funding approval, we plan to phase the expenditure as follows –

Year	\$ million (MOD)
2019 – 2020	8.4
2020 – 2021	74.8
2021 – 2022	120.1
2022 – 2023	137.0
2023 – 2024	66.2
2024 – 2025	22.6

/Year

⁴ The estimated cost of F&E is prepared with reference to the F&E reference list provided by EDB for a new 30-classroom secondary school adopting the standard schedule of accommodation. The actual cost will be subject to a survey on the conditions of the existing F&E.

Year	\$ million (MOD)
2025 – 2026	5.7
	<hr/> 434.8 <hr/>

12. We have 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 2019 to 2026. We will deliver the construction works through a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustment.

13. The cost of furniture and equipment for the project, estimated to be about \$6.6 million, will be borne by the Government according to the existing policy. We estimate the annual recurrent expenditure arising from this project to be \$68.5 million upon full commissioning of the new school premises.

PUBLIC CONSULTATION

14. We consulted the Social Services Committee of the Kwun Tong District Council on 22 November 2018 on this reprovisioning project. Members of the Committee supported the project.

15. We consulted the Legislative Council Panel on Education on 1 February 2019. While Members of the Panel supported the project and did not raise any objection to the submission of the funding proposal to the Public Works Subcommittee (PWSC), the Panel passed two motions and asked for supplementary information about school building projects. The Administration issued a consolidated response to the two motions and provided the required supplementary information to the Panel on 19 March 2019.

ENVIRONMENTAL IMPLICATIONS

16. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We completed a Preliminary Environmental Review (PER) in November 2018. The PER recommended the

/installation

installation of insulated windows for noise sensitive rooms exposed to traffic noise exceeding the limits set out in the Hong Kong Planning Standards and Guidelines, in addition to the standard provision of air-conditioning for all standard teaching facilities. With such mitigation measures in place, the project will not be exposed to long-term environmental impacts. We have included in the project estimates the cost to implement these mitigation measures.

17. During construction, we will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silencers, mufflers, acoustic linings or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

18. At the planning and design stages, we have considered measures to reduce the generation of construction waste where possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) 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 facilities⁵. We 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.

19. At the construction stage, we 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. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

/20.

⁵ 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 in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

20. We estimate that the project will generate in total 13 770 tonnes of construction waste. Of these, we will reuse 2 300 tonnes (16.7%) of inert construction waste on site and deliver 9 660 tonnes (70.2%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 1 810 tonnes (13.1%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$1.0 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 stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap.354N)).

HERITAGE IMPLICATIONS

21. 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

22. This project does not require any land acquisition.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

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

- (a) heat recovery fresh air pre-conditioners in the air-conditioned space for heat energy reclaim of exhaust air;
- (b) photovoltaic system; and
- (c) light tubes.

24. For greening features, there will be landscaping, vertical greening and green roof at appropriate areas for environmental and amenity benefits.

25. For recycled features, we adopt a rainwater harvesting system for landscape irrigation with a view to conserving water.

26. The total estimated additional cost for adoption of the above features is around \$8.3 million (including \$0.8 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 5.8% energy savings in the annual energy consumption with a payback period of about ten years.

BACKGROUND INFORMATION

27. We upgraded **272ES** to Category B in September 2014. We engaged term contractor to undertake ground investigation, and consultants to undertake various services at a total cost of about \$2.8 million. The services and works provided by the term contractor and consultants were funded under block allocation **Subhead 3100GX** “Project feasibility studies, minor investigations and consultants’ fees for items in Category D of the Public Works Programme”. The consultants and contractor have completed all the above consultancy services and works for the pre-contract stage.

28. There is no tree within the project boundary. Yet, there are nine trees along On Sau Road which will be affected by the construction of the vehicular ingress/egress for the school. All the trees will be transplanted into the school and all trees transplanted are not important trees⁶. We will incorporate planting proposals as part of the project, including the planting of about 18 trees, 300 bamboos, 2 400 shrubs, 140 climbers, 15 800 groundcovers, and 580 m² of grassed area.

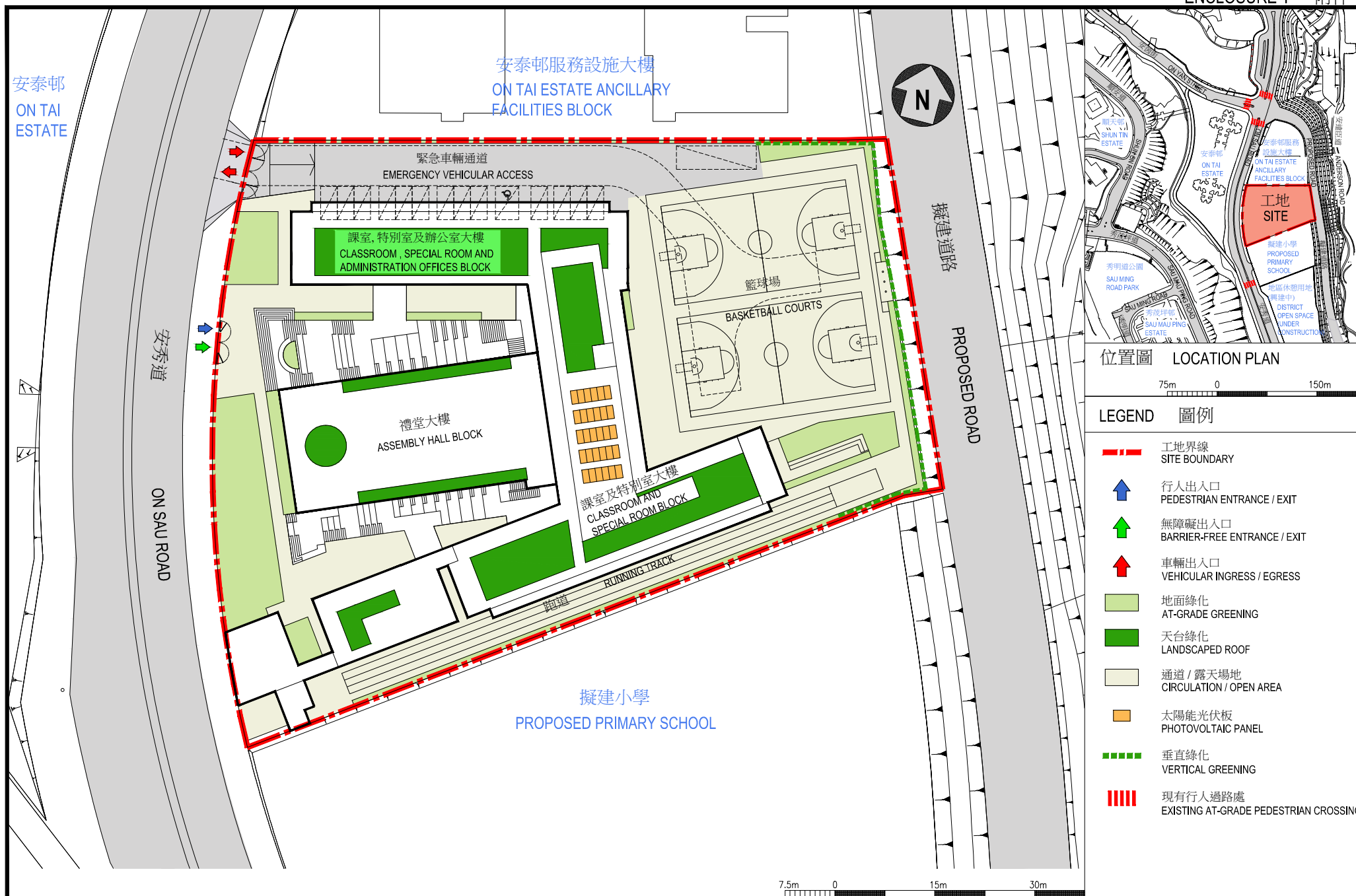
/ 29.

⁶ “Important trees” refer to trees in the Register of Old and Valuable Trees, or any other trees that meet 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 form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.

29. We estimate that the proposed works will create about 285 jobs (265 for labourers and 20 for professional or technical staff) providing a total employment of 3 300 man-months.

Education Bureau
March 2019



工地平面圖
SITE PLAN

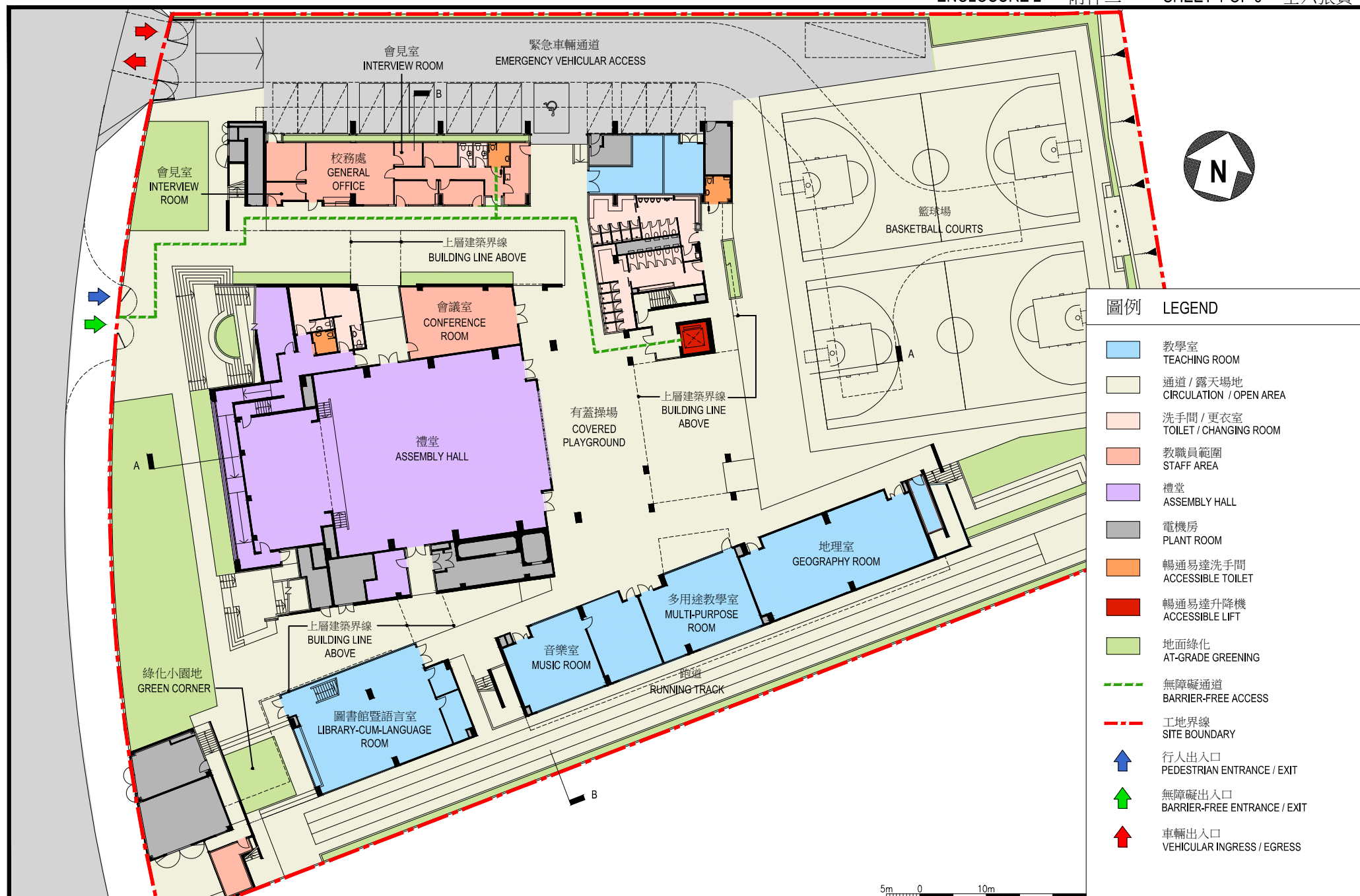
272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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地下平面圖
GROUND FLOOR PLAN

272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

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一樓平面圖
FIRST FLOOR PLAN

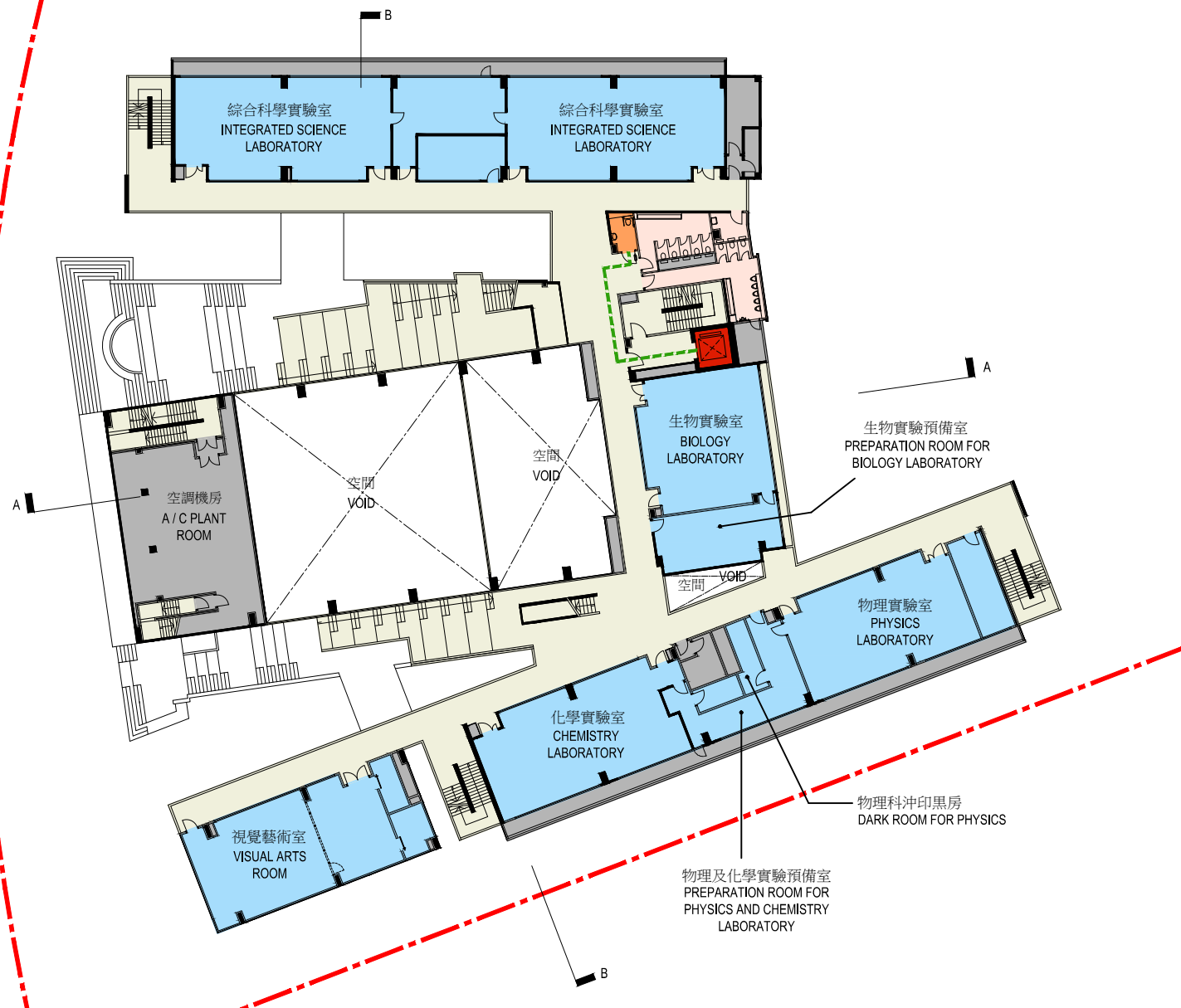
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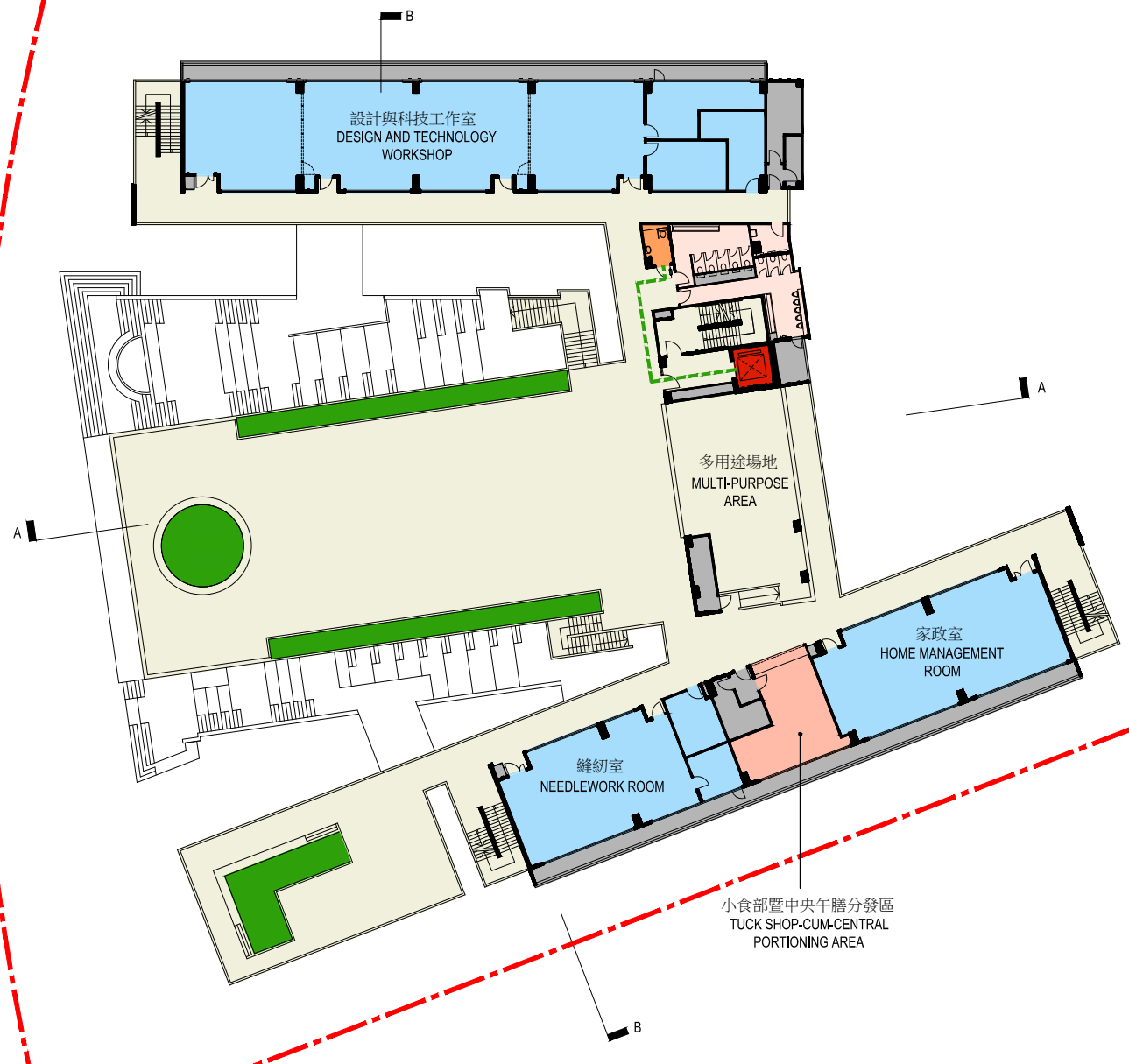


圖例 LEGEND

- 教學室
TEACHING ROOM
- 通道 / 露天場地
CIRCULATION / OPEN AREA
- 洗手間 / 更衣室
TOILET / CHANGING ROOM
- 電機房
PLANT ROOM
- 暢通易達洗手間
ACCESSIBLE TOILET
- 暢通易達升降機
ACCESSIBLE LIFT
- 無障礙通道
BARRIER-FREE ACCESS
- 工地界線
SITE BOUNDARY



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三樓平面圖
THIRD FLOOR PLAN

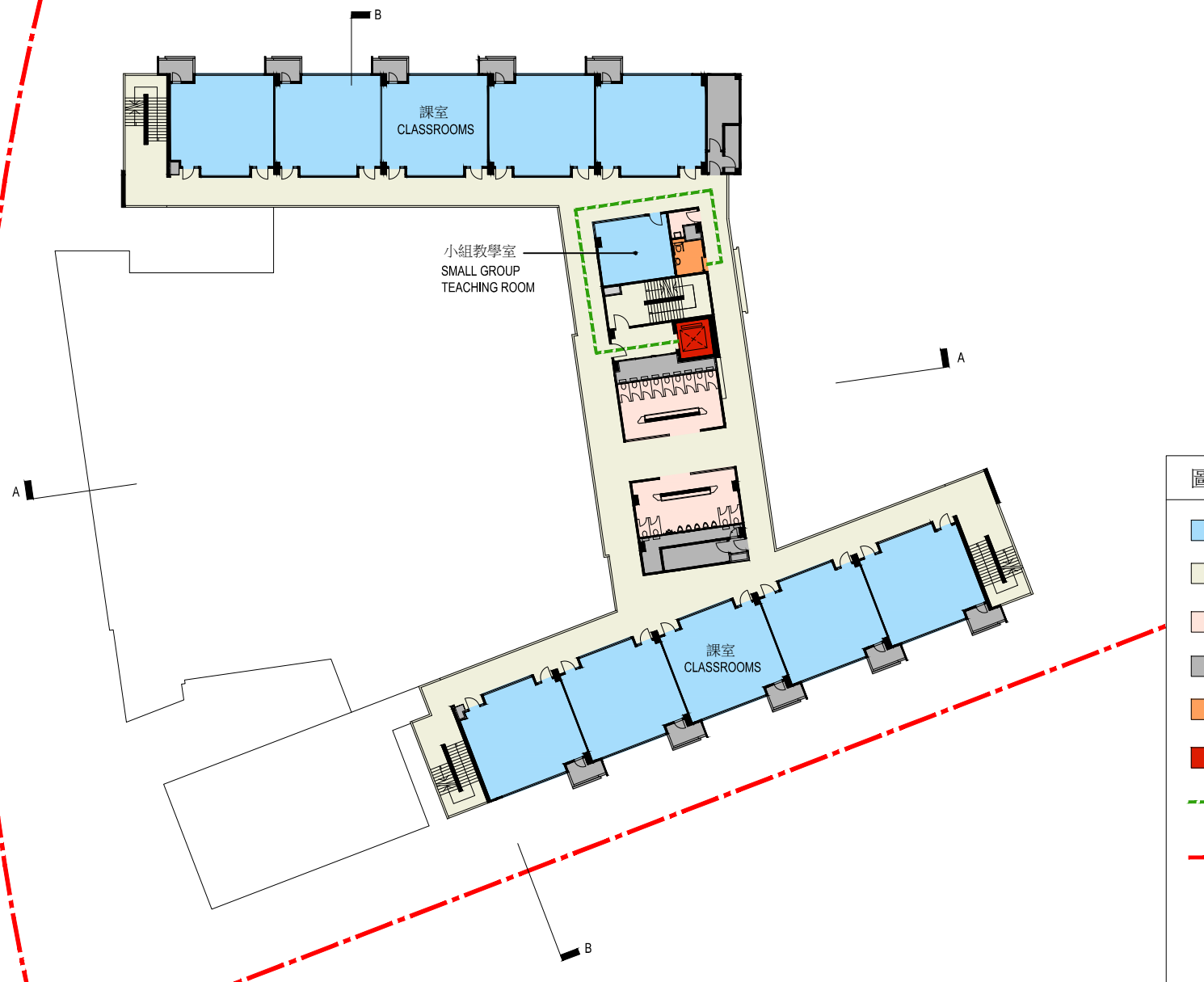
272ES

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A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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圖例 LEGEND

- 教學室
TEACHING ROOM
- 通道 / 露天場地
CIRCULATION / OPEN AREA
- 洗手間 / 更衣室
TOILET / CHANGING ROOM
- 電機房
PLANT ROOM
- 暢通易達洗手間
ACCESSIBLE TOILET
- 暢通易達升降機
ACCESSIBLE LIFT
- 無障礙通道
BARRIER-FREE ACCESS
- 工地界線
SITE BOUNDARY

5m 0 10m

四樓至六樓平面圖
FOURTH TO SIXTH FLOOR PLAN

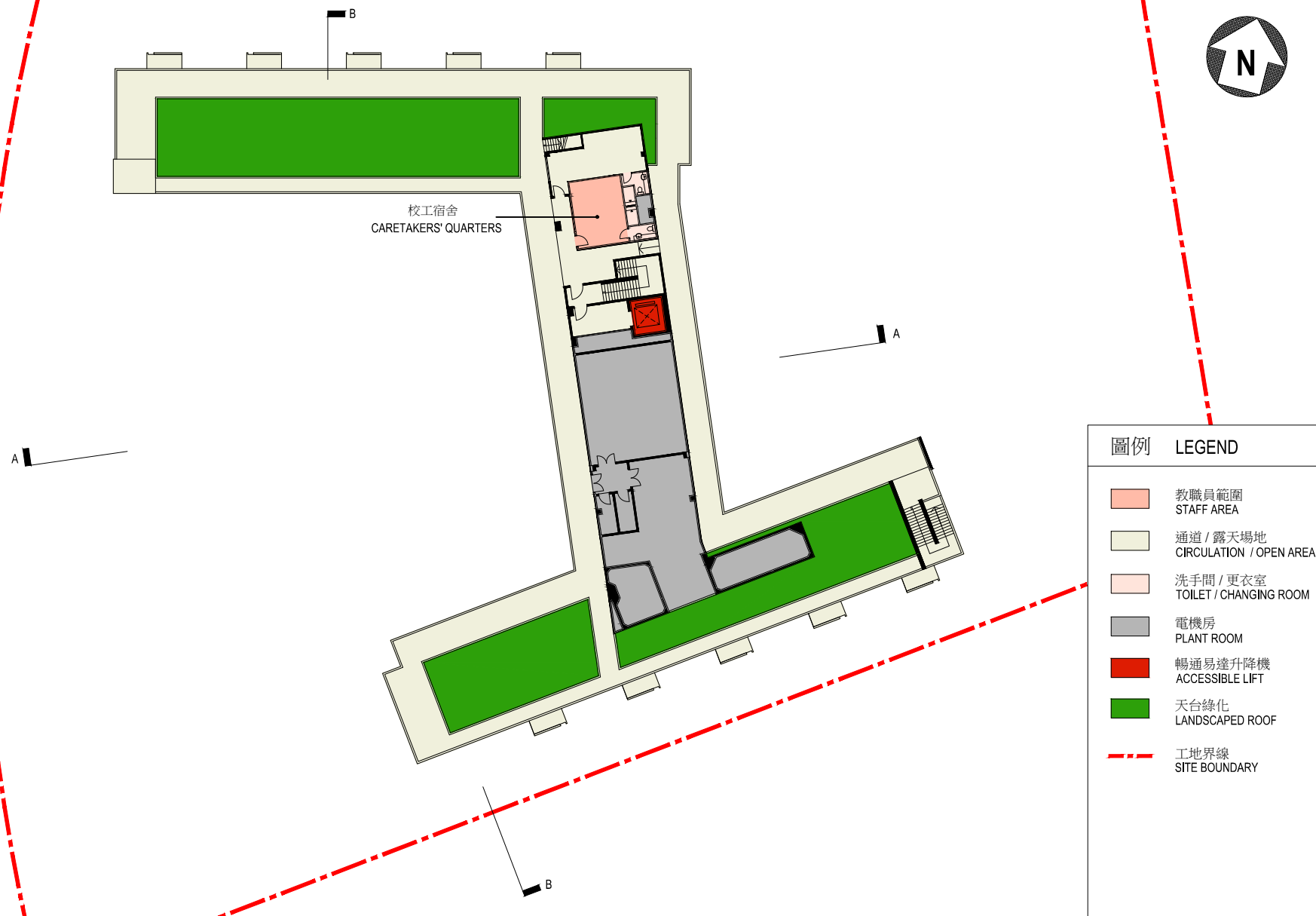
272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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天台平面圖
ROOF PLAN

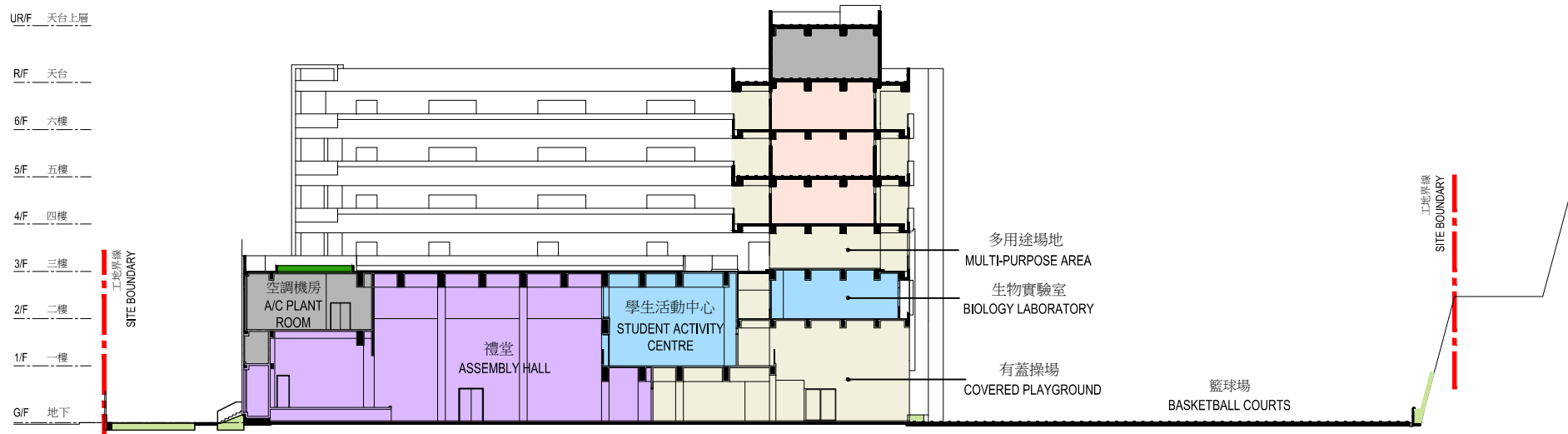
272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

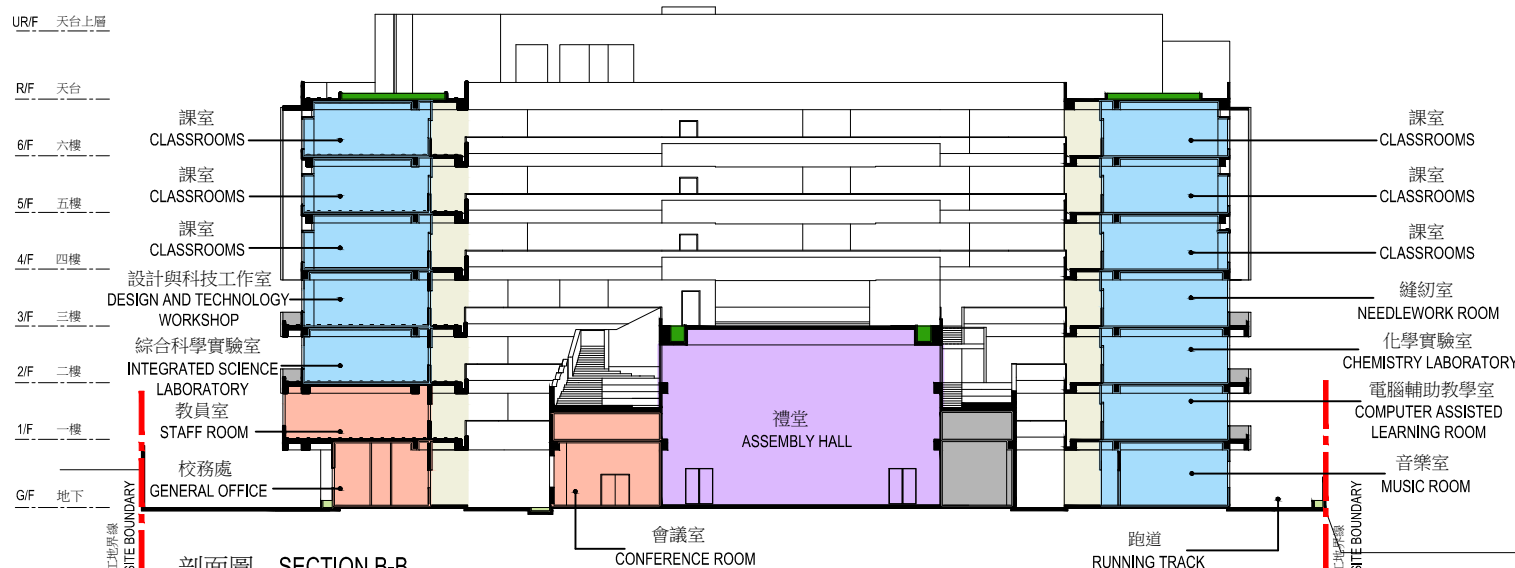
A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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剖面圖 SECTION A-A



剖面圖 SECTION B-B

圖例 LEGEND

- | | |
|---|--------------------------------------|
|  | 教學室
TEACHING ROOM |
|  | 通道 / 露天場地
CIRCULATION / OPEN AREA |
|  | 洗手間 / 更衣室
TOILET / CHANGING ROOM |
|  | 教職員範圍
STAFF AREA |
|  | 禮堂
ASSEMBLY HALL |
|  | 電機房
PLANT ROOM |
|  | 暢通易達洗手間
ACCESSIBLE TOILET |
|  | 天台綠化
LANDSCAPED ROOF |
|  | 地面綠化
AT-GRADE GREENING |
|  | 工地界線
SITE BOUNDARY |

5m 0 10m

剖面圖
SECTIONS

272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong

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從西南面望向中學的構思透視圖

PERSPECTIVE VIEW FROM SOUTH-WESTERN DIRECTION

構思圖
ARTIST'S IMPRESSION

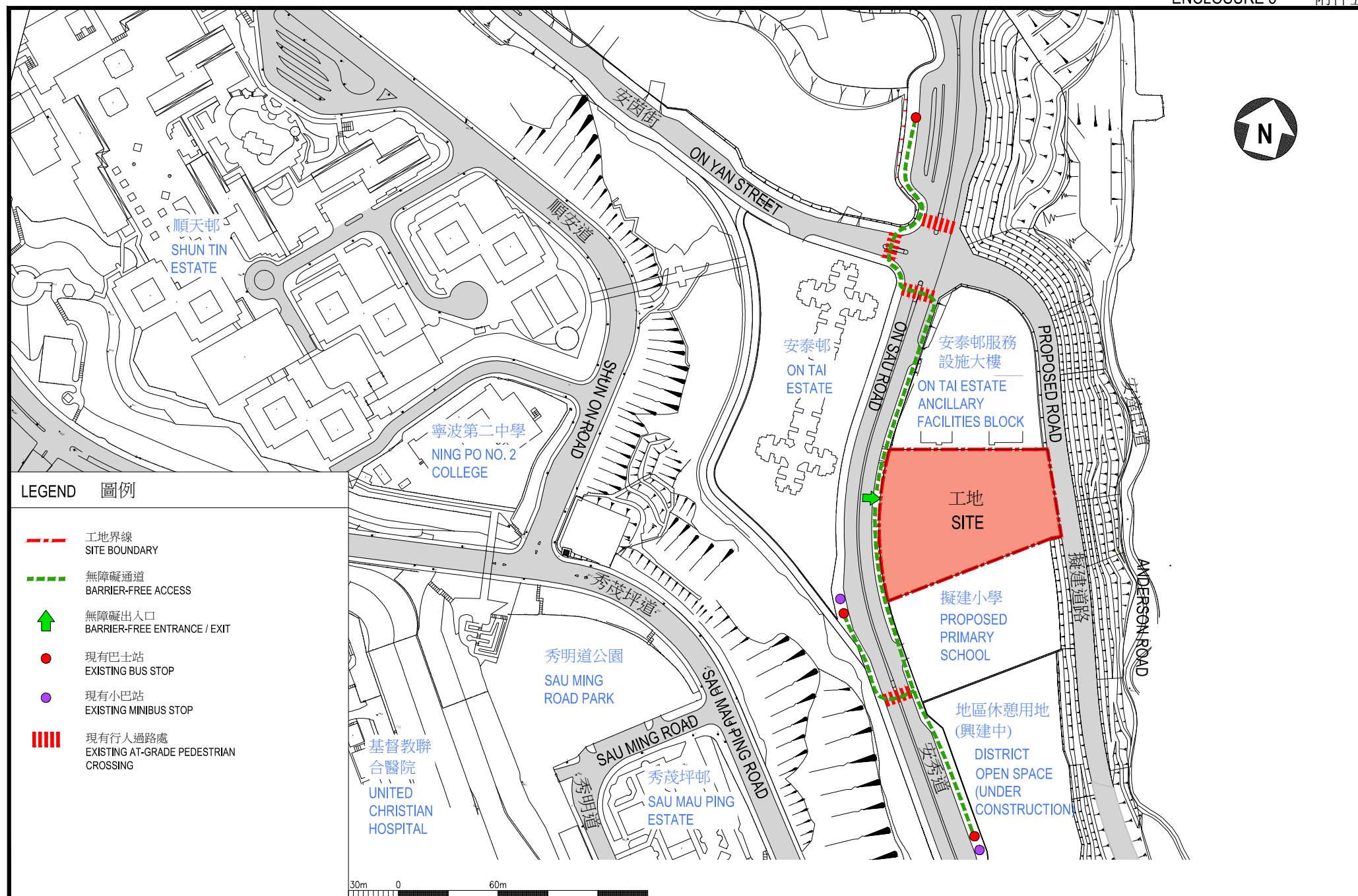
272ES

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A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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無障礙通道平面圖
PLAN OF BARRIER-FREE ACCESS

272ES

觀塘安達臣道發展區 (地盤KT2e) 1所設有30間課室的中學

A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong



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272ES – A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong

**Breakdown of the estimates for consultants' fees
(in September 2018 prices)**

		Estimated man- months	Average MPS salary point	Multiplier	Estimated fee (\$ million)
(a)	Consultants' fees for	Professional	–	–	0.8
	contract	Technical	–	–	0.4
	administration				_____
	(Note 1)				
Total					1.2#

Notes

- The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **272ES**. The assignment will only be executed subject to FC's funding approval to upgrade the project to Category A.

Remarks

The figures in this Enclosure are shown in constant prices. The figures marked with # are shown in MOD prices in paragraph 9 of the main paper.