

For discussion
on 2 June 2021

PWSC(2021-22)20

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Education Subventions

31ED – Conversion to Shatin Public School

Members are invited to recommend to the Finance Committee the upgrading of **31ED** to Category A at an estimated cost of \$148.6 million in money-of-the-day prices for carrying out the conversion to Shatin Public School.

PROBLEM

We need to carry out conversion works at Shatin Public School to enhance the learning and teaching facilities.

PROPOSAL

2. The Secretary for Education proposes upgrading **31ED** to Category A at an estimated cost of \$148.6 million in money-of-the-day (MOD) prices for enhancing and increasing the learning and teaching facilities at Shatin Public School.

/PROJECT

PROJECT SCOPE AND NATURE

3. The project involves the construction of a six-storey new annex block at the northern part of the school premises, conversion and reprovisioning of existing school facilities, and upgrading of existing slope features within the school site at an estimated cost of about \$148.6 million in MOD prices. The proposed scope of works is as follows –

Construction of an annex block

- (a) five classrooms;
- (b) two special rooms;
- (c) a staff room;
- (d) three social worker's rooms;
- (e) a speech therapy room;
- (f) two store rooms;
- (g) reprovisioning of a design and technology room and a home economics room; and
- (h) ancillary facilities, including an accessible/fireman's lift and toilets;

Conversion of existing school facilities

- (i) a classroom;
- (j) a special room;
- (k) a store room; and
- (l) upgrading of an existing classroom.

4. The project will meet the planning target of providing 2 square metres (m²) of open space per student. The site and location plans, artist's impressions, a plan of barrier-free access, floor plans and a sectional drawing for the project are at **Enclosures 1 to 5** respectively.

5. We plan to commence the proposed works upon obtaining funding approval from the Finance Committee for target completion in around three years.

JUSTIFICATION

6. The Education Bureau is implementing the New Senior Secondary academic structure and the improvement measures on extension of years of study gradually for students at special schools, which involve operation of additional classes at special schools.

7. Shatin Public School, a school for children with mild intellectual disability (ID) in Shatin, is offering 255 school places to children with mild ID in the 2020/21 school year. Following progressive reduction of class size from 20 to 15 students in schools for children with mild ID, the school has exhausted available learning and teaching facilities (including 12 classrooms, home economics room, computer room, music room, student activity centre and various small group teaching rooms). Some facilities including staff room, speech therapy room and social worker's room are also insufficient to meet the operational needs.

8. Taking into consideration factors including the needs of the school, students' adaptation to school at temporary premises, condition of the premises, other means to improve school premises such as reprovisioning/ redevelopment, availability of site, prudent use of public funds, we consider it appropriate to construct a new annex block and carry out internal conversion works for the school to provide additional facilities, including classrooms and other related facilities, to meet operational needs and provide services for students at senior secondary level and those for extension of years of study, bringing enhancement to the learning and teaching environment.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$148.6 million in MOD prices, broken down as follows –

	\$ million (in MOD prices)
(a) Site works	1.6
(b) Foundation	39.1
(c) Building	53.7
	/(d)

		\$ million (in MOD prices)
(d)	Building services	20.0
(e)	Drainage	2.8
(f)	External Works	1.4
(g)	Additional energy conservation, green and recycled features	1.3
(h)	Furniture and equipment (F&E) ¹	0.6
(i)	Consultants' fees for	4.4
	(i) contract administration	3.9
	(ii) management of resident site staff (RSS)	0.5
(j)	Remuneration of RSS	10.8
(k)	Contingencies	12.9
Total		148.6

10. We propose engaging consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for consultants' fees and RSS costs by man-months is at **Enclosure 6**. The construction floor area (CFA) of the project is about 2 607 m². The estimated construction unit cost, represented by the building and building services costs, is \$28,270 per m² of CFA in MOD prices. The unit cost is comparable to that of similar projects undertaken by the Government.

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

/Year

¹ The estimated cost is based on an indicative list of F&E required.

Year	\$ million (in MOD prices)
2021 – 22	28.3
2022 – 23	49.6
2023 – 24	44.8
2024 – 25	20.1
2025 – 26	2.3
2026 – 27	2.3
2027 – 28	1.2
	<hr style="width: 50%; margin: auto;"/> 148.6 <hr style="width: 50%; margin: auto;"/>

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 2021 to 2028. 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 adjustments.

13. The cost of F&E for the project, estimated to be about \$0.6 million (in MOD prices), will be borne by the Government according to the existing policy. We estimate the annual recurrent expenditure of the School to be \$61.9 million upon full commissioning of the new annex block.

PUBLIC CONSULTATION

14. We consulted the Education and Welfare Committee of the Shatin District Council on this project on 9 July 2020. Members of the Committee supported the project.

15. We consulted the Legislative Council Panel on Education on 7 May 2021. 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.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

16. The Architectural Services Department has completed and the Environmental Protection Department has agreed to a class assessment document which sets out the mitigation measures necessary for this class of projects. With such mitigation measures in place, the project would not have long term environmental impacts. We have included in the project estimates the cost to implement all necessary measures to mitigate the environmental impacts.

17. 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 which was generated during new building construction (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 facilities (PFRFs)². 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.

18. At the construction stage, we will require the contractor to submit a plan setting out the waste management measures for Government's approval, 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 construction waste 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 PFRFs and landfills respectively through a trip-ticket system.

19. We estimate that the project will generate in total about 5 960 tonnes of construction waste. Of these, we will reuse about 100 tonnes (1.7%) of inert construction waste on site and deliver 5 500 tonnes (92.3%) of inert construction waste to PFRFs for subsequent reuse. We will dispose of the remaining 360 tonnes (6.0%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRFs and landfill sites is estimated to be \$0.5 million for this project (based on an unit charge rate of \$71 per tonne for disposal

/at

² PFRFs are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at PFRFs requires a licence issued by the Director of Civil Engineering and Development.

at PFRFs and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

21. The project does not require any land acquisition.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

22. 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) water saving fitments to minimize water use and pump usage for energy saving; and
- (c) photovoltaic system.

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

24. The total estimated additional cost for adoption of the above features is around \$1.3 million (including \$0.7 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 7.4% energy savings in the annual energy consumption with a payback period of about ten years.

BACKGROUND INFORMATION

25. We upgraded **31ED** to Category B in September 2010. We engaged consultants to undertake various services at a total cost of about \$7.5 million. The services and works by the consultants are funded under block allocation **Subhead 8100QX** ‘Alterations, additions, repairs and improvements to education subvented buildings’. The consultants and contractor have completed all the above consultancy services and works for the pre-contract stage.

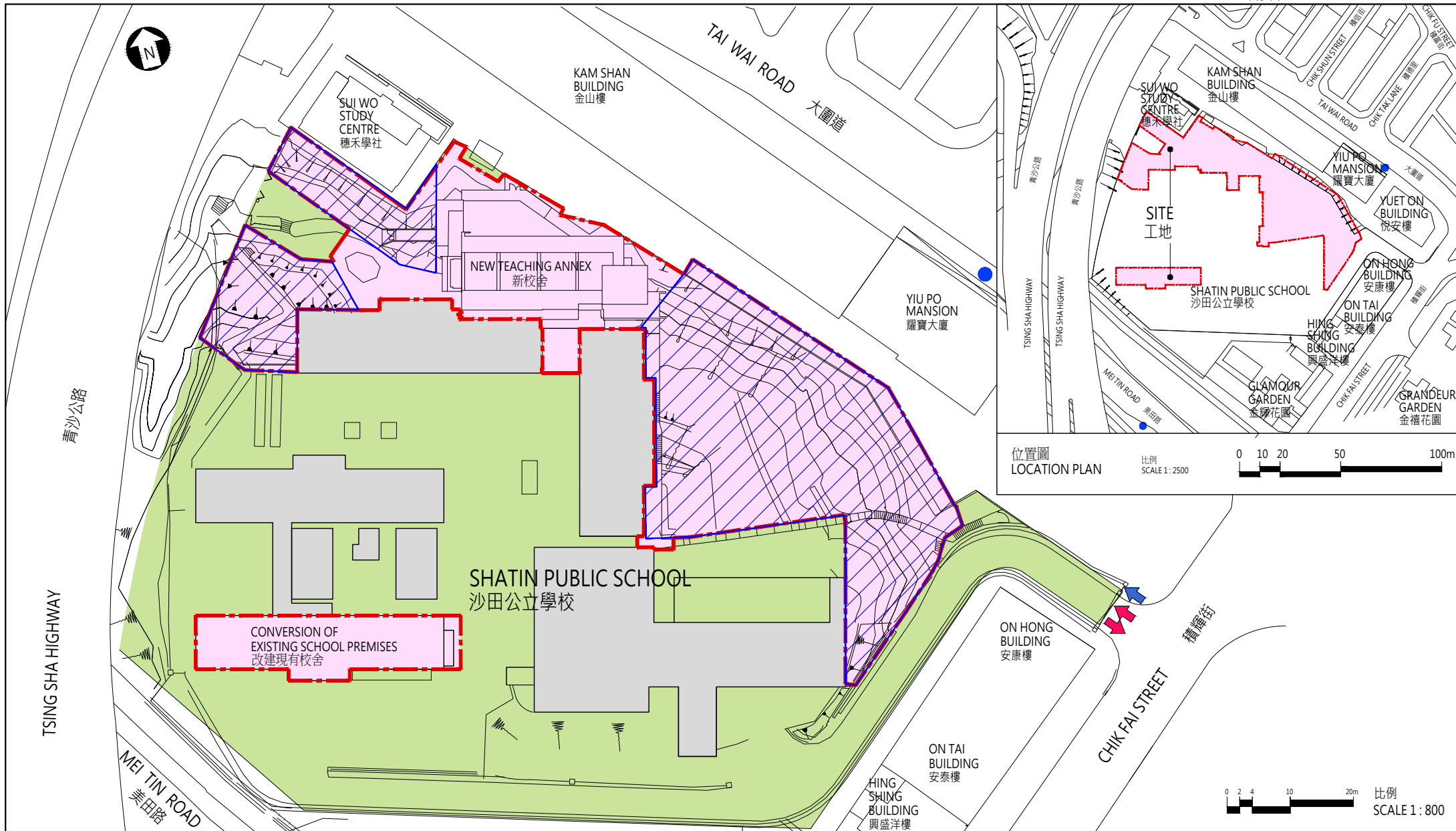
26. Of the 25 trees within the project boundary, 23 trees will be retained and 2 trees which are not important trees³ will be felled. We will incorporate planting proposals as part of the project, including estimated quantities of 2 trees, 92 large shrubs, 3 215 shrubs, 3 800 groundcovers and 12 climbers.

27. We estimate that the proposed works will create about 50 jobs (45 for labourers and 5 for professional or technical staff) providing a total employment of 960 man-months.

Education Bureau
May 2021

³ “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 (measured at 1.3 metres above ground level), or with height/canopy spread equal or exceeding 25 metres.



位置圖 LOCATION PLAN 比例 SCALE 1:2500 0 10 20 50 100m

0 2 4 10 20m 比例 SCALE 1:800

- 圖例: LEGEND:
- - - 工地界線 SITE BOUNDARY
 - ▨ 斜坡改善工程 SLOPE REMEDIAL WORKS
 - ▨ 工地範圍 WORKS AREA
 - ▨ 現有學校範圍 EXISTING SCHOOL AREA
 - ↑ 行人出入口 PEDESTRIAN ENTRANCE / EXIT
 - ↑ 車輛出入口 VEHICULAR INGRESS / EGRESS
 - 巴士站 BUS STOP

工地平面圖
SITE PLAN

31ED
改建沙田公立學校
CONVERSION TO SHATIN PUBLIC SCHOOL

教育局
EDUCATION BUREAU



從西南面望向大樓的構思透視圖

PERSPECTIVE VIEW FROM SOUTH-WEST DIRECTION

構思圖一
ARTIST'S IMPRESSION 1

31ED
改建沙田公立學校
CONVERSION TO SHATIN PUBLIC SCHOOL

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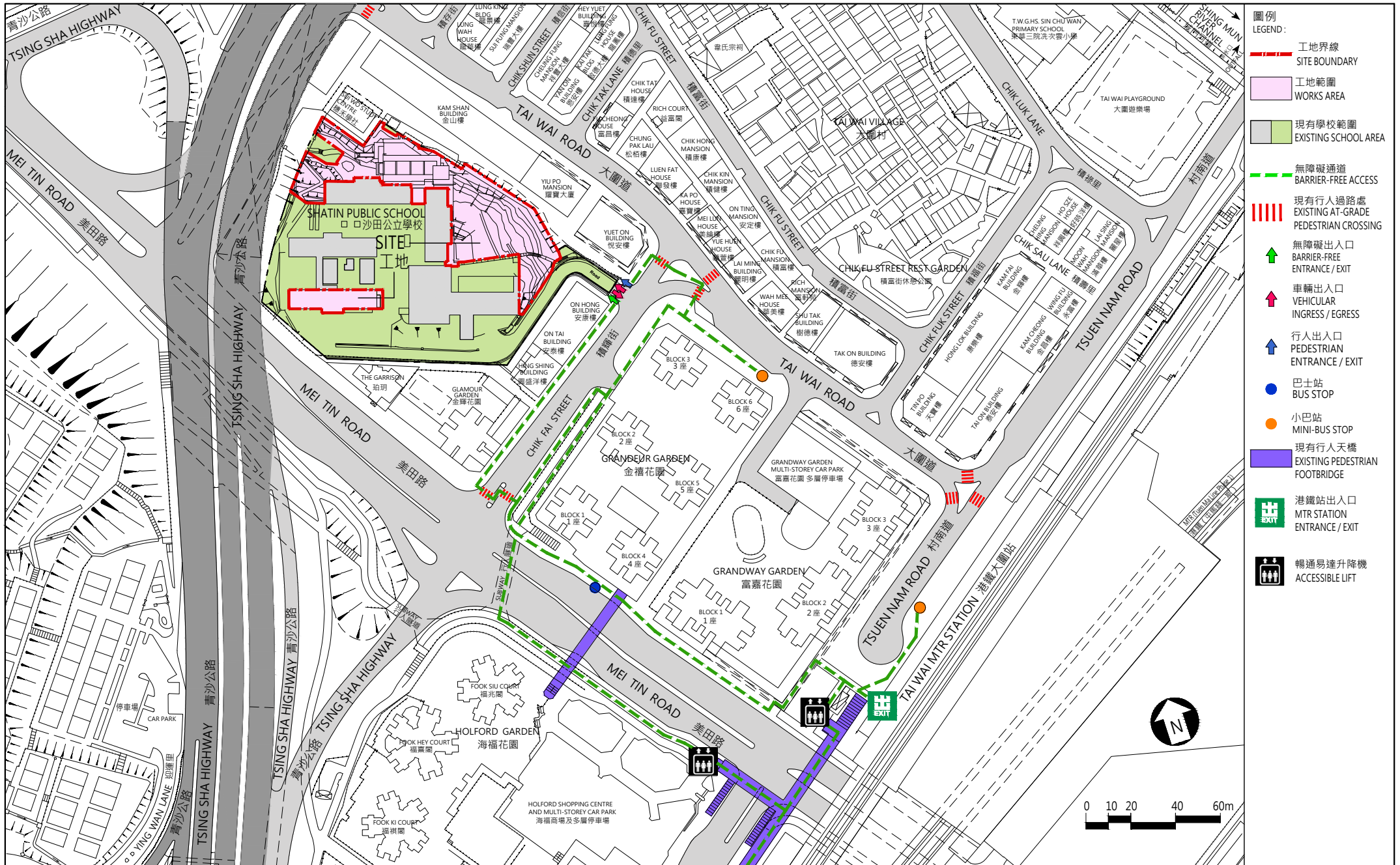
從東北面望向大樓的構思透視圖

PERSPECTIVE VIEW FROM NORTH-EAST DIRECTION

構思圖 二
ARTIST'S IMPRESSION 2

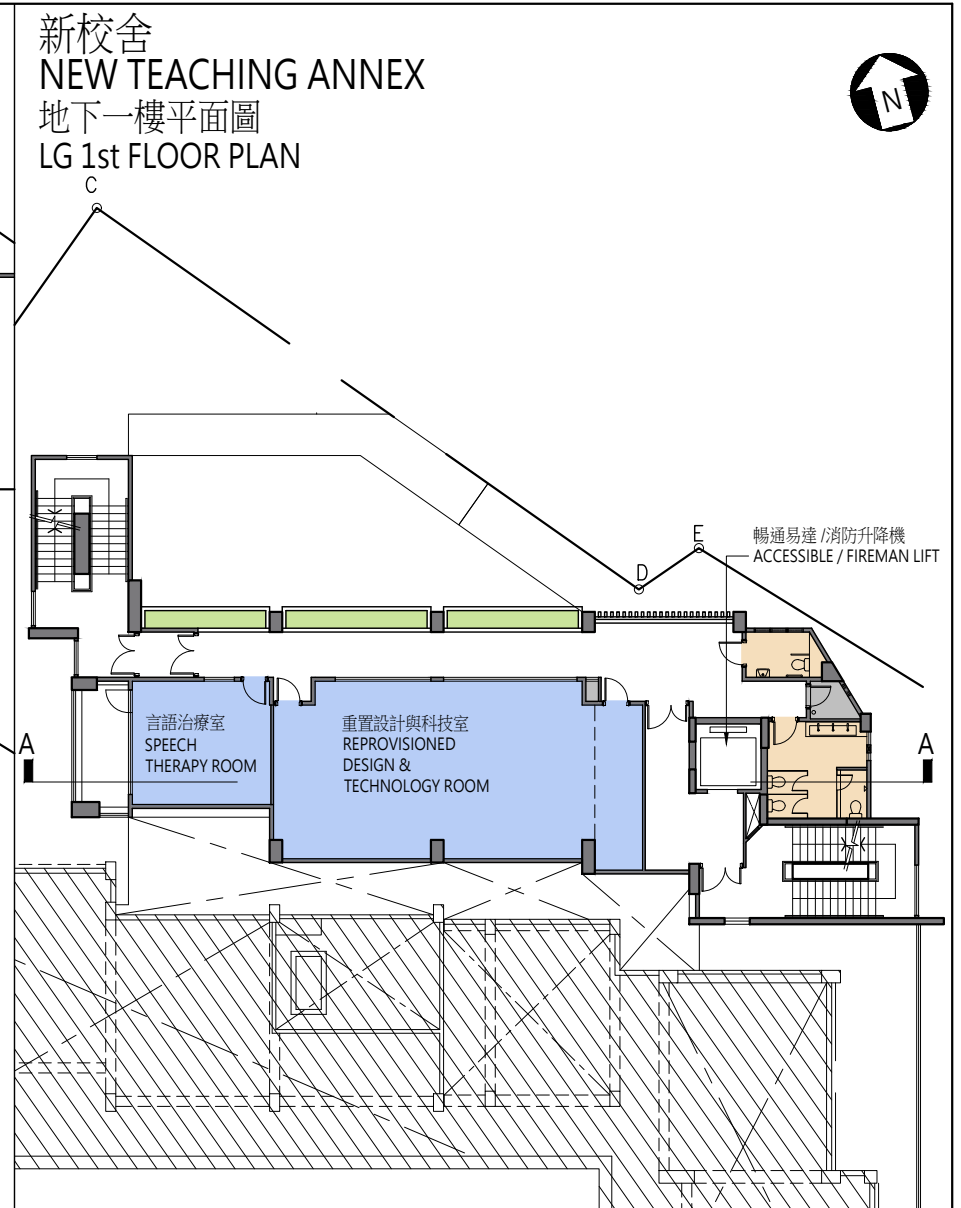
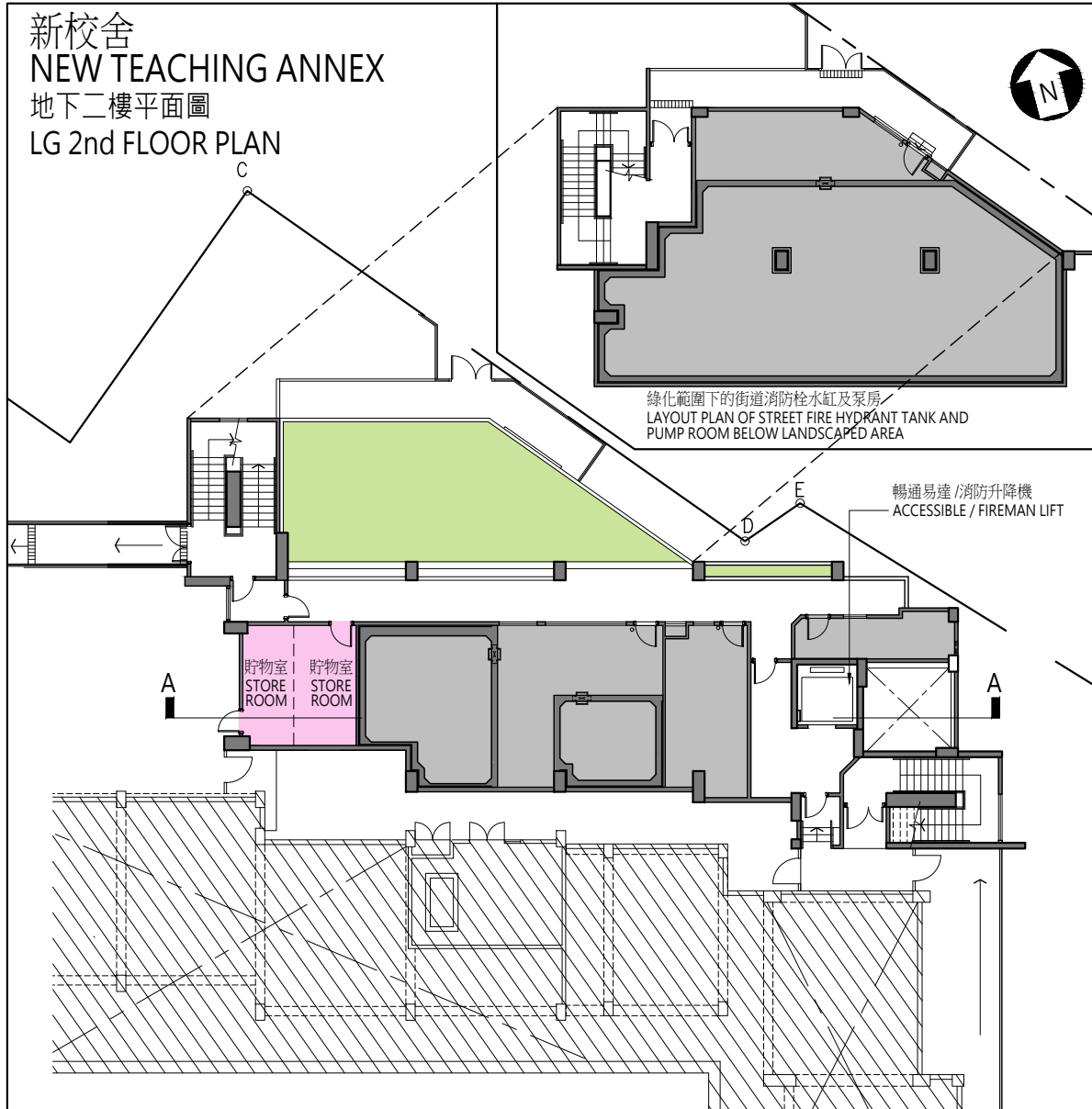
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CONVERSION TO SHATIN PUBLIC SCHOOL

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無障礙通道平面圖
PLAN OF BARRIER-FREE ACCESS

31ED
改建沙田公立學校
CONVERSION TO SHATIN PUBLIC SCHOOL



圖例
LEGEND:

教職員範圍
STAFF AREA

機房
PLANT ROOMS

現有校舍
EXISTING SCHOOL BUILDING

教學室
TEACHING ROOM

綠化範圍
LANDSCAPE AREA

洗手間
TOILET

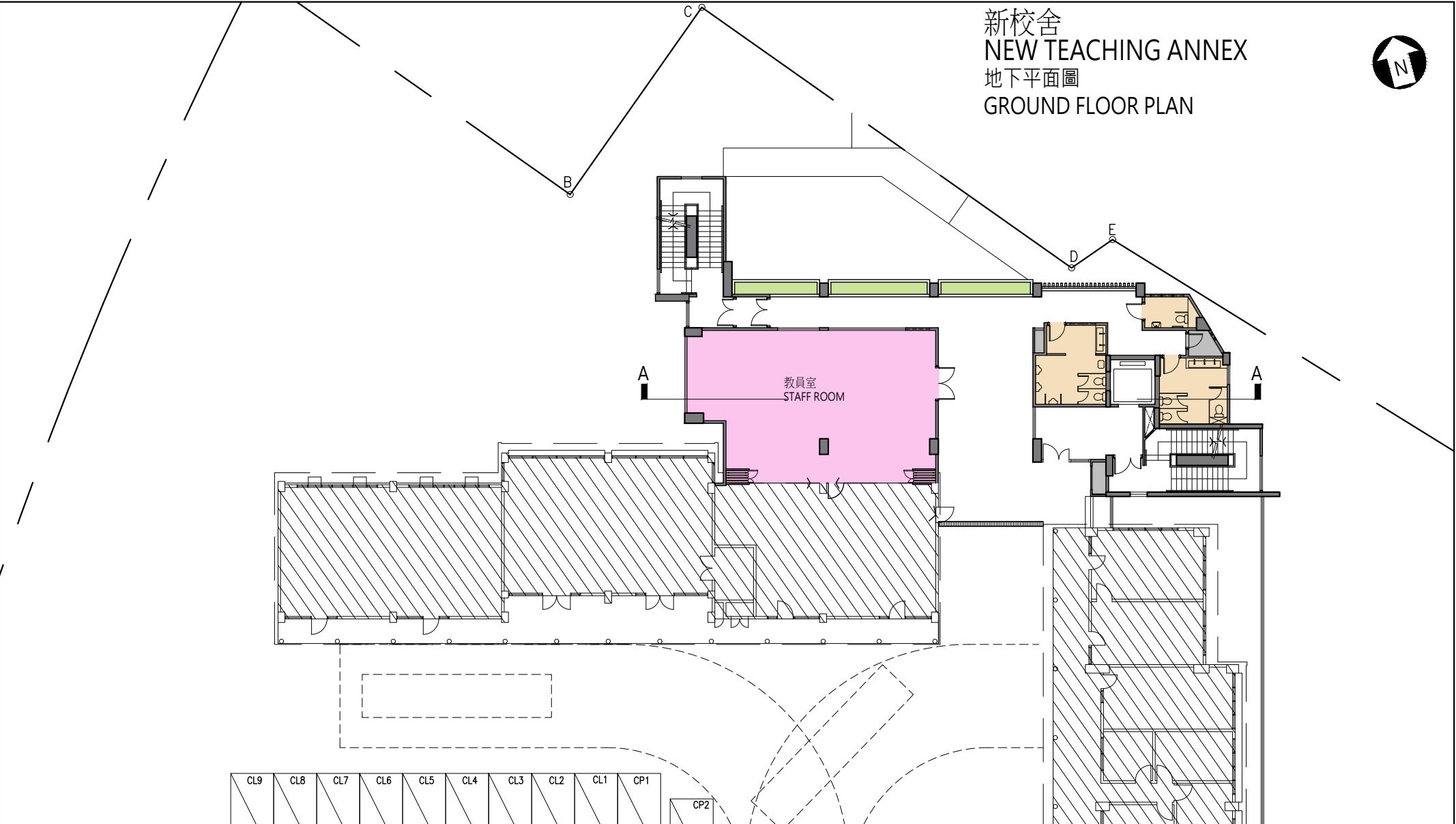
0 1 2 3 4 5 7 10m

地下二樓及一樓平面圖
LG 2nd & 1st FLOOR PLAN

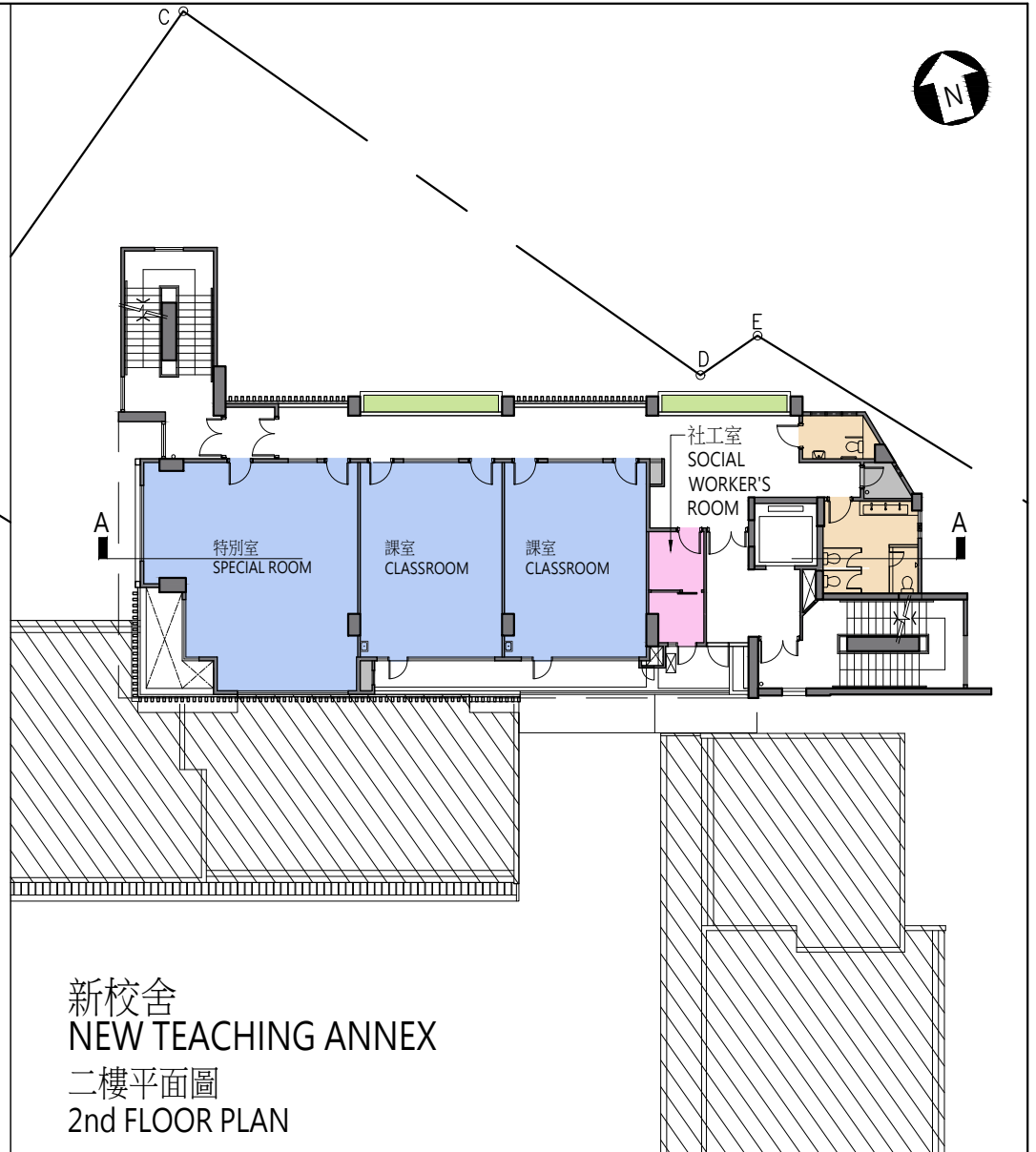
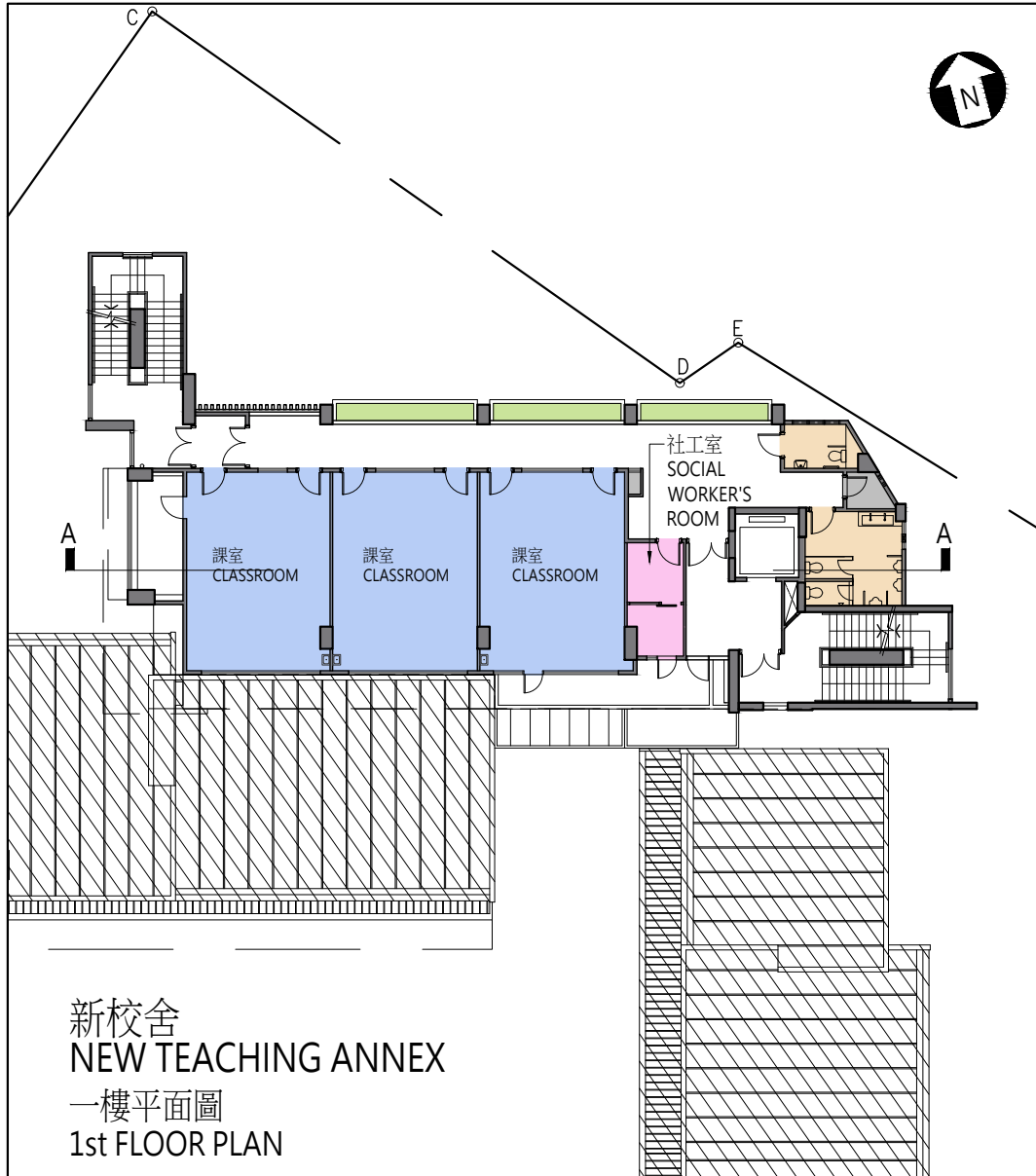
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CONVERSION TO SHATIN PUBLIC SCHOOL

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新校舍
NEW TEACHING ANNEX
地下平面圖
GROUND FLOOR PLAN



圖例 LEGEND:	教職員範圍 STAFF AREA	機房 PLANT ROOMS	現有校舍 EXISTING SCHOOL BUILDING	教學室 TEACHING ROOM	綠化範圍 LANDSCAPE AREA	洗手間 TOILET	0 1 2 3 4 5 7 10m
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圖例
LEGEND:

教職員範圍
STAFF AREA

機房
PLANT ROOMS

現有校舍
EXISTING SCHOOL BUILDING

教學室
TEACHING ROOM

綠化範圍
LANDSCAPE AREA

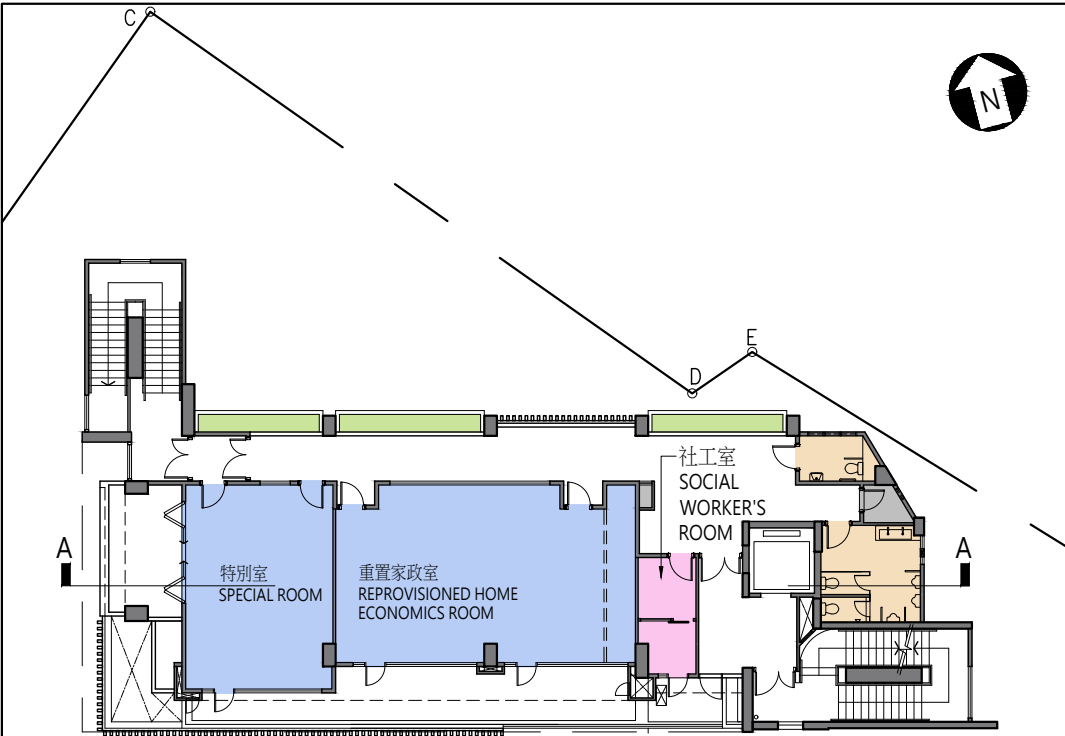
洗手間
TOILET

0 1 2 3 4 5 7 10m

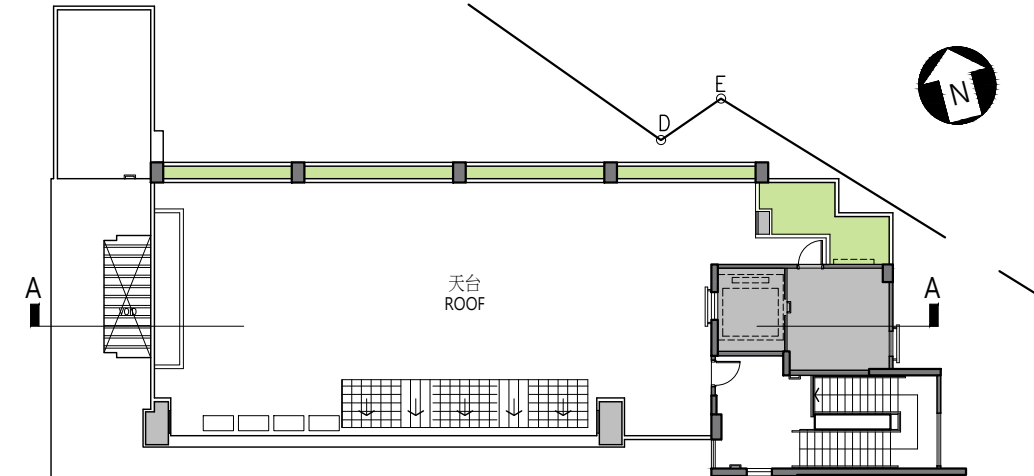
一樓及二樓平面圖
1st & 2nd FLOOR PLAN

31ED
改建沙田公立學校
CONVERSION TO SHATIN PUBLIC SCHOOL

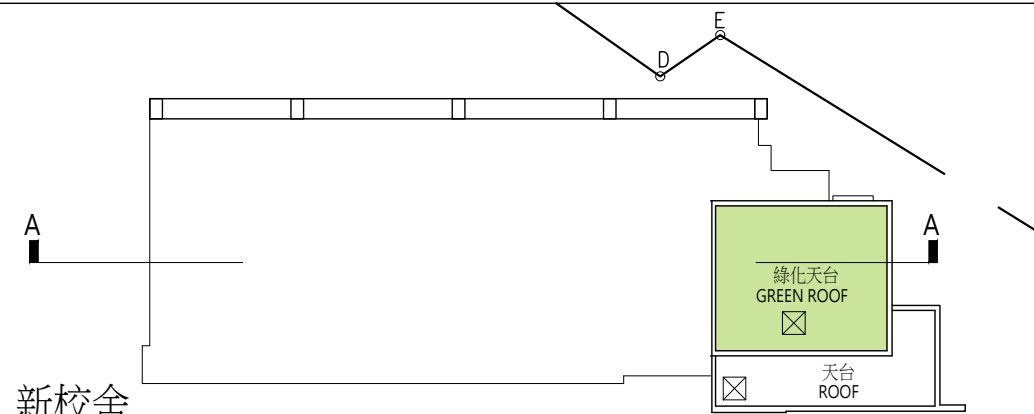
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新校舍
NEW TEACHING ANNEX
三樓平面圖
3rd FLOOR PLAN



新校舍
NEW TEACHING ANNEX
天台平面圖
ROOF PLAN



新校舍
NEW TEACHING ANNEX
高層天台平面圖
UPPER ROOF PLAN

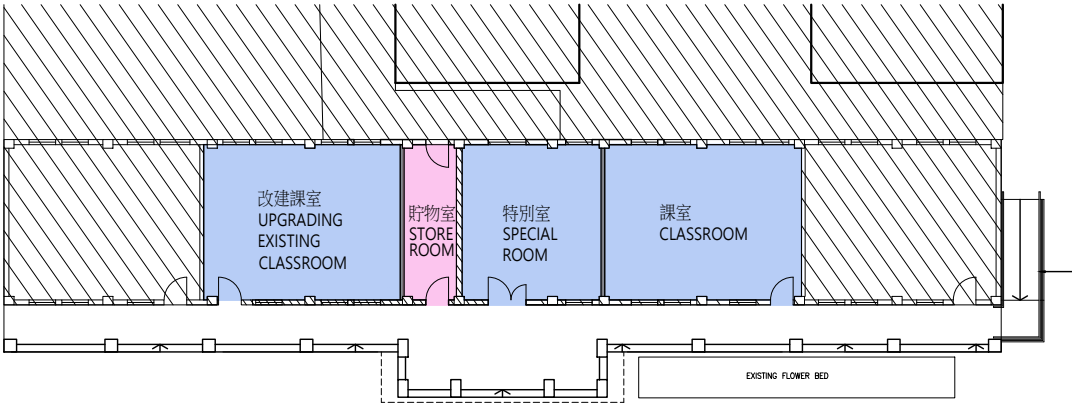
- 圖例 LEGEND:
- 教職員範圍 STAFF AREA
 - 機房 PLANT ROOMS
 - 教學室 TEACHING ROOM
 - 綠化範圍 LANDSCAPE AREA
 - 洗手間 TOILET



三樓, 天台及高層天台平面圖
3rd, ROOF &
UPPER ROOF FLOOR PLAN

31ED
改建沙田公立學校
CONVERSION TO SHATIN PUBLIC SCHOOL

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現有校舍改裝工程
 CONVERSION WORKS AT EXISTING BUILDING

圖例
 LEGEND: 教職員範圍
 STAFF AREA 現有校舍
 EXISTING SCHOOL BUILDING 教學室
 TEACHING ROOM



地下平面圖
 GROUND FLOOR PLAN

31ED
 改建沙田公立學校
 CONVERSION TO SHATIN PUBLIC SCHOOL

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新校舍
NEW TEACHING ANNEX
剖面圖 A-A
SECTION A-A

圖例
LEGEND:

- 工地界線 SITE BOUNDARY
- 粉紅色 教職員範圍 STAFF AREA
- 灰色 機房 PLANT ROOMS
- 藍色 教學室 TEACHING ROOM
- 黃色 洗手間 TOILET



剖面圖 A-A
SECTION A-A

31ED
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CONVERSION TO SHATIN PUBLIC SCHOOL

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31ED – Conversion to Shatin Public School**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2020 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for contract administration ^(Note 2)	Professional	–	–	–	3.4
	Technical	–	–	–	–
				Sub-total	3.4#
(b) Resident site staff (RSS) costs ^(Note 3)	Professional	63	38	1.6	8.7
	Technical	28	14	1.6	1.3
				Sub-total	10.0
Comprising -					
(i) Consultants' fees for management of RSS				0.4#	
(ii) Remuneration of RSS				9.6#	
				Total	13.4

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants (as at now, MPS salary point 38 = \$85,870 per month and MPS salary point 14 = \$30,235 per month.)
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **31ED**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **31ED** 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 MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 9 of the main paper.