

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

### **HEAD 703 – BUILDINGS**

#### **Education – Primary**

#### **363EP – A 24-classroom primary school at Au Pui Wan Street, Fo Tan, Sha Tin**

Members are invited to recommend to the Finance Committee the upgrading of **363EP** to Category A at an estimated cost of \$365.4 million in money-of-the-day prices.

### **PROBLEM**

We need to construct a primary school at Au Pui Wan Street, Fo Tan, Sha Tin for the reprovisioning of Po Leung Kuk Siu Hon Sum Primary School (SHSPS).

### **PROPOSAL**

2. The Director of Architectural Services, with the support of the Secretary for Education, proposes upgrading **363EP** to Category A at an estimated cost of \$365.4 million in money-of-the-day (MOD) prices for the construction of a primary school premises at Au Pui Wan Street, Fo Tan, Sha Tin for the reprovisioning of SHSPS.

**/PROJECT .....**

**PROJECT SCOPE AND NATURE**

3. The proposed scope of works of the project includes the construction of a primary school with the following facilities —

- (a) 24 classrooms;
- (b) six special rooms, including a music room, a visual arts room, a general studies room, a multi-purpose room, a computer assisted learning room and a language room;
- (c) four small group teaching rooms;
- (d) a guidance activity room;
- (e) two interview rooms;
- (f) a staff room and a staff common room;
- (g) a student activity centre;
- (h) a conference room;
- (i) a library;
- (j) an assembly hall;
- (k) multi-purpose areas;
- (l) a covered playground;
- (m) a basketball court;
- (n) a running track<sup>1</sup>; and
- (o) ancillary facilities including an accessible/fireman's lift, facilities for the disabled, a tuck shop-cum-central portioning area, stores and toilets, etc.

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<sup>1</sup> A 30-metre running track will be provided to make optimal use of campus space.

4. The proposed new school premises, with a site area of about 4 716 square metres (m<sup>2</sup>), will meet the planning target of providing 2 m<sup>2</sup> of open space per student. Parking spaces for private cars, lay-bys for taxis/private cars and school buses will also be provided within the new school premises. The site and location plan, floor plans, sectional drawings, an artist's impression, and the plan of barrier-free access 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 two and a half years.

## JUSTIFICATION

6. At present, there are about 900 public sector schools in the territory. Their premises were built in different periods in accordance with the building standards at the time of construction, and facilities in the premises vary. While the standards have been changing over the years, existing school premises in operation are required to comply with the prevailing statutory requirements. As at July 2021, about 200 of them were built according to the prevailing standards.

7. It is the Government's plan to, based on the needs of individual schools, improve the physical conditions and facilities of school premises not built according to the prevailing standards, through reprovisioning or in-situ redevelopment projects. SHSPS, currently operating 24 classes and occupying a site area of about 2 000 m<sup>2</sup> at Sui Wo Court, Sha Tin, was built in 1980. The school does not have language room, general studies room, guidance activity room, conference room, etc. Some of the existing facilities such as the covered playground, computer assisted learning room, music room and visual arts room are undersized according to the 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 the most effective way to upgrade the facilities of the school and improve the learning and teaching environment.

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8. SHSPS shall cease to occupy and voluntarily relinquish possession of its existing school premises at Sui Wo Court, Sha Tin upon reprovisioning. The Education Bureau (EDB) will handle the to-be-vacant school premises according to the established mechanism. EDB will assess the premises' suitability for school use having regard to factors including the size, location, physical conditions, etc., of the premises, as well as the educational needs and relevant policy measures. When the premises is confirmed no longer required by EDB for reallocation for school use, EDB will, in accordance with the Central Clearing House mechanism, inform the Planning Department (PlanD) and other relevant departments (such as the Housing Department) for PlanD's consideration of suitable alternative long-term uses.

## FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$365.4 million in MOD prices, broken down as follows –

	<b>\$million (in MOD prices)</b>
(a) Site works	3.2
(b) Foundation	37.0
(c) Building <sup>2</sup>	149.5
(d) Building services	85.4
(e) Drainage	9.5
(f) External works	19.8
(g) Additional energy conservation, green and recycled features	4.0

**/\$million .....**

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<sup>2</sup> Building works cover construction of substructure and superstructure of the building.



		<b>\$million (in MOD prices)</b>
(h)	Furniture and equipment (F&E) <sup>3</sup>	2.5
(i)	Consultants' fees for	7.5
	(i) contract administration	6.7
	(ii) management of resident site staff (RSS)	0.8
(j)	Remuneration of RSS	13.8
(k)	Contingencies	33.2
		<hr/>
	Total	365.4
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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 9 530 m<sup>2</sup>. The estimated construction unit cost, represented by the building and building services costs, is \$24,648 per m<sup>2</sup> of CFA in MOD prices. This unit cost is comparable to that of similar projects built by the Government.

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

<b>Year</b>	<b>\$ million (in MOD prices)</b>
2021 – 22	16.7
2022 – 23	82.3

/Year .....

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<sup>3</sup> The estimated cost of F&E is prepared with reference to the F&E reference list provided by EDB for a new 24-classroom primary school adopting the standard schedule of accommodation. The actual cost will be subject to a survey on the conditions of the existing F&E.

<b>Year</b>	<b>\$ million (in MOD prices)</b>
2023 – 24	89.9
2024 – 25	100.4
2025 – 26	62.2
2026 – 27	10.6
2027 – 28	3.3
	<hr/> 365.4 <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 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 adjustment.

13. The cost of F&E for the project, estimated to be about \$2.5 million (in MOD prices), will be borne by the Government according to the existing policy. We estimate the annual recurrent expenditure to be \$45.4 million upon full commissioning of the new school premises.

## **PUBLIC CONSULTATION**

14. Due to the cancellation and postponement of the first two meetings of the Education and Welfare Committee of the Sha Tin District Council respectively in early 2021 as affected by the COVID-19 epidemic situation, we informed the Committee the progress of this reprovisioning project by circulation of paper in March 2021. In response to questions from the Committee, we provided supplementary information on 17 May 2021 about the mitigation measures to address the traffic and environmental implications of the project.

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15. We consulted the Legislative Council Panel on Education on 4 June 2021. The Panel supported the project and did not raise any objection to the submission of the funding proposal to the Public Works Subcommittee.

## 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 September 2021. The PER recommended the 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 contract. These measures include the use of silencers, mufflers, acoustic linings or shields and the building of barrier walls for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to prevent dust nuisance.

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 facilities (PFRFs)<sup>4</sup>. 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.

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<sup>4</sup> 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.

19. 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 portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at PFRFs and landfills respectively through a trip-ticket system.

20. We estimate that the project will generate in total about 18 470 tonnes of construction waste. Of these, we will reuse about 480 tonnes (2.6%) of inert construction waste on site and deliver 17 060 tonnes (92.4%) of inert construction waste to PFRFs for subsequent reuse. We will dispose of the remaining 930 tonnes (5.0%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRFs and landfill sites is estimated to be \$1.4 million for this project (based on a unit charge rate of \$71 per tonne for disposal 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**

21. This 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**

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) .....

- (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 will adopt a rainwater harvesting system for landscape irrigation purpose with a view to conserving water.

26. The total estimated additional cost for adoption of the above features is around \$4.0 million (including \$0.6 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 6.1% energy savings in the annual energy consumption with a payback period of about ten years.

## BACKGROUND INFORMATION

27. We upgraded **363EP** to Category B in September 2018. We engaged term contractor to undertake ground investigation, and consultants to undertake various services at a total cost of about \$10.4 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 term contractor and consultants have completed all the above consultancy services and works except the assessment of tenders which is in progress.

28. There is no tree within the project boundary. The proposed works will not involve any tree removal proposal. We will incorporate planting proposals as part of the project, including the planting of about 32 trees, 155 bamboos, 2 354 shrubs, 188 climbers, 23 264 groundcovers, and 561 m<sup>2</sup> of grassed area.

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29. We estimate that the proposed works will create about 120 jobs (105 for labourers and 15 for professional or technical staff) providing a total employment of 2 385 man-months.

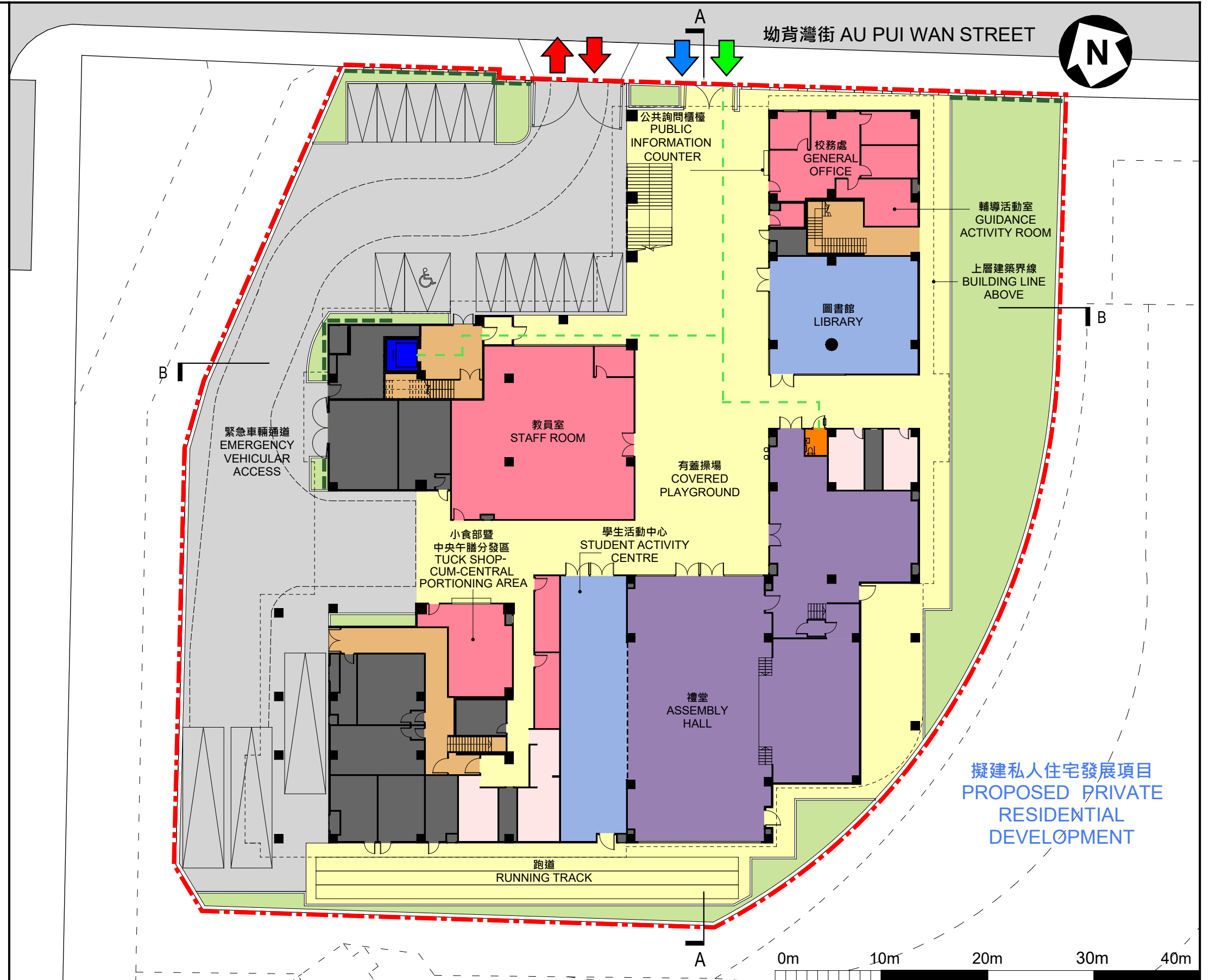
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**Education Bureau**  
**September 2021**



圖例 LEGEND

- 教學室  
TEACHING ROOM
- 教職員範圍  
STAFF AREA
- 洗手間  
TOILET
- 機房  
PLANT ROOM
- 通道/露天場地  
CIRCULATION / OPEN AREA
- 逃生樓梯  
MEANS OF ESCAPE STAIRCASE
- 暢通易達洗手間  
ACCESSIBLE TOILET
- 暢通易達升降機  
ACCESSIBLE LIFT
- 地面綠化  
AT-GRADE GREENING
- 禮堂  
ASSEMBLY HALL
- 行人出入口  
PEDESTRIAN ENTRANCE / EXIT
- 車輛出入口  
VEHICULAR INGRESS / EGRESS
- 無障礙出入口  
BARRIER-FREE ENTRANCE / EXIT
- 無障礙通道  
BARRIER-FREE ACCESS
- 垂直綠化  
VERTICAL GREENING
- 工地界線  
SITE BOUNDARY



地下平面圖  
GROUND FLOOR PLAN

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN



圖例 LEGEND

- 教學室  
TEACHING ROOM
- 教職員範圍  
STAFF AREA
- 洗手間  
TOILET
- 機房  
PLANT ROOM
- 通道/露天場地  
CIRCULATION / OPEN AREA
- 逃生樓梯  
MEANS OF ESCAPE STAIRCASE
- 暢通易達洗手間  
ACCESSIBLE TOILET
- 暢通易達升降機  
ACCESSIBLE LIFT
- 綠化範圍  
LANDSCAPED AREA
- 禮堂  
ASSEMBLY HALL
- 無障礙通道  
BARRIER-FREE ACCESS
- 垂直綠化  
VERTICAL GREENING
- 工地界線  
SITE BOUNDARY

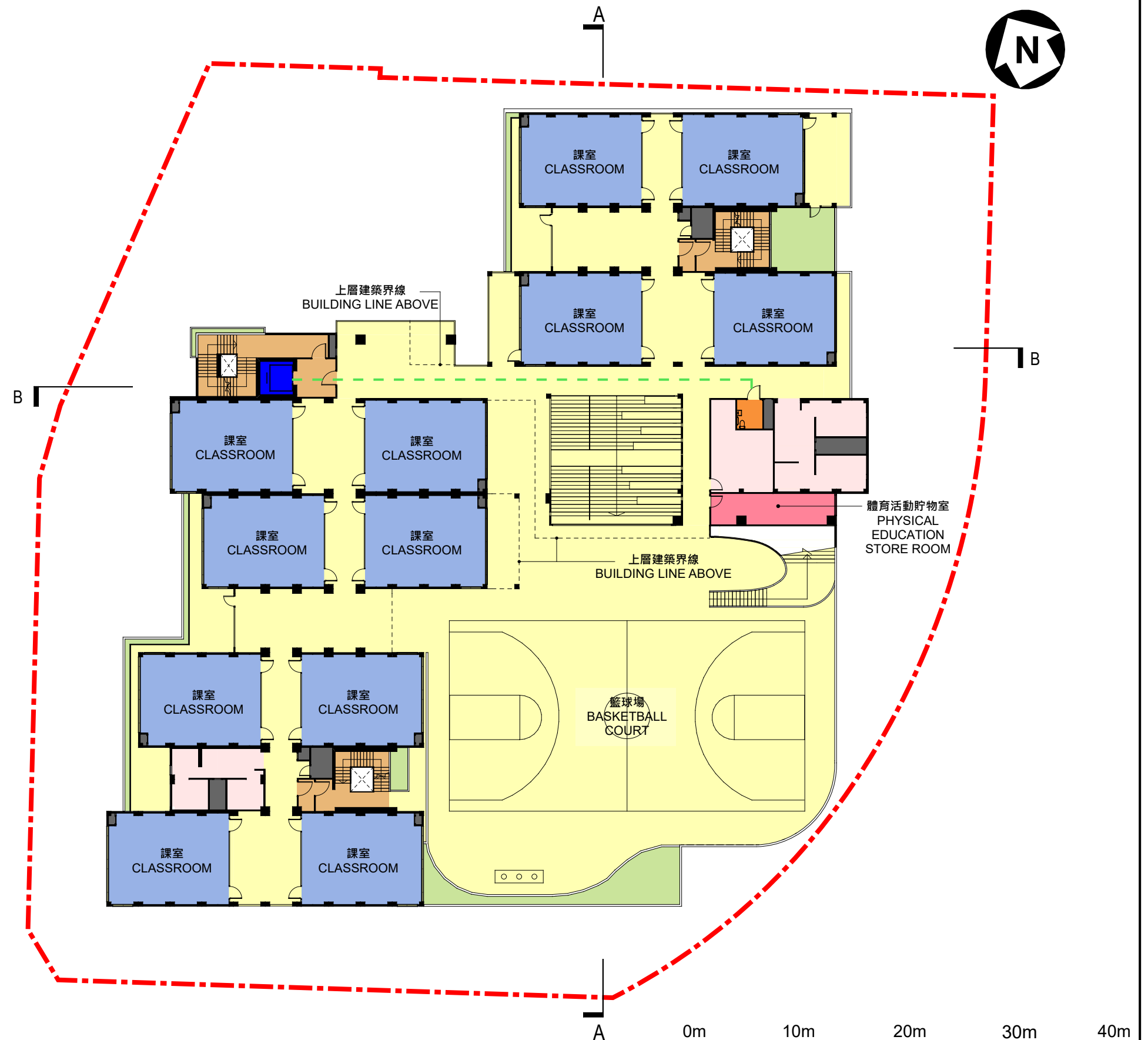


一樓平面圖  
FIRST FLOOR PLAN

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN

圖例 LEGEND

- 教學室  
TEACHING ROOM
- 教職員範圍  
STAFF AREA
- 洗手間 / 更衣室  
TOILET / CHANGING ROOM
- 機房  
PLANT ROOM
- 通道/露天場地  
CIRCULATION / OPEN AREA
- 逃生樓梯  
MEANS OF ESCAPE STAIRCASE
- 暢通易達洗手間  
ACCESSIBLE TOILET
- 暢通易達升降機  
ACCESSIBLE LIFT
- 綠化範圍  
LANDSCAPED AREA
- 天台綠化  
LANDSCAPED ROOF
- 無障礙通道  
BARRIER-FREE ACCESS
- 工地界線  
SITE BOUNDARY



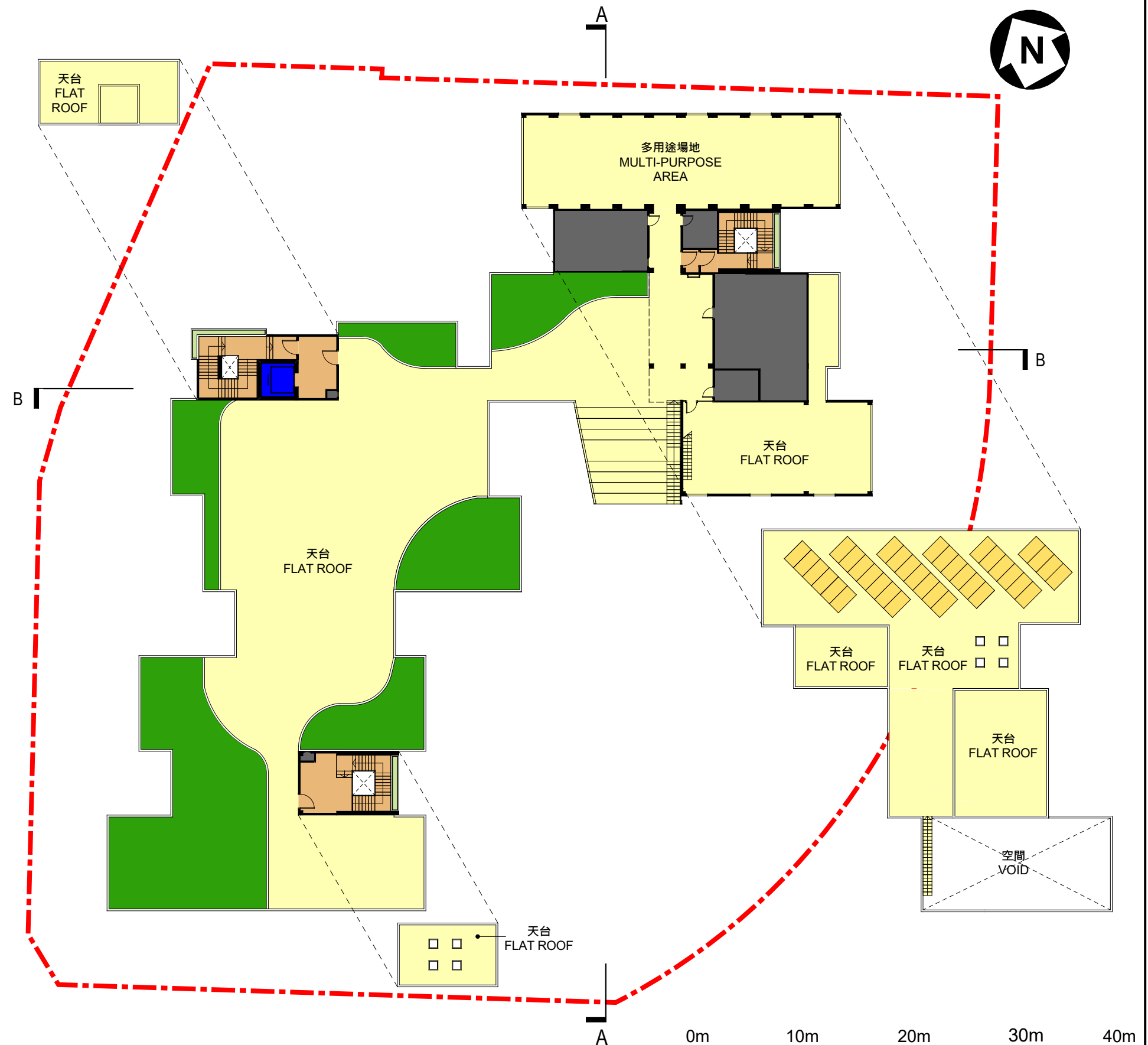
二樓平面圖  
SECOND FLOOR PLAN

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN



圖例 LEGEND

- 機房  
PLANT ROOM
- 通道/露天場地  
CIRCULATION / OPEN AREA
- 逃生樓梯  
MEANS OF ESCAPE STAIRCASE
- 暢通易達升降機  
ACCESSIBLE LIFT
- 綠化範圍  
LANDSCAPED AREA
- 天台綠化  
LANDSCAPED ROOF
- 太陽能光伏板  
PHOTOVOLTAIC PANEL
- 導光管  
LIGHT TUBE
- 工地界線  
SITE BOUNDARY

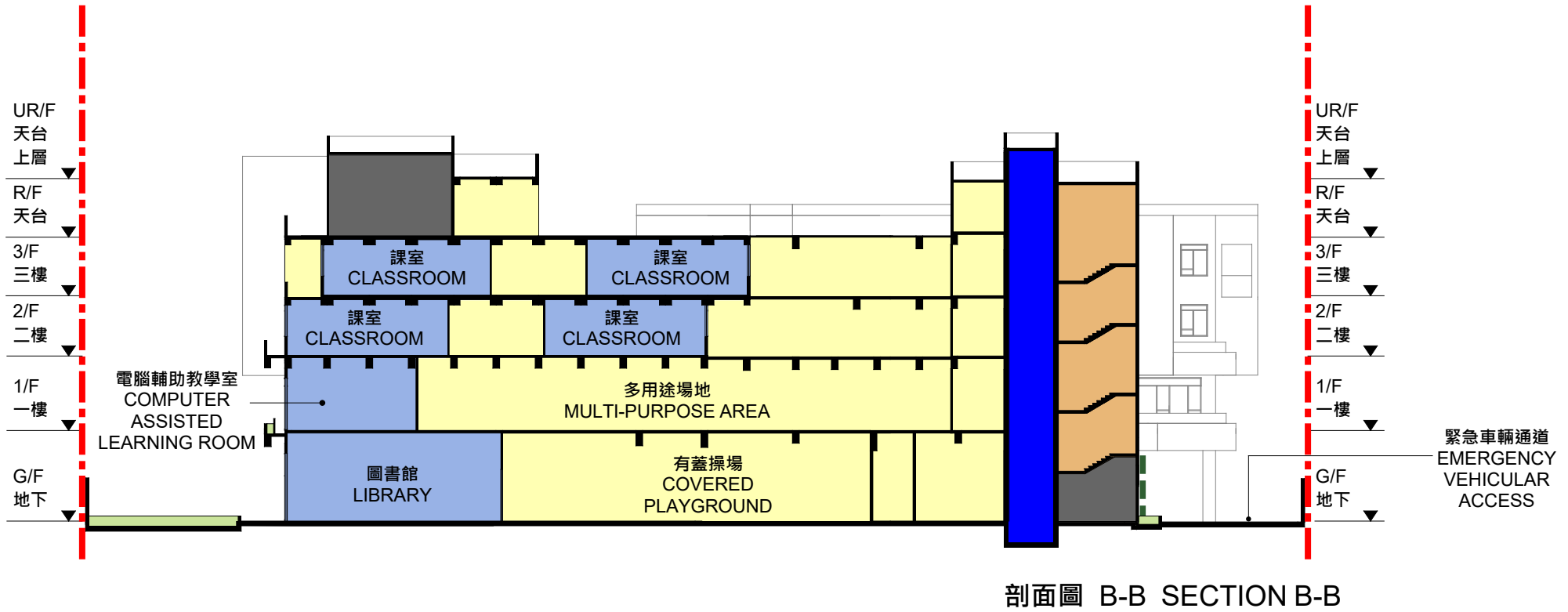
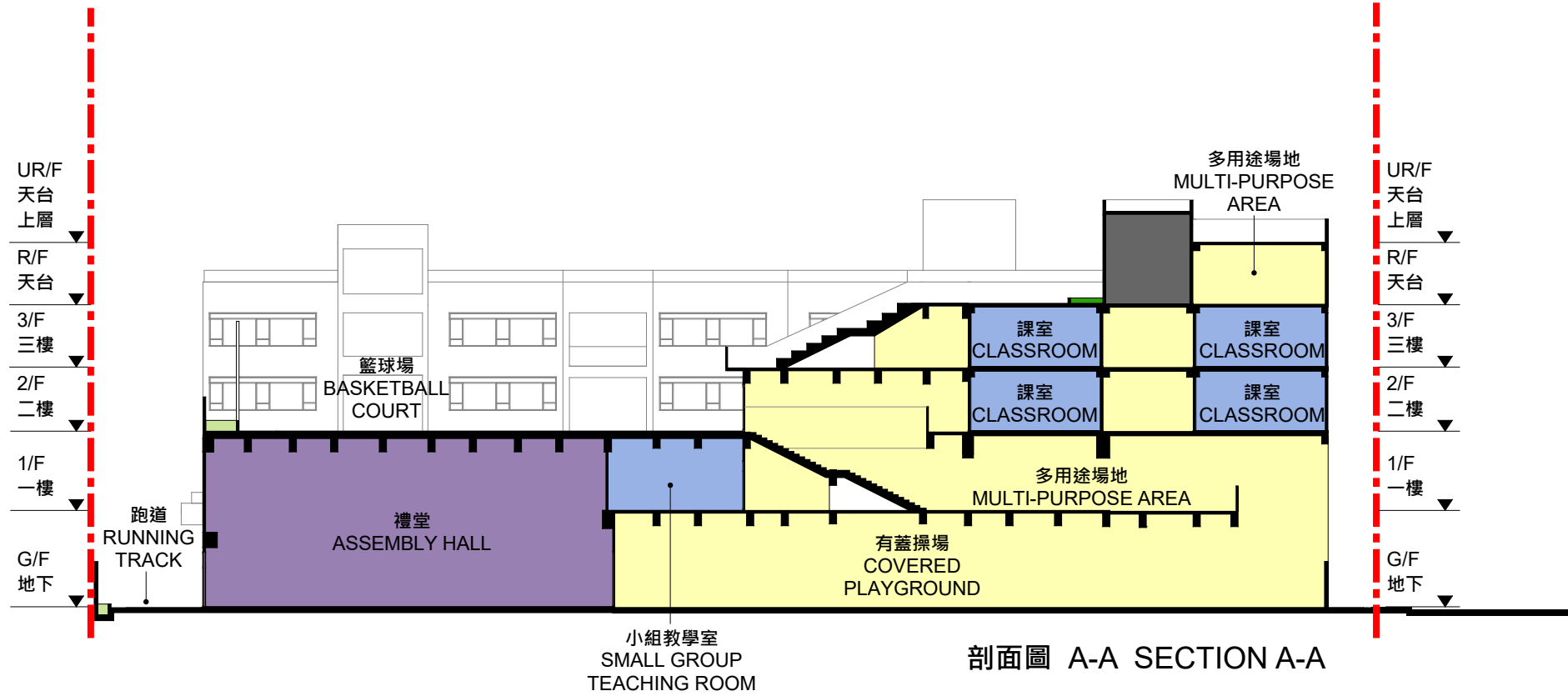


天台及天台上層平面圖  
ROOF & UPPER ROOF FLOOR PLANS

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN

圖例 LEGEND

- 教學室  
TEACHING ROOM
- 機房  
PLANT ROOM
- 通道/露天場地  
CIRCULATION / OPEN AREA
- 走火通道  
MEANS OF ESCAPE STAIRCASE
- 暢通易達升降機  
ACCESSIBLE LIFT
- 地面綠化/綠化範圍  
AT-GRADE GREENING/ LANDSCAPED AREA
- 天台綠化  
LANDSCAPED ROOF
- 禮堂  
ASSEMBLY HALL
- 垂直綠化  
VERTICAL GREENING
- 工地界線  
SITE BOUNDARY



0m 10m 20m 30m 40m

剖面圖  
SECTIONS

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN



ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署





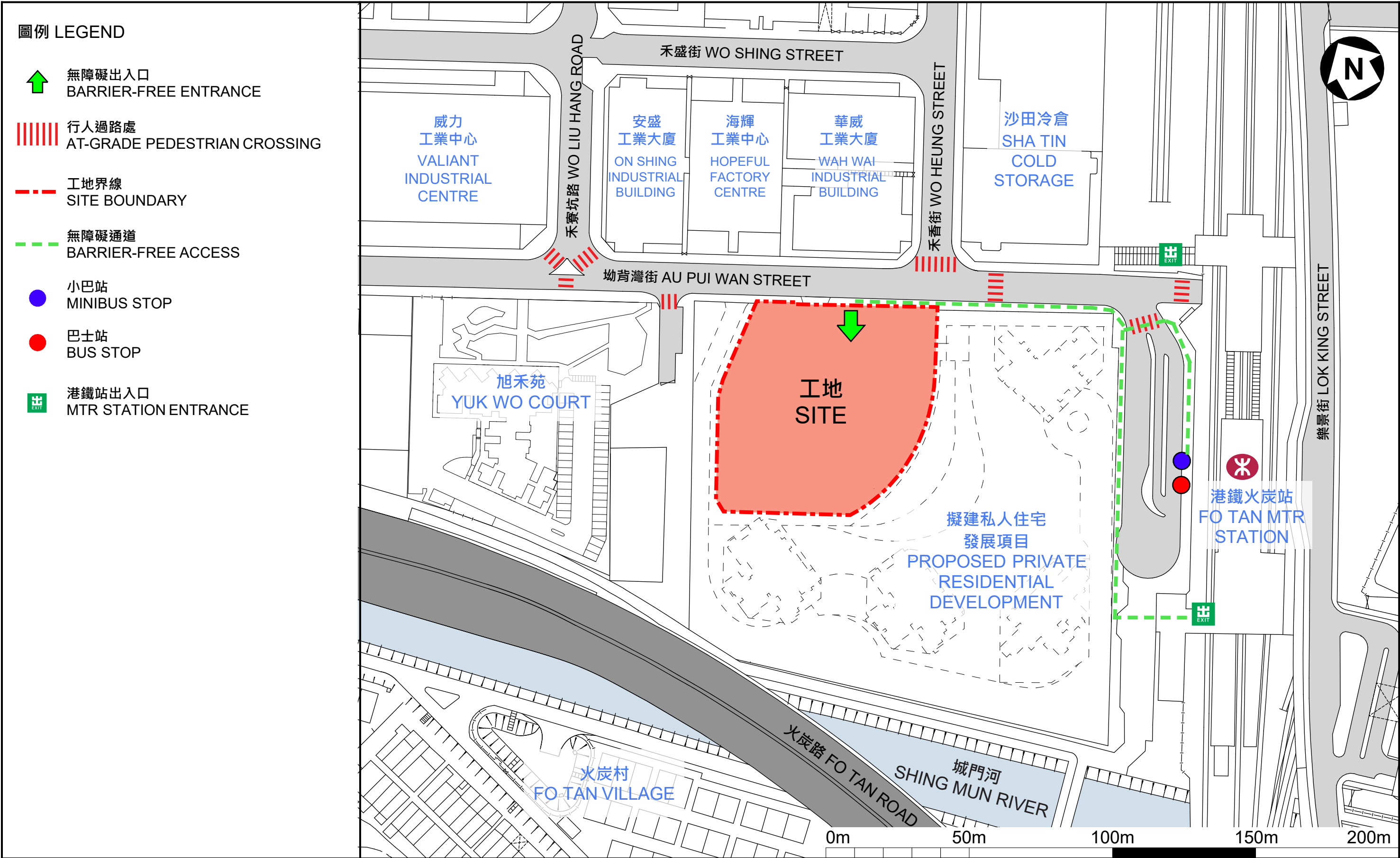
從南面望向小學的構思透視圖  
PERSPECTIVE VIEW FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)

構思圖  
ARTIST'S IMPRESSION

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN

 ARCHITECTURAL  
SERVICES  
DEPARTMENT 建築署





無障礙通道平面圖  
PLAN OF BARRIER FREE ACCESS

363EP  
沙田火炭坳背灣街1所設有24間課室的小學  
A 24-CLASSROOM PRIMARY SCHOOL AT AU PUI WAN STREET, FO TAN, SHATIN

## Enclosure 6 to PWSC(2021-22)32

### 363EP – A 24-classroom primary school at Au Pui Wan Street, Fo Tan, Sha Tin

#### 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	–	–	–	5.3
	Technical	–	–	–	0.4
				Sub-total	5.7 #
(b) Resident site staff (RSS) costs (Note 3)	Professional	16	38	1.6	2.2
	Technical	213	14	1.6	10.3
				Sub-total	12.5
Comprising -					
(i) Consultants' fees for management of RSS					0.7 #
(ii) Remuneration of RSS					11.8 #
				<b>Total</b>	<b>18.2</b>

\* 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 **363EP**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade the project to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.

#### Remarks

The cost figures in this Enclosure are shown in constant prices to correlate with the MPS salary point of the same year. The cost figures marked with # are shown in money-of-the-day prices in paragraph 9 of the main paper.