

**For discussion on
6 November 2020**

Legislative Council Panel on Education

**Campus Development Projects of
The Chinese University of Hong Kong and
the University of Hong Kong**

8056EF – Centralised General Research Laboratory Complex (Block 2)
8056EG – Redevelopment of No. 2 University Drive (Building 1)
8064EG – Information Technology Building at University Drive

PURPOSE

This paper briefs Members on the proposed capital works projects for The Chinese University of Hong Kong (CUHK) and the University of Hong Kong (HKU) to construct three new buildings on their campuses, namely –

CUHK

(a) **8056EF** – Centralised General Research Laboratory Complex (Block 2)

HKU

(b) **8056EG** – Redevelopment of No. 2 University Drive (Building 1)
(c) **8064EG** – Information Technology Building at University Drive

PROPOSAL

2. CUHK proposes to construct a research laboratory building at the northern side of its campus in Area 39, Tai Po (**8056EF**), whereas HKU proposes to construct a research laboratory building (**8056EG**) and an information technology building at University Drive (**8064EG**) on its main campus. Details of **8056EF** are at Enclosure 1, while details of **8056EG** and **8064EG** are at Enclosure 2.

3. We plan to submit the proposals for upgrading the three projects to Category A to the Public Works Sub-committee for endorsement, and subsequently to the Finance Committee for funding approval in early 2021.

ADVICE SOUGHT

4. Members are invited to offer views on the proposed three capital works projects of the two universities.

**Education Bureau
October 2020**

**The Chinese University of Hong Kong
8056EF - Centralised General Research Laboratory Complex (Block 2)**

PROJECT SCOPE AND NATURE

The scope of the works of **8056EF** involves mainly the construction of a nine-storey (excluding a basement floor) research laboratory building which will provide approximately 12 000 square meters (m²) in net operational floor area (NOFA)¹. The Faculty of Science of The Chinese University of Hong Kong (CUHK) will be the major user of the proposed building. Upon completion of the project, the building will provide the following new facilities –

- (a) laboratories of about 10 400 m² in NOFA;
- (b) offices of about 1 100 m² in NOFA; and
- (c) common and supporting facilities of about 500 m² in NOFA, including a lecture hall, storage area and cafeteria etc.

2. A site plan, an artist's impression, and floor plans of the project are at **Annexes 1 to 3 to Enclosure 1**.

JUSTIFICATION

3. In recent years, the School of Life Sciences of the Faculty of Science of CUHK has significantly expanded its research in taking advantage of biotechnology to address challenges posed by climate changes and to develop novel ways to treat human diseases. In addition, CUHK has launched the Biomedical Sciences Programme in 2016 to contribute to the nurturing of researchers and physician-scientists with a broad-based and strong foundation in biomedical sciences.

¹ NOFA is the floor area actually allocated to the users of a building for carrying out the intended activities. Unlike the construction floor area which takes into account all areas within the building structure envelop, NOFA does not include areas for such facilities (if any) as toilets, bathrooms and shower rooms, lift lobbies, stair halls, public or shared corridors, stairwells, escalators and lift shafts, pipe or services ducts, barriers-free access facilities, gender mainstreaming facilities, refuse chutes and refuse rooms, balconies, verandas, open decks and flat roofs, parking spaces, loading and unloading areas and mechanical plant rooms, etc.

4. With the aforesaid expansion in academic and research activities, the demand for space and infrastructure to support research in life sciences and biomedical sciences in CUHK has outgrown the capacity of its current campus facilities. The proposed new building will mainly comprise laboratory spaces with state-of-the-art facilities for research activities in the fields of life sciences and biomedical sciences, especially in the strategic research areas of Environment and Sustainability and Translational Biomedicine.

5. Specifically, the following laboratories are planned to be provided for and established in the new laboratory building –

- (a) State Key Laboratory of Agrobiotechnology for research in climate-smart agriculture;
- (b) specialised laboratories for high-precision instruments such as electron microscopes, mass spectrometers, X-ray diffractometers;
- (c) green house for plant biotechnology researches;
- (d) research facilities for animal models of human diseases;
- (e) computational and data center for bioinformatics research; and
- (f) herbarium to provide a platform for supporting research and education in STEM (Science, Technology, Engineering and Mathematics).

6. Upon completion of the proposed Centralised General Laboratory Complex (Block 2), the School of Life Sciences will be relocated to Area 39, Tai Po as part of CUHK's long-term strategy to develop the northern side of its campus into a cluster of research hub for life/biomedical sciences. As the proposed laboratory building will be located next to the School of Biomedical Sciences in the existing Centralised General Research Laboratory Complex (Block 1), this will enhance collaboration in Translational Biomedicine researches between the two schools in the future. The Complex's close proximity to the Hong Kong Science Park will also promote synergy in downstream technology development.

FINANCIAL IMPLICATIONS

7. The latest estimated cost of **8056EF** is \$1,416.1 million in money-of-the-day (MOD) prices. **8056EF** will be funded by the \$16-billion provision set aside for UGC-funded universities to enhance or refurbish campus facilities as announced in the 2019-20 Budget.

8. The project has no impact on tuition fees. In accordance with established practice, CUHK will operate the research laboratory building and the proposal will have no additional recurrent financial implications on the Government.

IMPLEMENTATION TIMETABLE

9. We plan to submit the proposal for upgrading the project to Category A to the Public Works Sub-committee for endorsement, and subsequently to the Finance Committee for funding approval in early 2021. CUHK plans to commence the construction works of **8056EF** once funding approval from the Finance Committee is obtained, with a view to completing the project within 2024.

PUBLIC CONSULTATION

10. The project is located on CUHK's campus. CUHK has briefed and consulted its staff and students on the project in various committee meetings, and no adverse comment was received.

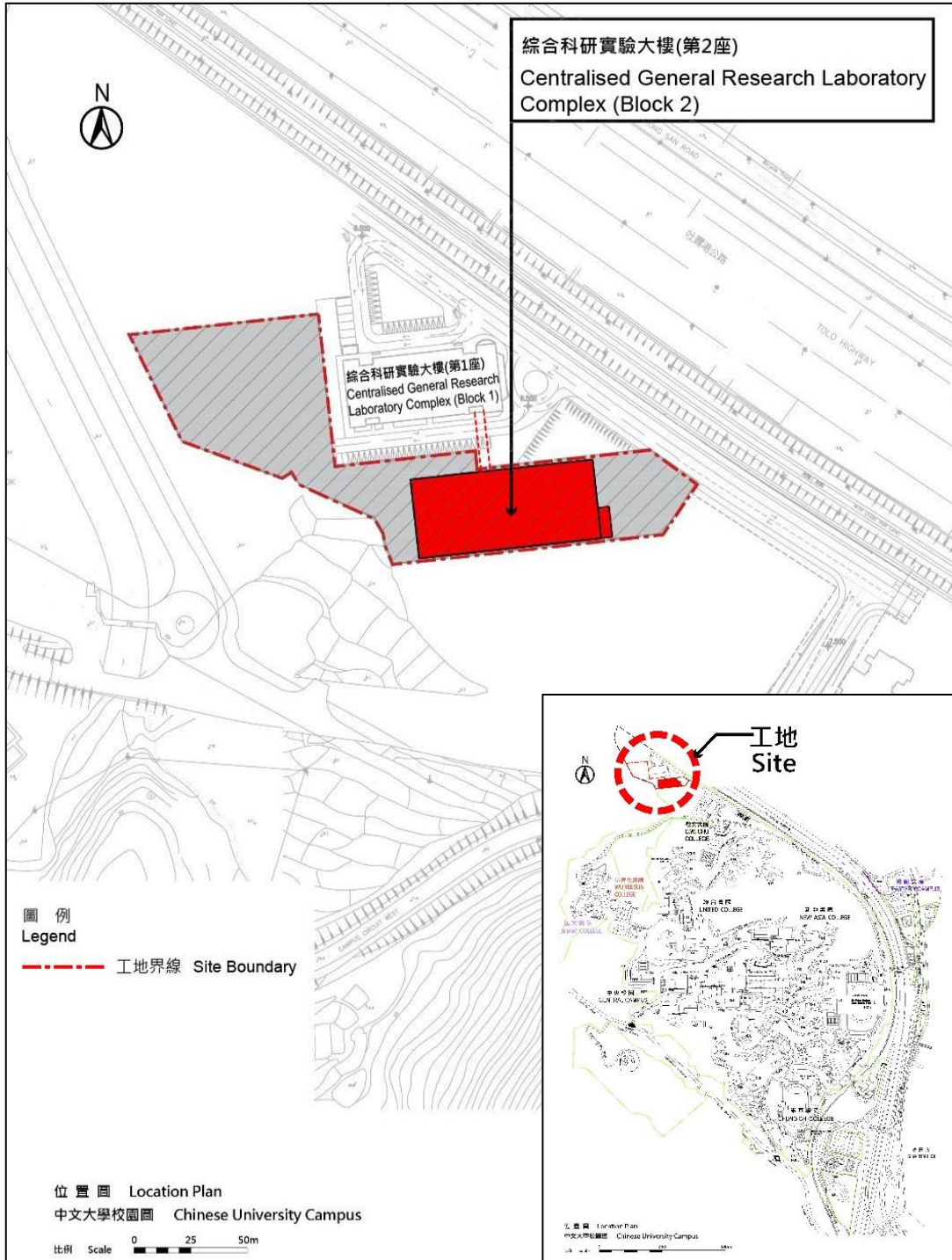
香港中文大學

8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

8056EF - Centralised General Research Laboratory Complex (Block 2)

工地平面圖 Site plan



附件 1 附錄 2 Annex 2 to Enclosure 1

香港中文大學

8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

8056EF - Centralised General Research Laboratory Complex (Block 2)



從東北面望向大樓的構思圖

View of the building from northeast (Artist's impression)



從東南面望向大樓的構思圖

View of the building from southeast (Artist's impression)

附件 1 附錄 3 Annex 3 to Enclosure 1

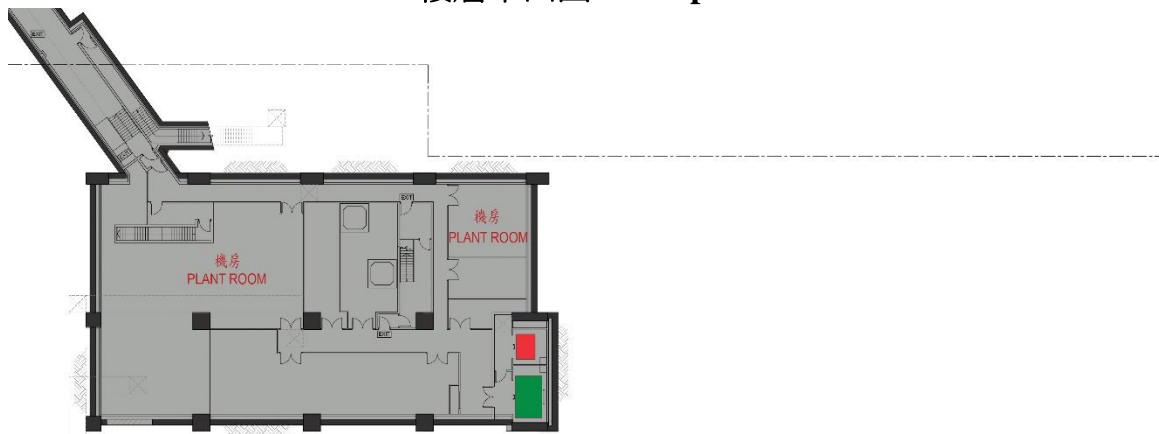
香港中文大學

8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong

8056EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan













地庫平面圖
Basement Plan



地下平面圖
Ground Floor Plan

LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

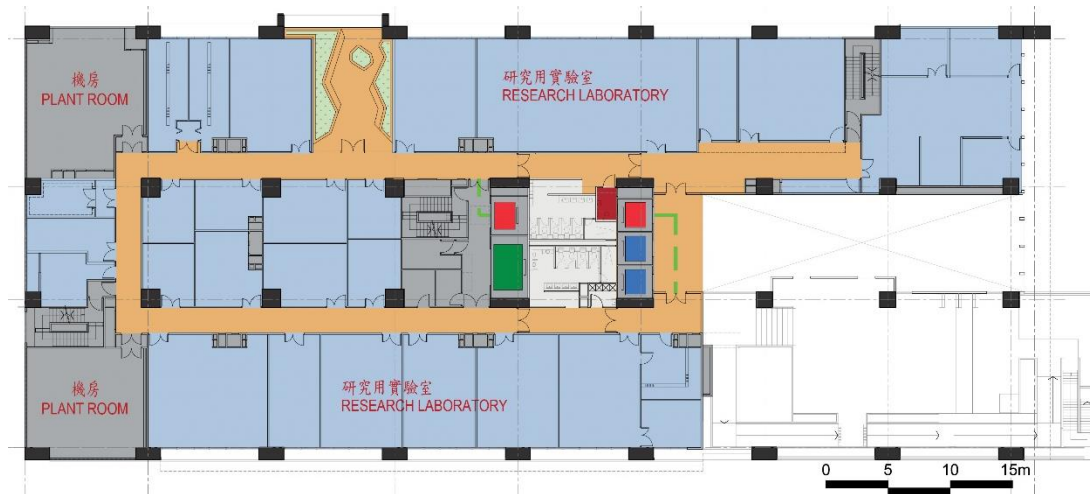
香港中文大學
8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong
8056EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan













一樓平面圖
First Floor Plan



二樓平面圖
Second Floor Plan

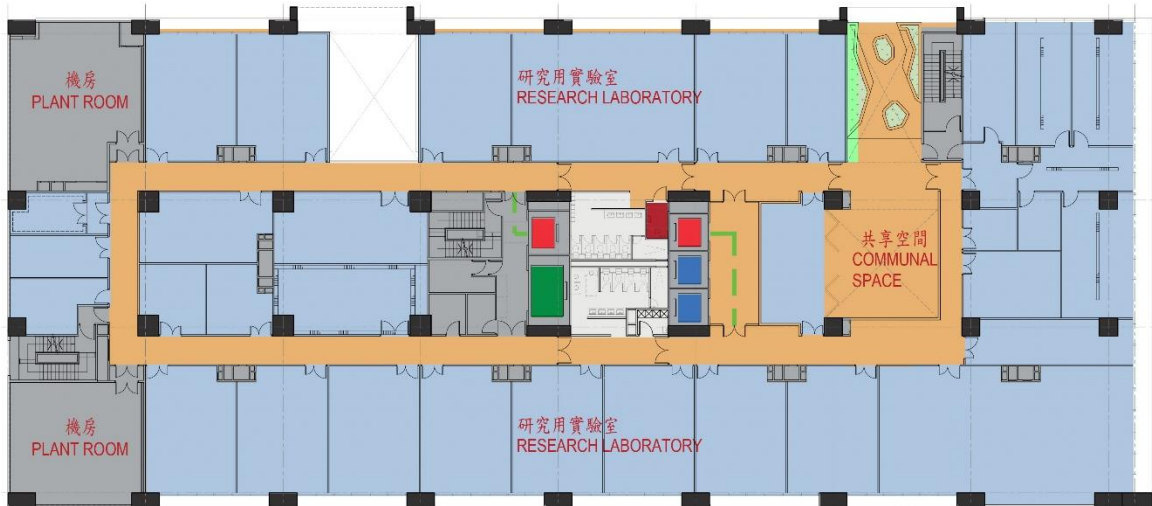
LEGEND :

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

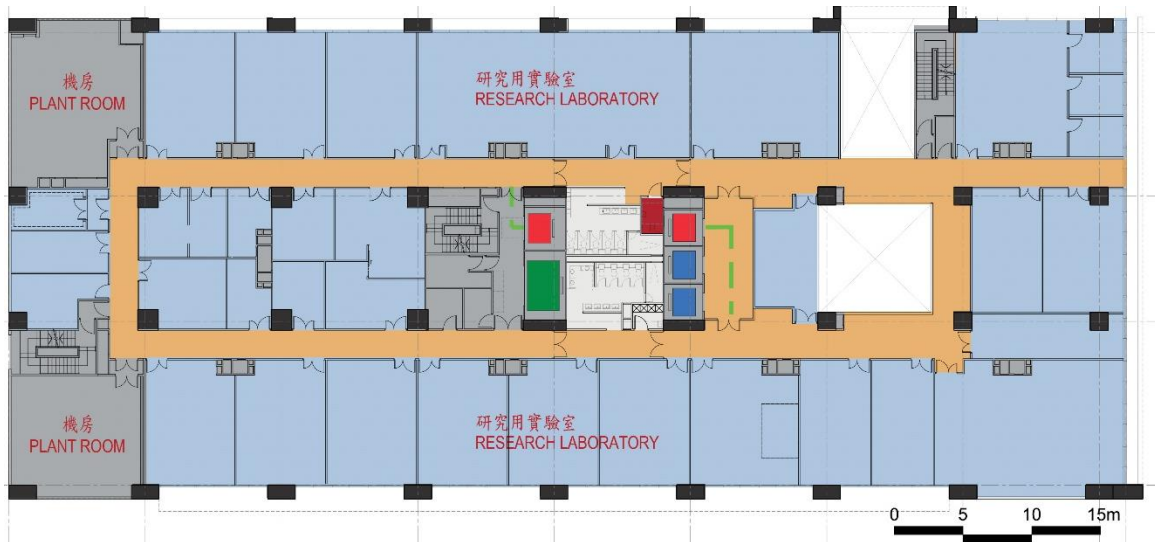
香港中文大學
8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong
8056EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan













三樓平面圖
Third Floor Plan



四樓平面圖
Fourth Floor Plan

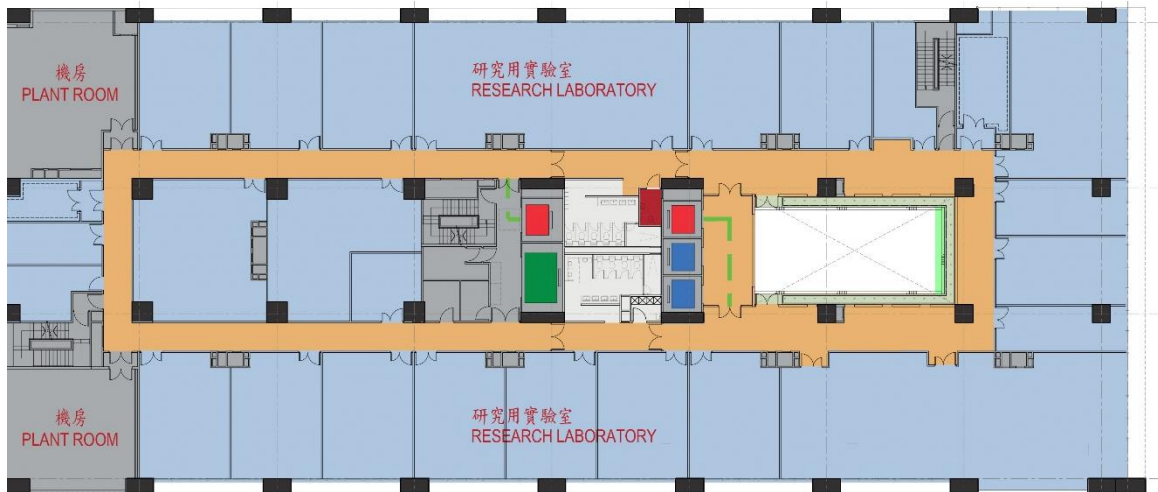
LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
 CIRCULATION 通道	 SERVICE LIFT 送貨升降機
 PLANT ROOM 機房	 VERTICAL GREEN 直綠化垂
 ACCESSIBLE TOILET 暢通易達洗手間	 BARRIER FREE ACCESS 無障礙通道

香港中文大學
8056EF – 綜合科研實驗大樓(第 2 座)

The Chinese University of Hong Kong
8056EF - Centralised General Research Laboratory Complex (Block 2)

樓層平面圖 Floor plan













五至七樓平面圖
Fifth to Seventh Floor Plan



天台平面圖
Roof Plan

LEGEND:

 RESEARCH LABORATORY 研究用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OFFICE 教職員辦公室	 PASSENGER LIFT 客用升降機
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**The University of Hong Kong
8056EG - Redevelopment of No. 2 University Drive (Building 1)
8064EG - Information Technology Building at University Drive**

PROJECT SCOPE AND NATURE

8056EG - Redevelopment of No. 2 University Drive (Building 1)

The scope of the works of **8056EG** involves the demolition of an existing five-storey staff quarters building and construction of a nine-storey research laboratory building on University Drive on the campus of the University of Hong Kong (HKU). The new building will provide approximately 7 100 m² in net operational floor area (NOFA), and the Faculty of Science and the Faculty of Engineering of HKU will be the major users of the proposed new building.

2. Upon completion of the project, the building will provide the following new facilities –

- (a) laboratories of about 4 200 m² in NOFA;
- (b) classrooms of about 1 800 m² in NOFA;
- (c) offices of about 1 000 m² in NOFA; and
- (d) study space of about 100 m² in NOFA.

8064EG - Information Technology Building at University Drive

3. The eight-storey information technology (IT) building, also to be located on University Drive and adjacent to the research laboratory building (i.e. 8056EG), will provide approximately 5 300 m² in NOFA. The Information Technology Services and Technology Transfer Office of HKU will be the major users of the proposed new building. Upon completion of the project, the building will provide the following new facilities –

- (a) IT laboratories of about 1 500 m² in NOFA;

- (b) data centre of about 1 100 m² in NOFA;
- (c) offices of about 350 m² in NOFA;
- (d) classrooms of about 250 m² in NOFA; and
- (e) common and supporting facilities of about 2 100 m² in NOFA.

4. A site plan, an artist's impression, and floor plans of the two projects are at **Annexes 1 to 5 to Enclosure 2**.

JUSTIFICATION

5. In support of the Government's policy of driving innovation and technology development in Hong Kong, HKU has been pursuing its long-term strategy to develop the eastern side of the campus into a science and engineering hub so as to provide additional space for academic and research activities. The research infrastructure will not only be used by researchers in the fields of STEM (Science, Technology, Engineering and Mathematics), but also support interdisciplinary research across a wide spectrum of subject areas.

6. HKU proposes to build a research laboratory building (i.e. **8056EG**) mainly for the development of science and engineering fields, and an IT building (i.e. **8064EG**) for housing a data centre as well as teaching and learning facilities.

7. The new research laboratory building will be dedicated to the theme of molecular and macromolecular technology. It is anticipated that around 20 teams will conduct research in the new building, whereas the interior of the building will adopt an open plan design with shared space for study lounge with a view to facilitating interaction and collaboration. The manpower to be trained in these new facilities will fuel Hong Kong's endeavours in innovation and technology in various sectors, including energy and sustainability, the environment, healthcare, business, finance and education.

8. Specifically, the following laboratories are planned to be provided for and established in the new research laboratory building –

- (a) Core Analytical and Instrumental Facilities - The new research building will house a number of advanced analytical laboratories, including Mass spectrometry suite, Nuclear Magnetic Resonance suite and Microscopy suite, for supporting teaching and research in materials science related disciplines; and
- (b) Molecular and Macromolecular Technology Laboratories - The primary wet laboratories will provide a safe and quality environment for students to receive hands-on laboratory training in advanced molecular science, biomolecular and biomedical engineering as well as soft robotics disciplines.

9. As for the new IT building, in addition to supporting research in IT, HKU plans to take the opportunity to re-organise its IT facilities which are currently scattered and dispersed in various locations across its campus. HKU has advised that there are substantial constraints in renovating its current data centres to meet its upcoming operational needs owing to the lack of space and limitation in the power supply of the existing premises. The new IT building will thus include a new data centre that will serve as a central hub of IT operations and equipment, with around 150 computer racks and related facilities to enhance the provision of IT service to members of the university community in the long run. Teaching and learning facilities will also be provided in the proposed building to equip students with the capability in harnessing IT to enhance their learning experience.

10. In addition, the interior of the new IT Building will adopt an open plan design to support interactive learning, innovation and entrepreneurship. For example, there will be co-working areas to encourage students and alumni to collaborate in early stage start-up IT projects, as well as shared space to facilitate meaningful exchanges among young innovators, entrepreneurs and pioneers.

FINANCIAL IMPLICATIONS

11. The latest estimated cost of **8056EG** and **8064EG** are \$599.9 million and \$561.8 million in MOD prices respectively. **8064EG** will be funded by the \$16-billion provision set aside for UGC-funded universities to enhance or refurbish campus facilities as announced in the 2019-20 Budget.

12. The projects have no impact on tuition fees. In accordance with the established practice, HKU will operate the two buildings and the proposals will have no additional recurrent financial implications on the Government.

IMPLEMENTATION TIMETABLE

13. We plan to submit the proposals for upgrading these projects to Category A to the Public Works Sub-committee for endorsement, and subsequently to the Finance Committee for funding approval in early 2021. HKU plans to commence the construction works of both buildings once funding approval from the Finance Committee is obtained, with a view to completing the projects within 2024.

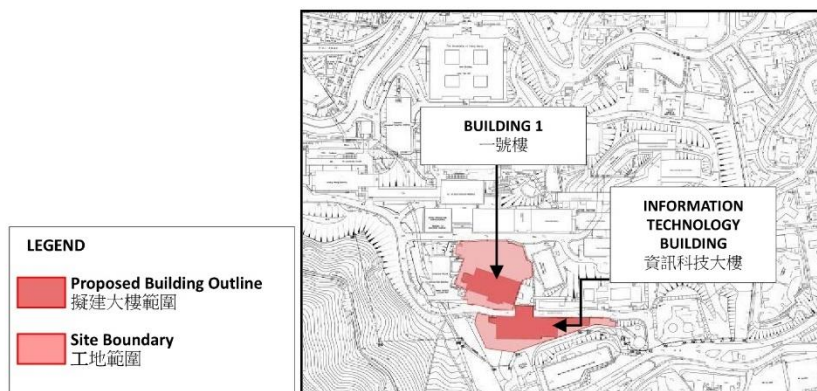
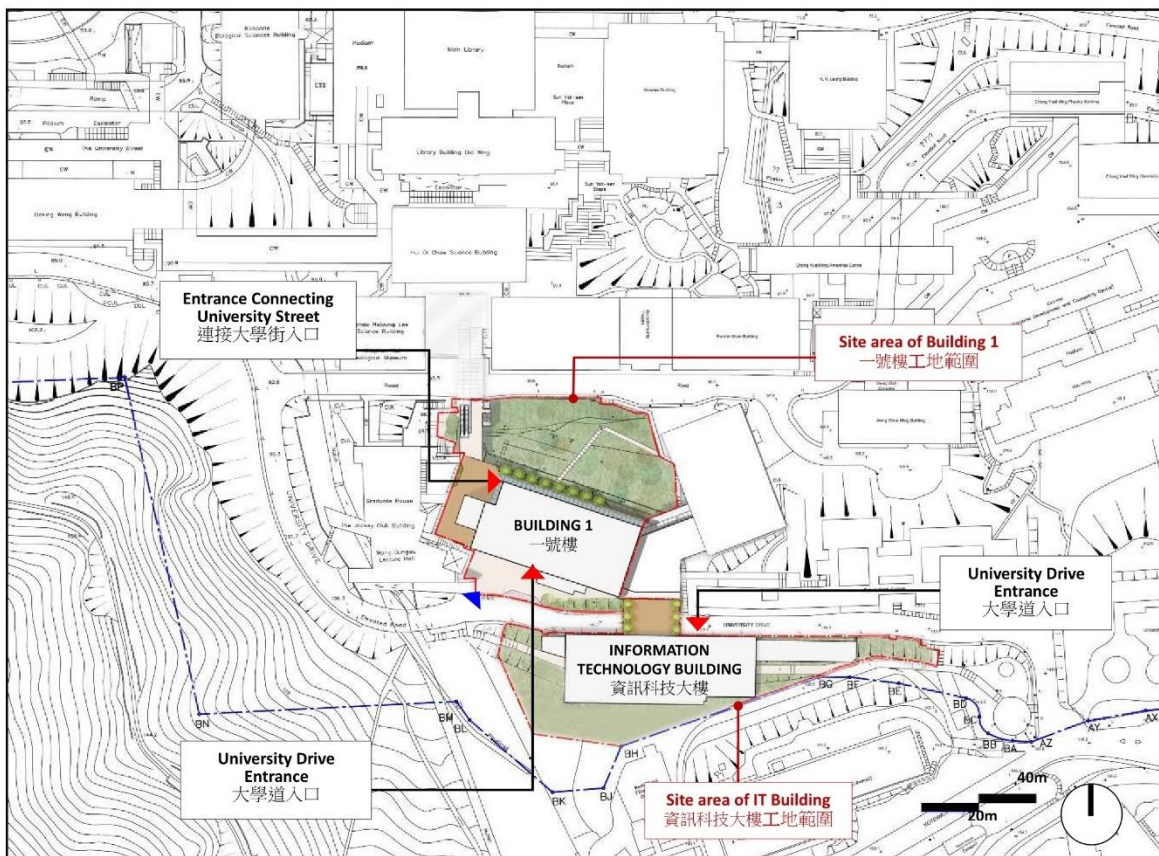
PUBLIC CONSULTATION

14. The projects are located on HKU's campus. HKU has briefed and consulted its staff and students on the projects in various committee meetings, and no adverse comment was received.

香港大學
8056EG - 大學道 2 號重建工程 (一號樓)
8064EG - 大學道資訊科技大樓

The University of Hong Kong
8056EG – Redevelopment of No. 2 University Drive (Building 1)
8064EG – Information Technology Building at University Drive

工地平面圖 Site plan



香港大學
8056EG - 大學道 2 號重建工程 (一號樓)

**The University of Hong Kong
8056EG – Redevelopment of No. 2 University Drive (Building 1)**



從西北面望向大樓的構思圖
View of the building from northwest (Artist's impression)

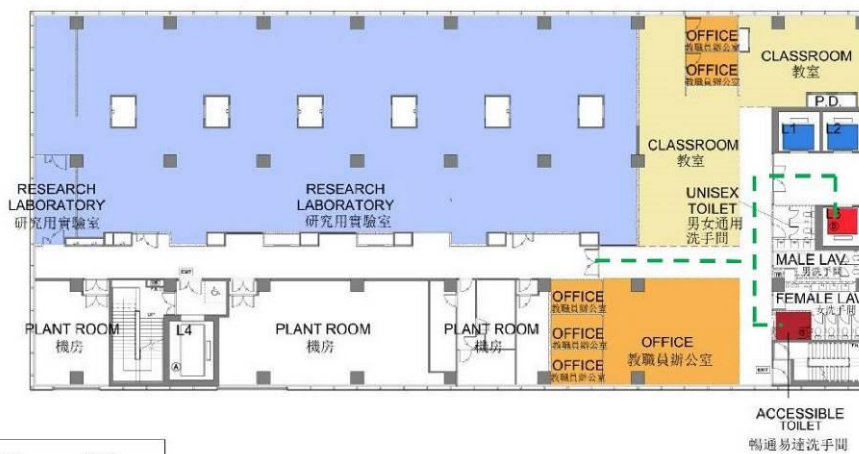
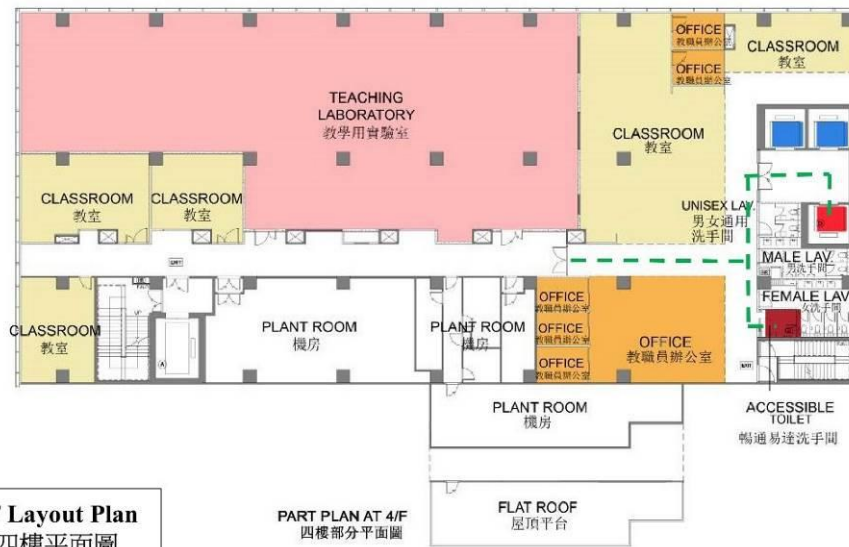


從西南面望向大樓的構思圖
View of the building from southwest (Artist's impression)

香港大學
8056EG - 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
8056EG – Redevelopment of No. 2 University Drive (Building 1)

樓層平面圖 Floor plan



LEGEND :

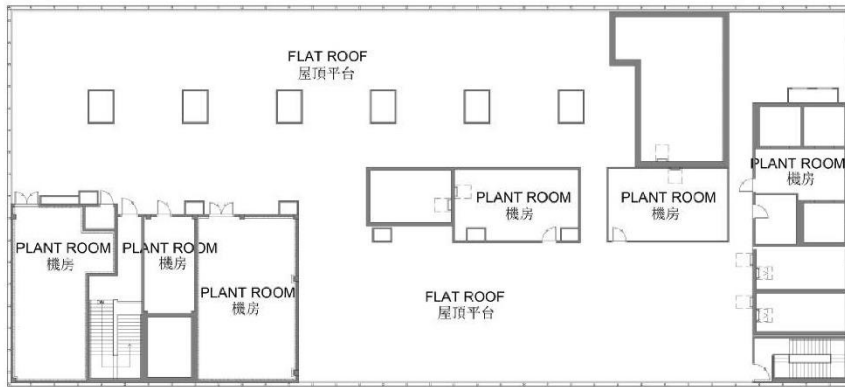
 CLASSROOM 教室	 OFFICE 教職員辦公室
 STUDY SPACE 學習空間	 ACCESSIBLE TOILET 暢通易達洗手間
 TEACHING LABORATORY 教學用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 OPEN LABORATORY 開放式實驗室	 PASSENGER LIFT 客用升降機
 RESEARCH LABORATORY 研究用實驗室	 BARRIER FREE ACCESS 無障礙通道



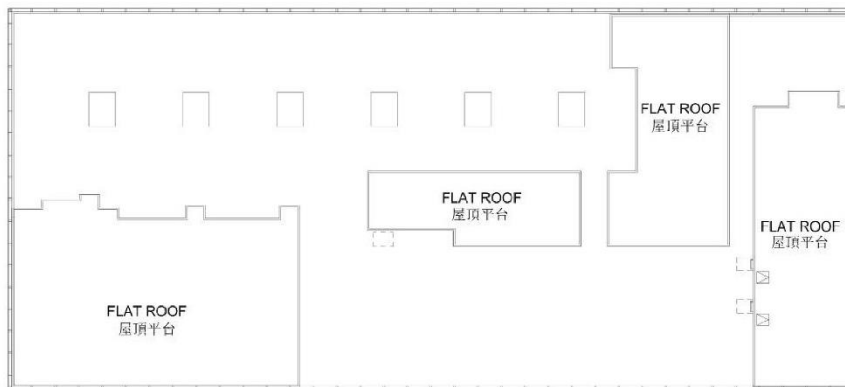
香港大學
8056EG - 大學道 2 號重建工程 (一號樓)

The University of Hong Kong
8056EG – Redevelopment of No. 2 University Drive (Building 1)

樓層平面圖 Floor plan












R/F Layout Plan
屋頂平面圖



Upper R/F Layout Plan
上層屋頂平面圖



LEGEND :

 CLASSROOM 教室	 OFFICE 教職員辦公室
 STUDY SPACE 學習空間	 ACCESSIBLE TOILET 暢通易達洗手間
 TEACHING LABORATORY 教學用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
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 RESEARCH LABORATORY 研究用實驗室	 BARRIER FREE ACCESS 無障礙通道

香港大學
8064EG - 大學道資訊科技大樓

**The University of Hong Kong
8064EG – Information Technology Building at University Drive**



從東北面望向大樓的構思圖
View of the building from northeast (Artist's impression)

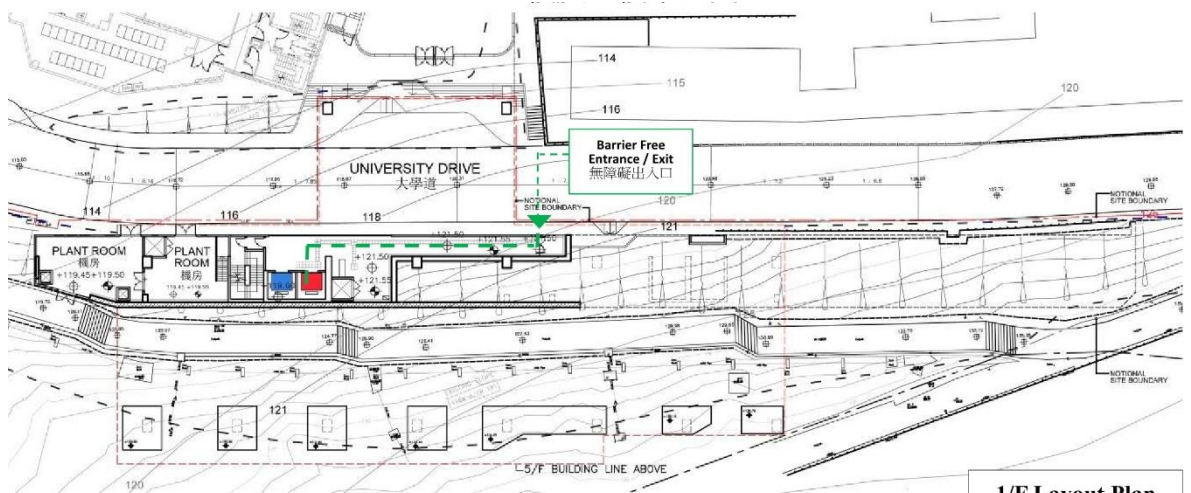


從西南面望向大樓的構思圖
View of the building from southwest (Artist's impression)

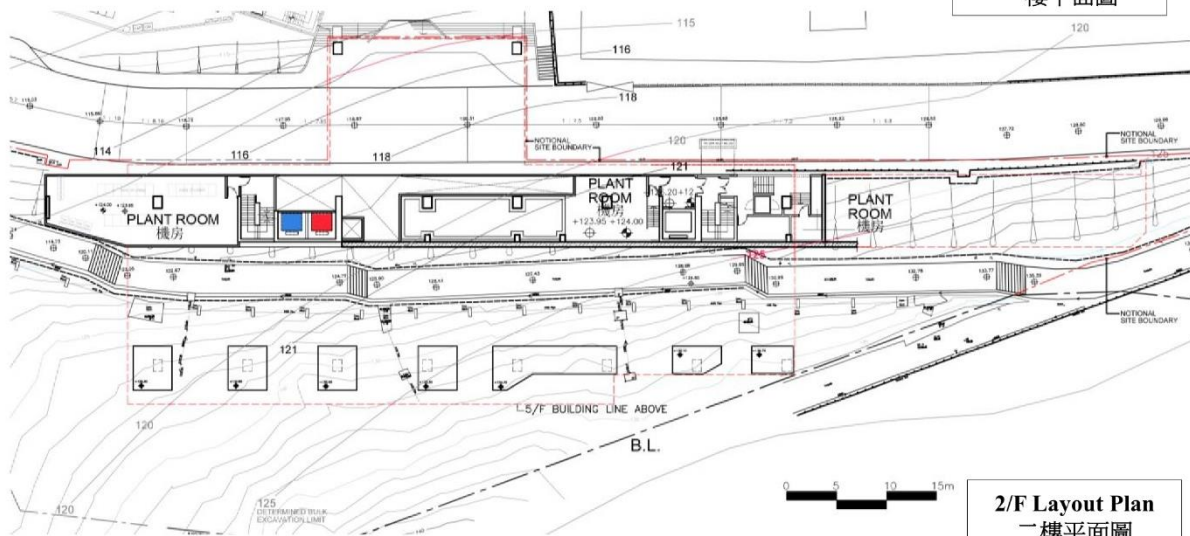
香港大學
8064EG - 大學道資訊科技大樓

The University of Hong Kong
8064EG – Information Technology Building at University Drive

樓層平面圖 Floor plan



1/F Layout Plan
一樓平面圖



2/F Layout Plan
二樓平面圖

LEGEND :

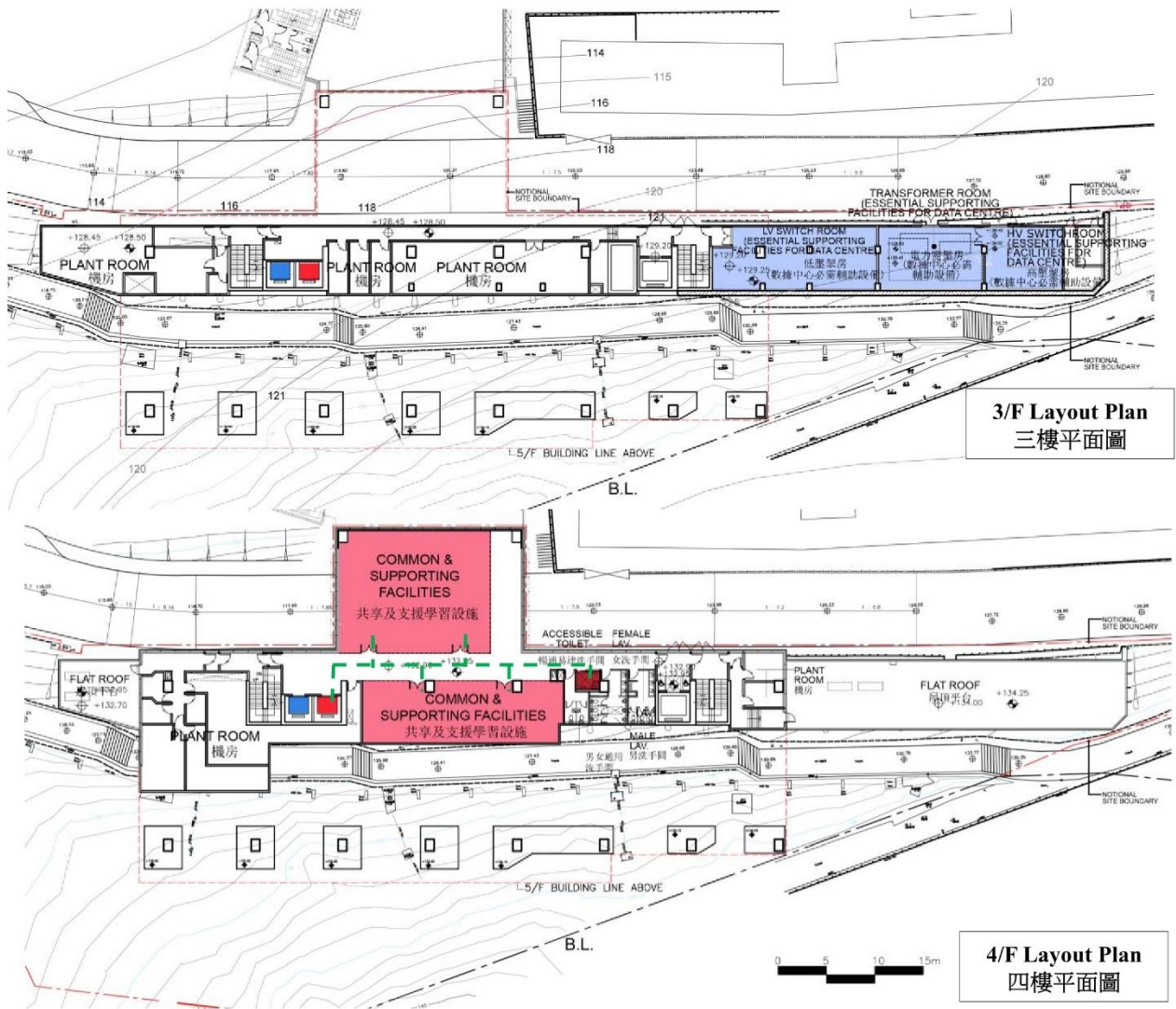
 CLASSROOM 教室	 OFFICE 教職員辦公室
 COMMON & SUPPORTING FACILITIES 共享及支援學習設施	 ACCESSIBLE TOILET 暢通易達洗手間
 IT TEACHING LABORATORY 資訊科技教學用實驗室	 ACCESSIBLE LIFT 暢通易達升降機
 DATA CENTRE/ ESSENTIAL SUPPORTING FACILITIES FOR DATA CENTRE 數據中心/數據中心必需輔助設備	 PASSENGER LIFT 客用升降機
 BARRIER FREE ACCESS 無障礙通道	








香港大學
8064EG - 大學道資訊科技大樓

The University of Hong Kong
8064EG – Information Technology Building at University Drive

樓層平面圖 Floor plan



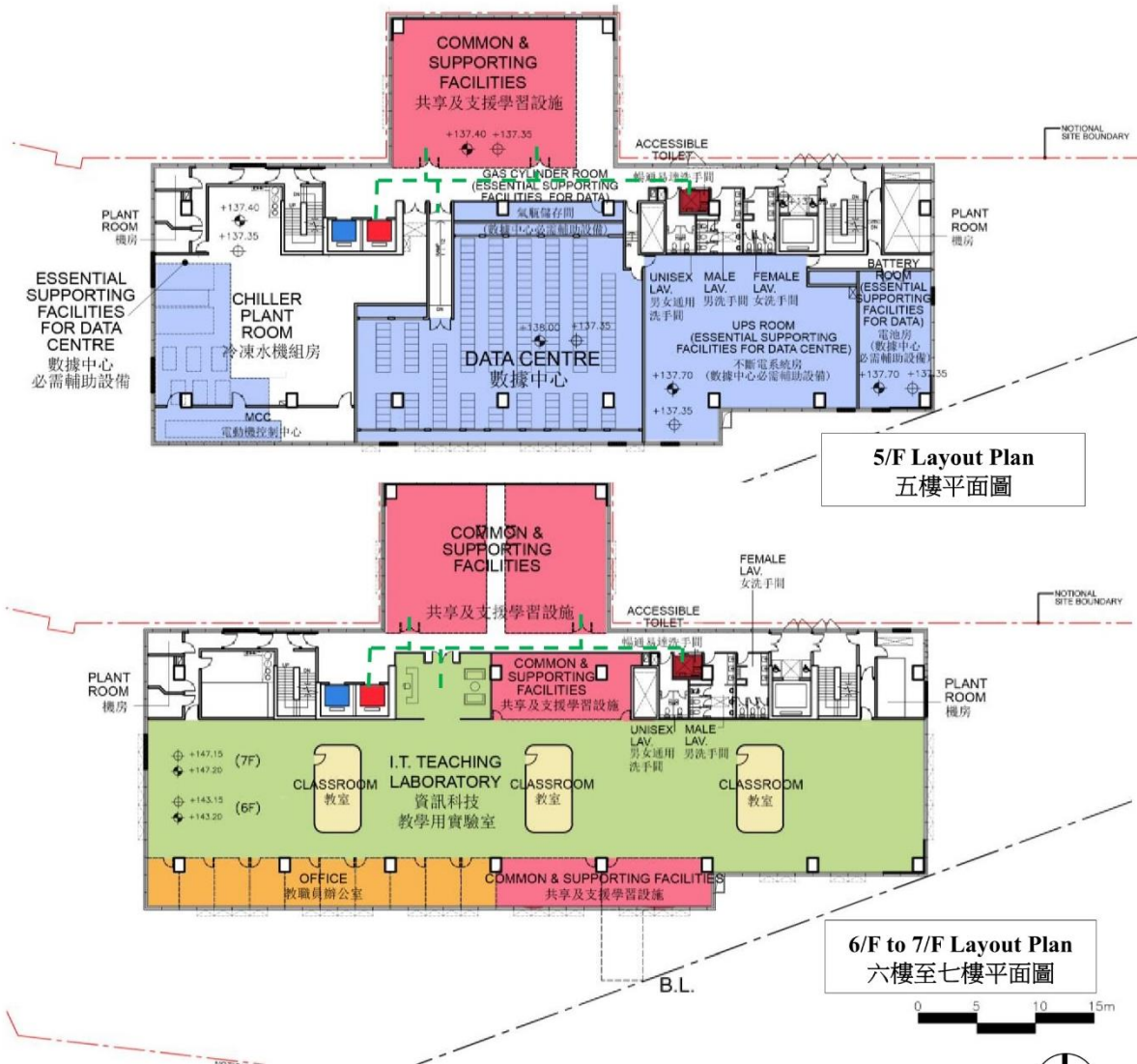
LEGEND :

 CLASSROOM 教室	 OFFICE 教職員辦公室
 COMMON & SUPPORTING FACILITIES 共享及支援學習設施	 ACCESSIBLE TOILET 暢通易達洗手間
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香港大學
8064EG - 大學道資訊科技大樓

The University of Hong Kong
8064EG – Information Technology Building at University Drive

樓層平面圖 Floor plan



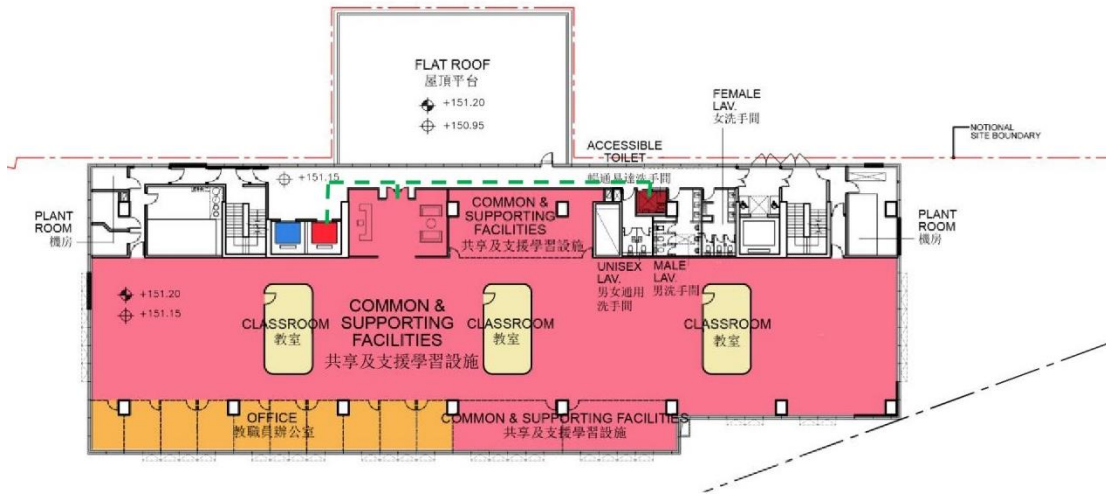
LEGEND :

- | | |
|---|---|
|  CLASSROOM 教室 |  OFFICE 教職員辦公室 |
|  COMMON & SUPPORTING FACILITIES
共享及支援學習設施 |  ACCESSIBLE TOILET 暢通易達洗手間 |
|  I.T. TEACHING LABORATORY
資訊科技教學用實驗室 |  ACCESSIBLE LIFT 暢通易達升降機 |
|  DATA CENTRE/ ESSENTIAL SUPPORTING FACILITIES FOR DATA CENTRE
數據中心/數據中心必需輔助設備 |  PASSENGER LIFT 客用升降機 |
|  BARRIER FREE ACCESS 無障礙通道 | |

香港大學
8064EG - 大學道資訊科技大樓

The University of Hong Kong
8064EG – Information Technology Building at University Drive

樓層平面圖 Floor plan












8/F Layout Plan
八樓平面圖



R/F Layout Plan
屋頂平面圖

LEGEND :

- | | |
|--|---|
|  CLASSROOM 教室 |  OFFICE 教職員辦公室 |
|  COMMON & SUPPORTING FACILITIES 共享及支援學習設施 |  ACCESSIBLE TOILET 暢通易達洗手間 |
|  IT TEACHING LABORATORY 資訊科技教學用實驗室 |  ACCESSIBLE LIFT 暢通易達升降機 |
|  DATA CENTRE/ ESSENTIAL SUPPORTING FACILITIES FOR DATA CENTRE 數據中心/數據中心必需輔助設備 |  PASSENGER LIFT 客用升降機 |
|  BARRIER FREE ACCESS 無障礙通道 | |

