

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

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

Universities

15EL – Tseung Kwan O Joint Student Hostel

Members are invited to recommend to Finance Committee the upgrading of **15EL** to Category A at an estimated cost of \$198.3 million in money-of-the-day prices for the construction of Tseung Kwan O Joint Student Hostel.

PROBLEM

The Hong Kong University of Science and Technology (HKUST) and Hong Kong Baptist University (HKBU) need additional hostel places to meet the accommodation need of their students.

PROPOSAL

2. The Secretary-General, University Grants Committee (SG, UGC), on the advice of the University Grants Committee (UGC) and the Director of Architectural Services (D Arch S) as UGC's Technical Adviser, together with the support of the Secretary for Education, proposes to upgrade **15EL** to Category A at an estimated cost of \$198.3 million in money-of-the-day (MOD) prices for the construction of a 520-place joint student hostel in Tseung Kwan O.

/ **PROJECT**

PROJECT SCOPE AND NATURE

3. The scope of **15EL** comprises the construction of a 10-storey hostel block, providing approximately 5 970 square metres (m²) in net operational floor area (NOFA). The following facilities will be provided by the project –

- (a) a total of 520 student hostel places and ancillary facilities of some 5 410 m² in NOFA, including accommodation for the hostel manager, tutors and domestic staff members as well as common space within student apartments;
- (b) a sky garden and common facilities of some 300 m² in NOFA, including a multi-purpose hall (which can be used as dining area) with kitchen, a gymnasium, a kiosk and a study room;
- (c) supporting facilities of some 260 m² in NOFA, including a management office, a laundry, and store and refuse rooms, etc.; and
- (d) 30 covered bicycle parking spaces, six open car parking spaces and ten open motorcycle parking spaces.

——— 4. A site plan is at Enclosure 1. The view of the building (artist's
——— impression), the sectional plan and the list of facilities are at Enclosures 2 to 4 respectively. Subject to funding approval of the Finance Committee, HKUST, the lead institution of this joint project, plans to commence construction works in the third quarter of 2012 for completion in the third quarter of 2014.

/JUSTIFICATION

JUSTIFICATION

5. Hostel life is an essential part of higher education. It provides students with an environment conducive to learning, and allows more social interaction which enriches students' personal development and learning experience. Provision of student hostel can also attract non-local students and, in turn, broaden the horizon of local students and foster Hong Kong's international links. Under the existing policy, UGC-funded institutions are provided with publicly-funded student hostels calculated in accordance with the following criteria¹ :

- (a) all undergraduate students should be given the opportunity to stay in student hostel for at least one year of their programme; and
- (b) all research postgraduates, non-local students as well as undergraduate students whose daily travelling time exceeds four hours should be provided with student hostel places.

The Government will fund up to 75% of the capital cost of the approved level of publicly-funded student hostel provision, with the remainder to be met by the respective institutions using their own sources of private funding.

6. In addition to the above-mentioned standard hostel provision, the Administration decided in February 2006 to provide an additional 1 840 publicly-funded student hostel places to the UGC-funded sector to support institutions' growing student exchange activities.

/7.

¹ The criteria are applicable to all UGC-funded institutions, except for the Lingnan University (which has been provided with hostel places for 50% of its full-time degree student population having regard to its remote location in Tuen Mun and its aspirations to develop itself into a relatively small, fully residential liberal arts institution) and the Hong Kong Institute of Education (which was provided with hostel places for 50% of its full-time degree student population projected at the time of establishment of the Institute having regard to the potential benefits that hostel life would bring to the quality of pre-service teacher education).

7. The Administration has been encouraging institutions to identify suitable sites within campus for hostel developments, or redevelop existing campus buildings / facilities into hostels so as to maximise the development and utilisation of their campus sites. In addition, the Administration has been exploring with UGC-funded institutions the development of off-campus joint hostels for shared use by the institutions in order to address institutions' shortfall of hostel places. Apart from enabling a more efficient use of land resource which is extremely scarce in Hong Kong, joint hostels can also help promote social interaction among students from different institutions and backgrounds, which will enrich their personal development and improve their communication and social skills.

8. As at the 2011/12 academic year, it is estimated that HKUST and HKBU require some 4 570 and 2 690 places respectively if they fully utilise the 20% non-local student quota. Against their current provision of some 3 580 and 1 710 publicly-funded hostel places, the respective hostel shortfall of HKUST and HKBU is 990 and 980 hostel places. Having regard to the site location and the needs of various UGC-funded institutions, we propose to allocate a site in Tseung Kwan O for the development of a publicly-funded joint hostel for the shared use by HKUST and HKBU. The proposed joint hostel will provide a total of 520 hostel places, with a provisional split of 370 places for HKUST and 150 for HKBU². It will be conveniently located within 5 minutes' walk from the Tseung Kwan O railway station and the nearby public transport interchange.

9. We will continue to work with UGC-funded institutions on the planning and implementation of new projects to address shortfall in hostel places faced by institutions.

10. The proposed hostel block will provide 65 apartments each accommodating four double bedrooms with study space in each room, and shared bathrooms and common space in each apartment. There will be a total of 260 double bedrooms for students, and a typical floor will provide accommodation for some 64 students. The ground floor will accommodate common and support facilities such as a multi-purpose hall with a kitchen, a management office, a gymnasium and a laundry. HKUST as the lead institution will coordinate project implementation of the joint hostel. A joint management committee comprising representatives from HKUST and HKBU will be formed to take up the future management of the hostel.

/FINANCIAL

² The Administration will keep in view the respective demand for hostel places of individual UGC-funded institutions, and liaise with the institutions on possible adjustments to the allocation of hostel places within the Tseung Kwan O Joint Student Hostel in future, with a view to better addressing institutions' shortfall of hostel places.

FINANCIAL IMPLICATIONS

11. The total estimated cost of the project is \$264.4 million (in MOD prices). The Government will fund up to \$198.3 million, i.e. 75% of the construction cost. HKUST and HKBU will contribute \$66.1 million through their private sources of funding for the remaining 25% of the construction cost. The respective construction costs to be borne by HKUST (\$47 million) and HKBU (\$19.1 million) are calculated on a pro-rata basis, in accordance with the number of hostel places to be allocated to the two institutions. In case of changes in the number of hostel places as agreed between HKUST and HKBU (or other institutions) in future, their contribution to the capital cost will be adjusted accordingly.

12. SG, UGC, on the advice of D Arch S, recommends capital funding of \$198.3 million in MOD prices to be provided by the Government (please see paragraph 15 below), broken down as follows –

	\$ million
(a) Site formation and development	25.9
(b) Building	111.9
(c) Building services	37.5
(d) Drainage and external works	11.5
(e) Additional energy conservation measures	2.3
(f) Consultants' fees for contract administration	3.6
(i) contract administration	3.0
(ii) management of resident site staff (RSS)	0.6
(g) Remuneration of RSS	4.1
(h) Furniture and equipment ³	15.0

/(i)

³ Based on an indicative list of furniture and equipment required by HKUST and HKBU.

		\$ million
(i)	Contingencies	18.9
	Sub-total	230.7 (in September 2011 prices)
(j)	Provision for price adjustment	33.7
	Sub-total	264.4 (in MOD prices)
(k)	Less contribution by HKUST and HKBU	(66.1)
	Total	198.3 (in MOD prices)

13. HKUST will engage consultants to undertake tender assessment, contract administration and site supervision of the project. A detailed breakdown of the estimated consultants' fee is at Enclosure 5.

14. The construction floor area (CFA) of this project is approximately 10 795 m². The estimated construction unit cost, comprising the building and building services costs, is \$13,840 per m² of CFA in September 2011 prices. A detailed account of the CFA vis-à-vis the construction unit cost is at Enclosure 6. D Arch S considers the estimated construction unit cost reasonable and comparable to those of similar projects.

15. Subject to approval, HKUST will phase the expenditure as follows –

Year	\$ million (September 2011)	Price adjustment factor	\$ million (MOD)	Contribution by HKUST and HKBU	
				\$ million (MOD)	15EL \$ million (MOD)
2012 – 13	12.1	1.05325	12.7	12.7	-
2013 – 14	102.4	1.11118	113.8	53.4	60.4
2014 – 15	96.9	1.17229	113.6	-	113.6
2015 – 16	12.6	1.23677	15.6	-	15.6
2016 – 17	6.7	1.30479	8.7	-	8.7
	230.7		264.4	66.1	198.3

/16.

16. We have derived the MOD estimate on the basis of the Government's latest sets of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2012 to 2017. HKUST will tender the works through a lump-sum contract as it can clearly define the scope of works in advance. The contract will provide for price adjustment.

17. The project has no impact on tuition fees. In accordance with established practice, HKUST and HKBU will operate the student hostel on a self-financing basis through charges levied on hostel places. The proposal has no additional recurrent cost implication on the Government.

PUBLIC CONSULTATION

18. The Sai Kung District Council (SKDC) was consulted in May 2009. Members of the SKDC supported the project and invited HKUST to continue to liaise with local organizations and nearby schools to collect their views on the proposal. HKUST conducted liaison meetings in June 2009 and November 2010 with representatives of nearby schools and residential developments, and presented the design of the project. Nearby residents raised concerns about the possible glare arising from the use of reflective building materials and noise problems from student activities. HKUST has addressed the concerns by undertaking to use only low-reflective building materials and to place the student activities rooms away from nearby residential buildings. Also, HKUST undertook to monitor closely the student activities to minimize possible noise disturbance to the nearby residents.

19. As for consultation with staff and students, HKUST organised a presentation and exhibition of the proposed hostel development on campus in February 2008. HKBU held consultation meetings with staff and student focus groups in 2008, 2010 and 2011. Staff and students generally had no adverse comment on the project. The implementation plan of the project has been posted on HKUST's and HKBU's websites for staff's and students' information.

20. We submitted a paper on the project to the Legislative Council Panel on Education for discussion on 13 February 2012. The Panel has no objection to the project.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

21. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause long term environmental impact. HKUST has included in the project estimates the cost to implement suitable mitigation measures to control short term environmental impacts.

22. During construction, HKUST 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.

23. At the planning and design stages, HKUST has considered measures (e.g. the optimization of the foundation layout by suitable piling design) to reduce the generation of construction waste where possible. In addition, HKUST 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 minimize the disposal of inert construction waste to public fill reception facilities⁴. HKUST will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

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

/25.

⁴ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

25. HKUST estimates that the project will generate in total about 9 759 tonnes of construction waste. Of these, HKUST will reuse about 5 868 tonnes (60.1%) of inert construction waste on site and deliver 2 961 tonnes (30.4%) of inert construction waste to public fill reception facilities for subsequent reuse. HKUST will dispose of the remaining 930 tonnes (9.5%) 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 about \$0.2 million for this project (based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne⁵ at landfills).

ENERGY CONSERVATION MEASURES

26. The project will adopt various forms of energy efficient features, including –

- (a) occupancy and daylight sensors for lighting control;
- (b) light-emitting diode (LED) type exit signs;
- (c) automatic on/off switching of lighting and ventilation fan inside lifts; and
- (d) heat recovery fresh air pre-conditioners.

27. For renewable energy technologies, this project will adopt solar park lighting in the landscape area.

28. For greening features, this project will provide greening at the rooftop, the sky garden and the ground floor.

29. For recycled features, this project will adopt recycling of rainwater for irrigation.

/30.

⁵ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90 per m³), nor the cost to provide new landfills (which is likely to be more expensive), when the existing ones are filled.

30. The total estimated additional cost for adoption of the above features is around \$2.3 million (including \$0.2 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 2.7% energy savings in the annual energy consumption with a payback period at about 5.7 years.

HERITAGE IMPLICATIONS

31. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites / buildings, site of archaeological interests and Government historic sites identified by the Antiquities and Monument Office.

LAND ACQUISITION

32. The project does not require any land acquisition.

BACKGROUND INFORMATION

33. Under existing procedures, UGC-funded institutions submit capital works proposals to the UGC annually. The UGC examines all these proposals carefully, with professional advice provided by D Arch S who acts as UGC's Technical Adviser, and refers those supported proposals to the Government for consideration of bidding of funds under the established mechanism. Having examined the joint proposal of HKUST and HKBU, SG, UGC has, in consultation with D Arch S, adjusted the project estimate proposed by HKUST and HKBU to arrive at the project estimate set out in paragraph 12 above.

34. We upgraded **15EL** to Category B in September 2009. HKUST engaged consultants in June 2010 to carry out site investigation and to prepare preliminary design, detailed design and tender documents for the project at a total estimated cost of about \$5.6 million. We charged about \$4.2 million (i.e. 75%) of the \$5.6 million to block allocation **Subhead 8100EX** "Alterations, additions, repairs and improvements to the campuses of the UGC-funded institutions". The remaining amount of about \$1.4 million was funded by the private sources of funding of HKUST and HKBU. The consultants have completed site investigation, preliminary design and detailed design of the project. HKUST is finalizing the relevant tender documents.

/35.

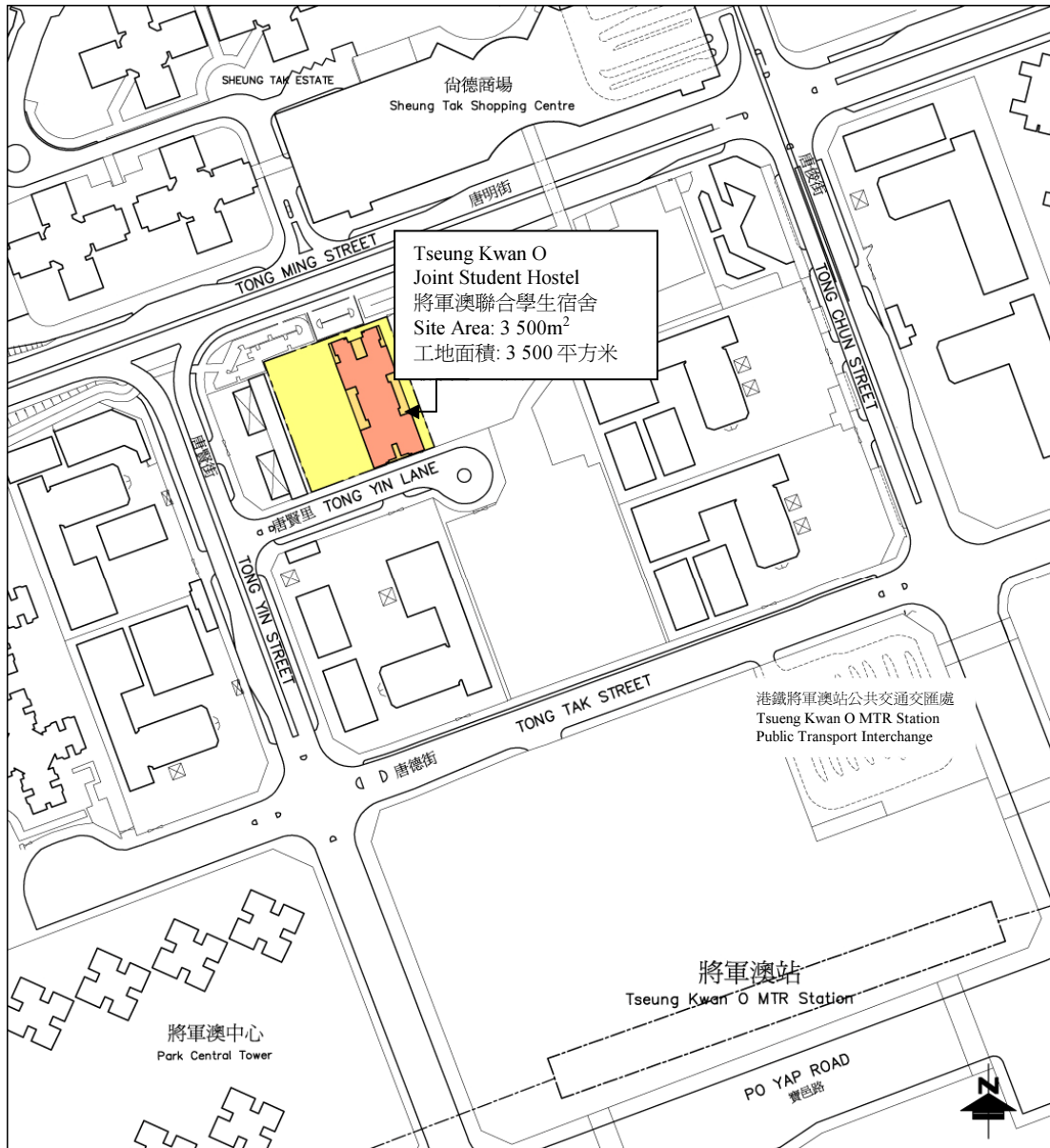
35. The project will not involve any tree removal within the project site. HKUST will incorporate a planting proposal as part of the project, including 1 400 m² grassed area with shrub and tree planting.

36. We estimate that the proposed works will create about 200 jobs (180 for labourers and another 20 for professional/ technical staff) providing a total employment of 3 180 man-months.

Education Bureau
April 2012

15EL - Tseung Kwan O Joint Student Hostel
15EL - 將軍澳聯合學生宿舍

Site Plan 工地平面圖



附件2 Enclosure 2 to PWSC(2012-13)3

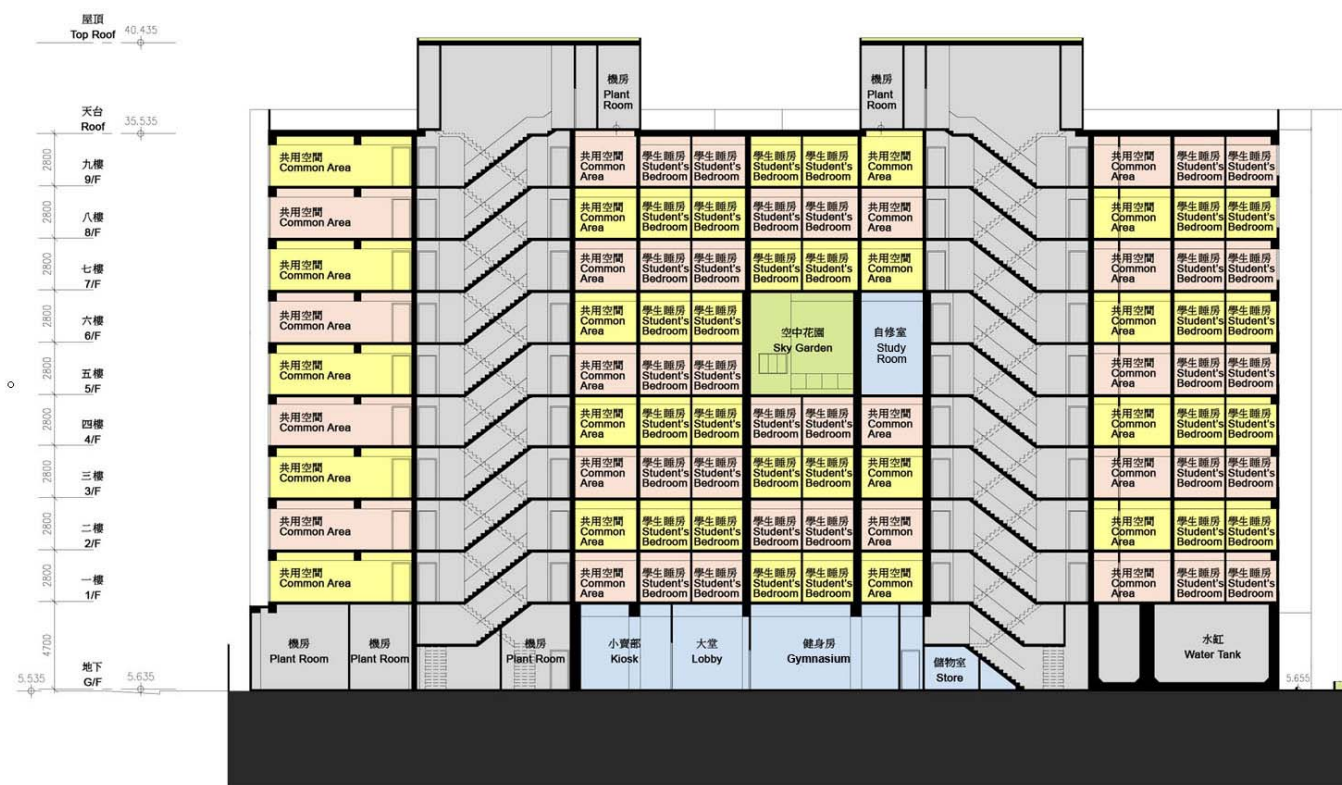
15EL - Tseung Kwan O Joint Student Hostel
15EL - 將軍澳聯合學生宿舍

View of the Building (Artist's Impression) 外觀構思圖



15EL - Tseung Kwan O Joint Student Hostel
15EL - 將軍澳聯合學生宿舍

Sectional Plan 截面圖



Enclosure 4 to PWSC(2012-13)3

15EL - Tseung Kwan O Joint Student Hostel

List of facilities

	No. of room	Estimated floor area in net operational floor area (NOFA) (m ²)
(A) Student and staff accommodation		
1. Double bedroom (each of the 65 apartments will include four double bedrooms, and the NOFA listed on the right includes common space within the apartments)	260	5 262
2. Manager flat	1	52
3. Tutor room	5	43
4. Domestic staff quarter	2	54
	<hr/> Sub-total	<hr/> 5 411
(B) Common facilities		
1. Study room	1	42
2. Multi-purpose hall with kitchen	1	106
3. Common area and kiosk	1	86
4. Gymnasium	1	66
	<hr/> Sub-total	<hr/> 300
(C) Support		
1. Laundry	1	50
2. Management office	1	36
3. Reception and attendant's room	1	30
4. Store and refuse rooms	37	143
	<hr/> Sub-total	<hr/> 259
	<hr/> Total	<hr/> 5 970

Enclosure 5 to PWSC(2012-13)3

15EL - Tseung Kwan O Joint Student Hostel

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2011 prices)

		Estimate d man- months	Average MPS* Salary Point	Multiplier (Note 1)	Estimate d Fees (\$ million)
(a)	Consultants' fees for contract administration (Note 2)	-	-	-	3.0
(b)	Resident site staff (RSS) costs (Note 3)	139	14	1.6	4.7
	Comprising -				
	(i) Consultant's fees for management of RSS			0.6	
	(ii) Remuneration of RSS			4.1	
	Total:				7.7

* MPS = Master Pay Scale

Notes:

1. A multiplier of 1.6 is applied to the average MPS point to estimate the costs of site supervision staff to be employed by the consultant. (As at now, MPS point 14 = \$21,175 per month.)
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreements for the design and construction of **15EL**. The construction phase of the assignment will only be executed subject to Finance Committee's funding approval to upgrade **15EL** to Category A.
3. HKUST will only know the actual man-months and actual costs for resident site staff after completion of the construction works.

15EL – Tseung Kwan O Joint Student Hostel

Breakdown of the construction floor area (CFA) vis-à-vis the construction unit cost

(a) Breakdown of CFA	Estimated floor area (m²)
Net operational floor area (NOFA)	5 970
Circulation areas and toilets	3 937
Mechanical and electrical plant rooms	888
CFA	10 795
(b) NOFA / CFA ratio	55.3%
(c) Estimated construction unit cost (represented by the building and building services costs)	\$13,840 per m ² of CFA (in September 2011 prices)