

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land Development

332CL – West Kowloon Reclamation – main works (remainder) – footbridge at the junction of Sham Mong Road and Yen Chow Street West in Sham Shui Po

Members are invited to recommend to the Finance Committee the upgrading of **332CL** to Category A at an estimated cost of \$330.0 million in money-of-the-day prices.

PROBLEM

We need to construct a footbridge system, as part of a comprehensive footbridge network, to enhance the connectivity of new and existing developments, as well as road safety, in the vicinity of the junction of Sham Mong Road and Yen Chow Street West in Sham Shui Po.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade the remainder of **332CL** to Category A, at an estimated cost of \$330.0 million in money-of-the-day (MOD) prices, for the construction of a footbridge system at the junction of Sham Mong Road and Yen Chow Street West in Sham Shui Po.

/PROJECT

PROJECT SCOPE AND NATURE

3. The remainder of **332CL** which we propose to upgrade to Category A (the proposed works) comprises –

- (a) a covered four-span footbridge system at the junction of Sham Mong Road and Yen Chow Street West, with the length of each span ranging from about 35 metres (m) to 52 m (about 197 m in total) and the clear width of about four metres;
- (b) six lifts, six covered escalators and three covered staircases linking the proposed footbridge system with the adjacent developments;
- (c) associated road works and ancillary works, including footpaths, drainage, utilities, electrical and mechanical (E&M) and landscaping works; and
- (d) necessary environmental mitigation measures.

— A site plan with elevations and an artist impression of the proposed works are at **Enclosure 1**.

4. Subject to funding approval of the Finance Committee (FC) of the Legislative Council, we plan to commence the proposed works in the third quarter of 2021 for completion in four years. To meet the programme, we plan to invite tenders in parallel to enable early commencement of the proposed works. The contract will only be awarded upon obtaining FC's funding approval.

JUSTIFICATION

— 5. To enhance pedestrian connectivity and provide a safe walking environment, and to increase vehicular traffic flow along the busy Sham Mong Road in Sham Shui Po, we secured funding from FC in 2016 and 2020 respectively to construct a footbridge system at the junction of Sham Mong Road and Tonkin Street West, and another footbridge system at the junction of Sham Mong Road and Hing Wah Street West. Since its opening in December 2019, the first footbridge system has been highly patronised (please see the photos at **Enclosure 2**). The second footbridge system is under construction for completion in the third quarter of 2024. These two footbridge systems, together with the proposed footbridge system at the junction of Sham Mong Road and Yen Chow Street West in this paper, collectively form the entire pedestrian footbridge system in the area.

6. Sham Mong Road is a primary distributor in Sham Shui Po and at its junction with Yen Chow Street West, there are six to seven traffic lanes at each of the pedestrian crossings. Similar to the situation at the junctions with Tonkin Street West and Hing Wah Street West, vehicular flow at the junction with Yen Chow Street West is heavy. From both the perspective of improving road safety and vehicular traffic flow, there is a compelling need to take forward the proposed works to complete the continuous grade-separated pedestrian network.

7. Together with the aforementioned two footbridge systems, the proposed works can provide a safe, comfortable, convenient, barrier-free and covered walking environment round-the-clock to users of different needs. These users include about 72 000 residents from the nine existing and future housing developments¹ and some 9 000 students from the 10 nearby primary and secondary schools². The entire footbridge system will also provide better connectivity for users to walk between the MTR Nam Cheong Station, the public transport interchanges, recreational, cultural, welfare and other district facilities³ in the vicinity. It will as well as also improve junction capacity with optimisation of vehicular traffic at the junction of Sham Mong Road and Yen Chow Street West after the removal of the existing pedestrian crossings⁴. The completion of the proposed third footbridge will enable the benefits of pedestrian-vehicular separation to be fully realised. The site plan of the proposed footbridge system and its main service area is at **Enclosure 3**.

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¹ The existing developments are Nam Cheong Estate, Fu Cheong Estate, Hoi Lai Estate, Aqua Marine, Cullinan West (previously known as property development above MTR Nam Cheong Station), Hoi Tak Court (previously known as housing development at Fat Tseung Street West), Hoi Ying Estate and Hoi Lok Court (previously known as Lin Cheung Road Sites 3 and 5 housing development). As regards Hoi Tat Estate (previously known as housing development at North West Kowloon Reclamation Site 6), phase 1 of the development was completed in November 2020 and the remaining phases are expected to be completed progressively from 2021 to 2022.

² The 10 schools are Tack Ching Girls' Secondary School, Tsung Tsin Christian Academy, S.K.H. St. Mary's Church Mok Hing Yiu College, S.K.H. St. Andrew's Primary School, Maryknoll Fathers' School (Primary Section), Laichikok Catholic Primary School, Sham Shui Po Government Primary School, Ying Wa College, Ying Wa Primary School and St. Margaret's Co-educational English Secondary and Primary School.

³ These facilities include a planned social welfare complex with residential care home for the elderly, special child care centre, early education and training centre, integrated vocational rehabilitation services centre, hostel for mentally handicapped persons and integrated children and youth services centre, and other recreational and leisure facilities such as public library, indoor sports centre and parks.

⁴ Like the original pedestrian crossings underneath the other two footbridge systems, the existing four sets of pedestrian crossings at the junction of Sham Mong Road and Yen Chow Street West will be removed. The junction capacity will improve after the removal of the existing pedestrian crossings, as the time allocated for pedestrian could be reassigned to vehicles, thereby allowing more vehicles to pass through the junction at each signal cycle.

8. The proposed works of the covered four-span footbridge system comprises a total of six lifts, six covered escalators and three covered staircases. The design capacity of the proposed footbridge system will be able to cope with the estimated peak two-way pedestrian flow of about 1 530 pedestrians per hour per span in 2031. As the proposed footbridge system seeks to improve overall road safety by providing a continuous grade-separate pedestrian network to users, the proposed provision of six lifts and covered escalators will ensure barrier-free access and convenience at all times, even when individual lifts or escalators are undergoing routine or ad hoc maintenance.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the proposed works to be \$330.0 million in MOD prices, broken down as follows -

		\$ million (in MOD prices)
(a)	Covered footbridge -	235.1
	(i) main spans and columns	145.1
	(ii) escalators and staircases	54.0
	(iii) lift towers and lifts	36.0
(b)	Associated road works and ancillary works	33.4
(c)	Environmental mitigation measures	4.2
(d)	Consultants' fees for	5.4
	(i) contract administration	2.7
	(ii) management of resident site staff (RSS)	2.7
(e)	Remuneration of RSS	21.9
(f)	Contingencies	30.0
	Total	<u>330.0</u>

10. We propose to engage consultants to undertake contract administration and site supervision of the proposed works. A breakdown of the estimate for consultants' fees and resident site staff costs by man-months is at **Enclosure 4**.

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

Year	\$ million (in MOD prices)
2021 - 2022	15.0
2022 - 2023	80.0
2023 - 2024	100.0
2024 - 2025	90.0
2025 - 2026	39.8
2026 - 2027	4.2
2027 - 2028	1.0
	<hr/>
	330.0
	<hr/>

12. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2021 to 2028. Subject to funding approval, we will deliver the works under a re-measurement contract because the quantities of works may vary depending on actual ground conditions. The contract will provide for price adjustment.

13. We estimate the annual recurrent expenditure arising from the proposed works to be about \$4.95 million.

PUBLIC CONSULTATION

14. On 7 June 2018, we consulted the Transport Affairs Committee under the Sham Shui Po District Council on the proposed footbridge systems. Members supported the proposed works. There are strong demands for the early implementation of the proposed works from the local community and nearby schools so that a continuous grade-separated pedestrian network could be provided in a timely manner as major housing developments in the vicinity are getting in place.

15. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 28 December 2018 and 4 January 2019. During the 60-day statutory objection period, three objections were received. The objections are about possible inconvenience arising from the closure of the existing at-grade pedestrian crossings, concerns on whether 24-hour access to the property development above MTR Nam Cheong Station would be provided and opinions that the proposed footbridge would not improve the overall pedestrian connectivity in the district. In response, we have explained that the removal of the pedestrian crossings is to separate pedestrians from vehicular traffic to enhance road safety and to improve the traffic capacity as the capacity at the junction is expected to be overloaded upon the completion of the nearby housing development projects. We have also confirmed that 24-hour access would be provided at the property development above MTR Nam Cheong Station.

16. The Chief Executive-in-Council authorised the proposed works without modification on 7 January 2020. The authorisation notice was gazetted on 6 March 2020.

17. On 19 March 2019, we consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)⁵ on the aesthetic design of the proposed works. The Committee accepted the aesthetic design.

18. We consulted the Legislative Council Panel on Development on the proposed works on 26 January 2021. Members supported the proposed works.

ENVIRONMENTAL IMPLICATIONS

19. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The proposed works will not cause long-term adverse environmental impact. We have included in the project estimate the cost to implement suitable mitigation measures to control short-term environmental impacts.

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⁵ ACABAS is responsible for vetting the design of bridges and other structures associated with the highway system, from the aesthetic and visual impact points of view. It comprises representatives of the Hong Kong Institute of Architects, Hong Kong Institution of Engineers, Hong Kong Institute of Planners, academic institutions, Architectural Services Department, Highways Department, Housing Department, and Civil Engineering and Development Department.

20. 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 lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

21. At the planning and design stages, we have considered the alignment, design level and construction method of the proposed works to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil and rock fill) 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 facilities⁶. 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.

22. 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 construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

23. We estimate that the proposed works will generate in total about 18 500 tonnes of construction waste. Of these, we will reuse about 9 900 tonnes (53.5%) of inert construction waste on site and deliver about 8 400 tonnes (45.4%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining about 200 tonnes (1.1%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at public fill reception facilities and landfill sites is estimated to be about \$ 0.6 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 for disposal at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

/HERITAGE

⁶ 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 at public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

HERITAGE IMPLICATIONS

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

TRAFFIC IMPLICATIONS

25. During construction stage, the proposed works will not cause any significant traffic impact. Temporary traffic arrangements will be implemented to facilitate the construction works which require temporary road closure. We will display publicity boards on site giving details of the temporary traffic arrangements, and the anticipated completion dates of individual section of works. In addition, we will set up a telephone hotline to respond to public enquires or complaints.

LAND ACQUISITION

26. The proposed works do not require land acquisition.

BACKGROUND INFORMATION

27. We upgraded **332CL** to Category B in November 1989.

28. In June 2016, part of **332CL** entitled “West Kowloon Reclamation – main works (remainder) – footbridge at the junction of Sham Mong Road and Tonkin Street West in Sham Shui Po” was upgraded to Category A at an approved estimated cost of \$368.9 million. The construction works were completed in December 2019 and the footbridge was subsequently open for public use.

29. In July 2020, part of **332CL** entitled “West Kowloon Reclamation – main works (remainder) – footbridge at the junction of Sham Mong Road and Hing Wah Street West in Sham Shui Po” was upgraded to Category A at an approved estimated cost of \$331.9 million. The construction works commenced in July 2020 for target completion in the third quarter of 2024.

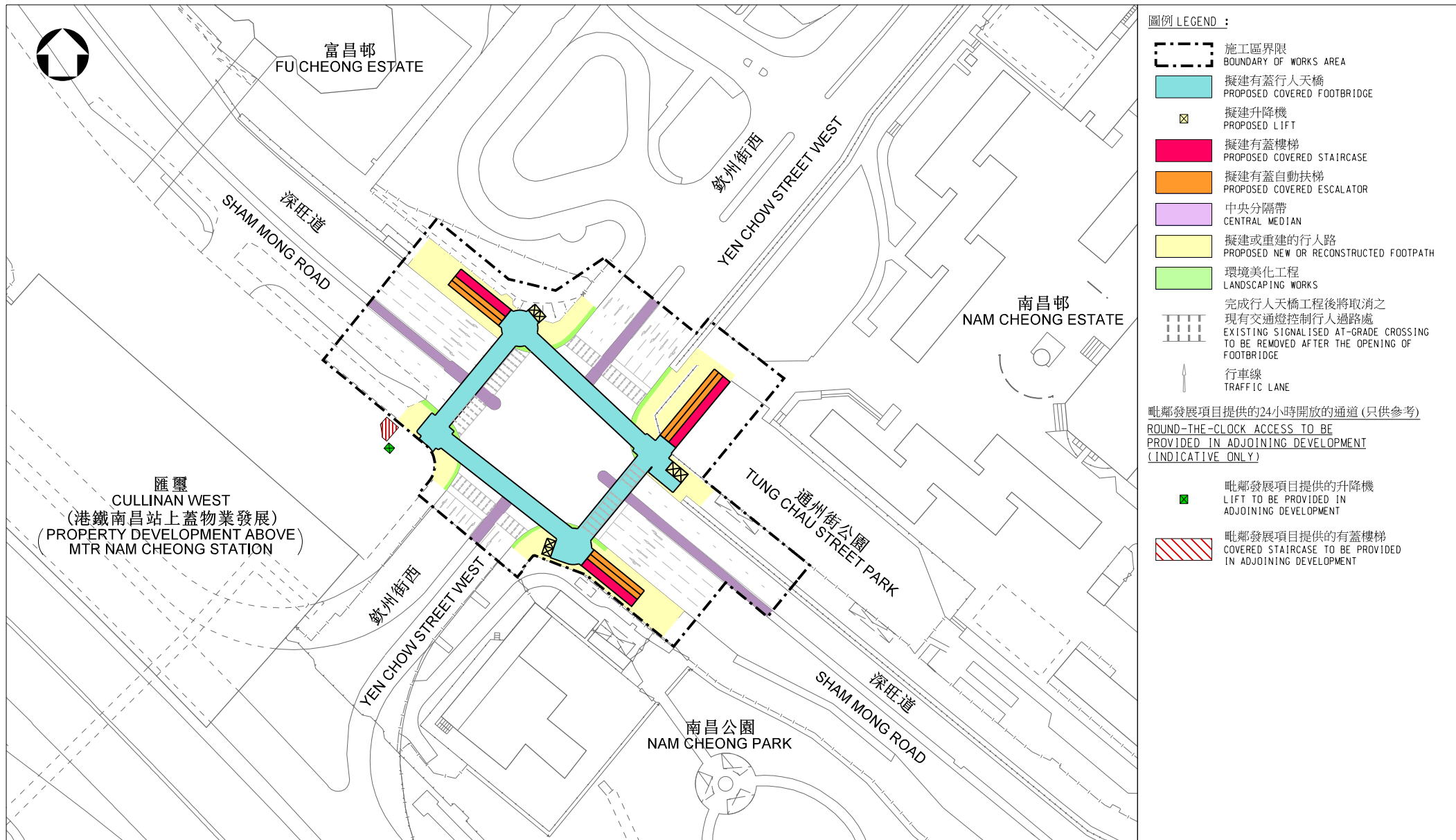
30. The proposed works will involve removal of 23 trees. All trees to be removed are not important trees⁷. We will incorporate planting proposals as part of the project, including a total of 23 trees and about 3 330 shrubs.

31. We estimate that the proposed works will create about 100 jobs (80 for labourers and another 20 for professional or technical staff) providing a total employment of about 4 000 man-months.

Development Bureau
February 2021

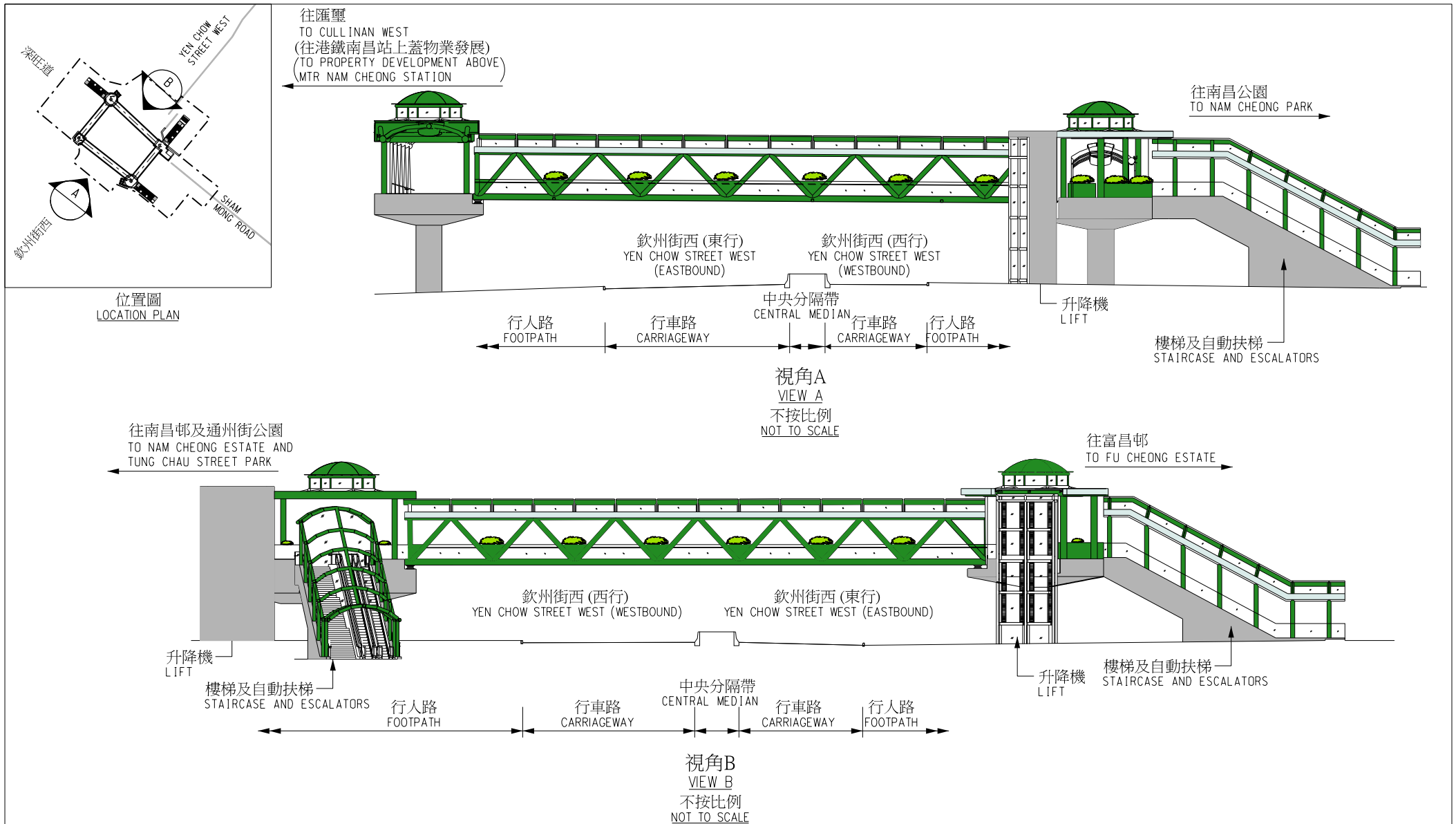
⁷ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument and trees in memory of important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree size, 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 m (measured at 1.3 m above ground level), or with height or canopy spread equal or exceeding 25 m.



工務計劃項目第332CL號西九龍填海計劃 - 主要工程 (餘下部分) -
位於深水埗深旺道與欽州街西交界處的行人天橋 - 平面圖

PWP ITEM NO. 332CL WEST KOWLOON RECLAMATION - MAIN WORKS (REMAINDER) -
FOOTBRIDGE AT THE JUNCTION OF SHAM MONG ROAD AND YEN CHOW STREET WEST IN SHAM SHUI PO - SITE PLAN



工務計劃項目第332CL號西九龍填海計劃 - 主要工程 (餘下部分) -
位於深水埗深旺道與欽州街西交界處的行人天橋 - 立視圖

PWP ITEM NO. 332CL WEST KOWLOON RECLAMATION - MAIN WORKS (REMAINDER) -
FOOTBRIDGE AT THE JUNCTION OF SHAM MONG ROAD AND YEN CHOW STREET WEST IN SHAM SHUI PO - ELEVATION



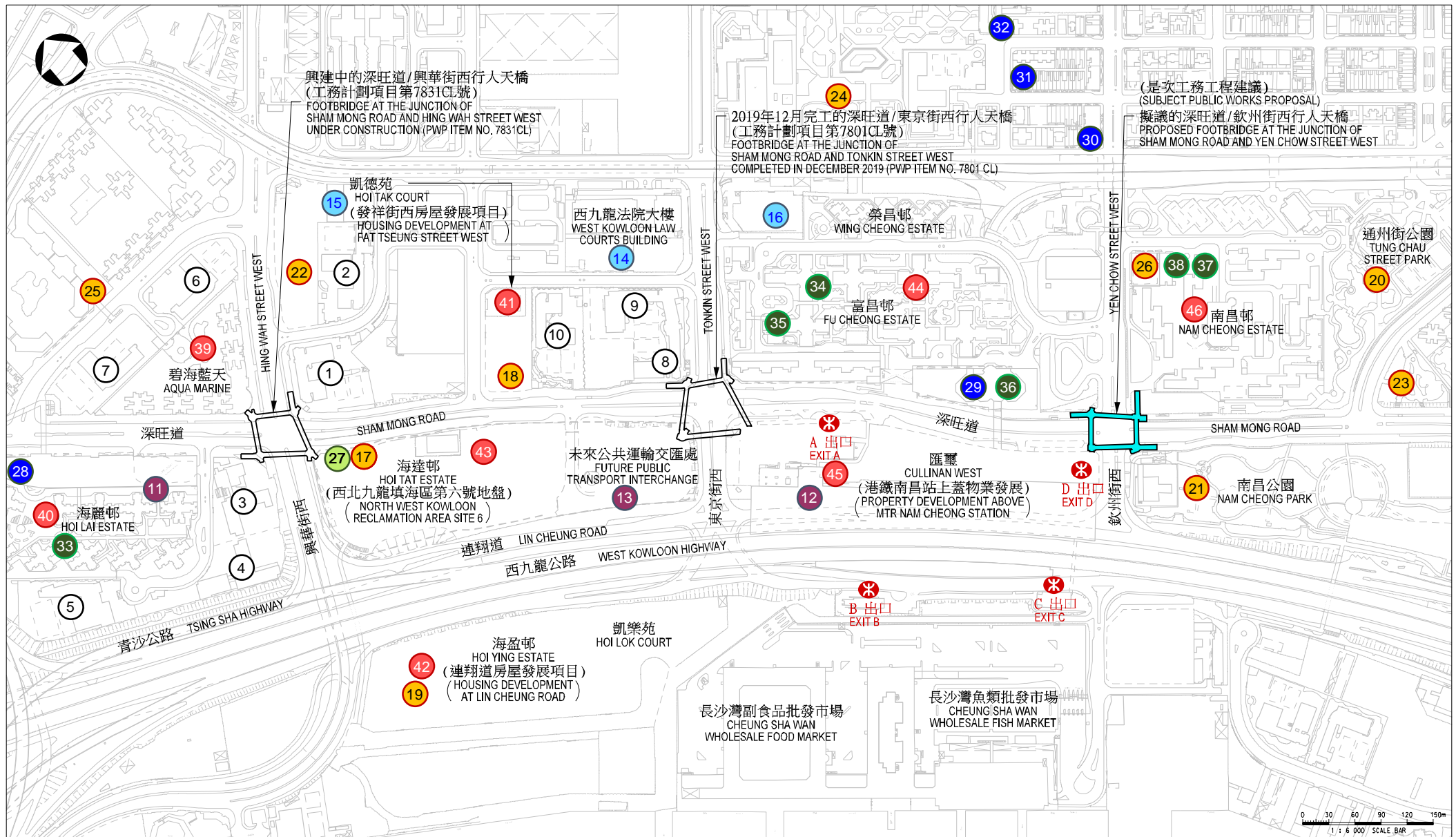
工務計劃項目第332CL號西九龍填海計劃 - 主要工程 (餘下部分) -
位於深水埗深旺道與欽州街西交界處的行人天橋 - 構想圖

PWP ITEM NO. 332CL WEST KOWLOON RECLAMATION - MAIN WORKS (REMAINDER) -
FOOTBRIDGE AT THE JUNCTION OF SHAM MONG ROAD AND YEN CHOW STREET WEST IN SHAM SHUI PO - ARTIST IMPRESSION



位於深水埗深旺道與東京街西交界處的行人天橋的使用情況

Use of footbridge at the junction of Sham Mong Road and Tonkin Street West in Sham Shui Po



工務計劃項目第332CL號西九龍填海計劃 - 主要工程 (餘下部分) - 深旺道行人天橋
擬建行人天橋系統附近的房屋、學校及社會設施

PWP ITEM NO. 332CL WEST KOWLOON RECLAMATION - MAIN WORKS (REMAINDER) - FOOTBRIDGE SYSTEMS AT SHAM MONG ROAD
HOUSING, SCHOOLS AND COMMUNITY FACILITIES IN THE VICINITY OF THE PROPOSED FOOTBRIDGES

項目 Item	學校 Schools	
1	德貞女子中學 Tack Ching Girls' Secondary School	
2	基督教崇真中學 Tsung Tsin Christian Academy	
3	聖公會聖馬利亞堂莫慶堯中學 SKH St. Mary's Church Mok Hing Yiu College	
4	聖公會聖安德烈小學 S.K.H. St. Andrew's Primary School	
5	瑪利諾神父教會學校(小學部) Maryknoll Fathers' School (Primary Section)	
6	荔枝角天主教小學 Laichikok Catholic Primary School	
7	深水埗官立小學 Sham Shui Po Government Primary School	
8	英華書院 Ying Wa College	
9	英華小學 Ying Wa Primary School	
10	聖瑪加利男女英文中小學 St Margaret's Co-educational English Secondary and Primary School	

項目 Item	交通設施 Transport Facilities	
11	公共運輸交匯處 Public Transport Interchange	
12	港鐵南昌站 MTR Nam Cheong Station	
13	公共運輸交匯處 Public Transport Interchange	

項目 Item	政府及司法機構 Government Offices and Judiciary	
14	西九龍法院大樓 West Kowloon Law Courts Building	
15	水務署九龍西區大樓 WSD Kowloon West Regional Building	
16	庫務大樓 Treasury Building	

項目 Item	文娛及康樂設施 Leisure and Cultural Facilities	
17	公共圖書館設施、室內運動館、五人足球場 Public Library Facilities, Indoor Sports Centre, 5-a-side Soccer Pitch	
18	羽毛球場 Badminton Court	
19	羽毛球場 Badminton Court	
20	通州街公園 Tung Chau Street Park	
21	南昌公園 Nam Cheong Park	
22	興華街西遊樂場 Hing Wah Street West Playground	
23	聚魚道休憩花園 Chui Yu Road Rest Garden	
24	深水埗公園 Sham Shui Po Park	
25	荔枝角社區會堂 Lai Chi Kok Community Hall	
26	南昌社區中心 Nam Cheong District Community Centre	

項目 Item	社會福利設施 Social Welfare Facilities	
27	社會福利設施大樓 Social Welfare Facilities Block - 安老院舍 Residential Care Home for the Elderly - 特殊幼兒中心 Special Child Care Centre - 早期教育及訓練中心 Early Education and Training Centre - 綜合職業康復服務中心 Integrated Vocational Rehabilitation Services Centre - 中度弱智人士宿舍 Hostel for Moderately Mentally Handicapped Persons - 嚴重弱智人士宿舍 Hostel for Severely Mentally Handicapped Persons - 展能中心 Day Activity Centre - 弱智人士輔助宿舍 Supported Hostel for Mentally Handicapped Persons - 綜合青少年服務中心 Integrated Children and Youth Services Centres	

項目 Item	安老院 / 長者地區中心 Homes for the Elderly / District Elderly Community Centres	
28	博愛醫院郭興坤長者鄰舍中心 Pok Oi Hospital Mr. Kwok Hing Kwan Neighbourhood Elderly Centre	
29	癸末年樂頤居暨耆安長者日間護理中心 Eco-Home for the Senior cum Sunny Green Day Care Centre for the Senior	
30	溫暖護老院欽州街分院 Wan Luen Home for Elderly (Yen Chow Street)	
31	福安老人院 Fuk On Home of Aged Limited	
32	杏林護老院 Doctor's Home for the Elderly Limited	

項目 Item	服務中心 Services Centres	
33	民社服務中心「海麗兒童發展中心」 People Service Centre – Hoi Lai Children Development Centre	
34	九龍婦女聯會劉舜舜富昌互助幼兒中心 Kowloon Women's Organisations Federation Lau Shun Man Fu Cheong Mutual Help Child Care Centre	
35	協康會富昌中心 Heep Hong Society Fu Cheong Centre	
36	東華三院凌瑞英中心 Tung Wah Group of Hospitals Ling Sui Ying Centre	
37	深水埗(南)綜合家庭服務中心 Shamshupo (South) Integrated Family Service Centre	
38	香港輪椅輔助隊 Hong Kong Wheelchair Aid Service Limited	

項目 Item	住宅項目 Residential Development	
39	碧海藍天 Aqua Marine	
40	海麗邨 Hoi Lai Estate	
41	凱德苑 (發祥街西房屋發展項目) Hoi Tak Court (Housing Development at Fat Tseung Street West)	
42	海盈邨 及 凱樂苑 (連翔道房屋發展項目) Hoi Ying Estate and Hoi Lok Court (Housing Development at Lin Cheung Road)	
43	海達邨 (西北九龍填海區第6號地盤) Hoi Tat Estate (NWKR Site 6)	
44	富昌邨 Fu Cheong Estate	
45	匯璽 (港鐵南昌站上蓋物業發展) Cullinan West (Property Development Above MTR Nam Cheong Station)	
46	南昌邨 Nam Cheong Estate	

Enclosure 4 to PWSC(2020-21)34

332CL – West Kowloon Reclamation – main works (remainder) – footbridge at the junction of Sham Mong Road and Yen Chow Street West in Sham Shui Po

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	–	–	–	1.6
	(Note 2)	–	–	–	0.7
				Sub-total	2.3#
(b)	Resident site staff (RSS)	65	38	1.6	8.9
	costs (Note 3)	256	14	1.6	12.4
				Sub-total	21.3
	Comprising –				
	(i) Consultants' fees				2.3#
	for management of				
	RSS				
	(ii) Remuneration of				19.0#
	RSS				
				Total	23.6

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS 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' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **332CL**. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade part of **332CL** to Category A.
3. The actual man-months and fees will only be known after the 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 figures marked with # are shown in money-of-the-day prices in paragraph 9 of the main paper.