

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

### **HEAD 705 – CIVIL ENGINEERING**

#### **Recreation, Culture and Amenities – Sports facilities**

#### **290RS – Expansion of mountain bike trail networks in Mui Wo and Chi Ma Wan, South Lantau**

Members are invited to recommend to Finance Committee the upgrading of **290RS** to Category A at an estimated cost of \$41.6 million in money-of-the-day prices for the expansion of mountain bike trail networks in Mui Wo and Chi Ma Wan, South Lantau.

### **PROBLEM**

We need to expand the mountain bike trail (MBT) networks in Mui Wo and Chi Ma Wan, South Lantau.

### **PROPOSAL**

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade **290RS** to Category A at an estimated cost of \$41.6 million in money-of-the-day (MOD) prices for the expansion of MBT networks in Mui Wo and Chi Ma Wan, South Lantau.

**/PROJECT .....**

**PROJECT SCOPE AND NATURE**

3. The scope of **290RS** comprises construction of –
- (a) a training ground of about 4.5 hectare near Lai Chi Yuen Tsuen with supporting facilities;
  - (b) MBTs from Mui Wo trailhead to the proposed training ground (about 2.4 kilometres (km)), from Chi Ma Wan MBT loop network to Shap Long Chung Hau (about 2.4 km), and joining the two ends of the existing Chi Ma Wan MBT (about 1.5 km) to form a circular network;
  - (c) a bikers' gathering place of about 230 square metres at the entrance to the proposed MBT at Mui Wo Ferry Pier Road; and
  - (d) associated geotechnical, landscape and ancillary works.

4. Layout plans of the proposed Project are at Enclosure 1.

5. Subject to funding approval of the Finance Committee (FC) within this legislative session, we plan to commence the construction works in the fourth quarter of 2016 for completion by the fourth quarter of 2017.

**JUSTIFICATION**

6. The Revised Concept Plan for Lantau released in May 2007 recommended provision of MBT networks in Lantau as an initiative to enhance the recreational potential of the country parks and rural areas of Lantau while maintaining their natural environment. Based on this initiative, we completed in 2011 the "Mountain Bike Trail Networks in South Lantau – Feasibility Study" (the Feasibility Study), which recommended improving and expanding the MBTs in South Lantau to international standards as far as practicable and providing support facilities, such as a training ground.

7. The proposed improvement and expansion of the MBT networks in South Lantau is in line with the proposed development strategy for Lantau formulated by the Lantau Development Advisory Committee (LanDAC) in early 2016 that the predominant part of Lantau be used for conservation, leisure, cultural and green tourism and we should better utilise the natural resources therein to enhance the recreational and educational values of country parks.

8. We plan to implement the recommended works under the Feasibility Study in two phases. The first phase of the works<sup>1</sup> which aims to improve the existing MBT network commenced in end 2015 for completion in end 2016. The proposed works, which is the second phase of the works, will mainly expand the MBT network in South Lantau and provide a training ground near Lai Chi Yuen Tsuen. Upon completion of the proposed works, more people can enjoy mountain biking in South Lantau.

## FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the proposed works to be \$41.6 million in MOD prices, broken down as follows –

	<b>\$ million</b>
(a) Construction of	28.2
(i) training ground	11.9
(ii) MBTs	10.7
(iii) bikers' gathering place	0.4
(iv) associated geotechnical, landscape and ancillary works	5.2

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<sup>1</sup> The first phase of the works covers 35 km-long MBT network, specifically, it comprises –

- (a) improvement works at several sections of the existing Mui Wo to Pui O MBT, Chi Ma Wan MBT and Pui O to Kau Ling Chung MBT to enhance safety and riding quality, minimise user conflicts and control erosion; and
- (b) a gathering place at Chi Ma Wan MBT western trail head with supporting facilities, such as information and educational kiosks.

		<b>\$ million</b>
(b)	Environmental mitigation measures	0.7
(c)	Consultants' fees for	0.9
	(i) contract administration	0.6
	(ii) management of resident site staff (RSS)	0.3
(d)	Remuneration of RSS	3.1
(e)	Contingencies	3.2
	Sub-total	36.1 (in September 2015 prices)
(f)	Provision for price adjustment	5.5
	Total	41.6 (in MOD prices)

10. Due to insufficient in-house resources, 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 2.

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

<b>Year</b>	<b>\$ million (Sept 2015)</b>	<b>Price adjustment factor</b>	<b>\$ million (MOD)</b>
2016 – 2017	1.5	1.05775	1.6
2017 – 2018	16.0	1.12122	17.9
2018 – 2019	18.6	1.18849	22.1
	36.1		41.6

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 from 2016 to 2019. Subject to funding approval, we will deliver the proposed works under a re-measurement contract as the quantities of works described in paragraph 9(a) may vary depending on actual site conditions. The contract will provide for price adjustments.

13. We estimate the annual recurrent expenditure arising from the proposed works to be about \$2.0 million.

## **PUBLIC CONSULTATION**

14. As part of the Feasibility Study conducted in 2010, we consulted the Islands District Council, the Country Parks Committee, the Mui Wo Rural Committee, the South Lantau Rural Committee, the Green Lantau Association, the Hong Kong Mountain Bike Association, the Hong Kong Cycling Association, the Friends of the Country Parks Hiking Club, the Hong Kong Hiking Association, and local communities on the proposed works under the Feasibility Study. They supported the recommendations of the Feasibility Study generally.

15. We briefed the Hong Kong Mountain Bike Association and the Hong Kong Cycling Association in January 2015 and the Country Parks Committee in April 2015 on the latest progress of the improvement and expansion of MBT networks in South Lantau. They all welcomed the early implementation of the proposed works.

16. From end January to April 2016, the LanDAC and the Government together conducted a public engagement exercise on the proposals of Lantau development which include the recreation and tourism proposals. Improvement and expansion of MBT networks in South Lantau is generally welcomed by the public and relevant stakeholders.

17. We circulated to the Legislative Council Panel on Development (the Panel) an information paper on the proposed works on 10 June 2016. Upon members' request, the project would be discussed at the Panel meeting on 21 June 2016. We will inform the Public Works Subcommittee (PWSC) of the views of the Panel prior to discussion at the PWSC.

## ENVIRONMENTAL IMPLICATIONS

18. This is not a designated project under the Environmental Impact Assessment Ordinance (EIAO). The Project mainly involves provision of education and recreational facilities within the Country Park agreed by the Country and Marine Parks Authority, and hence it is exempted from provisions under the EIAO. We completed a Preliminary Environmental Review (PER) for the proposed works under the Feasibility Study. The PER concluded that with the implementation of the recommended monitoring and mitigation measures during construction, the proposed works will not have long term adverse environmental impacts. We have included in the project estimate the cost of \$0.7 million (in September 2015 prices) in the project estimate under paragraph 9(b) above for implementing these monitoring and mitigation measures during construction.

19. We will control potential noise, dust and site runoff nuisances arising from the construction works to within established standards and guidelines through implementation of monitoring and mitigation measures. These measures include use of quiet construction plant, frequent cleaning of the site and covering of materials on trucks.

20. At the planning and design stages, we have considered the design of the proposed works by using natural materials as far as possible to minimise construction waste. In addition, we will require the contractor to reuse inert construction waste (e.g. use of excavated material 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<sup>2</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>2</sup> 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 in public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

21. 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.

22. The design and construction of MBTs inherently adopts a flexible approach that takes into account very small variations in natural terrain such as individual rocks, roots and trees and these are considered as part of the riding experience rather than obstacles. In addition, mainly natural materials such as timber and rock and hand held tools supplemented by small-scale machinery would be used for the proposed works. We estimate that only minimal construction wastes would be generated during the construction phase.

## HERITAGE IMPLICATIONS

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

## LAND ACQUISITION

24. The proposed works do not require any resumption of private land.

## BACKGROUND INFORMATION

25. We completed in 2011 the Feasibility Study at a cost of about \$8.0 million in MOD prices under block allocation **Subhead 5101CX** “Civil engineering works, studies and investigations for items in Category D of the Public Works Programme”. The Feasibility Study recommended works for improvement and expansion of the MBTs in South Lantau.

26. The first phase of the works recommended under the Feasibility Study, at an estimated cost of \$5.6 million in MOD prices and is funded under **Subhead 5101CX**, started in end 2015 for completion in end 2016.

27. After the upgrading of **290RS** in Category B in October 2015, we have substantially completed the design of the proposed works as set out in paragraph 3 above.

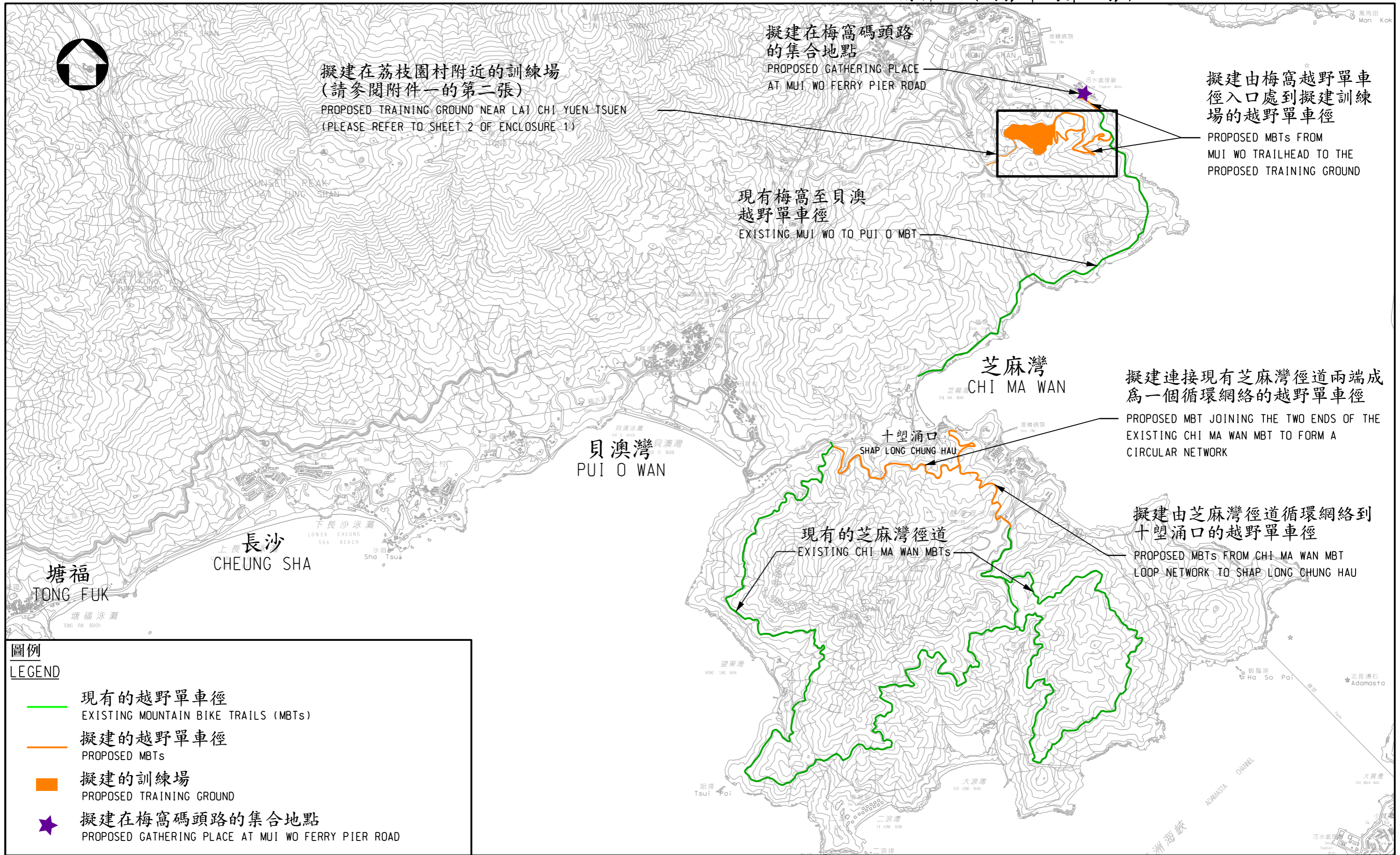
28. Majority of the proposed MBTs are located along dirt trails, footpaths and open area which are already established. The estimated number of existing trees along the proposed MBT and training ground is around 2 600. Following the principles of sustainable design, MBT alignments will be designed to avoid tree felling as far as practicable unless felling is justified on acceptable grounds. Further assessment to preserve these trees will be carried out during construction stage.

29. We estimate that the proposed works would create about 50 jobs (40 for labourers and another 10 for professional or technical staff), providing a total employment of 580 man-months.

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Development Bureau  
June 2016





圖則名稱 drawing title

### 南大嶼山（梅窩及芝麻灣）越野單車徑網絡擴建工程

EXPANSION OF MOUNTAIN BIKE TRAIL NETWORKS IN MUI WO AND CHI MA WAN, SOUTH LANTAU





小山丘跑道  
PUMP TRACK



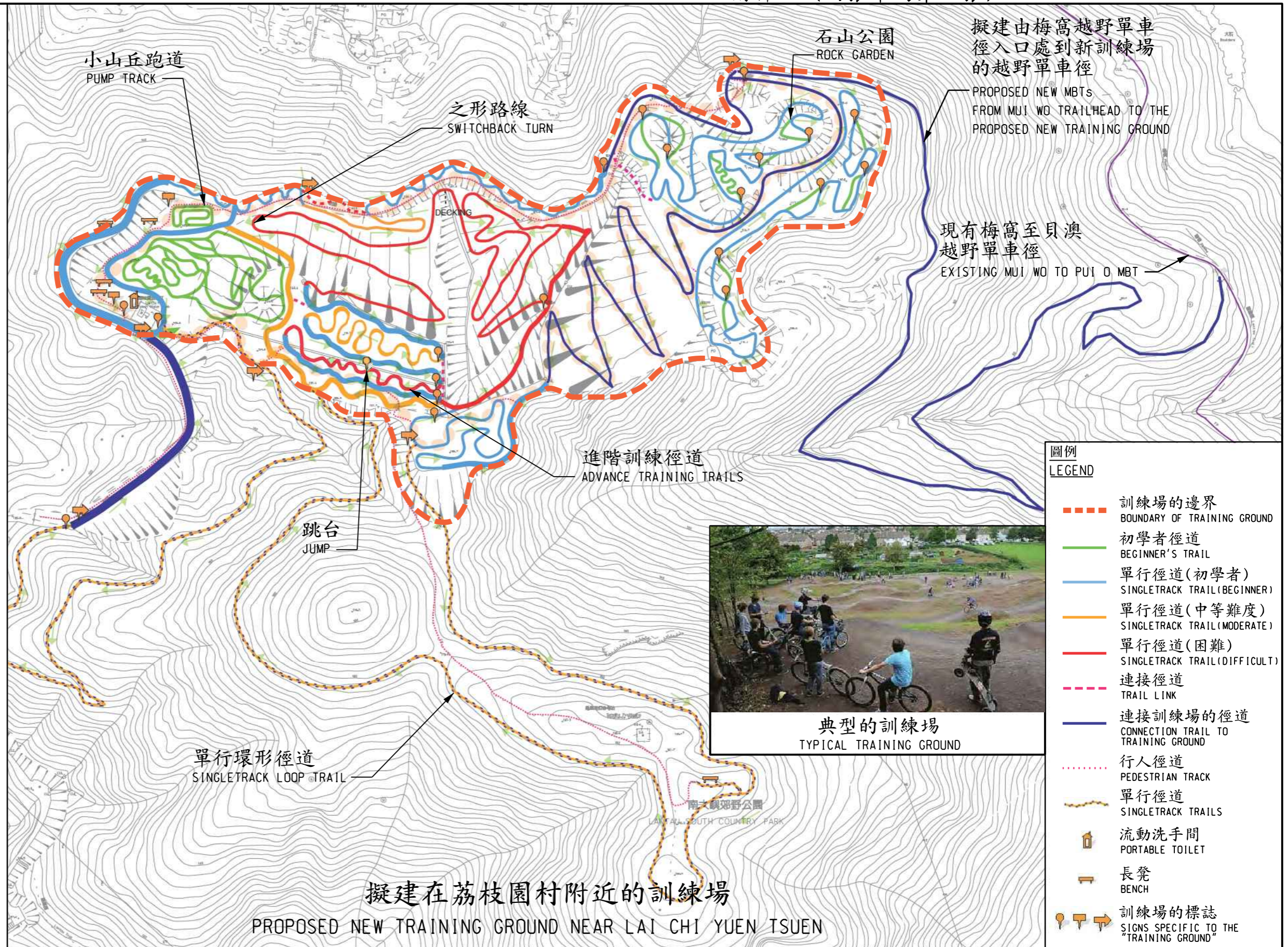
之形路線  
SWITCHBACK TURN



石山公園  
ROCK GARDEN



跳台  
JUMP



圖則名稱 drawing title

南大嶼山 (梅窩及芝麻灣) 越野單車徑網絡擴建工程  
EXPANSION OF MOUNTAIN BIKE TRAIL NETWORKS IN MUI WO AND CHI MA WAN, SOUTH LANTAU

**290RS – Expansion of mountain bike trail networks in Mui Wo and  
Chi Ma Wan, South Lantau**

**Breakdown of the estimates for consultants' fees and resident site staff costs  
(in September 2015 prices)**

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	--	--	--	0.5
		Technical	--	--	--	0.1
					Sub-total	<hr/> 0.6
(b)	Resident site staff (RSS) cost (Note 3)	Professional	15	38	1.6	1.8
		Technical	39	14	1.6	1.6
					Sub-total	<hr/> 3.4
Comprising -						
(i)	Consultants' fees for management of RSS				0.3	
(ii)	Remuneration of RSS				3.1	
					<b>Total</b>	<hr/> <b>4.0</b>
*	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 point 38 = \$74,210 per month and MPS point 14 = \$25,505 per month).
2. The consultants' staff cost for the contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **290RS**. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade part of **290RS** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.