

1st December, 2022

To whom it may concern,

Consultation Response regarding the NTCTN Cycle Track between Tsuen Wan Bayview Garden and So Kwun Wat

1. Introduction

- 1.1 Street Reset is a collective in support of human-oriented transport planning and street design, founded in 2020 by a group of practitioners and students in the field of transport and urban planning, architectural design and social innovation.
- 1.2 We strive to shape better streets for Hong Kong through our imagination, knowledge and experience from around the world. We advocate for Hong Kong's streets to be designed in such a way that people walking and cycling are treated more reasonably, and that road space is utilised in such a way that can enable a wider variety of convenient and reliable mode choices to the public, aside from private cars and rail transport.
- 1.3 In response to the public engagement on the Cycle Track between Tsuen Wan Bayview Garden and So Kwun Wat (hereafter TMTW Cycle Tracks), practitioners within Street Reset who specialise in Active Travel have gathered and formulated our views and suggestions to the said scheme.
- 1.4 In principle, Street Reset welcomes and supports the said scheme. However, we have certain concerns with some opportunities identified with the said scheme that should be addressed.

2. Background, Standards and Principles

- 2.1 One of the key directions in the upcoming comprehensive Traffic and Transport Strategy Study ("TTSS") was to "advocate green and active transport as healthy lifestyles to enhance the public's quality of life and accomplish carbon neutrality and associated policies". The departure from the traditional perception that cycling in Hong Kong is purely for leisure and recreation is important that cycling should start to be factored in for utility purposes - upon our ever-increasing travel demand with the climate emergency ahead.
- 2.2 We believe that the completion of NTCTN would be crucial for setting the foundations for active travel for decades to come, improving the resiliency of the transport system for Hong Kong. It is therefore important for this scheme to be designed to the highest standards for future-proofing paradigm shifts in travel into a more sustainable pattern.
- 2.3 With the set vision we, therefore, would recommend the following:
 - A comprehensive review and audit for existing cycle networks including earlier built sections of NTCTN
 - Considerations & network planning for walking & cycling at districts & strategic levels - including feasibility studies of retrofitting roads for said purposes

- 2.4 We recognise this would be out of the scope of this engagement exercise or CEDD's responsibility. We however also recognise ARUP being the lead consultant for the upcoming TTSS and we thought it would be good to raise it here anyway.
- 2.5 Despite the more generous geometric standards given in the HKPSG & TPDM with regards to cycle track width, cycling provisions stipulated in both HKPSG & TPDM have been deemed out-of-date and unambitious when compared to international counterparts. We encourage CEDD & ARUP, upon taking up concept designs of the work, to use up-to-date international references and best practices to provide for contemporarily high-quality, future-proofing cycle provisions.
- 2.6 For the purpose of this submission, we encourage the reference to the UK Department of Transport Local Transport Note 1/20 Cycle Infrastructure Design (hereafter LTN 1/20).¹ LTN 1/20 is the third generation of guidance in the year 2020 in the UK with regards to cycle infrastructure, superseding the LTN 2/08 (2008) and the earlier suites of LTNs in the 70s & 80s, as early as 1/78 that the current TPDM is still referencing to (as seen in TPDM Volume 3 Chapter 6).
- 2.7 LTN1/20 has stated 5 core design principles, which are: Coherent, Direct, Safe, Comfortable, and Attractive. Inclusivity and accessibility should run through all five of these core design principles, where the infrastructure should be accessible for all, especially the vulnerable.

3. Alignments & Geometry

- 3.1 We recognise that the TWTM cycle tracks complete the missing link between Tuen Mun and Tsuen Wan. This would determine the success of the NTCTN overall as having a complete network is paramount for enabling active travel.
- 3.2 We have no specific comments in terms of the actual alignments of the track. However, communities along the track section should be able to join and leave the cycle track safely including necessary junction treatments & crossing interventions. This enables cycling as a more viable mode of transport for local residents, enhancing accessibility and connectivity in these more remote areas. Interfaces between pedestrians, cyclists and other road users should be cautioned at access points.

Gradient

- 3.3 Another concern is the gradient along such alignments. There are numerous local gradients along Castle Peak Road which exceed 5%, a gradient that is undesirable for cycling. We are pleased to have heard from CEDD during the City Gallery x CEDD Webinar that the maximum gradient of the track would be capped at 4% with the use of cantilevered or subway structure whenever necessary.
- 3.4 We understand that some recreational cycling bodies would have perceived the said gradient as being the "challenge" and "fun" part of cycling. However we think the TWTM cycle track should be inclusively designed that suits everyone aged from 8 to 80. To promote inclusive cycling for all, we recommend CEDD/ARUP to take reference to LTN 1/20 Table 5-8 for maximum lengths of gradient, which is reproduced on the next page:

1 UK Department for Transport (2020), Local Transport Note 1/20, <https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120>

Gradient %	Desirable maximum length of gradient (m)
2.0	150
2.5	100
3.0	80
3.5	60
4.0	50
4.5	40
5.0	30

Maximum length of gradient as recommended by LTN 1/20

- 3.5 Another concern we understand from some recreational cycling bodies is that whenever the TWTM cycle tracks are provided for they will no longer be able to cycle along vehicular roads as per TD's Road User Code - cyclists must use a cycle track wherever one is present. We urge CEDD to liaise with TD in reviewing and removing said restrictions upon the implementation of the TWTM cycle track. With cycles being regarded as vehicles in road user code, the provision of cycle infrastructure should not be detrimental to the right of cycling. The rights of experienced cyclists to cycle more challenging alignments should be protected while there would also be potentially fewer conflicts between cyclists with different levels of experiences along the tracks. Mandating sport cyclists to stay on cycle tracks, where learners and holiday cyclists are concentrated, could lead to a higher level of collision risk for all.
- 3.6 Despite TPDM & HKPSG have has a more generous width than international guidances like the LTN 1/20, we encourage CEDD / ARUP to look into the anticipated flow of cycling traffic to make the case of the desirable width needed in the context of Hong Kong. Especially the route would have been a popular route during holidays and weekends when congestion might have been likely. Vertical clearance by segregations & guard railings should also be considered, where the design of the guard railing should also be cycle-friendly to prevent handlebar tripping into the guard rails.

4. Junction, Crossings & Traffic environment

- 4.1 The TWTM cycle track should not "give up at junctions" - i.e. requiring cyclists to give way at every side road it encounters. This affects the directness of the route and results in the following scenario even if it is less safe:
- Cyclist non-compliance upon junction, i.e. not dismounting as suggested and required without adequate junction treatment
 - Cyclist choosing the ride on the main carriageway as it is faster and more direct
- 4.2 A well-designed facility should not see any discontinuity in the journey as it is highly disruptive. Therefore any instruction instructing cyclists to dismount, especially across junctions is deemed inappropriate. In the UK there is now a paradigm shift moving to use more positive language & instructions instead, such as "Cyclist to rejoin carriageway", "Give way" or simply by design implementing appropriate junction/ crossing interventions.

4.3 The choice of junction/ crossing intervention is subject to the following criteria, as suggested in LTN 1/20 Table 10-2:

- Traffic flow across the minor arm
- Traffic speed to and from the major arm
- Number of lanes to cross (i.e. crossing distance)

Speed Limit	Total traffic flow to be crossed (pcu)	Maximum number of lanes to be crossed in one movement	Uncontrolled	Cycle Priority	Parallel	Signal	Grade separated
≥ 60mph	Any	Any					
40 mph and 50 mph	> 10000	Any					
	6000 to 10000	2 or more					
	0-6000	2					
	0-10000	1					
≤ 30mph	> 8000	> 2					
	> 8000	2					
	4000-8000	2					
	0-4000	2					
	0-4000	1					

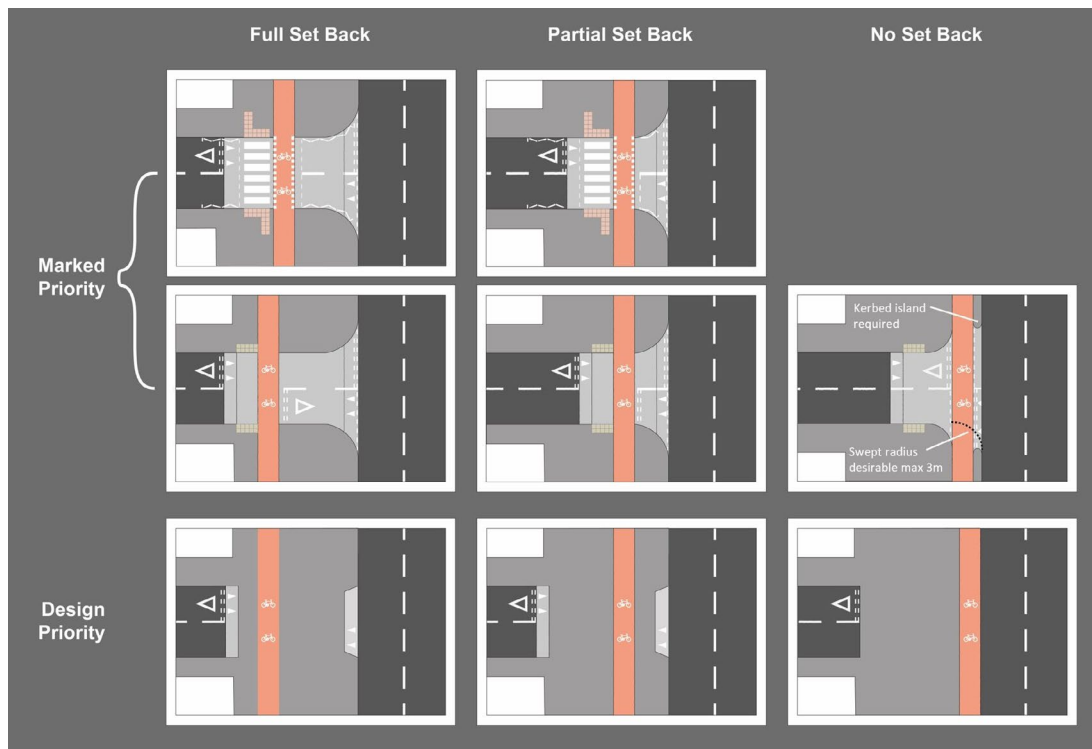
	Provision suitable for most people
	Provision not suitable for all people and will exclude some potential users and/or have safety concerns
	Provision suitable for few people and will exclude most potential users and/or have safety concerns

Notes:

1. If the actual 85th percentile speed is more than 10% above the speed limit the next highest speed limit should be applied
2. The recommended provision assumes that the peak hour motor traffic flow is no more than 10% of the 24 hour flow

Side Road Junctions

4.4 Wherever cycling across side roads where the minor arm is with quiet traffic and supposedly low traffic speed - for example village/ residential access, a cycle priority across junctions should be implemented to ensure the directness of the track. In the context of Hong Kong where drivers might not be used to interfacing with cycling traffic, a more conservative & protective design for cyclists should be used. We suggest a partial or full setback with marked priority for cyclists, as suggested by LTN 1/20 Figure 10.13. The image is reproduced on the next page:



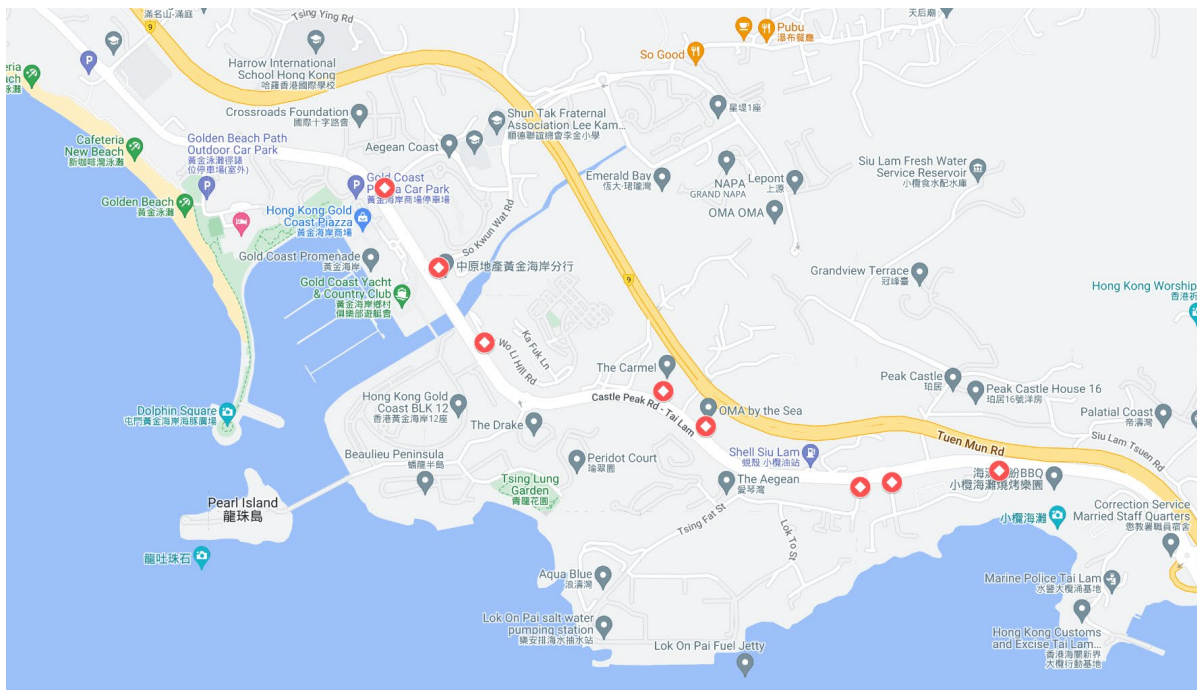
Setback arrangement as recommended by LTN 1/20

4.5 Below list some of the junctions we deemed to be appropriate for cycle priority over junction based on the context of the road layout, subject to feasibility study:

- Two residential access near Bay Bridge Lifestyle retreat (as marked by red arrows below)



- Quiet roads along Castle Peak Rd - Tai Lam & So Kwun Wat (marked in red dots in the image next page)



Signalised Junctions

- 4.6 Wherever traffic flow/ speed would be deemed inappropriate for cycle priority over the junction, a seamless yet signalised crossing with a dedicated cycle facility without the need to dismount should be fitted. These could be in the form of signalised parallel crossings, with an example shown in the figure below:



Example of a signalised parallel crossing for cycles seen in London's Cycle Superhighway 3 (credit: RantyHighwayman)

- 4.7 We think the following locations (marked in purple dot) would require a signalised crossing with cycle facility - subject to the feasibility study and actual traffic survey:



Junction between Castle Peak Rd - New Ting Kau and Castle Peak Road - Ting Ka

- 4.8 We are particularly concerned about the junction arrangement at the Castle Peak Rd - New Ting Kau & Castle Peak Road - Ting Kau (shown in the green arrow below). The existing alignment shown in public consultation appears to be using the existing uncontrolled crossing locations as cycle track crossings, using the central reservation and continuing the journey up west aside from the pedestrian footbridge. Our humble advice is that this arrangement, if it is exactly what we thought it would be, is deemed to be a very dangerous arrangement.

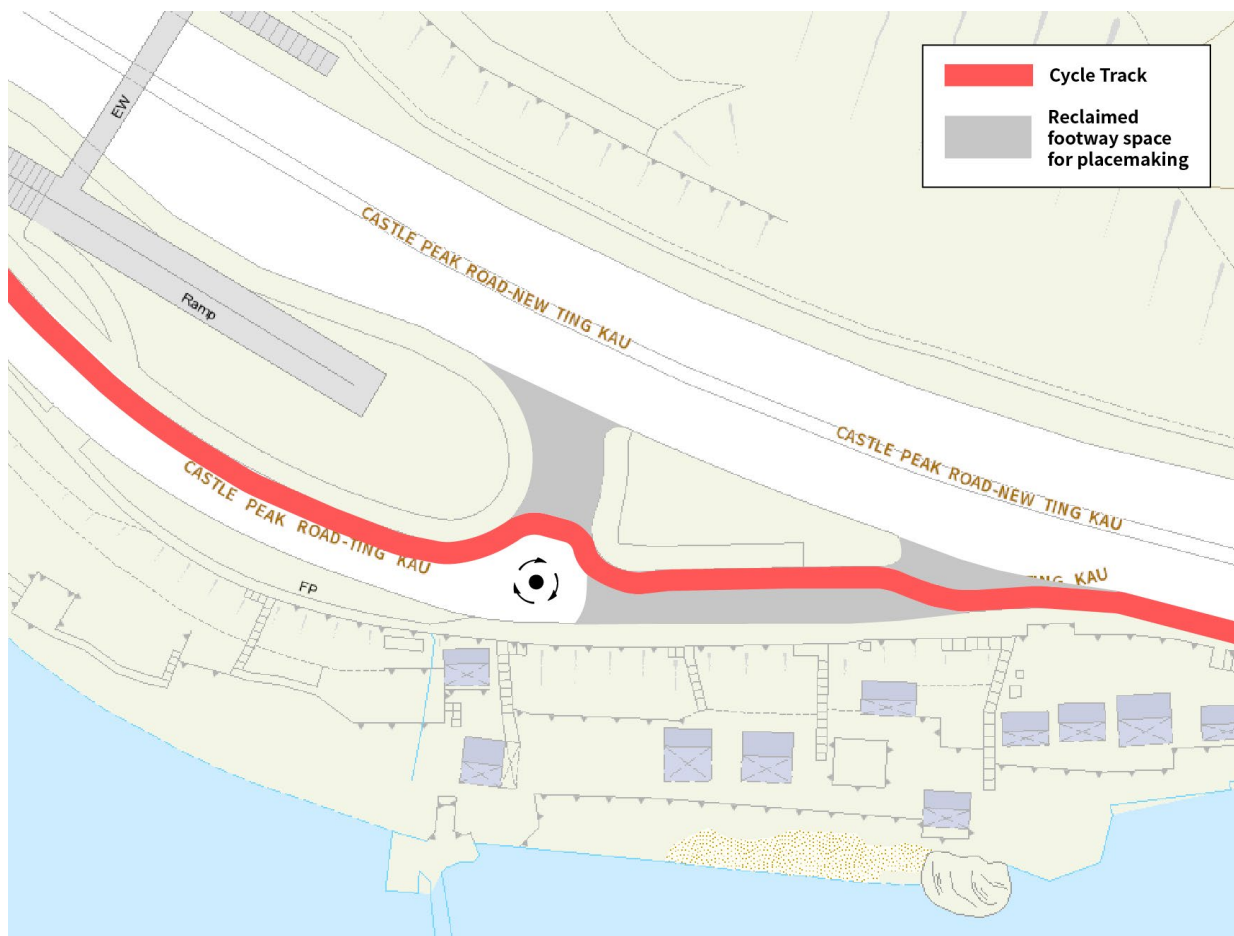


- 4.9 We think that the existing arrangement of uncontrolled crossing is already flawed, where the major arm (Ting Kau/ New Ting Kau) has a speed limit of 70 kmh with the minor arm speed limit being 50 kmh, the location of the existing crossing is too close to the junction. Be it 70 kmh or 50 kmh, drivers approaching from major arm to minor arm would not have had sufficient distance or time to react to hazards and stop (stopping sight distance; SSD) calculation suggests 50kmh traffic speed would have required at least 134m of stopping sight distance). Crossing these two ingress/ egress junctions safely would have been very difficult without any sort of signalised controlled crossings, as suggested in paragraph 4.3 with the quoted crossing selection diagram. Our concern remains that there is no sufficient clearance from the major arm to place the crossing with the existing crossing locations.

- 4.10 One of the options is to push back the crossing location further to the west, say immediately west of the existing footbridge, as circled in red in the figure below. This provides sufficient clearance from the junction for traffic to acclimatise to the local speed limit. But picking up the alignment next to the New Ting Kau section would have anticipated a topological challenge.



- 4.11 Another more ambitious option would be to close off the eastern access of the Ting Kau section (both ingress and egress). The road typologies have suggested that the eastern access has little significance as it only provides access to the Westbound on New Ting Kau section. For any traffic going east traffic, they would have to go to the roundabout next to the Ting Kau Car Park anyway for going eastbound on New Ting Kau Section.
- 4.12 The rural character of Ting Kau Tsuen makes it very ideal to implement the “traffic in village” type of scheme that strategically removes through traffic thus lowering traffic volume in the area, making no gain for rat-running along the village road. Together with traffic calming the area it would return the rural character and pleasantness of the area and potentially bring place value to the village with stunning scenic views upon Ting Kau & Tsing Ma Bridge. The junction could be retrofitted for U-turn & placemaking purposes, and of course cycle tracks across the “junctions”.
- 4.13 This concept is illustrated in the figure shown next page. The option for this junction can also be a combination of both - closing off the westbound ingress only and retain the egress which is likely to be a lower speed. This, again, would need to factor in the concern of minor arm merging with major arm with appropriate speed, etc, and would require crossing intervention treatments as well. Nevertheless, subject to feasibility study. design stages and stakeholder engagement.



Indicative diagram showing our conceptual solution for the cycle junction between Castle Peak Rd - New Ting Kau and Castle Peak Road - Ting Ka

5. Utilities & Placemaking

- 5.1 We believe that access to points of interest, day-to-day destinations and communities is essential for making a cycle route coherent and “useful”, thus enabling utility trips. We thus have the following suggestions for respective locations.
- 5.2 The cycle route should be connected to the Tuen Mun Road Bus-Bus Interchange with cycling hubs including secure, covered & CCTV-monitored cycle storage. This enables utility trips including park & ride trips. Possibly it could come with respective incentives/ sectional fares for boarding/ alighting at the interchange. The exit & entry hub at both ends of the routes (Tuen Mun & Tsuen Wan) should also provide the appropriate amount of secure, covered and CCTV-monitored cycle parking. Potentially it could be a secured hub with some sort of access controls to deter potential thieves as well.
- 5.3 As suggested in paragraph 3.2, access by settlements & communities along the TWTM cycle track section onto the cycle track safely and seamlessly should also be of important consideration in the concept design stage. This provides cycling being the viable option to and from their neighbourhood into Tuen Mun/ Tsuen Wan. The provision of secure cycle parking along these settlements area- like the use of Sheffield stands should be considered as well.

- 5.4 The route alignment along has stunning views and brings place value and potential place-making opportunities for local communities. Proper signposting & branding of the cycle route would be welcomed, with local signboards to guide for resting spots, scenic spots and other points of interest.
- 5.5 However we are concerned that guard railings that are necessary along the cycle track might block the scenic view, subject to the railing height necessary. Eye-level height of guard railings would diminish the attractiveness of the route to both cyclists and pedestrians. However we understand that it is, at times, necessary for safety purposes, especially if it is over water bodies, cantilevered, etc.; or upon great horizontal deviations, to use a higher guard railing. We suggest the design of the route and guard railings itself should mitigate these issues.
- 5.6 We would appreciate a deeper community engagement with the local communities along the alignments as well. We understand that there might be local concerns in Sham Tseng with respect to the potential impact during and after the construction of the TWTM cycle track that involves reclamation. We encourage CEDD/ ARUP to further engage with the local residents and take a community-led approach in designing and co-planning of the associated spaces of the route with placemaking values, but also mitigate potential construction impacts and maintenance concerns wherever possible.

Thank you for your attention.

Street Reset
1st December, 2022