APPENDICES

Appendix A Application of the proposed Working Tools for Cheung Pei Shan Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Form

Start of Chart 2 \rightarrow floor number (N) > 20 along westbound carriageway and 10 < N < 20 along eastbound carriageway \rightarrow buildings on one side of the carriageway \rightarrow propose semi-enclosure alongside westbound carriageway and 3m plain barrier and 4.5m bend-top barrier alongside eastbound carriageway \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow barrier intercept EVA fronting Tsui Shan House \rightarrow modify the scheme by deletion of 110m partial enclosure fronting Tsui Shan House \rightarrow check accessibility for fire fighting again \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow barrier is not located close to junction \rightarrow barrier is not located along bend \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow creates no impact on street level commercial activities \rightarrow creates no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow the existing westbound footpath and open space $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Tung Tau Tsuen Road

Chart 1: Identification of Problem

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < 400m \rightarrow Go to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) > 20 \rightarrow buildings on one side of the carriageway \rightarrow proposed semi-enclosure \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception of existing EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow identified barrier are close to junctions \rightarrow visibility/road safety problems of junctions and conflict with pedestrian and vehicular access \rightarrow scheme modification: consider using bend-top barrier \rightarrow check visibility \rightarrow no conflict with pedestrian and vehicular access and no visibility/road safety problem generated after such scheme modification \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow creates no impact on street level commercial activities \rightarrow creates no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow both northbound and southbound footpath > 2.5m wide \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Start of Chart 7 \rightarrow less than 50% of affected properties located within the shadow zone \rightarrow no other possible scheme can be found \rightarrow scheme not practical \rightarrow End

Appendix A Application of the proposed Working Tools for Fung Shue Wo Road

Chart 1: Identification of Problem

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) > 20 \rightarrow alongside southbound carriageway and floor number (N) < 10 alongside northbound carriageway \rightarrow proposed plain vertical barrier and semi-enclosures alongside northbound and southbound carriageway, respectively \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception of existing EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow identified barriers are close to junctions \rightarrow visibility and road safety problems at bend is identified \rightarrow Scheme modification: shift the bend-top barrier at bend away from the kerb line \rightarrow check visibility again \rightarrow no conflict with pedestrian and vehicular access and no visibility/road safety problem generated after such scheme modification \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow creates no impact on street level commercial activities \rightarrow creates no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart $6 \rightarrow$ both northbound and southbound amenity and/or footpath with overall width > 2.5m wide \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Yuen Wo Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Form

Start of Chart 2 \rightarrow floor number 10<(N)<20 alongside eastbound carriageway \rightarrow propose bendtop barriers \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception of existing EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow the identified barriers is not located close to junction \rightarrow The identified barriers is not located along bend \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow creates no impact on street level commercial activities \rightarrow creates no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow the eastbound footpath with width > 2.5m \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for <u>Tai Chung Kiu</u> Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow$ Go to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) > 20 alongside eastbound carriageway \rightarrow the facade are located alongside eastbound carriageway only \rightarrow propose semi-enclosure \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart $3 \rightarrow$ no interception of EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow the identified barriers are not located close to junction \rightarrow the identified barriers are not located along bend \rightarrow the identified barrier fronting Ming Yiu Lau adjacent to the existing bus stop will conflict with the pedestrian access \rightarrow scheme modification (provide 14m x 3m high opening) \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial \rightarrow no conflict with pedestrian crossing or access after providing 14m x 3m high opening \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart $6 \rightarrow$ the eastbound amenity and/or open space and/or footpath with overall width > $2.5m \rightarrow$ Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Ma On Shan Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow$ Go to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) > 20 alongside westbound carriageway \rightarrow the facade are located alongside eastbound carriageway only \rightarrow propose semi-enclosures \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow interception of EVA at Heng On Estate \rightarrow modify the scheme to exclude the section of barrier fronting the EVA at Heng On Estate \rightarrow by adoption of such scheme modification no interception of EVA will be resulted \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow the proposed barriers are located close to junction \rightarrow check visibility \rightarrow scheme modification: avoid barriers at the existing roundabout \rightarrow no visibility problem after such scheme modification \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow The proposed barrier interface with street level commercial activities fronting Sunshine City \rightarrow delete barriers fronting Sunshine City \rightarrow creates no obstruction to pedestrian crossing or across \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow the eastbound amenity and/or open space and/or footpath with overall width > 2.5m \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Che Kung Miu Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) > 20 alongside westbound carriageway \rightarrow excluding the cleared Shatin Tau THA, the affected facade are located alongside westbound carriageway only \rightarrow propose semi-enclosures \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart $3 \rightarrow$ no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow the proposed barriers are located close to junction \rightarrow check visibility no visibility and road safety problems \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities no obstruction to pedestrian crossing or across \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart $6 \rightarrow$ the affected amenity and footpath with overall width $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Che Kung Miu Road J/O Hung Mui Kuk Road

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between Che Kung Miu Road and facade at Tin Sam Village and Sun Chui Estate, and between Hung Mui Kuk Road and facade at Sun Chui Estate and Tin Sam Village (D) < 400 \rightarrow Go to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart $2 \rightarrow$ floor number (N) of facade at Tin Sam Village < 10; floor number (N) of facade at Sun Chui Estate > $20 \rightarrow$ propose semi-enclosure to cover southbound carriageway of Hung Mui Kuk Road; plain barriers alongside northbound carriageway of Hung Mui Kuk road and westbound carriageway of Che Kung Miu Road underneath south ramp of future footbridge to protect Tin Sam Village; plain barriers underneath east ramp of future footbridge \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart $3 \rightarrow$ no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart $4 \rightarrow$ the proposed barriers are located close to junction \rightarrow check visibility \rightarrow the proposed barriers are detailed with no generation of visibility problem \rightarrow scheme modification required to cope with future footbridge, roundabout and Route 16 above Che Kung Miu Road across Hung Mui Kuk Road \rightarrow deletion of proposed barrier alongside westbound carriageway of Che Kung Miu Road fronting Tin Sam Village \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart $5 \rightarrow$ no interface with street level commercial activities \rightarrow existing pedestrian access are maintained by modifying the scheme \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow the affected amenity, footpath and open spaces with overall width > 2.5m \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Tin Sam Street

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400\text{m} \rightarrow \text{Go}$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) of identified facade at Tin Sam Village < 10 and Carado Garden > 20 alongside eastbound carriageway, and floor number of Lok Sam House (N) > 10 and < 20 alongside westbound carriageway \rightarrow propose plain barrier and semi-enclosure for eastbound carriageway fronting Tin Sam Village < 10 and Carado Garden respectively, and bend-top barriers fronting Lok Sam House and Wing Sam House \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow the proposed barriers and located close to junction \rightarrow check visibility \rightarrow scheme modification: shift the support of barrier at bend fronting Carado Garden towards Carado Garden to comply with visibility requirement \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart $5 \rightarrow$ no interface with street level commercial activities except those fronting Tin Sam Village \rightarrow delete the proposed barriers fronting Tin Sam Village no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow the affected amenity, footpath and open space with overall width >2.5m \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Tseung Kwan O Road

Chart 1: <u>Identification of Problems</u>

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) of identified facade of Tsui Ping Estate, Lam Tin Estate, Hing Tin Estate and Hong Wah Count > 20 \rightarrow buildings on both side of carriageway at the western end of affected road section; buildings on westbound carriageway at the eastern end of affected road section \rightarrow propose full enclosure at western end and semi-enclosure at eastern end \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart $4 \rightarrow$ the proposed barriers and not located close to junction nor along bend \rightarrow the proposed barriers alongside westbound carriageway fronting Hing Tin Estate will conflict with the vehicular access for maintenance of the existing service reservoir \rightarrow scheme modification \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities \rightarrow no obstruction of pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and/or open space and/or footpath with overall width $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Po Lam Road North

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) = 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow$ Go to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) of identified facade at Po Lam Estate, Ying Ming Count, Yan Ming Count and King Lam Estate > 20 \rightarrow buildings are located alongside eastbound carriageway of Po Lam Road \rightarrow propose semi-enclosure \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow proposed barrier are located close to junctions \rightarrow check visibility \rightarrow scheme modification to provide sufficient visibility at junctions \rightarrow scheme modification to cope with existing pedestrian access (e.g. footbridge) \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart $5 \rightarrow$ no interface with street level commercial activities \rightarrow no obstruction with pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart $6 \rightarrow$ amenity and/or footpath with overall width $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Tuen Mun Road, Sam Shing Hui

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) of identified facade at Kam Fai Garden > 10 but < 20 \rightarrow propose bend-top barriers \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow barrier are not located to junction nor along bend \rightarrow no conflict with pedestrian and vehicular access \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities \rightarrow no obstruction with pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and/or open space and/or footpath with overall width > 2.5m \rightarrow Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Tuen Mun Road, Tsuen Wan

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) Belvedere Garden, Greenview Court exposed to traffic noise is between 10 to 20; and floor number (N) of Yau Kom Tau Village exposed to traffic noise is simulated as between 10 and 20 \rightarrow propose bend-top barriers \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 -> barrier are not located close to junction -> barrier are located along bend -> check visibility-> deletion of barriers fronting Yau Kom Tau Village alongside both slow and fast lane of eastbound carriageway to provide visibility under desirable minimum requirement-> no conflict with pedestrian and vehicular access-> Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities \rightarrow conflict with existing subway and footbridge \rightarrow scheme modification \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and/or open space with overall width $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Start of Chart 7 \rightarrow more than 50% of affected properties located within the shadow zone \rightarrow angle of view reduced by 70% or more at over 50% of affected properties

Application of the proposed Working Tools for Tuen Mun Road, Tsing Lung Tau

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow in according to the existing topographic profile, floor number (N) of Hong Kong Garden exposed to traffic noise < 10 \rightarrow propose plain vertical barrier alongside the westbound slow lane carriageway \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow barrier are not located close to junction \rightarrow barrier are located along bend \rightarrow check visibility \rightarrow scheme modification: more the plain barriers at bend away from the carriageway to provide desirable visibility requirement \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart $5 \rightarrow$ no interface with street level commercial activities \rightarrow no obstruction to pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and/or open space with overall width $> 2.5 \text{m} \rightarrow \text{Go}$ to Chart 7

Chart 7: Acoustic Effectiveness

Start of Chart 7 \rightarrow identify the acoustic effectiveness of the proposed barrier \rightarrow replace the plain barriers at bend with bend-top barriers \rightarrow more than 50% of affected properties located within the shadow zone \rightarrow angle of view reduced by 70% or more at over 50% of affected properties \rightarrow recommend for preliminary engineering feasibility study

Appendix A Application of the proposed Working Tools for Castle Peak Road, Hung Shui Kiu

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) < 10 \rightarrow propose plain vertical barrier \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart $3 \rightarrow$ no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow barrier is not located close to junction nor along bend \rightarrow no conflict with pedestrian but shall complies with LRT routing \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities \rightarrow no obstruction with pedestrian crossing or access \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and/or footpath with overall width $> 2.5m \rightarrow$ Go to Chart 7

Chart 7: Acoustic Effectiveness

Appendix A Application of the proposed Working Tools for Castle Peak Road, Ping Shan

Chart 1: Identification of Problems

Start of Chart 1 \rightarrow traffic lane (L) > 4 \rightarrow distance between the facade and the road kerb (D) < $400m \rightarrow Go$ to Chart 2

Chart 2: Selection of Barrier Forms

Start of Chart 2 \rightarrow floor number (N) < 10 \rightarrow propose plain vertical barrier \rightarrow Go to Chart 3

Chart 3: Emergency Access Consideration

Start of Chart 3 \rightarrow no interception with EVA \rightarrow Go to Chart 4

Chart 4: Road Safety Consideration

Start of Chart 4 \rightarrow barrier is not located close to junction \rightarrow check visibility \rightarrow scheme modification: delete a portion of barrier adjacent to Castle Peak Road - Ping Shan J/O minor road of Fu Sha Wai \rightarrow no conflict with pedestrian and vehicular access after such modification \rightarrow Go to Chart 5

Chart 5: Socio-economic Consideration

Start of Chart 5 \rightarrow no interface with street level commercial activities \rightarrow existing pedestrian crossing or access fronting Ping Shan Lane are maintained \rightarrow Go to Chart 6

Chart 6: Land Availability

Start of Chart 6 \rightarrow amenity and footpath with overall width $> 2.5m \rightarrow$ Go to Chart 7

Chart 7: Acoustic Effectiveness

Start of Chart 7 \rightarrow more than 50% of affected properties located within the shadow zone \rightarrow angle of view reduced by 70% or more at over 50% of affected properties located within the shadow zone \rightarrow angle of view reduced by 70% or more at over 50% of affected properties \rightarrow recommend for preliminary engineering feasibility study