INDEPENDENT REVIEW

Treatment of pedestrian and public transport benefits in the Golden Mile transport benefit-cost ratio

Author: Dr Timothy F. Welch, Senior Lecturer in Urban Planning, University of Auckland
Date: 16 June 2026
Prepared for: Councillor Geordie Rogers, Wellington City Council
Subject: Golden Mile Independent Revalue Review (June 2026), economic appraisal

1. Purpose and Scope

This review examines one methodological issue in the *Golden Mile Independent Revalue Review* (June 2026, the Review): the exclusion of pedestrian and public transport reliability benefits from the project's transport benefit-cost ratio. The Review states, at page 27, that pedestrian realm benefits are "excluded entirely from the transport-related (NZTA-aligned) BCR to comply with national transport appraisal guidance." The question addressed here is whether that exclusion, and the parallel treatment of pedestrian travel time, pedestrian safety, and public transport reliability, is consistent with the national guidance the Review cites.

The documents reviewed are the Review in full, the NZTA *Monetised Benefits and Costs Manual* (volume 1: procedures, version 1.7.5, May 2026, and volume 2: appendices), the NZTA draft *Investment Prioritisation Method 2024–27* (March 2024), and the project's 2021 Single Stage Business Case economic assessment. I was not a member of the review panel and have not had access to the underlying transport model runs or benefit worksheets, the same limitation the panel records for itself. The conclusions below rest on the published methodology and the cited national guidance, both of which are in the public record and can be checked against the page references given.

2. Principal Finding

The exclusion is not consistent with national appraisal guidance, and the justification the Review gives for it does not hold.

Pedestrian travel time savings, pedestrian safety (crash) benefits, and public transport reliability are all standard monetised transport benefits under the MBCM. They belong in the numerator of NZTA's national benefit-cost ratio. Nothing in the MBCM or the IPM requires, or even contemplates, removing them from the transport BCR. The Review has constructed a narrower measure, labelled it the "transport-related (NZTA-aligned) BCR," and excluded these three benefit streams from it. The label is the reverse of what the guidance says. The NZTA-aligned BCR is the one that *includes* these benefits, not the one that strips them out.

The exclusion is not a presentational matter. It is what produces a negative transport BCR of -0.39, and that negative figure is what the Review uses to warn that the project's 51% NZTA co-investment share of $68.0 million is at risk (page 9). When the three benefit streams are returned to the transport BCR where the guidance places them, the figure is no longer negative.

3. The Review's Two Benefit-Cost Ratios

The Review reports two ratios (page 35): a "BCR (Transportation Only Framework)" of -0.39 over 40 years and -0.54 over 60 years, and a "BCR (Comprehensive Economy)" of 1.78 over 40 years and 2.17 over 60 years. The difference between the two is entirely a question of which benefits are counted.

The benefit results table (page 33) sorts the quantified benefits into two groups. The first, "Transport-Related Benefits," contains public transport travel time, private vehicle travel time, heavy commercial vehicle travel time, walking-related health benefits, vehicle operating costs, and emissions, and sums to a net disbenefit of -

$91.5 million over 40 years. The second group, "Broader Pedestrian Amenity Benefits," contains four lines and is excluded from the transport BCR in full:

Excluded benefit stream	40-year PV	60-year PV
Pedestrian realm (central scenario)	$321.8m	$446.4m
Pedestrian travel time savings	$42.5m	$58.9m
Pedestrian safety benefits	$96.1m	$133.4m
Public transport reliability benefits	$50.4m	$69.9m
Subtotal removed from transport BCR	**$510.8m**	**$708.6m**

Three of those four excluded lines, totalling $189.0 million over 40 years, are pedestrian travel time, pedestrian safety, and public transport reliability. The justification is the single sentence at page 27. The executive summary at page 8 repeats it, stating that the primary BCR is calculated "explicitly excluding broader pedestrian amenity benefits," and then lists "travel time savings, safety, and transport reliability" as part of that excluded amenity group. *That grouping is the error, and the sections that follow set out why.*

4. Treatment Under the Monetised Benefits and Costs Manual

The MBCM is unambiguous that these are transport benefits and that they belong in the BCR.

Pedestrian safety. Section 3.1 covers the social cost of deaths and serious injuries. It defines a crash as "an event involving one or more transport system users that results in personal physical injury, including to pedestrians and cyclists" (page 57). Crash cost savings are the flagship safety benefit in NZTA appraisal, and the Review's own pedestrian safety line is built from "Updated NZTA crash data (2011–2025)" (page 31). This is a core MBCM benefit, not an amenity add-on.

Pedestrian travel time. Section 3.6 (Impact on network productivity and utilisation, from page 83) values travel time savings using the standard values of time, which apply across modes including walking. Section 4.2 sets out the full procedure for walking and cycling activities. Its benefit stage states that "the benefits of walking and cycling monetised in this manual include: impact on social cost and incidents of crashes; impact on physical and mental health; impact on productivity and network utilisation," arising from "changes to user benefits from decreased travel time and increased safety" (page 140). That procedure then feeds those benefits directly into the benefit-cost ratio at its costing and BCR stages.

Public transport reliability. Section 3.7 (Impact on system reliability) provides a dedicated method for "public transport's journey reliability," including a valuation formula and the minute-late ratios set out in Table 32 (page 100). PT reliability is monetised within the transport framework by design.

The BCR definition closes the point. Section 6.1 defines the national benefit-cost ratio as the present value of national economic benefits divided by national economic costs, where national economic benefits are "the net direct benefits and disbenefits experienced by transport users, the net indirect benefits and disbenefits experienced as externalities … and all other monetised impacts" (page 242). Pedestrian time savings, pedestrian crash savings, and PT reliability are direct benefits to transport users. The only category the MBCM singles out for separate "with and without" reporting is wider economic benefits, namely agglomeration, employment, and output changes in imperfectly competitive markets (page 242). Pedestrian time, safety, and reliability are none of those things and are not subject to that carve-out.

There is no "transport-related BCR" in the MBCM that excludes these streams. The manual's architecture is the opposite of what the Review implies: monetised benefits, including these three, go into the BCR, while effects that cannot be monetised are reported alongside it through the Land Transport Benefits Framework, not subtracted from it.

5. Treatment Under the Investment Prioritisation Method

The draft IPM 2024–27 points the same way. Efficiency, one of its three prioritisation factors, "is determined by considering the whole of life costs and benefits primarily through cost-benefit analysis," using the Benefit-Cost Ratio (page 7). The efficiency bands are Very Low for a BCR below 1, Low for 1 to under 3, Medium for 3 to under 6, and High for 6 or above (page 26). The BCR the IPM uses is the MBCM national BCR. It defines no alternative transport ratio that omits pedestrian or reliability benefits.

This matters in two directions. Because the efficiency rating is read off the BCR, removing $189 million of legitimate transport benefits from the BCR mechanically depresses the project's efficiency rating. And the IPM already provides for the situation the Review says it is worried about. Its prioritisation matrix carries an explicit note that a proposal with a Very Low (BCR below 1) rating "may be included in the 2024–27 NLTP with a Low Efficiency rating where there is uncertainty about the calculation or there are other benefits not included in the calculation," by exception at NZTA Board level (page 8). The guidance anticipates benefits sitting outside a given calculation and provides a route to recognise them. It does not instruct anyone to delete monetised transport benefits from the BCR in the first place.

6. Comparison With the 2021 Business Case

The clearest evidence that the exclusion is a departure from practice, rather than compliance with it, is the project's own Single Stage Business Case. The 2021 economic assessment that produced the original BCR of 4.6, and that was accepted into the NZTA funding process, counted all of these benefits inside a single benefit-cost ratio:

2021 SSBC benefit line	Present value
Public transport reliability impact	$27m
Pedestrian travel time impact	$25m
Pedestrian crash reduction benefit	$37m
Pedestrian realm benefit	$247m
Total benefits / total costs	$399m / $86m
Reported BCR	**4.6**

The methodology the Review now describes as the "NZTA-aligned" approach excludes the very benefits that the project's own NZTA-aligned business case included five years ago. The Review has not applied national guidance more strictly. It has applied a narrower, non-standard definition and attributed it to the guidance.

7. Effect on the Benefit-Cost Ratio

Correcting the classification is simple arithmetic, using the Review's own figures.

Returning pedestrian travel time ($42.5m), pedestrian safety ($96.1m), and public transport reliability ($50.4m) to the transport benefit subtotal changes it from -$91.5 million to +$97.5 million over 40 years. Against the Review's whole-of-life cost of $236.0 million, the transport BCR moves from -0.39 to about +0.41. On the 60-year basis the subtotal moves from -$141.4 million to +$120.8 million against costs of $261.8 million, and the BCR moves from -0.54 to about +0.46.

Transport BCR	40-yr	60-yr	Benefit swing
As reported by the Review	-0.39	-0.54	n/a
Corrected (time, safety, reliability restored)	+0.41	+0.46	+$189.0m (40-yr)

A BCR of about 0.4 remains below 1.0, and the corrected ratio does not, on its own, demonstrate strong value for money. What it establishes is that the finding before the Council, a negative transport BCR, and the co-investment warning built on it, do not survive a correct application of the guidance the Review claims to follow. The difference between a project that returns net transport disbenefits and one that returns positive transport benefits below the cost line is material to any funding conversation with NZTA.

If the pedestrian realm benefit is also recognised, the ratio is the Review's own "comprehensive economy" figure of 1.78. That figure is much closer to a properly specified MBCM national BCR than the "transportation only" figure, because it includes the standard transport, safety, reliability, and pedestrian benefits the manual requires.

8. The Private Vehicle Disbenefit and the Standalone Scenario

A separate issue affects the suitability of the Review result, and it points in the same direction. The transport subtotal is not negative because the benefits are weak. Public transport travel time savings are large and are kept in the transport BCR, at $360.4 million over 40 years. The subtotal is negative because of a single dominant line: private vehicle travel time, recorded as a disbenefit of -$443.0 million over 40 years (-$634.4 million over 60 years), with a further -$29.1 million for heavy commercial vehicles. That one line is larger than any positive benefit anywhere in the appraisal, and it is what pulls the ratio below zero.

Two features make the figure fragile. The first is scale. The project's 2021 business case recorded a car travel time impact of -$20 million. The 2026 figure is more than twenty times larger. Some increase is expected from updated modelling and a longer horizon, but a movement of that order warrants scrutiny rather than acceptance at face value, particularly where the underlying model runs were not available to the panel.

The second feature carries more weight. The Review itself describes this disbenefit as an upper bound. The 2026 modelling assesses the Golden Mile in isolation, excluding the State Highway 1 upgrades and the Harbour Quays bus priority works. The Review states that a combined-project scenario "would likely reduce both public transport travel time benefits and private vehicle disbenefits relative to the standalone modelling results, meaning the standalone results represent an indicative upper-bound estimate of transport system impacts" (page 26), and that the "Golden Mile-only modelling overstates or misattributes certain network-wide transport effects" (page 28).

The result is an asymmetry that compounds the classification problem. The single largest and least reliable input, an explicitly upper-bound car disbenefit, is carried in full, while $189 million of standard, monetisable benefits is removed entirely. A more complete model would reduce the disbenefit and lift the transport BCR further. That cannot be quantified from the material available, because the combined-project model runs were not provided, but the direction is not in doubt and the Review states it.

9. Qualifications

Two qualifications should be kept in view, each of which the Review's authors might reasonably raise.

First, the pedestrian realm benefit is the one item where the Review's caution has merit. The $321.8 million realm figure is a willingness-to-pay amenity valuation. It is large relative to the rest of the case, and the Review is right that it is sensitive to behavioural and valuation assumptions and carries some risk of overlap with other streams. Treating that single benefit cautiously, or scenario-testing it, is a legitimate analyst's judgement. The objection is not to caution about the amenity valuation. It is that the Review extended that caution to pedestrian time, pedestrian safety, and PT reliability, which are not amenity valuations, and then labelled the whole exclusion as a requirement of national guidance. Even on the most conservative reading, where the realm benefit is set aside in full, the three remaining streams belong in the transport BCR, and the corrected figure of about 0.41 holds.

Second, the corrected transport BCR remains below 1.0. The fair summary is that the project's transport-efficiency case is modest once costs are updated, and that its fuller case depends on pedestrian and city-centre benefits. That is a reasonable matter to debate on the merits. Presenting a negative transport BCR as the NZTA-compliant figure, when the guidance produces a positive one, is not.

A related inconsistency reinforces the point. The Review keeps walking-related health benefits inside its transport subtotal but moves pedestrian travel time and pedestrian safety out of it. Under MBCM section 4.2 all three are part of the same walking and cycling benefit family. There is no principled basis for splitting them across the two ratios.

10. Conclusion

The Review's statement that pedestrian and related benefits were excluded from the transport BCR "to comply with national transport appraisal guidance" is not supported by that guidance. The MBCM treats pedestrian travel time, pedestrian safety, and public transport reliability as monetised transport benefits that belong in the national BCR (sections 3.1, 3.6, 3.7, 4.2 and 6.1). The IPM reads its efficiency rating off that same BCR (pages 7, 8 and 26). The project's own 2021 business case counted these benefits inside its headline ratio. On the Review's own figures, restoring them moves the transport BCR from -0.39 to about +0.41 over 40 years, and the negative figure that remains is driven by a private vehicle disbenefit the Review itself labels an upper bound.

The negative "transport-related" BCR is therefore an artefact of removing $189 million of standard, monetisable transport benefits from the calculation. National guidance requires those benefits to be inside the ratio, not outside it.

The specific manual extracts underpinning each citation can be provided on request.

Timothy F. Welch, JD, LLB, PhD
Senior Lecturer in Urban Planning
School of Architecture and Planning
University of Auckland

This review sets out independent academic and professional opinion on transport economic appraisal methodology. It is based on the documents listed in section 1 and the cited national guidance. It is not a re-running of the project's transport model and does not purport to certify a final benefit-cost ratio for the project.

Appendix A. Reconciliation and Recalculation

All benefit and cost figures below are taken directly from the Review. Present value (PV) figures are from the benefit results table (page 33) and the BCR table (page 35). This appendix shows the full derivation so that any line can be traced and the recalculation checked independently.

A.1 Benefit reconciliation (Review, page 33)

Benefit / disbenefit line	40-yr PV	60-yr PV	In transport BCR?
Public transport travel time	360.4	495.2	Yes
Private vehicle travel time	-443.0	-634.4	Yes
Heavy commercial vehicle travel time	-29.1	-43.3	Yes
Walking-related health	16.2	22.1	Yes
Vehicle operating cost savings	10.9	14.8	Yes
CO2 impacts	-0.6	3.2	Yes
Emissions impacts	-6.3	1.0	Yes
Transport subtotal (as reported)	**-91.5**	**-141.4**	
Pedestrian realm (central scenario)	321.8	446.4	No (excluded)
Pedestrian travel time savings	42.5	58.9	No (excluded)
Pedestrian safety benefits	96.1	133.4	No (excluded)
Public transport reliability benefits	50.4	69.9	No (excluded)
Pedestrian amenity subtotal	**510.8**	**708.6**	
Total quantified benefits	**419.3**	**567.2**	

Of the four excluded lines, three are standard monetised transport benefits under the MBCM: pedestrian travel time, pedestrian safety, and public transport reliability. Together they total $189.0 million (40-yr) and $262.2 million (60-yr).

A.2 Recalculation of the transport BCR

Whole-of-life cost base (P50), Review page 35: $236.0m (40-yr), $261.8m (60-yr).

Reported: -91.5 ÷ 236.0 = -0.39 (40-yr); -141.4 ÷ 261.8 = -0.54 (60-yr). These reproduce the Review's figures on page 35.

Reclassify (restore the three MBCM transport benefits): transport subtotal becomes -91.5 + 189.0 = +97.5 (40-yr) and -141.4 + 262.2 = +120.8 (60-yr).

Corrected transport BCR: 97.5 ÷ 236.0 = 0.41 (40-yr); 120.8 ÷ 261.8 = 0.46 (60-yr).

With the realm benefit also included: 419.3 ÷ 236.0 = 1.78 (40-yr); 567.2 ÷ 261.8 = 2.17 (60-yr). This equals the Review's "comprehensive economy" BCR (page 35).

A.3 Source guidance for the classification

- **MBCM** (volume 1, version 1.7.5, May 2026): crash costs including pedestrians, s3.1 (p57); travel time and network productivity, s3.6 (p83); public transport journey reliability with valuation formula and Table 32, s3.7 (p100); walking and cycling benefits feeding the BCR, s4.2 (p140); national BCR definition and the wider-economic-benefit carve-out, s6.1 (p242).
- **Draft IPM 2024–27** (March 2024): efficiency determined through cost-benefit analysis using the BCR (p7); the Very Low (BCR below 1) exception note (p8); efficiency bands, Very Low to High (p26).
- **Golden Mile SSBC economic assessment** (2021): benefit composition and the reported BCR of 4.6 (benefit table, p7), including PT reliability ($27m), pedestrian travel time ($25m), pedestrian crash reduction ($37m), and pedestrian realm ($247m) inside a single ratio.