

State of the Network

The decision

Council is asked to note the condition of the sealed and unsealed network set out in this report, and to consider the works programme it supports. The figures below are the ones that decision turns on; each is set out in full in the section it comes from.

NETWORK IN THE SYSTEM 61.0 km	AVERAGE CONDITION (PCI) 52.7	FULL PROGRAMME COST \$689,824	CONDITION AFTER PROGRAMME 77.8
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WHAT THIS MEANS

WATCH	This valuation is of the 61 km loaded into the system — 3.4% of the 1,699 km register the council declares. It is not a replacement cost for the whole network.
WATCH	The same 8 segments (5.6 km) are absent from the 50.9 km programme below. Condition that has not been measured cannot be ranked, treated or priced, so this programme is not a whole-network cost.
WATCH	8 segments (5.6 km) carry no condition score. Every average in this report is over the 55.4 km that do — the rest is neither counted as good nor as poor.

WHAT THIS REPORT COVERS

58.6 km of road is loaded — 61.0 km of lane, because carriageways and lanes are held separately — against the 1,699.0 km register this council has declared, so 3.4% of it.

55.4 km of the loaded pavement carries a condition survey (90.9%). The rest has no condition score and is in none of the averages that follow.

Every length, average, valuation and recommended amount below describes only that. It is not an assessment of the whole network.

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Executive summary

NETWORK KM

61.0

SEGMENTS

94

AVERAGE PCI

52.7

over 55.4 km surveyed

The council manages 61.0 km of pavement. Condition is known for 55.4 km (90.9% of the network); the average PCI of 52.7 is across that surveyed length.

Basis and limitations

Scope — what this measures, and what it does not

PaveKeep measures surface condition (PCI, distress, ride/IRI) — not structural capacity (deflection, structural number, FWD). Outputs describe the observed surface, not the pavement's remaining structural life, and imply no reconstruction or structural-design advice.

Independence

- Our fee is a fixed subscription. It is not a share of your capital programme, not a commission on works, and not tied in any way to what this software recommends you spend.
- Every threshold, cost and rule on this page is configuration, not a hidden model. Each section says whose it is: "your council's" where you set it, "platform default" where it ships with the product. Defaults are changed for you on request — nothing here is a number you cannot see or challenge.
- Where a number is modelled rather than measured, the product labels it as modelled wherever it is shown. The two are never blended into one figure.

Settings behind these figures

The council's settings have not been changed since the system was set up.

The full method statement — every threshold, model and default these figures are computed from — is the closing annexe of this document.

Current condition

WHAT THIS MEANS

WATCH 8 segments (5.6 km) carry no condition score. Every average in this report is over the 55.4 km that do — the rest is neither counted as good nor as poor.

From totals.avg_pci_basis.covers_m in this report.

Condition by PCI band

BAND	SEGMENTS
■ Good	9
■ Satisfactory	15
■ Fair	24
■ Poor	25
■ Very Poor	4
■ Failed	9
■ Unknown	8

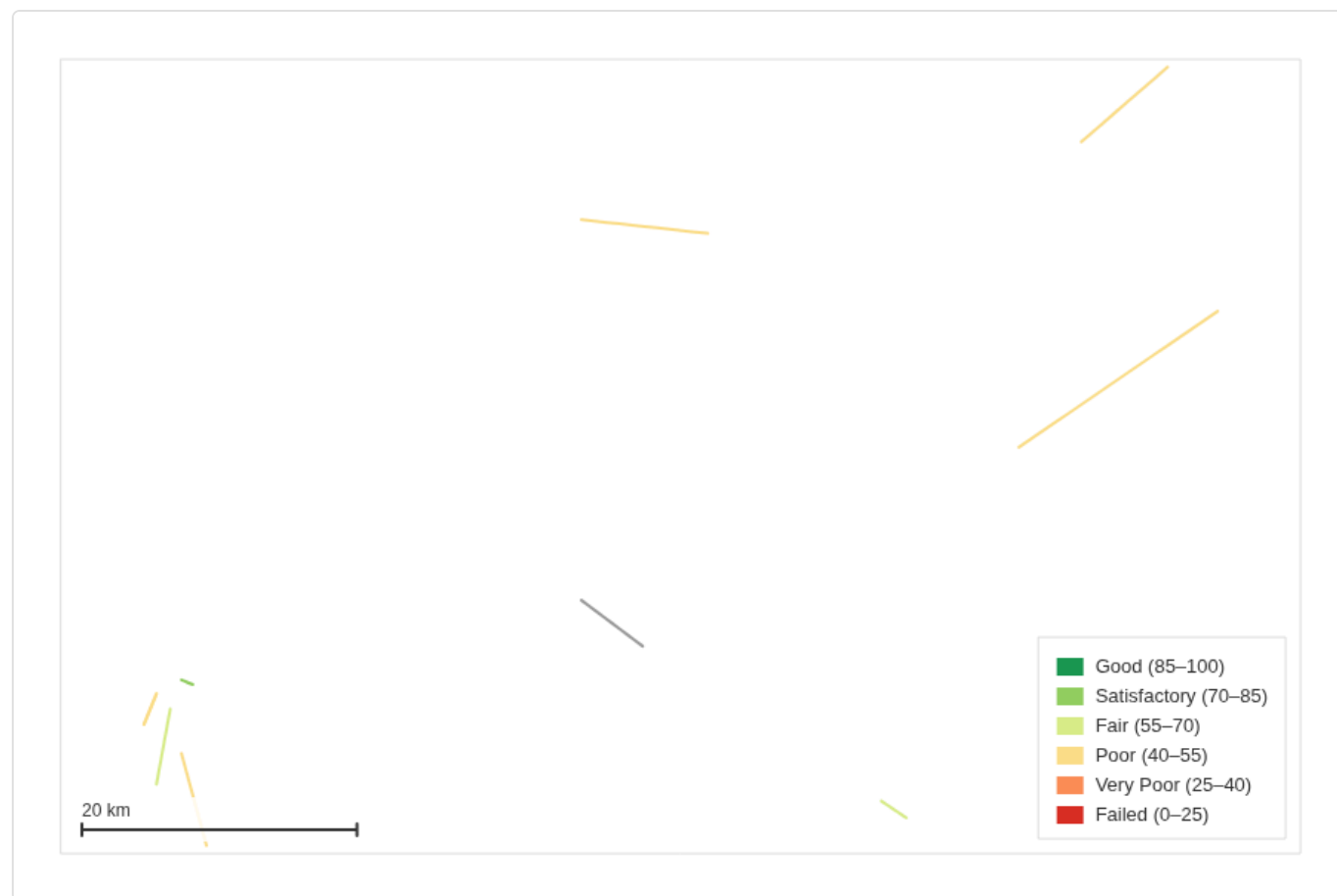
By road class

ROAD CLASS	AVERAGE PCI	SEGMENTS	LENGTH (KM)
Rural	48.0	42	40.6
Arterial	59.9	44	18.1
Highway	68.9	8	2.2

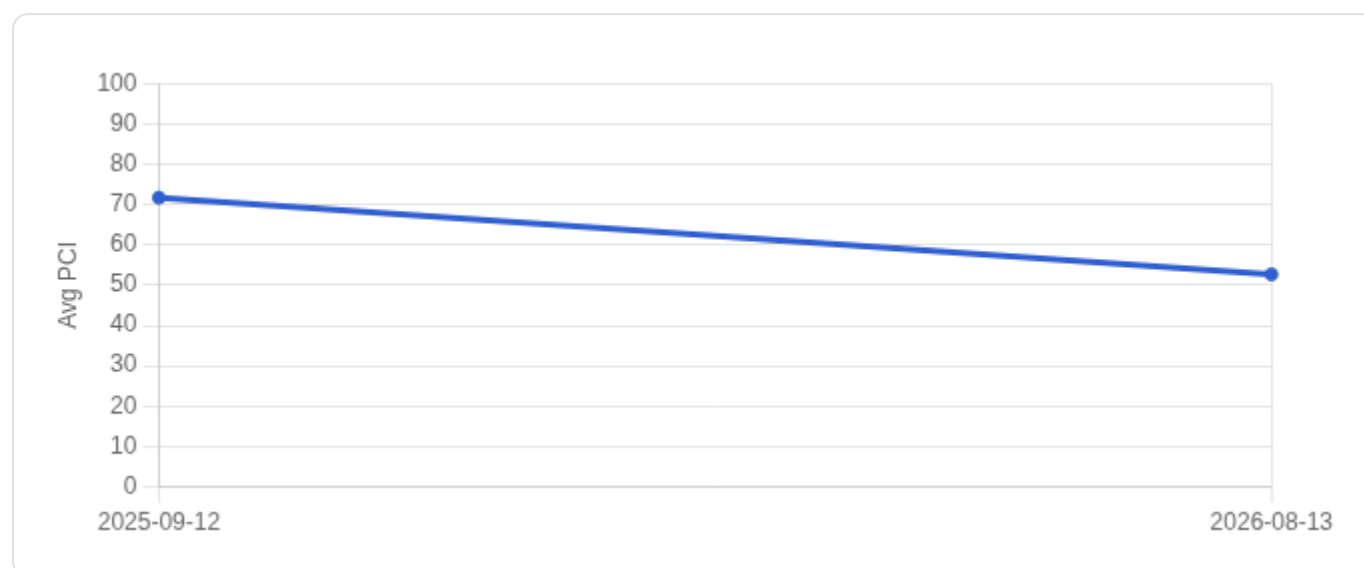
Zone comparison

NAME	AVERAGE PCI	SEGMENTS
Braidwood	68.9	8
Bungendore	—	3
Bungonia	52.9	2
Googong	60.0	19
Jerrabomberra	52.5	14
Karabar	68.5	3
Lake Bathurst	46.7	4
Mulloon	—	5
Nerriga	43.3	4
Oallen	42.2	12
Queanbeyan	79.1	5
Queanbeyan East	88.8	1
Queanbeyan West	58.0	2
Tarago	59.2	6
Windellama	52.8	6

Condition map



Condition trend



Valuation

WHAT THIS MEANS

WATCH

This valuation is of the 61 km loaded into the system — 3.4% of the 1,699 km register the council declares. It is not a replacement cost for the whole network.

From coverage.covers_pct in this report.

REPLACEMENT COST
\$6,772,071

WRITTEN-DOWN VALUE
\$3,574,404

AVERAGE PCI
52.7
over 55.4 km surveyed

ROAD CLASS	LENGTH (KM)	AVERAGE PCI	UNVALUED (KM)	REPLACEMENT COST	WRITTEN-DOWN VALUE
Arterial	18.1	59.9	0.0	\$3,446,114	\$2,063,225
Highway	2.2	68.9	0.0	\$480,946	\$331,373
Rural · Unsealed	40.6	48.0	5.6	\$2,845,011	\$1,179,806

5.6 km of network has no condition data and is reported as unvalued — survey it before the next revaluation.

Treatment program

WHAT THIS MEANS

WATCH

The same 8 segments (5.6 km) are absent from the 50.9 km programme below. Condition that has not been measured cannot be ranked, treated or priced, so this programme is not a whole-network cost.

From unsurveyed.length_m in this report.

PROGRAM COST
\$689,824

SEGMENTS
75

NETWORK AVG (BEFORE → AFTER)
52.7 → 77.8

By road — the approval unit

ROAD	TREATMENT	LENGTH (KM)	PCI (BEFORE → AFTER)	COST
Tarago Road	Grading / Blading · Spot Re-gravelling · Re-sheeting	8.3	50.9 → 75.8	\$38,839
Oallen Road	Grading / Blading · Spot Re-gravelling · Re-sheeting	7.3	48.4 → 76.1	\$41,181
Nerriga Road (MR92)	Grading / Blading · Spot Re-gravelling · Re-sheeting	17.5	42.5 → 77.8	\$141,897
Ellerton Drive	Crack sealing · Mill & overlay · Asphalt overlay · Reconstruction / rehabilitation	3.9	45.8 → 82.1	\$109,274
Kings Highway (Braidwood)	Crack sealing · Asphalt overlay · Reseal (sprayed seal)	1.9	66.1 → 76.4	\$23,091
Old Cooma Road	Crack sealing · Asphalt overlay · Reseal (sprayed seal)	4.6	64.9 → 75.4	\$67,622
Cooma Road	Crack sealing · Asphalt overlay · Reseal (sprayed seal) · Reconstruction / rehabilitation	6.9	54.5 → 76.0	\$265,128
Monaro Street	Crack sealing · Reseal (sprayed seal)	0.4	72.7 → 78.8	\$2,792

By treatment — the procurement unit

TREATMENT	ROADS	SEGMENTS	LENGTH (KM)	COST
Reconstruction / rehabilitation	2	3	1.3	\$178,475
Asphalt overlay	4	10	4.9	\$167,660
Re-sheeting	3	6	6.3	\$114,198
Spot Re-gravelling	3	15	15.7	\$94,485
Reseal (sprayed seal)	4	13	6.0	\$72,481
Mill & overlay	1	4	1.2	\$36,025
Crack sealing	5	13	4.4	\$13,266
Grading / Blading	3	11	11.0	\$13,234

The segment-by-segment schedule these figures are made from is in the works schedule appendix.

Data health

SURFACE	MEASURED (KM)	REGISTER (KM)	Δ	CONDITION KNOWN
Sealed	17.9	978	-960.1	100%
Unsealed	40.6	721	-680.4	86.3%
Total	61	—	—	90.8%

Register figures: QPRC Transport AMP (Sep 2025), as at 2024-06-30.

Appendix: works schedule

Every segment in the programme, in the order the model ranked them. These are the rows the programme tables above are made from; the works are approved and let by road and by treatment, not segment by segment.

RANK	ROAD	CHAINAGE (M)	TREATMENT	LENGTH (KM)	PCI (BEFORE → AFTER)	COST
1	Tarago Road · NB	8,323–9,248	Grading / Blading	0.9	59.6 → 74.6	\$1,110
2	Tarago Road · NB	3,699–4,624	Grading / Blading	0.9	59.6 → 74.6	\$1,110
3	Oallen Road · NB	7,279–8,319	Grading / Blading	1.0	59.6 → 74.6	\$1,248
4	Nerriga Road (MR92) · NB	14,232–15,328	Grading / Blading	1.1	59.6 → 74.6	\$1,314
5	Tarago Road · NB	0–925	Grading / Blading	0.9	59.6 → 74.6	\$1,110
6	Oallen Road · NB	0–1,040	Grading / Blading	1.0	59.6 → 74.6	\$1,248
7	Nerriga Road (MR92) · NB	9,852–10,947	Grading / Blading	1.1	59.6 → 74.6	\$1,314
8	Nerriga Road (MR92) · NB	4,378–5,473	Grading / Blading	1.1	59.6 → 74.6	\$1,314
9	Tarago Road · NB	5,549–6,473	Grading / Blading	0.9	59.6 → 74.6	\$1,110
10	Oallen Road · NB	3,119–4,159	Grading / Blading	1.0	59.6 → 74.6	\$1,248
11	Tarago Road · NB	1,850–2,774	Grading / Blading	0.9	59.6 → 74.6	\$1,110
12	Nerriga Road (MR92) · NB	3,284–4,378	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,568
13	Nerriga Road (MR92) · NB	8,757–9,852	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,569
14	Tarago Road · NB	7,398–8,323	Spot Re-gravelling	0.9	46.3 → 71.3	\$5,548
15	Tarago Road · NB	4,624–5,549	Spot Re-gravelling	0.9	46.3 → 71.3	\$5,549
16	Tarago Road · NB	925–1,850	Spot Re-gravelling	0.9	46.3 → 71.3	\$5,549
17	Oallen Road · NB	1,040–2,080	Spot Re-gravelling	1.0	46.3 → 71.3	\$6,239
18	Nerriga Road (MR92) · NB	0–1,094	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,567
19	Nerriga Road (MR92) · NB	1,094–2,189	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,567
20	Nerriga Road (MR92) · NB	5,473–6,568	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,569
21	Nerriga Road (MR92) · NB	12,042–13,137	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,570
22	Nerriga Road (MR92) · NB	15,328–16,423	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,571
23	Oallen Road · NB	4,159–5,199	Spot Re-gravelling	1.0	46.3 → 71.3	\$6,240
24	Oallen Road · NB	6,239–7,279	Spot Re-gravelling	1.0	46.3 → 71.3	\$6,240
25	Nerriga Road (MR92) · NB	7,663–8,757	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,569
26	Nerriga Road (MR92) · NB	13,137–14,232	Spot Re-gravelling	1.1	46.3 → 71.3	\$6,571
27	Tarago Road · NB	6,473–7,398	Re-sheeting	0.9	21.2 → 95.0	\$16,645
28	Oallen Road · NB	5,199–6,239	Re-sheeting	1.0	21.2 → 95.0	\$18,719
29	Nerriga Road (MR92) · NB	2,189–3,284	Re-sheeting	1.1	21.2 → 95.0	\$19,703
30	Nerriga Road (MR92) · NB	10,947–12,042	Re-sheeting	1.1	21.2 → 95.0	\$19,710
31	Nerriga Road (MR92) · NB	16,423–17,518	Re-sheeting	1.1	21.2 → 95.0	\$19,715
32	Nerriga Road (MR92) · NB	6,568–7,663	Re-sheeting	1.1	21.2 → 95.0	\$19,706
33	Ellerton Drive · NB	901–1,201	Crack sealing	0.3	73.1 → 78.1	\$525
34	Ellerton Drive · NB	1,501–1,801	Crack sealing	0.3	73.1 → 78.1	\$525
35	Ellerton Drive · NB	2,101–2,402	Crack sealing	0.3	73.1 → 78.1	\$525
36	Ellerton Drive · NB	300–600	Crack sealing	0.3	73.1 → 78.1	\$525
37	Ellerton Drive · SB	0–300	Mill & overlay	0.3	30.4 → 85.0	\$9,006
38	Ellerton Drive · SB	600–901	Mill & overlay	0.3	30.4 → 85.0	\$9,006
39	Ellerton Drive · SB	1,201–1,501	Mill & overlay	0.3	30.4 → 85.0	\$9,006
40	Ellerton Drive · SB	2,101–2,402	Mill & overlay	0.3	30.4 → 85.0	\$9,006

RANK	ROAD	CHAINAGE (M)	TREATMENT	LENGTH (KM)	PCI (BEFORE → AFTER)	COST
41	Kings Highway (Braidwood) · NB	820–1,093	Crack sealing	0.3	78.2 → 83.2	\$956
42	Old Cooma Road · NB	462–923	Crack sealing	0.5	79.6 → 84.6	\$1,616
43	Old Cooma Road · NB	2,308–2,770	Crack sealing	0.5	79.6 → 84.6	\$1,616
44	Cooma Road · NB	6,222–6,913	Crack sealing	0.7	79.6 → 84.6	\$2,420
45	Monaro Street · NB	147–294	Crack sealing	0.1	78.2 → 83.2	\$514
46	Monaro Street · NB	441–588	Crack sealing	0.1	78.2 → 83.2	\$514
47	Kings Highway (Braidwood) · NB	1,640–1,913	Crack sealing	0.3	78.2 → 83.2	\$956
48	Old Cooma Road · NB	4,154–4,616	Crack sealing	0.5	79.6 → 84.6	\$1,616
49	Kings Highway (Braidwood) · NB	0–273	Crack sealing	0.3	78.2 → 83.2	\$956
50	Ellerton Drive · NB	1,201–1,501	Asphalt overlay	0.3	52.2 → 75.0	\$5,704
51	Ellerton Drive · SB	1,501–1,801	Asphalt overlay	0.3	52.2 → 75.0	\$5,704
52	Ellerton Drive · SB	300–600	Asphalt overlay	0.3	52.2 → 75.0	\$5,704
53	Ellerton Drive · SB	901–1,201	Reconstruction / rehabilitation	0.3	12.1 → 95.0	\$27,018
54	Ellerton Drive · SB	1,801–2,101	Reconstruction / rehabilitation	0.3	12.1 → 95.0	\$27,018
55	Kings Highway (Braidwood) · NB	1,093–1,366	Asphalt overlay	0.3	42.9 → 75.0	\$10,384
56	Cooma Road · NB	3,457–4,148	Asphalt overlay	0.7	47.6 → 75.0	\$26,271
57	Cooma Road · NB	691–1,383	Asphalt overlay	0.7	47.6 → 75.0	\$26,271
58	Cooma Road · NB	2,074–2,765	Asphalt overlay	0.7	47.6 → 75.0	\$26,271
59	Old Cooma Road · NB	1,385–1,846	Asphalt overlay	0.5	47.6 → 75.0	\$17,540
60	Cooma Road · NB	5,531–6,222	Asphalt overlay	0.7	47.6 → 75.0	\$26,271
61	Old Cooma Road · NB	3,693–4,154	Asphalt overlay	0.5	47.6 → 75.0	\$17,540
62	Monaro Street · NB	588–735	Reseal (sprayed seal)	0.1	61.7 → 70.0	\$1,764
63	Kings Highway (Braidwood) · NB	1,366–1,640	Reseal (sprayed seal)	0.3	61.7 → 70.0	\$3,279
64	Kings Highway (Braidwood) · NB	547–820	Reseal (sprayed seal)	0.3	61.7 → 70.0	\$3,279
65	Kings Highway (Braidwood) · NB	1,913–2,186	Reseal (sprayed seal)	0.3	61.7 → 70.0	\$3,279
66	Cooma Road · NB	4,839–5,531	Reseal (sprayed seal)	0.7	63.0 → 70.0	\$8,296
67	Old Cooma Road · NB	3,231–3,693	Reseal (sprayed seal)	0.5	63.0 → 70.0	\$5,539
68	Old Cooma Road · NB	5,077–5,539	Reseal (sprayed seal)	0.5	63.0 → 70.0	\$5,539
69	Cooma Road · NB	2,765–3,457	Reseal (sprayed seal)	0.7	63.0 → 70.0	\$8,296
70	Cooma Road · NB	0–691	Reseal (sprayed seal)	0.7	63.0 → 70.0	\$8,296
71	Old Cooma Road · NB	0–462	Reseal (sprayed seal)	0.5	63.0 → 70.0	\$5,539
72	Old Cooma Road · NB	923–1,385	Reseal (sprayed seal)	0.5	63.0 → 70.0	\$5,539
73	Old Cooma Road · NB	1,846–2,308	Reseal (sprayed seal)	0.5	63.0 → 70.0	\$5,539
74	Cooma Road · NB	1,383–2,074	Reseal (sprayed seal)	0.7	63.0 → 70.0	\$8,296
75	Cooma Road · NB	4,148–4,839	Reconstruction / rehabilitation	0.7	22.9 → 95.0	\$124,439

How the numbers are made

Every threshold, rate and rule this software uses to turn a survey into a recommendation — read live from your council's own configuration, not a brochure.

Scope — what this measures, and what it does not

PaveKeep measures surface condition (PCI, distress, ride/IRI) — not structural capacity (deflection, structural number, FWD). Outputs describe the observed surface, not the pavement's remaining structural life, and imply no reconstruction or structural-design advice.

Independence

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- Where a number is modelled rather than measured, the product labels it as modelled wherever it is shown. The two are never blended into one figure.

Condition indices PLATFORM DEFAULT

- A condition index is 0–100, where 100 is a new surface. Each surface type is scored by its OWN engine and never by another surface's rules — the shared 0–100 frame is what lets a mixed network roll up into one number.

Which engine scores which surface

SURFACE	ENGINE	BASIS
Sealed (asphalt / unspecified)	ASTM PCI	ASTM D6433 deduct curves, by distress type, severity and density
Sprayed seal	Sprayed-seal index	Its own distress set and curves (a chip seal fails differently to asphalt)
Unsealed (gravel)	URCI-lineage factor rating	Weighted factor method in the ARRB / IPWEA tradition, not a deduct curve

Condition bands

BAND	INDEX RANGE
 Good	85–100
 Satisfactory	70–85
 Fair	55–70
 Poor	40–55
 Very Poor	25–40
 Failed	0–25

- A segment with no distress survey has no index. It is reported as "Not surveyed" and is never counted as either good or failed — the data-coverage map lens shows exactly how much of the network that is.
- ASTM density is an area ratio, so a sample area is needed. Where a road's carriageway width is recorded, that width is used and the score is measured against real area. Where it is not, the score falls back to an assumed 8 m sealed / 7 m unsealed width — the same convention baked into the unit-cost and valuation rates.
- LIMIT: on a road with no recorded width, a carriageway materially wider or narrower than the assumption has its distress density under- or over-stated accordingly. Recording widths fixes that, and it will CHANGE the affected scores at the next recompute — which is the correction, not a fault. Nothing changes until you supply them.

Ride quality (IRI) PLATFORM DEFAULT

- Ride roughness (IRI, m/km) is what a resident feels. It is a SEPARATE dimension from surface distress: a structurally sound road can ride badly, and a rough road can have no distress. The two are never averaged together.

Ride bands (IRI, m/km)

BAND	IRI RANGE
 Good	0–2
 Acceptable	2–4
 Poor	4–6
 Very Poor	≥ 6

Ride targets by road class

ROAD CLASS	TARGET IRI (MAX)
Highway	2.5
Arterial	3.5
Collector	4.2
Local	5
Rural	6
All other classes	5

Texture and skid safety PLATFORM DEFAULT

Texture / skid levels

MEASURE	INVESTIGATORY	INTERVENTION
Skid resistance (SFC, 0–1)	0.45	0.35
Macrotexture (MPD, mm)	0.4	0.3

- These follow the Austroads "investigatory level" concept: at or below the investigatory level a detailed study is warranted; below the intervention level it is treated as a safety deficiency that escalates the road's risk even when its condition target is met.
- LIMIT: in practice these levels are site-category dependent (geometry, speed, approach). The values above are defensible NETWORK defaults and are calibratable — they are not certified site thresholds, and this product does not certify a site.

Deterioration and forecasting

PLATFORM DEFAULT

- Forecasts are MODELLED, never measured, and are labelled as such everywhere they appear. They exist to compare options, not to promise a number.
- The projection runs year by year, so the rate follows the DECLINING condition rather than freezing at the starting band. This makes multi-year deferral estimates slightly steeper — the more honest curve.

Sealed: base decline by current condition (index points per year)

CURRENT INDEX	POINTS/YEAR
> 85	1
> 70	2
> 55	3.5
> 40	5
> 25	7
≤ 25	3

- The curve is band-shaped, NOT linear: a good road decays slowly and a poor road fast, which is the observed behaviour of a sealed pavement.
- The lowest band is deliberately slower again (3 points/year at 25 or below). A road that has already failed does not keep losing index at the same pace — there is little left to lose. It is not an error.
- Unsealed roads decline at a FLAT 8 points/year (before the traffic factor). Gravel loss genuinely does not accelerate the way asphalt failure does, so a linear rate is the correct shape here rather than a simplification.

Multipliers applied to the base rate

FACTOR	VALUE	APPLIES TO
Traffic < 500 AADT	× 0.7	All surfaces
Traffic < 2,000 AADT	× 1	All surfaces
Traffic < 10,000 AADT	× 1.3	All surfaces
Traffic ≥ 10,000 AADT	× 1.6	All surfaces
Heavy vehicles (ESAL)	reference 10% heavy, sensitivity 0.6, clamped 0.7–1.8	Sealed only
Urban context	× 1.15	Utility cuts, channelised loading, kerb moisture
Rural context	× 1	Reference case
Within a treatment's service life	× 0.5	Decline damped after works

The heavy-vehicle factor, worked out (sealed roads only)

HEAVY-VEHICLE SHARE	DECLINE RATE ×	
0%	× 0.7	floor — a very light network still ages
5%	× 0.7	floor — a very light network still ages
10%	× 1	reference — the share the base rates assume
15%	× 1.3	
20%	× 1.6	
30%	× 1.8	cap — a freight route deteriorates faster, but bounded
Not recorded	× 1	not recorded — the rate is left unchanged, never assumed

- Heavy vehicles get their own factor because pavement damage scales roughly with the fourth power of axle load (the AASHO generalised fourth-power law), so axle mix matters more than raw vehicle counts.

- It is applied to SEALED roads only. Gravel loss is not axle-load-driven, so carrying an ESAL term on an unsealed road would attribute the wrong physics to the right observation. Unsealed decline is a flat annual rate scaled by the traffic factor above; climate is NOT yet an input to either surface — see the next table.

What this model does NOT use (yet)

COVARIATE	STATUS
Climate (rainfall, temperature, frost, UV)	Designed, not consumed
Subgrade / geology	Designed, not consumed
Pavement structure and construction year	Designed, not consumed
Contractor / workmanship	Designed as an observed effect, not an input
Structural capacity (deflection, FWD)	Out of scope — see the scope statement

- LIMIT — the most important sentence in this section: the shipped model is a defensible DEFAULT, not a model fitted to your network. It uses only inputs we can explain to an auditor on day one. It becomes calibrated to your roads as your own survey history deepens, because every survey cycle adds to the condition record the model can be fitted against.

Treatment recommendations and costs PLATFORM DEFAULT

Condition → recommended treatment

INDEX RANGE	TREATMENT	UNIT COST (\$/M)	DESIGN LIFE (YR)
85–100	Do nothing	0	0
70–85	Crack sealing	3.5	4
55–70	Reseal (sprayed seal)	12	12
40–55	Asphalt overlay	38	15
25–40	Mill & overlay	60	18
0–25	Reconstruction / rehabilitation	180	30

Distress overrides (sealed roads only)

WHEN	THE RECOMMENDATION IS RAISED TO
Any pothole recorded	At least Asphalt overlay
More than 5 alligator-cracking records	At least Mill & overlay
More than 3 rutting records	At least Mill & overlay

- Overrides only ever RAISE a recommendation, never lower one, and only where the index alone would have under-called an observed defect.
- They apply to sealed roads only — the rules reference asphalt distress codes and asphalt treatments. Unsealed and sprayed-seal roads use their own matrices.
- Costs are annualised over design life as well as shown upfront, so a cheap short-life treatment and an expensive durable one compare on the same basis.
- Whose numbers these are, half by half. The condition → treatment RANGES: the platform default matrix. The UNIT COSTS: Australian-localised platform defaults — nobody has entered your rates yet.
- Defaults are starting points and are meant to be replaced. Enter your schedule of rates under Configuration → Unit costs and every dollar figure the product reports will use it. Until then, treat costs here as indicative and check them before they reach a budget paper.

Programme priority — what gets done first PLATFORM DEFAULT

- When work costs more than the budget, something has to go first. Priority is a single 0–100 score per segment — higher means sooner — and it is what every budget scenario ranks on.
- Four factors, each first reduced to a 0–1 score, then combined at the weights you choose for that scenario.

The four factors

FACTOR	HOW IT BECOMES A 0–1 SCORE	WHEN THE VALUE IS UNKNOWN
Condition	$(100 - \text{condition index}) \div 100$ — a worse road scores higher	Scores 0.5 (mid)
Traffic (AADT)	$\log_{10}(\text{AADT}) \div 5$, capped at 1.0 — so 100,000 AADT reaches 1.0 and each tenfold increase adds 0.2	Scores 0.0
Road class	A fixed table — see below	Scores 0.4
Movement & Place	A fixed table — see below. Counted ONLY if you give it a weight	Scores 0.4

Road-class scores

ROAD CLASS	SCORE
Arterial (also principal / major arterial)	1
Collector (also minor arterial)	0.6
Local / residential	0.3
Any other or unrecognised class	0.4

Movement & Place scores (used only when weighted)

ENVIRONMENT	SCORE
Civic space	1
Main street	0.8
Local street	0.5
Main road	0.2
Unclassified / any other	0.4

- The score is the weighted sum divided by the sum of the weights, times 100. Dividing by the weight total is what keeps the result on a 0–100 scale — so your weights do not have to add up to anything in particular, and turning Movement & Place on does not deflate every other road's score.
- The weights are yours and are set per scenario, not by us; the builder starts at Condition 50 / Traffic 30 / Road class 20 with Movement & Place off.
- All three scenario strategies use THIS SAME formula — none of them introduces a different measure. Worst-first ranks by the score on your weights; cost-effective by that score ÷ the treatment cost; traffic-weighted by the same score re-weighted so traffic dominates, with your remaining factors held in the proportions you set them. Traffic is counted once, at a bigger weight — not added twice.
- How dominant is your choice, set per scenario ("Traffic share" in the builder). A scenario that does not set one uses 60%. How much traffic ought to outweigh condition is a judgement about your network and your programme, so it is not ours to fix.
- LIMIT — an uncounted road is ranked as though it carried no traffic. That is a real bias, not a rounding detail: on a network where only the main roads have AADT, every uncounted road loses the whole traffic component of its score. If your traffic data is partial, weight traffic low until it is not.
- LIMIT — an unsurveyed segment scores 0.5 for condition: neither ignored nor pushed to the front. It is the honest choice (unknown is not the same as good), but it means a largely unsurveyed network is ranked mostly on traffic and class. The data-coverage map lens shows how much of your network that is.

- LIMIT — the traffic-weighted strategy is only as good as your traffic data. It raises traffic to the dominant weight, so on a network where AADT is missing or partial it promotes the roads that happen to have been counted, and every uncounted road sinks (see the bias above). Where traffic coverage is thin, prefer worst-first.
- LIMIT — "cost-effective" here means priority points per dollar. It is NOT the same quantity as the treatment report's "efficiency" objective, which ranks on network-average condition gained per dollar. Two reasonable readings of one word; they are different calculations and can order the same work differently.

Levels of service and risk PLATFORM DEFAULT

Level-of-service targets by road class

ROAD CLASS	DESIRABLE	TARGET	INTERVENTION	CONSEQUENCE WEIGHT
Highway	80	65	55	3
Arterial	75	60	50	3
Collector	70	55	45	2
Local	60	45	35	1
Rural	55	40	30	1
Any other class	60	45	35	1

- Risk is condition-likelihood × class-consequence, so the same index on a highway and on a rural lane are not the same problem.
- Urban roads are held to a target 5 points higher and rural roads 5 points lower than their class default, reflecting exposure rather than engineering importance.
- A safety deficiency escalates a road's risk even where its condition target is met, so a polished but otherwise sound road cannot sit quietly at "do nothing".

Valuation inputs **YOUR COUNCIL'S SETTING**

Valuation assumptions

ASSUMPTION	VALUE
Useful life	60 years
Replacement rate — Highway	\$220 / linear m
Replacement rate — Arterial	\$190 / linear m
Replacement rate — Collector	\$150 / linear m
Replacement rate — Local	\$120 / linear m
Replacement rate — Rural	\$95 / linear m
Replacement rate — any other class	\$120 / linear m

- Depreciation is straight-line against useful life; remaining useful life is scaled by observed condition, so a surveyed road's written-down value reflects what was actually seen rather than age alone.
- Consumption is calculated over the SURVEYED portion only, and unvalued length is reported with a warning rather than averaged away. A council should never discover after the fact that a total quietly assumed a condition for roads nobody looked at.
- Roads with no constructed pavement — naturally formed, unformed or unmaintained surfaces — are MAINTAINED but not RENEWED: grading one consumes nothing there is a plan to replace. They carry no replacement cost here, exactly as they sit outside a renewal register, and their length is reported separately rather than dropped. Everything else, including any road whose surface is unclassified, is valued.
- Ownership is recorded on every road and the valuation pack SPLITS gross and written-down value by custody, so state, regional and unclassified roads are visible as their own lines rather than absorbed into one total. The split is deliberate: which of those lines your council carries on its balance sheet is your accounting judgement, not ours to assume.
- LIMIT: these are valuation INPUTS prepared for your finance team and auditor. They are not an independent valuation and this product does not sign one.

Forecast uncertainty **PLATFORM DEFAULT**

Survey quality → starting-condition uncertainty (index points)

INFORMATION QUALITY LEVEL	UNCERTAINTY
IQL-1 — calibrated instrument	± 2
IQL-2 — detailed survey	± 4
IQL-3 — network rating	± 8
IQL-4 — basic inspection	± 12
IQL-5 — estimated	± 18

- A projection is a central estimate, not a measurement. Every forecast this product draws carries a band, and the band is part of the number: reporting "average condition 61 in five years" without one claims a precision nobody has.
- Half-width = starting-condition uncertainty + 3 points per $\sqrt{\text{year}}$ of horizon. The first term comes from the survey's Information Quality Level and does not grow — a ± 8 -point rating is ± 8 in year one and ± 8 in year five. The second is the deterioration model's own error, which compounds; $\sqrt{\text{year}}$ rather than year because successive years' errors partly cancel. Both are conventions in the IIMM / Austroads range, not measured tolerances.
- Where a survey records NO quality level, the starting-condition term is omitted rather than assumed, and every band built from it says so. An assumed middle level would invent exactly the number this exists to stop inventing.
- Cost projections are NOT banded. Their uncertainty is dominated by unit rates rather than by condition, and putting a tolerance on a dollar figure we have not measured would be the same over-claim in a different column.
- ON THIS NETWORK: starting-condition uncertainty is ± 4 points, length-weighted across the 100% of surveyed length that records a level.

Evidence and change control

PLATFORM DEFAULT

- Surveys APPEND. Importing a new survey never overwrites an earlier one; each becomes a dated run, and the condition shown is the latest active run.
- A survey can be VOIDED but not deleted. Voiding retracts the scores derived from it and is itself recorded, so a number can never change without a trace of why.
- Every index links back to the run that produced it, and the network can be shown as it stood on any past date — which is the question an auditor asks at 30 June.
- Modelled figures — forecasts and simulated treatment effects — are stored and shown distinctly from surveyed ones, and are excluded from valuation.
- Each survey can record an Information Quality Level — how the observation was obtained, from a calibrated instrument run down to an age-based estimate. A cab-rated score and an instrumented survey are then never treated as equally certain in a forecast; where no level is recorded, the forecast says so rather than assuming one.