

11.2 Dust Sealing Analysis.DOC

Table A1: Unsealed road assessments for dust sealing treatment (using World Bank Model) –Physical Factors

Item	Road	Suburb	Length	Physical Factors		
				Topography	Climate and Soil Conditions	Impact on Surrounding Segments
1	Converys Lane (10:080)	RURAL -McLeans Ridge	519	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
2	Scanlon Lane (10:036)	RURAL -Knockrow	670	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
3	Houghlahans Creek Road (10:170)	RURAL -Pearces Creek	2491	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	5: Proposed Seal Removes Unsealed Gap in Existing
4	Ingrams Road (10:056)	RURAL -Teven	701	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
5	Leadbeatters Lane (10:072)	RURAL -Tuckombil	1341	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
6	Whites Lane (10:096)	RURAL -Rous	2368	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
7	Rishworths Lane (10:014)	RURAL -Brooklet	988	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
8	Shaws Lane (10:069)	RURAL -Tuckombil	780	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
9	Laws Lane (10:107)	RURAL -Rous Mill	537	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
10	Grays Lane (10:094)	RURAL -Lynwood	340	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
11	Alstonvale Road (10:076)	RURAL -Alstonvale	572	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
12	Chesworths Lane (10:099)	RURAL -Rous	1436	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
13	Weis Lane (10:097)	RURAL -Rous	848	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
14	Phillips Road (10:007)	RURAL -Newrybar	1019	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
15	Cumbalum Road (10:041)	RURAL -Cumbalum	1726	0: Flat or Undulating area (< 4%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
16	Martins Lane -east (10:023)	RURAL -Knockrow	1108	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
17	Howards Road (10:070)	RURAL -Tuckombil	1368	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
18	Sandy Flat Road (10:046)	RURAL -Tintenbar	2004	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
19	Eyears Road (10:078)	RURAL -McLeans Ridge	844	0: Flat or Undulating area (< 4%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
20	Fosters Lane (10:115)	RURAL -Dalwood	595	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
21	Behs Lane (10:091)	RURAL -Lynwood	543	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
22	Victoria Park Road (10:051)	RURAL -Dalwood	806	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
23	Gap Road (10:102)	RURAL -Tuckombil	2591	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
24	Newports Lane (10:088)	RURAL -Uralba	752	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
25	UNL off Pacific Parade to Camp Drew (30:014)	RURAL -Lennox Head	1609	0: Flat or Undulating area (< 4%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
26	Hill Street (10:045)	RURAL -Tintenbar	500	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
27	Coolgardie Road (10:149)	RURAL -Coolgardie	2391	4: Hilly to Mountainous area (8 - 14%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
28	O'Keefes Lane (10:151)	RURAL -Patches Beach	350	0: Flat or Undulating area (< 4%)	0: Soils suitable for weather & traffic	3: Proposed Seal will be encompass > 50% of unsealed length
3A	Houghlahans Creek Road (10:170:080)	RURAL -Pearces Creek	296	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	5: Proposed Seal Removes Unsealed Gap in Existing
3B	Houghlahans Creek Road (10:170:130)	RURAL -Pearces Creek	330	2: Undulating to Hilly area (4 - 8%)	0: Soils suitable for weather & traffic	5: Proposed Seal Removes Unsealed Gap in Existing

11.2 Dust Sealing Analysis.DOC

Table A2: Unsealed road assessments for dust sealing treatment (using World Bank Model) –Socio-Economic Factors

Item	Road	Suburb	Length	Socio-Economic Factors				
				Non Motorised Traffic Demand for Surfacing	Motorised Traffic Volume	Impact of Dust Forming	Traffic Increase After Sealing	Availability of Quality Material for Unsealed Overlays
1	Converys Lane (10:080)	RURAL -McLeans Ridge	519	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
2	Scanlon Lane (10:036)	RURAL -Knockrow	670	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
3	Houghlahans Creek Road (10:170)	RURAL -Pearces Creek	2491	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	5: Severe	3: Some	0: Available and short hauling distance
4	Ingrams Road (10:056)	RURAL -Teven	701	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
5	Leadbeatters Lane (10:072)	RURAL -Tuckombil	1341	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
6	Whites Lane (10:096)	RURAL -Rous	2368	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
7	Rishworths Lane (10:014)	RURAL -Brooklet	988	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
8	Shaws Lane (10:069)	RURAL -Tuckombil	780	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
9	Laws Lane (10:107)	RURAL -Rous Mill	537	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
10	Grays Lane (10:094)	RURAL -Lynwood	340	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
11	Alstonvale Road (10:076)	RURAL -Alstonvale	572	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
12	Chesworths Lane (10:099)	RURAL -Rous	1436	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
13	Weis Lane (10:097)	RURAL -Rous	848	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
14	Phillips Road (10:007)	RURAL -Newrybar	1019	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
15	Cumbalum Road (10:041)	RURAL -Cumbalum	1726	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
16	Martins Lane -east (10:023)	RURAL -Knockrow	1108	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
17	Howards Road (10:070)	RURAL -Tuckombil	1368	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
18	Sandy Flat Road (10:046)	RURAL -Tintenbar	2004	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
19	Eyears Road (10:078)	RURAL -McLeans Ridge	844	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
20	Fosters Lane (10:115)	RURAL -Dalwood	595	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
21	Behs Lane (10:091)	RURAL -Lynwood	543	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
22	Victoria Park Road (10:051)	RURAL -Dalwood	806	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
23	Gap Road (10:102)	RURAL -Tuckombil	2591	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
24	Newports Lane (10:088)	RURAL -Uralba	752	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
25	UNL off Pacific Parade to Camp Drew (30:014)	RURAL -Lennox Head	1609	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
26	Hill Street (10:045)	RURAL -Tintenbar	500	1: Animal or NMT with low volume (NMT < 50 per day)	1: Low Traffic (ADT < 50 per day)	3: Medium	1: Unlikely	0: Available and short hauling distance
27	Coolgardie Road (10:149)	RURAL -Coolgardie	2391	1: Animal or NMT with low volume (NMT < 50 per day)	5: High Traffic (ADT > 200 per day)	5: Severe	3: Some	3: Available but distance > 10km
28	O'Keefes Lane (10:151)	RURAL -Patches Beach	350	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	3: Medium	1: Unlikely	3: Available but distance > 10km
3A	Houghlahans Creek Road (10:170:080)	RURAL -Pearces Creek	296	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	5: Severe	3: Some	0: Available and short hauling distance
3B	Houghlahans Creek Road (10:170:130)	RURAL -Pearces Creek	330	1: Animal or NMT with low volume (NMT < 50 per day)	3: Medium Traffic (50 < ADT < 200 per day)	5: Severe	3: Some	0: Available and short hauling distance

11.2 Dust Sealing Analysis.DOC

Table A3: Unsealed road assessments for dust sealing treatment (using World Bank Model) –Socio-Economic Factors

Item	Road	Suburb	Length	TOTAL	TOTAL (weighted)	RANKING	Stable Funding Regime Rating
1	Converys Lane (10:080)	RURAL -McLeans Ridge	519	16	2	7	consider
2	Scanlon Lane (10:036)	RURAL -Knockrow	670	16	2	7	consider
3	Houghlahans Creek Road (10:170)	RURAL -Pearces Creek	2491	21	2.625	2	consider
4	Ingrams Road (10:056)	RURAL -Teven	701	11	1.375	29	-
5	Leadbeatters Lane (10:072)	RURAL -Tuckombil	1341	15	1.875	17	consider
6	Whites Lane (10:096)	RURAL -Rous	2368	16	2	7	consider
7	Rishworths Lane (10:014)	RURAL -Brooklet	988	16	2	7	consider
8	Shaws Lane (10:069)	RURAL -Tuckombil	780	15	1.875	17	consider
9	Laws Lane (10:107)	RURAL -Rous Mill	537	16	2	7	consider
10	Grays Lane (10:094)	RURAL -Lynwood	340	14	1.75	20	consider
11	Alstonvale Road (10:076)	RURAL -Alstonvale	572	16	2	7	consider
12	Chesworths Lane (10:099)	RURAL -Rous	1436	16	2	7	consider
13	Weis Lane (10:097)	RURAL -Rous	848	16	2	7	consider
14	Phillips Road (10:007)	RURAL -Newrybar	1019	18	2.25	5	consider
15	Cumbalum Road (10:041)	RURAL -Cumbalum	1726	14	1.75	20	consider
16	Martins Lane -east (10:023)	RURAL -Knockrow	1108	18	2.25	5	consider
17	Howards Road (10:070)	RURAL -Tuckombil	1368	13	1.625	26	-
18	Sandy Flat Road (10:046)	RURAL -Tintenbar	2004	11	1.375	29	-
19	Eyears Road (10:078)	RURAL -McLeans Ridge	844	12	1.5	28	-
20	Fosters Lane (10:115)	RURAL -Dalwood	595	16	2	7	consider
21	Behs Lane (10:091)	RURAL -Lynwood	543	16	2	7	consider
22	Victoria Park Road (10:051)	RURAL -Dalwood	806	14	1.75	20	consider
23	Gap Road (10:102)	RURAL -Tuckombil	2591	15	1.875	17	consider
24	Newports Lane (10:088)	RURAL -Uralba	752	14	1.75	20	consider
25	UNL off Pacific Parade to Camp Drew (30:014)	RURAL -Lennox Head	1609	14	1.75	20	consider
26	Hill Street (10:045)	RURAL -Tintenbar	500	13	1.625	26	-
27	Coolgardie Road (10:149)	RURAL -Coolgardie	2391	24	3	1	consider
28	O'Keefes Lane (10:151)	RURAL -Patches Beach	350	14	1.75	20	consider
3A	Houghlahans Creek Road (10:170:080)	RURAL -Pearces Creek	296	19	2.375	3	consider
3B	Houghlahans Creek Road (10:170:130)	RURAL -Pearces Creek	330	19	2.375	3	consider

Long-Term Effects of Transferring Funds for Dust Sealing

This section shall summarise the effects on network health in terms of roughness if we transfer a series of dollar amounts from existing budgets to a dust sealing program that will continue for the life of the analysis (40 years)

Five analyses shall be performed for 5 budget amounts will be transferred,

- Budget A: \$0 pa (no money transferred to dust seal program)
- Budget B: \$200,000 pa
- Budget C: \$300,000 pa
- Budget D: \$400,000 pa
 - Budget E: \$500,000 pa

Figure A: All network roughness profiles given NO transfer of capital budget to dust sealing program -A

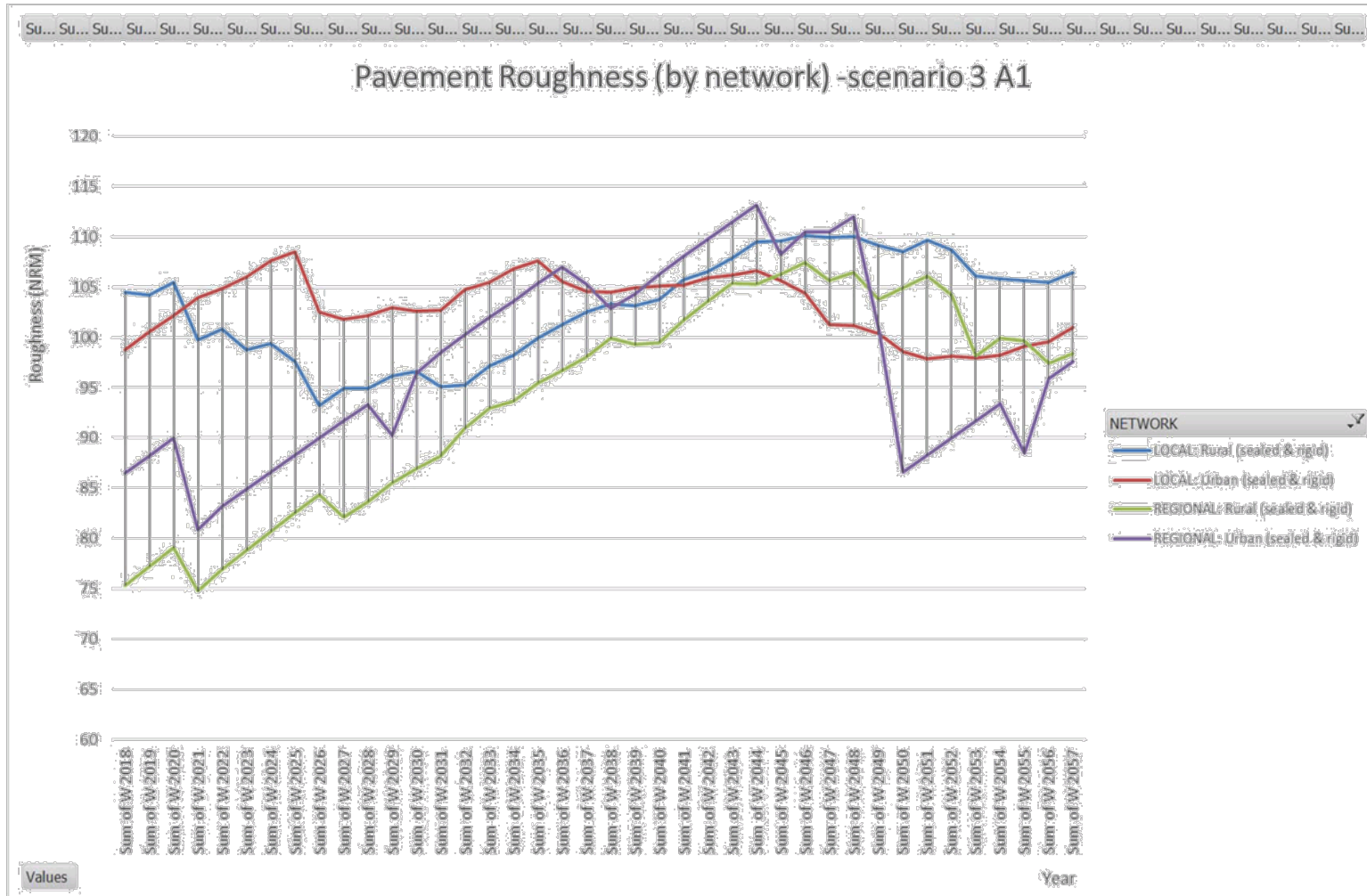


Figure B: Combined network roughness profiles given NO transfer of capital budget for dust sealing -A

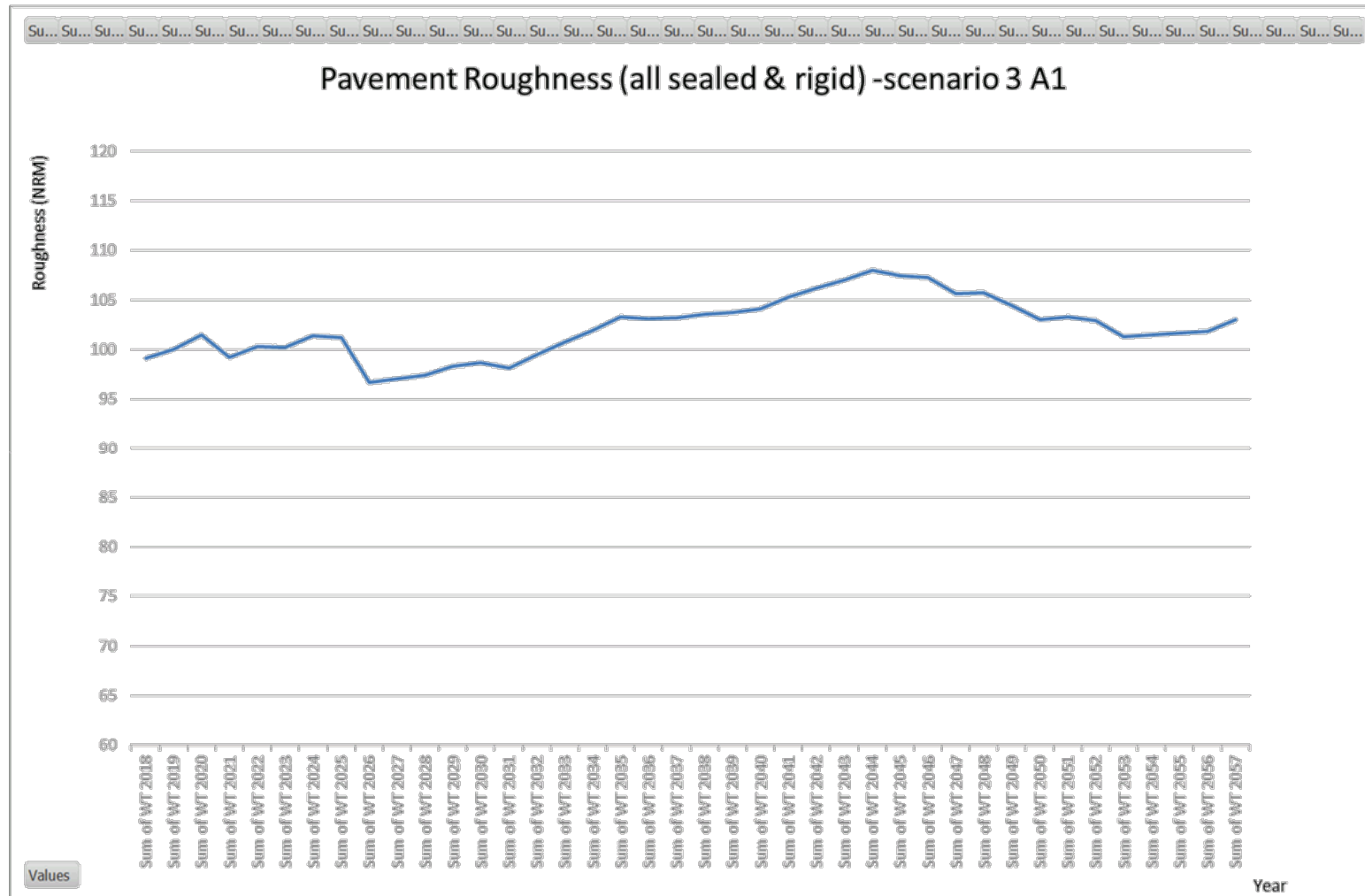


Figure C: Budget Profile -A

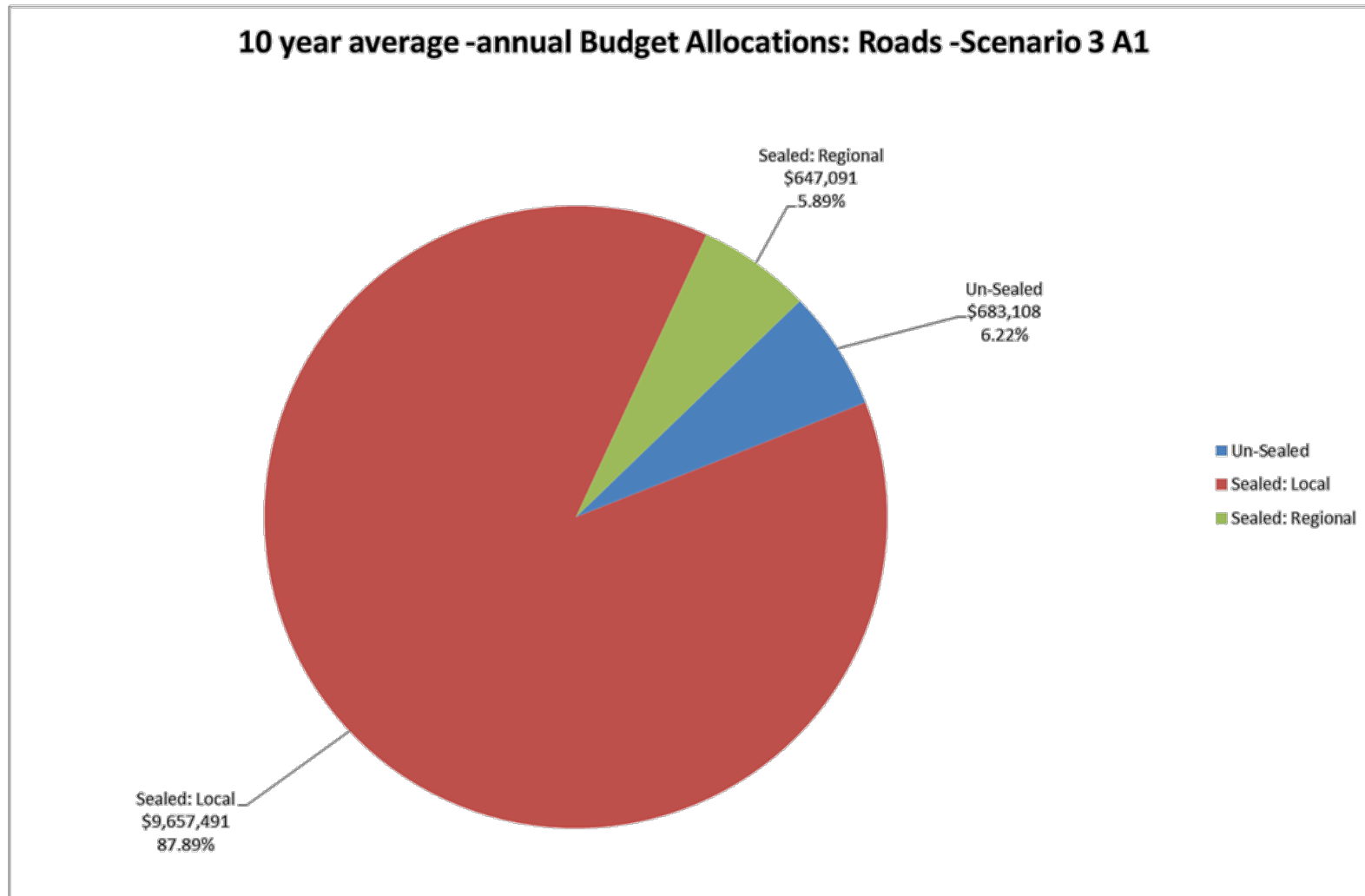


Figure D: All network roughness profiles given \$200K transfer of capital budget to dust sealing program -B

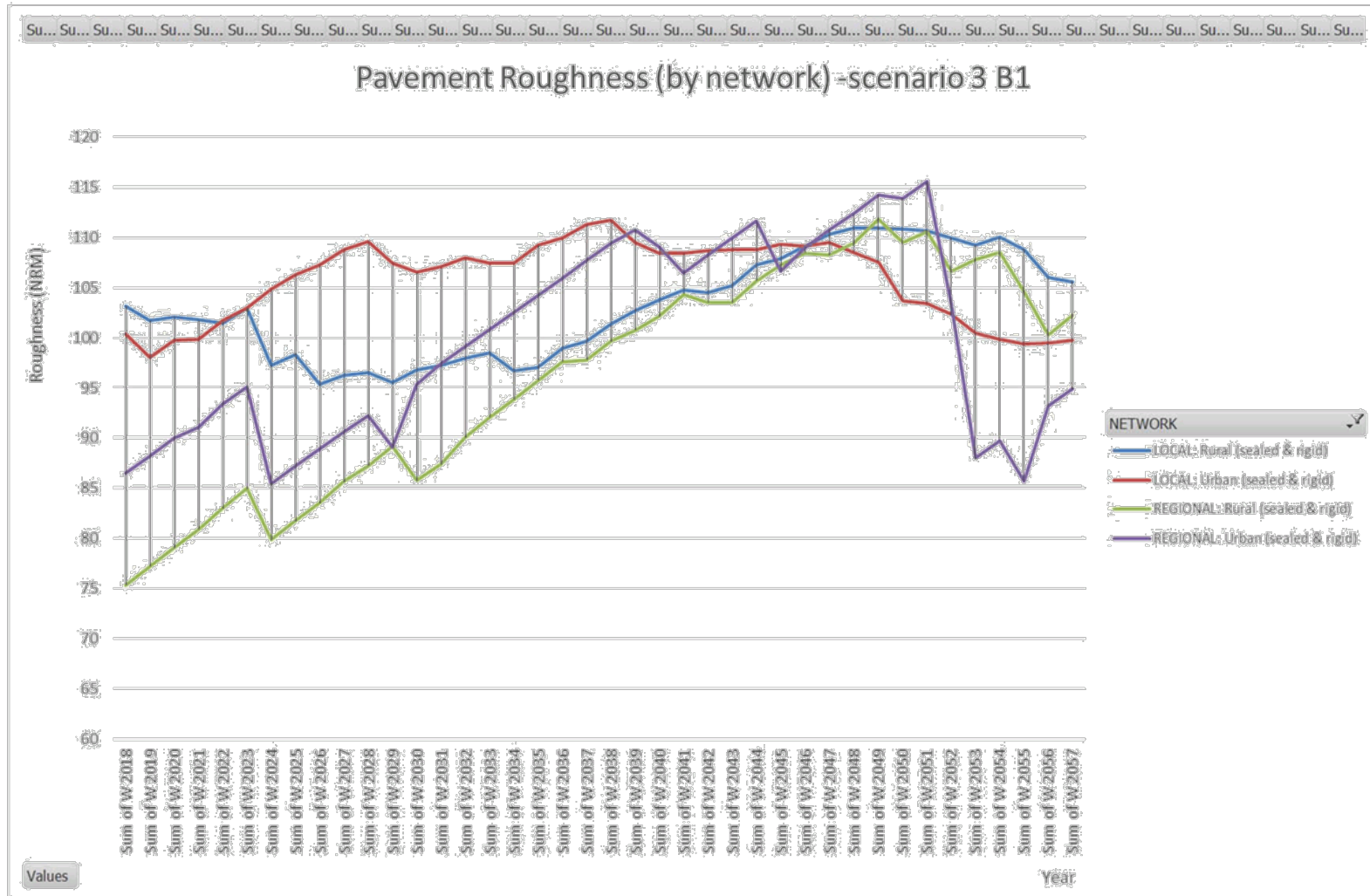


Figure E: Combined network roughness profiles given \$200K transfer of capital budget for dust sealing -B

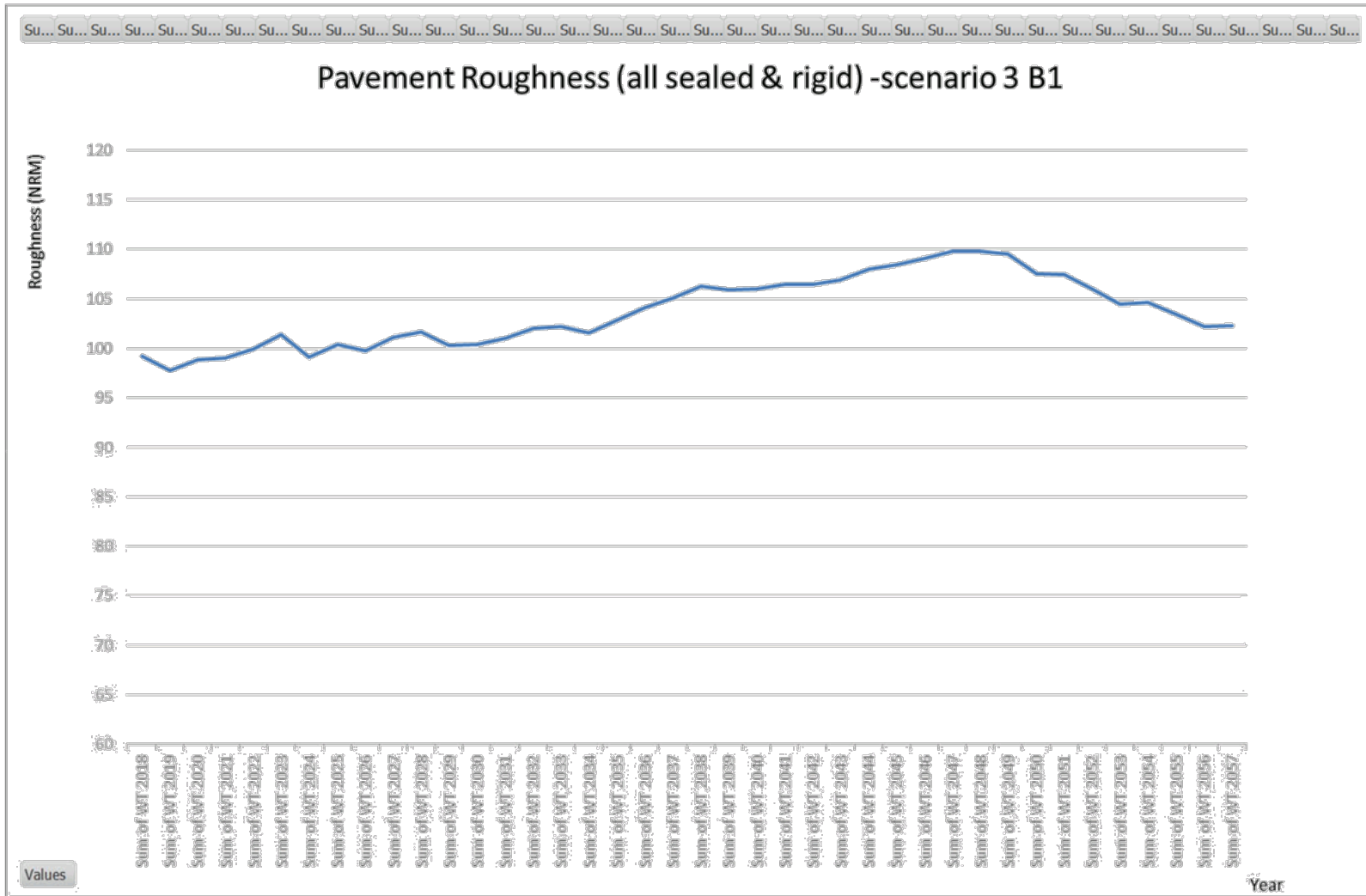


Figure F: Budget Profile -B

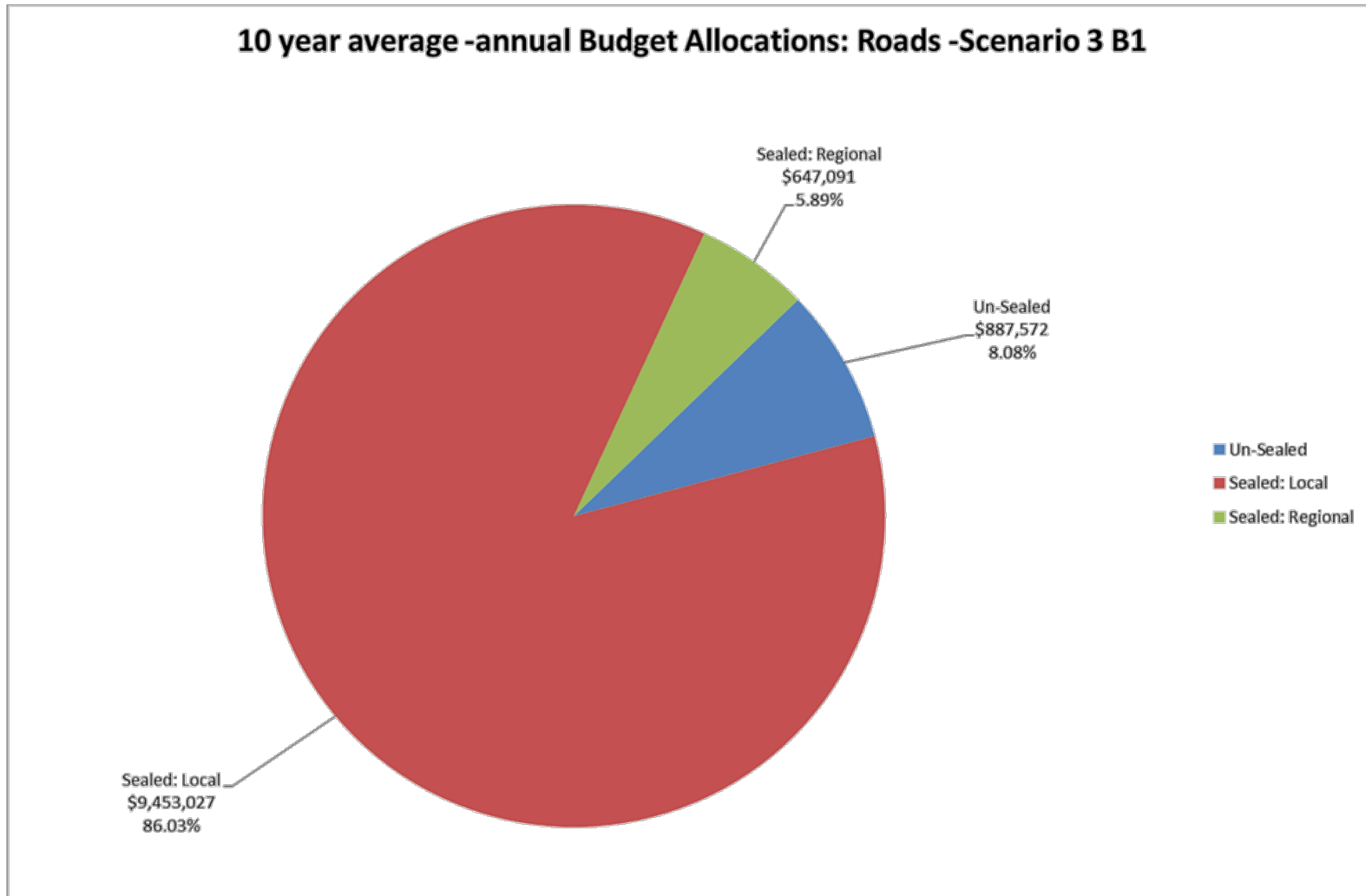


Figure G: All network roughness profiles given \$300K transfer of capital budget to dust sealing program -C

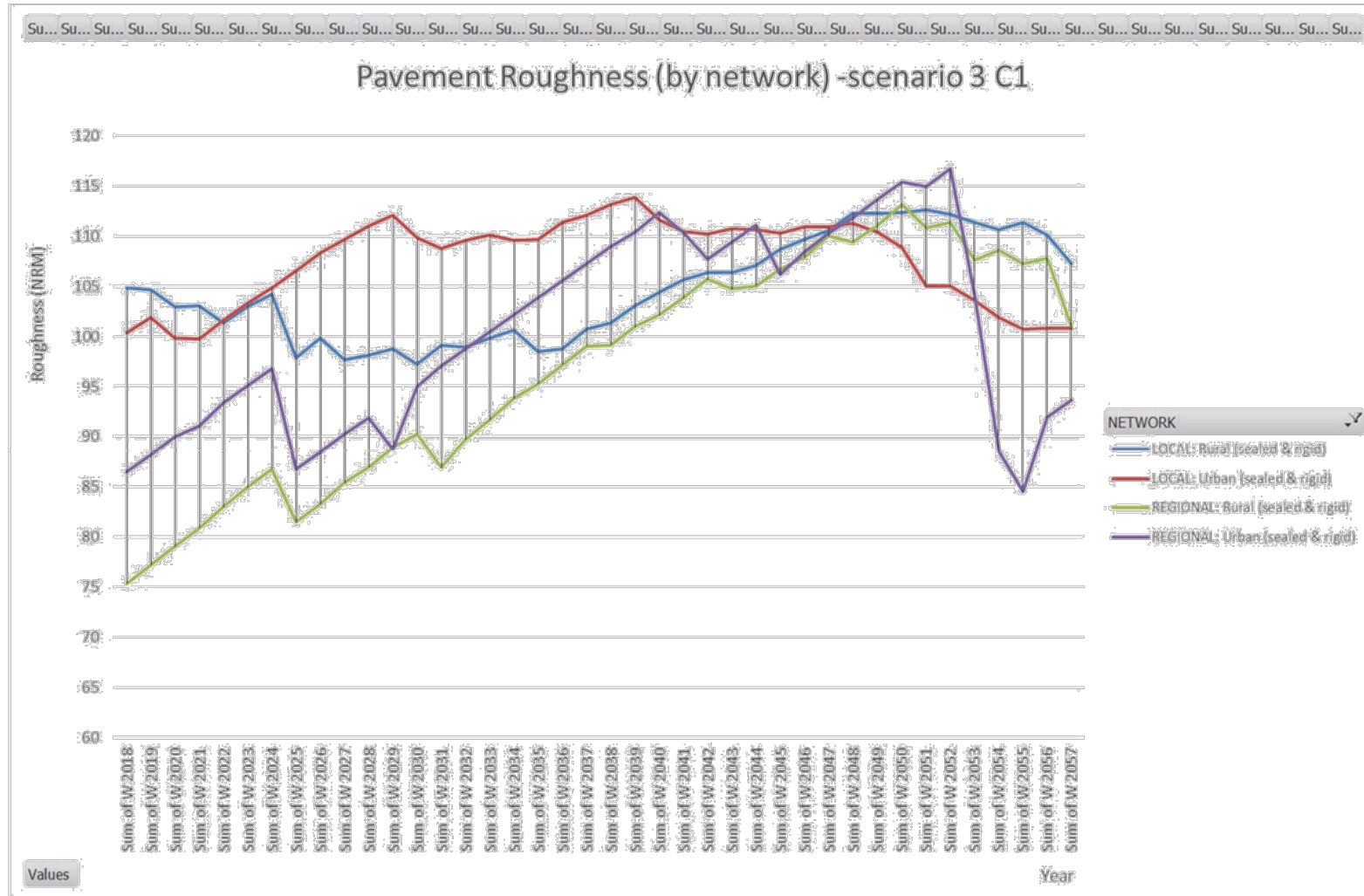


Figure H: Combined network roughness profiles given \$300K transfer of capital budget for dust sealing -C

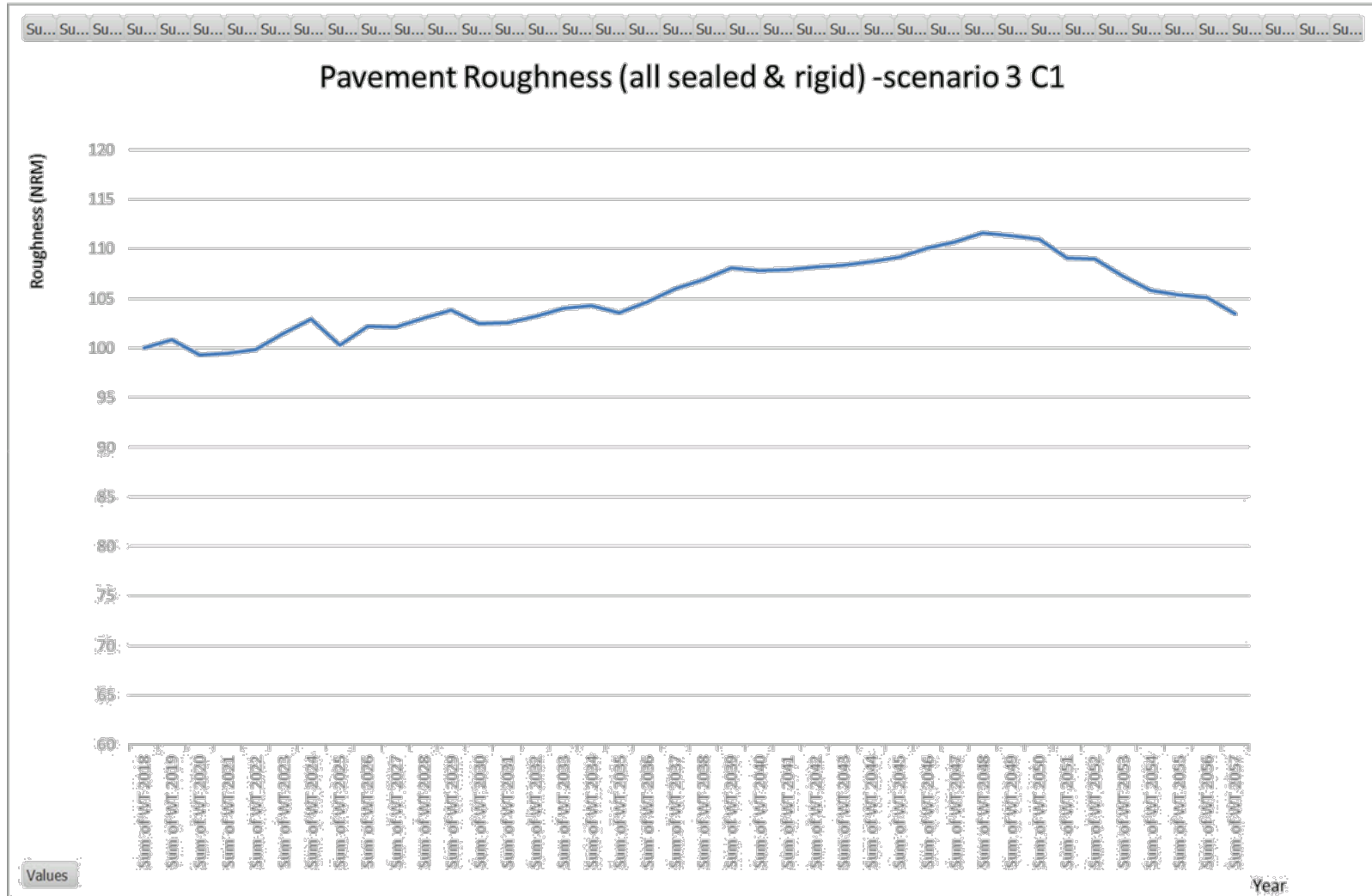


Figure I: Budget Profile -C

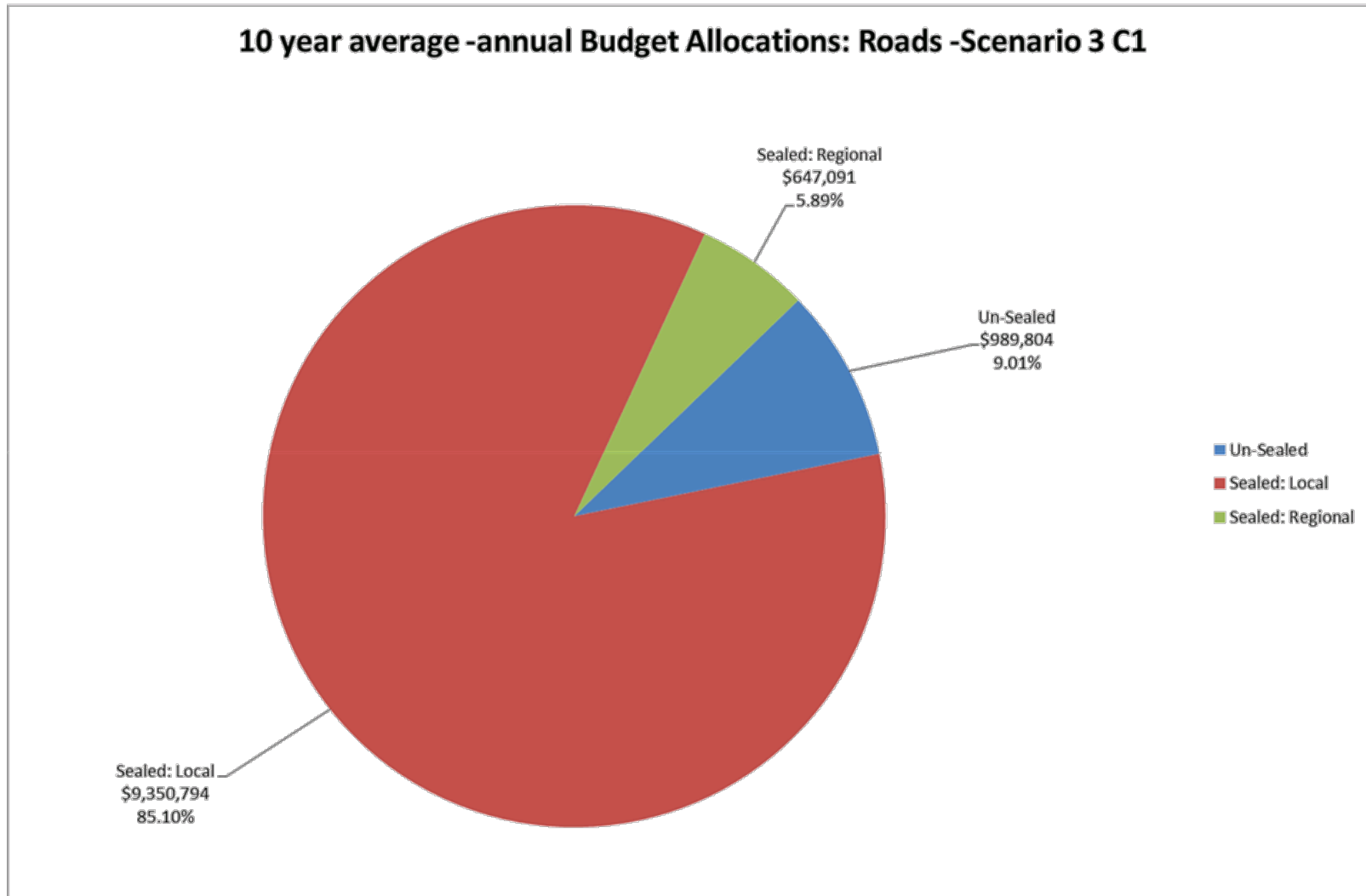


Figure J: All network roughness profiles given \$400K transfer of capital budget to dust sealing program -D

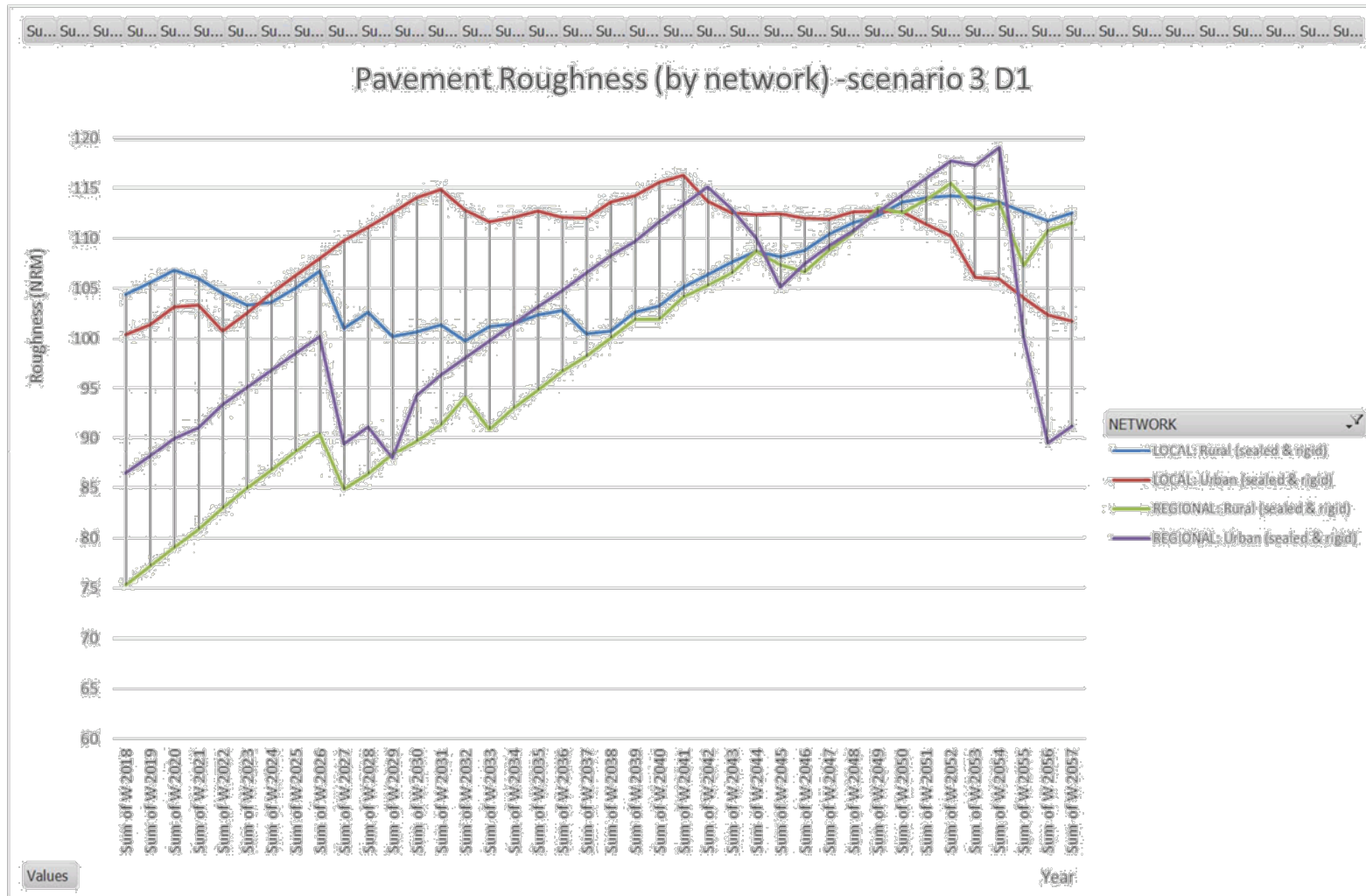


Figure K: Combined network roughness profiles given \$400K transfer of capital budget for dust sealing –D

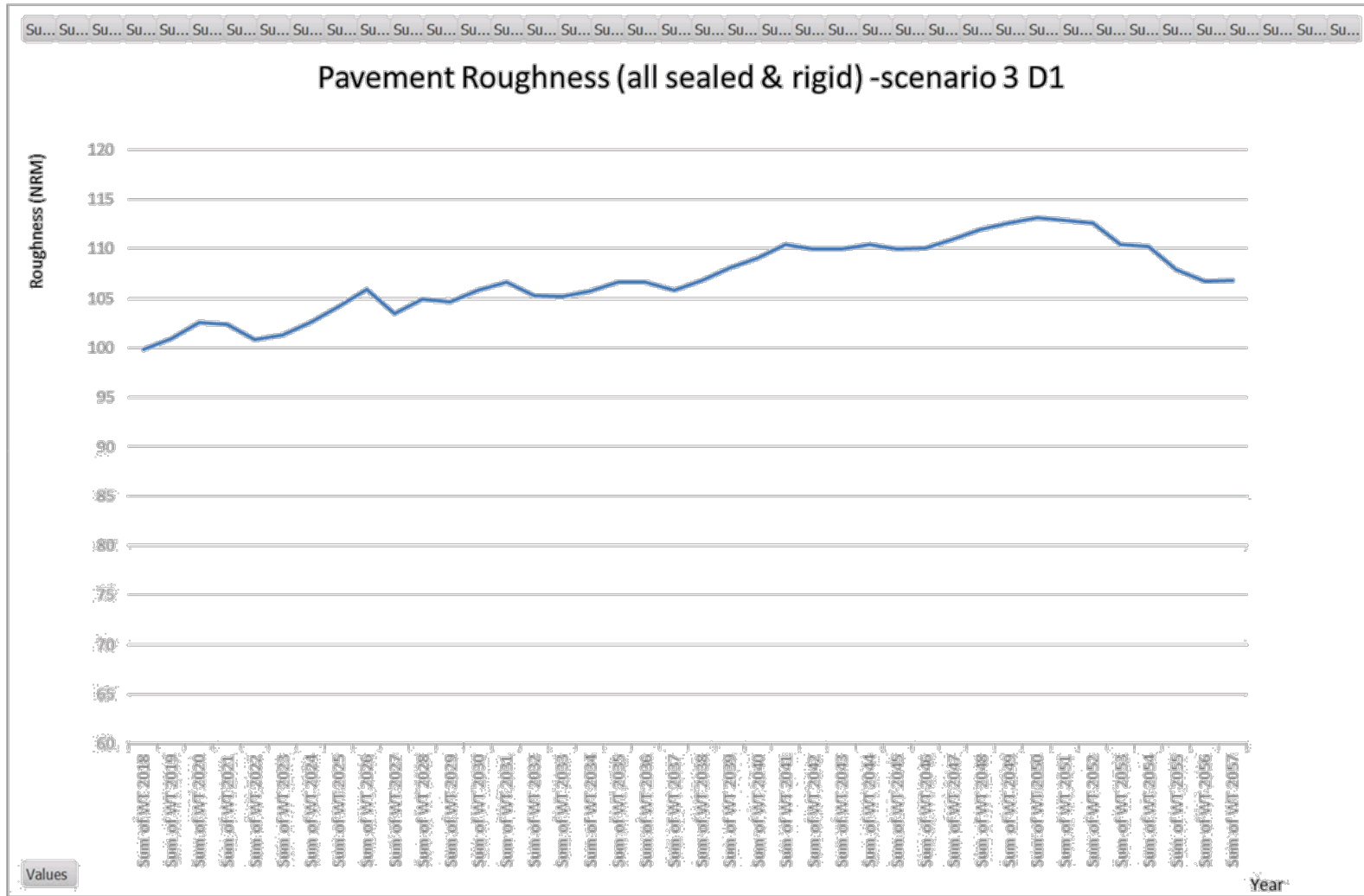


Figure L: Budget Profile –D

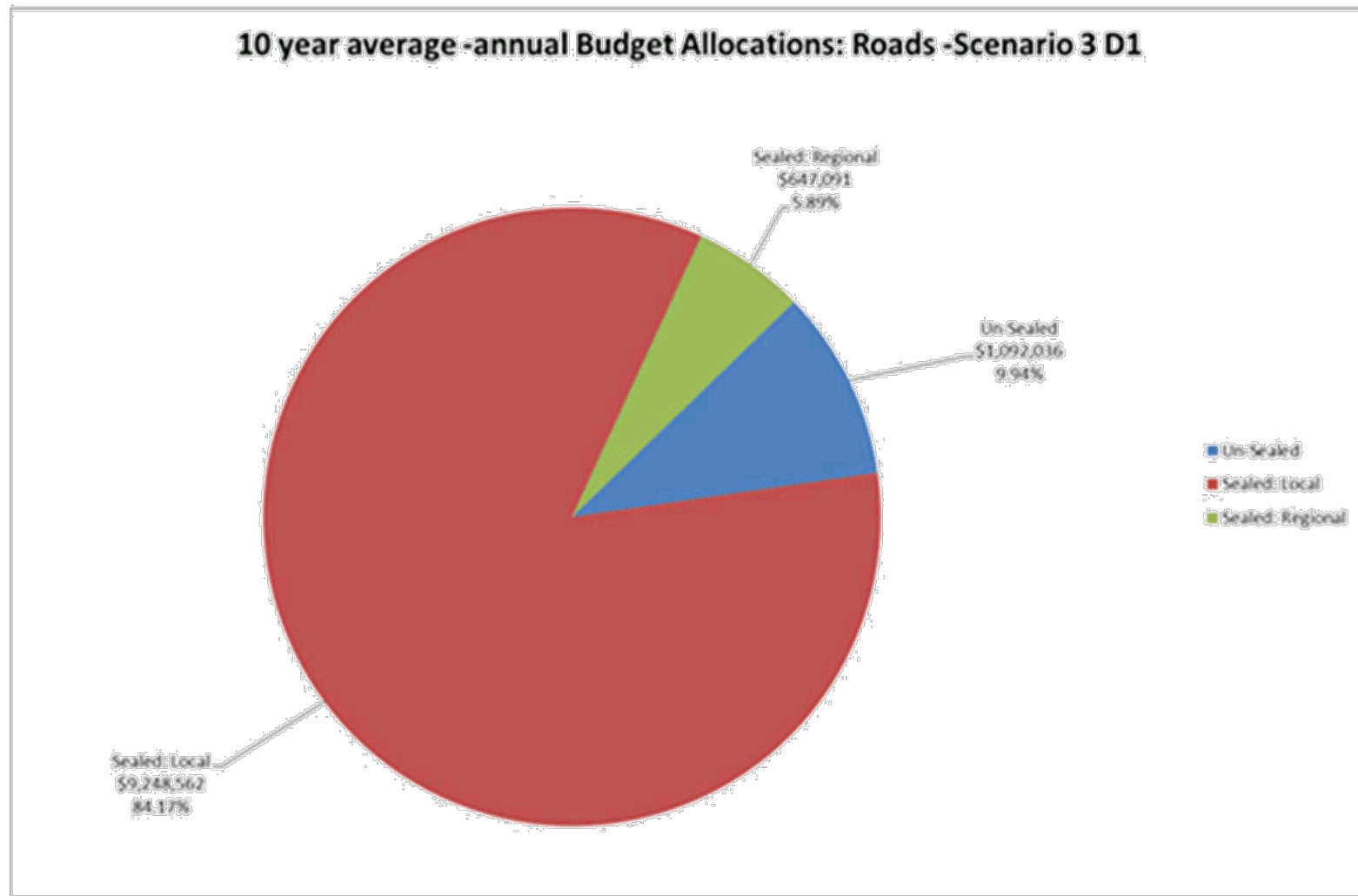


Figure M: All network roughness profiles given \$500K transfer of capital budget to dust sealing program - E

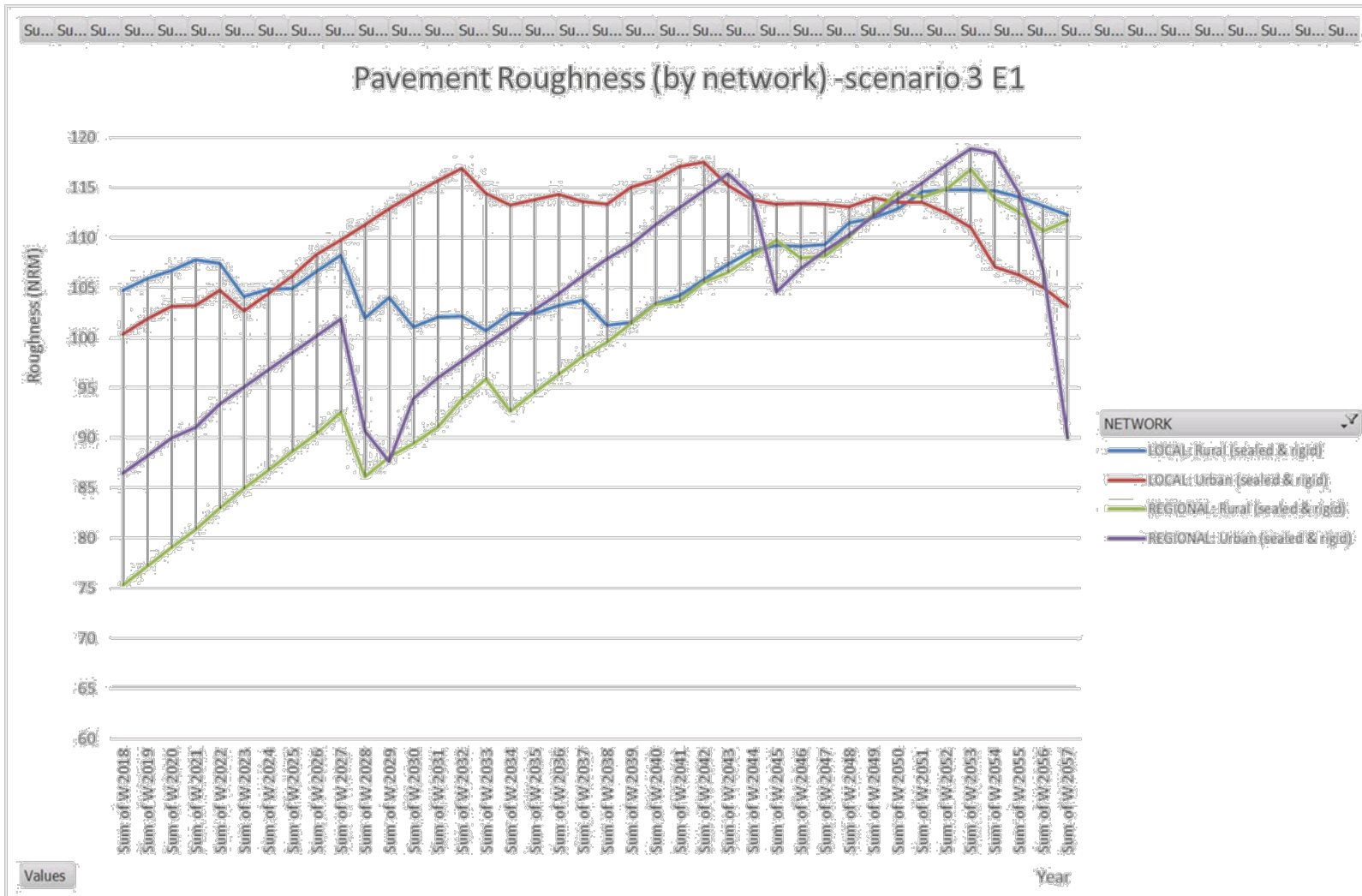


Figure N: Combined network roughness profiles given \$500K transfer of capital budget for dust sealing -E

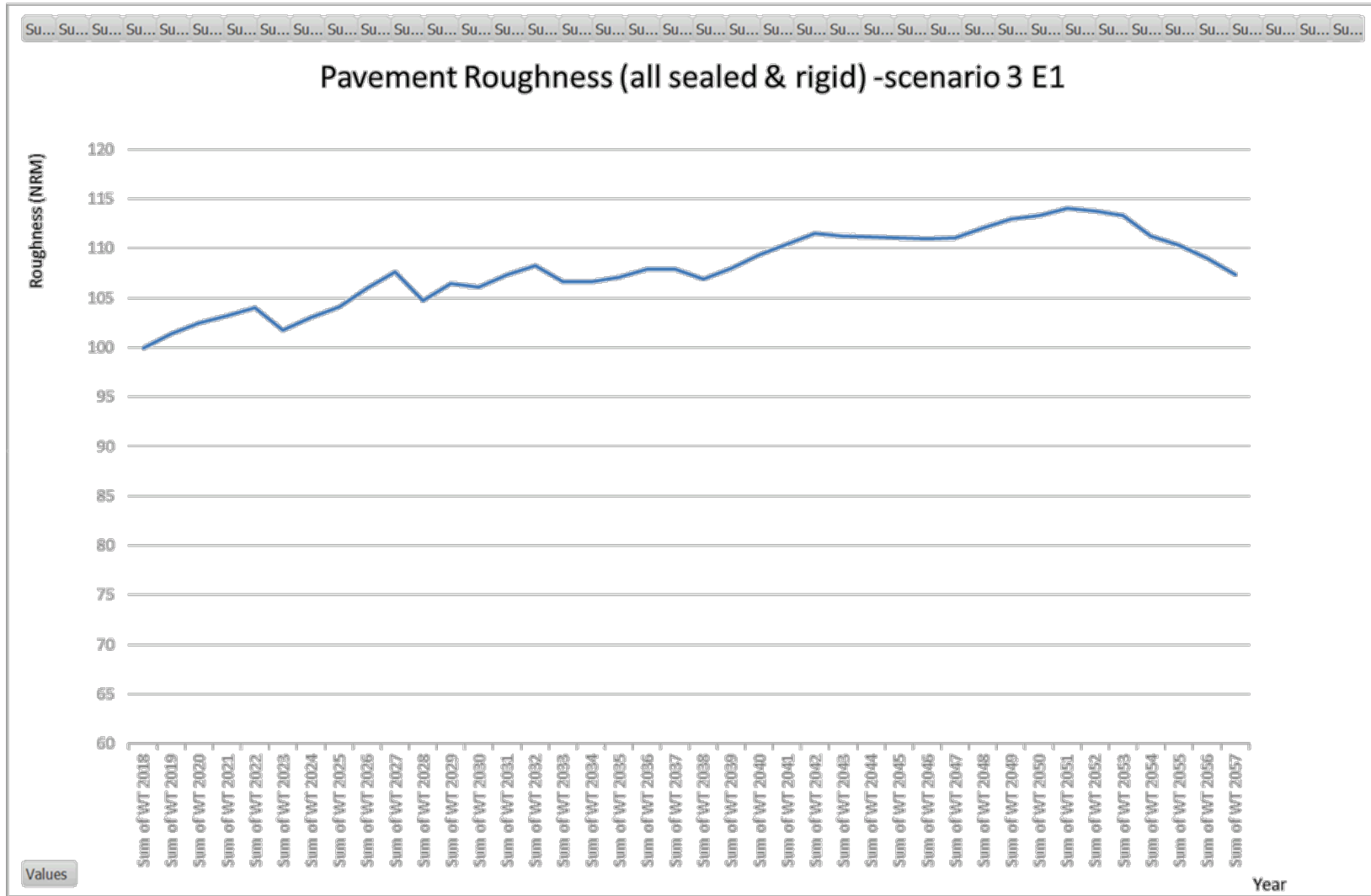


Figure O: Budget Profile -E

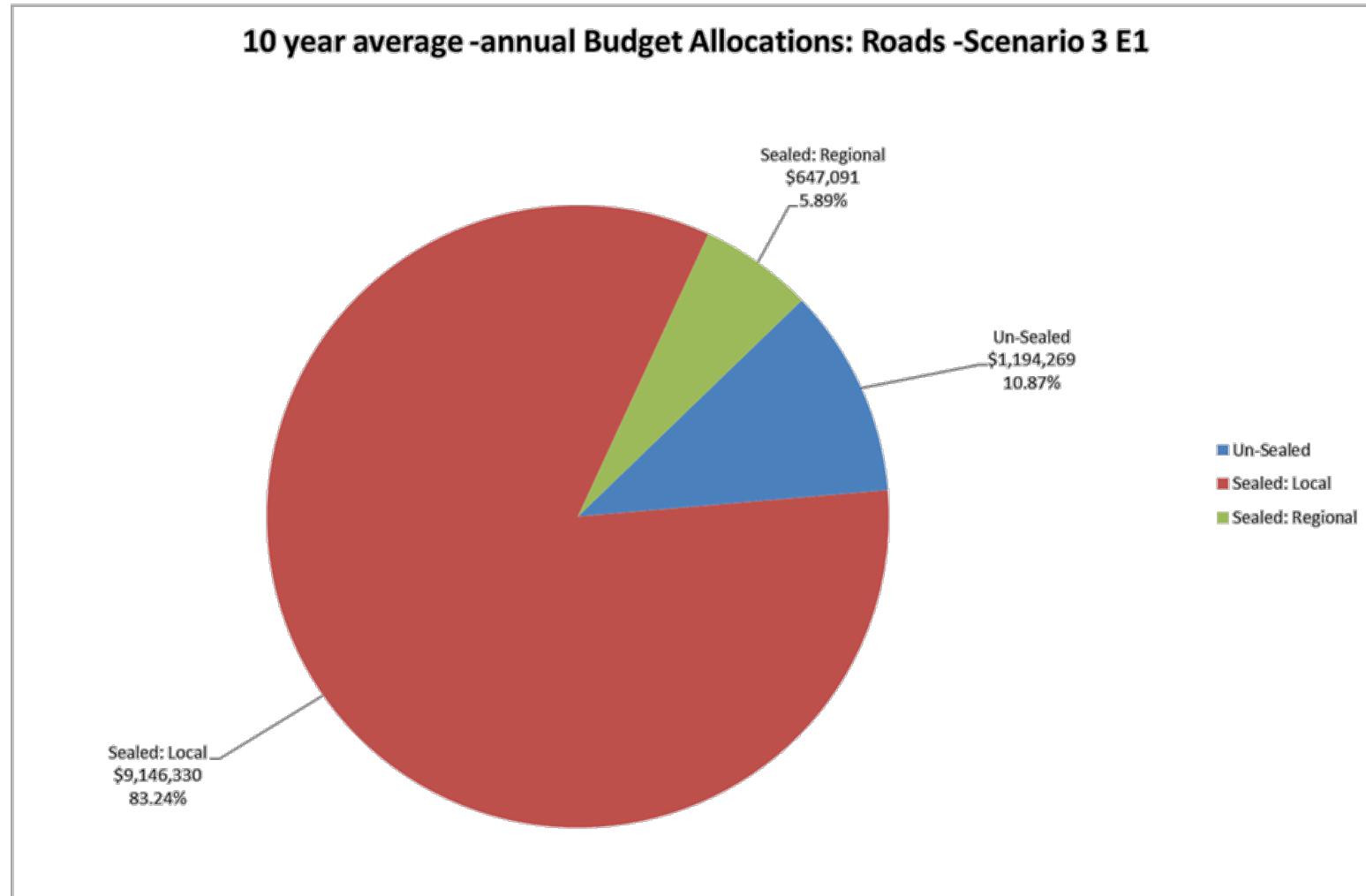


Figure P: All network roughness profiles given various transfer of capital budget to dust sealing program

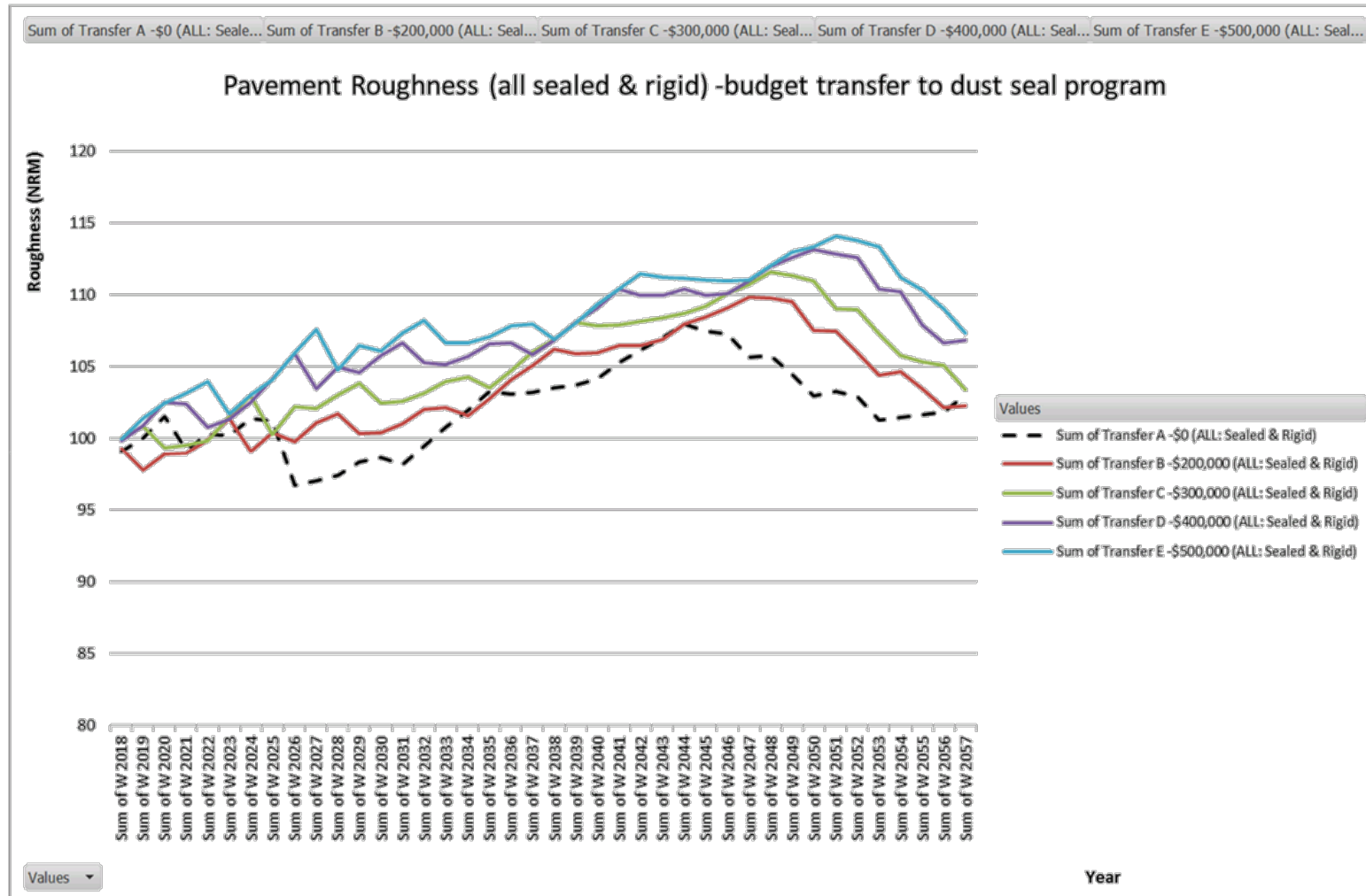


Figure Q: Local-Rural roughness profiles given transfer of capital budget to dust sealing program

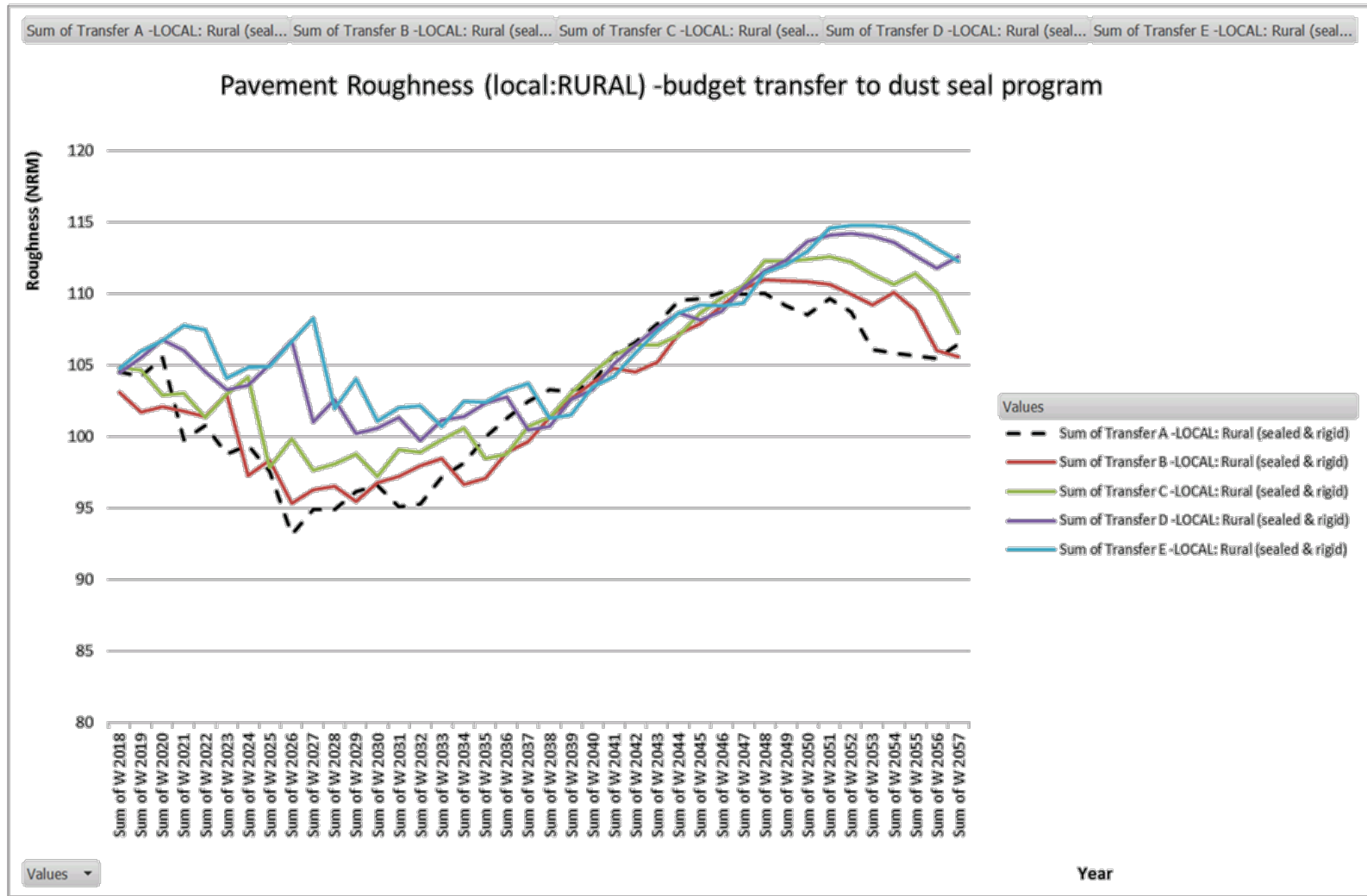


Figure R: Local-Urban roughness profiles given transfer of capital budget to dust sealing program

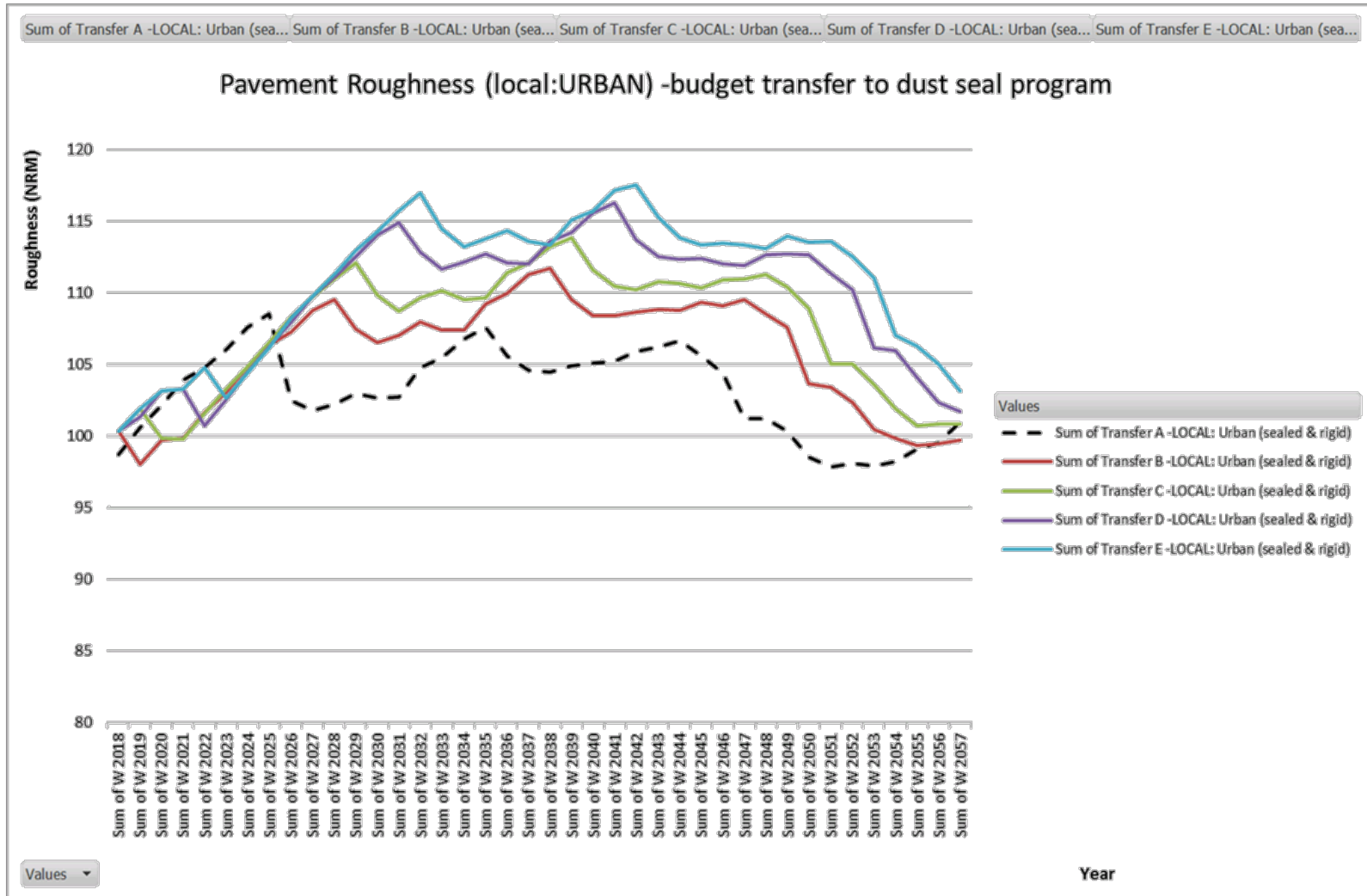


Figure S: Regional-Rural roughness profiles given transfer of capital budget to dust sealing program

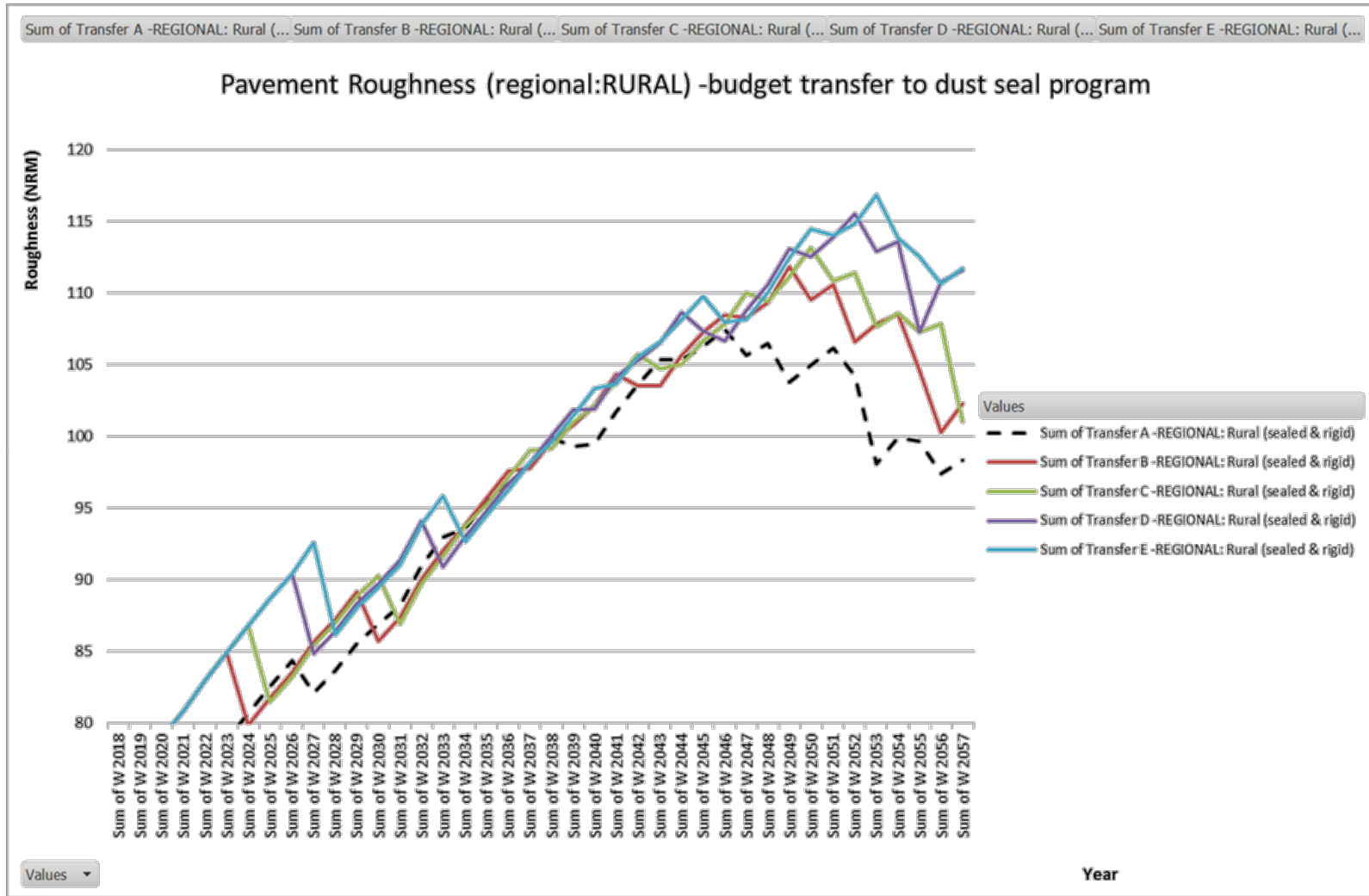


Figure T: Regional-Urban roughness profiles given transfer of capital budget to dust sealing program

