



CRC Construction Innovation
B U I L D I N G O U R F U T U R E

Report

School Survey to Collect Data on Material Performance

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EXECUTIVE SUMMARY

A survey of a number of schools in a number of different climates was carried out to determine the condition of building components of interest in the project. Schools in Melbourne, the Victorian Surf Coast, Brisbane, Townsville and the Sunshine Coast were inspected. A rating system was devised to categorise the components and the results collated in tables. Analysis of the data (where sufficient examples permitted) resulted in formulae to predict the service of the components and a database was derived.

1 INTRODUCTION

This project is developing a program to access a number of sources of data on service lifetimes of metallic building components. Originally it was planned to utilise the Queensland Department of Public Works database of maintenance activities to develop a lifetime database giving information based on current usage and updating as more events were entered by the actual maintainers reflecting ongoing upkeep of the schools' infrastructure. Maintenance information is seen as being a particularly useful source of data about service life of building components as it relates to actual performance of materials in the working environment.

Access was granted to a number of databases recording maintenance activities in Queensland Government Housing. However, analysis of the information indicated that entries did not give information in fine enough detail to enable extraction of data for the individual building components being considered in the current work.

An alternative approach was devised to estimate the performance of materials in the field. This involved a survey of a range of schools with inspection of the building components of relevance to the current work. These were given a rating indicating the current condition of the structure and the age of the buildings was also ascertained. This data collected was also used to validate the modifications made to the holistic model for the different building components.

2 SURVEY METHODOLOGY

Schools were chosen to give a wide range of climates and corrosivity levels (related to salt levels). At least three schools in each category were chosen, where possible with different ages.

Three climates were looked at:

- Tropical (Townsville)
- Subtropical (Brisbane and Sunshine Coast)
- Temperate (Melbourne and southern coast of Victoria)

Figure 1 shows the locations of the school areas surveyed in the Eastern part of Australia.

Within these climates corrosive severity levels can be classified as

- Severe marine (within 3km of the coast)
- Coastal (3-10km from coast)
- Inland (>10km from coast)

Ideally all three corrosivity levels in each of the three climate types would be surveyed, but this was not possible. The categories looked at are:

- Tropical Coastal
- Subtropical Marine
- Subtropical inland
- Temperate Marine

- Temperate Inland

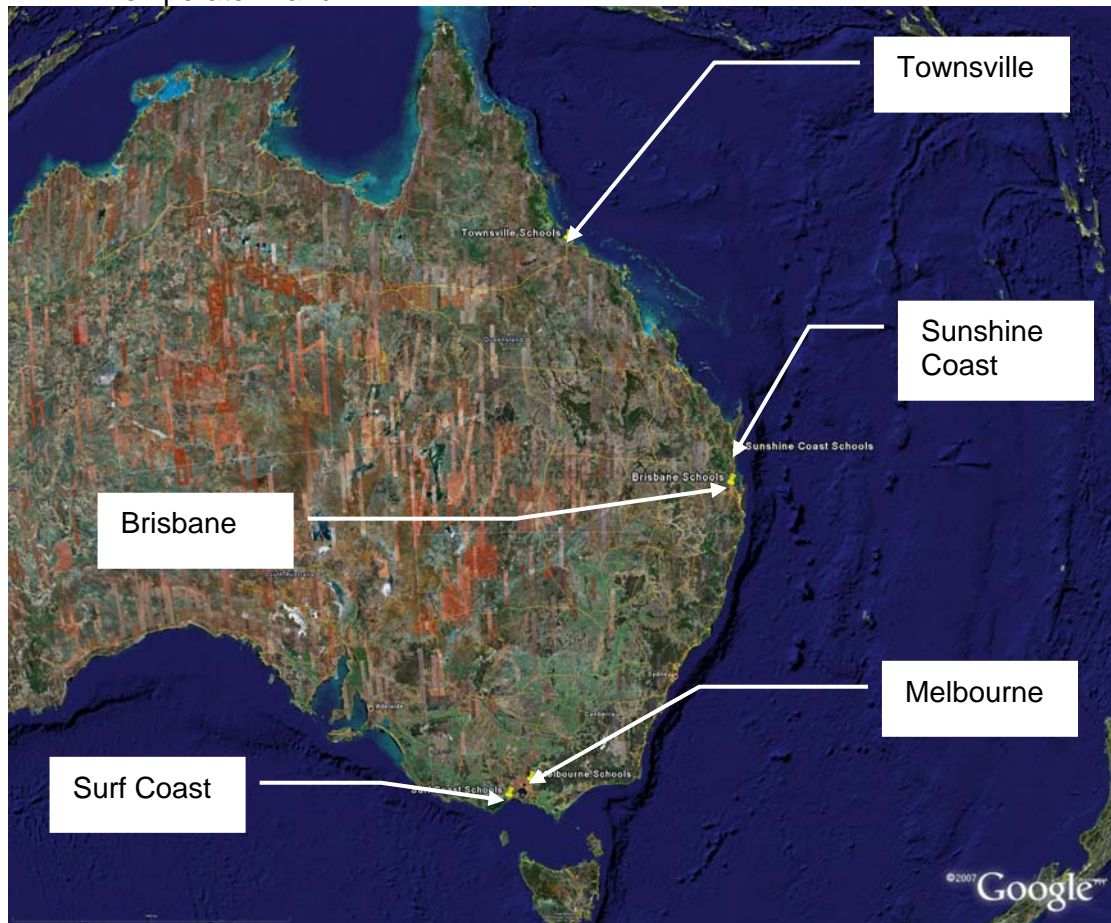


Figure 1. Locations of the different areas surveyed, chosen to give a range of climates

The Sunshine Coast schools surveyed are shown in more detail in Figure 2. A number of schools were looked at in 2005 as part of the earlier phase of this project and they are indicated in the map as well. The locations of the Townsville schools are shown in Figure 3 and those of the Victorian schools surveyed in Figure 4.

A list of all the Queensland schools surveyed is given in Table 1 along with details such as longitude and latitude and distance from the ocean. In some cases two figures are given indicating the distance from a sheltered beach on an inlet and the actual distance from the nearest ocean beach. Similar details are given for the Victorian schools visited in Table 2.

Not all the schools visited had the full array of metal components of interest. In particular it was difficult to gain information for the sub-floor components, as many schools had wooden and concrete footings rather than metal. These were more prevalent on portable classrooms but they were not included in the survey as their location history is unknown and the condition of metal components may have been affected by previous environments.

At each school, the relevant building components on a number of buildings were identified as to material and the condition rated, noting the orientation and degree of sheltering etc. Photographs taken are documented in a series of appendices (I – XXVII) in separate files (due to the size).

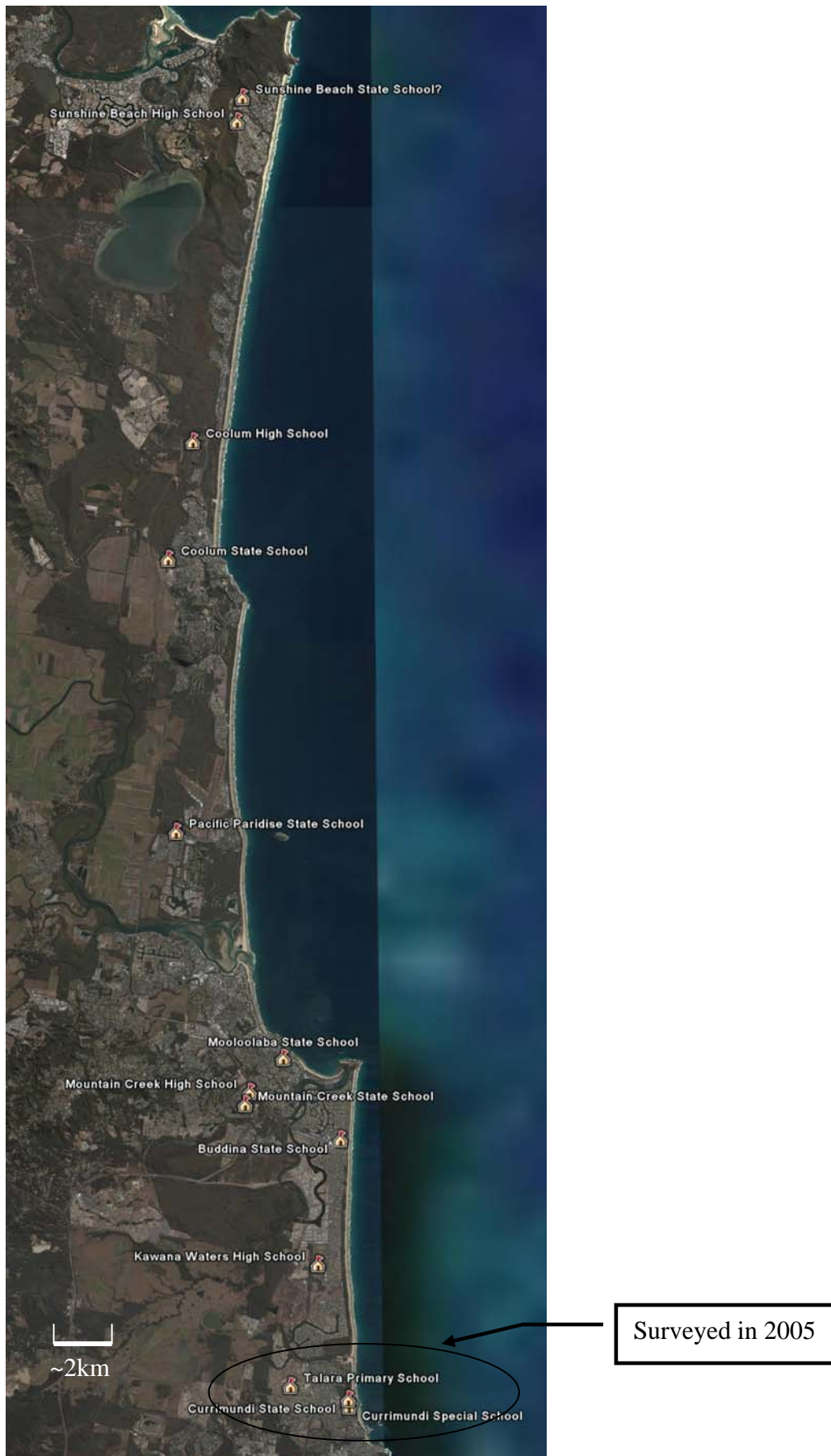


Figure 2. Locations of Sunshine Coast schools surveyed in 2007 and 2005.

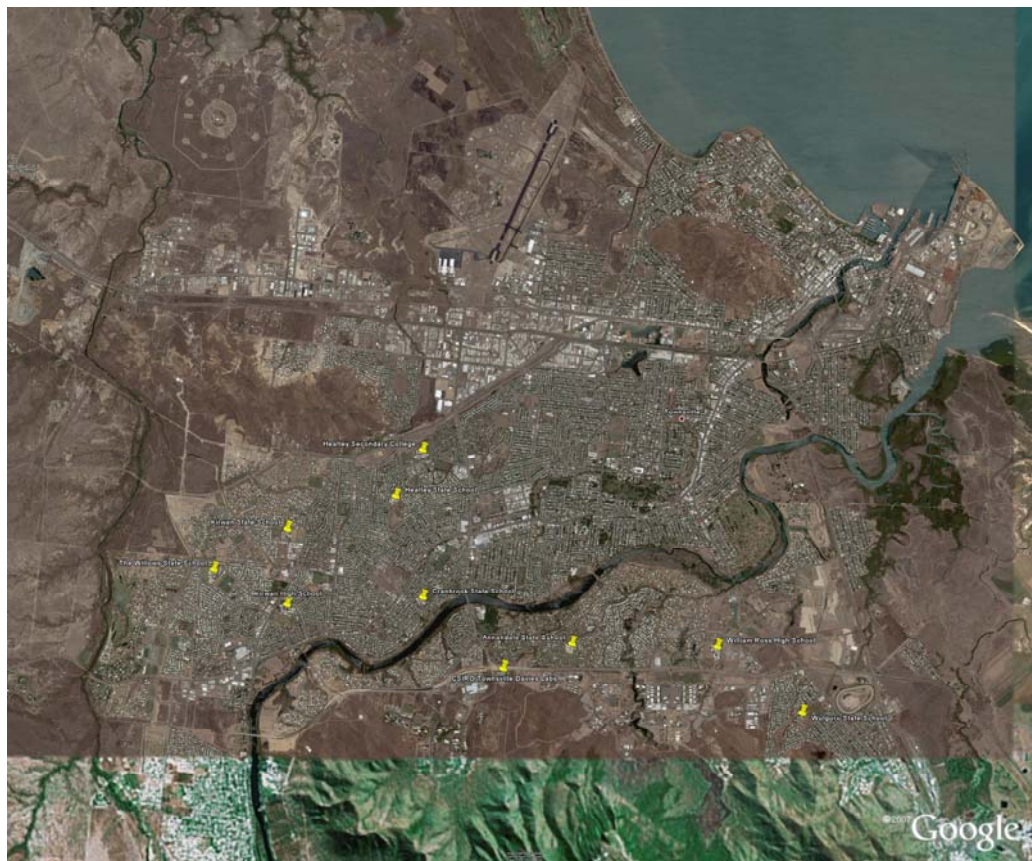


Figure 3. Locations of the Townsville schools

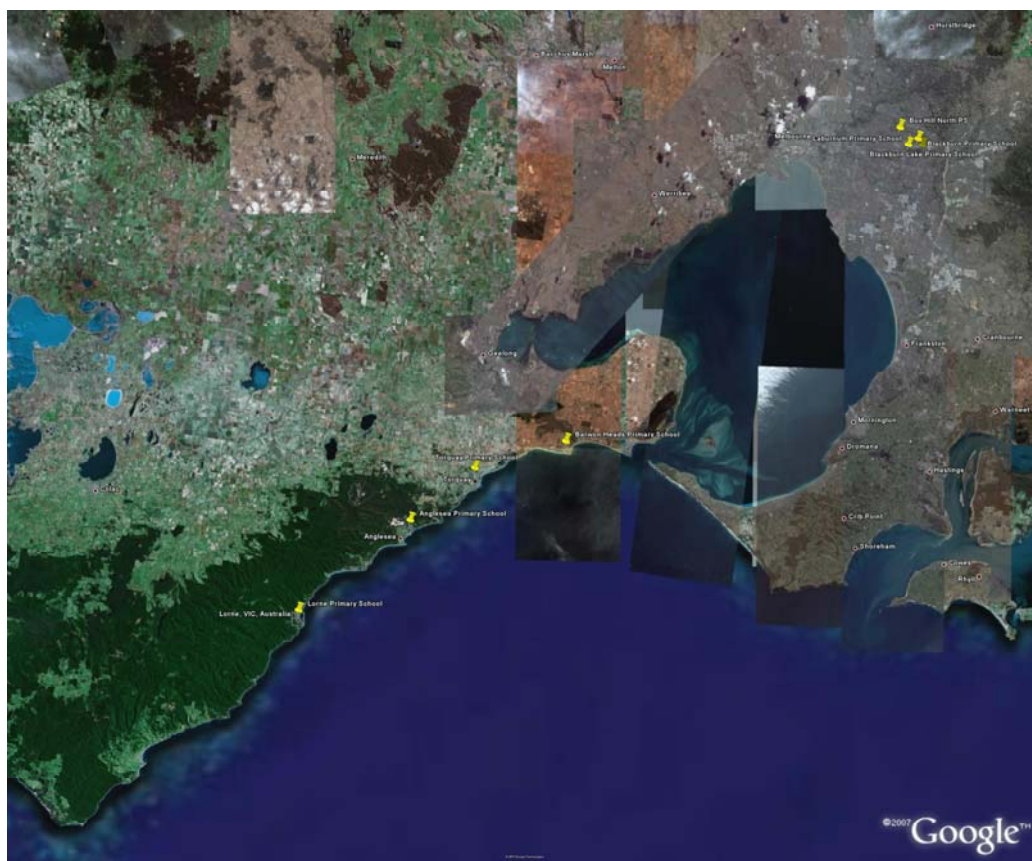


Figure 4. Locations of the Victorian schools, in Melbourne and on the surf coast.

Table 1. Queensland School Details

School Code	School Name	Year opened	Address Line 1	Address Line 2	Post Code	Longitude (Degrees)	Latitude (Degrees)	Distance from Coast (KM)
Sunshine Coast								
1888	Buddina State School	1979	Cnr Tumut Street and Iluka Avenue	Buddina	4575	153.1329	-26.7018	0.3
2165	Coolum State High School		Havana Road	Coolum	4573	153.0856	-26.5005	1.0
1571	Coolum State School	1917	School Road	Coolum Beach	4573	153.0771	-26.5349	1.6
1818	Mooloolaba State School	1930	Cnr Meta & Douglas Streets	Mooloolaba	4557	153.1146	-26.6782	0.3**
2190	Mountain Creek State High School	1995	Lady Musgrave Drive	Mountain Creek	4557	153.1031	-26.6867	2-3*
1999	Mountain Creek State School	1994	Lady Musgrave Drive	Mountain Creek	4557	153.1027	-26.6903	2-3*
1991	Pacific Paradise State School	1992	14-24 Menzies Drive	Pacific Paradise	4564	153.0810	-26.6126	2.0
2108	Sunshine Beach State High School	1992	45 Ben Lexcen Drive	Sunshine Beach	4567	153.0996	-26.4085	1.2
1917	Sunshine Beach State School	1982	David Low Way	Sunshine Beach	4567	153.1011	-26.4018	1.2
Townsville								
2186	William Ross State High School	1991	Mervyn Crossman Drive	Annandale	4814	146.7999	-19.3174	7
2120	Heatley Secondary College	1968	Cnr Hanlon Street and Fulham Road	Heatley	4814	146.7557	-19.2899	7
305	Heatley State School	1971	410 Fulham Road	Heatley	4814	146.7557	-19.2899	7
1862	Kirwan State School	1977	21 Burnda Street	Kirwan	4817	146.7335	-19.2990	9
2146	Kirwan State High School	1979	Hudson Street	Kirwan	4817	146.7321	-19.3086	10
287	The Willows State School	1997	Bilberry Street	Kirwan	4817	146.7241	-19.3066	10
Brisbane								
923	Kenmore State School		2052 Moggill Road	Kenmore	4069	152.9394	-27.5093	25-53*
1872	Chapel Hill State School	1978	Ironbark Road	Chapel Hill	4069	152.9435	-27.5006	25-53*
16	Brookfield State School		Boscombe Road	Brookfield	4069	152.9136	-27.4962	25-53*
2053	The Gap State High School		1020 Waterworks Road	The Gap	4061	152.9502	-27.4461	20-50*
1302	The Gap State School	1912	Cnr Waterworks & Settlement Roads	The Gap	4061	152.9443	-27.4427	20-50*
286	Payne Road State School	1970	171 Payne Road	The Gap	4061	152.9516	-27.4483	20-50*
1887	Hilder Road State School	1980	Cnr Kaloma and Hilder Roads	The Gap	4061	152.9378	-27.4382	20-50*

* near sheltered beach and open ocean ie. 25-53 is 25KM to sheltered beach and 53KM to open ocean

** slightly sheltered beach

Table 2., Victorian School Details

School Code	School Name	Year opened	Address Line 1	Address Line 2	Post Code	Longitude (Degrees)	Latitude (Degrees)	Distance from Coast (KM)
Surf Coast								
4332	Anglesea Primary School		Camp Rd	Anglesea	3230	144.1771	-38.4188	1
1574	Barwon Heads Primary School	1950	Golf Links Rd	Barwon Heads	3227	144.4868	-38.2812	1
3368	Torquay Primary School	2000	P O Box 51	Torquay	3228	144.3242	-38.3327	1.5
2162	Lorne - Aireys Inlet P-12 School	1879	Grove Road	Lorne	3232	143.9750	-38.5419	0.4
Melbourne (Blackburn)								
4717	Box Hill North Primary School	1955	Elizabeth St	Box Hill North	3129	145.1228	-37.8003	16-70*
2923	Blackburn Primary School	1889	185 Whitehorse Rd	Blackburn	3130	145.1581	-37.8172	16-70*
4860	Blackburn Lake Primary School	1964	Florence St	Blackburn	3130	145.1656	-37.8272	16-70*
4863	Laburnum Primary School	1964	Janet St	Blackburn	3130	145.1396	-37.8268	16-70*

* near sheltered beach and open ocean ie. 25-53 is 25KM to sheltered beach and 53KM to open ocean

** slightly sheltered beach

Table 3. Definition of Rating used for Components

Damage Rating		0	1	2	3	4	5
Component	Material	As New	Shows signs of Age	Needs maintenance	Significant Maintenance required	Planning for replacement	Needs replacement
Roof Sheeting Ridge Cap Flashings Gang Nails Steel Supports	Coated Steel	No Damage	Some loss of paint gloss/coating (Top coat only on multi-coat systems), dulling of surface	Loss of paint (chips lost, peeling, undercoat may still be intact), White corrosion product less than 50%, red rust on cut edges	Some red rust present, less than 50% of a particular area, White corrosion product greater than 50%	50- 100% red rust	Perforation
	Aluminium	No Damage	Dulling of Surface	White and/or Grey Corrosion Product <50% coverage and/or signs of pitting	Pitting/Black Corrosion Product <50% coverage, No perforation	Significant pitting >50% coverage, No perforation	Perforation
Fasteners		No Damage	Some loss of paint coating (if applied), often mechanical damage during installation	White corrosion product (more than 25%) on less than 50% of fasteners	Red rust present, on any fasteners but more than spotting	Red rust (>25%) present on all fasteners	100% Red rust, on more than 50% of fasteners
Gutters Down Pipes	Coated Steel (For Al see above)	No Damage	Some loss of paint gloss/coating (Top coat only on multi-coat systems), dulling of surface	Loss of paint (chips lost, peeling, undercoat may still be intact), White corrosion product less than 50%, red rust on cut edges or spotting	Some red rust present, less than 50% of a particular area, White corrosion product greater than 50%	Red Rust >50% of Inside bottom of Gutter or Downpipe	Perforation

Table 3. (cont) Definition of Rating used for Components

Damage Rating		0	1	2	3	4	5
Component	Material	As New	Shows signs of Age	Needs maintenance	Significant Maintenance required	Planning for replacement	Needs replacement
Windows	Bare and Anodised	No Damage	Loss of new look, loss of gloss or staining	Corrosion Product present <10%, at joins or other	White corrosion product less than 50%,	> 50% WCP	Perforation or loss of window function, Jamming etc.
	Painted	No Damage	Some loss of paint gloss/coating (Top coat only on multi	Undercutting of paint, White Corrosion Product present <10%, at joins or other	Loss of paint (chips lost, peeling), White corrosion product less than 50%,	>50% paint loss and > 50% WCP	

2.1 Material Rating Used in Survey

The components in the survey were rated using the following scheme:

0. As new
1. Shows signs of age
2. Needs maintenance
3. Significant maintenance required
4. Planning for replacement
5. Needs replacement

How these different categories relate to the conditions of the components is detailed in Table 3.

Indicative photos depicting the condition of the components are shown in Figure 5 (on the following pages). Not all ratings for each component were found or photographed in the survey.

3 SURVEY RESULTS

The raw data for all the schools surveyed is presented in Appendix XXVIII. The data has been reformatted in Tables 4 -11 which show the ratings for the different components categorised for the different environments.

The information for Colorbond roofs is graphed in Figure 6.

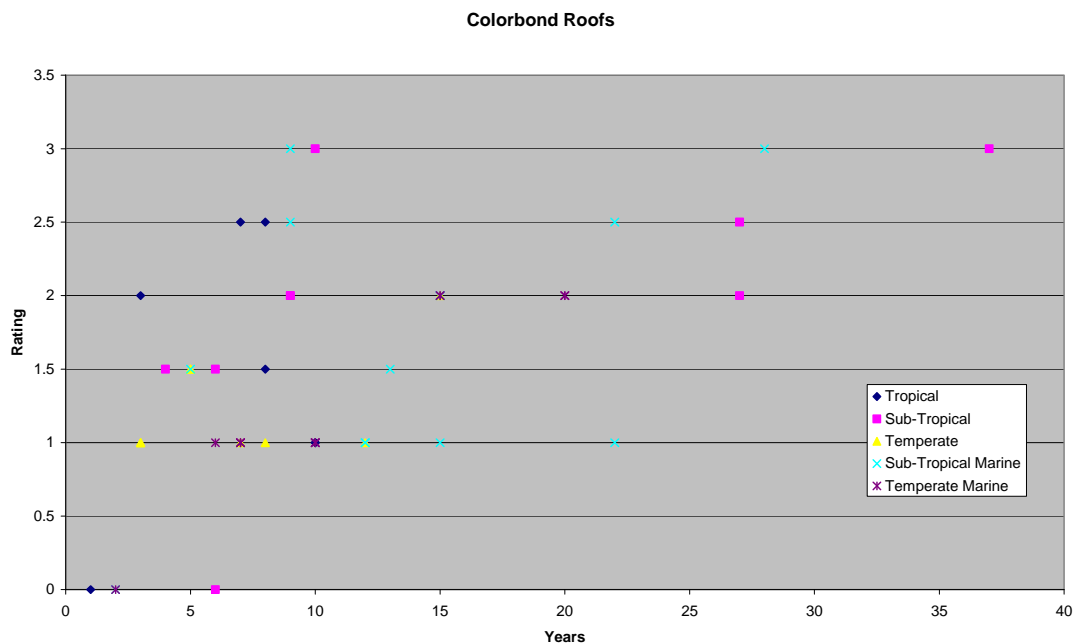


Figure 6. The Colorbond data for roofs in graphical form.

Roof rating
a) Colorbond

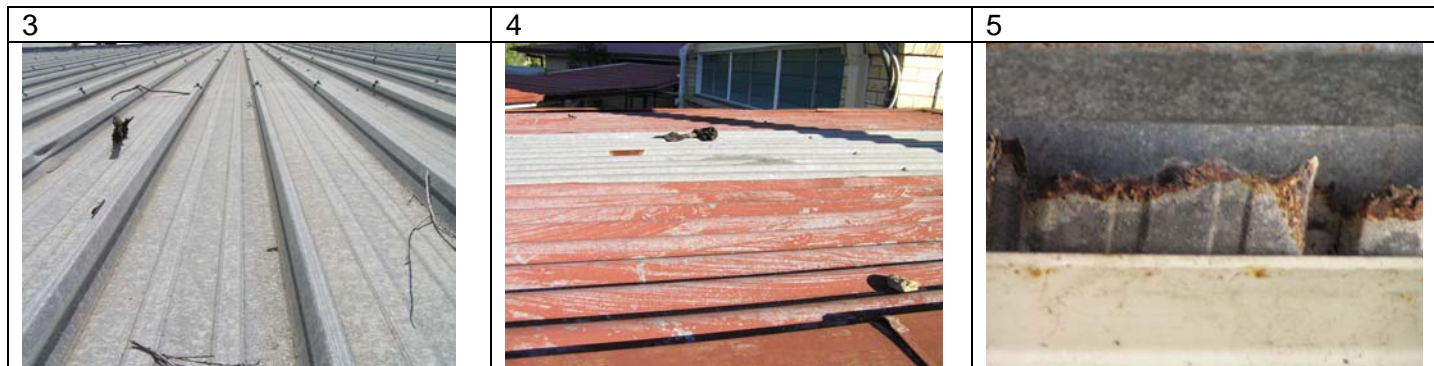


b) Zinalume



Figure 5: Photographs depicting the various rating categories for the different components and materials

c) Galvanised steel



Gutters

a) Colorbond

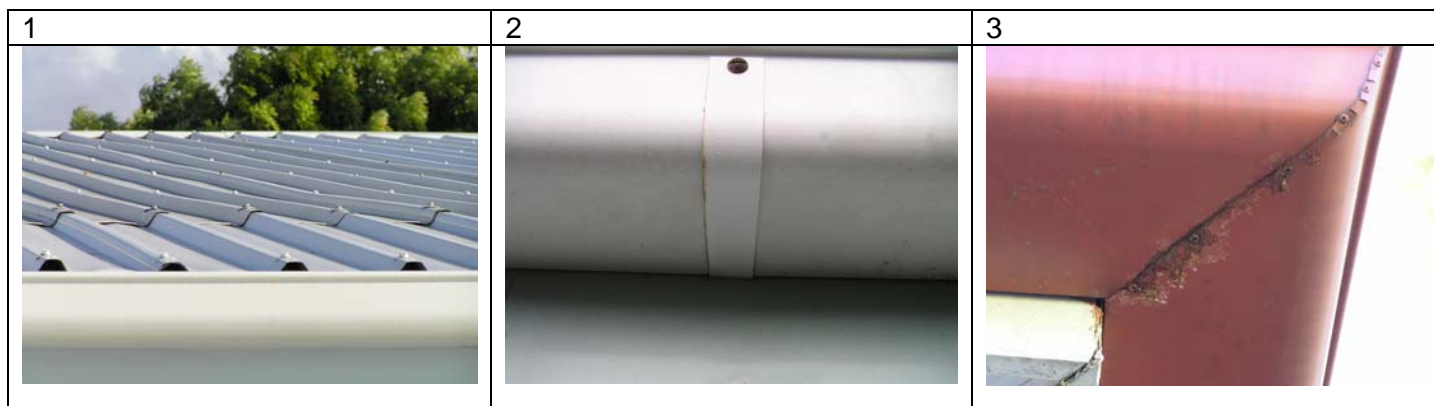


Figure 5(cont): Photographs depicting the various rating categories for the different components and materials

b) Zincalume (painted outside)

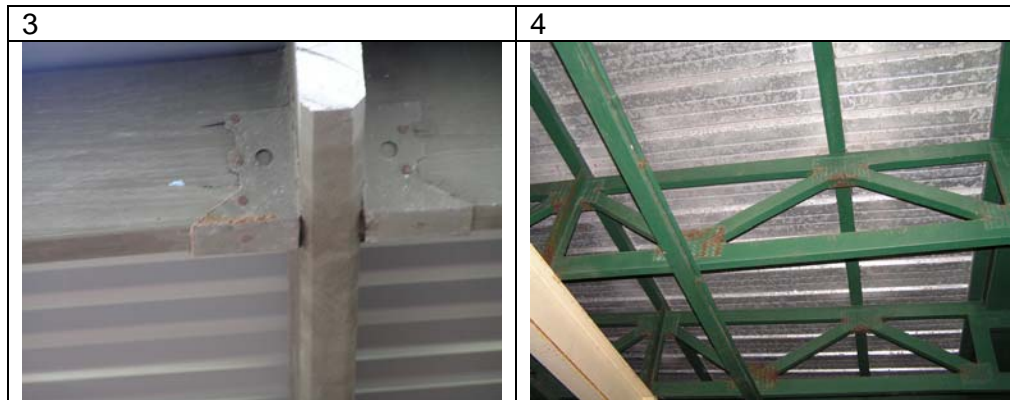


c) Galvanised (painted outside)



Figure 5(cont): Photographs depicting the various rating categories for the different components and materials

Gangnails



Flashings



Figure 5(cont): Photographs depicting the various rating categories for the different components and materials

Downpipes Colorbond



Windows anodized Al



Figure 5(cont): Photographs depicting the various rating categories for the different components and materials

Steel supports - Galvanised



Fasteners – galvanised

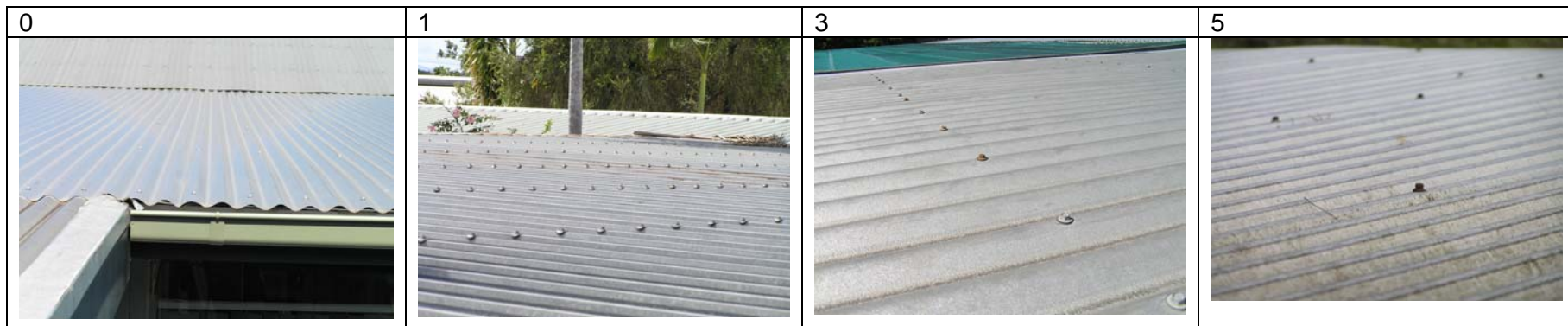


Figure 5(cont): Photographs depicting the various rating categories for the different components and materials

Table 4. Survey data for downpipes

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
CB	10	2	CB	10	1	CB	3	2	CB	9	1.5	CB	2	1
Painted steel	37	5	CB	27	2.5	CB	3	1	CB	13	3	CB	7	2
Painted ZA	7	1.5				CB	3	2	CB	15	2.5	CB	7	2
CB	10	1				CB	5	1.5	CB	22	1	CB	15	
CB						CB	8	1	Inbuilt structural, steel	22	2	CB	15	5
Gal	8	3				CB	12	2	Painted ZA	21	3	Gal	20	3
Painted steel	27	5				Gal painted	12	1	Plastic	2	0	Painted gal	20	5
Painted ZA	16	2				Gal painted	12	1				Painted Heavy section Gal	10	2
						Gal painted	25	3				ZA	6	2.5
						Painted	12	2				ZA	6	2.5
						ZA	3	1				ZA	6	2
						ZA	5	1.5				ZA painted outside	10	2
						ZA	20	1.5				ZA painted outside		1
						ZA painted outside	15	2						

Table 5. Survey data for flashing

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
CB	8	2.5	Gal	18	2.5	CB	3	1	Al	16	3	CB	2	0
CB		2	Gal	27	2.5	CB	3	1	Al	17	2.5	CB	6	1.5
Gal	27	4.5	Gal	27	2	CB	3	1	CB	5	2	Gal	15	2.5
			Gal	37	2	CB	3	1	CB	12	1.5			
						CB	5	1.5	CB	13	1.5			
						CB	12	1	CB	15	2.5			
						Gal	12	3	ZA Painted	15	2			
						Gal	15	2.5						
						Gal	25	4						
						ZA	10	2						

Table 6. Survey data for gutters

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
CB	0		CB	4	2	3	1	75	Al	16	3	gal	20	5
CB	1	1	CB	6	2	3	1	75	Al	25	2.5	ZA		1
CB	7	2	CB	6	2	3	1	75	Al	30	1	Gal	7	2
CB	10	2.5	CB	9	2	5	2	75	CB	2	0	Gal	15	2
CB	10	2	CB	9	1.5	5	1	75	CB	12	1	Gal	20	2.5
CB		2	CB	10	3	5	1	75	CB	12	1	Gal	20	2.5
CB Single Top Coat	16	2	CB	27	2	8	2	80	CB	15	1	CB	2	0
CB Single Top Coat	16	2	CB	27	2	8	0	50	CB	22	1	CB	6	1
CB XRW	8	2.5	CB	37	1	8	1	75	CB double sided	5	1.5	CB	6	1
Painted Gal or ZA	27	5	CB		2	12	1	75	CB double sided	9	2	CB	6	1
Painted ZA	27	3	Painted Gal	37	4	15	1.5	80	CB Double Sided	13	1	CB	7	2
Painted ZA		3	Painted Gal	47	5	20	2	75	CB Galvanised inside	22	5	CB	7	2
Painted ZA		5	Stainless Steel	7	0	12	1	50	Painted Al	28	2	CB	10	1.5
Stainless Steel		1	Stainless Steel	7	0	12	1	75	ZA Painted outside	15	2	CB	15	2
Painted Gal	3	2	ZA	18	3	25	3.5	50	ZA Painted outside	21	5	CB	15	2
			ZA	27	2	3	1	75	ZA Painted outside	30	3	CB	15	2
			ZA	31	2.5	15	1	50				CB	20	2

Table 6 (cont). Survey data for gutters

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
			ZA painted outside	27	5	10	1.5	25				CB	20	2
			ZA painted outside	27	3	20	4	75				Painted Gal	20	5
			ZA painted outside	27	4	15	4	50				Painted Gal	20	5
			ZA painted outside	31	4									
			ZA painted outside	37	3									
			ZA painted outside	47	4									

Table 7. Survey data for ridge capping

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
CB	10	1	CB	6	0	CB	8	1.5	CB	15	1	CB	2	0
ZA	27	2.5	CB	9	2	CB	15	1	CB	22	1	CB	10	1
			ZA	27	1	Gal	12	4				CB	15	1
			ZA	31	4	Gal	20	3				CB	20	2
			ZA	31	3	ZA	10	2				CB	20	2
						ZA	15	1				Gal	20	3

Table 8. Survey data for roofs

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
CB	1	0	CB	4	1.5	CB	3	1	Al	16	1	CB	2	0
CB	3	2	CB	6	0	CB	3	1	Al	17	2.5	CB	6	1
CB	7	2.5	CB	6	1.5	CB	3	1	Al	22	2	CB	7	1
CB	8	2.5	CB	9	2	CB	5	1.5	Al	25	1.5	CB	7	1
CB	8	1.5	CB	9	2	CB	5	1.5	Al	25	3	CB	7	1
CB	10	1	CB	10	3	CB	7	1	Al	28	4	CB	10	1
CB	10	1	CB	27	2.5	CB	8	1	CB	2	0	CB	10	1
Gal	36	5	CB	27	2	CB	12	1	CB	5	1.5	CB	10	1
Gal	37	3	CB	37	3	CB	15	2	CB	9	2.5	CB	15	2
Gal Kliplock	27	3	CB		2.5	Gal	5	1.5	CB	9	3	CB	15	2
			Kliplock deck, top painted		3									
Painted Gal	37	5				Gal	12	2	CB	12	1	CB	20	2
ZA	9	2.5	Gal	27	3	Gal	12	3	CB	12	1	CB	20	2
			Galv sheet corrugated top painted		4									
ZA	16	3.5				Gal	12	2	CB	13	1.5	Gal	20	5
			Painted											
ZA	16	2.5	Gal	37	2	Gal	12	2.5	CB	15	2	Gal	20	3.5
ZA	27	2.5	ZA	18	2.5	Gal	12	2.5	CB	15	1	Gal	35	2.5
ZA	27	3	ZA	27	1	Gal	20	3	CB	15	2	Gal painted	20	1
			ZA	27	3	Gal	25	3	CB	22	2.5			
			ZA	27	3	Gal	51	3.5	CB	22	1			
			ZA	27	3	Gal		3	CB	28	3			
			ZA	27	3	Gal		3	Gal Kliplock	36	3.5			
			ZA	27	3	ZA	3	1.5	ZA	10	1.5			
			ZA	31	3	ZA	5	1	ZA	21	3			

Table 8 (cont) Survey data for roofs

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
			ZA	31	1	ZA	8	2	ZA	25	3			
			ZA	31	2	ZA	8	0.5	ZA	30	2.5			
			ZA	31	3	ZA	10	2						
			ZA	37	2	ZA	12	2						
			ZA	47	2	ZA	15	1.5						
			ZA		2	ZA	15	1.5						
			ZA		1	ZA	20	0						
			ZA		1	ZA		2						

Table 9. Survey data for roof fasteners

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
B1 non cyclone	16	3	Gal	18	2	Gal	3	0	Painted	2	0	Gal	10	3
B4	1	1	Gal	27	2	Gal	3	1	Painted	12	1	gal	20	2.5
Buildex class4 Zinc	9	2	Gal	31	2	Gal	8	0	Painted	12	4	Gal nails	20	2
Buildex Painted	8	1	Gal	31	5	Gal	12	1	Painted	15	1	Nails	20	4
Bx	10	3	Gal	37	5	Gal	12	4	Painted	22	2.5	Painted	2	0
Bx Cyclone	16	2	Painted	4	1.5	Gal	12	1.5	Painted	28	4	Painted	6	2.5
Gal	27		Painted	6	0	Gal	15	3	Stainless Steel	22	2	Painted	6	5
Gal		1	Painted	6	1.5	Gal	15	3.5				Painted	6	2
Gal Bx	16	2	Painted	9	1	Painted	3	0				Painted	6	2
Painted	7	1.5	Painted	10	3	Painted	7	1				Painted	7	2
Painted	10	3	Painted	27	2	Painted	8	1				painted	7	2
Painted Bx	3	1	Painted	27	1.5	painted	10	3				Painted	15	3
Painted Bx	8	3	Painted	31	4	Painted	12	1.5				Painted	15	3
			Painted		1	Painted	15	1.5				Painted	20	5
												Painted	20	5

Table 10. Survey data for steel supports

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
Gal	8	1	Painted	27	2	Gal	3	1	Gal	2	0	Gal	6	2
Galvaspan G92075P11 4.195		1	Painted Gal	10	1	Gal	7	1	Gal steel	15	2	Gal	7	1
Painted	10	1	Painted Gal	17	2	Painted	5	1	Gal steel	17	1	Gal	15	2
Painted (Gal?)	3	0	Painted Gal	37	3	Painted	8	2	Gal steel	25	2	Painted steel	10	1
Painted steel	16	1	Painted steel	9	2	Painted	12	1	Painted Gal steel	12	1			
Painted steel	16	2	Painted Steel	18	3	Painted	12	1	Painted steel	9	2			
Painted steel	27	2	Painted steel	27	2				Painted steel	21	2			
Painted steel	27	1	Painted Steel	27	3				Painted steel	21	2			
Painted steel		1	Painted steel	31	1				Painted Steel	22	2			
Uprights Painted gal			Painted steel	31	2				Painted steel	36	3			
			Painted steel	37	3									
			Painted Steel	47	2									
			Painted steel		2									
			Painted steel		1									

Table 11. Survey data for windows

Tropical			Sub-tropical inland			Temperate Inland			Sub-tropical Marine			Temperate Marine		
Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R	Type	Age	R
Al mesh screens		2.5	Al	10	1	Al	5	1	Al	22	1.5	Al	2	0
Anodised Al	3	1.5	Al anodised	37	2	Al	12	1	Aluminium	15		Powdercoated Al	6	2
Anodised Al	8	1	Anodised Al	18	3	Powdercoated Al	0	0	Anodised Al	9	1	Powdercoated Al	6	2
Anodised Al	16	1.5	Anodised Al	27	3	Powdercoated Al	3	1	Anodised Al	12	1	Powdercoated Al	7	1
Anodised Al	16	2	Painted Al	9	2	Powdercoated Al	5	1	Anodised Al	15	1.5	Powdercoated Al	7	1
Powdercoated Al	7	2				Powdercoated Al	12	1	Anodised Al	21	1	Powdercoated Al	10	2
									Anodised Al	28	2.5	Powdercoated Al	15	2
									Anodised painted	13	2	Powdercoated Al	20	1

3.1 Analysis of Data

The data for the different components were graphed separately for each material and environment type. In some cases there were very limited data points, but the points were used to estimate an exponential line of best fit using the equation:

$$\text{Damage} = A * \ln(\text{life}) - B \quad \dots \text{Eqn (1)}$$

Where Damage is the rating system (from 0-5)

life is the age of the component in years

A, B are constants

In some cases there appeared to be two rates of material aging so these were separated in two sets of data: “normal” and “accelerated”.

Equation 1 was used to estimate the service life of all the components surveyed. A and B were determined for the different materials and environments.

3.1.1 Colorbond® Components

For Colorbond® the formula was used to estimate the time to reach Rating 3 and then 10 years was added. Table 12 shows the values estimated for A and B from the survey data.

Table 12. Parameter Values for Colorbond® components

Component	Environment	A	B
Roof	Normal	1.27	-1.84
Roof	Accelerated	1.30	-0.38
Roof	Tropical	1.18	-1.5
Roof	Tropical accelerated	1.3	0
Downpipes	normal	1.13	-0.95
Down pipes	accelerated	1.39	0
Gutters	normal	1.2	-1.9
Gutters	tropical	0.99	-0.043
Gutters	accelerated	1.30	-0.67

3.1.2 Zinalume Components

Equation (1) was used to calculate the years to reach Rating 3 and then D was added to give service life. Values for A, B and D are given in Table 13.

Table 13. Parameters for Zinalume components

Component	Environment	A	B	D
Roof	Sub tropical normal	1.28	-1.80	9
Roof	accelerated	1.28	-0.50	9
Roof	tropical	1.28	-1.43	9
Roof	temperate	1.28	-1.43	9
Downpipes	normal	1.25	-2.2	9
Down pipes	accelerated	1.31	-0.37	6
Gutters	normal	1.26	-1.29	9
Gutters	accelerated	1.31	-0.075	6
Ridge cap	normal	1.18	-1.2	9

3.1.3 Galvanised Components

Equation (1) was used to calculate the years to reach Rating 3 and then D was added to give service life. Values for A, B and D are given in Table 14.

Table 14. Parameters for Galvanised components

Component	Environment	A	B	D
Roof	normal	1.1	-0.64	8
Roof	accelerated	1.3	-0.48	8
Downpipes	normal	1.1	-1.58	8
Down pipes	accelerated	1.31	-0.37	5
Gutters	normal	2.52	-4.9	8
Flashing	normal	1.1	-1.1	8
Flashing	accelerated	1.22	-0.18	8
Fasteners	normal	1.36	-1.1	*
Fasteners	accelerated	1.38	-0.06	*

* For fasteners the formulae were used to calculate the time to reach Rating 5 to give the predicted service life. Therefore D is not applicable

3.1.4 Aluminium Components

Equation (1) was used to calculate the years to reach Rating 3 and then D was added to give service life. Values for A, B and D are given in Table 15.

Table 15. Parameters for Galvanised components

Component	Environment	A	B	D
Windows	normal	0.92	-0.68	10
Windows	accelerated	1.0	-0.04	10
Powder coated	normal	0.53	-0.05	10
Powder coated	accelerated	0.89	-0.14	10
Fasteners	normal	1.36	-1.1	5
Fasteners	accelerated	1.36	-0.06	5

3.1.5 Database

The results of applying these formulae to the components surveyed to estimate the remaining life is consolidated into Table 16. Service life determined to be more the 50 years is quoted as >50 in all cases.

Table 16. Database of Service life determined from Survey data.

Component	Material	Environment	Severity	Life (years)
roof	galvanised	All	normal	35
roof	galvanised	All	accelerated	23
downpipes	galvanised	All	normal	>50
downpipes	galvanised	All	accelerated	18
gutters	galvanised	All	normal	31
flashing	galvanised	All	normal	50
flashing	galvanised	All	accelerated	19
roof	zincalume	Sub-tropical	normal	>50
roof	zincalume	Tropical	Normal	41
roof	zincalume	Temperate	Normal	41
roof	zincalume	All	accelerated	24
downpipes	zincalume	All	normal	>50
downpipes	zincalume	All	accelerated	18
gutters	zincalume	All	normal	39
gutters	zincalume	All	accelerated	15
ridge cap	zincalume	All	normal	44
window	Al anodized	All	normal	>50
window	Al anodized	All	accelerated	31
window	Powder coated	All	normal	>50
window	Powder coated	All	accelerated	48
roof	Colorbond	Temperate and Sub-tropical	normal	>50
roof	Colorbond	Temperate and Sub-tropical	accelerated	25
roof	Colorbond	Tropical	normal	>50
roof	Colorbond	Tropical	accelerated	22
gutters	Colorbond	Temperate and Sub-tropical	normal	>50
gutters	Colorbond	Tropical	normal	34
gutters	Colorbond	All	accelerated	29
downpipes	Colorbond	All	normal	45
downpipes	Colorbond	All	accelerated	21
fasteners	galvanised	All	accelerated	38
fasteners	galvanised	All	normal	>50

APPENDIX I – XXVII School Photograph Files

The plans and photographs taken at the various schools are collated into a series of separate files.

I	Anglesea Primary School
II	Barwon Heads Primary School
III	Blackburn Primary School
IV	Brookfield State School
V	Buddina State School
VI	Chapel Hill State School
VII	Coolum High School
VIII	Coolum State School
IX	Heatley High School
X	Heatley State School
XI	Hilder Road State School
XII	Kenmore State School
XIII	Kirwan High School
XIV	Laburnum Primary School
XV	Lorne P-12 College
XVI	Mooloolaba State School
XVII	Mountain Creek High School
XVIII	Mountain Creek State School
XIX	Pacific Paradise State School
XX	Payne Road State School
XXI	Sunshine Beach Secondary School
XXII	Sunshine Beach State School
XXIII	The Gap High School
XXIV	The Gap State School
XXV	The Willows State School
XXVI	Torquay Primary School
XXVII	William Ross High School

APPENDIX XXVIII School Survey Data

The raw data from the schools survey is presented in the following table.

RR = red rust

WCP = white corrosion product

School	Zone	Building	Component	Type	Age	Condition	Rating
William Ross HS	Townsville	GB	Roof	CB	3	Dirty but Glossy RR at defects only	2
William Ross HS	Townsville	GB	Roof Fasteners	Painted Bx	3	perfect except Mech Damage	1
William Ross HS	Townsville	GB	Gutters inside	Painted Gal	3	50% Black 50% White Wall has RR spots	2
William Ross HS	Townsville	GB	Gutters outside	Painted Gal	3	Fine	1
William Ross HS	Townsville	GB	Windows	Anodised Al	3	Small Pits on Frame base	1.5
William Ross HS	Townsville	GB	Steel Supports	Painted (Gal?)	3	Good	0
William Ross HS	Townsville	GA	Roof	ZA	16	Dull & Dirty but mostly shiny, edge corrosion up to 2mm, grey spots up to 1inch with 50%RR	3.5
William Ross HS	Townsville	GA	Roof Underside	ZA	16	>50% Coating Loss, WCP&BCP, spots of RR	3
William Ross HS	Townsville	GA	Roof Fasteners	Gal Bx	16	Significant WCP around some	2
William Ross HS	Townsville	GA	Windows	Anodised Al	16	Fine pits on bottom surface ~500µm dia, spaced ~3mm Apart	1.5
William Ross HS	Townsville	GA	Steel Supports	Painted steel	16	Maintained with Thick paint	1
William Ross HS	Townsville	GA	Gutters outside	CB Single Top Coat	16	Hangers have undercutting up to 50mm, average 20mm Top coat is chalking	2
William Ross HS	Townsville	GA	Gutters inside	CB Single Top Coat	16	Dirty, RR spotting at internal bends, also on side walls	2
William Ross HS	Townsville	Canteen	Gutters outside	CB Single Top Coat	16	Hangers have undercutting up to 50mm, average 20mm Top coat is chalking	2
William Ross HS	Townsville	Canteen	Gutters inside	CB Single Top Coat	16	Dirty, RR spotting at internal bends, also on side walls	2
William Ross HS	Townsville	Canteen	Roof	ZA	16	Black Spots, RR in some grooves and folds	2.5
William Ross HS	Townsville	Canteen	Roof Fasteners	B1 non cyclone	16	All 20%RR	3
William Ross HS	Townsville	Canteen	Roof Fasteners	Bx Cyclone	16	Plates ZA grey, 10%wcp rr spots on some	2
William Ross HS	Townsville	Canteen	Downpipes	Painted ZA	16	Delamination of paint at both ends up to 3inches, RR damage also up to 3 inches from base & large RR spots at top cut end ~5mm in dia	2
William Ross HS	Townsville	Canteen	Windows	Anodised Al	16	Damage at bottom panels; WCP spots up to 3mm Dia. Maybe associated with concrete splashing. No other damage	2

School	Zone	Building	Component	Type	Age	Condition	Rating
William Ross HS	Townsville	Canteen	Steel Supports	Painted steel	16	Railings have rr where paint is damaged	2
Heatley Sec	Townsville	K Manual Arts Bldng	Roof	ZA	27	Dull Clean but not cleaned, Dull, Grey-black spots in places, more prevalent at bottom of roof sheeting, some red streaks, appear to be from small red spotting	2.5
Heatley Sec	Townsville	K Manual Arts Bldng	Roof Fasteners	Gal	27	50% of fasteners have 100% rr, remainder have some rr and wcp	
Heatley Sec	Townsville	K Manual Arts Bldng	Gutters	CB	0		
Heatley Sec	Townsville	K Manual Arts Bldng	Gutter North side	Painted Gal or ZA	27	Totally Rusted out	5
Heatley Sec	Townsville	K Manual Arts Bldng	Flashings	Gal	27	Zinc almost gone, some Black spots, 1005 WCP in pustules, RR at joins severe in places up to 30-40mm, some has rusted away	4.5
Heatley Sec	Townsville	ICT centre	Roof	CB	7	North facing, dull & dirty, clean, shine has gone, RR spots mainly in crevices	2.5
Heatley Sec	Townsville	ICT centre	Roof Fasteners	Painted	7	Mechanical damage with some WCP	1.5
Heatley Sec	Townsville	ICT centre	Gutter	CB	7	Damage where gutter is pushed into downpipe, RR spots	2
Heatley Sec	Townsville	ICT centre	Down pipes	Painted ZA	7	Outside good, inside OK except where water drips into it inside	1.5
Heatley Sec	Townsville	ICT centre	Windows	Powdercoated Al	7	Louvre's corroding in btn seals & paint Al-presumably where moisture is trapped. General Damage of some powder coated windows	2
Heatley Sec	Townsville	Walkways	Roof top	ZA	27	Moderately dirty, not much edge damage, flat, some black spots, spots of RR	2.5
Heatley Sec	Townsville	Walkways	Roof Underside	ZA	27	>50% black and grey spots	3
Heatley Sec	Townsville	Walkways	Gutters	Painted ZA outside	27	New sections added in 2006, wcp on edges 100%, RR up to 20mm in spots and on edge, no perforations	3
Heatley Sec	Townsville	Walkways		Painted ZA inside	27	Maintained paint	
Heatley Sec	Townsville	Walkways	Steel Supports	Painted steel	27	Condition OK	1
Heatley State	Townsville	Bldng B	Roof	Gal	37	Flat no cleaning, 80% WCP pustules, 10% RR	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Heatley State	Townsville	Bldng B	Roof Underside	Gal		Almost totally covered with a fine film of WCP, some larger pustules of WCP	3
Heatley State	Townsville	Bldng B	Roof Fasteners	Gal		Not as old as roof sheets, in good condition	1
Heatley State	Townsville	Bldng B	Gutters inside	Painted ZA		Not clean inch of leaves and mud, 30% RR	3
Heatley State	Townsville	Bldng B	Gutters edges	Painted ZA		50% WCP, spots of RR	3
Heatley State	Townsville	Bldng B	Gutters outside	Painted ZA		dull & dirty , damage around holes	2
Heatley State	Townsville	Bldng B	Windows	AL mesh screens		Widespread small pits	2.5
Heatley State	Townsville	Bldng B	Steel Supports	Painted steel		Look fine particularly the uprights	1
Heatley State	Townsville	Bldng J	Roof	Gal Kliplock	27	Flat no cleaning, 80% WCP pustules, 10% RR	3
Heatley State	Townsville	Bldng J	Ridge Cap	Zincalume	27	Black & grey spotting all over	2.5
Heatley State	Townsville	Bldng J	Gutters	Stainless Steel		Fine	1
Heatley State	Townsville	Bldng J	Downpipes	Painted steel	27	Perforated in spots	5
Heatley State	Townsville	Bldng J	Steel Supports	Painted steel	27	Surface rust	2
Heatley State	Townsville	Covered play area	Roof	CB XRW 1999	8	Top is Dull & Dirty Underneath mechanically damaged, no signs of Corrosion	1.5
Heatley State	Townsville	Covered play area	Roof Fasteners	Buildex Painted	8	Look fine	1
Heatley State	Townsville	Covered play area	Other Fasteners	Bx gal		Some rr around rim of Fastener	2
Heatley State	Townsville	Covered play area	Gutters	CB		Fine at bottom, on inside edge small blisters starting	2
Heatley State	Townsville	Covered play area	Downpipes	CB			
Heatley State	Townsville	Covered play area	Flashings	CB		Dull, couple of rr spots	2
Heatley State	Townsville	Covered play area	Steel Supports	Galvaspan G92075P11 4.195		Significant mechanical damage, no signs of corrosion, although grain structure obvious	1
Heatley State	Townsville	Covered play area	Steel Supports	Uprights Painted gal			

School	Zone	Building	Component	Type	Age	Condition	Rating
Heatley State	Townsville	Bldng D	Roof	Painted Gal	37	Not Maintained, Coating cracked, loss of coating due to Blistering, RR at Perforations, Perforations at sheet joints	5
Heatley State	Townsville	Bldng D	Gutters	Painted ZA		Totally perforated nearest edge to bldng	5
Heatley State	Townsville	Bldng D	Down pipes	Painted steel	37	Perforated red rust	5
Heatley State	Townsville	Walkways	Roof	Gal	36	Up to 70% WCP, RR and perforations at depressions	5
Heatley State	Townsville	Walkways	Roof Underside	Gal	36	Thin Film WCP on underside	3
Kirwan Sec	Townsville	ZA shelter	Roof	ZA	9	Dull & Dirty, RR at sheet join in crevices	2.5
Kirwan Sec	Townsville	ZA shelter	Roof Underside	ZA	9	Black spots/pitting on underside up to 20% black	2
Kirwan Sec	Townsville	ZA shelter	Roof Fasteners	Buildex class4 Zinc	9	Dull, covered totally with WCP, more heavy on ~15% of area	2
The Willows	Townsville	Multicovered PlayArea	Roof	CB	10	Dull & Dirty	1
The Willows State	Townsville	Multicovered PlayArea	Roof Underside	AL Foil & Gal mesh	10	Gal Mesh has WCP and RR	3
The Willows	Townsville	Multicovered PlayArea	Ridge Cap	CB	10	Dull & Dirty	1
The Willows	Townsville	Multicovered PlayArea	Roof Fasteners	Painted	10	10% Have RR <25%	3
The Willows	Townsville	Multicovered PlayArea	Gutters	CB	10	RR on CB hangers, some RR spots(sparse) more regular with leaf coverage	2.5
The Willows	Townsville	Multicovered PlayArea	Down Pipes	CB	10	Some damage at bottom edge	2
The Willows	Townsville	Multicovered PlayArea	Steel Supports	Painted	10	Good Condition	1
The Willows	Townsville	Admin	Roof	CB	8	No damage to top coat except for some chalking	1.5
The Willows	Townsville	Walkway from Admin	Roof Underside	CB	8	Significant pin hole red rusting in places (up to 30% damage) Also edge damage up to 3 mm	2.5
The Willows	Townsville	Admin	Roof Fasteners	Painted Bx	8	Most have retained paint, some (5-10%) have red rust >50%	3
The Willows	Townsville	Admin	Gutters Exterior	CB XRW	8	Good	1

School	Zone	Building	Component	Type	Age	Condition	Rating
The Willows	Townsville	Admin	Gutters Interior	CB XRW	8	RR spots in the outside bend, some also on inner edge.	2.5
The Willows	Townsville	Admin	Downpipes	Gal	8	up to 60% WCP	3
The Willows	Townsville	Admin	Flashings	CB	8	Spots of WCP and RR also chalking	2.5
The Willows	Townsville	Admin	Windows	Anodised Al	8	Damage from water cleaning solution	1
The Willows	Townsville	Walkway from Admin	Steel Supports	Gal	8	Look ok, grain obvious	1
The Willows	Townsville	Walkway from Admin	Purlins	CB or powder coated steel	8	Paint flaking off at edges, RR at edges	2
The Willows	Townsville	Library / resource centre	Roof	CB	10	West facing 20°, Dull & Dirty	1
The Willows	Townsville	Library / resource centre	Roof	CB	1	West facing 20°	0
The Willows	Townsville	Library / resource centre	Roof Fasteners	Bx	10	third have > 20% RR, some paint damage due to installation	3
The Willows	Townsville	Library / resource centre	Roof Fasteners	B4	1	all good	1
The Willows	Townsville	Library / resource centre	Gutters	CB	10	Dull, loss of shine possible staining underneath on outside, inside red rust spots	2
The Willows	Townsville	Library / resource centre	Gutters	CB	1	shiny on outside, dirty inside no obvious damage	1
The Willows	Townsville	Library / resource centre	Downpipes	CB	10	no obvious damage	1
Sunshine Beach	Sunshine Coast	Staff room Sheltered area	Roof	CB	5	10°, moderately maintained, some leaves and sticks, Morning shading, no coating loss, no WCP, Slight RR on cut edge, no perforations	1.5
Sunshine Beach	Sunshine Coast	Staff room Sheltered area	Fasteners	Painted Buildex	5	Loss of paint due to mechanical damage, localised WCP where paint lost, sparsely spotted with RR	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Sunshine Beach	Sunshine Coast	Staff room Sheltered area	Gutters	CB double sided	5	no damage except WCP on hangers on sheltered edges 1-5mm	1.5
Sunshine Beach	Sunshine Coast	Staff room Sheltered area	Flashings	CB	5	Dull & Dirty some undercutting at cut edges with roof sheeting up to 2mm	2
Sunshine Beach	Sunshine Coast	Staff room Sheltered area	Post holders	Gal	5	some WCP at ground level	2
Sunshine Beach	Sunshine Coast	Admin / staff room	Roof Old	Al	25	Could not get close but much duller than newer section	1.5
Sunshine Beach	Sunshine Coast	Admin / staff room	Roof Newer	Al	16	Textured aluminium sheet, no noticeable pitting, Dull and dirty	1
Sunshine Beach	Sunshine Coast	Admin / staff room	Gutter	Al	16	noticeable pitting but no perforations	3
Sunshine Beach	Sunshine Coast	Admin / staff room	Flashings newer	Al	16	Flat smooth with noticeable pitting	3
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Roof Top	Al	25	Textured aluminium sheet, very dirty stained from leaf litter. Pitting not obvious	1.5
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Roof Underside	Al	25	Btn 25 and 50% large grey spots, with large white pustules in the centre of the larger grey spots, no noticeable perforations	3
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Steel Supports	Galvanised steel	25	WCP present on <25%	2
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Beams	Galvanised steel	25	Significant WCP 25-50%, some red rust spots <10%	3
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Fasteners	Stainless Steel	25	Look fine but are very dirty	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Sunshine Beach	Sunshine Coast	Walkway junction btn Admin & Under covered area	Gutters	Al	25	Textured Al, Outside Side looks good, Outside underneath shows WCP, Outside top edge shows black spot inside the texture and looks pitted, Inside side walls Ok, Inside bottom is very stained and possibly pitted, no noticeable perforations	2.5
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Roof Top	Al	17	Textured aluminium sheet, very dirty stained from leaf litter. Pitting not obvious	1.5
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Roof Underside	Al	17	Around 25 % grey spots not as big and not as much coverage as Walkways	2.5
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Steel Supports	Galvanised steel	17	Slight WCP grain structure pronounced more towards top	1
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Beams	Galvanised steel	17	Large Spots of WCP and Some RR Mainly in crevices at connections	3
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Fasteners	Stainless Steel	17	Good Condition although dirty and stained	1
Sunshine Beach	Sunshine Coast	Undercovered area btn B1 & B12	Flashings newer	Al	17	Flat smooth very dirty with some pitting	2.5
Sunshine Beach High	Sunshine Coast	Student Centre	Roof	CB	13	North facing, 25°, not maintained, no shading, Dull&Dirty, no WCP or RR, undercutting from cut edge at gutter 1-10mm	1.5
Sunshine Beach High	Sunshine Coast	Student Centre	Fasteners	Painted	13	Some paint damage and Slight WCP where paint damaged, no RR	2
Sunshine Beach High	Sunshine Coast	Student Centre	Gutters	CB Double Sided	13	Full of leaf litter and mud, but in good condition	1
Sunshine Beach High	Sunshine Coast	Student Centre	Flashings	CB	13		1.5
Sunshine Beach High	Sunshine Coast	Student Centre	Windows	Anodised painted	13	Minor damage at cut edge	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Sunshine Beach High	Sunshine Coast	Student Centre	Air Grills	Aluminium Anodised	13	Insignificant corrosion in crevices	2
Sunshine Beach High	Sunshine Coast	Student Centre	Rain Head	CB Double Sided	13	Rusted out from inside	5
Sunshine Beach High	Sunshine Coast	Student Centre	Gutter hangers	Gal	13	Red rust on cut edges	3
Sunshine Beach High	Sunshine Coast	Student Centre	Down pipes	CB	13	Mostly looks good except where it is in Rain head. Here there is `20mm of undercutting from cut edge and red rust	3
Sunshine Beach High	Sunshine Coast	Student Centre	Beams		13	Steel beams on lower roof section have red rust present and upper roof section has significant RR at join btn two beams as well as flaking rust.	4
Sunshine Beach High	Sunshine Coast	General studies	Roof	CB	9	North facing, 10°, mild dust & dirt, some chalking, some blistering and undercutting up to 20mm, reasonably significant at edge at gutter	2.5
Sunshine Beach High	Sunshine Coast	General studies	Fasteners	Painted	9	40% have > 80% RR, spots of RR on all fasteners	3.5
Sunshine Beach High	Sunshine Coast	General studies	Gutters	CB double sided	9	Reasonably clean, dry dirt coverage, minor RR at cut edges including overflow cutouts	2
Sunshine Beach High	Sunshine Coast	General studies	Windows	Anodised	9	Look fine	1
Sunshine Beach High	Sunshine Coast	General studies	Gutter hangers	Gal	9	RR on cut edges	2
Sunshine Beach High	Sunshine Coast	General studies	Purlins / beams	? Painted gal	9	Bolts have RR, WCP is on purlins in sheltered areas	2.5
Sunshine Beach High	Sunshine Coast	General studies	Downpipes	CB	9	look good except for WCP at pop rivets at join to gutters	1.5
Sunshine Beach High	Sunshine Coast	Walkway near General Studies	Roof top	CB	9	OK in general, Dull & Dirty, no shading, some loss of gloss, Some undercutting at edges <10mm, some blistering	2.5
Sunshine Beach High	Sunshine Coast	Walkway near General Studies	Roof Underside	CB	9	Performing poorly, <25% WCP, RR in places up to 30mm in places	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Sunshine Beach High	Sunshine Coast	Walkway near General Studies	Fasteners	Painted	9	<20% have >50% RR, all show some RR spots too.	3.5
Sunshine Beach High	Sunshine Coast	Walkway near General Studies	Steel supports	Painted steel	9	Blistering of paint, 15-20% blistering breaking, worst on sheltered cross members than uprights	2
Coolum High	Sunshine Coast	Walkway Btn Bldng F and Amenities	Roof top	Al	22	Moderate shading, dirty, no WCP	1
Coolum High	Sunshine Coast	Walkway Btn Bldng F and Amenities	Roof Underside	Al	22	15% WCP	2
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Roof Top	CB	22	Clean, no shading, significant coating loss on North side up to 50% of top coat	2
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Roof Underside	CB	22	Clean and is cleaned once a year, small localised red spots, some WCP within 5mm of edges	2.5
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Roof Fasteners	Stainless Steel	22	Some red marks but minimal damage	2
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Gutters	CB Galvanised inside	22	These are being replaced since original	5
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Downpipes	Inbuilt structural, steel	22	Problematic where water collects at bottom	2
Coolum High	Sunshine Coast	Walkway Btn Amenities and Admin (position 2)	Steel Supports	Painted Steel	22	Reasonable condition, Walkways are washed once a year	2
Coolum High	Sunshine Coast	Bldng ?	Windows	Al not anodised	22	No serious problems, some damage at bottom (where water collects)	1.5

School	Zone	Building	Component	Type	Age	Condition	Rating
Coolum State	Sunshine Coast	Walkway btn block C and toilets (pos 1)	Roof top	Gal Kliplock	36	No slope, slight shading, >25% RR	3.5
Coolum State	Sunshine Coast	Walkway btn block C and toilets (pos 1)	Roof Underside	Gal Kliplock	36	100% WCP, spots of RR < 1%	3
Coolum State	Sunshine Coast	Walkway btn block C and toilets (pos 1)	Roof Fasteners	Gal	36	100% RR	4
Coolum State	Sunshine Coast	Walkway btn block C and toilets (pos 1)	Steel Supports	Painted steel	36	Where the uprights go into the concrete red rust, where flat plates are welded on to the bottom they have minimal damage. <5% RR on uprights,<10% RR on x-members where blisters have ruptured	3
Coolum State	Sunshine Coast	Toilet block south of teaching block 4 (B), east of Block C, (marked Position 2)	Roof	Zincalume	30	Black staining, not maintained, covered with leaf litter, lots of coating loss	2.5
Coolum State	Sunshine Coast	Toilet block south of teaching block 4 (B), east of Block C, (marked Position 2)	Roof Fasteners	Buildex gal	30		
Coolum State	Sunshine Coast	Toilet block south of teaching block 4 (B), east of Block C, (marked Position 2)	Gutters	Zincalume Painted	30	Definite Blisters of RR	3
Coolum State	Sunshine Coast	Block B (D)	Gutters	Al	30	Good condition	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Coolum State	Sunshine Coast	Library Block G (I) Position 3	Roof	CB	22	Facing East, 10°, not maintained, clean, no shading, no Coating loss, no WCP, No RR, Edges are mostly ok, small amount of damage along longitudinal edge	1
Coolum State	Sunshine Coast	Library Block G (I) Position 3	Ridge Cap	CB	22	Good condition	1
Coolum State	Sunshine Coast	Library Block G (I) Position 3	Roof Fasteners	Painted	22	Mechanical damage, WCP up to 50% only where paint removed, some RR spots 20%	2.5
Coolum State	Sunshine Coast	Library Block G (I) Position 3	Gutter	CB	22	Some dirt	1
Coolum State	Sunshine Coast	Library Block G (I) Position 3	Downpipes	CB	22	Slight edge corrosion on mounting brackets	1
Coolum State	Sunshine Coast	Walkway East of Block 2 (L) position 4	Roof Top	Zincalume	25	no angle, not maintained, No WCP	1
Coolum State	Sunshine Coast	Walkway East of Block 2 (L) position 4	Roof Underside	Zincalume	25	40% WCP and 10% black CP, some RR where ZNAI nodules have been	3
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Roof top	CB	15	0°, Dull&Dirty losing gloss, RR spots in localised areas	2
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Roof Underside	CB	15	1 spot with significant RR at a join under flashing, possibly due to moisture trap	2
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Roof Fasteners	Coated Marked "F"	15	100% RR all have RR	5
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Flashings	CB	15	0°, Dull&Dirty losing gloss, RR spots in localised areas	2.5
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Gutters	CB	15	Clean but some dirt ok	1
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Gutter hangers	CB	15	Several completely destroyed	5
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Downpipes	CB	15	Blistering at joins but otherwise ok	2.5
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Windows	Al anodised lightly	15	Good performance in general except where vegetation has brushed against them	1.5

School	Zone	Building	Component	Type	Age	Condition	Rating
Pacific Paradise	Sunshine Coast	Walkway & Bldngs	Gangnail Plates	Painted	15	Significant WCP	3
Mooloolaba State	Sunshine Coast	Walkway btn Block D and Undercover eating area	Roof Top	Zincalume	21	no angle, WCP on ridges, black spotting and tiny amount of RR	2.5
Mooloolaba State	Sunshine Coast	Walkway btn Block D and Undercover eating area	Roof Underside	Zincalume	21	50% WCP or grey corrosion product	3
Mooloolaba State	Sunshine Coast	Walkway btn Block D and Undercover eating area	Gutters	Painted Zincalume	21	Rusted through in places, most of gutter displays RR	5
Mooloolaba State	Sunshine Coast	Walkway btn Block D and Undercover eating area	Down Pipes	Painted Zincalume	21	Some damage due to impact, paint peeling but otherwise ok some signs of RR inside down pipe	3
Mooloolaba State	Sunshine Coast	Walkway btn Block D and Undercover eating area	Steel Supports		21	Some paint peeling, not maintained, no RR	2
Mooloolaba State	Sunshine Coast	Block D	Windows	Al anodised	21	OK in general, Dull& Dirty, on veranda so Sheltered from washing, no WCP present	1
Mooloolaba State	Sunshine Coast	Block D	Beams		21	Painted beams sheltered by veranda, not cleaned, RR present on edges and has eaten away up to 5mm in parts, but insignificant due to size of beams	2
Mooloolaba State	Sunshine Coast	Block D	Ventilation frames	Steel Painted	21	Dirty, rust in bends	3
Mooloolaba State	Sunshine Coast	Under cover eating area	Roof Top	Zincalume	10	Dull&dirty, no obvious WCP or RR	1
Mooloolaba State	Sunshine Coast	Under cover eating area	Roof Underside	Zincalume	10	looks good maybe some wcp or staining along edge of trough	1.5
Mooloolaba State	Sunshine Coast	Under cover eating area	Purlins	Gal	21	Significant WCP all over (100%), Red rust at joins and edges,	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Mooloolaba State	Sunshine Coast	Under cover eating area	Steel Supports	painted steel	21	Dirty, not cleaned, in general look ok, paint intact mostly, where it isn't there is RR present but only surface. On some there is paint loss and RR at base above where embedded into concrete	2
Mooloolaba State	Sunshine Coast	Block T	Roof Top	CB	2	Good condition, still glossy, some dirt collecting in valleys and bldg up at edge of sheet into gutter	0
Mooloolaba State	Sunshine Coast	Block T Walkway	Roof Underside	CB	2	Good condition a little bit dirty	0
Mooloolaba State	Sunshine Coast	Block T	Roof Fasteners	Painted	2	Some mechanical damage from installation but otherwise good, no WCP	0
Mooloolaba State	Sunshine Coast	Block T	Gutters	CB	2	Dirt and leaves present but no damage	0
Mooloolaba State	Sunshine Coast	Block T	End Cap	CB	2	Good condition	0
Mooloolaba State	Sunshine Coast	Block T and Walkway	Steel Supports	Gal	2	Steel supports on walkway and veranda in good condition, still shiny and little sign of grain structure	0
Mooloolaba State	Sunshine Coast	Block T	Downpipes	Plastic	2	Downpipe are painted plastic and held with stainless brackets, in good condition	0
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Roof	CB	12	facing NE, clean and no shading, Dull	1
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Roof Fasteners	Painted	12	Paint has faded	1
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Fasteners other	Painted non standard	12	Incorrect fasteners used to fix flashings to Walkway almost complete loss of paint and >50% red rust	4
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Gutters	CB	12	A bit of dirt in gutters and paint is dull	1
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Flashings	CB	12	No damage apart from loss of gloss, and possible problems around the non standard fasteners	1.5
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Windows	Anodised Al	12	No Damage	1
Mountain Creek High	Sunshine Coast	Admin Bldg and Walkway	Steel Supports	Painted Galvanised steel	12	No damage, No corrosion visible at base	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Mountain Creek High	Sunshine Coast	Admin Bldng and Walkway	Gutter clips	CB	12	WCP from edges	2
Mountain Creek High	Sunshine Coast	Arts Bldng	Roof	CB	12	Dull & Dirty	1
Mountain Creek High	Sunshine Coast	Arts Bldng	Roof Fasteners	Painted	12	Significant RR on all fasteners >25%	4
Mountain Creek High	Sunshine Coast	Arts Bldng	Gutters	CB	12	Dirt inside but no leaves, outside is dull	1
Mountain Creek State	Sunshine Coast	Admin Bldng	Roof	CB	15	Very Dull & Dirty	1
Mountain Creek State	Sunshine Coast	Admin Bldng	Ridge Cap	CB	15	Dull & Dirty	1
Mountain Creek State	Sunshine Coast	Admin Bldng	Gutters	Zincalume Painted outside only	15	look ok, some pitting(grey) <10%, no RR	2
Mountain Creek State	Sunshine Coast	Admin Bldng	Roof Fasteners	Painted Buildex	15	no significant wcp, no RR	1
Mountain Creek State	Sunshine Coast	Admin Bldng	Windows	Aluminium	15		
Mountain Creek State	Sunshine Coast	Admin Bldng	Flashings	Zincalume Painted	15	Widespread peeling paint	2
Mountain Creek State	Sunshine Coast	Walkway from Admin Bldng	Steel Supports	Galvanised steel	15	moderately corroded, Grains obvious, all cemented in at expansion joints and corrosion initiating at these points	2
Mountain Creek State	Sunshine Coast	Walkway from Admin Bldng	Beams	Galvanised steel	15	In bad way in places red rust present	3
Mountain Creek State	Sunshine Coast	Walkway from Admin Bldng	Roof Underside	CB	15	no damage except where incorrectly specified screw used and have gone rusty and under cut sheeting	2
Buddina State	Sunshine Coast	Covered Area & Walkways	Roof	Aluminium	28	Heavily pitted top and bottom, 40% grey corrosion product	4
Buddina State	Sunshine Coast	Covered Area & Walkways	Beams	Painted Steel	28	Rusting in places where paint damaged, needs maintenance but is not significant	2
Buddina State	Sunshine Coast	Covered Area & Walkways	Roof	CB	28	Significant RR undercutting from edge sheltered by ridge capping Otherwise ok	3
Buddina State	Sunshine Coast	Covered Area & Walkways	Roof Fasteners	Painted	28	Significant red rust >75% coverage	4

School	Zone	Building	Component	Type	Age	Condition	Rating
Buddina State	Sunshine Coast	Covered Area & Walkways	Gutters	Painted Al	28	Paint peeling,	2
Buddina State	Sunshine Coast	Covered Area & Walkways	Windows	Al Anodised	28	Some damage mainly confined to windows directly in line with coast	2.5
Buddina State	Sunshine Coast	Covered Area & Walkways	Gang Nails	Painted	28	Significant Red rust, up to 50%	4
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Roof top	CB	10	0-5° angle, not maintained some dirt, no shading, no coating loss	1
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Roof Underside	CB Single sided	10	10% blistering under paint, mechanical damage, WCP up to 30%,some red rust	3
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Roof Fasteners	Painted	10	some damage, red rust in places	3
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Gutters	CB Single sided	10	Good in general, some RR spots internal, WCP in corner joins and undercutting up to 5mm	3
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Downpipes	CB	10	OK	1
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Flashings	CB Single sided	10		
Kenmore State	Brisbane	Walkway Senior Toilets to B Block	Steel Supports	Painted Gal	10	Good Condition in general	1
Kenmore State	Brisbane	Senior covered area	Roof Underside	Zincalume		Dirty, 50% black & white corrosion product on underside no visible RR, roof angle 0	2
Kenmore State	Brisbane	Senior covered area	Steel Supports	Painted steel		In good condition except for footing, concrete has bad adhesion at base and corrosion present, paint loss and red rust present	2
Kenmore State	Brisbane	Senior covered area	Gang Nails	Painted		Good condition	1
Kenmore State	Brisbane	Senior covered area	Roof top	Zincalume		Dull & Dirty, no obvious WCP and no RR	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Kenmore State	Brisbane	Walkway at Junior Covered area	Roof top	Kliplock deck, Painted on top,		Paint wearing, up to 50% loss, Thin even WCP were paint lost.	2
Kenmore State	Brisbane	Walkway at Junior Covered area	Roof Underside	Kliplock deck, Painted on top,		WCP and grey spots covering all	3
Kenmore State	Brisbane	Junior Covered area	Roof top	Galvanised corrugated sheet Painted on top		Paint loss to > 50%, one sheet replace with non painted and large rust spot now present	3
Kenmore State	Brisbane	Junior Covered area	Roof Underside	Galvanised corrugated sheet Painted on top		WCP evenly covered, Heavy WCP and RR at joins extending 10-30mm	4
Kenmore State	Brisbane	Tuck shop	Roof top	Zincalume Kliplock		Dull & Dirty, No obvious damage	1
Kenmore State	Brisbane	Bldngs	Windows	Al	10	Good condition	1
Brookfield State	Brisbane	Covered Play Area, End of D Block	Roof top	CB	6	Not Maintained, Dirty only, No gloss loss or coating loss	0
Brookfield State	Brisbane	Covered Play Area, End of D Block	Ridge Cap	CB	6	Good condition	0
Brookfield State	Brisbane	Covered Play Area, End of D Block	Roof Fasteners	Painted	6	Mechanical damage has deformed but not broken paint, good condition	0
Brookfield State	Brisbane	Covered Play Area, End of D Block	Gutter	CB	6	good condition but there are a few rust spots, EIS done	2
Brookfield State	Brisbane	N Block	Roof	CB	6	15°, not maintained, clean, no shading, faded undercutting where dirt collects on edge of roof (5mm)	1.5
Brookfield State	Brisbane	N Block	Roof	CB	4	15°, not maintained, clean, no shading, faded undercutting where dirt collects on edge of roof (5mm)	1.5
Brookfield State	Brisbane	N Block	Roof Fasteners	Painted	6	Mech damage, light WCP or dulling at damage	1.5
Brookfield State	Brisbane	N Block	Roof Fasteners	Painted	4	Mech damage, light WCP or dulling at damage	1.5
Brookfield State	Brisbane	N Block	Gutters	CB	6	Blistering and WCP at drip point from roof	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Brookfield State	Brisbane	N Block	Gutters	CB	4	Blistering and WCP at drip point from roof	2
Brookfield State	Brisbane	C Block Walkway	Roof top	ZA	37	Flat, Not maintained, dirty, Black and Gray CP 10-20%, 1% really black spots	2
Brookfield State	Brisbane	C Block Walkway	Roof Underside	ZA	37	Black & Grey CP 50%	2.5
Brookfield State	Brisbane	C Block Walkway	Gutters	Painted ZA outside	37	Red rust on hangers, bottom has red rust	3
Brookfield State	Brisbane	C Block Walkway	Flashings	Gal	37	Corroded, dull no red rust	2
Brookfield State	Brisbane	C Block Walkway	Steel supports	Painted Gal	37	Maintained with thick paint, chipped and flaking in places, some older posts show significant RR, good cementing at base	3
Brookfield State	Brisbane	C Block	Roof	CB	37	Flat, dirty, but swept, Paint cracking & susceptible to peeling off in small segments, Paint loss on ridges, no visible WCP, some RR on ridges	3
Brookfield State	Brisbane	C Block	Roof Fasteners	Gal	37	All red rust	5
Brookfield State	Brisbane	C Block	Gutters	CB Single sided	37	Ok have been changed at some stage	1
Brookfield State	Brisbane	C Block	Windows	Al anodised	37	Very few tiny pits, mostly good condition	2
Brookfield State	Brisbane	C Block	Steel supports	Painted steel	37	Steel supports on underside of covered walkway show significant red rust. Moisture gets btn steel and cement fibre sheet.	3
Brookfield State	Brisbane	Covered are (Shed) south of A block Walkway	Roof	Painted Gal	37	Pre 1970 50% of paint removed	2
Brookfield State	Brisbane	Covered are (Shed) south of A block	Roof	Gal	27	100% WCP	3
Brookfield State	Brisbane	Covered are (Shed) south of A block	Gutter	Painted ZA	27	Perforated where water collects	5

School	Zone	Building	Component	Type	Age	Condition	Rating
Brookfield State	Brisbane	Covered are (Shed) south of A block Walkway	Gutter	Painted Gal	37	100% RR inside (well drained) not perforated due to good drainage	4
Chapel Hill State	Brisbane	Walkway Btn Admin & Covered Games Area	Roof Top	ZA	31	Dull and Dirty <50% black spots, no WCP no RR	2
Chapel Hill State	Brisbane	Walkway Btn Admin & Covered Games Area	Roof Underside	ZA	31	100% WCP, 20% black spots	3
Chapel Hill State	Brisbane	Walkway Btn Admin & Covered Games Area	Gutter		31		
Chapel Hill State	Brisbane	Walkway Btn Admin & Covered Games Area	Steel Supports	Painted steel	31	Good condition	1
Chapel Hill State	Brisbane	Walkway Btn Admin & Covered Games Area	Roof Fasteners	Zinc ?	31	100% RR	5
Chapel Hill State	Brisbane	Covered Games Area	Roof Underside	ZA	31	60% WCP, <25% Grey and black spots	3
Chapel Hill State	Brisbane	Amenities Block	Roof top	ZA	31	Dull and Dirty, some staining from leaf litter some black spotting <10%, no RR	2
Chapel Hill State	Brisbane	Amenities Block	Gutter	Painted ZA	31	Repainted outside a number of times, inside bottom red rust	4
Chapel Hill State	Brisbane	Amenities Block	Roof Fasteners	May have been painted	31	some 100% RR, others <25% WCP pustules	4
Chapel Hill State	Brisbane	Amenities Block	Steel Supports	Painted steel	31	except for paint flaking in good condition, no Red Rust	2
Chapel Hill State	Brisbane	Teaching Block 2	Roof	ZA	31	Dull & Dirty, some black spotting, no RR or noticeable WCP	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Chapel Hill State	Brisbane	Teaching Block 2	Gutter	Stainless Steel	7	Good no damage	0
Chapel Hill State	Brisbane	Teaching Block 2	Ridge Cap	ZA	31	Badly pitted lots of Black spotting > 50%, 100% RR under leaf litter	4
Chapel Hill State	Brisbane	Resource Centre	Roof	ZA	27	dull but shiny on ridges, no WCP or RR, some dirt	1
Chapel Hill State	Brisbane	Resource Centre	Gutter	Stainless Steel	7	No Damage but full of leaves	0
Chapel Hill State	Brisbane	Resource Centre	Ridge cap	ZA	27	no damage, only slightly dull	1
Chapel Hill State	Brisbane	Walkway Btn Resource & Teaching Block 6	Roof top	CB		Heavily Stained, no obvious WCP or RR	1
Chapel Hill State	Brisbane	Walkway Btn Resource & Teaching Block 6	Roof Underside	CB		WCP especially on lower ridge edges, some RR spots	2.5
Chapel Hill State	Brisbane	Walkway Btn Resource & Teaching Block 6	Steel Supports	Painted steel		Good condition painted many times no Red Rust	1
Chapel Hill State	Brisbane	Walkway Btn Resource & Teaching Block 6	Gutter	CB		Painted on outside some pitting of paint inside bottom	2
Chapel Hill State	Brisbane	Walkway Btn Resource & Teaching Block 6	Roof Fasteners	Painted		Stained, no obvious WCP or RR	1
Chapel Hill State	Brisbane	Admin Bldng	Roof	ZA	31	Dull and some black/grey spotting <25% pitting (black spots) up to 50%, no obvious RR	2
Chapel Hill State	Brisbane	Admin Bldng	Gutter	ZA	31		2.5
Chapel Hill State	Brisbane	Admin Bldng	Roof Fasteners	Zinc	31	Dull possible general WCP over all of Fastener, no pustules	2
Chapel Hill State	Brisbane	Admin Bldng	Ridge Cap	ZA	31	Black spots and WCP up to 50%	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Payne Road State	Brisbane	Activities Bldng	Roof Top	CB	9	Very stained, dull & Dirty, staining mainly in trough, lichens growing on roof, Some undercutting at edges where dirt builds up, lichens may be damaging the paint.	2
Payne Road State	Brisbane	Activities Bldng	Roof Lining	CB	9	Underneath lined with colorbond sheet. Dull no obvious damage	1
Payne Road State	Brisbane	Activities Bldng	Roof Fasteners	Painted	9	BX fasteners, Some mechanical damage no obvious WCP, no RR	1
Payne Road State	Brisbane	Activities Bldng	Ridge Cap	CB	9	Same as roof	2
Payne Road State	Brisbane	Activities Bldng	Gutter	CB	9	Some undercutting around joins and pop rivets, > 10% coating loss, Gal or ZA hangers some RR	2
Payne Road State	Brisbane	Activities Bldng	Windows	Painted Al	9	Some WCP at joins and edges, <1mm of undercutting. Pop rivets WCP	2
Payne Road State	Brisbane	Activities Bldng	Downpipes	Plastic	9		
Payne Road State	Brisbane	Walkway to Activities Bldng	Roof top	CB	9	Very stained, dull & Dirty, staining mainly in trough, lichens growing on roof, Some undercutting at edges where dirt builds up, lichens may be damaging the paint.	2
Payne Road State	Brisbane	Walkway to Activities Bldng	Roof Underside	CB	9	Paint looks stained which may be the start of some undercutting or blistering	1
Payne Road State	Brisbane	Walkway to Activities Bldng	Gutter	CB	9	Dry and only dirt no leaf litter, no obvious damage inside, some undercutting and RR around some pop rivets	1.5
Payne Road State	Brisbane	Walkway to Activities Bldng	Steel Supports	Painted steel	9	Paint dull but intact, some paint damage but no WCP or RR	2
The Gap High	Brisbane	Admin Block	Gutters	Painted Gal	47	Rusted through in places	5
The Gap High	Brisbane	Walkway btn Admin and B Block	Steel supports	Painted Steel	47	Some paint chipped off but no Red rust seen	2
The Gap High	Brisbane	Walkway btn Admin and B Block	Roof top	ZA	47	Dull & Dirty, Leaf litter present near gutters, Pitting and black spots approx 25%	2

School	Zone	Building	Component	Type	Age	Condition	Rating
The Gap High	Brisbane	Walkway btn Admin and B Block	Roof Underside	ZA	47	25% black spotting, Red rust along sheet edges, small WCP pustules	2
The Gap High	Brisbane	Walkway btn Admin and B Block	Gutters	ZA painted outside only	47	Red Rust inside bottom, and up to 50% up side walls, no perforations seen	4
The Gap State	Brisbane	Walkway Btn Library and C Block	Roof Top	CB	27	Flat Dirty & very Dull and Faded, Undercutting at sheet edge at gutter in trough of sheet up to 15mm	2
The Gap State	Brisbane	Walkway Btn Library and C Block	Roof Underside	CB	27	Blistering and WCP and a little RR on Cut edges of joins, some Blistering on sheet	2.5
The Gap State	Brisbane	Walkway Btn Library and C Block	Roof Fasteners	Painted	27	Some mechanical damage from installation, some WCP, colour faded	2
The Gap State	Brisbane	Walkway Btn Library and C Block	Gutters	CB	27	Some small blisters inside no Red Rust, undercutting on outside at joins up to 10mm	2
The Gap State	Brisbane	Walkway Btn Library and C Block	Steel Supports	Painted steel	27	Look ok some paint chips no RR	2
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Roof Top	CB	27	Dull & Dirty, curved roof, some leaves and lichens, some undercutting at sheet edge in gutters up to 10mm	2
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Roof Underside	CB	27	Some blistering, edge corrosion in places up to 2mm	2
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Roof Fasteners	Painted	27	Mechanical damage to most WCP <5%	1.5
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Gutters	CB	27	Very dirty full of leaves and water some plants growing, Blistering present some RR on edges	2

School	Zone	Building	Component	Type	Age	Condition	Rating
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Steel cross members	Gal	27	In general good condition except for a couple of places where red rust spots up to 20mm of unknown origin are present under roof	3
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Steel Supports	Painted	27	some loss of paint chips, rr at bases with concrete, some rr spots	2
The Gap State	Brisbane	Covered area Btn Library, C Block and D Block	Downpipes	CB	27	CB sheet connected to Steel support RR at bottom	2.5
The Gap State	Brisbane	Activities covered area	Roof Underside	ZA	27	Covered with white and grey corrosion product, some black spots	3
The Gap State	Brisbane	Activities covered area	Gang nails	Painted	27	Good condition no WCP or RR	1
The Gap State	Brisbane	Shade sail in Quadrangle Btn Blocks B, A, and C	Steel Supports	Painted Gal	17	Paint cracking, no corrosion on uprights, red rust around Welds, some corrosion at joins of heavy structural members	2
Hilder Road State	Brisbane	Teaching Block 3	Roof	ZA	27	On cleaning still shiny, Flat, some maintenance, clean, slight shading, 10% Black CP, general WCP, 1% RR, some heavy pitting	3
Hilder Road State	Brisbane	Teaching Block 3	Gutters	ZA	27	Large pits up to 6mm in Dia, leave and dirt present, no obvious RR	2
Hilder Road State	Brisbane	Teaching Block 3	Roof Fasteners	Gal	27	Buildex, dull, light WCP	2
Hilder Road State	Brisbane	Teaching Block 3	Flashings	Gal	27	White pustules over top surface (15% of area), black of bottom of pustule	2.5
Hilder Road State	Brisbane	Teaching Block 3	Windows	Anodised Al	27	Small Black pits (<0.5mm) at base of windows spaced ~4mm apart	3
Hilder Road State	Brisbane	Teaching Block 3	Steel Supports	Painted Steel	27	Not well maintained, Red Rust showing where paint has been cracking & peeling (most damage is mechanical)	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Hilder Road State	Brisbane	Teaching Block 3	Roof	ZA	18	On cleaning still shiny, Flat, some maintenance, clean, slight shading, general WCP, some pitting less corroded than 1980's roof on same bldng	2.5
Hilder Road State	Brisbane	Teaching Block 3	Gutters	ZA	18	Large pits, more leaves than older section and dirt present, 30% RR	3
Hilder Road State	Brisbane	Teaching Block 3	Roof Fasteners	Gal	18	Buildex, dull, light WCP	2
Hilder Road State	Brisbane	Teaching Block 3	Flashings	Gal	18	White pustules over top surface (15% of area), black of bottom of pustule	2.5
Hilder Road State	Brisbane	Teaching Block 3	Windows	Anodised Al	18	Small Black pits (<0.5mm) at base of windows spaced ~4mm apart	3
Hilder Road State	Brisbane	Teaching Block 3	Steel Supports	Painted Steel	18	Not well maintained, Red Rust showing where paint has been cracking & peeling (most damage is mechanical)	3
Hilder Road State	Brisbane	Walkway from Teaching Block 3	Roof top	ZA	27	Dull & Dirty, 10% Heavy Black spotting, <1 % RR	2
Hilder Road State	Brisbane	Walkway from Teaching Block 3	Roof Underside	ZA	27	>50% WCP, >10% Black CP	3
Hilder Road State	Brisbane	Walkway from Teaching Block 3	Gutters	ZA painted outside only	27	100% White and Black CP, no obvious RR except at joins where there is RR and significant (>10mm) undercutting.	3
Hilder Road State	Brisbane	Walkway from Teaching Block 3	Flashings	Gal	27	Thin film of WCP, no obvious RR	2
Hilder Road State	Brisbane	Walkway from Teaching Block 3 to Amenities 2	Roof Underside	ZA	27	>50% WCP, <10% Black CP	3
Hilder Road State	Brisbane	Walkway from Teaching Block 3 to Amenities 2	Gutters	ZA painted outside only	27	100% RR inside bottom, and 25% of wall	4
Hilder Road State	Brisbane	Covered Play Area 1	Roof Underside	ZA	27	approx. 50% WCP, <25% Black CP	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Hilder Road State	Brisbane	Covered Play Area 1	Gang nails	Painted	27	Good condition no WCP or RR	1
Blackburn PS	Blackburn	Prep Bldng	Roof top	CB	15	10% coating loss, Dull & Dirty, Chalking, no cut edge corrosion, Some pin pricks which may be corrosion, more damage in valleys at edge of sheet	2
Blackburn PS	Blackburn	Prep Bldng	Roof Fasteners	Painted	15	some paint loss, some WCP	1.5
Blackburn PS	Blackburn	Prep Bldng	Ridge Cap	CB	15	Very dull & dirty	1
Blackburn PS	Blackburn	Prep Bldng	Gutters	CB	15	some maintenance, Faded Dull, similar condition to roof	1.5
Blackburn PS	Blackburn	Prep Bldng	Downpipes	ZA painted outside only	15	Extensive RR around joint to gutter, wrong insert?	2
Blackburn PS	Blackburn	Veranda on Admin Bldng	Roof	ZA	8	Some cut edge corrosion btn sheets, Condensation marks	2
Blackburn PS	Blackburn	Admin Bldng	Roof	CB	8	Very dull & dirty	1
Blackburn PS	Blackburn	Admin Bldng	Ridge Cap	CB	8	signs of cut edge corrosion	1.5
Blackburn PS	Blackburn	Admin Bldng	Roof Fasteners	Painted	8	no rr	1
Blackburn PS	Blackburn	Admin Bldng	Fasteners other	metal	8	on ridge cap, wrong fasteners?, RR	4
Blackburn PS	Blackburn	Admin Bldng	Gutters	CB	8	Corrosion around join to downpipe	2
Blackburn PS	Blackburn	Admin Bldng	Steel supports	painted	8	RR where paint is chipped from surface	2
Blackburn PS	Blackburn	Walkway north of Library	Roof Top	ZA	15	WCPspots<10%, Valleys dirt, ridges clean, not pitted very dull	2
Blackburn PS	Blackburn	Walkway north of Library	Roof Underside	ZA	15	RR at panel joins, no RR in middle of sheets, corrosion spots	2
Blackburn PS	Blackburn	Walkway north of Library	Gutter	Gal	15	Btn walkway and next roof, 100% RR in bottom	4
Blackburn PS	Blackburn	Walkway north of Library	Roof Fasteners	Gal	15	70% have RR	3
Blackburn PS	Blackburn	Walkway north of Library	Flashing	Gal	15	covered in light WCP no RR	2.5
Blackburn PS	Blackburn	Computer Centre	Roof Top	ZA	15	Dull maybe light CP	1.5
Blackburn PS	Blackburn	Computer Centre	Roof Fasteners	Gal	15	70% of Fasteners 100% RR	3.5

School	Zone	Building	Component	Type	Age	Condition	Rating
Blackburn PS	Blackburn	Computer Centre	Ridge Cap	ZA	15	Shiny	1
Blackburn PS	Blackburn	Library	Roof	ZA	8	Bright Shiny	0.5
Blackburn PS	Blackburn	Library	Gutters	CB	8	Clean no corrosion	0
Blackburn PS	Blackburn	Library	Roof Fasteners	Gal	8	New looking	0
Blackburn PS	Blackburn	Arts Bldng	Roof	ZA	15	Very Dull Kliplock	1.5
Blackburn PS	Blackburn	Arts Bldng	Gutters	ZA	15	looks new	1
Blackburn Lake Primary	Blackburn	Main Bldng	Roof	CB	5	Corrugated, Dull & Dirty, no obvious WCP, but blistering on edges at gutter	1.5
Blackburn Lake PS	Blackburn	Main Bldng	Gutter	CB	5	Good condition some dirt but maintained, cut edge corrosion on gutter hangers and pop rivets have WCP & RR	2
Blackburn Lake PS	Blackburn	Main Bldng	Downpipes	CB	5	good, (except pop rivets 100% RR)	1.5
Blackburn Lake PS	Blackburn	Main Bldng	Downpipes	ZA	5	ZA insert into gutter corroding	1.5
Blackburn Lake PS	Blackburn	Main Bldng	Flashings	CB	5	Corrugated, Dull & Dirty, no obvious WCP, but blistering on edges at gutter	1.5
Blackburn Lake PS	Blackburn	Main Bldng	Windows	Powdercoated Al	5	Good condition	1
Blackburn Lake PS	Blackburn	Walkway Main Bldng	Roof	CB	5	Kliplock, <5°, Kliplock, not very dull, Blistering of paint, some deterioration, some WCP in blisters	1.5
Blackburn Lake PS	Blackburn	Walkway Main Bldng	Gutter	CB	5	Good	1
Blackburn Lake PS	Blackburn	Block B	Roof	Gal	12	Flat Kliplock Gal, some WCP, <1%RR	2
Blackburn Lake PS	Blackburn	Block A	Roof	CB	12	20-30°, not much debris, no edge corrosion, dull	1
Blackburn Lake PS	Blackburn	Block A	Roof Fasteners	Painted	12	some mechanical damage, light WCP where no paint, no RR	1.5
Blackburn Lake PS	Blackburn	Block A	Gutters	CB	12	OK just dirty but cleaned	1
Blackburn Lake PS	Blackburn	Block A	Downpipes	CB	12	some undercutting, on bent edges and top surface, rivets RR	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Blackburn Lake PS	Blackburn	Block A	Windows	Powdercoated Al	12	Good condition	1
Blackburn Lake PS	Blackburn	Walkway West of Block A	Roof	Gal	12	Kliplock, <5% RR, WCP all over	3
Blackburn Lake PS	Blackburn	Walkway West of Block A	Flashing	Gal	12	100% WCP, painted on external side	3
Blackburn Lake PS	Blackburn	Walkway West of Block A	Steel supports	Painted	12	OK	1
Blackburn Lake PS	Blackburn	Walkway West of Block A	Downpipes	Gal painted	12	OK	1
Blackburn Lake PS	Blackburn	Art Room	Roof	Gal	20	Kliplock, 35°, WCP all over, <5% RR, South and west side	3
Blackburn Lake PS	Blackburn	Art Room	Ridge Cap	gal	20	Some RR, North side worst	3
Blackburn Lake PS	Blackburn	Art Room	Gutters	ZA painted outside only	20	100% Red rust in bottom	4
Blackburn Lake PS	Blackburn	Art Room	Roof	ZA	20	Flat water ponding, good condition still shiny	0
Blackburn Lake PS	Blackburn	Art Room	Downpipes	ZA	20	corrosion around base	1.5
Blackburn Lake PS	Blackburn	Art Room	Gutters	CB	20	RR spots on inside side walls	2
Blackburn Lake PS	Blackburn	Shelter Shed	Roof	Gal	25	10-15°, WCP all over, <5% RR	3
Blackburn Lake PS	Blackburn	Shelter Shed	Flashings	Gal	25	70-80% RR	4
Blackburn Lake PS	Blackburn	Shelter Shed	Gutter	Gal painted	25	RR inside 50%	3.5
Blackburn Lake PS	Blackburn	Shelter Shed	Downpipes	Gal painted	25	RR around joints	3
Box Hill North PS	Blackburn	North Wing Porch next to Library	Roof	Gal	12	south facing, 20-30°, corrugated, general WCP, no RR on roof	2
Box Hill North PS	Blackburn	North Wing Porch next to Library	Roof Fasteners	Gal	12	50% of fasteners have 100% rr,	4

School	Zone	Building	Component	Type	Age	Condition	Rating
Box Hill North PS	Blackburn	North Wing Porch next to Library	Gutters	Gal painted	12	no RR	1
Box Hill North PS	Blackburn	North Wing Porch next to Library	Downpipes	Gal painted	12	Good	1
Box Hill North PS	Blackburn	North Wing GPC75	Roof	Gal	12	WCP	2.5
Box Hill North PS	Blackburn	North Wing GPC75	Roof	Gal	51	Heavy WCP, 20% RR	3.5
Box Hill North PS	Blackburn	North Wing GPC75	Gutters	Gal painted	12	Not maintained, full of water	1
Box Hill North PS	Blackburn	North Wing GPC75	Roof Fasteners	Gal	12	ok look new	1
Box Hill North PS	Blackburn	North Wing GPC75	Steel Supports	Painted ?	12	ok	1
Box Hill North PS	Blackburn	North Wing GPC75	Downpipes	Painted	12	Cut bends	2
Box Hill North PS	Blackburn	North Wing GPC75	Windows	AL	12	OK	1
Box Hill North PS	Blackburn	North Wing GPC72	Roof	ZA	12	Very dull & dirty, slightly grey, grey CP	2
Box Hill North PS	Blackburn	North Wing GPC72	Roof Fasteners	Gal	12	Some WCP	1.5
Box Hill North PS	Blackburn	North Wing GPC72	Flashings	CB	12	Some mechanical damage but OK	1
Box Hill North PS	Blackburn	Newer Bldng on West end of North Wing	Roof	ZA	3	Tree over hang, Dull & Dirty, some loss of ZN, No WCP or RR	1.5
Box Hill North PS	Blackburn	Newer Bldng on West end of North Wing	Gutters	ZA	3	full of debris, WCP on some hangers	1
Box Hill North PS	Blackburn	Newer Bldng on West end of North Wing	Roof Fasteners	Gal	3	Ok no WCP	0

School	Zone	Building	Component	Type	Age	Condition	Rating
Box Hill North PS	Blackburn	Newer Bldng on West end of North Wing	Flashings	CB	3	dirty no visible problems	1
Box Hill North PS	Blackburn	Newer Bldng on West end of North Wing	Gang nails	?	3	Shiny	0
Box Hill North PS	Blackburn	Gym	Roof	ZA	5	Very dull & dirty, black corrosion spots, 20°, no edge corrosion	1
Box Hill North PS	Blackburn	Gym	gutters	CB	5	dirty not clean, no corrosion visible, outside ok but scratched	1
Box Hill North PS	Blackburn	Gym	Windows	AL	5	dirty but ok	1
Box Hill North PS	Blackburn	Gym foyer	Roof	Gal	5	kliplock, <5°, WCP where covered, no RR, clean of debris	1.5
Box Hill North PS	Blackburn	Gym foyer	Steel Supports	Painted	5	Good	1
Box Hill North PS	Blackburn	Block A	Roof	Gal	12	General WCP	2.5
Box Hill North PS	Blackburn	Block A	Ridge Cap	Gal	12	Red Rust	4
Laburnum PS	Blackburn	Toilet Block East end of Main Bldng	Roof	Gal		<5°, kliplock, not maintained, but is clean, no obvious WCP but Red Rust on ridges ~50% RR	3
Laburnum PS	Blackburn	Toilet Block East end of Main Bldng	Gutters	CB	8	Not Maintained or clean, External some loss of gloss, inside looks good.	1
Laburnum PS	Blackburn	Toilet Block East end of Main Bldng	Downpipes	CB	8	a little cut edge corrosion, silicon is weathering, rivets are good.	1
Laburnum PS	Blackburn	Toilet Block East end of Main Bldng	Flashings	Gal		South and SW, <50% RR	3
Laburnum PS	Blackburn	Toilet Block East end of Main Bldng	Windows	Powdercoated Al	0	Good	0
Laburnum PS	Blackburn	Music Bldng East of Main Bldng	Roof	ZA		Not Maintained, ridges clean, valleys very dirty, some debris, very dull & Dirty, some coating loss, small RR spots	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Laburnum PS	Blackburn	Music Bldg East of Main Bldng	Roof Fasteners	Gal		No RR, some WCP ~25%	2
Laburnum PS	Blackburn	Music Bldg East of Main Bldng	Gutters	CB		Exterior repainted, not maintained, very full of leaf litter and wet, looks ok	1
Laburnum PS	Blackburn	Music Bldg East of Main Bldng	Downpipes	PVC			
Laburnum PS	Blackburn	Music Bldg East of Main Bldng	Flashings	ZA		Dirty, no RR same as roof.	2
Laburnum PS	Blackburn	Canteen	Roof	CB	3	kliplock, <5°, not maintained, south facing, looks ok	1
Laburnum PS	Blackburn	Canteen	Gutters	CB	3	Not Maintained, not clean, no corrosion	1
Laburnum PS	Blackburn	Canteen	Downpipes	CB	3	cut edge corrosion lots, WCP on brackets	2
Laburnum PS	Blackburn	Canteen	Flashings	CB	3	OK, no cut edge corrosion	1
Laburnum PS	Blackburn	Canteen Veranda	Roof	CB	3	Not maintained or clean, troughs have lots of dirt, roof ok	1
Laburnum PS	Blackburn	Canteen Veranda	Roof Fasteners	Gal & some Painted	3	<1% WCP	1
Laburnum PS	Blackburn	Canteen Veranda	Gutters	CB	3	Very dirty, faded interior ok	1
Laburnum PS	Blackburn	Canteen Veranda	Flashings	CB	3	Ok	1
Laburnum PS	Blackburn	Canteen Veranda	Strapping	Gal	3	some WCP	1
Laburnum PS	Blackburn	Canteen Veranda	sarking wires	Steel	3	some corrosion	1
Laburnum PS	Blackburn	Canteen Veranda	Gang nails	Gal	3	no corrosion	1
Laburnum PS	Blackburn	Canteen Veranda	Steel supports	Gal	3	no corrosion	1
Laburnum PS	Blackburn	Canteen Veranda	Downpipes	CB	3	ok	1
Laburnum PS	Blackburn	room 9 & 10	Roof	CB	3	not maintained not clean, some dulling	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Laburnum PS	Blackburn	room 9 & 10	Roof Fasteners	Painted	3	no corrosion	0
Laburnum PS	Blackburn	room 9 & 10	gutters	CB	3	ok	1
Laburnum PS	Blackburn	room 9 & 10	Downpipes	CB	3	cut edge corrosion mainly at elbow and join	2
Laburnum PS	Blackburn	room 9 & 10	Downpipes	ZA	3	Insert into gutter and down pipe	1
Laburnum PS	Blackburn	room 9 & 10	Capping	CB	3	Some undercutting	1
Laburnum PS	Blackburn	room 9 & 10	Windows	Powdercoated Al	3	very dirty but ok	1
Laburnum PS	Blackburn	Walkway Btn main bldngs	Roof	CB	7	not maintained, no corrosion, no cut edge corrosion, not too dirty.	1
Laburnum PS	Blackburn	Walkway Btn main bldngs	Roof Fasteners	Painted	7	Mechanical damage, no WCP or RR	1
Laburnum PS	Blackburn	Walkway Btn main bldngs	Steel supports	Gal	7	Dull but ok	1
Laburnum PS	Blackburn	North side of Main bldng	Roof	ZA	10	Dull & Dirty, some Zn loss, small amount of WCP, no cut edge corrosion	2
Laburnum PS	Blackburn	North side of Main bldng	Roof Fasteners	painted	10	most paint gone (25% left), one fastener 50% RR(50%WCP), rest none but some WCP	3
Laburnum PS	Blackburn	North side of Main bldng	Ridge Cap	ZA	10	Dull & Dirty, some Zn loss, small amount of WCP, no cut edge corrosion	2
Laburnum PS	Blackburn	North side of Main bldng	Flashing	ZA	10	Dull & Dirty, some Zn loss, small amount of WCP, no cut edge corrosion	2
Laburnum PS	Blackburn	North side of Main bldng	Gutter	ZA painted outside only	10	no RR on inside but Black spotting(Zn loss) outside ok	1.5
Laburnum PS	Blackburn	Veradah on north of Main Bldng	Roof	Gal		100% WCP, 25% RR, flat	3
Laburnum PS	Blackburn	Veradah on north of Main Bldng	Flashing	ZA		No RR	1
Laburnum PS	Blackburn	Veradah on north of Main Bldng	Gutter	ZA painted outside only		Dirty, losing Zn ie Black spots, pitting obvious inside	2
Laburnum PS	Blackburn	Veradah on north of Main Bldng	Downpipes	Painted		ZA paint blistering, RR at sheltered joint.	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Laburnum PS	Blackburn	Music Room West end of Mani bldng	Gangnail Plates	Gal	10	Grain structure pronounced, sub floor, bldng moved 1997 and sub floor structure built	1
Barwon Heads PS	Barwon Heads	Admin Bldng	Roof	CB	15	45-50°, maintained, not clean, very dull, 20% paint coating loss, no RR, White discolouration near edge of sheets, thinner paint at edges top coat loss.	2
Barwon Heads PS	Barwon Heads	Admin Bldng	Ridge caps	CB	15	ok	1
Barwon Heads PS	Barwon Heads	Admin Bldng	Roof Fasteners	Painted	15	20% have significant RR, SE corner all fasteners have RR	3
Barwon Heads PS	Barwon Heads	Admin Bldng	Gutters	CB	15	Cut edge corrosion at joins, RR on edge where water drips, inside and out ok	2
Barwon Heads PS	Barwon Heads	Admin Bldng	Gutter Hangers	Gal	15	WCP on gal hangers	2
Barwon Heads PS	Barwon Heads	Admin Bldng	Downpipes	CB	15		
Barwon Heads PS	Barwon Heads	Admin Bldng	Gang nails	Painted	15	Painted generally ok but south facing ones were rusting	2
Barwon Heads PS	Barwon Heads	Admin Bldng	Windows	Powdercoated Al	15	Some paint blistering, on south facing, but not a great deal.	2
Barwon Heads PS	Barwon Heads	Admin Bldng West side	Roof	CB	15	45-50°, maintained, not clean, very dull, 20% paint coating loss, no RR, White discolouration near edge of sheets, thinner paint at edges top coat loss. Some undercutting around fasteners	2
Barwon Heads PS	Barwon Heads	Admin Bldng West side	Roof Fasteners	Painted	15	all WCP, 10% have 50% RR, 20% have some RR	3
Barwon Heads PS	Barwon Heads	Admin Bldng West side	Gutters	CB	15	Inside OK, WCP on exterior, RR on Rain head	2
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Roof	CB	7	OK	1
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Roof Fasteners	Painted	7	Some RR on mechanical damage	2
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Gutters	CB	7	Some blistering due to corrosion of gal hangers	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Gutter Hangers	Gal	7	WCP	2
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Downpipes	CB	7	WCP at edges of joins, rivets ok	2
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Windows	Powdercoated Al	7	good	1
Barwon Heads PS	Barwon Heads	Bldng 1 SE	Door Hinges	Stainless Steel	7	Tea Staining	1
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Roof	CB	7	Ok	1
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Roof Fasteners	painted	7	some paint loss, WCP, no RR	2
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Gutters	CB	7	OK, some corrosion on Gal hangers	2
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Downpipes	CB	7	Edge corrosion on joins	2
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Windows	Powdercoated Al	7	ok	1
Barwon Heads PS	Barwon Heads	Bldng 1 SW	Lintel	Painted	7	Some corrosion	
Barwon Heads PS	Barwon Heads	Bldng 3 South	Roof	CB	20	dull & Dirty, undercutting around fasteners, no blistering	2
Barwon Heads PS	Barwon Heads	Bldng 3 South	Roof Fasteners	Painted	20	all 100% RR	5
Barwon Heads PS	Barwon Heads	Bldng 3 South	Ridge Cap	CB	20	dull & Dirty, undercutting around fasteners, no blistering	2
Barwon Heads PS	Barwon Heads	Bldng 3 South	Gutters	CB	20	ok except for joins	2
Barwon Heads PS	Barwon Heads	Bldng 3 South	Gutter Hangers	Gal	20	WCP all over RR where water drips on to hangers	2.5
Barwon Heads PS	Barwon Heads	Bldng 3 East, West and North	Roof	CB	20	dull & Dirty, undercutting around fasteners, no blistering	2
Barwon Heads PS	Barwon Heads	Bldng 3 East, West and North	Roof Fasteners	Painted	20	most 100% red rust but some only 85%	5

School	Zone	Building	Component	Type	Age	Condition	Rating
Barwon Heads PS	Barwon Heads	Bldng 3 East, West and North	Ridge Cap	CB	20	dull & Dirty, undercutting around fasteners, no blistering	2
Barwon Heads PS	Barwon Heads	Bldng 3 East, West and North	Gutters	CB	20	ok except for joins	2
Barwon Heads PS	Barwon Heads	Bldng 3 East, West and North	Gutter Hangers	Gal	20	WCP all over RR where water drips on to hangers	2.5
Barwon Heads PS	Barwon Heads	Walkway outside Bldng 3	Steel Supports	Gal	7	ok on beams some WCP and cut edge corrosion	1
Barwon Heads PS	Barwon Heads	Walkway outside Bldng 3	Roof	CB	7	ok	1
Barwon Heads PS	Barwon Heads	Bldng 13 S	Roof	CB	2	Dirty but not dull	0
Barwon Heads PS	Barwon Heads	Bldng 13 S	Ridge cap	CB	2	Looks ok	0
Barwon Heads PS	Barwon Heads	Bldng 13 S	Flashing	CB	2	A bit dirty	0
Barwon Heads PS	Barwon Heads	Bldng 13 S	Gutters	CB	2	Fine	0
Barwon Heads PS	Barwon Heads	Bldng 13 S	Windows	Al	2	Not painted look fine	0
Barwon Heads PS	Barwon Heads	Bldng 13 S	Downpipes	CB	2	Cut edge corrosion especially on brackets	1
Barwon Heads PS	Barwon Heads	Bldng 13 S	Roof Fasteners	Painted	2	no undercutting, no WCP, look good	0
Barwon Heads PS	Barwon Heads	Bldng 2	Roof	ZA		Dull & Dirty, some ZN loss, ie grey CP, no WCP or RR	1
Barwon Heads PS	Barwon Heads	Bldng 2	Gutter	ZA		Box gutter, some coating loss	1
Barwon Heads PS	Barwon Heads	Bldng 2	Downpipes	ZA painted outside only		OK	1
Torquay PS	Torquay	Walkways	Roof	CB	6	Dirty not very dull	1

School	Zone	Building	Component	Type	Age	Condition	Rating
Torquay PS	Torquay	Walkways	Roof Fasteners	Painted	6	Paint loss, some WCP and red rust spotting, shanks also show red rust	2.5
Torquay PS	Torquay	Walkways	Gutters	CB	6	Look ok, dull and dirty but clean	1
Torquay PS	Torquay	Walkways	beams	Gal	6	Circular beams red rust at all weld joints, WCP up to 50% on rest	3.5
Torquay PS	Torquay	Walkways	Steel Supports	Gal	6	WCP generally on sheltered areas, exposed area are clean and grain structure is noticeable	2
Torquay PS	Torquay	D Block	Roof Fasteners	Painted	6	Shanks of some fasteners are corroded through, all red rust, heads not seen	5
Torquay PS	Torquay	D Block	Beams	Gal	6	Sheltered areas have WCP and Red Rust in areas, some large areas of Red rust, beams are exposed but sheltered	3.5
Torquay PS	Torquay	D Block	Roof Underside	CB	6	Dull & Dirty some red rust blisters	3
Torquay PS	Torquay	D Block	Windows	Powdercoated Al	6	WCP at most joints	2
Torquay PS	Torquay	D Block	Downpipes	ZA	6	Loss of coating in sheltered areas, WCP at joints	2.5
Torquay PS	Torquay	D Block	Door Hinges	Stainless Steel	6	1 in 4 screws have red rust, generally dull& dirty	2
Torquay PS	Torquay	A Block North	Downpipes	ZA	6	WCP at top and joins, under eaves significant corrosion on top of bends and at joins	2.5
Torquay PS	Torquay	A Block North	Roof Underside	CB	6	Wave shaped roof, some WCP, some <10% undercutting	2
Torquay PS	Torquay	A Block North	Roof Top	CB	6	Wave shaped roof, Dull & Dirty	1
Torquay PS	Torquay	A Block North	Windows	Powdercoated Al	6	WCP at joins, undercutting up to ~2mm	2
Torquay PS	Torquay	A Block North	Roof Fasteners	Painted	6	Some loss of paint and WCP, no RR, Underside of fasteners show WCP	2
Torquay PS	Torquay	A Block North	Flashing	CB	6	Wave shaped roof, Dull & Dirty, some cut edge corrosion	1.5
Torquay PS	Torquay	A Block North	Beams	Gal	6	Some light WCP and Red Rust spots, few mm in diameter,	3
Torquay PS	Torquay	A Block North	Gutters	CB	6	Dull & Dirty	1
Torquay PS	Torquay	A Block South	Roof Top	CB	6	Dull & Dirty only	1
Torquay PS	Torquay	A Block South	Roof Underside	CB	6	Undercutting at fasteners	2

School	Zone	Building	Component	Type	Age	Condition	Rating
Torquay PS	Torquay	A Block South	Roof Fasteners	Painted	6	WCP and red rust spots	2
Torquay PS	Torquay	A Block South	Downpipes	ZA	6	Significant loss of coating, on sheltered areas, areas that are sheltered and liable for deposition have ~25% black CP	2
Torquay PS	Torquay	A Block South	Gutters	CB	6	Hangers have significant RR, dull & dirty	1
Lorne	Lorne	Bldng 8	Roof	Gal painted	20	Could be Gal CB, Dull & Dirty, some paint lifted	1
Lorne	Lorne	Bldng 8	Roof Fasteners	Gal nails	20	WCP no RR	2
Lorne	Lorne	Bldng 8	Downpipes	Painted gal	20	Perforated	5
Lorne	Lorne	Bldng 8	Gutters	Painted Gal	20	Perforated	5
Lorne	Lorne	Bldng 9	Roof	Gal	20	not maintained, clean, no shading, heavy WCP, red rust under eaves, some perforations	5
Lorne	Lorne	Bldng 9	Roof Fasteners	gal	20	general wcp no RR	2.5
Lorne	Lorne	Bldng 9	Gutter	gal	20	Perforated	5
Lorne	Lorne	Bldng 5	Roof	CB	10	Dull & Dirty, slight coating loss, no WCP, no RR	1
Lorne	Lorne	Bldng 5	Gutters	CB	10	Dull & Dirty, slight coating loss, no WCP, no RR	1.5
Lorne	Lorne	Bldng 5	Downpipes	ZA painted outside only	10	Some blistering, cut edge WCP	2
Lorne	Lorne	Bldng 1	Roof	CB	10	Dull & Dirty only	1
Lorne	Lorne	Bldng 1	Ridge Cap	CB	10	Flat Dull & Dirty only	1
Lorne	Lorne	Bldng 1	Roof Fasteners	Painted BX	10	Flat, 25% coating loss, WCP where paint lost	2
Lorne	Lorne	Bldng 1	Roof Fasteners	Gal	10	10% have 100% RR other have spots	3
Lorne	Lorne	Bldng 1	Windows	Powdercoated Al	10	Slight Blistering	2
Lorne	Lorne	Walkways	Roof	CB	10	Not maintained but clean, Dull& Dirty	1
Lorne	Lorne	Walkways	Downpipes	Painted Heavy section Gal	10	Some WCP coming through paint	2
Lorne	Lorne	Walkways	Steel supports	Painted steel	10	good	1
Lorne	Lorne	Original Bldng	Roof	Gal	20	100% Wcp, some RR spots, RR near Ridge Cap	3.5
Lorne	Lorne	Original Bldng	Ridge Cap	Gal	20	WCP	3

School	Zone	Building	Component	Type	Age	Condition	Rating
Lorne	Lorne	Original Bldng	Roof Fasteners	Nails	20	Red Rust	4
Lorne	Lorne	Original Bldng	Gutters	Painted Gal	20	RR outside Perforations	5
Lorne	Lorne	Original Bldng	Downpipes	Gal	20	RR at top and bottom	3
Lorne	Lorne	Original Bldng	Windows	Powdercoated Al	20	Slight Blistering at joins	1
Anglesea PS	Anglesea	Main Bldng	Roof	Gal	35	Even WCP	2.5
Anglesea PS	Anglesea	Main Bldng	Gutters	CB	15	Undercutting at joints, and RR at Joints	2
Anglesea PS	Anglesea	Main Bldng	Downpipes	CB	15	WCP, RR and perforations	5
Anglesea PS	Anglesea	Main Bldng	Flashings	Gal	15	even WCP, no RR	2.5
Anglesea PS	Anglesea	Main Bldng	Steel Supports	Gal	15		2



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