Table 1 – Fit For Purpose Assessment – Public Open Spaces

Parameter	Treated effluent from Bendigo Water Reclamation Plant – Expected Median	Treated groundwater from Bendigo Mining Limited – Expected Range	Combined Stream – Expected Range	Compliant with EPA Pub 168 "Wastewater Irrigation"	Compliant with EPA Pub 464.2 "Use of Reclaimed Water"	Compliant with EPA Pub 1015 "Dual pipe water recycling schemes"	Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]
BOD_5	< 5 mg/L	Very low values expected in this Reverse Osmosis effluent	< 3 mg/L	Yes	Yes	Yes	NS
Suspended Solids	1 mg/L		< 1 mg/L	Yes	Yes	Yes	NS
Turbidity	< 2 NTU		< 2 NTU	NS	Yes	Yes	NS
Microbiological quality	Class A	No source of pathogens. Refer to BML Risk Assessment (separate document).	< 10 E.coli/100 mL	Yes	Yes	Yes	Yes
Salinity	620 mg/L	< 200 mg/L	< 500 mg/L	Acceptable level depends on plant sensitivity and soil properties	Low risk category	NS. Requires risk assessment.	Limit depends on plant sensitivity and soil properties
Sodium	125 mg/L	55 mg/L	< 200 mg/L	For soil structure, slight or moderate risk category	NS. Requires risk assessment.	NS. Requires risk assessment.	For soil structure, risk depends on soil properties and rainfall. For foliar impact, limit depends on plant sensitivity.
Chloride	160 mg/L	100 mg/L	< 250 mg/L	Limit depends on irrigation method	NS	NS. Requires risk assessment.	Limit depends on plant sensitivity
Boron	0.067 mg/L	0.03 mg/L	< 0.1 mg/L	Yes	NS	NS. Requires risk assessment.	Yes

Parameter	Treated effluent from Bendigo Water Reclamation Plant – Expected Median	Treated groundwater from Bendigo Mining Limited – Expected Range	Combined Stream – Expected Range	Compliant with EPA Pub 168 "Wastewater Irrigation"	Compliant with EPA Pub 464.2 "Use of Reclaimed Water"	Compliant with EPA Pub 1015 "Dual pipe water recycling schemes"	Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]
Total Nitrogen	6 mg/L	< 0.5 mg/L	< 5 mg/L	Yes. Acceptable loading depends on plant requirement.	Appropriate for direct off-site movement	NS. Requires risk assessment.	Yes
Total Phosphorus	0.2 mg/L	0.01 mg/L	< 0.5 mg/L	Acceptable loading depends on plant requirement	Appropriate for direct off-site movement	NS. Requires risk assessment.	No. Added fertilizer value.
Chlorine disinfection residual	< 0.1 mg/L	0.0 mg/L	< 0.01 mg/L at point of use	NS	Yes	Yes	NS
pH	6-9	6.5-8.5	6-9	Yes	Yes	Yes	Yes
Heavy metals and other chemicals (aluminium, arsenic, cadmium, copper, cyanide, lead, mercury, nickel, zinc)	Refer to RWQMP[2]	Refer to RWQMP[2]	Refer to RWQMP[2]	Yes	NS. Document refers to Pub 168 and ANZECC guidelines.	NS. Risk to human health not anticipated.	Yes

1 ANZECC Guidelines Volume 1 Chapter 4.2, with specific reference to irrigation, using LTVs (long-term trigger values)
2 Recycled Water Quality Management Plan for the scheme

Where the assessment result is NS, this indicates that the guideline does not specify a limit.
Where risk assessments are required, the risks have been assessed and appropriate mitigation actions have been developed as necessary. Risk assessment has been undertaken through comparison to ANZECC guidelines, as shown in the table above, or through more detailed risk assessment. The detailed risk assessments are documented later in this Appendix D of the REIP.
Note that the expected quality of the recycled water streams as presented above is based on actual test results. Trigger limits for action (such as investigation, cessation of supply, notification of EPA) are documented in the Recycled Water Quality Management Plan (RWQMP) and HACCP.

Table 2 – Fit For Purpose Assessment – Rural Channel Customers

Parameter	Treated effluent from Bendigo Water Reclamation Plant – Expected Median	Treated groundwater from Bendigo Mining Limited – Expected Range	Combined Stream – Expected Range	Compliant with EPA Pub 168 "Wastewater Irrigation"	Compliant with EPA Pub 464.2 "Use of Reclaimed Water"	Compliant with EPA Pub 1015 "Dual pipe water recycling schemes"	Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]	Compliant with ANZECC Guidelines for Livestock Drinking[2]	Compliant with ANZECC Guidelines for Aquaculture[3]
BOD_5	< 5 mg/L	Very low values expected in this Reverse Osmosis effluent	< 3 mg/L	Yes	Yes	Yes	NS	NS	Yes
Suspended Solids	1 mg/L		< 1 mg/L	Yes	Yes	Yes	NS	NS	Yes
Turbidity	< 2 NTU		< 2 NTU	NS	Yes	Yes	NS	NS	NS
Microbiological quality	Class A	No source of pathogens. Refer to BML Risk Assessment (separate document).	< 10 E.coli/100 mL	Yes	Yes	Yes	Yes	Yes	Yes
Salinity	620 mg/L	< 200 mg/L	< 500 mg/L	Acceptable level depends on plant sensitivity and soil properties	Low risk category	NS. Requires risk assessment.	Limit depends on plant sensitivity and soil properties	Yes	Yes
Sodium	125 mg/L	55 mg/L	< 200 mg/L	For soil structure, slight or moderate risk category	NS. Requires risk assessment.	NS. Requires risk assessment.	For soil structure, risk depends on soil properties and rainfall. For foliar impact, limit depends on plant sensitivity.	NS	NS
Chloride	160 mg/L	100 mg/L	< 250 mg/L	Limit depends on irrigation method	NS	NS. Requires risk assessment.	Limit depends on plant sensitivity	NS	NS
Boron	0.067 mg/L	0.03 mg/L	< 0.1 mg/L	Yes	NS	NS. Requires risk assessment.	Yes	Yes	NS

Parameter	Treated effluent from Bendigo Water Reclamation Plant – Expected Median	Treated groundwater from Bendigo Mining Limited – Expected Range	Combined Stream – Expected Range	Compliant with EPA Pub 168 "Wastewater Irrigation"	Compliant with EPA Pub 464.2 "Use of Reclaimed Water"	Compliant with EPA Pub 1015 "Dual pipe water recycling schemes"	Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]	Compliant with ANZECC Guidelines for Livestock Drinking[2]	Compliant with ANZECC Guidelines for Aquaculture[3]
Total Nitrogen	6 mg/L	< 0.5 mg/L	< 5 mg/L	Yes. Acceptable loading depends on plant requirement.	Appropriate for direct off-site movement	NS. Requires risk assessment.	Yes	Yes	Ammonia levels to be confirmed.
Total Phosphorus	0.2 mg/L	0.01 mg/L	< 0.5 mg/L	Acceptable loading depends on plant requirement	Appropriate for direct off-site movement	NS. Requires risk assessment.	No. Added fertilizer value.	NS	Phosphate levels to be confirmed.
Chlorine disinfection residual	< 0.1 mg/L	0.0 mg/L	< 0.01 mg/L at point of use	NS	Yes	Yes	NS	NS	Yes
pH	6-9	6.5-8.5	6-9	Yes	Yes	Yes	Yes	NS	Yes
Heavy metals and other chemicals (aluminium, arsenic, cadmium, copper, cyanide, lead, mercury, nickel, zinc)	Refer to RWQMP[4]	Refer to RWQMP[4]	Refer to RWQMP[4]	Yes	NS. Document refers to Pub 168 and ANZECC guidelines.	NS. Risk to human health not anticipated.	Yes	Yes	No. To be re-assessed when RO plant comes on line.

1 ANZECC Guidelines Volume 1 Chapter 4.2, with specific reference to irrigation, using LTVs (long-term trigger values)
2 ANZECC Guidelines Volume 1 Chapter 4.3
3 ANZECC Guidelines Volume 1 Chapter 4.4
4 Recycled Water Quality Management Plan for the scheme

Where the assessment result is NS, this indicates that the guideline does not specify a limit.
Where risk assessments are required, the risks have been assessed and appropriate mitigation actions have been developed as necessary. Risk assessment has been undertaken through comparison to ANZECC guidelines, as shown in the table above, or through more detailed risk assessment. The detailed risk assessments are documented later in this Appendix D of the REIP.
Note that the expected quality of the recycled water streams as presented above is based on actual test results. Trigger limits for action (such as investigation, cessation of supply, notification of EPA) are documented in the Recycled Water Quality Management Plan (RWQMP) and HACCP.

Table 3 – Fit For Purpose Assessment – Industrial Customers

Parameter	**Treated effluent from Bendigo Water Reclamation Plant – Expected Median**	**Treated groundwater from Bendigo Mining Limited – Expected Range**	**Combined Stream – Expected Range**	**Compliant with EPA Pub 464.2 "Use of Reclaimed Water"**	**Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]**	**Compliant with Drinking Water Guidelines[2]**
BOD_5	< 5 mg/L	Very low values expected in this Reverse Osmosis effluent	< 3 mg/L	Yes	NS	NS
Suspended Solids	1 mg/L		< 1 mg/L	Yes	Yes	NS
Turbidity	< 2 NTU		< 2 NTU	Yes	NS	Yes
Microbiological quality	Class A	No source of pathogens. Refer to BML Risk Assessment (separate document).	< 10 E.coli/100 mL	Yes	N/A	N/A
Salinity	620 mg/L	< 200 mg/L	< 500 mg/L	NS. Document notes potential risk of corrosion etc.	N/A	Yes
Sodium	125 mg/L	55 mg/L	< 200 mg/L	N/A	N/A	Yes
Chloride	160 mg/L	100 mg/L	< 250 mg/L	N/A	N/A	Yes
Boron	0.067 mg/L	0.03 mg/L	< 0.1 mg/L	N/A	N/A	Yes
Total Nitrogen	6 mg/L	< 0.5 mg/L	< 5 mg/L	NS. Document notes potential risk of slime formation etc.	Yes	Yes

Parameter	Treated effluent from Bendigo Water Reclamation Plant – Expected Median	Treated groundwater from Bendigo Mining Limited – Expected Range	Combined Stream – Expected Range	Compliant with EPA Pub 464.2 "Use of Reclaimed Water"	Compliant with ANZECC Guidelines for Irrigation and General Water Use[1]	Compliant with Drinking Water Guidelines[2]
Total Phosphorus	0.2 mg/L	0.01 mg/L	< 0.5 mg/L	NS. Document notes potential risk of slime formation etc.	No. Some risk of bioclogging.	NS
Chlorine disinfection residual	< 0.1 mg/L	0.0 mg/L	< 0.01 mg/L at point of use	N/A	NS	Yes
pH	6-9	6.5-8.5	6-9	Yes	Yes	Yes
Heavy metals and other chemicals (aluminium, arsenic, cadmium, copper, cyanide, lead, mercury, nickel, zinc)	Refer to RWQMP[3]	Refer to RWQMP[3]	Refer to RWQMP[3]	N/A	N/A	N/A

1 ANZECC Guidelines Volume 1 Chapter 4.2, with specific reference to the corrosion and fouling potential of waters
2 Australian Drinking Water Guidelines (2004), included to provide a comparison to a normal urban reticulated water supply. Note that only parameters considered relevant to industrial use have been assessed, and this assessment is not intended to imply that the recycled water is suitable for drinking.
3 Recycled Water Quality Management Plan for the scheme

Where the assessment result is NS, this indicates that the guideline does not specify a limit.
Where the assessment result is N/A, this indicates that although the guideline may provide trigger values, these values are not relevant to industrial use.
The HEMP for Industrial Customers requires each industrial customer to undertake a risk assessment specific to their enterprise.
Note that the expected quality of the recycled water streams as presented above is based on actual test results. Trigger limits for action (such as investigation, cessation of supply, notification of EPA) are documented in the Recycled Water Quality Management Plan (RWQMP) and HACCP.