

APPENDIX E – Mona Creek

Site MC-1

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	754691			
Approximate Northing	6439594			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC1 is within open pasture area west of LWW8. - In 2023 LHB is a mild slope and well vegetated. RHB is a flat broad flood plain and is also well vegetated. Channel bed at this location is within a slight depression and is well vegetated. A small amount of flood debris was noted across the gauging control. A wombat hole in the channel bed was noted upstream. Water had pooled at this location. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	96°E (T) 55 S 754684 6439595 ±4m ▲ 457m Mona Creek Site 1 28 Nov 2023, 14:20:58	321°NW (T) 55 S 754694 6439590 ±4m ▲ 457m Mona Creek Site 1 28 Nov 2023, 14:19:23

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Site MC-2

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	754832			
Approximate Northing	6439604			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC2 is within an established open woodland area, west of LWW8. - In 2023 this location has mature trees either side of the channel. LHB and RHB have flat to gentle slopes with good groundcover vegetation and dense leaf litter. Accumulation of flood debris was noted in the low flow section of the channel. The creek bed is a mix of fine and coarse sand. A minor tributary flows into MC2 at the location in 2023. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	Mona Creek Site 2 28 Nov 2023 14:24:33	Mona Creek Site 2 28 Nov 2023 14:25:53

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Site MC-3

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755115			
Approximate Northing	6439678			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC3 is within an established open woodland area, immediately west of LWW8 commencement end. - In 2023 this location has mature trees either side of the channel. LHB and RHB have gentle slopes with good groundcover vegetation and leaf litter. The creek bed is a mix of fine and coarse sand with increasing bare areas. A small scour has developed at this location. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	NE60E90SE120150180210S ☼ 132°SE (T) ● 55 S 755115 6439669 ±4m ▲ 463m  Mona Creek Site 3 28 Nov 2023, 14:34:20	SW210240270W300NW330N ☼ 285°W (T) ● 55 S 755116 6439668 ±4m ▲ 464m  Mona Creek Site 3 28 Nov 2023, 14:34:35

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Site MC-4

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755342			
Approximate Northing	6439657			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC4 is within an established open woodland area, above LWW8. - In 2023 this location has mature trees either side of the channel. LHB and RHB have gentle slopes with good groundcover vegetation and leaf litter. The creek bed is a mix of fine and coarse sand and soil like material, mostly bare areas. An active wombat burrow was within an existing scour. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	261°W (T) ● 55 S 755352 6439653 ±4m ▲ 467m Mona Creek Site 4 28 Nov 2023, 14:40:07	51°NE (T) ● 55 S 755343 6439649 ±4m ▲ 467m Mona Creek Site 4 28 Nov 2023, 14:39:22

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Site MC-5

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755571			
Approximate Northing	6439792			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC5 is within an established open woodland area, approximately 200m within LWW8. - In 2023 this location has mature trees either side of the channel. RHB has near vertical bare walls >1m, exposed tree roots with recent signs of erosion. The LHB is very similar to the RHB, with undercutting noted along the LHB. Channel bed is well defined at this location with signs of recent erosion and movement. There is no groundcover vegetation within the channel at this location which has formed an active scour. The bed The creek bed is a mix of fine and coarse sand and small gravel material. A large accumulation of flood debris was noted. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	31°NE (T) 55 S 755576 6439797 ±4m ▲ 469m Mona Creek Site 5 28 Nov 2023, 14:45:16	255°W (T) 55 S 755577 6439800 ±4m ▲ 469m Mona Creek Site 5 28 Nov 2023, 14:46:11

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Site MC-6

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755593			
Approximate Northing	6439837			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC6 is within an established open woodland area, within LWW8. - In 2023 this location has mature trees either side of the channel. RHB has almost near vertical bare walls >1m, exposed tree roots with recent signs of erosion. The LHB is vertical and very similar to the RHB, with undercutting noted along the LHB and RHB. Channel bed is well defined at this location with signs of recent erosion and movement. There is no groundcover vegetation within the channel at this location which has formed an active scour. Water was pooling with the scour hole at this location. There was a fallen tree from the LHB into the channel. A tributary of Mona Creek flows into the creek system at this location causing further erosion and instabilities. The bed is a mix of fine and coarse sand and small gravel material. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	☀ 14°N (T) ● 55 S 755600 6439830 ±4m ▲ 469m Mona Creek Site 6 28 Nov 2023, 14:47:48	☀ 225°SW (T) ● 55 S 755603 6439838 ±4m ▲ 469m Mona Creek Site 6 28 Nov 2023, 14:48:17

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Site MC-7

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755612			
Approximate Northing	6439987			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC7 is within an established open woodland area, on the Chain Pillar of LWW8. - In 2023 this location has mature trees either side of the channel. RHB is a mild to gentle slope with good groundcover vegetation. The LHB is a gentle slope with good groundcover vegetation. Flood debris, leaf litter, fallen trees and tree limbs were noted. The channel bed is less defined at this location. Very little groundcover vegetation within the channel at this location. The creek bed is a mix of fine and coarse sand and soil like material. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	 ☼ 50°NE (T) ● 55 S 755611 6439918 ±4m ▲ 470m  Mona Creek Site 7 28 Nov 2023, 14:55:25	 ☼ 232°SW (T) ● 55 S 755617 6439922 ±4m ▲ 470m  Mona Creek Site 7 28 Nov 2023, 14:55:51

APPENDIX E – Mona Creek

Site MC-8

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755652			
Approximate Northing	6439987			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC8 is within an established open woodland area, approximately 80m to the north of LWW8. - In 2023 this location has mature trees either side of the channel. RHB is a mild to gentle slope with good groundcover vegetation. The LHB is a gentle slope with good groundcover vegetation. Flood debris, leaf litter, fallen trees and tree limbs were noted. The channel bed is less defined at this location. Very little groundcover vegetation within the channel at this location. The creek bed is a mix of fine and coarse sand and soil like material. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	☀ 21°N (T) ● 55 S 755655 6439984 ±4m ▲ 472m Mona Creek Site 8 28 Nov 2023, 14:57:40	☀ 206°SW (T) ● 55 S 755661 6439984 ±4m ▲ 471m Mona Creek Site 8 28 Nov 2023, 14:58:45

APPENDIX E – Mona Creek

Site MC-9

Site Attributes				
Date Sampled	28 November 2023			
Approximate Easting	755664			
Approximate Northing	6440072			
Monitoring Requirement	Monitoring to distinguish between natural erosion and erosion from mine subsidence instability, surface cracking, surface ponding and out of channel flows. Monitoring before longwall retreats and annually for a period of two years.			
2023 Monitoring Photo				
Year	November 2023			
Result	Pre-Mining			
Comments / Interpretation				
- MC9 is within an established open woodland area, approximately 160m to the north of LWW8. - In 2023 this location has mature trees either side of the channel. RHB is partially formed from exposed bedrock and is a mild slope with good groundcover vegetation. Above the RHB the slope is steep up to a sandstone formation. The LHB is a gentle slope with good groundcover vegetation. Flood debris, leaf litter, fallen trees and tree limbs were noted. Very little groundcover vegetation within the channel at this location. A scour in the channel has formed at the location of the exposed bedrock. Wombat burrows were also noted at this location. The creek bed is a mix of fine and coarse sand material. - Continue to monitor.				
Recommendations				
- If unchanged and past two year recommend remove from annual monitoring program (yes/no) - Recommend recording cross sections at locations identified with channel and/or channel bank cracking as a result of subsidence, to monitor for erosion and/or changes to the channel width (yes/no)				
Photographic Recording (see below)				

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Year	Upstream	Downstream
2023	☀ 24°NE (T) ● 55 S 755667 6440071 ±4m ▲ 471m  Mona Creek Site 8 28 Nov 2023, 15:01:34	☀ 216°SW (T) ● 55 S 755671 6440078 ±4m ▲ 469m  Mona Creek Site 8 28 Nov 2023, 15:04:56

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