

Warperup Creek Improvement Plant Feasibility Study 2022

SUPPLEMENT 5: WARPERUP CREEK PHOTO AUDIT – 2020



Prepared for North Stirlings Pallinup Natural Resources Inc

By Steve and Geraldine Janicke



2020



natural resource
management program



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Prepared by Steve and Geraldine Janicke for North Stirlings Pallinup Natural Resources Inc part of their Waterways Restoration Project (CSGL19013).

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Cover graphic Warperup Creek at site PAL509 by *G Janicke*

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INTRODUCTION

Warperup Creek is a significant tributary of the Pallinup River and extends, as the fish swims, for nearly 70 kilometres from east of Ongerup to its confluence with the Pallinup near Borden.

The ten stream reaches were chosen to represent the main channel of the Warperup Creek and the influence of several key sub-catchments. The reference reaches are distributed from the uppermost reaches of Warperup Creek east of Ongerup, to its confluence with the Middle Pallinup River. It can be noted that more reaches can be added over time to improve representation of the waterways and to target other specific reaches.

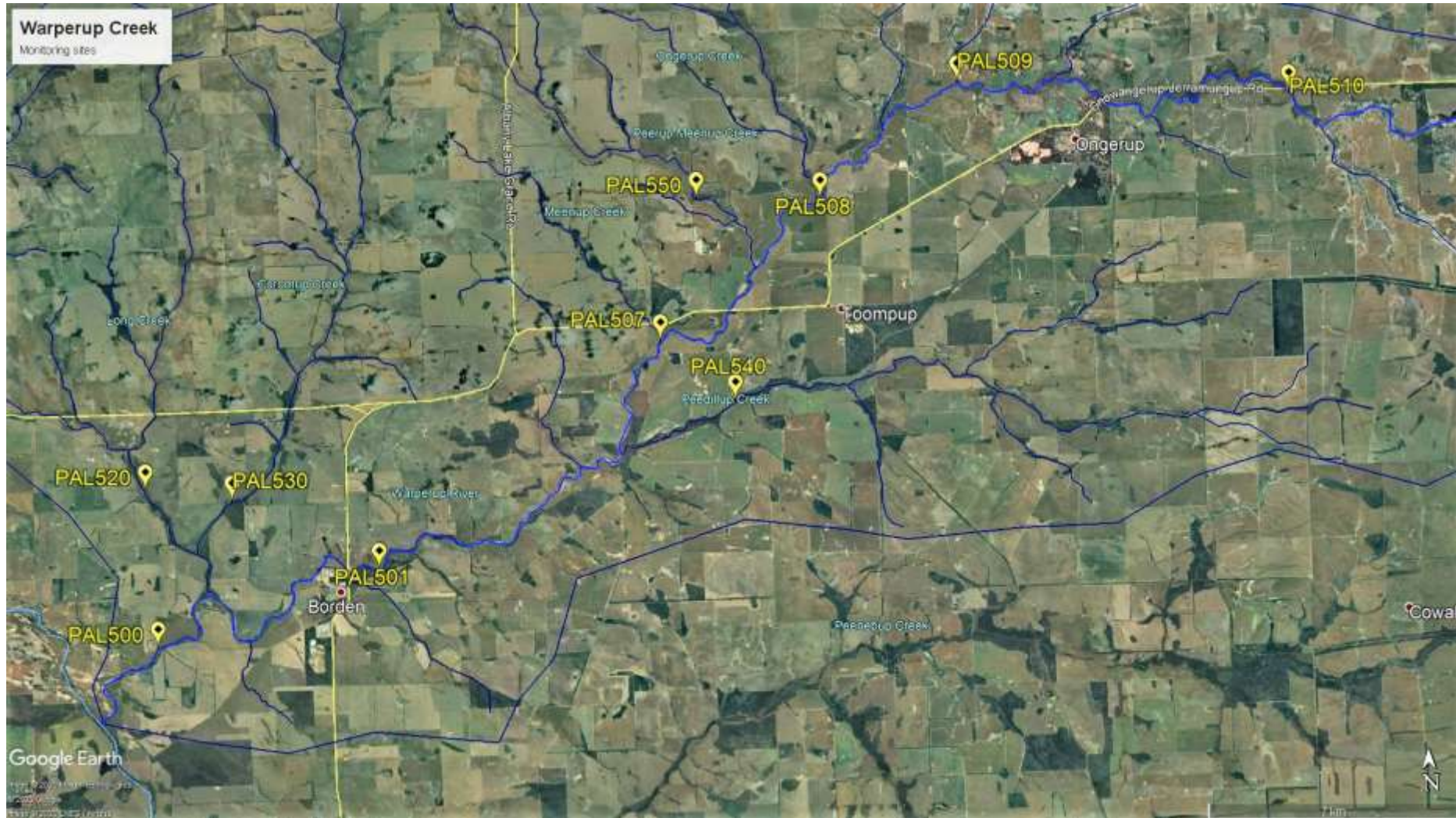
A river Photo Audit is a systematic series of geo-referenced photographic images taken at regular intervals along a waterway. Over time the images provide a means to determine physical changes at a fixed location such as the amount of erosion, degree of sedimentation and the condition of the riparian vegetation. From three to five geo-referenced photo points were taken along each reach to capture the physical condition of the floodway. Views were looking either upstream, downstream or across the channel. GPS coordinates are given for the vantage point from which photographs were taken (coordinates are in GDA 94, UTM zone 50H and decimal degrees), along with the compass direction of photo and date-time. A Nikon 750 and an iPhone 8 were used to take the images, one camera providing a back-up to the other. Panorama images were taken using the iPhone 8 panorama setting. The panorama images help give a broader view of the site and the peripheral riparian attributes but do distort the perspective.

This document is an index of the photographic images. The original photos are labelled according to the following format.

WARPERUP _ Site code (e.g. PAL500A) _ Coordinates – compass direction – descriptor.jpg.

UTM Coordinates are for Zone H50

Warperup Creek Riparian Condition Reference Sites Photo Audit - October 2022



Location of Warperup Creek reference reaches and associated monitoring sites

PAL500 LOWER WARPERUP CREEK



PAL500A looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL500A	7/10/2020	611729	6227896	060	34.08375598	118.211023

PAL500B looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL500B	7/10/2020	611624	6227853	270	-34.08414801	118.209894

PAL500C looking across



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL500C	7/10/2020	611524	6227816	350	-34.08449803	118.208819

PAL500D looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL500D	7/10/2020	611407	6227808	250	-34.08458001	118.207552

PAL500E looking across to water monitoring site



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL500E	7/10/2020	611314	6227734	NA	-34.085255	118.206556

PAL501 WARPERUP CREEK BORDEN GOLF CLUB



PAL501 water monitoring site upstream view



Panorama - Water Quality monitoring site adjacent to the Golf Club House.

Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501	6/10/2020	617515	6229671	Upstream view	34.06711003	118.273491

PAL501A looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501A	6/10/2020	617668	6229711	260	34.06673402	118.275141

PAL501A looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501A	6/10/2020	617668	6229711	040	-34.06673402	118.275141

PAL501B looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501B	6/10/2020	617724	6229768	040	-34.06621501	118.275741

PAL501C looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501C	6/10/2020	617758	6229936	190	-34.06469696	118.276085

PAL501C looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL501C	6/10/2020	617758	6229936	030	34.06469696	118.276085

PAL507 WARPERUP CREEK, MEENUP CREEK CONFLUENCE



PAL507A Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL507A	6/10/2020	625710	6235622	225	-34.01250604	118.361414

Lower end of reach (320 m), Water quality monitoring site.

PAL507B Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL507B	6/10/2020	625833	6235756	215	-34.011278	118.362727

PAL507C Meenup Creek looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL507C	6/10/2020	625845	6235819	300	34.01071298	118.362852

PAL507D Warperup Creek side view



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL507D	6/10/2020	625943	6235821	335	-34.01067903	118.363911

PAL508 WARPERUP CREEK, ONGERUP CREEK CONFLUENCE



PAL508A Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL508A	5/10/2020	630339	6239360	240	-33.97823998	118.410973

PAL508B Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL508B	5/10/2020	630281	6239317	240	33.97862999	118.410354

PAL508C Verge revegetation site



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL508C	6/10/2022	630204	6239257	120		-33.97918504	118.409534

PAL508D Warperup Creek looking downstream – water monitoring site



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL508D	5/10/2020	629967	6239256	270	-33.97921697	118.406973

PAL508E Ongerup Creek confluence looking upstream



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL508E	5/10/2020	630113	6239262	040		33.97914497	118.408551

PAL509 WARPERUP CREEK, JAEKEL CREEK CONFLUENCE



PAL509A Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL509A	5/10/2020	634485	6242275	300	-33.95143499	118.455405

PAL509B Warperup Creek flood terrace



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL509B	5/10/2020	634351	6242386	310	-33.950445	118.453934

PAL509C Warperup Creek looking across to Jaekel Creek confluence



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL509C	5/10/2020	634325	6242404	040		-33.95029304	118.453651

PAL509D Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL509D	5/10/2020	634240	6242410	220	-33.95024601	118.452733

PAL509E Warperup Creek looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL509E	6/10/2022	634166	6242359	260	-33.95071498	118.451936

PAL510 WARPERUP CREEK



PAL510A looking upstream – water monitoring point



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL510A	5/10/2020	643466	6241796	120	-33.95456797	118.552642

PAL510B looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL510B	5/10/2020	643636	6241654	195	-33.95581797	118.554509

PAL510C looking upstream



Site Code	DATE	Time	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL510C	5/10/2020		643668	6241497	135		-33.957232	118.554876

PAL510D side view



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL510D	5/10/2020	643692	6241343	140	-33.95862004	118.555164

PAL520 MAILEEUP/LONG CREEK



PAL520A looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL520A	6/10/2020	611074	6232220	175	-34.044828	118.203375

PAL520B looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL520B	6/10/2020	610981	6232387	170	-34.04334096	118.202351

PAL520C looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL520C	6/10/2020	611010	6232177	115	-34.04522798	118.202687

PAL520D looking upstream at water monitoring site



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL520D	6/10/2020	611154	6232126	-		-34.04567398	118.204254

PAL530 COROMUP CREEK



PAL530A looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL530A	6/10/2020	613690	6231826	250	-34.04810096	118.231767

PAL530B side view



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL530B	6/10/2020	613525	6231732	160	-34.04897301	118.22999

PAL530C looking upstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL530C	6/10/2020	613499	6231709	060	-34.04917996	118.229707

PAL540 PEEDILUP CREEK



PAL540A looking downstream Left Hand Side



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL540A	6/10/2020	628019	6234095	250	-34.02599	118.386645

PAL540B looking downstream Right Hand Side and panorama both sides



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL540B	6/10/2020	627849	6233992	220	-34.02694596	118.384816

PAL540D looking upstream



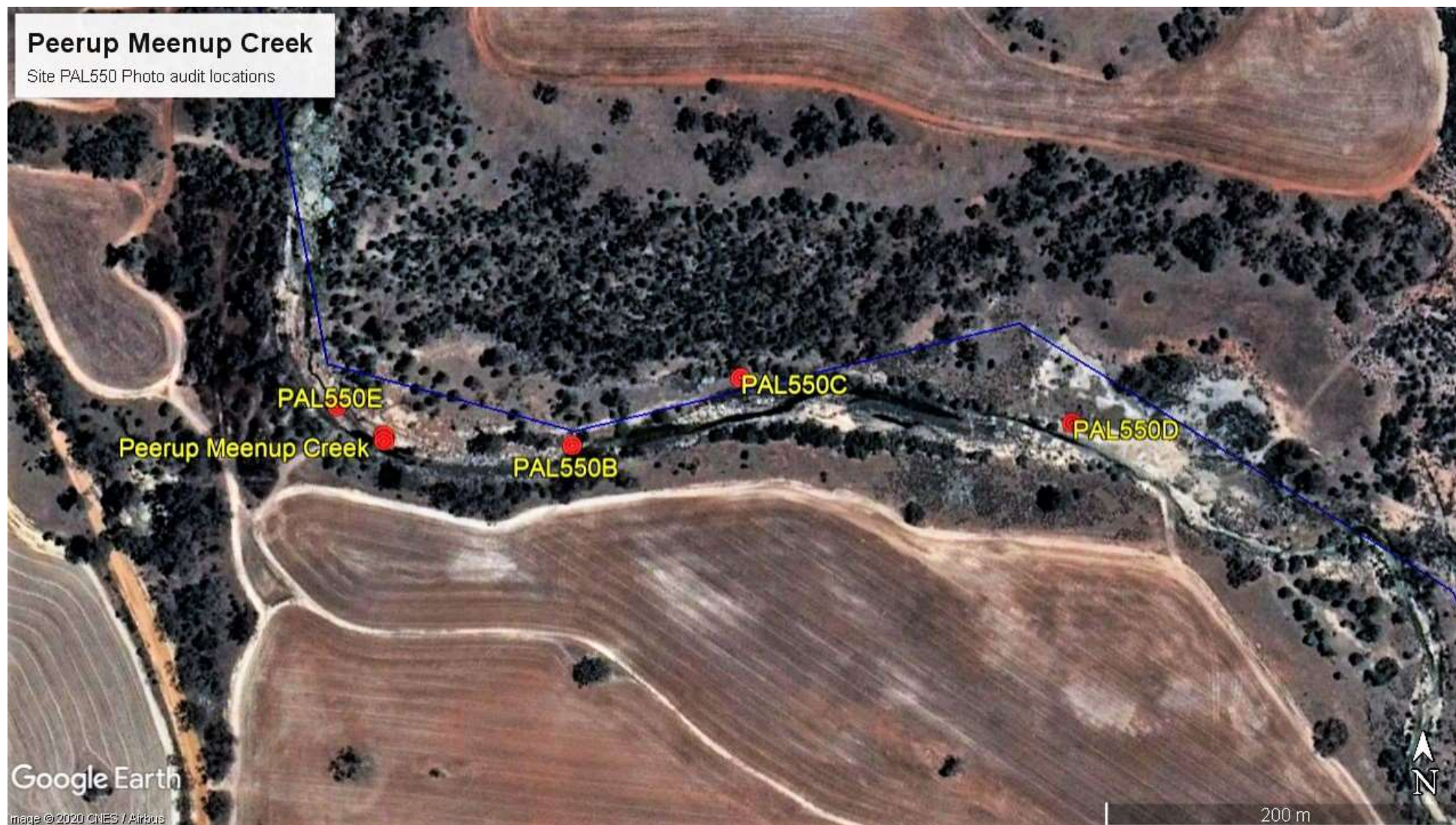
Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL540D	6/10/2020	627721	6233859	010	-34.02815798	118.383451



Lower end of reach at crossing. Water monitoring site.

Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL540D	6/10/2020	627721	6233859	010	-34.02815798	118.383451

PAL 550 PEERUP MEENUP CREEK



PAL550A looking downstream – water monitoring site



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL550A	5/10/2020	626871	6239516	135	-33.97725603	118.373424

PAL550B looking downstream



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL550B	5/10/2020	626972	6239508	080		-33.97731696	118.374517

PAL550C looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL550C	5/10/2020	627065	6239546	100	-33.97696098	118.37552

PAL550D looking downstream



Site Code	DATE	Easting	Northing	Photo Compass Direction (°)	Decimal Latitude	Decimal Longitude
PAL550D	5/10/2020	627249	6239516	120	-33.97720599	118.377512

PAL550E looking upstream



Site Code	DATE	Easting	Northing	Photo Direction (°)	Compass	Decimal Latitude	Decimal Longitude
PAL550E	5/10/2020	626844	6239532	340		-33.97711496	118.373129

APPENDIX 1: LOCATION COORDINATES FOR SITES AND PHOTO POINTS

October 2020. Datum: WGS84/GDA94, UTM 50H

Site Code	DATE	Easting	Northing	Decimal Latitude	Decimal Longitude	Latitude	Longitude	Reach length (m)	Photo Direction (°)	Comment
PAL500	7/10/2020	611285	6227733	-34.08526598	118.206233	34 05 07.0	118 12 22.4	490		WQ Site/downstream end
PAL500A	7/10/2020	611729	6227896	-34.08375598	118.211023	34 05 01.5	118 12 39.7		060	Upstream end
PAL500B	7/10/2020	611624	6227853	-34.08414801	118.209894	34 05 02.9	118 12 35.6		270	Left bank
PAL500C	7/10/2020	611524	6227816	-34.08449803	118.208819	34 05 04.2	118 12 31.7		350	Left bank
PAL500D	7/10/2020	611407	6227808	-34.08458001	118.207552	34 05 04.5	118 12 27.2		250	Left bank (? No photo)
PAL500E	7/10/2020	611314	6227734	-34.085255	118.206556	34 05 06.9	118 12 23.6			Left bank
PAL501	6/10/2020	617515	6229671	-34.06711003	118.273491	34 04 01.6	118 16 24.6	390		WQ Site/downstream end
PAL501A	6/10/2020	617668	6229711	-34.06673402	118.275141	34 04 00.2	118 16 30.5		040/260	Left bank
PAL501B	6/10/2020	617724	6229768	-34.06621501	118.275741	34 03 58.4	118 16 32.7		040	Left bank
PAL501C	6/10/2020	617758	6229936	-34.06469696	118.276085	34 03 52.9	118 16 33.9		190/030	Upstream end
PAL507A	6/10/2020	625710	6235622	-34.01250604	118.361414	34 00 45.0	118 21 41.1	320	225	Downstream end/ WQ Site
PAL507B	6/10/2020	625833	6235756	-34.011278	118.362727	34 00 40.6	118 21 45.8		215	Channel
PAL507C	6/10/2020	625845	6235819	-34.01071298	118.362852	34 00 38.6	118 21 46.3		300	Tributary/ WQ Site
PAL507D	6/10/2020	625943	6235821	-34.01067903	118.363911	34 00 38.4	118 21 50.1		335	Upstream end/ WQ Site
PAL508	5/10/2020	629965	6239258	-33.97920499	118.40695	33 58 45.1	118 24 25.0			Downstream end
PAL508	5/10/2020	629965	6239257	-33.97921597	118.406948	33 58 45.2	118 24 25.0			Downstream/ WQ Site
PAL508	5/10/2020	630373	6239391	-33.97794904	118.411341	33 58 40.6	118 24 40.8			Upstream end/ WQ Site
PAL508A	5/10/2020	630339	6239360	-33.97823998	118.410973	33 58 41.7	118 24 39.5	460	240	Left bank
PAL508B	5/10/2020	630281	6239317	-33.97862999	118.410354	33 58 43.1	118 24 37.3		240	Revegetation
PAL508C	5/10/2020	630204	6239257	-33.97918504	118.409534	33 58 45.1	118 24 34.3		120	Left bank
PAL508D	5/10/2020	629967	6239256	-33.97921697	118.406973	33 58 45.2	118 24 25.1		270	Channel
PAL508E	5/10/2020	630113	6239262	-33.97914497	118.408551	33 58 44.9	118 24 30.8		040	Tributary/ WQ site
PAL509	5/10/2020	634364	6242386	-33.95044601	118.454069	33 57 01.6	118 27 14.6	390		Upstream WQ site
PAL509	5/10/2020	634355	6242430	-33.95004904	118.453969	33 57 00.2	118 27 14.3			Tributary/ WQ site
PAL509	5/10/2020	634316	6242426	-33.95008902	118.453551	33 57 00.3	118 27 12.8			Downstream/ WQ site
PAL509A	5/10/2020	634485	6242275	-33.95143499	118.455405	33 57 05.2	118 27 19.5		300	Upstream end
PAL509B	5/10/2020	634351	6242386	-33.950445	118.453934	33 57 01.6	118 27 14.2		310	Left bank

Warperup Creek Riparian Condition Reference Sites Photo Audit - October 2022

Site Code	DATE	Easting	Northing	Decimal Latitude	Decimal Longitude	Latitude	Longitude	Reach length (m)m	Photo Direction (°)	Comment
PAL509C	5/10/2020	634325	6242404	-33.95029304	118.453651	33 57 01.1	118 27 13.1		040	Left bank
PAL509D	5/10/2020	634240	6242410	-33.95024601	118.452733	33 57 00.9	118 27 09.8		220	Left bank
PAL509E	5/10/2020	634166	6242359	-33.95071498	118.451936	33 57 02.6	118 27 07.0		260	Downstream end
PAL510	5/10/2020	643460	6241800	-33.95453202	118.552577	33 57 16.3	118 33 09.3	600		WQ Site
PAL510	5/10/2020	643434	6241838	-33.95419196	118.552292	33 57 15.1	118 33 08.3		085	Downstream end
PAL510A	5/10/2020	643466	6241796	-33.95456797	118.552642	33 57 16.4	118 33 09.5		120	Left bank
PAL510B	5/10/2020	643636	6241654	-33.95581797	118.554509	33 57 20.9	118 33 16.2		195	Left bank
PAL510C	5/10/2020	643668	6241497	-33.957232	118.554876	33 57 26.04	118 33 17.55		135	Left bank
PAL510D	5/10/2020	643692	6241343	-33.95862004	118.555164	33 57 31.0	118 33 18.6		140	Upstream end
PAL520	6/10/2020	611113	6232173	-34.04525598	118.203806	34 02 42.9	118 12 13.7	330		African Boxthorn
PAL520A	6/10/2020	611074	6232220	-34.044828	118.203375	34 02 41.4	118 12 12.1		175	Left bank
PAL520B	6/10/2020	610981	6232387	-34.04334096	118.202351	34 02 36.0	118 12 08.5		170	Upstream end
PAL520C	6/10/2020	611010	6232177	-34.04522798	118.202687	34 02 42.8	118 12 09.7		115	Right bank
PAL520D	6/10/2020	611154	6232126	-34.04567398	118.204254	34 02 44.4	118 12 15.3			WQ Site/ downstream end
PAL530	6/10/2020	613500	6231704	-34.049229	118.229727	34 02 57.2	118 13 47.0	220		WQ Site/downstream end
PAL530A	6/10/2020	613690	6231826	-34.04810096	118.231767	34 02 53.2	118 13 54.4		250	Upstream end
PAL530B	6/10/2020	613525	6231732	-34.04897301	118.22999	34 02 56.3	118 13 48.0		160	Right bank
PAL530C	6/10/2020	613499	6231709	-34.04917996	118.229707	34 02 57.0	118 13 46.9		060	Old survey peg
PAL540A	6/10/2020	628019	6234095	-34.02599	118.386645	34 01 33.6	118 23 11.9	400	250	Upstream end
PAL540B	6/10/2020	627849	6233992	-34.02694596	118.384816	34 01 37.0	118 23 05.3		220	Right bank
PAL540D	6/10/2020	627721	6233859	-34.02815798	118.383451	34 01 41.4	118 23 00.4		010	WQ Site/downstream end
PAL550	5/10/2020	626870	6239513	-33.977281	118.373415	33 58 38.2	118 22 24.3	410		WQ Site
PAL550A	5/10/2020	626871	6239516	-33.97725603	118.373424	33 58 38.1	118 22 24.3		135	Left bank
PAL550B	5/10/2020	626972	6239508	-33.97731696	118.374517	33 58 38.3	118 22 28.3		080	Left bank
PAL550C	5/10/2020	627065	6239546	-33.97696098	118.37552	33 58 37.1	118 22 31.9		100	Left bank
PAL550D	5/10/2020	627249	6239516	-33.97720599	118.377512	33 58 37.9	118 22 39.0		120	Downstream end
PAL550E	5/10/2020	626844	6239532	-33.97711496	118.373129	33 58 37.6	118 22 23.3		340	Upstream end