External Road Dilapidation Report – Existing Condition

Uungula Wind Farm





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STATEMENT OF LIMITATION

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1 Introduction

The proposed Uungula Wind Farm is located approximately 15 km East of the township of Wellington in the Central Western Slopes Region of New South Wales (NSW). Uungula Wind Farm has been approved under Development Consent SSD 6687 in which Condition B31 stipulates that the proponent must undertake dilapidation surveys at these prescribed times:

- prior to construction, upgrading or decommissioning of works (i.e., the 'existing condition');
- on an annual basis during the construction works; and
- within 1 month of the completion of any construction, upgrading or decommissioning works.

Uungula Wind Farm Pty Ltd engaged icubed consulting pty ltd (icubed) to undertake the existing condition dilapidation survey of the public roads to be used by the Project's construction traffic. The roads that were surveyed by icubed are shown in Figure 1 and listed below:

- Twelve Mile Road Goolma Road to Primary Site Entry;
- Uungula Road Twelve Mile Road to 50m past Project Boundary;
- Wuuluman Road Twelve Mile Road to Uungula Road; and
- Ilgingery Road Uungula Road to 50m past Project Boundary.

All the surveyed roads are under the jurisdiction of Dubbo Regional Council (DRC).

The method used for this assessment was to drive the roads while video recording and then use this report to identify the notable condition issues. The video files have been issued in conjunction with this report. The method was approved by DRC as documented in Appendix A.

This existing condition dilapidation assessment was undertaken 21st October 2022.

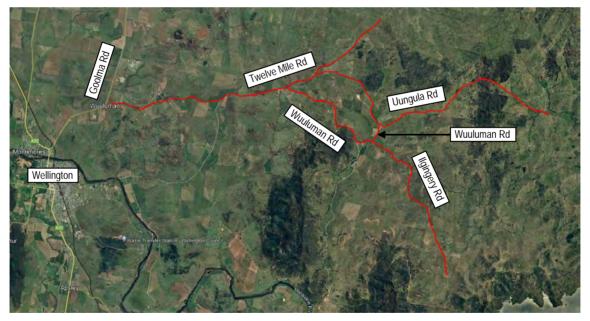


Figure 1 – Dilapidation survey routes

2 Dilapidation Assessment

This section will outline the findings of the dilapidation assessment.

The defects observed along the roads include shoving, flushing, ravelling, crocodile cracking, longitudinal cracking, block cracking, depression, stripping, patching, edge drop-off, rutting and potholes. The "Australian Roads and Research Board (ARRB) 2020 Sealed Roads Best Practice Guide" and the ARRB "2020 Unsealed Roads Best Practice Guide" have been used to identify and define defect types. Section 5 of both guides provide comprehensive overviews and descriptions of typical defects.

The locations of these defects are identified in Section 2 in Table 1 - Table 4. The brackets identify which side of the road the defects are located, as per the following key:

- LHS Left Hand Side
- RHS Right Hand Side
- BS Both Sides
- CR Centre of Road

Note that the defects identified may not be presented in the images however, were identified within the specified chainage. In all instances the video survey takes precedence and should be used to identify the road condition.

2.1 Twelve Mile Road – Dilapidation Assessment

The Twelve Mile Road (12MR) assessment was conducted between chainage 0 – 13700, where chainage 0 is the intersection with Goolma Rd – see Figure 2. 12MR is a sealed road of varying width along the assessed chainage range. The seal along the route is predominately 4.5 m wide except for the initial 1.1 km where it is 8 m wide. The observed defects are listed in Table 1 below.



Figure 2 – Twelve Mile Road dilapidation survey route

Table 1 – Twelve Mile Road identified defects

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
1.0	0	600	Edge Break (BS) Pothole (LHS) Flushing (LHS)	0.8 wy 394 wy 39
2.0	600	1000	Minor seal defects.	1.2 ru 398 u 25 u 09:14 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
3.0	1000	1400	Edge Break (BS) Potholes (BS) Potholes Patched (BS) Ravelling/Fretting (RHS)	1.6 KM OSTANZE 402 u ASTRICE 33 u ERMANOS 64/9 09:15 PM 2020/20
4.0	1400	1700	Edge break (BS) Transverse Crack (RHS) Pothole (RHS) Ravelling/Fretting (LHS) Stripping (BS)	1.9 ray 0.77.005 407 407 0.9-15 PM 0.9-15 PM 0.9-15 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
5.0	1700	1800	Pothole (LHS) Pothole Patched (BS) Ravelling/Fretting (LHS) Edge break (LHS) Drainage Issue	2.1 cm #1700ck 407 u 39 w ELEVATOR (GAR) 09:15 PM 202:0020
6.0 (Image looking west)	1800	2000	Pothole (LHS) Ravelling/Fretting (LHS) Longitudinal Cracking (LHS)	12.1 mg 412. m 106 m REVALICA LAN 10:00 PM 2022 16:20

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
7.0 (Image looking west)	2000	2600	Edge break (BS) Ravelling/Fretting (BS) Pothole (RHS) Pothole (CR) Pothole Patched (BS)	431 # 105 # 105 # 105 PM 2023020
8.0	2600	3400	Pothole (RHS) Ravelling/Fretting (RHS) Stripping (RHS) Delamination (CR) Ponding issues	3.6 M 440 g 73 M BLANCE BAR 09:16 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
9.0	3400	4200	Ravelling/Fretting (BS) Delamination (RHS) Pothole (LHS) Depression (CR) Ponding issue Crocodile Cracking (LHS)	477 u 110 u 09:17 PM

Defect ID	Start Ch	End Ch		Image
10.0	4200	4800	Ravelling/Fretting patched (LHS) Depression (RHS) Stripping (RHS)	4.6 m 500 - 193 - 09:17 PM
11.0	4800	5200	Pothole (BS) Stripping (RHS)	136 × BRANTON GAIN 09:18 PM 2002:80:20

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
12.0	5200	5300	Ravelling/Fretting (RHS) Pothole (RHS) Drainage Issue	ASS II TORGONOUN O9:18 PM ADDROXA
13.0	5300	5500	Ravelling/Fretting (RHS) Pothole (RHS) Pothole Patched (CR) Corrugation (RHS) Edge break (LHS) Stripping (CR)	5.7 m 459 m 136 m 09:18 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
14.0 (Image looking west)	5500	5600	Pothole (CR) Ravelling/Fretting (CR)	A69 62 II 09:56 PM
15.0	5700	6400	Ravelling/Fretting (RHS) Pothole (CR) Delamination (CR) Edge break (RHS) Stripping (LHS)	470 s 470 s 48 s 18 s 18 s 18 s 18 s 18 s 18 s 18 s 1

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
16.0 (image looking west.)	6400	7100	Pothole (CR) Pothole (LHS) Stripping (LHS) Ravelling/Fretting (LHS) Edge break (BS)	54 · JEWATTE GAR O9:55 PM
17.0	7100	7400	Pothole (LHS) Longitudinal Cracking (BS) Delamination (BS)	7.5 448 463 09:20 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
18.0	7400	8000	Pothole (RHS) Stripping (RHS) Longitudinal Crack (LHS) Edge break (LHS) Delamination (RHS)	93.3 pm 051365 445 pr 164 x 09:20 PM 202000
19.0	8000	8200	Potholes (BS) Potholes (CR) Ravelling/Fretting (LHS)	8. 6. 1 64 4 09:21 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
20.0	8200	9000	Stripping (RHS) Pothole (LHS) Pothole Patched (RHS) Ravelling/Fretting Patched (RHS)	8.8 m 447 u 168 u
21.0	9000	9300	Pothole (CR) Pothole (RHS) Ravelling/Fretting Patched (LHS) Stripping (CR) Stripping (RHS)	9.5 III 461 II 102 III

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
22.0	9300	9500	Longitudinal Cracking (RHS) Longitudinal Cracking (CR) Pothole (CR)	9. E. 470 = 192 = 09:22 PM
23.0	9500	9900	Longitudinal Cracking (RHS) Delamination (CR) Delamination (RHS)	471 » 193 » 09:22 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
24.0	9900	10400	Ravelling/Fretting Patched (RHS) Longitudinal Cracking (RHS) Longitudinal Cracking (CR)	705s 09-22 PM
25.0	10400	10600	Ravelling/Fretting Patched (RHS) Ravelling/Fretting Patched (CR) Pothole (RHS)	10.8 m A85 w 209 w 09:23 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
26.0	10600	10700	Pothole Patched (BS) Pothole Patched (CR) Ravelling/Fretting Patched (RHS)	11.0 m 11.0 m 187 = 212 09:23 PM
27.0	10700	11300	Ravelling/Fretting Patched (LHS) Pothole Patched (RHS) Pothole (LHS)	11.6 m 502 m 226 m

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
28.0	11300	11600	Pothole (RHS) Ravelling/Fretting (BS) Stripping (RHS) Delamination (BS) Edge break (LHS)	11.7 m 504 m 228 m 09:23 PM
29.0	11600	12000	Edge break (LHS) Pothole Patched (BS) Delamination Patched (BS) Delamination (CR) Pothole (BS) Ravelling/Fretting (RHS)	519 340. 09:24 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
30.0	12000	12200	Pothole (CR) Pothole Patched (CR) Pothole Patched (LHS) Ravelling/Fretting Patched (RHS) Ravelling/Fretting Patched (CR)	12.5 m. 2023 524 m. 248 m. 09:24 PM
31.0	12200	12500	Delamination (LHS) Pothole (CR) Ravelling/Fretting (LHS) Ravelling/Fretting (CR)	262 to 09:24 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
32.0	12500	13000	Delamination (LHS) Pothole (RHS) Pothole (CR) Ravelling/Fretting Patched (CR)	264 4 09:24 PM
33.0	13000	13300	Delamination (CR) Delamination Patched (CR) Edge break (LHS)	55¢ 282 09:25 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
34.0	13300	13400	Pothole (CR) Ravelling/Fretting (CR)	286 u 09:25 PM
35.0	13400	13700	Ravelling/Fretting (CR) Stripping (RHS)	09-25 PM

2.2 Wuuluman Road – Dilapidation Assessment

The Wuuluman Road assessment was conducted between chainage 0 – 6100, where chainage 0 is the intersection with Twelve Mile Rd and CH 6100 is the intersection with Uungula Road – see Figure 3. Wuuluman Road is unsealed except for a few short sealed sections as described below:

- CH 0 2450: unsealed, 4.5 5.5 m width;
- CH 2450 2490: sealed for 40 m with cattle grid in the middle, 4.5 5.5 m width;
- CH 2490 3400: unsealed, 4.5 5.5 m width;
- CH 3400 3800: sealed, 4.5 m width;
- CH 3800 4300: unsealed, 4.5 5.5 m width;
- CH 4300 4500: sealed, 4.5 m width, (CH 4500 is intersection with Yarragal Rd);
- CH 4500 4800: sealed, 5 m width;
- CH 4500 6100: unsealed, 4.5 5m width.

The observed defects are listed in Table 2 below.



Figure 3 – Wuuluman Road dilapidation survey route

Table 2 – Wuuluman Road identified defects

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
1.0	0	500	Minor Defects	0.4 ··· 453 ·· 10.13 PM
2.0	500	700	Surface Scour (BS) Potholes (BS) Rutting (RHS) Drainage Issue	0.7 m 463 m 10:13 PM 2002/2000

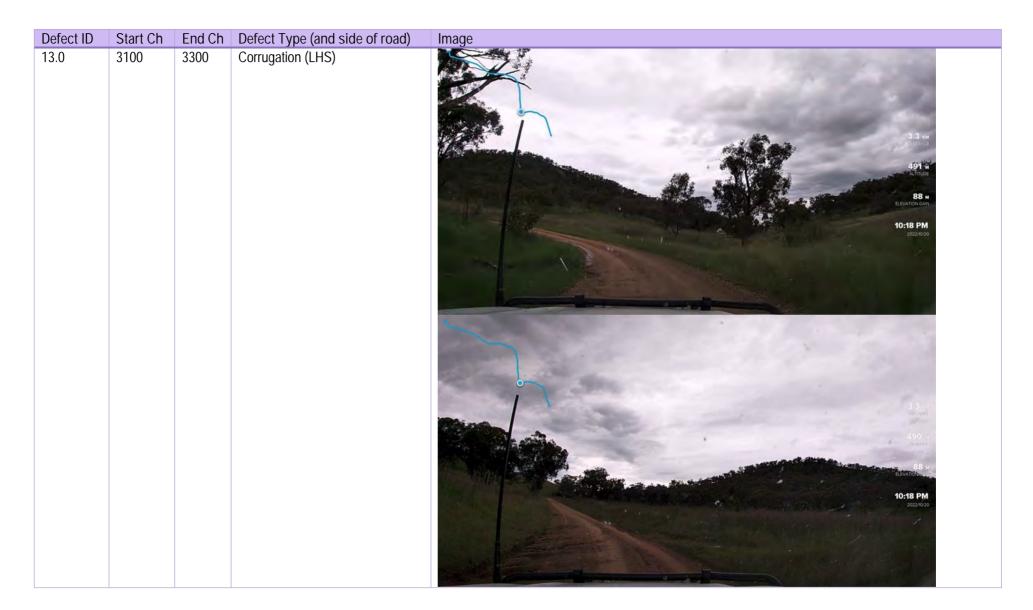
Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
3.0	700	800	Rutting (BS) Soft Surface (BS)	0.9 км 469 м 23 м
4.0	800	1000	Loss of material (RHS)	1.1 a 10:14 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
5.0	1000	1200	Potholes (LHS) Rutting (CR) Soft Surface (CR) Surface Scour (BS)	480 u 34 u 10:14 PM
6.0	1200	1400	Rough Surface (CR)	13 M 482 37 t 10:14 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
7.0	1400	1900	Rutting (CR) Rutting (BS) Loose material	502 H 502 H 10:15 PM
8.0	1900	2100	Pothole (BS) Surface Scour (RHS) Soft Surface (BS) Drainage issue	2.0 ml 10.705 507 w 10.715 M 10.16 PM 2022/32/32

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
9.0	2100	2200	Surface Scour (RHS) Rutting (RHS) Drainage issue	2.3 m 510 m 76 m 10:16 PM
10.0	2200	2400	Potholes (CR) Loose material (BS) Loose material (CR)	2.4 to ostande 517 to stande 5

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
11.0	2400	2500	Potholes (BS) Settlement (LHS) Drainage issue at sealed/unsealed interface.	
12.0	2500	3100	Rutting (RHS) Rough Surface Loose Material	2.9 xm 351743CB 506 w A 174gel 88 w ERANTON GAN 10:17 PM 20227020



Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
14.0	3300	3400	Rough Surface (CR)	92 M BLEVATION BAR 10-18 PM 2022/9/20
15.0	3400	3800	Unsealed to sealed pavement Pothole (RHS) Delamination (RHS)	900 a Saturda Adak PRATOR Adak 10:18 PM 2023 8:20



Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
17.0	4300	4800	Unsealed to sealed road. Cattle grid at transition. Pothole (RHS) Edge break (RHS)	480 a ATTUO 120 M EXENTION CAME 10:20 PM 2022/85/20
18.0	4800	4900	Sealed to unsealed road.	10.222 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
19.0	4900	5000	Corrugation (RHS) Surface scour (RHS) Drainage issue Cattle grid at fence line	9.5 3.1 1.3 10:23 PM 2022/020
20.0	5000	5400	Pothole (CR) Surface scour (BS) Rutting (RHS) Drainage issue	4.4. ENATION CAM 10:23 PM 2020 020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
				0,8 vo 7,8 vo 7,9 vo 442 w 6cm 10:23 PM
22.0	5400	5700	Rough surface	1.0 mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	Image
23.0	5700	6000	Corrugation (CR) Surface scour (RHS) Potholes (BS)	1.2 m 1.2 m 1.
24.0	6000	6100	Slippery Surface Pothole (RHS) Pothole (CR) Rutting (BS) Drainage issue	1.5 ng 460 w 5.5 ng 25 m 10.25 PM 2223.22

2.3 Uungula Road – Dilapidation Assessment

The Uungula Road assessment was conducted between chainage 0 – 11800, where chainage 0 is the intersection with Twelve Mile Rd – see Figure 4. Uungula Road is unsealed except for a few short sealed sections as described below:

- CH 0 100: sealed, 3.5 m width;
- CH 100 2500: unsealed, 4.5 5 m width until cattle grid;
- CH 2500 3700: unsealed, after cattle grid 4 5 m width;
- CH 3700 3725: RHS unsealed & LHS sealed for 25 m, 7.5 m road width;
- CH 3725 4300: unsealed, 4.5 m width;
- CH 4300 4700: sealed, 3.5 m width;
- CH 4700 11800: unsealed, 3.5 4.5 m width.

The observed defects are listed in Table 3 below.

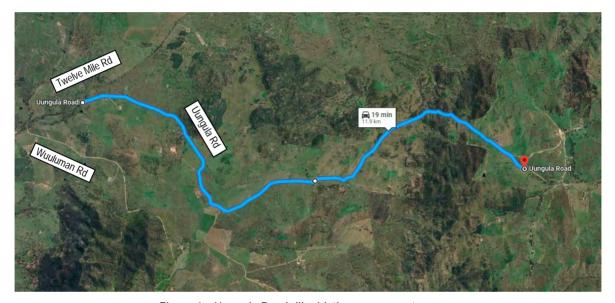


Figure 4 – Uungula Road dilapidation survey route

Table 3 – Uungula Road identified defects

D C 115	Jungula Road		D.C. T. (
Defect ID	Start Ch	End Ch		
1.0	0	100	Sealed to unsealed pavement with concrete causeway transition. Pothole (LHS) Pothole (CR) Depression (RHS) Drainage issue	0.1 pm 247 AVE 462 p ATTRICE 1 a 1 a 1 a 1 a 1 a 1 a 1 a 2 a 1 a 2 a 2 a 2 a 2 a 2 a 3 a 3 a 3 a 3 a 3 a 3 a 3 a 3
2.0	100	550	Surface Scour (BS) Edge break (BS)	478 a A ATROANA ATROANA 17 M ENARONGAA 12:15 AM 202002

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
3.0	550	550	Erosion (RHS) Surface scour (RHS) Edge break (LHS) Local attempt to prevent further erosion.	
4.0	550	750	Rutting (BS)	486 w

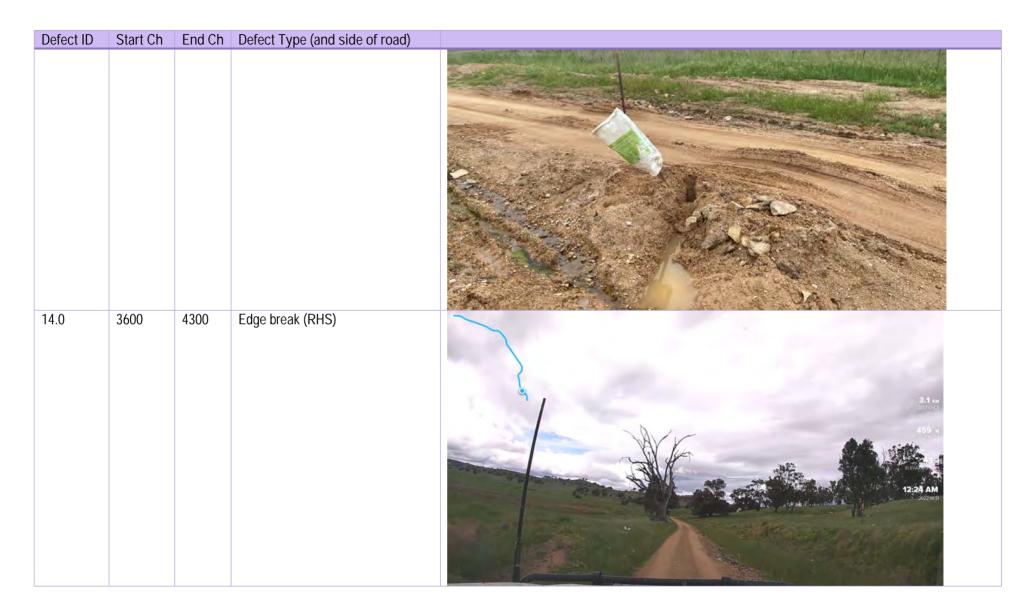
Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
5.0	750	800	Causeway Rutting (BS) Pothole (CR) Drainage Issue	4 til a Litterangian 12:13 AM Augusta

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
6.0	800	1000	Surface Scour (LHS)	12:18 AM
7.0	1000	1200	Rutting (BS) Surface Scour (RHS) Soft Surface	ZA S AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
8.0	1200	1600	Surface scour (RHS) for 400m	490 M
9.0	1600	2200	Rutting (LHS)	

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
10.0	2200	2400	Rutting (CR) Rutting (BS)	41 . 12:21 AM
11.0	2400	2500	Surface Scour (RHS)	495 a. ARTHUR ARTHUR ARTHUR 12:21 AM ARTHUR

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
12.0	2500	3500	Cattle grid Rutting minor (CR) Rutting (RHS)	1.7 or DOTINGE 490 * (ARTHOR) 41 * ERMATON GAM 12:21 AM 20230-31
13.0	3500	3600	Rutting major (BS) Rocks in pavement Soft surface (LHS) Drainage issue.	2.7 m 47 h 43 m 12-23 AM 2022 921



Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
15.0	4300	4400	Surface scour at unsealed to sealed transition.	0.2 mm 457 12.26 AM
16.0	4400	4500	Rutting (BS) Corrugation (BS)	0.4 mm 25% at 1 12.10 12.26 AM 20.23027

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
17.0	4600	4700	Rutting (BS) Drainage issue	12:26 AM 2023 023
18.0	4700	4700	Transition from sealed to unsealed	0.5 m Access and 12:27 AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
19.0	4700	4900	Cattlegrid Potholes Rutting (BS)	9.6 mm 0.57% c 473 u 21ml 22.27 AM 502270.21
20.0	4900	5200	Depression (CR) Rutting (BS) Drainage issue	A76 H 12:27 AM 2023/027

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
21.0	5200	5600	Depression Rutting (BS)	12:28 AM 2021507
22.0	5600	6200	Surface scour (BS) Edge break (RHS) Rutting (BS)	15 m 484 I 33 a 12:29 AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
23.0	6200	6500	Rutting Potholes (BS) Cattle grid	2.2 rd 572 vd 499 vd 12.30 AM 2022 b27
24.0	6500	6600	Causeway	12:31 AM 2023/021

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
25.0	6600	6700	Corrugation (RHS)	LEXALDS AND ADDRESS AND ADDRES
26.0	6700	7000	Surface scour (CR) Corrugation (LHS)	2.5 m 60 m 12.31 AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
27.0	7000	7600	Potholes (BS) Potholes (RHS) Rutting (RHS)	517 a 518 LECATION CON 12:32 AM 2022/02/2
28.0	7600	7700	Depression (CR) Rutting (LHS)	94 w REPARTON AND 12:33 AM 2020071

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
29.0	7700	8200	Rutting (LHS) Drainage issue	541 u Armoni 103 u BERNITOR GAN 12:33 AM 5022007
30.0	8200	8300	Causeway Surface scour around concrete transition Drainage issue Loose material on causeway	543 µ 105 ₩ ELNATON GAN 12:34 AM 2023/02/1

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
31.0	8300	8400	Cattle grid	111. 12:34 AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
32.0	8400	8800	Soft surface (LHS) Rutting (BS)	550 T ANDS 113 H DOWNTON DAY 12:34 AM 2022022
33.0	8800	8900	Surface scour (BS) Pothole (CR)	29 u 12:35 AM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
34.0	8900	9500	Pothole (CR) Rutting (BS)	5.0 at oscillation. 585 m A.Tifice. 148 m EENATORIGAN. 12:36 AM. 2022/0021
35.0	9500	9600	Surface scour (CR) Corrugation (RHS) Rutting (RHS)	589 w A TIDE 152 w ELEVITOR CAP 12:36 AM -20227027

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
36.0	9600	9700	Causeway Soft Surface Rutting (BS) Drainage issue	5.4 or 50 mod 2 mo
37.0	9700	9800	Corrugation (RHS) Edge break (RHS)	SSG J. A. PITLOG. 154 J. BENATORIAN 12:37 AM 2002/2017

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
38.0	9800	10300	Corrugation (RHS) Corrugation (CR) Surface scour (BS)	606 u Attrick 175 u Ecyclopida 12:37 AM 2003 000
39.0	10300	10500	Edge break (LHS) Depression (CR) Drainage issue Cattle grid	636 636 12:38 AM 202001

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
40.0	10500	10800	Rutting (LHS)	6.6 rw 37 M-2 G44 w 246 w ERWITCH GAN 12:39 AM 202021
41.0	10800	11100	Surface scour (CR) Rutting (BS) Pothole (LHS) Drainage issue	6.7 sa 6.8 216 s EPAZZAN 12.39 AM 2222001

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
42.0	11100	11200	Rutting (BS) Pothole (BS) Drainage issue Cattle grid	77.0 xm 1.77x/cg 630 m 2.77 m REPRETICE (Signal State of Control of Contr
43.0	11200	11500	Surface scour (RHS)	2.47 M ELECTRONISM 12.40 AM 200.000

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
44.0	11500	11800	Soft surface Drainage issue	7.6 mm
				224 w BENATONICAN 12:42 AM 502/5021

2.4 Ilgingery Road – Dilapidation Assessment

The Ilgingery Road assessment was conducted between chainage 0 – 7300, where chainage 0 is the intersection with Wuuluman Road – see Figure 5. Ilgingery Road is unsealed with an approximate width of 3.5 m until the cattle grid at CH 6200, from this point the width is approximately 2.5 m. The observed defects are listed in Table 4 below.



Figure 5 – Ilgingery Road dilapidation survey route

Table 4 – Ilgingery Road identified defects

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
1.0	0	100	Cattle grid	0.0 10:29 PM
2.0	100	200	Concrete causeway Pothole (LHS) Drainage issue	Olivers 446 or experience of the control of the co

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
3.0	200	500	Ravelling	FILORING STATES AND ST
4.0	500	600	Cattle grid	6 M B.B.P.B.C. (* M. 10:30 PM 3020020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
5.0	600	700	Pothole (LHS) Depression Drainage issue	10.30 PM
6.0	700	1000	Soft surface Rutting (BS)	20 * ERVATONIAN 10:31 PM 20:25:20

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
7.0	1000	1300	Rutting (BS)	30 HELYALON GASANAN TO STATE OF THE STATE OF
8.0	1300	1600	Pothole (RHS)	1.5 m 10:32 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
9.0	1600	1800	Defect Type (and side of road) Cattle grid	10:32 PM 5003/020
10.0	1800	2000	Edge break (LHS)	52 10:33 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
11.0	2000	2300	Corrugation (BS) Surface scour (BS)	S G F C C C C C C C C C C C C C C C C C C
12.0	2300	2500	Poorly graded pavement material	501-1 Sparse and the sparse and the

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
13.0	2500	2600	Pothole (LHS) Surface scour (RHS)	10:34 PM
14.0	2600	2800	Poorly graded pavement materialMinor rutting (LHS)	2.8 or outside: 479 in 4.79 in 10:35 PM 2223020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
15.0	2800	3000	Pothole (BS) Rutting (LHS)	SS MELINATORICAN DESCRIPTION DESCRIPTION
16.0	3000	3300	Pothole (BS) Edge break (LHS) Poorly graded pavement material	476 u ATRUS 86 w EDMS

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
17.0	3300	3400	Poorly graded pavement material	474 × ALTORIA 86 × 10:36 PM 2023-02.01
18.0	3400	3800	Pothole (LHS) Corrugation (RHS)	10,36 °M

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
19.0	3800	3900	Cattle grid	10:37 PM
20.0	3900	4200	Edge break (RHS)	10:37 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
21.0	4200	4400	Surface scour (CR)	
				117-
				10:37 PM
22.0	4400	4700	Rutting (RHS) Pothole (BS)	
			Pothole (BS)	
				No. 3 v
				10:38 PM 2022/0/20

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
23.0	4700	4800	Poorly graded pavement material	463 u 463 u 10:38 PM
24.0	4800	4900	Rutting (BS)	10.39 PM

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
25.0	4900	5100	Rutting (RHS) Surface scour (LHS)	456 L Atmost 117 L ELEVATOR GALV 10:39 PM 2022-0.20
26.0	5000	5100	Rutting (RHS)	#36 ** #18V #342046040 #0039 PM #00207020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
27.0	5100	5200	Pothole (CR) Rutting (RHS)	455 1180 10:39 PM
28.0	5200	5200	Pothole (RHS) Cattle grid	456 w Althors 119 w ELVATORE 10:39 PM 2022/020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
29.0	5200	5600	Surface scour (RHS) Edge break (RHS)	123 u ETVALONIOAN 10-40 PM 5002/000
30.0	5600	5700	Depression Drainage issue	5.6 to ostave 452 to Astronomy 123 to BERATONIGAN 10:40 PM 2022/0020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
31.0	5700	5800	Defect Type (and side of road) Corrugation (CR)	127 m ELEVATION CAN 10:40 PM 2023/020
32.0	5800	6200	Rutting (BS)	445 u Almor Almor 10-41 PM 2022/020

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
33.0	6200	6500	Pothole (BS) Cattle grid	728 ** 10:41 PM
34.0	6500	6600	Rutting (BS) Rutting (CR) Soft surface Drainage issue	434 M ARTHOR 130 M 10:42 PM 2022 6:20

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
35.0	6600	6700	Drainage issue	61.6 or DotAsset 431 at Actions 130 at 100:42 PM 2003/009
36.0	6700	7100	Rutting (BS) Drainage issue	422 u

Defect ID	Start Ch	End Ch	Defect Type (and side of road)	
37.0	7100	7100	Defect Type (and side of road) Cattle grid (LHS) Grass in the middle of the road	420 w Althor D w textifinor cus 10:44 PM 20:24 20:
38.0	7100	7300	Drainage issue	0.12 mm



3 Conclusion

As per the requirements of Condition B31 of this Project's Development Consent, this report has been prepared to present an accurate representation of the existing condition of the Dubbo Regional Council roads: Twelve Mile Road, Wuuluman Road, Uungula Road and Ilgingery Road, which will be used by the construction traffic for the proposed Uungula Wind Farm. The assessment was undertaken on 21st October 2022 and identified many defects along each road–refer to Section 2 of this report for a list of the identified issues. Refer to video surveys for full and complete dilapidation survey.

Appendix A – Dilapidation Assessment Method Approval

Email thread shown overleaf

Daniel Kyriacou

From: Joshua Mason

Sent: Thursday, 3 November 2022 10:16 AM

Daniel Kyriacou To:

FW: 19-142 | Uungula Wind Farm - Dilapidation Survey of existing roads Subject:

Regards,

Joshua Mason

BEng (Hons) CPEng NER RPEQ

Associate I Civil & Environmental Engineer



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From: Peter James < Peter. James@dubbo.nsw.gov.au>

Sent: Thursday, 6 October 2022 10:26 AM

To: Joshua Mason <joshua.mason@icubed.com.au>

Subject: RE: 19-142 | Uungula Wind Farm - Dilapidation Survey of existing roads

Thanks Josh,

I'm happy with that, the images are quite good.

ΡJ



Peter James

Senior Transport Asset Specialist

Infrastructure Delivery | Dubbo Regional Council

P 02 6840 6409

Peter.James@dubbo.nsw.gov.au

http://dubbo.nsw.gov.au



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From: Joshua Mason <joshua.mason@icubed.com.au>

Sent: Thursday, 6 October 2022 11:18 AM

To: Peter James < Peter. James @dubbo.nsw.gov.au>

Cc: 19-142 - Uungula Wind Farm < 19-142UungulaWindFarm@icubed.com.au >; Antoni Mrdjen < Antoni.Mrdjen@cwprenewables.com >; matthew flower < matthew.flower@cwprenewables.com >

Subject: RE: 19-142 | Uungula Wind Farm - Dilapidation Survey of existing roads

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Thanks Pete.

We'll proceed on this basis. Below are examples (taken from a different project) of the quality we receive from the GoPro, the "stills" are screenshot when watching the video. We just use the standard GoPro "Hero," we've found this to be a suitable method, especially when viewing videos taken at different times. I'd add that there is some level of surveyor discretion required when completing the works, they will have to stop the car and take photos of individual items at times.

80	D Rutting, Delamination, Edge Break LHS	
	Flushing RHS	

600-700	S Rutting, Delamination, Ravelling (either end of bridge) BS	1
	Crocodile Cracking (north end of bridge) MOR	
2100	VD Rutting, Surface Rutting, Depression, M Potholes, Delamination LHS	

Regards,

Joshua Mason

BEng (Hons) CPEng NER RPEQ

Associate I Civil & Environmental Engineer



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From 10th October 2022 visit us at our new Brisbane HQ in 5 Gardner Close, Milton







From: Peter James < Peter. James@dubbo.nsw.gov.au>

Sent: Thursday, 6 October 2022 10:08 AM

To: Joshua Mason <joshua.mason@icubed.com.au>

Subject: RE: 19-142 | Uungula Wind Farm - Dilapidation Survey of existing roads

Hi Josh,

Yes, that method looks acceptable as long as it has capacity to provide a still image (pause?) at any particular location and that the resolution is high enough to clearly show the condition.

I'm very interested in the camera that you plan to use, we are looking for something similar to record all of our roads, we don't need video images instead we need to capture a single image every 50m on each road, this is a precondition for disaster relief funding, do you know if your camera has that capacity?

We have heard of the 'Garmin Verb' camera, it can capture an image using pre-set GPS distances but unfortunately it seems to be unavailable for purchase now?

PJ



Peter James

Senior Transport Asset Specialist

Infrastructure Delivery | Dubbo Regional Council

P 02 6840 6409

Peter.James@dubbo.nsw.gov.au http://dubbo.nsw.gov.au

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From: Joshua Mason < joshua.mason@icubed.com.au >

Sent: Thursday, 6 October 2022 10:45 AM

To: Peter James < Peter. James@dubbo.nsw.gov.au>

Cc: Mark Johnston <Mark.Johnston@dubbo.nsw.gov.au>; Chris Godfrey <Chris.Godfrey@dubbo.nsw.gov.au>; 19-

142 - Uungula Wind Farm <19-142Uungula Wind Farm@icubed.com.au>; Antoni Mrdjen

<a href="mailto:<a

Subject: 19-142 | Uungula Wind Farm - Dilapidation Survey of existing roads

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Hi Peter,

I'm looking to confirm that DRC are accepting of the proposed dilapidation survey strategy and reporting for the Uungula Wind Farm to fulfill condition B31 of the Project's Development Consent (image 1 below). Can DRC please review the methodology below and provide in-principle acceptance so we can undertake the "existing condition" survey?

The roads and areas of road to be surveyed can be seen in the attached .kmz and include.

- Twelve Mile Road Goolma Road to Primary Site Entry
- Uungula Road Twelve Mile Road to 50m past Project Boundary
- Wuuluman Road Twelve Mile Road to Uungula Road
- Ilgingery Road Uungula Road to 50m past Project Boundary

Work is proposed to be completed through a bi-directional video survey undertaken using a GoPro mounted to a dashboard. Following the video survey a report and register will be compiled and submitted to DRC. Timing of surveys to be as per condition B31.

Image 1

Road Maintenance

- B31. The Applicant must:
 - (a) undertake an independent dilapidation survey to assess the:
 - existing condition of Twelve Mile Road on the transport route, and the sections of Uungula Road, Wuuluman Road and Ilgingery Road described in condition B29, prior to construction, upgrading or decommissioning works; and
 - condition of Twelve Mile Road on the transport route, and the sections of Uungula Road, Wuuluman Road and Ilgingery Road described in condition B29:
 - within 1 month of the completion of any construction, upgrading or decommissioning works;
 - on an annual basis during construction works;
 - rehabilitate and/or make good any development-related damage
 - repair Twelve Mile Road, on the transport route, and the sections of Uungula Road, Wuuluman Road and Ilgingery Road described in condition B29, if dilapidation surveys identify that the road has been damaged during construction, upgrading or decommissioning works;

in consultation with the relevant roads authority, to the satisfaction of the Planning Secretary.

Regards,

Joshua Mason

BEng (Hons) CPEng NER RPEQ
Associate I Civil & Environmental Engineer



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