LAND COURT OF QUEENSLAND

CITATION:	*Bowen Basin Coal Pty Ltd v Namrog Investments Pty Ltd* [2020] QLC 23
PARTIES:	**Bowen Basin Coal Pty Ltd** (applicant) v **Namrog Investments Pty Ltd** (respondent)
FILE NO:	CPA202-18
DIVISION:	General Division
PROCEEDING:	Application to decide a dispute under the *Mineral and Energy Resources (Common Provisions) Act 2014*
DELIVERED ON:	17 June 2020
DELIVERED AT:	Brisbane
HEARD ON:	20 April 2020
HEARD AT:	Brisbane
MEMBER:	JR McNamara
ORDERS:	**1. I determine compensation in respect of MDL429 and MDL3001 in the sum of One Hundred and Seven Thousand, Three Hundred Dollars ($107,300).** **2. The parties will be heard in relation to any application for determination of outstanding issues pursuant to section 96 of the *Mineral and Energy Resources (Common Provisions) Act 2014*. A request for such a hearing must be made no later than 15 business days after the delivery of these reasons.**
CATCHWORDS:	STATUTES – ACTS OF PARLIAMENT – INTERPRETATION – GENERAL APPROACHES TO INTERPRETATION – whether the pre-amended *Mineral and Energy Resources (Common Provisions) Act 2014* applies – whether, if the pre-amended Act does apply, the

Land Court has jurisdiction to decide issues in dispute other than compensation – where the parties referred the whole dispute to the Court

PROCEDURE – CIVIL PROCEEDINGS IN STATE AND TERRITORY COURTS – SEPARATE DECISION OR DETERMINATION OF QUESTIONS – where the Court was asked to determine compensation – where the parties would bring outstanding issues before the court at a later date

ENERGY AND RESOURCES – MINERALS – MINING FOR MINERALS – COMPENSATION – available mapping datasets - where agronomy experts disagreed on accuracy of available land type mapping data – where agronomy experts disagreed on land type composition of affected paddock – where available mapping data was accepted

Mineral and Energy Resources (Common Provisions) Act 2014 s 15A, s 81, s 83, s 96(2)
Acts Interpretation Act 1954 s 20

MRV Metals Pty Ltd v Chief Executive, Department of Environment and Science [2020] QLC 9

APPEARANCES: EJ Morzone (instructed by Emanate Legal) for the applicant
N Loos (instructed by Colin Biggers and Paisley Lawyers) for the respondent

The legislative scheme

[1] Under the *Mineral and Energy Resources (Common Provisions) Act 2014* (MERCPA), before a resource company can enter private land to carry out advanced activities[1] pursuant to a mineral development licence, they generally must have a

[1] Advanced activity is defined at s 15A of the MERCPA as activities that have more than a minor impact on the landholder's land use activities or business activities. They can include:
- levelling of drilling pads and digging sumps
- earthworks associated with pipeline installation
- bulk sampling
- open trenching or costeaning with an excavator
- vegetation clear-felling
- constructing an exploration camp, concrete pad, sewage or water treatment facility or fuel dump
- geophysical surveying with physical clearing
- carrying out a seismic survey using explosives
- constructing a track or access road
- changing a fence line.

legally binding agreement with the landholder. This can be either a conduct and compensation agreement (CCA),[2] a deferral agreement, or an opt-out agreement.[3]

[2] A CCA sets out the activities or conduct proposed to be undertaken as well as compensation arrangements for any impacts.[4]

[3] A resource authority holder may give an eligible claimant a notice that they wish to negotiate a CCA.[5]

[4] In those circumstances the parties must use reasonable endeavours to negotiate a CCA during the prescribed period, but if no agreement is reached either party may give an ADR election notice.[6]

This case

[5] The applicant, Bowen Basin Coal Pty Ltd (Bowen Basin Coal) holds MDL429 and MDL3001 (the MDLs), which affect a cattle property known as Vermont Park at Dysart owned by the respondent, Namrog Investments Pty Ltd (Namrog).

[6] The proposed activity comprises 35 exploration core drill holes, three seismic drill holes, about 12 kilometres of seismic line, seven point of access tracks, 15 kilometres of access along existing roads and two kilometres of access along the seismic lines.[7]

[7] In this case an ADR election notice was given on 8 March 2018 and mediation occurred on 13 April 2018, however a CCA was not agreed, and the applicant filed an application in the Land Court on 24 May 2018 pursuant to MERCPA s 96(2). Neither a deferral agreement nor an opt-out agreement was pursued in this matter.

Jurisdiction

[8] Since the filing of the application, the provisions of the MERCPA which concern the jurisdiction of the Land Court were amended, including s 96(2).

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2 Conduct and compensation agreement is defined at s 83 of the MERCPA.

3 Landholders can agree to delay making a conduct and compensation agreement until after the land has been accessed under MERCPA s 44 (deferral agreement) or opt-out of negotiating a conduct and compensation agreement under MERCPA s 45(2) (opt-out agreement).

4 *Mineral and Energy Resources (Common Provisions) Regulation 2016* pt 5.

5 MERCPA s 84.

6 MERCPA s 88.

7 T 1-4, lines 35 to 38.

[9] The scheme of the MERCPA as amended now requires the parties to engage in non-binding ADR prior to the making of an application to the Court. That occurred in any case. The pre-amended s 96(2) allowed an application to be brought in the alternative, that is, for the Court to decide compensation, *or* future compensation, *or* matters concerning entry and conduct. The amended s 96(2) simply provides that either party may apply to the Land Court to decide the dispute.[8]

[10] Consistent with the findings of Kingham P in *MRV Metals Pty Ltd v Chief Executive, Department of Environment and Science,*[9] generally, the amendment of an Act does not affect anything begun under the Act or a right acquired under the Act. The remedy can be started, continued, or completed, as if the amendment had not happened.[10] There is no contrary intention expressed in the amending Act.[11]

[11] The originating application asks the Court to decide the applicant's compensation liability or future compensation liability only. The alternative versions of the draft CCA found in the hearing materials disclose there are more matters in dispute than compensation.[12]

[12] Had the application been brought after the Act was amended it would seem that the task for the court would be to 'decide the dispute' – presumably outstanding issues between the parties relevant to the CCA. However, the pre-amended Act gave the applicant the option to seek a decision regarding any (or all) of the issues in dispute being compensation, future compensation and access/conduct arrangements.

[13] While the originating application was specific to compensation, as discussed below, the subject matter broadened.

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8 A dispute might relate to all or any of the s 83 matters – entry conditions, conduct and/or compensation. However, under s 96(3), the Land Court may decide the liability or future liability (compensation) only to the extent it is not subject to a CCA.

9 [2020] QLC 9 at [20].

10 Section 20(2) of the *Acts Interpretation Act 1954* provides that the repeal or amendment of an Act does not—(c) affect a right, privilege or liability acquired, accrued or incurred under the Act; or … (e) affect an investigation, proceeding or remedy in relation to a right, privilege, liability or penalty mentioned in paragraph (c) or (d). Section 20(3) provides that the investigation, proceeding or remedy may be started, continued or completed, and the right, privilege or liability may be enforced and the penalty imposed, as if the repeal or amendment had not happened.

11 *Natural Resources and Other Legislation Amendment Act 2019*.

12 Ex 1, tab 7; Ex 1, tab 8.

Issues unresolved

[14] Orders made 13 March 2020 required the parties to provide, amongst other things, a list of issues and a list of matters not in dispute. The document filed by the parties is headed 'List of Issues in Dispute/List of Matters not in Dispute'.[13]

[15] The matters in dispute are identified under sub-headings 'issues of fact in dispute' and 'issues of law in dispute'. The issues of fact relate to the bases and assessment of compensation. The issues of law are expressed as follows:

> 6. The terms of the conduct and compensation agreement to be entered into by the parties; and
>
> 7. The compensation payable by the Applicant to the Respondent as required under section 81(1)(a)(i) (sic) of the *Mineral and Energy Resources (Common Provisions) Act 2014* (Qld).

[16] In opening submissions, Mr Loos noted that the hearing materials included an original version and a marked up version of the CCA, and said that whether the differences in those two documents are resolved in this decision is a matter for the court, but also noted that it may be that the determination of the compensatable effect of the deprivation of possession of the land surface might adjust the parties' approaches to how the CCA might be drafted.[14] The substance of the CCA, other than compensation, was not significantly discussed in the hearing. In closing submissions it was acknowledged that a number of the issues were conceded or resolved and a process for determining issues regarding the CCA dispute could be included in orders made at the time of delivering judgment on compensation. That is the way I intend to proceed.

Compensation

[17] The parties were unable to agree on compensation for the advanced activities on MDL429 and MDL3001.

[18] As noted, attempts had been made to resolve the compensation issue in mediation prior to the application to the Court.

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13 List of Issues in Dispute/List of Matters not in Dispute, provided 17 April 2020.

14 T 1-15, lines 6 to 11.

[19] The parties sought to rely on expert evidence of valuers and agronomists. The respondent engaged agronomist Mr William Thompson and valuer Mr William McLay, while the applicant engaged agronomist Mr Jim Brennan and valuer Mr Chris Caleo.

[20] After the application was made, the Court Managed Expert Evidence (CMEE) process was used to develop joint expert reports (JERs) by the expert agronomists and valuers.[15] Mr Thompson and Mr Brennan produced an agronomists' JER dated 31 May 2019 (Initial Agronomists' JER)[16] and an agronomists' supplementary JER dated 20 December 2019 (Supplementary Agronomists' JER).[17] Mr Caleo and Mr McLay produced a valuation JER dated 5 July 2019 (Initial Valuation JER)[18] and a supplementary valuation JER dated 20 March 2020 (Supplementary Valuation JER).[19]

[21] The qualifications and experience of Mr Thompson and Mr Brennan is outlined in their respective curricula vitae.[20] Their expertise was not challenged. In my view both are suitably experienced to provide expert evidence in this matter. At the hearing conducted on 20 April 2020 they gave evidence in concurrent session.

[22] Facts concerning the work program were not in dispute. Where and when advanced activities are to occur was agreed.

Components of compensation

[23] The assessment of compensation in this case is a mathematical exercise. It is the values ascribed to certain variables that are in dispute. Those variables are the stocking rate or carrying capacity, the average daily weight gain, and the average annual operating cost. This results in a difference of opinion concerning the gross value of production loss and opportunity cost – which are agreed components of compensation in this matter. The quantum of the other components (fencing, labour/stock management, managers time, and cost, damage or loss), were agreed.

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15 The CMEE process is a method where the Court supervises the briefing and meeting of expert witnesses and production of their joint expert report. See *Practice Direction No 3 of 2018 - Procedure for Court Managed Expert Evidence,* 30 April 2018.

16 Ex 1, tab 3.

17 Ex 1, tab 5.

18 Ex 1, tab 4.

19 Ex 1, tab 6.

20 Ex 1, tab 9; Ex 1, tab 10.

[24] The valuers reached agreed values of compensation for the alternative assessments of production loss by each agronomist. At the commencement of the hearing there were three scenarios referred to in the hearing material and presented for consideration.[21] At the hearing in closing submissions the third scenario was abandoned.[22] The two remaining scenarios reflect the values ascribed to the variables by the expert agronomists as seen in the following table titled "Table 6 – Summary of Impacts" found in the Agronomists' Supplementary JER:[23]

	JB Assessment	**BT Assessment**
Productivity	$29,536	$49,469
Fencing	$15,000	$15,000
Labour/Stock Management	$1,250	$1,250
Managers Time	$8,250	$8,250
Opportunity Cost	$20,138	$45,625
Total	**$74,174**	**$119,594**

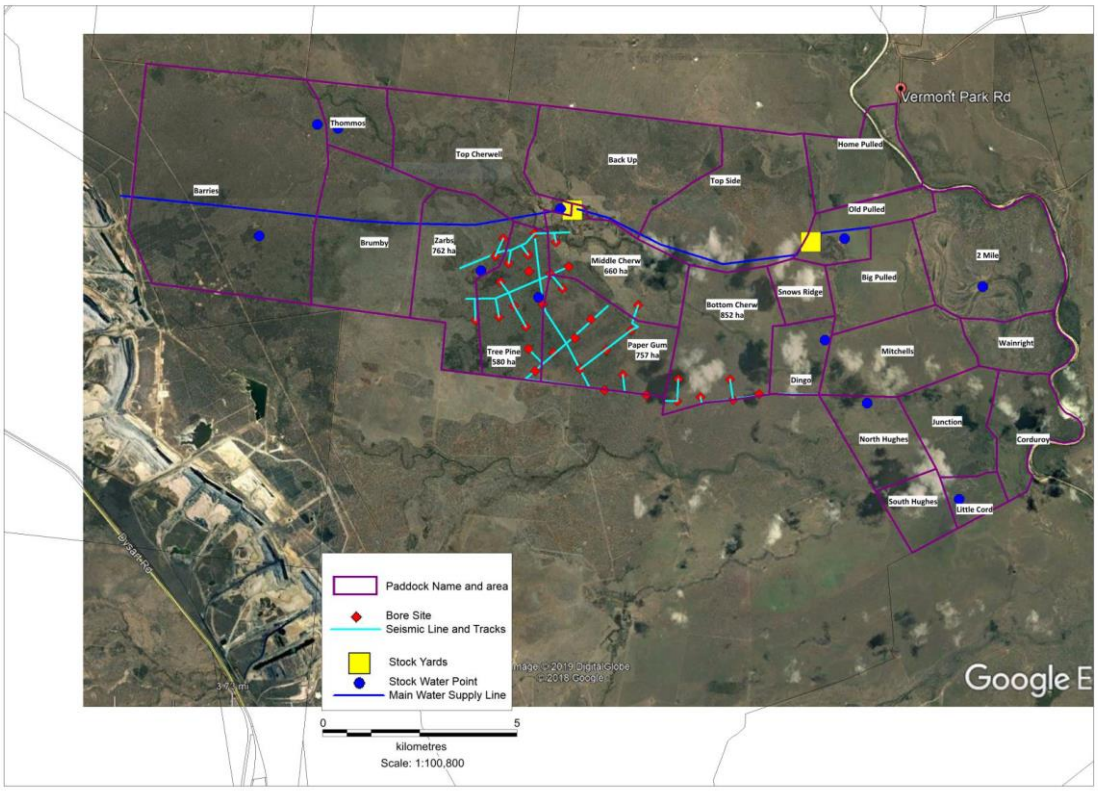
[25] It was also agreed at the hearing that the assessment of cost, damage and loss, regardless of scenario, of $15,750 in the Supplementary Valuation JER was accepted by both parties.[24]

21 Ex 1.
22 T 1-81, line 43 to line 46; T 1-82 line 1 to line 2.
23 Ex 1, tab 5, page 255 (first three columns shown only).
24 T 1-14, line 24 to line 28; T 1-14 line 40; Ex 1, tab 6.

Variables affecting productivity and opportunity cost

Stocking rate or carrying capacity

[26] The advanced activities are located across five paddocks,[25] however they will be carried out principally in the two paddocks known respectively as Tree Pine and Paper Gum. The following figure was included in the hearing materials as "Figure 1 – Vermont Park Property Plan".[26]



[27] Stocking rate or carrying capacity is determined in relation to land type. The following table appeared as "Table 1 - Assessment of Carrying Capacity for all of Vermont Park" in the Supplementary Agronomists' JER.[27] The table provides a breakdown of Vermont Park by land type in order of dominance, and the estimated area occupied by each land type both as a number of hectares and as a percentage of the total area. The information relates to the whole property rather than individual paddocks.

25 Vermont Park consists of 24 paddocks in total.
26 Ex 1, tab 5, page 257.
27 Ex 1, tab 5, page 242.

Table 1 – Assessment of Carrying Capacity for all of Vermont Park

		Ha		Acres	Ha/AE		CC	
Land Type	**Total Area**	**16,669**		**41,189**		**AE**	**Rate**	**Breeder**
7	Poplar box with ironbark	6,866	41.2%	16,966	16.19	424		
2	Box flats	4,970	29.8%	12,281	8.09	614		
6	Brigalow with melonholes	3,889	23.3%	9,610	3.24	1,201		
4	Coolibah floodplains	439	2.6%	1,085	4.05	108		
1	Alluvial brigalow	238	1.4%	588	3.24	74		
3	Blue gum/river red gum flats	121	0.7%	299	3.64	33		
5	Brigalow with blackbutt (Dawson gum)	105	0.6%	259	3.64	29		
		16,628		**41,088**	**6.71**	**2,483**	**1.35**	**1,840**
	Variance	-41	-0.25%	-101				

Notes:- 1. Land type & areas as per DNR Forage Report: Indicate Land Type
2. As aerial maps inconclusive, CC rates assumes most of the land suitable for development (pulling & pasture establishment) has been developed

3. Rate is the conversion rate from AE (Adult Equivalent) to a Breeder Equivalent

	Breeders	**AE Conversion**	**AE**
Breeders Currently Run (as advised by manager)	1,700	1.35	2,295

[28] There are seven land types identified on Vermont Park. The land type and areas are "as per DNR Forage Report". Forage is an online system that generates and distributes information for rural lots on plan. The information in the table is not based on a site inspection but is rather drawn from a range of physical, geographical and spatial datasets.

[29] The stocking rate, by land type, is expressed numerically as hectares per adult equivalent (Ha/AE). By taking the area of a particular land type (in hectares) and dividing it by the Ha/AE, the figure produced is the expected number of adult equivalents that that pasturage can sustain.

[30] If a paddock is all one land type, then the actual carrying capacity of that paddock is easily calculated (*x* hectares divided by the Ha/AE figure). If however a paddock is made up of a combination of land types, then the same calculation is done per land type area and the total aggregated.

[31] To more accurately determine land type in the affected paddocks, additional datasets were overlaid. These datasets were the Land Type Mapping from the DNR Long

Paddock data set[28] and the DNR Queensland Globe, which shows paddocks affected by the activities.[29]

[32] A site inspection was also conducted by the expert agronomists who traversed the track abutting the fence line between the two most affected paddocks and observed the landscape from that position in either direction. Mr Thompson in evidence said that he and Mr Brennan were able to inspect approximately 15% of the impacted area.[30] In the course of the inspection the agronomists also spoke with the property manager.

[33] The agronomists' conclusions differed and both accept the data is not perfect. Mr Thompson said that it is useful at a whole of property level, but not necessarily at the paddock level.[31]

Affected paddocks

[34] Advanced activities will have a small impact on three paddocks which can be managed and rehabilitated with exclusion fencing, but the majority of the area affected lies in just two paddocks – Tree Pine and Paper Gum. According to the Supplementary Agronomists' JER these two paddocks have 28 of the 35 drill sites and are transected by seismic lines.[32] While the cattle could remain in these paddocks during drilling (provided the work sites are properly fenced off), grazing and management of the paddocks during rehabilitation periods is impractical. At completion of the drilling program the paddocks will be destocked, drill sites and other disturbed areas reseeded, so that the areas can be returned to pre-disturbance condition within three years.

[35] The task for the expert agronomists was to determine the carrying capacity loss on each of the affected paddocks expressed in AE. Each expert agronomist completed a table setting out productivity losses on each affected paddock – Table 2JB[33] and Table 2BT.[34] The tables are reproduced below:

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28 Ex 1, tab 5, page 259.
29 Ex 1, tab 5, page 260.
30 T 1-23, line 15 to line 16; T 1-27 line 11.
31 T 1-23, lines 10 to 20.
32 Ex 1, tab 5, page 240.
33 Ex 1, tab 5, page 246.
34 Ex 1, tab 5, page 248.

Table 2JB Productivity Losses JB

Productivity Losses with Updated Mapping

Paddock						CC Loss - % of Year Not Grazed							
Tree Pine (100% affected)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	560.92	16.19	35			50%	50%	35	0.3	3,794		
	2	34.87	8.09	4			50%	50%	4	0.3	472		
Undeveloped	6	166.33	16.19	10			50%	50%	10	0.3	1,125		
		762.12	**15.48**	**49**	18				**49.2**		**5,391**	**$ 2.70**	**$ 14,555**
Paper Gum (100% affected)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	626.42	16.19	39			50%	50%	39	0.3	4,237		
	2	0	8.09	-			50%	50%	-		-		
Undeveloped	6	0	16.19	-			50%	50%	-	0.3	-		
		626.42	**16.19**	**39**	10				**38.7**		**4,237**	**$ 2.70**	**$ 11,439**
Bottom Cherwell (affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	122	16.19	8			50%	50%	8	0.3	825		
	2	0	8.09	-			50%	50%	-		-		
Undeveloped	6	0	16.19	-			50%	50%	-		-		
		122	**16.19**	**8**	6				**7.5**		**825**	**$ 2.70**	**$ 2,228**
Zarbs Paddock (affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	0	16.19	-			50%	50%	-		-		
	2	0	8.09	-			50%	50%	-		-		
Developed	6	4.5	3.24	1			50%	50%	1.4	0.6	304		
Undeveloped	6	1	16.19	0			50%	50%	0	0.3	152		
		4.5	**3.10**	**1**	0				**1.5**		**456**	**$ 2.70**	**$ 1,232**
Middle Cherwell (Affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7		16.19	-			50%	50%	-		-		
Developed	2	2.25	8.09	0.3			50%	50%	0	0.3	30		
	6	0	16.19	-			50%	50%	-		-		
		2.25	**8.09**	**0**	1				**0.3**		**30**	**$ 2.70**	**$ 82**
Summary													
		Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
		1517	15.6	97			50%	50%					
		1517	**15.6**		**35**				**97**	**0.31**	**10,939**	**$ 2.70**	**$ 29,536**

Table 2BT Productivity Losses BT

Productivity Losses with Updated Mapping

Paddock						CC Loss - % of Year Not Grazed							
Tree Pine (100% affected)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	560.92	12.14	46			50%	50%	46	0.4	6,746		
	2	34.87	8.09	4			50%	50%	4	0.4	629		
Undeveloped	6	166.33	16.19	10			50%	50%	10	0.4	1,500		
		762.12	**12.54**	**61**	18				**60.8**		**8,875**	**$ 2.70**	**$ 23,963**
Paper Gum (100% affected)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	626.42	12.14	52			50%	50%	52	0.4	7,534		
	2	0	8.09	-			50%	50%	-		-		
Undeveloped	6	0	16.19	-			50%	50%	-	0.3	-		
		626.42	**12.14**	**52**	10				**51.6**		**7,534**	**$ 2.70**	**$ 20,341**
Bottom Cherwell (affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	122	12.14	10			50%	50%	10	0.4	1,467		
	2	0	8.09	-			50%	50%	-		-		
Undeveloped	6	0	16.19	-			50%	50%	-		-		
		122	**12.14**	**10**	6				**10.0**		**1,467**	**$ 2.70**	**$ 3,961**
Zarbs Paddock (affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7	0	12.14	-			50%	50%	-		-		
	2	0	8.09	-			50%	50%	-		-		
Developed	6	4.5	3.24	1			50%	50%	1.4	0.4	203		
Undeveloped	6	1	16.19	0			50%	50%	0	0.4	203		
		4.5	**3.10**	**1**	0				**1.5**		**406**	**$ 2.70**	**$ 1,095**
Middle Cherwell (Affected area only)													
	Land Type	Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
	7		16.19	-			50%	50%	-		-		
	2	2.25	8.09	0.3			50%	50%	0	0.4	41		
Developed	6	0	16.19	-			50%	50%	-		-		
		2.25	**8.09**	**0**	1				**0.3**		**41**	**$ 2.70**	**$ 110**
Summary													
		Affected Ha	Ha/AE	AE CC Loss	Drill Sites	Yr 1	Yr 2	Yr 3	Total AE CC Loss	ADWG	Total Kg Loss	$/Kg	Total Loss
		1517	12.2	124			50%	50%					
		1517	**12.2**		**35**				**124**	**0.40**	**18,322**	**$ 2.70**	**$ 49,469**

[36] In both tables, for each of the five paddocks, the land type per hectare information is identical. Only three land types, 7, 2 and 6, are identified for the five paddocks.

[37] In both tables, for land types 2 and 6, the Ha/AE figure and the AE (carrying capacity) loss is identical. For land type 2 the Ha/AE figure is 8.09, which is the figure contained in Table 1.[35] For land type 6 both tables record the Ha/AE figure as 16.19 (whereas Table 1 indicates for land type 6 a Ha/AE of 3.24). A note beside land type 6 in the agronomists' tables says 'Undeveloped'. This is explained in the JER that the land type 6 on Vermont Park is "undeveloped Brigalow" and has a very low carrying capacity, "similar or less than land type 7 … i.e. 16.19 Ha/AE".[36]

[38] However, for land type 7, in relation to the affected paddocks, as between the experts the Ha/AE figures differ.[37]

[39] Mr Brennan adopted the Ha/AE figure of 16.19 which appears in Table 1 above. Mr Thompson adopted a figure of 12.14. The reasons for Mr Thompson's difference are explained below. The cumulative loss in carrying capacity based on Mr Brennan's calculation is 97 AE, and on Mr Thompson's calculation 124 AE.

The difference in Ha/AE

[40] Mr Thompson expressed his view that broadscale data cannot be relied on at paddock level. In his view the Long Paddock mapping actually suggested ratios on the affected paddocks as broadly similar to that of the overall property (6.71 Ha/AE). However, based on the field inspection of the affected paddocks he considered this an overestimate and thought a more appropriate figure for the land type 7 area, given the range in soils and land units would be mid-way between the carrying capacity of land type 7 and land type 2, which he averaged as 12.14 ha/AE. He confirmed in evidence and based on the site inspection (what appears in his observations in the Supplementary Agronomists' JER) that land type 2 soils were "were observed throughout the area and intermixed with land type 7". He noted in the Supplementary Agronomists' JER that land type 6 "is also mapped in the paddocks".

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35 Ex 1, tab 5, page 242.

36 I would observe that the agreed adjustment by the agronomists to the DNR Forage Report assessment of Ha/AE for land type 6 on Vermont Park based on other mapping and on a site inspection would suggest that the figures are not necessarily fixed.

37 I note that in Table 2BT in relation to Middle Cherwell the figure of 16.19 Ha/AE is recorded. In evidence Mr Thompson confirmed that the figure should be 12.14. Regardless it made no difference to Mr Thompson's assessment of cumulative AE loss.

[41] Mr Brennan took a more clinical approach. He overlaid the activities on the Queensland Globe Land Type Map, which was considered more accurate than the mapping used in the Initial Agronomists' JER. In the Supplementary Agronomists' JER and in evidence he expressed the view that the land types depicted on the Long Paddock mapping confirmed noted observations regarding the extent of impact on the five paddocks and the approximate breakdown (percentage and area) by land type.[38]

[42] Mr Brennan maintained that he did not agree that averaging should be applied.

[43] The Land Type Mapping was accepted at face value in constructing Tables 2JB and 2BT. Both Mr Thompson and Mr Brennan agreed, for example, that Tree Pine included 560.92 hectares of land type 7, 34.87 hectares of land type 2, and 166.33 hectares of (undeveloped) land type 6.

[44] In evidence Mr Thompson said that:

> "The reality of this land type mapping is that it's pretty crude. It's useful at arguably the whole of a very large property, but it's not necessarily an accurate indicator or predictor of what you will get in an individual paddock."[39]

[45] Mr Thompson continued:

> "There are a number of other resources that you can assess to determine whether the mapping as used to compile table 1 was a reasonable predictor of what you could find on the ground. One of those is what you visually see when you drive through those paddocks. The other ones are looking in detail at some of the satellite imagery. And the other one is looking at the other independent data sets … which is the CSIRO soils and land resource mapping …"[40]

[46] Mr Thompson said that these other datasets indicate a significant percentage "of what could loosely be called land type 2, which is the box flats, scattered throughout – or soil similar to that scattered throughout that nominal land type 7 area".[41]

[47] Accordingly, it is asserted by Mr Thompson that the agreed area of land type 7 on the affected paddocks was in fact not purely land type 7 (although still described as such), but was collocated or intermixed with land type 2, which would require its own Ha/AE score - although the agreed area of land type 2 remains.

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38 T 1-28, lines 32 to 39.
39 T 1-23, lines 18 to 20.
40 T 1-23, lines 45 to 47; T 1-24 lines 1 to 3.
41 T 1-24, lines 3 to 6.

[48] I accept that the experts did not accept at face value the Ha/AE score for land type 6 because it was undeveloped – but not because it was not land type 6.

[49] Both experts took away different conclusions from the site inspection. Mr Thompson observations are noted above. Mr Brennan however said he came away from the inspection feeling the mapping was "quite a good indicator"; that he felt "at ease with Table 1"; and that he "thought it aligned very well".[42] Mr Brennan says he questioned the manager "about the country and the land and how they ran the place, and I questioned him extensively".[43] Mr Brennan said in evidence:

> "… basically, there are two paddocks that comprise 92 per cent of the area that is being affected by the mining activity so tree pine and paper gum, those two paddocks cover 92 per cent of the affected area, and of that 86 per cent is land type 7, which has the lowest carrying capacity on our assessment, and undeveloped land type 6 is 12 per cent, and it is undeveloped land type 6 which is regulated scrub. When it's undeveloped … it has a similar carrying capacity to land type 7. And my point was that there is 98 per cent of the 92 per cent, that is the lowest carrying capacity land type."[44]

[50] In closing submissions Mr Morzone accepted that any land type category is going to contain a mix of land types but said it is the dominant land type which is agreed for the purpose of determining carrying capacity. He said that if the land type information is used for determining affected areas but not for determining carrying capacity, adjustments to carrying capacity would need to be balanced over other land types – which potentially make adjustments arbitrary.

[51] I accept the position advocated by Mr Morzone in this regard. In my view had Mr Thompson re-classified land type 7 on the affected paddocks as a hybrid, or had the ratio of land type 7 and land type 2 been adjusted to reflect his observations, his table would in my view have greater strength. I accept that broadscale data is indicative and is only as good as the quality of the inputs – but if it is accepted for some purposes and not others the conclusions become little more than a 'guesstimate'. Averaging seems convenient – but perhaps simplistic. The intermixing of land types (as opposed to more discrete areas) could have other consequences which have a bearing on the carrying capacity – although there is no evidence regarding this. If there was in fact a greater area of type 2 land, then it should have been quantified.

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42 T 1-28, lines 1 to 29.
43 T 1-29, lines 28 to 29.
44 T 1-29, lines 12 to 22.

[52] In my view the stocking rate or carrying capacity outlined in Mr Brennan's table 2JB is to be preferred. This results in acceptance of the figure of 15.6 Ha/AE over the affected area of 1,517 hectares and an AE loss of 97.

Average daily weight gain

[53] The monetary figure of total loss in productivity is reached by multiplying the AE loss by the daily weight gain (ADWG), by the number of days in a year, by the per kilogram value, which is agreed to be $2.70. This is set out below:

$$\text{Total productivity loss} = \text{total CC loss} \times (\text{average daily weight gain} \times 365 \text{ days}) \times \text{cost per kilogram}$$

[54] Mr Thompson contends the ADWG to be 0.4, Mr Brennan contends it to be 0.31.

[55] In the Initial Agronomists' JER it says: "The estimated liveweight gain (LWG) from this class of grazing land assuming minimal supplementation is 0.4 kg/AE/year (sic) or 146 kg/AE/year …".[45]

[56] A 2017 report authored by M. K. Bowen and F. Chudleigh (the Bowen and Chudleigh report)[46] was tendered during the hearing although the only parts of the report referred to specifically were Table 17[47] and Table 23.[48] In the Supplementary Agronomists' JER, in response to the use by Mr Brennan of the "liveweight gain figure of 0.31 kg/day" in table 2JB, Mr Thompson notes that it is less than the figure adopted in the Initial Agronomists' JER. He says: "Recent research modelling of herd performance in the Central Queensland and Bowen districts indicates that the figure of 0.4 is of itself at the lower end of what could be anticipated for weaner cattle."[49] He notes that Table 17 in the Bowen and Chudleigh report shows an overall annual daily gain of 0.49 kg per day. In evidence Mr Thompson said the data is "based on real herd, commercial scale herd … monitoring"[50] – that is, real reference data from commercial herds as opposed to modelling.[51]

[57] Mr Brennan, in response to Mr Thompson's assessment in the Supplementary Agronomists' JER, says that he accepted the figure of 0.4 in the Initial Agronomists'

45 Ex 1, tab 3, page 226, line 211.
46 Ex 2.
47 Ex 2, page 79.
48 Ex 2, page 83.
49 Ex 1, tab 3, page 226, line 211.
50 T 1-42, lines 22 to 24.
51 T 1-42, line 35.

JER as a compromise, but no accommodation had then been made for opportunity cost. In the Supplementary Agronomists' JER, opportunity cost is included. Mr Brennan considered that the Bowen and Chudleigh report concerned two enterprises on "brigalow softwood scrub country near Rolleston", which he says is regarded as some of the best country in central Queensland. He says that based on his professional experience he is firmly of the view that 0.3 for land type 7 is a realistic ADWG for the affected area.

[58] It is not clear how comparable Vermont Park is to the two enterprises the subject of the report, however, the report says: "The modelled enterprises were situated centrally in the Fitzroy Natural Resource Management region in central Queensland, near Rolleston, with the predominant land type used for growing and finishing cattle considered to be Brigalow softwood scrub." The report states further that the land type constitutes the largest land type area within the Fitzroy NRM area, being 1.5 million hectares and 9.7% of the entire area,[52] and that the majority of this land type has been cleared and developed to sown pasture with buffel the predominant species.[53] Mr Brennan in evidence said that the two properties are "premium country".[54]

[59] The land types in the affected paddocks are as described in Tables 2BT and 2JB. I note that in Table 1, "Brigalow with melonholes" is defined as land type 6, and "Brigalow with blackbutt (Dawson gum)" is defined as land type 5. According to Tables 2BT and 2JB some undeveloped land type 6 (166.33 hectares) is agreed to exist in Tree Pine.

[60] In evidence, Mr Thompson explained that live weight gain comes from weaners – the weight of cows does not change year on year. He calculated that a figure of 0.31 would translate to about 131 kilograms live weight which he considered a "very, very, very low weight weaner".[55] He said that his figure of 0.4 means a live weight of about 195 kg, which is at the bottom end of what would be an acceptable sale.[56] He said his figure of 0.4 matches what you would expect from a good sustainable operation. Mr

52 Ex 2, page 10, para 2.2.1.
53 Ex 2, page 10.
54 T 1-44, line 43.
55 T 1-44, lines 2 to 8.
56 T 1-44, lines 11 to 13.

Thompson said that he believed the relevant paddocks could support a 0.4 average daily weight gain.

[61] Mr Brennan said that the basis of calculations had been AE such that "it was not consistent to use weaner weight",[57] which introduces a range of other variables.

[62] Both experts were forceful in their arguments to support their assessment of ADWG. In the circumstances I accept the conclusion of Mr Thompson. As noted in closing submissions from Mr Loos, Mr Thompson drew his conclusion from the Bowen and Chudleigh report, aware of factors which would cause him to moderate the factor to be applied, and adjusting to what he described as the lower end of the scale what is in fact a figure beneath the scale referred to in that report. I accept the data in that report is drawn from monitoring rather than modelling which lends it more credence. I accept there is some lack of precision, but I have also take into account the lower carrying capacity I have accepted which in theory would render a higher ADWG more likely.

[63] I accept the ADWG of 0.4 kg/day. Accordingly, productivity loss for the whole of Vermont Park is calculated as below:

$$\text{productivity loss} = 97 \times (0.4 \times 365) \times 2.70$$

[64] The total productivity loss is $38,237.

[65] My calculation is on the basis that total loss is the $/kg figure multiplied by the total kilogram loss figure. Total kilogram loss is calculated by multiplying the AE loss by ADWG by the number of days in a year.

[66] In relation to calculating the total kilogram loss, I note that the summary tables 2BT and 2JB, in a straight calculation, do not deliver their respective calculated total losses precisely. Those tables contain a variance which is not explained. In both cases the figure in 2JB and 2BT is slightly below the straight calculation. My conclusion is based on a straight calculation based on the AE loss and ADWG as determined in this decision.

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[57] T 1-44, line 35.

Average Annual Operating Costs

[67] The opportunity cost is the value of the productive loss less the cost of production. Opportunity cost is calculated by subtracting expenses and freight and selling costs from the productivity loss, which is the potential income. Expenses are calculated by multiplying the number of AE by the number of years by the average annual operating cost. This is set out below:

$$\text{opportunity cost} = \text{productivity loss} - \text{freight and selling costs} - \text{expenses}$$

[68] The main variable in dispute however is the average annual operating cost. Mr Brennan adopted a figure of $60/AE/year. Mr Thompson adopted a figure of $15.50/AE/year.

[69] In closing submissions Mr Loos said that, understanding that Mr Brennan did not contend for a figure higher than $60 per AE/year, it was accepted by Mr Thompson.

[70] I accept the figure of $60/AE/year. Over two years, productivity loss is 97 AE which is 49 AE per year when rounded. I accept the figure of $3,544 as freight and selling cost. The opportunity cost is therefore $28,813, as set out in the table below:

Potential Income		$38,237
Less freight & selling Costs		$3,544
Expenses		
Potential Additional AE	49	
No of years	2	
Average annual operating costs	$60	
Total additional costs		$5,880
Potential Opportunity Cost		**$28,813**

Determination

[71] Based on my findings I determine the compensation payable by the applicant Bowen Basin Coal Pty Ltd to the respondent Namrog Investments Pty Ltd as follows:

Productivity	$38,237
Fencing	$15,000

Labour/stock management	$1,250
Manager's time	$8,250
Opportunity cost	$28,813
Cost, damage, loss	$15,750
Total	**$107,300**

Orders:

1. **I determine compensation in respect of MDL429 and MDL3001 in the sum of One Hundred and Seven Thousand, Three Hundred Dollars ($107,300).**

2. **The parties will be heard in relation to any application for determination of outstanding issues pursuant to section 96 of the *Mineral and Energy Resources (Common Provisions) Act 2014*. A request for such a hearing must be made no later than 15 business days after the delivery of these reasons.**