



# ASX Announcement

2 October 2012

## Dellworth Project - Preliminary Concept Study

The Directors of NuCoal Resources Ltd (ASX: NCR) (**NuCoal**) are pleased to provide the following details from the recently completed Preliminary Concept Study for the Company's 100% owned Dellworth Coal Project in the Hunter Valley of NSW.

### Highlights

Highlights from the Preliminary Concept Study (**Study**) for the Dellworth Coal Tenement EL 6594 (**the Project**) are as follows:

- Draft mining plan laid out over the most prospective areas
- +10 year mine life anticipated for domestic coal sales scenarios
- Base case as a contract mining opencut providing 500kt – 1Mt to local domestic consumer
- Existing infrastructure provides access to local consumer within 7kms of project site
- Capital requirements estimated at \$24m - \$34m to establish an operation with contract mining rates utilised for the Study
- Economic modelling indicates a positive NPV at realistic coal prices
- Following consideration of the Preliminary Concept Study, the NuCoal Board has approved the immediate commencement of the next stage of studies

#### ASX:NCR • Share Information

Issued Shares: 768.6m

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#### Key Projects

Doyles Creek Mining Pty Ltd  
Hunter Valley NSW  
Tenement: EL7270  
Ownership: 100%

Doyles Creek Underground Mine Training School  
Contact: Maree Roberts

Dellworth Pty Ltd  
Hunter Valley NSW  
Tenements: EL6594 & EL6812  
Ownership: 100%

## Dellworth Coal Project - Preliminary Concept Study

The key objectives of the Study were to assess:

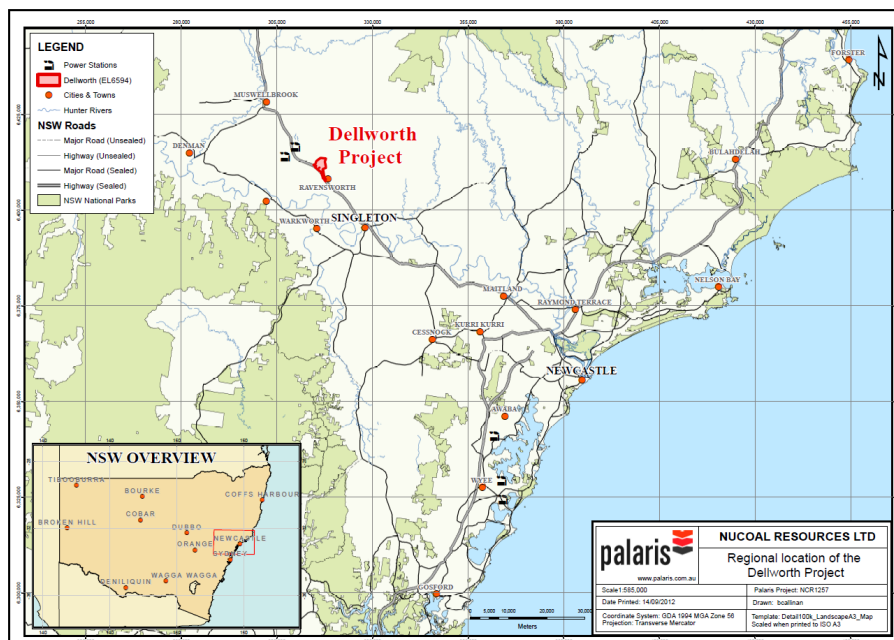
- Potential development and mine planning options for the Project;
- Key parameters for the establishment of an economically viable coal operation;
- The financial robustness of the Project;
- Key Project risks and determine whether any fatal flaws exist;
- Infrastructure requirements and options; and
- Environmental and community considerations.

The Study was conducted by independent technical consultants, Palaris Mining Pty Ltd (**Palaris**) with the assistance of Parsons Brinckerhoff.

## Executive Summary

### 1. Overview

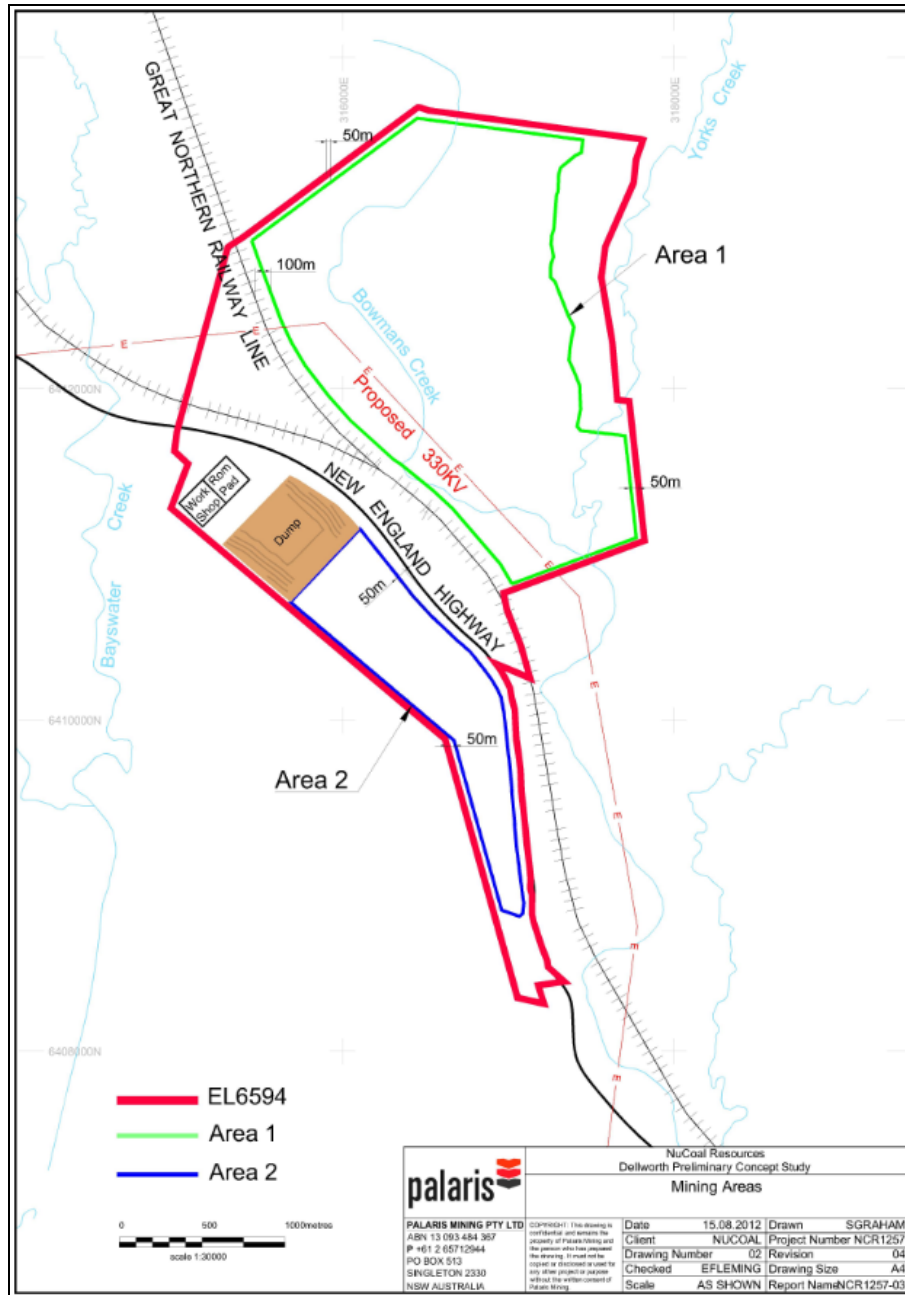
NuCoal engaged Palaris to conduct a Preliminary Concept Study on the Dellworth Project to determine the viability of pursuing the potential mining targets further towards execution. Exploration Licence 6594 (**Dellworth or EL 6594**) is located approximately 20km to the north of Singleton, in the upper Hunter Valley of New South Wales. A regional location of the Dellworth Project is shown in Figure 1.1 below.



**Figure 1.1 Dellworth Location Map**

Initially, two mining areas were assessed within EL 6594 as shown in Figure 1.2 below:

- Area 1 - East of the Great Northern Railway
- Area 2 - West of the New England Highway



**Figure 1.2 Dellworth Mining Areas**

## 2. Recommendations

Palaris have recommended that the Project be progressed through a process of development, including:

- Ramp up the Exploration Program in Area 2 to support project development;
- Establish a JORC compliant coal resource from the 16 holes drilled at Dellworth to date and planned drilling of an additional 4 holes;
- Progress to Pre-feasibility Study;
- Initiate negotiations with landholders, infrastructure owners and potential partners;
- Continue community and environmental background monitoring and assessment; and
- Work with regulators to maintain status in the approvals pipeline.

## 3. Coal Quality and Marketability

Dellworth is located adjacent to a coal conveyor supplying a local power station. The conveyor transports coal from Narama Mine's 5kt capacity bin to Macquarie Generation. There may be an opportunity to utilise this infrastructure that is owned, operated and maintained by Macquarie Generation.

## 4. Capital Expenditure Assumptions

It has been assumed that the mining operation is contractor-run, with mobile plant being supplied by the contractor. The capital expenditure assumptions for the Project only include fixed plant. No capital costs have been included for a coal handling and preparation plant or rail, since it has been assumed all product coal is sold locally as a domestic thermal product.

## 5. Geological Assessment

The main target seam in the Dellworth area is the Bayswater seam, which sits at the base of the Burnamwood Formation of the Wittingham Coal Measures. Within Area 1, the Bayswater seam is present as two distinct plies, the upper Bayswater seam, BAY1, approximately 2.8 m thick, consists of banded coal and carbonaceous parting material. It is separated from the BAY2 ply by approximately 1.7 m of parting. The BAY2 ply, approximately 3.2 m thick, appears from the geophysical logs to be the better ply, consisting mainly of coal with only minor carbonaceous partings.

To the west the Bayswater seam coalesces to form one seam ranging in thickness from 3.43m up to 6.20m, averaging 5.41m thickness, with an average Raw Ash of ~23% ad. Historic borehole data suggests that the coalesced seam will be present in Area 2.

## 6. Infrastructure and Equipment Selection

The Study was premised on the potential for Dellworth to be a domestic thermal coal operation. Upfront capital outlay would therefore be significantly less (no coal handling and preparation plant and rail loader).

Dellworth is located in close proximity to a local power station. An opportunity exists to utilise a coal conveyor adjacent to the deposit (owned and maintained by Macquarie Generation).

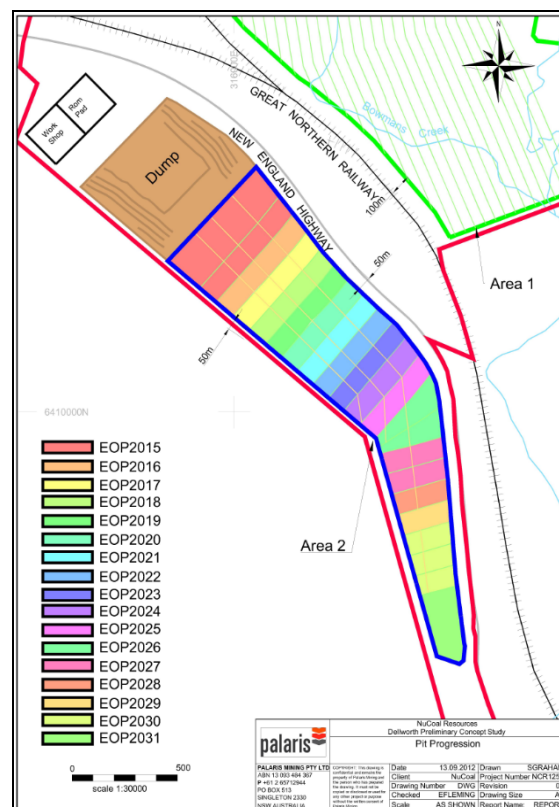
## 7. Scheduling

Target coal scheduling was used to form high level schedules for financial assessment. Figure 1.3 below outlines the Dellworth schedules created for financial modelling:

Area	Mining Direction	0.5Mtpa	0.75Mtpa	1Mtpa
Area 2	North to south	✓	✓	✓

**Figure 1.3 Dellworth Schedules**

Figure 1.4 below illustrates the mining direction at Dellworth Area 2. The north to south mining direction is largely driven by out-of-pit dumping balances.



**Figure 1.4 Area 2 – Mining Sequence**



## 8. About NuCoal

NuCoal owns a 100% interest in the Doyles Creek Underground Mine and Training School and 100% of Dellworth Pty Ltd, which are strategically located adjacent to many world class operating coal mines in the lower Hunter Valley in New South Wales Australia. The Projects are situated near the towns of Jerrys Plains and Ravensworth respectively which are approximately 105kms from the port of Newcastle and within 20kms of several rail coal loading facilities.

The Doyles Creek tenement contains a 512 Mt JORC compliant Measured, Indicated and Inferred Resource of premium quality semi soft coking and thermal coal. The coal seams are outlined in the latest Resource Statement dated December 2011 which details high quality, known coal brands such as "Whybrow Coal", "Whynot Coal" and "Woodlands Hill Coal". These coal brands are produced from other collieries in the Hunter Valley and are marketed for sale to overseas steel mills and both the domestic and international power generation industry.

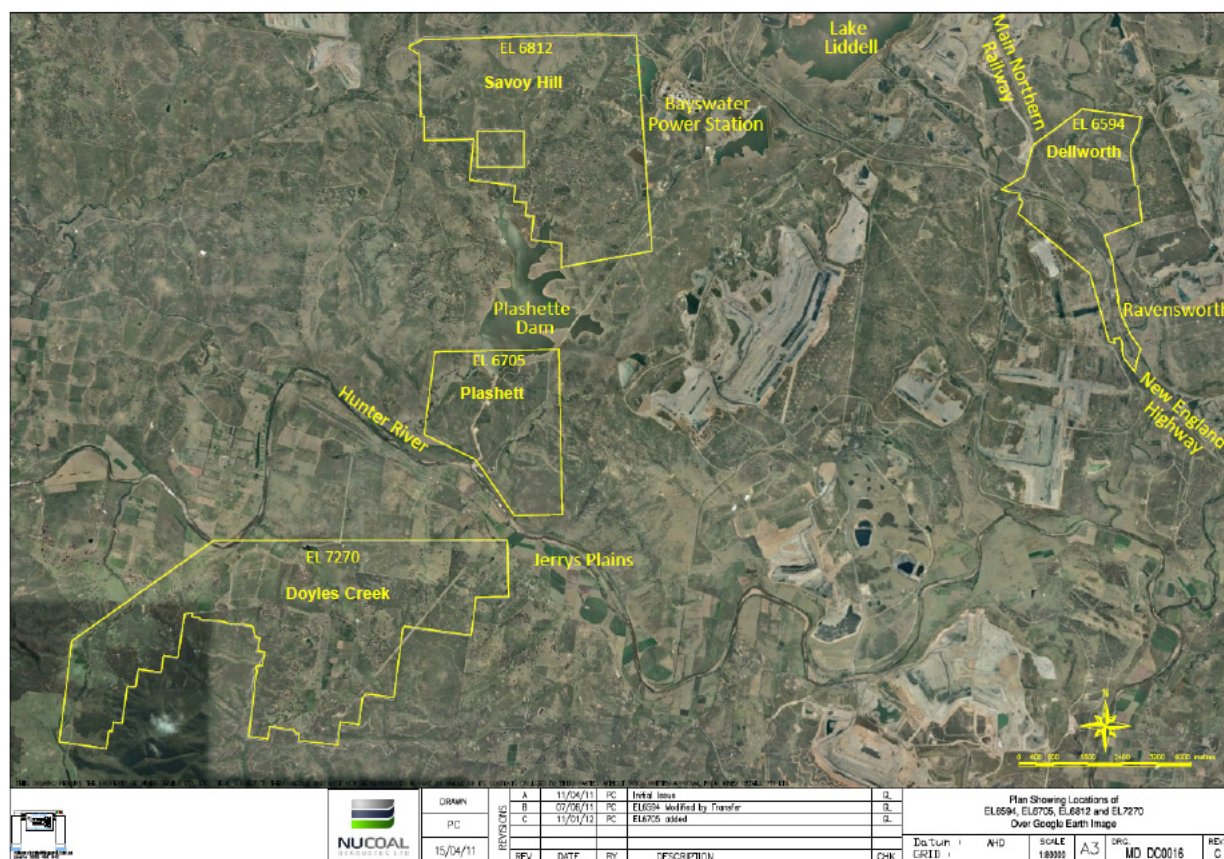
More recently, the Project has identified an initial Probable Ore Reserve of 50.9 Mt across two of the five identified target seams. The ore reserve comprises premium quality semi soft coking coal and thermal coal products.

The ultimate outcome is for the development of an underground mine and an associated world class training facility that meets the training and professional development needs of all workers in the underground coal mining industry. The training school is already offering opportunities for post graduate and undergraduate study through its association with The University of Newcastle. The next course to be offered is Certificate IV in accordance with RII09 Resources and Infrastructure Industry Training Package. The school will operate with an underground mine specifically built for training purposes. It will have its own coal seam, equipment and services allowing it to provide a learning environment that replicates an operational mine but without the commercial pressures of needing to fund its operation from coal production. Students of the school will be able to learn in an environment that can tolerate variable skill levels, qualifications and learning cycles. Training will focus on supporting a safe, sustainable and skilled workforce for the whole of the mining industry, with the first courses being offered in the Conservation and Land Management training packages and in conjunction with the University of Newcastle's Environmental Sciences faculty.

The Dellworth tenements (EL 6594 (Dellworth) and EL 6812 (Savoy Hill)) are in the early stages of exploration and will assist form NuCoal's project pipeline. Please also refer to the NuCoal website at [www.nucoal.com.au](http://www.nucoal.com.au).

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The information in this report that relates to exploration results and mineral resources is based on information compiled by Dr Ian Stone, who is a Member of the Australasian Institute of Mining and Metallurgy (102087). Dr Stone is Manager, Geology of Palaris Mining Pty Ltd. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person, as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Stone has over 30 years experience in exploration and mining of coal deposits. Dr Stone consents to the inclusion in this report disclosed by the Company, of the matters based on his information, in the form and context in which it appears.

The Underground Reserves estimate is based on information compiled by Mr Michael Barker, who is a Member of the Australasian Institute of Mining and Metallurgy (112634). Mr Barker is General Manager, Underground Services for Palaris Mining Pty Ltd. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person, as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Barker has over 16 years' experience in the estimation, assessment, evaluation and economic extraction of Coal Reserves. He consents to the inclusion of this Reserve Estimate in reports disclosed by the Company in the form in which it appears.

This estimation of Underground Coal Reserves has been undertaken by a team of people in the Palaris Mining office and in co-operation with technical staff employed by NuCoal Resources Ltd. Mr Barker is satisfied that the work of the other contributors is acceptable, and Mr Barker accepts responsibility and accountability for the Underground Coal Reserve estimate documentation under the Code.

Refer to detailed Doyle's Creek JORC Resource Statement in Table A1 and the initial Reserve Statement in Table A2 below.

SEAM	CATEGORY	AVERAGE SEAM THICKNESS (m)	RESOURCE (mt)	ASH (ad)	MOISTURE (ad)	RELATIVE DENSITY (gm/cc) (ad)	INSITU RELATIVE DENSITY (gm/cc)	TOTAL SULPHUR (% ad)	FIXED CARBON (ad)	VOLATILE MATTER (%ad)	CALORIFIC VALUE MJ/KG (ad)	CALORIFIC VALUE MJ/KG (daf)	CALFORIFIC VALUE KC/KG (ad)	CALFORIFIC VALUE KC/KG (daf)
West Borehole	MEASURED	2.38	9.4	33.5	5.0	1.56	1.53	0.42	37.4	24.6	4780	7185	66.8	13.2
West Borehole	INDICATED	2.41	23.5	34.2	5.4	1.57	1.53	0.45	36.6	24.1	4688	7184	64.9	14.2
West Borehole	INFERRED	2.26	19.0	34.9	5.4	1.58	1.54	0.46	36.8	24.0	4705	7267	64.8	15.0
<b>TOTAL</b>		<b>2.35</b>	<b>51.9</b>	<b>34.3</b>	<b>5.3</b>	<b>1.57</b>	<b>1.54</b>	<b>0.45</b>	<b>36.8</b>	<b>24.1</b>	<b>4711</b>	<b>7215</b>	<b>65.2</b>	<b>14.3</b>
Whybrow	MEASURED	-	-	-	-	-	-	-	-	-	-	-	-	-
Whybrow	INDICATED	3.61	13.9	22.6	3.8	1.45	1.42	0.38	42.5	30.9	5870	7303	76.8	8.9
Whybrow	INFERRED	3.48	93.2	23.3	4.2	1.46	1.44	0.37	42.2	31.4	5745	7109	74.8	9.2
<b>TOTAL</b>		<b>3.50</b>	<b>107.1</b>	<b>23.3</b>	<b>4.1</b>	<b>1.46</b>	<b>1.43</b>	<b>0.37</b>	<b>42.2</b>	<b>31.3</b>	<b>5762</b>	<b>7134</b>	<b>75.0</b>	<b>9.2</b>
Redbank Creek	MEASURED	-	-	-	-	-	-	-	-	-	-	-	-	-
Redbank Creek	INDICATED	5.86	19.9	36.3	4.2	1.58	1.54	0.32	34.0	25.5	4670	6675	62.5	14.9
Redbank Creek	INFERRED	5.25	89.0	36.4	4.3	1.59	1.55	0.34	35.3	25.3	4749	6621	64.7	15.2
<b>TOTAL</b>		<b>5.36</b>	<b>108.9</b>	<b>36.4</b>	<b>4.3</b>	<b>1.59</b>	<b>1.55</b>	<b>0.33</b>	<b>35.0</b>	<b>25.4</b>	<b>4735</b>	<b>6631</b>	<b>64.3</b>	<b>15.1</b>
Whynot	MEASURED	2.55	13.7	8.3	3.4	1.34	1.32	0.38	54.5	33.8	7258	8194	94.3	4.6
Whynot	INDICATED	2.57	41.6	7.3	3.5	1.34	1.32	0.39	54.8	34.4	7332	8218	95.4	4.8
Whynot	INFERRED	2.24	29.5	8.0	3.6	1.34	1.32	0.4	53.9	34.4	7267	8218	94.3	4.7
<b>TOTAL</b>		<b>2.45</b>	<b>84.8</b>	<b>7.7</b>	<b>3.5</b>	<b>1.34</b>	<b>1.32</b>	<b>0.39</b>	<b>54.4</b>	<b>34.3</b>	<b>7298</b>	<b>8214</b>	<b>94.9</b>	<b>4.7</b>
Woodlands Hill	MEASURED	-	-	-	-	-	-	-	-	-	-	-	-	-
Woodlands Hill	INDICATED	3.6	20.4	45.7	2.9	1.71	1.68	0.33	29.22	21.49	3991	6019	49.6	11.8
Woodlands Hill	INFERRED	3.66	138.8	47.0	2.9	1.72	1.7	0.32	28.67	21.27	3744	5822	48.6	11.8
<b>TOTAL</b>		<b>3.65</b>	<b>159.2</b>	<b>46.8</b>	<b>2.9</b>	<b>1.72</b>	<b>1.7</b>	<b>0.32</b>	<b>28.74</b>	<b>21.3</b>	<b>3775</b>	<b>5847</b>	<b>48.7</b>	<b>11.8</b>
	Total MEASURED		23.1											
	Total INDICATED		119.3											
	Total INFERRED		369.5											
<b>EL7270 TOTAL</b>			<b>511.9</b>											

**Table A1 - EL 7270 (Doyles Creek) Measured, Indicated and Inferred Resources and Coal Quality (Resource Areas Only)**



Seam	Probable Reserves (ROM Mt Mo <sub>ROM</sub> 8%)	Total Marketable Reserves (Mt various moisture basis)	Total Yield (%)
West Borehole	23.3	13.8	59 %
Whynot	27.6	26.4	96 %
<b>Total</b>	<b>50.9</b>	<b>40.2</b>	79 %

*Table A2 - Underground total probable and marketable reserves*