



**Tahmoor Colliery**

**MANAGEMENT PLAN**

**for**

**POTENTIAL IMPACTS TO**

**PEPES DUCKS INFRASTRUCTURE**

**AT TAHMOOR**

**DUE TO THE MINING OF**

**LONGWALL 26**

**REVISION A**



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**Report Number MSEC446-14**

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## GENERAL

### AUTHORISATION OF SURFACE SAFETY AND SERVICEABILITY MANAGEMENT PLAN

<b>Authorised on behalf of Tahmoor Colliery:</b>	
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Date:	15 MARCH 2011

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Position:	Chief Financial Officer
Date:	14/3/11

#### REVIEW

Date	Report No.	Rev	Comments
Mar-11	MSEC446-14	A	Plan for Longwall 26

## CHAPTER 1. INTRODUCTION

### 1.1. Background

Tahmoor Colliery is located approximately 80 kilometres south west of Sydney in the township of Tahmoor NSW. It is managed and operated by Xstrata Coal. Tahmoor Colliery has previously mined 25 longwalls to the north and west of the mine's current location.

Longwall 26 is a continuation of a series of longwalls that extend into the Tahmoor North Lease area, which began with Longwall 22. The longwall panels are located between the Bargo River in the south-east, the township of Thirlmere in the west and Picton in the north. A portion of each longwall is located beneath the urban area of Tahmoor. Pepes Ducks leases land that is located near but directly above Longwall 26.

A map showing the location of Pepes Ducks property relative to Longwall 26 is shown in Fig. 1.1. It can be seen that the closest distance between the duck sheds and Longwall 26 is 300 metres.

Longwall 26 is approximately 283 metres wide and more 3.4 km long. The longwall will extract coal from the Bulli Seam, which is approximately 2.2 metres thick and 450 metres below the surface. The longwall equipment will commence extracting from the southern end, closest to the Pepes Ducks property and gradually progress to the northwest, away from the Pepes Ducks property.

This Management Plan provides detailed information about how the risks associated with mining near Pepes Ducks will be managed by Tahmoor Colliery and Pepes Ducks. The Management Plan has been developed in accordance with the conditions of approval for the extraction of Longwall 26 from Industry and Investment, NSW.

The Management Plan is a live document that can be amended at any stage of mining, to meet the changing needs of Tahmoor Colliery and Pepes Ducks.

### 1.2. Surface Features on Pepes Ducks property

Pepes Ducks farm is located at the end of Tahmoor Road and Myrtle Creek Avenue, Tahmoor. The property consists of 3 duck sheds, other smaller sheds, service pipes, farm dams, fences and gates.

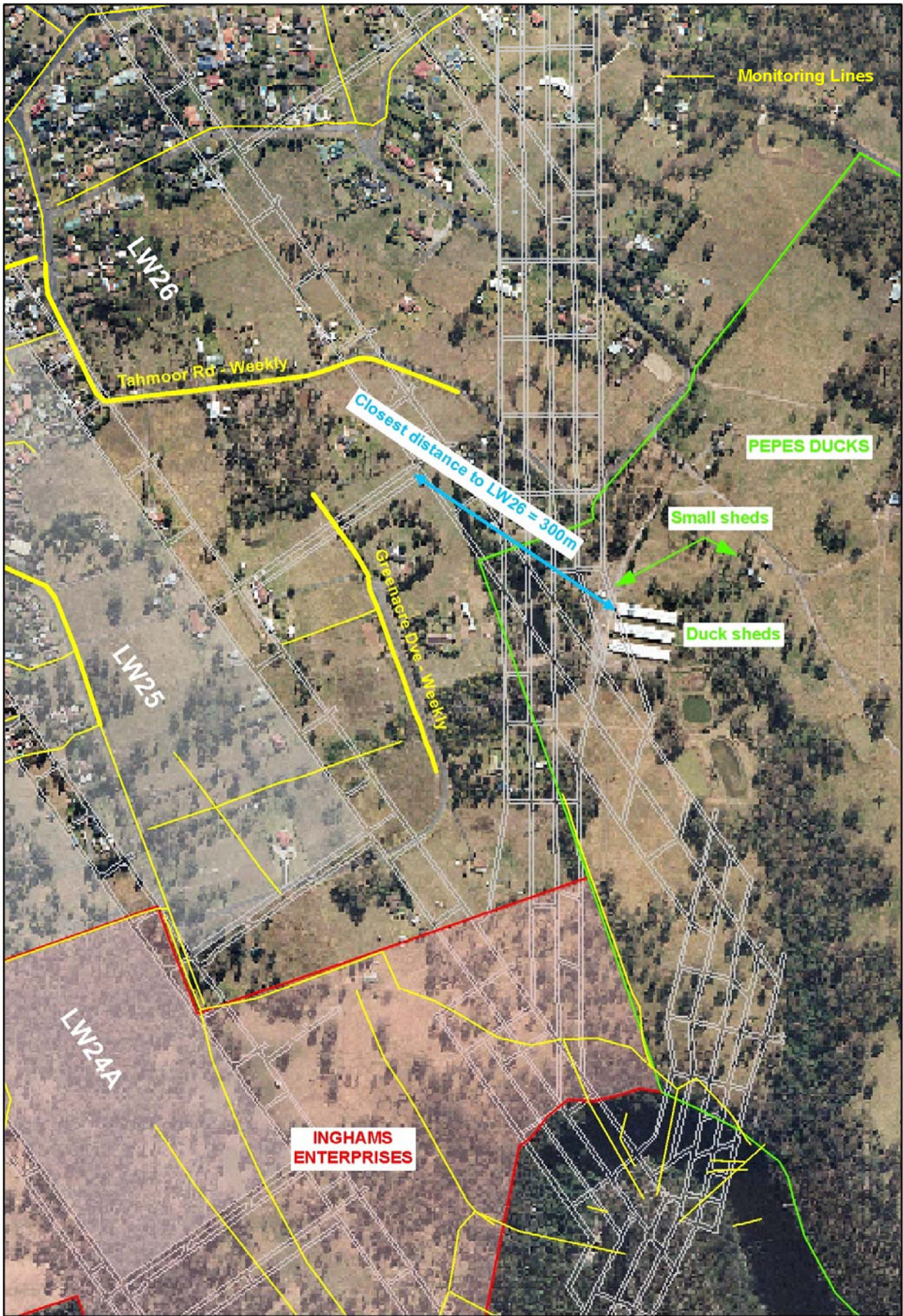
Photographs of the duck sheds are shown in Fig. 1.2, Fig. 1.3 and Fig. 1.4. The sheds consist of light-weight frames buildings with metal sheeting. While the sheds are enclosed and secured, the openings are covered with mesh and plastic sheeting.

Feed is supplied to the ducks via steel hoppers, as shown in Fig. 1.5. The hoppers are supported by four concrete pad footings.

A number of small sheds and other buildings are located to the north and east of the duck sheds. These buildings are of light-weight construction and are shown in Fig. 1.6.

The farm is serviced by potable water from a Sydney Water pipe at Myrtle Creek Avenue. Power is serviced by aerial power lines that are located on the property. The farm also uses gas supplied from bottles on the property. Tahmoor Colliery has developed subsidence management plans with Sydney Water and Integral Energy to manage potential impacts to these services due to the mining of Longwall 26.

A number of farm dams are located on the property. These dams are not used to supply water for the ducks. A farm dam located south of the duck sheds is shown in Fig. 1.7.



**Fig. 1.1 Location of Pepes Ducks relative to Longwall 26**



**Fig. 1.2 Duck sheds viewed from north**



**Fig. 1.3 Duck sheds viewed from south**



**Fig. 1.4 Closer view of duck shed**



**Fig. 1.5 Feed hopper**



**Fig. 1.6 Small shed north of 3 duck sheds**



**Fig. 1.7 Farm dam south of duck sheds**



**Fig. 1.8 Sheds and building east of duck sheds**

### **1.3. Potential subsidence impacts to surface features**

As a general guide, mining-induced subsidence impacts are rarely observed to surface features that are not located directly above longwalls, unless they are very sensitive to ground movements.

In this case, Longwall 26 is located approximately 300 metres from the duck sheds at their closest point. It is expected that the sheds will experience less than 50 mm of vertical subsidence movements as a result of the mining of Longwall 26. These movements are quite small.

The likelihood of impacts to the duck sheds, hoppers and small sheds is considered to be very rare, particularly given that the structures and openings are flexible and can tolerate small differential ground movements. In the very rare event that impacts occur, they can be quickly repaired by the Mine Subsidence Board at its cost.

It is recommended that Pepes Ducks requests a pre-mining inspection by the Mine Subsidence Board to facilitate the processing of any claims for mine subsidence damage in the very rare event that they occur. The inspection is free.

Pepes Ducks have expressed concerns regarding the potential for ground vibration as a result of the mining operations as this may disturb the ducks. Ground surface vibration due to longwall extraction is rarely reported as a result of mining 450 metres below the surface. This includes observations during the extraction of Longwalls 14 to 16 at Tahmoor Colliery beneath chicken breeder farms and the extraction of longwalls at West Cliff Colliery beneath chicken farms at Appin.

The Mine Subsidence Board installed vibration sensors and monitored for ground vibration within the urban area of Tahmoor while mining occurred directly beneath them. No vibration was detected that could be attributed to longwall mining.

In relation to the area around Greenacre Drive, Tahmoor Road and Myrtle Creek Avenue, no reports of ground vibration were received from residents during the commencement of mining of Longwall 25, which mined directly beneath a number of residential properties and was located approximately 380 metres to the west of the duck sheds (please refer Fig. 1.1).

Given that the duck sheds are located approximately 300 metres from Longwall 26, the likelihood of ground vibration disturbing the ducks is considered to be very rare.

#### **1.4. Measures for managing potential impacts to surface features**

Given the flexibility of the duck sheds and the low levels of subsidence that may develop at the property, the following management measures will be undertaken.

- Tahmoor Colliery will be conducting, at its cost, weekly ground surveys along Greenacre Drive and Tahmoor Road, as shown in Fig. 1.1. These surveys measure subsidence movements due to the extraction of Longwall 26. They will commence after 200 metres of longwall extraction when significant subsidence is expected to start developing directly above the longwall and will cease when the longwall face moves away from this area and monitoring shows small changes between surveys.
- If all pegs on the Greenacre Drive monitoring line, or the southernmost pegs on the Tahmoor Road line are measured to subside a total of more than 50 mm of subsidence during the mining of Longwall 26, Tahmoor Colliery will contact Pepes Ducks and consider whether any further management measures are required. The determination of appropriate measures will depend on the nature of the actual observations, though measures may include increased monitoring, including periodic detailed visual inspections.
- If damage or ground vibration is observed to the building structures by Pepes Ducks staff during mining, Pepes Ducks will contact Tahmoor Colliery and/or the Mine Subsidence Board. Repairs will be undertaken by the Mine Subsidence Board. In addition, Tahmoor Colliery will meet with Pepes Ducks to consider whether any further management measures are required. The determination of appropriate measures will depend upon the nature of the impacts observed.

## CHAPTER 2. CONTACT LIST

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