5 November 2024

Muhammad Umer Siddique
Engineer – Gas Distribution
Jemena

Notification – Amendment No. 1 to Subsidence Management Plan for Jemena infrastructure due to shortening of LW S4A

Dear Muhammad,

Please be advised that a minor amendment can be made to the Management Plan, which is titled *MSEC1193-06 SIMEC Mining – Tahmoor South Longwalls S1A to S7A – Management Plan for potential impacts to Jemena Gas Infrastructure, Revision B*.

Tahmoor Coal has shortened LW S4A by approximately 104 metres at the commencing end, as shown in Drawing No. MSEC1446-01. The effect of the change is to very slightly reduce the amount and extent of subsidence that will be experienced along Remembrance Drive, as shown in Drawing No. MSEC1446-07.

The Management Plan documents the commencement of monitoring measures for LW S4A, most of which are defined based on a length of extraction. As LW S4A has been shortened at the commencing end, the commencing lengths of extraction for monitoring activities requires a change.

Based on the above, Tahmoor Coal has reviewed the risk control procedures in Table 4.1 of the Management Plan with respect to LW S4A. It can be seen that the proposed changes effectively bring forward the planned timing of surveys and inspections along Remembrance Drive. Table 4.1 has also been updated with respect to the contractor that is responsible for conducting visual inspections. Tahmoor Coal is currently conducting the inspections in-house and may appoint a contractor in future.

Please also see attached revised Drawing No. MSEC1193-06-01, Revision D, which shows the location of Sydney Water sewer infrastructure relative to the mine layout, and Drawing No. MSEC1193-01-01, Revision C, which shows the location of subsidence monitoring locations.

Tahmoor Coal welcomes any feedback from Sydney Water regarding the planned changes relating to the shortening of LW S4A. Please note that LW S4A is planned to commence in January 2025.

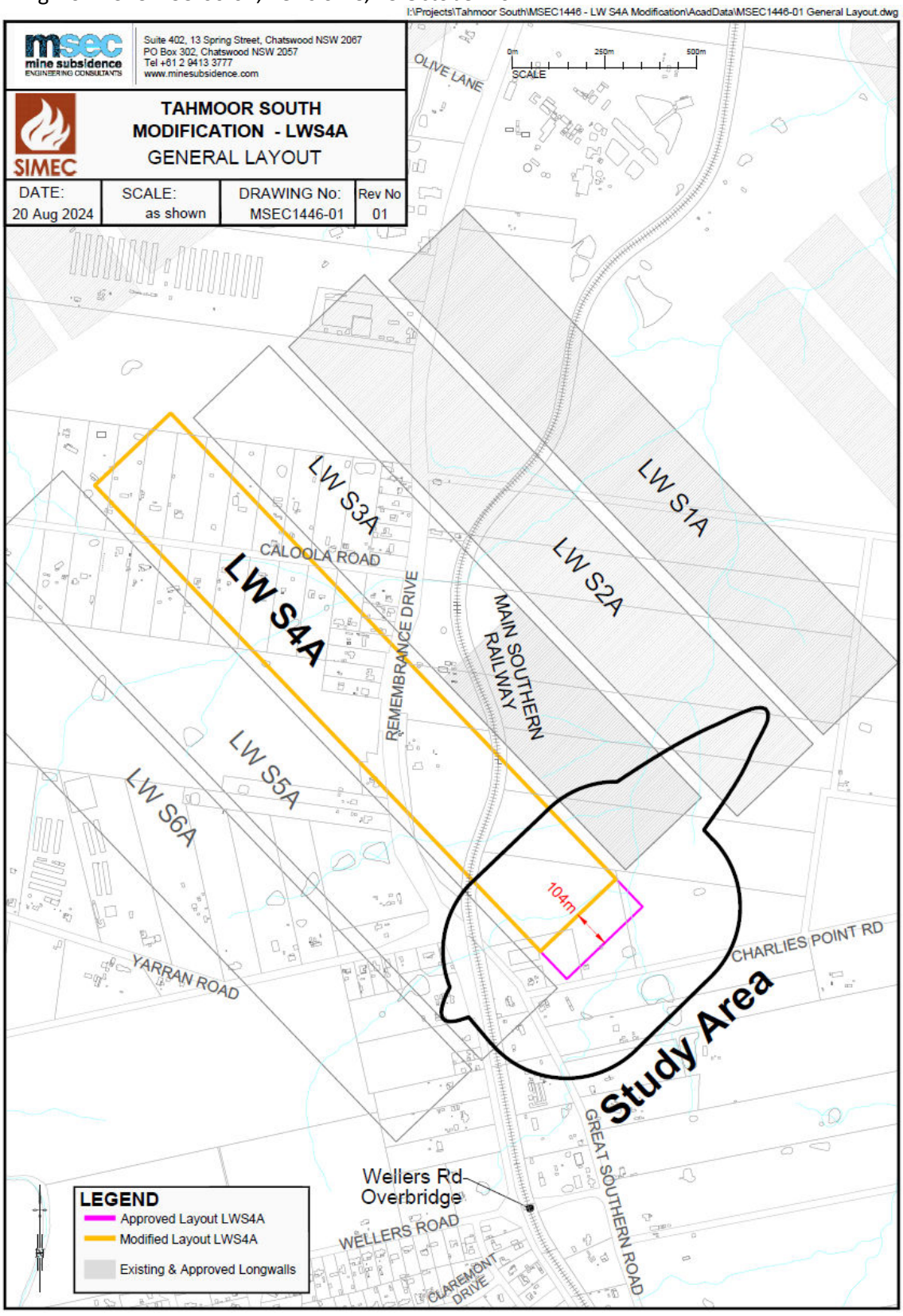
Yours Faithfully

Ross Barber

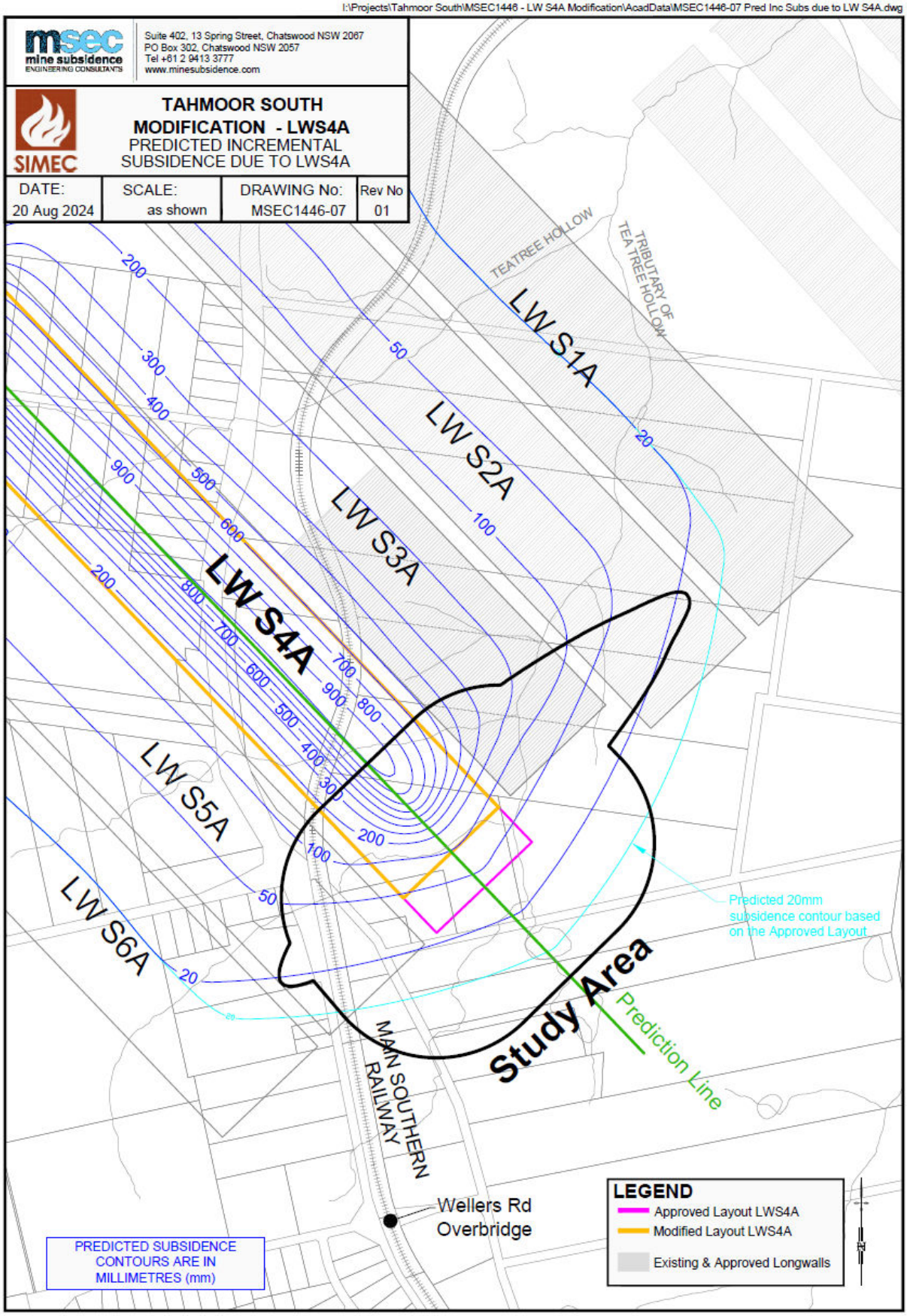
Ross Barber
Project Manager Subsidence
SIMEC Mining

CC Ray Ramage, Principal Subsidence Engineer, Resource Regulator
Encl
Amended Table 4.1 – Risk Control Procedures (Amended for LW S4A)

Drawing No. MSEC1193-01-01, Revision C, 16 October 2024
Drawing No. MSEC1193-06-01, Revision C, 23 October 2024



Drawing No. MSEC1446-01



Drawing No. MSEC1446-07

Revised Table 4.1: Risk Control Procedures LW S1A-S7A (amended for LW S4A in blue)

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
Gas infrastructure	Impacts to Jemena gas infrastructure	Low	None	Excavate and expose 50 metres of gas pipeline along the southbound crest of the Teatree Hollow embankment along Remembrance Drive near the Caloola Road intersection, under supervision from Jemena	Prior to 800m of extraction of LW S3A (complete)	Tahmoor Coal
				Continuous GNSS monitoring as shown in Drawing No. MSEC1193-01-01	GNSS units installed with exception of GNSS on Railway above centreline of LW S5A, which will be installed prior to start of LW S4A Continuous readings, with data averaged over 24 hours and recorded once per day until end of LW S7A.	Tahmoor Coal (Unit Zero)
				2D survey line along Tahmoor Mine property boundary	Pegs installed. Baseline survey complete Monthly survey during LW S1A between 200m and 1300m extraction, and continue if ongoing adverse movements are observed. (complete) End of LW S1A (complete).	Tahmoor Coal (SMEC)
				Conduct 2D / Absolute 3D surveys along Main Southern Railway in accordance with Railway Management Plan	Monthly 3D / Weekly 2D surveys for pegs within active subsidence zone during LWs S1A to S7A	Tahmoor Coal (SRS)
				Conduct 2D / Absolute 3D surveys along Remembrance Drive	Pegs installed from northern boundary of Tahmoor Mine site to No. 3166 Remembrance Drive. Baseline survey complete up to LW S3A. Extend line and baseline survey pegs within predicted limit of incremental subsidence of LWs S4A to LW S7A, prior to start of each LW Monthly 3D / Weekly 2D surveys for pegs within active subsidence zone commencing as per below: LW S1A: start after 1300m extraction (complete) LW S2A: start after 900m extraction (complete) LW S3A: start after 500 m extraction LW S4A: start after GNSS at 100.55km subsides more than 20 mm due to LW S4A or ~~300~~200 m extraction, whichever occurs first LW S5A: start after GNSS at 100.55km subsides more than 20 mm due to LW S5A or 200 m extraction, whichever occurs first LW S6A: start after GNSS at 100.55km subsides more than 20 mm due to LW S6A or 200 m extraction, whichever occurs first LW S7A start after 200 m extraction Continue surveys until outside active subsidence zone or one month after end of LW and continue further if ongoing adverse movements are observed. End of each LW	Tahmoor Coal (SMEC)
				Conduct Local 3D / Absolute 3D survey of Remembrance Drive Embankment over Teatree Hollow at Caloola Drive (RE4) as per Drawing No. MSEC1193-03-07, Remembrance Drive Embankment North of Yarran Road (RE3) as per Drawing No. 1193-03-08, Remembrance Drive Embankment South of Yarran Road (RE2) as per Drawing No. 1193-03-09, and Remembrance Drive Embankment at Wellers Road (RE1) as per Drawing No. MSEC1193-03-10.	Install and baseline survey prior to influence of LWs. Monthly 3D / Weekly 2D surveys within active subsidence zone of each LW Continue if ongoing adverse movements are observed. End of each LW.	Tahmoor Coal (SMEC)
				Conduct Local 3D / Absolute 3D survey of Remembrance Drive Cutting (RC1) as per Drawing No. MSEC1193-03-11.	Install and baseline survey prior to LW S2A. 3D Survey at end of LW S2A. Monthly 3D / Weekly 2D surveys within active subsidence zone commencing as per below: LW S3A: start after 500m extraction LW S4A: start after ~~500~~400m extraction LW S5A: start after 500m extraction LW S6A: start after 500m extraction Continue if ongoing adverse movements are observed. End of LWs S3A to S7A.	Tahmoor Coal (SMEC)
				Conduct Local 3D survey of structure and ground marks on the Remembrance Drive Bridge over the Bargo River as per Drawing No. MSEC1193-03-02, with one mark on the Bridge to be surveyed in Absolute 3D. The survey includes a measurement of the gap between the deck and the northern abutment.	Baseline survey prior to LW S1A. (complete) Monthly surveys between 1000m and one month after end of extraction of LWs S1A to S3A and continue if ongoing adverse movements are observed. End of LWs S1A to S3A.	Tahmoor Coal (SRS)
				Baseline survey of gaps at expansion joints on sewer main on the Remembrance Drive Bridge over the Bargo River	Baseline survey complete	Tahmoor Coal (SRS)

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
				Visual inspection of Remembrance Drive Bridge over the Bargo River	Baseline inspection prior to LW S1A (complete) Monthly inspections between 1000m and one month after end of extraction of LWs S1A to S3A and continue if ongoing adverse movements are observed. End of LWs S1A to S3A	Tahmoor Coal (BIS)
				Detailed visual inspections of pavement, culverts, embankments and cuttings along the route of the gas main along Remembrance Drive	Weekly for areas within the active subsidence zone or one month after end of LW and continue if ongoing adverse movements or impacts are observed.	Tahmoor Coal ~~(BIS)~~
				Detailed visual inspections by geotechnical engineer for Remembrance Drive embankments and cutting	Monthly for areas within the active subsidence zone during periods of active subsidence of each LW, and continue if ongoing adverse movements are observed.	Douglas Partners
				Inform Sydney Water Call Centre of mining in area and possible issues.	Completed	Sydney Water
				Notify residents of potential mine subsidence impacts and contact numbers.	Completed	Tahmoor Coal
				Analyse and report results to IMG, including information on the position of the longwall face.	Weekly during LW S1A-S7A after the length of the extraction exceeds 200 metres.	Tahmoor Coal
			Ground strain along Remembrance Drive exceeds 2 mm/m or Non-conventional ground movement detected along Remembrance Drive	Notify Jemena	Within 24 hours	Tahmoor Coal
				Notify Jemena and convene an IMG meeting. Consider additional monitoring and mitigation measures based on observed monitoring results, which may include: - increase frequency of ground surveys at affected site - increase frequency of visual inspections - conduct additional gas detection surveys - excavate to expose pipe and reduce distortion or strain on pipe (as per contingency plan) - increase frequency of IMG meetings - any other additional management actions	As required by IMG	Tahmoor Coal
			Leakage of gas observed	Contact Jemena as per contact protocol.	As required by Jemena	Jemena
				Investigate cause of gas leak to ascertain whether leak might be due to subsidence	Within 24 hours	Jemena
				If gas leak is subsidence related, notify all stakeholders, including Jemena, Tahmoor Coal, Wollondilly Shire Council, Sydney Water, Telstra, NBN, Endeavour Energy, neighbouring residents and businesses, Subsidence Advisory NSW and Resources Regulator	Within 24 hours	Tahmoor Coal
				Convene IMG meeting to consider additional monitoring and mitigation measures based on observed monitoring results, which may include: - increase frequency of surveys - increase frequency of visual inspections - conduct additional gas detection surveys - excavate to expose pipe and repair with either temporary clamp or full repair - decide whether to backfill pipe or leave exposed during remaining period of active subsidence - increase frequency of IMG meetings - any other additional management actions	As required by IMG	Tahmoor Coal and Jemena
			A hazard has been identified that involves potential serious injury or illness to a person or persons on public property or, or in vicinity of gas infrastructure and cannot be controlled	IMG, Tahmoor Coal and Jemena meet to decide whether any additional management measures are required, including: - shut off gas main and repair damaged pipe, - emergency evacuation of hazardous area - demarcation to prevent people entering hazardous area	Immediately	Tahmoor Coal and Jemena
				Notify stakeholders, including Jemena, Tahmoor Coal, Wollondilly Shire Council, Sydney Water, Telstra, NBN, Endeavour Energy, neighbouring residents and businesses, Subsidence Advisory NSW and Resources Regulator of trigger exceedance and any management decisions undertaken	Within 24 hours of decision	Tahmoor Coal
			Closure between abutments on Remembrance Drive Bridge over	Notify Jemena	Within one week	MSEC

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
			Bargo River exceeds 7 mm or Impacts observed to bridge	Jemena and IMG meet and consider whether any additional management measures are required, which may include: - conduct additional inspection of gas main on Remembrance Drive Bridge over the Bargo River - conduct additional gas detection surveys - undertake structural engineering inspection - increase monitoring frequency and reporting procedures - excavate to expose pipe and reduce distortion or strain on pipe at pipe bend - consider potential risks and implement control measures to protect the gas main if it is decided to conduct modification works on the bridge	Within one week	IMG
				Report trigger exceedance and actions taken to IMG, Jemena, SA NSW & MSO in Status Report	Within one week	Tahmoor Coal