51 May 2024

David Cantlon
Operations Lead West
Sydney Water

Amendment No. 1 to Subsidence Management Plan for Sydney Water sewer infrastructure due to shortening of LW S3A

Dear David,

Please be advised that a minor amendment can be made to the Management Plan, which is titled *MSEC1193-05 SIMEC Mining – Tahmoor South Longwalls S1A to S6A – Management Plan for potential impacts to Sydney Water Sewer Infrastructure, Revision A*.

Tahmoor Coal has shortened LW S3A by approximately 104 metres at the commencing end, as shown in Drawing No. MSEC1395-01. 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. MSEC1395-07.

The Management Plan documents the commencement of monitoring measures for LW S3A, most of which are defined based on a length of extraction. As LW S3A 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 S3A. It can be seen that the proposed changes effectively bring forward the planned timing of surveys and inspections along Remembrance Drive. The planned change in the commencing length of extraction for Remembrance Drive is greater than 104 metres as, on review, it was considered prudent to commence monitoring earlier than originally planned.

Please also see attached revised Drawing No. MSEC1193-05-01, Revision C, which shows the location of Sydney Water sewer infrastructure relative to the mine layout, and Drawing No. MSEC1193-01-01, Revision B, which shows the location of subsidence monitoring locations.

On a separate matter, Tahmoor Coal will soon submit a Modification to the development consent to extract LW S7A to the side of LW S6A. The proposed LW S7A will not extract directly beneath Sydney Water sewer infrastructure and result in very minor additional subsidence along Remembrance Drive, where the sewer main is located. Whilst LW S7A has been included in Drawings Nos. MSEC1193-05-01 and MSEC1193-01-01, Tahmoor Coal cannot extract the longwall until the Department of Planning, Housing and Infrastructure approves the proposed modification to Tahmoor Coal's development consent. Tahmoor Coal proposes to seek approval from Sydney Water to amend the Management Plan to include LW S7A at a later time.

Tahmoor Coal welcomes any feedback from Sydney Water regarding the planned changes relating to the shortening of LW S3A.

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Please note that LW S3A is planned to commence next week.

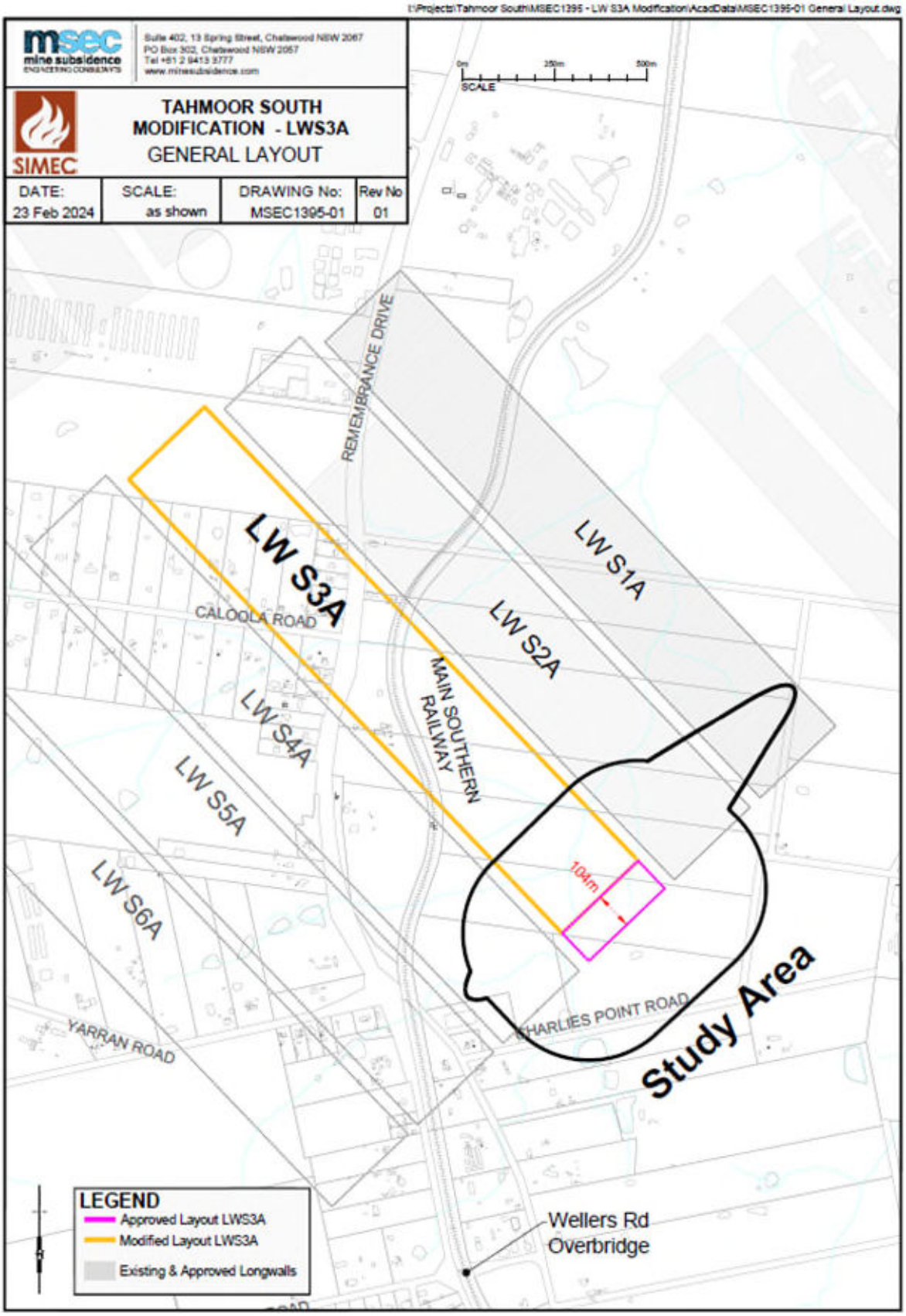
Yours Faithfully

Ross Barber

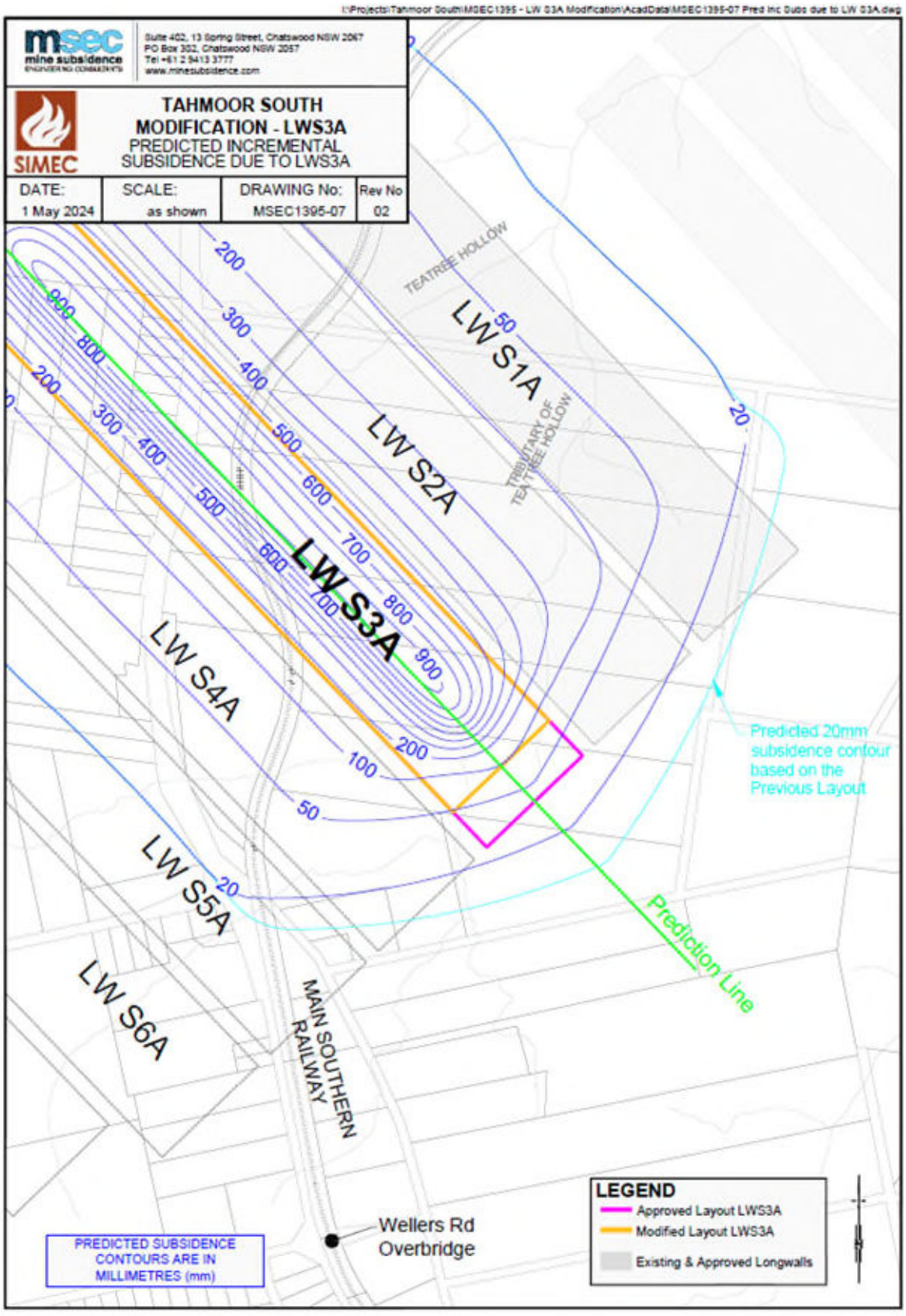
Ross Barber

Project Manager Subsidence
SIMEC Mining

CC Ray Ramage, Principal Subsidence Engineer, Resource Regulator
Encl
Amended Table 4.1 – Risk Control Procedures (Amended for LW S3A)
Drawing No. MSEC1193-01-01, Revision B, 22 April 2024
Drawing No. MSEC1193-05-01, Revision C, 1 May 2024



Drawing No. MSEC1395-01



Drawing No. MSEC1395-07

Revised Table 4.1: Risk Control Procedures LW S1A-S6A (amended for LW S3A in blue)

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
Sewer infrastructure	Impacts to Sydney Water sewer infrastructure	Low	None	Continuous GNSS monitoring as shown in Drawing No. MSEC1193-01-01	GNSS units installed Continuous readings, with data averaged over 24 hours and recorded once per day until end of LW S6A.	Tahmoor Coal (Unit Zero)
				2D survey line along Tahmoor Mine property boundary	Pegs installed. Baseline survey prior to commencement of LW S1A. Monthly survey during LW S1A between 200m and 1300m extraction, and continue if ongoing adverse movements are observed. End of LW S1A.	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 S6A	Tahmoor Coal (SRS)
				Conduct 2D / Absolute 3D surveys along Remembrance Drive	Pegs installed from northern boundary of Tahmoor Mine site to Caloola Road. Baseline survey prior to 900m extraction of LW S1A. Extend line and baseline survey pegs within predicted limit of incremental subsidence of each active LW, prior to active LW face approaching within 600 metres of survey line. Monthly 3D / Weekly 2D surveys for pegs within active subsidence zone commencing as per below: LW S1A: start after 1300m extraction LW S2A: start after 900m extraction LW S3A: start after ~~800~~500m extraction LW S4A: start after 300m extraction LW S5A: start after 200m extraction LW S6A: start after 200m 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 LW S1A-S6A.	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.	Install and baseline survey prior to LW S2A. Monthly 3D / Weekly 2D surveys within active subsidence zone commencing as per below: LW S2A: start after 900m extraction LW S3A: start after ~~900~~800m extraction LW S4A: start after 900m extraction LW S5A: start after 900m extraction Continue if ongoing adverse movements are observed. End of LW S2A-S6A.	Tahmoor Coal (SMEC)
				Conduct Local 3D / Absolute 3D survey of Remembrance Drive Embankment over Tributary to Teatree Hollow north of Yarran Road (RE3) as per Drawing No. MSEC1193-03-08.	Install and baseline survey prior to LW S3A. 3D Survey at end of LW S3A. Monthly 3D / Weekly 2D surveys within active subsidence zone commencing as per below: LW S4A: start after 400m extraction LW S5A: start after 400m extraction LW S6A: start after 400m extraction Continue if ongoing adverse movements are observed. End of LW S4A-S6A.	Tahmoor Coal (SMEC)
				Conduct Local 3D / Absolute 3D survey of Remembrance Drive Embankment over Tributary to Teatree Hollow south of Yarran Road (RE2) as per Drawing No. MSEC1193-03-09.	Install and baseline survey prior to LW S3A. 3D Survey at end of LW S3A. Monthly 3D / Weekly 2D surveys within active subsidence zone commencing as per below: LW S4A: start after 200m extraction LW S5A: start after 200m extraction LW S6A: start after 200m extraction Continue if ongoing adverse movements are observed. End of LW S4A-S6A.	Tahmoor Coal (SMEC)
				Conduct Local 3D / Absolute 3D survey of Remembrance Drive Embankment at intersection of Wellers Road (RE1) as per Drawing No. MSEC1193-03-10.	Install and baseline survey prior to LW S5A. 3D Survey at end of LW S5A. Monthly 3D after 200m extraction of LW S6A until 800m of extraction and continue if ongoing adverse movements are observed. End of LW S6A.	Tahmoor Coal (SMEC)

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
				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 500m extraction LW S5A: start after 500m extraction LW S6A: start after 500m extraction Continue if ongoing adverse movements are observed. End of LW S3A-S6A.	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.	Install and baseline survey prior to LW S1A. 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 LW S1A-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 prior to 400m extraction of LW S1A.	Tahmoor Coal (SRS)
				Visual inspection of Remembrance Drive Bridge over the Bargo River	Baseline inspection prior to LW S1A 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 LW S1A to S3A	Tahmoor Coal (BIS)
				Conduct Local 3D survey of structure and ground marks on the Bargo River Road Bridge over tributary to Bargo River and Bargo River Road Bridge over Main Southern Railway as per Drawing No. MSEC1193-03-03, with one mark on each Bridge to be surveyed in Absolute 3D	Install and baseline survey prior to LW S1A. 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 LW S1A-S3A.	Tahmoor Coal (SRS)
				Visual inspection of Bargo River Road Bridges	Baseline inspection prior to LW S1A 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 LW S1A to S3A	Tahmoor Coal (BIS)
				Detailed visual inspections of local roads, culverts, embankments and cuttings along the route of the sewer main along Remembrance Drive	Weekly for areas within the active subsidence zone during LWs S1A to S6A and continue if ongoing adverse movements or impacts are observed until one month after the extraction of each LW.	Tahmoor Coal (BIS)
				Detailed visual inspections by geotechnical engineer along Remembrance Drive embankments and cutting	Monthly during periods of active subsidence of LW S2A to S6A, 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-S6A after the length of the extraction exceeds 200 metres.	Tahmoor Coal
			Non-conventional ground movement detected	Notify Sydney Water	Within 24 hours	Tahmoor Coal
				Notify Sydney Water 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 - excavate to expose pipe and reduce distortion or strain on pipe - increase frequency of IMG meetings - any other additional management actions	As required by IMG	Tahmoor Coal

INFRASTRUCTURE	HAZARD / IMPACT	RISK	TRIGGER	CONTROL PROCEDURE/S	FREQUENCY	BY WHOM?
			Blockage or leakage of sewage observed	Contact Sydney Water as per contact protocol. Clear blockage as required.	As required by Sydney Water	Sydney Water
				Investigate cause of sewage leak to ascertain whether leak might be due to subsidence	Within 24 hours	Sydney Water
				If blockage is subsidence related, notify all stakeholders, including Sydney Water, Tahmoor Coal, 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 along streets - increase frequency of visual inspections - excavate to expose pipe and reduce distortion or strain on pipe - increase frequency of IMG meetings - any other additional management actions	As required by IMG	Tahmoor Coal
			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 sewer water infrastructure and cannot be controlled	IMG, Tahmoor Coal and Sydney Water meet to decide whether any additional management measures are required, including: - emergency evacuation of hazardous area - demarcation to prevent people entering hazardous area	Immediately	Tahmoor Coal and Sydney Water
				Notify IMG of trigger exceedance and any management decisions undertaken (incl Subsidence Advisory NSW, Resources Regulator)	Within 24 hours of decision	Tahmoor Coal
			Closure between abutments on Remembrance Drive Bridge over Bargo River exceeds 7 mm or Closure between abutments Bargo River Road bridges exceeds 5 mm or Impacts observed to bridge	Notify Sydney Water	Within one week	MSEC
				Sydney Water and IMG meet and consider whether any additional management measures are required, which may include: - conduct additional survey of expansion joints on sewer main on Remembrance Drive Bridge over the Bargo River - undertake structural engineering inspection - increase monitoring frequency and reporting procedures - install additional expansion joint on Remembrance Drive Bridge over the Bargo River or Bargo River Road Bridge over tributary to Bargo River - excavate to expose pipe and reduce distortion or strain on pipe on Bargo River Road Bridge over Main Southern Railway - consider potential risks and implement control measures to protect the sewer main if it is decided to conduct modification works on the bridges	Within one week	IMG
				Report trigger exceedance and actions taken to IMG, Sydney Water, SA NSW & MSO in Status Report	Within one week	Tahmoor Coal