

BEFORE INDEPENDENT HEARING COMMISSIONERS APPOINTED  
BY WAIKATO DISTRICT COUNCIL

IN THE MATTER of the Resource Management Act 1991  
(Act)

AND

IN THE MATTER of the Proposed Waikato District Plan –  
Hearing 27E – Land Stability, Liquefaction,  
Mine Subsidence

INTRODUCTORY HEARING STATEMENT OF DOUG JOHNSON

Dated 06 MAY 2021

1. This statement summarises my technical report on mine subsidence matters that was attached as an Appendix to the s42A report for Hearing 27E prepared by Mr Eccles.
2. Surface subsidence is recognised as a hazard above areas of underground coal extraction. The extent, magnitude, and shape of any maximum potential subsidence is a function of the volume of coal extracted, the depth of extraction, and the strength of the strata immediately below and above the coal extraction.
3. The mining methods at Huntly East, the ground conditions at the time of coal extraction, and the subsidence risks associated with the Huntly East Mine are well defined and understood.
4. The subsidence notation in the Proposed District Plan (Stage 2 provisions as notified) is delineated by an area where the old workings of the Huntly East Mine underly urban development. The extent of the subsidence notation in the Operative Waikato District Plan is defined by areas where the ground movement have been measured and where it could credibly occur due to the nature of the mining methods used in the past.
5. The extent of the subsidence notation in the Proposed District Plan (Stage 2 provisions as notified) makes no differentiation for different areas of subsidence risk and now incorporates mine roadways and areas of potential gas accumulation.
6. The differences between the operative Huntly East Mine Subsidence Area overlay and the proposed Mine Subsidence Risk Area overlay are predominantly related to different interpretations of how the risk of subsidence is managed about the edge of the potential subsidence and where the risks are lowest.
7. I do not consider gas accumulation is a risk to subsidence and it should not be used for subsidence zoning management purposes. The risk of combustion underground has been controlled by flooding the workings and by the sealing of the mine to prevent oxygen ingress. The trapping of the gas and its potential to escape is very unlikely to affect surface settlements.

8. The risks associated with mine subsidence at Huntly East can be addressed and managed by appropriate building rules and regulations already in place for the Huntly subsidence area.
9. The operative Huntly East Mine Subsidence Area overlay provides for the most practical management of the subsidence risk (by virtue of the boundaries of the overlay aligning with property boundaries).
10. The group of properties that submitted against inclusion within both the operative and proposed subsidence overlays should remain within the subsidence zone.
11. Properties outside of the operative overlay but within the proposed overlay are at low risk to subsidence. These properties are all in areas of low risk to subsidence and have very different risk profiles to the areas within the current overlay boundaries.
12. If the new overlay is adopted, I consider the properties now added to the subsidence zone should be recognised as being at a lower risk and should be treated differently compared to the properties within the operative overlay with known subsidence. The submitters from properties in this area should be recognised as being at lower risk than those properties within the current subsidence zone.
13. If the proposed Mine Subsidence Risk Area overlay is adopted, it will require modification as it currently crosses through properties and will be difficult to interpret and administer.

Doug Johnson  
MIPENZ