AGRICULTURAL ASSESSMENT

ELAMBRA WEST URBAN RELEASE AREA

Supplementary Report

Lot 2 DP 1168922
Campbell Street
Gerringong

Prepared for

Allen Price & Scarratts

May 2023

COWMAN STODDART PTY LTD

Supplementary Agricultural Assessment

Project	Elambra West Urban Release Area
Address	Lot 2 DP 1168922 Gerringong
Our ref:	19/70
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1.0 INTRODUCTION

This is a Supplementary Report to the Agricultural Assessment for the Elambra West Urban Release Area dated November 2020. The purpose of this report is to address agricultural implications of the Asbestos Contamination Report prepared by the consulting firm Environment & Natural Resource Solutions (ENRS) dated February 2022.

A Remediation Action Plan (RAP) identified shallow soil contamination (by asbestos) on the proposed residential land which requires remediation, prior to lodgement of a subdivision application (see **Figure 1**).

The exact amount is unknown but the final strategy will be a combination of:

- Off-site disposal of the most contaminated soil; and
- On-site encapsulation of less contaminated soil.

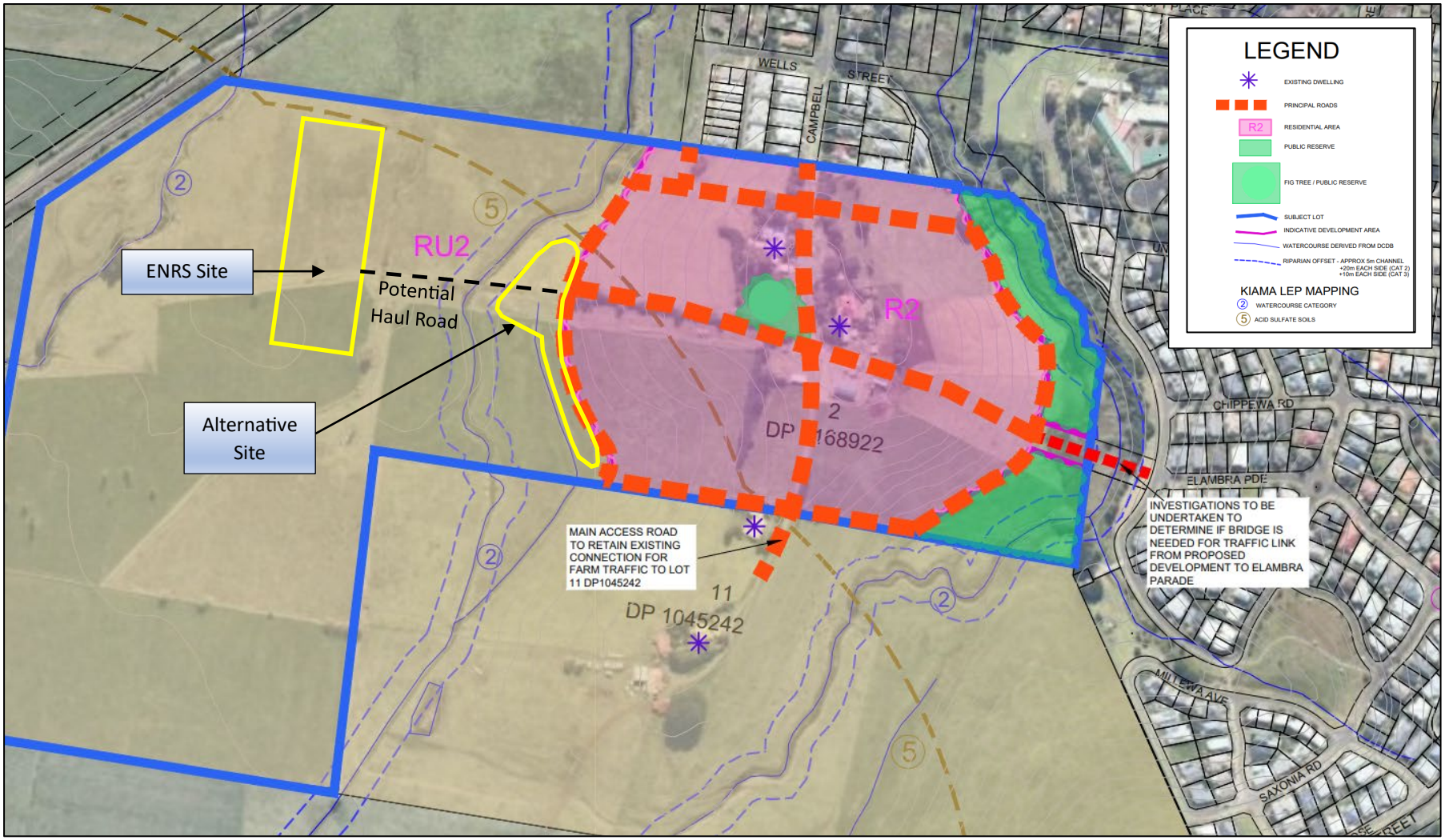


Figure 1: Site Plan showing Encapsulation Site Options
(Base plan: 'Proposed Structure Plan' prepared by Allen Price & Scarratts ref K128069-07, Rev 0)

2.0 ON-SITE ENCAPSULATION

2.1 ENRS SITE

The ENRS report has identified an area of 1.8 hectares on the creek flats which may be suitable for an encapsulation cell (see **Photo No. 1**). It is proposed to excavate an area of 8000 m^2 to a depth of one metre, with the top 0.5 metres to be reinstated as "Clean Capping Material" over the contaminated soil. The intention is to re-create the original land surface terrain after allowing for settlement so that the current agricultural land use can continue.

Photo No. 1: ENRS encapsulation cell site in foreground with motor vehicle on proposed haul road.

2.2 SOIL ASSESSMENT

The soil at this site has been mapped by Hazelton as Shoalhaven Soil Landscape, with geology of alluvium resulting in a deep loam topsoil overlying a light clay subsoil. (preliminary soil investigation indicates a topsoil depth of 400 mm all of which should be preserved for site rehabilitation).

2.3 SITE ASSESSMENT

The land has a very gentle slope to the south and drainage requires further investigation. If confirmed that drainage is poor there may be issues of groundwater with the

encapsulation cell and difficulty in earth moving operations to create the cell and rehabilitate the site.

2.4 HAUL ROAD

The development and use of this site will require a haul road of 250 metres (approx.) to be created for heavy trucks to access the cell. It is proposed that this road be constructed on the line of an existing farm track used by farm machinery to provide access to the various paddocks on the floodplain (see **Photo No. 2**). The track is now in disrepair so its upgrade will be of some benefit to ongoing agricultural use of the land. (The haul road will also require a creek crossing.)

Photo No. 2: Cattle and motor vehicle on farm track which is proposed haul road.

2.5 ALTERNATIVE SITE

An alternative site for an encapsulation cell has been identified at the foot of the hill downslope from the proposed residential land. The major benefit of this site is that an all-weather, heavy vehicle haul road across the floodplain is not required. Effectively it would butt into the side of the hill. See **Photo No. 3**.

Table 1 compares the two sites.

Table 1

Comparison of Encapsulation Sites

Parameter	***ENRS Site***	***Alternative Site***
Depth of topsoil (for rehabilitation)	400 mm	300 mm
Surface drainage	Poor	Good
Need for haul road	Yes	No
Need for creek crossing	Yes	No
Impact on agriculture	Moderate (due to haul road and location in centre of property)	Minor (due to location on boundary between residential and rural)
Groundwater in excavation	Possible	Unlikely
Visual impact (during construction and rehabilitation	Significant (due to location on flat grazing land)	Minor (due to location at foot of slope)

Photo No. 3: Alternative site for encapsulation cell at base of hill avoids the need for a haul road.

2.6 SOIL ASSESSMENT

The soil at this site has been mapped by Hazelton as Kiama Soil Landscape, with geology of basalt resulting in a krasnozem soil with friable loam topsoil.

(Preliminary soil investigation indicates a topsoil depth of 300 mm, all of which should be preserved for site rehabilitation.)

2.7 SITE ASSESSMENT

The land is well drained and supporting kikuyu pasture. It is bounded on the west by an intermittent watercourse and the hillside to the east.

A well vegetated swale drain flows to the south and eventually discharges into the watercourse on the next property (see **Photo No. 4**).

Further investigation including the status of the watercourse and swale is needed.

Photo No. 4: Broad swale at base of hill becomes more clearly defined further to the south.

3.0 AGRICULTURAL LANDUSE

3.1 FARM MANAGEMENT

An issue which must be addressed is how the residue land will be managed for agriculture once the elevated land is rezoned residential. At present the homestead, rural sheds, stockyards, etc. are located on the crest of the hill but this is intended to become residential and will be unavailable.

The creek flats comprise 30 ha (approx.) of prime agricultural land which will continue to be sought after for cropping and grazing purposes. As such it is essential that all-weather vehicle access is provided through the residential area for normal farm related activities, eg. livestock and farm machinery; supervision of the enterprise.

The only property improvements which will be needed are a set of stockyards and a rural shed (for farm machinery, fencing materials, etc.). There should be adequate separation between new residential areas and ongoing farming operations.

3.2 DWELLING ENTITLEMENT

The residue lot of 30 ha (approx.) will not have a dwelling entitlement and can operate satisfactorily as agricultural land without an owner/manager living on-site.

The most likely uses of the land are:

- Grazing of beef cattle;
- Grazing of dairy heifers or dry cows;
- Fodder conservation (hay – silage).

4.0 IMPACT OF ENCAPSULATION CELL ON AGRICULTURAL VIABILITY OF THE SITE

Factors which will determine impact on agriculture include:

a) Period of time that cell will be open and unavailable for agriculture.

b) Topsoil stripping, stockpiling and re-spreading protocols.

c) Extent of land permanently taken out of production by haul road.

Photo No. 5: The creek flats will continued to be used for grazing and fodder conservation.

5.0 IMPACT ON ADJOINING RURAL ZONE LANDS

There may be minor impacts of dust and noise from the haul road and construction of the encapsulation cell. However, these should be able to be managed by conditions of the Development Consent in a similar manner to a quarry.

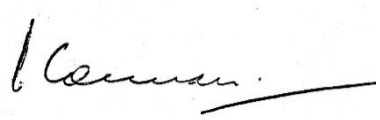
6.0 CONCLUSION

This is a supplementary report to the Agricultural Assessment for Elambra West prepared in November, 2020. Its purpose is to address agricultural implications of the asbestos contamination report prepared by ENRS dated February, 2022.

For the land to be suitable for a residential zoning, the asbestos contaminated soil must be removed; either by taking it off-site or disposing of it on-site in an encapsulation cell; or a combination of both solutions.

Two possible sites for an encapsulation cell have been identified and compared. While both are feasible, the site on the land class boundary at the foot of the hillside is the most attractive for an excavation and land fill of the contaminated soil.

This report discusses the implications for agriculture and options for land disposal. However, this is a rezoning application and is strategic in nature. If the Planning Proposal is supported, then a subsequent Development Application will be prepared which addresses these matters in detail.



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