

MEMO

To: Murray Wilson

From: Kristie White

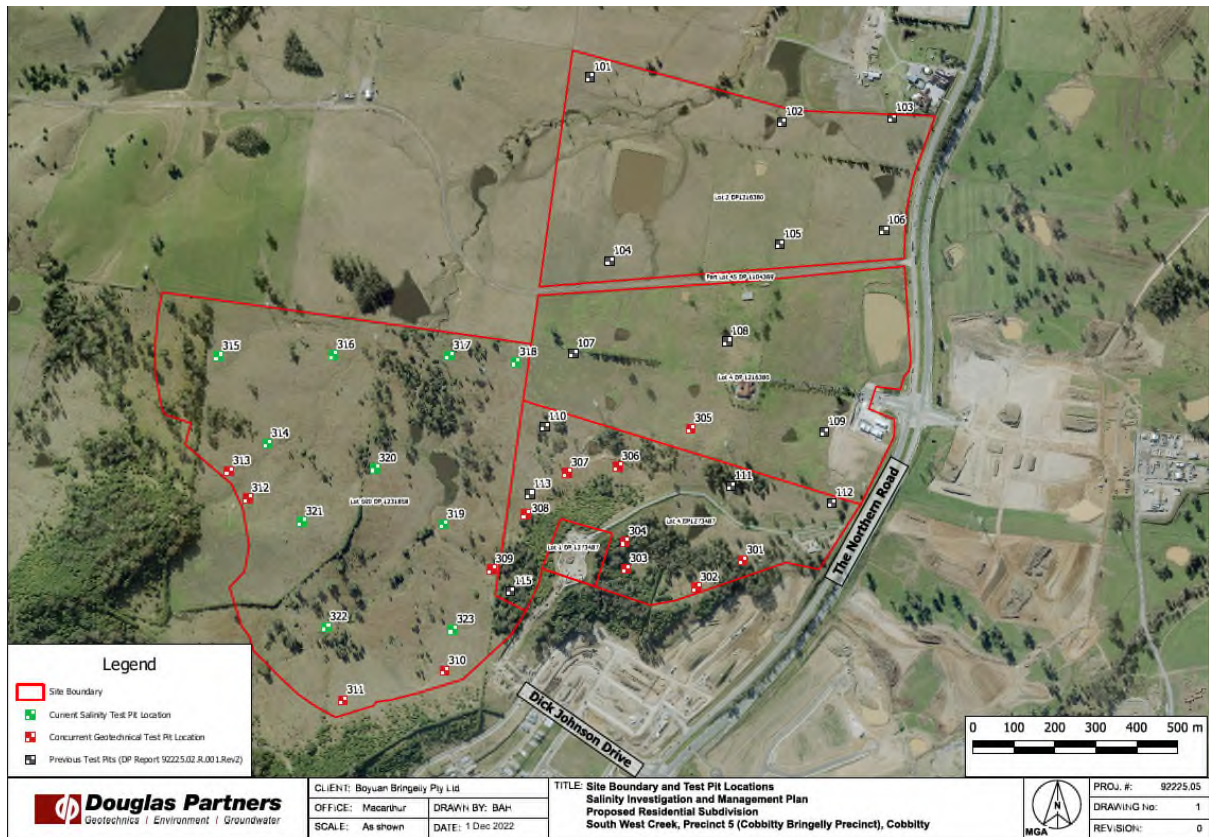
Date: 30 April 2024

RE: Report on Salinity Investigation and Salinity Management Plan Proposed Rezoning Sub Precinct 5, South Creek west, NSW

I have reviewed the following documentation :

- Electronic Document 24/164731 South Creek West - Salinity Investigation and Salinity Management Plan March 2024
- Electronic Document 21/637111 - PP/2021/8/1 - Memo SSEHO - planning Proposal 2021 South Creek West Cobbitty Precinct 5 Review Technical Documents Perry, Mitch

A review of the Salinity Investigation and Salinity Management Plan disclosed that a Salinity investigation was previously completed by DP for the site in 2020. Due to limited site access at the time of the investigation, intrusive sampling was not completed within Lot 500 in DP 1231858. As such this investigation comprises of excavation of test pits within this lot. Previous investigations were carried out on the other lots identified within the map and were found to be non- saline to very saline, non aggressive to concrete and non aggressive to moderately aggressive to buried steel. The data from that report has been utilised and included in this investigation.



The investigation comprised of 10 test pits TP 314-323 to a minimum depth of 3m or prior to refusal.

The results are presented in the table below.

Table 2: Summary of Parameters Tested and Results Obtained

Parameter		Units	Samples	Minimum	Maximum
pH		pH units	110	4.5	8.4
Chlorides		(mg/kg)	30	<10	1300
Sulphates		(mg/kg)	30	<10	330
Aggressivity	to Concrete	[AS2159]	110	Non-Aggressive	Moderately Aggressive
	to Steel	[AS2159]	110	Non-Aggressive	Non-Aggressive
Exchangeable Sodium (Na)		(meq/100g)	25	0.7	8.3
CEC (cation exchange capacity)		(meq/100g)	20	8.5	27
Sodicity [Na/CEC]		(ESP%)	20	3.5	44.4
Sodicity Class		[after DLWC]	20	Non-sodic	Highly Sodic
EC1:5 [Lab.]		(mS/cm)	110	6	110
Resistivity		Ω .cm	110	284.4	74074.1
ECe [M x EC1:5] where M is textural factor		(dS/m)	110	0.1	24.6
Salinity Class		[after Richards 1954]	110	Non-Saline	Highly Saline

A salinity Management Plan has been developed, however it has been recommended that further detailed salinity investigations will be required after completion of bulk earthworks for the construction of residential dwellings.

Murray, I do not have any issues with the project progressing to the Council for public exhibition.

I recommended that that further salinity investigations be undertaken at the DA subdivision application stage with suitable management plans be provided where necessary.