



Our Ref: PSM4636-007L REV3

25 August 2023

The Trustee for Huntingwood Property Trust
L29, Aurora Place,
88 Phillip Street,
SYDNEY NSW 2000
AthleneKyle@logosproperty.com.au

G3 56 Delhi Road
North Ryde NSW 2113
P +61-2 9812 5000
F +61-2 9812 5001
E mailbox@psm.com.au
www.psm.com.au

Attention: Athlene Kyle

Dear Athlene

**RE: AUGUSTA STREET, HUNTINGWOOD EAST
SALINITY MANAGEMENT PLAN**

1. Introduction

PSM has been commissioned by The Trustee for Huntingwood Property Trust to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD- 36138263) for the proposed Augusta Street warehouse and distribution centre at Augusta Street, Blacktown.

2. Description of the site and locality

The site is located at Augusta Street, Blacktown, within the Blacktown local government area (LGA). The site comprises multiple parcels of land and is legally described as:

- Lot 1 DP835264
- Lots 218-219 DP457024
- Lot 2151 DP135859
- Lot 2 DP516449
- Lot 163-164, 168-188 and 216 DP8716
- Lot 1 DP119616
- Lots 4-6 DP226294
- Lots 50-52 DP1144623
- Lot 7 DP803359
- Lots 6-10 DP801210
- Lot 4 DP585492
- Lot 4 DP583442
- Lot 2 DP1263824.

The site is identified in Inset 1 below.



Inset 1: Site Locality Plan (source: Urbis 2022)

Key features of the site are as follows:

- The site has frontage to the Great Western Highway and the Western Motorway of approximately 940 metres and frontage to Flushcombe Road of approximately 250 metres. Augusta Street dissects part of the western portion of the site and is vested to Blacktown Council
- Access to the site is currently available from Augusta Street which connects to Flushcombe Road to the west. Flushcombe Road intersects with the Great Western Highway, providing east-west access to the metropolitan road network, with right-in and right-out movements available via the existing signalised intersection
- The eastern part of the site slopes to the west, while the western part of the site slopes to the east, with the central low point at Blacktown Creek adjacent to the easement for water supply
- The site is affected by multiple easements and restrictions including:
 - Multiple easements up to 30 metres wide for transmission lines along the southern part of the site. The site features high voltage power lines along the southern side
 - An 10m wide easement for water supply which runs north-south within the central part of the site, with associated 9 metre wide and 3 metre wide easements for construction purposes.
- Lot 164 in DP8716 is identified as being owned by Amplitel as the land accommodates a Telstra mobile telecommunications facility which is proposed to be relocated
- The site has been cleared but is undeveloped with scattered trees across the western boundary and southern boundaries and in the north-eastern corner. Blacktown Creek runs north-south through the central part of the site with riparian vegetation along the corridor.

Key features of the locality:

- The site is approximately 34km west of the Sydney CBD and approximately 3.3km south of the Blacktown commercial centre
- The region features a mix of land uses, including residential and employment-generating activities. The Huntingwood and Pemulwuy industrial estates are located to the west and south-east

- The Prospect Reservoir is approximately 1km south of the site adjacent to the Western Sydney Parklands.

The surrounding locality is described as follows:

- North: The site adjoins the Great Western Highway. The land further to the north primarily comprises residential development including detached single and double storey dwellings. A small natural reserve known as Timbertop Reserve separates the residential development and associated landscaping
- East: The land immediately to the east of the site is vacant. The Prospect Highway is located further east, providing access to the M4 Motorway and Great Western Highway. St Bartholomew's Church and Cemetery is located on the eastern side of the Prospect Highway
- South: The M4 Motorway runs along the southern boundary of the site, with boundary landscaping providing visual screening of the site. The land on the opposite side of the Motorway comprises recreational and entertainment facilities in the form of a water park and a drive in movie theatre
- West: The land to the west comprises an animal holding facility and industrial development, characterised by large warehouse buildings.

This letter presents salinity management advice for the proposed development at Augusta Street, Huntingwood East (the Site). This work has been undertaken in accordance with PSM proposal PSM4636-004L dated 31 January 2022 and our email dated 15 February 2022.

We understand the following regarding the site and the proposed development:

- The proposed site currently comprises mainly vacant land with a telecommunication tower and an existing Telstra facility near the eastern end of Augusta Street. A high voltage transmission line passes across the southern portion of the proposed site
- The proposed development is of industrial nature which comprises one to two storey warehouses, conservation areas, hardstand and carparking areas
- Bulk earthworks will be required. PSM understands the following regarding the bulk earthworks:
 - Maximum fill depth: 8.7 m
 - Maximum cut depth: 9.4 m.

Inset 2 presents an aerial locality plan.



Inset 2: Nearmap Aerial Photograph of the site conditions on 17 February 2022 (dated 7 August 2021)

3. Project Description

3.1 Brief Description

Construction and operation of a warehouse and distribution centre development of 134,565 m² gross floor area, including four warehouse buildings, ancillary office space, office facilities, indicative warehouse fitout works inclusive of warehouse racking, on-site car parking, and associated works including excavation, landscaping, and signage.

3.2 Detailed Description

The proposed SSDA seeks approval to redevelop the site to accommodate a warehouse and distribution centre use inclusive of the following:

- Site establishment works, including tree removal, minor excavation / bulk earthworks
- Construction and operation of four (4) new warehouse buildings comprising a multi-level warehouse building on the eastern portion of the site and three single storey warehouse buildings on the western portion of the site. The warehouse buildings will include ancillary office space and indicative warehouse fit out works including warehouse racking
- The warehouse and distribution tenancies are proposed to be operated 24 hours per day, 7 days per week
- Other associated works including landscaping, at-grade car parking and general site improvements.
- Business and building identification signage including wayfinding signage
- Vehicle access provided via Augusta Street and a new proposed access from the Great Western Highway
- Lot consolidation of properties.

This plan has been prepared to address the requirement of salinity analysis in “Section 12. Ground and Water Conditions” of the SEARs deliverables list for DA lodgement. The requirement is reproduced below.

“Provide an assessment of salinity and acid sulfate soil impacts.”

Please note this letter does not address the impacts of acid sulfate soils. This is addressed by the environmental consultant engaged for the project.

4. Objective

The objective of this salinity management plan (SMP) is to effectively manage site salinity, to minimise the effect of the proposed development on the salinity processes and to protect the proposed development from salinity damage.

5. Salinity and Sodicty Assessment

PSM have undertaken a salinity and sodicity investigation at the Site as part of our geotechnical site investigations (ref: PSM4636-006L REV4, dated 29 June 2023).

The investigation included a total of 17 boreholes, of which 10 contained salinity and sodicity testing. Figure 1 presents the locality plan showing the 10 boreholes in which testing was undertaken.

It is assessed that the soil units tested (as follows) are classified as “non-saline to moderately saline”:

- Six (6) samples from NATURAL SOIL
- Four (4) samples from EXISTING FILL.

Furthermore, it is assessed that the soil units on the site are classified as “Non-sodic to Highly sodic”.

The report also presented laboratory test results for soil aggressivity assessment as follows:

- The pH of the soil samples analysed was in the range of 5.0 to 8.2
- The concentrations of chlorides in samples analysed was in the range of < 50 mg/kg to 830 mg/kg
- The concentrations of soluble sulphate in samples analysed was in the range of 40 mg/kg to 500 mg/kg
- The moisture content ranged from 8.6 to 22.2 %
- The resistivity of the soil samples ranged from 1,460 ohm.cm to 23,200 ohm.cm.

6. Discussion

6.1 Development Components

This Salinity Management Plan (SMP) addresses the components of the proposed development at construction stage for the permanent works. Recommendations regarding the following development components are provided in the following sections:

- Conservation landscaped areas
- Surface water, stormwater and drainage
- Durability of concrete structures in contact with the ground
- Durability of steel structures in contact with the ground.

6.2 Gardens and Landscaped Areas

The proposed development will result in the majority of the site comprising warehouse buildings. We note that three conservation areas are proposed for the site. The design and construction of three conservation areas should consider the following recommendations:

- Selection of plant species should consider the soil conditions, including moderate salinity, relatively poor fertility and clayey low permeability soil profiles. Promotion of successful revegetation is likely to require use of nutrient rich topsoil. Saline topsoils should not be imported to site
- Potential for water logging should be minimised by:
 - Adopting plant species with minimal watering requirements
 - Adopting ‘waterwise’ gardening principles
 - Minimising use of potable water in landscaped areas
 - Properly designed and implemented irrigation systems
 - Establishment of perennial species and deep-rooted trees.

6.3 Surface Water, Stormwater and Drainage

Surface water, stormwater and drainage design should aim at restricting infiltration into the ground resulting in groundwater recharge. The design and construction of surface water, stormwater and drainage measures should thus consider the following recommendations:

- Disturbance of natural drainage patterns should be reduced. Where these are disturbed or altered appropriate artificial drainage should be installed
- Stormwater and surface water should be managed to restrict infiltration
- Temporary water retaining structures used during construction should be managed to restrict infiltration
- Stormwater and surface water infrastructure should be designed and constructed to minimise the likelihood of leakage
- Guttering and down pipes should be connected and maintained

- Surface water runoff should be directed around all exposed surfaces, temporary stockpiles and landscaped areas.

Refer to our groundwater report PSM4636-008L REV2 dated 29 June 2023 for advice regarding groundwater.

6.4 Durability of Concrete Structures in Contact with The Ground

In designing structural concrete elements in contact with the ground the design should consider the results of the salinity assessment and the durability requirements in AS2159:2009 Piling “Design and Installation” and AS3600:2018 “Concrete Structures”.

Both these standards provide guidance on minimum concrete grade/strength and minimum cover requirements.

Based on the salinity and aggressivity test results (ref. PSM4636-006L REV4, dated 29 June 2023), it is recommended that:

1. The design of structural concrete members in contact with the ground (excluding piles) adopt an “A2” exposure classification as defined in AS3600:2018.
2. The design of concrete cast in situ piles adopt a “mild” classification as defined in AS2159:2009.

6.5 Durability of Steel Structures in Contact with The Ground

Table 6.5.2(C) of Australian Standard AS2159:2009, Piling – Design and Installation provides criteria for exposure classification for steel piles based on resistivity, soil and groundwater pH, and chlorides in soil and groundwater. On the basis of soil chlorides, resistivity and pH testing completed we assess the exposure classification for steel piles in the soil to be “mild”.

7. Sign off

We recommend the following:

- The designer(s) and contractor(s) responsible for construction of the various development components be required to sign-off their design and the as built, certifying that:
“The works have been designed/constructed having given appropriate consideration to the recommendations in the SMP (Ref. PSM4636-007L REV2)”.

The designer and contractors should contact PSM during the works if they have any queries with regards to the requirements in the SMP or if conditions significantly differ from those described in this SMP.

Yours Sincerely



KEN TONG LEE
GEOTECHNICAL ENGINEER



AGUSTRIA SALIM
PRINCIPAL

Encl.

Figure 1 Site Locality Plan



Legend

Site Boundary - Main Site

Site Boundary - Additional Lots

Borehole Locations

Notes

1. Aerial image sourced from Nearmap.com dated 3 February 2023.

2. Extents of boundaries are approximate

N

Scale 1:3,000

0 20 40 60 80 100 m

EPSG:7856
GDA2020 / MGA zone 56

	Created By:	Revision:
	Date:	Paper Size:
	PSM	A
	26 Jun 2023	A3

LOGOS Property Group Ltd

Augusta Street

Huntingwood East

SITE LOCALITY PLAN

PSM4636-007L	FIGURE 1
--------------	----------