Allera

PROJECT: Club Mount Lewis

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1 Introduction

This Statement of Environmental Effects (SEE) has been prepared by Allera Planning Pty Ltd on behalf of Club Mount Lewis to support a Development Application (DA) submitted to City of Canterbury Bankstown Council.

The proposal seeks consent for the installation of lighting poles to the northern most bowling greens of 14A Waterloo Road, Mount Lewis, legally defined as Lot 100 DP 1280447.

The proposal is located within a R2 Low Density Residential zone where recreation facility (outdoor) is not permitted. However, given the existing use as a recreation facility (outdoor), the proposal benefits from existing use rights pursuant to Part 4, Division 4.11 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Part 7 of the *Environmental Planning and Assessment Regulation 2021* (Regulation).

This SEE has been prepared pursuant to Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act) and Part 3 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

Given the assessment below, the proposed development is considered to warrant support from Canterbury Bankstown Council.

2 Site Analysis

2.1 Site Location & Existing Site Characteristics

The Site subject to this SEE is 14A Waterloo Road, Mount Lewis (Lot 100 DP 1280447). The Site is currently occupied by the Club Mount Lewis comprising a two storey building and three bowling greens. The Site is located on the western side of Waterloo Road with vehicular access also provided via a vehicle crossover from Waterloo Road. The Site is irregular in shape and is approximately 1.1 ha. The Site is relatively flat noting that it is currently operating as a Bowling Green. A Survey Plan is provided at **Appendix 7**.

The Site is located approximately 1.8km east of Bankstown and 14.5km south west of the Sydney Central Business District (CBD). The property is bordered primarily by residential land. The Site is zoned R2 Low Density Residential pursuant to the *Canterbury Bankstown Local Environmental Plan 2023* (CBLEP 2023).

The Site and its surrounding context are shown in **Figure 1** and **Figure 2** below.

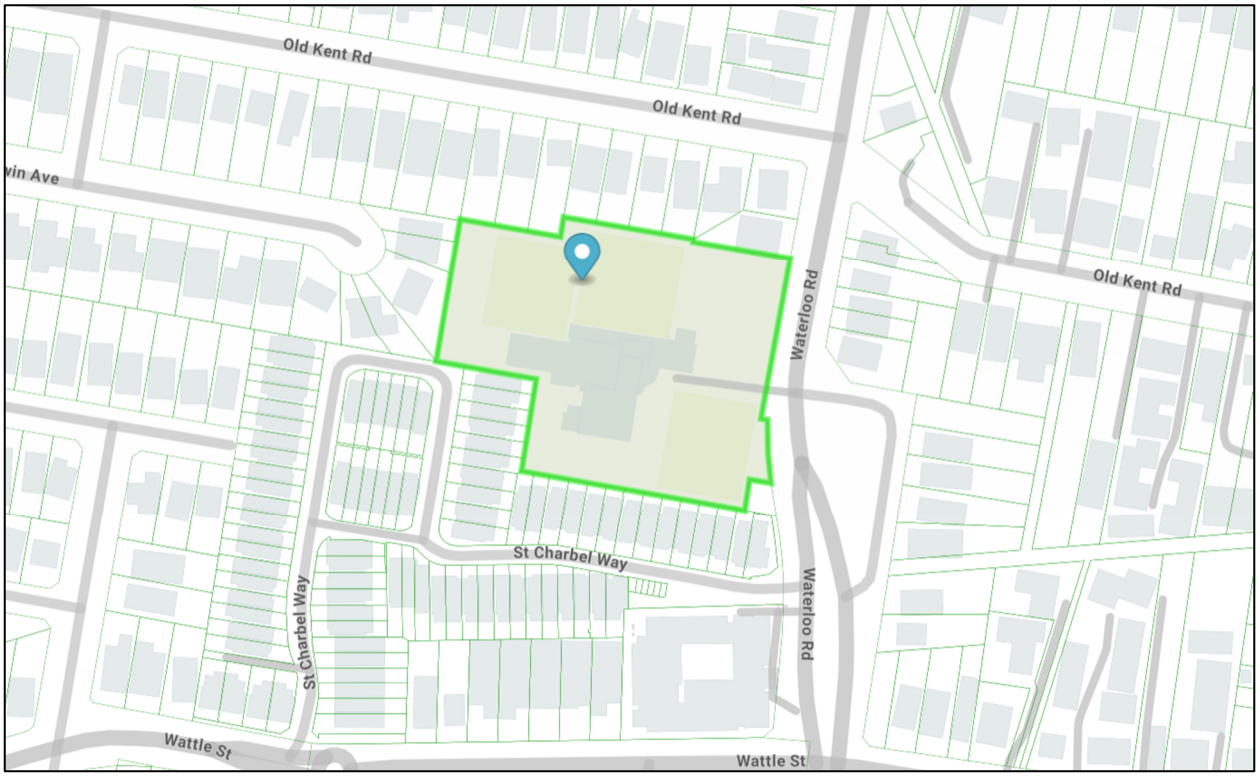

Figure 1. Cadastral Map of Site (Mecone Mosaic, 2024)

Figure 2. Aerial Map of Site (Mecone Mosaic, 2024)

2.2 Land Ownership

The Site is owned by Mount Lewis Bowling Club Co Op. Signed owner's consent is provided at **Appendix 1** of this SEE. The owner is a Co Operative meaning no ASIC Certificate is available. As such, a Annual Report for 2023-2024 has been provided to demonstrate Fred Ayoub is the President and Matthew Cavanagh is the Chief Executive Officer.

2.3 Site Context

The Site is located within Canterbury Bankstown Local Government Area (LGA) and is subject to the provisions of the CBLEP 2023. The Site is zoned R2 Low Density Residential pursuant to the CBLEP 2023 and is surrounded by residential development. Wiley Park Train station is located approx. 1.3km to the south and Bankstown Train Station 1.9km to the west of the Site. Bus Stops are also located on Waterloo Road directly adjacent the Site and Wattle Street approx. 150m to the east of the Site.

2.4 Relevant Development Application History

A review of Council's development application register shows the relevant development application history for the Site. **Table 2** below provides the most recent development history of the Site.

Table 1. Relevant Development Application History (Canterbury Bankstown Council, 2024)

DA Reference	Description	Decision
DA-311/69	*Additions to the existing building for use of amenities for the Mount Lewis Bowling Clubs.*	Approved
DA-646/90	*Additions of amenities to existing club building.*	Approved, 22 February 1991
DA-339/96	*Erection of illuminated pylon sign measuring 2440mm x 1830mm.*	Approved, 26 June 1996

DA-1656/2000	*Extension to and refurbishment of the Mount Lewis Bowling Club.*	Approved, 22 November 2000
DA-210/2007	*Installation of rainwater tanks and demolition of existing outbuilding at the rear of the site.*	Approved, 19 June 2007
DA-777/2012	*Proposed Car Park on Four Vacant Properties, Construction of a Front Fence and Sliding Gate and Two New Al Fresco Areas*	Approved, 21 November 2012
DA-777/2012/1	*Proposed Car Park on Four Vacant Properties, Construction of a Front Fence and Sliding Gate and Two New Al Fresco Areas - S96(1a) Amendment: Increase the Size of the Storage Area and Increase the Size of the Terrace Above the Storage Area.*	Approved 20 May 2014
DA-280/2013	*Pylon Sign and Two (2) Front Fence Signs.*	Approved, 2 May 2013

The applications above reinforce the ongoing use of the Site as a bowling club.

3 Proposal

3.1 Development Overview

This DA seeks consent for the installation of lighting poles to the northern most bowling greens. The details of the proposed development are provided in **Table 2** below and accompanying Design Drawings (**Appendix 2**). The proposed development includes eight light poles split four poles located in the corners of each of the two bowling greens.

3.2 Development Statistics

This DA seeks consent for the installation of lighting poles to the northern most bowling greens.

Table 2 below provides a summary of the proposed lighting poles whilst **Figure 3** provides an extract from the proposed lighting plan.

Table 2. Development Particulars

Component	Proposed
Site Area	1.17ha
Land Use	Recreation Facility (Outdoor)
Gross Floor Area (GFA)	No change proposed
Floor Space Ratio (FSR)	No change proposed
Height of Building (HOB)	Proposed HOB: 9m
Landscaping	No change proposed
Car Parking	No change proposed

The proposed Design Drawings including a specification sheet has been prepared by Legacy Lighting and are attached to **Appendix 2**. Extracts of the proposed lighting plan are provided in **Figure 3** below.

The Design Drawings also include a Light Spill Plan on page 3 which demonstrates that the proposal is compliant with AS4282:2023 *Control of the Obtrusive Effects of Outdoor Lighting.* In terms of operation the lights will be utilised semi-regularly and will not be used part 11pm.

Figure 3. Proposed Lighting Plan (Source: Legacy Lighting, 2024)

The proposed cost of works is $120,650 excluding GST, a Cost Report is provided at **Appendix 3** of this SEE.

4 Legislative Framework

4.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the overarching statutory planning legislation in NSW. The EP&A Act provides the legislative framework for assessment and approval of the proposed development. The objects of the Act are as follows:

a) *to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
b) *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
c) *to promote the orderly and economic use and development of land,*
d) *to promote the delivery and maintenance of affordable housing,*
e) *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*
f) *to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*
g) *to promote good design and amenity of the built environment,*
h) *to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*
i) *to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,*
j) *to provide increased opportunity for community participation in environmental planning and assessment.*

The Site has been identified for urban development by virtue of its R2 Low Density Residential zoning. The proposed development is for the installation of lighting poles to the northern most bowling greens of an existing bowling club and does not seek to amend the existing use of the Site and is therefore consistent with the objects of the Act.

4.1.1 Integrated Development

Section 4.46(1) *What is "integrated development"?* of the EP&A Act determines whether the proposed development is integrated development and requires approval under another Act. The table below assesses whether the proposed development is integrated development.

Table 3. EP&A Act 1979 - Integrated Development (NSW Legislation, 2022)

Act	Provision	Approval	Response
Coal Mine Subsidence Compensation Act 2017	*s 22*	*approval to alter or erect improvements, or to subdivide land, within a mine subsidence district*	No
Fisheries Management Act 1994	*s144*	*aquaculture permit*	No
	s201	*permit to carry out dredging or reclamation work*	No
	s205	*permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease*	No
	s219	*permit to—* *a) set a net, netting or other material, or* *b) construct or alter a dam, floodgate, causeway or weir, or*	No

Act	Provision	Approval	Response
		c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat	
Heritage Act 1977	*s58*	*Approval in respect of the doing or carrying out of an act, matter or thing referred to in s 57 (1)*	No
Mining Act 1992	*ss63 and 64*	*grant of mining lease*	No
National Parks and Wildlife Act 1974	*s90*	*grant of Aboriginal heritage impact permit*	No
Petroleum (Onshore) Act 1991	*s16*	*grant of production lease*	No
Protection of the Environment Operations Act 1997	*ss 43(a), 47 and 55*	*Environment protection licence to authorise carrying out of scheduled development work at any premises.*	No
	ss 43(b), 48 and 55	*Environment protection licence to authorise carrying out of scheduled activities at any premises (excluding any activity described as a "waste activity" but including any activity described as a "waste facility").*	No
	ss 43(d), 55 and 122	*Environment protection licences to control carrying out of non-scheduled activities for the purposes of regulating water pollution resulting from the activity.*	No
Roads Act 1993	*s 138*	*consent to—* *a) erect a structure or carry out a work in, on or over a public road, or* *b) dig up or disturb the surface of a public road, or* *c) remove or interfere with a structure, work or tree on a public road, or* *d) pump water into a public road from any land adjoining the road, or* *e) connect a road (whether public or private) to a classified road*	No
Rural Fires Act 1997	*s100B*	*authorisation under section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes*	No
Water Management Act 2000	*ss 89, 90, 91*	*water use approval, water management work approval or activity approval under Part 3 of Chapter 3*	No

The proposed development is not considered integrated development pursuant to the EP&A Act.

4.2 Background to Existing Use Rights

Pursuant to the CBLEP 2023, recreation facilities (outdoor) are prohibited within the R2 Low Density Residential zone.

4.2.1 Site History

A search of Council's historical records indicates several previous development consents including Development Application No. 646/90 which granted development consent for *"addition of amenities to*

existing club building" on 22 February 1991. A subsequent Development Application (No. 1656/2000) was granted development consent for *"Extension to and refurbishment of the Mount Lewis Bowling Club"* on 22 November 2000. The Site continues to be operated as the Club Mount Lewis.

4.3 Assessment of Proposal with Existing Use Rights

Having established that existing use rights apply to the Site, Section 4.66 of the EPA Act relates to the continuance and limitations on existing use, which states:

> *(1) Except where expressly provided in this Act, nothing in this Act or an environmental planning instrument prevents the continuance of an existing use.*
> *(2) Nothing in subsection (1) authorises:*
> *(a) any alteration or extension to or rebuilding of a building or work, or*
> *(b) any increase in the area of the use made of a building, work or land from the area actually physically and lawfully used immediately before the coming into operation of the instrument therein mentioned, or*
> *(c) without affecting paragraph (a) or (b), any enlargement or expansion or intensification of an existing use, or*
> *(d) the continuance of the use therein mentioned in breach of any consent in force under this Act in relation to that use or any condition imposed or applicable to that consent or in breach of any condition referred to in section 4.17 (1) (b), or*
> *(e) the continuance of the use therein mentioned where that use is abandoned.*
> *(3) Without limiting the generality of subsection (2) (e), a use is to be presumed, unless the contrary is established, to be abandoned if it ceases to be actually so used for a continuous period of 12 months.*

The existing use on the site is a registered club and recreation facility (outdoor), which has not been abandoned within the meaning of Section 4.66(3). Section 4.67 of the EPA Act is for regulations respecting existing use and relates to alterations, additions or rebuilding of a building or work being used for an existing use and states, inter alia:

> *(1) The regulations may make provision for or with respect to existing use and, in particular, for or with respect to:*
> *(a) the carrying out of alterations or extensions to or the rebuilding of a building or work being used for an existing use, and*
> *(b) the change of an existing use to another use, and*
> *(c) the enlargement or expansion or intensification of an existing use.*
> *(d) (Repealed)*
> *(2) The provisions (in this section referred to as the incorporated provisions) of any regulations in force for the purposes of subsection (1) are taken to be incorporated in every environmental planning instrument.*
> *(3) An environmental planning instrument may, in accordance with this Act, contain provisions extending, expanding or supplementing the incorporated provisions, but any provisions (other than incorporated provisions) in such an instrument that, but for this subsection, would derogate or have the effect of derogating from the incorporated provisions have no force or effect while the incorporated provisions remain in force.*
> *(4) Any right or authority granted by the incorporated provisions or any provisions of an environmental planning instrument extending, expanding or supplementing the incorporated provisions do not apply to or in respect of an existing use which commenced pursuant to a consent of the Minister under section 4.33 to a development application for consent to carry out prohibited development.*

The proposal includes the installation of lighting poles to the northern most bowling greens of the existing bowling club which is an existing use within the meaning of Section 5.67(1)(a) and (c). Another environmental planning instrument cannot derogate from the above provisions.

Part 5 of the Regulations relates to existing uses. Clause 41(1) of the Regulations states, inter alia:

> ***41 Certain development allowed***
> *(1) An existing use may, subject to this Division:*
> *(a) be enlarged, expanded or intensified, or*
> *(b) be altered or extended, or*
> *(c) be rebuilt, or*
> *(d) be changed to another use, but only if that other use is a use that may be carried out with or without development consent under the Act, or*
> *(e) if it is a commercial use—be changed to another commercial use (including a commercial use that would otherwise be prohibited under the Act), or*
> *(f) if it is a light industrial use—be changed to another light industrial use or a commercial use (including a light industrial use or commercial use that would otherwise be prohibited under the Act).*

The existing use on Site as a registered club and recreation facility (outdoor) will be subject to the installation of lighting poles to the northern most bowling greens within the meaning of Clause 41(1)(a) and (c) of the Regulations.

In summary, the proposal is permissible by virtue of existing use rights. Furthermore, the existing use has continued within the meaning of Section 4.66(3) of the EPA Act. Accordingly, the proposal has the benefit of existing use rights in accordance with the EPA Act 1979 and is a permissible use.

4.3.1 Planning Principles for Existing Use Rights

The Land and Environment Court in *Fodor Investments v Hornsby Shire Council [2005] NSWLEC 71* addressed the question of how development applications should be assessed in instances where the site has existing use rights (14 – 15):

> *A long line of legal authority has held that the provisions of planning instruments that derogate (i.e. detract) from Regulation 41(1) do not apply to the assessment of applications on sites with existing use rights ..... Thus the consequences of preserving existing use rights is that zone objectives and planning controls that limit the size of a proposal (i.e. floor space, height and setback) have no application.*

The subject Site enjoys the benefits of existing use rights and the provisions of Council's LEP and DCP cannot derogate from the existing use rights. The planning principles established by the NSW Land and Environment Court in *Fodor Investments v Hornsby Shire Council* [2005] NSWLEC 71 at [17] and *Stromness v Woollahra Municipal Council* [2006] NSWLEC 587 at [83-84] will be assessed in the following section of this SEE. Notwithstanding this, under the recent case in *Saffioti v Kiama Municipal Council* [2018] NSWLEC 1426, it was recognised that the LEP and DCP should still be considered.

The *Fodor* case establishes four criteria that should inform the assessment of applications on land with existing use rights. Under *Saffioti*, the LEP and DCP should still be considered which has been addressed in Section 4.10 and 4.11.

1. How do bulk and scale (as expressed by height, floor space ratio and setbacks) of the proposal relate to what is permissible on surrounding sites?

With respect to the first principle, Fodor establishes that:

> *While planning controls, such as height, floor space ratio and setbacks do not apply to sites with existing use rights; they have relevance to the assessment of applications on such sites. This is because the controls apply to surrounding sites and indicate the kind of development that can be expected if and when surrounding sites are redeveloped. The relationship of new development to its existing and likely future context is a matter to be considered in all planning assessment.*

Planning Comment: The proposed installation of lighting poles to the northern most bowling greens of the existing bowling club will maintain the height of the existing building. The proposal will not result in an increase to GFA. In addition, the proposal remains within the boundaries of the site. The proposed light poles have been located and directed to ensure that they would not impact the amenity of the surrounding dwellings. The light poles provide enhanced amenities for future users of the existing greens.

2. What is the relevance of the building in which the existing takes place?

With respect to the second principle, Fodor establishes that:

> *Where the change of use is proposed within an existing building, the bulk and scale of that building are likely to be deemed acceptable, even if the building is out of scale with its surroundings, because it already exists. However, where the existing building is proposed for demolition, while its bulk is clearly an important consideration, there is no automatic entitlement to another building of the same floor space ratio, height or parking provision.*

Planning Comment: The proposal retains the existing use as a recreation facility (outdoor). Further, given the proposal is for installation of lighting poles to the northern most bowling greens, they are not buildings and do not result in significant bulk and mass. Accordingly, the building will maintain its compatibility with surrounding development.

3. What are the impacts on adjoining land?

> *The impact on adjoining land should be assessed as it is assessed for all development. It is true that where, for example, a development control plan requires three hours of sunlight to be maintained in adjoining rear yards, the numerical control does not apply. However, the overshadowing impact on adjoining rear yards should be reasonable.*

Planning Comment: The proposal is for the installation of lighting poles to the northern most bowling greens of the existing bowling club. The proposal does not seek consent to amend the existing built form and is considered to maintain adjoining properties' privacy and maintain views. Importantly, the proposal does not increase the GFA of the existing building and thus does not intensify the existing use. The proposal will maintain solar access to adjoining properties as existing and is not considered to have any impacts on the surrounding area in terms of traffic. A light spill plan has been provided which shows that the proposal would not unreasonably impact the nearby dwelling houses.

4. What is the internal amenity?

With respect to the fourth principle, Fodor establishes that:

> *Internal amenity must be assessed as it is assessed for all development. Again, numerical requirements for sunlight access or private open space do not apply, but these and other aspects must be judged acceptable as a matter of good planning and design. None of the legal principles discussed above suggests that development on sites with existing use rights may have lower amenity than development generally.*

Planning Comment: Given that the proposal is for the installation of lighting poles to the northern most bowling greens of the existing bowling club, it represents an opportunity to significantly enhance the amenities for users. The proposal does not seek consent to amend the built form of the existing club building.

4.4 Existing Use Rights - Environmental Planning & Assessment Regulation 2021

The Regulation sets out what development may be undertaken in accordance with existing use rights. Specifically, Section's 163 '*Certain development allowed*', 164 '*Enlargement, expansion and intensification of existing uses'* and 165 '*Alteration of buildings and works'* are applicable to this proposal. A response to the relevant sections of the Regulation is provided below:

Table 4. Response to Section 163, 164 and 166 of the Regulation

Clause	Response
163 Certain development allowed	
(1) An existing use may, subject to this Part— *(a) be enlarged, expanded or intensified, or* *(b) be altered or extended, or* *(c) be rebuilt, or* *(d) be changed to another use, but only if the other use is a use that may be carried out with or without development consent under the Act, or* *(e) if it is a commercial use—be changed to another commercial use, including a commercial use that would otherwise be prohibited under the Act, or* *(f) if it is a light industrial use—be changed to another light industrial use or a commercial use, including a light industrial use or commercial use that would otherwise be prohibited under the Act.*	The proposal comprises the installation of lighting poles to the northern most bowling greens of the existing bowling club to enhance the amenity of these greens for future users.
(2) However, an existing use must not be changed under subsection (1)(e) or (f) unless the change— *(a) involves only minor alterations, and* *(b) does not involve an increase of more than 10% in the gross floor area of the premises associated with the existing use, and* *(c) does not involve the rebuilding of the premises associated with the existing use, and* *(d) does not involve a significant intensification of the existing use.*	The proposal does not comprise a change of use.
(3) In this section— *commercial use means the use of a building, work or land for the purposes of commercial premises.* *light industrial use means the use of a building, work or land for the purposes of light industry.*	This proposal does not comprise a commercial or light industrial land use.
164 Enlargement, expansion and intensification of existing uses	
(1) Development consent is required for any enlargement, expansion or intensification of an existing use.	This application does not seek consent for the enlargement, expansion or intensification of the existing use. It is noted that the lights will allow

Clause	Response
	nighttime play on the northern most bowling greens. This will be semi-regular and with the latest time being 11pm.
(2) The enlargement, expansion or intensification must be— *(a) for the existing use and for no other use, and* *(b) carried out only on the land on which the existing use was carried out immediately before the relevant day.*	The proposal comprises the existing use and is on the land that the existing use has been carried out on.
165 Alteration of buildings and works	
(1) Development consent is required for an alteration of a building or work used for the existing use.	This application does not seek development consent for the alteration of the existing building. The proposal is for the installation of light poles to the northern most bowling greens of the existing bowling club.
(2) The rebuilding must be— *(a) for the existing use of the building or work and for no other use, and* *(b) carried out only on the land on which the building or work was erected or carried out immediately before the relevant day.*	The proposal comprises the existing use and is on the land that the existing use has been carried out on.

The proposal is permitted with consent in accordance with the Regulations.

4.5 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Act 2016* (BC Act) is to maintain a healthy, productive, and resilient environment for the well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

Part 4, Division 2 and 5 lists threatened species, ecological communities, and key threatening processes to be considered under s7.3. S7.3 sets out the test for determining whether the proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats. Further, Part 6 establishes an offsets scheme which aims to ensure there is no net loss of biodiversity values. Entry into the offset scheme is triggered by exceeding the thresholds as outlined in Part 7 of the BC Reg, specifically:

- Clearing of native vegetation 0.5 ha or more (based upon minimum lot size of 1 ha to less than 40 ha).
- Clearing of land within the Biodiversity Values Map, which identifies areas of high biodiversity value.
- Development that will significantly affect threatened species or ecological communities, or their habitats (according to s7.3 of the BC Act).

The proposal does not seek to clear any native vegetation nor is it identified as being of high biodiversity value on the Biodiversity Values Map. Therefore, further consideration of the BC Act is not warranted.

4.6 Water Management Act 2000

The *Water Management Act 2000* (WM Act) is based on the concept of ecologically sustainable development to ensure the sustainable and integrated management of the state's water resources for the benefit of current and future generations. The WM Act provides for the protection and management of water resources through

the development of water sharing plans that allocate water for specified uses and set rules for water trading, and through control of activities within and adjacent to natural water resources.

Under the WM Act, development undertaken on waterfront land requires Controlled Activity Approval (CAA), where waterfront land is defined as any land within 40m from the highest bank of a river, lake or estuary.

The Site is not located within 40m of waterfront land and thus a CAA is not required.

4.7 State Environmental Planning Policy (Planning Systems) 2021

The *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) identifies what is State significant development, State significant infrastructure and regionally significant development.

Under Schedule 6 to the Planning Systems SEPP, triggers for regionally significant development are provided. Under Clause 2, 'General development' over $30 million is considered regionally significant development.

The proposed development is not State significant development, State significant infrastructure or regionally significant development pursuant to Planning Systems SEPP.

4.8 State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021 Chapter 4 refers to the remediation of land. Under the provision of Chapter 4 of the Resilience and Hazards SEPP, where a development application is made concerning land that is contaminated, the consent authority must not grant consent unless:

(1) A consent authority must not consent to the carrying out of any development on land unless—

- *a. it has considered whether the land is contaminated, and*
- *b. if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- *c. if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

(2) Before determining an application for consent to carry out development that would involve a change of use on any of the land specified in subsection (4), the consent authority must consider a report specifying the findings of a preliminary investigation of the land concerned carried out in accordance with the contaminated land planning guidelines.

The existing use is a recreation facility (outdoor). The proposal is for the installation of lighting poles to the northern most bowling greens of the existing bowling club, therefore, would not result in any issues with regards to contamination. Nonetheless, a Preliminary Site Investigations has been prepared by Sydney Environmental and the Site has been identified as suitable for the proposed use.

4.9 State Environmental Planning Policy (Transport and Infrastructure) 2021

The *State Environmental Planning Policy (Transport and Infrastructure) 2021* includes provisions to achieve permissibility for the development of certain activities for a range of infrastructure types. The Transport and Infrastructure SEPP indicates whether an activity is permissible with or without consent on what land the activity is permissible.

Schedule 3 of the Transport and Infrastructure SEPP lists the types of development that are defined as Traffic Generating Development. The referral thresholds for 'any other purpose' are:

- *200 or more motor vehicles per hour where the site with access to a road (generally); and*
- *50 or more motor vehicles per hour where the site has access to a classified road or to a road that connects to a classified road (if access is within 90 metres of connection, measured along the alignment of the connecting road).*

The proposed development comprises the installation of lighting poles to the northern most bowling greens and thus would not trigger traffic generating development. Therefore, the proposed development would not require referral to TfNSW.

4.10 Canterbury Bankstown Local Environmental Plan 2023

CBLEP 2023 is the primary Environmental Planning Instrument applying to the Site. The Site is located within the R2 Low Density Residential zone pursuant to the CBLEP 2023. The relevant provisions of the CBLEP 2023 are addressed in the table below.

Table 5. CBLEP 2023 - Relevant development standards

Clause	Control	Response
Zone R2 Low Density Residential	• *To provide for the housing needs of the community within a low density residential environment.* • *To enable other land uses that provide facilities or services to meet the day to day needs of residents.* • *To allow for certain non-residential uses that are compatible with residential uses and do not adversely affect the living environment or amenity of the area.* • *To ensure suitable landscaping in the low density residential environment.* • *To minimise and manage traffic and parking impacts.* • *To minimise conflict between land uses within this zone and land uses within adjoining zones.* • *To promote a high standard of urban design and local amenity.*	Recreation facility (outdoor) is a prohibited land use in the R2 Low Density Residential zone. However, the proposal is subject to existing use rights provisions under the EP&A Act and the Regulations therefore compliance with the objectives of the R2 Low Density Residential zone cannot be achieved.
Permitted without consent	*Home occupations*	Not applicable.
Permitted with consent	*Bed and breakfast accommodation; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Early education and care facilities; Environmental facilities;*	Not applicable.

Clause	Control	Response
	Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home businesses; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Tank-based aquaculture	
Prohibited	*Any development not specified in item 2 or 3*	Recreation facility (outdoor) is prohibited in the R2 Low Density Residential zone. However, the proposal is subject to existing use rights provisions under the EP&A Act and the Regulations.
Clause 4.1 Minimum subdivision lot size	The Site has a prescribed minimum subdivision lot size of 450m^2 pursuant to CBLEP 2023.	The Site is greater than 450m² and Torrens title subdivision is not proposed as part of this application.
Clause 4.3 Height of buildings	The Site is subject to a maximum height of building of 9m pursuant to CBLEP 2023.	The proposed height of the lighting structures is 9m and is therefore compliant.
Clause 4.4 Floor space ratio	The Site has a prescribed maximum floor space ratio of 0.5:1 pursuant to CBLEP 2023.	The proposal is for the installation of lighting poles to the northern most bowling greens of the existing bowling club. The proposal does not seek consent for any additional GFA or alterations to the existing building.
Clause 5.10 Heritage conservation	The Site is not identified as a heritage item nor is the Site located within a heritage conservation area.	The proposal is for the installation of lighting poles to the northern most bowling greens of the existing bowling club. No further consideration of Clause 5.10 is warranted.

As noted above, recreation facility (outdoor) is prohibited in the R2 Low Density Residential zone and the proposal relies on existing use rights provisions. As such, prescriptive requirements of environmental planning instruments cannot be applied to the assessment of the application as they would derogate from the existing use rights. Any future application would include a town planning report that would provide an on-merit assessment of the CBLEP 2023.

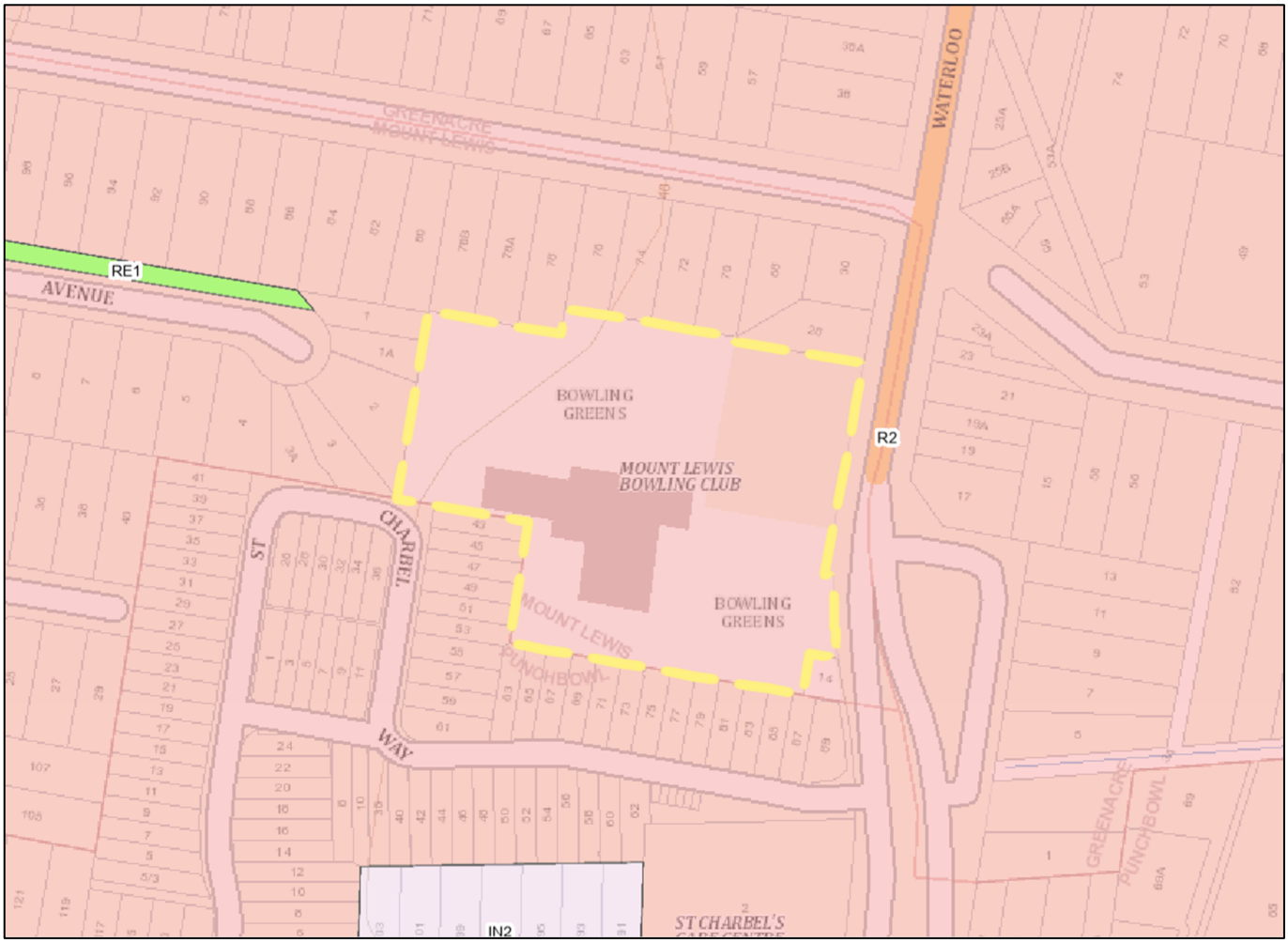

Figure 4. Land Zoning Map (NSW Planning Portal, 2024)

4.11 Canterbury Bankstown Development Control Plan 2023

The *Canterbury Bankstown Development Control Plan 2023* (CBDCP 2023) supports the CBLEP 2023 by providing additional objectives and development controls to enhance the function and appearance of development within Canterbury Bankstown. The proposed development is for the installation of lighting poles to the northern most bowling greens of the existing bowling club. The CBDCP 2023 does not prescribe controls in relation to the proposed development. Notwithstanding, the proposal is consistent with the overarching objectives of the CBDCP 2023 as outlined below.

O1 To have a single, dynamic document that supports the Canterbury-Bankstown Local Environmental Plan 2023.

Response: Noted.

O2 To have objectives and development controls that establish clear guidelines for effective and orderly development in Canterbury-Bankstown.

Response: Noted.

O3 To have a high quality urban environment and built form character in Canterbury Bankstown.

Response: The proposed installation of lighting poles on the northernmost bowling greens at Club Mount Lewis supports the objective of maintaining a high-quality urban environment and built form character in the Canterbury Bankstown LGA. By enhancing the functionality of the bowling greens with improved lighting, the proposal contributes to the overall quality of the club's recreational facilities while preserving the character of the existing building. The design and location of the lighting poles has been carefully considered to ensure that it complements the existing built form and does not detract from the character of the locality. Further, the proposal supports the ongoing positive impact of the club within the community.

O4 To have development that contributes to the prosperity of Canterbury-Bankstown.

Response: The proposed lighting enhances the functionality and appeal of the bowling greens, which will likely increase the club's usage and attract more patrons. This not only supports the club's operational success but also contributes to the local economy by boosting patronage and potentially generating increased revenue. Additionally, the enhanced facilities can serve as a community asset, promoting engagement and social activity, further contributing to the overall prosperity of Canterbury-Bankstown.

O5 To have development that protects and enhances the natural environment in Canterbury-Bankstown.

Response: The proposed lighting poles are strategically positioned to minimise light spill and reduce potential impacts on the surrounding natural landscape. Furthermore, the installation will incorporate energy-efficient lighting technology to lower energy consumption and reduce the environmental footprint. By ensuring that the development is both environmentally responsible and considerate of the natural surroundings, the proposal supports the preservation and enhancement of the local environment while improving the functionality of the club's facilities.

O6 To have development that incorporates the principles of ecologically sustainable development including:

- *(a) the conservation of energy and natural resources, particularly water and soil,*
- *(b) the avoidance of environmentally damaging materials,*
- *(c) the avoidance of significant adverse impact on the natural environment, particularly areas of remnant vegetation, watercourses and native flora and fauna,*
- *(d) waste avoidance and waste minimisation,*
- *(e) encouraging the use of public transport.*

Response: The proposed installation of lighting poles on the northernmost bowling greens at Mount Lewis Bowling Club adheres to the principles of ecologically sustainable development by integrating several key measures. The project will utilise energy-efficient LED lighting to conserve energy and minimise the use of natural resources, while careful design will ensure minimal impact on the surrounding environment. Environmentally damaging materials will be avoided, and the proposal will not interfere with remnant vegetation, watercourses, or native flora and fauna. Waste management practices will be employed to minimise construction waste, and the development encourages the use of public transport by maintaining accessibility to existing transport links. These considerations collectively ensure that the project supports sustainability while enhancing the club's facilities.

O7 To have a safe and secure environment in Canterbury-Bankstown.

Response: The proposal will enhance illumination on the greens, thus significantly improve visibility during evening use, reducing the risk of accidents and enhancing overall safety for club members and visitors. The installation is designed to provide uniform lighting that deters potential hazards and ensures a secure environment, thereby contributing to a safer recreational space.

This proactive approach to lighting not only benefits the immediate users but also promotes a broader sense of security within the community.

O8 To have development that considers the following general environmental matters:

(a) flora and fauna, including threatened species,

(b) water quality of surface water bodies and ground water,

(c) any catchment management plan or study applying to the land,

(d) the reduction of stormwater run-off by minimising the area of impervious surfaces, increasing infiltration and the use of rainwater tanks.

Response: The proposed development has been designed to avoid any impact on local flora and fauna, including threatened species, by ensuring that the lighting infrastructure is placed in a manner that does not disrupt their habitats. The development will not affect surface water bodies or groundwater quality, as no changes are proposed to the existing drainage or water management systems. Additionally, the proposal aligns with catchment management plans by maintaining the existing impervious surfaces and stormwater systems.

Given the above, the proposed development is consistent with the objectives of the CBDCP 2023.

5 Environmental Assessment

5.1 Context and Setting

The proposal seeks to provide lights to the existing bowling greens. The proposed lights have been strategically located to ensure that there are no adverse impacts on the surrounding development. The proposed development is considered appropriate in its context. The proposed lights will not result in any significant environmental impacts.

5.2 Contamination

A Preliminary Site Investigations has been prepared by Sydney Environmental (SE) and is attached at **Appendix 4**.

In SE's analysis of the site, key historical and regulatory details have emerged. Historical land records indicate various private ownerships over the years, with potential usage for fibrous plaster manufacturing and sheet metal works. An analysis of historical aerial imagery shows a transformation from commercial/industrial uses to its present function as Club Mount Lewis, with significant structural changes occurring from 1943 to 2024. Furthermore, checks of publicly available contaminated land databases reveal that the site has no outstanding environmental compliance issues under key sections of the *Protection of the Environment Operations Act 1997* and the *Contaminated Land Management Act 1997*, and it is not listed as contaminated land under council records.

During the desktop review and a physical site walkover, SE identified one potential area of moderate environmental risk that correlates with the redevelopment plans. Overall, SE deems the site suitable for redevelopment, with the recommendation that all excavated soil, particularly from the sports lighting footings, must undergo visual inspection and waste classification.

To ensure environmental compliance during the installation, SE recommends that all excavated soil be classified by a qualified environmental consultant following the NSW EPA Waste Classification Guidelines (2014). In case of unexpected finds during the redevelopment, it is imperative to follow the unexpected finds protocol outlined in Section 10 of the report. SE also advises maintaining meticulous records of the transport and disposal of materials to ensure they are handled appropriately at licensed waste facilities.

The site is considered suitable for the installation of lights at Club Mount Lewis.

5.3 Geotechnical

A Geotechnical Report has been prepared by Core Geotech and is attached at **Appendix 5**.

The geotechnical assessment revealed that the subsurface profile at the site includes silty clay and clayey sand fill overlying soft to very stiff residual silty clay, which extends to the refusal depth. In boreholes BH02, BH05, and BH06, refusal was encountered within the fill layer, and it was noted that no records exist regarding the composition or control of the fill, leading to its classification as uncontrolled per AS2870-2011. The site was assigned a 'P' site classification due to the uncontrolled fill, the potential disturbance from removing existing concrete structures, and the influence of nearby tree roots, which are considered abnormal moisture conditions.

The footing analysis determined that suitable conditions for shallow footings exist at the locations of boreholes BH01, BH03, and BH04, where very stiff residual clayey soils were found at depths ranging from 0.5m to 1.5m. These locations can support shallow footings with an Allowable Bearing Pressure (ABP) of 150 kPa. However, further geotechnical investigations using deeper drilling are recommended for the other borehole locations (BH02, BH05, and BH06) to assess the depth and suitability of substrata for supporting proposed structures.

Soil aggressivity testing, including pH, sulphate, chloride content, and resistivity, suggests a classification of A1 exposure for concrete, indicating a non-aggressive environment as per the criteria set out in AS2870-2011 for residential slabs and footings. Similar non-aggressive conditions are noted for concrete and steel piles under AS2159-2009 standards. These findings are crucial for determining appropriate construction materials and methods to ensure long-term durability and structural integrity of the proposed developments.

The geotechnical conditions are considered suitable for the installation of the lights subject to recommendations contained within the Geotechnical Report.

5.4 Acoustic

The land use remains the same as existing and the proposed lights would be silent during operation and as such would not give rise to any noise impacts.

5.5 Waste

A Waste Management Plan (WMP) has been prepared by Allera Planning and is attached at **Appendix 6**. The only waste would be generated during excavation and would comprise soil. This soil would be removed from the site by a licensed contractor. The lights are manufactured for installation and there would be no construction waste generated as a result.

5.6 Social and Economic

The proposed development results in an improvement to the existing facilities without compromising the amenity of the neighbouring properties. The proposal would contribute to the ongoing viability of the site as a Bowls Club and contributes to the private recreation facilities in the Canterbury-Bankstown LGA. The proposal is considered to represent a positive social and economic outcome.

5.7 Suitability of Site

The site is currently Club Mount Lewis and this application seeks to improve the existing facilities at the venue. The proposal would support the ongoing viability of the club and is considered in the public interest. The ground conditions for the installation are appropriate as demonstrated by the Preliminary Site Investigations and Geotechnical Report.

Accordingly, the Site is considered suitable for the proposed development.

5.8 Submissions

No submissions have been received in relation to the proposed development at the time of writing. However, the applicant is willing to address any submissions, should they be received by Council.

5.9 Public Interest

The proposed development is in the public interest given the following:

- Improves the facilities at the existing Club Mount Lewis contributing to the Club's ongoing viability.
- The proposed development would not result in any significant or measurable environmental or amenity impacts.
- The proposed development is commensurate with the surrounding development.

The proposed development aligns with the zone objectives and as such, the proposed development is in the public interest.

6 Conclusion

The purpose of this SEE outlines the proposed installation of lights on the northern most bowling greens at Club Mount Lewis and to assess its potential impacts having regards to Section 4.15(1) of the EP&A Act.

The proposal is considered to warrant a favourable determination for the following reasons:

- The proposal does not alter the existing use of the land;
- This proposal seeks to improve the existing facilities at Club Mount Lewis and contribute to the ongoing viability of the site;
- The proposed development would be an orderly and economically appropriate development for the Site;
- It is appropriate within the context of the Site and surrounding locality; and
- The proposed development would not comprise any significant environmental impact.

Considering the merits of the proposed development and in absence of any significant environmental impact, the proposed development warrants support by Council.

Appendix 1 – Owners Consent

CANTERBURY BANKSTOWN

Owners Consent

SECTION A. Location and Title Description of the Property

Unit No.		Street No.	14A	Street	Waterloo Road		
Suburb	Mount Lewis			State	NSW	Postcode	2190
Lot No.	100			Section No.			
Deposited Plan/Strata Plan No.	DP1280447						

SECTION B. Owner(s) Consent

As owner(s) of the land to which this application relates, I/we consent to this application. I/we also give consent for authorised Council Officers or agents to enter (without prior notice) the land to carry out inspections. I/we accept that all communication regarding this application will be through the nominated applicant..

Owner 1 Name			
Signature		Date	
Owner 1 email			
Owner 2 Name			
Signature		Date	
Owner 2 email			

If the owner is a Company, owner's consent is to be provided with signatures of 2 directors or a director and company secretary (unless it has a sole trader). Please attach ASIC extract verifying directors and or secretary of Company.

Owner Company Name	ABN
MOUNT LEWIS BOWLING CLUB CO OP	28 120 359 675
Director 1 Name	Director or Secretary Name
FRED AYOUB	MATT CAVANAGH
Signature Director 1	Signature Director 2 or Secretary
× Fred Ayoub	
Company email: matt@clubmountlewis.com.au	Date: 21.11.24

If the owner is an owner's corporation, owner's consent is to be provided with a signature of the secretary of the body corporate.

Body corp. Secretary Name	Signature
Body corp. email	Date

If you are signing on the owner's behalf as the owner's legal representative, please state the nature of your legal authority and attach documentary evidence.

(e.g. Power of attorney, executor, trustee, company director, ASIC search) ABN

SECTION C. Owner's Declaration

To be signed by the owner, if a Company/Owner's Corporation, this must be signed by a director/secretary or authorised delegate.

- [x] I authorise the applicant to apply for consent to carry out the development as described for this application.
- [x] I understand that the information supplied on this form and any related document will be made accessible to the public on Council's website and may be copied at Council under the GIPA Act 2009.
- [x] I understand that if incomplete the application may be delayed, rejected or returned and that additional information may be requested.
- [x] I understand that Council will liaise with the Applicant.
- [ ] If Company owned, I have attached an ASIC extract.

Name	Matt Cavanagh + Fred Ayoub.
Signature	
Date	21.11.24.

PRIVACY NOTICE
Council is required under the Privacy and Personal Information Protection Act 1998 (PPIPA) to collect, maintain and use your personal information in accordance with the Privacy Principles and other relevant requirements of the PPIPA.
Personal information requested on this form will only be used to fulfil the purpose for which it is being collected. Provision of this information is voluntary and is required to help process your application. Council is regarded as the agency that holds the information and access is restricted to council officers and other authorised people. You may apply to access or amend the information. For further information or clarification please contact the Privacy Contact Officer at Council.

Appendix 2 – Design Drawings

Luminaire Schedule			
Symbol	Qty	Label	LLF
	8	Invictus II 750 O1	0.890

Calculation Summary						
Project: Calculation Area						
Label	Units	Avg	Max	Min	Min/Avg	Min/Max
CalcPts_Green 1	Lux	255.95	385	192	0.75	0.50
CalcPts_Green 2	Lux	235.04	307	179	0.76	0.58

Calculation Summary	
Project: Glare	
Label	Max
GR_1	296
GR_1	10
GR_1	41
GR_1	13
GR_1	13
GR_1	39
GR_1	12
GR_1	43
GR_1	44
GR_1	41
GR_1	48
GR_1	39

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A3 - Medium District Brightness, Non-Curfew L1
Filename: Mount Lewis Bowling Club
15/10/2024 9:47:30 AM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (10):

Calculation Label	Test Results	Max. Illum.
ObtrusiveLight_Eh_II_Seg1	PASS	5
ObtrusiveLight_Eh 2_II_Seg1	PASS	1
ObtrusiveLight_Eh 2_II_Seg2	PASS	2
ObtrusiveLight_Eh 2_II_Seg3	PASS	6
ObtrusiveLight_Eh 2_II_Seg4	PASS	2
ObtrusiveLight_Eh 2_II_Seg5	PASS	4
ObtrusiveLight_Eh 2_II_Seg6	PASS	3
ObtrusiveLight_Eh 2_II_Seg7	PASS	1
ObtrusiveLight_Eh 2_II_Seg8	PASS	4
ObtrusiveLight_Eh_1_II_Seg1	PASS	1

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 12500 Cd

Calculations Tested (10):

Calculation Label	Test Results
ObtrusiveLight_Eh_Cd_Seg1	PASS
ObtrusiveLight_Eh 2_Cd_Seg1	PASS
ObtrusiveLight_Eh 2_Cd_Seg2	PASS
ObtrusiveLight_Eh 2_Cd_Seg3	PASS
ObtrusiveLight_Eh 2_Cd_Seg4	PASS
ObtrusiveLight_Eh 2_Cd_Seg5	PASS
ObtrusiveLight_Eh 2_Cd_Seg6	PASS
ObtrusiveLight_Eh 2_Cd_Seg7	PASS
ObtrusiveLight_Eh 2_Cd_Seg8	PASS
ObtrusiveLight_Eh_1_Cd_Seg1	PASS

Upward Waste Light Ratio (UWLR)

Maximum Allowable Value: 2.0 %

Calculated UWLR: 1.3 %
Test Results: PASS

Lighting system performance meets the minimum lighting criteria of AS2560.2 Sports Lighting - 200 lux

Uses 9 metre poles
Lights are mounted at 9 metres

Design is compliant with AS4282:2023 Obtrusive Light
Obtrusive Lighting is calculated at 1.0MF

Project Name

Mount Lewis Bowling Club.AGI

Project designed by: Stacey

LEGACY LIGHTING

Date:15/10/2024

Legacy Lighting

158 Gray Street
Swan Hill VIC 3585

ABN 53 622 912 252

Lighting system performance meets the minimum lighting criteria of AS2560.2 Sports Lighting - 200 lux

Uses 9 metre poles
Lights are mounted at 9 metres

Design is compliant with AS4282:2023 Obtrusive Light
Obtrusive Lighting is calculated at 1.0MF

Project Name

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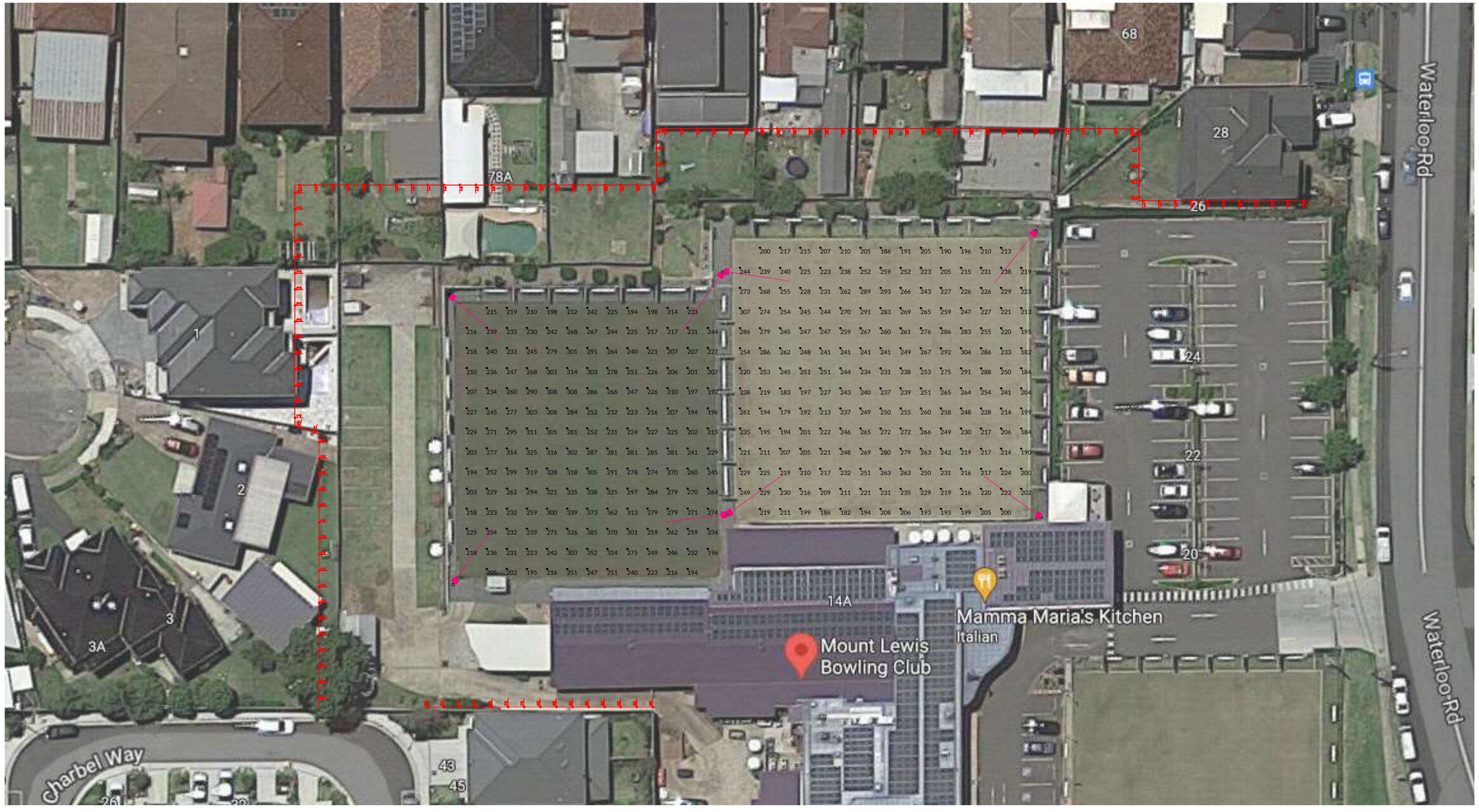
LEGACY LIGHTING

Date:15/10/2024

Legacy Lighting

158 Gray Street
Swan Hill VIC 3585

ABN 53 622 912 252



Lighting system performance meets the minimum lighting criteria of AS2560.2 Sports Lighting - 200 lux

Uses 9 metre poles
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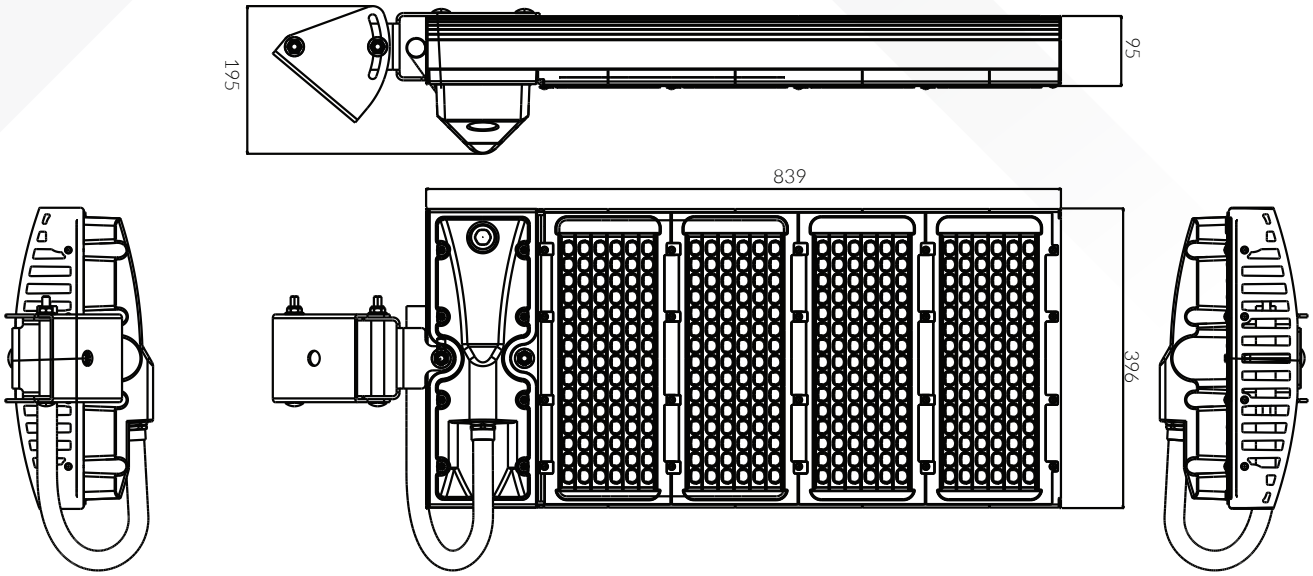
Date:15/10/2024

Legacy Lighting

158 Gray Street
Swan Hill VIC 3585

ABN 53 622 912 252

LEGACY INVICTUS 750W - OPTIC 1
External Driver



Model No	INVICTUS 750
Input Power	750W
LED	3030 LED Chips
Lumen Output	140 lm/watt
Working Temp	-40°C - +50°C
Protection Class	IP66
Material	Aluminium Body
Size (excl handle)	839x396x95mm
Weight	19 kg
Lifespan	100,000 hours
Colour Temperature	4000 – 5000K
Input Voltage	200 – 415VAC, 50/60 Hz
CRI	70-90 Ra
Dim/RC (optional)	1-10V/DMX/DALI
Sail Area @ 40°	0.250
Warranty	10 Years
Country of Manufacture	Australia
Inrush Currents	@415V - 7.5A for 14ms/@240V - 3.5A for 14ms
Current Draw	@415V - 1.8A/@240V - 3.2A

CONTACT US - AUSTRALIAN OFFICE

P – 1300 800 345
E – salesapac@legacysportlighting.com

LEGACY
LIGHTING

Appendix 3 – Cost Summary Report

LEGACY
LIGHTING

QUOTATION

Mount Lewis Bowling Club - 2 Greens together

Quote Ref: 231204-01

Joshua Berry
bowls@clubmountlewis.com.au

ITEM	PRICE			QTY		TOTAL
750W Invictus Narrow Flood 5000K & 80 CRI Remote 240/415V Control Gear Stainless Universal Bracket Made in Australia + 10 Year Warranty*	$3,450	ea	x	8	pcs	$27,600
10m BPM Pole Cross arm to suit Invictus fittings Footing cages subject to engineering	$2,650	ea	x	6	pcs	$15,900
Installation - new poles Installation of poles, lights & electrical Supply & install of all conduits & cabling Supply & install of concrete footings Aiming and commissioning	$75,900	ea	x	1	pcs	$75,900

Freight	$1,250
Total Project (excl. GST)	**$120,650**

*Quotation based on 10 year warranty on Legacy LED's and hardware
Payment Terms: 30 days (approved credit accounts) or 50% deposit, 40% prior to dispatch and 10% on completion
Quotation is EXCLUSIVE of GST (goods and services tax which is applicable at time of sale)
Quote is valid for 90 days from date of quote.

Appendix 4 – Preliminary Site Investigations for Contamination

Sydney Environmental Group

Stage 1 Preliminary Site Investigation

Mount Lewis Bowling Club, Mount Lewis NSW

Allera Pty Ltd

Report No: 2729-PSI-01-161024.v1f

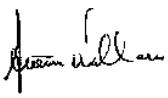
Report Date: 16 October 2024

Sydney Environmental Group Pty Ltd PO Box A1420, Sydney South NSW

Info@sydneyenvironmental.com.au

DOCUMENT RECORD

Revision	Date	Author	Reviewer
v1f	16 October 2024	Thomasine Hulme	Steven Wallace

Author Signature		**Reviewer Signature**	
Name	Thomasine Hulme	**Name**	Steven Wallace
Credentials	B. Environmental Management	**Credentials**	CEnvP, M.Sc.Envir.Sci, B.Sc. Meteorology, Licensed Asbestos Assessor LAA001096
Title	Environmental Scientist	**Title**	Managing Consultant

Document Title:	Stage 1 Preliminary Site Investigation, Mount Lewis Bowling Club, Mount Lewis NSW
Site Address:	Mount Lewis Bowling Club, Mount Lewis NSW
Client Name:	Allera Pty Ltd
Site Size:	≈ 1.18 ha
Reference Number:	2729-PSI-01-161024.v1f
Project Type:	Stage 1 Preliminary Site Investigation
Project Type Abbreviation:	PSI
Document Draft:	FINAL
Document Revision No.	v1

Prepared by Sydney Environmental Group Pty Ltd ABN: 14 631 026 214

EXECUTIVE SUMMARY

Sydney Environmental Group Pty Ltd (SE) was engaged Allera Pty Ltd (hereafter referred to as 'the client'), to undertake a Stage 1 Preliminary Site Investigation of the site located at the Mount Lewis Bowling Club, Mount Lewis NSW (hereafter referred to as 'the site') (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

SE has the following project appreciation:

- The site covers an area of approximately 1.18 ha;
- The site is currently utilised as a recreational lawn bowls club within a commercial land-use setting;
- The site is proposed for installation of sporting lights on two (2) of the bowling greens within the site; and
- A contamination assessment of the site is required to identify any contamination that may be present and provide advice on the suitability of the site for any proposed future land-use.

The objectives of this project were to:

- Assess the potential for contamination to be present on the site as a result of past and current land use activities;
- Provide advice on whether the site would be suitable (in the context of land contamination) for the proposed redevelopment works; and
- Provide recommendations for further investigation, management and/or remediation (if warranted).

SE undertook the following activities to address the project objectives:

- A desktop review of relevant information pertaining to the site;
- A site walkover to understand current site conditions; and
- Data assessment and reporting.

Based on SE's assessment of the desktop review information, fieldwork data and laboratory analytical data, in the context of the proposed redevelopment scenario, SE makes the following conclusions:

- Historical land titles have indicated that the site has been owned by a number of private individuals and there may be potential for fibrous plaster manufacturing and sheet metal works to have taken place on-site;
- Review of historical aerial imagery has indicated that the site has undergone changes from commercial/industrial land use to the current land-use as the Mount Lewis Bowling Club. Multiple structures appear to have been constructed and demolished across the site between 1943 and 2024;
- A review of publicly available contaminated land databases indicated that the site is not the subject of any licenses, applications, notices under Section 308 of the *Protection of the Environment Operations Act 1997*. The site is not notified under Section 60 of the *Contaminated Land Management Act 1997*. The site is not the subject of any notifications under Section 58 of the *Contaminated Land Management Act 1997*;
- Review of council certification has indicated that the site is not registered as:
    - Significantly contaminated land;
    - Subject to a management order;
    - The subject of an approved voluntary management proposal;
    - Subject to an ongoing maintenance order; or
    - The subject of a site audit statement.
- Based on the desktop review and site walkover, one (1) potential area of environmental concern was identified within the site in relation to the proposed redevelopment works and noted as being of moderate risk; and
- Based on the assessments undertaken as part of this investigation, SE have concluded that the site is suitable to the proposed redevelopment works, subject to visual inspection and waste classification of the waste soil materials generated from the excavations of the sports lighting footings.

Based on the conclusions stated above and the background data gathered during the course of this investigation, SE recommend the following:

- All soil materials removed as part of the installation works will be subject to a waste classification assessment by a suitably experienced environmental consultant prior to disposal off-site to a licensed waste receiving facility. The waste classification assessment must be prepared in line with NSW EPA Waste Classification Guidelines (2014);
- In the event any unexpected finds are encountered during redevelopment works, the unexpected finds protocol presented within **Section 10** must be followed; and
- Records of the transport and disposal of any materials off-site should be maintained.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 11**.

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FIGURES

APPENDICES

ABBREVIATIONS

AHD	Australian Height Datum
AEC	Area of Environmental Concern
ANZECC	Australian and New Zealand Environment and Conservation Council
AST	Aboveground storage tank
Bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
Btoc	Below top of casing
CoC	Chain of Custody
CSM	Conceptual Site Model
DSI	Detailed Site Investigation
EC	Electrical conductivity
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
GS	Geological Survey of NSW
HIL	Health Investigation Levels
HSL	Health Screening Levels
IL	Investigation Levels
LOR	[Laboratory] Limit of reporting
NATA	National Association of Testing Laboratories
N/A	Not applicable
ND	Not detected
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW EPA	NSW Environment Protection Authority
OCP	Organochlorine Pesticide
OPP	Organophosphorus Pesticide
PAEC	Potential Area of Environmental Concern
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PID	Photo-ionisation detector
PSH	Phase separated hydrocarbon
PSI	Preliminary Site Investigation
QA/QC	Quality assurance/Quality control
RPD	Relative percentage difference
SAQP	Sampling Analysis and Quality Plan
SE	Sydney Environmental Group Pty Ltd
SVOC	Semi-volatile organic compound
TPH	Total petroleum hydrocarbon
USCS	Unified Soil Classification System
UST	Underground storage tank
VOC	Volatile organic compound

1. INTRODUCTION

1.1. Background

Sydney Environmental Group Pty Ltd (SE) was engaged Allera Pty Ltd (hereafter referred to as 'the client'), to undertake a Stage 1 Preliminary Site Investigation of the site located at the Mount Lewis Bowling Club, Mount Lewis NSW (hereafter referred to as 'the site') (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

SE has the following project appreciation:

- The site covers an area of approximately 1.18 ha;
- The site is currently utilised as a recreational lawn bowls club within a commercial land-use setting;
- The site is proposed for installation of sporting lights on two (2) of the bowling greens within the site; and
- A contamination assessment of the site is required to identify any contamination that may be present and provide advice on the suitability of the site for any proposed future land-use.

1.2. Proposed Development

SE have not been provided with specific development plans, however, have been advised by the client that the proposed works include the installation of sporting lights on two (2) of the bowling greens located within the site. The typical footing depth of the sporting lights is expected to be approximately 1.5 – 2 m depth by 800 mm diameter.

1.3. Objectives

The objectives of this project were to:

- Assess the potential for contamination to be present on the site as a result of past and current land use activities;
- Provide advice on whether the site would be suitable (in the context of land contamination) for the proposed redevelopment works; and
- Provide recommendations for further investigation, management and/or remediation (if warranted).

1.4. Scope of Work

SE undertook the following activities to address the project objectives:

- A desktop review of relevant information pertaining to the site;
- A site walkover to understand current site conditions; and
- Data assessment and reporting.

2. SITE IDENTIFICATION

The site identification details and associated information are presented in **Table 2.1.**

Table 2.1. Site Identification Information

Attribute	Description
Street Address	Mount Lewis Bowling Club, Mount Lewis NSW
Lot & Deposited Plan (DP)	Lot 100 DP1280447 Lot 5 DP539423
Geographical Coordinates	33°54'55.8"S 150°3'18.64"E (Approximate centre of site)
Site Area	≈ 1.18 ha
Local Government Area (LGA)	Canterbury-Bankstown Council
Parish	Bankstown
County	Cumberland
Zoning	R2 – Low Density Residential *Canterbury-Bankstown Local Environmental Plan 2023*

The locality of the site is set out in **Figure 1**.

The general layout and boundary of the site is set out in **Figure 2**.

3. GEOLOGY, ACID SULFATE SOILS, TOPOGRAPHY AND HYDROGEOLOGY

Regional geology, topography, soil landscape and hydrogeological information are presented in **Table 3.1.**

Table 3.1. Regional Setting Information

Attribute	Description
Climate	A review of the closest weather station to the site (Canterbury Racecourse AWS, Station Number: 066194) indicated that the climate is relatively mild with average maximum temperatures ranging from 17.7 – 27.9 °C and minimum temperatures ranging from 5.8 – 18.6 °C. Rainfall is relatively varied across the year, ranging from 8 days of rain per month in August, to 13.2 average days of rainfall per month in March and February. Average monthly rainfall varied from 49.7 mm in September up to 128.3 mm in February.
Geology	A review of the Environment NSW 'eSpade V2.2' web application (environment.nsw.gov.au/eSpade2WebApp, accesses 9 October 2024), indicated that the majority of the site is likely to be underlain by Wianamatta Group– Ashfield Shale consisting of laminite and dark grey siltstone and Bringelly Shale which consists of shale, with occasional calcareous claystone, laminite and coal. This is occasionally underlain by claystone and laminite lenses within the Hawkesbury Sandstone.
Acid Sulfate Soils	A review of the Environment NSW 'eSpade V2.2' web application (environment.nsw.gov.au/eSpade2WebApp, accessed 9 October 2024), indicates that the site lies in an area mapped as ***'No Known Occurrence'*** with respect to acid sulfate soils. This infers that land management activities are not likely to be affected by acid sulfate soil materials. Further assessment of acid sulfate soils in the context of this investigation is considered by SE as not warranted.
Topography	Gently undulating rises on Wianamatta Shale with local relief 10–30 m and slopes generally <5%, but up to 10%. Crests and ridges are broad (200–600 m) and rounded with convex upper slopes grading into concave lower slopes. Rock outcrop is absent. SE understands that the site is located at an elevation approximately 44 m to 39 m Australian Height Datum (AHD) and sloping downwards to the east.
Hydrology and Hydrogeology	Surface water courses proximal to the site include an unnamed tributary of Cox Creek, located approximately 50 m east of the site, and Cox Creek, located approximately 850 m north-east of the site. Based on distances to the nearest surface water course and the site topography, groundwater flow in the vicinity of the site is considered likely to be towards the east. A review of the NSW Office of Water groundwater database undertaken on 9 October 2024 indicated there were no registered groundwater features located within a 500m radius of the site.
Adjacent Sensitive Receptors	A review of the Bureau of Meteorology Groundwater Dependent Ecosystem Map was undertaken to determine the closest sensitive ecological receptors. The closest ecological receptors to the site includes Cox Creek located approximately 850 m north-east of the site, and is noted as a low potential groundwater dependent ecosystem. The closest sensitive human receptors are the residential properties surrounding the site's boundary and any future onsite construction workers/ builders.

A copy of the NSW Office of Water search record is presented in **Appendix A**.

4. SITE HISTORY AND LAND USE

4.1. Land Titles

A search of historical land title ownership was undertaken by Infotrack Pty Ltd. The results of which indicated that the land had been owned by a number of private individuals and one (1) Co-Operative Limited company (current site owner) (refer to **Table 4.1.1**).

Table 4.1.1 Land Titles Records Summary

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
As regards to the part numbered 1 on attached Cadastral Records Enquiry Report		
07.09.1912 (1912 to 1931)	Muriel Rowan (Married Woman)	Volume 2289 Folio 196
29.07.1931 (1931 to 1937)	Edward William Rowan (Hairdresser)	Volume 2289 Folio 196
01.09.1937 (1937 to 1944)	Francis John Ryan (Clerk)	Volume 2289 Folio 196
02.08.1944 (1944 to 1945)	David William Pearce (Baker)	Volume 2289 Folio 196
22.01.1945 (1945 to 1957)	Doris Elizabeth Fitzgerald (Married Woman)	Volume 2289 Folio 196 Then Volume 5488 Folio 138 Now Volume 10227 Folio 10
21.10.1957 (1957 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector) Ernest Clive Thorburn (Retired)	Volume 10227 Folio 10
29.04.1966 (1966 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector now Retired) (Notice of Death)	Volume 10227 Folio 10
29.04.1966 (1966 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk)	Volume 10227 Folio 10 Now Volume 10417 Folio 146
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 146
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 10417 Folio 146
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 10417 Folio 146 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447
As regards to the part numbered 2 on attached Cadastral Records Enquiry Report		
07.09.1912 (1912 to 1931)	Muriel Rowan (Married Woman)	Volume 2289 Folio 196
29.07.1931 (1931 to 1937)	Edward William Rowan (Hairdresser)	Volume 2289 Folio 196
01.09.1937 (1937 to 1944)	Francis John Ryan (Clerk)	Volume 2289 Folio 196
02.08.1944 (1944 to 1945)	David William Pearce (Baker)	Volume 2289 Folio 196

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
22.01.1945 (1945 to 1957)	Doris Priscilla Langford (Married Woman)	Volume 2289 Folio 196 Then Volume 5488 Folio 112 Now Volume 10227 Folio 10
21.10.1957 (1957 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector) Ernest Clive Thorburn (Retired)	Volume 10227 Folio 10
29.04.1966 (1966 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector now Retired) (Notice of Death)	Volume 10227 Folio 10
29.04.1966 (1966 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk)	Volume 10227 Folio 10 Now Volume 10417 Folio 146
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 146
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 10417 Folio 146
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 10417 Folio 146 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447
As regards to the part numbered 3 on attached Cadastral Records Enquiry Report		
07.09.1912 (1912 to 1931)	Muriel Rowan (Married Woman)	Volume 2289 Folio 196
29.07.1931 (1931 to 1937)	Edward William Rowan (Hairdresser)	Volume 2289 Folio 196
01.09.1937 (1937 to 1944)	Francis John Ryan (Clerk)	Volume 2289 Folio 196
02.08.1944 (1944 to 1957)	David William Pearce (Baker)	Volume 2289 Folio 196 Then Volume 5458 Folio 57 Now Volume 10227 Folio 10
21.10.1957 (1957 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector) Ernest Clive Thorburn (Retired)	Volume 10227 Folio 10
29.04.1966 (1966 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector now Retired) (Notice of Death)	Volume 10227 Folio 10
29.04.1966 (1966 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk)	Volume 10227 Folio 10 Now Volume 10417 Folio 146
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 146
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 10417 Folio 146

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 10417 Folio 146 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447
As regards to the part numbered 4 on attached Cadastral Records Enquiry Report		
07.09.1912 (1912 to 1931)	Muriel Rowan (Married Woman)	Volume 2289 Folio 196
29.07.1931 (1931 to 1937)	Edward William Rowan (Hairdresser)	Volume 2289 Folio 196
01.09.1937 (1937 to 1944)	Francis John Ryan (Clerk)	Volume 2289 Folio 196
02.08.1944 (1944 to 1984)	David William Pearce (Baker)	Volume 2289 Folio 196 Then Volume 5458 Folio 57 Now Volume 10227 Folio 9
12.06.1984 (1984 to 1986)	James Stewart McNaught Elizabeth Watson McNaught	Volume 10227 Folio 9 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283
As regards to the part numbered 5 on attached Cadastral Records Enquiry Report		
26.10.1920 (1920 to 1929)	Sydney Joseph O'Brien (Hairdresser) Maude Elizabeth O'Brien (Married Woman now Widow)	Volume 3115 Folios 243 & 244
24.05.1929 (1929 to 1936)	Maude Elizabeth O'Brien (Widow) (Notice of Death)	Volume 3115 Folios 243 & 244
21.04.1936 (1936 to 1946)	Prudential Estates Limited	Volume 3115 Folios 243 & 244
17.01.1946 (1946 to 1950)	Thomas Eugene Lawless (Furniture Manufacturer)	Volume 3115 Folios 243 & 244 Now Volume 5571 Folio 194
03.03.1950 (1950 to 1957)	T. E. Lawless Pty Limited	Volume 5571 Folio 194
21.10.1957 (1957 to 1966)	James Shaw Aikens (Retired) Thomas Joseph Lynch (Insurance Inspector) Ernest Clive Thorburn (Retired)	Volume 5571 Folio 194 Now Volume 10227 Folio 10
29.04.1966 (1966 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk)	Volume 10227 Folio 10 Now Volume 10417 Folio 146
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 146
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 10417 Folio 146
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 10417 Folio 146 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
As regards to the part numbered 6 on attached Cadastral Records Enquiry Report		
26.10.1920 (1920 to 1929)	Sydney Joseph O'Brien (Hairdresser) Maude Elizabeth O'Brien (Married Woman now Widow)	Volume 3115 Folio 244
24.05.1929 (1929 to 1936)	Maude Elizabeth O'Brien (Widow) (Notice of Death)	Volume 3115 Folio 244
21.04.1936 (1936 to 1936)	Prudential Estates Limited	Volume 3115 Folio 244
18.07.1936 (1936 to 1957)	Leonard Keith Sheen (Wireless Process Worker)	Volume 3115 Folio 244 Now Volume 4793 Folio 217
07.08.1957 (1957 to 1995)	Ralph Bartley Grisdale (Commercial Traveller)	Volume 4793 Folio 217 Now 8/17873
16.02.1995 (1995 to 2000)	Ralph Bartley Grisdale (Commercial Traveller) Phyllis Winifred Grisdale	8/17873
31.03.2000 (2000 to 2000)	Phyllis Winifred Grisdale (Notice of Death)	8/17873
04.10.2000 (2000 to 2000)	Ross Anthony Grisdale (Transmission Application)	8/17873
08.11.2000 (2000 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	8/17873 Now 100/1280447
As regards to the part numbered 7 on attached Cadastral Records Enquiry Report		
26.10.1920 (1920 to 1929)	Sydney Joseph O'Brien (Hairdresser) Maude Elizabeth O'Brien (Married Woman now Widow)	Volume 3115 Folio 244
24.05.1929 (1929 to 1936)	Maude Elizabeth O'Brien (Widow) (Notice of Death)	Volume 3115 Folio 244
21.04.1936 (1936 to 1936)	Prudential Estates Limited	Volume 3115 Folio 244
27.10.1936 (1936 to 1940)	Arthur Hector Berriman (Master Plumber) Florence Minnie Berriman (Married Woman)	Volume 3115 Folio 244 Now Volume 4807 Folio 162
17.10.1940 (1940 to 1948)	Roy Charles Montgomery (Showman) Grace Irene Montgomery (Married Woman)	Volume 4807 Folio 162
26.08.1948 (1948 to 1951)	Basil Counsell Gasper (Retired) Maud Alice Gasper (Married Woman)	Volume 4807 Folio 162
07.09.1951 (1951 to 1958)	Peter Rashleigh (Ships Officer) Lola Margaret Rashleigh (Married Woman)	Volume 4807 Folio 162
24.02.1958 (1958 to 1967)	Margaret Ethel Mary Jones (Spinster)	Volume 4807 Folio 162
08.12.1967 (1967 to 1999)	Trevour Charles Osborne Townsend Elsie Lillian Townsend	Volume 4807 Folio 162 Now 9/17873
04.02.1999 (1999 to Date)	# Mt Lewis Bowling Club Co-Operative Limited Now # Mount Lewis Bowling Club Co-Operative Limited	9/17873 Now 100/1280447
As regards to the part numbered 8 on attached Cadastral Records Enquiry Report		
26.10.1920 (1920 to 1929)	Sydney Joseph O'Brien (Hairdresser) Maude Elizabeth O'Brien (Married Woman now Widow)	Volume 3115 Folio 244

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
24.05.1929 (1929 to 1936)	Maude Elizabeth O'Brien (Widow) (Notice of Death)	Volume 3115 Folio 244
21.04.1936 (1936 to 1937)	Prudential Estates Limited	Volume 3115 Folio 244
20.04.1937 (1937 to 1967)	Mary Cousins (Widow)	Volume 3115 Folio 244 Now Volume 4846 Folio 35
28.06.1967 (1967 to 1996)	Alexander Cousins (Sheet Metal Worker) (Section 94 Application not investigated)	Volume 4846 Folio 35 Now 10/17873
21.08.1996 (1996 to 1996)	Peter Kenneth Lucas (Transmission Application)	10/17873
24.09.1996 (1996 to 2002)	Geza Alexander Frey	10/17873
29.04.2002 (2002 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	10/17873 Now 100/1280447
As regards to the part numbered 9 on attached Cadastral Records Enquiry Report		
26.10.1920 (1920 to 1929)	Sydney Joseph O'Brien (Hairdresser) Maude Elizabeth O'Brien (Married Woman now Widow)	Volume 3115 Folio 244
24.05.1929 (1929 to 1936)	Maude Elizabeth O'Brien (Widow) (Notice of Death)	Volume 3115 Folio 244
21.04.1936 (1936 to 1939)	Prudential Estates Limited	Volume 3115 Folio 244
02.05.1939 (1939 to 1950)	Harold Paul Hodge (Printers Employee)	Volume 3115 Folio 244 Now Volume 5043 Folio 193
02.06.1950 (1950 to 1958)	Bernard Yarnton Mills (Radio Physicist) Lerida Mills (	Volume 5043 Folio 193
04.03.1958 (1958 to 1965)	Arthur James Pickering (Tool Maker) June Elizabeth Collins (Spinster)	Volume 5043 Folio 193
31.05.1965 (1965 to 1968)	George Dakacs (Toolmaker) Margaret Dakacs (Married Woman)	Volume 5043 Folio 193
07.05.1968 (1968 to 2002)	Terezia Frey (Married Woman)	Volume 5043 Folio 193 Now 11/17873
29.04.2002 (2002 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	11/17873 Now 100/1280447
As regards to the part numbered 10 on attached Cadastral Records Enquiry Report		
19.02.1920 (1920 to 1921)	Joseph Patrick Kelly (Farmer)	Volume 3020 Folio 215
23.12.1921 (1921 to 1960)	David Chrystal (Fibrous Plaster Manufacturer now Company Managing Director)	Volume 3020 Folio 215 Then Volume 4011 Folio 173 Now Volume 6521 Folio 155
25.11.1960 (1960 to 1965)	Thomas Eugene Lawless (Company Director) Boris Isabel Grace Lawless (Married Woman now Femme Sole)	Volume 6521 Folio 155
26.01.1965 (1965 to 1968)	Boris Isabel Grace Lawless (Femme Sole) (Notice of Death)	Volume 6521 Folio 155 Now Volume 10417 Folio 146

Date of Acquisition (Term Held)	Registered Proprietor/s and Occupations	Reference to Title at Acquisition and Sale
14.01.1969 (1969 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk)	Volume 10417 Folio 146
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 146
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 10417 Folio 146
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 10417 Folio 146 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447
As regards to the part numbered 11 on attached Cadastral Records Enquiry Report		
19.02.1920 (1920 to 1921)	Joseph Patrick Kelly (Farmer)	Volume 3020 Folio 215
23.12.1921 (1921 to 1960)	David Chrystal (Fibrous Plaster Manufacturer now Company Managing Director)	Volume 3020 Folio 215 Then Volume 4011 Folio 173 Now Volume 6521 Folio 155
25.11.1960 (1960 to 1965)	Thomas Eugene Lawless (Company Director) Boris Isabel Grace Lawless (Married Woman now Femme Sole)	Volume 6521 Folio 155
26.01.1965 (1965 to 1968)	Boris Isabel Grace Lawless (Femme Sole) (Notice of Death)	Volume 6521 Folio 155 Now Volume 10417 Folio 147
11.12.1968 (1968 to 1971)	Jack Harman Button (Hotelkeeper) Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Aircraft Inspector now Clerk)	Volume 10417 Folio 147
28.06.1971 (1971 to 1971)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) (Notice of Death)	Volume 10417 Folio 147 Now Volume 11823 Folio 179
28.06.1971 (1971 to 1974)	Thomas Joseph Lynch (Retired) Brendan Flemming Tooth (Clerk) Roland Ernest Swan (Clerk)	Volume 11823 Folio 179
07.06.1974 (1974 to 1986)	Mount Lewis Bowling Club (Co-Operative Limited)	Volume 11823 Folio 179 Now 1/732283
24.04.1986 (1986 to Date)	# Mount Lewis Bowling Club Co-Operative Limited	1/732283 Now 100/1280447

There were no easements or leases reported for the site.

Based on the land title ownership search, SE conclude that there is a moderate to high potential for land contaminating activities to have been undertaken on the site related to potential fibrous plaster manufacturing and sheet metal works. As such, further investigation, in the form of a site walkover, was considered warranted.

A copy of the land title search record is presented in **Appendix B**.

4.2. Aerial Imagery

A review of selected historical aerial imagery of the site was undertaken. Observations made of the imagery considered relevant to this investigation, are presented in **Table 4.2.1** below.

A copy of the historical aerials is presented in **Appendix C**.

Table 4.2.1 Aerial Imagery Observations

Image Date	Site Features	Surrounding Land Use Settings
1943	The site is observed to be a combination of both vacant land with tree cover present in the northwestern portion of the site and low-density residential properties and a commercial industrial property within the eastern portion of site.	Low-density residential properties appear to boarder the sites northern and eastern boundary. The rest of the surrounding land use appears to be vacant land.
1955	The southeastern portion of the site is observed to have expanded its commercial industrial land use. Fencing is observed surrounding the properties southern and western boarders. Tree vegetation has widely been removed only leaving a spare quantity on site.	Low-density residential properties have continued to develop to the north and east of site. The remaining surrounding land use appears to remain unchanged.
1971	The site has been developed and is observed to be utilised for its low-density residential land use setting within the usage of a commercial lawn bowls property. Three (3) bowling greens are now present within the northern and southern portion of the site. A car park is apparent within the central southern portion of site with a large building having been developed within the centre of site.	Low-density residential properties have continued to develop to the north, east and west of site. A large industrial warehouse has been developed along the south-western boundary of site.
1982	No changes observed to the site.	No changes observed to surrounding land use.
1991	The building located within the centre of site appears to have been extended to the west.	A large industrial warehouse has been developed along the southern boarder of site.
2005	The building located within the centre of site appears to have been extended to the south.	No changes observed to surrounding land use.
2024	Within the northeastern portion of site, an extension of the site's car park has been added adjacent to the site's eastern boundary. Two (2) building extensions have been added to both the southwestern and northeastern portions of the commercial building on site.	The commercial industrial warehouse to the south-west of site has been converted to a low-density subdivision of properties.

The aerial imagery review indicated a moderate to high potential for land contaminating activities to have occurred on the site including commercial/industrial land use activities and uncontrolled filling across the site. As such, further investigation of this value was deemed warranted.

4.3. Anecdotal Information

There was no anecdotal information provided to SE during the site investigation.

4.4. Incident Reports / Complaints History

There was no incident reports or complaints history information provided to SE as part of this project.

4.5. Previous Contamination Assessments

There were no previous contamination assessments provided to SE during the investigation.

5. REGULATORY RECORDS

5.1. NSW EPA CLM Act Record of Notices

A search of the publicly available online NSW EPA CLM Act Record of Notices was completed on 10 October 2024. The results indicated that the site was not the subject of any notifications under Section 58 of the *Contaminated Land Management Act 1997*.

A copy of the CLM Act Record of Notices search record is presented in **Appendix D**.

5.2. NSW EPA POEO Act Register of Licences, Applications and Notices

A search of the publicly available online NSW EPA Record of Notices was completed on 10 October 2024. The results indicated that the site was not the subject of any licences, applications, notices, audits or pollution studies or reduction programs under Section 308 of the *Protection of the Environment Operations Act 1997*.

A copy of the POEO Act Register of Licences, Applications and Notices search record is presented in **Appendix D**.

5.3. NSW EPA CLM Act Register of Notified Sites

A search of the publicly available online register of sites notified to the NSW EPA under Section 60 of the *Contaminated Land Management Act 1997*, was undertaken on 10 October 2024. The results did not indicate any sites requiring regulation under Section 60 of the *Contaminated Land Management Act 1997* within the suburb of Claremont Meadows NSW.

A copy of the NSW EPA CLM ACT Register of Notified Sites is presented in **Appendix D**.

5.4. Section 10.7 Planning Certificate

The site consists of land use zone 'R2 – Low Density Residential' in accordance with the *Canterbury-Bankstown Local Environmental Plan 2023*. The objectives of the zone are as follows:

- To provide for the housing needs of the community within a low density residential environment;
- To enable other land uses that provide facilities or services to meet the day to day needs of residents;
- To promote the desired future character by ensuring that development reflects features or qualities of traditional detached dwelling houses that are surrounded by private gardens;
- To enhance the essential character and identity of established residential areas; and
- To ensure a high level of residential amenity is achieved and maintained.

The certificates indicated that, within the meaning of the Contaminated Land Management Act, the site was not:

- Significantly contaminated land;
- Subject to a management order;
- The subject of an approved voluntary management proposal;
- Subject to an ongoing maintenance order; or
- The subject of a site audit statement.

A copy of the section 10.7 planning certificate is presented in **Appendix E**.

6. SITE WALKOVER

A site walkover was undertaken on the 24 September 2024 by a suitably experienced environmental consultant representing SE. The purpose of the site walkover was to make observations of land use activities on the site, and on properties immediately adjacent to the site.

6.1. Current Land Use Activity

The land use setting of the site was observed to be utilised as a recreational lawn bowls club within a commercial land use setting.

6.2. Buildings and General Infrastructure

The following buildings and general infrastructure were observed across the site footprint at the time of the site walkover:

- One (1) double-storey commercial structure within the central portion of the site;
- One (1) greenkeeper shed within the western portion of the site
- Three (3) bowling greens within the northern and southeastern portions of the site; and
- One (1) extended hardstand parking lot within the northeastern to the southern portion of the site.

The north-western portion of the site is observed to be vacant with grass cover.

Site Photograph 6.2.1 View of the double-storey commercial building located within the central portion of the site, as observed 24 September 2024, facing north-west.

Site Photograph 6.2.2 View of the greens keeper shed located within the western portion of the site, as observed 24 September 2024, facing west.

Site Photograph 6.2.3 View of the two (2) northern bowling greens located within the northern portion of the site, as observed 24 September 2024, facing north-east.

Site Photograph 6.2.4 View of the single (1) bowling green located within the southeastern portion of the site, as observed on 24 September 2024, facing south-east.

Site Photograph 6.2.5 View of northern portion of the sites concrete car parking area, as observed 24 September 2024, facing east.

6.3. Boundary Fencing

Boundary fencing was observed along the boundaries of the site during the site walkover. One (1) gate providing access to the site was observed along the eastern boundary.

Site Photograph 6.3.1 View of boundary fencing and gated access from Waterloo Road along the eastern boundary of the site, as observed 24 September 2024, facing south.

Site Photograph 6.3.2 View of boundary fencing within the north-western portion of the site, as observed 24 September 2024, facing north.

6.4. Adjacent Land Use Activities

Observations made during the site walkover indicated the following land use activities adjacent to the site:

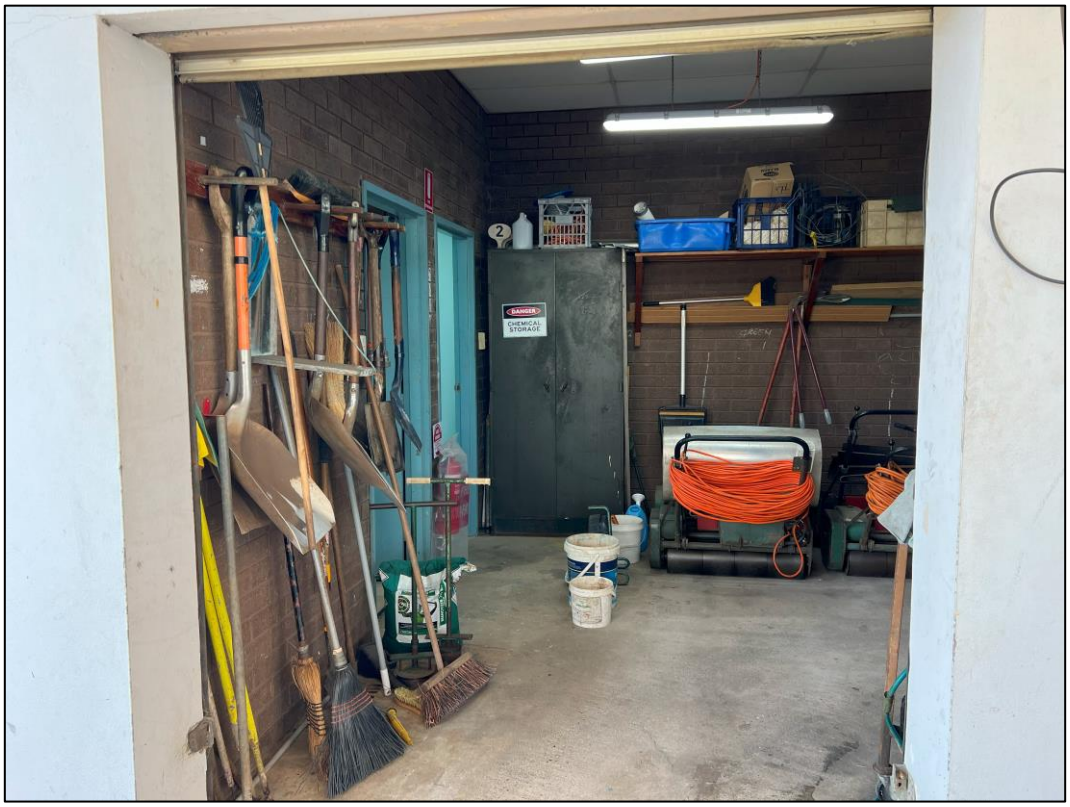
- North - Low-Density Residential followed by Old Kent Road;
- East - Waterloo Road followed by Low-Density Residential;
- West - Low-Density Residential; and
- South - Low-Density Residential followed by St Charbel Way.

6.5. Odours and Staining

There was no olfactory or visual evidence of contamination identified on the surface of the site, during the site walkover.

6.6. Chemical Storage

A chemical storage cabinet was observed within a secondary greens keeper shed located within the western portion of the commercial building. Access was not able to be provided to the shed at the time of the site walkover, however, no evidence of spilling or leaking was observed surrounding cabinet or within the shed.



Site Photograph 6.6.1 Chemical storage cabinet observed within the western portion of the commercial building, as observed 24 September 2024.

6.7. Underground and Aboveground Storage Tanks

One (1) large concrete storage tank was observed within the western portion of the site and was presumed to be filled with rainwater at the time of the site visit. No other tanks were observed within the site at the time of the inspection.

Site Photograph 6.7.1 View of the concrete storage tank within the western portion of the site, as observed 24 September 2024.

6.8. Fill Material

A small sand and soil stockpile was observed within the central portion of the site, south-west of the commercial building structure. These materials are presumably utilised for maintenance of the bowling greens and within the surrounding landscaping areas when required.

Site Photograph 6.8.1 View of the sand and soil stockpile within central portion of the site, as observed 24 September 2024, facing north.

6.9. Wastes

There was no visual evidence of waste identified on the surface of the site, during the site walkover.

6.10. Asbestos Containing Materials

Potential Asbestos Containing Materials (PACM) were not observed on the surface of the site during the site walkover inspection.

6.11. Phytotoxicity

There was no visual evidence observed to suggest significant or widespread phytotoxic impact (in the form of dieback or plant stress) in the vegetation at the site. Similar observations were made of visible vegetation on land adjacent to the site.

6.12. Surface Water and Site Drainage

Visual observations made in the context of site drainage during the walkover, indicated that drainage mechanisms on the site are likely to include:

- Infiltration into underlying soils, where soil permeability permits; and
- Stormwater systems identified within the site and adjacent to the site.

6.13. Adjacent Receptors

Adjacent ecological receptors included an unnamed tributary of Cox Creek, located approximately 50 m east of the site, and Cox Creek located approximately 850 m north-east of the site.

The closest sensitive human receptors are current and future onsite residential land users, and those on neighbouring sites.

7. DATA INTEGRITY ASSESSMENT

SE has relied on the following sources of data while undertaking this investigation:

- SE field observations during the site walkover;
- Australian Soil Resource Information System;
- Department of Land and Water Conservation;
- Department of Minerals and Energy;
- Department of Primary Industries – Water;
- Canterbury-Bankstown Council;
- Google Earth;
- Infotrack Pty Ltd;
- National Environment Protection Council;
- Nearmap Pty Ltd;
- NSW Environment Protection Authority;
- NSW Land and Property Information; and
- Water NSW.

Based on SE's experience and professional judgement, the data obtained from the sources relied upon, is considered to be adequately precise, accurate, representative, complete and comparable within the objectives of this investigation and for the purpose of drawing conclusions regarding land contamination risks at the site.

8. CONCEPTUAL SITE MODEL

8.1. Potential Areas of Environmental Concern

The site history data collected and site walkover observations made were assessed within the objectives of this investigation and in the context of the proposed development works. That assessment identified areas of environmental concern (AEC) and contaminants of potential concern (COPC) which have the potential to be present on site. The AEC and associated COPC identified are presented in **Table 8.1.1** below.

Table 8.1.1 PAEC and COPC

ID	Potential Area of Environmental Concern	Land Use Activity	Contaminants of Potential Concern	Risk
PAEC01	Fill Materials Across Site Footprint	Uncontrolled Filling / Demolition	Heavy Metals, TRH, BTEX, PAH, OCP, PCB & Asbestos	Moderate

The potential contamination pathways are considered to be as follows:

- Inhalation/ingestion of contaminants released in dust during redevelopment; and
- Direct contact, ingestion or inhalation of soil.

Relevant potential receptors are considered to include:

- Onsite construction and maintenance workers;
- Third parties during construction (adjacent site users and adjacent residents);
- Onsite flora and fauna;
- Future residents/end users; and
- Neighbouring residential land users.

8.2. Land Use Setting

SE have not been provided with specific development plans, however, have been advised by the client that the site is proposed for installation of sporting lights on two (2) of the bowling greens located within the site. The typical footing depth of the sporting lights is expected to be approximately 1.5 – 2 m depth by 800 mm diameter.

As the continued use of the site is as the Mount Lewis Bowling Club, SE considers it reasonable to adopt the 'HIL C – Open Space' per guidance provided in Section 2.2 of Schedule B (1) of the National Environment Protection Measure (Assessment of Site Contamination) 2013 (NEPM ASC 2013), in order to conservatively assess the site for the future proposed land use.

8.3. Drinking Water Use

There are no groundwater bores onsite or down-gradient of the site, registered for drinking water use. It is noted that a reticulated mains potable water supply is available in the area. Therefore, further assessment of this groundwater drinking water value is not considered warranted.

8.4. Recreational Water Use

Surface water courses proximal to the site included an unnamed tributary of Cox Creek, located approximately 50 m east of the site, and Cox Creek located approximately 850 m north-east of the site.

It is not considered likely that these surface water courses within proximity to the site would include be utilised for recreational activities such as swimming, fishing for consumption and / or water sports. As such consideration of this pathway was not considered warranted.

8.5. Aquatic Ecosystems

Surface water courses proximal to the site included an unnamed tributary of Cox Creek, located approximately 50 m east of the site, and Cox Creek located approximately 850 m north-east of the site.

Based on historical and proposed future land use of the site, there is a potential for surface / groundwater contamination. As a conservative measure, consideration of this value is deemed warranted.

8.6. Direct Contact – Human Health

SE understands that a future continued use of the site will remain relatively unchanged, with building structures and hardstand parking areas across the current site acting as a direct contact barrier between potential land contamination and onsite receptors during operation of the site. The rest of the site generally consists of open space landscaped areas. In these areas, it is considered that a direct contact exposure pathway may be present between potential contamination and onsite receptors.

Soil materials removed from the light installation works will be removed off-site to a licensed waste receiving facility in line with a waste classification assessment prepared in accordance with the NSW EPA Waste Classification Guidelines (2014). As such, no further consideration of this value is considered warranted.

SE recommends a pragmatic approach during the course of any required intrusive / excavation works outside of the proposed scope of works. If contamination is suspected, works should stop, an unexpected finds protocol should be followed, and further investigation of the fill materials should be carried out by a suitably qualified environmental consultant.

8.7. Inhalation / Vapour Intrusion – Human Health

In order for a potentially unacceptable inhalation / vapour intrusion human health exposure risk to exist, a primary vapour source (e.g. underground storage tank) or secondary vapour source (e.g. significantly contaminated soil or groundwater) must exist.

The historical evidence reviewed indicated a low to moderate likelihood for a potential primary source to be present on the site. Potential sources of groundwater contamination in the immediate vicinity of the site were not observed.

Soil materials removed from the light installation works will be removed off-site to a licensed waste receiving facility in line with a waste classification assessment prepared in accordance with the NSW EPA Waste Classification Guidelines (2014). As such, no further consideration of this value is considered warranted.

SE recommends a pragmatic approach during the course of any required intrusive / excavation works outside of the proposed scope of works. If contamination is suspected, works should stop, an unexpected finds protocol should be followed, and further investigation of the fill materials should be carried out by a suitably qualified environmental consultant.

8.8. Aesthetics

Section 3.7 of Schedule B1 NEPM ASC advises that there are no specific numerical aesthetic guidelines, however site assessment requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity.

Soil materials removed from the light installation works will be removed off-site to a licensed waste receiving facility in line with a waste classification assessment prepared in accordance with the NSW EPA Waste Classification Guidelines (2014). As such, no further consideration of this value is considered warranted.

8.9. Ecological Health - Terrestrial Ecosystems

Section 3.4.2 of Schedule B (1) NEPM ASC 2013 suggests that a pragmatic risk-based approach be taken in applying ecological investigation levels and ecological screening levels in residential and commercial/ industrial land use settings.

SE understand that the proposed development includes the installation of sports lighting structures across two (2) of the bowling greens within the site. The remainder of the site would remain unchanged, including hardstand and building structure areas which would act as a direct contact barrier between potential land contamination and onsite receptors during operation of the site. The rest of the site would generally consist of open space and landscaped areas that are currently present. In these areas, it is considered that a direct contact exposure pathway may be present between potential contamination and onsite receptors.

Soil materials removed from the light installation works will be removed off-site to a licensed waste receiving facility in line with a waste classification assessment prepared in accordance with the NSW EPA Waste Classification Guidelines (2014). As such, no further consideration of this value is considered warranted.

8.10. Management Limits for Petroleum Hydrocarbon Compounds

NEPM ASC 2013 notes that there are a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosive hazards; and
- Effects on buried infrastructure (e.g. penetration of or damage to, in-ground services by hydrocarbons).

Section 2.9 of Schedule B (1) NEPM ASC 2013 includes ‘management limits’ to avoid or minimise these potential effects. Application of the management limits requires consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine the maximum depth to which the limits should apply. Section 2.9 of Schedule B (1) NEPM ASC 2013 also notes that management limits may have less relevance at operating industrial sites which have no or limited sensitive receptors in the area of potential impact, and when management limits are exceeded, further site-specific assessment and management may enable any identified risk to be addressed.

Soil materials removed from the light installation works will be removed off-site to a licensed waste receiving facility in line with a waste classification assessment prepared in accordance with the NSW EPA Waste Classification Guidelines (2014). As such, no further consideration of this value is considered warranted.

9. CONCLUSIONS AND RECOMMENDATIONS

Based on SE's assessment of the desktop review information, fieldwork data and laboratory analytical data, in the context of the proposed redevelopment scenario, SE makes the following conclusions:

- Historical land titles have indicated that the site has been owned by a number of private individuals and there may be potential for fibrous plaster manufacturing and sheet metal works to have taken place on-site;
- Review of historical aerial imagery has indicated that the site has undergone changes from commercial/industrial land use to the current land-use as the Mount Lewis Bowling Club. Multiple structures appear to have been constructed and demolished across the site between 1943 and 2024;
- A review of publicly available contaminated land databases indicated that the site is not the subject of any licenses, applications, notices under Section 308 of the *Protection of the Environment Operations Act 1997*. The site is not notified under Section 60 of the *Contaminated Land Management Act 1997*. The site is not the subject of any notifications under Section 58 of the *Contaminated Land Management Act 1997*;
- Review of council certification has indicated that the site is not registered as:
    - Significantly contaminated land;
    - Subject to a management order;
    - The subject of an approved voluntary management proposal;
    - Subject to an ongoing maintenance order; or
    - The subject of a site audit statement.
- Based on the desktop review and site walkover, one (1) potential area of environmental concern was identified within the site in relation to the proposed redevelopment works and noted as being of moderate risk; and
- Based on the assessments undertaken as part of this investigation, SE have concluded that the site is suitable to the proposed redevelopment works, subject to visual inspection and waste classification of the waste soil materials generated from the excavations of the sports lighting footings.

Based on the conclusions stated above and the background data gathered during the course of this investigation, SE recommend the following:

- All soil materials removed as part of the installation works will be subject to a waste classification assessment by a suitably experienced environmental consultant prior to disposal off-site to a licensed waste receiving facility. The waste classification assessment must be prepared in line with NSW EPA Waste Classification Guidelines (2014);
- In the event any unexpected finds are encountered during redevelopment works, the unexpected finds protocol presented within **Section 10** must be followed; and
- Records of the transport and disposal of any materials off-site should be maintained.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 11**.

10. UNEXPECTED FINDS PROTOCOL

This contamination assessment has not identified the presence of significant soil and groundwater contamination that is unacceptable for the proposed redevelopment works. However, it is possible that unexpected finds may be present within the site during the works. To this end, an Unexpected Finds Protocol has been compiled, and is summarised herein. Unexpected finds could include, but are not limited to:

- Other underground storage tanks that are previously not identified;
- Asbestos containing materials;
- Buried containers and drums;
- Phase separated hydrocarbons;
- Powders and other suspicious buried material;
- Potentially hazardous materials; and
- Evidence of contamination including significant staining, odours and discolouration.

In the event that any material suspected of containing potentially hazardous substances is found during remediation works, the following Unexpected Finds Protocol is to be followed:

Unexpected Finds Protocol

11. STATEMENT OF LIMITATIONS

The findings presented in this report are based on specific searches of relevant, government historical databases and anecdotal information that were made available during the course of this investigation. To the best of our knowledge, these observations represent a reasonable interpretation of the general condition of the site at the time of report completion.

This report has been prepared solely for the use of the client to whom it is addressed and no other party is entitled to rely on its findings.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Sydney Environmental Group Pty Ltd. Should information become available regarding conditions at the site including previously unknown sources of contamination, SE reserves the right to review the report in the context of the additional information.

This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to SE's engagement. The report must not be used for any purpose other than the purpose specified at the time SE was engaged to prepare the report.

Logs, figures, and drawings are generated for this report based on individual SE consultant interpretations of nominated data, as well as observations made at the time site walkover/s were completed.

Data and/or information presented in this report must not be redrawn for its inclusion in other reports, plans or documents, nor should that data and/or information be separated from this report in any way.

Should additional information that may impact on the findings of this report be encountered or site conditions change, SE reserves the right to review and amend this report.

12. REFERENCES

National Environment Protection Council (NEPC) 2013A, 'Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'.

National Environment Protection Council (NEPC) 2013B, 'Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'.

NSW EPA 2017, '*Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd edition)'.*

NSW EPA 2022, '*Contaminated Sites: Sampling Design Guidelines'.*

NSW EPA 2012, *'Guidelines for the Assessment and Management of Sites Impacted by Hazardous Ground Gases'*

NSW EPA 2020, '*Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites'*.

WA DOH 2021, '*Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia'* dated May 2009.

FIGURES

Scale : 50 m	Site Locality			
Client Name:	Allera Pty Ptd	N	Figure Number:	1
Project Name:	Stage 1 Preliminary Site Investigation		Figure Date:	10 October 2024
Project Location:	Mount Lewis Bowling Club, Mount Lewis NSW		Report Number:	2729-PSI-01-161024.v1f

Sydney Environmental Group

Source: Nearmap (maps.au.nearmap.com)

Sydney Environmental Group

Scale :	20 m	Site Layout	
Client Name:	Allera Pty Ptd	Figure Number:	2
Project Name:	Stage 1 Preliminary Site Investigation	Figure Date:	10 October 2024
Project Location:	Mount Lewis Bowling Club, Mount Lewis NSW	Report Number:	2729-PSI-01-161024.v1f

N

Source: Nearmap (maps.au.nearmap.com)

Sydney Environmental Group

Scale :	20 m	Potential Areas of Environmental Concern	
Client Name:	Allera Pty Ptd	Figure Number:	3
Project Name:	Stage 1 Preliminary Site Investigation	Figure Date:	10 October 2024
Project Location:	Mount Lewis Bowling Club, Mount Lewis NSW	Report Number:	2729-PSI-01-161024.v1f

N

APPENDIX A

GROUNDWATER

WaterNSW

State Overview
State Overview

Rivers and Streams
favourites | search | download sites | find a site
⊞ Real Time Data - Rivers And Streams

Daily River Reports
⊞ Daily River Reports

Dams
favourites | search | download sites | find a site
⊞ Real Time Data - Major Dams

Groundwater (Telemetered data)
favourites | search | download sites | find a site
⊞ Real Time Data - Bores

All Groundwater Site details
search | download sites | find a site
search by licence
⊞ All Groundwater Map

Meteorology
favourites | search | download sites | find a site
⊞ Real Time Data - Weather Stations

Hunter River Salinity Trading Scheme
Hunter River Salinity Trading Scheme

contact WaterNSW

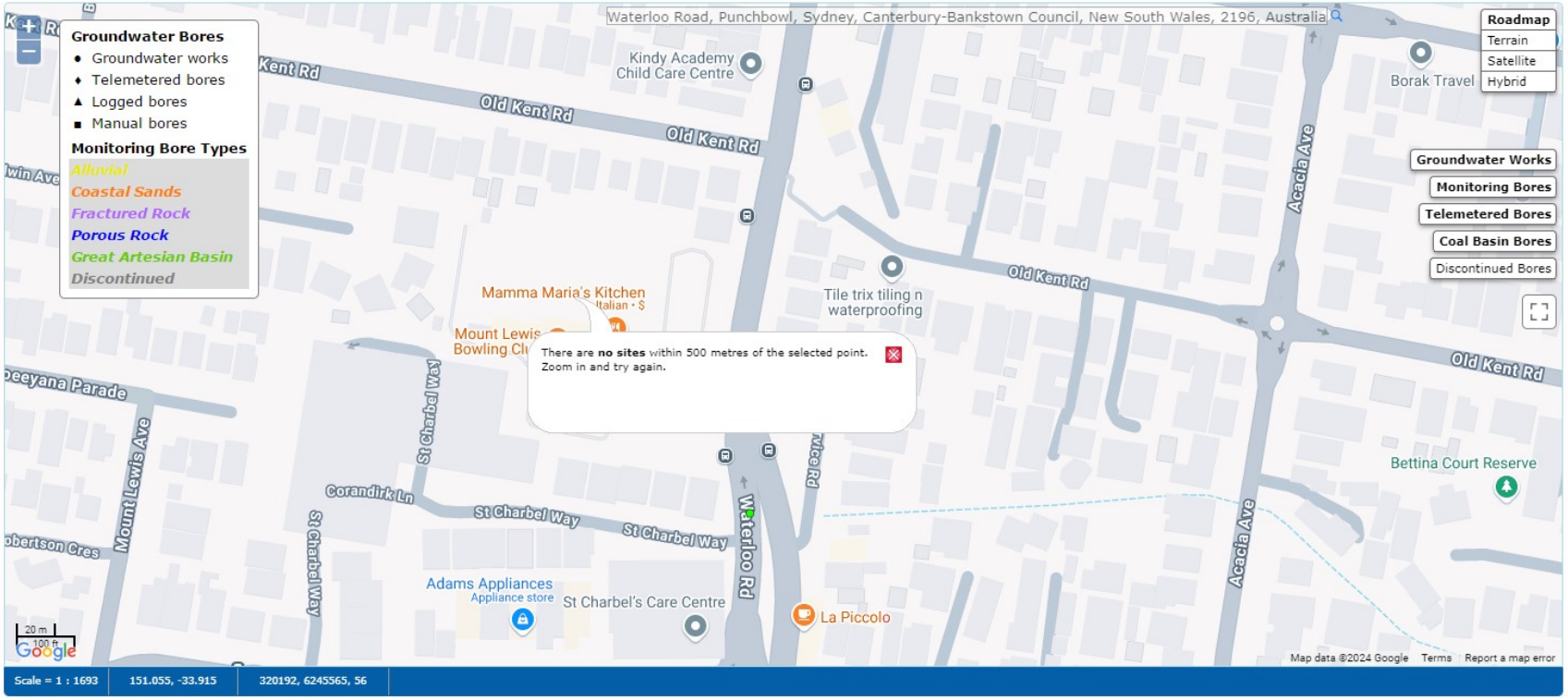
All Groundwater Site Details

ALL GROUNDWATER MAP

bookmark this page

All data times are Eastern Standard Time

Map | Info



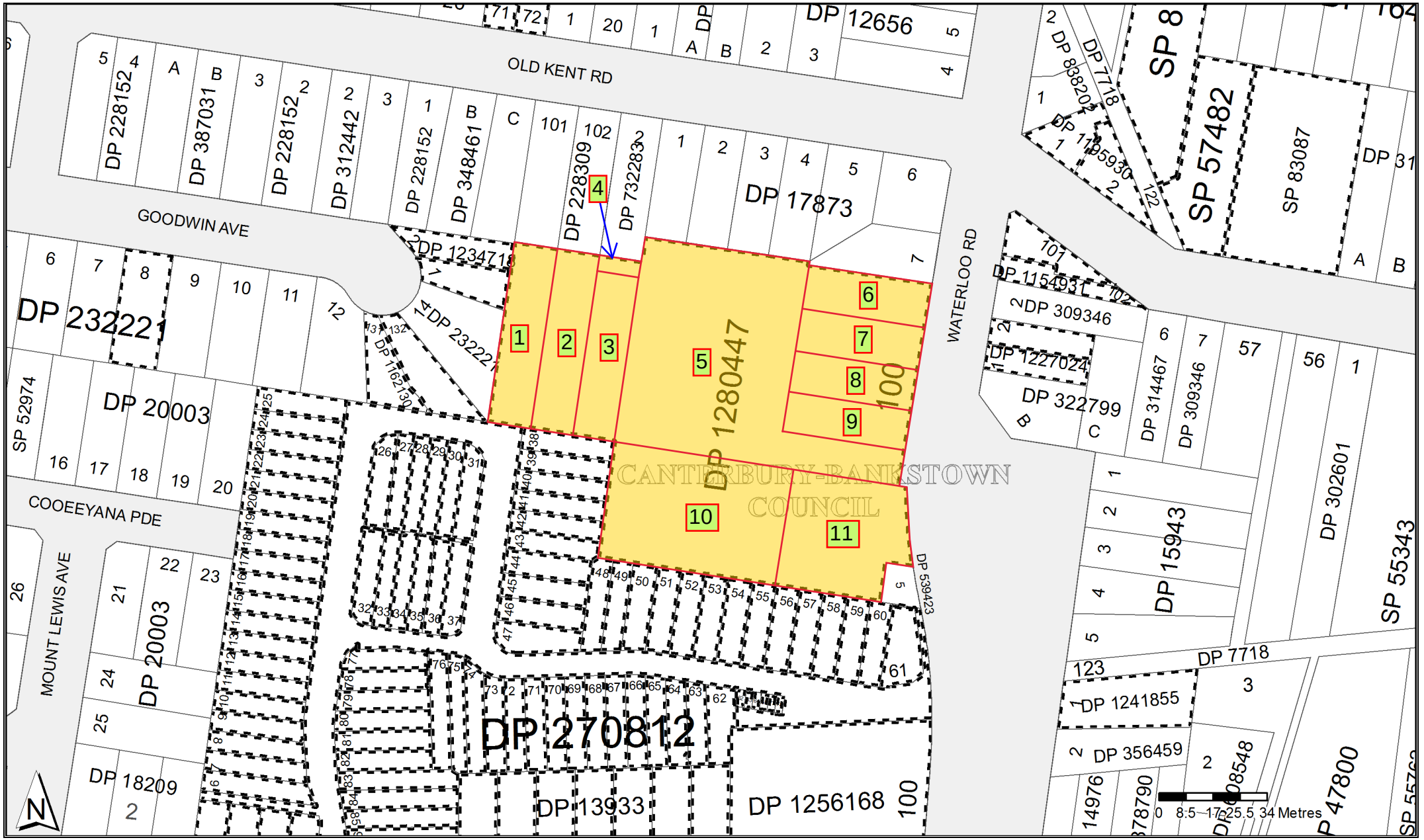
APPENDIX B

LAND TITLES

Cadastral Records Enquiry Report : Lot 100 DP 1280447

Ref : 14 Waterloo Road, Mount Lewis

Locality : MOUNT LEWIS
Parish : BANKSTOWN
LGA : CANTERBURY-BANKSTOWN
County : CUMBERLAND



This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

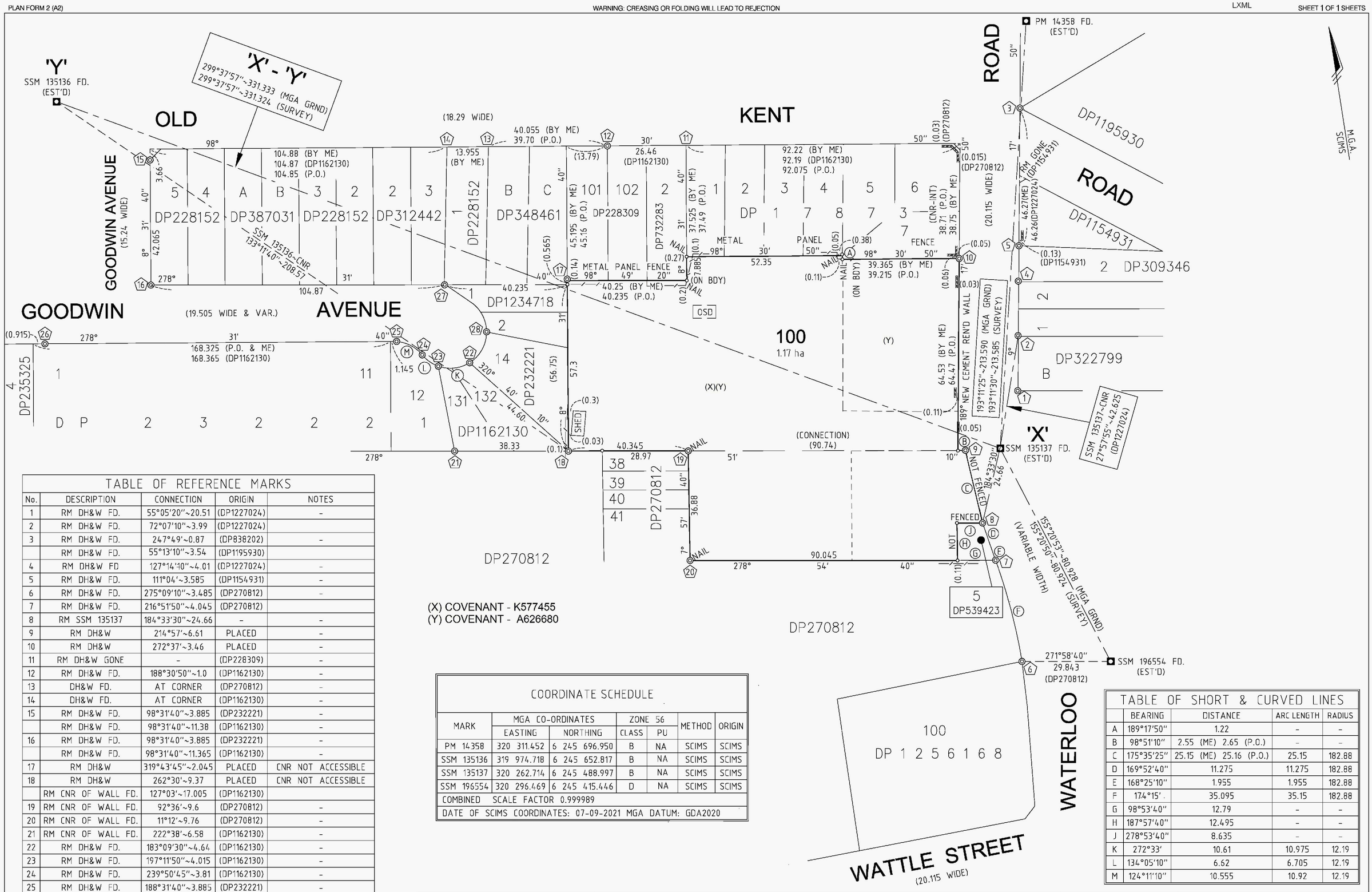


TABLE OF REFERENCE MARKS

No.	DESCRIPTION	CONNECTION	ORIGIN	NOTES
1	RM DH&W FD.	55°05'20"~20.51	(DP1227024)	-
2	RM DH&W FD.	72°07'10"~3.99	(DP1227024)	
3	RM DH&W FD.	247°49'~0.87	(DP838202)	-
	RM DH&W FD.	55°13'10"~3.54	(DP1195930)	
4	RM DH&W FD	127°14'10"~4.01	(DP1227024)	-
5	RM DH&W FD.	111°04'~3.585	(DP1154931)	-
6	RM DH&W FD.	275°09'10"~3.485	(DP270812)	-
7	RM DH&W FD.	216°51'50"~4.045	(DP270812)	
8	RM SSM 135137	184°33'30"~24.66	-	-
9	RM DH&W	214°57'~6.61	PLACED	-
10	RM DH&W	272°37'~3.46	PLACED	-
11	RM DH&W GONE	-	(DP228309)	-
12	RM DH&W FD.	188°30'50"~1.0	(DP1162130)	-
13	DH&W FD.	AT CORNER	(DP270812)	-
14	DH&W FD.	AT CORNER	(DP1162130)	-
15	RM DH&W FD.	98°31'40"~3.885	(DP232221)	-
	RM DH&W FD.	98°31'40"~11.38	(DP1162130)	-
16	RM DH&W FD.	98°31'40"~3.885	(DP232221)	-
	RM DH&W FD.	98°31'40"~11.365	(DP1162130)	-
17	RM DH&W	319°43'45"~2.045	PLACED	CNR NOT ACCESSIBLE
18	RM DH&W	262°30'~9.37	PLACED	CNR NOT ACCESSIBLE
	RM CNR OF WALL FD.	127°03'~17.005	(DP1162130)	
19	RM CNR OF WALL FD.	92°36'~9.6	(DP270812)	-
20	RM CNR OF WALL FD.	11°12'~9.76	(DP270812)	-
21	RM CNR OF WALL FD.	222°38'~6.58	(DP1162130)	-
22	RM DH&W FD.	183°09'30"~4.64	(DP1162130)	-
23	RM DH&W FD.	197°11'50"~4.015	(DP1162130)	-
24	RM DH&W FD.	239°50'45"~3.81	(DP1162130)	-
25	RM DH&W FD.	188°31'40"~3.885	(DP232221)	-
	RM DH&W FD.	188°31'40"~11.395	(DP1162130)	-
26	RM DH&W FD.	188°31'40"~3.885	(DP232221)	-
	RM DH&W FD.	188°31'40"~11.38	(DP1162130)	-
27	RM DH&W FD.	49°44'15"~10.785	(DP1234718)	-
28	RM DH&W FD.	105°25'15"~4.015	(DP1234718)	-

(X) COVENANT - K577455
(Y) COVENANT - A626680

COORDINATE SCHEDULE

MARK	MGA CO-ORDINATES EASTING	MGA CO-ORDINATES NORTHING	ZONE 56 CLASS	ZONE 56 PU	METHOD	ORIGIN
PM 14358	320 311.452	6 245 696.950	B	NA	SCIMS	SCIMS
SSM 135136	319 974.718	6 245 652.817	B	NA	SCIMS	SCIMS
SSM 135137	320 262.714	6 245 488.997	B	NA	SCIMS	SCIMS
SSM 196554	320 296.469	6 245 415.446	D	NA	SCIMS	SCIMS
COMBINED SCALE FACTOR 0.999989						
DATE OF SCIMS COORDINATES: 07-09-2021 MGA DATUM: GDA2020						

TABLE OF SHORT & CURVED LINES

	BEARING	DISTANCE	ARC LENGTH	RADIUS
A	189°17'50"	1.22	-	-
B	98°51'10"	2.55 (ME) 2.65 (P.O.)	-	-
C	175°35'25"	25.15 (ME) 25.16 (P.O.)	25.15	182.88
D	169°52'40"	11.275	11.275	182.88
E	168°25'10"	1.955	1.955	182.88
F	174°15'.	35.095	35.15	182.88
G	98°53'40"	12.79	-	-
H	187°57'40"	12.495	-	-
J	278°53'40"	8.635	-	-
K	272°33'	10.61	10.975	12.19
L	134°05'10"	6.62	6.705	12.19
M	124°11'10"	10.555	10.92	12.19

Surveyor: HUY DUC XUAN THAI	PLAN OF CONSOLIDATION OF LOT 1 IN DP 732283 AND LOTS 8, 9, 10 AND 11 IN DP 17873	L.G.A.: CANTERBURY-BANKSTOWN	Registered:	DP1280447
Date of Survey: 07.09.2021		Locality: MOUNT LEWIS	10/01/2022	
Surveyor's Ref: 171090-DP		Subdivision No: ——		
		Lengths are in metres. Reduction Ratio 1: 800		

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Table of mm

PLAN FORM 6 (2020)	DEPOSITED PLAN ADMINISTRATION SHEET	Sheet 1 of 2 sheet(s)

Office Use Only

Registered: 10/01/2022

Title System: TORRENS

Office Use Only

DP1280447

PLAN OF CONSOLIDATION OF LOT 1 IN DP 732283 AND LOTS 8, 9, 10 AND 11 IN DP 17873

LGA: CANTERBURY-BANKSTOWN

Locality: MOUNT LEWIS

Parish: BANKSTOWN

County: CUMBERLAND

Survey Certificate

I, HUY DUC XUAN THAI .....

of RGM PROPERTY SURVEYS .....

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a) The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, is accurate and the survey was completed on 07.09.2021....., or

~~*(b) The part of the land shown in the plan (*being/*excluding ** ....) was surveyed in accordance with the *Surveying and Spatial Information Regulation 2017*, the part surveyed is accurate and the survey was completed on,..... the part not surveyed was compiled in accordance with that Regulation, or~~

~~*(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2017*.~~

Datum Line: SSM 135137 – SSM 135136 ("X"-"Y")

Type: *Urban/~~*Rural~~

The terrain is ~~*Level-Undulating / *Steep-Mountainous.~~

Signature: ..... Dated: 07/09/2021 ....

Surveyor Identification No: 8258.....

Surveyor registered under the *Surveying and Spatial Information Act 2002*

*Strike out inappropriate words.

**Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Crown Lands NSW/Western Lands Office Approval

I, ..., (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, ...

*Authorised Person/*General Manager/*Registered Certifier, certify that the provisions of section 6.15 *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: .....

Registration number: .....

Consent Authority: .....

Date of endorsement: .....

Subdivision Certificate number: .....

File number: .....

*Strike through if inapplicable.

Plans used in the preparation of survey/~~compilation.~~

DP 17873	DP 374788	DP 1162130
DP 228152	DP 387031	DP 1195930
DP 228309	DP 539423	DP 1227024
DP 232221	DP 541525	DP 1234718
DP 270812	DP 732283	
DP 312442	DP 1154931	
DP 348461	DP 1157604	

Statements of intention to dedicate public roads, create public reserves and drainage reserves, acquire/resume land.

Surveyor's Reference: 171090-DP

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

PLAN FORM 6A (2019) **DEPOSITED PLAN ADMINISTRATION SHEET** Sheet 2 of 2 sheet(s)

Office Use Only

Registered: 10/01/2022

Office Use Only

DP1280447

PLAN OF CONSOLIDATION LOT 1

IN DP 732283 AND LOTS 8, 9, 10 AND 11 IN DP 17873

Subdivision Certificate number: .....

Date of Endorsement: .....

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

SCHEDULE OF STREET ADDRESSES

LOT	STREET No.	STREET NAME	STREET TYPE	LOCALITY
100	14A, 20-26	WATERLOO	ROAD	MOUNT LEWIS

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 AS AMENDED, IT IS INTENDED TO CREATE:

1. POSITIVE COVENANT
2. RESTRICTION ON THE USE OF LAND

APPROVED BY OWNERS

Company Name: MOUNT LEWIS BOWLING CLUB CO-OPERATIVE LIMITED

~~ACN~~ / ABN: 28 120 359 675

Authority: Section 127 (1) of The Corporation Act 2001 (CTH)

Name of Director / ~~Secretary~~ : FRED AYOUB

Signature of Director / Secretary .....

Name of ~~Director~~ / Secretary : BARBARA ANN PYE

Signature of Director / Secretary .....

APPROVED BY MORTGAGEE

I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness: .....

Name of Witness: VIET NGUYEN

Address of witness: 203-209 NORTHUMBERLAND ST LIVERPOOL NSW 2170

Certified correct for the purposes of the Real Property Act 1900 by the person(s) named below who signed this instrument pursuant to the power of attorney specified

Signature of attorney: .....

Attorney's name: SHABANALI KHAN

Attorney's position: ACCOUNT MANAGER

Signing on behalf of: COMMONWEALTH BANK OF AUSTRALIA ABN 48 123 123 124

Power of attorney -Book: 4548

-No: 404

If space is insufficient use additional annexure sheet

Surveyor's Reference: 171090-DP

Municipality of Bankstown.

C454421 11.8.36 (Substituted Plan)

PLAN

of subdivision of lots 21 & 22, D.P. 6175.

Parish of Bankstown — County of Cumberland

— Scale 40' = 1" —

17873

9th September 36

D P 6175 | D P 12656 | WATERLOO

OLD KENT ROAD (66' Wide) (Not Aligned)

88'5" 43'7" 66'0" 66'0"

Pg fd

A X 90° 00' B Y (71'8") 64'8" See Note

130'10" 132'9" 44'5" 43'0" ea. 43'0" 57'0" 135°-21½' 9'10"

Old peg fd.

1 2 3 4 5 6 7 8 9 10 11 12

19 20

123'0" 180° 47' 123'0" 123'0" 75'0" 68'0" (75'0")

19½p. 19¼p. ea. 19¼p. 20½p. 19½p. 71'8" 52'0"

50° 14' 75'0"

42'9" 43'0" ea. 43'0" 171'9" 90° 00' 128'8"

40" 42'0" 19¾p. 42'0" 180°

0° 47' 47' each. each. each. each.

180° 00' 213'10½" 172'0" 42'0" 19¾p. 42'0"

128'8" 270° 00" 43'6¼"

Sec 9.

3r. 34¼p.

D P 6175

D P 7718

(66' Wide - Not Aligned) ROAD. 66'0"

Small peg Found

M. N.

Old fence

396'0" Peg placed 90° 18' 30" 297'4" Z 90'0"

Tacks in old Sq. mortised fence Post.

Note: It is intended to dedicate the cutback corner of Lot 6 as a public thoroughfare.

REFERENCE MARKS.

X. 180°0' 1'6" from G.I. pipe to Corner.

Y. 180°0' 1'6" from G.I. Pipe to Corner

Z. 225°47' 1'6" from G.I. Pipe to Corner.

THE COMMON SEAL of PRUDENTIAL ESTATES LIMITED was hereunto duly affixed by the authority of the Directors previously given and in the presence of:

Secretary.

Directors.

8/9/36

Subscribed and declared before me at Sydney this 20th day of July, 1936.

J.P.

This Plan (which is also the Plan covered by my Certificate No. 1831, and dated 13/6/1936) was approved by The Council of the Municipality of Bankstown on the 2/6/1936

Town Clerk.

MUNICIPALITY OF BANKSTOWN.

I, Edmond Clifford Banks, of 115 Pitt St., Sydney a surveyor registered ~~under the Surveyors Act 1929~~ do hereby solemnly and sincerely declare (a) that all boundaries and measurements shown on this plan are correct (b) that all survey marks found and relevant physical objects on or adjacent to the boundaries are correctly represented (c) that all physical objects indicated actually exist in the positions shown (d) that the whole of the material facts in relation to the land are correctly represented and that the survey represented in this plan was made in accordance with the Survey Practice Regulations 1933 by me and was completed on the 24th day of June 1936, and reference marks have been placed as shown hereon.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900

Surveyor registered under the Surveyors' Act 1929.

Azimuth from A-B.

LAND REGISTRY SERVICES Historical Search

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

26/9/2024 9:53AM

FOLIO: 8/17873

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4793 FOL 217

Recorded	Number	Type of Instrument	C.T. Issue
22/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
12/3/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
16/2/1995	O24836	TRANSFER	EDITION 1
31/3/2000	6682718	NOTICE OF DEATH	EDITION 2
4/10/2000	7120212	TRANSMISSION APPLICATION	EDITION 3
8/11/2000	7205638	TRANSFER	EDITION 4
4/1/2002	8245336	DEPARTMENTAL DEALING	EDITION 5
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 6 CORD ISSUED
16/11/2021	AR621770	DISCHARGE OF MORTGAGE	EDITION 7
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

97-011

TRANSFER

Real Property Act, 1900

0 024836 G

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 66E S1 1994/95 NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title. If appropriate, specify the share transferred.

Certificate of Title Volume 4793 Folio 217

NOW BEING 8/17873

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
343R	Phillip Goldman +CO
	REFERENCE (max. 15 characters): Grisdale

(C) **TRANSFEROR** RALPH BARTLEY GRISDALE

(D) acknowledges receipt of the consideration of natural love and affection

and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

(G) **T** RALPH BARTLEY GRISDALE and PHYLLIS WINIFRED GRISDALE

TENANCY: JOINT TENANTS

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** .....

Signed in my presence by the Transferor who is personally known to me.

Signature of Witness

JOHN ANTHONY NICOTINA
Name of Witness (BLOCK LETTERS)

22 SMART ST, FAIRFIELD, SOLICITOR
Address of Witness

Ralph B Grisdale
Signature of Transferor

Signed in my presence by the Transferee who is personally known to

Signature of Witness

JOHN ANTHONY NICOTINA
Name of Witness (BLOCK LETTERS)

22 SMART ST, FAIRFIELD, SOLICITOR
Address of Witness

Phyllis W. Grisdale
Ralph B Grisdale
Signature of Transferee

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

SIGHTED CANC. & RET.

RP8

NOTICE OF DEAT

Section 101 Real Property Act 1900

6682718P

Show no more than 20 References to Title.

Folio Identifier 8/17873

(B) **REGISTERED DEALING**
If applicable.

(C) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
343K	Philip Caddman & Co REFERENCE (max. 15 characters): Grisdale

(D) **DECEASED JOINT TENANT** RALPH BARTLEY GRISDALE

(E) **SURVIVING JOINT TENANT**

ND PHYLLIS WINIFRED GRISDALE

(F) I, the Surviving Joint Tenant, apply to be registered as proprietor of the interest of the Deceased Joint Tenant in the **Land/~~Registered Dealing~~** referred to above.

(G) **STATUTORY DECLARATION BY THE SURVIVING JOINT TENANT**

I solemnly and sincerely declare that the Deceased Joint Tenant died on 10 February 2000 ~~199~~ and is identical with the deceased named in the **Death Certificate/~~certified copy of Death Certificate~~** No. 5923/2000 accompanying this application.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act, 1900, and I certify this application correct for the purposes of the Real Property Act 1900. Made and subscribed at Greenacre in the State of New South Wales on 29th March ~~199~~ 2000 in the presence of

Signature of Witness

JOHN NICOTINA
Name of Witness (BLOCK LETTERS)

28 NELSON STREET, FAIRFIELD, SOLICITOR.
Address and Qualification of Witness

P. W. Grisdale
Signature of Surviving Joint Tenant

EVIDENCE SIGHTED (office use only)

1/1

CHECKED BY (office use only)

RP3

TRANSMISSION APPLICATION

Section 93 Real Property Act 1900

7120212M

B

Office of State Revenue use only

(A) **LAND**
Show no more than 20 References to Title.

8/17873

(B) **REGISTERED DEALING**
If applicable.

(C) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
343K	Philip Goldman & Co REFERENCE (max. 15 characters): Grisdale

(D) **DECEASED REGISTERED PROPRIETOR**

PHYLLIS WINIFRED GRISDALE

(E) **APPLICANT**

TA ROSS ANTHONY GRISDALE

(F) I, the Applicant, being entitled as Executor of the **will/estate** of the Deceased Registered Proprietor (who died on 21 June, 2000 ~~19~~xx) pursuant to **Probate/Letters of Administration** No. 113715/00 granted on 13/9/00 ~~19~~xx to ROSS ANTHONY GRISDALE, apply to be registered as proprietor of the estate or interest of the Deceased Registered Proprietor in the **Land/Registered Dealing** specified above.

(G) Certified correct for the purposes of the Real property Act 1900. **DATE** .....
Signed in my presence by the Applicant who is personally known to me.

.....
Signature of Witness

JOHN NICOTINA
Name of Witness (BLOCK LETTERS)

78 NELSON ST, FAIRFIELD
Address of Witness

Ross Grisdale
Signature of Applicant

EVIDENCE SIGHTED (office use only)

CHECKED BY (office use only)

Ausdoc Commercial and Law Stationers

(H)

CONSENT OF EXECUTOR OR ADMINISTRATOR

I, ... **Executor of the will /Administrator of the estate**

of the Deceased Registered Proprietor, hereby consent to this application.

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Executor/Administrator

INSTRUCTIONS FOR COMPLETION

STAMP DUTY: if the Applicant is a devisee, beneficiary, next-of-kin or otherwise beneficially entitled or if the Deceased Registered Proprietor died prior to 31 December 1981 the application must be presented to the Office of State Revenue prior to lodgment at the Land Titles Office.

1. The Application must be completed clearly and legibly in permanent, dense, black or dark blue non-copying ink. If using a dot-matrix printer the print must be letter-quality.
2. Do not use an eraser or correction fluid to make alterations: rule through rejected material. Initial each alteration in the lefthand margin.
3. If the space provided at any point is insufficient, you may annex additional pages. These must be the same size as the form; paper quality, colour. etc, must conform to the requirements set out in Land Titles Office Information Bulletin No. 19. All pages of any annexure must be signed by the person executing the Application and any attesting witness.
4. The following instructions relate to the marginal letters on the application.

(A) LAND
Show the relevant Reference to Title. If there are more than 20 show none in this panel. Place ALL of them on an annexure (see 3 above) with 20 per sheet.

(B) REGISTERED DEALING
Show the registration number of any lease, mortgage or charge in regard to which the Applicant is applying to be registered as a proprietor.

(C) LODGED BY
This section relates to the person or firm lodging the Application at the Land Titles Office.
Reference (max. 15 characters) This is optional. Any slashes, dots, blank spaces, etc, will be counted as characters.

(D) DECEASED REGISTERED PROPRIETOR
Show the name in full. Address and occupation need not be shown.

(E) APPLICANT
Show the name in full. Address and occupation need not be shown.

(F) WILL/ESTATE, etc
Amend "will/estate", "Probate/Letters of Administation" and "Land/Registered Dealing" as appropriate.
In the relevant spaces show the capacity (executor, devisee, etc) in which the Applicant is entitled to apply, the number and date of grant of the Probate or Letters of Administration pursuant to which the application is made, and the name of the person to whom the grant was made.

(G) EXECUTION
General The application must be executed by or on behalf of the Applicant.
By the Applicant Personally The application must be signed in the presence of an adult witness who is not an Applicant and who knows the party executing personally. The witness should complete the appropriate section of the application.
By the Applicant's Attorney The Power of Attorney must be registered in the General Register of Deeds at the Land Titles Office. The execution should take the form, "AB by her attorney XY *[full name]* pursuant to Power of Attorney Book 1234 Number 567".
Under Authority If the application is made pursuant to any statutory, judicial or other authority, except a Power of Attorney (see above), the nature of the authority should be disclosed.
By a Corporation under Seal The execution should include a statement that the seal has been properly affixed, for example, "... pursuant to a resolution of the board of directors ...". Alternatively, all those attesting the affixing of the seal must state their position in the corporation.

(H) CONSENT OF EXECUTOR OR ADMINISTRATOR
This is required only where the Applicant claims to be entitled other than as executor, administrator or trustee.

The completed Application must be lodged by hand at the LAND TITLES OFFICE, Queen's Square, Sydney, together with the Certificate of Title, the probate or letters of administration (or a copy thereof certified by a solicitor to be a true copy) and a completed Notice of Sale.

If you have any questions about filling out the form, please call 228-6666 and ask for our Customer Services Branch.

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/9/2024 9:53AM

FOLIO: 9/17873

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4807 FOL 162

Recorded	Number	Type of Instrument	C.T. Issue
22/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
19/3/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
4/2/1999	5568792	TRANSFER	EDITION 1
13/12/2001	8202015	CHANGE OF NAME	
13/12/2001	8202016	MORTGAGE	EDITION 2
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 3 CORD ISSUED
16/11/2021	AR621770	DISCHARGE OF MORTGAGE	EDITION 4
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Form: 97-01T
Licence: MID/0734/97

TRANSFER

New South Wales
Real Property Act 1900

OFFICE OF STATE REVENUE (N.S.W. TREASURY)

Office of State Revenue use only
CLIENT No. 1390684 STAMP No. 214
STAMP DUTY $2- SIGNATURE K Cantwell
TRANSACTION No. 8 DATE 2.2.99
ASSESSMENT DETAILS:

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

FOLIO IDENTIFIER 9/17873

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
396T	SALMON & CO., Solicitors 157A Waterloo Road, Greenacre 2190 DX 1508, SYDNEY Tel: (02) 9750 7511 Reference (15 character max): ~~TS.Lee~~ H: MTLBC

(C) **TRANSFEROR** TREVOR CHARLES OSBORNE TOWNSEND AND ELSIE LILLIAN TOWNSEND

(D) acknowledges receipt of the consideration of $230,000.00 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable):

(F) **TRANSFEREE**

(G)

T TS (s713 LGA) TW (Sheriff)	MT LEWIS BOWLING CLUB CO-OPERATIVE LIMITED

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE** 1.2.1999

Signed in my presence by the Transferor who is personally known to me.

Christopher Costelloe
Signature of Witness

C. COSTELLOE
Name of Witness (BLOCK LETTERS)

11, JEAN ST., WELLINGTON
Address of Witness

D Townsend
E Townsend.
Signature of Transferor

Signature of TERRENCE PATRICK SALMON
Solicitor for the Transferee

CT SIGHTED CANC. & RET.

Checked by (LTO use) .....

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/9/2024 9:53AM

FOLIO: 10/17873

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4846 FOL 35

Recorded	Number	Type of Instrument	C.T. Issue
22/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
13/3/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
21/8/1996	2394336	REQUEST	
21/8/1996	2394337	TRANSMISSION APPLICATION	EDITION 1
24/9/1996	2484761	TRANSFER	
24/9/1996	2484762	MORTGAGE	EDITION 2
29/4/2002	8542449	DISCHARGE OF MORTGAGE	
29/4/2002	8542450	TRANSFER	
29/4/2002	8542452	MORTGAGE	EDITION 3
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 4 CORD ISSUED
16/11/2021	AR621769	DISCHARGE OF MORTGAGE	EDITION 5
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

97-03TA

B TRANSMISSION APPLICATION

Section 93 Real Property Act 1900

2394337 H

Office of State Revenue use only

(A) **LAND**

Show no more than 20 References to Title.

CERTIFICATE OF TITLE
VOLUME 4846 FOLIO 35 NOW BEING 10/1787 3

(B) **REGISTERED DEALING**

If applicable.

(C) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
	COLEMAN & GREIG SOLICITORS 189 Y
	REFERENCE (max. 15 characters): COUSINS

(D) **DECEASED REGISTERED PROPRIETOR**

ALEXANDER COUSINS

(E) **APPLICANT**

TA PETER KENNETH LUCAS

(F) I, the Applicant, being entitled as Executor of the **will/~~estate~~** of the Deceased Registered Proprietor (who died on 7 March 1996) pursuant to **Probate/~~Letters of Administration~~** No. 111252/96 granted on 9 August 1996 to PETER KENNETH LUCAS, apply to be registered as proprietor of the estate or interest of the Deceased Registered Proprietor in the **Land/~~Registered Dealing~~** specified above.

(G) Certified correct for the purposes of the Real property Act 1900. **DATE** 15 August 1996

Signed in my presence by the Applicant who is personally known to me.

Signature of Witness

WALLACE ROGER SPENCE
Name of Witness (BLOCK LETTERS)

8/131 BURWOOD ROAD CROYDON PARK
Address of Witness

Signature of Applicant

EVIDENCE SIGHTED & RETURNED (office use only)

CHECKED BY (office use only)

(H)

CONSENT OF EXECUTOR OR ADMINISTRATOR

I, ... **Executor of the will /Administrator of the estate**

of the Deceased Registered Proprietor, hereby consent to this application.

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Executor/Administrator

INSTRUCTIONS FOR COMPLETION

STAMP DUTY: if the Applicant is a devisee, beneficiary, next-of-kin or otherwise beneficially entitled or if the Deceased Registered Proprietor died prior to 31 December 1981 the application must be presented to the Office of State Revenue prior to lodgment at the Land Titles Office.

1. The Application must be completed clearly and legibly in permanent, dense, black or dark blue non-copying ink. If using a dot-matrix printer the print must be letter-quality.
2. Do not use an eraser or correction fluid to make alterations: rule through rejected material. Initial each alteration in the lefthand margin.
3. If the space provided at any point is insufficient, you may annex additional pages. These must be the same size as the form; paper quality, colour, etc, must conform to the requirements set out in Land Titles Office Information Bulletin No. 19. All pages of any annexure must be signed by the person executing the Application and any attesting witness.
4. The following instructions relate to the marginal letters on the application.

(A) LAND
Show the relevant Reference to Title. If there are more than 20 show none in this panel. Place ALL of them on an annexure (see 3 above) with 20 per sheet.

(B) REGISTERED DEALING
Show the registration number of any lease, mortgage or charge in regard to which the Applicant is applying to be registered as a proprietor.

(C) LODGED BY
This section relates to the person or firm lodging the Application at the Land Titles Office.
Reference (max. 15 characters) This is optional. Any slashes, dots, blank spaces, etc, will be counted as characters.

(D) DECEASED REGISTERED PROPRIETOR
Show the name in full. Address and occupation need not be shown.

(E) APPLICANT
Show the name in full. Address and occupation need not be shown.

(F) WILL/ESTATE, etc
Amend "will/estate", "Probate/Letters of Administation" and "Land/Registered Dealing" as appropriate.
In the relevant spaces show the capacity (executor, devisee, etc) in which the Applicant is entitled to apply, the number and date of grant of the Probate or Letters of Administration pursuant to which the application is made, and the name of the person to whom the grant was made.

(G) EXECUTION
General The application must be executed by or on behalf of the Applicant.
By the Applicant Personally The application must be signed in the presence of an adult witness who is not an Applicant and who knows the party executing personally. The witness should complete the appropriate section of the application.
By the Applicant's Attorney The Power of Attorney must be registered in the General Register of Deeds at the Land Titles Office. The execution should take the form, "AB by her attorney XY *[full name]* pursuant to Power of Attorney Book 1234 Number 567".
Under Authority If the application is made pursuant to any statutory, judicial or other authority, except a Power of Attorney (see above), the nature of the authority should be disclosed.
By a Corporation under Seal The execution should include a statement that the seal has been properly affixed, for example, "... pursuant to a resolution of the board of directors ...". Alternatively, all those attesting the affixing of the seal must state their position in the corporation.

(H) CONSENT OF EXECUTOR OR ADMINISTRATOR
This is required only where the Applicant claims to be entitled other than as executor, administrator or trustee.

The completed Application must be lodged by hand at the LAND TITLES OFFICE, Queen's Square, Sydney, together with the Certificate of Title, the probate or letters of administration (or a copy thereof certified by a solicitor to be a true copy) and a completed Notice of Sale.

If you have any questions about filling out the form, please call 228-6666 and ask for our Customer Services Branch.

RP13 [redacted]

TRANSFER

Real Property Act, 1900

2484761 S

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1996/97 $0 DULY STAMPED 1ST REC № 19823103

0JJ0JJ

$2 STAMP DUTY

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title. If appropriate, specify the share transferred.

10/17873 (formerly Vol. 4846 Fol. 35)

(B) **LODGED BY**

L.T.O. Box

550L

Name, Address or DX and Telephone

MACREE SCULLY KARRAS
Solicitors
23-25 Marion Street
Bankstown. 2200
Phone: 709-2466

REFERENCE (max. 15 characters) 125158 Frey

(C) **TRANSFEROR** PETER KENNETH LUCAS

(D) acknowledges receipt of the consideration of $105,000.00

and as regards the land specified above transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

(G) T

GEZA ALEXANDER FREY

as joint tenants/tenants in common

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATE** 16-9-96

Signed in my presence by the transferor who is personally known to me.

Ron L Henry

Signature of Witness

RONALD LESLIE HENRY

Name of Witness (BLOCK LETTERS)

67 JACOB ST BANKSTOWN 2200

Address of Witness

Signature of Transferor

Signed in my presence by the transferee who is personally known to me.

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferee

Solicitor K J SCULLY

☞ INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

LAND REGISTRY SERVICES Historical Search

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/9/2024 9:53AM

FOLIO: 11/17873

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 5043 FOL 193

Recorded	Number	Type of Instrument	C.T. Issue
18/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
15/6/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
29/4/2002	8542451	TRANSFER	
29/4/2002	8542452	MORTGAGE	EDITION 1
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 2 CORD ISSUED
16/11/2021	AR621769	DISCHARGE OF MORTGAGE	EDITION 3
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

[redacted]IFICATE OF TITLE

NEW SOUTH WALES — ERTY ACT, 1900, as amended.

10417147

Application No. 16436
Prior Title Volume 6521 Folio 155

Vol. 10417 Fol. 147

ID

Edition issued 14-10-1966

CANCELLED

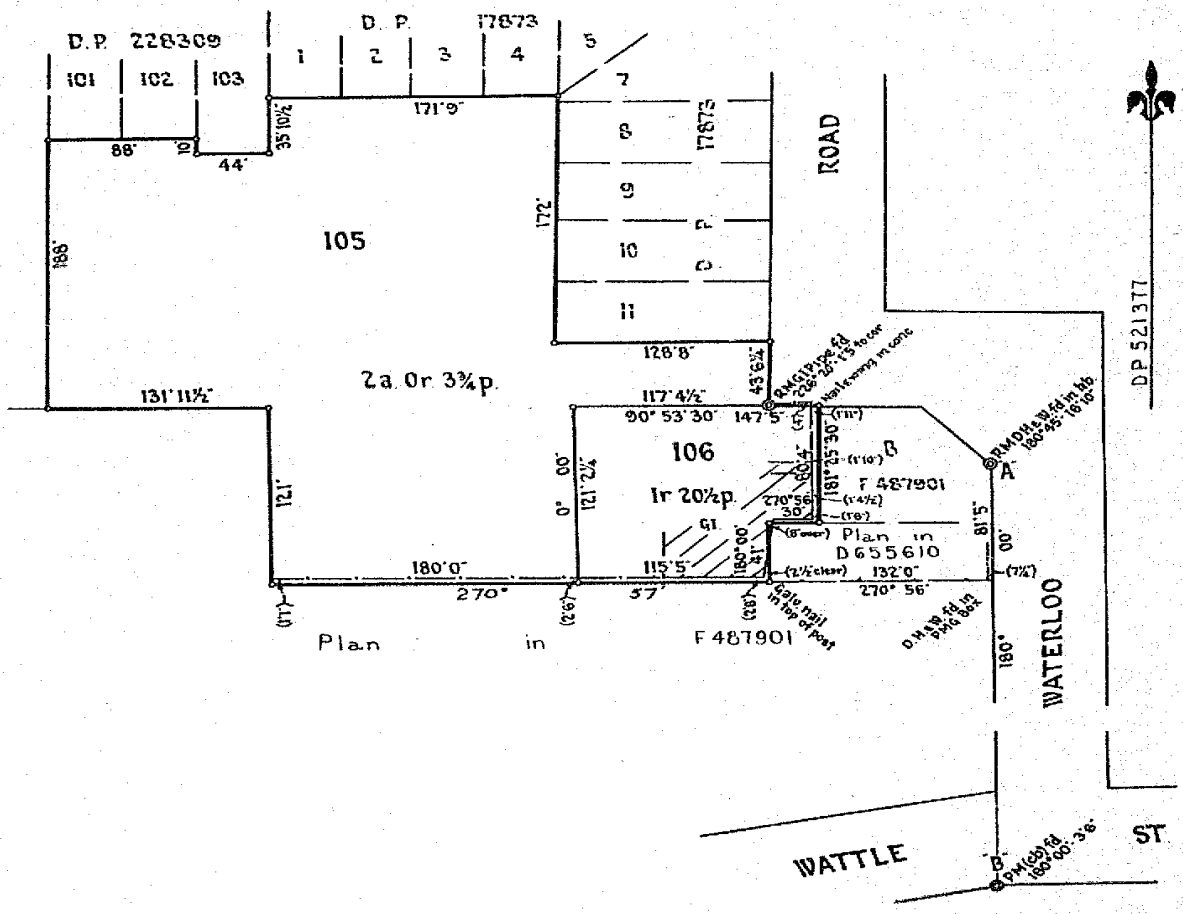
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness D. O'Sullivan.

Registrar General.

(Page 1) Vol. 10417 Fol. 147

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 106 in Deposited Plan 521377 at Greenacre in the Municipality of Bankstown Parish of Bankstown and County of Cumberland being part of Portion 99 granted to Thomas Collins on 4-1-1836.

FIRST SCHEDULE (continued overleaf)

~~DORIS ISABEL GRACE LAWLESS, of Punchbowl, Femme Sole.~~

Registrar General

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. ~~Mortgage No. H669458 to Jack Roseverne Marks of Clareville Beach, Gentleman Entered 20-12-1960.~~ DISCHARGED R577454.

Registrar General

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

PT 1 , 17 V.C.N. Blight, Government Printer

10417 Fol 147

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
Jack Harman Butler of Lyons, Hotel Keeper, Thomas Joseph Lynch of Punchbowl Retired Cook, Brendan ~~Fleming~~ Fleming Jack of Tokumbo Aircraft Inspector as joint tenants					
Thomas Joseph Lynch of Punchbowl Retired, and ~~Brendan~~ Brendan Fleming Jack of Tokumbo Clerk	Transfer	L272593	11.12.1968	7.1.1969	
Thomas Joseph Lynch of Punchbowl, Retired, Brendan Fleming Jack of Tokumbo Clerk and Robert Ernest Swan of Tokumbo, Clerk as joint tenants	~~Notice of Death of Joint Proprietor~~	M498803	28.6.1971	15.11.1971	
This deed is cancelled as to whole (ex. road)	Transfer	M498804	28.6.1971	15.11.1971	
New Certificates of Title have issued on 1-5-1972					
for lots in Deposited Plan No. 553636 as follows:					
Lots 8 Vol. 11823 Fol 179 ~~respectively~~.					

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
mortgage	L272594	11.12.1968	to Ona Isabel Grace Lawson of Punchbowl, Femme Sole	7.1.1969		Discharged	L516629	
Mortgage	L590630	23.9.1969	to Rural Bank of New South Wales	14.10.1969				
			The interest of the Council of the Municipality of Rinkstown in the addition to existing road shown in D.P. 553636	13-4-1972				

The residue of land in this certificate of title comprises new road shown on D.P. 553636

Entered 4-5-1972.

REGISTRAR GENERAL

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

11823179

C[redacted]CATE OF TITLE

NEW SOUTH WALES

[redacted]PROPERTY ACT, 1900

Vol. 11823 Fol. 179

Appln. No. 16436

Prior Title Vol. 10417 Fol. 147

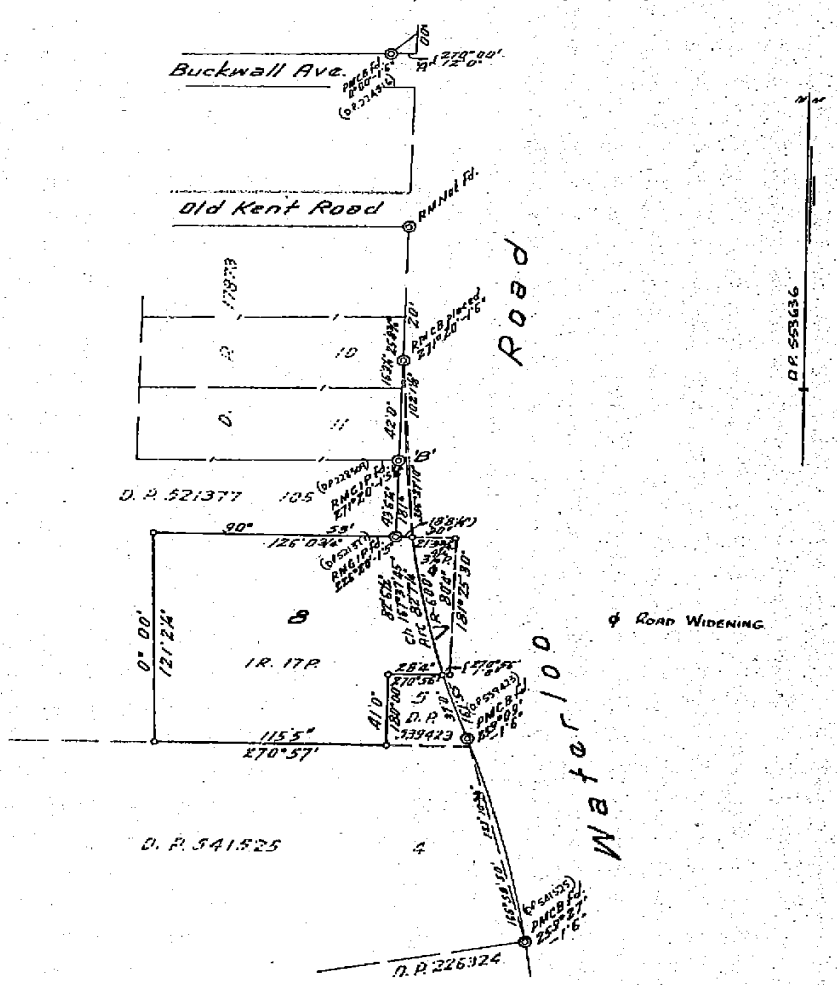
CANCELLED W Edition 5 1972.

(Page 1) Vol. 11823 Fol. 179

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 8 in Deposited Plan 553636 at Punchbowl in the Municipality of Bankstown Parish of Bankstown and County of Cumberland being part of Portion 99 granted to Thomas Collins on 4-1-1836.

FIRST SCHEDULE

~~THOMAS JOSEPH LYNCH of Punchbowl, Retired, BRENDAN FLEMING TOOTH of Lakemba, Clerk and ROBERT ERNEST SWAN of Lakemba, Clerk as Joint Tenants.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Mortgage No.L596630 to Rural Bank of New South Wales. Entered 14-10-1969.

Registrar General

Vol. 11823 Fol. 179

(Page 2 of 2 pages)

P24166 To TMK

DP 732283R

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar General
Mount Lewis Bowling Club (Co-operative Limited)	Transfer	P24166	7-6-1974	9-10-1974	
~~DP/SP~~ 732283 Registered 14-4-1986					
This folio is cancelled as to whole/~~part~~ upon					
of computer folios for lots 1 and 2					
abovementioned plan.					

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
Mortgage	P24167	28-8-1974	to Rural Bank of New South Wales	9-10-1974				

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

[redacted]TIFICATE OF TITLE

NEW SOUTH WALES [redacted]PERTY ACT, 1900, as amended.

10227010

Application No. 15263
Prior Titles Volume 5458 Folio 57
Volume 5488 Folios 112 and 138
Volume 5571 Folio 194

Vol. 10227 Fol. 10

CANCELLED

EH Edition issued 2-2-1966

(Page 1) Vol. 10227 Fol. 10

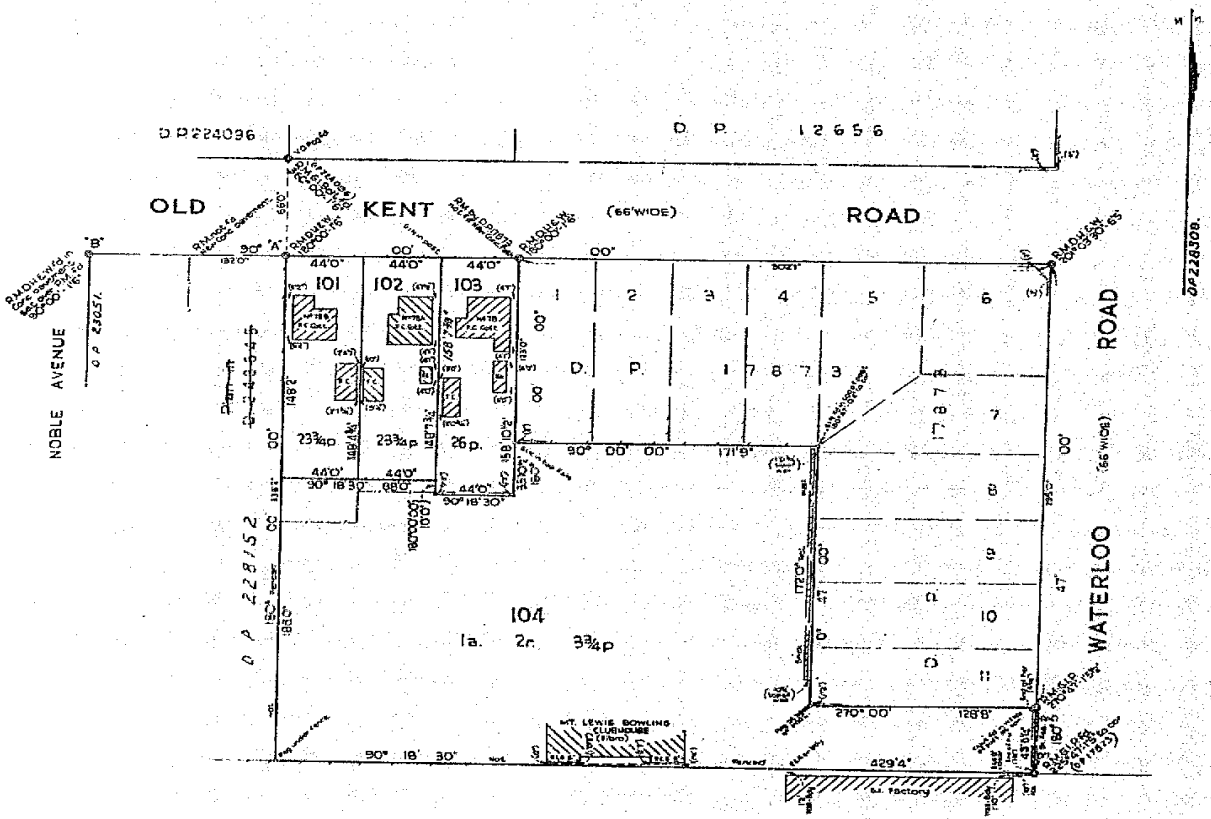
I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness J. Charles

Registrar General.

REGISTRAR GENERAL NEW SOUTH WALES

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 104 in Deposited Plan 228309 at Greenacre in the Municipality of Bankstown Parish of Bankstown and County of Cumberland being part of Portion 6 granted to John Payne Lloyd on 17-6-1831.

FIRST SCHEDULE (continued overleaf)

~~DAVID WILLIAM PEARCE, of Lakemba, Baker, as regards the part of the land above described formerly comprised in Certificate of Title Volume 5458 Folio 57, DORIS PRISCILLA LANGFORD, wife of William Alexander Langford, of Lakemba, a Member of the Australian Imperial Forces, as regards the part formerly comprised in Certificate of Title Volume 5488 Folio 112, DOROTHY ELIZABETH FITZGERALD, wife of Ernest Victor Fitzgerald, of Lakemba, a Member of the Australian Imperial Forces, as regards the part formerly comprised in Certificate of Title Volume 5488 Folio 138 and JAMES SHAW AIKINS, of Greenacre, Retired, THOMAS JOSEPH LYNCH of Punchbowl, Insurance Inspector and ERNEST CLIVE THORBURN, of Belmore, Retired, as Joint Tenants as regards the part formerly comprised in Certificate of Title Volume 5571 Folio 194.~~

Registrar General.

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Covenant created by Transfer No.A626680 affecting part.
3. ~~Mortgage No.D577132 of the part of the land above described formerly comprised in Certificate of Title Volume 5488 Folio 138 to Commonwealth Bank of Australia. Entered 18-12-1946.~~ Discharged K261942
4. ~~Mortgage No.G874794 of the part of the land above described formerly comprised in Certificate of Title Volume 5458 Folio 57 to The Commercial Bank of Australia Limited. Entered 15-1-1958.~~ Discharged K261940
5. ~~Mortgage No.G938648 of the part of the land above described formerly comprised in Certificate of Title Volume 5571 Folio 194 to The Commercial Bank of Australia Limited. Entered 28-4-1958.~~ Discharged K306321

Registrar General.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

F 1, 17 V.C.N. Blight, Government Printer

Vol. 10227 Fol 10

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
~~AS JOINT TENANTS~~ James Shaw Aitken of Gracemere, Retired and Thomas Joseph Lynch of Pinkbourk, Insurance Inspector, as to part of the land formerly comprised in Certificate of Title Volume 5571 Folio 194 and David William Pearce, Doris Priscilla Longford and Dorothy Elizabeth Fitzgerald Jack Harman Rutton of Sydney, Hotelkeeper, Thomas Joseph Lynch of Pinkbourk, Retired and Brendan Fleming Tooth of Jakemba, Clerk as joint tenants	Notice of Death	K234256	12-1-1966	29-4-1966	
		K 234 257	12-1-1966		
		K 261940	21-2-1966		
		K 261941	26-9-1965		
	Transfer	K 261942	1-11-1965	29-4 1966	

This deed is cancelled as to Part

New Certificates of Title have issued on 14.10.1966

for lots in Deposited Plan No. 521377 as follows:

Lots 1 & 54 & 106 Vol. 16417 Fol 166 & 167 respectively.

REGISTRAR GENERAL

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION
Mortgage	K306322	10-3-1966	to The Commercial Bank of Australia Limited thereby affecting as to DP 521377 No further dealings to be registered without consent of S.B.B.	29-4-1966		

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

(Page 2 of 2 pages)

Registered DP 521377 Cumbole

[redacted]IFICATE OF TITLE

[redacted]ERTY ACT, 1900, as amended.

10417146

NEW SOUTH WALES

Application Nos.15263 and 16436
Prior Titles Volume 6521 Folio 155
Volume 10227 Folio 10

Vol. 10417 Fol. 146

ID

Edition issued 14-10-1966

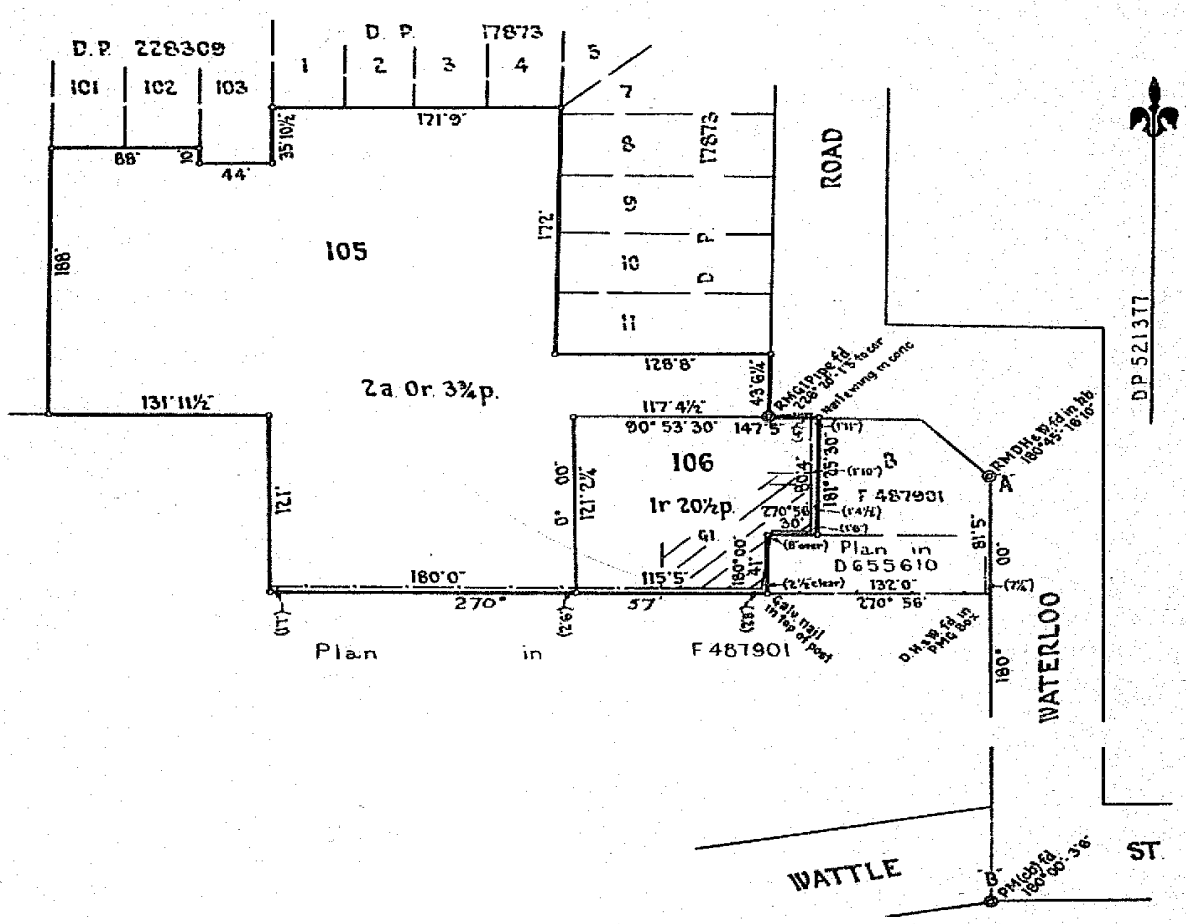
(Page 1) Vol. 10417 Fol. 146

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness D. O'Sullivan.

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 105 in Deposited Plan 521377 at Greenacre in the Municipality of Bankstown Parish of Bankstown and County of Cumberland being part of Portion 6 granted to John Payne Lloyd on 17-6-1831 and part of Portion 99 granted to Thomas Collins on 4-1-1836.

FIRST SCHEDULE (continued overleaf)

~~DORIS ISABEL GRACE LAWLESS, of Punchbowl, Femme Sole, as to that part of the land above described formerly comprised in Certificate of Title Volume 6521 Folio 155 and JACK HARMAN BUTTON, of Sydney, Hotelkeeper, THOMAS JOSEPH LYNCH, of Punchbowl, Retired, and BRENDAN FLEMING TOOTH, of Lakemba, Clerk, as Joint Tenants, as to that part formerly comprised in Certificate of Title Volume 10227 Folio 10.~~

Registrar General

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. Covenant created by Transfer No.A626680 affecting part.
3. ~~Mortgage No. H669458 of that part of the land above described formerly comprised in Certificate of Title Volume 6521 Folio 155 to Jack Rosewarne Marks of Clareville Beach, Gentleman Entered 20-12-1960.~~ Discharged K57454.
4. ~~Mortgage No. K306322 of that part of the land above described formerly comprised in Certificate of Title Volume 10227 Folio 10 to The Commercial Bank of Australia Limited Entered 29-4-1966.~~ Discharged K713386

Registrar General

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

PT I ,17 V.C.N. Blight, Government Printer

Vol. 10417 Fol 146

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
~~Jack Norman Britton of Sydney, Hotel Keeper, Thomas Joseph Lynch of Punchbowl, Clerk and Brendan Fleming Toath of Taharoba, Clerk as joint tenants.~~					
~~Thomas Joseph Lynch of Punchbowl, Retired, and Brendan Fleming Toath of Taharoba, Clerk as joint tenants~~	~~Transfer~~	~~K577455~~	~~14-2-1967~~	~~14-3-1967~~	
~~Thomas Joseph Lynch of Punchbowl, Retired and Brendan Fleming Toath of Taharoba, Clerk and Robert Ernest Swan of Taharoba, Clerk as joint tenants~~	~~Transfer~~	~~K577455~~	~~14-2-1967~~	~~14-3-1967~~	
~~Thomas Joseph Lynch of Punchbowl, Retired and Brendan Fleming Toath of Taharoba, Clerk and Robert Ernest Swan of Taharoba, Clerk as joint tenants~~	~~Transfer~~	~~K577455~~	~~14-2-1967~~	~~14-3-1967~~	
Mount Lewis Bowling Club (Co-operative Limited)	Transfer	P24166	7-6-1974	9-10-1974	

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		
~~Covenant~~	~~K577455~~		~~Created by Transfer No. K577455.~~	~~14-2-1967~~				
~~Mortgage~~	~~K713257~~	~~29-5-1967~~	~~to The Commercial Bank of Australia Limited~~	~~24-6-1967~~		~~Discharged~~	~~L596928~~	
Mortgage	L24583	27-3-1968	To Albert Ernest Swan of ~~Punchbowl~~ Punchbowl, Builder	3-5-1968		Discharged	L169019	
Mortgage	L596830	23-9-1969	to Rural Bank of New South Wales	14-10-1969				
Mortgage	P24167	28-8-1974	to Rural Bank of New South Wales	9-10-1974				
~~P/~~ 732283 Registered 14-4-1986								
~~The~~ folio is cancelled as to whole/~~part~~ upon creation								
computer folios for lots 1 and 2								
aforementioned plan.								

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

[redacted]RTIFICATE OF TITLE

NEW SOUTH WALES — [redacted]OPERTY ACT, 1900, as amended.

Application No. 15263

Prior Title Volume 5458 Folio 57

Vol. 10227 Fol. 9

[redacted]LLED

EH

Edition issued 2-2-1966

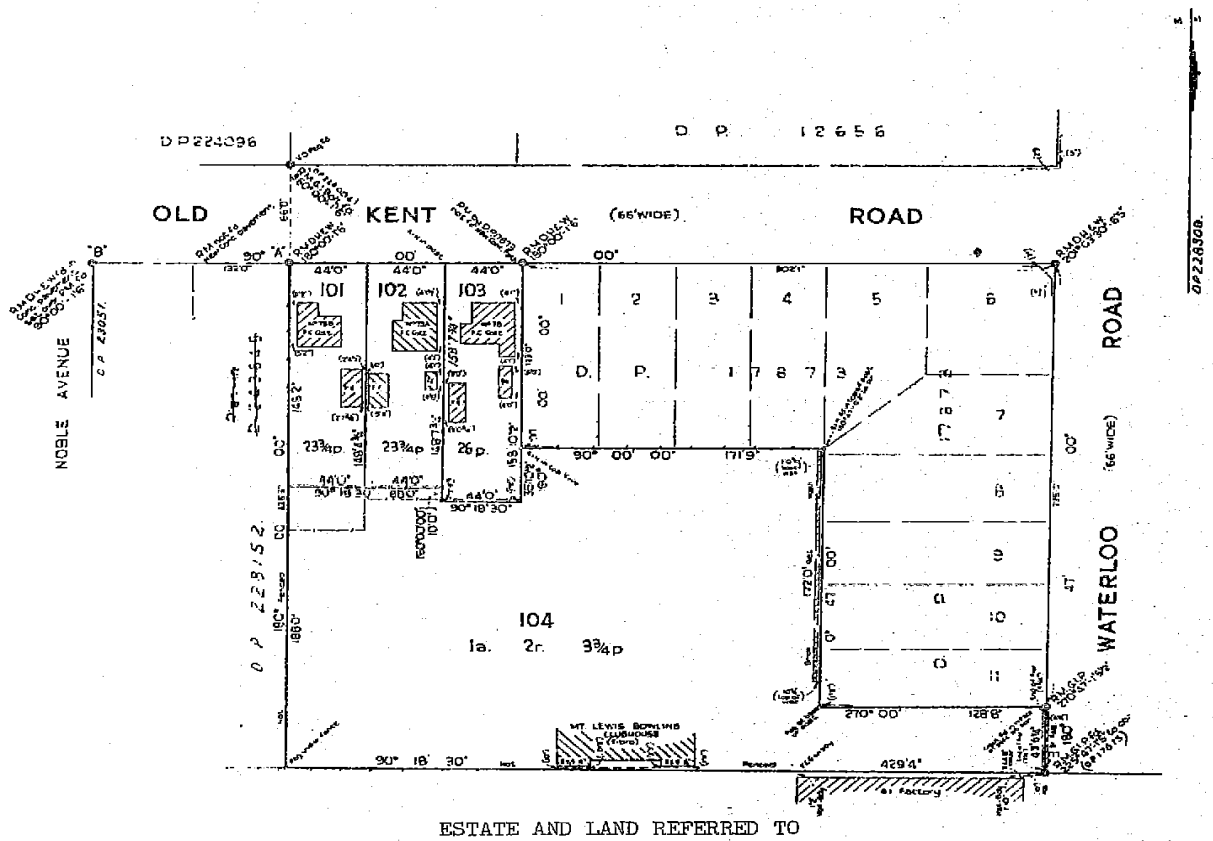
(Page 1) Vol. 10227 Fol. 9

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

Witness J. Charles

Registrar General.

PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 103 in Deposited Plan 228309 at Greenacre in the Municipality of Bankstown Parish of Bankstown and County of Cumberland being part of Portion 6 granted to John Payne Lloyd on 17-6-1831.

FIRST SCHEDULE (continued overleaf)

~~DAVID WILLIAM PEARCE, Bakemba, Baker.~~

Registrar General.

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
~~2. Mortgage No.G874794 to The Commercial Bank of Australia Limited. Entered 15-1-1958.~~ Discharged V154595

Registrar General.

PT 1, 17 V.C.N. Blight, Government Printer

Vol. 10227 Fol 9

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	ENTERED	Signature of Registrar-General
James Stewart McNaught and Elizabeth Watson McNaught as joint tenants by Transfer V154596. Registered 12-6-1984					

DP ~~SP~~ 732283 Registered 14-4-1986
This folio is cancelled as to whole/~~part~~ upon creation of
computer folios for lots 1 and 2 in the
abovementioned plan.

V154595 D1 -67
CT 4/9/198
W263101
D.P. 73228

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	INSTRUMENT DATE	PARTICULARS	ENTERED	Signature of Registrar-General	CANCELLATION		

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR-GENERAL ARE CANCELLED

(Page 2 of 2 pages)

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

26/9/2024 9:53AM

FOLIO: 1/732283

First Title(s): OLD SYSTEM
Prior Title(s): VOL 10227 FOL 9 VOL 10417 FOL 146
VOL 11823 FOL 179

Recorded	Number	Type of Instrument	C.T. Issue
16/4/1986	DP732283	DEPOSITED PLAN	FOLIO CREATED EDITION 1
24/4/1986	W263101	TRANSFER	EDITION 2
12/6/2001	7676621	MORTGAGE	EDITION 3
13/12/2001	8201963	DISCHARGE OF MORTGAGE	
13/12/2001	8201964	DISCHARGE OF MORTGAGE	EDITION 4
7/11/2013	AI146844	DEPARTMENTAL DEALING	
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 5 CORD ISSUED
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

Received: 26/09/2024 09:53:31

LAND REGISTRY SERVICES Historical Search

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

26/9/2024 9:53AM

FOLIO: 100/1280447

First Title(s): OLD SYSTEM
Prior Title(s): 8-11/17873 1/732283

Recorded	Number	Type of Instrument	C.T. Issue
10/1/2022	DP1280447	DEPOSITED PLAN	FOLIO CREATED EDITION 1
8/2/2022	AR870856	DISCHARGE OF MORTGAGE	
8/2/2022	AR870857	MORTGAGE	EDITION 2

*** END OF SEARCH ***

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 100/1280447

SEARCH DATE	TIME	EDITION NO	DATE
26/9/2024	9:47 AM	2	8/2/2022

LAND

LOT 100 IN DEPOSITED PLAN 1280447

AT MOUNT LEWIS

LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN

PARISH OF BANKSTOWN COUNTY OF CUMBERLAND

TITLE DIAGRAM DP1280447

FIRST SCHEDULE

MOUNT LEWIS BOWLING CLUB CO-OPERATIVE LIMITED

SECOND SCHEDULE (6 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

2 A626680 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.

3 K577455 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM.

4 DP1280447 POSITIVE COVENANT

5 DP1280447 RESTRICTION(S) ON THE USE OF LAND

6 AR870857 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

APPENDIX C

HISTORICAL AERIAL IMAGERY

Aerial Photograph 1. 1943 Historical Aerial Image of the site.

Aerial Photograph 2. 1955 Historical Aerial Image of the site.

Aerial Photograph 3. 1971 Historical Aerial Image of the site.

Aerial Photograph 4 1982 Historical Aerial Image of the site.

Aerial Photograph 5. 1991 Historical Aerial Image of the site.

Aerial Photograph 6. 2005 Historical Aerial Image of the site.

Aerial Photograph 7. 2024 Historical Aerial Image of the site.

APPENDIX D

NSW EPA

Search results

Your search for:Suburb: MOUNT LEWIS

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.POEO public register

10 October 2024

Search results

Your search for: **General Search** with the following criteria

Suburb - mount lewis

returned 0 result

Search Again

For business and industry

For local government

Contact us

131 555 (tel:131555)

Online (https://www.epa.nsw.gov.au/about-us/contact-us/feedback)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MOSS VALE	Woolworths Service Station Moss Vale	609 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55409411	150.3609797
MOSS VALE	Coles Express Service Station	579 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55313422	150.364684
MOSS VALE	Moss Vale Refuelling Facility	Lackey ROAD	Other Petroleum	Regulation under CLM Act not required	-34.54662421	150.3721525
MOUNT ANNAN	Woolworths Caltex Mount Annan	157 Narellan (Corner Smeaton Grange Road) ROAD	Service Station	Regulation under CLM Act not required	-34.04685527	150.7610434
MOUNT ANNAN	Great Southern Railways Aqueduct	Off Narellan ROAD	Unclassified	Regulation under CLM Act not required	-34.07308479	150.7707436
MOUNT COLAH	Caltex Service Station Mount Colah	603 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.67034662	151.1151861
MOUNT COLAH	Foxglove Oval	Foxglove ROAD	Landfill	Contamination currently regulated under CLM Act	-33.65829855	151.1229638
MOUNT DRUITT	Caltex (former Mobil) Service Station, 17 Mount Street, Mount Druitt	17 Mount STREET	Service Station	Regulation under CLM Act not required	-33.76567994	150.8244544
MOUNT DRUITT	7-Eleven Mount Druitt	Lot 6 Luxford ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76483839	150.8254157
MOUNT HUTTON	Woolworths Service Station	46 Wilsons ROAD	Service Station	Regulation under CLM Act not required	-32.9836378	151.67309
MOUNT PRITCHARD	7-Eleven Service Station	352 Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.90260656	150.8963326
MOUNT THORLEY	Bulga Surface Operations	Broke ROAD	Other Industry	Regulation under CLM Act not required	-32.68325751	151.1206158
MOUNT THORLEY	Lowes Petroleum (Former BP) Depot Mount Thorley	74 Mount Thorley ROAD	Other Petroleum	Regulation under CLM Act not required	-32.62443074	151.1025122
MOUNT VICTORIA	Former Mobil Service Station	81 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.5889727	150.2511783
MOUNT VICTORIA	Caltex Service Station	36a Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.58436517	150.2465528

APPENDIX E

PLANNING CERTIFICATE

City of Canterbury Bankstown
PO BOX 8
BANKSTOWN NSW 1885
Telephone: (02) 9707 9000
Email: council@cbcity.nsw.gov.au

2729:137604

Sydney Environmental Group
63/45 Huntley Street
ALEXANDRIA NSW 2015

PLANNING CERTIFICATE

Section 10.7(2) of the Environmental Planning and Assessment Act 1979

Certificate No: 20247439
23 September 2024

Land which Certificate is issued for:

Lot 100 DP 1280447

20 Waterloo Road, MOUNT LEWIS NSW 2190

Note: The information in this certificate is provided pursuant to Section 10.7(2) and (5) of the Environmental Planning and Assessment Act 1979 (the Act), and as prescribed by Schedule 2 of the Environmental Planning and Assessment Regulation 2021 (the Regulation). The information has been extracted from Council's records, as it existed at the date listed on the certificate.

Please note that the accuracy of the information contained within the certificate may change after the date of this certificate due to changes in Legislation, planning controls or the environment of the land.

CAMILLE LATTOUF
MANAGER CITY STRATEGY AND DESIGN

City of Canterbury Bankstown
PO BOX 8
BANKSTOWN NSW 1885
Telephone: (02) 9707 9000
Email: council@cbcity.nsw.gov.au

**INFORMATION PROVIDED UNDER SECTION 10.7 (2)
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

1 ENVIRONMENTAL PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Relevant Planning Instruments

Canterbury Bankstown Local Environmental Plan 2023

1.2 Relevant Development Control Plans

Canterbury Bankstown Development Control Plan 2023

1.3 State Environmental Planning Policies

Note: The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning and Environment (DPE) website at www.planning.nsw.gov.au. The full wording of each SEPP can also be accessed via the NSW Legislation website at https://legislation.nsw.gov.au/.

State Environmental Planning Policies:
State Environmental Planning Policy (Sustainable Buildings) 2022
State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Housing) 2021
State Environmental Planning Policy (Industry and Employment) 2021
- Chapter 3: Advertising and Signage

State Environmental Planning Policy (Planning Systems) 2021
- Chapter 2: State and regional development
- Chapter 3: Aboriginal Land
- Chapter 4: Concurrences and consents

State Environmental Planning Policy (Precincts - Central River City) 2021
State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021
State Environmental Planning Policy (Precincts - Regional) 2021
State Environmental Planning Policy (Precincts - Western Parkland City) 2021
State Environmental Planning Policy (Primary Production) 2021
State Environmental Planning Policy (Resilience and Hazards) 2021
- Chapter 2: Coastal Management
- Chapter 3: Hazardous and offensive development
- Chapter 4: Remediation of Land

State Environmental Planning Policy (Resources and Energy) 2021
- Chapter 2: Mining, petroleum production and extractive industries
- Chapter 3: Extractive industries in Sydney area

State Environmental Planning Policy (Transport and Infrastructure) 2021
- Chapter 2: Infrastructure
- Chapter 3: Educational establishments and child care facilities
- Chapter 4: Major infrastructure corridors

State Environmental Planning Policy (Biodiversity and Conservation) 2021
- Chapter 2: Vegetation in non-rural areas
- Chapter 3: Koala habitat protection 2020
- Chapter 6: Bushland in urban areas
- Chapter 7: Canal estate development
- Chapter 10: Sydney Harbour Catchment
- Chapter 11: Georges River Catchment

1.4 Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act

Not applicable.

City of Canterbury Bankstown
PO BOX 8
BANKSTOWN NSW 1885
Telephone: (02) 9707 9000
Email: council@cbcity.nsw.gov.au

2 Zoning and Land Use Under Relevant Planning Instruments

Note: The information below will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.

2.1 Land Use Zone

Canterbury Bankstown Local Environmental Plan 2023

Date effective from

23 June 2023

Land Use Zone

ZONE R2 LOW DENSITY RESIDENTIAL

1. Permitted without consent
Home occupations

2. Permitted with consent
Bed and breakfast accommodation; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Early education and care facilities; Environmental facilities; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Health consulting rooms; Home businesses; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings; Tank-based aquaculture

3. Prohibited
Any development not specified in item 1 or 2

2.2 Additional Permitted Uses

The land, or part of land is affected by Schedule 1 Additional Permitted Uses of the Canterbury Bankstown Local Environmental Plan 2023. For further information visit https://legislation.nsw.gov.au/ or contact Council on 02 9707 9000.

Note: Due to the subdivision and/or consolidation of land, the Lot and Deposited Plans referenced in Schedule 1 of the relevant Local Environmental Plan may change. It is your responsibility to confirm the applicability of Additional Permitted Uses before undertaking any development on the site that relies upon provisions in Schedule 1.

2.3 Minimum Land Dimensions for the Erection of a Dwelling House

For land zoned R2, R3 or R4 and on land identified as 'Area 2' on the Clause Application Map within the Canterbury Bankstown Local Environmental Plan 2023, the minimum lot size required for dwelling houses on a battle-axe lot or other lot with an access handle is 600m^2. For land without an access handle, please refer to the Minimum Lot Sizes Map of the Local Environmental Plan for minimum lot sizes for dwelling houses.

2.4 Area of Outstanding Biodiversity Value

Not applicable

2.5 Conservation Area and/or Environmental Heritage

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

3 Contribution Plans

Canterbury Bankstown Local Infrastructure Contributions Plan 2022
This Development Contributions Plan was prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2021.

City of Canterbury Bankstown
PO BOX 8
BANKSTOWN NSW 1885
Telephone: (02) 9707 9000
Email: council@cbcity.nsw.gov.au

The Plan allows the Council or other consent authority to levy contributions on selected new development to pay for local public infrastructure (such as parks, roads and libraries), required to meet the needs of our growing and changing City. A copy of the development contributions plan can be viewed on Council's website.

Housing and Productivity Contribution
The Housing and Productivity Contribution applies to development applications for new residential, commercial and industrial development and is collected by Council on behalf of the NSW State Government. The Contributions will help deliver essential State infrastructure such as schools, hospitals, major roads, public transport infrastructure and regional open space.

The subject land is within Greater Sydney to which the Environmental Planning and Assessment (Housing and Productivity Contribution) Order 2023 applies. For more information visit https://www.planning.nsw.gov.au/policy-and-legislation/infrastructure/infrastructure-funding/improving-the-infrastructure-contributions-system

4 Complying Development

Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land.

Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.

Housing Code (if in a residential zone)	Yes
Rural Housing Code (if in a rural residential zone)	Not applicable
Low Rise Housing Diversity Code	Yes
Housing Alterations Code	Yes
General Development Code	Yes
Greenfield Housing Code	Not applicable
Inland Code	Not applicable
Commercial and Industrial (New Building and Alterations) Code	Yes
Commercial and Industrial Alterations Code	Yes
Container Recycling Facilities Code	Yes
Demolition Code	Yes
Subdivision Code	Yes
Fire Safety Code	Yes

**Note: The reason(s) why complying development may not be carried may only apply to part of, or all of, the property. For more information go to the NSW ePlanning Spatial Viewer and search the property address https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address.*

4.1 Variation of Complying Development Codes

A variation to the Complying Development Code applies to certain lots in Zone R2 Low Density Residential areas which are no more than 450m^2 in area and are located in land to which the former Bankstown Local

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Email: council@cbcity.nsw.gov.au

Environmental Plan 2015 applied. For further information on the variation to the Complying Development Code, please refer to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 at the NSW Legislation website at https://legislation.nsw.gov.au/

5 Exempt Development

Whether or not the land is land on which exempt development may be carried out under each of the exempt development codes under State Environmental Planning Policy (Exempt and Complying Development Codes)2008 because of the provisions of clauses 1.16(1)(b1)-(d) or 1.16A, the development (new or alterations proposed to the existing structures) must meet the following criteria:

General Exempt Development Code
Yes

Advertising and Signage Exempt Development Code
Yes

Temporary Uses and Structures Exempt Development Code
Yes

Note: Despite the above, if the exempt development meets the requirements and standards specified by the State Environmental Planning Policy (Exempt and Complying Development) 2008 and that development (a) has been granted an exemption under section 57(2) of the Heritage Act 1977, or (b) is subject to an exemption under section 57(1A) or (3) of that Act, the development is exempt development. For further information refer to the Heritage NSW website at https://www.heritage.nsw.gov.au/.

Important Disclaimer: Clause 4 and 5 of this Certificate only contain information in respect of that required by clause 4 and 5 of Schedule 2 of the Environmental Planning and Assessment Regulation 2021, in relation to Complying and Exempt Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Exempt or Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued, or work carried out as Exempt Development under the provisions of the SEPP is invalid.

6 Affected Building Notices and Building Product Rectification Orders

Not applicable

7 Land Reserved for Acquisition

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

8 Road Widening and Road Realignment

Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument:

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council:

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

9 Flooding

The land, or part of the land, **is within** the flood planning area (FPA) and consequently the probable maximum flood (PMF).

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The land, or part of the land, **is subject to** flood related development controls.

Please note that a Stormwater Systems Report (SSR) will be required from Council (cost applies) to further understand constraints that may relate to development of the property. An SSR can be ordered online from Council website.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.2 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (https://cb.city/flooding).

NB: The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan.

10 Council and Other Public Authority Policies on Hazard Risk Restrictions

Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:

Land Slip
The land is not affected by a policy restriction relating to landslip

Tidal Inundation
The land is not affected by a policy restriction relating to tidal inundation

Subsidence
The land is not affected by a policy restriction relating to subsidence

Acid Sulfate Soils
The land is not affected by a policy restriction relating to acid sulfate soils.

Contamination
Council has adopted by resolution a policy concerning the management of contaminated land. The policy applies to all land in the Canterbury-Bankstown Local Government Area and will restrict development of the land if the circumstances set out in the policy prevail. A copy of the policy is available on Council's website at www.cbcity.nsw.gov.au.

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environment Protection Authority (EPA)* for more information.

Salinity
Not applicable

Coastal Hazards
Not applicable

Sea Level Rise
Not applicable

Unhealthy Building Land
The land is not affected by a policy restriction relating to Unhealthy Building Land.

Any Other Risk (including Aircraft Noise)
Not applicable

11 Bush Fire Prone Land

Not applicable

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12 **Loose-Fill Asbestos Ceiling Insulation**
Not applicable

13 **Mine Subsidence**
The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

14 **Paper Subdivision Information**
Not applicable

15 **Property Vegetation Plans**
Not applicable

16 **Biodiversity Stewardship Sites**
Not applicable

17 **Biodiversity Certified Land**
Not applicable

18 **Orders Under Trees (Disputes Between Neighbours) Act 2006**
Not applicable

19 **Annual Charges Under Local Government Act 1993 For Coastal Protection Services That Relate to Existing Coastal Protection Works**
Not applicable

20 **Western Sydney Aerotropolis**
Not applicable

21 **Development Consent Conditions for Seniors Housing**
Not applicable

22 **Site Compatibility Certificates and Development Consent Conditions For Affordable Rental Housing**
Not applicable

23 **Water or sewerage services**
Council has not received a notice from a public water utility that water or sewerage services are, or are to be, provided to the land under the Water Industry Competition Act 2006, a statement to that effect.

Note— A public water utility may not be the provider of some or all of the services to the land. If a water or sewerage service is provided to the land by a licensee under the Water Industry Competition Act 2006, a contract for the service will be deemed to have been entered into between the licensee and the owner of the land. A register relating to approvals and licences necessary for the provision of water or sewerage services under the Water Industry Competition Act 2006 is maintained by the Independent Pricing and Regulatory Tribunal and provides information about the areas serviced, or to be serviced, under that Act. Purchasers should check the register to understand who will service the property. Outstanding charges for water or sewerage services provided under the Water Industry Competition Act 2006 become the responsibility of the purchaser.

Appendix 5 – Geotechnical Report

Core Geotech

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Report

Geotechnical Assessment
Proposed Sports Light
14 Waterloo Road Greenacre NSW

Prepared for:

Sydney Environmental Group Pty Ltd
Unit 63/45 Huntley Street
Alexandria NSW 2015

Prepared by:

Core Geotech Pty Ltd

13 October 2024

Ref: CG24-0997-A Rev 0

Document Status

Rev No.	Version	Author	Reviewer	Approved for Issue		
				Name	Signature	Date
0	Final	Gopinath Naga	Raj Singh	Raj Singh		13 October 2024

Document Delivery

CG provides this document in either printed format, electronic format or both. The electronic format is provided for the client's convenience and CG requests that the client ensures the integrity of this electronic information is maintained.

Where an electronic only version is provided to the client, a signed hard copy of this document is held on file by CG and a copy will be provided if requested.

Table of Contents

Appendices

1 Introduction

Core Geotech Pty Ltd (CG) was engaged by Sydney Environmental Group Pty Ltd to carry out a geotechnical investigation of a site located at 14 Waterloo Road Greenacre NSW, which is being considered for the installation of eight (8) sports lights.

The scope of work and associated terms and conditions of our engagement were detailed in our geotechnical services proposal letter referenced QU24-0351 Rev 0 dated 20 August 2024.

2 Scope of works

As detailed in our proposal letter, the instructed scope of work to be conducted by CG was defined as follows:

- Desktop study of available information relevant to the proposed development;
- Arrange and execute a geotechnical Site Investigation (SI);
- Review of all the data relevant to existing subsurface information and the proposed project;
- Details and descriptions of the existing subsoil strata with laboratory test results;
- Development of the geotechnical ground model;
- Preliminary Site Classification in accordance with AS2870-2011; and
- Provide suitable foundation options as appropriate (e.g. shallow footings / bored piers etc.) and comments on the soil aggressivity.

3 Proposed Development

Based on the SUPPLIED pdf copy titled ‘Mount Lewis Bowling Club Design’ prepared by Legacy Lighting dated 4 December 2023, it is understood that proposed project comprises installation of eight (8) sports lighting poles of height 10m at each corner of two existing bowling club fields situated on the north side of Mount Lewis Bowling Club building.

4 Site Description

The current general landform, together with associated features located within and adjacent to the site is presented on the attached Site Investigation plan as Drawing CG24-0997-1. The site is a part of Mount Lewis Bowling Club.

The site lies within the Local Government Area of Canterbury Bankstown Council and is located on the west of Waterloo Road. The site is bounded to the north and west by residential dwellings, to the south by club buildings and to the east by the car park.

No detailed contour survey plan was available for CG to assess the slope of the site at the time of preparing this report. However, by visual observations the site appeared to be generally flat with a maximum surface gradient of about 1° to 2º sloping downward to the east side. The site contains some immature trees along the northern boundary. A concrete footpath was observed along the perimeter of the bowling courts.

Surface soils generally comprise silty sandy clay fill. Site photography is attached in Appendix E.

5 Investigation Scope

Following a Before You Dig Australia (BYDA) search, onsite service location and concrete coring, the field investigation was carried out on 25 September 2024. All fieldwork was carried out under the direction of CG in general accordance with AS 1726 specifications and logged in accordance with AS 1726 (2017) guidance. The scope of fieldwork completed was as follows:

- Completed a walkover survey of the site to assess the general landform, site conditions and adjacent structures / infrastructure;
- Six (6) hand auger boreholes, denoted BH01 to BH06 were drilled to a refusal depth ranging from 0.2m to 1.6m using a 125mm diameter size hand auger. Engineering logs of the boreholes are provided in Appendix C;
- Dynamic Cone Penetration (DCP) tests were carried out inside the boreholes to assess the relative density/consistency of in-situ soils; and
- Disturbed samples were collected, labelled and sent to a NATA Accredited laboratory with Chain of Custody (COC) documentation.

The approximate locations of the respective investigation sites referred to above are shown on the Site Investigation Plan in Drawing CG24-0997-1 attached in Appendix B. Test locations were measured from the site features to an accuracy of +/- 2m.

6 Laboratory Testing

Laboratory testing was carried out generally in accordance with the Australian Standards. All testing was scheduled by CG and carried out by ALS NATA registered testing laboratory situated at Smithfield NSW.

The extent of testing carried out to provide the geotechnical parameters required for this study are presented in Table 1.

Table 1: Laboratory Testing Schedule

Type of Test	Test Method	Quantity
Field Moisture Content (FMC) and Aggressivity Soil Set	APHA	3

7 Ground Model

7.1 Soil Landscape

The NSW Environment & Heritage eSPADE web application identifies the soil landscape at the site as Blacktown (bt) residual. The residual soil landscape is characterised by:

- Landscape – gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Local relief to 30m, slopes are usually <5%. Broad rounded crests and ridges with gently inclined slopes. Cleared eucalypt woodland and tall open-forest (wet sclerophyll forests);
- Soils – shallow to moderately deep (<100cm) red and brown podzolic soils on crests, upper slopes and well-drained areas, deep (150–300cm) yellow podzolic soils and Soloths on lower slopes and in areas of poor drainage; and
- Limitations – moderately reactive highly plastic subsoil, low soil fertility, poor soil drainage.

7.2 Published Geology

Based on review of Sydney 1:100,000 Geological map Geological Series Sheet 9130 (Edition 1) 1983 by Geological Survey of NSW Department of Mineral and Resources indicate that site is underlain by Middle Triassic Aged Wianamatta Group Bringelly Shale (Rwb) subgroup which generally comprises shale, carbonaceous claystone, laminate, fine to medium grained lithic sandstone, rare coal.

7.3 Stratigraphic Units

The ground conditions encountered and inferred from the investigation (BH01 to BH06) were considered to be generally consistent with the published geology for the area and can be summarised according to the following subsurface sequence:

Table 2: Summary of subsurface profile encountered in BH01 to BH06		
Layer	**Description**	**Depth to the base of layer (m)**
Concrete	Concrete Slab (BH03, BH04 and BH06)	
		0.2
Topsoil Fill/Fill	Silty Sandy CLAY/Silty CLAY, low plasticity, dark grey, brown with fine grained sand, trace rootlets, moisture condition <= plastic limit	
		>0.4 – >1.0
Residual	Silty CLAY/CLAY, high plasticity, pale red, grey, trace ironstone gravel, moisture condition >= plastic limit (only BH01, BH03 and BH04)	
		>1.0 – >1.6

It should be noted that the depths and layer thickness provided in Table 2 are based on the subsurface conditions as observed at the investigation locations and may not be a representative of the entire site.

7.4 Groundwater

No free groundwater was encountered during the geotechnical investigation. However, it is pointed out that standing groundwater and seepages may fluctuate with variations in rainfall, temperature and other factors. No longer term groundwater monitoring has been carried out.

8 Laboratory Test Results

Field Moisture Content (FMC) of three (3) samples tested ranged from 16.0% to 19.2% indicating medium to high plasticity fill and residual soils and of similar reactivity. Three (3) soil samples were collected to test for aggressivity suite to assess the exposure classification of in situ soils to buried concrete and steel members. A summary of laboratory test results is presented in Table 3.

Table 3: Summary of FMC and Aggressivity Test Results								
BH No.	**Depth (m)**	**Material Description/Origin**	**FMC (%)**	**pH**	**Conductivity µS/cm**	**Resistivity Ohm.cm**	**Chloride, Cl- (ppm)**	**Sulphate, SO4 2- (ppm)**
BH02	0.3 – 0.5	Silty Gravelly Clay/Clayey Sand Fill	18.6	6.8	21	47600	<100	<10
BH03	0.5 – 0.7	Clay/Residual	16.0	5.9	84	11900	<100	110
BH04	0.3 – 0.5	Clay/Residual	19.2	6.5	69	14500	140	40
Note: FMC – Field Moisture Content								

The laboratory test results are attached in Appendix D.

9 Geotechnical Discussion and Recommendations

9.1 General

The subsurface profile as encountered in the boreholes generally comprises silty clay/clayey sand fill overlying soft to very stiff residual silty clay/clay up to the refusal depth.

Three (3) boreholes BH02, BH05 and BH06 were refused within the fill layer. At the time of preparing the report, CG does not have any records of the fill. Therefore, fill is assessed to be uncontrolled in accordance with AS2870-2011.

9.2 Site Classification

We note that AS 2870-2011 does not apply for this type of development. However, due to the possibility of removal of existing concrete footpath slabs, the presence of number of trees near

some of the locations of sports lights and presence of uncontrolled fill, the site is regarded as being impacted by abnormal moisture conditions and a 'P' site classification in accordance with the AS 2870-2011 applies.

In the absence of the abnormal moisture conditions and fill material, the designing engineer should recognise that the natural residual silty clays/clay soil encountered on this site result in a class **"Class H1"** site classification applying to this site. It is anticipated that the characteristic surface movement under normal moisture condition of approximately, Ys, of 40mm to 60mm.

This site classification provides a guide to the level of surface movement due to seasonal moisture changes that could be expected on site.

Larger characteristic surface movements may occur when the future moisture content change within the soil exceeds design moisture content changes, as determined from AS2870-2011. Such changes may occur, for example, adjacent to leaking water services or where the soils are desiccated by the roots of trees.

Placement of further reactive fill may increase the severity of classifications. Therefore, advice should be sought if fill earthworks exceeding about 0.4m depth is to be carried out on site to verify that the classification provided in this report remains valid.

The above recommendations are provided on the assumption that the performance expectations described in AS 2870 – 2011 are acceptable and future site maintenance accord CSIRO BTF -18 a copy of which is attached in Appendix F.

9.3 Footings

Natural residual clay soils were encountered only in three (3) of the boreholes (BH01, BH03 and BH04). The DCP test results in these boreholes indicate that consistency of very stiff soils ranging from 0.5m to 1.5m depth below the existing surface grade.

Based on the DCP test results, it is assessed that shallow footings (pad) are suitable only at the location of BH01, BH03 and BH04 provided all the footings are founded into very stiff residual clayey soils.

Footings founded into very stiff residual clay soils may be designed for an Allowable Bearing Pressure (ABP) of 150kpa.

We recommend that deeper drilling using a mechanical drilling rig or similar would be required at other three locations (BH02, BH05 and BH06) to assess the depth of suitable stratum to support the proposed lights.

9.4 Soil Aggressivity

Based on the pH, sulphate content, chloride content and resistivity test results, an exposure classification for concrete of A1 would be appropriate in accordance with Table 5.2 of AS2870-2011 'Residential Slabs and Footings'.

Additionally, a 'non aggressive' exposure classification for concrete piles in accordance with Table 6.4.2 (C) in AS2159-2009 and a 'Non-aggressive' exposure classification for steel piles in accordance with Table 6.5.2 (C) in AS2159-2009 'Piling – Design and Construction' is applicable.

10 Further Inspection

It is recommended that the following works must be undertaken to assess the geotechnical conditions:

- Borehole BH02, BH05 and BH06 must be extend deeper using a mechanical drilling rig or similar to assess the depth of suitable stratum to support the proposed lights.

- Structural drawings for footings should be reviewed and approved by an experienced consultant.
- All footings must be inspected and approved by an experienced Geotechnical Engineer prior to pouring concrete.
- In the event soil conditions encountered differ significantly from those described within this report.
- To confirm founding materials and allowable bearing pressures.

11 Reference

1. AS1726 – 2017, “Geotechnical Site Investigation”.
2. AS2870 – 2011, “Residential slabs and footings”.
3. AS2159 – 2009, “Piling – Design and installation”.
4. NSW Environment & Heritage eSPADE web application.
5. Sydney 1:100,000 Geological map Geological Series Sheet 9130 (Edition 1) 1983.

12 Closure

This report has been prepared for Sydney Environmental Group Pty Ltd in accordance with CG's proposal dated 20 August 2024 (Ref. QU24-0351 Rev 0) under CG's Terms of Engagement.

The report is provided for the exclusive use of Sydney Environmental Group Pty Ltd for the specific development and purpose as described in the report. The report may not contain sufficient information for developments or purposes other than that described in the report.

The information in this report is considered accurate at the date of issue with regard to the current conditions of the site. The conclusions drawn in the report are based on interpolation between boreholes. Conditions can vary between test locations that cannot be explicitly defined or inferred by investigation.

The report, or sections of the report, should not be used as part of a specification for a project, without review and agreement by CG, as the report has been written as advice and opinion rather than instructions for construction.

The report must be read in conjunction with the attached Information Sheets and any other explanatory notes and should be kept in its entirety without separation of individual pages or sections. CG cannot be held responsible for interpretations or conclusions from review by others of this report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this report. In preparing the report CG has necessarily relied upon information provided by the client and/or their agents.

This report must be read in conjunction with the attached Information Sheets and any other explanatory notes.

We trust these comments are sufficient to meet your present requirements. Please do not hesitate to contact CG should you have any queries.

Appendix A
Information About this Report

Information About This Report

Limitations

Scope of Services: The report has been prepared in accordance with the scope of services set out in CG's Proposal under CG's Terms of Engagement, or as otherwise agreed with the client. The scope of services may have been limited and/or amended by a range of factors including time, budget, access and site constraints.

Specific Purpose: The report is provided for the specific development and purpose as described in the report. The report may not contain sufficient information for developments or purposes other than that described in the report.

Currency of Information: The information in this report is considered accurate at the date of issue with regard to the current conditions of the site.

Reliance on Information: In preparing the report CG has necessarily relied upon information provided by the Client and/or their Agents. Such data may include surveys, analyses, designs, maps and plans. CG has not verified the accuracy or completeness of the data except as stated in this report.

Copyright and Reproductions: The contents of this documents are and remain the intellectual property of CG. This document should only be used for the purpose for which it was commissioned and should not be used for other projects or by a third party. This report shall not be reproduced either totally or in part without the permission of CG. Where information from this report is to be included in contract documents or engineering specification for the project, the entire report should be included in order to minimise the likelihood of misinterpretation.

Construction Specifications: Unless otherwise stated, the report, or sections of the report, should not be used as part of a specification for a project, without review and agreement by CG.

Report Should Not be Separated: The report must be read in conjunction with the attached information Sheets and any other explanatory notes and should be kept in its entirely without separation of individual pages or sections.

Review by Others: CG cannot be held responsible for interpretation or conclusions from review by others of this report or test data, which are not otherwise supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

GENERAL NOTES

Geotechnical Reporting: Geotechnical reporting relies on the interpretation of factual information based on judgment and opinion and is far less exact than other engineering or design disciplines. Geotechnical reports are for a specific purpose, development and site as described in the report and may not contain sufficient information for other purposes, developments or sites (including adjacent sites) other than that described in the report.

Subsurface Conditions: Subsurface conditions can change with time and can vary between test locations. For example, the actual interface between the materials may be far more gradual or abrupt than indicated and contaminant presence may be affected by spatial and temporal patterns. Therefore, actual conditions in areas not sampled may differ from those predicted since no subsurface investigation, no matter how comprehensive, can reveal all subsurface details and anomalies. Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations can also affect subsurface conditions and thus the continuing adequacy of a geotechnical report. CG should be kept informed of any such events and should be retained to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Groundwater: Groundwater levels indicated on borehole and test pit logs are recorded at specific times. Depending on ground permeability, measured levels may or may not reflect actual levels if measured over a longer time period. Also, groundwater levels and seepage inflows may fluctuate with seasonal and environmental variations and construction activities.

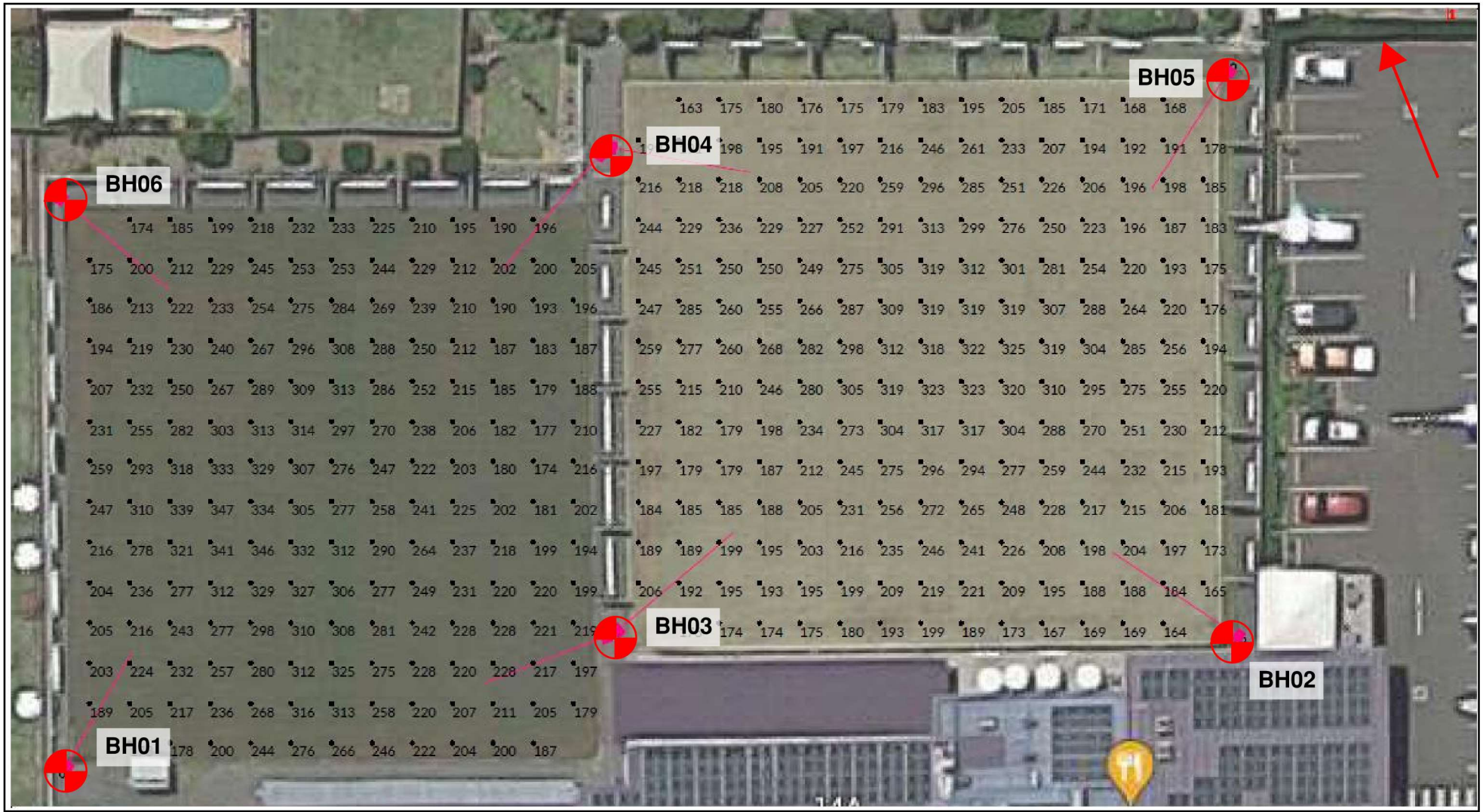
Interpretation of Data: Data obtained from nominated discrete locations, subsequent laboratory testing and empirical or external sources are interpreted by trained professionals in order to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions in accordance with any relevant industry standards, guidelines or procedures.

Soil and Rock Descriptions: Soil and rock descriptions are based on AS 1726 – 2017, using visual and tactile assessment except at discrete locations where field and / or laboratory tests have been carried out. Refer to the accompanying soil and rock terms sheet for further information.

Further Advice: CG would be pleased to further discuss how any of the above issues could affect a specific project. We would also be pleased to provide further advice or assistance including:

- Assessment of suitability of designs and construction techniques;
- Contract documentation and specification;
- Construction control testing (earthworks, pavement materials, concrete);
- Construction advice (foundation assessments, excavation support).

Appendix B
Site Investigation Plan



	LEGEND:	Core Geotech	Scale: A4 - NOT TO SCALE	Client: SYDNEY ENVIRONMENTAL GROUP PTY LTD	
	APPROXIMATE BOREHOLE LOCATION		Date: 12/10/2024	Project: PROPOSED SPORTS LIGHTS	
			Drawing: RS	Location: 14 WATERLOO ROAD GREENACRE NSW	
			Drawing No: CG24/0997-1	Sheet: 1 of 1	**SITE PLAN**

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Appendix C
Borehole Logs

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BOREHOLE NUMBER BH01

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED				CL/CI	Silty Sandy CLAY, low to medium plasticity, dark grey, with fine grained sand and rootlets , moisture condition <= plastic limit	DCP = 6	FILL
					CI/CH	Silty CLAY, medium to high plasticity, dark grey brown, trace fine grained sand and gravel, moisture condition <= plastic limit	6	
							4	
							2	
			0.5				1	
					CH	Silty CLAY/CLAY, high plasticity, pale grey red brown with ironstone gravel, moisture condition <= plastic limit, soft to firm	2	RESIDUAL
							2	
							1	
					CH	Silty CLAY/CLAY, high plasticity, pale grey red brown with ironstone gravel, moisture condition <= plastic limit, very stiff	4	
			1.0				10	
						Borehole BH01 terminated at 1m	15	BH01 refusal at 1.0m depth
							+25	
			1.5					
			2.0					
			2.5					

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BOREHOLE NUMBER BH02

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED				SC	Silty Gravelly Clayey SAND, fine to medium grained, grey brown, fine to medium gravel, low plasticity fines, moisture condition = moist	DCP = 4	FILL
							3	
							2	
							2	
						Borehole BH02 terminated at 0.4m	2	BH02 refusal at 0.4m depth
			0.5				2	
							2	
							2	
							2	
							2	
							3	
			1.0				2	
							4	
							5	
							4	
							7	
			1.5				5	
							6	
							5	
							5	
							6	
			2.0				8	
							8	
							9	
							12	
			2.5				13	

Core Geotech Pty Ltd
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Telephone: +61 479 154 977

BOREHOLE NUMBER BH03

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED					CONCRETE SLAB	DCP = 3	CONCRETE
							4	
					CI	Silty Sandy CLAY/CLAY, medium plasticity, grey brown, fine to medium grained sand and garvel, moisture condition < plastic limit	4	FILL
							2	
			0.5				2	
					CH	Silty CLAY/CLAY, medium to high plasticity, brown grey becoming red organse and pale brown grey, moisture condition >= plastic limit, firm	2	RESIDUAL
							2	
							2	
							2	
			1.0				3	
							4	
					CH	Silty CLAY/CLAY, medium to high plasticity, brown grey becoming red organse and pale brown grey, moisture condition >= plastic limit, very stiff	7	
							6	
							8	
			1.5				13	
							+20	
						Borehole BH03 terminated at 1.6m		BH03 refusal at 1.6m depth
			2.0					
			2.5					

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BOREHOLE NUMBER BH04

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED					CONCRETE SLAB	DCP = 0	CONCRETE
							1	
					CH	Silty CLAY/CLAY, high plasticity, pale red grey, trace ironstone gravel, moisture condition >= plastic limit, firm	2	RESIDUAL
							2	
			0.5				2	
					CH	Silty CLAY/CLAY, high plasticity, pale red grey, trace ironstone gravel, moisture condition >= plastic limit, very stiff	6	
							13	
							12	
							15	
			1.0				+25	
						Borehole BH04 terminated at 1.2m		BH04 refusal at 1.2m depth
			1.5					
			2.0					
			2.5					

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Telephone: +61 479 154 977

BOREHOLE NUMBER BH05

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED				CL	Silty Sandy CLAY, low plasticity, dark grey brown with fine grained sand, trace rootlets, moisture condition <= plastic limit	DCP = 10	TOPSOIL/FILL
							4	
					CI/CH	Silty CLAY, medium to high plasticity, grey brown, trace fine grained sand, moisture condition >= plastic limit	7	FILL
							4	
			0.5				2	
							2	
							1	
							2	
							2	
			1.0				1	
						Borehole BH05 terminated at 1m	1	BH05 refusal at 1.0m depth
							2	
							2	
							3	
			1.5				4	
							6	
							7	
							9	
							6	
			2.0				14	
							18	
							+20	
			2.5					

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BOREHOLE NUMBER BH06

CLIENT Sydney Environmental Group Pty Ltd **PROJECT NAME** Proposed Sports Light

PROJECT NUMBER CG24-0997 **PROJECT LOCATION** 14 Waterloo Road Greenacre NSW

DATE STARTED 24/9/24 **COMPLETED** 24/9/24 **R.L. SURFACE** _____ **DATUM** _____

DRILLING CONTRACTOR Soil Strata Pty Ltd **SLOPE** 90° **BEARING** ---

EQUIPMENT Hand Auger **HOLE LOCATION** Refer to Drawing No. CG24-0997-1

HOLE SIZE 125mm **LOGGED BY** GN **CHECKED BY** RS

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
HA	NONE ENCOUNTERED					CONCRETE SLAB		CONCRETE SLAB
			0.5			Borehole BH06 terminated at 0.2m	DCP = +30 Double Bounce	BH06 refusal at 0.2m depth
			1.0					
			1.5					
			2.0					
			2.5					

Abbreviations, Notes & Symbols

Core Geotech

SUBSURFACE INVESTIGATION

METHOD

Borehole Logs		Excavation Logs	
AS#	Auger screwing (#-bit)	BH	Backhoe/excavator bucket
AD#	Auger drilling (#-bit)	NE	Natural exposure
B	Blank bit	HE	Hand excavation
V	V-bit	X	Existing excavation
T	TC-bit		
HA	Hand auger	**Cored Borehole Logs**	
R	Roller/tricone	NMLC	NMLC core drilling
W	Washbore	NQ/HQ	Wireline core drilling
AH	Air hammer		
AT	Air track		
LB	Light bore push tube		
MC	Macro core push tube		
DT	Dual core push tube		

SUPPORT

Borehole Logs		Excavation Logs	
C	Casing	S	Shoring
M	Mud	B	Benched

SAMPLING

B	Bulk sample
D	Disturbed sample
U#	Thin-walled tube sample (#mm diameter)
ES	Environmental sample
EW	Environmental water sample

FIELD TESTING

PP	Pocket penetrometer (kPa)
DCP	Dynamic cone penetrometer
PSP	Perth sand penetrometer
SPT	Standard penetration test
PBT	Plate bearing test
s_u	Vane shear strength peak/residual (kPa) and vane size (mm)
N*	SPT (blows per 300mm)
Nc	SPT with solid cone
R	Refusal

**denotes sample taken*

BOUNDARIES

————	Known
— — — -	Probable
.....	Possible

SOIL

MOISTURE CONDITION

D	Dry
M	Moist
W	Wet
Wp	Plastic Limit
Wl	Liquid Limit
MC	Moisture Content

CONSISTENCY

VS	Very Soft
S	Soft
F	Firm
St	Stiff
VSt	Very Stiff
H	Hard
Fb	Friable

DENSITY INDEX

VL	Very Loose
L	Loose
MD	Medium Dense
D	Dense
VD	Very Dense

USCS SYMBOLS

GW	Well graded gravels and gravel-sand mixtures, little or no fines
GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
GM	Silty gravels, gravel-sand-silt mixtures
GC	Clayey gravels, gravel-sand-clay mixtures
SW	Well graded sands and gravelly sands, little or no fines
SP	Poorly graded sands and gravelly sands, little or no fines
SM	Silty sand, sand-silt mixtures
SC	Clayey sand, sand-clay mixtures
ML	Inorganic silts of low plasticity, very fine sands, rock flour, silty or clayey fine sands
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays
OL	Organic silts and organic silty clays of low plasticity
MH	Inorganic silts of high plasticity
CH	Inorganic clays of high plasticity
OH	Organic clays of medium to high plasticity
PT	Peat muck and other highly organic soils

ROCK

WEATHERING		STRENGTH	
RS	Residual Soil	EL	Extremely Low
XW	Extremely Weathered	VL	Very Low
HW	Highly Weathered	L	Low
MW	Moderately Weathered	M	Medium
DW*	Distinctly Weathered	H	High
SW	Slightly Weathered	VH	Very High
FR	Fresh	EH	Extremely High

**covers both HW & MW*

ROCK QUALITY DESIGNATION (%)

$$= \frac{\text{sum of intact core pieces} > 100\text{mm}}{\text{total length of section being evaluated}} \times 100$$

CORE RECOVERY (%)

$$= \frac{\text{core recovered}}{\text{core lift}} \times 100$$

NATURAL FRACTURES

Type

JT	Joint
BP	Bedding plane
SM	Seam
FZ	Fractured zone
SZ	Shear zone
VN	Vein

Infill or Coating

Cn	Clean
St	Stained
Vn	Veneer
Co	Coating
Cl	Clay
Ca	Calcite
Fe	Iron oxide
Mi	Micaceous
Qz	Quartz

Shape

pl	Planar
cu	Curved
un	Undulose
st	Stepped
ir	Irregular

Roughness

pol	Polished
slk	Slickensided
smo	Smooth
rou	Rough

Soil and Rock Terms

Core Geotech

SOIL

MOISTURE CONDITION

Term	Description
Dry	Looks and feels dry. Cohesive and cemented soils are hard, friable or powdery. Uncemented granular soils run freely through the hand.
Moist	Feels cool and darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.
Wet	As for moist, but with free water forming on hands when handled.

For cohesive soils, moisture content may also be described in relation to plastic limit (W_P) or liquid limit (W_L). [>> much greater than, > greater than, < less than, << much less than].

CONSISTENCY

Term	c_u (kPa)	Term	c_u (kPa)
Very Soft	< 12	Very Stiff	100 - 200
Soft	12 - 25	Hard	> 200
Firm	25 - 50	Friable	-
Stiff	50 - 100		

DENSITY INDEX

Term	I_D (%)	Term	I_D (%)
Very Loose	< 15	Dense	65 – 85
Loose	15 – 35	Very Dense	> 85
Medium Dense	35 – 65		

PARTICLE SIZE

Name	Subdivision	Size (mm)
Boulders		> 200
Cobbles		63 - 200
Gravel	coarse	20 - 63
	medium	6 - 20
	fine	2.36 - 6
Sand	coarse	0.6 - 2.36
	medium	0.2 - 0.6
	fine	0.075 - 0.2
Silt & Clay		< 0.075

MINOR COMPONENTS

Term	Proportion by Mass coarse grained	fine grained
Trace	≤ 5%	≤ 15%
Some	5 - 2%	15 - 30%

SOIL ZONING

Layers	Continuous exposures
Lenses	Discontinuous layers of lenticular shape
Pockets	Irregular inclusions of different material

SOIL CEMENTING

Weakly	Easily broken up by hand
Moderately	Effort is required to break up the soil by hand

SOIL STRUCTURE

Massive	Coherent, with any partings both vertically and horizontally spaced at greater than 100mm
Weak	Peds indistinct and barely observable on pit face. When disturbed approx. 30% consist of peds smaller than 100mm
Strong	Peds are quite distinct in undisturbed soil. When disturbed >60% consists of peds smaller than 100mm

ROCK

SEDIMENTARY ROCK TYPE DEFINITIONS

Rock Type	Definition (more than 50% of rock consists of….)
Conglomerate	… gravel sized (> 2mm) fragments
Sandstone	… sand sized (0.06 to 2mm) grains
Siltstone	… silt sized (<0.06mm) particles, rock is not laminated
Claystone	… clay, rock is not laminated
Shale	… silt or clay sized particles, rock is laminated

STRENGTH

Term	Is50 (MPa)	Term	Is50 (MPa)
Extremely Low	< 0.03	High	1 – 3
Very Low	0.03 – 0.1	Very High	3 – 10
Low	0.1 – 0.3	Extremely High	> 10
Medium	0.3 – 1		

WEATHERING

Term	Description
Residual Soil	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident
Extremely Weathered	Rock is weathered to such an extent that it has 'soil' properties, i.e. it either disintegrates or can be remoulded, in water. Fabric of original rock is still visible
Highly Weathered	Rock strength usually highly changed by weathering; rock may be highly discoloured
Moderately Weathered	Rock strength usually moderately changed by weathering; rock may be moderately discoloured
Distinctly Weathered	See 'Highly Weathered' or 'Moderately Weathered'
Slightly Weathered	Rock is slightly discoloured but shows little or no change of strength from fresh rock
Fresh	Rock shows no signs of decomposition or staining

NATURAL FRACTURES

Type	Description
Joint	A discontinuity or crack across which the rock has little or no tensile strength. May be open or closed
Bedding plane	Arrangement in layers of mineral grains of similar sizes or composition
Seam	Seam with deposited soil (infill), extremely weathered insitu rock (XW), or disoriented usually angular fragments of the host rock (crushed)
Shear zone	Zone with roughly parallel planar boundaries, of rock material intersected by closely spaced (generally < 50mm) joints and /or microscopic fracture (cleavage) planes
Vein	Intrusion of any shape dissimilar to the adjoining rock mass. Usually igneous

Shape	Description
Planar	Consistent orientation
Curved	Gradual change in orientation
Undulose	Wavy surface
Stepped	One or more well defined steps
Irregular	Many sharp changes in orientation

Infill or Coating	Description
Clean	No visible coating or discolouring
Stained	No visible coating but surfaces are discoloured
Veneer	A visible coating of soil or mineral, too thin to measure; may be patchy
Coating	Visible coating ≤ 1mm thick. Ticker soil material described as seam

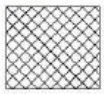
Roughness	Description
Polished	Shiny smooth surface
Slickensided	Grooved or striated surface, usually polished
Smooth	Smooth to touch. Few or no surface irregularities
Rough	Many small surface irregularities (amplitude generally < 1mm). Feels like fine to coarse sandpaper

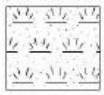
Note: soil and rock descriptions are generally in accordance with AS1726-2017 Geotechnical Site Investigations

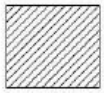
Graphic Symbols Index

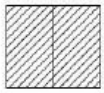
Core Geotech

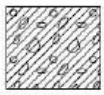
Soil


Fill

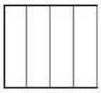

Peat, Topsoil


Clay

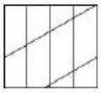

Silty Clay

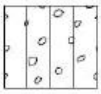

Gravelly Clay

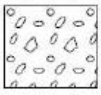

Sandy Clay


Silt

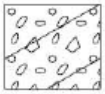

Sandy Silt


Clayey Silt


Gravelly Silt

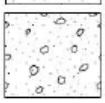

Gravel


Sandy Gravel

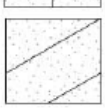

Clayey Gravel


Silty Gravel


Sand

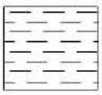

Gravelly Sand

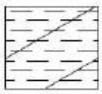

Silty Sand


Clayey Sand

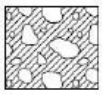
Rock


Sandstone

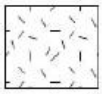

Shale

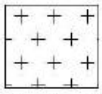

Clayey Shale

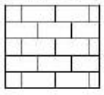

Siltstone


Conglomerate

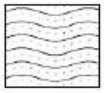

Claystone

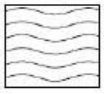

Dolerite, Basalt

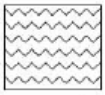

Granite


Limestone


Tuff

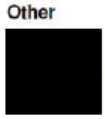

Coarse grained Metamorphic


Medium grained Metamorphic

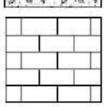

Fine grained Metamorphic


Coal

Other


Asphalt


Concrete


Brick

Water Measurements

Level at time of drilling

Level after drilling

Inflow

Outflow

Appendix D
Laboratory Test Results

CERTIFICATE OF ANALYSIS

Work Order	: **ES2432775**	Page	: 1 of 3
Client	: **Core Geotech Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: Mr Raj Singh	Contact	: Customer Services ES
Address	: Suite 314 Level 3/33 Lexington Bella Vista 2153	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: CG24-0997, Proposed Flood Lights	Date Samples Received	: 08-Oct-2024 15:15
Order number	: ----	Date Analysis Commenced	: 09-Oct-2024
C-O-C number	: ----	Issue Date	: 10-Oct-2024 15:05
Sampler	: Raj Singh		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 3		
No. of samples analysed	: 3		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ED045G: LOR raised for Chloride on sample nos.1 and 2 due to sample matrix.
- Corrosion assessment for Concrete and Steel piles in soil per Australian Standard AS2159-2009 uses a combination of soil and groundwater data (Tables 6.4.2 C & 6.5.2 C). In the absence of groundwater data, assessment has been made against soil criteria only. Refer to AS2159-2009 section 6.4 for further interpretation of corrosion assessment. ALS is not NATA accredited for Corrosion Assessment comments
- EA167: Soil Condition A – High permeability soils (e.g. sands and gravels) which are in groundwater
- EA167: Soil Condition B – Low permeability soils (e.g. silts and clays) or all soils above groundwater
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH02 0.3 - 0.5m	BH03 0.5 - 0.7m	BH04 0.3 - 0.5m	----	----
			Sampling date / time	03-Oct-2024 00:00	03-Oct-2024 00:00	03-Oct-2024 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2432775-001	ES2432775-002	ES2432775-003	--------	--------
				Result	Result	Result	----	----
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	**6.8**	**5.9**	**6.5**	**----**	**----**
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	**21**	**84**	**69**	**----**	**----**
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**18.6**	**16.0**	**19.2**	**----**	**----**
EA080: Resistivity								
Resistivity at 25°C	----	1	ohm cm	**47600**	**11900**	**14500**	**----**	**----**
EA167: Corrosion Classification (per AS2159-2009)								
ø Exposure Classification - Concrete Piles Soil Condition A	----	-	-	**Mild**	**Mild**	**Mild**	**----**	**----**
ø Exposure Classification - Concrete Piles Soil Condition B	----	-	-	**Non Aggressive**	**Non Aggressive**	**Non Aggressive**	**----**	**----**
ø Exposure Classification - Steel Piles Soil Condition A	----	-	-	**Non Aggressive**	**Non Aggressive**	**Non Aggressive**	**----**	**----**
ø Exposure Classification - Steel Piles Soil Condition B	----	-	-	**Non Aggressive**	**Non Aggressive**	**Non Aggressive**	**----**	**----**
ED040S: Soluble Major Anions								
Sulfate as SO4 2-	14808-79-8	10	mg/kg	<10	**110**	**40**	**----**	**----**
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	10	mg/kg	<100	<100	**140**	**----**	**----**

Appendix E
Site Photography

Photo 1: Site view looking towards east of the bowling field

Photo 2: Site view looking towards west of the bowling club

Photo 3: Site view showing looking towards south of the bowling club

Appendix F
Foundation Maintenance Homeowner's Guide

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18
replaces
Information
Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction

There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion

All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation

This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume – particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil

All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure

This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.
- In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites with only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes
H	Highly reactive clay sites, which can experience high ground movement from moisture changes
E	Extremely reactive sites, which can experience extreme ground movement from moisture changes
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise

Tree root growth
Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation
Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

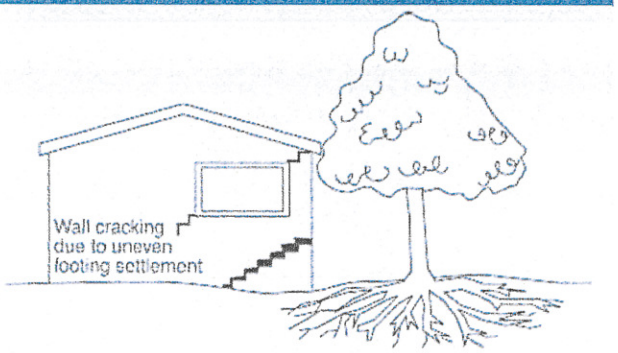
Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

Seasonal swelling/shrinkage in clay
Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.

Trees can cause shrinkage and damage



As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Movement caused by tree roots
In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself
Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures
Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation cause a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem.
Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870.

AS 2870 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

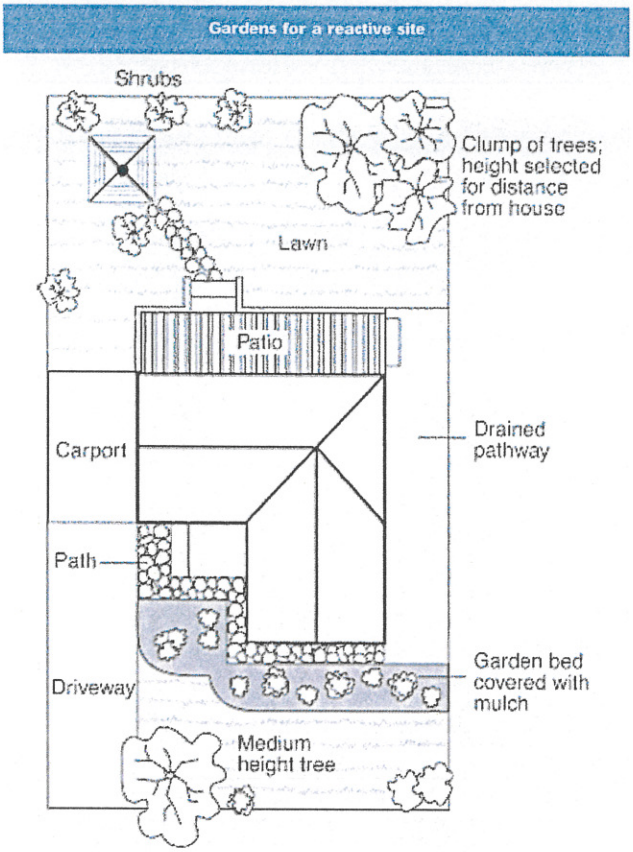
It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted	15–25 mm but also depend on number of cracks	4



should extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation

In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden

The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees

Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs

State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation

Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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Appendix 6 – Waste Management Plan

Site Address: 14A Waterloo Road, Mount Lewis		
Section 1: Estimated Amount of Excavation Material (m^3): 32	☒ Re-use on-site ☐ Re-use off site (go to section 2) ☐ Landfill Disposal (go to section 3)	
Section 2: Address if re-used off site:		
Section 3: Name and Address of licensed landfill:		
Section 4: Estimated Construction Material Waste		

Type of Material:	**Estimated Amount (m^3):**	**How will you manage this waste?**		
		Re-use on-site	**Recycle Offsite**	**Landfill**
Bricks		☐	☐	☐
Concrete		☐	☐	☐
Tiles		☐	☐	☐
Timber (clean) Timber (treated)		☐ ☐	☐ ☐	☐ ☐
Plasterboard		☐	☐	☐
Green Waste		☐	☐	☐
Other	<1	☐	☐	☒

Off-Site Recycling Facilities	**Licensed Landfill Site/s**
----------	To be confirmed ----------
----------	----------
----------	----------

Appendix 7 – Survey Plan

REAR OF ADJOINING HOUSES

REAR OF ADJOINING HOUSES

REAR OF ADJOINING HOUSES

WATERLOO ROAD

CARPARK ON LOWER LEVEL

BOWLING GREEN

BOWLING GREEN

HIGH RENDERED RETAINING WALL

GRASSED AREA

BRICK

GRATE

METAL GARAGE

TANK

AWNING

AWNING

AWNING

MOUNT LEWIS BOWLING CLUB MAIN BUILDING

BENCHMARK
TOP OF WALL
RL 41.39 AHD

98°49'20" 40.25

98°30'50" 52.35

8°31'40" 7.885

189°17'50" 1.22

0°51'40" 57.3

278°51'05" 40.345

MGA

DP30116

Notes:
* This plan has been prepared from a combination of field survey and existing records, for the purpose of updating the drawing records of the land and should not be used for any other purpose.
* The title boundaries shown hereon have been determined by plan dimensions only and have not been verified by field measurement.
* Services shown hereon have been located by field survey only where visible.
* Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed location of all services.
* Contours have been interpolated from spot heights taken and are an approximation only.
* This note is an integral part of this plan.

ORIGIN OF LEVELS IS AHD USING SCIMS COORS NETWORK

SITE OF AREA SURVEYED

LOT 100
DP1280447

98°49'20" 40.25
8°31'40" 7.885
98°30'50" 52.35
189°17'50" 1.22
98°30'50" 39.365
189°17'50" 64.53
278°51'05" 40.345
7°57'40" 38.88
98°51'10" 2.55
278°53'40" 8.635
189°57'40" 12.495
278°54'40" 90.045
WATERLOO ROAD

LOCALITY SKETCH

SYDNEY REGISTERED SURVEYORS
NSW STATE CERTIFIED
LAND & ENGINEERING SURVEYORS
DEVELOPMENT CONSULTANTS
ABN: 14 013 722 806

- ALL SURVEYING SERVICES
- LAND SUBDIVISION
- ROAD / DRIVEWAY DESIGN
- DRAINAGE / OSD DESIGN
- DETAIL SURVEYS
- STRATA PLANS
- IDENTIFICATION SURVEYS
- CONSTRUCTION SETOUT
- PROJECT MANAGEMENT

Head Office: Liverpool
57 Pine Road, Casula NSW 2170
Ph: 9822-2477
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Mobile 0418268930, 0431919480

LOCAL COUNCIL AREA: CANTERBURY-BANKSTOWN

DETAIL SURVEY OVER LOT 100 IN DP 1280447

BEING MOUNT LEWIS BOWLING CLUB

DRAWN: RW	DATE: 10-02-25	CADREF: 7758MOUNTLEWIS
SCALE 1:100	APPROVED: RW	DATUM: AHD

AMEND.	DATE	DESCRIPTION	BY
A	10/02/25	INITIAL ISSUE	RGW

PLAN REFERENCE:

7758 MOUNTLEWIS

SHEET 1 OF 1

Allera Planning Pty Ltd
Level 3, 22 Darley Road, Manly, NSW 2095