



REVIEW OF ENVIRONMENTAL FACTORS

INSTALLATION OF FOUR (4) NEW SPORTS LIGHTING POLES AND
ASSOCIATED LIGHTING AT LYSAGHT PARK,
BIBBY STREET, CHISWICK

LOT 1 DP 909058

APRIL 2018

Prepared by
Milestone (AUST) Pty Limited

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FOREWORD

Milestone (AUST) Pty Limited (Milestone) has prepared this Review of Environmental Factors (REF) for the City of Canada Bay Council. This REF assesses the potential environmental impacts that could arise from the installation of four (4) new sports lighting poles and associated lighting at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058).

The REF has been prepared in accordance with the relevant provisions of the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulation 2000*.

On the basis of a site inspection by the authors of the REF, consideration of key environmental, economic and community aspects, and the information presented in this REF, it is concluded that by adopting the mitigation measures and recommendations contained in this assessment it is unlikely that there would be significant adverse environmental impacts associated with the proposed works.

CERTIFICATION

This REF provides a true and fair assessment of the proposed activity in relation to its potential effects on the environment. It addresses all matters affecting or likely to affect the environment as a result of the proposed activity.

Name of the person(s) and who prepared the REF: Patrick Lebon

Position of the person(s) who prepared the REF: Director



Signature:

Date: 24 April 2018

I have examined this REF and the certification and accept the REF on behalf of City of Canada Bay Council.

Name of the Reviewing Officer:

Position of the Reviewing Officer:

Signature:

Date:

PART 5 DETERMINATION

City of Canada Bay Council as the determining authority determines that the Proposal can proceed as described in the REF.

Name of City of Canada Bay Council Delegated Officer:

Designation:

Signature:

Date:

TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	PROPOSED ACTIVITY	1
	2.1 Project Objectives	1
	2.2 Location of Activity	1
	2.3 Description of the Activity	2
	2.4 Licenses	4
	2.5 Reasons for the Activity and Consideration of Alternatives.....	4
	2.6 Stakeholder Consultation	5
	2.7 Community Consultation	5
3	THE SITE	5
	3.1 The Site and its Context	5
4	PLANNING CONTEXT	7
	4.1 Environmental Planning Assessment Act 1979.....	7
	4.2 Threatened Species Conservation Act 1995	7
	4.3 Contaminated Land Management Act 1997.....	8
	4.4 Protection of the Environment Operations Act 1997	8
	4.5 Waste Avoidance and Resource Recovery Act 2001	8
	4.6 State Environmental Planning Policy (Infrastructure) 2007	8
	4.7 State Environmental Planning Policy No. 55 – Remediation of Land.....	9
	4.8 State Environmental Planning Policy (Coastal Management) 2018.....	9
	4.9 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005	10
	4.10 Canada Bay Local Environmental Plan 2013	11
	4.11 Canada Bay Development Control Plan 2013.....	14
5	ENVIRONMENTAL IMPACTS AND MANAGEMENT	16
	5.1 Visual Amenity.....	16
	5.2 Acoustic Amenity.....	17
	5.3 Traffic and Transport.....	18
	5.4 Heritage.....	18
	5.5 Flora and Fauna	18
	5.6 Flooding and Stormwater	18
	5.7 Socio Economic Impacts	19
	5.8 Soils and Geotechnical Impacts	19
	5.9 Spoil and Waste Management	19
	5.10 Environmental Planning and Assessment Regulation 2000.....	19
6	CONCLUSION	21
	6.1 Summary of Impacts	21
	6.2 Summary of Recommendations	21

APPENDICES

- Appendix A: Electrical Services Lighting Layout, prepared by Gary Roberts and Associates Pty Ltd
- Appendix B: Light Spill Compliance Certificate, prepared by Gary Roberts and Associates, dated 23 August 2017
- Appendix C: Review of Traffic and Parking Matters Statement, prepared by McLaren Traffic Engineering dated April 2018
- Appendix D: Noise Impact Assessment prepared by Marshall Day Acoustics dated April 2018
- Appendix E: Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 – Assessment prepared by Milestone (AUST) Pty Limited dated April 2018

1 INTRODUCTION

1.1 Brief Description Of The Proposed Activity

This Review of Environmental Factors (REF) has been prepared by Milestone (AUST) Pty Limited for the City of Canada Bay Council (Council) to assess the likely environmental impacts associated the installation of four (4) new sports lighting poles and associated lighting at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058) (the site).

The proposed works are contained wholly within Lysaght Park (refer to Figure 1).

1.2 Permissibility and Type of Approval Sought

This REF has been prepared in accordance with the requirements of Clause 111 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). It includes an analysis of the subject site and the proposed activity in the context of the relevant State and local planning policy and instruments. It also identifies potential environmental impacts including integration with existing land use and infrastructure and details mitigation measures proposed.

1.3 Supporting Documentation

This report has been prepared with reference to the following:

- Electrical Services Lighting Layout, prepared by Gary Roberts and Associates Pty Ltd (Appendix A);
- Light Spill Compliance Certificate, prepared by Gary Roberts and Associates, dated 23 August 2017 (Appendix B);
- Review of Traffic and Parking Matters Statement, prepared by McLaren Traffic Engineering dated April 2018 (Appendix C);
- Noise Impact Assessment prepared by Marshall Day Acoustics dated April 2018 (Appendix D); and
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 – Assessment prepared by Milestone (AUST) Pty Limited dated April 2018 (Appendix E).

2 PROPOSED ACTIVITY

2.1 Project Objectives

The objectives of the proposal are to facilitate increased organised sport and recreation opportunities through:

- Installation of four sports field light poles of 22m in height at the four corners of existing soccer pitch to enable winter weeknight training Tuesday to Thursday from 4:30pm – 9pm.
- Extending the weekend sports use from Saturdays 8am – 1pm only (existing) to Saturdays and Sundays 8am – 1pm (proposed).
- Enabling both junior and senior games through utilising the existing sports field as either two mini fields or a full size field.

2.2 Location of Activity

The subject works are located at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058). The site currently accommodates one playing field and is interspersed with open and grassed recreation areas. The park is bordered by on-street car parking on Byrne Avenue, Bibby Street and Swannell Avenue (refer to Figure 1).

The proposed works are located wholly within Lysaght Park, located in the middle, adjacent to the Swannell Avenue to the north and Bibby Street to the west (refer to Figure 2). Refer to the layout plan held at Appendix A for further details.



Figure 1: Aerial View of Lysaght Park, Chiswick
Source: Sixmaps 2016



Figure 2: Aerial View of Lysaght Park, Chiswick.
Source: Sixmaps 2016

2.3 Description of the Activity

The proposed activity includes the installation of four (4) sports lighting poles and associated lighting at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058).

The proposed activity comprises the following physical works:

Installation of New Light Poles

- Installation of four (4) new outdoor floodlighting poles approximately 22.0m in height to the northern, southern, eastern and western corners of the existing Field No. 1.

Refer to the layout plan held at Appendix A for specific pole locations and details. An extract of pole locations is however provided at Figure 3 (as annotated) below.



Figure 3: Extract of proposed lighting plan (annotated in blue by Milestone for clarity)

The proposed activity seeks to alter existing operational aspects associated with the use of the existing sports field which are provided in full for clarity below.

Typical Playing Schedule

A typical playing schedule for Lysaght Park includes:

- Sporting Groups: Soccer.
- Training: Weekends (during winter season, Saturday 8.00am to 1.00pm).

Hours of Illumination

The proposed floodlighting illumination hours will be restricted to the following hours:

- Sporting Groups: Soccer.
- Tuesday: 5:00pm to 9:00pm.

- Wednesday: 5:00pm to 9:00pm.
- Thursday: 5:00pm to 9:00pm.

No floodlighting is proposed on Saturday or Sunday evenings. The proposed floodlighting illumination intensity is noted as being consistent with existing illumination, as detailed in the proposed lighting plan held at Appendix A.

Parking

Lysaght Park is bordered by on-street car parking on Byrne Avenue, Bibby Street and Swannell Avenue.

The proposal does not include any modification to any existing car parking arrangements.

Access and Waste Management

All machinery and equipment to be utilised for the proposed works will be transported to the site via the existing vehicle access point along Bibby Street to the north of the site. The number of vehicles, vehicle movements and specific quantities of waste and recycling materials generated by the proposed works will be determined prior to the commencement of the works and upon the successful appointment of a qualified contractor.

It is understood that free and full public access to all other areas of Lysaght Park not subject to proposed works is to be maintained during the course of construction works.

Construction Hours and Timeframe

Subject to the outcomes of the community consultation and Council's endorsement, the proposed works are scheduled to commence in late 2018 and will occur between standard construction hours of 7:00am and 5:00pm, Monday to Friday, for a duration of approximately 6-8 weeks. Works are not proposed on Sundays or Public Holidays. It is anticipated that new lighting poles and associated outdoor lighting will commence operation in late 2018, subject to community consultation and endorsement by Council.

2.4 Licenses

The site is not known to contain any species or endangered communities classified under the *Threatened Species Conservation Act 1995* and therefore the proposed activity does not require a Section 91 licence from the NSW Office of Environment and Heritage prior to the commencement of works.

The proposed activity is located within close proximity (approximately 20m) from Parramatta River and is classified as waterfront land. Pursuant to Section 38 of the *Water Management (General) Regulation 2011* however:

"A public authority is exempt from section 91E (1) of the Act in relation to all controlled activities that it carries out in, on or under waterfront land."

Having regard to the dictionary of the Water Management Act 2000, Council is classified as a 'public authority' and proposed works therefore do not require any controlled activity approval or license from the NSW Office of Water.

On this basis, no licences are required to be obtained for the proposed activity.

2.5 Reasons for the Activity and Consideration of Alternatives

The proposed provision of the installation of sports lighting poles and associated lighting is considered necessary to satisfy the aims contained within the Canada Bay Local Planning Strategy (2010) **and Council's Recreation and Facilities Strategy (2013)** including, however not limited to, provision of facilities, and increased utilisation of and visitation to parks, sporting and recreation facilities.

Having regard to the objectives of these documents, the provision of lighting to Lysaght Park will enhance the use of this asset in evenings and during winter months and will provide a tangible benefit to the local community and

local sporting groups. **It is a requirement of Council's Sports Field Allocation Policy** that clubs who wish to hire fields within the Canada Bay LGA must demonstrate that their membership is significantly of Canada Bay residents.

Accordingly, **the only alternative to the proposed activity is to 'do nothing'**. This would result in the continued underutilisation of this key public asset and would be contrary to the objectives of the EP&A Act to achieve orderly, economic and sustainable development and use of land. This alternative would also be contrary to the objectives of the Local Government Act 1993 (LG Act) for the provision, management, improvement and development of goods, services and facilities, appropriate to the current and future needs of local communities and of the wider public, as well as contrary to the objectives of the Canada Bay Local Planning Strategy and Management Action Plan for the reserve.

2.6 Stakeholder Consultation

The site is located wholly within the Lysaght Park site and does not impact the provision of any existing facilities or infrastructure operated or owned by other Government agencies or utility providers. Liaison with the relevant sewer, electricity and gas providers will be undertaken prior to and during works on the site. Stakeholder consultation with Government agencies is not required for the proposed activity.

2.7 Community Consultation

Milestone has been provided with the details of the community consultation to be managed by Council for these proposed works. Community consultation will be undertaken from 1 – 28 May 2018. The community will be notified of the consultation period through a variety of channels including direct notification to nearby residents, DL flyer **distribution to broader community members, on Council's website and social media profiles, within the Inner West** Courier and direct email. The community will be able to provide their feedback 24 hours a day, 7 days a week online, by emailing, via post and at two community listening posts as follows:

Table 1: Community Consultation Program

Online	https://canadabay.engagementhub.com.au
Community Listening Posts	Listening post dates and venues: Wednesday, 9 May 6pm – 7.30pm, Chiswick Community Centre Saturday, 19 May 11am – 12.30pm, Lysaght Park
By Post	Attention: City Assets, Technical Services and Operations City of Canada Bay Council Locked Bag 1470, Drummoyne NSW 1470
By Email	parksupgrade@canadabay.nsw.gov.au

Additionally it is recommended a site hoarding or fencing is to be erected on the site prior to works commencing, and is to include details of the proposed works as well as details of the contractors (including contact details) available for the duration of construction works. Hoarding must also ensure adequate pedestrian circulation and access to all other areas of the site not subject to proposed works.

3 THE SITE

3.1 The Site and its Context

The subject works are located at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058). The site currently accommodates one (1) playing field and is interspersed with open and grassed recreation areas and trees. Lysaght Park is bordered by on-street car parking on Byrne Avenue, Bibby Street and Swannell Avenue (refer to Figure 1). The site is bound by, and accessible from Bibby Street to the west and Byrne Avenue to the south and Swannell Avenue to the north. The Parramatta River bounds the site to the east. There is currently a shared pedestrian and

bike path to the east of Lysaght Park in addition to a pedestrian path to the east of the site adjacent to the boundary with Parramatta River.

Lysaght Park was built on reclaimed land in 1950-51 and has since been used for a range of active sports including netball and soccer in the 1970s-1990s.

In 1999 Council endorsed seven parks including Lysaght Park to be available to the community for off-leash dog activity. Currently 17 parks across the LGA provide this function with six of the parks accommodating both active sports and off-leash dog activity.

In 2007 Council endorsed the Generic Plan of Management – Community Land in which Lysaght Park is categorised as a sportsground and park.

In 2013 Council undertook a Recreations Facilities Strategy to review current and future community recreation needs including provision of sports fields.

The proposed works are located wholly within Lysaght Park only, and are located in the middle of the site adjacent to Bibby Street and Swannell Avenue (refer to Figure 2). Refer to the layout plan held at Appendix A for further details.

Existing development to the west of the site consists of ‘**Campbell Park**’ (refer above), inclusive of existing playing fields, an amenities block and sports lighting, and a smaller reserve, adjacent to Lysaght Park further east. Development to the north and south of the site consists of predominately low density established residential development (refer Figure 2). Parramatta River is located directly to the east of Lysaght Park, forming its eastern boundary.



Photo 1: View of existing Lysaght Park facing north west towards existing residential properties.



Photo 2: View of existing Swannell Avenue east.



Photo 3: View of existing Lysaght Park facing south east towards Byrne Avenue.



Photo 4: View of Campbell Park facing west from Lysaght Park across Bibby Street.



Photo 5: View of existing Lysaght Park facing north east towards existing residential properties.



Photo 6: View of existing Lysaght Park facing north towards existing residential properties and existing pedestrian and bike path and pedestrian path.

4 PLANNING CONTEXT

The following Section provides an appraisal of the proposed activity having regard to the relevant State and any Commonwealth legislation applicable to the proposed activity as well as any provisions in statutory planning instruments that are relevant to the proposed activity.

4.1 Environmental Planning Assessment Act 1979

The EP&A Act establishes a framework for the assessment of environmental impacts associated with development. The EP&A Act establishes Environmental Planning Instruments (EPI) to control development activities including State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs) some of which include provisions relevant to the proposal. This section addresses the relevant legislation and EPI provisions that are relevant to the proposed demolition.

Under the EP&A Act, Council is **classified as a 'proponent' and 'a determining authority'** (under Part 5 of the EP&A Act) and must assess an activity under Part 5 of the EP&A Act if it may be carried out without development consent. The project is unlikely to have a significant impact on the environment and consequently an environmental impact statement is not required pursuant to Section 5.7 of the EP&A Act.

Section 5.5 of the EP&A Act requires that a determining authority in its consideration of an activity has a duty to consider the environmental impacts of the activity. Clause 228 of the Environmental Planning Assessment Regulation 2000 lists those factors that must be taken into account when considering the likely impact of an activity on the environment. This REF addresses those heads of consideration and meets the requirements of the Act and regulations in relation to the assessment of development under Part 5 of the EP&A Act, contained within Section 5 of this report.

4.2 Threatened Species Conservation Act 1995

Council holds information on flora and fauna in the Local Government Area (LGA), contained within the following documents:

- Fauna of the City of Canada Bay LGA 2013-2014, prepared by InSight Ecology, dated August 2014, and;
- City of Canada Bay Flora Inventory, prepared by Gingra Ecological Surveys, dated 3 August 2009.

These reports provide a review of any vulnerable, endangered or critically endangered fauna and flora species in the City of Canada Bay LGA as listed in the Threatened Species Conservation Act 1995 (Threatened Species Act). Neither the flora nor fauna reports indicate the presence of any vulnerable, endangered or critically endangered fauna and flora species at the site.

Having regard to these reports, there are no fauna or flora species recorded on the site as being listed as critically endangered under the Threatened Species Act. On this basis a Seven Part Test is not required to be prepared for the proposed activity as part of this REF.

4.3 Contaminated Land Management Act 1997

In NSW, the management of contaminated land is also dealt with under the Contaminated Land Management Act 1997, the major objective of which is to “*establish a process for investigating and (where appropriate) remediating land that the Environmental Protection Authority (EPA) considers to be contaminated significantly enough to require regulation.*”

The site is not listed on the EPA Contaminated Land Register and the Section 149 Certificate provided to Milestone (Ref. PC2017/1645) does not indicate that the site is contaminated. No other documentation provided by Council indicates that the site is contaminated. On this basis there is no evidence to suggest that the site is contaminated.

4.4 Protection of the Environment Operations Act 1997

The *Protection of Environment and Operations Act 1997* (POEO Act) addresses water, land, air and noise pollution and waste management, making it illegal to pollute or cause or permit pollution of waters, and an offence to wilfully or negligently cause any substance to leak, spill or otherwise escape in a manner that harms or is likely to harm the environment. **If a pollution incident occurs during an activity and it causes or threatens ‘material harm’ to the environment, by law the appropriate regulatory authority – either the local council or the EPA must be notified.** As noted within Section 4.3 of this report there is no known environmental contamination present at the site.

4.5 Waste Avoidance and Resource Recovery Act 2001

The *Waste Avoidance and Resource Recovery Act 2001* (WARR Act) provides the following objectives to moderate and reduce the impacts of waste on the environment:

- a) **“To encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development,**
- b) *To ensure that resource management options are considered against a hierarchy of the following order:*
 - i. *Avoidance of unnecessary resource consumption,*
 - ii. *Resource recovery (including reuse, reprocessing, recycling and energy recovery),*
 - iii. *Disposal,*
- c) *To provide for the continual reduction in waste generation,*
- d) *To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste,*
- e) *To ensure that industry shares with the community the responsibility for reducing and dealing with waste,*
- f) *To ensure the efficient funding of waste and resource management planning, programs and service delivery,*
- g) *To achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis,*
- h) *To assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.”*

Having regard to Part 4.4 of this report, it is recommended that a Waste Management Plan be prepared by the principal contractor for the proposed activity prior to the commencement of work to ensure that no offensive noise, spills, leaks or discharge to the stormwater occurs as a result of the proposed activity and to ensure that all waste recovered from the site will be managed appropriately during the construction phase.

4.6 State Environmental Planning Policy (Infrastructure) 2007

The State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP) seeks to facilitate the efficient development of infrastructure and service facilities. It establishes a planning regime that aims to provide regulatory certainty and efficiency by identifying the environmental assessment category into which development falls and identifying matters to be considered in the assessment of development.

The proposed development comprises the provision of sports lighting on land owned and operated by Council. The proposed works can proceed without development consent pursuant to Clause 65(3)(d) of the Infrastructure SEPP and Part 5 of the EP&A Act 1979, as outlined below:

- (3) Development for any of the following purposes may be carried out by or on behalf of a council without consent on a public reserve under the control of or vested in the council:
- (a) roads, cycleways, single storey car parks, ticketing facilities and viewing platforms,
 - (b) outdoor recreational facilities, including playing fields, but not including grandstands,
 - (c) information facilities such as visitors' **centres and information boards**,
 - (d) lighting, if light spill and artificial sky glow is minimised in accordance with AS/NZS 1158: 2007, *Lighting for Roads and Public Spaces*,
 - (e) landscaping, including irrigation schemes (whether they use recycled or other water),
 - (f) amenity facilities,
 - (g) maintenance depots,
 - (h) environmental management works.

4.7 State Environmental Planning Policy No. 55 – Remediation of Land

The State Environmental Planning Policy No. 55 Remediation of Land (SEPP 55) seeks to ensure that the potential for contamination of land is considered by the Consent Authority through the rezoning or Development Application process. It establishes a planning regime that aims to provide regulatory certainty and efficiency by requiring the consideration of a preliminary contamination assessment. SEPP 55 requires that the Consent Authority needs to be satisfied that any contaminated land will be remediated and made suitable for the purpose for which the development is proposed to be carried out, before the land is used for that purpose.

Pursuant to Clause 7(1) and 7(2) of SEPP 55 the provisions of SEPP 55 are only applicable to development that requires the consent of a consent authority. The provisions of SEPP 55 are therefore not required to be considered for the proposed works or activity under Part 5 of the EP&A Act. Having regard to Section 4.3 of this report, the site is not identified as being contaminated and is considered acceptable with regard to the provisions of SEPP 55.

4.8 State Environmental Planning Policy (Coastal Management) 2018

The State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) came into effect on 3 April 2018. Lysaght Park falls within the area of the Coastal Management SEPP (refer to Figure 4). The proposal is not identified as being within proximity of any coastal wetlands, littoral rainforests, or being within a coastal environment. Five Dock Bay immediately to the east of the site is identified under the Coastal Management SEPP as a coastal environment.

The proposal will have minimal impact on the coastal environment and will not be inconsistent with the primary aim of the Coastal Management SEPP which is to manage ***“development in the coastal zone and protecting the environmental assets of the coast”***.

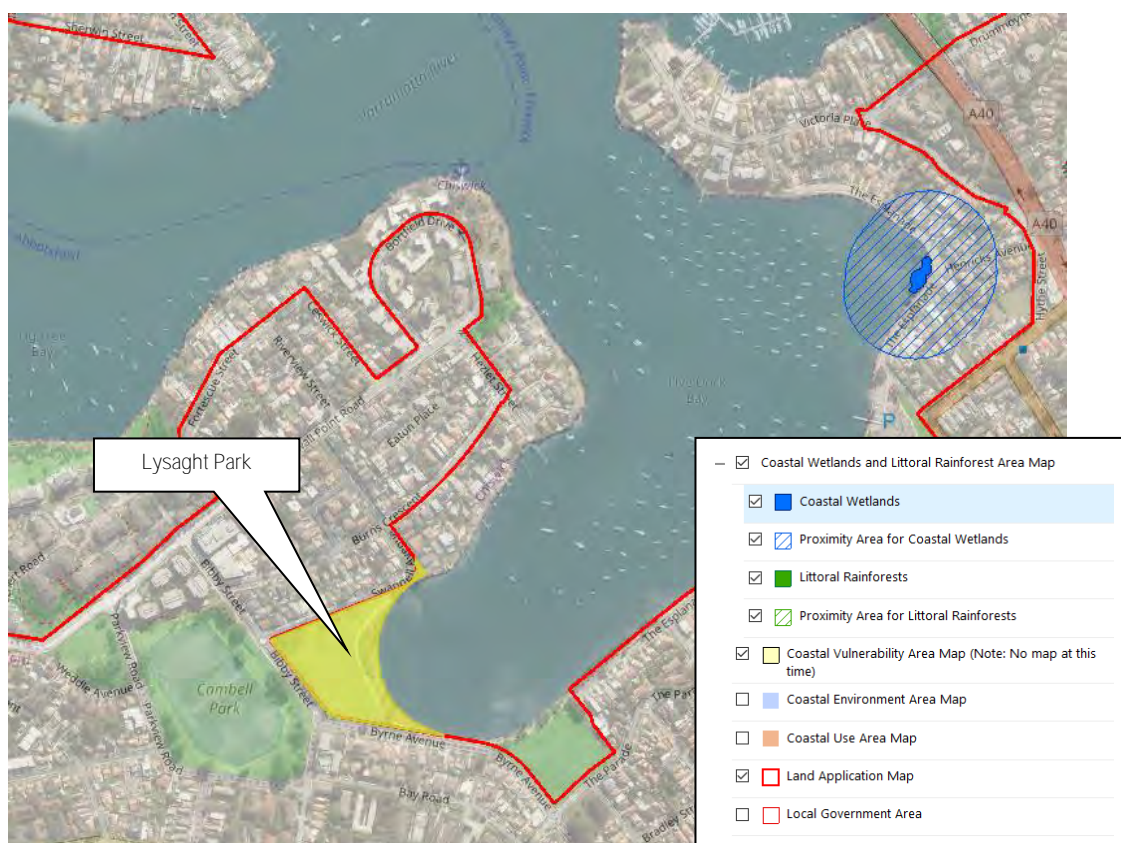


Figure 4: Coastal Management SEPP map
Source: NSW Department of Planning and Environment, 2018

4.9 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP 2005) applies to the site and is a deemed SEPP. The site is located within the Sydney Harbour Catchment under SREP 2005 (refer Figure 5). The proposed development will satisfy the aims of the SREP 2005 and will not result in any significant adverse heritage, environmental, social or economic impacts on the site or the locality.

The proposal includes the installation of four new sports lighting poles and associated lighting. Pursuant to Clause 20(b) of the SREP 2005, the provisions in **Division 2 "matters for consideration"** in SREP 2005 must be considered for the proposed works or activity under Part 5 of the EP&A Act.

An assessment of matters for consideration within Division 2 have been addressed in detail and are held at Appendix E. The assessment concludes that the proposed installation of four new light poles will not adversely impact on the quality and amenity of Sydney Harbour Catchment and will achieve a high level of compliance with the requirements of SREP 2005.

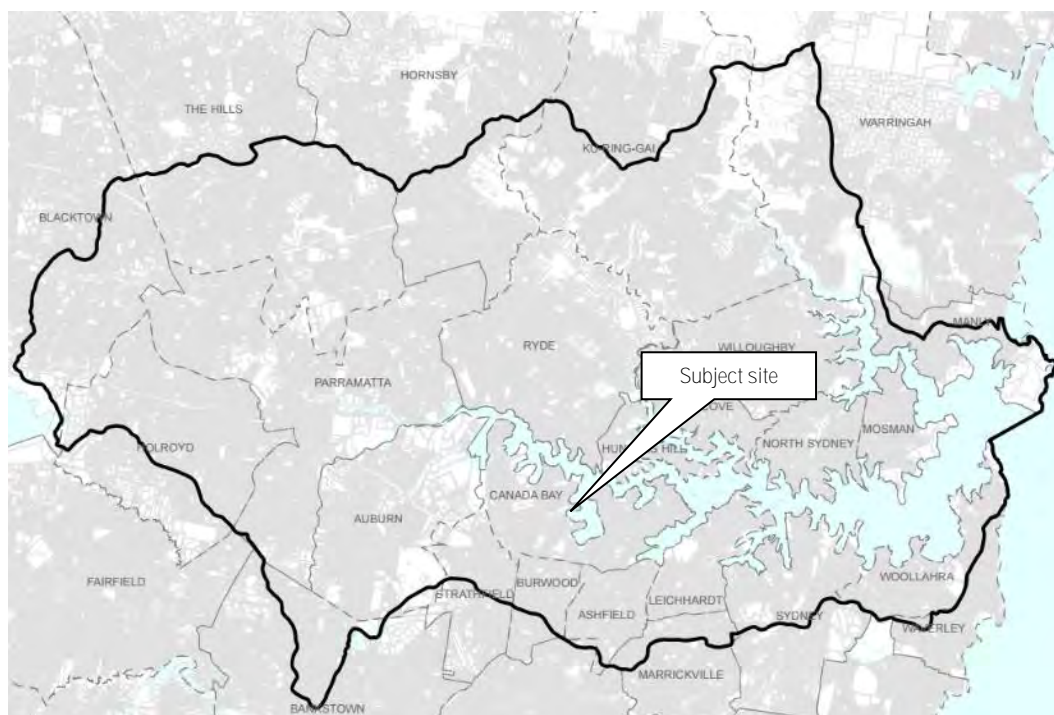


Figure 5: Sydney Harbour Catchment Map
Source: SREP 2005

4.10 Canada Bay Local Environmental Plan 2013

Zoning and Permissibility

The site is zoned RE1 Public Recreation pursuant to Canada Bay Local Environmental Plan 2013 (LEP 2013) (refer to Figure 6). The objectives of the RE1 Zone are:

- *“To enable land to be used for public open space or recreational purposes.*
- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*
- *To facilitate public access to and along the foreshore.*
- *To conserve public open space that enhances the scenic and **environmental quality of Canada Bay.**”*

The proposal satisfies the objectives of the RE1 Public Recreation Zone.

The proposed works comprise of the installation of four (4) new sports lighting poles and associated lighting Lysaght Park at the site. The proposed works seek alterations to the existing recreation area, and are permitted in the RE1 Public Recreation **Zone under the “recreation area” land use definition** as follows:

“Recreation area means a place used for outdoor recreation that is normally open to the public, and includes:

- (a) A **children’s playground, or***
- (b) An area used for community sporting activities, or*
- (c) A public park, reserve or garden or the like,*

And any ancillary buildings, but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).”

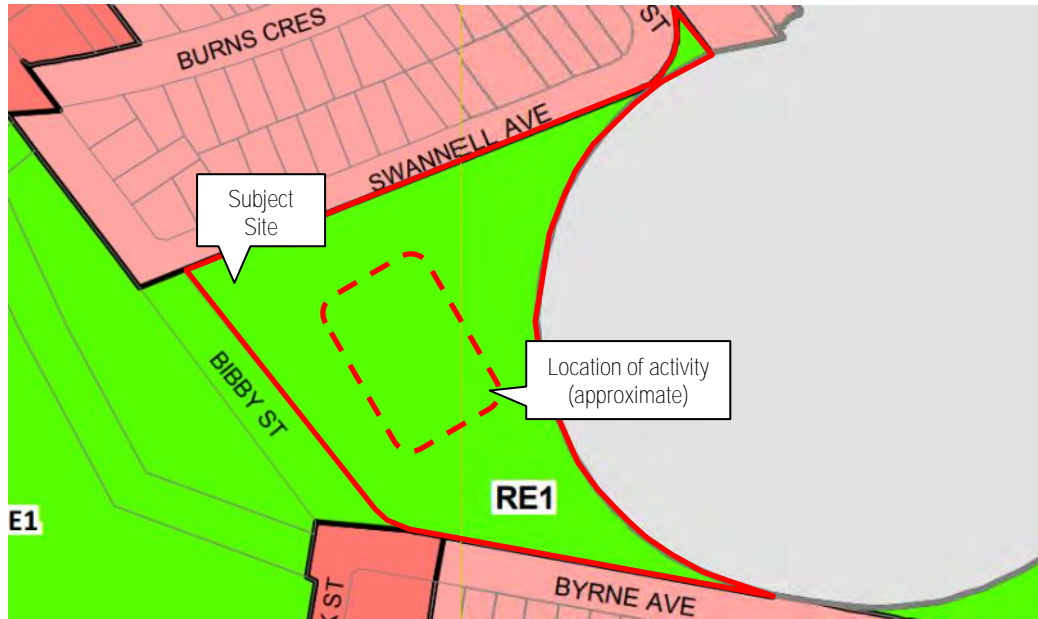


Figure 6: Zoning Map
Source: LEP 2013

Height of Building

There are no maximum building heights applicable to the site under LEP 2013. The proposed outdoor lighting poles have a maximum height of 22.0m, which are considered to be generally consistent with existing light poles at the adjacent Campbell Park and nearby Five Dock Park and Oval, which range in height from approximately 22.0m through 25.0m.

Proposed lighting poles at the site are within the vicinity of residential areas to the north and south of the site, including in particular a number of established single detached dwellings to both Byrne Avenue and Swannell Avenue which abut the north and southern eastern boundaries of the site.

Given the height of poles (22.0m), poles will be visible from surrounding streets and residential areas off Byrne Avenue, Bibby Street and Swannell Avenue and The Parade (to the east). Refer to an assessment of visual impact within Section 5 of this report.

Having regard to a discussion of amenity matters contained further within this report, and as light spill certification provided by a suitably qualified electrical engineer (Appendix B), proposed lighting poles are not anticipated to result in any significant adverse visual, amenity, overshadowing, obtrusive light spill or view impacts and are therefore consistent with the objectives of Clause 4.3(1) of LEP 2013.

Heritage

The subject site is not identified as a heritage item pursuant to Clause 5.10 of the LEP 2013. The site is not located within, nor within proximity to, any Heritage Conservation Areas. The site is within proximity to one heritage item, provided in Table 2 below.

Table 2: Heritage Items within proximity to Lysaght Park

Item No.	Item Description	Address	Listing	Distance from proposed Works (Approximate)
I23	AWI office building	54A Blackwall Point Road	Local	148m to the north west

An extract of the LEP 2013 Heritage Map is provided in Figure 7 below.

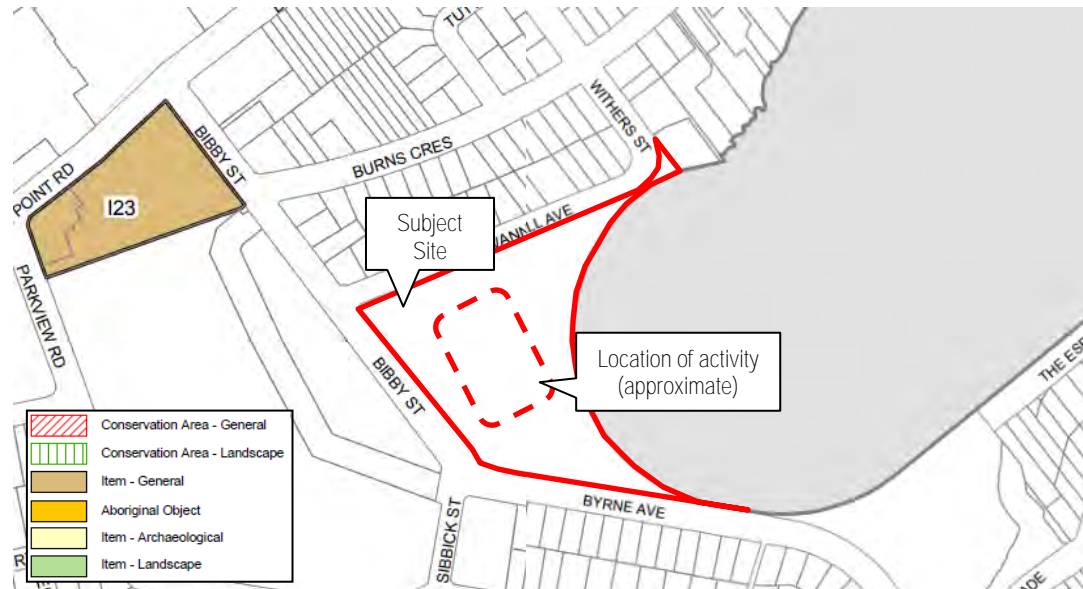


Figure 7: Heritage Map
Source: LEP 2013

Having regard to the location of proposed new works being of significant distance from heritage items identified in Table 2 above, it is considered that the proposed activity is unlikely to result in any detrimental heritage impact and will be consistent with controls and objectives contained within Clause 5.10 of the LEP 2013.

Terrestrial Biodiversity

The site is not located within the vicinity of biodiversity land pursuant to Clause 6.3 of the LEP 2013.

Acid Sulphate Soils

The site is located wholly within a Class 2 Acid Sulphate Soils (ASS) area and is within 500m of Class 2 ASS under LEP 2013 (refer to Figure 8). The proposal includes minor excavation works associated with the installation of the light poles themselves and is considered unlikely to result in the lowering of the water table pursuant to Clause 6.1(2) of the LEP 2013 below.

“(2) Development consent is required for the carrying out of works described in the Table to this subclause on land shown on the Acid Sulphate Soils Map as being of the class specified for those works.

Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.”

On this basis the proposed development is considered to be consistent with Clause 6.1 of the LEP 2013 and the preparation of an Acid Sulfate Soils Management Plan is not required.

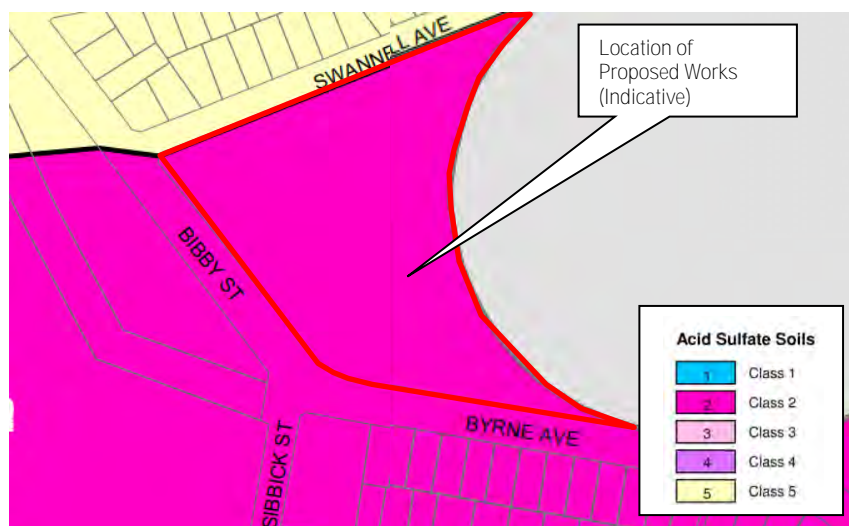


Figure 8: Acid Sulfate Soils
Source: LEP 2013

4.11 Canada Bay Development Control Plan 2013

The following sections of DCP 2013 are relevant to the proposal:

Part 3 (Section 3.3) – Stormwater, Detention and Sediment control

Part 3 (Section 3.3) of the DCP 2013 relates to stormwater, detention and sediment control, and provides the following controls. Controls within this section have been reviewed, with proposed works involving minor boring and excavation to facilitate the installation of light poles and associated services infrastructure only, and will not alter existing overland flow or stormwater provisions at the site.

Part 3 (Section 3.4) – Contamination

Part 3 (Section 3.4) of the DCP 2013 relates to contamination and provides the following controls:

Control	Proposal
C1	<p>For all development applications involving industrial, commercial, more than 2 residential dwellings or major redevelopment of sites, an initial evaluation for potential contamination must occur. The evaluation must address the following:</p> <ul style="list-style-type: none"> (a) was or is the site currently zoned for industrial or defence purposes; (b) Do existing records held by Canada Bay Council show an activity listed in Table 2; (c) Is the site currently used for an activity listed in Table 2; and (d) Is Council aware of information concerning contamination impacts on land immediately adjacent the site which could affect the subject land? If after carrying out the above initial evaluation none of the enquiries suggest that the land might be contaminated, the planning process should continue in the normal way. If contamination is, or may be present, the applicant must investigate the site and provide Council with the information it needs to carry out its planning functions. It should be noted that Council may at any stage in the process, require a preliminary investigation to be undertaken if Council believes there is a possibility of contamination on the site.
	<p>Having regard to Sections 4.3 and 4.7 of this report, the site is not listed on the EPA Contaminated Land Register and the Section 149 Certificate provided to Milestone (Ref. PC2017/1645) does not indicate that the site is contaminated. No other documentation provided by Council indicates that the site is contaminated. On this basis there is no evidence to suggest that the site is contaminated.</p>

Part 3 (Section 3.5) – Acid Sulphate Soils

Part 3 (Section 3.5) of the DCP2013 relates to acid sulphate soils and provides the following controls:

Control		Proposal
C1	If your property is within a potential acid sulphate area (Check Council's Acid Sulphate Soil Maps) and you intend to undertake building works that could disturb acid sulphate soils (i.e. if excavation at or below the ground water table is required) an evaluation of whether or not acid sulphate soils are present will need to be undertaken. Where acid sulphate soils are found to exist, an acid sulphate soils management plan will be required detailing the means which will be employed to minimise the impacts of the development on the wider environment from the soil.	Further to matters within Section 4.9 of this report, the site is located wholly within a Class 2 Acid Sulphate Soils (ASS) area under LEP 2013 (refer to Figure 7). The proposal includes minor excavation works associated with the installation of the light poles themselves and is considered unlikely to result in the lowering of the water table pursuant to Clause 6.1(2) of the LEP 2013 below.

Part 3 (Section 3.8) – Preservation of Trees and Vegetation

Part 3 (Section 3.8) of the DCP 2013 relates to the preservation of trees and vegetation. The proposed development does not include the removal of any trees or vegetation at the site. It is recommended that appropriate measures to be implemented through the course of construction to protect trees and vegetation at the site, particularly relating to access to and storage of materials during construction. On this basis the proposed development is considered acceptable with regard to Part 3 (Section 3.8) of the DCP 2013.

Having regard to the structure of the DCP 2013, being specific development types on private land, given proposed works are located wholly on public land, no other sections are relevant to the proposal.

5 ENVIRONMENTAL IMPACTS AND MANAGEMENT

5.1 Visual Amenity

The proposed works are accompanied by a Light Spill Compliance Certificate, prepared by Gary Roberts and Associates, dated August 2017, held at Appendix B. Having regard to this assessment, matters relating to visual privacy, including obtrusive light spill and views, relating to the installation of light poles fields are provided below.

Visual Privacy

Proposed works are within the vicinity of residential dwellings to the north and south of the site along Swannell Avenue and Byrne Avenue. It is noted that a number of properties to the northern side of Swannell Avenue and the southern side of Byrne Road share a visual interface with Lysaght Park.

These properties benefit from dwelling setbacks and areas of open space within front setbacks however hold a partial outlook over Lysaght Park. These properties are within proximity to the location of the two proposed northern light poles and the single proposed additional light pole to the south western corner of the site.

The proposed development seeks the installation of lighting at the site, and will not alter the existing use of the site for public recreation or as a sporting facility.

In this regard, and subject to any matters raised following undertaking of public consultation processes, the proposal will not present unreasonable visual privacy impacts to surrounding properties.

Obtrusive Light Spill

The Light Spill Compliance Certificate, prepared by Gary Roberts and Associates, dated August 2017, held at Appendix B confirms the placement and intensity of the proposed lights attached to the lighting poles achieves a **“Pass” grade on Illuminance and Luminous Intensity. In accordance with the requirements of Clause 65(3)(d) of the Infrastructure SEPP**, any impacts of light spill and artificial sky glow are to be minimised in accordance with AS/NZS 1158: 2010 (formerly 2007), *Lighting for Roads and Public Spaces* as well as AS 4282–1997, *Control of the obtrusive effects of outdoor lighting* (Schedule 1 of the Infrastructure SEPP).

Based on results of the light spill certificate and subject to the requirements of Clause 65(3)(d) being adhered to during the installation of the lighting poles and lights, the proposed lighting on the site will not have a significant adverse impact on nearest residential dwellings and the surrounding area.

Views

It is noted that a number of properties to the northern side of Swannell Avenue and the southern side of Byrne Avenue, currently enjoy an outlook over the broader Lysaght Park, which may be minimally obscured by the provision of the proposed four (4) light posts to the corners of Lysaght Park. The proposed light poles are however to be slim and non bulky in design, and will not obscure any significant or iconic views are considered to be a reasonable form of development for the site.

As the site and surrounding residential areas are not subject to any iconic or significant view or vistas, an assessment against view loss principles within **the Views (General Principles) Planning Principle** (*Tenacity Consulting v Warringah Council [2004] NSWLEC 140*) is not considered necessary in this instance.

Any minimal view obstruction of this outlook is not considered unreasonable under the circumstances as the degree of the impact is negligible and the parkland views enjoyed by surrounding properties will be substantially retained and the proposed works will therefore not present an unreasonable impact to surrounding properties in this regard.

5.2 Acoustic Amenity

The proposed works are accompanied by a review of acoustic matters, prepared by Marshall Day Acoustics dated 23 April 2018 held at Appendix D. Having regard to this assessment, matters relating to acoustic amenity relating to the proposed use of field are provided below.

“Predicted noise levels from all proposed activities will be at or below the site-specific assessment guideline noise levels for receivers along Byrne Avenue (including St Andrews Anglican Church), with and without the above proposed management techniques.

Predicted noise levels from worst case activities may give rise to noise levels above the site-specific assessment guideline noise levels by up to 2dB at some receivers along Swannell Avenue without the implementation of management techniques. This is for evening activities only. It should be noted that typical activities in the park will comprise training sessions of lower noise levels with worst case activities occurring rarely. Additional reductions may be achieved with the mitigation strategies proposed.

It should be noted that in the absence of a specifically applicable noise policy the ultimate decision regarding acoustic suitability of the proposal remains with City of Canada Bay Council and will need to be judged having regard to the overall merit of the proposal.”

Refer to the Marshall Day Acoustics Report for details.

During Construction

The installation of new light poles and lights works will give rise to minor noise and vibration impacts over a short duration of time. This impact is considered acceptable given both its temporary nature, its short duration and the need to upgrade the facilities. Demolition and construction will occur within standard construction work hours permitted by Council.

Ongoing Use of Fields

The proposed works are located at Lysaght Park, however are within proximity to residential development to the north and south of the site, as detailed in Section 5.1 of this report. It is noted the proposed development seeks additional lighting at the site and seeks to extend the operating parameters for activity in the evening and therefore there will be an intensification of in relation to activity, access and car parking at the site.

The acoustic review undertaken by Marshall Day Acoustics at Appendix D provides details of noise monitoring and data logging of the locality. In the absence of noise criteria relating to community sporting activities, site specific assessment guideline noise levels have been derived with reference to New South Wales EPA Noise Policy for **Industry (NPfI) and existing guidelines contained in Camden Council’s Environmental Noise Policy.**

Recommendations have been included in the Marshall Day Acoustics report for noise mitigation management techniques to help control noise from park use. These management measures are included in Section 5.2 of the Marshall Day Acoustics report and include:

“Management practices undertaken by the facility users afford the greatest opportunity for effective noise control and the reduction of predicted noise levels if required. Instructions to limit the use of loud hailers/amplified speech devices and the positioning of spectators to the centre of the park space will contribute towards reducing noise impacts on residential receivers.

Scheduling of activities will play a large part in managing noise, avoiding several noisy training/practise activities occurring simultaneously and placing noisier training activities towards the centre portions of the field a greater distance from residential receivers. Good control and discipline of training sessions may also mitigate excessive noise generation.

Given the lack of specific legislation relating to noise generation from park activities, documents providing comparative guidelines have been used to form the site-specific assessment guideline. As with all community developments, in considering the appropriateness of this proposal Council will need to consider the impact of noise against the community benefit of the facilities.”

Refer to the acoustic assessment report for details of the noise impact analysis of the proposal and a discussion regarding the nature of the impact.

5.3 Traffic and Transport

Construction

All machinery and equipment to be utilised for the proposed works will be transported to the site via the existing vehicle access point along Bibby Street to the south of the site. The number of vehicles, vehicle movements and specific quantities of waste and recycling materials generated by the proposed works will be determined prior to the commencement of the works and upon the successful appointment of a qualified contractor. Accordingly, it is recommended that a Construction Management Plan be prepared to determine these matters prior to the undertaking of works.

Ongoing Use of Fields

The proposed works have been accompanied by a review of traffic and parking matters prepared by McLaren Traffic Engineering and is held at Appendix C. The report concludes there is sufficient car parking in proximity of Lysaght Park to accommodate the proposed extended hours of use of the park and there will be no adverse traffic or car parking impact on the locality. Refer to the traffic report for details.

5.4 Heritage

Aboriginal Heritage

A search of the NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) was undertaken on 6 November 2017. This search indicated that no Indigenous heritage items have been recorded within the site or immediately adjacent to the site. The proposal is located in an area that has been highly modified for a range of urban and recreational uses and therefore it is considered unlikely that any Indigenous heritage items would be located in the vicinity of the proposal, due to the past history of disturbance.

If previously unidentified Indigenous heritage items are uncovered during the work, all work in the vicinity of the find would cease and appropriate advice be sought from OEH by the contractor in order to mitigate potential impacts.

European Heritage

Having regard to section 4.9 of this report, the subject site is not identified as a heritage item pursuant to Schedule 5 of the LEP 2013, however is within proximity to a one heritage item, provided within Table 1. The site is not located within, or within proximity to, any Conservation Areas. The proposed development involves the installation of lighting at the site which constitutes minor development, with the location of proposed new works being approximately 143m from the nearest heritage items identified in Table 1. It is considered that the proposed activity is unlikely to result in any detrimental heritage impact and will be consistent with controls and objectives contained within Clause 5.10 of the LEP 2013. The proposed installation of new light poles will not present any detrimental impact to these items by virtue of the works not significantly adversely impacting the setting, and views to and from the nearest heritage items from the public domain and surrounding properties.

5.5 Flora and Fauna

The site does not contain significant flora and fauna and consequently the proposed works will not give rise to any adverse impact on flora and fauna. The proposed development does not involve the removal of any trees or vegetation at the site other than grass.

5.6 Flooding and Stormwater

Milestone has not been provided within any flooding or stormwater details for proposed works. The proposed works will result in a minor increase in impervious surfaces, being the concrete slab base of proposed lighting poles only, and will not significantly alter stormwater infrastructure at the site.

Additionally, it is recommended that sediment and erosion control measures be implemented by the principal contractor to Council's requirements during demolition and construction works.

5.7 Socio Economic Impacts

Construction

The construction works to provide the new light poles and associated lighting is unlikely to have an adverse socioeconomic impact. Any noise generated during the construction phase is temporary and will be undertaken during the daytime only.

It is recommended that free and full public access to all other areas of the reserve not subject to proposed works is to be maintained during the course of construction works.

Ongoing Use of Fields

The ongoing use of the playing fields and operation of the associated lighting is unlikely to detrimentally affect the socio-economic context of the Lysaght Park facility and the surrounding areas. The sports lighting will contribute to the ongoing use and management of the park, and will provide a safe recreation facility into the future, with minimal environmental impacts in accordance with the objectives of **Council's Recreation and Facilities Strategy (2013)** and the Canada Bay Local Planning Strategy 2010 - 2031 (June 2010).

The provision of sports lighting will provide a positive contribution to the community, by way of the increased usage and patronage to the Lysaght Park, a key place of public recreation within the local area.

5.8 Soils and Geotechnical Impacts

A preliminary geotechnical investigation by Council has revealed soft soil profiles beyond the depth of 9m. In this regard, Council are required to investigate geotechnical matters further before the commencement of works and undertake the required findings suitable for the installation of the four light poles in Lysaght Park.

5.9 Spoil and Waste Management

It is recommended that an Environmental Waste Management Plan be prepared by the principal contractor for the proposed activity prior to the commencement of work to ensure appropriate spoil and waste management.

5.10 Environmental Planning and Assessment Regulation 2000

Division 1 Clause 228 of the Environmental Planning and Assessment Regulation 2000 (Regulation) provides factors to be taken into account when consideration is being given to the likely impact of an activity on the environment. Pursuant to Clause 228(2) of the Regulation the following matters must be taken into account:

Clause	Matters for Consideration	Section Reference
228(2)(a)	<i>any environmental impact on a community,</i>	5.1 through 5.7
228(2)(b)	<i>any transformation of a locality,</i>	5.1 through 5.3
228(2)(c)	<i>any environmental impact on the ecosystems of the locality,</i>	4.2, 4.7, 4.8, 4.9, 5.1
228(2)(d)	<i>any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality,</i>	4.8, 4.9, 5.1, through 5.4
228(2)(e)	<i>any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations</i>	4.8, 4.9, 5.1, through 5.4

Clause	Matters for Consideration	Section Reference
228(2)(f)	<i>any impact on the habitat of protected fauna (within the meaning of the <u>National Parks and Wildlife Act 1974</u>),</i>	4.2, 4.8, 4.9, 5.5
228(2)(g)	<i>any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air,</i>	4.2, 4.8, 4.9, 5.5
228(2)(h)	<i>any long-term effects on the environment,</i>	4.1 through 5.9
228(2)(i)	<i>any degradation of the quality of the environment,</i>	4.1 through 5.9
228(2)(j)	<i>any risk to the safety of the environment,</i>	5.1 through 5.9
228(2)(k)	<i>any reduction in the range of beneficial uses of the environment</i>	2.5
228(2)(l)	<i>any pollution of the environment,</i>	5.1 through 5.9
228(2)(m)	<i>any environmental problems associated with the disposal of waste,</i>	4.5, 5.9
228(2)(n)	<i>any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply</i>	5.1 through 5.9
228(2)(o)	<i>any cumulative environmental effect with other existing or likely future activities,</i>	5.1 through 5.9
228(2)(p)	<i>any impact on coastal processes and coastal hazards, including those under projected climate change conditions.</i>	4.8, 5.6

Having regard to the matters contained within this report, and referenced in the table above, the proposal is considered to comply with the factors to be taken into account, pursuant to Clause 228(2) of the EP&A Regulations.

6 CONCLUSION

This REF concludes that the proposed installation of four (4) new sports lighting poles and associated lighting at Lysaght Park, Bibby Street, Chiswick (Lot 1 DP 909058), can be undertaken without resulting in significant adverse environmental impacts, subject to the recommendations of this report. In the absence of any significant environmental impacts as a result of the proposed activity, and considering the broader social and economic benefits of the proposed redevelopment of the site, it is considered a satisfactory proposal.

6.1 Summary of Impacts

The proposed activity is considered to be in the public interest, as the provision of lighting to the existing playing field (Lysaght Park) will provide a tangible benefit to the local community and regional sporting groups, and contribute to the enhanced management and utilisation of key public assets.

Minor impacts associated with the proposed physical works will include noise, vibration and limited additional vehicular movements which will be temporary in their duration. During works Council will provide information on the hoarding of the site to visitors advising of the location of alternative facilities. It is recommended that free and full public access to all other areas of the reserve not subject to proposed works be maintained during the course of construction works.

The proposal will result in a minor visual amenity impact as a result of installation of additional light poles and illumination within proximity to residential dwellings, however the degree of the impact is considered to be minimal and acceptable in the context of the use of the site for public recreation.

Based on the conclusions of this comprehensive review of environmental impact the overall effect of the proposed activity is considered acceptable in terms of the site and its context, subject to the recommendations provided in Section 6.2.

6.2 Summary of Recommendations

This REF is prepared on the scope of works identified in the accompanying site plan, attached at Appendix A, on the conditional basis that the following recommendations are undertaken prior to the commencement of proposed works at the site:

1. An Environmental Waste Management Plan be prepared;
2. A Construction Management Plan be prepared;
3. A Sediment and Erosion Control Plan to be prepared;
4. Further geotechnical investigation is carried out by Council to ascertain most suited construction method in accordance with geotechnical findings;
5. The proposed lighting is installed in accordance with AS/NZS 1158:2010, *Lighting for Roads and Public Spaces* and AS 4282-1997, *Control of the obtrusive effects of outdoor lighting*;
6. That community consultation undertaken is consistent with provisions of Section 2.1.3 of the Canada Bay Development Control Plan 2013;
7. All recommendations or requirements of items one (1) through six (6) of this section be adopted prior to, and implemented during, any construction at the site; and
8. That any substantial design revisions be required as an outcome of the fulfilment of item six (6) of this section, that Milestone be engaged to review these changes and provide a revised REF (as required).

The above recommendations are provided in order to minimise any potential adverse environmental impacts on the site and the surrounding properties and to preserve amenity to the locality.

MILESTONE (AUST) PTY LIMITED

Appendices

APPENDIX A. ELECTRICAL SERVICES LIGHTING LAYOUT, PREPARED BY GARY ROBERTS AND ASSOCIATES PTY LTD

Lottery Results						Lottery Results Summary					
Lottery	Year	Draw Date	Draw Time	Draw Location	Draw Status	Lottery	Year	Draw Date	Draw Time	Draw Location	Draw Status
1	2015	11/26/15	10:00 AM	1000	Open	1	2015	11/26/15	10:00 AM	1000	Open
2	2015	11/26/15	10:00 AM	1000	Open	2	2015	11/26/15	10:00 AM	1000	Open
3	2015	11/26/15	10:00 AM	1000	Open	3	2015	11/26/15	10:00 AM	1000	Open
4	2015	11/26/15	10:00 AM	1000	Open	4	2015	11/26/15	10:00 AM	1000	Open
5	2015	11/26/15	10:00 AM	1000	Open	5	2015	11/26/15	10:00 AM	1000	Open
6	2015	11/26/15	10:00 AM	1000	Open	6	2015	11/26/15	10:00 AM	1000	Open
7	2015	11/26/15	10:00 AM	1000	Open	7	2015	11/26/15	10:00 AM	1000	Open
8	2015	11/26/15	10:00 AM	1000	Open	8	2015	11/26/15	10:00 AM	1000	Open
9	2015	11/26/15	10:00 AM	1000	Open	9	2015	11/26/15	10:00 AM	1000	Open
10	2015	11/26/15	10:00 AM	1000	Open	10	2015	11/26/15	10:00 AM	1000	Open
11	2015	11/26/15	10:00 AM	1000	Open	11	2015	11/26/15	10:00 AM	1000	Open
12	2015	11/26/15	10:00 AM	1000	Open	12	2015	11/26/15	10:00 AM	1000	Open



Appendices

APPENDIX B. LIGHT SPILL COMPLIANCE CERTIFICATE, PREPARED BY GARY ROBERTS AND ASSOCIATES, DATED 23 AUGUST 2017

Obtrusive Light - Compliance Report

AS 4282-1997, Pre-Curfew, Residential - Dark Surrounds

Filename: Lysaght Park 100x70_2

23/08/2017 1:05:50 PM

Illuminance

Maximum Allowable Value: 10 Lux

Calculations Tested (2):

Calculation Label	Test Results	Max. Illum.	
ObtrusiveLight_1_Ill_Seg1	PASS	2.8	
ObtrusiveLight_2_Ill_Seg1	PASS	3.5	

Luminous Intensity (Cd) Per Luminaire

Maximum Allowable Value: 7500 Cd

Control Angle: 83 Degrees

Luminaire Locations Tested (13)

Test Results: **PASS**

All Luminaire Locations (13):

Lum.No.	Label	Cd	Tilt	Roll	Spin
1	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
2	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
3	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
4	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
5	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
6	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
7	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
8	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
9	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
10	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
11	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
12	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0
13	SR4H757A2 Raptor 1270W NB gla	1540	5	0	0

Appendices

APPENDIX C. REVIEW OF TRAFFIC AND PARKING MATTERS STATEMENT, PREPARED BY MCLAREN
TRAFFIC ENGINEERING DATED APRIL 2018



**TRAFFIC AND PARKING IMPACT ASSESSMENT OF
CANADA BAY COUNCIL SPORTS FACILITIES UPGRADE
AT LYSAGHT PARK, CHISWICK**



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Division of RAMTRANS Australia ABN: 45067491678 RPEQ: 19457

Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

Development Type: Canada Bay Council Sports Facilities Upgrade
Site Address: Lysaght Park, Chiswick
Prepared for: Milestone (AUST) Pty Ltd
Document reference: 17675.01FA

Status	Issue	Prepared By	Checked By	Date
Draft	A	DF		24 April 2018

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TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	Description and Scale of Development.....	1
1.2	The State Environmental Planning Policy (Infrastructure) 2007	1
1.3	Site Description.....	1
1.4	Site Context	1
2	EXISTING TRAFFIC AND PARKING CONDITIONS	3
2.1	Road Hierarchy.....	3
2.2	Existing Traffic Management	3
2.3	Existing Parking Environment.....	3
2.3.1	Weekday Survey Results	4
2.3.2	Weekend Survey Results	4
2.4	Public Transport.....	5
2.5	Future Road and Infrastructure Upgrades	6
3	PARKING ASSESSMENT	7
3.1	Council Parking Requirement	7
3.2	Parking Demand Analysis.....	7
3.2.1	Weekday Parking Demand.....	7
3.2.2	Weekend Parking Demand.....	7
3.3	Resultant On-street Parking	9
3.3.1	Resultant Weekday Parking	9
3.3.2	Resultant Weekend Parking.....	10
3.4	Bicycle & Motorcycle Parking Requirements	11
3.5	Servicing & Loading.....	12
4	TRAFFIC ASSESSMENT	12
4.1	Traffic Generation	12
4.2	Traffic Impact.....	12
5	CONCLUSION	13

1 INTRODUCTION

McLaren Traffic Engineering (MTE) was commissioned by *Milestone (AUST) Pty Ltd* to provide a Traffic and Parking Impact Assessment of the Canada Bay Council Sports Facilities Upgrade at Lysaght Park, Chiswick.

1.1 *Description and Scale of Development*

Lysaght Park contains one (1) sports playing field which currently operates on Saturdays and Sundays from 8:00AM-1:00PM for organised sporting events. The proposed upgrade to Lysaght Park includes the following relevant to traffic and parking impacts:

- Installation of four (4) lighting fixtures intended to allow use of Lysaght Park for formal sports practices on Tuesday – Thursday from 4:30PM-9:00PM;
- Extension of weekend sports use of an additional five (5) hours from 1:00PM-6:00PM on Saturdays and Sundays (subject to the outcome of a community consultation and the endorsement from Council);

1.2 *The State Environmental Planning Policy (Infrastructure) 2007*

The proposed development does not qualify as a development with relevant size and/or capacity under Clause 104 of the SEPP (Infrastructure) 2007. Accordingly, formal referral to the Roads and Maritime Services (RMS) is not necessary and Canada Bay City Council officers can determine this proposal accordingly.

1.3 *Site Description*

Lysaght Park contains one (1) sports playing field which is used on weekends for organised sporting events. The site has street frontages to Swannell Avenue, Bibby Street, and Byrne Avenue.

The site is generally surrounded by low to medium density residential dwellings and is located adjacent to Campbell Park, which contains three (3) sports playing fields, eight (8) lighting fixtures, and currently operates until 6:00PM on Saturday and Sunday for organised sporting events, and until 9:00PM on Tuesday-Thursday for official sports.

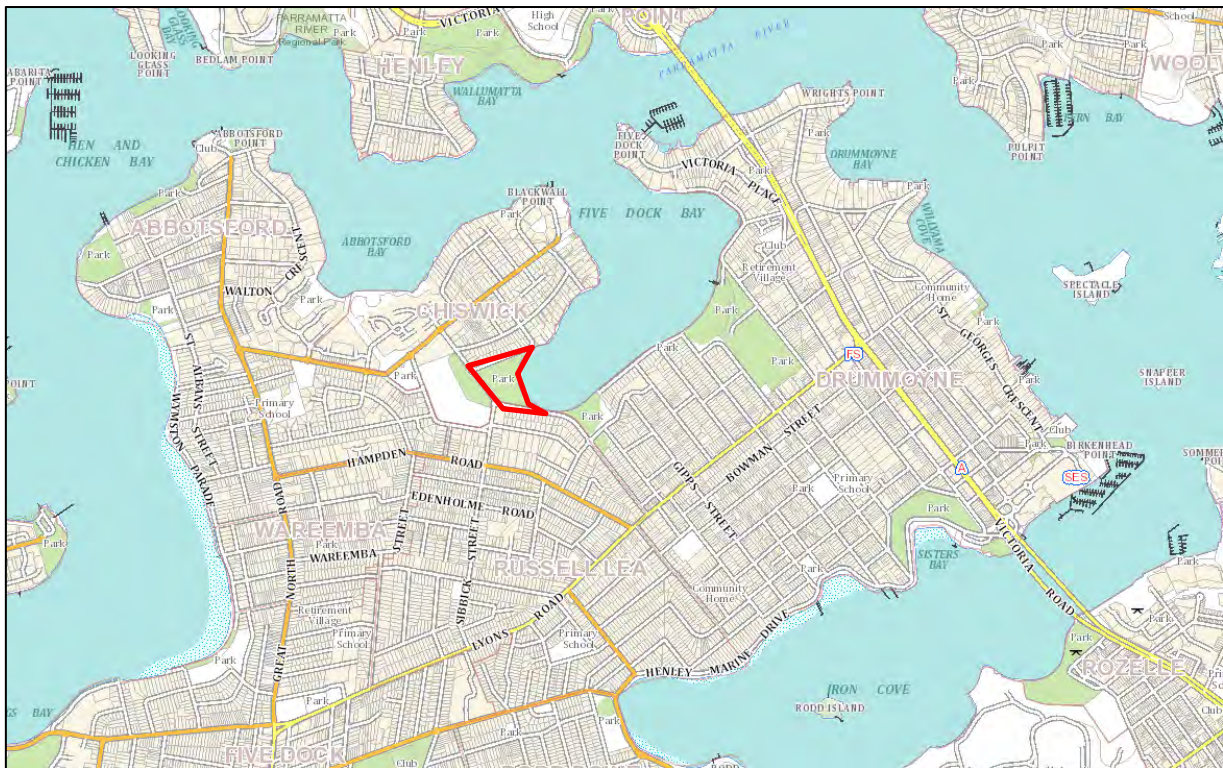
1.4 *Site Context*

The site location is shown on aerial imagery and a map in **Figure 1 & Figure 2** respectively.



 Site Location

FIGURE 1: SITE CONTEXT – AERIAL PHOTO



 Site Location

FIGURE 2: SITE CONTEXT – STREET MAP

2 EXISTING TRAFFIC AND PARKING CONDITIONS

2.1 Road Hierarchy

The road network surrounding the site has the following characteristics:

Swannell Avenue

- Unclassified LOCAL road;
- Approximately 7m in width facilitating two-way traffic flow and kerbside parking;
- Non-signposted 50km/h carriageway;
- Unrestricted kerbside parking permitted along both sides of the road.

Bibby Street

- Unclassified LOCAL road;
- Approximately 11m in width facilitating two-way traffic flow and linemarked kerbside parking bays;
- Non-signposted 50km/h carriageway;
- Unrestricted kerbside parking permitted along both sides of the road.

Byrne Avenue

- Unclassified LOCAL road;
- Approximately 11m in width facilitating two-way traffic and kerbside parking;
- Non-signposted 50km/h carriageway;
- Unrestricted kerbside parking permitted along both sides of the road.

2.2 Existing Traffic Management

- Round-about controlled intersection of Byrne Avenue / Bibby Street;
- Round-about controlled intersection of Swannell Avenue / Bibby Street;

2.3 Existing Parking Environment

Weekday on-street parking surveys were completed within 200m of both Lysaght Park and Campbell Park on Tuesday 10th April, Wednesday 11th April, and Thursday 8th March, from 4:00PM to 9:30PM, representing typical weekday night usage for Campbell Park official sports practices. Lysaght Park is not currently used for official sports practices on weekdays.

Additionally, weekend on-street parking surveys were completed within 200m of both Lysaght Park and Campbell Park on Saturday 7th April between 7:30AM-6:30PM, representing a typical weekend usage for official sports competitions at both Lysaght Park and Campbell Park.

The results of the weekday and weekend surveys (full results in **Annexure B**) are summarised and discussed in the following sub-sections.

2.3.1 Weekday Survey Results

The results of the weekday on-street parking capacity surveys are shown graphically in **Figure 3** below.

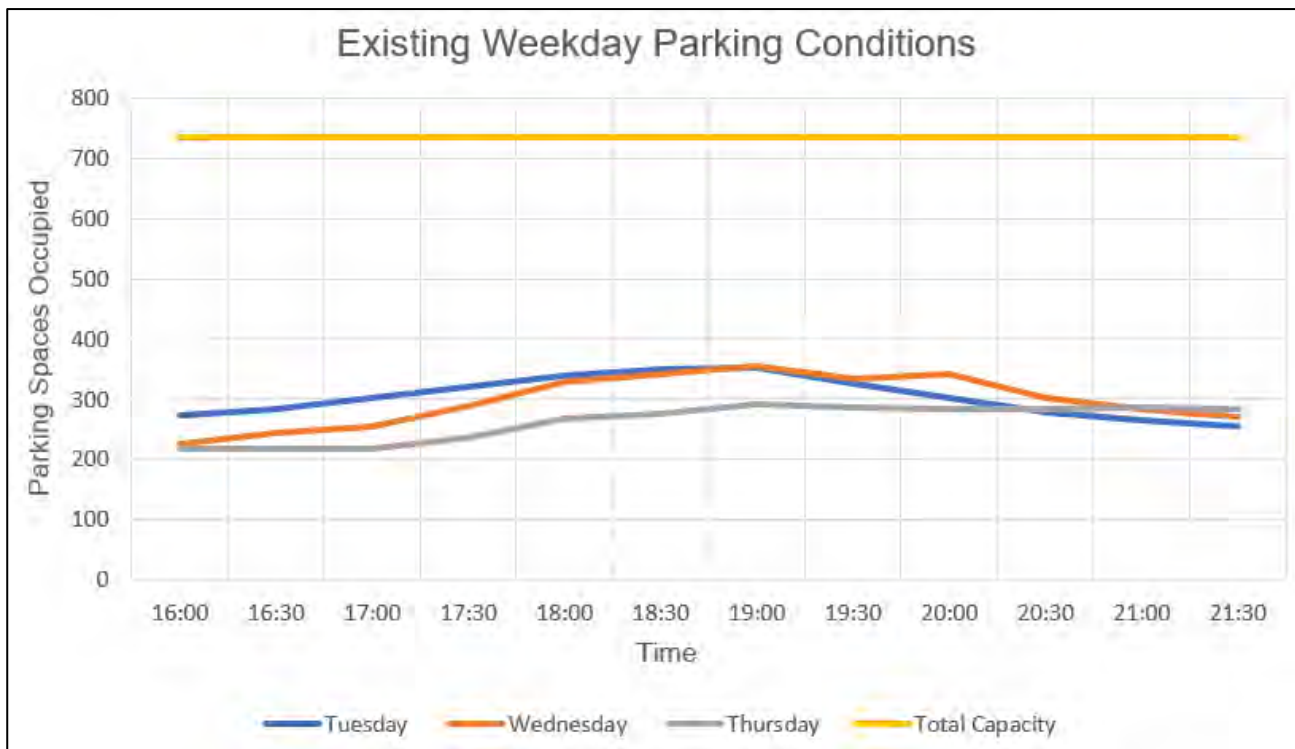


FIGURE 3: EXISTING WEEKDAY PARKING CONDITIONS

As shown in the graph above, the maximum spaces occupied occurred on Wednesday at 7:00PM. At that time, the on-street parking capacity was **380** spaces, which represents the minimum number of spaces available throughout the weekday survey period. Additionally, there is a total capacity of **734** on-street parking spaces within 200m walking distance of either Lysaght Park or Campbell Park.

2.3.2 Weekend Survey Results

The results of the weekend on-street parking capacity surveys are shown graphically in **Figure 4** below.

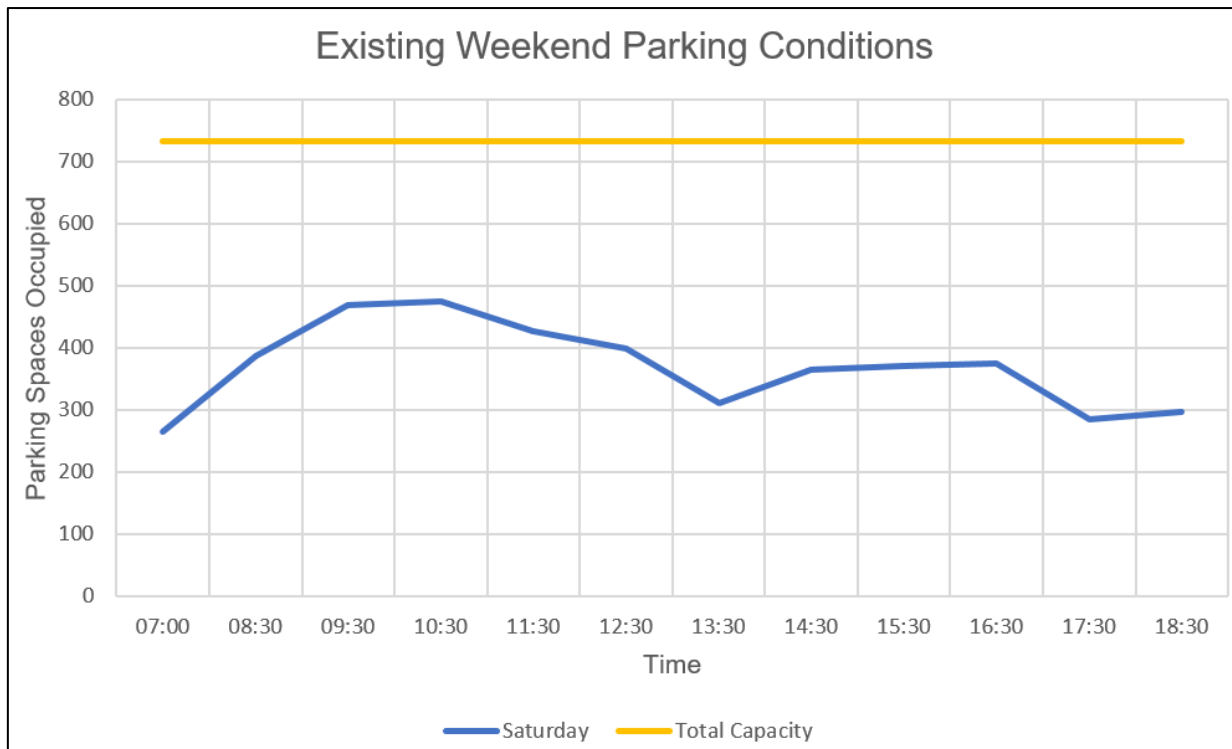


FIGURE 4: EXISTING WEEKEND PARKING CONDITIONS

As shown in **Figure 4** above, the maximum spaces occupied occurred at 10:30AM. At that time, the spare on-street parking capacity was **260** spaces, which represents the minimum number of spaces available when both Campbell Park and Lysaght Park were in use for official sporting events. After 1:00PM when official sporting events concluded at Lysaght Park, the maximum occupied spaces occurred at 3:30PM. At that time, the spare on-street parking capacity was **363** spaces. Additionally, there is a total capacity of **734** on-street parking spaces within 200m walking distance of either Lysaght Park or Campbell Park.

In summary, there is currently spare on-street parking capacity on Tuesday, Wednesday Thursday, and Saturday nights given the current operating hours of Campbell Park and Lysaght Park. On weekday nights between 4:00PM-9:30PM, there is a minimum of **380** on-street parking spaces within 200m walking distance of either park. Further, on Saturday between 1:00PM and 6:00PM, there is a minimum of **363** on-street parking spaces within 200m walking distance of either park.

2.4 Public Transport

The subject site has access to existing bus routes 415, 436, 437, and 504 provided by Transport NSW which runs along Blackwall Point Road, with the nearest bus stop located approximately 300m from the site. The 415 and 504 services provide a connection between Chiswick, Campsie Train Station and the City, while the 436 and 437 service provides a connection between Chiswick and Central Station. The location of the site relative to the surrounding public transport infrastructure is presented in **Figure 5** below:

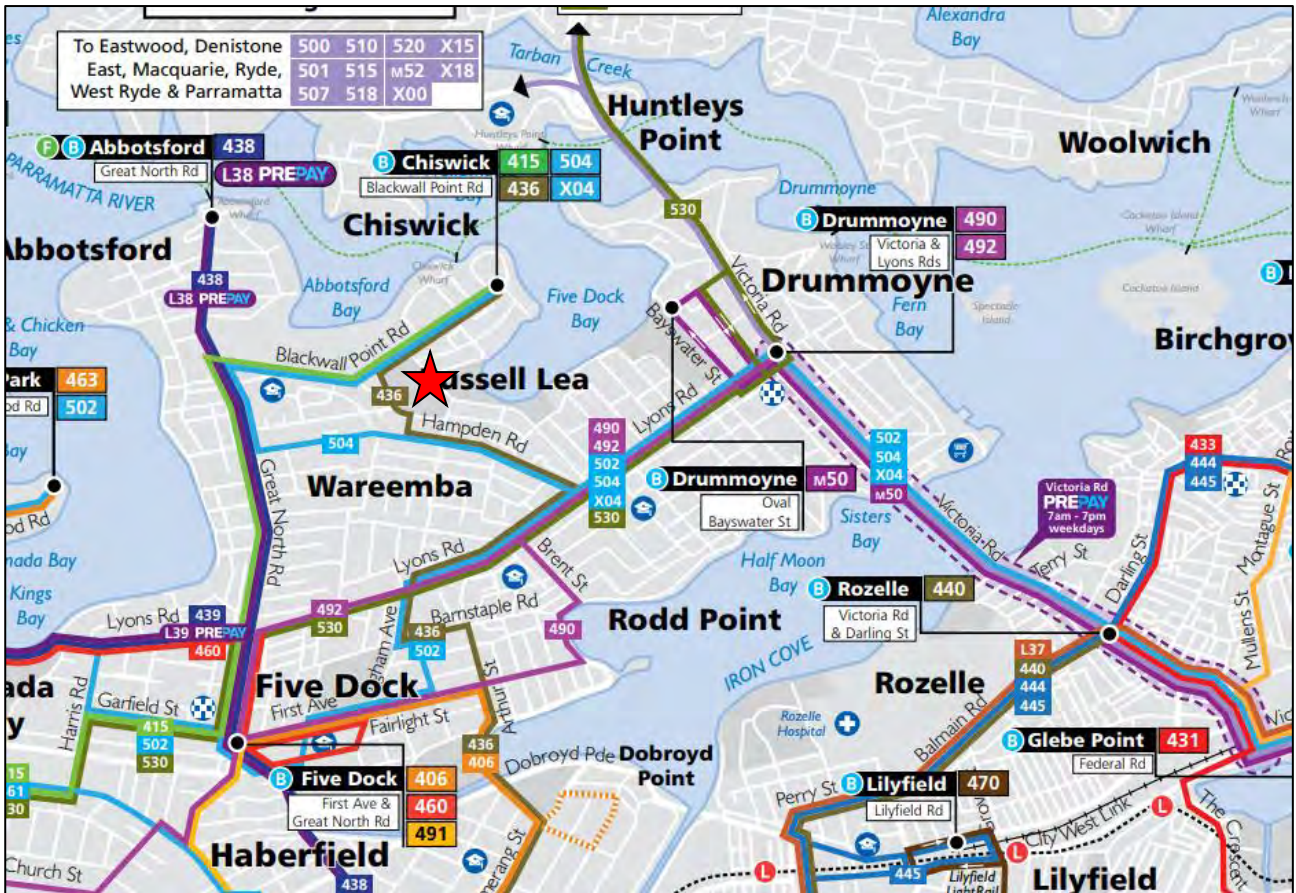


FIGURE 5: PUBLIC TRANSPORT INFRASTRUCTURE MAP

 Site Location

2.5 Future Road and Infrastructure Upgrades

From Canada Bay City Council Development Application tracker and website, it appears that there are no future planned road or public transport changes that will affect traffic conditions within the immediate vicinity of the subject site.

3 PARKING ASSESSMENT

3.1 Council Parking Requirement

The Canada Bay Council Development Control Plan does not provide car parking requirements for sports fields; thus, the parking demand must be calculated through the survey data discussed in **Section 2**.

3.2 Parking Demand Analysis

The proposal is for the extension of weekday use on Tuesdays-Thursdays for organised sports practices the extension of weekend use on Saturdays and Sundays for organised sports competitions at Lysaght Park. Weekday and weekend parking demands were calculated separately and are discussed in the following sub-sections.

3.2.1 Weekday Parking Demand

As shown in **Figure 3**, the maximum parking demand was **354** spaces, which occurred at 7:00PM. The occupied spaces within the same area at 4:00PM when Campbell Park was not in use was **227** spaces. This gives an overall observed parking demand of **127** spaces, all of which can be conservatively attributed to the usage of Campbell Park for organised sports practices. This is a conservative assumption due to the likelihood that some portion of the difference in the occupation of parking spaces would be attributed to residents arriving home after work and parking on -street within the surrounding residential area.

At the time of the maximum parking demand, all three (3) fields at Campbell Park were in use. It follows that the maximum parking demand during the weekday period is not more than 42.3 spaces per field.

For weekdays, the proposed hours of use of Lysaght Park is from 4:30PM to 9:00PM on Tuesday through Thursday. As Lysaght Park is not currently being used for official sports practices during this period, the generated parking demand will be consistent with the calculated parking demand. Lysaght Park has one (1) field, thus it will generate a maximum parking demand of **42.3** spaces between the hours of 4:30PM to 9:00PM on Tuesday-Thursday.

3.2.2 Weekend Parking Demand

A summary of the sports schedule for Saturday April 7th is shown in **Table 1** below:

TABLE 1: APRIL 7TH SOCCER SCHEDULE

Time	Lysaght Park		Campbell Park		Total	
	Games	Fields	Games	Fields	Games	Fields
9:00	2	1	6	2	8	3
10:00	2	1	6	2	8	3
11:00	2	1	3	2	5	3
12:00	2	1	2	1	4	2
13:00	0	0	2	2	2	2
14:00	0	0	2	2	2	2
15:00	0	0	2	2	2	2
16:00	0	0	2	2	2	2
17:00	0	0	0	0	0	0
18:00	0	0	0	0	0	0

For Junior games, a field is often split such that multiple games can be played on the same full-size field. As shown in **Table 1** above, only Junior games were played on Lysaght Park; thus, the single field was split in half with two (2) games occurring simultaneously throughout the day.

The maximum parking demand has been calculated at 10:00AM, which is the start time of the second set of games. The vehicles which are captured in this demand include vehicles which are parked for the first game, which started before 10:00AM, and vehicles which have recently arrived for the second game, which starts at 10:00AM. Given that the highest quantity of games throughout the day occur at 9:00AM and 10:00AM, it is considered that the overlap of parking between these two games will be the maximum parking demand experienced throughout the day.

As shown in **Figure 4**, approximately **471** parking spaces were in use at 10:00AM while organised games were happening at Campbell Park and Lysaght Park. At 7:30AM, there were **264** spaces in use while there were no organised games happening at either park. This results in an overall observed parking demand of **207** parking spaces. It is reasonable to assume that the entirety of this parking demand can be attributed to the official sports games occurring at Lysaght Park and Campbell Park, as there were no other major events happening in the area.

At the time of the maximum parking demand, a total of eight (8) official Junior games were happening on four (4) fields across both parks. It follows that the maximum parking demand during the weekend period is 25.9 spaces per official game.

The proposed hours of use for Lysaght Park are from 1:00PM-6:00PM on Saturday and 8:00AM-6:00PM on Sunday (subject to the outcome of a community consultation and the endorsement from Council). As Lysaght Park is not currently being used for official sports games during these periods, the generated parking demand will be consistent with the

calculated parking demand. Lysaght Park has one (1) field. As a worst-case scenario, it is assumed that the field will be used for two (2) Junior games throughout these time periods. Thus, the extended use of Lysaght Park will generate a maximum parking demand of **51.8** spaces between the hours of 1:00PM to 6:00PM on Saturday and between 8:00AM to 6:00PM on Sunday.

The weekend parking demand discussed above is summarised in **Table 2** below.

TABLE 2: LYSAGHT PARK ADDITIONAL WEEKEND PARKING DEMAND

Time	Fields	Games	Parking Demand per Game	Total Additional Demand
13:00	1 field	2 games (maximum)	25.9 spaces per game	51.8 spaces
14:00				
15:00				
16:00				
17:00				
18:00				

3.3 Resultant On-street Parking

The parking demand figures discussed in **Section 3.2** have been superimposed onto the existing parking volumes for the proposed extended hours of use. The results are shown and discussed in the following sub-sections.

3.3.1 Resultant Weekday Parking.

The cumulative on-street parking usage in the weekday period is shown in **Figure 6** below.

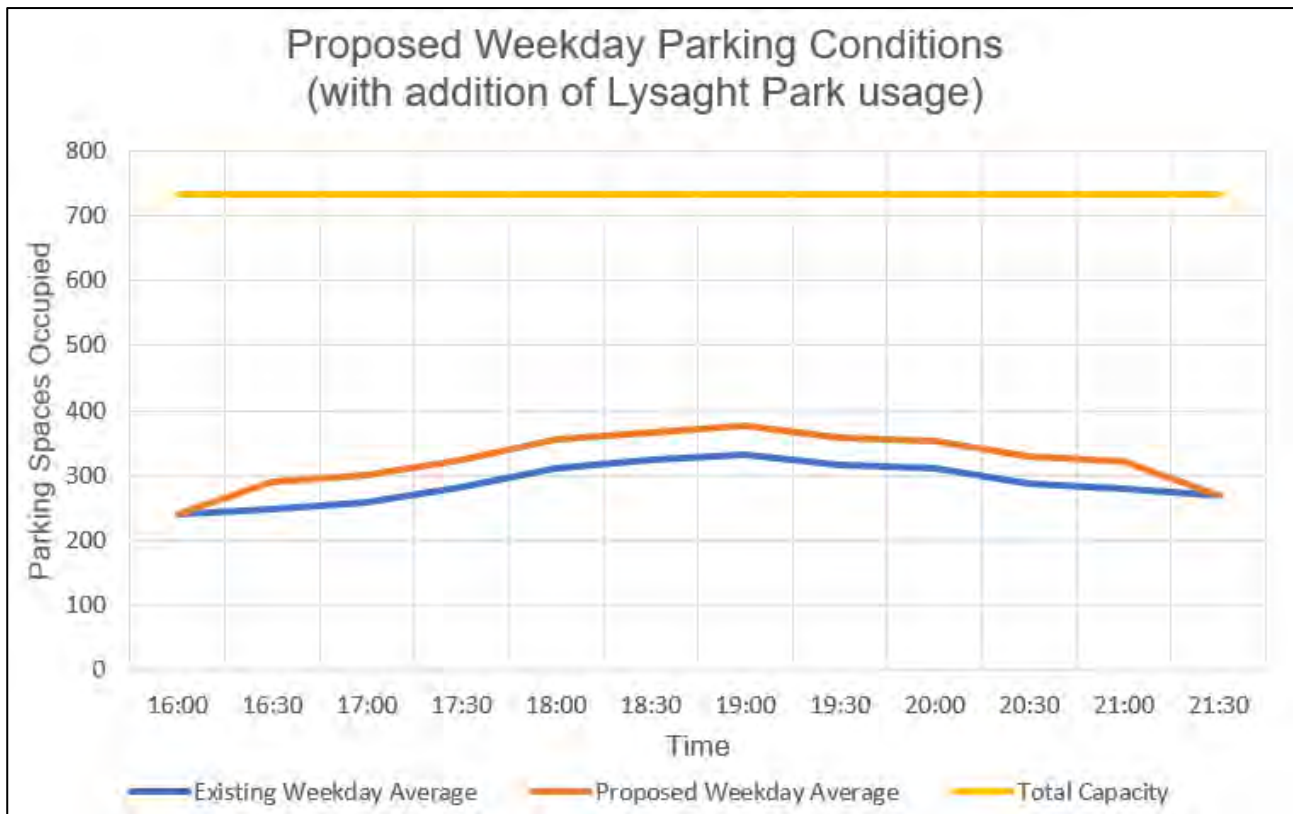


FIGURE 6: WEEKDAY PEAK PARKING USAGE

As shown in **Figure 6** above, the maximum parking requirement during the weekday period is **396** parking spaces when the calculated parking demand is added to the existing parking environment. As stated previously, there is a capacity of **734** on-street car parking spaces within 200m walking distance of either Campbell Park or Lysaght Park. Therefore, there is enough spare capacity within the existing on-street parking areas to satisfy the maximum parking demand from 4:30PM-9:00PM on Tuesday-Thursday.

3.3.2 Resultant Weekend Parking

The cumulative on-street parking usage in the weekend period is shown in **Figure 7** below.

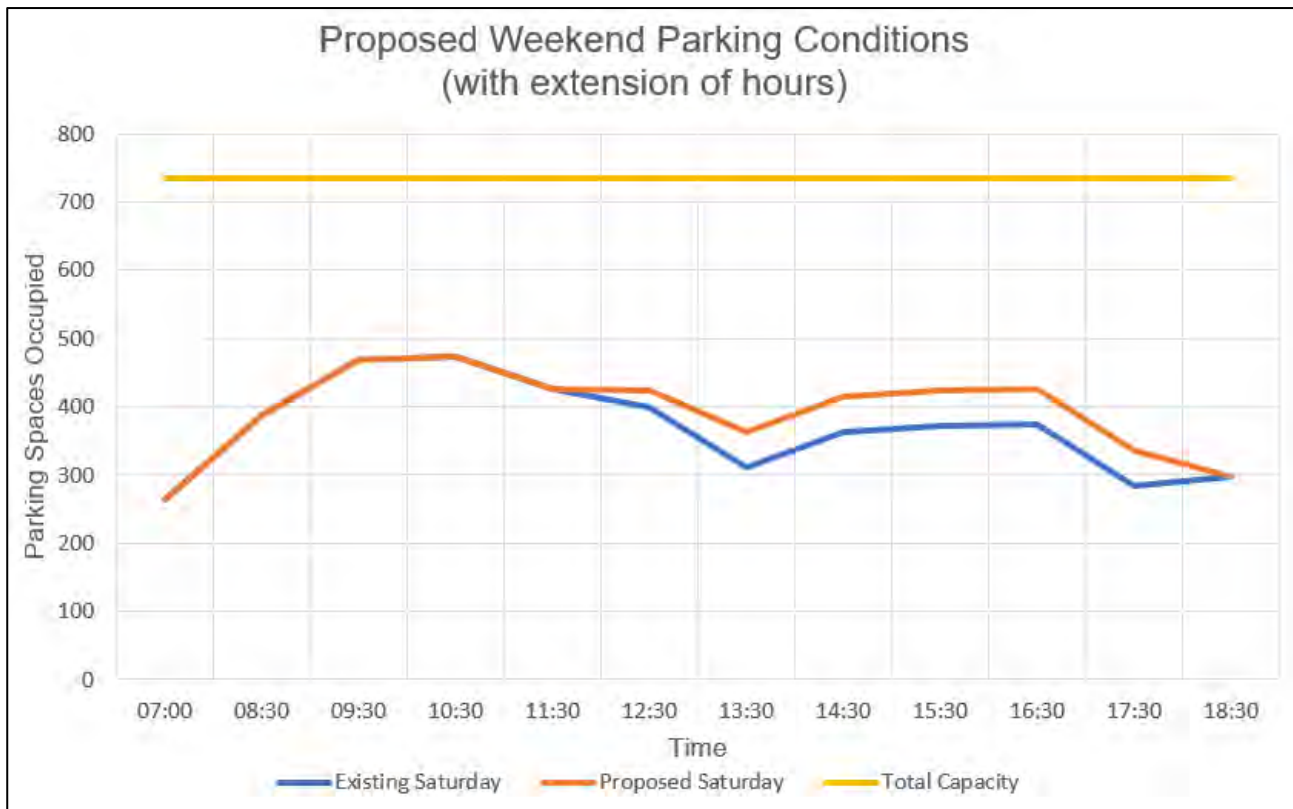


FIGURE 7: WEEKEND PEAK PARKING USAGE

As shown in **Figure 7** above, the maximum parking requirement during the weekday period is **474** parking spaces when the calculated parking demand is added to the existing parking environment. As stated previously, there is a total capacity of **734** spaces within 200m walking distance of Lysaght Park or Campbell Park. It is relevant to note that this maximum parking requirement occurs at 10:30AM, which is within the hours that Lysaght Park is currently operating. Therefore, the extension of Saturday hours from 1:00PM-6:00PM does not increase the current maximum parking demand for the area.

Additionally, it is reasonable to assume that the existing Sunday on-street parking environment would be similar the existing Saturday parking environment. In view of the foregoing, it is clear that there is enough spare capacity within the existing on-street parking areas to satisfy the maximum parking demand during the proposed extension of hours from 1:00PM-6:00PM on Saturday and 8:00AM-6:00PM on Sunday. The extension of hours from 1:00PM-6:00PM on Saturdays, and 8:00AM-6:00PM on Sundays will be implemented subject to the outcome of a community consultation and the endorsement of Council.

3.4 Bicycle & Motorcycle Parking Requirements

The Canada Bay Council Development Control Plan does not require the provision of Bicycle or Motorcycle Parking for parks or other sport facilities. Lysaght Park is a public facility used for sports, so it is likely that some portion of visitors would cycle to sports training or games. As such, it is recommended that bicycle racks be provided in Lysaght Park near the pedestrian crossing island on Bibby Street.

3.5 Servicing & Loading

The Canada Bay Council DCP does not specify loading or delivery requirements for the proposed sports field hours extension. It is expected that food or other deliveries to the clubhouse will be of small scale and can be undertaken outside of peak hours with a B99 vehicle (i.e. Toyota Hiace) within the on-street parking area.

4 TRAFFIC ASSESSMENT

The impact of the expected traffic generation levels associated with the subject proposal is discussed in the following sub-sections.

4.1 Traffic Generation

As discussed in **Section 3.2**, the expected parking demand for the weekday period is 42.3 spaces. As a worst-case scenario, this would generate **43** trips per weekday practice period. It is relevant to note that practice periods generally last longer than one hour, thus the peak hour generation will be less than 43 trips.

The expected parking demand for the weekend period is 51.8 spaces. As a worst-case scenario, this would generate **52** trips per weekend game. It is relevant to note that each game period generally lasts longer than one hour, thus the peak hour generation will be less than 52 trips.

4.2 Traffic Impact

This level of traffic will have no noticeable effect on any nearby intersections and can be readily accommodated within the existing road network with minimal impact in terms of traffic flow efficiency and road safety considerations.

Additionally, it is important to note that Lysaght Park is accessible from four (4) different local roads, all of which provide access to collector roads within 600m of Lysaght Park. It is assumed that the low level of generated traffic will be distributed throughout the four available routes to Lysaght Park, further minimising the traffic impact.

5 CONCLUSION

The traffic and parking impacts of the proposed sports facilities hours extension at Lysaght Park, Chiswick, as shown in reduced plans in **Annexure A** to this report, have been assessed.

The proposed hours extension is from 4:30PM-9:00PM on Tuesdays, Wednesdays and Thursdays. The extension of hours from 1:00PM-6:00PM on Saturdays, and 8:00AM-6:00PM on Sundays will be implemented subject to public consultation and Council endorsement.

Based on survey data, the expected parking demand is conservatively calculated to be **42.3** spaces per field on Tuesdays-Thursdays and **51.8** spaces per game on Saturdays and Sundays. When the parking demand is added to the existing parking environment, it is found that the peak weekday and weekend parking requirements are **396** and **474** spaces, respectively. **734** on-street car parking spaces are provided within convenient walking distance, which exceeds the weekday and weekend parking requirement by **338** and **260** spaces respectively.

The traffic generation of the site, estimated at some **43** trips in the weekday and **52** trips in the weekend peak hours, is presumed to have no noticeable impact on the surrounding road network in terms of both traffic flow efficiency and residential amenity concerns. The assessment has not considered that practices and games generally last longer than one (1) hour and should be considered a worst case.

In view of the foregoing, the traffic and parking impacts of the proposed sports facilities extension of hours for Lysaght Park are fully supported.



ANNEXURE A: REDUCED PLANS

(1 SHEET)

POINT NO.	Easting	Northing	Height	Remarks
1	100.00	100.00	100.00	100.00
2	100.00	100.00	100.00	100.00
3	100.00	100.00	100.00	100.00
4	100.00	100.00	100.00	100.00
5	100.00	100.00	100.00	100.00
6	100.00	100.00	100.00	100.00
7	100.00	100.00	100.00	100.00
8	100.00	100.00	100.00	100.00
9	100.00	100.00	100.00	100.00
10	100.00	100.00	100.00	100.00
11	100.00	100.00	100.00	100.00
12	100.00	100.00	100.00	100.00
13	100.00	100.00	100.00	100.00
14	100.00	100.00	100.00	100.00
15	100.00	100.00	100.00	100.00
16	100.00	100.00	100.00	100.00
17	100.00	100.00	100.00	100.00
18	100.00	100.00	100.00	100.00
19	100.00	100.00	100.00	100.00
20	100.00	100.00	100.00	100.00
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22	100.00	100.00	100.00	100.00
23	100.00	100.00	100.00	100.00
24	100.00	100.00	100.00	100.00
25	100.00	100.00	100.00	100.00
26	100.00	100.00	100.00	100.00
27	100.00	100.00	100.00	100.00
28	100.00	100.00	100.00	100.00
29	100.00	100.00	100.00	100.00
30	100.00	100.00	100.00	100.00
31	100.00	100.00	100.00	100.00
32	100.00	100.00	100.00	100.00
33	100.00	100.00	100.00	100.00
34	100.00	100.00	100.00	100.00
35	100.00	100.00	100.00	100.00
36	100.00	100.00	100.00	100.00
37	100.00	100.00	100.00	100.00
38	100.00	100.00	100.00	100.00
39	100.00	100.00	100.00	100.00
40	100.00	100.00	100.00	100.00
41	100.00	100.00	100.00	100.00
42	100.00	100.00	100.00	100.00
43	100.00	100.00	100.00	100.00
44	100.00	100.00	100.00	100.00
45	100.00	100.00	100.00	100.00
46	100.00	100.00	100.00	100.00
47	100.00	100.00	100.00	100.00
48	100.00	100.00	100.00	100.00
49	100.00	100.00	100.00	100.00
50	100.00	100.00	100.00	100.00
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63	100.00	100.00	100.00	100.00
64	100.00	100.00	100.00	100.00
65	100.00	100.00	100.00	100.00
66	100.00	100.00	100.00	100.00
67	100.00	100.00	100.00	100.00
68	100.00	100.00	100.00	100.00
69	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00
71	100.00	100.00	100.00	100.00
72	100.00	100.00	100.00	100.00
73	100.00	100.00	100.00	100.00
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75	100.00	100.00	100.00	100.00
76	100.00	100.00	100.00	100.00
77	100.00	100.00	100.00	100.00
78	100.00	100.00	100.00	100.00
79	100.00	100.00	100.00	100.00
80	100.00	100.00	100.00	100.00
81	100.00	100.00	100.00	100.00
82	100.00	100.00	100.00	100.00
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84	100.00	100.00	100.00	100.00
85	100.00	100.00	100.00	100.00
86	100.00	100.00	100.00	100.00
87	100.00	100.00	100.00	100.00
88	100.00	100.00	100.00	100.00
89	100.00	100.00	100.00	100.00
90	100.00	100.00	100.00	100.00
91	100.00	100.00	100.00	100.00
92	100.00	100.00	100.00	100.00
93	100.00	100.00	100.00	100.00
94	100.00	100.00	100.00	100.00
95	100.00	100.00	100.00	100.00
96	100.00	100.00	100.00	100.00
97	100.00	100.00	100.00	100.00
98	100.00	100.00	100.00	100.00
99	100.00	100.00	100.00	100.00
100	100.00	100.00	100.00	100.00



Imagery Date: 11/26/2015 33°51'08.33" S 151°08'23.06" E elev 2 m

© 2017 Google

Google

Bibby St

Swannell Ave

Byrne Ave

0 m



ANNEXURE B: TRAFFIC SURVEY RESULTS
(12 SHEETS)

Curtis Traffic Surveys

Job: 180202mcl (17_675)
 Client: McLaren Traffic Engineering
 Day, date: 10/04/18
 Location: Chiswick
 Weather: Fine
 Surveyor: MC

Tuesday, 10th April 2018

Parking round commencing...

Zone	Street	From	To	Side of Street	Capacity	Restriction	16:00	16:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30	21:00	21:30
a	Blackwall Pt Rd	Berchert Rd	Parkview Rd	north	12	u	5	5	6	5	8	10	12	12	11	11	9	8
b	Blackwall Pt Rd	Kokoda St	Parkview Rd	south	13	u	2	2	2	3	3	3	2	2	2	2	2	3
c	Blackwall Pt Rd	Parkview Rd	Shore Rd	north	7	1*1/2p1	3	3	4	5	6	8	8	7	7	7	7	7
d	Blackwall Pt Rd	Parkview Rd	Bibby St	south	6	u	4	4	4	6	4	7	7	7	7	7	6	7
e	Shore Rd	Blackwall Pt Rd	Promenade	west	0		0	0	0	0	0	0	6	0	0	0	0	0
f	Shore Rd	Promenade	Blackwall Pt Rd	east	0	private pro	2	2	2	2	2	2	2	2	2	2	2	2
g	Blackwall Pt Rd	Shore Rd	200m	north	7	u	5	6	7	7	7	7	7	6	6	5	5	5
h	Blackwall Pt Rd	200m	Bibby St	south	11	3*2r<+4*2	9	9	9	10	11	10	9	8	8	8	7	7
r	Bibby St	Blackwall Pt Rd	Burns Cr	east	3	u	7	7	7	7	6	7	6	5	5	6	10	6
q	Bibby St	Blackwall Pt Rd	Sibbick St	west	26	u	25	26	27	28	28	28	26	22	21	20	19	18
m	Burns Cr	Bibby St	Swannell Av	north	18	u	9	9	9	10	10	10	10	7	7	6	6	6
n	Burns Cr	Bibby St	Swannell Av	south	23	u	11	14	16	16	15	15	16	15	14	11	9	9
l	Withers St	Burns Cr	200m	west	7	u	2	1	1	1	1	1	1	1	1	1	1	1
bc	Tutt Cr	Burns Cr	Withers St	north	15	u	5	4	4	3	3	2	2	2	2	2	2	2
bd	Tutt Cr	Burns Cr	Withers St	south	20	u	2	2	2	2	2	3	3	3	3	3	3	3
j	Withers St	200m	Burns Cr	east	9	u	7	7	7	7	7	7	6	6	6	7	7	7
k	Burns Cr	Withers St	200m	north	5	u	1	1	1	1	0	0	0	0	0	0	0	0
L	Burns Cr	200m	Withers St	south	9	u	2	1	1	2	2	2	3	3	3	3	3	3

at Curtin Av 200m Tyler Cr north 8 u
 av Tyler Cr Curtin Av 200m west 8 u
 aw Tyler Cr 200m Curtin Av east 7 u
 ar Curtin Av Tyler Cr Parkview Rd north 12 u
 ap Parkview Rd Curtin Av Weddle Av west 8 u
 ao Parkview Rd bend Blackwall Pt Rd east 38 u
 bb Weddle Av Parkview Rd end south 9 u
 az Weddle Av end Parkview Rd north 22 u
 aq Parkview Rd Weddle Av Blackwall Pt Rd west 15 u

0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
4	4	4	4	5	5	5	5	3	3	3	3	3
1	1	1	1	1	1	1	1	1	1	1	1	1
5	5	5	6	7	7	7	5	3	2	1	0	0
13	15	17	17	17	16	16	14	11	7	8	7	7
2	2	2	2	3	4	3	3	3	2	2	2	2
9	2	7	8	8	10	10	9	8	7	7	7	7
7	8	9	10	10	10	11	9	8	5	3	2	2

734

Curtis Traffic Surveys

Job: 180202mcl (17_675)
 Client: McLaren Traffic Engineering
 Day, date: 04/04/18
 Location: Chiswick
 Weather: Fine
 Surveyor: MC

Wednesday, 11th April 2018

Parking round commencing...

Zone	Street	From	To	Side of Street	Capacity	Restriction	16:00	16:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30	21:00	21:30
a	Blackwall Pt Rd	Berchert Rd	Parkview Rd	north	12	u	7	8	9	10	10	12	13	13	13	11	9	9
b	Blackwall Pt Rd	Kokoda St	Parkview Rd	south	13	u	0	0	0	0	1	1	1	2	3	2	1	1
c	Blackwall Pt Rd	Parkview Rd	Shore Rd	north	7	1*1/2p1+6u	5	6	7	7	6	8	9	8	8	9	11	8
d	Blackwall Pt Rd	Parkview Rd	Bibby St	south	6	u	3	4	5	6	8	7	7	8	7	7	7	7
e	Shore Rd	Blackwall Pt Rd	Promenade	west	0		0	0	0	0	0	0	0	0	0	0	0	0
f	Shore Rd	Promenade	Blackwall Pt Rd	east	0	private property	2	2	2	2	2	2	2	2	2	2	2	2
g	Blackwall Pt Rd	Shore Rd	200m	north	7	u	6	6	6	5	7	7	8	8	9	9	9	9
h	Blackwall Pt Rd	200m	Bibby St	south	11	3*2r<+4*2r+4u	5	6	7	8	10	10	10	10	9	9	9	8
r	Bibby St	Blackwall Pt Rd	Burns Cr	east	3	u	5	6	6	6	5	6	6	5	5	5	3	3
q	Bibby St	Blackwall Pt Rd	Sibbick St	west	26	u	26	26	26	27	27	28	28	28	26	20	15	11
m	Burns Cr	Bibby St	Swannell Av	north	18	u	10	10	10	12	14	13	11	10	9	11	13	10
n	Burns Cr	Bibby St	Swannell Av	south	23	u	14	13	13	15	17	17	18	17	16	15	15	14
l	Withers St	Burns Cr	200m	west	7	u	2	2	2	2	1	1	1	1	1	1	1	1
bc	Tutt Cr	Burns Cr	Withers St	north	15	u	4	4	5	5	5	5	5	4	4	4	4	4
bd	Tutt Cr	Burns Cr	Withers St	south	20	u	2	2	2	2	2	2	2	2	4	3	3	3
j	Withers St	200m	Burns Cr	east	9	u	6	6	7	7	7	7	8	8	8	8	8	8
k	Burns Cr	Withers St	200m	north	5	u	1	1	0	0	0	0	0	0	0	0	0	0
L	Burns Cr	200m	Withers St	south	9	u	1	1	1	1	1	1	1	1	2	2	2	2

at Curtin Av 200m Tyler Cr north 8 u
 av Tyler Cr Curtin Av 200m west 8 u
 aw Tyler Cr 200m Curtin Av east 7 u
 ar Curtin Av Tyler Cr Parkview Rd north 12 u
 ap Parkview Rd Curtin Av Weddle Av west 8 u
 ao Parkview Rd bend Blackwall Pt Rd east 38 u
 bb Weddle Av Parkview Rd end south 9 u
 az Weddle Av end Parkview Rd north 22 u
 aq Parkview Rd Weddle Av Blackwall Pt Rd west 15 u

0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	5	5	6	7	7	4	4	4	4	4	4
0	1	1	1	1	1	4	4	4	2	1	1	1
0	1	5	5	6	6	4	6	6	3	1	1	1
5	5	4	14	14	15	16	11	9	5	5	5	5
3	3	3	4	4	4	4	3	3	2	1	1	1
3	4	4	6	6	6	5	4	4	4	4	4	4
3	4	5	6	10	13	13	12	11	4	4	4	4

at	<small>Curtin Av</small>	200m	<small>Tyler Cr</small>	nor	8	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	0	0	0		
av	<small>Tyler Cr</small>	<small>Curtin Av</small>	200m	we:	8	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
av	<small>Tyler Cr</small>	200m	<small>Curtin Av</small>	eas	7	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5		
ar	<small>Curtin Av</small>	<small>Tyler Cr</small>	<small>Parkview Rd</small>	nor	12	0	0	0	0	0	1	1	3	3	3	5	5	5	5	5	5	6	6	6	6		
af	<small>Parkview Rd</small>	<small>Curtin Av</small>	<small>Weddle Av</small>	we:	8	1	1	2	2	2	2	3	6	7	7	7	8	8	7	3	3	3	3	3	2	2	2
ac	<small>Parkview Rd</small>	bend	<small>Blackwell Ph Rd</small>	eas	38	6	6	5	5	5	6	6	13	14	14	15	15	15	15	15	11	8	8	8	8	8	
bl	<small>Weddle Av</small>	<small>Parkview Rd</small>	end	sou	9	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3		
az	<small>Weddle Av</small>	end	<small>Parkview Rd</small>	nor	22	9	9	9	9	9	9	8	8	8	8	8	8	8	8	8	9	9	9	9	9		
ac	<small>Parkview Rd</small>	<small>Weddle Av</small>	<small>Blackwell Ph Rd</small>	we:	15	8	8	8	8	8	8	8	10	11	10	9	9	9	9	9	8	8	8	8	8	8	

Daniel F Saturday Traffic Count

Saturday 7th April 2018 17675

Parking Round Commenced...

Zone	Street	From	To	Side of Street	Capacity	730	8	830	930	1030	1130	1230	1330	1430	1530	1630	1730	1830
a	Blackwall Pt	Berchert	Parkview	North	12	12	11	12	11	10	8	6	9	7	6	9	13	14
b	Blackwall Pt	Kokoda St	Parkview	South	13	4	2	5	5	4	5	3	3	3	3	3	3	5
c	Blackwall Pt	Parkview	Shore Rd	North	7	6	6	7	8	7	6	6	6	5	6	7	7	8
d	Blackwall Pt	Parkview	Bibby St	South	6	6	7	7	6	7	4	3	6	7	5	5	7	8
e	Shore Rd	Blackwall	Promenad	West	0													
f	Shore Rd	Promenad	Blackwall	East														
g	Blackwall Pt	Shore Rd	200m	North	7	6	7	5	6	6	5	5	7	6	6	6	6	7
h	Blackwall Pt	200m	Bibby St	South	11	8	7	7	6	7	7	7	8	7	7	8	8	8
r	Bibby St	Blackwall	Burns Cr	East	3	0	8	7	7	5	6	6	7	7	6	8	4	5
q	Bibby St	Blackwall	Sibbick St	West	26	20	34	37	36	35	35	35	28	39	31	35	15	12
m	Burns Cr	Bibby St	Swannell	North	18	9	13	14	15	13	12	13	11	14	15	14	9	11
n	Burns Cr	Bibby St	Swannell	South	23	14	14	20	22	18	15	15	15	18	19	18	13	14
l	Withers St	Burns Cr	200m	West	7	1	1	1	1	1	5	1	1	1	1	1	1	1
bc	Tutt Cr	Burns Cr	Withers S	North	15	4	4	4	4	4	4	4	4	1	3	3	3	3

bd	Tutt Cr	Burns Cr	Withers S	south	20	2	3	3	2	2	2	2	2	2	3	3	4
j	Withers St	200m	Burns Cr	east	9	5	5	3	3	5	1	5	4	3	5	3	4
k	Burns Cr	Withers S	200m	north	5	0	3	3	3	3	3	3	4	4	6	6	5
L	Burns Cr	200m	Withers S	south	9	1	5	4	4	6	5	5	3	5	4	6	5
p	Swannell Av	Burns Cr	Bibby St	south	48	0	2	17	21	26	28	15	4	8	10	9	1
o	Swannell Av	Burns Cr	Bibby St	north	35	1	11	18	20	23	24	17	8	13	13	10	6
t	Bibby St	Swannell /	Sibbick St	east	12	1	11	12	12	16	13	11	7	10	10	8	0
s	Bibby St	Swannell /	Burns Cr	east	7	2	4	6	7	7	7	6	3	11	8	8	1
w	Byrne Av	Sibbick St	Parade	north	60	13	13	17	24	25	21	17	9	9	9	9	11
x	Byrne Av	Parade	Sibbick St	south	37	11	15	16	21	18	15	17	12	14	16	13	13
u	Sibbick St	Byrne Av	Parkview I	west	8	1	1	6	5	10	9	9	5	5	6	3	0
v	Sibbick St	Byrne Av	Bay Rd	east	9												
y	Bay Rd	Sibbick St	200m	north	12	7	8	4	16	9	6	4	5	6	6	5	8
z	Bay Rd	200m	Sibbick St	south	21	10	7	8	10	10	9	8	8	7	8	13	10
ab	Sibbick St	Bay Rd	Hampden	east	14	6	6	6	8	8	8	6	8	7	9	7	7
aa	Sibbick St	Parkview I	Hampden	west	0												
ae	Hampden R	Sibbick St	200m	north	0												
af	Hampden R	200m	Sibbick St	south	0												
ad	Sibbick St	Hampden	200m	east	6	2	5	3	2	3	1	1	0	0	0	0	3
ac	Sibbick St	200m	Hampden	west	0												
ai	Hampden R	Sibbick St	200m	south	24	23	23	22	20	20	18	17	17	20	22	22	20
ah	Hampden R	200m	Margaret S	north	3	6	3	3	3	3	3	3	2	2	3	3	3
ag	Hampden R	Margaret S	Sibbick St	north	14	11	10	12	11	13	12	14	14	11	12	14	14
aj	Margaret St	Hampden	Parkview I	west	9	8	8	8	6	9	7	6	6	7	8	10	10
ak	Margaret St	Hampden	Parkview I	east	10	5	4	3	5	10	6	5	2	3	4	7	8

am	Parkview Rc Sibbick St Margaret †south	15	8	11	11	16	16	15	13	10	10	12	11	11	10
aL	Parkview Rc Sibbick St bend north	28	6	7	14	28	26	23	29	8	16	15	13	5	7
an	Parkview Rc Margaret †Curtin Av south	4	0	0	1	5	4	2	2	4	3	3	1	0	1
as	Curtin Av Parkview †Tyler Cr south	6	2	2	2	2	1	2	2	0	2	6	2	3	3
be	Fielburg Pl Curtin Av end east	5	1	1	1	0	0	0	0	0	0	0	0	1	1
bf	Fielburg Pl end Curtin Av west	6	3	4	3	3	3	3	2	3	3	3	3	3	2
ay	Tyler Cr Curtin Av 200m east	9	4	4	6	5	5	5	4	1	1	1	1	1	1
ax	Tyler Cr 200m Curtin Av west	7	4	4	4	3	3	5	2	2	2	2	2	2	2
au	Curtin Av Tyler Cr 200m south	7	0	0	0	0	0	0	0	0	0	0	0	0	0
at	Curtin Av 200m Tyler Cr north	8	0	0	0	0	0	0	0	0	0	0	0	0	0
av	Tyler Cr Curtin Av 200m west	8	0	3	2	0	3	3	3	3	3	3	4	3	2
aw	Tyler Cr 200m Curtin Av east	7	4	5	4	5	6	5	5	3	3	2	4	3	5
ar	Curtin Av Tyler Cr Parkview †north	12	3	1	1	5	5	6	4	6	6	2	4	3	2
ap	Parkview Rc Curtin Av Weddle A west	8	0	0	0	10	8	5	6	3	7	8	8	0	0
ao	Parkview Rc bend Blackwall †east	38	12	13	25	31	21	25	29	21	22	23	24	15	18
bb	Weddle Av Parkview †end south	9	2	2	1	1	4	3	4	3	3	3	2	2	3
az	Weddle Av end Parkview †north	22	7	8	7	11	13	9	11	9	11	10	8	7	7
aq	Parkview Rc Weddle A Blackwall †west	15	3	3	5	13	13	5	8	7	10	9	11	4	8

Appendices

APPENDIX D. NOISE IMPACT ASSESSMENT PREPARED BY MARSHALL DAY ACOUSTICS DATED
APRIL 2018



Project: LYSAGHT PARK FLOODLIGHTS

Prepared for: City of Canada Bay Council
c/o Milestone (Aust) Pty Limited
93 Norton Street
Leichhardt NSW 2040

Attention: Patrick Lebon

Report No.: Rp 001 r03 20171264

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Document Control

Status:	Rev:	Comments	Date:	Author:	Reviewer:
Superseded	-	---	09/04/18	A Stoker	M Ottley
Superseded	r01	Mid-week training start time updated	11/04/18	A Stoker	M Ottley
Superseded	r02	Weekend training start time updated	23/04/18	A Stoker	M Ottley
For issue	r03	Park lighting plan updated	27/04/18	A Stoker	M Ottley

EXECUTIVE SUMMARY

Marshall Day Acoustics Pty Ltd has been engaged to assess the noise impacts associated with weekday evening and weekend day-time sporting activities associated with the installation of proposed floodlights to Lysaght Park, Chiswick, NSW.

Unattended background noise monitoring was conducted at St Andrews Anglican Church between 14 March 2018 and 27 March 2018, with additional attended measurements conducted on Swannell Avenue on the evening of 26 March 2018.

In the absence of noise criteria relating to community sporting activities, site specific assessment guideline noise levels have been derived with reference to New South Wales EPA Noise Policy for Industry (NPfI) and existing guidelines contained in Camden Council's Environmental Noise Policy.

Recommendations have been made for noise mitigation management techniques to help control noise from park use.

Predicted noise levels from all proposed activities will be at or below the site-specific assessment guideline noise levels for receivers along Byrne Avenue (including St Andrews Anglican Church), with and without the above proposed management techniques.

Predicted noise levels from worst case activities may give rise to noise levels above the site-specific assessment guideline noise levels by up to 2dB at some receivers along Swannell Avenue without the implementation of management techniques. This is for evening activities only. It should be noted that typical activities in the park will comprise training sessions of lower noise levels with worst case activities occurring rarely. Additional reductions may be achieved with the mitigation strategies proposed.

It should be noted that in the absence of a specifically applicable noise policy the ultimate decision regarding acoustic suitability of the proposal remains with City of Canada Bay Council and will need to be judged having regard to the overall merit of the proposal.

This report was updated on 11 April 2018 to reflect the revised mid-week training start time of 1630hrs from the previously assessed 1700hrs. This change did not affect predicted results, outcomes or advice.

This report was updated on 23 April 2018 to update the existing weekend training start time of 0800hrs from the previously assessed 0900hrs. Additionally, the intended purpose of the report was corrected. The report is to inform a review of environmental factors being prepared by Council. Finally, some table column headings have been improved to provide more clarity in table information delivery. These changes did not affect predicted results, outcomes or advice.

This report was updated on 27 April 2018 to reflect the revised park lighting plan and correct some references of 'Swannell Street' to Swannell Avenue'. These changes did not affect predicted results, outcomes or advice.

TABLE OF CONTENTS

1.0	INTRODUCTION	6
2.0	DEVELOPMENT DESCRIPTION	6
3.0	ENVIRONMENTAL NOISE SURVEY	8
4.0	ENVIRONMENTAL NOISE GUIDANCE LEVELS.....	9
4.1.1	Noise Policy for Industry.....	9
4.1.2	Camden Council Environmental Noise Policy.....	10
4.1.3	Site Specific Assessment Guideline Noise Levels.....	10
5.0	NOISE ASSESSMENT	11
5.1	Source noise levels	11
5.2	Assessment results and discussion.....	12
APPENDIX A GLOSSARY OF TERMINOLOGY		
APPENDIX B GUIDANCE NOISE LEVEL DERIVATION		
APPENDIX C NOISE LOGGER DATA		
APPENDIX D PREDICTED NOISE LEVELS		

1.0 INTRODUCTION

The City of Canada Bay proposes to install floodlights to Lysaght Park, Swannell Avenue, Chiswick to enable sports training activities to continue after sunset to approximately 2100hrs Tuesdays to Thursdays.

This report addresses the effect of potential noise emissions associated with the extended use of the playing fields, occurring with the installation and operation of the proposed floodlights and is designed to supplement a review of environmental factors being prepared by Council.

The findings of this report are based on calculations and measurements carried out by Marshall Day Acoustics (MDA), in addition to:

- Pitch and lighting layouts provided Milestone via email dated 28 September 2017
- Measurements of sporting activities in Morrison Bay Park, Putney, previously conducted by MDA

Acoustic terminology used throughout this report is defined in Appendix A.

2.0 DEVELOPMENT DESCRIPTION

Lysaght Park is located next to Campbell Park along Bibby Street in Chiswick and currently consists of a large open grass area overlooking the Parramatta River. The park is bounded by residential properties along Swannell Avenue to the North, Campbell Park and associated playing fields to the West, residential properties along Byrne Avenue to the South and Parramatta River to the East. Additionally, St Andrews Anglican Church is located to the corner of Byrne Avenue and Sibbock Street. Nearby receiver types and measurement positions are also shown.

The park location is shown in Figure 1 below.



Figure 1: Site and noise monitoring locations

The park is currently used for recreation and fitness, in particular soccer, with training occurring at weekends during the winter season in addition to evenings pre-season (February), as allowed by day light savings light conditions. Additional facilities include picnic areas and benches.

City of Canada Bay has proposed the installation of four new light poles to provide illumination for soccer training activities. The arrangement of the proposed floodlights and associated illuminated areas is shown in Figure 2 below.

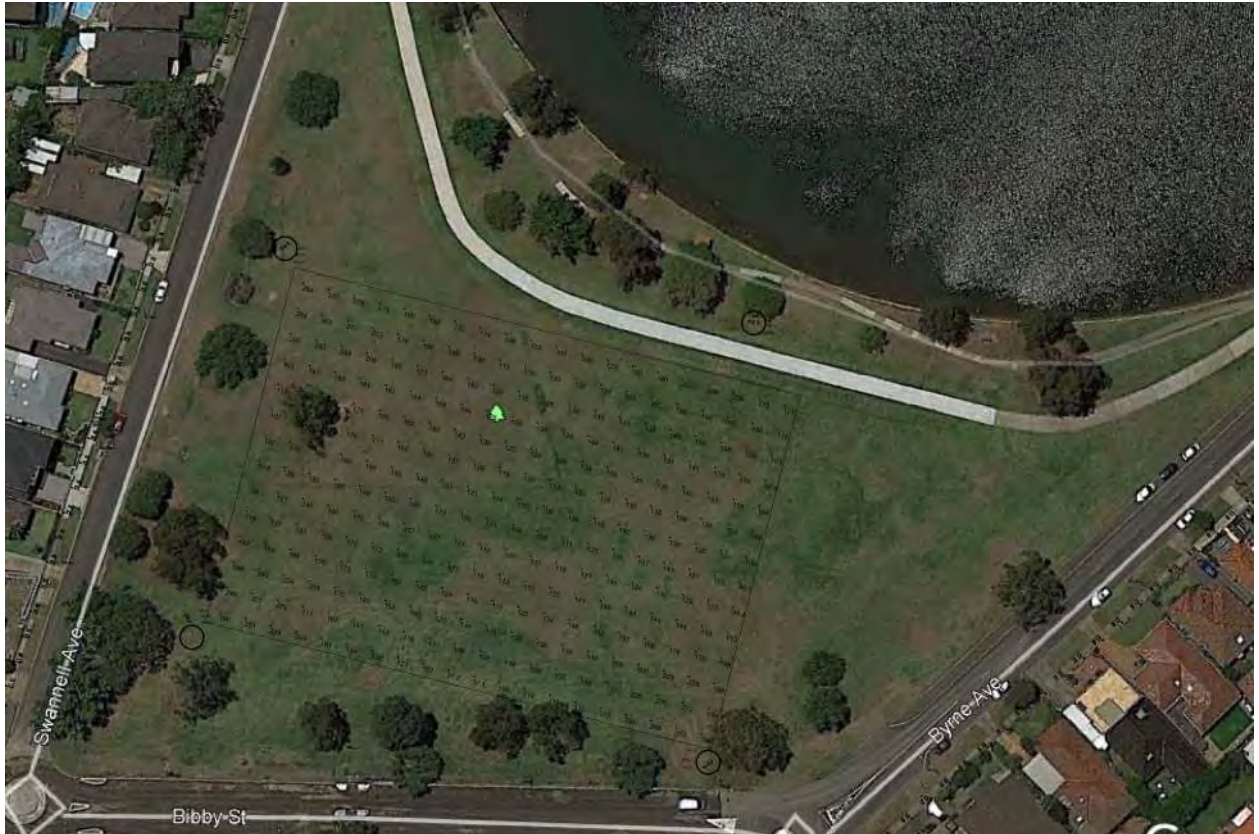


Figure 2: Floodlight position and illuminated areas

A summary of the current and proposed use of the park for training purposes is provided in Table 1 below:

Table 1: Summary of training schedules

	Current Use	Proposed Use (post-installation of floodlights)
Sporting Group	Soccer	Soccer
Weekend Use	0800hrs-1300hrs Saturday	0800hrs-1300hrs Saturday and Sunday
Evening Use	Pre-season (February only) - based on daylight savings	1630-2100hrs Tuesday, Wednesday and Thursday

Based on the receivers shown in the Figure 1 the nearby noise sensitive receivers shown in Table 2 overleaf have been selected for assessment.

Table 2: Noise sensitive receivers selected for assessment

Receiver Type	Address
Residential	All numbers to Swannell Avenue bounding the park*
Place of worship	81 Byrne Avenue (St Andrews Anglican Church)
Residential	77 Byrne Avenue
Residential	73 Byrne Avenue

*As all residences to Swannell Avenue bounding the park lie parallel with the park boundary, a single position will allow the most significant noise levels for these locations to be calculated

3.0 ENVIRONMENTAL NOISE SURVEY

As the park is relatively small, with a similar noise environment to all aspects (consisting primarily of traffic noise), a single unattended noise monitoring location has been used to establish background noise levels for all residential receivers bounding the park. This is shown in Figure 1.

An ARL-316 noise logger, serial no. 16-707-019 was installed in the front landscaped area of garden of St Andrews Anglican Church for the period 14 March 2018 to 27 March 2018 with background noise levels measured continuously and logged in 15-minute intervals. Logger background noise data was then analysed and edited, removing data sets affected by poor weather conditions and data exclusion guidelines set out in the EPA's Noise Policy for Industry (NPfI).

The calibration of the unit was checked prior to and following the measurement period using a Rion NC-74 Sound Level Calibrator and exhibited no significant deviation.

In the NPfI, the background noise level is termed the Rating Background Level (RBL). We have determined the RBL and L_{Aeq} noise levels for the relevant Day and Evening periods in accordance with the procedures detailed in the NPfI.

The survey results for the entire measurement period are summarised in Appendix B. A summary of the logging measurements is shown in Table 3 below. Based on the proposed floodlight use three assessment periods have been derived representing Sunday Day time activity, weekday Day shoulder period (1600-1800hrs) and weekday Evening period (1800-2200hrs).

Table 3: NPfI time periods and measured background noise levels for Byrne Avenue receivers

Time Period and Description	Proposed Activity Covered	RBL L_{A90} dB
Applicable to Byrne Avenue receivers		
Daytime Period (0800-1800hrs))	Sunday training 0800-1300hrs*	46
Day Shoulder Period (1600-1800hrs)	Weekday training 1630-1800hrs	48
Evening Period (1800-2200hrs)	Weekday training 1800-2100hrs	42

* Two Sundays occurred during the overall logging period. Both days featured adverse weather conditions and noise level data for the daytime period was omitted from assessment based on the guidelines described in the NPfI. Analysis of the recorded data reveals the averaged Sunday day-time period level to be generally consistent with weekday day-time period levels. As such the average weekday day-time period level has been used for assessment.

Unattended noise logging data conducted at St Andrews Anglican Church will provide representative background noise levels experienced by receivers along Byrne Avenue due to the similarities in distance from road traffic along Byrne Avenue.

Issues may arise however when applying the acquired logging background data to receivers along Swannell Avenue due to reduced traffic numbers and distance from Byrne Avenue. As such, attended background noise measurements were conducted by MDA on 26 March 2018 outside

12 Swannell Avenue at approximately 2000hrs. The evening background noise level was measured to be 39-40 dB L_{A90} .

Based on a comparison of the attended evening measurement and the logging level from the same period an adjustment of -2dB has been derived. This has been applied to the levels shown in Table 3 to derive commensurate levels for Swannell Avenue. The derived background noise levels for Swannell Avenue are shown in Table 4 below.

Table 4: NPfl time periods and background noise levels for Swannell Avenue receivers

Time Period and Description	Proposed Activity Covered	RBL L_{A90} dB
Applicable to Swannell Avenue receivers		
Daytime Period (0800-1800hrs)	Sunday training 0800-1300hrs	44
Evening Shoulder Period (1600-1800hrs)	Weekday training 1630-1800hrs	46
Evening Period (1800-2200hrs)	Weekday training 1800-2100hrs	40

4.0 ENVIRONMENTAL NOISE GUIDANCE LEVELS

No specific guidelines exist governing the assessment of noise from sporting activities in public parks or recreation spaces in Canada Bay LGA, however MDA has provided reference from other documents to provide guidance as to the type of noise levels that might be appropriate.

Ultimately, as no legislated criteria is available, the appropriateness or otherwise of these guidance levels will be at the discretion of City of Canada Bay Council.

A summary of the derivation of the site-specific assessment guideline noise levels is provided below. Full details regarding the documents considered can be found in Appendix B.

4.1.1 Noise Policy for Industry

The NPfl is published by the NSW EPA and is intended for the setting of noise targets for large industrial developments that are scheduled under an EPA licence. It specifically excludes assessment of noise from sporting activities from assessment. It is included here as a point of reference regarding what noise levels would be allowable to impact on the residents surrounding the park if the site were used for industrial purposes.

The Amenity Noise Levels for the Day and Evening time-period for a Suburban environment are detailed in Table 5 below. No adjustment for existing industrial sources has been made as none are present in the surrounds of Lysaght Park. NPfl Amenity Noise Levels do not allow for the derivation of shoulder periods.

Table 5: Recommended Amenity Noise Levels

Assessment period	Proposed Activity Covered	Recommended Amenity Noise Level, dB $L_{Aeq 15min}$
Residential		
Day (0800-1800hrs)	Sunday training 0800-1300hrs	58
Evening (1800-2200hrs)	Weekday training 1800-2100hrs	48
Places of worship		
When in use	Sunday training 0800-1300hrs	40 (internal)

Source: Table 2.2 NSW Noise Policy for Industry including +3dB $L_{Aeq period}$ to $L_{Aeq 15min}$ correction

The NPfI also indicates that multiple other factors should be considered in the determination of new or modified developments including economic considerations, community benefits and the social worth of the development.

We note that the use of the sports field for sporting practice would likely to have a lower subjective impact than if the site were used for industrial uses and therefore noise targets above those in Table 5 may be appropriate.

4.1.2 Camden Council Environmental Noise Policy

We note that some other local councils have existing guidelines relating to noise from sporting events and community sports facilities. We have referenced Camden Council, who are one council that do have published guidance. The documentation provides a methodology for establishing guidance noise levels and states:

The following guidelines for any assessment of noise from the use of these Parks have been devised in order to minimise the likelihood of disturbance to the surrounding community. In some instances, however, where an event or activity is determined by Council to be of particular social or cultural benefit, more relaxed criteria may be applied to the use of the site.

Camden Council’s ENP allows for the $L_{eq(15min)}$ noise levels from parks to be 5dB above the background level during the daytime and 10dB above during the night-time. In that Policy the Daytime is 0700-1800hrs Monday to Friday and 0800-1800hrs weekends and public holidays. The night-time is 1800-2200hrs any day.

Applying the guidance to measured background levels presented in Table 3 gives recommended noise levels as shown in Table 6.

Table 6: Derived Camden ENP Noise Levels

Assessment Period	Proposed Activity Covered	Recommended Noise Level, dB $L_{Aeq 15min}$
Residential		
Day (0800-1800hrs)	Sunday training 0800-1300hrs	49-53
Evening (1800-2200hrs)	Weekday training 1630-1800hrs	50-52

4.1.3 Site Specific Assessment Guideline Noise Levels

Ultimately appropriate noise criteria will be determined by City of Canada Bay Council, however given the above information and lack of current applicable Council policy with regard to the assessment of noise from community sporting events, noise levels shown in Table 7 may be a useful benchmark for comparison. These levels are drawn from the NPfI (which we note specifically excludes assessment of sporting activities) and the Camden Council guidance (which we note does not apply within the Canada Bay LGA). Predicted noise levels above these targets would not necessarily mean that such activities should not be permitted, but it would suggest that the noise impacts should be considered by Council with regard to the impact on residential amenity..

Table 7: Site-specific guideline noise levels, dB $L_{Aeq 15min}$

Period of Assessment	Proposed Activity Covered	Guideline Noise Levels, dB $L_{Aeq 15min}$
Residents to Swannell Avenue		
Day-time	Sunday training 0800-1300hrs	52
Evening	Weekday training 1630-1800hrs	50
Residents to Byrne Avenue		

Period of Assessment	Proposed Activity Covered	Guideline Noise Levels, dB L _{Aeq, 15min}
Day-time	Sunday training 0800-1300hrs	54
Evening	Weekday training 1630-1800hrs	52
St Andrews Anglican Church		
Daytime	Sunday training 0800-1300hrs	55 external*

* Based on expected performance of glazing and target of 40dB L_{Aeq, 15min} internal

Note that we have not applied any corrections for noise character in our assessment.

5.0 NOISE ASSESSMENT

5.1 Source noise levels

MDA has previously conducted measurements of training sessions at Meadowbank Park, located off Constitution Road West, Ryde, during floodlit evening training sessions extending up to 2130hrs. Training activities undertaken at the time of measurement included small and large group training for a range of ages and ability levels including a final competitive game for open age men's teams of 11-a-side. Recorded noise levels are presented in Table 8 below.

These levels have been used for assessment as activities occurring at Lysaght Park are expected to be similar to that recorded at Meadowbank Park.

Table 8: Measured noise levels from training activities, dB L_{Aeq, 15min}

Measurement	Description of activity	dB L _{Aeq, 15min} @ 10m
Measurement 1	Youth team practise match Approx. 15 players lower half of pitch Following squad warming up 20m away Excited shouting, kicking noises, encouragement from spectators approx. 15m away	54
Measurement 2	Senior/open age men 2 squads of 11/13 players (half pitch each) Stretching, running laps, penalty practise General shouting, laughing and encouragement	54
Measurement 3	Senior/open age men 2 squads of 11/13 players (half pitch each) Cross drills Generally more concentration and lower noise levels	52
Measurement 4	Senior/open age Full pitch practise game 22 players with subs behind southern goal practising and talking Shouting and encouragement	57

Using the both the lowest and highest noise levels presented in Table 8 (Measurement 3 and Measurement 4), predicted noise levels at distances representing receivers surrounding the fields at Lysaght Park have been calculated. This demonstrates the typical range of noise levels expected at residences in the vicinity of Lysaght Park for the range of activities likely to occur during training sessions.

5.2 Assessment results and discussion

Graphical representations of predicted noise levels at receivers surrounding Lysaght Park are shown in Appendix D with noise levels summarised in Table 9 below.

Table 9: Predicted noise levels due to training activities, dB L_{Aeq, 15min}

Location	Predicted Noise Level: dB L _{Aeq, 15min}		Guideline Noise Level: dB L _{Aeq, 15min}	
	Least noisy training activity	Most noisy training activity	Evening activities.	Sunday activities
Swannell Avenue	46	52	50	52
St Andrew Anglican Church	46	51	55	55
77 Byrne Avenue	46	51	52	54
73 Byrne Avenue	45	50	52	54

The results of the measurements and predictions show that, depending on receiver locations and training activities, the L_{Aeq,15min} noise levels from field use at Lysaght Park range from 45 – 52 dBA L_{Aeq, 15min}.

Noise levels from sporting activities within Lysaght Park are predicted to be at or below the guideline noise levels for both evening and weekend sporting activities for St Andrews Anglican Church and residents to Byrne Avenue.

Noise levels experienced by residents to Swannell Avenue are predicted to be below the site-specific guideline noise levels during the weekend day-time period and may be marginally above the guideline levels for evening activities (by up to 2 dB).

As shown in Table 8, noise levels from typical sporting activities likely to occur in Lysaght Park vary significantly depending on the nature of the training and age range of participants. Levels during the evening at Swannell Avenue may be marginally above the guideline levels only for the noisiest activities likely to occur during practice.

It should be noted that the likelihood of this worst-case scenario occurring is limited, with moderate training likely to occur a majority of the time. Noise levels for all other activities are predicted to be below the guidance noise levels.

Management practices undertaken by the facility users afford the greatest opportunity for effective noise control and the reduction of predicted noise levels if required. Instructions to limit the use of loud hailers/amplified speech devices and the positioning of spectators to the centre of the park space will contribute towards reducing noise impacts on residential receivers.

Scheduling of activities will play a large part in managing noise, avoiding several noisy training/practise activities occurring simultaneously and placing noisier training activities towards the centre portions of the field a greater distance from residential receivers. Good control and discipline of training sessions may also mitigate excessive noise generation

Given the lack of specific legislation relating to noise generation from park activities, documents providing comparative guidelines have been used to form the site-specific assessment guideline. As with all community developments, in considering the appropriateness of this proposal Council will need to consider the impact of noise against the community benefit of the facilities.

APPENDIX A GLOSSARY OF TERMINOLOGY

SPL or L_p	<p><u>Sound Pressure Level</u> A logarithmic ratio of a sound pressure measured at distance, relative to the threshold of hearing (20 μPa RMS) and expressed in decibels.</p>
SWL or L_w	<p><u>Sound Power Level</u> A logarithmic ratio of the acoustic power output of a source relative to 10^{-12} watts and expressed in decibels. Sound power level is calculated from measured sound pressure levels and represents the level of total sound power radiated by a sound source.</p>
dB	<p><u>Decibel</u> The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of $P_r=20 \mu$Pa i.e. $dB = 20 \times \log(P/P_r)$</p>
dBA	<p>The unit of sound level which has its frequency characteristics modified by a filter (A-weighted) so as to more closely approximate the frequency bias of the human ear.</p>
A-weighting	<p>The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.</p>
$L_{Aeq}(t)$	<p>The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.</p>
$L_{A90}(t)$	<p>The A-weighted noise level equalled or exceeded for 90% of the measurement period. This is commonly referred to as the background noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.</p>
SEL or L_{AE}	<p><u>Sound Exposure Level</u> The sound level of one second duration which has the same amount of energy as the actual noise event measured. Usually used to measure the sound energy of a particular event, such as a train pass-by or an aircraft flyover</p>

APPENDIX B GUIDANCE NOISE LEVEL DERIVATION

No specific criteria exist governing the assessment of noise from sporting activities in public parks or recreation spaces. As such, the documents below have been used for guidance.

B1 Noise Policy for Industry

The EPA's Noise Policy for Industry has superseded the previous Industrial Noise Policy and is designed for the assessment of noise from commercial or industrial sites and how such noise might affect the amenity of nearby receivers.

The NPfI guidelines are not designed for assessment of social or community sporting activities, we have, however, referred to them for guidance on desirable levels of acoustic amenity in the suburban context.

The NPfI aims to address industrial noise sources with respect to two noise trigger levels, firstly to address short term intrusive noise impacts and secondly to maintain noise level amenity for an area.

The NPfI trigger levels for short term intrusion impacts are based on a RBL +5dB assessment, forming the Intrusiveness Noise Level. An intrusiveness assessment would generally be considered unreasonable for a community-based activity, such as sporting play in a park. A sensible approach in applying relevant aspects of the NPfI would be to utilise the Amenity Noise Level as a guiding reference of acceptable noise levels near the park.

The Amenity Noise Level is designed to prevent noise continually increasing above an acceptable level. A review of the background noise levels presented in Table 3 indicates that the noise environment is typical of a suburban area with mostly traffic related noise sources with no noticeable contributions from industrial sources. As such, the acceptable and recommended maximum noise levels for receivers in a suburban area can be assumed to provide partially suitable guidance, bearing in mind they are designed primarily for industrial applications.

The derived Amenity Noise Levels for the day and evening time-period for a suburban environment are detailed in Table B 1 below. No adjustment for existing industrial sources has been made as none are present in the surrounds of Lysaght Park.

Table B 1: Recommended Amenity Noise Levels

Assessment period	Period of activity applicable	Recommended Amenity Noise Level, dB $L_{Aeq, 15min}$
Residential		
Day (0800-1800hrs)	Sunday training	58
Evening (1800-2200hrs)	Weekday training	48
Places of worship		
When in use	Sunday training	40 (internal)

Source: Table 2.2 NSW Noise Policy for Industry including +3dB $L_{Aeq, period}$ to $L_{Aeq, 15min}$ correction

The NPfI also indicates that multiple other factors should be considered in the determination of new or modified developments including economic considerations, community benefits and the social worth of the development.

B2 Camden Council Environmental Noise Policy

We note that other local councils have existing guidelines relating to noise from sporting events and community sports facilities. We have referenced Camden Council, who are one council that do have published guidance.

Camden Council Environmental Noise Policy details noise guidelines relating to residential developments proposed on land likely to be impacted by noise from the use of parks. It states:

6.1 General

Camden Council is responsible for regulating noise emissions from the recreational use of parks (such as Onslow and Kirkham Parks) which are used for sporting events, circuses, and special events.

It is recognised that the use of these parks has the potential to negatively impact on the amenity of surrounding residents with respect to noise. Therefore it is important to consider the level of noise impact when land in the vicinity of such parks is proposed to be rezoned for residential development or similar sensitive land-use.

The following guidelines for any assessment of noise from the use of these Parks have been devised in order to minimise the likelihood of disturbance to the surrounding community. In some instances, however, where an event or activity is determined by Council to be of particular social or cultural benefit, more relaxed criteria may be applied to the use of the site.

Guideline noise levels suggested for the evening (referred to as night –time in the Camden Council document) are provided:

Where residential development is proposed on land that is likely to be impacted by noise from the use of parks then an acoustic assessment report is required.

During the daytime the following hours are:

Monday to Friday 7.00am to 6.00pm

Weekends and Public Holidays 8.00am to 6.00pm

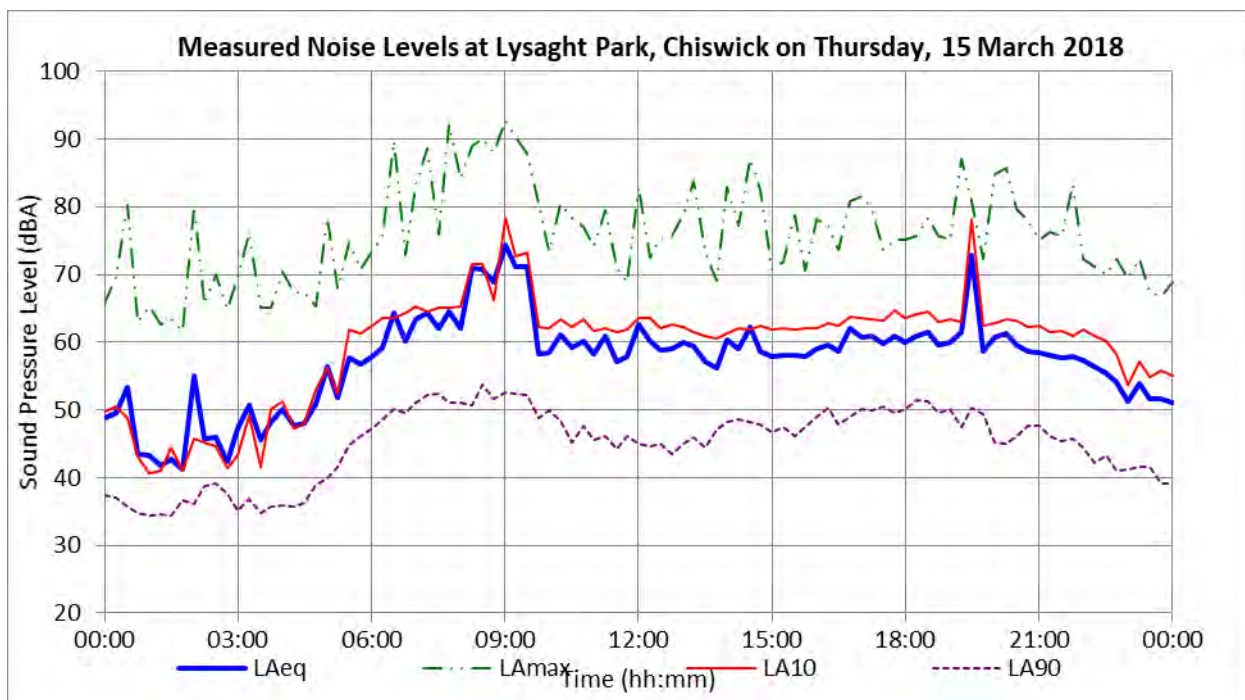
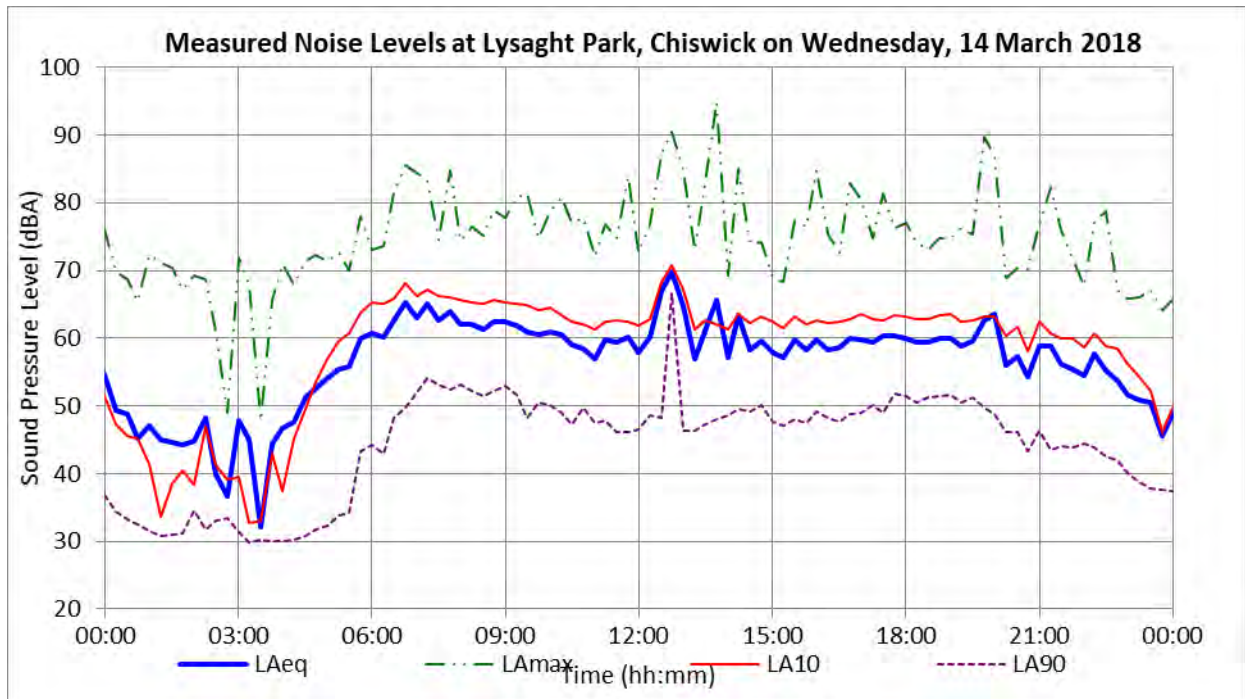
For the above daytime hours the relevant intrusive noise level ($L_{Aeq, 15 \text{ minutes}}$) should not exceed the background (L_{A90}) plus 5 dB(A).

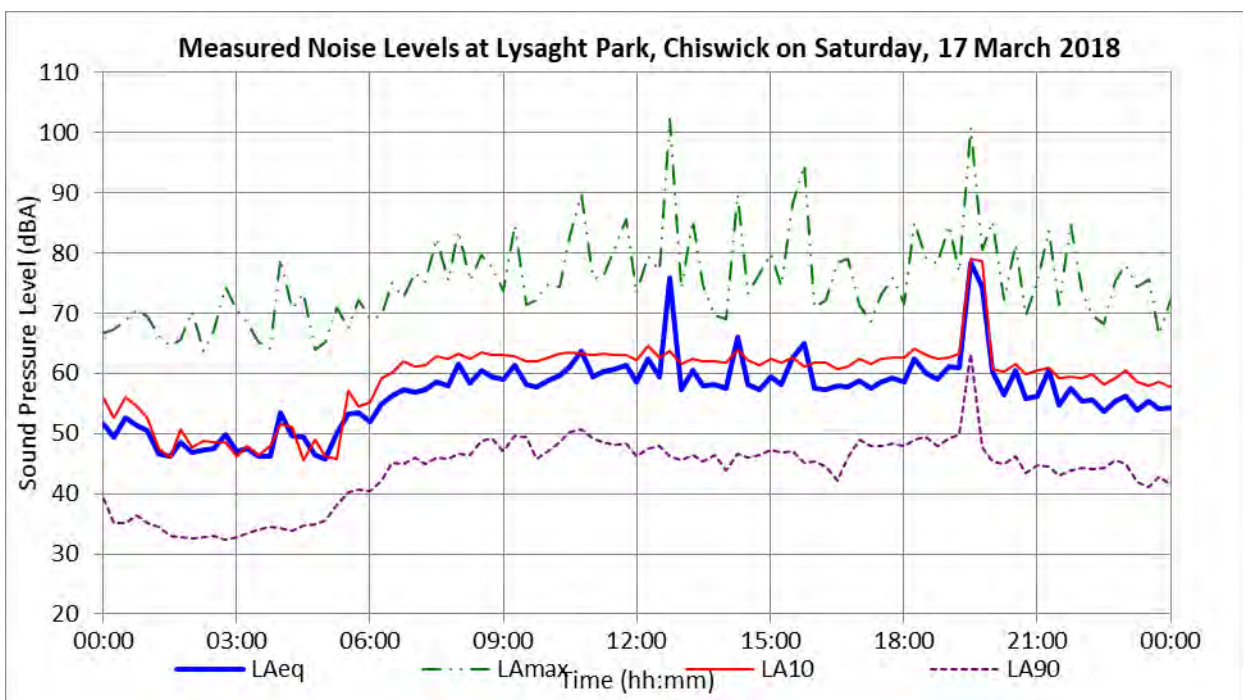
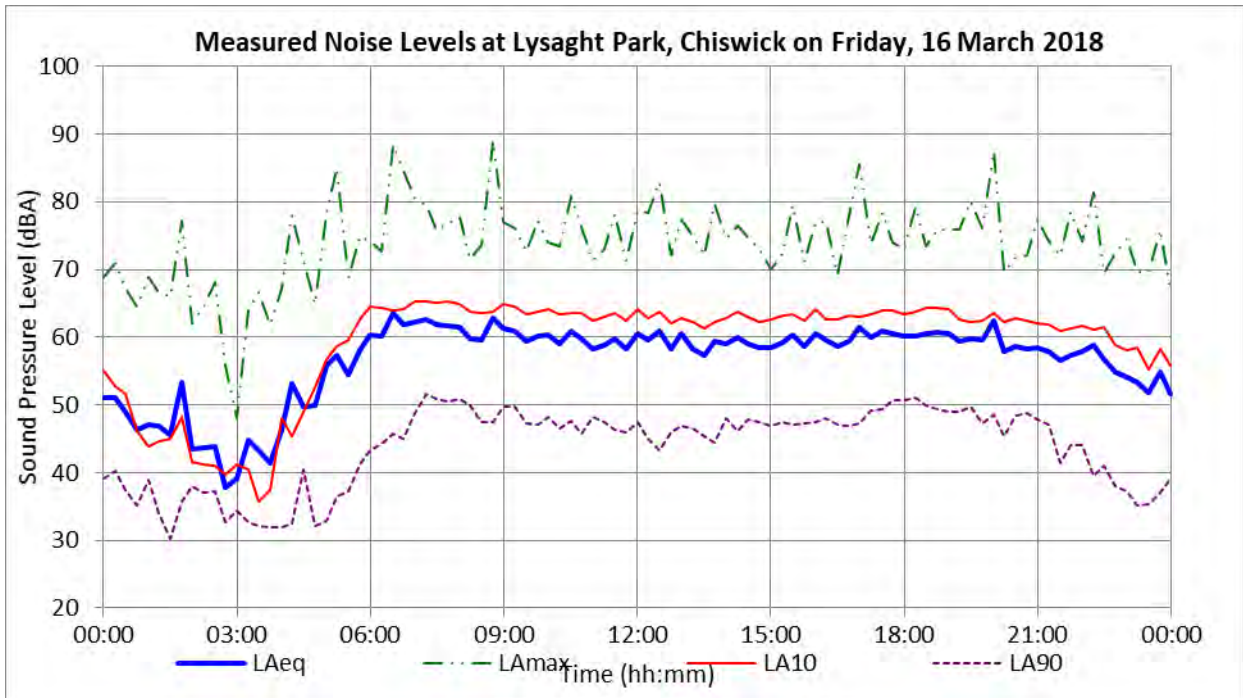
During night-time hours of 6.00pm and 10.00pm. the relevant intrusive noise level ($L_{Aeq, 15 \text{ minutes}}$) should not exceed the background (L_{A90}) plus 10 dB(A).

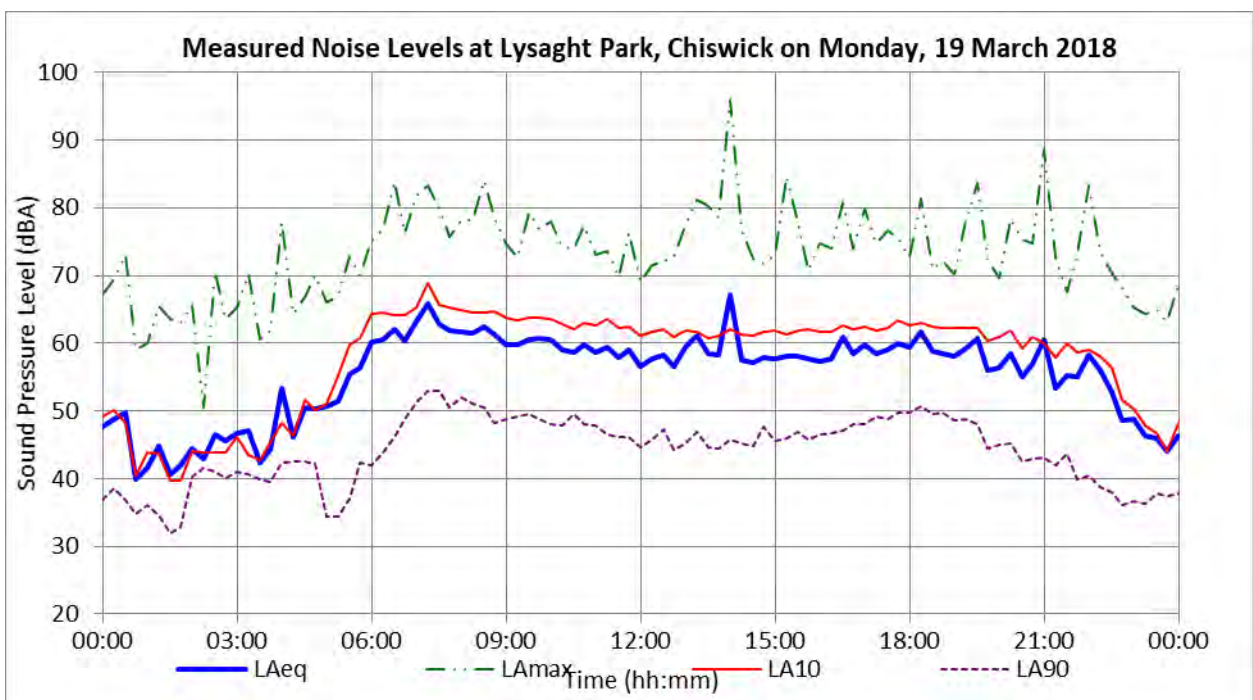
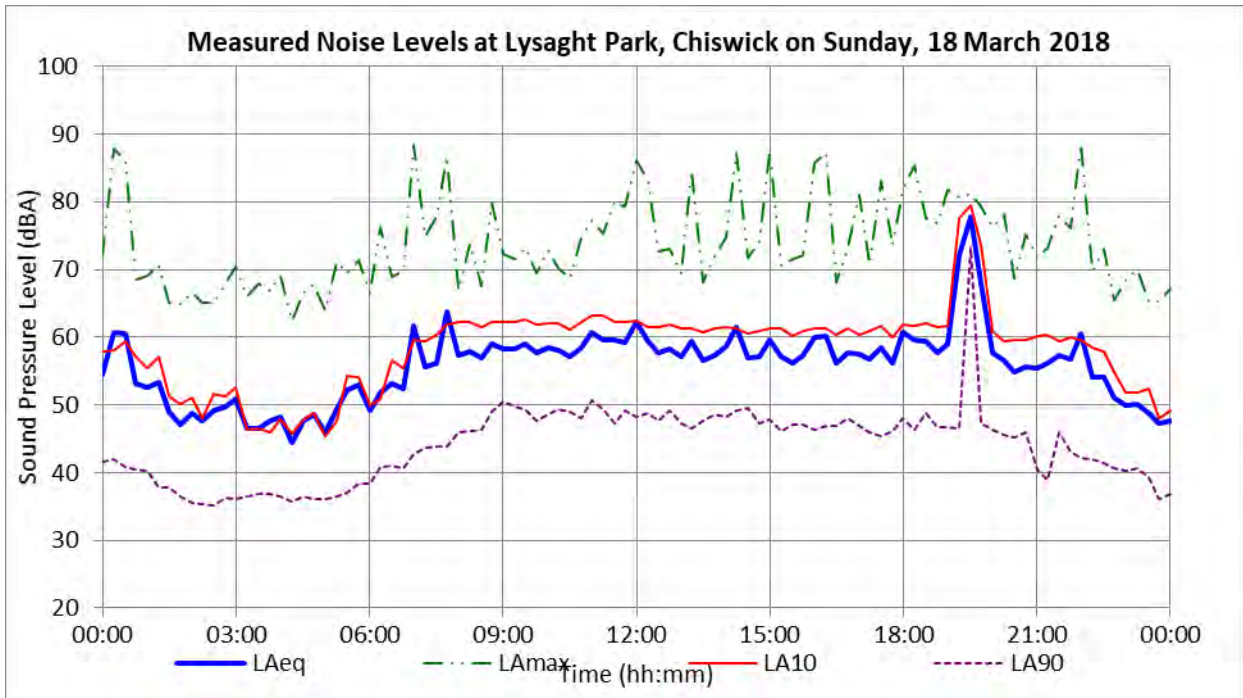
Noise shall be assessed at any proposed residential boundary or, if that boundary is proposed to be more than 30 metres from the residence, at the most affected point within 30 metres of the residence.

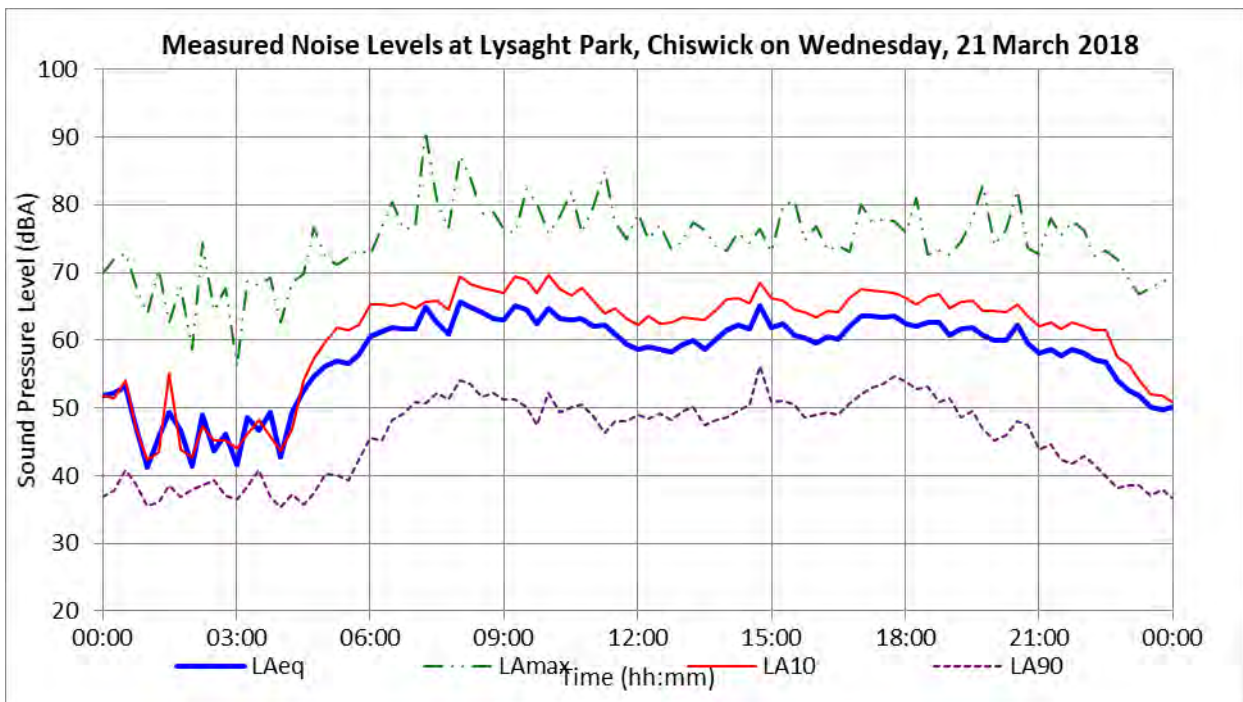
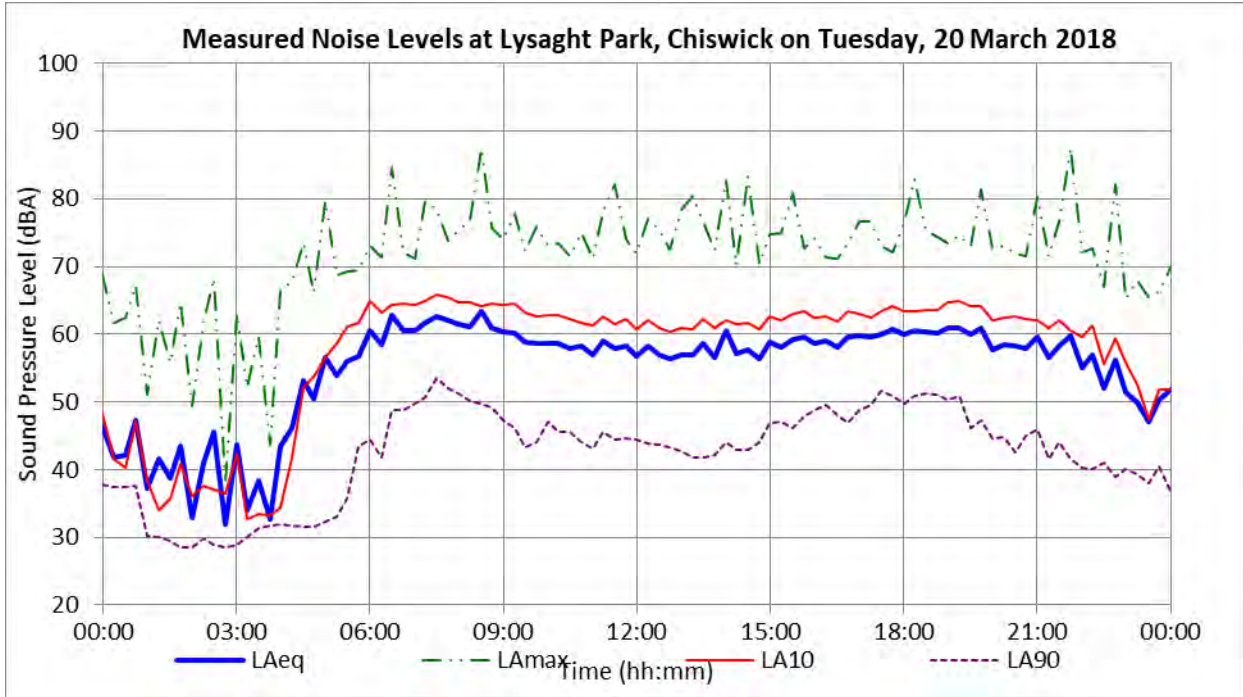
Applying this guidance to measured background levels presented in Table 3 and Table 4 gives day time levels in the range of 49-53 dBA $L_{Aeq, 15min}$ and evening time guidance levels in the range of 50-52 dBA $L_{Aeq, 15min}$.

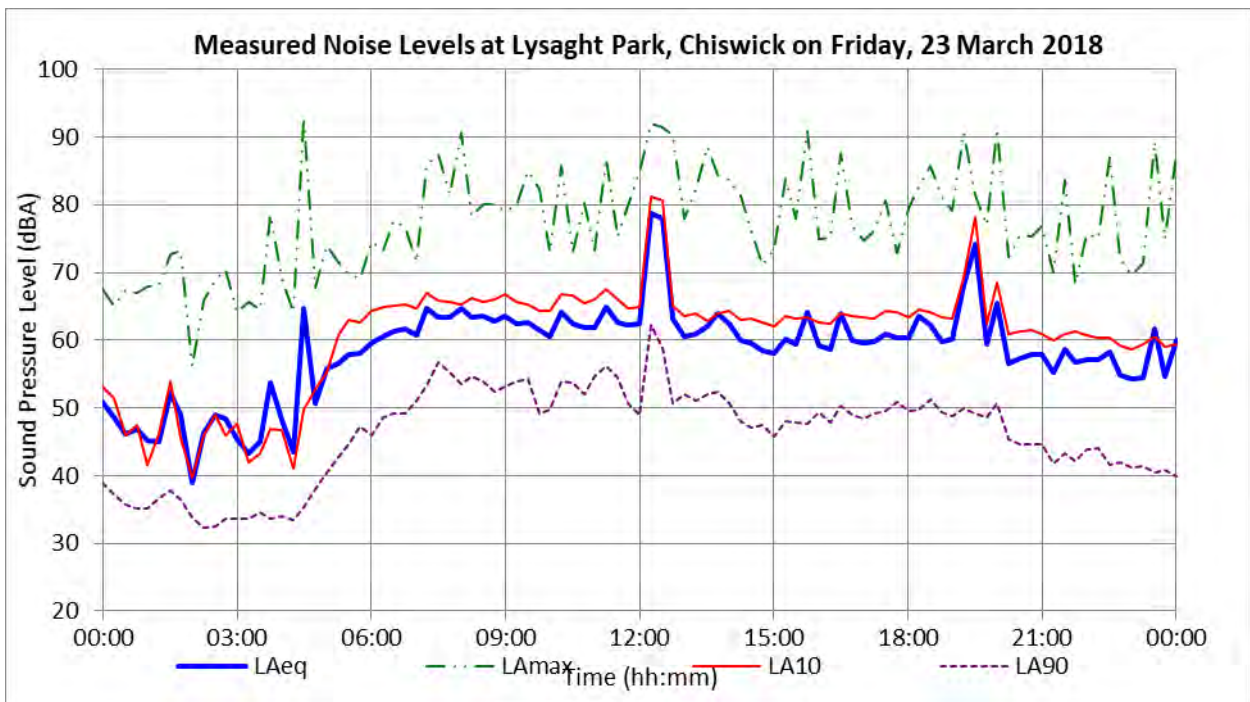
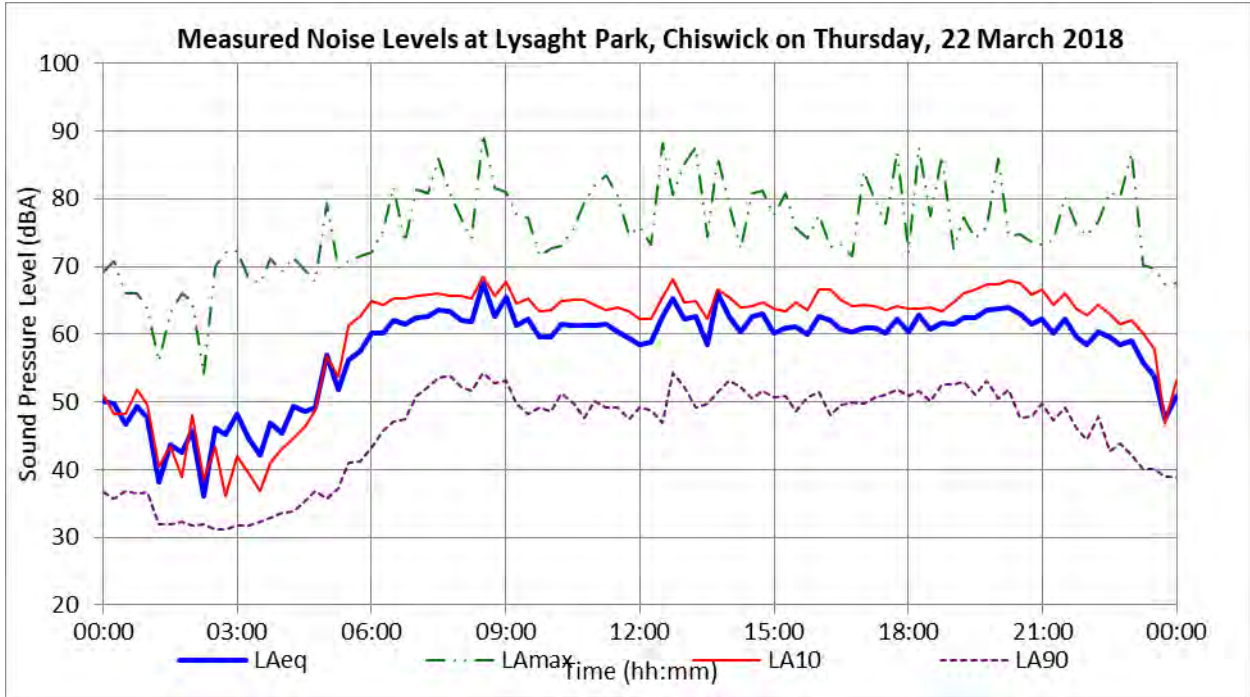
APPENDIX C NOISE LOGGER DATA

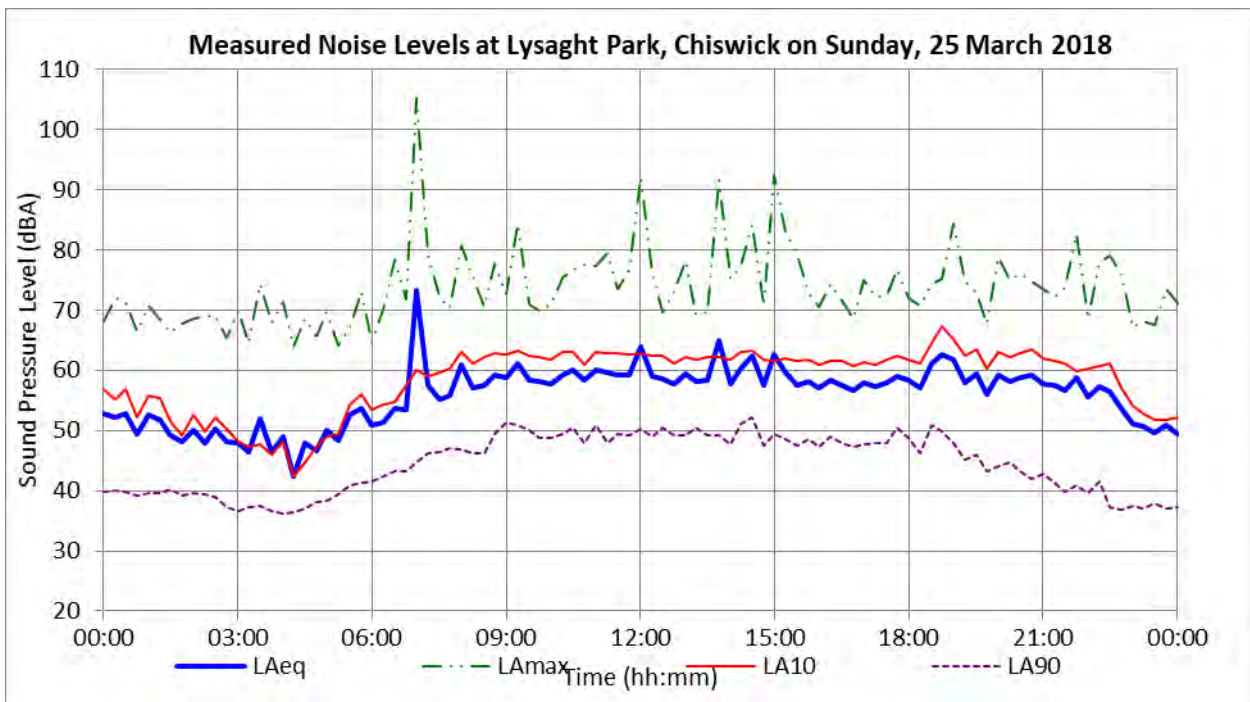
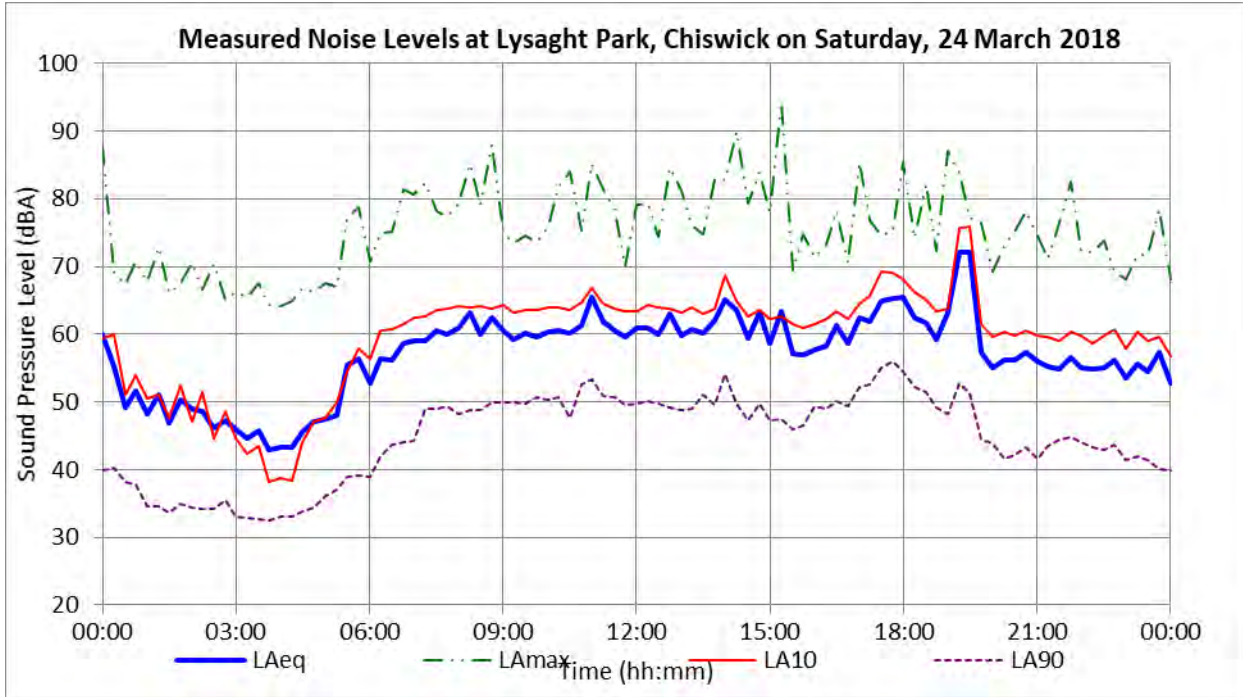


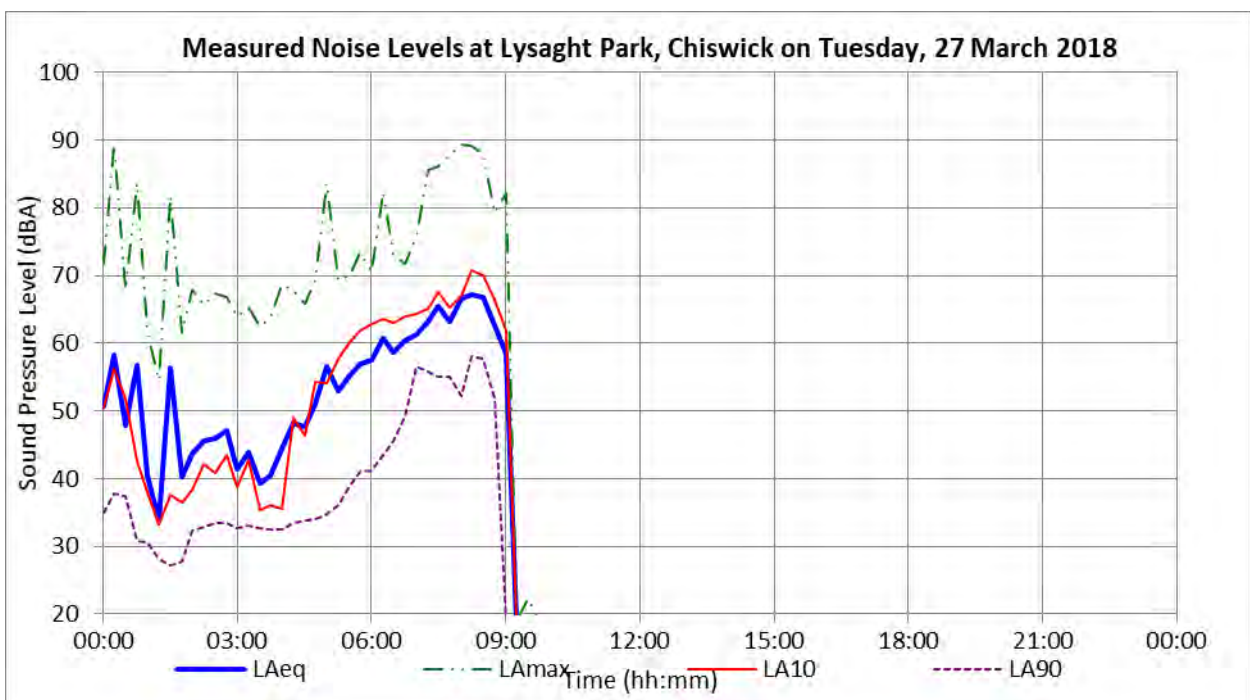
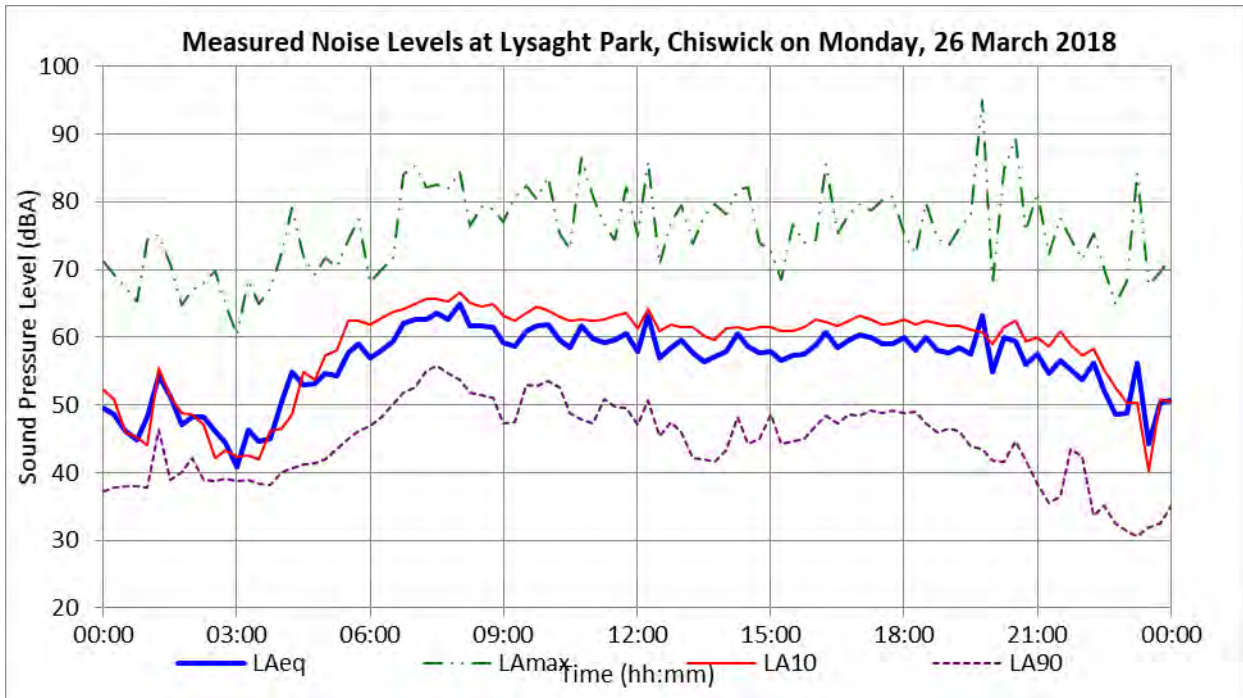












APPENDIX D PREDICTED NOISE LEVELS



Appendices

APPENDIX E. SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005 –
ASSESSMENT PREPARED BY MILESTONE (AUST) PTY LIMITED DATED APRIL 2018

REVIEW OF ENVIRONMENTAL FACTORS FOR THE INSTALLATION OF FOUR NEW LIGHTING POLES AND ASSOCIATED LIGHTING AT LYSAGHT PARK, BIBBY STREET, CHISWICK (LOT 1 DP 909058)

ASSESSMENT OF PROPOSAL PURSUANT TO THE SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

APRIL 2018

Clause	Matter for Consideration	COMPLIANCE
Clause 21 – Biodiversity, ecology and environment protection.	(a) A development should have a neutral or beneficial effect on the quality of water entering the waterways.	Complies. The proposed will not alter the quality of water entering waterways.
	(b) Development should protect and enhance terrestrial and aquatic species, populations and ecological communities and, in particular, should avoid physical damage and shading of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities).	Complies. No impact on the ecology of the area arises from current proposal.
	(c) Development should promote ecological connectivity between neighbouring areas of aquatic vegetation (such as seagrass, saltmarsh and algal and mangrove communities).	Complies Proposed works are to be located within and continue the use of existing areas of public recreation and do not seek alteration to, maintain a minimum distance of 10m from Parramatta River. No works will occur within or immediately adjacent to water, and therefore the proposal will not impact any areas of aquatic vegetation.
	(d) Development should avoid indirect impacts on aquatic vegetation (such as changes to flow, current and wave action and changes to water quality) as a result of increased access.	Complies. Existing access routes are maintained to the site with no increase in activity within the aquatic environment resulting from the proposed minor works.
	(e) Development should protect and reinstate natural intertidal foreshore areas, natural landforms and native vegetation.	Complies. All works are located within the bounds of the existing public recreation area, with no new impacts to the existing waterways.
	(f) Development should retain, rehabilitate and restore riparian land.	Not applicable. No works to riparian land are proposed.
	(g) Development on land adjoining wetlands should maintain and enhance the ecological integrity of the wetlands and, where possible, should provide a vegetative buffer to protect the wetlands.	Not applicable. No works to riparian land are proposed.
	(h) The cumulative environmental impact of development.	Complies. The proposed works are compatible with the existing use of the site for public recreation and no significant additional impact will arise as a result of the proposal. The cumulative environmental impact is considered to be minimal.
	(i) Whether sediments in the waterway adjacent to the development are contaminated, and what means will minimise their disturbance.	Complies No impact on the adjoining waterways will result from the proposed works.

Clause	Matter for Consideration	COMPLIANCE
Clause 22 - Public access to use of foreshores and waterways.	(a) Development should maintain and improve public access to and along the foreshore, without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation.	Complies. The proposal will have no impact on existing access arrangements at the site. The proposed light pole located in the north eastern part of the site near the pedestrian pathway will be installed with site management considerations to maintain pedestrian access at all times. Details of pedestrian access being maintained or any temporary diversions required to the pedestrian access along existing pathways can be detailed by the works contractor with appropriate signage and safety barriers installed for the duration of the light pole and lighting installation works.
	(b) Development should maintain and improve public access to and from the waterways for recreational purposes (such as swimming, fishing and boating), without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation.	Complies. The proposal will have no impact on existing access arrangements at the site.
	(c) If foreshore land made available for public access is not in public ownership, development should provide appropriate tenure and management mechanisms to safeguard public access to, and public use of, that land.	Complies The proposal will have no impact on existing access arrangements at the site.
	(d) The undesirability of boardwalks as a means of access across or along land below the mean high water mark if adequate alternative public access can otherwise be provided.	Not applicable. The proposal will have no impact on existing access.
	(e) The need to minimise disturbance of contaminated sediments.	Not applicable. The proposal will not involve direct disturbance of any sediments.
Clause 23 - Maintenance of working harbour	(a) Foreshore sites should be retained so as to preserve the character and functions of a working harbour, in relation to both current and future demand.	Not applicable.
	(b) Consideration should be given to integrating facilities for maritime activities in any development.	Not applicable.
	(c) In the case of development on land that adjoins land used for industrial and commercial maritime purposes, development should be compatible with the use of the adjoining land for those purposes.	Not applicable
	(d) In the case of development for industrial and commercial maritime purposes, development should provide and maintain public access to and along the foreshore where such access does not interfere with the use of the land for those purposes.	Not Applicable

Clause	Matter for Consideration	COMPLIANCE
Clause 24 - Interrelationship of waterway and foreshore uses	(a) Development should promote equitable use of the waterway, including use by passive recreation craft.	Complies The use of the surrounding waterway is not affected.
	(b) Development on foreshore land should minimise any adverse impact on the use of the waterway, including the use of the waterway for commercial and recreational uses.	Not Applicable.
	(c) Development on foreshore land should minimise excessive congestion of traffic in the waterways or along the foreshore.	Not Applicable.
	(d) Water-dependent land uses should have priority over other uses.	Not applicable. The proposal does not constitute a water dependent use.
	(e) Development should avoid conflict between the various uses in the waterways and along the foreshores.	Complies. No waterways conflict will arise as a result of the proposed development.
Clause 25 - Foreshore and Waterways Scenic Quality	(a) The scale, form, design and siting of any building should be based on an analysis of: (i) the land on which it is to be erected, and (ii) the adjoining land, and (iii) the likely future character of the locality.	Complies. The proposed activity is acceptable in terms of scale, form, design and siting. Refer to the Review of Environmental Factors Assessment for details.
	(b) Development should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries.	Complies The current proposal will not impact on the visual qualities of Sydney Harbour, its islands, the foreshore area and tributaries. The proposed light poles are slim visual elements on the landscape that will not obstruct views to and from the Harbour. The dominant foreshore character of Lysaght Park being a large open grassed reserve abutting Parramatta River (Five Dock Bay) will not be altered by the proposal for the new light poles. The scenic and visual character of the area will be maintained by the proposal.
	(c) The cumulative impact of water-based development should not detract from the character of the waterways and adjoining foreshores.	Complies. No impact on the character of the waterways will arise from the proposed development.
Clause 26 - Maintenance, protection and enhancement of views	(a) Development should maintain, protect and enhance views (including night views) to and from Sydney Harbour.	Complies. The proposal will maintain the views to and from Sydney Harbour.
	(b) Development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items.	Complies. The site is not subject to any significant or iconic views.
	(c) The cumulative impact of development on views should be minimised.	Complies. No impact arises with respect to view impacts.
Clause 27 - Boat Storage Facilities	(a) Development should increase the number of public boat storage facilities and encourage the use of such facilities.	Not applicable.
	(b) Development should avoid the proliferation of boat sheds and other related buildings and structures below the mean high water mark.	Not applicable.

Clause	Matter for Consideration	COMPLIANCE
	(c) Development should provide for the shared use of private boat storage facilities.	Not applicable.
	(d) Development should avoid the proliferation of private boat storage facilities in and over the waterways by ensuring that all such facilities satisfy a demonstrated demand.	Not applicable.
	(e) Boat storage facilities should be as visually unobtrusive as possible.	Not applicable.
	(f) In the case of permanent boat storage, the safety and utility of the development should not be adversely affected by the wave environment, and the development should avoid adverse impacts on safe navigation and single moorings.	Not applicable.