



**Warringah
Council**

Statement of Environmental Effects

Provision of Floodlighting – Nolans Reserve, North Manly

Prepared By

Parks Reserves and Foreshores Section

and

habitation

Suite C.1.D, 13 Joynton Avenue
Zetland NSW 2017 Australia

PO Box 201 Alexandria NSW 1435

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1 INTRODUCTION

This report has been prepared to support a Development Application for the upgrade of sports floodlighting in Nolans Reserve, North Manly. In preparing this documentation consideration has been given to the following:

- The Environmental Planning and Assessment Act 1979
- Warringah Local Environmental Plan 2000 and General Principles of Development Control
- WLEP 2000 Locality Statement G3
- District Park Plan of Management adopted 2002
- SEPP 71 Coastal Protection
- Local Government Act 1993 and Local Government Regulation 2006

1.1 PROJECT OBJECTIVES

The proposed floodlighting will replace and augment existing floodlighting provision in meeting new Australian Standards to improve safety and sportsground usability.

1.2 PROJECT ALTERNATIVES

The introduction of new Australian Standards for sportsground floodlighting are aimed at improving safety and usability of sportsgrounds. Subsequently the standards require a minimum provision of lighting levels commensurate with prescribed use. The project proposes to meet the minimum requirements of the standard and as such there are no design alternatives for consideration.

2 SITE AND CONTEXT

2.1 SITE DESCRIPTION

The proposed development will be undertaken within Nolans Reserve, Pittwater Road, North Manly. The reserve has a long street frontage along Pittwater Road and can also be accessed via a car park with entry from Kentwell Parade which provides an east west link between Pittwater Road and Condamine Streets.

Nolans Reserve is part of an important Warringah recreational open space known as District Park. Figure 1, below shows Nolans Reserve and the context of surrounding land use.

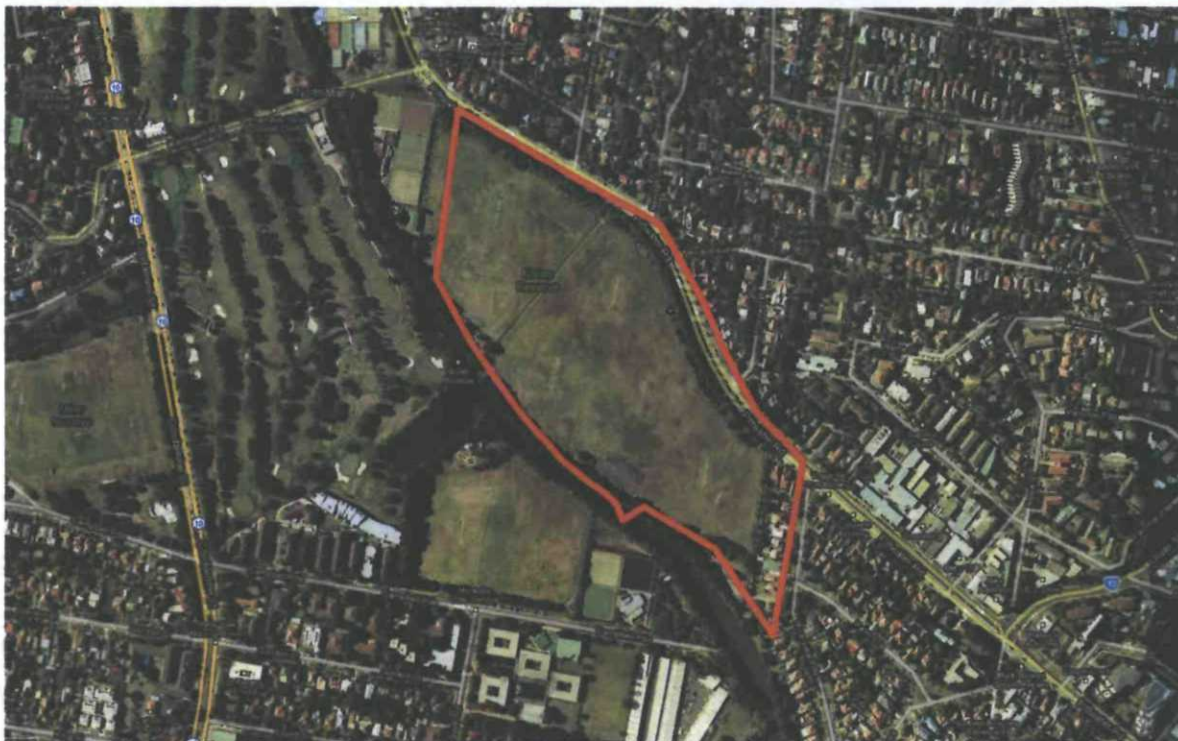


FIGURE 1: LOCATION PLAN

2.2 DISTRICT PARK

District Park consists of the area commonly known as Nolan, Passmore, Millers and David Thomas Reserves as well as Warringah Golf Course. The park is located at the boundary between the suburbs of Manly Vale and North Manly in B Ward of Warringah's Local Government Area. District Park is one of Warringah's most significant reserves in terms of its sporting and recreational uses and open space. It is a complex and regional resource containing a number of different categories of Community Land.

Two creeks flow through District Park. Manly Creek flows from the west, from Manly Dam and joins Brookvale Creek. Brookvale Creek flows from the north, into Manly Lagoon, and both creeks join at the sidebay that sits at the intersection of the golf course, Passmore and Nolan Reserves. The majority of land surrounding District Park is residential or general business. There is a large shopping complex, and an industrial area situated along and above Brookvale Creek. Brookvale Creek is piped underneath this complex.

The catchment area is made up of a variety of different land uses including residential areas, commercial businesses at Warringah Mall, and Brookvale Industrial Estate. There is another small industrial area at the eastern end of Campbell Parade. To the west of District Park is the bushland and open space area known as Manly Warringah War Memorial Park (Manly Dam), and to the South East and downstream is Manly Lagoon.

In 1953 Manly and Warringah Councils formalised an agreement for the control of District Parks which by then included War Memorial Park at Manly Dam, Warringah Golf Course, Nolan, Miller, Passmore and David Thomas Reserves. The Manly Warringah Sporting Union was formed in 1964 to control the fair distribution of grounds and lights on behalf of the District Parks Committee. This District Parks Committee was dissolved in 1991. District Park is now administered solely by Warringah Council. In the 1920's, District Park was planned as a regional recreation space, and through the efforts of the Manly Warringah District Parks Joint Committee, it has been developed into a regional sporting and recreation area.

2.3 CURRENT LAND USE

The site is currently used as sports playing fields and passive and active recreation space. Nolan Reserve has been substantially modified over the years by extensive reclamation and drainage works to develop a large multi field facility. The playing fields within the Nolan Reserve are extensively used for organised sports such as rugby league, rugby union, soccer, touch football and cricket at both junior and senior levels. A substantial open space, it also provides many opportunities for a range of casual sports. A large multi field facility it caters well for district and regional competition and is favoured by the local primary and secondary schools associations for a range of school sporting pursuits. A three netball court sized bitumen area, in very poor condition, is currently used for radio controlled model cars, recreational skateboarding and roller blading. The reserve also contains four separate toilet facilities and two internal parking areas.

To the north of this reserve lies the North Manly Bowling Club and to the west the Warringah Golf Club, both of which are leased from Warringah Council.

2.4 TOPOGRAPHY AND VEGETATION

The site is generally level with ground cover consisting primarily of kikuyu grass. There are range of endemic and introduced tree plantings located around the perimeter providing a buffer to street frontages and other adjoining properties. Brookvale Creek flowing to Manly Lagoon provides a boundary of the reserve on the south west side with significant riparian plantings located on both banks.

2.5 LOCAL CONTEXT AND ADJOINING LAND USES.

The subject site is located adjacent to Pittwater Road, which is an arterial road linking Manly with the upper northern beaches. The area surrounding the site comprises a mix of residential, recreation and general business uses. Adjacent land use consists of:

- To the east: Single dwelling Residential Lots
- To the south: Passmore Reserve and Manly Vale Bowling Club
- To the west: Warringah golf course
- To the north: North Manly Bowling Club, Bob Giltinan Tennis Centre and single dwelling residential lots.

2.6 LAND INFORMATION

The subject site consists of the following land parcels:

- | | | |
|--|-----------|--|
| 1. Part Lot 2743 | DP752038 | Campbell Pde & Condamine St, North Manly |
| 2. Lot 2762 | DP752038 | Lot 3 Campbell Pde, North Manly |
| 3. Lot 1 | DP723586 | Pittwater Rd & Condamine St, North Manly |
| 4. Lot 1 to 17 | DP1125336 | Pittwater Rd, North Manly |
| 5. Lot 12 to 24, Part Lot 25, Lot 26 to 28 Sec A | DP5857 | 9990 Pittwater Rd, North Manly |
| 6. Lot 1 | DP449244 | Pittwater Rd, North Manly |

2.7 LAND MANAGEMENT

Warringah Council has care control and management of the subject site and all landholding within.

3 PROJECT DESCRIPTION

3.1 PROPOSED DEVELOPMENT

The proposed development is for the construction of new floodlighting for sportsgrounds configured primarily for the winter sporting season. Floodlighting will replace some existing floodlighting infrastructure and augment the provision of floodlighting generally in meeting the requirements of Australian Standard 2560.2.3 – 2007 Lighting for Football. The works will involve the following:

- Demolition and disposal of existing floodlighting poles and luminaries
- Installation of 15 new 20-25m floodlighting towers including concrete footings
- Excavation required for construction of footings and trenching for power reticulation including installation of cabling and conduits
- Installation of new luminaries on each light tower
- Installation of lighting control gear
- Commissioning of lighting

3.2 PROPOSED HOURS OF OPERATION

The proposed development is intended to provide illumination of the sports field to service authorised allocated use. All Warringah sportsgrounds are allocated for use from 4.00pm until 9.30pm Monday through Friday; 8.00am until 9.30pm on Saturdays and 8.00am until 6.00pm on Sundays. The application seeks approval for lighting to be used for sporting activities at Nolans Reserve consistent with current allocation arrangements and objectives of the community land categorised as sportsground.

3.3 DESIGN PHILOSOPHY

A high level detailed design has been undertaken to ensure that the proposed works conform with AS2560.2.3-2007 Lighting for football; and AS 4282-1997 Control of obtrusive effects of outdoor lighting such that:

- the fields receive the prescribed light levels over the sportsgrounds;
- that light spill and glare conforms to the prescribed standards and does not encroach on adjoining properties;
- the light poles provide minimal visual impact within the park and allow for the reasonable sharing of views.

The lighting design undertaken by Sylvania Lighting Australasia provides calculations for light spill and glare on the adjoining property boundaries and is submitted with this application.

3.4 CONSTRUCTION MANAGEMENT

Construction will be managed in accordance with standard conditions of consent.

While the details of the construction management plan will be finalised pending development approval, the key aspects for consideration are:

- Site establishment including the installation of safety and environmental controls to minimise impacts such as noise, dust, erosion and sedimentation
- Demolition phase comprising the demolition and disposal of existing light poles
- Construction and installation phase including footings, erection of towers and installation of luminaries
- Adjustment of lighting controls and angle of lights – required to be undertaken after dark
- Construction working hours are proposed from 7am – 5pm Monday through Friday
- Access and use of sportsgrounds for passive and active use will be retained where practicable throughout construction

4 STATUTORY PLANNING FRAMEWORK

Under the provisions of Section 79C(1) of the EP&A Act 1979 as amended, in determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development, the subject of the development application.

- (a) the provision of -
 - i) any environmental planning instrument, and
 - ii) any draft environmental planning instrument that is or has been placed on exhibition and details of which have been notified to the consent authority
 - iii) any development control plan, and
 - iv) any matters prescribed by the regulations that apply to the land, which the development application relates.
- (b) The likely impact of that development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality;
- (c) the suitability of the site for the development;
- (d) any submission made in accordance with this Act or the regulations;
- (e) the public interest

The environmental planning instruments relevant to the development include:

- State Environmental Planning Policy 74: Coastal Protection
- Warringah Local Environment Plan 2000

The draft environmental planning instruments relevant to the development include:

- Draft LEP Warringah Local Environment Plan
- Draft Warringah Development Control Plan

The following tables outline the relevant clauses and note compliance or compliance with the objectives and standards.

4.1 SEPP 71 COASTAL PROTECTION

This State Environmental Planning Policy applies to land identified as being within 100m of a coastal lake. The subject property is identified as being located within this area and as such the matters for consideration set out in clause 8 of the policy are to be taken into account by a consent authority when it determines a development application to carry out development on land to which this Policy applies.

The aim of the policy are as follows:

- (a) to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast, and
- (b) to protect and improve existing public access to and along coastal foreshores to the extent that this is compatible with the natural attributes of the coastal foreshore, and
- (c) to ensure that new opportunities for public access to and along coastal foreshores are identified and realised to the extent that this is compatible with the natural attributes of the coastal foreshore, and
- (d) to protect and preserve Aboriginal cultural heritage, and Aboriginal places, values, customs, beliefs and traditional knowledge, and
- (e) to ensure that the visual amenity of the coast is protected, and
- (f) to protect and preserve beach environments and beach amenity, and
- (g) to protect and preserve native coastal vegetation, and
- (h) to protect and preserve the marine environment of New South Wales, and
- (i) to protect and preserve rock platforms, and
- (j) to manage the coastal zone in accordance with the principles of ecologically sustainable development (within the meaning of section 6 (2) of the *Protection of the Environment Administration Act 1991*), and
- (k) to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area, and
- (l) to encourage a strategic approach to coastal management.

The relevant matters for consideration are:

CL	OBJECTIVE / STANDARD	COMPLIANCE / COMMENT
8(b)	existing public access to and along the coastal foreshore for pedestrians or persons with a disability should be retained and, where possible, public access to and along the coastal foreshore for pedestrians or persons with a disability should be improved,	Existing public access to coastal foreshore is unrestricted currently and is not compromised as a consequence of the proposed works.
8(d)	the suitability of development given its type, location and design and its relationship with the surrounding area,	Council has in place a Plan of Management encompassing the subject site, the proposed development is compatible with the uses contained within this Plan of Management
8(e)	any detrimental impact that development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore,	This has been discussed in detail previously in this report. The visual amenity of the foreshore is protected by the type of structures proposed.
8(f)	the scenic qualities of the New South Wales coast, and means to protect and improve these qualities,	The proposal involves minimal structure and will not affect the scenic qualities of the coastal areas.
8(g)	To protect and preserve the native coastal vegetation	The proposal does not require the removal of any trees or native coastal vegetation. It will be located on existing grassed sections of land categorised and used as sportsgrounds.
8(i)	existing wildlife corridors and the impact of development on these corridors,	<p>The proposal does not require the removal of any trees or native coastal vegetation. It will be located on existing grassed sections of land categorised and used as sportsgrounds.</p> <p>The proposed lighting is designed to conform with AS4282-1997 Control of obtrusive effects of outdoor lighting and as such has been designed to minimise lighting spill impact at the riparian boundary. Additionally there is sufficient vegetative cover at this boundary to provide additional protection and habitat.</p>

4.2 WARRINGAH LOCAL ENVIRONMENT PLAN 2000

The following General Principles of Development Control as contained in Part 4 of the WLEP 2000 are applicable to the proposed development:

CL	General Principle	COMPLIANCE / COMMENT
17	HOW WILL THE USE OF PUBLIC OPEN SPACE BE CONTROLLED (2) Public open space can be developed for any purpose that is consistent with a plan of management applying to that public open space. (4) Development on public open space other than exempt development is to be regarded as Category Two development.	<p>Council has in place a Plan of Management encompassing the subject site, the proposed development is compatible with the uses contained within this Plan of Management</p> <p>The development is to be regarded as Category Two Development</p>
38	GLARE AND REFLECTION Development is not to result in overspill or glare from artificial illumination, or sun reflection, which would unreasonably diminish the amenity of the locality.	<p>The lighting specification included identifies the proposed lighting must comply with;</p> <ul style="list-style-type: none"> o Australian Standards AS2560.2.3-2007, 'Lighting for Football' to club competition level (Amateur) (see the proposal) and o Australian Standard AS4282-1997, "Control of the obtrusive Effects of Lighting". This standard addresses three (3) issues spill lighting, luminous intensity and glare and provides criteria for each: <p>Spill lighting – provides for a maximum level in the vertical plane of 10 lux when measured at a residential boundary. This is the vertical luminance calculated at the relevant boundary commensurate with the height of the effected dwelling.</p> <p>The maximum spill level at the reference points at the residential boundaries was 7.4 lux which is well within the permissible levels of 10 lux recommended maximum level set by AS4282 during pre-</p>

		<p>curfew hours (before 11.00pm). There is no proposed operation of the floodlighting after 11.00pm.</p> <p>Luminous Intensity – this is governed by the type of light fitting/luminaries and the angle it is installed. Maximum Luminous Intensity = 58 367 per floodlight Cd.</p> <p>The type of area it is to be used is also a factor. We have assumed Level 2 control, based on the fact that that it is an environmentally sensitive area and residential property is nearby. It was considered that any angle of the light fitting could result in undesirable glare.</p> <p>Threshold Increment – the is the measure of disability glare to motorists and has been calculated on Pittwater Road, Kentwell Rd, Nenagh St, hillcrest Pl, Palm Ave and Riverview Pde. The maximum Threshold Increment = 14.5%.</p>
43	<p>NOISE</p> <p>Development is not to result in noise émission which would unreasonably diminish the amenity of the area and is not to result in noise intrusion which would be unreasonable to the occupants.</p>	<p>Noise generated during construction is expected to be minimal and conforming with general conditions of development consent.</p> <p>Noise associated with usage will be typical of that associated with this type of recreational land use and will be restricted to existing allocated sportsground usage hours terminating around 9.30pm Monday through Saturday and 6.00pm Sundays. This is compatible with surrounding recreational land uses such as tennis.</p>
47	<p>FLOOD AFFECTED LAND</p> <p>Development on flood affected land is to be sited and designed to minimise impacts of flooding on property and have regard to the existing flood regime.</p> <p>In particular:</p> <ul style="list-style-type: none"> • development is not to reduce flood storage area or impact upon the existing flood regime, • habitable floor areas of buildings are to be at a level of at least 500mm above the 1% annual exceedance probability flood level, and • buildings or works affected by flooding are to be constructed of flood compatible building materials. <p>For the purposes of this clause, flood affected land means land below the 1 per cent annual exceedance probability flood level</p>	<p>The site is located within a 1:100 year flood area. It is considered that the most likely impacts on the flood water at the time of flooding would be debris impacting or wrapping around the lower section of the poles.</p> <p>The poles have been designed by a Structural Engineer and has taken into account the effects of flooding and the implications.</p> <p>The development will not reduce the flood storage area or significantly impact on the current flood modelling.</p>
48	<p>REMEDIATION OF CONTAMINATED LAND</p>	<p>The Plan of Management identifies the site as a former landfill site. Given the small amount of excavation and soil displacement it is anticipated no rehabilitation will be required. Prior to the Construction Certificate being released further details will be required.</p> <p>The playing fields are currently used as a sporting fields and this use is not altering. It is considered the land is suitable for the purpose of siting the lighting poles.</p>
49A	<p>ACID SULFATE SOILS</p> <p>Development on land identified as Class 1, 2, 3, 4 or 5 on the Acid Sulfate Soils Hazard Map is to be carried out in a manner that manages any disturbance to acid sulfate soils so as to minimise impacts on natural water bodies and wetlands, and on agriculture, fishing, aquaculture, urban activities and infrastructure</p> <p>The site is indicated as being affected by Class 2 and 5 soils.</p>	<p>High risk areas of acid sulfate soils in Warringah are identified in estuarine sediments forming the foreshores and lower catchments of Narrabeen, Dee Why, Curl Curl and Manly Lagoons and Manly Dam.</p> <p>Lower risk areas are also identified adjoining high risk areas of the foreshore and lower lagoon catchments and along coastal areas from Queenscliff to Narrabeen.</p>

		<p>The subject area is classified Risk Category 2 on the WLEP 2000 – Acid Sulfate Soil Hazard Map. Accordingly, there is potential risk of ASS in areas below natural ground surface. An Acid Sulfate Soils management plan has been prepared in accordance with the Acid Sulfate Soils Assessment Guidelines, as work will be undertaken below the natural ground surface. This is part of the application package.</p> <p>Preliminary investigation undertaken by GHD determined that the saturated loose sands and clayey sands underlying the site are not Potential Acid Sulfate Soils (PASS). Despite these findings the site is ideally located for PASS conditions to occur and it is suggested that proposed excavation and exposure of these soils be minimised as far as possible. Where proposed construction activities are likely to result in the exposure and possible oxidation of the site soils, it is recommended that proposed works continue under the guidance of a site specific Acid Sulfate Soil Management Plan (ASSMP).</p>
52	<p>DEVELOPMENT NEAR PARK, BUSHLAND RESERVES AND OTHER PUBLIC OPEN SPACES</p> <p>Development adjacent to parks, bushland reserves and other public open spaces, including land reserved for public open space, is to complement the landscape character and public use and enjoyment of that land.</p>	<p>All proposed works is contained to land currently categorised and used as Sportsground. The proposed development is typical of this type of open space and is consistent with existing and similar development on site. The proposed works do not encroach or impact on natural areas including, bushland, riparian boundaries and wildlife corridors.</p>
56	<p>RETAINING UNIQUE ENVIRONMENTAL FEATURES ON SITE</p> <p>Development is to be designed to retain and complement any unique environmental features of its site and on adjoining and nearby land. In particular, development is to be designed to incorporate or be sympathetic to environmental features such as remnant bushland and watercourses.</p>	<p>All proposed works is contained to grassed sections of land currently categorised and used as Sportsground.</p> <p>The proposed development is typical of this type of open space and is consistent with existing and similar development on site. The floodlighting towers which are distributed around the site of a tapered design that is sympathetic to natural features beyond the sportsground areas. The proposed works do not encroach or impact on natural areas including, bushland, riparian boundaries and wildlife corridors.</p>
60	<p>WATERCOURSES AND AQUATIC HABITAT</p> <p>Development is to be sited and designed to maintain and enhance natural watercourses and aquatic habitat.</p>	<p>The proposed development is located beyond defined riparian zones and will have minimal impact due to the control of light spill, the curfews that will be imposed and the limited development footprint associated with the proposed works.</p>
61	<p>VIEWS</p> <p>Development is to allow for the reasonable sharing of views</p>	<p>The proposed layout, distribution, design and construction of the lighting towers allows for the reasonable sharing of views across Nolans Reserve.</p>
78	<p>EROSION AND SEDIMENTATION</p> <p>Development is to be sited and designed, and related construction work carried out, so as to minimise the potential for soil erosion.</p>	<p>The proposed works will be undertaken on level grassed playing fields where there is minimal risk of movement of exposed excavation materials during construction. To mitigate any impacts arising during construction works an erosion and sediment control plan has been developed and is attached to this application.</p>
79	<p>HERITAGE CONTROL</p>	<p>Given the highly disturbed nature of the land categorised and used as sportsgrounds at Nolans Reserves it is unlikely that there are any heritage items located on the site of proposed works.</p>
82	<p>DEVELOPMENT IN THE VICINITY OF HERITAGE ITEMS</p>	<p>Investigation of Council's Heritage layer suggests that there is a heritage item known as Sloan's Bridge in some proximity to the proposed works. Sloan's Bridge is located in Sloan Crescent Manly Vale between David Thoms Reserve and Millers Reserve, Manly Vale. The nature of the proposed works will not impact on this Heritage structure given its location some 600m away from the nearest works in Nolans Reserve.</p>

83	DEVELOPMENT OF KNOWN OR POTENTIAL ARCHAEOLOGICAL SITES	Given the highly disturbed nature of the land categorised and used as sportsgrounds at Nolans Reserves it is unlikely that there are any archaeological items located on the site of proposed works.
	LOCALITY G3 The development is located within the Manly Lagoon Suburbs locality. There are no specific controls for this locality.	The development is considered to be Category 3 development - "recreation facilities" and is permissible with approval
	BUILDING HEIGHT Except within the areas shown as "medium density areas" on the map: • buildings are not to exceed 8.5 metres in height, where height is the distance measured vertically between the topmost point of the building (not being a vent or chimney or the like) and the natural ground level below.	The maximum height of the light towers is 25m see attached . The proposal seeks to vary that requirement. A clause 20 submission is provided.
	FRONT BUILDING SETBACK Development is to maintain a minimum front building setback. The minimum front building setback is 6.5 metres.	The proposed works are set back in excess of the 6.5m setback

CLAUSE 20 SUBMISSION (UNDER WARRINGAH LEP 2000)

Under clause 20(1):

consent may be granted to proposed development even if the development does not comply with one or more development standards, provided the resulting development is consistent with the general principles of development control, the desired future character of the locality and any relevant State environmental planning policy.

The proposed location for the lighting is public open space. Under Clause 17 of WLEP public open space can be developed for any purpose that is consistent with a Plan of Management applying to that open space. Firstly the proposal is consistent with the core objectives for the management of community land categorised as sportsground:

- a) To encourage, promote and facilitate recreational pursuits in the community involving organised and informal sporting activities and games, and
- b) To ensure that such activities are managed having regard to any adverse impact on nearby residences.

Further the proposal is in accordance with the District Park Plan of Management adopted 2002 viz Action 28 Investigate and develop if appropriate, the addition of further lights at Nolan's, Miller's Passmore and David Thomas Reserves.

As stated in Clause 20 Council may approve the lights even though they are proposed to exceed the 8.5m maximum height provided;

CL	OBJECTIVE / STANDARD	COMPLIANCE / COMMENT
	<i>the resulting development is consistent with the general principles of development control</i>	as identified in the Statement of Environmental Effects the application is consistent with the general principles
	<i>the desired future character(DFC) of the locality</i>	the proposal is not contrary to the DFC
	<i>any relevant State environmental planning policy.</i>	No State Policies apply

This Clause 20 objection should be supported and the development standard varied for the following reasons:

- Compliance with the development standard is unnecessary and unreasonable given the works support the efficient management and use of Councils recreational assets
- The proposal is consistent with the core objectives of the management of community land categorised as sportsground and supports the development of sport in the Warringah community
- The impact on the nearby community is minimal
- The proposed work is augmentation of an existing approved use
- The works do not impinge upon the opportunity for public and private views

5 CONSIDERATION OF ENVIRONMENTAL IMPACTS

5.1 ESSENTIAL CHECKLIST FOR ENVIRONMENTAL ASSESSMENT OF ACTIVITIES AFFECTING BUSHLAND, WATERWAYS AND TREES

5.1.1 REMOVE OR MODIFY BUSHLAND VEGETATION?

The proposed works will not require removal or modification of bushland vegetation.

5.1.2 INVOLVE TREE REMOVAL?

The proposed works will not require tree removal.

5.1.3 OCCUR IN OR AROUND A NATURAL WATERCOURSE?

The proposed works will be undertaken outside the riparian buffer zone associated with Brookvale and Manly Creeks. The proposed works site is generally level with protective measures such as sediment and erosion control used to mitigate any likely implications for migration of excavated materials beyond the works area. The depth of excavation and development is not expected to encounter or alter existing groundwater conditions.

5.1.4 OCCUR IN OR AROUND CULVERTS GREATER THAN 1500MM?

The works area does not include any culverts or drainage swales of this magnitude.

5.1.5 OCCUR IN AN AREA WITH A BOUNDARY TO AN AREA OF BUSHLAND MANAGEMENT?

The proposed works will not occur in an area under bushland management.

5.1.6 CAUSE A SIGNIFICANT EROSION HAZARD?

The activity will result in the removal of surface vegetation. This is not considered a significant erosion hazard. The works will be protected by the implementation and maintenance of erosion and sediment control measures in accordance with design plans and Landcom's (2004) Soils and Construction Manual Vol 1- Managing Urban Stormwater: Soils and Construction. Works are not to commence until such time that all erosion and sediment control measures are in place.

5.1.7 RESULT IN LARGE QUANTITIES OF WASTE MATERIAL BEING LEFT ON-SITE?

The proposed works will include the excavation and stockpiling of materials during work to be treated and removed from site to an approved waste disposal centre. Any stockpiled material will be protected from erosion or migration off site using erosion and sediment control measures.

5.2 SPECIFIC ENVIRONMENTAL IMPACT CONSIDERATIONS DURING THE ACTIVITY

5.2.1 LAND USE

The proposed works are limited to the carrying out of a work and does not require a change in land use.

5.2.2 SOCIAL AMENITY

The proposed works may require some erection of protective fencing and the temporary closure of the immediate area of the subject site to ensure public safety and to ensure unencumbered access to complete the proposed works in a safe, timely and efficient manner.

5.2.3 PUBLIC ACCESS

The activity and subsequent erection of protective fencing will result in the diversion of public access around the proposed works areas for the duration of the activity. Given the extent of alternative access options this is not considered significant.

5.2.4 RUNOFF AND DRAINAGE DURING THE ACTIVITY

All stormwater runoff will be directed away from disturbed areas and stockpiles in accordance with erosion and sediment control system.

5.2.5 EROSION

The activity will result in some removal of surface vegetation. This is not considered a significant erosion hazard. The works will be protected by the implementation and maintenance of erosion and sediment control measures in accordance with design plans and

Landcom's (2004) Soils and Construction Manual Vol 1- Managing Urban Stormwater: Soils and Construction. Works are not to commence until such time that all erosion and sediment control measures are in place.

5.2.6 SEDIMENTATION

Sediment control measures are required to trap and retain sediment once soil has been eroded. The emphasis for planning should, however, be on preventing erosion rather than trapping sediment from eroded areas. Sediment control measures are temporary solutions prior to revegetation and stabilisation of the site.

Erosion potential is minimised as described above, undertaking the activity will not create sedimentation of waterways or water bodies in the locality. Protection will be provided using silt fencing as required along with specific measures for pits and formed drainage lines within the works areas. These measures are to be maintained throughout the works with all traps cleared on a regular basis and after each rain event.

Works are not to commence until such time that all erosion and sediment control measures are in place. Additionally earth works are not to be undertaken during rain events.

5.2.7 ACID SULPHATE SOILS (ASS)

High risk areas of acid sulphate soils in Warringah are identified in estuarine sediments forming the foreshores and lower catchments of Narrabeen, Dee Why, Curl Curl and Manly Lagoons and Manly Dam.

Lower risk areas are also identified adjoining high risk areas of the foreshore and lower lagoon catchments and along coastal areas from Queenscliff to Narrabeen.

The subject area is classified Risk Category 2 on the WLEP 2000 – Acid Sulfate Soil Hazard Map. Accordingly, there is potential risk of ASS in areas below natural ground surface.

Preliminary investigation undertaken by GHD determined that the saturated loose sands and clayey sands underlying the site are not Potential Acid Sulfate Soils (PASS). Despite these findings the site is ideally located for PASS conditions to occur and it is suggested that proposed excavation and exposure of these soils be minimised as far as possible. Where proposed construction activities are likely to result in the exposure and possible oxidation of the site soils, it is recommended that proposed works continue under the guidance of a site specific Acid Sulfate Soil Management Plan (ASSMP). An Acid Sulfate Soils management plan has been prepared in accordance with the Acid Sulfate Soils Assessment Guidelines. This is part of the application package.

5.2.8 FLOOD LEVELS AND NATURAL HAZARDS

The proposed activity is not expected to have any impact on the occurrence of any natural hazard such as bushfire, landslip or flood. Further the proposed works will not significantly alter existing surface levels.

5.2.9 TRANSPORT OF MATERIALS PLANT AND EQUIPMENT

The Activity will require the movement of materials and resources into, across and out of the site. All works on the site will be undertaken to prevent erosion and transport of soil and sediment off site and onto adjoining properties via plant and equipment.

5.2.10 NOISE AND VIBRATION

The proposed activity will involve the use of various plant and equipment associated with construction works. Based on proposed construction activities there is potential that noise during construction may impact on adjoining properties. To mitigate these impacts careful management of the proposed works will involve forward planning and selection of equipment, minimising duration of works and limiting the hours of work on site to 7am to 5pm Monday to Friday with no work on weekends or public holidays.

5.2.11 UTILITIES

The contractor is required to undertake Dial Before You Dig investigations prior to the commencement of works to ascertain from the appropriate authorities the position, extent and depth of all services and utilities that may be encountered and or interfered with during the works.

5.2.12 WASTE MANAGEMENT

Waste that would not be suitable for re-use on site would be generated as a result of the excavation of landfill material. Waste material will be classified, transported and disposed in accordance with DEC guidelines. The contractor would be responsible for ensuring that appropriate protection measures are in place to insure that waste material is not discharged into drainage, Brookvale Creek and Manly Lagoon.

5.2.13 TRAFFIC IMPACTS DURING THE ACTIVITY

The proposed works will require movement of plant equipment and materials at various times during the activity. To mitigate disruption to adjoining property owners and to minimise intensification of existing traffic conditions a traffic management plan will be implemented. Additionally, traffic control procedures regarding entry, exit and movement within the site will be implemented for the protection of contractors, adjoining properties and the surrounding community.

5.2.14 ABORIGINAL AND EUROPEAN HERITAGE

There are no known items of Aboriginal or European Heritage likely to be affected by the proposed works. It is unlikely given the highly disturbed nature of the site and the history of landfill that the proposed works will encounter or disturb any heritage items.

5.2.15 SAFETY FACTORS

A construction fence will be established and maintained as required around the works to protect the community and to prevent unauthorised access. Advisory signage will be installed to warn of hazards and risks associated with the site.

The contractor will be required to retain on site a safety management plan and will be subject to site inspections and safety auditing throughout the period of occupation. Specific safety measures will be implemented on site to protect excavation, traffic and pedestrian movements.

5.2.16 ANY REDUCTION IN THE USE OF THE AREA.

The activity will affect current use of the areas for the duration of the activity. Reduction in amenity will cease once the all works have been completed.

5.2.17 OVERALL ENVIRONMENTAL IMPACT DURING THE ACTIVITY.

Overall there will be minor impacts on the quality and character of the environment during the undertaking of the activity. Users will identify areas of the site as being closed to allow the safe conduct of works. The works site will be contained such that there will be no encroachment onto areas of significance such as the riparian buffer zone associated with Brookvale Creek.

All excavation and construction activities will be contained and undertaken such that no siltation, erosion or migration of material will impact outside the designated works area. To this end Environmental Control Statements stipulate that temporary construction fencing, silt fencing and other sediment and erosion controls will be erected and maintained throughout the works. Further, appropriate traffic management and OH&S measures will be implemented to protect the community, workers and authorised visitors to the site.

5.3 LIKELY ENVIRONMENTAL IMPACTS AFTER COMPLETION OF THE ACTIVITY

The proposed development is located in large recreation precinct with residential and community uses on adjoining properties.

The proposed installation of sports lighting is complimentary and ancillary to the current and primary use – sporting and recreational activities that occur on the site.

5.3.1 TRANSFORMATION OF A LOCALITY

The completed works will not result in a change of land use (currently public recreation) and there will be no permanent transformation of the locality.

5.3.2 ANY ENVIRONMENTAL IMPACT ON ECOSYSTEMS IN THE LOCALITY

The proposed works when constructed are sufficiently spaced from natural areas to have minimal impact on ecosystems in the locality. The impacts of light spill are expected to be minimal at riparian boundaries.

5.3.3 IMPACTS ON FLORA AND FAUNA

The construction of the light poles does not involve the removal of any trees or vegetation. The poles will be sufficiently spaced from the riparian boundary and operated such that light spill is minimised similar to that at residential boundaries. Additionally, existing vegetative cover at the riparian boundary further reduces lighting impacts such that there are no expected impact on the fauna and flora.

5.3.4 NATURAL HAZARDS

The site is located in a 1:100 flood area. The construction of the light poles will not significantly impact on the flood waters.

5.3.5 ENERGY

The lighting design has been carefully undertaken so that the light is focused on the playing fields. The avoidance of waste light or light spill ensures that the minimum amount of energy required will be used. Further the proposed lighting is latest generation providing enhanced energy saving technology and performance.

5.3.6 POTENTIAL IMPACTS ON ADJACENT PROPERTIES:

The lighting design has been prepared to meet the project objectives whilst considering and reducing the impacts on the adjoining residential properties. During daylight and non use hours the proposed design layout and distribution of lighting and poles will have limited impacts on the amenity of the surrounding land including the reasonable sharing of views. The lighting and pole design is typical of that associated with this type of open space use with a tapered design to provide further relief during daylight and non use hours. Further, the proposed light poles and light heads will be partially obstructed from view at some properties by the existing perimeter trees. During use, the

floodlighting by its nature will be visible; however the obtrusive effects will be controlled by AS4282-1997 - 'The Control of the Obtrusive effects of Outdoor Lighting'.

An assessment has been undertaken of potential for spill light at the property boundaries during pre-curfew hours for compliance with AS4282-1997. The floodlighting will not be authorised for use after the curfew limitation of 11.00pm. The design has been reviewed and the calculated initial maximum spill light value = 7.4 lux. This value is well within the allowable maximum value of 10 lux prescribed for pre-curfew hours.

An assessment of threshold increment for compliance with AS4282-1997 has been undertaken on Pittwater Road, Kentwell Parade, Nenagh St, Hillcrest Place, Palm Avenue and Riverview Parade. The calculated maximum threshold increment = 14.5%. Which is within the allowable maximum value of 20% for an adaptation luminance of 0.1cd/m sq.

An assessment of luminous intensity emitted by luminaries for compliance with AS4282- has been undertaken and maximum values are: -

- 58,367 cd with 70 degree tilt angle

This luminous intensity values is below the required maximum value of 100,000cd and complies with Level 2 control as per AS4282-1997 'The Control of the Obtrusive effects of Outdoor Lighting'.

5.3.7 ANY EFFECT ON A PLACE OR BUILDING WITH SPECIAL VALUES.

As previously stated there are no places or buildings of special value within the area affected by the activity.

5.3.8 DRAINAGE ASPECTS FOLLOWING COMPLETION OF THE ACTIVITY

After completion of the works the local drainage behaviours of the site would be unchanged.

5.3.9 EROSION/SEDIMENTATION ON COMPLETION OF THE ACTIVITY

Erosion and sedimentation is not expected to occur after completion of works.

5.3.10 TRAFFIC IMPACTS AT COMPLETION OF THE ACTIVITY.

There is no expected change in existing authorised use. Accordingly there are no changes to traffic expected at the completion of works.

5.3.11 NOISE

The proposed development is intended to provide illumination of the sports field to service authorised allocation of the Nolans Reserve. All Warringah sportsgrounds are allocated for use from 4.00pm until 9.30pm Monday through Friday; 8.00am until 9.30pm on Saturdays and 8.00am until 6.00pm on Sundays. The application seeks approval for lighting to be used for sporting activities at Nolans Reserve consistent with current allocation arrangements. It is expected that noise associated with authorised usage will be typical of this type of recreational open space facility.

5.3.12 ECONOMIC AND SOCIAL IMPACT ON THE LOCALITY

The installation of the playing field lighting will provide a positive social and economic benefit to the community of north Manly. The lighting will ensure that recreational activities can be undertaken on the playing fields in a safe manner in accordance with AS 2560.2.3 Lighting for Football.

5.4 SUITABILITY OF THE SITE FOR THE DEVELOPMENT

Having regard to the characteristics of the site, and its location, the site is suitable for the proposed development in that:

- the lighting provides for authorised use consistent with the categorisation of community land as sportsground
- the lighting will enable safe use of the playing field in accordance with Australian Standards 2560.2.3 Lighting for Football
- the lighting will conform with AS4282-1997, "Control of the obtrusive Effects of Lighting" designed to mitigate the impacts on adjoining properties

The development is consistent with the local, regional and state planning objectives and provides a sustainable development outcome that will contribute to the benefit of the existing residents and wider community.

6 CONCLUSION

The proposed development is satisfactory when assessed under the heads of consideration of Section 79C (1) of the EP&A Act 1979, as amended. No adverse environmental impacts have been identified that require specific mitigation measures apart from those discussed within this report.

The proposed development of a playing field floodlighting provides for a safe and appropriate use of community land categorised as sportsground. The development will not result in any significant environmental, social or economic impacts.

The impact on the community and surrounding residents will be minimised by best practice design of lighting, conformance with Australian Standards for both provision and management of floodlighting and appropriate restriction on hours of use.

The proposed development layout is consistent with the relevant Warringah development controls with regard to satisfying development standards and environmental management measures.

7 ATTACHMENTS