

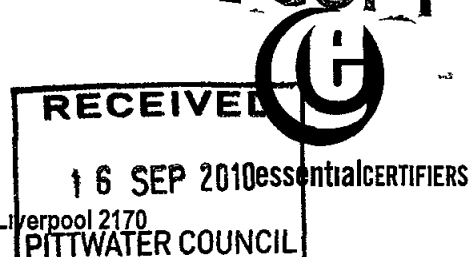
Bernie Cohen & Associates Pty Ltd Trading as

## ESSENTIAL CERTIFIERS

ACN 100386650  
ABN 84100386650

PO Box 208 Casula Mall NSW 2170 ☎ Level 1, 405 Hume Hwy, Liverpool 2170  
Telephone (02) 9612 5000 ☎ Facsimile (02) 9612 5050

COUNCIL COPY



CERT NO

### INTERIM OCCUPATION CERTIFICATE

CC2010-01196

*issued under the Environmental Planning and Assessment Act 1979  
Sections 109C(1)(c) and 109H*

COUNCIL

PITTWATER

#### APPLICANT

Name Pittwater RSL Club C/- Paynter Dixon Constructions  
Address 320 Liverpool Road, ASHFIELD 2131  
Contact no (telephone/fax) 97975555

#### OWNER

Name Pittwater RSL Club  
Address 80-82 Mona Vale Road, MONA VALE 2103  
Contact no (telephone/fax) 99973833

#### SUBJECT LAND

Address 22 Jubilee Road , MONA VALE 2103  
Lot No 27  
DP - 5055

#### APPROVAL DETAILS

D A No N0123/09  
D A Approval Date 1/02/2010  
CC No CC2010-01196  
Date of CC Approval 13/04/2010  
Issued by Essential Certifiers

*Essential Certifiers Certificate No CC2010-01196*

\$30 PRVC REC 288213  
16/9/10

**INTERIM REPORT**

The Accredited Certifier certifies that the subject stages of construction were inspected and found to be satisfactory and the development is completed in accordance with the approved plans and specifications

Date	Inspection	Inspected by
07/04/10	Pre CC Site Inspection	Bernie Cohen
23/07/10	Storm Water	Stephen Murray
09/09/10	Final Inspection	Chris Manzi
14/09/10	Interim OC Completion	Chris Manzi


**CERTIFICATES RELIED UPON**

- \$30 00 Cheque for Council Submission Fee
- Structural Certificate by Northrop dated 13/9/10
- Stormwater Certificate by Paynter Dixon dated 11/9/10
- Obtrusive Lighting Certificate by Haron Robson dated 30/11/09 & Report dated 24/11/09
- Dilapidation Report by Paynter Dixon dated 8/9/10
- Record of Inspection by Greenfield Certifiers for Stormwater dated 23/7/10
- Record of Inspections by Essential Certifiers for -  
Final dated 9/9/10  
Interim OC Completion dated 14/9/10

**CERTIFYING AUTHORITY**

Name of Accredited Certifier      Chris Manzi  
Accreditation No                      BPB0248

**SIGNED**





3 Sep 2010 15 06

PAYNTER DIXON MPC1-59

+61 2 9997 1396

P 1

+61 2 9997 1396

11/175LS



essentialCERTIFIERS

Bernie Cohen and Associates Pty Ltd T/As Essential Certifiers  
ABN 84047117254

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E [info@essentialcertifiers.com.au](mailto:info@essentialcertifiers.com.au)  
[www.essentialcertifiers.com.au](http://www.essentialcertifiers.com.au)

## OCCUPATION CERTIFICATE APPLICATION FORM

Occupation Certificate in accordance with Clause 149, Division 3 of the Environmental Planning and Assessment Regulations 2000

### PART A – Identification of the Land

Lot No 27 Street No 22 DP No

Street Jubilee Rd Suburb Mona Vale Postcode 2103

### PART B – Applicant Details (Person having Benefit of Development Consent) within the meaning and under the EP&A ACT 1979

☒ Mr ☐ Mrs ☐ Miss ☐ Other

Surname/s SMITH

First Name/s BRUCE

Company/Organisation PITTWATER RSL

Full Address of Applicant 80 Mona Vale Rd, Mona Vale NSW

Phone 9997-3833

Fax 9999-3535

Mobile

Email [bruce@pittwater.rsl.com.au](mailto:bruce@pittwater.rsl.com.au)

Signature of the Applicant/s

Date 13/9/10

### PART C – Billing Details

Billing Name PAYNTER DIXON CONSTRUCTIONS P/L ABN 84 097 120 315

Billing Address 320 LIVERPOOL RD, ASHFIELD NSW

+61 2 9997 1396

---

**PART D – Description of Development**

Describe the completed building works

6 FUTSAL COURTS

(excluding court 3)

Number of Stories ☐Number of Structures ☐

Building Classification

Has development consent been granted for the development?

No ☐Yes ☒

Consent Number NC123/09

Date of Determination 1/2/10

Council Area

Has a Construction Certificate/Complying Development Certificate been granted for the development?

No ☐Yes ☒

Construction Certificate/Complying Development Certificate Number 2010/1196

Date certificate issued 13/4/10

---

**PART E – Application Type**

If you want to occupy or use a new building that is only partially completed or change the use of part of an existing building you require and Interim Occupation Certificate. If you want to occupy or use a new building that has been completed or change the whole use of an existing building you require a Final Occupation Certificate.

Interim Occupation Certificate ☒Final Occupation Certificate ☐

---

**PART F – Information to be Attached to the Application**

Please cross the appropriate boxes where relevant:

A copy of the Development Consent or Complying Development Certificate ☐A copy of the Construction certificate ☐A copy of the Final Fire Safety Certificate ☐A copy of the Interim Fire Safety Certificate ☐Any other certificate or document relied upon ☐**essentialCERTIFIERS**



PO Box H171 Australia Square NSW 1215

www.northrop.com.au ABN 81 094 433 100

**Pittwater RSL Club**  
82 Mona Vale Road  
Mona Vale, NSW  
2103

## INSPECTION CERTIFICATION AS TO COMPLIANCE WITH THE STRUCTURAL DOCUMENTATION

We, Northrop Engineers, being professional engineers, certify that

- The structural engineering drawings (or structural components) referred to in this certification are S00/A, S01/A, and S02/A

- 1 Retaining wall footings
- 2 Pad footings for Acoustic Wall 1
- 3 Piers for Acoustic Wall 2
- 4 Acoustic wall framing

- 1 Retaining walls
- 2 Chain mesh fence

We also note that a Geotechnical Engineer was engaged for the project to determine the suitability and capacity of the founding material

Yours sincerely,

Structural Engineer  
BE MIEAust CPEng NPER

SPRING

## FACSIMILE TRANSMISSION



PAYNTER DIXON

To CHRIS MANZI  
Company ESSENTIAL CERTIFIERS  
Fax No 9612-5050  
From ADRIAN DANN  
Date 11/9/10  
Re DA NO123/09 – CONDITIONS E1, E3  
Pages

Chris,

In relation to DA condition #E1 and E3 we hereby certify the following

Condition E1

- All onsite stormwater detention systems have been constructed in accordance with the engineering plans and specifications required under the above mentioned consent

Condition E3

- The stormwater drainage management system has been constructed in accordance with the engineering plans and specifications required under the above mentioned consent

All above works have been completed in accordance with relevant building codes, regulations and Australian standards of construction

ADRIAN DANN  
PROJECT MANAGER



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Should this facsimile transmission fail please phone the sender on (02) 9797 5555

**Paynter Dixon Constructions Pty Limited**

ABN 84 097 120 315

320 Liverpool Road, Ashfield NSW 2131

Phone (02) 9797 5555 Facsimile (02) 9799 6149

*Celebrating 100 years 1914 - 2014*



Global-Mark.com.au®

30 November 2009

Paynter Dixon Constructions Pty Ltd  
320 Liverpool Road  
ASHFIELD NSW 2131

Attention Robert Clarke

**RE PITTWATER RSL CLUB – FUTSAL COURTS  
OBTRUSIVE LIGHTING REPORT**

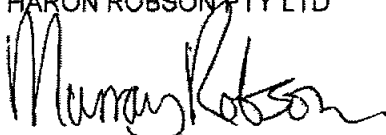
Please find attached Obtrusive Lighting Report prepared by our in-house Lighting Design Studio, lightmatters®, as requested for exterior lighting works associated with Pittwater RSL Club – Futsal Courts

This Design Statement certifies that the lighting design complies with the requirements of

- Australian Standard AS 4282 "Control of the Obtrusive Effects of Outdoor Lighting", and
- Australian Standards AS 2560 2 3 Sports Lighting – Lighting for Football (All Codes)"

Should you have any questions on this matter please do not hesitate to contact the undersigned at this office

Yours faithfully  
HARON ROBSON PTY LTD



Murray Robson MIES  
Director

mrobson@haronrobson.com.au

Attachment (12) Obtrusive Lighting Report

# **Obtrusive Lighting Report**

**Associated with Proposed Development at**

**Pittwater RSL Club – Futsal Courts  
Pittwater, NSW**

**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
DEVELOPMENT AT  
PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers

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**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
DEVELOPMENT AT  
PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers

**INTRODUCTION**

The purpose of this report is to assess and advise on the potential obtrusive effects of the outdoor lighting on neighbouring properties associated with the proposed Pittwater RSL Club – Futsal Courts lighting

The assessment of the lighting installation has been carried out in accordance with Australian Standard AS 4282 'Control of the Obtrusive Effects of Outdoor Lighting'. The Obtrusive Lighting Standard provides a standardised basis for assessment of the likely effects of developments that involve the provision of outdoor lighting. It provides guidelines for maximum permissible levels of spill light and glare.

Australian Standard AS 4282 defines obtrusive light as spill light, which because of quantitative and directional attributes in a given context, gives rise to annoyance, discomfort and distraction. Spill light or stray light is further defined as light emitted by a lighting installation which falls outside the boundaries of the property on which the installation is sited. The obtrusive effects of brightly lit surfaces e.g. light reflected from vehicles in the Carpark are not addressed in the Standard.

We have classified the area type in accordance with AS 4282 as in commercial areas or at the boundary of commercial and residential areas. Our assessment has been based on the lighting operating only during the pre-curfew hours.

The lighting design has been carried out in accordance with

- Australian Standards AS 4282 "Control of the Obtrusive Effects of Outdoor Lighting"
- Australian Standards AS 2560 2.3 "Sports Lighting – Lighting for Football (All Codes)"

**THE REQUIREMENTS OF AS 4282 - THE OBTRUSIVE LIGHTING STANDARD**

Australian Standard AS 4282-1997 places limits on three factors that are of primary concern to the limitation of the obtrusive effects of outdoor lighting:

- 1 Stray light illuminance (lux/spill light)
- 2 Luminous intensity (cd/glare)
- 3 Threshold increment (TI/disability glare)

AS 4282 applies to lighting installations operating from dusk to an 11:00pm curfew and within curfew hours from 11:00pm to 6:00am.

The first factor is concerned with spill or stray light where spill light illuminance (lux) is measured or calculated in a vertical plane. Under pre-curfew conditions this factor limits the amount of stray light incident on a relevant property vertical boundary. During curfew hours this factor limits the amount of stray light incident on a relevant property in the plane of the dwelling windows. The maximum permissible illuminance values are assessed with regard to the location of the development and the zoning of the relevant properties. The recommended maximum illuminance values are highest in commercial areas or at the boundary of commercial and residential areas. The recommended maximum illuminance values are significantly lower for residential areas with either light or dark surrounds. Residential areas are considered to be in light surrounds where they abut major roads and to be dark surround where they abut local roads. (For the recommended maximum illuminance values refer to Table 2.1 from AS 4282 - See Appendix A)

The second factor is concerned with luminous intensity emitted by the luminaires or put more simply, the glaring effects of the lighting equipment. This factor is assessed in terms of units of light intensity called candelas. This factor is more difficult to assess and requires analysis of the photometric distribution of light from the luminaires in question. The luminous intensity limits are also subject to pre-curfew and curfew hours limitations.

## **THE REQUIREMENTS OF AS 4282 - THE OBTRUSIVE LIGHTING STANDARD (CONTINUED)**

During pre-curfew hours of operation the maximum luminous intensity must be assessed for each luminaire in the installation. The maximum pre-curfew intensity is to be checked in the principal vertical plane of maximum intensity and depends on the aiming angle / maximum intensity angle and the size of the area being illuminated (Refer to Figure 5.1 from AS 4282 - See Appendix B). The maximum pre-curfew intensity values are subject to the level of glare control required. There are two levels of pre-curfew luminous intensity glare control. Level 1 glare control is for sensitive areas such as residential areas. Level 1 control would typically apply to outdoor carparks and requires the use of low glare full cut-off luminaires with a horizontal lens in order to comply. For smaller areas less than 25 metres across, the maximum luminous intensity is 2500cd. For areas larger than 25 metres across the maximum luminous intensity is 7500cd. (For maximum pre-curfew luminous intensity refer to Table 2.2 from AS 4282 - See Appendix A). Level 2 glare control is utilised where the lighting installation requires the use of non cut-off luminaires to achieve the required lighting levels eg sports field flood lighting. The maximum intensity values in these conditions are much higher. For small areas less than 25 metres across the maximum luminous intensity is 25,000cd. For medium size areas 25 metres to 75 metres across the maximum luminous intensity is 50,000cd and for large areas greater than 75 metres across the maximum luminous intensity is 100,000cd. Again these values are in the upper angles of the principal vertical plane depending on the size of the area being lit and the aiming angle. (For maximum pre-curfew luminous intensity refer to Table 2.2 from AS 4282 - See Appendix A).

During curfew hours the maximum luminous intensity limits become much more stringent and would typically require the switching off of sports style floodlights in order to comply. The curfew hours maximum intensity limits apply in the directions where views of bright surfaces of luminaires are likely to be troublesome to residents and from positions where such views are likely to be maintained (Refer to Figure 5.3 from AS 4282 - See Appendix B). Under this condition the exact geometry from the viewer to the luminaire in question has to be ascertained to assess the luminous intensity in that particular direction. The maximum curfew hours intensity is then found depending on the zoning of the development in question. In commercial areas the maximum luminous intensity is 2500cd, in residential areas with light surrounds the maximum luminous intensity is 1000cd and in residential areas with dark surrounds the maximum luminous intensity is 500cd (Refer to Table 2.1 from AS 4282 - See Appendix A).

The third and final factor relates to threshold increment which is a measure of visibility dependant on the disability glare caused by the luminaire in question and the adaptation of the viewer. These limits only apply to users of transport systems, e.g., where lighting is near road, railway, waterway and air transport etc. The threshold increment is dependent on the adaptation level of the viewer according to the zoning of the area whether that be commercial or residential with light or dark surrounds. (For the recommended maximum threshold increment refer to table 2.1 from AS 4282 – see Appendix A).

## **PROPOSED INSTALLATION**

The proposed new lighting installation to Pittwater RSL Club – Futsal Courts will illuminate the playing area. This installation will utilise low glare full cut-off area luminaires with a horizontal light-emitting face supported on 12.20m poles (Refer to Typical Carpark Lighting Pole - See Appendix C). The proposed lighting will use concealed fixtures where possible, with luminaires hidden from view by the landscaping elements and plants.

The installation at Pittwater RSL Club – Futsal Courts will be designed such that it complies with AS 4282 to control the obtrusive effects of outdoor lighting.

**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
DEVELOPMENT AT  
PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers

**PROPOSED INSTALLATION (CONTINUED)**

We have classified the installation in accordance with AS 4282 Table 2.1 as at the boundary of commercial and residential areas (see Appendix A Column 3) for operation prior to curfew hours only (dusk to 11.00pm). This classification therefore requires a maximum illuminance of 25 lux in the vertical property boundary of nearby residential properties and a maximum luminous intensity of 2,500cd / 7,500cd / 25,000cd / 50,000cd / 100,000cd for each luminaire, in the principle plane for all angles at and above the control direction.

The illumination levels will be designed in accordance with the following requirements:

- Football Field AS 2560.2.3 Sports Lighting – Lighting for Football (All Codes) This will provide general lighting of an average 260 Lux.

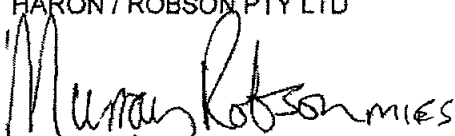
**CONCLUSION**

This report is based on the illuminance values at the residential boundaries, provided by the proposed lighting supplier.

The lighting installation at Pittwater RSL Club – Futsal Courts is correctly designed by the Lighting Supplier to limit the impact of spill light and visible glare. Provided pre-curfew operational hours are adhered to, the installation complies with the recommended maximum values of spill light and glare for residential areas, in accordance with AS 4282 'Control of the Obtrusive Effects of Outdoor Lighting'. There should, therefore, be no basis for objection to the installation and operation of the proposed lighting scheme.

Should you have any questions on this matter, please do not hesitate to contact the undersigned at this office.

Yours faithfully  
HARON / ROBSON PTY LTD

  
Murray Robson MIES  
Director

mrobson@haronrobson.com.au



**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
DEVELOPMENT AT  
PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers

**APPENDIX A - AUSTRALIAN STANDARD LIGHTING TECHNICAL PARAMETERS**

Extract from Australian Standards AS 4282-1997

- Table 2.1 Recommended Maximum Values of Lighting Technical Parameters for the Control of Obtrusive Light
- Table 2.2 Maximum Luminous Intensity per Luminaire for Pre-Curfew Operating Times

Extract from Australian Standards AS 2560 2.3

- Table 1 Lighting Criteria for Sports Lighting – Lighting for Football (All Codes)

TABLE 2 1  
RECOMMENDED MAXIMUM VALUES OF LIGHT TECHNICAL PARAMETERS  
FOR THE CONTROL OF OBTRUSIVE LIGHT  
(See Clause 2 7)

1	2	3	4	5
Light technical parameter	Application or calculation conditions (see also Figure 2 1 and Section 5)	Recommended maximum values		
		In commercial areas or at boundary of commercial and residential areas*	Residential areas	
			Light surrounds†	Dark surrounds‡
Illuminance in vertical plane ( $E_v$ )	<i>Pre curfew</i> Limits apply at relevant boundaries of nearby residential properties in a vertical plane parallel to the relevant boundary to a height commensurate with the height of the potentially affected dwellings. Values given are for the direct component of illuminance.	25 lx	10 lx	10 lx
	<i>Curfewed hours</i> Limits apply in the plane of the windows of habitable rooms of dwellings on nearby residential properties. In the absence of development (i.e. vacant allotment) the limits apply on the potentially affected property in a vertical plane parallel to the relevant boundary at the minimum setback permitted for a dwelling to a height commensurate with land use zoning provisions. Values given are for the direct component of illuminance.	4 lx	2 lx	1 lx
Luminous intensity emitted by luminaires ( $I$ )	<i>Pre curfew</i> Limits apply to each luminaire (irrespective of the number on a head frame) in the principal plane for all angles at and above the control direction when aimed in accordance with the installation design.	Limits as determined from Table 2 2 Alternatively the limits and method of assessment associated with curfewed hours may be applied at the discretion of the designer (see Clauses 2 7 1 and 2 7 2)		
	<i>Curfewed hours</i> Limits apply in directions where views of bright surfaces of luminaires are likely to be troublesome to residents from positions where such views are likely to be maintained, i.e. not where momentary or short term viewing is involved.	2 500 cd	1 000 cd	500 cd
Threshold increment ( $TI$ )	Limits apply at all times where users of transport systems are subject to a reduction in the ability to see essential information. Values given are for relevant positions and viewing directions in the path of travel.	20% based on adaptation luminance ( $\bar{L}$ ) of 10 cd/m <sup>2</sup>	20% based on adaptation luminance ( $\bar{L}$ ) of 1 cd/m <sup>2</sup>	20% based on adaptation luminance ( $\bar{L}$ ) of 0.1 cd/m <sup>2</sup>

\* Applies to residential accommodation in commercial areas or at the boundary between commercial and residential areas. The term commercial is used as a generic description for zoning which provides for urban uses other than residential.

† Where the affected property abuts roads that are lit to Category V5 or higher in accordance with AS/NZS 1158 1 1.

‡ Where the affected property abuts roads that are lit to Category B1 or lower in accordance with AS 1158 1 or where there is no lighting.

TABLE 2 2  
MAXIMUM LUMINOUS INTENSITY PER LUMINAIRE  
FOR PRE-CURFEW OPERATING TIMES  
(See Table 2 1)

1	2	3	4
Area description		Maximum luminous intensity from each luminaire*	
Size of area	Controlling dimension (Figure 5 1)	Level 1 control (Note 1)	Level 2 control (Note 2)
Large	>75 m	7 500 cd	100 000 cd
Medium	≥25 m ≤75 m	7 500 cd	50 000 cd
Small	<25 m	2 500 cd	25 000 cd

\* Limits apply to each luminaire (irrespective of the number on a head frame) in the principle plane for all angles at and above the control direction when aimed in accordance with the installation design (see Clause 5 3 2 1)

NOTES

- 1 Level 1 control is appropriate for development control of environmentally sensitive areas i.e. where the existing environment is of high quality where abutting properties are close to the installation where they are residential in nature where the existing ambient light levels are low and where the community requires the best available environmental safeguards to be applied
- As the use of Type C cut off luminaires† is likely to be necessary for Level 1 control the implementation of this level of control will normally be possible only for lighting applications that require relatively high illuminances over areas that are small to medium in size e.g. lighting for tennis courts or hockey fields. However Level 1 control may also be suitable for larger areas where lower illuminances are appropriate e.g. for car parks and outdoor storage areas
- 2 Level 2 control will permit the use of a wide range of currently used lighting techniques but will limit intensities in the control direction to what might reasonably be expected by careful attention to design and the selection and aiming of luminaires especially for applications involving Type A luminaires†

† See Appendix D for details of these luminaire classifications

TABLE 1  
LIGHTING CRITERIA

Level of play	Maintained horizontal illuminance <sup>1 2</sup>	Minimum horizontal uniformities <sup>3</sup>		Maximum glare rating	Minimum colour rendering index	Maximum uniformity gradient
	$E_{mh}$	$U_1$	$U_2$	$GR_{max}$	$R_a\ min$	
Amateur and semi-professional level						
Ball and physical training	50	0.3	N/A	N/A	20	N/A
Club competition and match practice	100	0.5	0.3	50	65	N/A
Semi-professional competition	200	0.6	0.4	50	65 <sup>4</sup>	N/A
Professional level						
Ball and physical training	100	0.5	0.3	50	20	N/A
Match practice	200	0.6	0.4	50	65	N/A
Professional competition	500	0.7	0.5	50	65 <sup>4</sup>	20% per 5m

- 1 For the height above the playing surface at which the illuminance is to be measured refer to Clause 6.3.1
- 2 Values of illuminance measured at the time of commissioning an installation (ie initial or close to) should be higher than the maintained illuminance values (see Clause 6.2)
- 3 Being ratios  $U_1$  and  $U_2$  can be calculated with equal accuracy by using either all initial or all maintained values
- 4 If future upgrading to a level suitable for television broadcasting is intended or likely the selection of light sources with  $R_a \geq 90$  should be considered

NOTE The above values are chosen to be adequate to provide for the safety of the participants and the level of visual tasks anticipated. Factors such as large crowds (e.g.  $\geq 10000$ ) with consequent longer viewing distances might require higher values to be chosen than initially indicated above.

**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
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PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers

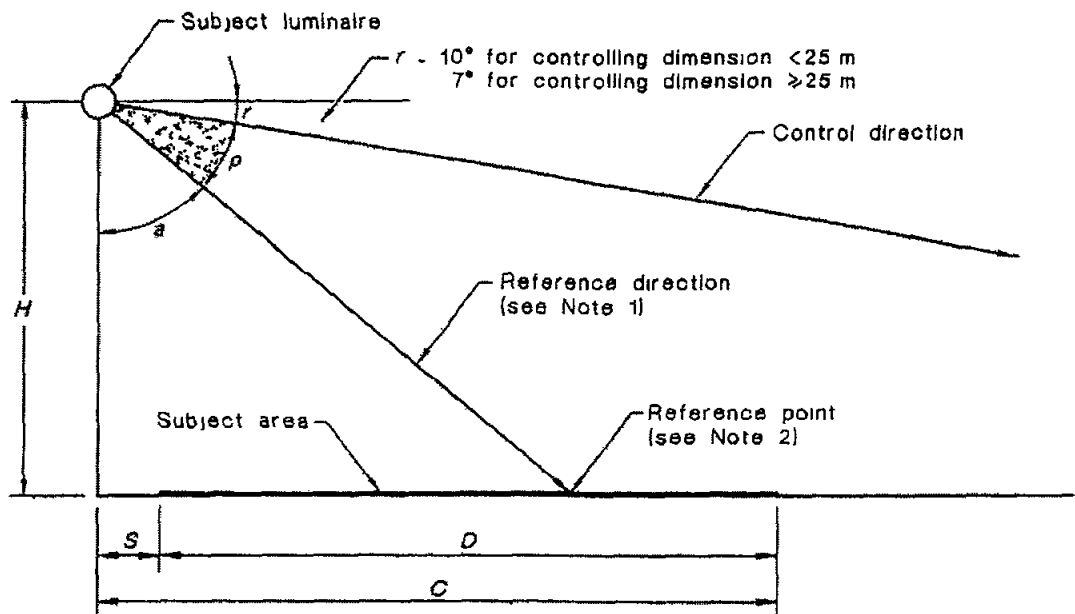
**APPENDIX B - AUSTRALIAN STANDARD LUMINOUS INTENSITY CHECKING CALCULATIONS**

Recommended checking procedure - Extract from Australian Standard AS 4282-1997

- Figure 5 1 Pre-Curfew Control Direction for Luminous Intensity
- Figure 5 3 Example of Curfew Hours Luminous Intensity Checking Calculation

OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
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PITTSWATER RSL CLUB – FUTSAL COURTS

**HARON ROBSON**  
Electrical Consultants and Lighting Designers



LEGEND

- $H$  - mounting height of the subject luminaire above the plane of the subject area  
 $S$  - setback of the luminaire from the edge of the subject area perpendicular to the edge of the subject area (see Figure 5.2)  
 $D$  - dimension of the subject area perpendicular to the edge of the subject area (see Figure 5.2)  
 $C$  - controlling dimension i.e.  $D + S$  (see Table 2.2)  
 $a$  - reference angle (aiming angle in elevation of the subject luminaire (see Note 3))  
 $p$  - angular displacement in elevation of the control direction from the reference direction  
 $r$  - angular difference between control direction and the horizontal

NOTES

- 1 The reference direction is the direction of maximum intensity from the floodlight (or the direction of the beam where there is no unique maximum). Most often this is the direction of the origin to which the intensity distribution is referred. The reference and control directions are in the same vertical plane i.e. the principal plane of the light distribution of the floodlight.
- 2 The reference point is the point to which the maximum luminous intensity from the floodlight is aimed. Most often this will coincide with the aiming point for the luminaire in the design specification.
- 3 Angle  $a$  will most often be the aiming angle of the floodlight (in elevation) in the design specification i.e. when the reference direction coincides with origin of the direction of the maximum luminous intensity from the floodlight.
- 4 See Figure 5.2 for examples illustrating in plan view application of the principles of Figure 5.1 to specific areas.

FIGURE 5.1 THE SUBJECT LUMINAIRE AND AREA AND THEIR RELATIONSHIP  
WITH THE CONTROL AND REFERENCE DIRECTIONS

**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
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PITTWATER RSL CLUB – FUTSAL COURTS**

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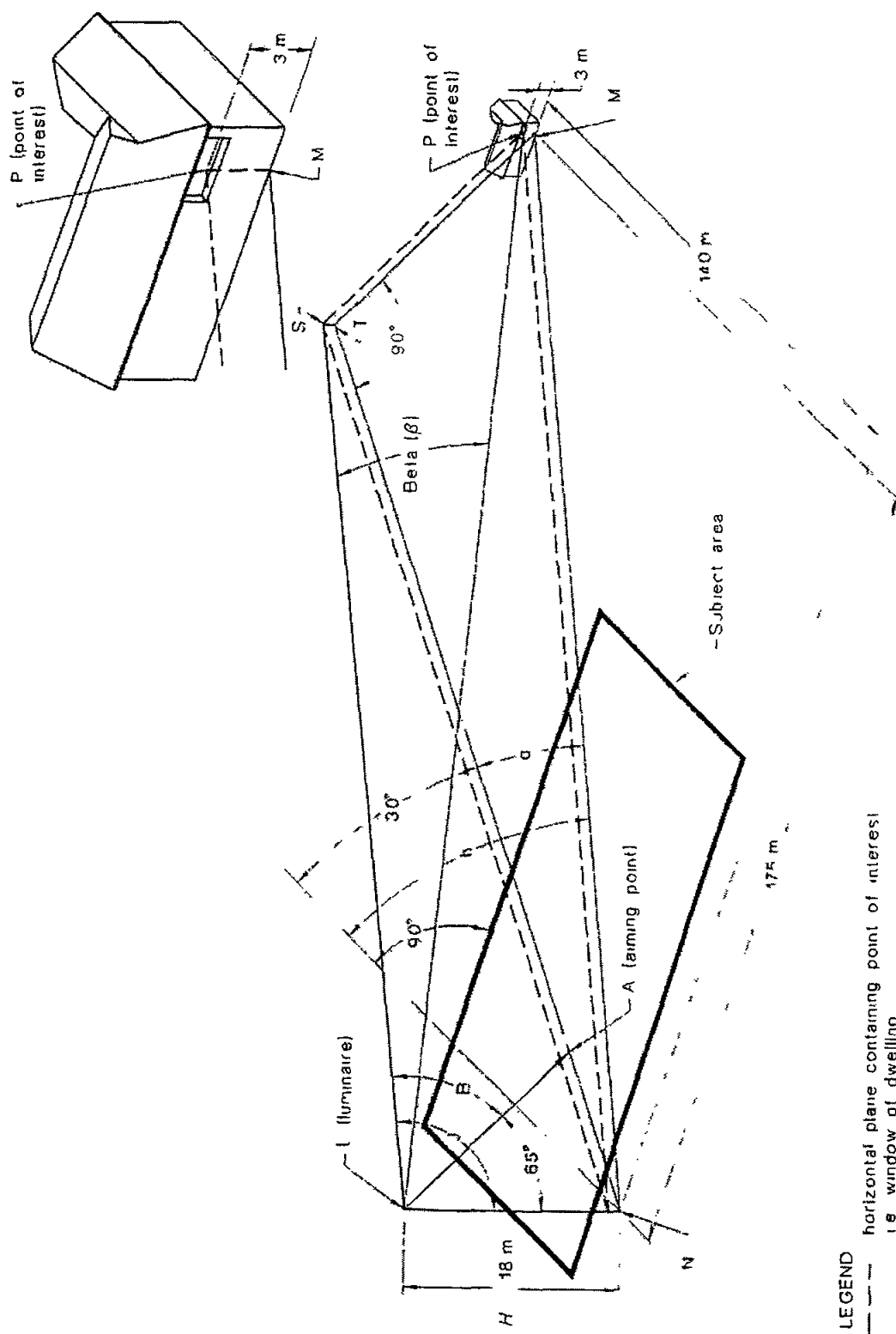
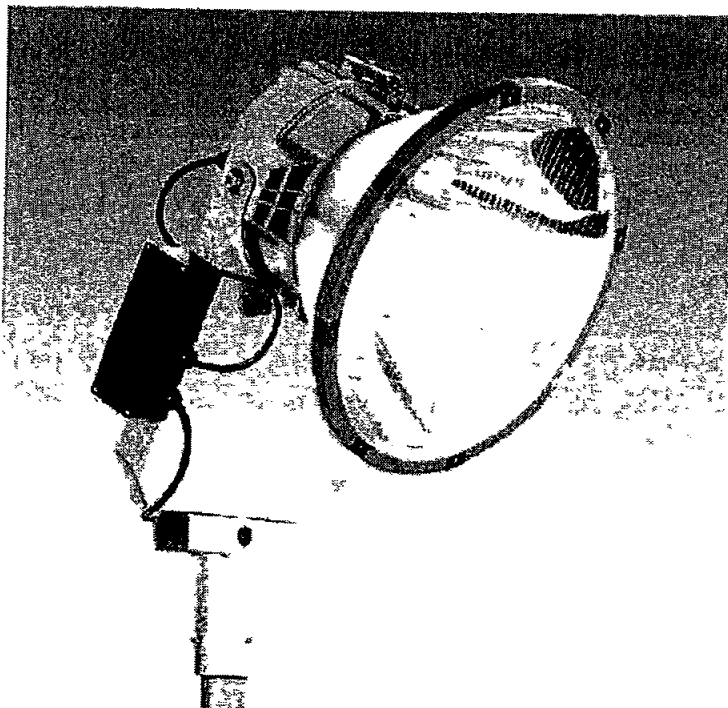


FIGURE 53 ILLUSTRATION OF PHYSICAL ARRANGEMENT FOR EXAMPLE 53

**OBTRUSIVE LIGHTING REPORT ASSOCIATED WITH PROPOSED  
DEVELOPMENT AT  
PITTWATER RSL CLUB – FUTSAL COURTS**

**HARON ROBSON**  
Electrical Consultants and Lighting Designers



**Typical sports lighting type A floodlight**





# **DILAPIDATION REPORT**

## **PUBLIC INFRASTRUCTURE**

PRL 1/24

### **PITTWATER RSL – FUTSAL COURTS JUBILEE AVE, MONA VALE**

**Prepared By**  
Paynter Dixon Constructions Pty Ltd

**Date of Inspection**  
8/9/10

**Issued to Property Owner / Agent**  
Essential Certifiers P/L  
**Name** Chris Manzi

---

**Paynter Dixon Constructions Pty Ltd**  
320 Liverpool Road  
ASHFIELD NSW 2131  
Phone 9797 5555 Fax 9716 6870

---

# CONTENTS

SECTION 1	Property Description
SECTION 2	Building Inspection
SECTION 3	Locality Map
SECTION 4	Disclaimer
SECTION 5	Photographs





## **SECTION 1**

# **PROPERTY DESCRIPTION**



Property Address:

80-82 Mona Vale Rd  
MONA VALE NSW 2103

Owner / Tenant:  
*Land owner if applicable*

PITTWATER RSL CLUB

Date of Inspection:

8<sup>th</sup> September 2010

Job No:

PRL 1/24

Present During Inspection:

Adrian DannProject Manager

Project Manager Representative:

*Paynter Dixon Constructions*

Structural Engineer:

Northrop Engineers

Weather:

Sunny, clear, dry

Description of Project:

Construction of 6 Futsal Courts

- EXTERNAL
- Driveway + Laybacks

Concrete
- Carpark

Bitumen
- Footpaths

Concrete
- Roadway

bitumen with concrete kerb and gutter
- Landscaping

Grass verges. Some tress along boundary
- Fencing

☐ Timber

☒ Metal

☐ Brick
- Gates / Doors

☐ Timber

☒ Metal



# SECTION 2

## SITE INSPECTION





Commenced on Site: 12.00pm  
Finished on Site: 1.00pm

## EXTERNAL – Road & Paths

- Kerb and gutter in good condition. PDC to sweep clean any excess dirt stains from gutter.
- New stormwater inlet pit has been constructed as a result of building works
- Neighbours driveway and layback appears in good condition. Some cleaning required by PDC to remove dirt stains.
- Roadway in reasonable to poor condition. Some parts appear to be a 2 coat seal, whilst the majority is asphalt. Some oil stains present
- Grass verge in good condition. Verge directly in front of site entrance to be re-grassed by Paynter dixon as a result of truck movements throughout construction.
- Council assets including power poles remain vertical and plumb. Electrical turret in good condition, no sign of any damage.
- Pittwater RSL laybacks in good condition.
- Telstra assets in good condition.



## SECTION 3

### LOCALITY MAP











## **SECTION 4**

# **DISCLAIMER**





# DISCLAIMER

This Report is solely for the purpose of identifying the condition of current infrastructure at completion of construction works at Jubilee Ave, Mona Vale.

This Report is solely intended for use by those persons or organisations listed in Section 1 of this report.

This Report shall not be relied upon for any other purpose.

**Omissions**

- Pest control.
- Inspection of ceiling space, under floor area and roof.
- Electrical services – power, light, smoke.
- Hydraulics.
- Gas.
- Other services and building elements not specifically noted.
- Authority requirements such as Council and service providers.



# **SECTION 5**

# **PHOTOGRAPHS**

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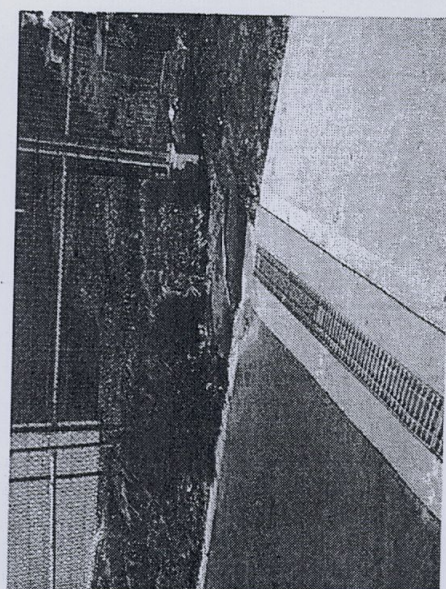
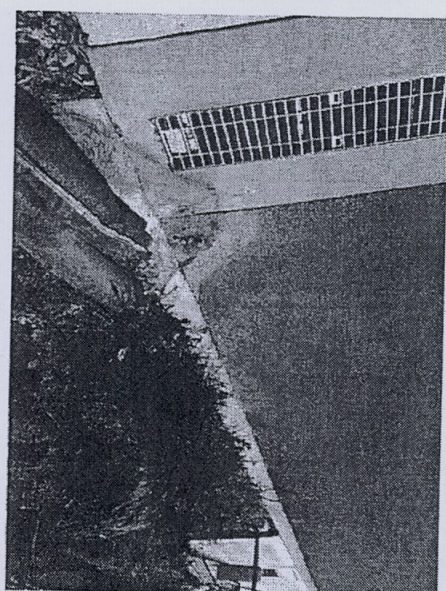
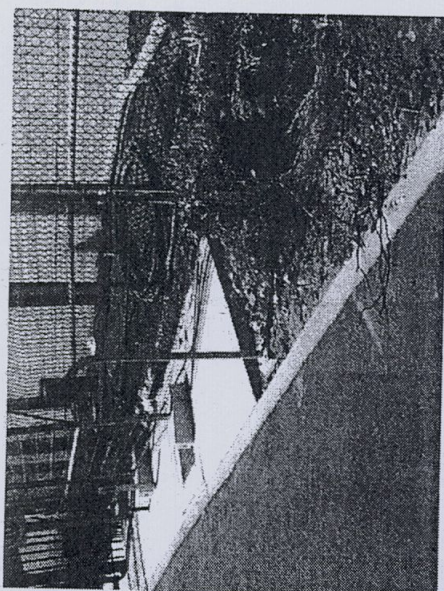
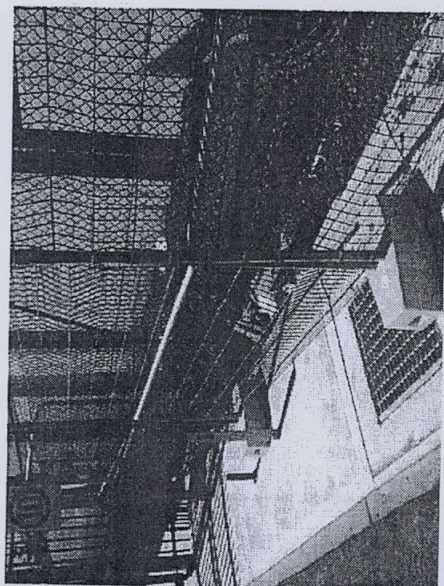
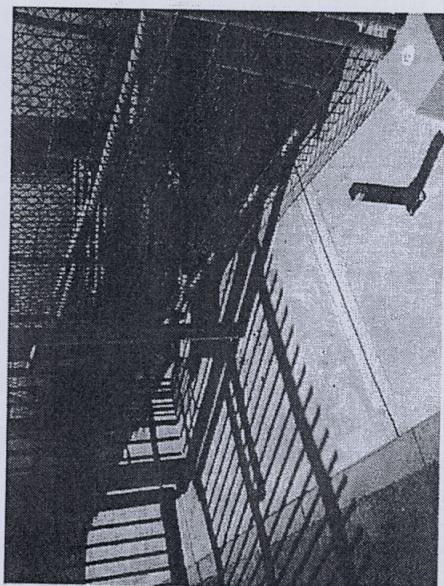
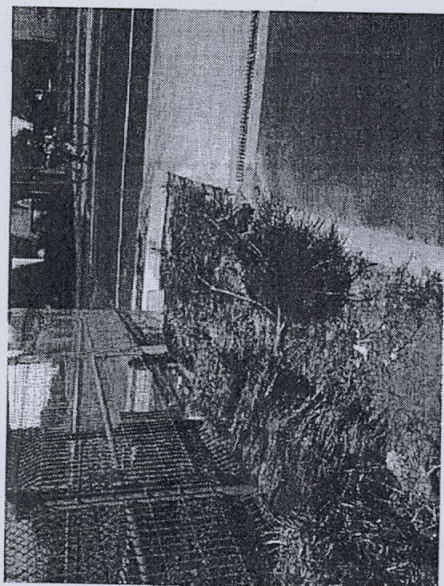
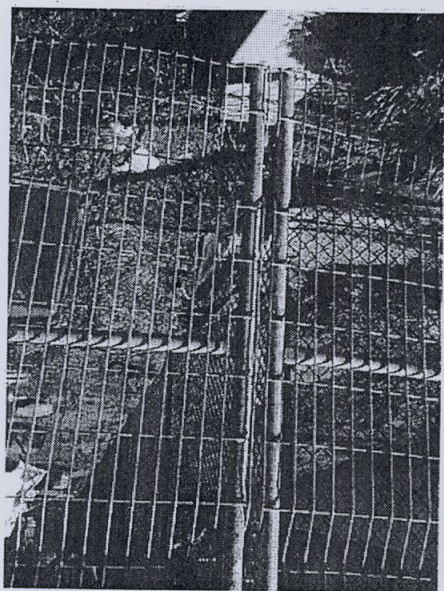
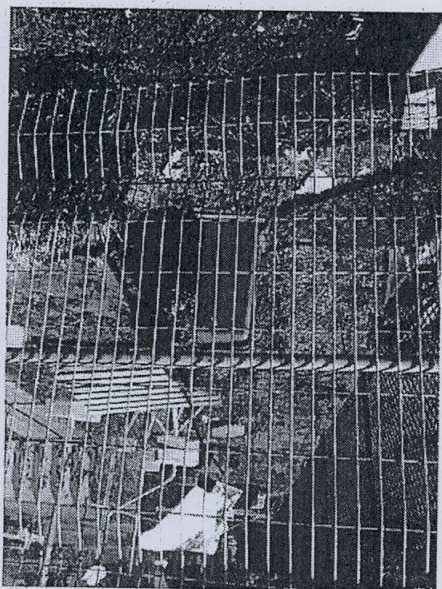
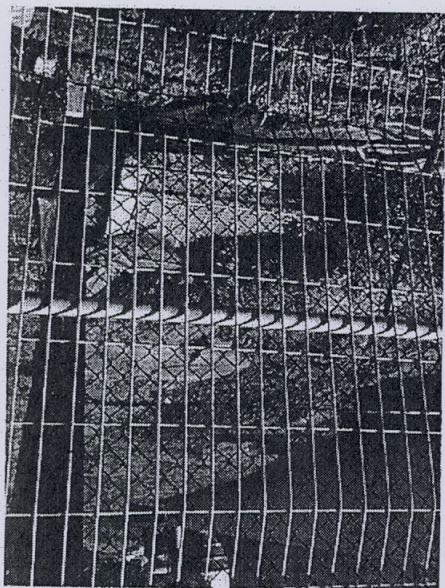
**Paynter Dixon Constructions Pty Ltd**

320 Liverpool Road

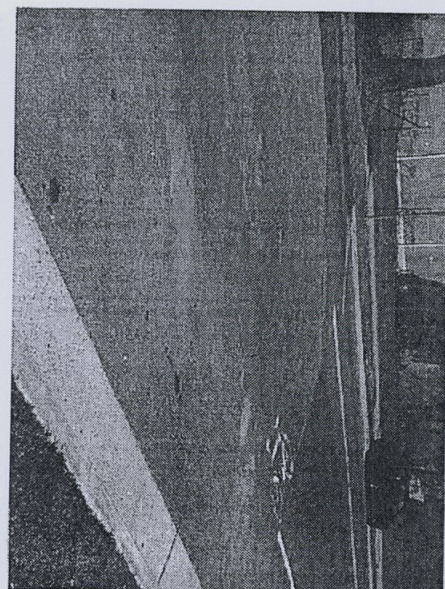
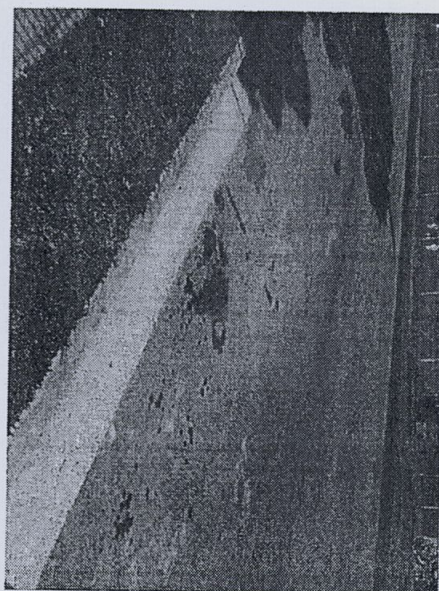
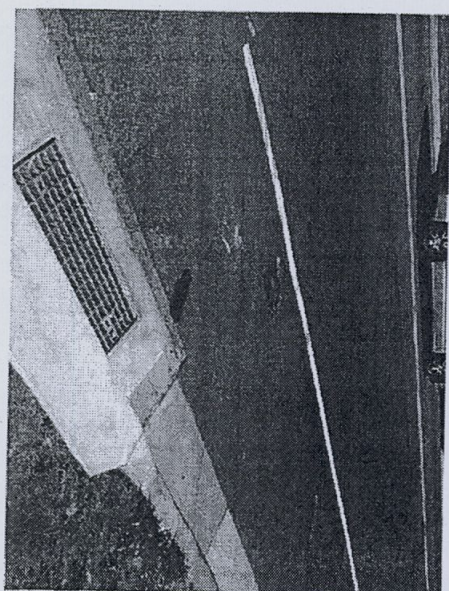
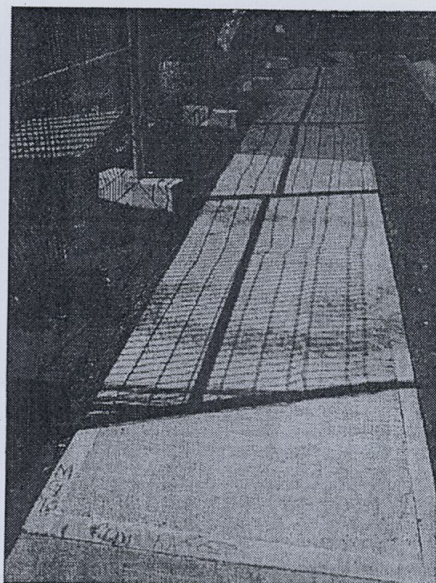
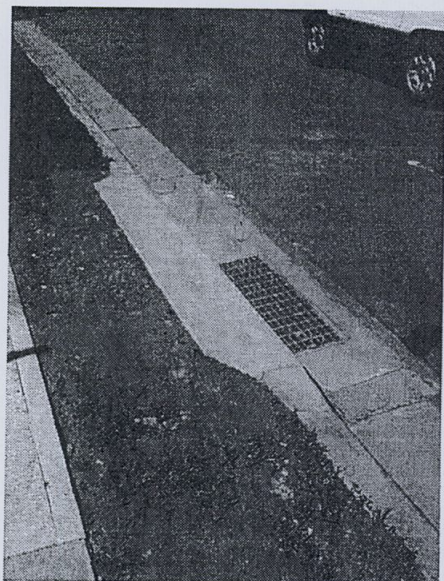
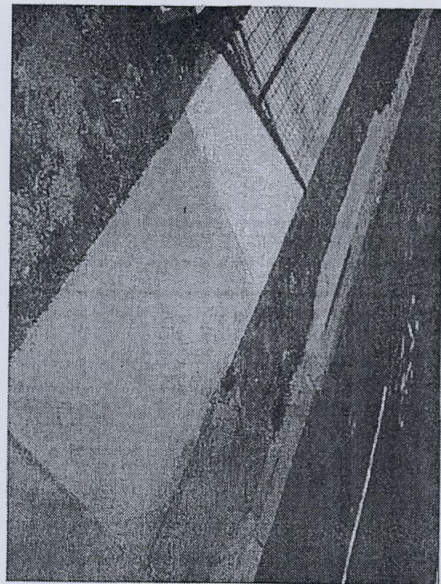
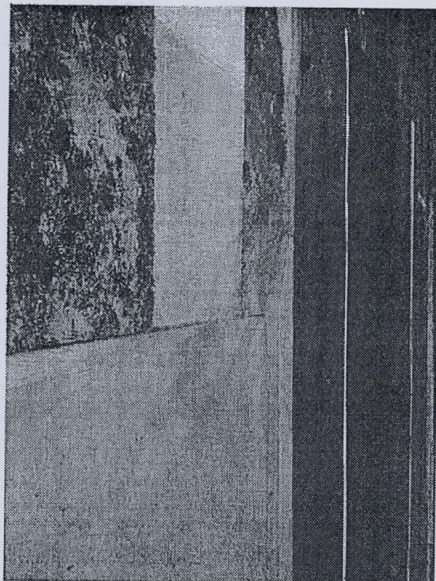
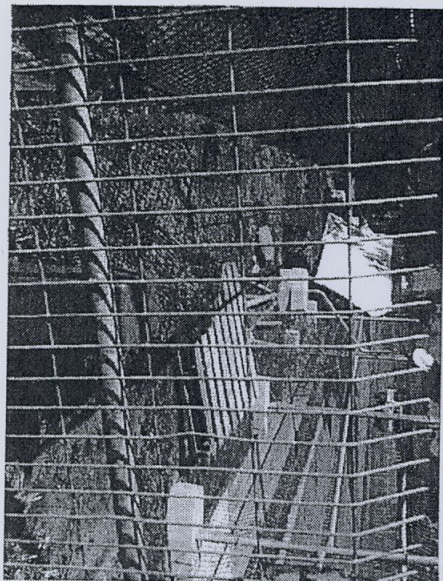
ASHFIELD NSW 2131

Phone: 9797-5555 Fax: 9716-6870

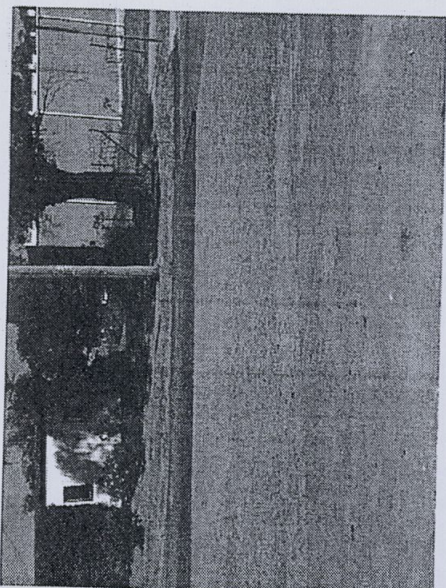
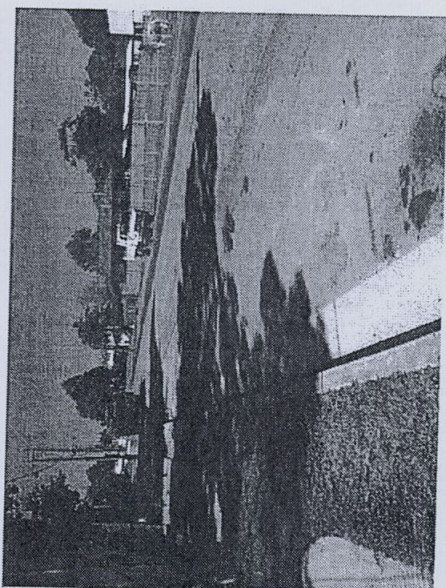
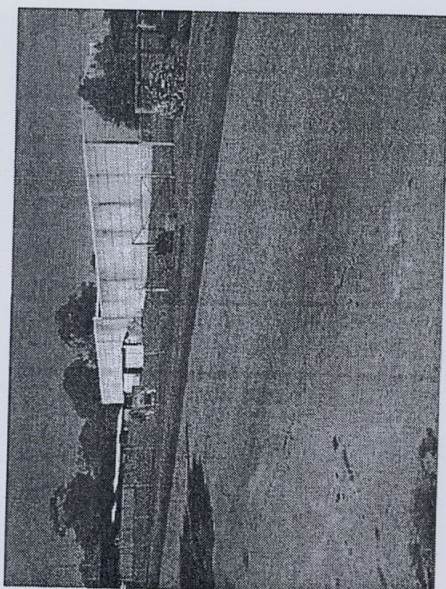
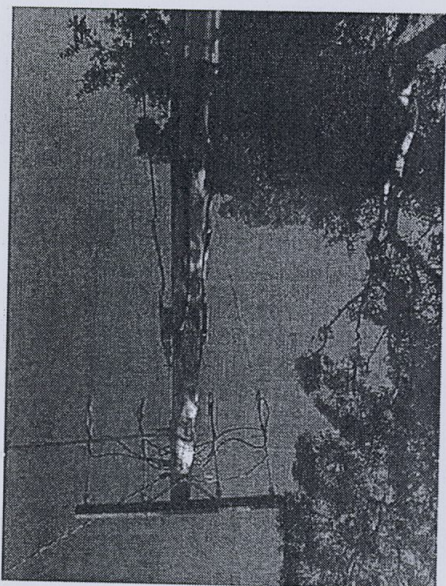
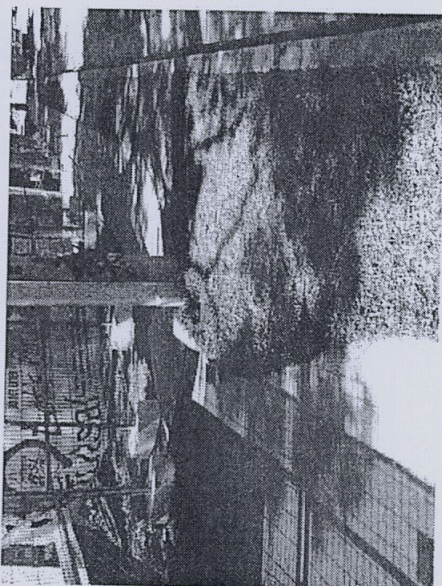
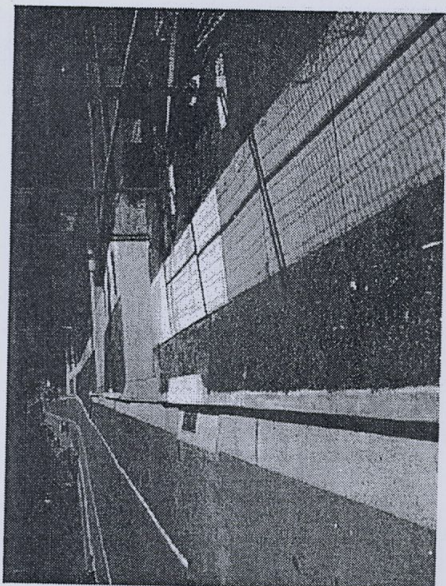
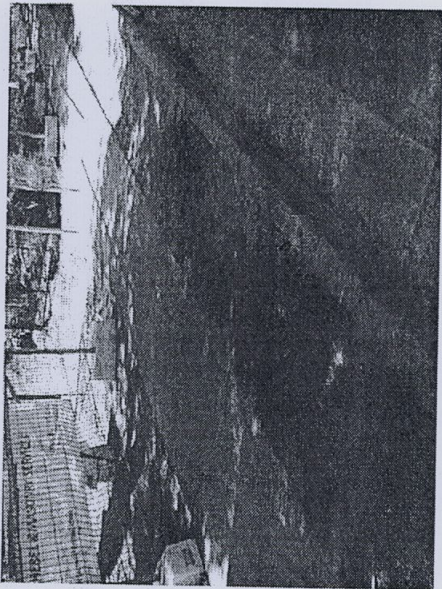




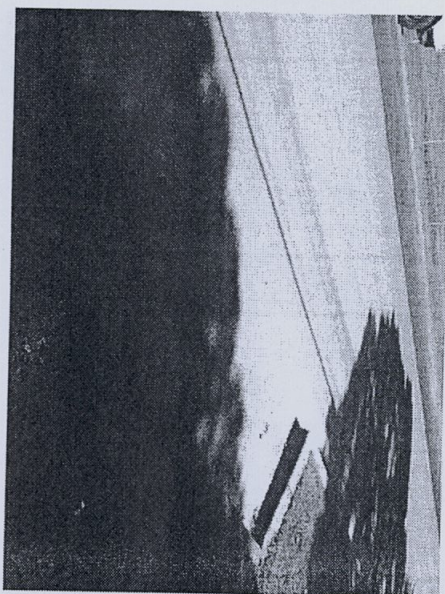
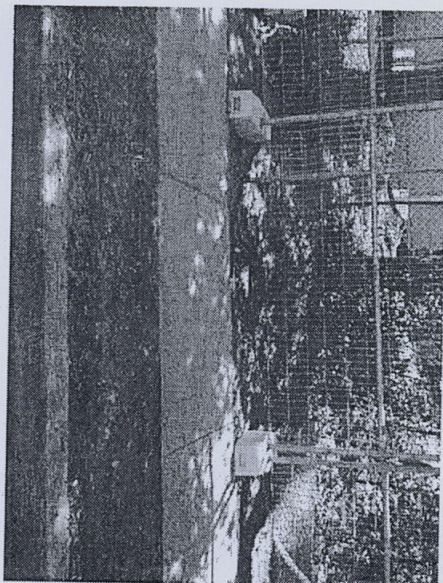
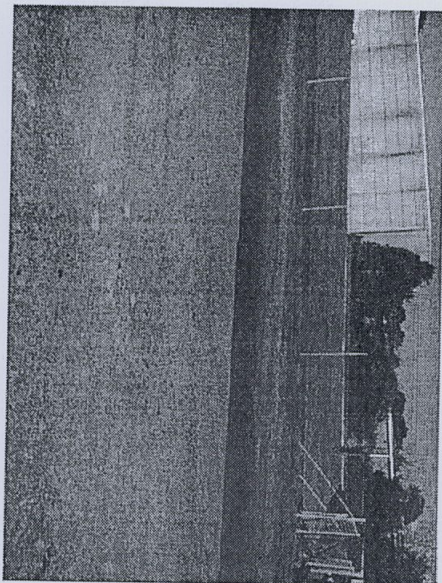




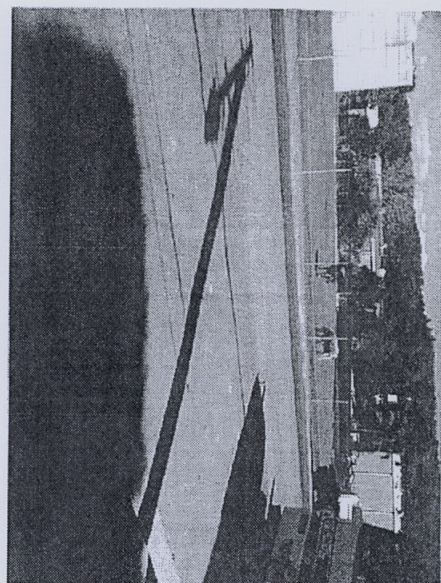
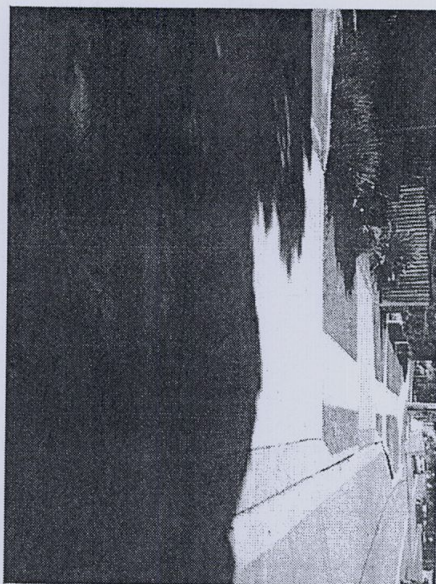
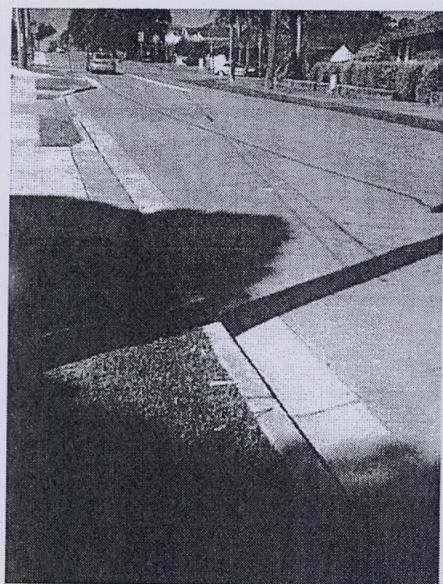


















Bernie Cohen & Associates Pty Ltd Trading as

## ESSENTIAL CERTIFIERS

ACN : 100386650  
ABN : 84047117254

PO Box 208 Casula Mall NSW 2170 ☐ Level 1, 405 Hume Hwy, Liverpool 2170  
Telephone: (02) 9612-5000 ☐ Facsimile: (02) 9612-5050



essentialCERTIFIERS

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### RECORD OF INSPECTION

CCNo: CC2010-01196  
COUNCIL: PITTWATER

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Type of Inspection Storm Water  
Date of Inspection 23/07/2010  
Applicant Name Pittwater RSL Club C/- Paynter Dixon Constructions  
Owner Name Pittwater RSL Club  
Builder Name Paynter Dixon Constructions P/L

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#### SUBJECT LAND

Address 22 Jubilee Road , MONA VALE 2103

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#### COUNCIL'S D/A CONSENT

Development Consent No N0123/09  
D.A Approval Date 1/02/2010

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#### CONSTRUCTION CERTIFICATE DETERMINATION

Decision Approved  
Date of Decision 13/04/2010

---

#### RESULT OF INSPECTION

Result Satisfactory  
Re Inspection Required No

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#### CERTIFYING AUTHORITY

Name of Certifying Authority Greenfield Certifiers  
Name of Accredited Certifier Stephen Murray  
Accreditation No BPB0282

---

*Essential Certifiers Certificate No. CC2010-01196*



Bernie Cohen & Associates Pty Ltd Trading as  
**ESSENTIAL CERTIFIERS**

ACN : 100386650  
ABN : 84047117254



essentialCERTIFIERS

PO Box 208 Casula Mall NSW 2170 ☐ Level 1, 405 Hume Hwy, Liverpool 2170  
Telephone: (02) 9612-5000 ☐ Facsimile: (02) 9612-5050

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## RECORD OF INSPECTION

CC No: CC2010-01196  
COUNCIL: PITTWATER

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Type of Inspection	Final Inspection
Date of Inspection	9/09/2010
Applicant Name	Pittwater RSL Club C/- Paynter Dixon Constructions
Owner Name	Pittwater RSL Club
Builder Name	Paynter Dixon Constructions P/L

---

**SUBJECT LAND**  
Address 22 Jubilee Road , MONA VALE 2103

---

**COUNCIL'S D/A CONSENT**  
Development Consent No N0123/09  
D.A Approval Date 1/02/2010

---

**CERTIFICATE DETERMINATION**  
Decision Approved  
Date of Decision 13/04/2010

---

**RESULT OF INSPECTION**  
Result Satisfactory  
Re Inspection Required No

---

**CERTIFYING AUTHORITY**  
Name of Certifying Authority Essential Certifiers  
Name of Accredited Certifier Chris Manzi  
Accreditation No BPB0248

Signature

---

Essential Certifiers Certificate No. CC2010-01196



Bernie Cohen & Associates Pty Ltd Trading as  
**ESSENTIAL CERTIFIERS**

ACN : 100386650  
ABN : 84047117254



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Telephone: (02) 9612-5000 ☐ Facsimile: (02) 9612-5050

---

## RECORD OF INSPECTION

CC No: CC2010-01196  
COUNCIL: PITTWATER

---

Type of Inspection Interim OC Completion  
Date of Inspection 14/09/2010  
Applicant Name Pittwater RSL Club C/- Paynter Dixon Constructions  
Owner Name Pittwater RSL Club  
Builder Name Paynter Dixon Constructions P/L

---

SUBJECT LAND  
Address 22 Jubilee Road , MONA VALE 2103

---

COUNCIL'S D/A CONSENT  
Development Consent No N0123/09  
D.A Approval Date 1/02/2010

---

CERTIFICATE DETERMINATION  
Decision Approved  
Date of Decision 13/04/2010

---

RESULT OF INSPECTION  
Result Satisfactory  
Re Inspection Required No

---

CERTIFYING AUTHORITY  
Name of Certifying Authority Essential Certifiers  
Name of Accredited Certifier Chris Manzi  
Accreditation No BPB0248

Signature

---

Essential Certifiers Certificate No. CC2010-01196