



Shire of
Serpentine
Jarrahdale

Sustainable. Connected. Thriving!

All enquiries to Development Services on 9526 1111
Our ref: PA23/54: RF/dk

19 May 2023

[REDACTED]
26 Karbro Drive
CARDUP WA 6122

Via email: [admin@\[REDACTED\].com.au](mailto:admin@[REDACTED].com.au)

Dear Sir/Madam,

**Proposed Amendment to Delete Condition of Development Approval
Lot 87, 26 Karbro Drive, Cardup**

I refer to your application, received 13 February 2023, for approval to commence development on the aforementioned lot.

In accordance with the provisions of the Shire's Town Planning Scheme No. 2 and the authority delegated to Council under the provisions of the Metropolitan Region Scheme, your application to commence development has been approved. Attached is the Notice of Determination of Application for Development Approval stating the conditions with which the development is required to comply.

Should you be aggrieved by any of the decision or any conditions imposed, you have the right under the *Planning and Development Act 2005* to have the decision reviewed by the State Administrative Tribunal. Applications for review must be submitted to the Tribunal within 28 days of the date on the decision notice. Further information can be obtained by calling the Tribunal on (08) 9219 3111 or by visiting their website at www.sat.justice.wa.gov.au.

Your attention is drawn to the fact that this consent constitutes planning approval only and that a Building Permit may be required from the Shire prior to the commencement of construction works. Where relevant, the nominated builder should be provided with a copy of conditions of the Notice of Determination on Application for Development Approval. The Building Permit application cannot be accepted until all relevant planning conditions are cleared by the Shire. Accordingly, please ensure that the drawings and information supplied to the Shire for a building permit address any conditions issued on the planning approval by the Shire to avoid delays in the issue of the Permit. Please note that any amendments proposed outside of the approved plans and conditions of development approval may result in the requirement for a new Planning Application to be submitted for assessment and determination.

Yours faithfully

H O'Brien

[REDACTED]
Statutory Town Planning Coordinator

6 Paterson Street
Mundijong 6123
Western Australia



Shire of
Serpentine
Jarrahdale

Telephone: 9526 1111
Facsimile: 9525 5441
Web: www.sjshire.wa.gov.au
Email: info@sjshire.wa.gov.au

Planning and Development Act 2005
Shire of Serpentine Jarrahdale
**Notice of Determination on Application for
Development Approval**

Property File:	A143801	Application No:	PA23/54
Location:	26 Karbro Drive, Cardup		
Lot:	87	Plan/Diagram:	94436
Vol. No:	2141	Folio No:	124
Application Date:	30 December 2022	Received On:	13 February 2023

Description of Proposed Development: Amendment to Delete Condition of Development Approval

Use Class: 'Stable'

Date of Determination: 15 May 2023

That Council at its Ordinary Council Meeting of 15 May 2023 APPROVES the development application pursuant to Clause 68(2) of the Deemed Provisions of *Planning and Development (Local Planning Schemes) Regulations 2015* to remove Condition (e) of approval PA22/535 for Lot 87 (26) Karbro Drive, Cardup, subject to the following conditions:

Conditions:

- a. The development is to be carried out in compliance with the plans and documentation listed below and endorsed with the Shire of Serpentine Jarrahdale stamp, except where amended by other conditions of this consent.

Plans and Specifications	Development Plans (P1) received at the Shire's Offices on 13 February 2023; and Lighting Report (P2) dated 27 March 2023.
--------------------------	---

- b. Within 30 days of the date of this approval, the lights are to be further angled downwards or alternatively have shields placed on them, in order to limit light spill to no greater than 3m into the southern adjoining property.
- c. Use of the lights must only occur between 6:00pm - 8:00pm.

NOTE 1: If an applicant or owner is aggrieved by this determination there is a right of review by the State Administrative Tribunal in accordance with the *Planning and Development Act 2005* Part 14. An application must be made within 28 days of the determination.

Signed:

Dated:

15 May 2023

For and on behalf of the Shire of Serpentine Jarrahdale

SHIRE OF SERPENTINE-JARRAHDAL
PLANNING APPROVAL

H. O'Brien

Date 15/05/2023 Signed (Authorised Officer)

10.1.5 - Attachment 1

PLANNING APPROVAL ONLY
 THIS IS NOT A BUILDING PERMIT

It is the responsibility of the Builder / Applicant to incorporate all conditions of the Planning Approval into revised documentation submitted to support an application for a Building Permit

Note: The arena and arena lights are the only development subject to this determination.



Commercial parking inside shed and on the side/back of shed.

- Proposed Paddocks
 - Tree Removal Area (26) trees.
 - Trees (308) trees
 - Horse Shelters + Jack shed.
 - Arena lights.
 - Tree Removal area (Additional)
- Close to Paddock 5*

OVERALL SITE PLAN

SCALE 1:1000 @ A3 SIZE

LOT 87, 26 KARBRO DRIVE, CARDUP
 SITE AREA 26263m²

Upgrade existing fencing with RL5 Post and Rail.

Perth Lighting Consultants

ABN:69 609 527 586

SHIRE OF SERPENTINE-JARRAHDALE
PLANNING APPROVAL

H Brien

Date 15/05/2023 Signed (Authorised Officer)

27/03/2023

Project Title

Spill light Compliance 26 Karbro Drive Cardup WA 6122



Summary
 Requirements
 Calculation areas
 Calculation Results
 Luminaire Product Details
 Conclusions
 Project Review and Signoff

Summary

The intent of this report serves as confirmation for the compliance of the attached design and serves as proof that the installation upgrade was done to achieve compliance to Australian standards AS/NZS4282-2019 Control of obtrusive effect of outdoor lighting to existing infrastructure .

Requirements.

The following standards has been nominated for the areas as stated below for performance levels for the area.

- AS/NZS4282-2019 Control of obtrusive effect of outdoor lighting Table 3.2 and Table 3.3
- This area is classified as a Class A2 area Low district brightness area- sparsely inhabited rural and semi-rural areas.

Lighting parameters for these areas as follows.

Maximum (lux) level at property building line 5 lux max before curfew and 1 lux max after curfew typical after 10pm)

Max illuminance intensity (Candela) of 7500Cd before curfew and 1000Cd after curfew

All these measurement are taken in a vertical plane (line of site)

Calculation areas:

Calculations measurements are done at the following areas.

- Building Line of 42 Karbro Drive
- Building Line of 28 Karbro Drive
- Fence line that forms part of fence between 42 Karbro Drive, 26 Karbro Drive and 28 Karbro Drive

Calculation results:

- All calculations as displayed below results in measurements below max allowed according to ASNZS4282-2019 Control of obtrusive effect of outdoor lighting Table 3.2 and Table 3.3 for area Class A2

Calculations results shows results that will cause no discomfort to inhabitants adjacent to 26 Karbo drive . All these results expected to be even lower as all calculations are done without any obstructions in the way like trees etc.

All calculations applied to curfewed as well as non-curfewed time. Lighting can be used at any time of night or early morning and still comply to curfewed requirements

Calculation Summary				
Label	CalcType	Units	Max	Pass/Fail
ObtrusiveLight 28 Karbo Drive_Cd_Seg1	Obtrusive - Cd	Cd	781	Pass
ObtrusiveLight 28 Karbo Drive_Cd_Seg2	Obtrusive - Cd	Cd	927	Pass
ObtrusiveLight 28 Karbo Drive_Cd_Seg3	Obtrusive - Cd	Cd	927	Pass
ObtrusiveLight 28 Karbo Drive_III_Seg1	Obtrusive - Lux	Lux	0.4	Pass
ObtrusiveLight 28 Karbo Drive_III_Seg2	Obtrusive - Lux	Lux	0.5	Pass
ObtrusiveLight 28 Karbo Drive_III_Seg3	Obtrusive - Lux	Lux	0.2	Pass
ObtrusiveLight 42 Karbo Drive_Cd_Seg1	Obtrusive - Cd	Cd	273	Pass
ObtrusiveLight 42 Karbo Drive_Cd_Seg2	Obtrusive - Cd	Cd	436	Pass
ObtrusiveLight 42 Karbo Drive_Cd_Seg3	Obtrusive - Cd	Cd	0	Pass
ObtrusiveLight 42 Karbo Drive_Cd_Seg4	Obtrusive - Cd	Cd	455	Pass
ObtrusiveLight 42 Karbo Drive_III_Seg1	Obtrusive - Lux	Lux	0.1	Pass
ObtrusiveLight 42 Karbo Drive_III_Seg2	Obtrusive - Lux	Lux	0.3	Pass
ObtrusiveLight 42 Karbo Drive_III_Seg3	Obtrusive - Lux	Lux	0	Pass
ObtrusiveLight 42 Karbo Drive_III_Seg4	Obtrusive - Lux	Lux	0.1	Pass
ObtrusiveLight Boundary Line_Cd_Seg1	Obtrusive - Cd	Cd	791	Pass
ObtrusiveLight Boundary Line_III_Seg1	Obtrusive - Lux	Lux	0.6	Pass

Obtrusive Light - Compliance Report

AS/NZS 4282:2019, A2 - Low District Brightness, Curfew
 Filename: 26 Karbro Drive, Cardup WA, Australia
 3/29/2023 6:53:07 AM

Illuminance

Maximum Allowable Value: 1 Lux

Calculations Tested (8):

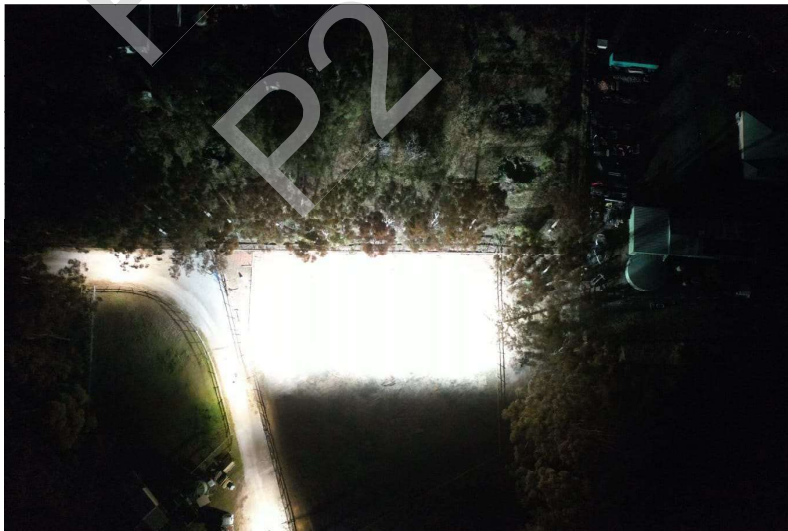
Calculation Label	Test Results	Max. Illum.
ObtrusiveLight Boundary Line_Ill_Seg1	PASS	0.6
ObtrusiveLight 42 Karbro Drive_Ill_Seg1	PASS	0.1
ObtrusiveLight 42 Karbro Drive_Ill_Seg2	PASS	0.3
ObtrusiveLight 42 Karbro Drive_Ill_Seg3	PASS	0.0
ObtrusiveLight 42 Karbro Drive_Ill_Seg4	PASS	0.1
ObtrusiveLight 28 Karbro Drive_Ill_Seg1	PASS	0.4
ObtrusiveLight 28 Karbro Drive_Ill_Seg2	PASS	0.5
ObtrusiveLight 28 Karbro Drive_Ill_Seg3	PASS	0.2

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 1000 Cd

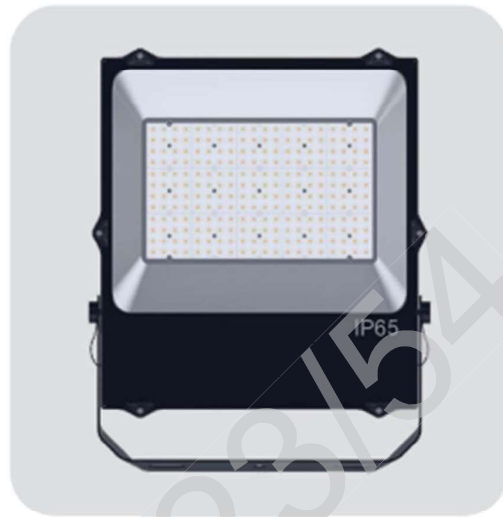
Calculations Tested (8):

Calculation Label	Test Results
ObtrusiveLight Boundary Line_Cd_Seg1	PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg1	PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg2	PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg3	PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg4	PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg1	PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg2	PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg3	PASS



Luminaire Product details:

A total of 6 x Luminaires are installed at 7m height with a max allowable tilt angle of 35 deg to achieve compliance



**ETG-ESFL200
200W**



Conclusion

All design parameters of the relevant Australian standards were met in this report.

Reviewer



FW Strydom Mies Lighting Engineer

Registration number 2367

Contact 0415774615

PA23/54
P2



<p>PERTH LIGHTING CONSULTANTS WWW.PERTHLIGHTINGCONSULTANTS.COM</p>	<p>Project: 26 KARBO DRIVE CARDU WA AUSTRALIA</p>	<p>Client:</p>	<table border="1"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>Comments:</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Rev.	Date	Comments:													<p>Project No:</p>
	Rev.	Date	Comments:																
<p><small>This design calculation is based upon specified parameters supplied by the client, and other design inputs assumed by us, as detailed in this document. In practice, the accuracy of the calculation will differ due to environmental variables such as actual luminaire positioning, room surface reflectance, supply voltage, local luminaires ambient temperature, obstructions/obstacles, etc. These results are also subject to normally accepted photometric tolerances, and calculation program uncertainties.</small></p> <p><small>Perth Lighting Consultants provides this calculation "as is" without any representation or warranty of any kind. The Company shall be under no liability to the Customer for failure to attain such performance figures unless the performance of the Goods supplied is specifically guaranteed in writing, and any such written guarantee shall be subject to recognized manufacturing variations and tolerances applicable to the Goods.</small></p>	<table border="1"> <tr> <td>Designer: FWS</td> <td>Scale: Not to scale</td> </tr> <tr> <td>Drawn Date: 27/03/2023</td> <td>Page Size: A3</td> </tr> <tr> <td colspan="2" style="text-align: right;"><small>Page 1 of 2</small></td> </tr> </table>	Designer: FWS	Scale: Not to scale	Drawn Date: 27/03/2023	Page Size: A3	<small>Page 1 of 2</small>													
Designer: FWS	Scale: Not to scale																		
Drawn Date: 27/03/2023	Page Size: A3																		
<small>Page 1 of 2</small>																			
<p>File Name:</p>																			

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	6	F1	Single	ETG-ESFL200	1.000	28000	48.4	290.4

Calculation Summary					
Label	CalcType	Units	Avg	Max	Min/Max
ObtrusiveLight 28 Karbro Drive_Cd Seg1	Obtrusive - Cd	N.A.	741.39	781	0.90
ObtrusiveLight 28 Karbro Drive_Cd Seg2	Obtrusive - Cd	N.A.	854.23	927	0.93
ObtrusiveLight 28 Karbro Drive_Cd Seg3	Obtrusive - Cd	N.A.	905.29	927	0.95
ObtrusiveLight 28 Karbro Drive_Ill Seg1	Obtrusive - Ill	Lux	0.32	0.4	0.75
ObtrusiveLight 28 Karbro Drive_Ill Seg2	Obtrusive - Ill	Lux	0.47	0.5	0.90
ObtrusiveLight 28 Karbro Drive_Ill Seg3	Obtrusive - Ill	Lux	0.13	0.2	0.50
ObtrusiveLight 42 Karbro Drive_Cd Seg1	Obtrusive - Cd	N.A.	345.96	273	0.21
ObtrusiveLight 42 Karbro Drive_Cd Seg2	Obtrusive - Cd	N.A.	348.11	436	0.61
ObtrusiveLight 42 Karbro Drive_Cd Seg3	Obtrusive - Cd	N.A.	0.00	0	N.A.
ObtrusiveLight 42 Karbro Drive_Cd Seg4	Obtrusive - Cd	N.A.	338.69	455	0.42
ObtrusiveLight 42 Karbro Drive_Ill Seg1	Obtrusive - Ill	Lux	0.05	0.1	0.00
ObtrusiveLight 42 Karbro Drive_Ill Seg2	Obtrusive - Ill	Lux	0.29	0.3	0.67
ObtrusiveLight 42 Karbro Drive_Ill Seg3	Obtrusive - Ill	Lux	0.00	0.0	N.A.
ObtrusiveLight 42 Karbro Drive_Ill Seg4	Obtrusive - Ill	Lux	0.10	0.1	1.00
ObtrusiveLight Boundary Line_Cd Seg1	Obtrusive - Cd	N.A.	689.10	791	0.25
ObtrusiveLight Boundary Line_Ill Seg1	Obtrusive - Ill	Lux	0.25	0.6	0.10

Obtrusive Light - Compliance Report
AS/NZS 4282:2019, A2 - Low District Brightness, Curfew
Filename: 26 Karbro Drive, Cardup WA, Australia
3/29/2023 6:53:55 AM

Illuminance
Maximum Allowable Value: 1 Lux

Calculations Tested (8):
TestMax.
Calculation LabelResultsIllum.
ObtrusiveLight Boundary Line_Ill_Seg1PASS0.6
ObtrusiveLight 42 Karbro Drive_Ill_Seg1PASS0.1
ObtrusiveLight 42 Karbro Drive_Ill_Seg2PASS0.3
ObtrusiveLight 42 Karbro Drive_Ill_Seg3PASS0.0
ObtrusiveLight 42 Karbro Drive_Ill_Seg4PASS0.1
ObtrusiveLight 28 Karbro Drive_Ill_Seg1PASS0.4
ObtrusiveLight 28 Karbro Drive_Ill_Seg2PASS0.5
ObtrusiveLight 28 Karbro Drive_Ill_Seg3PASS0.2

Luminous Intensity (Cd) At Vertical Planes
Maximum Allowable Value: 1000 Cd

Calculations Tested (8):
Test
Calculation LabelResults
ObtrusiveLight Boundary Line_Cd_Seg1PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg1PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg2PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg3PASS
ObtrusiveLight 42 Karbro Drive_Cd_Seg4PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg1PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg2PASS
ObtrusiveLight 28 Karbro Drive_Cd_Seg3PASS

<p>PERTH LIGHTING CONSULTANTS WWW.PERTHLIGHTINGCONSULTANTS.COM</p>	Project: 26 KARBO DRIVE CARDU WA AUSTRALIA	Client:	Rev:	Date:	Comments:	Project No:												
	<small>This design calculation is based upon specified parameters supplied by the client, and other design inputs assumed by us, as detailed in this document. In practice, the accuracy of the values will differ due to environmental variables such as actual luminaire positioning, room surface reflectance, supply voltage, local luminaires ambient temperature, obstacles/obstructions, etc. These results are also subject to normally accepted photometric tolerances, and calculation program uncertainties.</small>			<table border="1"> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>														Designer: FWS
<small>Perth Lighting Consultants provides this calculation "as is" without any representation or warranty of any kind. The Company shall be under no liability to the Customer for failure to attain such performance figures unless the performance of the Goods supplied is specifically guaranteed in writing, and any such written guarantee shall be subject to recognized manufacturing variations and tolerances applicable to the Goods.</small>			<table border="1"> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>														Drawn Date: 27/03/2023	Scale: Not to scale
File Name:			<table border="1"> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>														Page Size: A3	Page 2 of 2