

## 6.2.4 Multiple Sports Field Lighting Package Tender

**Responsible GM:** Peter Benazic  
**Author:** Tristan Brigham

### Recommendation(s)

That Council accept the Tender submitted by Commlec Services for RFT000030 Sports Field Lighting Package for the total amount of \$1,050,638.00 excluding GST. The contract completion date is 1 June 2025.

### Attachments

1. CONFIDENTIAL REPORT CIRCULATED TO COUNCILLORS ONLY - RFT 000030 Multiple Sports Filed Lighting - Tender Evaluation Report - signed [6.2.4.1 - 11 pages]
2. 2324 Multiple Sports Field Lighting Package Site Overviews [6.2.4.2 - 5 pages]

### Executive Summary

This report seeks approval to award the tender for RFT000030 Sports Field Lighting Package to Commlec Services. The tender is to upgrade sports lighting at five recreation reserves to meet Australian Standards and Cardinia Sport Facility Standards Policy.

The tender evaluation was conducted against weighted and non-weighted criteria followed by clarifications, best and final offer, reference checks and a scorecard financial assessment of the preferred tenderer. The tender submitted by Commlec Services Pty Ltd complies with all the tender conditions, demonstrated a clear understanding of the contract deliverables, while providing best value.

### Background

During 2022 condition audits were undertaken for sports lighting infrastructure within the shire by Coulthard Shim engineers on behalf of the Webb Lighting Group. The audits identified and ranked priority works across the recreation reserves and sports facilities. Where assets were determined to be a risk, they were made safe, and a cyclic program of design and replacement has been established and will continue into the 2024-25 financial year.

In February 2023 Webb Australia were engaged to provide full lighting and civil design to replace all identified sportsfield lighting with current generation LED, poles, wiring and supporting infrastructure.

To take advantage of bulk supply savings as a combined delivery, five sites have been prioritised for works under a single contract:

- Toomuc Reserve, Senior Oval.
- Upper Beaconsfield Recreation Reserve, Oval.
- Mountain Road Recreation Reserve, Oval.
- Perc Allison Reserve, Oval.
- Dick Jones Park, Tennis (Courts 1 and 2).

A public tender was called on 13 November 2023. During the open period three questions were asked and no addendums created. The tender closed on 12 December 2023, with six submissions received. Five submissions were found to be conforming with the top three shortlisted and given the the opportunity to provide a best and final offer.

## Policy Implications

The delivery of this project aligns with the Cardinia Sports Facility Standards Policy.

## Relevance to Council Plan

### 2.1 We support the creation of liveable spaces and places

2.1.2 Plan and maintain safe, inclusive and connected open spaces, places and active travel routes.

## Climate Emergency Consideration

The lighting design incorporates the use of gen 3.5 LED lighting, replacing obsolete metal halide luminaires. New LED lighting units will provide an increase and uniformity of Lux levels on the playing fields at up to 70% less electrical usage. Gen 3.5 LED will have a useful lifespan of 50,000 hours.

## Consultation/Communication

The lighting designs were developed in consultation with the relevant sports clubs and reserve committees, and their input ensures the designs accommodate for the future needs of the facilities.

## Financial and Resource Implications

The overall budget available for this project is \$1,607,487. including Victorian Government funding of the works at Beaconsfield Reserve.

**Table 1. Funding sources for sports field lighting program**

Organisation	Amount
Victorian Government (DEECA) – fully funding works at Beaconsfield Reserve	\$231,938
Council	\$1,342,549
Pakenham Football Club (up to an agreed maximum of \$33,000) – Toomuc Reserve project	\$33,000
<b>Total</b>	<b>\$1,607,487</b>

The final tender price falls well within Council's budget allocation for the project and will allow for a 10% contingency within the project budget. Contract completion date is 1 June 2025 to allow for phasing of works to minimise impact on stakeholders.

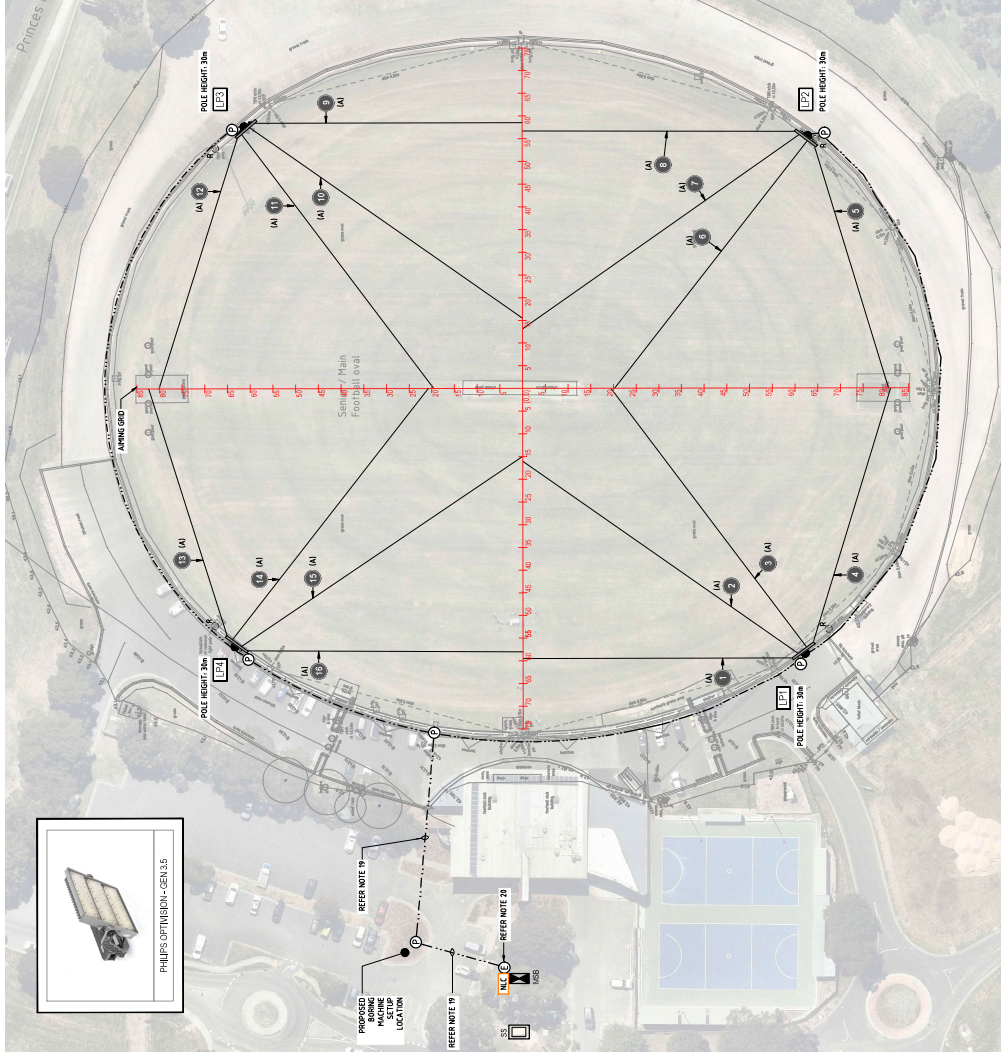
## Conclusion

It is recommended that council endorses the recommendation to award RFT000030 Multiple Sports Field Lighting Package to Commlec services for \$1,050,638.00 excluding GST

# TOOMUC RESERVE OVAL LIGHTING • CARDINIA SHIRE COUNCIL

LUMINAIRE LIGHT NO.	FLOODLIGHT No.	LUMINAIRE TYPE	LUMINAIRE TILT ANGLE (UP=HELI)
L1	1	(AI)	33°
L1	2	(AI)	35°
L1	3	(AI)	35°
L1	4	(AI)	30°
L1	5	(AI)	30°
L2	6	(AI)	35°
L2	7	(AI)	35°
L2	8	(AI)	35°
L2	9	(AI)	35°
L2	10	(AI)	35°
L3	11	(AI)	35°
L3	12	(AI)	30°
L3	13	(AI)	30°
L3	14	(AI)	35°
L3	15	(AI)	35°
L4	16	(AI)	35°

## Luminaire Schedule



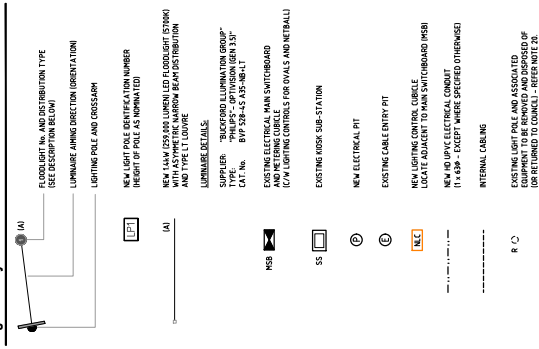
## Notes:

- DO NOT SCALE DRAWINGS.
- THE DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- ALL DIMENSIONS SHALL BE WORKED ON SITE BEFORE SUBMITTING TENDER.
- ALL NEW UNDERGROUND CONDUITS SHALL BE MINIMUM 80MM DIAMETER.
- CONDUIT ROUTES SHOWN ARE INDICATIVE ONLY. EXACT CONDUIT ROUTES TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE COUNCIL PRIOR TO INSTALLATION.
- ALL TENDERS MUST INCLUDE PROVISION TO TEST TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S "TREE PROTECTION" REQUIREMENTS, PLEASE WITH THE COUNCIL FOR FURTHER DETAILS.
- PROVIDE ENGRAVED ASSET PLATE AT EACH NEW POLE WITH THE FOLLOWING INFORMATION:
  - MANUFACTURER
  - MANUFACTURE NUMBER
  - POLE NUMBER
  - LUMINAIRE MAKE AND MODEL
  - MANUFACTURE FLOODLIGHT CAPACITY
  - TEXT SIZE: 10mm HIGH
- NEW LIGHT POLE CROSS-ARMS AND FOOTINGS TO HAVE CAPACITY FOR UP TO FOUR (4) LUMINAIRES PER POLE.
- BEFORE BEGINNING WORKS - OBTAIN FROM STRUCTURAL DESIGN ENGINEER.
- ALL NEW CONDUIT TO BE INSTALLED BY ORIENTATION BORING, EXCEPT WHERE TRACKING IS APPROVED BY THE COUNCIL. TYPICALLY TRACKING SHOULD BE PROMISSED AROUND THE PERIMETER OF, AND OUTSIDE THE FIELD.
- ALL EXPOSED CABLES AND POLES TO LUMINAIRES TO BE ENCLOSED IN STEEL FINISHED POLYCARBONATE CONDUIT TO JUMP PAST LEVEL 2.5.
- ANY NEW UNDERGROUND CONDUIT TO BE INSTALLED AT A DEPTH AS REQUIRED TO COMPLY WITH ASSOCIATED TILTING LEVELS AND PPE DESIGN.
- CONFORM FINAL POLE LOCATIONS WITH PROJECT MANAGER ON SITE.
- ALLOW FOR INCIDENTAL & ASSOCIATED WORKS AS REQUIRED TO PROVIDE A COMPLETE ELECTRICAL SYSTEM AND NEW FLOODLIGHTING SYSTEM.
- SUPPLY ALL LABOUR MATERIAL AND EQUIPMENT, WHETHER MENTIONED IN THIS SPECIFICATION OR NOT, REQUIRED TO LEAVE THE INSTALLATION FULLY WORKING ORDER.
- PROVIDE PROTECTIVE PROTECTION WITHIN EACH LIGHT POLE BASE EQUIVALENT TO OAK GLEK PROTECTIVE COATING.
- RETAIN EXISTING LIGHTING UNTIL NEW LIGHTING INSTALLATION IS COMPLETED.
- ALL CABLES BELOW GRADE SURFACE TO BE NOT CALLED BY ORIENTATION BORING TO PREVENT DAMAGE TO SURFACES.
- CONNECT NEW CABLES/CONDUIT TO EXISTING RIBS VIA EXISTING CABLE PIT.

## Drawing Schedule

REV	DATE	BY	APP	DESCRIPTION
B1	30.05.23	A.P.	R.H.	FOR COUNCIL REVIEW
E2	03.08.23	A.P.	R.H.	FOR APPROVAL
T1	09.11.23	P.H.	R.H.	FOR TENDER

## Legend of Symbols



## Scope of Works:

- THE SCOPE OF WORKS FOR THIS PROJECT INCLUDES:
- NEW LIGHT POLES, LUMINAIRES AND ASSOCIATED ITEMS
  - FOOTINGS FOR NEW LIGHT POLES
  - ANNING OF NEW LUMINAIRES, INCLUDING INITIAL ANNING TO BE CARRIED OUT DURING DAY LIGHT HOURS AND FINAL ANNING TO BE CARRIED OUT AT NIGHT.
  - NEW UNDERGROUND CONDUIT AND CABLEING FOR SPORTS LIGHTING.
  - CONNECTION OF NEW CIRCUITS TO EXISTING MAIN SWITCHBOARD
  - NEW LIGHTING CONTROLS MOUNTED ONTO EXISTING MSHB
  - RETURN TO QUANTIFICATION OF REDUNDANT EQUIPMENT. ALLOW FOR DISPOSAL OR COUNCIL.
  - COMPLY WITH CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN BY COUNCIL
  - TESTING AND COMMISSIONING OF LIGHTING SYSTEM UPON COMPLETION OF WORKS INCLUDING FINAL ANNING TO ACHIEVE REQUIRED LUMINAIRE LEVELS AND UNIFORMITY.
  - AS-BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS.
  - GROUNDING - ENGAGE A LICENSED OPERATOR TO DATE BEFORE AND AFTER WORK. BOTH STILL PHASES AND ZERO POTENTIAL TO BE TESTED FOR BOTH SCENARIOS BEFORE WORKS COMMENCE. PHOTOGRAPHS TO BE TAKEN FOR THE NEW LED LIGHTING SCHEME. ALL PHOTOGRAPHS SHALL BE PROVIDED TO THE COUNCIL IN ELECTRONIC FORMAT.



TOOMUC RESERVE OVAL LIGHTING UPGRADE VIC 3910

LEGEND, DRAWING SCHEDULE, NOTES AND LIGHTING LAYOUT

DATE	REV	APP	DESCRIPTION
30.05.23	A.P.	R.H.	FOR COUNCIL REVIEW
03.08.23	A.P.	R.H.	FOR APPROVAL
09.11.23	P.H.	R.H.	FOR TENDER



# DICK JONES PARK TENNIS COURT LIGHTING • CARDINA SHIRE COUNCIL

**Drawing Schedule**

ES-01	LEGEND, DRAWING SCHEDULE, NOTES AND LIGHTING LAYOUT
ES-02	SINGLE LINE DIAGRAM AND DETAILS
ES-03	LUMINAIRE CALCULATIONS

**Legend of Symbols**

(A) FLOODLIGHT NO. AND DISTRIBUTION TYPE (SEE DESCRIPTION BELOW)

(B) LUMINAIRE AIMING DIRECTION

(C) LIGHTING POLE AND CROSSARM

(D) NEW LIGHT POLE IDENTIFICATION NUMBER (HEIGHT OF POLE AS INDICATED)

(E) NEW 15kW IPSO (RED) LUMEN LEFT FLOODLIGHT DISTRIBUTION AND TYPE (1M) LUMEN

(F) LUMINAIRE DETAILS

(G) SUPPLIER: "BUDYFORD ILLUMINATION GROUP"  
TYPE: "PHILIPS OPTIVISION (GEN 3)"  
CAT. No. BVP 328 A35-08-1LT

(H) EXISTING ELECTRICAL MAIN SWITCHBOARD AND PETERING CABLE TO RE-USE

(I) REPLACE EXISTING BUILDING OR REFER SCOPE OF WORKS NO.5

(J) NEW ELECTRICAL PIT

(K) NEW 400V UPVC ELECTRICAL CONDUIT IT'S 65W - EXCEPT WHERE SPECIFIED OTHERWISE

(L) INTERNAL CABLEING

(M) EXISTING LIGHT POLE AND ASSOCIATED EQUIPMENT TO BE REMOVED AND DISPOSED OF (DO NOT REMOVE TO COUNCIL)

(N) R C

**Scope of Works:**

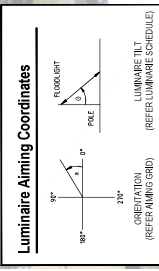
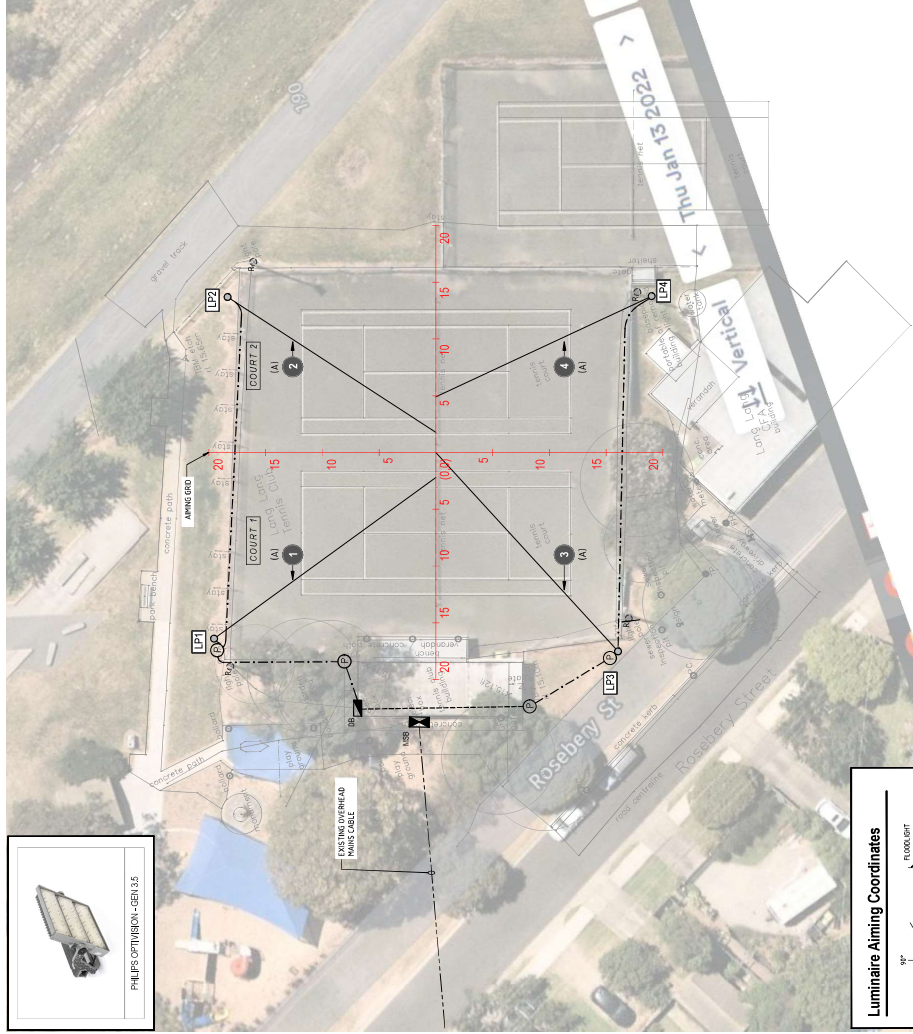
- 1. NEW LIGHT POLES, LUMINAIRES AND ASSOCIATED ITEMS
- 2. FOOTINGS FOR NEW LIGHT POLES
- 3. AIMING OF NEW LUMINAIRES, INCLUDING INITIAL AIMING TO BE CARRIED OUT DURING DAY LIGHT FADING AND FINAL AIMING TO BE CARRIED OUT AT NIGHT.
- 4. NEW UNDERGROUND CONDUIT AND CABLEING FOR SPORTS LIGHTING
- 5. REPLACE EXISTING BUILDING OR WITH NEW 3P PILE PANEL BOARD, CONNECT NEW LIGHTING CIRCUITS TO NEW BUILDING OR
- 6. NEW LIGHTING CONTROLS
- 7. REMOVAL AND DISPOSAL OF REDUNDANT EQUIPMENT ALLOW FOR DISPOSAL OR RETURN TO COUNCIL
- 8. COMPLIANCE WITH CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
- 9. COMPLIANCE WITH CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
- 10. INCLUDING INITIAL AIMING TO ACHIEVE REQUIRED LUMINAIRE LEVELS AND UNIFORMITY.
- 11. AS-BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS.
- 12. ENGAGE A SIGNAGE OPERATOR TO TAKE BEFORE AND AFTER SHINE FOOTAGE OF THE SPORTS LIGHTING OPERATING AT NIGHT. THIS SHALL INCLUDE BOTH STILL AND VIDEO FOOTAGE. THE SIGNAGE OPERATOR SHALL BE PROVIDED WITH THE SIGNAGE MANUALS AND TAKE FOR EXISTING THE SPORTS LIGHTING AND AFTER FOOTAGE SHALL BE PROVIDED TO THE COUNCIL IN ELECTRONIC FORM.

**Luminaire Schedule**

LIGHT POLE	FLOODLIGHT No.	LUMINAIRE TYPE	LUMINAIRE TILT ANGLE (UP-TILT)
LPT	1	(A)	26°
LPT	2	(B)	27°
LPT	3	(A)	26°
LPT	4	(B)	27°

**Notes:**

- DO NOT SCALE OFF DRAWINGS.
- THE DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE SUBMITTING TENDER.
- ALL NEW UNDERGROUND CONDUITS SHALL BE 50mm Ø 50mm DIAMETER.
- CONDUIT ROUTES SHALL BE INDICATED ONLY EXACT CONDUIT ROUTES TO BE DETERMINED DURING CONSTRUCTION TO SUIT SITE CONDITIONS AND TO FURNITURE, OBTAIN APPROVAL FOR CONDUIT ROUTES FROM COUNCIL PRIOR TO INSTALLATION.
- ALL TRENCH WORKS IN CLOSE PROXIMITY TO TREES TO BE CARRIED OUT IN CONJUNCTION WITH TREE PROTECTION REQUIREMENTS, ASIDE WITH THE COUNCIL FOR THE TREE DETALS.
- PROVIDE ENGRAVED ASSET ID PLATE AT EACH NEW POLE WITH THE FOLLOWING INFORMATION:
  - REFERENCE TO TALKIE NUMBER
  - LUMINAIRE MAKE AND MODEL
  - POLE HEIGHT
  - CROSS ARM LENGTH
  - TEXT SIZE: 25mm HIGH
- NEW LIGHT POLE CROSS-ARMS AND FOOTINGS TO HAVE CAPACITY TO ONE (1) LUMINAIRE PER POLE.
- STRUCTURAL CERTIFICATION OF POLES AND FOOTINGS MUST BE SUPPLIED BEFORE BEGINNING WORKS - OBTAIN FROM STRUCTURAL DESIGN ENGINEER.
- ALL NEW CONDUIT TO BE INSTALLED BY DIRECTIONAL BORING EXCEPT WHERE SPECIFIED OTHERWISE. CONDUIT SHALL BE INSTALLED TO A MINIMUM OF 100mm BELOW PERMISSIBLE GRADE, THE PERMITTER OF, AND OUTSIDE THE FIELD.
- ALL EXPOSED CABLES (60 FROM POLES TO LUMINAIRES) TO BE ENCLOSED IN STEEL SHEATHED FLEXIBLE CONDUIT, EQUAL TO ADAPT STEEL 5P
- PROVIDE SCALED CABLE ENTRY TO BUILDINGS FOR NEW LIGHTING SUB-CIRCUITS, INCLUDING STEEL CABLE GUARD (OR SIMILAR) FOR MECHANICAL PROTECTION UP TO BUILDING LEVEL.
- ALL INTERNAL CABLEING (LUMEN AND 0-10V) TO BE CONCEALED IN WALLS, POSSIBLE TO REMOVED TO BE INCLUDED IN SURFACE MOUNTED DUCT AT HIGH LEVEL TO COUNCIL APPROVAL ALLOW TO PAINT DUCT TO MATCH COLOUR OF CONCEALMENT PRIOR TO CONSTRUCTION.
- PERFORMING OPTICAL CALCULATIONS WITHIN BUILDING FOR CABLE NIGHT AS REQUIRED, TO COMPLY WITH ASSOCIATED LIGHTING LEVELS (AS PER DESIGN).
- ALLOW FOR INITIAL AIMING OF LUMINAIRES AT DAY TIME AND FINAL AIMING AT NIGHT AS REQUIRED, TO COMPLY WITH ASSOCIATED LIGHTING LEVELS (AS PER DESIGN).
- COMPLY FINAL POLE LOCATION WITH PROJECT MANAGER ON SITE.
- ALLOW FOR INCIDENTAL & ASSOCIATED WORKS AS REQUIRED TO PROVIDE A COMPLETE ELECTRICAL SYSTEM AND NEW FLOODLIGHTING SYSTEM.
- SUPPLY ALL LABOR, MATERIAL, AND EQUIPMENT, WHETHER INSTALLED IN CONSTRUCTION OR NOT, REQUIRED TO COMPLETE THE INSTALLATION IN FULL ORDER.
- PROVIDE SURGE PROTECTION WITHIN EACH LIGHT POLE BASE (EQUIVALENT TO OAK ELECTRONICS ES551V5-100)
- RETAIN EXISTING LIGHTING, NEW LIGHTING INSTALLATION IS COMPLETED.



REVISION	DATE	REV. APP	PROVIDER
B1	FOR COUNCIL REVIEW	30.05.23	J.D. R.H.
B2	FOR APPROVAL	31.08.23	P.M. R.H.
T1	FOR TENDER		P.M. R.H.

**PROJECT DETAILS**

DICK JONES PARK  
TENNIS COURT LIGHTING  
ROSEBERRY STREET VIC 3884

**CLIENT**

Cardina

**DRAWING**

LEGEND, DRAWING SCHEDULE  
NOTES AND LIGHTING LAYOUT

**DATE**

30.05.23

**SCALE**

1:200 @ A1

DATE	REV. APP	PROVIDER
30.05.23	J.D. R.H.	
31.08.23	P.M. R.H.	
	P.M. R.H.	

**DATE**

30.05.23

**SCALE**

1:200 @ A1



# UPPER BEACONSFIELD RECREATION RESERVE

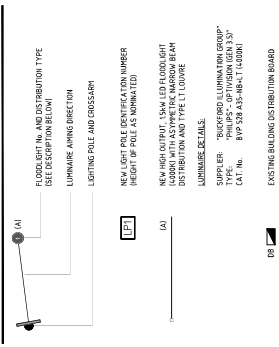
## OVAL LIGHTING • CARDINIA SHIRE COUNCIL

REVISION	DATE	REV.	APP.	PROVISION
B1	30.05.23	A.P.	R.H.	FOR COUNCIL REVIEW
B2	31.08.23	P.H.	R.H.	FOR APPROVAL
T1	27.09.23	P.H.	R.H.	FOR TENDER

### Drawing Schedule

R34A ES-300	LEGEND, DRAWING SCHEDULE, NOTES AND LIGHTING LAYOUT
R34A ES-301	SINGLE LINE DIAGRAM AND DETAILS
R34A LC-300	LUMINAIRE CALCULATIONS

### Legend of Symbols



- FLOODLIGHT No. AND DISTRIBUTION TYPE**  
(SEE DESCRIPTION BELOW)
- LUMINAIRE AIMING DIRECTION**
- LIGHTING POLE AND CROSSARM**
- NEW LIGHT POLE IDENTIFICATION NUMBER**  
(HEIGHT OF POLE AS NOMINATED)
- NEW LIGHT POLE LOCATION**  
(LOCATION WITH A NUMBER TO IDENTIFY THE LUMINAIRE BEAM DISTRIBUTION AND TYPE LT LOUVER)
- LUMINAIRE DETAILS**
- SUPPLIER** - "BACKORDER LUMINAIRE GROUP"  
TYPE: PHILIPS - OPTIVISION (OR 3.30")  
CAT. No. 879 28 45-01-1-1 (OR 3.30")
- EXISTING BUILDING DISTRIBUTION BOARD**
- NEW ELECTRICAL PIT**
- NEW FREE STANDING LIGHTING CONTROL**  
(REFER TO DRAWINGS ES-301 FOR DETAILS)
- NEW 480V PVC ELECTRICAL CONDUIT**  
(1 x 63) - EXCEPT WHERE SPECIFIED OTHERWISE)
- INTERNAL CABLING**
- EXISTING LIGHT POLE AND ASSOCIATED EQUIPMENT** TO BE REMOVED AND DISPOSED OF (OR RETURNED TO COUNCIL) - REFER NOTE 21.

### Scope of Works:

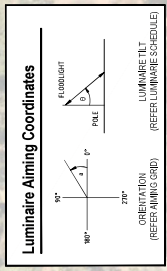
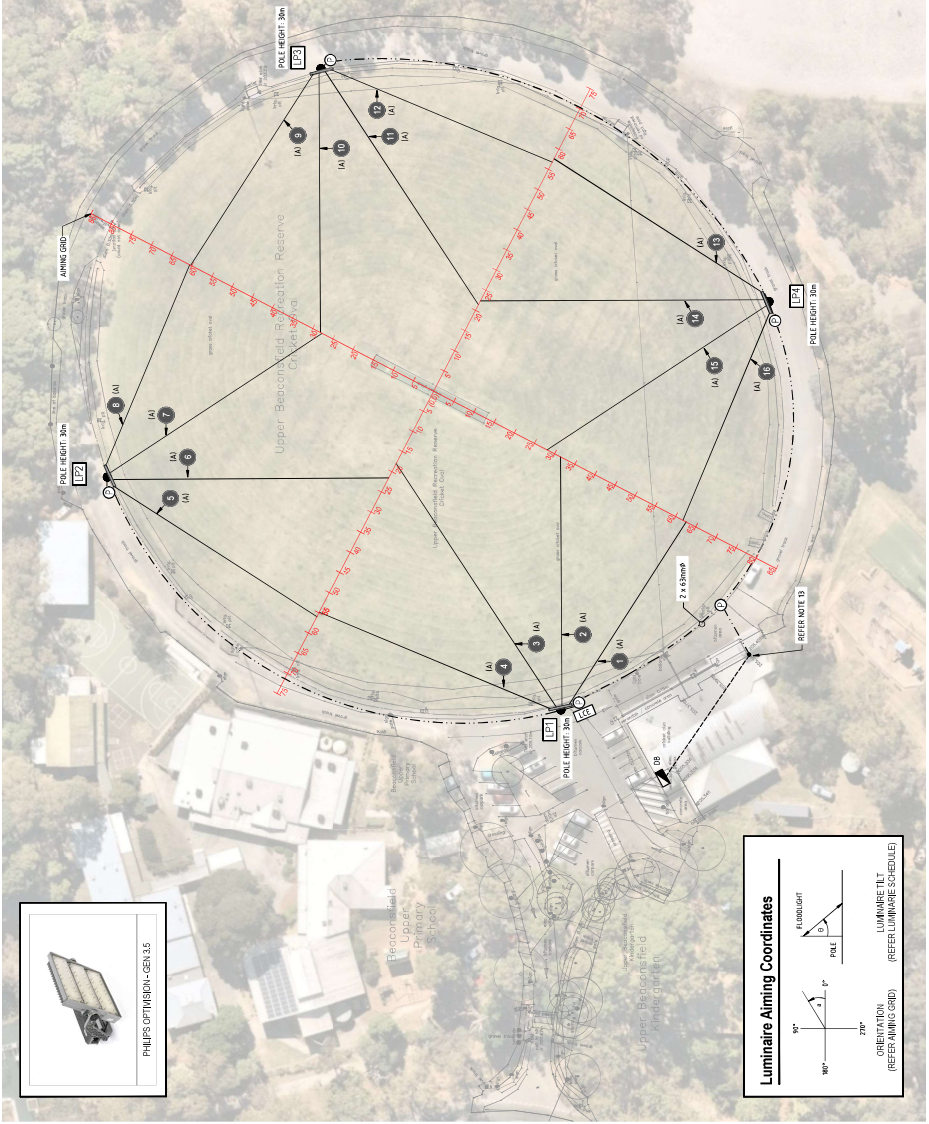
- NEW LIGHT POLES, LUMINAIRES AND ASSOCIATED ITEMS
- FOUNDATIONS FOR NEW LIGHT POLES
- AIMING OF NEW LUMINAIRES, INCLUDING INITIAL AIMING TO BE COMPLETED AT NIGHT
- NEW UNDERGROUND CONDUIT AND CABLES FOR SPORTS LIGHTING
- NEW ELECTRICAL FREE STANDING LIGHTING CONTROL, OPERATION CABLES PROVIDE NEW 63A SUPPLY TO CABLES FROM BUILDING OR LIGHTING CONTROL
- REMOVAL AND DISPOSAL OF REDUNDANT EQUIPMENT - ALLOW FOR DISPOSAL OR RETURN TO COUNCIL
- LANDSCAPE WITH COUNCIL APPROVED ON ALL MATTERS ASSOCIATED WITH TREE PROTECTION
- COMPLIANCE WITH CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
- TESTING AND COMMISSIONING OF LIGHTING SYSTEM UPON COMPLETION OF WORKS TO BE PROVIDED TO COUNCIL
- REQUIRED LUMINAIRE LEVELS AND UNIFORMITY
- AS-BUILT DRAWINGS, OPERATION AND MAINTENANCE MANUALS
- ENGAGE A BOND OPERATOR TO TAKE BEFORE AND AFTER DRONE FOOTAGE OF THE SPORTS LIGHTING OPERATIONS AT NIGHT. THIS FOOTAGE SHALL BE PROVIDED TO THE COUNCIL FOR ARCHIVING PURPOSES. BEFORE FOOTAGE SHALL BE TAKEN FOR EXISTING SPORTS LIGHTING AND AFTER FOOTAGE SHALL BE TAKEN FOR THE PROPOSED LIGHTING. THIS FOOTAGE SHALL BE PROVIDED TO THE COUNCIL IN ELECTRONIC FORMAT.

### Luminaire Schedule

LIGHT POLE No.	FLOODLIGHT No.	LUMINAIRE TYPE	LUMINAIRE HEIGHT (OP. TILT)
L1	1	IA1	26"
L1	2	IA1	34"
L1	3	IA1	34"
L1	4	IA1	26"
L2	5	IA1	34"
L2	6	IA1	34"
L2	7	IA1	26"
L2	8	IA1	34"
L3	9	IA1	34"
L3	10	IA1	34"
L3	11	IA1	34"
L3	12	IA1	26"
L4	13	IA1	26"
L4	14	IA1	34"
L4	15	IA1	34"
L4	16	IA1	26"

### Notes:

- DO NOT SCALE OFF DRAWINGS.
- THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE SIGNING TENDER.
- ALL NEW UNDERGROUND CONDUITS SHALL BE MINIMUM 60MM DIAMETER.
- CONDUIT ROUTES SHOWN ARE INDICATIVE ONLY. EXACT CONDUIT ROUTES TO BE DETERMINED DURING CONSTRUCTION TO SUIT SITE CONDITIONS AND TO AVOID OBSTACLES. ALL CONDUIT ROUTES SHALL BE APPROVED BY COUNCIL PRIOR TO INSTALLATION.
- ALL TREEMING WORKS IN CLOSE PROXIMITY TO TREES TO BE CARRIED OUT IN CONJUNCTION WITH TREE PROTECTION REQUIREMENTS. LAISE WITH THE COUNCIL FOR MATTERS BEING.
- PROVIDE NEARBY ASSET TO POLE AT EACH NEW POLE WITH THE FOLLOWING INFORMATION:
  - POLE NUMBER
  - POLE HEIGHT
  - POLE TYPE
  - TEXT SIZE: 10mm HIGH
  - REFERENCE TO LARGE NUMBER
- NEW LIGHT POLE CROSS-ARMS AND OUTRIGS TO HAVE CAPACITY FOR UP TO FOUR LUMINAIRES (PER POLE).
- STRUCTURAL CERTIFICATION OF POLES AND OUTRIGS MUST BE SUPPLIED BEFORE BEGINNING WORKS - OBTAIN FROM STRUCTURAL DESIGN ENGINEER.
- ALL NEW CONDUIT TO BE INSTALLED BY DIRECTIONAL BORING, EXCEPT WHERE OTHERWISE SPECIFIED. CONDUIT SHALL BE INSTALLED TO THE DEEPEST POSSIBLE AROUND THE PERIMETER OF AND OUTSIDE THE FIELD.
- ALL EXPOSED CABLES FROM POLES TO LUMINAIRES TO BE ENCASED IN STEEL SHEATHED 12.5mm CONDUIT, EQUAL TO ADAPT STEEL SP.
- PROVIDE SEALED CABLE ENTRY TO BUILDING FOR NEW LIGHTING SUB-CIRCUITS, INCLUDING STEEL CABLE GUARD OR SIMILAR FOR MECHANICAL PROTECTION OF EXPOSED INSULATED CONDUIT.
- ALL NEW CONDUIT TO BE INSTALLED TO A MINIMUM OF 100mm ABOVE FINISH LEVEL TO COUNCIL APPROVAL. ALLOW TO PAINT DUCT TO MATCH COLOUR OF EXISTING WALL.
- PROVIDE PROTECTION FOR ALL EXPOSED CABLES WITHIN BUILDING FOR CABLE CONDUIT FROM TO CONSTRUCTION.
- ALLOW FOR INITIAL AIMING OF LUMINAIRES AT 20% THE 480V PHASE ANGLE AT NIGHT AS REQUIRED, TO COMPLY WITH ASSOCIATED LIGHTING LEVELS AS PER DESIGN.
- CONTEMPORARY POLE LOCATIONS WITH PROJECT MANAGER ON SITE.
- ALLOW FOR INCIDENTAL & ASSOCIATED WORKS AS REQUIRED TO PROVIDE A COMPLETE ELECTRICAL SYSTEM AND NEW FLOODLIGHTING SYSTEM.
- SUPPLY ALL LABOUR MATERIAL AND EQUIPMENT, WHEN REFERRED IN ORDER OR NOT REFERRED TO LEAVE THE INSTALLATION FULLY WORKING ORDER.
- PROVIDE SURGE PROTECTION WITHIN EACH LIGHT POLE BASE EQUIVALENT TO OAK ELECTRONICS DES25A-VIE-4501
- RETAIN EXISTING LIGHTING IN THE NEW LIGHTING INSTALLATION IS COMPLETED.



REVISION	DATE	REV.	APP.	PROVISION
B1	30.05.23	A.P.	R.H.	FOR COUNCIL REVIEW
B2	31.08.23	P.H.	R.H.	FOR APPROVAL
T1	27.09.23	P.H.	R.H.	FOR TENDER

SCALE 1:500 @ A1

DATE	REV.	APP.	PROVISION
30.05.23	A.P.	R.H.	FOR COUNCIL REVIEW
31.08.23	P.H.	R.H.	FOR APPROVAL
27.09.23	P.H.	R.H.	FOR TENDER

**WEB**

PROJECT TITLE	PROJECT NO.	DRAWING NO.	D	R	A
UPPER BEACONSFIELD RECREATION RESERVE LIGHTING UPGRADE VC 3808		ES-300	A.P.	P.H.	R.H.
LEGEND, DRAWING SCHEDULE, NOTES AND LIGHTING LAYOUT					
FOR TENDER					T1



# BEACONSFIELD RECREATION RESERVE

## OVAL LIGHTING • CARDINA SHIRE COUNCIL

REVISION	DATE	REV. APP.	PROVISION
B1 FOR COUNCIL REVIEW	30.05.23	A.P. R.H.	
B2 FOR APPROVAL	31.08.23	J.D. R.H.	
T1 FOR TENDER	02.12.23	P.M. R.H.	

### Drawing Schedule

BSVA ES-90	LEGEND, DRAWING SCHEDULE, NOTES AND LIGHTING LAYOUT
BSVA ES-91	SINGLE LINE DIAGRAM AND DETAILS
BSVA LC-90	LUMINAIRANCE CALCULATIONS

### Legend of Symbols

**FLOODLIGHT** (Symbol: Floodlight icon)

**LUMINAIRE** (Symbol: Luminaire icon)

**NEW LIGHT POLE IDENTIFICATION NUMBER** (Symbol: Pole icon)

**NEW 15M (555000) LUMEN LED FLOODLIGHT (STAND WITH ASYMETRIC NARROW BEAM DISTRIBUTION AND TYPE LT1 LIGHT)** (Symbol: Floodlight icon)

**LUMINAIR DETAILS**

**SUPPLIER:** THICKWOOD ILLUMINATION GROUP  
**MODEL:** THICKWOOD LUMINAIRE GROUP  
**CAT. No.:** BWP 528 A 35-NAL1

**EXISTING ELECTRICAL MAIN SWITCHBOARD AND PRELIMS LABEL** (Symbol: MBS icon)

**EXISTING LIGHTING CONTROL CABLE (TO BE REMOVED)** (Symbol: Dashed line)

**NEW LIGHTING CONTROL CABLE** (Symbol: Solid line)

**NEW LIGHT SWITCH PANEL** (Symbol: Square with X)

**NEW LIGHT SWITCH IN CLOSE** (Symbol: Square with circle)

**NEW ELECTRICAL PIT** (Symbol: Circle with X)

**NEW 40 (500V) ELECTRICAL CONDUIT (15 x 50) - EXCEPT WHERE SPECIFIED OTHERWISE** (Symbol: Dashed line)

**INTERNAL CABLEING** (Symbol: Dotted line)

**R/O** (Symbol: Circle with dot)

**EXISTING LIGHT POLES AND CONDUITS EQUIPPED TO BE DEMOLISHED AND DISPOSED OF (OR RETURNED TO COUNCIL - REFER NOTE 23)** (Symbol: Circle with dot)

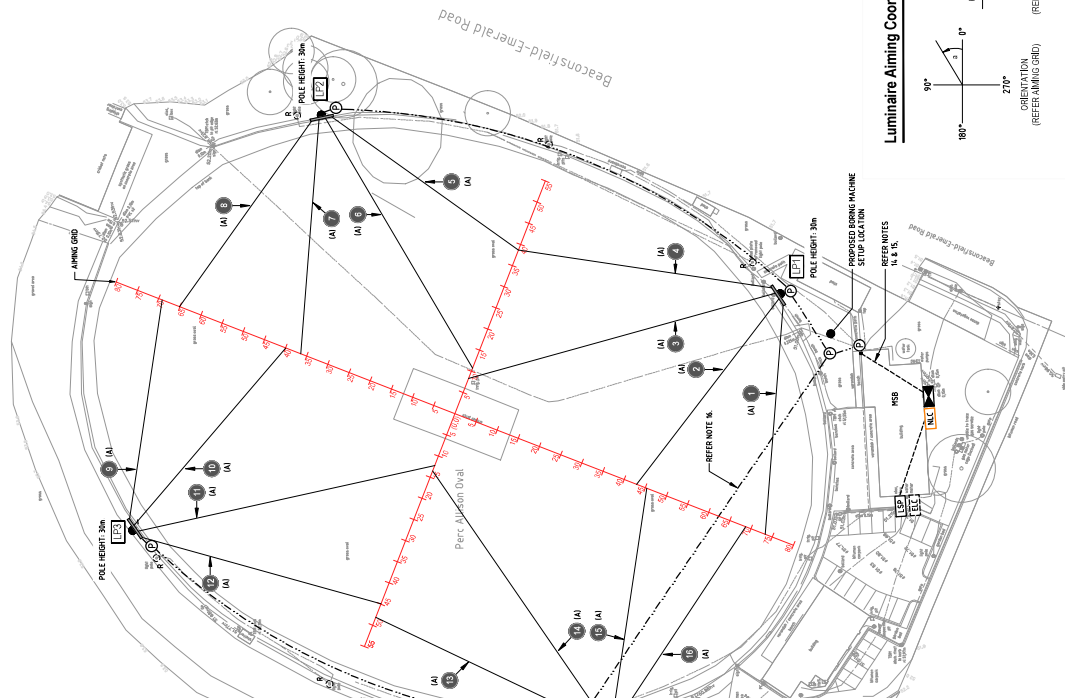


### Luminaire Schedule

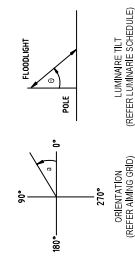
FLOODLIGHT No.	LUMINAIRE TYPE	LUMINAIRE TILT ANGLE (UP-HELI)
1	(AI)	27°
2	(AI)	33°
3	(AI)	33°
4	(AI)	28°
5	(AI)	33°
6	(AI)	33°
7	(AI)	27°
8	(AI)	32°
9	(AI)	33°
10	(AI)	30°
11	(AI)	30°
12	(AI)	33°
13	(AI)	33°
14	(AI)	33°
15	(AI)	27°

### Notes:

- DO NOT SCALE OFF DRAWINGS.
- THE DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION.
- ALL DIMENSIONS SHALL BE WORKED ON SITE BEFORE SIGHTING UNDER.
- ALL NEW UNDERGROUND CONDUITS SHALL BE MINIMUM 60MM DIAMETER.
- CONDUIT ROUTES SHOWN ARE INDICATIVE ONLY. EXACT CONDUIT ROUTES TO BE DETERMINED ON SITE. CONDUITS SHALL BE INSTALLED TO AVOID DAMAGE TO EXISTING WEIR STRUCTURE, EQUIPMENT AND SURROUNDING. OBTAIN APPROVAL FOR CONDUIT ROUTES FROM COUNCIL PRIOR TO INSTALLATION.
- ALL TRENCHING WORKS IN CLOSE PROXIMITY TO TREES TO BE CARRIED OUT IN THE CONSOLE FOR FURTHER DETAILS.
- PROVIDE EMBOSSED ASSET OF PLATE AT EACH NEW POLE WITH THE FOLLOWING INFORMATION:
  - REFERENCED ALIQUID NUMBER
  - LUMINAIRE MAKE AND MODEL
  - POLE HEIGHT
  - POLE LOCATION
  - POLE IDENTIFICATION CAPACITY
  - TEXT SIZE: 10mm HIGH
- NEW LIGHT POLE, CROSS-ARMS AND FOOTINGS TO HAVE CAPACITY FOR UP TO FOUR (4) LUMINAIRES (PER POLE).
- STRUCTURAL CERTIFICATION OF POLES AND FOOTINGS MUST BE SUPPLIED BEFORE BEGINNING WORKS - OBTAIN FROM STRUCTURAL DESIGN ENGINEER.
- ALL NEW CONDUIT TO BE INSTALLED BY DIRECTIONAL BORING, EXCEPT WHERE OTHERWISE SPECIFIED. CONDUITS SHALL BE INSTALLED TO AVOID DAMAGE TO EXISTING WEIR STRUCTURE, EQUIPMENT AND SURROUNDING. OBTAIN APPROVAL FOR CONDUIT ROUTES FROM COUNCIL PRIOR TO INSTALLATION.
- ALL EXPOSED CABLES (HANG FROM POLES TO LUMINAIRES) TO BE ENCLOSED IN STEEL SHEATHED FLEXIBLE CONDUIT, EQUAL TO ADAPT STEEL SP.
- PROVIDE SEALED CABLE ENTRY TO BUILDING FOR NEW LIGHTING SUB-CIRCUITS. EXPOSED STEEL CABLE SHOULD BE PROTECTED BY MECHANICAL PROTECTION OF STEEL SHEATHED FLEXIBLE CONDUIT TO BE CONVEYED, WHERE POSSIBLE, OTHERWISE TO BE ENCLOSED IN SURFACE PAINTED DUCT AT HIGH LEVEL (TO COUNCIL APPROVAL ALLOW TO PAINT DUCT TO MATCH COLOUR OF CONDUIT).
- SEALING OF ALL CABLE ROOTS WITHIN BUILDING FOR CABLE (CONCEALMENT) PRIOR TO CONSTRUCTION.
- ALL CONDUITS BELOW GROUND TO BE INSTALLED BY DIRECTIONAL BORING.
- THE SCALE OF ALL SERVICES (AS SHOWN BY THE DRAWINGS) SHALL BE TO THEIR ORIGINAL CONDITION TO THE SATISFACTION AND APPROVAL OF THE COUNCIL.
- ALLOW FOR INITIAL AIMING OF LUMINAIRES AT DAY TIME AND FINAL AIMING AT NIGHT AS REQUIRED, TO COMPLY WITH AS2604 LIGHTING LEVELS (AS PER DESIGN).
- CONFORM FINAL POLE LOCATIONS WITH PROJECT MANAGER ON SITE.
- ALLOW FOR INCIDENTAL & ASSOCIATED WORKS AS REQUIRED TO PROVIDE A COMPLETE ELECTRICAL SYSTEM AND NEW FLOODLIGHTING SYSTEM.
- SUPPLY ALL LABOUR, MATERIAL AND EQUIPMENT, WHETHER RETAINED IN DETAIL OR NOT, REQUIRED TO LEAVE THE INSTALLATION IN FULL WORKING ORDER. (AS PER DESIGN AND SPECIFICATION).
- PROVIDE SURGE PROTECTION WITHIN EACH LIGHT POLE BASE (EQUIVALENT TO GUK ELECTRONICS BWS3500-100).
- RETAIN EXISTING LIGHTING UNTIL NEW LIGHTING INSTALLATION IS COMPLETED.



### Luminaire Aiming Coordinates



CONCERNED ABOUT THE PROJECT? VISIT OUR WEBSITE FOR MORE INFORMATION.  
 VISIT US AT: [www.beaconsfieldshire.vic.gov.au](http://www.beaconsfieldshire.vic.gov.au)  
 OR CALL US ON: 03 5441 1111



BEACONSFIELD RECREATION RESERVE  
 OVAL LIGHTING  
 VC 3807

LEGEND, DRAWING SCHEDULE  
 NOTES AND LIGHTING LAYOUT

SCALE 1:500 @ A1

DATE	REV.	APP.	PROVISION
02/12/23	P.M.	R.H.	
31/08/23	J.D.	R.H.	
30/05/23	A.P.	R.H.	

TENDER