



WOOD & GRIEVE ENGINEERS

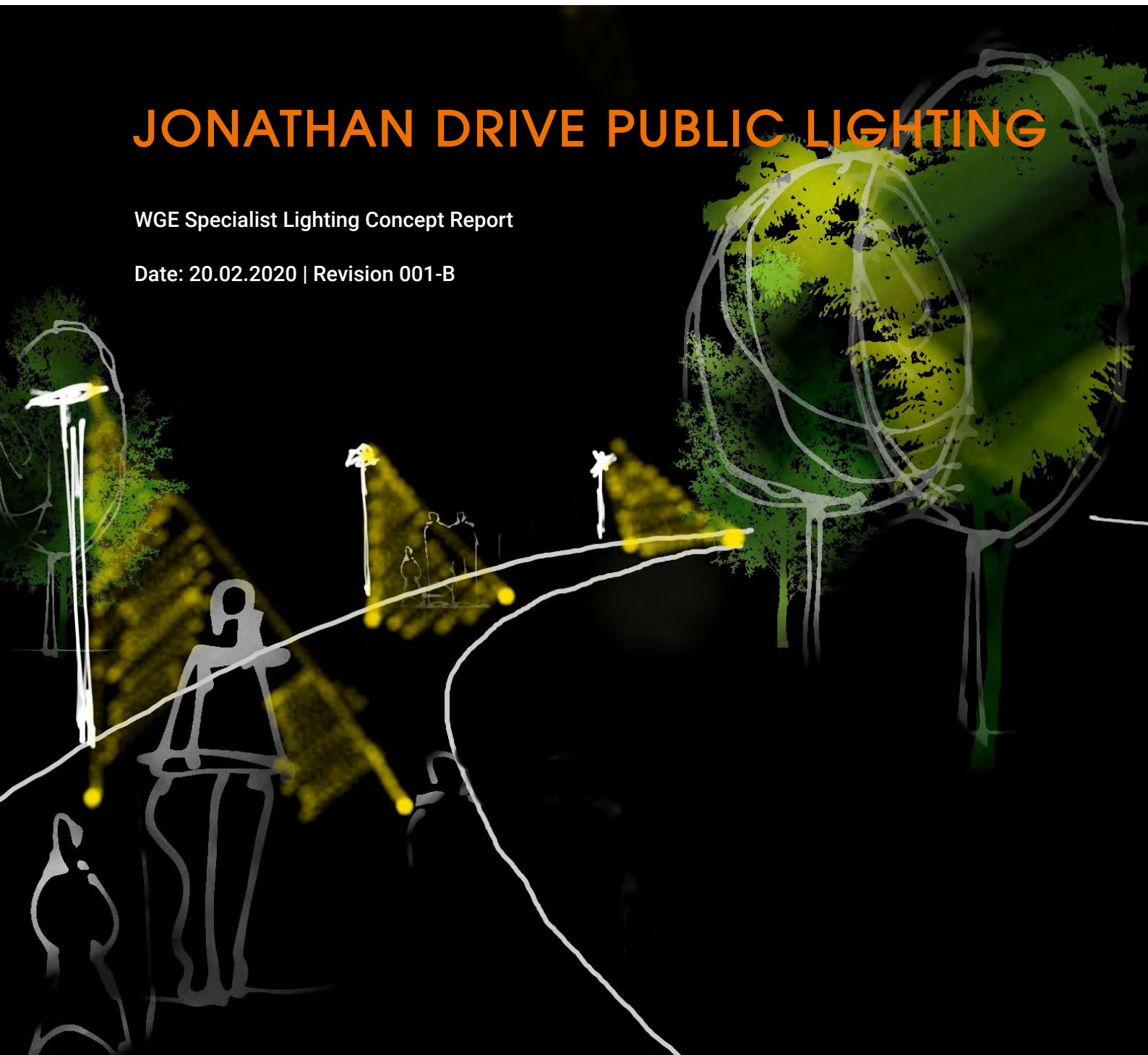
NOW PART OF



# JONATHAN DRIVE PUBLIC LIGHTING

WGE Specialist Lighting Concept Report

Date: 20.02.2020 | Revision 001-B





The vision for artificial illumination of Jonathan Drive Pathway Lighting is:

1. Safety and Security
2. Robustness and Durability
3. Preservation of Darkness

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# Lighting Opportunities

## Overview

When designing the lighting for a public space, it is important to understand the users' habits. Where do they go? How do they get there? What connects them to that place? At Jonathan Drive, the focus is to ensure that the community feels safe at night time when on their way to or from the Darley Neighbourhood House.

The map below highlights the main lighting opportunities: the community centre carpark; the playground across the road, and the crossways that cut Jonathan Drive into three sections.

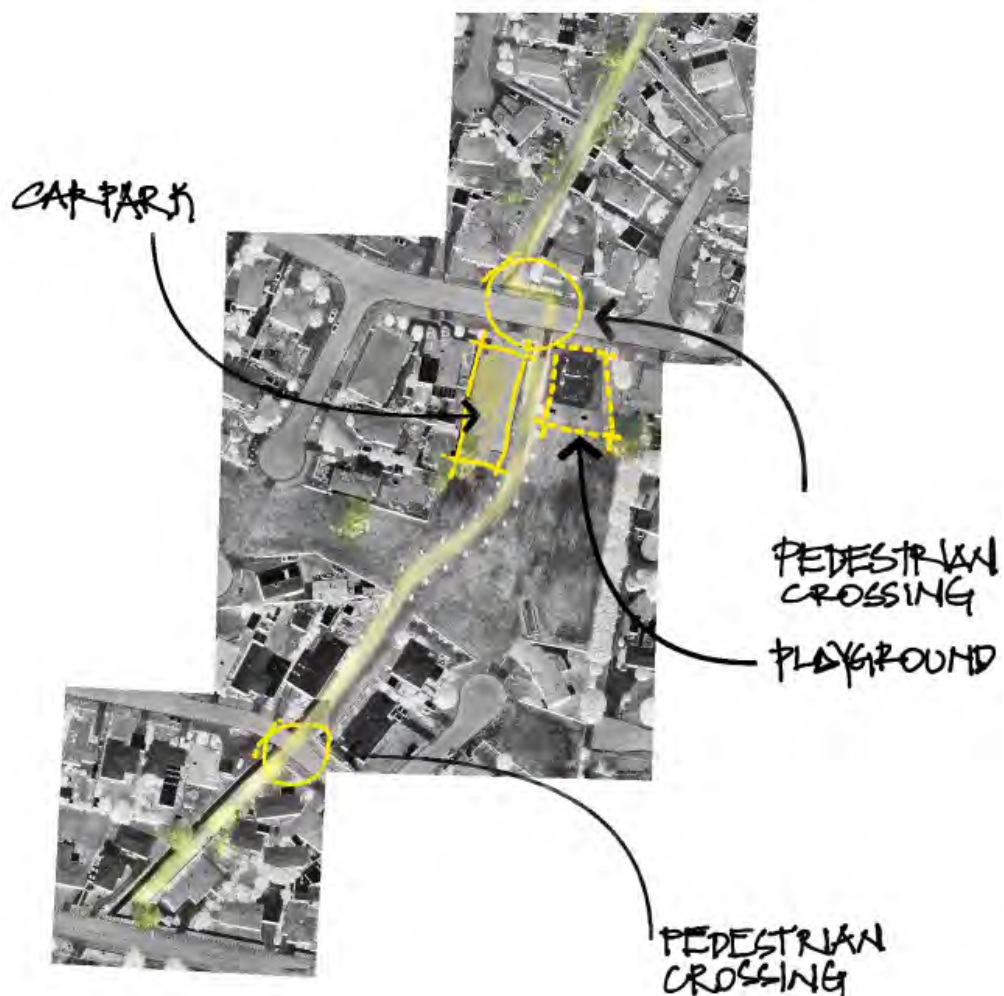
## Technical

This report has been prepared in accordance with the Australian Standards AS/NZS 1158.3.1:2005. The design proposed achieves the minimum or base level requirements of the following applicable categories:

**Pathways:** AS/NZS 1158.3.1:2005 Category P3, includes draft 2018.

**External Car Park:** AS/NZS 1158.3.1:2005 Category P11c & P12 for DDA car parks.

Minimum compliance is targeted to mitigate obtrusive spill light to both the adjacent residential boundaries and the night sky.



# Lighting Design Criteria

High powered, weatherproof, robust LED pole lights with specialized optics and excellent glare control are proposed to provide functional lighting to Jonathan Drive. Pole lights are utilized to reduce the required quantity of luminaires, control light spill, and reduce sky glow.

Pole heights are nominated at 4 metres with concealed base plate fixing details. Pole heights are restricted to promote a subtle, non-competing lighting solution. Forward throw optics are proposed to contain the light within the site's boundaries while providing adequate lighting levels in accordance with Australian standards.

Artificial lighting is required to perform the following functionality : a. Safe movement b. Way-finding

All fittings are electronically dimmable (DALI) to ensure the area is not over-lit during low occupancy.

All fittings will be Smart City ready.

Pole: 4m Pole Height

CCT: 3000k (warm white)

IK08: Protected against a 1.7kg object dropped from 29.5cm in height

Control Gear: Integral, DALI dimmable.

Optics: Assymetric throw distribution for spill light control.



Light Colour Temperature



Side Throw Optics

# Luminaire Type

**PRECEDENT PROJECT:**

Standard pole luminaires with specialized optics

**LIGHTING TYPE:**

Documented pole lights

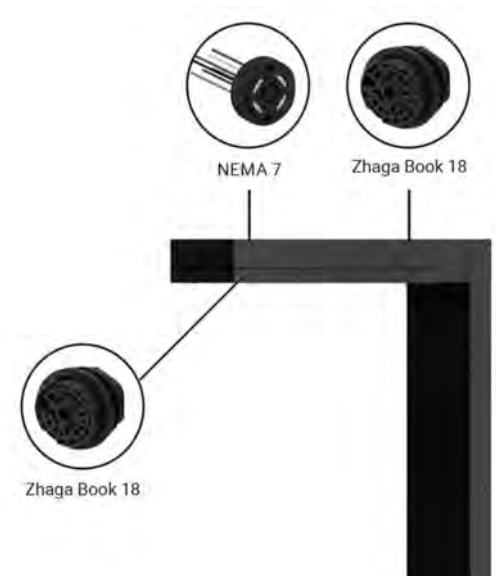
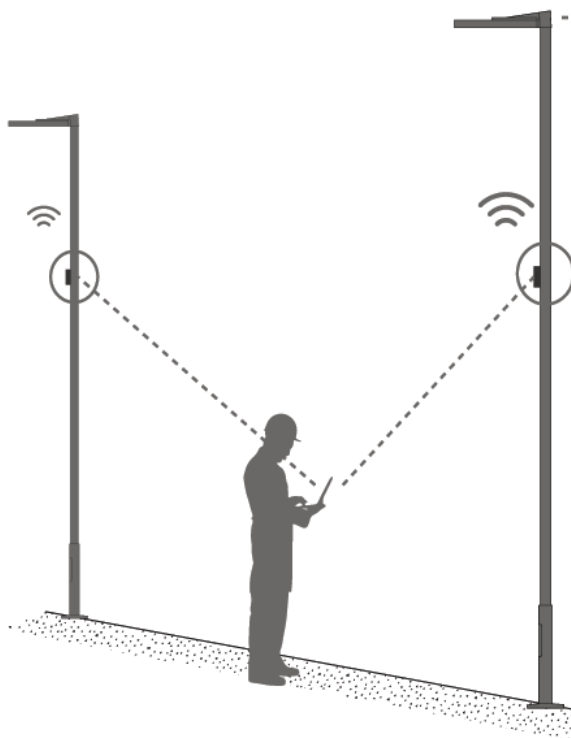


# Smart Cities Concept

Smart City Lighting is using wireless technology to improve the operational efficiency a lighting system. The luminaires will have in built technology to deliver future proof applications through socket outlet on the luminaire housing. A sensor can be plugged in to enable the lighting system become Smart City.

Some Smart City initiatives can be as following:

- Photo Electric Cell control - switch on at dusk / switch off at dawn
- Motion Sensor – switch on lighting for a short period of time late at night
- External Bluetooth Speaker interface



# Section 1 Lighting Design





# Section 2 Lighting Design



# Section 3 Lighting Design



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Design with community in mind

