

OPAL ST IVES – RESPONSE TO PS-31 – ENVIRONMENTAL RISK

PROJECT NAME:	Opal St Ives
PROJECT NUMBER:	250251
ATTENTION:	Ben Carmody
FROM:	John Stefani
DATE:	23 March 2026

1. INTRODUCTION

This memorandum has been prepared in response to the public submission identified as PS-31, which raises concerns regarding the proposed electrical infrastructure—specifically the inclusion and location of two substations within the development. The submission suggests that the co-location of substations adjacent to a driveway and near a main road presents an elevated traffic and safety risk.

As the project's Electrical Engineer, I provide the following technical response to address these concerns and to clarify that the proposed design complies with all relevant standards, authority requirements, and accepted engineering practices. Based on this assessment, there are no safety, operational, or traffic-related concerns associated with the proposed substation arrangement.

2. SUMMARY OF KEY CONCERNS RAISED

The public submission highlights the following key issues:

- The introduction of an additional substation (increasing from one to two)
- The proximity of substations to a driveway and main road
- Potential interaction with heavy vehicles, buses, and service vehicles
- Risk of vehicular incidents impacting substations or pedestrians
- Lack of consideration of increased risk due to co-location

Each of these matters is addressed in detail below.

3. ELECTRICAL INFRASTRUCTURE REQUIREMENTS

3.1 AUTHORITY REQUIREMENTS FOR SUBSTATION PLACEMENT

The placement of substations is not arbitrary; it is governed by strict requirements from the relevant electricity distribution authority. These requirements include:

- Direct street frontage access for maintenance, emergency response, and asset replacement
- Unobstructed 24/7 access without reliance on private property access arrangements
- Compliance with safety clearances, including separation from buildings, pedestrian paths, and trafficable areas
- Constructability and replacement feasibility, including crane and vehicle access

The proposed locations of both substations have been selected specifically to comply with these requirements. Relocating substations away from street access would contravene authority standards and may render the installation non-compliant or unserviceable over its lifecycle.

4. TRAFFIC AND SAFETY CONSIDERATIONS

4.1 NO INCREASE IN TRAFFIC RISK FROM ADDITIONAL SUBSTATION

The assertion that the addition of a second substation increases traffic risk is not supported from an engineering or traffic perspective.

- Substations are passive infrastructure with no regular interaction with vehicular traffic
- They do not generate traffic movements beyond infrequent maintenance visits
- The presence of two substations instead of one does not materially change traffic conditions, vehicle movements, or driver behaviour

Accordingly, the risk profile associated with traffic remains effectively unchanged.

4.2 INTERACTION WITH DRIVEWAY AND VEHICLE MOVEMENTS

The substations are located adjacent to a driveway; however:

- This arrangement is common practice in urban and semi-urban developments
- Driveway crossings are designed with appropriate sightlines and turning geometry in accordance with civil and traffic engineering standards
- Substations are positioned outside of vehicle swept paths and do not obstruct visibility

Furthermore, the presence of substations does not introduce any new conflict points between vehicles and pedestrians beyond those already inherent in a driveway crossing.

4.3 HEAVY VEHICLES AND BUS MOVEMENTS

The submission references heavy vehicle and bus activity, including kerbside bus services. In response:

- Road design and traffic conditions are independent of substation placement
- Substations are set back and protected in accordance with authority and Australian Standards

It is also noted that substations are routinely installed along roads with significantly higher traffic volumes, including arterial roads and bus corridors, without introducing safety concerns.

4.4 PEDESTRIAN SAFETY CONSIDERATIONS

The suggestion that a vehicle could be pushed across a footpath due to an incident near the substations is speculative and not unique to this development.

- The risk of vehicular accidents impacting pedestrians exists at all driveway crossings, irrespective of nearby infrastructure
- Substations do not increase the likelihood of such incidents
- Standard design measures—including footpath delineation, kerb design, and traffic controls—remain the primary mitigations

Therefore, pedestrian safety is not adversely affected by the presence of the substations.

5. CO-LOCATION OF SUBSTATIONS

The co-location of substations is a common and accepted practice, particularly where:

- Load requirements necessitate multiple transformers
- Network configuration requires separation of supply or redundancy
- Site constraints limit alternative compliant locations

There is no inherent increase in risk associated with having two substations in proximity, provided that each installation complies with clearance, access, and protection requirements—which is the case for this project.

6. COMPLIANCE WITH STANDARDS AND GUIDELINES

The proposed design complies with:

- Relevant electricity distributor standards and specifications
- Australian Standards applicable to electrical installations and safety clearances
- Local planning and development requirements
- Industry best practices for substation siting and access

All safety, operational, and maintenance considerations have been addressed during the design process.

7. CONCLUSION

Based on a detailed review of the concerns raised in submission PS-31, it is concluded that:

- The inclusion of a second substation does not increase traffic risk
- The proposed locations are required to meet authority access and operational requirements
- There is no adverse impact on vehicle movement, pedestrian safety, or overall site risk profile
- The design is fully compliant with all relevant standards and engineering practices

Accordingly, there are no electrical or safety concerns associated with the proposed substation arrangement, and no changes to the design are warranted.