

Electrical Investigation Report

APAM Apron High-Mast Floodlight Replacement

Results of the field investigation of the existing apron high-mast lighting electrical assets at Melbourne Airport (CP24163). Records per-board asset condition against a traffic-light rating, catalogues defects against a P1–P4 priority framework, and assesses each board's suitability to accommodate the new LED lighting works. Prepared by Empower3D as Stream B — electrical infrastructure — and issued to APAM via Optimise Energy Solutions.

PREPARED FOR



Optimise Energy Solutions (OES) · APAM Melbourne Airport
Report prepared by Empower3D Pty Ltd as Stream B (electrical)

Document control

Project	CP24163 — Airfield High-Mast Floodlight Replacement, Melbourne Airport (APAM / Beca)	Document ref	E3D-APAM-RPT-002
Client	APAM, via Optimise Energy Solutions (OES)	Revision	B — Incorporating APAM comments (27 Jul 2026)
Stream	Stream B — Electrical infrastructure design	Issued	10 Aug 2026
Engagement	Empower3D proposal E3D-OES-001 Rev A	Status	Issued for review
Author	J. Patman, RPEQ / RPEV	Site inspection date(s)	21–22 June 2026

Investigation at a glance

Counts summarise the board condition register (Appendix A) and defect register (Appendix B).

BOARDS INSPECTED	GREEN — GOOD	AMBER — MONITOR	RED — ACTION	P1 DEFECTS
67	2	32	33	0

1. Background and purpose

APAM is replacing the airfield high-mast floodlights at Melbourne Airport under CP24163, with the new lighting to be installed inside the existing apron electrical infrastructure. Empower3D was engaged by OES as Stream B to audit the existing electrical assets supplying each apron high-mast distribution board in scope, confirm those assets can accommodate the new LED gear and controls, and produce the IFC electrical design. This report presents the results of the field investigation — the per-board as-built condition, the defects identified, and the suitability of each board for the new works. It follows the Engineering Position / gap-analysis report (E3D-APAM-RPT-001 Rev A, 27 May 2026).

2. Scope of investigation

In scope. Field verification of the apron high-mast lighting distribution boards in scope and their supply cabling. **Out of scope.** Replacement DBs, submains and cabinet GAs; luminaire / photometric / layout design (Stream A); structural assessment of poles or footings. Any asset unable to accommodate the new works is recorded and referred to APAM through the variation process.

2.1 Boards inspected

Confirmed in-scope board list.

#	Board ID	Location / zone	Source (parent DB / sub)	Inspected	Date
1	DB-B21N	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
2	DB-B21S	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
3	DB-B22S	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
4	DB-B23N	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
5	DB-B24S	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
6	DB-B25N	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
7	DB-B26S	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
8	DB-B27N	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
9	DB-B28E	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
10	DB-B30N	Bravo Concourse	Switchboard Room 27	Yes	21–22 Jun 2026
11	DB-C1S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
12	DB-C3S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
13	DB-C4S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
14	DB-C6S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
15	DB-C7S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
16	DB-C8S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
17	DB-C9S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
18	DB-C10N	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
19	DB-C10S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
20	DB-C11S	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
21	DB-C12E	Charlie Concourse	DB-CCC, Sub 19	Yes	21–22 Jun 2026
22	DB-D2E	Delta Concourse	Sub 18	Yes	21–22 Jun 2026
23	DB-D2W	Delta Concourse	Sub 18	Yes	21–22 Jun 2026
24	DB-D3N	Delta Concourse	Sub 18	Yes	21–22 Jun 2026
25	DB-D3S	Delta Concourse	Sub 18	Yes	21–22 Jun 2026
26	DB-D4W	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
27	DB-D6W	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
28	DB-D7E	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
29	DB-D7W	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
30	DB-D8N	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
31	DB-D9E	Delta Concourse	Sub 42	Yes	21–22 Jun 2026

#	Board ID	Location / zone	Source (parent DB / sub)	Inspected	Date
32	DB-D10E	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
33	DB-D10W	Delta Concourse	—	Yes	21–22 Jun 2026
34	DB-D11E	Delta Concourse	Sub 42	Yes	21–22 Jun 2026
35	DB-D12E	Delta Concourse	—	Yes	21–22 Jun 2026
36	DB-D12S	Delta Concourse	—	Yes	21–22 Jun 2026
37	DB-D13W	Delta Concourse	Nth Apron DB	Yes	21–22 Jun 2026
38	DB-D15W	Delta Concourse	Nth Apron DB	Yes	21–22 Jun 2026
39	DB-D17W	Delta Concourse	Nth Apron DB	Yes	21–22 Jun 2026
40	DB-D19E	Delta Concourse	Nth Apron DB	Yes	21–22 Jun 2026
41	DB-D14N	Northern Apron	—	Yes	21–22 Jun 2026
42	DB-D16N	Northern Apron	—	Yes	21–22 Jun 2026
43	DB-D18N	Northern Apron	—	Yes	21–22 Jun 2026
44	DB-D20N	Northern Apron	—	Yes	21–22 Jun 2026
45	DB-E1E	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
46	DB-E3E	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
47	DB-E5E	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
48	DB-E7E	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
49	DB-E9E	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
50	DB-E9W	Echo Concourse	DB-CCE, Sub 17A	Yes	21–22 Jun 2026
51	DB-F11E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
52	DB-F13E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
53	DB-F14E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
54	DB-F14W	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
55	DB-F15E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
56	DB-F17E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
57	DB-F18W	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
58	DB-F19E	Foxtrot Concourse	Sub 40	Yes	21–22 Jun 2026
59	DB-JGSENE	Zone 8 (GSE)	DB Gate 28	Yes	21–22 Jun 2026
60	DB-JGSENW	Zone 8 (GSE)	DB Gate 28	Yes	21–22 Jun 2026
61	DB-JGSESE	Zone 8 (GSE)	DB Gate 28	Yes	21–22 Jun 2026
62	DB-JGSESW	Zone 8 (GSE)	DB Gate 28	Yes	21–22 Jun 2026
63	DB-SGSEE	Zone 9 (GSE)	—	Yes	21–22 Jun 2026
64	DB-SGSEW	Zone 9 (GSE)	—	Yes	21–22 Jun 2026

3. Methodology

Each cabinet in scope was opened once and captured against a standard site-verification template covering enclosure, protection chassis, OCPD ratings, internal layout and free space, control gear, earthing, incoming supply and cabinet condition (busbar, terminals, corrosion, water ingress, overheating). Each board was assigned an overall condition rating (Section 4) and each discrete defect logged and prioritised (Section 5). Photographs were taken at every board and are catalogued per board in the accompanying evidence set.

4. Board condition rating framework

Each board is assigned a single overall condition rating on a traffic-light scale reflecting fitness for continued service over the design life of the new lighting works.

Rating	Definition	Implication for the works
 GREEN — Good	Good/serviceable condition. No material deterioration. Fit for continued service with no electrical remediation required.	Works proceed as-is. No remediation.
 AMBER — Monitor	Functional but showing wear, ageing or minor defects. Requires minor rectification and/or monitoring. P3/P4 defects typical.	Proceed with minor rectification folded into the works.
 RED — Action	Significant deterioration or a defect affecting safety, compliance, capacity or reliability. Not fit for continued service without remediation. P1/P2 defects typical.	Remediation required before / as part of the works. Likely variation.
 GREY — Not assessed	Board not opened / not accessible, or assessment incomplete.	Access to be arranged; rating to be confirmed.

Board rating is the roll-up of its captured condition escalated by its most severe open defect.

Condition Index — how each board is scored

The traffic-light rating is derived, not subjective. Every inspected board is scored across six condition dimensions, and the weighted result is the **Condition Index (0–100)** shown on that board's individual report. The method keeps the rating objective, repeatable and defensible.

1. Score each dimension (0–4). Each dimension is scored on a severity anchor tied to the defects actually recorded on site (0 = none, 1 = minor, 2 = moderate, 3 = major / safety, 4 = critical), so a score can never exceed what the inspection observed. The six dimensions and their weights are:

Condition dimension	Weight	Safety gate
Electrical safety & compliance	25%	Yes
Structural & enclosure integrity	20%	Yes
Corrosion & protective coating	20%	—
Ingress protection	10%	—
Access & working space	15%	—
Thermal / fire & component	10%	—

2. Weight and combine. The dimension scores are multiplied by their weights and summed, then scaled to a 0–100 index: *Condition Index* = $\sum(\text{dimension score} \times \text{weight}) \times 25$. A higher index means worse condition. Electrical safety and structural integrity carry the most weight because they most directly affect the board's fitness to keep the airfield lighting in service.

3. Apply the safety gates. A board is rated **RED**, regardless of how well it scores elsewhere, if any safety gate is breached: an electrical-safety or structural / enclosure defect at the major (P2) level, a prior internal fire, a non-compliant AS/NZS 3000 Cl 2.10 working-space clearance, any critical (P1) defect, or a Condition Index above 62. Otherwise it is **AMBER** where any defect is logged or the index reaches 25, and **GREEN** only where no deterioration was recorded. This gate ensures a single critical breach cannot be averaged away by good scores in other areas.

5. Defect priority framework

Priority	Class	Definition & typical rectification window
P1	Critical / Immediate	Immediate safety risk or imminent failure. Rectify immediately and before energisation of the new works.
P2	High / Short-term	Significant defect affecting safety, compliance or reliability. Rectify before or as part of the works (6–12 months).
P3	Medium / Planned	Correct as part of the planned upgrade scope; not urgent (12–24 months).
P4	Low / Monitor	Minor or cosmetic. Address opportunistically or at next maintenance cycle.

6. Capacity and suitability assessment

Whether each board can accommodate the new LED drivers, controls and load within its existing chassis, protection and cabling.

Assessment: Yes, with four exceptions. Every in-scope board can accommodate the new LED works within its existing enclosure, protection chassis and supply cabling, except the four Delta-west boards built on the obsolete Terasaki Safe-T chassis (DB-D13W, DB-D15W, DB-D17W and DB-D19E). The circuit protection for that chassis can no longer be purchased, so those four cannot be re-protected or maintained for the works and must be replaced in full by APAM to facilitate the installation (Section 7.4). For every other board, the new LED load is materially lower than the legacy HID gear it replaces, and the new control and driver footprint fits the existing cabinets. One LED driver is mounted in each board per luminaire (relocated from the mast head). The per-board driver count is scheduled in Appendix C. Boards rated RED, other than those four, remain suitable for the works; their condition items are recommended for rectification by APAM (Section 7) and do not prevent the installation.

7. Findings and recommendations

7.1 Condition summary

Of the 67 distribution boards inspected, 2 rated GREEN, 32 AMBER and 33 RED. The dominant issues across the fleet are the working-space clearance of the board doors and pole access, which does not comply with AS/NZS 3000, together with generally end-of-life (EOL) enclosures and protection gear. These are systemic, age-related conditions rather than isolated faults. Across the 269 discrete defects recorded, none is Priority 1 (critical); the register comprises 42 at P2, 90 at P3 and 137 at P4. No immediate-safety (P1) defect exists anywhere in the fleet, which directly supports the new works proceeding.

7.2 Suitability for the works

Notwithstanding their condition, the in-scope boards are fit for purpose for this project, with the exception of the four obsolete Terasaki Safe-T boards identified in Section 7.4. For all other boards the existing chassis, protection and supply cabling can accommodate the new LED drivers, controls and load (Section 6), and the RED ratings reflect existing remediation items rather than any inability to carry the new works.

Where existing circuit protection within the existing distribution board is not suitable, a relevant replacement design has been prepared.

7.3 Recommendation

Given the critical nature of the airfield lighting these boards supply, Empower3D/OES strongly recommends that APAM establish a capital works program to progressively renew this distribution-board fleet (enclosures, doors and protection gear) beyond the scope of the current lighting project. The working-space clearance non-compliances in particular should be prioritised for rectification. This program would restore compliance and long-term reliability to infrastructure whose failure would directly affect airfield operations.

7.4 Replacement and sequencing

Four boards must be replaced by APAM to facilitate the electrical installation and, at those poles, before the lighting works proceed (see below). No other in-scope board requires replacement; every other board can carry the new works within its existing enclosure, protection and cabling (Section 6). A further group of boards is being replaced under a separate APAM program and is relevant to the sequencing of the works.

Boards that must be replaced to facilitate the works. Four Delta-west high-mast boards (DB-D13W, DB-D15W, DB-D17W and DB-D19E, the Northern Apron floodlighting distribution boards) are built on an obsolete Terasaki Safe-T chassis whose circuit protection (Safe-T SRCB2030 MCB/RCD and TH-5-SE control CBs) is no longer manufactured or available. Because the chassis is obsolete and the circuit protection it takes

can no longer be purchased, these boards cannot be re-protected or maintained for the new works, and a partial refurbishment is not possible. Full replacement of these four boards by APAM is therefore required to facilitate the electrical installation, and must be completed before the lighting works proceed at these poles. The single-line sheets for these poles are issued as note-only stubs that reserve the drawing number until the replacement board is installed and confirmed.

Boards being replaced under a separate program. Five Delta-west boards (DB-D4W, DB-D7W, DB-D9E, DB-D10E and DB-D11E) are already scheduled for replacement under a separate APAM project (Resolve CP23151). Where a board is replaced under that program, the lighting works at that pole should be sequenced to follow the board replacement, so the new drivers and controls are installed into the new board and are not disturbed twice. If the lighting works precede the replacement at any of these poles, the drivers and final connections would need to be re-terminated and re-commissioned into the new board, at additional cost.

7.5 Priority 2 defects and risk acceptance

At the workshop of 13 July 2026 it was agreed that certain Priority 2 (P2) defects may remain in service subject to an APAM risk assessment, rather than mandatory rectification before the works. Of the 42 P2 defects recorded across the fleet, 28 are non-compliant AS/NZS 3000 Cl 2.10 working-space / door-clearance conditions on the existing enclosures. These are physical constraints of the existing boards that cannot be resolved without enclosure replacement and that do not affect the board's ability to carry the new works; they are the candidates to remain in service subject to an APAM-accepted risk assessment, pending the recommended capital renewal program (Section 7.3). The remaining P2 defects (9 structural / enclosure, 4 obsolete-protection, 1 thermal / fire) are addressed above; the 4 obsolete-protection P2s fall on the four Delta-west boards that APAM is to replace to facilitate the works (Section 7.4), and so are resolved by that replacement rather than left for risk acceptance. As the PCBU for the completed installation, APAM is to determine and document the accepted risk position for any P2 defect left in service.

8. Design

The electrical design developed from this investigation is issued separately.

The pole switchboard electrical design, load and capacity model, protection philosophy and per-board schedule are documented in the **Pole Switchboard Electrical Design** (E3D-APAM-DES-001) and the **Master Board Schedule** (E3D-APAM-DES-002), issued alongside this investigation.

9. Photographic evidence log

Full site photography is catalogued per board in the accompanying evidence set (one folder per board, 67 boards). A curated selection keyed to the priority defects will be embedded here in the issued revision.

10. Sign-off

Prepared and verified by the Registered Professional Engineer of Victoria (RPEV) responsible for this investigation.

Role	Registered Professional Engineer of Victoria (RPEV)
Name	Justin Patman
Registration No.	RPEV PE0018706
Signature	
Date	10 August 2026

Appendix A — Board condition register

One row per board. Overall uses the Section 4 traffic-light rating; "Fit for works" records whether the board can accommodate the new LED works.

#	Board ID	Location / zone	Enclosure	Internal	Overall	Defects	Fit for works
1	DB-Mast-11-E1E	Echo Concourse	Fair	Fair	Amber	4 — D-133, D-134, D-135, D-136	Yes
2	DB-Mast-10-E3E	Echo Concourse	Fair	Fair	Amber	4 — D-043, D-044, D-137, D-138	Yes
3	DB-Mast-9-E5E	Echo Concourse	Fair	Fair	Amber	4 — D-139, D-140, D-141, D-142	Yes
4	DB-Mast-8-E7E	Echo Concourse	Fair	Fair	Amber	3 — D-143, D-144, D-145	Yes
5	DB-Mast-7-E9E	Echo Concourse	Fair	Fair	Amber	3 — D-146, D-147, D-148	Yes
6	DB-Mast-6-E9W	Echo Concourse	Poor	Poor	Red	4 — D-001, D-149, D-150, D-151	Yes — remediation
7	DB-D2E	Delta Concourse	Fair	Fair	Amber	3 — D-152, D-153, D-154	Yes
8	DB-D2W	Delta Concourse	Fair	Fair	Red	4 — D-002, D-155, D-156, D-157	Yes — remediation
9	DB-D4W	Delta Concourse	Fair	Fair	Red	2 — D-003, D-158	Yes — remediation
10	DB-D6W	Delta Concourse	Fair	Fair	Amber	3 — D-159, D-160, D-161	Yes
11	DB-D8N	Delta Concourse	Fair	Fair	Amber	3 — D-162, D-163, D-164	Yes
12	DB-D12E	Delta Concourse	Fair	Fair	Amber	3 — D-165, D-166, D-167	Yes
13	Western Apron MSB	Western Apron	Fair	Fair	Green	0	Yes
14	DB-D14N	Northern Apron	Good	Good	Green	3 — D-168, D-169, D-170	Yes
15	DB-D12S	Delta Concourse	Fair	Fair	Amber	2 — D-171, D-172	Yes
16	DB-D16N	Northern Apron	Not assessed	Not assessed	Amber	1 — D-045	Yes
17	DB-D18N	Northern Apron	Fair	Fair	Amber	3 — D-046, D-173, D-174	Yes
18	DB-D20N	Delta Concourse	Fair	Fair	Red	3 — D-004, D-047, D-175	Yes — remediation
19	DB-D19E	Delta Concourse	Poor	Poor	Red	4 — D-005, D-006, D-176, D-177	Replace before works
20	DB-NthApron-NEss	Northern Apron	Poor	Poor	Amber	3 — D-048, D-049, D-178	Yes

#	Board ID	Location / zone	Enclosure	Internal	Overall	Defects	Fit for works
21	DB-NthApron-Ess	Northern Apron	Poor	Poor	● Red	4 — D-007, D-050, D-051, D-179	Yes — remediation
22	DB-D17W	Delta Concourse	Poor	Poor	● Red	5 — D-008, D-009, D-010, D-052, D-180	Replace before works
23	DB-D13W	Delta Concourse	Poor	Poor	● Red	4 — D-011, D-012, D-053, D-181	Replace before works
24	DB-D15W	Delta Concourse	Poor	Poor	● Red	5 — D-013, D-014, D-182, D-183, D-184	Replace before works
25	DB-D10W	Delta Concourse	Fair	Fair	● Amber	3 — D-185, D-186, D-187	Yes
26	DB-D10E	Delta Concourse	Poor	Poor	● Amber	2 — D-188, D-189	Yes
27	DB-D11E	Delta Concourse	Poor	Poor	● Amber	1 — D-190	Yes
28	DB-D9E	Delta Concourse	Poor	Poor	● Amber	1 — D-191	Yes
29	DB-D7W	Delta Concourse	Not assessed	Not assessed	● Red	1 — D-015	Yes — remediation
30	DB-JGSESW	GSE Aprons	Poor	Poor	● Red	4 — D-016, D-017, D-054, D-055	Yes — remediation
31	DB-JGSESE	GSE Aprons	Poor	Poor	● Red	3 — D-018, D-056, D-192	Yes — remediation
32	DB-JGSENE	GSE Aprons	Poor	Poor	● Red	7 — D-019, D-057, D-058, D-059, D-060, D-193, D-194	Yes — remediation
33	DB-JGSENW	GSE Aprons	Fair	Fair	● Red	6 — D-020, D-061, D-062, D-063, D-195, D-196	Yes — remediation
34	DB-SGSEE	GSE Aprons	Fair	Fair	● Red	3 — D-021, D-064, D-197	Yes — remediation
35	DB-SGSEW	GSE Aprons	Fair	Fair	● Red	4 — D-022, D-065, D-198, D-199	Yes — remediation
36	DB-F14E	Foxtrot Concourse	Poor	Poor	● Red	7 — D-023, D-066, D-067, D-068, D-069, D-200, D-201	Yes — remediation
37	DB-F14W	Foxtrot Concourse	Poor	Poor	● Red	7 — D-024, D-070, D-071, D-072, D-073, D-202, D-203	Yes — remediation
38	DB-F18W	Foxtrot Concourse	Poor	Poor	● Amber	1 — D-025	Yes
39	DB-F19E	Foxtrot Concourse	Poor	Poor	● Amber	4 — D-074, D-075, D-204, D-205	Yes
40	DB-F17E	Foxtrot Concourse	Poor	Poor	● Red	7 — D-026, D-076, D-077, D-078, D-079, D-206, D-207	Yes — remediation

#	Board ID	Location / zone	Enclosure	Internal	Overall	Defects	Fit for works
41	DB-F15E	Foxtrot Concourse	Poor	Poor	Red	5 — D-027, D-028, D-029, D-080, D-208	Yes — remediation
42	DB-F13E	Foxtrot Concourse	Poor	Poor	Red	3 — D-030, D-081, D-209	Yes — remediation
43	DB-F11E	Foxtrot Concourse	Poor	Poor	Red	5 — D-031, D-082, D-083, D-084, D-210	Yes — remediation
44	DB-D7E	Delta Concourse	Poor	Poor	Red	6 — D-032, D-085, D-086, D-087, D-211, D-212	Yes — remediation
45	DB-D3N	Delta Concourse	Fair	Fair	Amber	3 — D-088, D-213, D-214	Yes
46	DB-D3S	Delta Concourse	Poor	Poor	Amber	6 — D-089, D-090, D-091, D-215, D-216, D-217	Yes
47	DB-C4S	Charlie Concourse	Fair	Fair	Red	5 — D-033, D-092, D-218, D-219, D-220	Yes — remediation
48	DB-C6S	Charlie Concourse	Poor	Poor	Red	7 — D-034, D-093, D-094, D-095, D-221, D-222, D-223	Yes — remediation
49	DB-C8S	Charlie Concourse	Poor	Poor	Red	7 — D-035, D-096, D-097, D-098, D-224, D-225, D-226	Yes — remediation
50	DB-C10S	Charlie Concourse	Poor	Poor	Red	7 — D-036, D-099, D-100, D-101, D-227, D-228, D-229	Yes — remediation
51	DB-C10N	Charlie Concourse	Poor	Poor	Red	6 — D-037, D-102, D-103, D-230, D-231, D-232	Yes — remediation
52	DB-C12E	Charlie Concourse	Poor	Poor	Amber	6 — D-104, D-105, D-106, D-233, D-234, D-235	Yes
53	DB-C11S	Charlie Concourse	Poor	Poor	Red	5 — D-038, D-107, D-236, D-237, D-238	Yes — remediation
54	DB-C9S	Charlie Concourse	Poor	Poor	Red	5 — D-039, D-108, D-109, D-239, D-240	Yes — remediation
55	DB-C7S	Charlie Concourse	Poor	Poor	Red	3 — D-040, D-110, D-241	Yes — remediation
56	DB-C3S	Charlie Concourse	Poor	Poor	Red	5 — D-041, D-111, D-112, D-242, D-243	Yes — remediation
57	DB-C1S	Charlie Concourse	Poor	Poor	Red	5 — D-042, D-113, D-114, D-244, D-245	Yes — remediation
58	DB-B22S	Bravo Concourse	Poor	Poor	Amber	5 — D-115, D-116, D-246, D-247, D-248	Yes
59	DB-B24S	Bravo Concourse	Poor	Poor	Amber	5 — D-117, D-118, D-249, D-250, D-251	Yes
60	DB-B21N	Bravo Concourse	Poor	Poor	Amber	6 — D-119, D-120, D-121, D-252, D-253, D-254	Yes

#	Board ID	Location / zone	Enclosure	Internal	Overall	Defects	Fit for works
61	DB-B21S	Bravo Concourse	Poor	Poor	Amber	4 — D-122, D-123, D-255, D-256	Yes
62	DB-B23N	Bravo Concourse	Fair	Fair	Amber	3 — D-124, D-257, D-258	Yes
63	DB-B25N	Bravo Concourse	Fair	Fair	Amber	3 — D-125, D-259, D-260	Yes
64	DB-B26S	Bravo Concourse	Poor	Poor	Amber	4 — D-126, D-127, D-261, D-262	Yes
65	DB-B27N	Bravo Concourse	Fair	Fair	Amber	4 — D-128, D-129, D-263, D-264	Yes
66	DB-B28E	Bravo Concourse	Poor	Poor	Amber	5 — D-130, D-131, D-265, D-266, D-267	Yes
67	DB-B30N	Bravo Concourse	Poor	Poor	Amber	3 — D-132, D-268, D-269	Yes

All in-scope boards can accommodate the new LED works within the existing chassis and cabling. Boards shown "Yes — remediation" carry existing defects, predominantly non-compliant AS/NZS 3000 Cl 2.10 working-space / door clearance and end-of-life enclosure and protection gear, recommended for rectification by APAM; other than the four Delta-west boards marked "Replace before works", which APAM is to replace to facilitate the installation (Section 7.4), these do not prevent the new works (Section 7). Enclosure and Internal reflect the single overall condition assessed on site.

Appendix B — Defect register

Every discrete defect, cross-referenced to its board and prioritised per Section 5, sorted P1 first. The photo column references the per-board evidence folder.

Ref	Board	Category	Defect	Pri	Evidence
D-001	DB-Mast-6-E9W	Compliance (clearance)	Non-compliant door / working-space clearance	P2	06_DB-mast-6-e9w/
D-002	DB-D2W	Compliance (clearance)	Non-compliant door / working-space clearance	P2	08_DB-D2W/
D-003	DB-D4W	Compliance (clearance)	Non-compliant door / working-space clearance	P2	09_DB-D4W/
D-004	DB-D20N	Compliance (clearance)	Non-compliant door / working-space clearance	P2	18_DB-d20n_lcc-c6/
D-005	DB-D19E	Structural / enclosure	Safe-T chassis — structural chassis integrity concern	P2	19_DB-nthapron4/
D-006	DB-D19E	Electrical safety	Obsolete circuit protection: Terasaki Safe-T MCB/RCD (SRCB2030) and control CBs (TH-5-SE) are no longer manufactured or available. The chassis is obsolete and its circuit protection can no longer be purchased, so the board cannot be re-protected or maintained for the new works. Full board replacement by APAM is required to facilitate the electrical installation and must be completed before the works proceed at this pole.	P2	19_DB-nthapron4/
D-007	DB-NthApron-Ess	Structural / enclosure	Safe-T chassis — structural chassis integrity concern	P2	21_Northern_apron_man_ess/
D-008	DB-D17W	Structural / enclosure	Safe-T chassis — structural chassis integrity concern	P2	22_DB-northernapron3/

Ref	Board	Category	Defect	Pri	Evidence
D-009	DB-D17W	Structural / enclosure	Pole filler missing	P2	22_DB-northernapron3/
D-010	DB-D17W	Electrical safety	Obsolete circuit protection: Terasaki Safe-T MCB/RCD (SRCB2030) and control CBs (TH-5-SE) are no longer manufactured or available. The chassis is obsolete and its circuit protection can no longer be purchased, so the board cannot be re-protected or maintained for the new works. Full board replacement by APAM is required to facilitate the electrical installation and must be completed before the works proceed at this pole.	P2	22_DB-northernapron3/
D-011	DB-D13W	Structural / enclosure	Safe-T chassis — structural chassis integrity concern	P2	23_DB-northernapron2/
D-012	DB-D13W	Electrical safety	Obsolete circuit protection: Terasaki Safe-T MCB/RCD (SRCB2030) and control CBs (TH-5-SE) are no longer manufactured or available. The chassis is obsolete and its circuit protection can no longer be purchased, so the board cannot be re-protected or maintained for the new works. Full board replacement by APAM is required to facilitate the electrical installation and must be completed before the works proceed at this pole.	P2	23_DB-northernapron2/
D-013	DB-D15W	Structural / enclosure	Safe-T chassis — structural chassis integrity concern	P2	24_DB-northernapron1/
D-014	DB-D15W	Electrical safety	Obsolete circuit protection: Terasaki Safe-T MCB/RCD (SRCB2030) and control CBs (TH-5-SE) are no longer manufactured or available. The chassis is obsolete and its circuit protection can no longer be purchased, so the board cannot be re-protected or maintained for the new works. Full board replacement by APAM is required to facilitate the electrical installation and must be completed before the works proceed at this pole.	P2	24_DB-northernapron1/
D-015	DB-D7W	Compliance (clearance)	Non-compliant door / working-space clearance	P2	29_DB-d7w/
D-016	DB-JGSESW	Structural / enclosure	Structural damage to enclosure	P2	30_DB-GSE-JGSESW/
D-017	DB-JGSESW	Compliance (clearance)	Non-compliant door / working-space clearance	P2	30_DB-GSE-JGSESW/
D-018	DB-JGSESE	Compliance (clearance)	Non-compliant door / working-space clearance	P2	31_DB-JGSESE/
D-019	DB-JGSENE	Compliance (clearance)	Non-compliant door / working-space clearance	P2	32_DB-JGSENE/
D-020	DB-JGSENW	Compliance (clearance)	Non-compliant door / working-space clearance	P2	33_DB-JGSENW/
D-021	DB-SGSEE	Compliance (clearance)	Non-compliant door / working-space clearance	P2	34_DB-SGSEE/
D-022	DB-SGSEW	Compliance (clearance)	Non-compliant door / working-space clearance	P2	35_DB-SGSEW/
D-023	DB-F14E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	36_DB-F14E/
D-024	DB-F14W	Compliance (clearance)	Non-compliant door / working-space clearance	P2	37_DB-F14W/

Ref	Board	Category	Defect	Pri	Evidence
D-025	DB-F18W	Structural / enclosure	Door lock / barrel faulty — could not access essential-supply cubicle	P2	38_DB-F18W/
D-026	DB-F17E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	40_DB-F17E/
D-027	DB-F15E	Structural / enclosure	Structural damage to enclosure	P2	41_DB-_-41/
D-028	DB-F15E	Thermal-fire	Prior internal fire event — internal / component damage	P2	41_DB-_-41/
D-029	DB-F15E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	41_DB-_-41/
D-030	DB-F13E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	42_DB-F13E/
D-031	DB-F11E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	43_DB-F11E/
D-032	DB-D7E	Compliance (clearance)	Non-compliant door / working-space clearance	P2	44_DB-D7E/
D-033	DB-C4S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	47_DB-C4S/
D-034	DB-C6S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	48_DB-C6S/
D-035	DB-C8S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	49_DB-C8S/
D-036	DB-C10S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	50_DB-C10S/
D-037	DB-C10N	Compliance (clearance)	Non-compliant door / working-space clearance	P2	51_DB-C10N/
D-038	DB-C11S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	53_DB-C11S/
D-039	DB-C9S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	54_DB-9S/
D-040	DB-C7S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	55_DB-C7S/
D-041	DB-C3S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	56_DB-3S/
D-042	DB-C1S	Compliance (clearance)	Non-compliant door / working-space clearance	P2	57_DB-C1S/
D-043	DB-Mast-10-E3E	Structural / enclosure	Enclosure door(s) bent (still operable)	P3	02_DB-Mast-10-E3E/
D-044	DB-Mast-10-E3E	Electrical safety	End-of-life internals; internal renewal recommended at the lighting upgrade	P3	02_DB-Mast-10-E3E/
D-045	DB-D16N	Thermal-fire	Capacitors on chokes have failed	P3	16_DB-16N/
D-046	DB-D18N	Electrical safety	Non-standard insulation on busbar combs	P3	17_DB-D18N/
D-047	DB-D20N	Electrical safety	Non-standard insulation on busbar combs	P3	18_DB-d20n_icc-c6/
D-048	DB-NthApron-NEss	Corrosion	Severe rust to door mechanism and enclosure	P3	20_Northern_apron_db_ne/

Ref	Board	Category	Defect	Pri	Evidence
D-049	DB-NthApron-NEss	Corrosion	Minor pitting to enclosure / structure	P3	20_Northern_apron_db_ne/
D-050	DB-NthApron-Ess	Corrosion	Severe rust to door mechanism and enclosure	P3	21_Northern_apron_man_ess/
D-051	DB-NthApron-Ess	Corrosion	Minor pitting to enclosure / structure	P3	21_Northern_apron_man_ess/
D-052	DB-D17W	Corrosion	Minor pitting to enclosure / structure	P3	22_DB-northernapron3/
D-053	DB-D13W	Corrosion	Minor pitting to enclosure / structure	P3	23_DB-northernapron2/
D-054	DB-JGSESW	Structural / enclosure	Interim support brackets in place (temporary repair)	P3	30_DB-GSE-JGSESW/
D-055	DB-JGSESW	Access & working space	Additional bollards recommended at rear of plinth (delineation / physical protection)	P3	30_DB-GSE-JGSESW/
D-056	DB-JGSESE	Structural / enclosure	Previous structural repairs noted	P3	31_DB-JGSESE/
D-057	DB-JGSENE	Structural / enclosure	Previous structural repairs noted	P3	32_DB-JGSENE/
D-058	DB-JGSENE	Electrical safety	Non-standard insulation on busbar combs	P3	32_DB-JGSENE/
D-059	DB-JGSENE	Labelling	No circuit schedule card / designation	P3	32_DB-JGSENE/
D-060	DB-JGSENE	Ingress protection	Pest / vermin activity noted	P3	32_DB-JGSENE/
D-061	DB-JGSENW	Electrical safety	Non-standard insulation on busbar combs	P3	33_DB-JGSENW/
D-062	DB-JGSENW	Labelling	No circuit schedule card / designation	P3	33_DB-JGSENW/
D-063	DB-JGSENW	Ingress protection	Pest / vermin activity noted	P3	33_DB-JGSENW/
D-064	DB-SGSEE	Electrical safety	Non-standard insulation on busbar combs	P3	34_DB-SGSEE/
D-065	DB-SGSEW	Electrical safety	No MEN link — earth stake present; earthing arrangement requires investigation	P3	35_DB-SGSEW/
D-066	DB-F14E	Structural / enclosure	Enclosure door(s) bent (still operable)	P3	36_DB-F14E/
D-067	DB-F14E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	36_DB-F14E/
D-068	DB-F14E	Structural / enclosure	Bottom cabinet access door stuck (cannot open)	P3	36_DB-F14E/
D-069	DB-F14E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	36_DB-F14E/
D-070	DB-F14W	Structural / enclosure	Enclosure door(s) bent (still operable)	P3	37_DB-F14W/
D-071	DB-F14W	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	37_DB-F14W/
D-072	DB-F14W	Structural / enclosure	Bottom cabinet access door stuck (cannot open)	P3	37_DB-F14W/

Ref	Board	Category	Defect	Pri	Evidence
D-073	DB-F14W	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	37_DB-F14W/
D-074	DB-F19E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	39_DB-F19E/
D-075	DB-F19E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	39_DB-F19E/
D-076	DB-F17E	Structural / enclosure	Enclosure door(s) bent (still operable)	P3	40_DB-F17E/
D-077	DB-F17E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	40_DB-F17E/
D-078	DB-F17E	Structural / enclosure	Bottom cabinet access door stuck (cannot open)	P3	40_DB-F17E/
D-079	DB-F17E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	40_DB-F17E/
D-080	DB-F15E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	41_DB-_-41/
D-081	DB-F13E	Electrical safety	Non-standard insulation on busbar combs	P3	42_DB-F13E/
D-082	DB-F11E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	43_DB-F11E/
D-083	DB-F11E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	43_DB-F11E/
D-084	DB-F11E	Electrical safety	Cabling arrangement / condition concern	P3	43_DB-F11E/
D-085	DB-D7E	Thermal-fire	Prior fire marks / thermal event	P3	44_DB-D7E/
D-086	DB-D7E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	44_DB-D7E/
D-087	DB-D7E	Structural / enclosure	Additional (non-original) support installed	P3	44_DB-D7E/
D-088	DB-D3N	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	45_DB-D3N/
D-089	DB-D3S	Structural / enclosure	Enclosure door(s) bent (still operable)	P3	46_DB-D3S/
D-090	DB-D3S	Structural / enclosure	Structural alterations to board	P3	46_DB-D3S/
D-091	DB-D3S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	46_DB-D3S/
D-092	DB-C4S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	47_DB-C4S/
D-093	DB-C6S	Thermal-fire	Prior fire marks / thermal event	P3	48_DB-C6S/
D-094	DB-C6S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	48_DB-C6S/
D-095	DB-C6S	Electrical safety	Unidentified service / junction box	P3	48_DB-C6S/
D-096	DB-C8S	Thermal-fire	Prior fire marks / thermal event	P3	49_DB-C8S/
D-097	DB-C8S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	49_DB-C8S/
D-098	DB-C8S	Electrical safety	Unidentified service / junction box	P3	49_DB-C8S/
D-099	DB-C10S	Thermal-fire	Prior fire marks / thermal event	P3	50_DB-C10S/

Ref	Board	Category	Defect	Pri	Evidence
D-100	DB-C10S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	50_DB-C10S/
D-101	DB-C10S	Electrical safety	Unidentified service / junction box	P3	50_DB-C10S/
D-102	DB-C10N	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	51_DB-C10N/
D-103	DB-C10N	Electrical safety	Unidentified service / junction box	P3	51_DB-C10N/
D-104	DB-C12E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	52_DB-c12E/
D-105	DB-C12E	Electrical safety	Unidentified service / junction box	P3	52_DB-c12E/
D-106	DB-C12E	Structural / enclosure	Fall hazard noted at board location	P3	52_DB-c12E/
D-107	DB-C11S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	53_DB-C11S/
D-108	DB-C9S	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	54_DB-9S/
D-109	DB-C9S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	54_DB-9S/
D-110	DB-C7S	Electrical safety	Non-standard insulation on busbar combs	P3	55_DB-C7S/
D-111	DB-C3S	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	56_DB-3S/
D-112	DB-C3S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	56_DB-3S/
D-113	DB-C1S	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	57_DB-C1S/
D-114	DB-C1S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	57_DB-C1S/
D-115	DB-B22S	Electrical safety	Driver sizing / accommodation to be confirmed	P3	58_DB-B22S/
D-116	DB-B22S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	58_DB-B22S/
D-117	DB-B24S	Electrical safety	Driver sizing / accommodation to be confirmed	P3	59_DB-B24S/
D-118	DB-B24S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	59_DB-B24S/
D-119	DB-B21N	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	60_DB-B21N/
D-120	DB-B21N	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	60_DB-B21N/
D-121	DB-B21N	Ingress protection	Water ingress / internal staining	P3	60_DB-B21N/
D-122	DB-B21S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	61_DB-B21S/
D-123	DB-B21S	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	61_DB-B21S/
D-124	DB-B23N	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	62_DB-B23N/
D-125	DB-B25N	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	63_DB-B25N/
D-126	DB-B26S	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	64_DB-B26S/

Ref	Board	Category	Defect	Pri	Evidence
D-127	DB-B26S	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	64_DB-B26S/
D-128	DB-B27N	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	65_DB-B27N/
D-129	DB-B27N	Corrosion	Weathering / mottling of galvanised enclosure surfaces (apron exposure)	P3	65_DB-B27N/
D-130	DB-B28E	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	66_DB-B28E/
D-131	DB-B28E	Ingress protection	Unsealed cable penetrations at base / gland plate	P3	66_DB-B28E/
D-132	DB-B30N	Corrosion	Significant rust / corrosion to enclosure, fixings and bars	P3	67_DB-B30N/
D-133	DB-Mast-11-E1E	Labelling	Duplicate circuit-breaker designation (E and NE labelled to same CB)	P4	01_DB-Mast-11-E1E/
D-134	DB-Mast-11-E1E	Corrosion	Minor pitting to enclosure / structure	P4	01_DB-Mast-11-E1E/
D-135	DB-Mast-11-E1E	Thermal-fire	Forced ventilation may be required (solar heat load)	P4	01_DB-Mast-11-E1E/
D-136	DB-Mast-11-E1E	Electrical safety	End-of-life internals; internal renewal recommended at the lighting upgrade	P4	01_DB-Mast-11-E1E/
D-137	DB-Mast-10-E3E	Corrosion	Minor pitting to enclosure / structure	P4	02_DB-Mast-10-E3E/
D-138	DB-Mast-10-E3E	Housekeeping	Internal dust / dirt accumulation	P4	02_DB-Mast-10-E3E/
D-139	DB-Mast-9-E5E	Corrosion	Minor pitting to enclosure / structure	P4	03_DB-mast-9-E5E/
D-140	DB-Mast-9-E5E	Thermal-fire	Prior fire marks / thermal event	P4	03_DB-mast-9-E5E/
D-141	DB-Mast-9-E5E	Housekeeping	Internal dust / dirt accumulation	P4	03_DB-mast-9-E5E/
D-142	DB-Mast-9-E5E	Corrosion	Minor surface rust to fixings and bars	P4	03_DB-mast-9-E5E/
D-143	DB-Mast-8-E7E	Corrosion	Minor pitting to enclosure / structure	P4	04_DB-mast-8-e7e/
D-144	DB-Mast-8-E7E	Corrosion	Minor surface rust to fixings and bars	P4	04_DB-mast-8-e7e/
D-145	DB-Mast-8-E7E	Housekeeping	Internal dust / dirt accumulation	P4	04_DB-mast-8-e7e/
D-146	DB-Mast-7-E9E	Corrosion	Minor pitting to enclosure / structure	P4	05_DB-mast-7-e9e/
D-147	DB-Mast-7-E9E	Corrosion	Minor surface rust to fixings and bars	P4	05_DB-mast-7-e9e/
D-148	DB-Mast-7-E9E	Housekeeping	Internal dust / dirt accumulation	P4	05_DB-mast-7-e9e/
D-149	DB-Mast-6-E9W	Corrosion	Minor pitting to enclosure / structure	P4	06_DB-mast-6-e9w/

Ref	Board	Category	Defect	Pri	Evidence
D-150	DB-Mast-6-E9W	Housekeeping	Internal dust / dirt accumulation	P4	06_DB-mast-6-e9w/
D-151	DB-Mast-6-E9W	Corrosion	Minor surface rust to fixings and bars	P4	06_DB-mast-6-e9w/
D-152	DB-D2E	Housekeeping	Internal dust / dirt accumulation	P4	07_DB-D2E/
D-153	DB-D2E	Corrosion	Minor surface rust to fixings and bars	P4	07_DB-D2E/
D-154	DB-D2E	Corrosion	Minor pitting to enclosure / structure	P4	07_DB-D2E/
D-155	DB-D2W	Corrosion	Minor pitting to enclosure / structure	P4	08_DB-D2W/
D-156	DB-D2W	Corrosion	Minor surface rust to fixings and bars	P4	08_DB-D2W/
D-157	DB-D2W	Housekeeping	Internal dust / dirt accumulation	P4	08_DB-D2W/
D-158	DB-D4W	Replacement	Board tagged for replacement	P4	09_DB-D4W/
D-159	DB-D6W	Corrosion	Minor pitting to enclosure / structure	P4	10_DB-d6w/
D-160	DB-D6W	Housekeeping	Internal dust / dirt accumulation	P4	10_DB-d6w/
D-161	DB-D6W	Corrosion	Minor surface rust to fixings and bars	P4	10_DB-d6w/
D-162	DB-D8N	Corrosion	Minor pitting to enclosure / structure	P4	11_DB-D8N/
D-163	DB-D8N	Corrosion	Minor surface rust to fixings and bars	P4	11_DB-D8N/
D-164	DB-D8N	Housekeeping	Internal dust / dirt accumulation	P4	11_DB-D8N/
D-165	DB-D12E	Corrosion	Minor surface rust to fixings and bars	P4	12_DB-D12E/
D-166	DB-D12E	Housekeeping	Internal dust / dirt accumulation	P4	12_DB-D12E/
D-167	DB-D12E	Corrosion	Minor pitting to enclosure / structure	P4	12_DB-D12E/
D-168	DB-D14N	Corrosion	Minor pitting to enclosure / structure	P4	14_DB-D14N/
D-169	DB-D14N	Housekeeping	Internal dust / dirt accumulation	P4	14_DB-D14N/
D-170	DB-D14N	Corrosion	Minor surface rust to fixings and bars	P4	14_DB-D14N/
D-171	DB-D12S	Housekeeping	Internal dust / dirt accumulation	P4	15_DB-D12S/
D-172	DB-D12S	Corrosion	Minor surface rust to fixings and bars	P4	15_DB-D12S/
D-173	DB-D18N	Housekeeping	Internal dust / dirt accumulation	P4	17_DB-D18N/
D-174	DB-D18N	Corrosion	Minor surface rust to fixings and bars	P4	17_DB-D18N/
D-175	DB-D20N	Housekeeping	Internal dust / dirt accumulation	P4	18_DB-d20n_lcc-c6/
D-176	DB-D19E	Housekeeping	Internal dust / dirt accumulation	P4	19_DB-nthapron4/
D-177	DB-D19E	Corrosion	Minor pitting to enclosure / structure	P4	19_DB-nthapron4/
D-178	DB-NthApron-NEss	Housekeeping	Internal dust / dirt accumulation	P4	20_Northern_apron_db_ne/
D-179	DB-NthApron-Ess	Housekeeping	Internal dust / dirt accumulation	P4	21_Northern_apron_man_ess/

Ref	Board	Category	Defect	Pri	Evidence
D-180	DB-D17W	Corrosion	Minor surface rust to fixings and bars	P4	22_DB-northernapron3/
D-181	DB-D13W	Housekeeping	Internal dust / dirt accumulation	P4	23_DB-northernapron2/
D-182	DB-D15W	Housekeeping	Internal dust / dirt accumulation	P4	24_DB-northernapron1/
D-183	DB-D15W	Corrosion	Minor surface rust to fixings and bars	P4	24_DB-northernapron1/
D-184	DB-D15W	Corrosion	Minor pitting to enclosure / structure	P4	24_DB-northernapron1/
D-185	DB-D10W	Housekeeping	Internal dust / dirt accumulation	P4	25_DB-10w-C7/
D-186	DB-D10W	Corrosion	Minor surface rust to fixings and bars	P4	25_DB-10w-C7/
D-187	DB-D10W	Corrosion	Minor pitting to enclosure / structure	P4	25_DB-10w-C7/
D-188	DB-D10E	Replacement	Board tagged for replacement	P4	26_DB-d10e/
D-189	DB-D10E	Replacement	Limited space for like-for-like replacement with plinth	P4	26_DB-d10e/
D-190	DB-D11E	Replacement	Board tagged for replacement	P4	27_DB-d11e/
D-191	DB-D9E	Replacement	Board tagged for replacement	P4	28_DB-d9e/
D-192	DB-JGSESE	Corrosion	Minor surface rust to fixings and bars	P4	31_DB-JGSESE/
D-193	DB-JGSENE	Housekeeping	Internal dust / dirt accumulation	P4	32_DB-JGSENE/
D-194	DB-JGSENE	Corrosion	Minor surface rust to fixings and bars	P4	32_DB-JGSENE/
D-195	DB-JGSENW	Housekeeping	Internal dust / dirt accumulation	P4	33_DB-JGSENW/
D-196	DB-JGSENW	Corrosion	Minor surface rust to fixings and bars	P4	33_DB-JGSENW/
D-197	DB-SGSEE	Housekeeping	Internal dust / dirt accumulation	P4	34_DB-SGSEE/
D-198	DB-SGSEW	Housekeeping	Internal dust / dirt accumulation	P4	35_DB-SGSEW/
D-199	DB-SGSEW	Corrosion	Minor surface rust to fixings and bars	P4	35_DB-SGSEW/
D-200	DB-F14E	Housekeeping	Internal dust / dirt accumulation	P4	36_DB-F14E/
D-201	DB-F14E	Corrosion	Minor pitting to enclosure / structure	P4	36_DB-F14E/
D-202	DB-F14W	Housekeeping	Internal dust / dirt accumulation	P4	37_DB-F14W/
D-203	DB-F14W	Corrosion	Minor pitting to enclosure / structure	P4	37_DB-F14W/
D-204	DB-F19E	Structural / enclosure	Enclosure doors stiff / binding on operation	P4	39_DB-F19E/
D-205	DB-F19E	Housekeeping	Internal dust / dirt accumulation	P4	39_DB-F19E/
D-206	DB-F17E	Housekeeping	Internal dust / dirt accumulation	P4	40_DB-F17E/
D-207	DB-F17E	Corrosion	Minor pitting to enclosure / structure	P4	40_DB-F17E/
D-208	DB-F15E	Housekeeping	Internal dust / dirt accumulation	P4	41_DB-_41/
D-209	DB-F13E	Housekeeping	Internal dust / dirt accumulation	P4	42_DB-F13E/
D-210	DB-F11E	Housekeeping	Internal dust / dirt accumulation	P4	43_DB-F11E/

Ref	Board	Category	Defect	Pri	Evidence
D-211	DB-D7E	Housekeeping	Internal dust / dirt accumulation	P4	44_DB-D7E/
D-212	DB-D7E	Corrosion	Minor pitting to enclosure / structure	P4	44_DB-D7E/
D-213	DB-D3N	Housekeeping	Internal dust / dirt accumulation	P4	45_DB-D3N/
D-214	DB-D3N	Corrosion	Minor pitting to enclosure / structure	P4	45_DB-D3N/
D-215	DB-D3S	Corrosion	Minor surface rust to fixings and bars	P4	46_DB-D3S/
D-216	DB-D3S	Corrosion	Minor pitting to enclosure / structure	P4	46_DB-D3S/
D-217	DB-D3S	Housekeeping	Internal dust / dirt accumulation	P4	46_DB-D3S/
D-218	DB-C4S	Housekeeping	Internal dust / dirt accumulation	P4	47_DB-C4S/
D-219	DB-C4S	Corrosion	Minor pitting to enclosure / structure	P4	47_DB-C4S/
D-220	DB-C4S	Corrosion	Minor surface rust to fixings and bars	P4	47_DB-C4S/
D-221	DB-C6S	Housekeeping	Internal dust / dirt accumulation	P4	48_DB-C6S/
D-222	DB-C6S	Corrosion	Minor surface rust to fixings and bars	P4	48_DB-C6S/
D-223	DB-C6S	Corrosion	Minor pitting to enclosure / structure	P4	48_DB-C6S/
D-224	DB-C8S	Housekeeping	Internal dust / dirt accumulation	P4	49_DB-C8S/
D-225	DB-C8S	Corrosion	Minor surface rust to fixings and bars	P4	49_DB-C8S/
D-226	DB-C8S	Corrosion	Minor pitting to enclosure / structure	P4	49_DB-C8S/
D-227	DB-C10S	Housekeeping	Internal dust / dirt accumulation	P4	50_DB-C10S/
D-228	DB-C10S	Corrosion	Minor surface rust to fixings and bars	P4	50_DB-C10S/
D-229	DB-C10S	Corrosion	Minor pitting to enclosure / structure	P4	50_DB-C10S/
D-230	DB-C10N	Housekeeping	Internal dust / dirt accumulation	P4	51_DB-C10N/
D-231	DB-C10N	Corrosion	Minor surface rust to fixings and bars	P4	51_DB-C10N/
D-232	DB-C10N	Corrosion	Minor pitting to enclosure / structure	P4	51_DB-C10N/
D-233	DB-C12E	Housekeeping	Internal dust / dirt accumulation	P4	52_DB-c12E/
D-234	DB-C12E	Corrosion	Minor surface rust to fixings and bars	P4	52_DB-c12E/
D-235	DB-C12E	Corrosion	Minor pitting to enclosure / structure	P4	52_DB-c12E/
D-236	DB-C11S	Housekeeping	Internal dust / dirt accumulation	P4	53_DB-C11S/
D-237	DB-C11S	Corrosion	Minor surface rust to fixings and bars	P4	53_DB-C11S/
D-238	DB-C11S	Corrosion	Minor pitting to enclosure / structure	P4	53_DB-C11S/
D-239	DB-C9S	Housekeeping	Internal dust / dirt accumulation	P4	54_DB-9S/
D-240	DB-C9S	Corrosion	Minor pitting to enclosure / structure	P4	54_DB-9S/
D-241	DB-C7S	Housekeeping	Internal dust / dirt accumulation	P4	55_DB-C7S/
D-242	DB-C3S	Housekeeping	Internal dust / dirt accumulation	P4	56_DB-3S/
D-243	DB-C3S	Corrosion	Minor pitting to enclosure / structure	P4	56_DB-3S/

Ref	Board	Category	Defect	Pri	Evidence
D-244	DB-C1S	Housekeeping	Internal dust / dirt accumulation	P4	57_DB-C1S/
D-245	DB-C1S	Corrosion	Minor pitting to enclosure / structure	P4	57_DB-C1S/
D-246	DB-B22S	Housekeeping	Internal dust / dirt accumulation	P4	58_DB-B22S/
D-247	DB-B22S	Corrosion	Minor surface rust to fixings and bars	P4	58_DB-B22S/
D-248	DB-B22S	Corrosion	Minor pitting to enclosure / structure	P4	58_DB-B22S/
D-249	DB-B24S	Housekeeping	Internal dust / dirt accumulation	P4	59_DB-B24S/
D-250	DB-B24S	Corrosion	Minor surface rust to fixings and bars	P4	59_DB-B24S/
D-251	DB-B24S	Corrosion	Minor pitting to enclosure / structure	P4	59_DB-B24S/
D-252	DB-B21N	Labelling	Degraded / peeling warning and schedule labels	P4	60_DB-B21N/
D-253	DB-B21N	Housekeeping	Internal dust / dirt accumulation	P4	60_DB-B21N/
D-254	DB-B21N	Corrosion	Minor surface rust to fixings and bars	P4	60_DB-B21N/
D-255	DB-B21S	Housekeeping	Internal dust / dirt accumulation	P4	61_DB-B21S/
D-256	DB-B21S	Corrosion	Minor surface rust to fixings and bars	P4	61_DB-B21S/
D-257	DB-B23N	Housekeeping	Internal dust / dirt accumulation	P4	62_DB-B23N/
D-258	DB-B23N	Corrosion	Minor surface rust to fixings and bars	P4	62_DB-B23N/
D-259	DB-B25N	Housekeeping	Internal dust / dirt accumulation	P4	63_DB-B25N/
D-260	DB-B25N	Corrosion	Minor surface rust to fixings and bars	P4	63_DB-B25N/
D-261	DB-B26S	Housekeeping	Internal dust / dirt accumulation	P4	64_DB-B26S/
D-262	DB-B26S	Corrosion	Minor surface rust to fixings and bars	P4	64_DB-B26S/
D-263	DB-B27N	Housekeeping	Internal dust / dirt accumulation	P4	65_DB-B27N/
D-264	DB-B27N	Corrosion	Minor surface rust to fixings and bars	P4	65_DB-B27N/
D-265	DB-B28E	Housekeeping	Internal dust / dirt accumulation	P4	66_DB-B28E/
D-266	DB-B28E	Housekeeping	Graffiti to mast / enclosure exterior	P4	66_DB-B28E/
D-267	DB-B28E	Corrosion	Minor surface rust to fixings and bars	P4	66_DB-B28E/
D-268	DB-B30N	Housekeeping	Internal dust / dirt accumulation	P4	67_DB-B30N/
D-269	DB-B30N	Corrosion	Minor surface rust to fixings and bars	P4	67_DB-B30N/

Appendix C — Driver schedule by pole

Driver count per in-scope board. One Inventronics LED driver is provided per luminaire and relocated into the pole distribution board (from the mast head), so the driver count equals the new luminaire count. Extracted from the apron lighting luminaire schedule (E3D-APAM-RPT-003).

#	Board ID	Location / zone	Mount ht	Drivers in board
1	DB-B21N	Bravo Concourse	30m	5
2	DB-B21S	Bravo Concourse	30m	3
3	DB-B22S	Bravo Concourse	30m	3
4	DB-B23N	Bravo Concourse	30m	4
5	DB-B24S	Bravo Concourse	30m	4
6	DB-B25N	Bravo Concourse	30m	5
7	DB-B26S	Bravo Concourse	30m	6
8	DB-B27N	Bravo Concourse	30m	5
9	DB-B28E	Bravo Concourse	30m	4
10	DB-B30N	Bravo Concourse	30m	4
11	DB-C10N	Charlie Concourse	30m	4
12	DB-C10S	Charlie Concourse	30m	4
13	DB-C11S	Charlie Concourse	30m	6
14	DB-C12E	Charlie Concourse	30m	6
15	DB-C1S	Charlie Concourse	30m	3
16	DB-C3S	Charlie Concourse	30m	5
17	DB-C4S	Charlie Concourse	30m	4
18	DB-C6S	Charlie Concourse	30m	4
19	DB-C7S	Charlie Concourse	30m	6
20	DB-C8S	Charlie Concourse	30m	4
21	DB-C9S	Charlie Concourse	30m	4
22	DB-D10E	Delta Concourse	30m	8
23	DB-D10W	Delta Concourse	30m	6
24	DB-D11E	Delta Concourse	30m	6
25	DB-D12E	Delta Concourse	30m	6
26	DB-D12S	Delta Concourse	30m	5
27	DB-D13W	Delta Concourse	30m	5
28	DB-D15W	Delta Concourse	30m	10
29	DB-D17W	Delta Concourse	30m	8
30	DB-D19E	Delta Concourse	30m	5
64 in-scope boards				314

#	Board ID	Location / zone	Mount ht	Drivers in board
31	DB-D2E	Delta Concourse	30m	2
32	DB-D2W	Delta Concourse	30m	5
33	DB-D3N	Delta Concourse	30m	6
34	DB-D3S	Delta Concourse	30m	3
35	DB-D4W	Delta Concourse	30m	6
36	DB-D6W	Delta Concourse	30m	6
37	DB-D7E	Delta Concourse	30m	6
38	DB-D7W	Delta Concourse	30m	6
39	DB-D8N	Delta Concourse	30m	6
40	DB-D9E	Delta Concourse	30m	5
41	DB-E1E	Echo Concourse	30m	3
42	DB-E3E	Echo Concourse	30m	4
43	DB-E5E	Echo Concourse	30m	4
44	DB-E7E	Echo Concourse	30m	4
45	DB-E9E	Echo Concourse	30m	4
46	DB-E9W	Echo Concourse	30m	4
47	DB-F11E	Foxtrot Concourse	30m	3
48	DB-F13E	Foxtrot Concourse	30m	4
49	DB-F14E	Foxtrot Concourse	30m	4
50	DB-F14W	Foxtrot Concourse	30m	6
51	DB-F15E	Foxtrot Concourse	30m	4
52	DB-F17E	Foxtrot Concourse	30m	4
53	DB-F18W	Foxtrot Concourse	30m	6
54	DB-F19E	Foxtrot Concourse	30m	5
55	DB-D14N	Northern Apron	30m	8
56	DB-D16N	Northern Apron	30m	8
57	DB-D18N	Northern Apron	30m	8
58	DB-D20N	Northern Apron	30m	4
59	DB-JGSENE	Zone 8	15m	4
60	DB-JGSENW	Zone 8	15m	4
61	DB-JGSESE	Zone 8	15m	4
62	DB-JGSESW	Zone 8	15m	4
63	DB-SGSEE	Zone 9	25m	4
64 in-scope boards				314

#	Board ID	Location / zone	Elec 25%	Struct 20%	Corr 20%	IP 10%	Access 15%	Therm 10%	Index	Rating
27	DB-D11E	Delta Concourse	0	0	0	0	0	0	0	● Amber
28	DB-D9E	Delta Concourse	0	0	0	0	0	0	0	● Amber
29	DB-D7W	Delta Concourse	0	0	0	0	3	0	11.2	● Red
30	DB-JGSESW	GSE Aprons	0	3	0	0	3	0	26.3	● Red
31	DB-JGSESE	GSE Aprons	0	2	1	0	3	0	26.3	● Red
32	DB-JGSENE	GSE Aprons	2	2	1	2	3	0	43.8	● Red
33	DB-JGSENW	GSE Aprons	2	0	1	2	3	0	33.8	● Red
34	DB-SGSEE	GSE Aprons	2	0	1	0	3	0	28.7	● Red
35	DB-SGSEW	GSE Aprons	2	0	1	0	3	0	28.7	● Red
36	DB-F14E	Foxtrot Concourse	0	2	2	2	3	0	36.3	● Red
37	DB-F14W	Foxtrot Concourse	0	2	2	2	3	0	36.3	● Red
38	DB-F18W	Foxtrot Concourse	0	3	0	0	3	0	26.3	● Amber
39	DB-F19E	Foxtrot Concourse	0	1	2	2	0	0	20	● Amber
40	DB-F17E	Foxtrot Concourse	0	2	2	2	3	0	36.3	● Red
41	DB-F15E	Foxtrot Concourse	0	3	2	0	3	3	43.8	● Red
42	DB-F13E	Foxtrot Concourse	2	0	1	0	3	0	28.7	● Red
43	DB-F11E	Foxtrot Concourse	2	0	2	2	3	0	38.8	● Red
44	DB-D7E	Delta Concourse	0	2	2	0	3	2	36.3	● Red
45	DB-D3N	Delta Concourse	0	1	2	0	0	0	15	● Amber
46	DB-D3S	Delta Concourse	0	2	1	2	0	0	20	● Amber
47	DB-C4S	Charlie Concourse	0	1	1	2	3	0	26.3	● Red
48	DB-C6S	Charlie Concourse	2	1	1	2	3	2	43.7	● Red
49	DB-C8S	Charlie Concourse	2	1	1	2	3	2	43.7	● Red
50	DB-C10S	Charlie Concourse	2	1	1	2	3	2	43.7	● Red
51	DB-C10N	Charlie Concourse	2	1	1	2	3	0	38.7	● Red
52	DB-C12E	Charlie Concourse	2	2	1	2	2	0	40	● Amber
53	DB-C11S	Charlie Concourse	0	1	1	2	3	0	26.3	● Red
54	DB-C9S	Charlie Concourse	0	1	2	2	3	0	31.3	● Red
55	DB-C7S	Charlie Concourse	2	0	1	0	3	0	28.7	● Red
56	DB-C3S	Charlie Concourse	0	1	2	2	3	0	31.3	● Red
57	DB-C1S	Charlie Concourse	0	1	2	2	3	0	31.3	● Red
58	DB-B22S	Bravo Concourse	2	1	1	2	0	0	27.5	● Amber
59	DB-B24S	Bravo Concourse	2	1	1	2	0	0	27.5	● Amber
60	DB-B21N	Bravo Concourse	1	0	2	2	0	0	21.3	● Amber

#	Board ID	Location / zone	Elec 25%	Struct 20%	Corr 20%	IP 10%	Access 15%	Therm 10%	Index	Rating
61	DB-B21S	Bravo Concourse	0	0	2	2	0	0	15	● Amber
62	DB-B23N	Bravo Concourse	0	0	1	2	0	0	10	● Amber
63	DB-B25N	Bravo Concourse	0	0	2	0	0	0	10	● Amber
64	DB-B26S	Bravo Concourse	0	0	2	2	0	0	15	● Amber
65	DB-B27N	Bravo Concourse	0	0	2	2	0	0	15	● Amber
66	DB-B28E	Bravo Concourse	0	0	2	2	0	0	15	● Amber
67	DB-B30N	Bravo Concourse	0	0	2	0	0	0	10	● Amber

Index = Σ(dimension score × weight) × 25; higher is worse. RED where a safety gate is breached (P2 electrical or structural, prior internal fire, AS/NZS 3000 CI 2.10 clearance non-compliance, any P1, or Index > 62), AMBER where any defect is logged or Index ≥ 25, GREEN otherwise. Ratings match the Section 4 framework and Appendix A.

End of Report — APAM Apron High-Mast Floodlight Electrical Investigation