Gillman Barracks EIA: Findings From HDB's Own Report

This document sets out five findings from HDB's Environmental Impact Assessment (EIA) for the proposed Gillman Barracks redevelopment, compiled by a resident after reading the full 255-page report, its appendices, and NParks' own published *Biodiversity Impact Assessment (BIA) Guidelines*. Every claim below is drawn directly from these primary sources, with citations included throughout — not secondhand summary.

Source documents: CH2M Hill/Jacobs, "Specialist Consultancy Services for Environmental Impact Assessment (EIA) at Gillman Barracks," Final Report, 8 July 2026, and appendices, commissioned by NParks on behalf of HDB; National Parks Board, "Biodiversity Impact Assessment (BIA) Guidelines," May 2024.

Section 1: A multi-species concentration of conservation-significant flora next to Telok Blangah Street 31 appears to fall outside the retained area, with no explanation for why it was not avoided

The raw specimen records for this area — between two streams, along the eastern boundary — show a real concentration of conservation-significant flora, and the report's own maps show no retained-area or habitat-creation coverage there at all. This includes 3 of the site's 8 *Ficus sinuata* (Critically Endangered), forming a distinct cluster roughly 100m from the rest of the species' population (which does fall within the retained area); 2 clusters of *Cissus repens*, a Vulnerable climber; and *Cratoxylum cochinchinense*, an Endangered tree (specimen GB0435). Critically Endangered, Endangered, and Vulnerable flora, together in one small area, entirely outside the retained boundary.

The *Ficus sinuata* specimens here are young, actively regenerating individuals — under 5cm girth, under 1.4m tall — which points to something worth taking seriously. The report's own salvage records describe them as saplings, not mature trees. That's not incidental: it suggests this location isn't just holding rare plants, it's actively producing new ones. Transplanting the saplings elsewhere may keep the individual plants alive, but it does nothing to preserve whatever soil, moisture, or microhabitat conditions at this exact spot are enabling a Critically Endangered species to regenerate there in the first place.

The stated fate differs by species, and none is fully reassuring. *Cissus repens* is slated for full removal: "Transplant/salvage 2 of 2 clusters... transplanted from site." *Ficus sinuata* sees partial retention site-wide (5 of 8 individuals remain within the Proposed Retained Area elsewhere, though not these 3). *Cratoxylum cochinchinense* has no documented mortality, salvage, or retention outcome anywhere in the report — its fate is simply unstated.

The EIA structures its mitigation approach around a four-tier hierarchy, in order of preference: Avoid, Minimise, Restore, Compensate (Section 4.5, Figure 4-20), mirroring NParks' own guidelines. Section 4.5.1, titled "Avoid," names the 14.6ha Proposed Retained Area and Area of Habitat Creation as the report's own answer to this top tier. By the report's own definition, this cluster sits outside that measure. The response — salvage — is the report's own bottom tier, described as a last resort to be used "where site clearance is unavoidable" (BIA Guidelines, Table 5.1, p.75–76). No Minimise or Restore step appears to have been planned for this cluster in between, and the report never explains why: "inevitable" and "cannot be avoided" appear only as general descriptions of the hierarchy itself, never as justification applied to this specific location.

Any suggestion this matters less because the area is "exotic-dominated forest" doesn't hold up against NParks' own framework. The *BIA Guidelines* rank habitat value in three tiers (Table 2.18, p.36): Critical Habitat, Natural Habitat, and Modified Habitat — only the first two carry "high conservation priority in Singapore." Critical Habitat is triggered by "habitat of significant importance to locally and globally Critically Endangered and/or Endangered species," independent of vegetation type — and this cluster appears to qualify on that basis alone. The guidelines are explicit about method too: consultants are instructed to identify these priority areas by overlaying species locations onto vegetation maps, since classification

"depends on both its vegetation type and importance to species of conservation concern" (Section 2.4, p.36). The guidelines' own worked example (Figure 2.2, p.37) shows this in practice: species markers positioned near or adjacent to higher-value habitat are captured within the priority boundary even where the immediate area is lower-value, while markers genuinely isolated in the lowest-value habitat are not. This cluster fits the first pattern — it sits immediately alongside a section of native-dominated forest, the same higher-value habitat type the example itself uses to justify inclusion.

Where there's genuine uncertainty, NParks' own guidelines call for caution, not proceeding regardless. "The precautionary principle and worst-case scenarios should always be applied when there is any doubt in the evaluation of impacts and development of mitigation measures" (Section 7, p.89). The report doesn't explain why this location supports this concentration and regeneration of threatened flora across three separate species — which is exactly the kind of doubt this principle is meant to address before clearance, not after.

What I'd like considered: extending the Proposed Retained Area boundary by approximately 40m in this specific location — which would appear to cover this cluster in full, a modest, low-cost adjustment relative to the 40ha development area, for a disproportionate gain in protecting Critically Endangered, Endangered, and Vulnerable flora, including *Cratoxylum cochinchinense*, whose status under the current plan remains unclear.

Section 2: The fauna survey appears to fall short of NParks' own published standards, for both birds and mammals

Neither point below depends on any species' current conservation status — both are structural gaps in survey design, checkable against NParks' own *Biodiversity Impact Assessment (BIA) Guidelines* (May 2024).

NParks' guidelines require bird surveys to sample across both seasonal windows, not just one. For bird surveys, whether by point count or line transect, the guidelines state: *"each point should minimally be sampled once a month during the non-migratory season (April to August), and twice a month during the migratory season (September to March)"* (Section 2.3.2, Tables 2.6–2.7). The EIA's faunistic field surveys, including birds, ran from 21 October 2024 to 7 March 2025 (Section 4.2.4.2) — entirely within the migratory season as NParks defines it, with no overlap with the April–August window at all. On the dates alone, the survey appears to have missed one of the two seasonal windows NParks' own guidelines call for.

A similar gap applies to the mammal survey. All seven camera traps deployed for this EIA were terrestrial-only, mounted "approximately 20–30 cm above ground" and explicitly labelled "Terrestrial Camera Trap Set up" — despite the report elsewhere naming "birds (including forest interior species) and arboreal mammals" as the specific target species groups for its proposed ecological corridor (Section 4.5.1(g)). NParks' guidelines describe camera trapping as having two distinct components for mammal surveys — terrestrial (30–50cm height) and a separate arboreal method, mounted at least 3m above ground specifically to detect canopy-dwelling species (Section 2.3.4, Table 2.10, p.28) — and no arboreal cameras appear anywhere in the report. Camera density also falls short of the guideline's own range: the report states "approximately one camera deployed for every 6.25 ha of forest," sparser than NParks' recommended "approximately one every 3–5 ha" (same table).

What I'd like considered: a supplementary bird survey covering the non-migratory season (April to August), and a supplementary arboreal camera trap survey at the height and density NParks' own guidelines specify — both to complete the seasonal and methodological coverage the current survey appears to be missing.

Section 3: Two globally Critically Endangered parrots — and a celebrated hornbill — are missing from the EIA's headline count

The Oriental Pied Hornbill — a species NParks has publicly credited as a Singapore conservation success — is barely present in the assessment. The EIA's field survey recorded it only once, incidentally, in nearly five months. It's absent from the 255-page main report entirely, since it was downlisted to "Near Threatened" in 2023 and no longer meets the technical bar for discussion. As covered in Section 2, the survey window itself may not have been well suited to detecting the hornbill's actual presence — a single incidental sighting is exactly what an incomplete survey design would produce. Residents have since reported juvenile hornbills more recently than the survey period, which the study couldn't have captured.

Two globally Critically Endangered parrots — Yellow-crested and Citron-crested Cockatoo — don't appear in the official "11 species" count at all. Both are recorded in the EIA's own appendix (Appendix 1 – Birds: Yellow-crested Cockatoo, entry No. 15, p.7; Citron-crested Cockatoo, entry No. 56, p.8); they're excluded because the EIA's own conservation-significance definition requires a species to be both native to Singapore and threatened — an "AND" test that NParks' own baseline guidelines don't call for. The *BIA Guidelines* define "species of conservation interest" purely by extinction risk, "at the global and/or local level" (p.19), and treat native/exotic status as a separate fact to report, not a gate on conservation interest — confirmed across every taxon section, including birds specifically (p.25). Both cockatoos carry IUCN's most severe classification, Critically Endangered, regardless of origin.

The EIA classifies the hornbill and the Yellow-crested Cockatoo identically — both "introduced resident breeder" — despite very different treatment elsewhere. NParks has repeatedly called the hornbill's return "a wonderful conservation success story." The cockatoo, under the same classification and more severely threatened globally, doesn't count at all — even though Earth.org (2024) notes feral populations like Singapore's could play a role in the species' global recovery.

What I'd like considered: that all three species be discussed explicitly regardless of the technical threshold; that a follow-up survey across more than one season establish whether the hornbill is actually breeding on site, given the current record is a single incidental sighting; and clarification on whether the EIA's "native AND threatened" test reflects NParks' own methodology or a narrower construction adopted for this report.

Section 4: The report's own construction-phase assessment shows real risk to flora near the retained boundary — including along Malan Road — and protection isn't finalised

This is a quantified risk, not a hypothetical one. Even after mitigation, nine plant species still face a "Moderate Negative" risk of declining health during construction from edge effects alone — not direct clearance. The Endangered *Litsea* cf. *castanea*, for example, sits just 16m from a forest edge, well inside the 20–30m range the report elsewhere identifies as the zone edge effects reach into (Section 4.5.1(g), p.95, citing Beschta et al., 1987; Johnson & Ryba, 1992; Matlack, 1993; and Murphy, 1995).

Being retained isn't the same as being unaffected. *Archidendron contortum* and *Macaranga griffithiana* were initially assessed as facing no impact, since their specimens sit outside the cleared area — but the report downgrades this to "Moderate Negative" because at least half their individuals fall within 30m of the new forest margin. *Ficus sinuata*, *Ficus vasculosa*, and *Horsfieldia polyspherula* remain "Moderate Negative" after salvage, for the same reason. For *Litsea* cf. *castanea*, the report states it "may be marked for salvation or transplantation during the environmental monitoring and management phase, though not initially identified for salvation or transplantation pre-construction" — there is currently no confirmed plan, only a possibility to be decided later.

One specific illustration of this general risk: the native-dominated forest along Malan Road. It could be argued that because this forest currently survives well, no additional buffer is needed between the retained area and the forest edge — but I don't think that holds up against the report's own findings. The EIA defines forest edge effects as changes in microclimate "due to vegetation removal" (Section 4.4.5.1.2) — meaning they're triggered specifically by nearby clearing, not something that shows up in advance of it. Today, this forest borders low-intensity interim uses — event spaces, art galleries, dining establishments, and the Academy of Singapore Teachers (Section 2.2.2) — not the construction activity and completed housing estate to come. The forest's current good health reflects the absence of that trigger so far, not resilience to it, and the report's own impact assessment already predicts forest edge effects are "Likely" to occur in native-dominated secondary forest, at "Medium" intensity.

What I'd like considered: a wider buffer wherever native-dominated forest and conservation-significant flora sit close to the construction boundary — including specifically along Malan Road, where current conditions don't reflect what construction and the completed estate will bring — and confirmed protection measures now, rather than deferred to a later monitoring phase.

Section 5: Gillman Barracks is part of a much larger connected forest network — and the corridor linking it may be too narrow to function

Gillman Barracks isn't isolated — the report places it partially within the Southern Ridges, a 10km corridor linking Mount Faber Park, Telok Blangah Hill Park, HortPark, Kent Ridge Park, and Labrador Nature Reserve. Based on its own Straw-headed Bulbul mapping, the EIA suggests Gillman Barracks itself "serves as a corridor between the Southern Ridges and Berlayar Creek," potentially extending to Labrador Nature Reserve.

The report goes further than shared habitat — it raises a shared population. Straw-headed Bulbul and Changeable Hawk-eagle have been recorded at both Gillman Barracks and the former Keppel Club site, leading the EIA to suggest these birds "could belong to the same metapopulation utilising this ecological corridor." NParks has independently identified this same path in its own Ecological Profiling Exercise.

One might reasonably point out that most of the native forest here is being retained — but the report's own conclusion anticipates that response, and I don't think it holds up. It states the corridor "expand[s] to approximately 200m within the native-dominated secondary forest" — the generous width sits specifically within the forest block already being retained. The 30m minimum, by its own account, falls in the narrower connecting sections instead. The report's stated conclusion is that "the wider retained areas compensate" for these — but a corridor's function depends on its narrowest passable point, not its average. A well-preserved core doesn't help wildlife reach neighbouring parks if the stretch connecting them is constricted.

What I'd like considered: that the corridor's narrowest sections be widened toward the report's own 60m recommendation, rather than relying on wider areas elsewhere to compensate — given the report's own suggestion that a shared metapopulation, not just shared habitat, may depend on it.

"Loss of connectivity" is listed as a standard category of ecosystem impact in NParks' own guidelines (BIA Guidelines, Table 4.1, p.62) — this is not a fringe concern, but one of the recognised impact types every BIA is expected to assess.