# Long-nosed Bandicoot Assessment of Significance Report

## 4-12 McGill Street, Lewisham

Prepared for
Modern Construction

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# Abbreviations

| Abbreviation | Description |
|---|---|
| AoS | Assessment of Significance |
| BPZ | Bandicoot Protection Zone |
| DA | Development Application |
| DCP | Draft Development Control Plan |
| ELA | Eco Logical Australia |
| EP&A Act | *Environmental Planning and Assessment Act 1979* |
| FFA | Flora and Fauna Assessment |
| IWLR | Inner West Light Rail |
| LEP | Local Environment Plan |
| LNB | Long-nosed Bandicoot |
| MC | Marrickville Council |
| OEH | Office of Environment and Heritage |
| SIS | Species Impact Statement |
| TSC Act | *Threatened Species Conservation Act 1995* |
| WIRES | NSW Wildlife Information, Rescue and Education Services Inc |

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# 1 Introduction

## 1.1 Background

This Long-nosed Bandicoot (LNB) Assessment of Significance (AoS), also known as a 7 Part Test, evaluates the potential impacts to the NSW *Threatened Species Conservation Act 1995* (TSC Act) listed *Endangered LNB population in inner western Sydney* from a proposed development at 4-12 McGill Street, Lewisham (the subject site) (**Figure 1** and **Figure 2**). This AoS will support a Development Application (DA) for the re-development of the site.

The LNB (*Perameles nasuta*) was once regarded as being abundant throughout inner suburbs of Sydney. But during the 1970s it appeared to become extinct from the inner western suburbs of Sydney (Leary et al. 2010; Marlow 1962). However, in the early 2000s, a small population was rediscovered that has since been found to occupy Dulwich Hill, Marrickville, Petersham, Lewisham, Five Dock and Annandale (Leary et al. 2010; NSW Scientific Committee 2008).

## 1.2 Objectives

This AoS has been prepared in accordance with Section 5A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Marrickville Council's (MC) Local Environment Plan (LEP) 2011a (cl 6.4(3 and 4)) and Part 2.13.3 and Part 2.13.4 of the Generic Provisions / Biodiversity of the MC Development Control Plan 2011b (DCP). Under Part 2.13 of the DCP this AoS is required because:

- The subject site is located within MC's designated Bandicoot Protection Zone (BPZ). The BPZ has been established to:
    - protect and promote the recovery of the endangered LNB population, and
    - assist with the decision making framework associated with DAs.
- The subject site shares a boundary with the Inner West Light Rail (IWLR; **Figure 2**). The IWLR is regarded as containing LNB habitat and may be a migratory route for the species.
- The subject site and/or the proposed construction footprint will be greater than 450 $m^2$ in area.
- The proposed development will disturb or reduce the subject site surface area by more than 25%.

This AoS determines the potential significance of the impacts associated with the proposed development on the LNB endangered population.

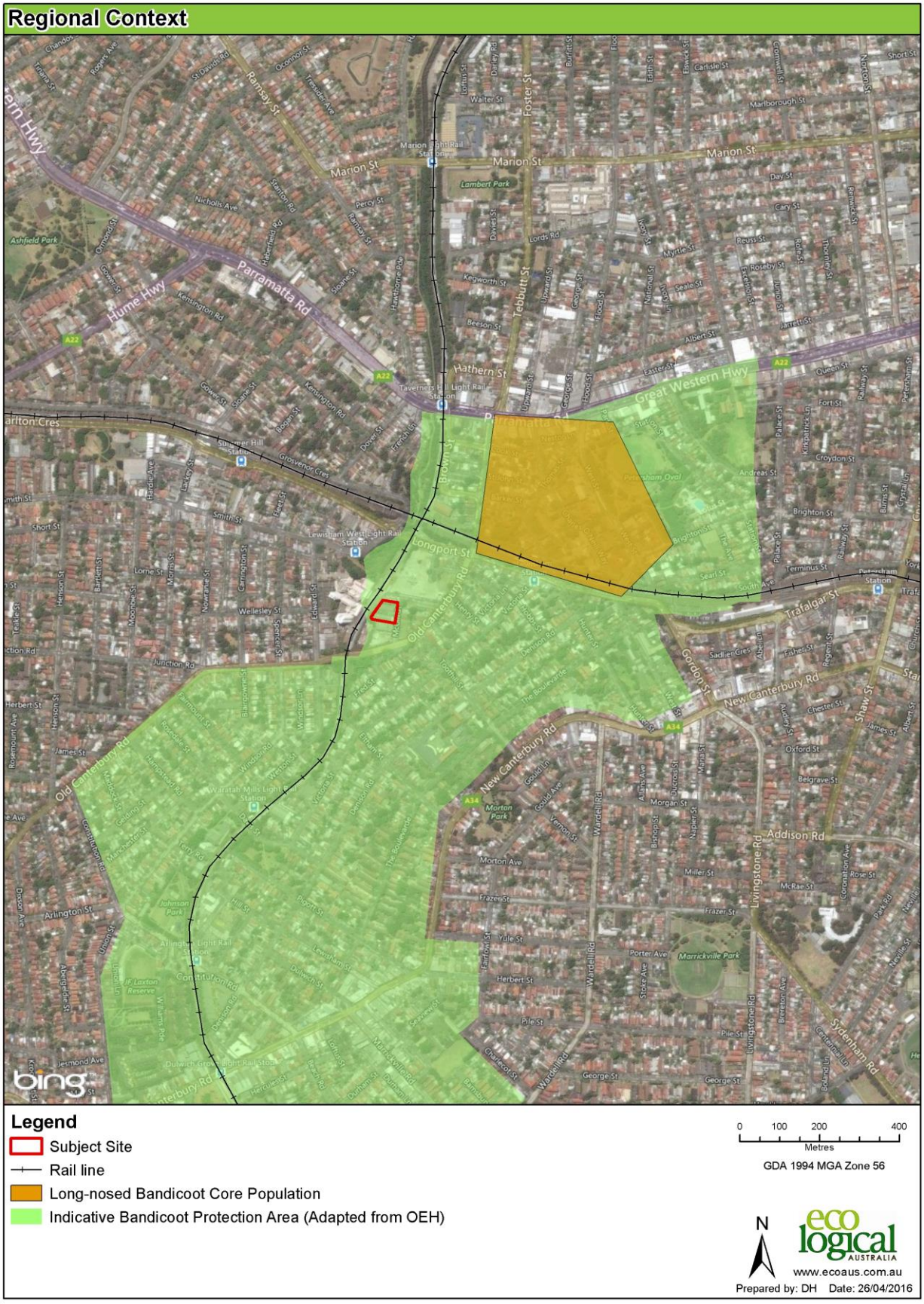


**Figure 1: Location of the subject site (4-12 McGill Street) with location of core LNB population**


**Figure 2: Subject site, extent of core population, and previous nearby LNB records**

# 2 Methods

## 2.1 Site and impact assessment

The site was visited by ELA ecologist Mitchell Scott on 21 April 2016 to:

- determine the suitability and potential of the habitat to support LNBs
- search for LNB nests and / or burrows:
    - LNBs use wall cracks, crevices, loose bricks or other openings that lead to sub-floor spaces for nesting (Leary et al. 2010; NSW Scientific Committee 2008)
- search for direct evidence of the species through sightings, and/or the presence of distinctive conical foraging digs, fur, carcasses and scats in accordance with DECC (2004).

The results of the field assessment are used to develop this AoS analysis.

## 2.2 Limitations

The survey and AoS report does not represent a full Flora and Fauna Assessment (FFA), but instead focuses on the following:

- identifying whether the site contains suitable LNB nesting and foraging habitats
- searching for direct evidence of LNB.

# 3 Results

A thorough search of the subject site failed to find evidence of LNB occupancy or use. The subject site consists of four adjacent factory buildings utilized as book-binding facilities, fabrics manufacture, imaging, marketing, creative spaces and storage areas. All four buildings are constructed on a concrete slab (**Figures 3-4**). The walls and floor on the inside of each building were inspected for cracks and crevices, and none were found, with the exception of a narrow wall crack within 12 McGill Street (**Figure 5**). One observation of *Rattus rattus* (Black Rat) scats was observed within 12 McGill Street (**Figure 6**).

Only one building (6-8 McGill Street) had a small rear courtyard (**Figure 7**) which was securely fenced and had no visible holes into the building or through the outer wall. The courtyard contained exotic weeds including *Ricinus communis* (Castor Oil) and *Ipomoea indica* (Morning Glory).

The outer walls of the entire subject site were inspected and no potential entrances were observed. Access to 4 McGill Street was not permitted, but its outer perimeter was observed to be secure.

The subject site is adjacent to the IWLR. Vegetation within this corridor consisted of a small number of scattered weeds including *Ricinus communis* (Castor oil), *Ipomoea indica* (Morning Glory), *Ligustrum sinense* (Small-leaved Privet), *Toxicodendron succedaneum* (Rhus Tree), *Lantana camara* (Lantana) and other annual exotic vegetation (**Figure 8**). In an adjacent area of *Pennisetum clandestinum* (Kikuyu) and rubble, no conical diggings characteristic of LNB were observed.

For these reasons the subject site it unlikely to provide refuge, foraging, nesting or breeding habitat for LNB.

The results of the AoS support the conclusion that the site is unlikely to support LNB. Due to a lack of suitable habitat at the subject site, the proposed development is unlikely to impact upon the threatened LNB population (see **Appendix A**).

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# 4 Recommendations and conclusion

No LNB or their required habitat were recorded at the subject site and thus it was determined that the LNB population is unlikely to occupy or use the subject site. This population is unlikely to be significantly impacted by the proposed development because:

- The subject site was occupied by a four adjacent buildings with a small secure courtyard, concrete floor and sealed walls.
- There is an absence of:
    - structurally rich native vegetation. Such areas would normally provide cover and nesting habitat for LNBs
    - there were no conical diggings observed in the grassy corridor adjacent to the subject site
- The concrete floor of the storage area would not allow the growth of mycorrhizal fungi and insect larvae. Both are the preferred food resources of LNB.
- The four buildings are constructed on a concrete 'slab on ground', which prevents cracks and holes leading to crawl spaces. Only one wall crack was observed (**Figure 5**), which was deemed unlikely to be accessible by LNB.
- A domestic cat has been observed adjacent to the subject site (14 McGill Street, Lewisham) in a previous report (ELA 2014). The presence of this introduced predator is likely to discourage LNB from using the subject site.

Consequently, further surveys and a Species Impact Statement (SIS) are not required for the proposed development.

It is also pertinent to note that a number of construction projects are being undertaken in the areas immediately adjacent to the subject site. The excessive noise and high level of human and vehicular activities associated with these construction works are likely to further prevent LNB from using the area.

Despite these conclusions, it must be acknowledged that individuals of this population are known to occur and persist in the region (Leary et al. 2010; NSW Scientific Committee 2008). Therefore, we recommend the implementation of a precautionary approach that aims to protect this endangered population. The following recommendations are aimed at supporting this:

- Restrict or limit the ability of LNBs to enter the subject site during the construction phase. A temporary mesh or sediment fence should be installed along the boundary of the subject site that adjoins the vegetated area at the western margins of the subject site. The fence should at least 80 cm in height and be flush with, or dug into the ground. This fence must not contain gaps large enough to allow a LNB to push its way into the subject site (pore size to be no more than 5 cm in diameter).
- Each morning before any construction activities begin, the site manager should inspect the entire length for gaps or holes. Any holes or potential entry points along the fence should be repaired immediately.
- If any holes are discovered that are large enough to allow LNBs to enter the construction site, a search of the subject site should be undertaken. The search should determine that no LNBs are

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present within the construction site before works begin. The search should focus on any deep excavations that have been left open overnight. Searches are not required if fence is intact.

- If a LNB is observed within the subject site, all construction activities must cease immediately until it is certain that all LNB have been removed or vacated.
- If individuals do not or are unable to vacate the subject site of their own accord they will require assistance to be relocated. An ELA ecologist should be contacted on 0429 494 886 (Dr Rodney Armistead) or NSW Wildlife Information, Rescue and Education Services Inc (WIRES) on 1300 094 737 to aid or provide advice on the removing any LNBs.
- It is suggested that these recommendations be communicated to all site staff via a Tool Box Talk prior to any works being undertaken at the subject site.

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**Figure 3: View of buildings within the subject site on McGill Street**

**Figure 4: A creative space used within the subject site**

**Figure 5: Wall crevice located on the ground floor of 12 McGill Street**

**Figure 6: Black rat (*rattus* rattus) scats, located in 12 McGill Street**

**Figure 7: Small courtyard located at the rear of 6-8 McGill Street, and adjacent to the IWLR**

**Figure 8: Inner West Rail Corridor adjacent to the western boundary of the subject site. The outside walls of the subject site is on the left of picture.**

# References

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# Appendix A: Assessment of Significance

**(a). In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.**

This section is not relevant because this is a threatened population.

**(b) In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.**

The actions that are likely to cause significant impacts to the LNB lifecycle are the removal of foraging, nesting, refuge and breeding habitat. LNB use small cracks and crevices that lead to crawl spaces in the footings of older buildings for shelter and nesting (Leary et al. 2010; NSW Scientific Committee 2008). Individuals from this population are known to forage among the sparse vegetation and grassy patches of a nearby urban hospital and residential dwellings. Although there was one open wall crevice within one building, this was deemed not accessible from the outside. Thus, none of these habitat types were recorded inside the subject site.

Therefore, due to an absence of suitable foraging, nesting and refuge habitat at the subject site, it is unlikely that the proposed development will impact upon the life cycle of the LNB that constitute this endangered population to such a level that it will compromise the population's viability and increase the likelihood of it becoming extinct.

**(c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:**

**i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or**

**ii. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.**

Not applicable, this is not an endangered ecological community or a critically endangered community

**(d) in relation to the habitat of a threatened species, population or ecological community:**

**i. the extent to which habitat is likely to be removed or modified as a result of the action proposed.**

The habitat at the subject site was considered unsuitable for LNBs. This was mainly due to the slab on base style of building, which does not provide suitable habitat. Therefore, the proposed development is unlikely to impact upon the regional distribution of the population.

**ii. whether an area of habitat is likely to become fragmented or isolated from other the importance of the habitat to be removed, modified, fragmented or isolated to the long term survival of the species, population or ecological community in the locality, of habitat as a result of the proposed action**

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It is unlikely that the proposed development will result in altering the existing levels of isolation associated with this endangered population. The core population of the species is occupies the grounds of the Lewisham Hospital (**Figure 2**) whilst scattered records occur throughout the Dulwich Hill, Petersham, Five Dock and Annandale areas (Leary et al. 2010; NSW Scientific Committee 2008). The subject site is located approximately 2 km from the Lewisham Hospital site.

**iii. whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),**

No critical habitat has been declared for this threatened LNB population.

**(e) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,**

No recovery plan or threat abatement plan has been prepared for this threatened LNB population. Despite this the subject site is located within MC's designated BPZ, which has been established to protect and promote the recovery of the species.

**(f) whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.**

The proposal does not constitute a key threatening process. Only a small portion of exotic weeds may be cleared from the subject site (within the outside courtyard). Further, the proposed re-development is unlikely to increase the level of weed infestation in the area.

***Conclusion to Assessment of Significance***

No LNB or evidence of their presence was recorded at the subject site. Further, it was deemed unlikely that the species would occur at the subject site based on the absence of suitable foraging and nesting habitat as well as the presence of a domestic predatory animal.

Therefore, on the basis of the above considerations, it is unlikely that the proposed development will significantly impact the LNB endangered population.

Consequently, a SIS is not required for the proposed development with respect to this species.

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