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20 January 2020

Our ref: 19SUT-14749

NBRS Architecture
Level 3, 4 Glen St
Milsons Point NSW 2061

Attention: Andrew Tripet

Dear Andrew,

Sutherland Entertainment Centre – Ecological Assessment/Biodiversity Development Assessment Report Waiver

Eco Logical Australia (ELA) was engaged by NBRS Architecture to undertake a biodiversity assessment of the Sutherland Entertainment Centre site. NBRS Architecture propose to lodge an application for the re-development of the Sutherland Entertainment Centre located at 22 and 30 Eaton Road, Sutherland (Lot 1 DP1253156 and Lot 7 Section 46 DP802). This proposal is a State Significant Development (SSD) under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) (SSD-10379). The biodiversity assessment is limited to the land on which the redevelopment will occur, i.e. Lot 1 DP1253156 (the "Study Area", **Figure 1**).

The project will require the removal of the following vegetation:

- One *Corymbia maculata* (Spotted Gum) tree surrounded by pavement near the front entrance to the Entertainment Centre on Eaton St (**Figure 2**);
- A planted garden bed containing one *Eucalyptus scoparia* (Wallangarra White Gum) tree, two small *Callistemon viminalis* (Weeping Bottlebrush) trees, native shrubs (2 X *Grevillea* "Robyn Gordon" and 2 X *Banksia spinulosa* (Hairpin Banksia)) and ground covers (*Lomandra confertifolia* and *L. glauca*) near the front entrance on Eaton St (**Figure 3**);
- A row of six planted native Paperbarks trees (5 X *Melaleuca styphelioides* (Prickly-leaved Tea Tree) and 1 X *M. quinquenervia* (Broad-leaved Paperbark)) in a narrow passage between two three-storey buildings (**Figure 4**);
- A courtyard garden to the south of the main Entertainment Centre building between Eton and Merton Streets, which is completely surrounded by two to three-storey high walls and only accessible from inside the Entertainment Centre. The floor of this courtyard is covered by AstroTurf and the area is dominated by one large *Eucalyptus resinifera* (Red Mahogany). Smaller trees include *Acmena smithii* (Lilly Pilly), *Archontophoenix cunninghamiana* (Bangalow Palm), *Howea forsteriana* (Kentia Palm) and *Melaleuca linariifolia* (Flax-leaved Paperbark) (**Figure 5**);

- Two small *Pittosporum undulatum* (Sweet Pittosporum) and one *Syncarpia glomulifera* (Turpentine) trees in a small garden bed also containing two *Acmena smithii* (Lilly Pilly) shrubs and a dense ground cover of *Clivia miniata* (Clivia's) near the Meriton St entrance (**Figure 6**).
- Three planted exotic trees (2 X *Ulmus parvifolia* (Chinese Elm) and 1 X *Liriodendron tulipifera* (Tulip Tree)) surrounded by pavement near the front entrance on Eaton St (**Figure 7**).

Under section 7.9(2) of the NSW *Biodiversity Conservation Act 2016* (BC Act), any state significant development application is to be accompanied by a Biodiversity Development Assessment Report (BDAR) *unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values*. To waive the requirements for a BDAR, it must be demonstrated that the site does not contain biodiversity values in accordance with Clause 1.5 of the BC Act and Clause 1.4 of the *Biodiversity Conservation Regulation 2017*.

In accordance with the Department of Planning and Environment Fact Sheet (2018), **Table 1** contains the BDAR waiver request information requirements and **Table 2** describes the impacts of the proposed development on biodiversity values. It was determined that the proposed development will not have a significant impact on biodiversity values, and as such, a BDAR waiver should be sought.

Regards,

Bronwyn Callaghan
Botanist

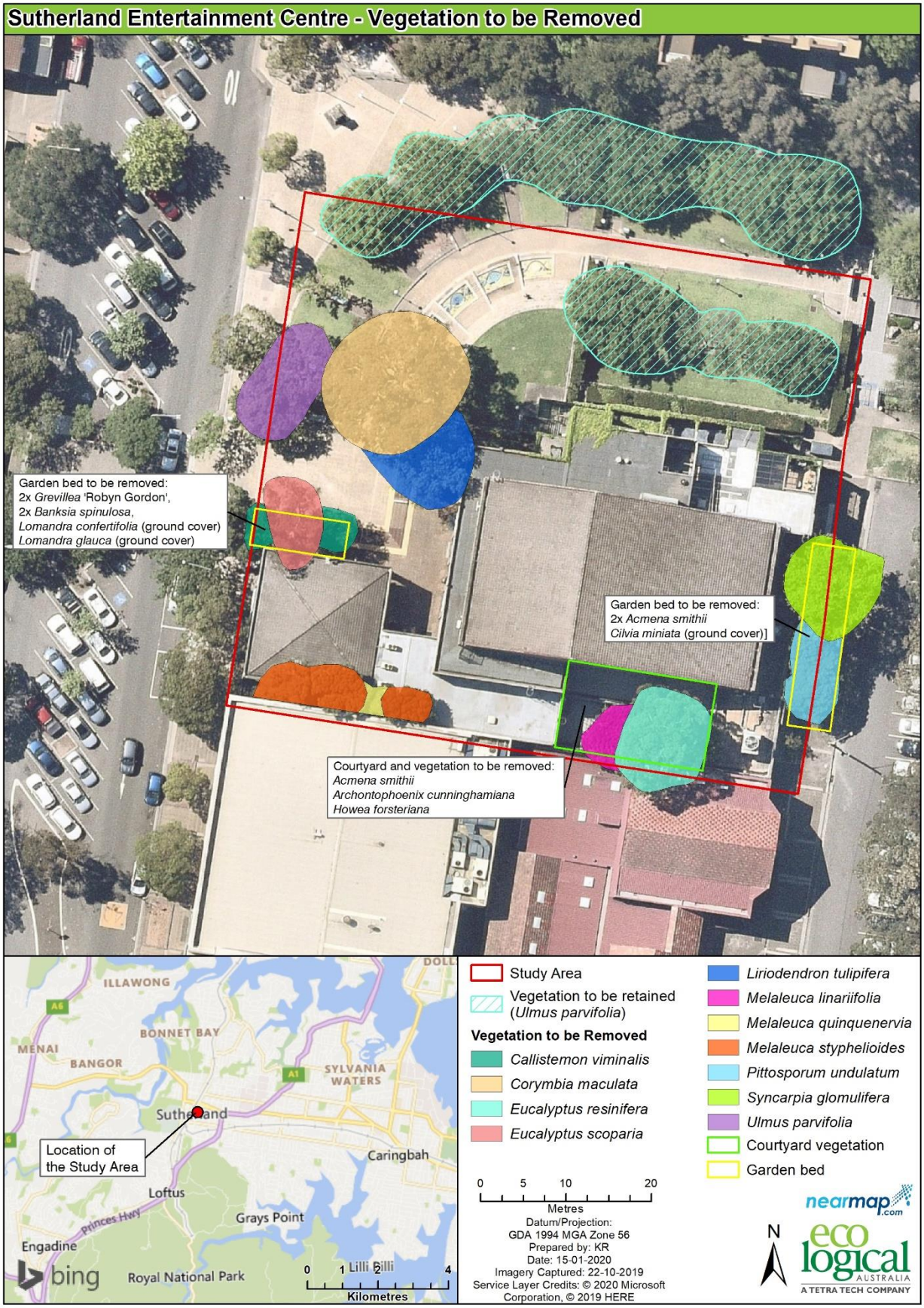


Figure 1: Site and location map

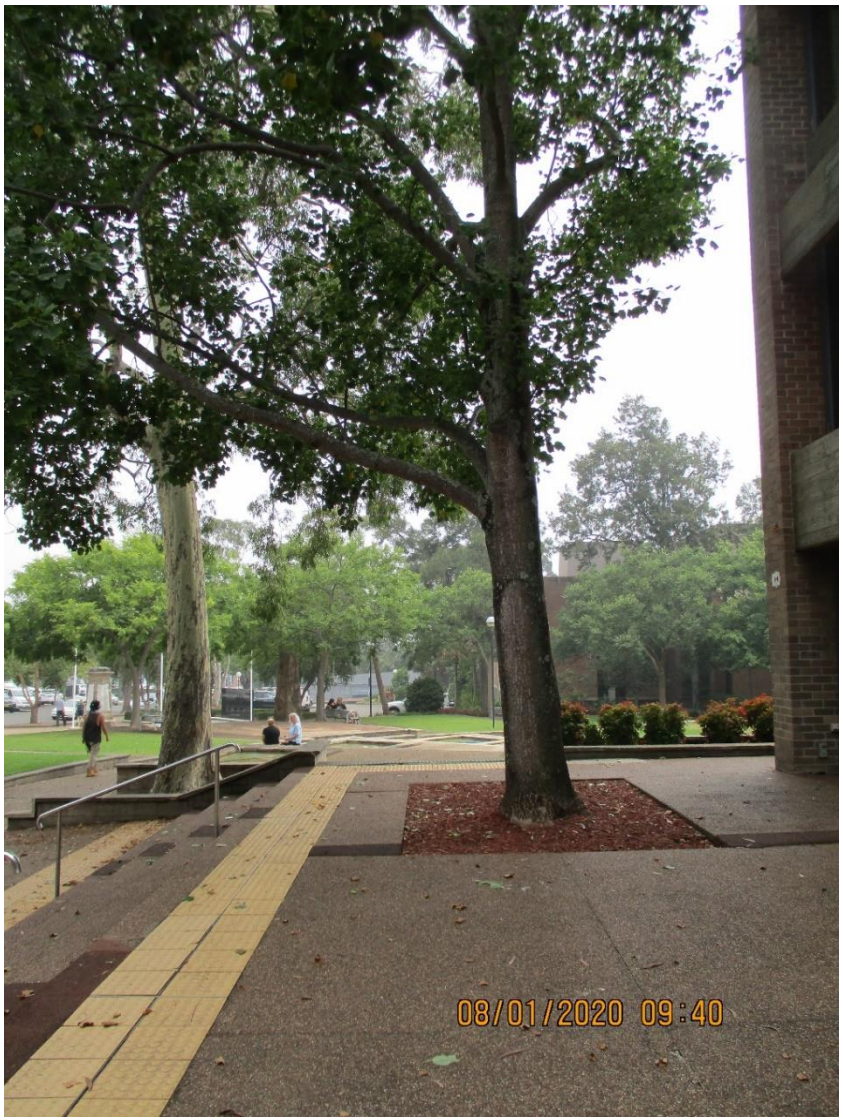
Figure 2: ***Corymbia maculata*** **tree proposed for removal near the front entrance of the Entertainment Centre on Eton St.**

Figure 3: Garden bed containing planted *Eucalyptus scoparia* tree and native shrubs and ground covers proposed for removal near the front entrance of the Entertainment Centre on Eton St.

Figure 4: Row of Paperbark trees (5 X *Melaleuca styphelioides* (Prickly-leaved Tea Tree) and 1 X *M. quinquenervia* (Broad-leaved Paperbark) proposed for removal in passageway between the Entertainment Centre and nearest buildings on Eton St side.

Figure 5: Courtyard garden proposed for removal.

Figure 6: Garden near back entrance to the Entertainment Centre on Meriton St, including 2 X *Pittosporum undulatum* trees and one *Syncarpia Glomulifera* (Turpentine) tree and a dense ground layer of Clivias.



a)

b)

Figure 7: Three exotic street trees proposed for removal near the front entrance of the Entertainment Centre on Eton St: a) *Liriodendron tulipifera* (Tulip Tree); b) 2 X *Ulmus parvifolia* (Chinese Elm).

Table 1: BDAR waiver request information requirement

Category	Details required	Information
Admin	• Proponent name and contact details • Project ID (Information to identify which SSD or SSI project the request relates to and where the project is up to in the assessment process). • Name and ecological qualifications of person completing TABLE 2.	• NBRS Architecture, Level 3, 4 Glen St, Milsons Point NSW 2061 • The project is called Sutherland Entertainment Centre and Peace Park, project ID: SSD-10379. The SEARs were issued on 8/11/19. • Bronwyn Callaghan, Botanist with 8 years' experience, B. Env. Sc. (Hons) UOW
Site details	• Street address, Lot and DP, local government area. • Description of existing development site, i.e., the area of land that is subject to the proposed development application • Location map showing the development site in the context of surrounding areas and landscape features. Satellite image of site in context of adjoining sites. • Site Map (to scale, ideally as a spatial shapefile).	• 22 and 30 Eaton Road, Sutherland. Lot 1 DP1253156 and Lot 7/46 DP802, Sutherland LGA • The proposed development site is currently occupied by the Sutherland Entertainment Centre. The portion of the land not covered by building is mostly paved with some small garden beds and isolated trees. • See regional inset map in **Figure 1** • See **Figure 1**
Proposed development	• Project Description providing enough information to enable an understanding of the nature and scale of the proposed development and any associated activities (including construction etc). • Proposed Site Plan	• Sutherland Shire Council propose to re-develop the current Sutherland Entertainment Centre. This will involve a major refurbishment of the building and outdoor areas to improve the interconnectedness between the Centre and the Peace Park, in particular by adding a north facing verandah and versatile foyer space. • Please see **Figure 8a & b** below
Impacts on biodiversity values		• Provide below in **Table 2**

Figure 8a: Proposed site plans – Landscape plan.

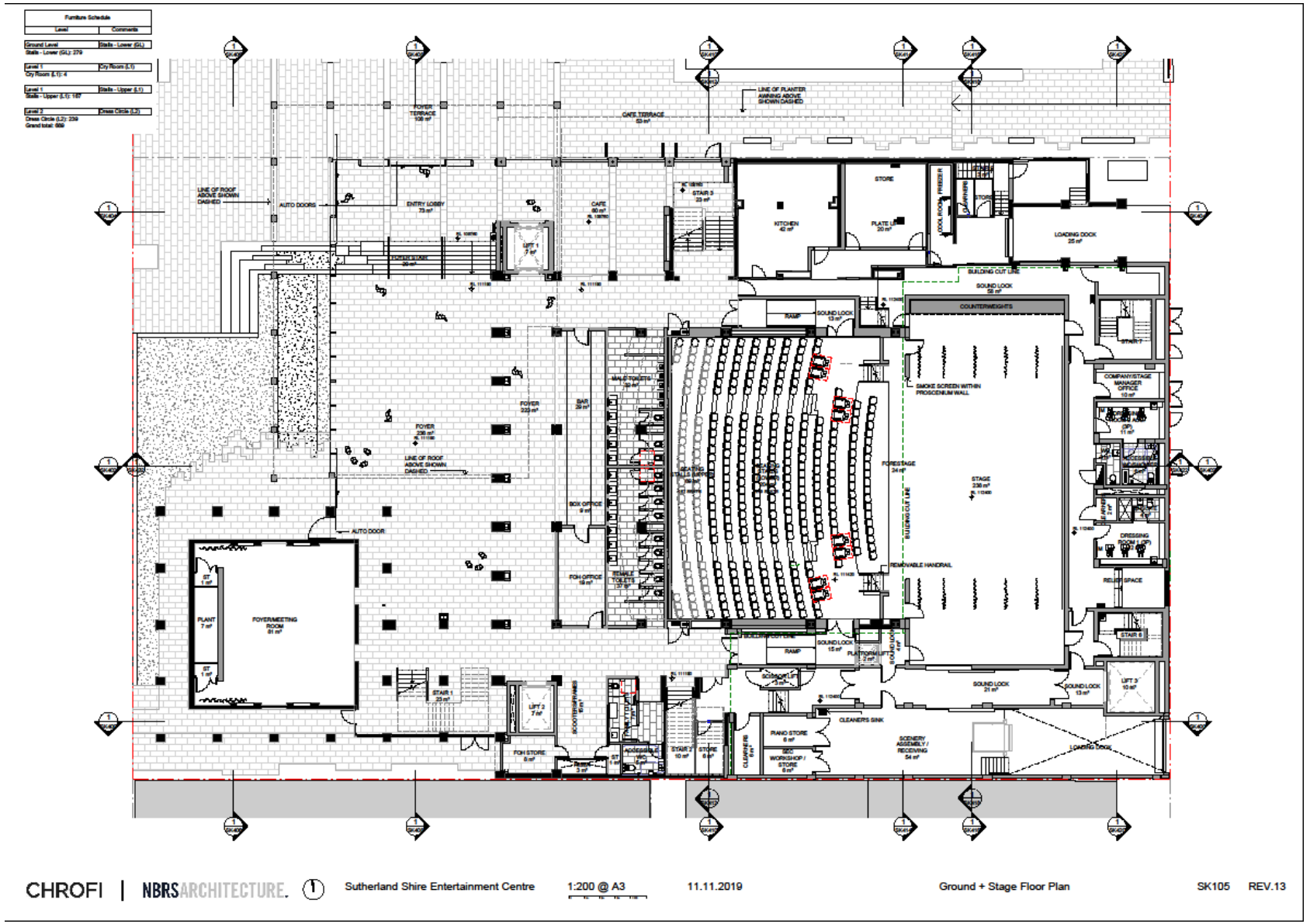


Figure 8b: Proposed site plans – ground floor plan.

Table 2: Criteria to assess biodiversity under the BC Act and BC Regulation

Legislation Criteria	Discussion of values within study area
Biodiversity Conservation Act (Clause 1.5)	

2 a) Vegetation integrity – being the degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state;	The vegetation requiring removal as part of the proposed development has all been planted as a part of the landscaping of the outdoor areas of the existing Entertainment Centre. This includes a mixture of exotic, native and endemic species planted in garden beds and as isolated trees in paved high-pedestrian areas as follows:
	• Three standalone exotic trees (2 X *Ulmus parvifolia* (Chinese Elm) and 1 X *Liriodendron tulipifera* (Tulip Tree)).
	• One standalone *Corymbia maculata* (Spotted Gum) tree, a species which occurs along the coastal plains and hills of New South Wales (**Figure 2**).
	• A row of six *Melaleuca spp.* trees in a narrow passage between three-storey buildings, which is accessible only from inside the Entertainment Centre (**Figure 4**):
	  ○ Five *M. styphelioides* (Prickly-leaved Tea Tree), which occurs naturally along the NSW coast north from Nowra, growing in moist situations, often along stream banks.
	  ○ One *M. quinquenervia* (Broad-leaved Paperbark), which occurs naturally along the NSW coast, north from Botany Bay, growing in coastal swamps and around lake margins.
	• A 10 X 5 m garden bed containing the following planted native trees, shrubs and ground layer species (**Figure 3**):
	  ○ One *Eucalyptus scoparia* (Wallangarra White Gum) tree, which occurs naturally in a restricted area of the northern tablelands of NSW near the border with Qld.
	  ○ Two small *Callistemon viminalis* (Weeping Bottlebrush) trees, which occurs naturally along the eastern Australian coast north from Grafton, growing naturally along watercourses.
	  ○ Native cultivar shrubs (2 X *Grevillea* "Robyn Gordon" and 2 X *Banksia spinulosa* (Hairpin Banksia)) and ground covers (*Lomandra confertifolia* and *L. glauca*).
	• A 20 X 7 m courtyard garden which is completely surrounded by two to three-storey high walls and only accessible from inside the Entertainment Centre (**Figure 5**). The floor of this courtyard is covered by AstroTurf apart from around the base of the following native trees and shrubs:
	  ○ One *Eucalyptus resinifera* (Red Mahogany) tree, which naturally occurs along the NSW coast, north from Jervis Bay, on deeper soils of medium to high fertility.
	  ○ One *Melaleuca linariifolia* (Flax-leaved Paperbark) tree, which occurs naturally within this region, growing on moist or swampy ground.
	  ○ One small *Acmena smithii* (Lilly Pilly) tree, which occurs naturally along the coast and ranges of eastern Australia, most commonly in rainforests and along watercourses.
	  ○ One *Archontophoenix cunninghamiana* (Bangalow Palm), which occurs naturally in the coastal areas of eastern Australia north from Batemans Bay, growing in or near rainforests, mostly in moist sites, besides creeks and on alluvial flats.

Legislation Criteria	Discussion of values within study area
	○ Three clumps of *Howea forsteriana* (Kentia Palm), a species which is endemic to Lord Howe Island. • A 15 X 3 m garden with a dense ground cover of *Clivia miniata* (Clivia's) near the Merton St entrance (**Figure 6**), containing the following native trees and shrubs: ○ One *Syncarpia glomulifera* (Turpentine) tree, which occurs naturally in coastal districts and lower ranges of eastern Australia, north from Murramarang N.P., often growing as an emergent near the margins of rainforests or in wet sclerophyll forests on heavier soils. ○ Two small *Pittosporum undulatum* (Sweet Pittosporum) trees, a common and widespread species occurring naturally on the coasts and ranges of eastern Australia, most commonly growing in rainforest and wet sclerophyll forest. ○ Two *Acmena smithii* (Lilly Pilly) shrubs. All trees and shrubs requiring removal have been planted. *Syncarpia Glomulifera* and *Pittosporum undulatum* are listed as indicative species of the critically endangered ecological community (CEEC) *Sydney Turpentine-Ironbark Forest of the Sydney Basin*. However, at this location, where the soil has been highly modified, the garden bed is surrounded by an extensive area of footpath and car park and the only understorey in the small garden bed in which these trees are located is a dense layer of the exotic garden plant *Clivia miniata*, these species are not considered to be part of the Sydney Turpentine Ironbark Forest CEEC. The study area has a long history of disturbance and development and the majority of the outdoor areas are paved, with only small openings for the standalone trees and garden beds. The garden beds appear to have been mulched heavily with pine chip, whilst the openings for the standalone trees are covered in gravel. The court yard garden is covered with AstroTurf and the passage containing the Melaleuca trees is regularly raked of all litter. The only native species present in the understorey or ground layer are planted horticultural varieties, e.g. *Grevillea* "Robyn Gordon" and *Lomandra confertifolia*. Due to historical and current land management, vegetation and soil within the study area has been highly modified and lacks species diversity and natural resilience. As such, the vegetation integrity of the study is low and is far from a near-natural state.
b) Habitat suitability – being the degree to which the habitat needs of threatened species are present at the particular site;	Suitable habitat for threatened species is highly limited within the study area. As the study area is highly-altered from a natural state in terms of available (uncovered) soil and vegetation, there is no habitat for any threatened flora species. Some of the native trees present in the study area (*Corymbia maculata, Eucalyptus resinifera, Eucalyptus scoparia, Melaleuca spp.* and *Syncarpia glomulifera*) may provide winter foraging habitat for the threatened Grey-headed Flying-fox. However, Grey-headed Flying-fox feed on a wide variety of native and exotic plants, particularly in urban areas and the distance travelled during foraging is extensive (up to 50km). Therefore, removal of these trees will not impact the overall availability of foraging habitat for this species. No hollows are present within the trees proposed for removal. Therefore, no roosting habitat is available within the study area for hollow-dependent threatened fauna species. The human-made structures present within the study area do not consist of potential roosting habitat for threatened microbat species such as culverts, bridges or railway tunnels.

Legislation Criteria	Discussion of values within study area
	The removal of the garden beds and trees listed above will not compromise habitat suitability for threatened species in the locality.
Biodiversity Conservation Act (Clause 6.3)	
a) the impacts of the clearing of native vegetation and the loss of habitat	The following planted trees and tall shrubs proposed for removal are not considered native vegetation, as they don't occur naturally within the region in which the study area is located: *Callistemon viminalis* (Weeping Bottlebrush), *Eucalyptus scoparia* (Wallangarra White Gum) and *Howea forsteriana* (Kentia Palm). The proposal will result in the removal of 14 trees which are native to region in which the study area is located (1 X *Acmena smithii* (Lilly Pilly), 1 X *Archontophoenix cunninghamiana* (Bangalow Palm), 1 X *Corymbia maculata* (Spotted Gum), 1 X *Eucalyptus resinifera* (Red Mahogany), 1 X *Melaleuca linariifolia* (Flax-leaved Paperbark), 5 X *M. styphelioides* (Prickly-leaved Tea Tree), 1 X *M. quinquenervia* (Broad-leaved Paperbark), 2 X *Pittosporum undulatum* (Sweet Pittosporum) and 1 X *Syncarpia glomulifera* (Turpentine). All these trees have been planted in small garden beds or are completely surrounded by pavement. The study area is highly-altered from a natural state through a long history of development, including loss of natural soil and native vegetation communities. Therefore, impacts to native vegetation are considered negligible. Some of the planted trees on the study area, listed above, may provide a minimal winter foraging resource for the Grey-headed Flying-fox. No fauna roosting habitat (e.g. hollow-bearing trees) are present onsite. Therefore, impacts to fauna habitat will be minimal.
(b) the impacts of action that are prescribed by the regulations.	Impacts of actions that are prescribed by the regulations are addressed below under *Biodiversity Conservation Regulation* **(Clause 6.1)**.
Biodiversity Conservation Regulation (Clause 1.4)	
a) Threatened species abundance – being the occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site	No threatened ecological communities were present within the study area. The small amount of vegetation present is not consistent with any listed Plant Community Type (PCT). All native plants within the study area have been planted into small garden beds or as part of the landscaping of the high-pedestrian paved area. *Syncarpia Glomulifera* and *Pittosporum undulatum* are listed as characteristic species of the critically endangered ecological community (CEEC) *Sydney Turpentine-Ironbark Forest of the Sydney Basin*. At this location, where the soil has been highly modified, the garden bed is surrounded by an extensive area of footpath and car park and the only understorey in the small garden bed in which these are located is a dense layer of the exotic garden plant *Clivia miniata*, these species are not considered to be part of the Sydney Turpentine Ironbark Forest CEEC. No habitat was available for threatened flora species due to the highly-altered state of the vegetation and soils within the study area. No threatened fauna species were observed within the study area during the site survey. Some of the native trees present in the study area (*Corymbia maculata, Eucalyptus resinifera, Eucalyptus scoparia, Melaleuca spp.* and *Syncarpia glomulifera*) may provide winter foraging habitat for the threatened Grey-headed Flying-fox. However, Grey-headed

Legislation Criteria	Discussion of values within study area
	Flying-fox feed on a wide variety of native and exotic plants, particularly in urban areas and the distance travelled during foraging is extensive (up to 50km). Therefore, removal of these three trees will not impact the overall availability of foraging habitat for this species. No hollows are present within the trees proposed for removal. Therefore, no roosting habitat is available within the study area for hollow-dependent threatened fauna species. The human-made structures present within the study area do not consist of potential roosting habitat for threatened microbat species such as culverts, bridges or railway tunnels.
b) Vegetative abundance – being the occurrence and abundance of vegetation at a particular site;	Vegetation within the study area is of very low abundance and poor condition relative to a native vegetation community. The majority of the study area contains the Entertainment Centre building. The surrounding outdoor areas are entirely paved apart from the garden beds and small openings (approximately 2 X 2 m) around the base of the 4 standalone trees (1 X native *Corymbia maculata* (Spotted Gum), 2 X exotic *Ulmus parvifolia* (Chinese Elm) and 1 X exotic *Liriodendron tulipifera* (Tulip Tree)) which is covered with gravel. The two garden beds (one near the front entrance of the Entertainment Centre on Eaton St and one near the back entrance on Merton St) contain planted native vegetation, with many of the species being horticultural cultivars and hybrids, e.g. *Grevillea* "Robyn Gordon" and *Lomandra confertifolia*. The Merton St garden has a dense ground layer of the exotic garden plant *Clivia miniata* (Clivia). These garden beds have a pine bark mulch and are likely to have been filled with soil sourced off-site. The passage way which contains the six planted *Melaleuca* spp. trees is very dark, has no other vegetation and the ground is regularly raked. The court yard garden is likewise very dark due tall buildings surrounding it on all sides. The ground is mostly covered by AstroTurf and the vegetation contained is a mixture of planted native trees and shrubs. Vegetation within the study area is not consistent with any remnant native vegetation communities and the study area has a long history of being clear of native vegetation, as evident in historic imagery from 1943 (SixMaps), which show the study area and all surrounding land as cleared suburban land.
c) Habitat connectivity – being the degree to which a particular site connects different areas of habitat of threatened species to facilitate movement of those species across their range;	Vegetation within the study area is highly fragmented and does not contribute to habitat connectivity across the local landscape. Vegetation within the study area and adjacent areas is limited to individual trees surrounded by pavement and isolated garden beds. Movement of threatened species across the study area would be limited by the existing large buildings within and adjacent to the study area and the lack of vegetation connectivity. The study area does not provide any significant level of connectivity to facilitate movement of threatened species across their range. Only highly mobile threatened species, such as Grey-headed Flying-fox may use the vegetation for foraging.
d) Threatened species movement – being the degree to which a particular site contributes to the	The study area and surrounding area contains minimal vegetation which is fragmented by the existing Entertainment Centre, buildings adjacent to the study area, roads, car parks and paved pedestrian areas. Movement for less mobile threatened fauna such as mammals is highly unlikely due to existing buildings and pavement within the study area and the extensive car parks, large buildings

Legislation Criteria	Discussion of values within study area
movement of threatened species to maintain their lifecycle;	and pavement adjacent to the study area. Opportunities for movement across the study area for mobile threatened fauna including birds and bats are available, however is limited to the fragmented small planted trees. The study area is not considered to be significant for the movement of any threatened species to maintain their lifecycle.
e) Flight path integrity – being the degree to which the flight paths of protected animals over a particular site are free from interference; and	The landscape within and surrounding the study area is highly urbanised. The buildings both within and adjacent to the study are two - three storeys high and have very little space between them. The flight paths of protected animals over the study area may currently be restricted due to existing buildings and unlikely to be further impacted by the proposed redevelopment. The removal of the identified trees and garden beds will not cause any further impacts to the flight paths of protected animals.
f) Water sustainability – being the degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	No natural water courses are present within the study area. The study area is highly developed and does not contain water bodies or contribute to hydrological processes that sustain threatened species or ecological communities within or adjacent to the study area. The removal of the identified trees and garden beds will not impact on water quality, water bodies or hydrological processes.
Biodiversity Conservation Regulation (Clause 6.1)	
a) the impacts of development on the following habitat of threatened species or ecological communities: *(i) karst, caves, crevices, cliffs and other geological features of significance,* *(ii) rocks,* *(iii) human made structures,* *(iv) non-native vegetation*	The proposed development will not impact on any karst, caves, crevices, cliffs or any other geological features of significance, nor will it impact on any surface rocks. The human-made structures present within the study area do not consist of potential roosting habitat for threatened microbat species such as culverts, bridges or railway tunnels. Non-native vegetation within the study area includes two small *Ulmus parvifolia* (Chinese Elm) trees and one X *Liriodendron tulipifera* (Tulip Tree). These are isolated standalone trees, entirely surrounded by pavement in a high-pedestrian area near the front entrance of the Entertainment Centre on Eaton St. The two Chinese Elms are small trees are small (<7 m tall) and close to the road and large parking area, whilst the Tulip tree is taller (>10 m) but is situated very close to the Entertainment Centre building. None of these trees contain any habitat features, such as hollows. Being contained entirely in a paved area they do not contribute to ground level habitat features, such as litter or coarse woody debris, which would be regularly removed as a part of garden maintenance. For these reasons none of these exotic trees are likely to provide any habitat for threatened species.
(b) the impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range,	Vegetation within the study area is highly fragmented and does not contribute to habitat connectivity across the local landscape. Vegetation is limited to individual trees surrounded by pavement and isolated garden beds. Movement of threatened species across the study area would be limited by the existing large buildings within and adjacent to the study area and the lack of vegetation connectivity.

Legislation Criteria	Discussion of values within study area
	The study area has poor connectivity to facilitate movement of threatened species across their range and would be limited to highly mobile threatened species such as bats and birds.
(c) the impacts of development on movement of threatened species that maintains their lifecycle,	The study area contains minimal vegetation in the form of individual planted street trees and landscaped garden beds. Movement across the study area for less mobile threatened fauna such as mammals is highly unlikely due to existing development within the study area. Opportunities for movement across the study area for mobile threatened fauna including birds and bats are available, however limited due to the large buildings and very sparse vegetation. Due to the limited exposed soil within the study area, there would be very little opportunity for genetic dispersal of threatened flora species in the form of germinating seeds. Further, given the limited vegetation on site, dispersal of pollen from threatened plants via insect or other animal vectors through the study area is likewise unlikely. The study area is not considered to be significant for the movement of any threatened species to maintain their lifecycle.
(d) the impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from underground mining or other development),	No natural water courses are present within the study area. In its current state, the study area is highly developed and does not contain water bodies or contribute to hydrological processes that sustain threatened species or ecological communities within or adjacent to the study area. The removal of the garden beds and trees will not impact on water quality, water bodies or hydrological processes.
(e) the impacts of wind turbine strike on protected animals,	N/A – The development of wind turbines is not proposed within this development application.
(f) the impacts of vehicle strike on threatened species of animals or on animals that are part of a threatened ecological community.	The study area contains minimal vegetation which is fragmented by the existing building, pavement and the adjacent roads, car parks and the surrounding commercial areas. Impacts of vehicle strikes on threatened species would therefore not increase as a result of the proposed redevelopment of the study area.