

## CONNECTED CORRIDORS FOR BIODIVERSITY – MAPPING METHODOLOGY

### BACKGROUND

The Connected Corridors for Biodiversity project (CCB), funded through the Sydney Coastal Council Group's (SCCG) Salty Communities program, has been implemented by the Southern Sydney Regional Organisation of Councils (SSROC) in collaboration with Greater Sydney Local Land Services (GS LLS). The project encompasses the 23 pre-amalgamation Council areas shown in Figure 1 (comprising all Councils within the SSROC and SCCG areas, plus Strathfield Council).



**Figure 1 Councils within the CCB project area**

One of the aims of the project was to produce a habitat corridor map, based largely on existing habitat mapping, for use by these Councils as a tool to facilitate increased habitat connectivity across the project area, and to thereby increase resilience of biodiversity to climate change and other threats.

## MAPPING METHODOLOGY

Greater Sydney Local Land Services (GS LLS) provided the GIS expertise required to prepare the CCB map.

The methodology used varied between Council areas, depending on whether or not existing habitat corridor mapping was available for the area, as described below.

### ***Methodology for Councils with existing habitat corridor mapping***

Existing habitat corridor mapping was used as the basis of the CCB habitat corridor map for the Council areas for which it was available. This is because this mapping was based on extensive previous local studies, is the basis of well-established Council programs and/or has been accepted by the community, with the mapping adopted into Development Control Plans in some cases.

For some areas, changes were incorporated into the existing habitat corridor mapping where requested by Council staff (for example, to reflect changes in their areas since the mapping was prepared).

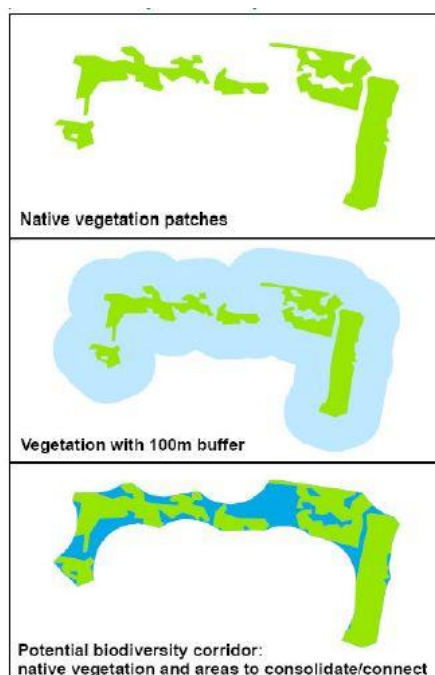
### ***Methodology for other Councils***

Due to the highly fragmented nature of most of the very urbanised project area, all existing recognised habitat, plus potential habitats (such as green open space including playing fields, and school, university and hospital grounds) were considered as important for facilitating connections across the landscape, and spatial layers for these features were therefore compiled for use in preparation of the CCB habitat corridor map for the other Council areas. Table 1 indicates the spatial layers used.

**Table 1 Spatial layers used in preparation of the CCB habitat corridor map**

|   |
|---|
| Native Vegetation of the Sydney Metropolitan Area (OEH, 2013)   |
| Land Use Zoning from Local Environmental Plans: <ul style="list-style-type: none"> <li>➤ E1 – National Parks &amp; Nature Reserves</li> <li>➤ E2 – Environmental Conservation</li> <li>➤ E3 – Environmental Management</li> <li>➤ RE1 – Public Recreation</li> <li>➤ RE2 – Private Recreation</li> <li>➤ SP1 – Special Activities (Cemeteries)</li> <li>➤ SP1 – Special Activities (Recreation – Outdoor)</li> <li>➤ SP2 – Infrastructure (Educational Establishments)</li> </ul> |
| Detailed habitat mapping where provided by Councils   |
| Rivers, creeks, natural & artificial wetlands from the NSW Govt spatial database  |
| Riparian Zone (50 m either side of bank)  |
| Coastal Zone (50 m either side of shoreline)  |

These layers were combined, and potential habitat linkages between areas of existing and potential habitats were identified by placing a 100m buffer around the existing and potential habitat and clipping the resulting buffered polygons back to their outline, as illustrated in Figure 2. Where gaps remained, a minimum of 50m either side of railway corridors or roads was used as a linkage and incorporated into the corridor map.



**Figure 2 Methodology used to identify habitat corridor location and extent**

Existing mapped habitat that fell outside of the clipped buffers was not included as part of the corridors.

The mapping for those Council areas with existing habitat corridor mapping and those without was then combined to produce the CCB habitat corridor map. The map was refined based on feedback received from Council biodiversity/bushland management staff. Where received, feedback from other land managers within the project area was also incorporated.

The resultant habitat corridor map was classified into four categories. Table 2 indicates the categories and the spatial layers associated with each.

**Table 2 CCB habitat corridor map categories and associated spatial layers**

| Categories            | Spatial layers used   |
|-----------------------|---|
| National Parks Estate | Land Use Zoning from Local Environmental Plans: <ul style="list-style-type: none"> <li>E1 – National Parks &amp; Nature Reserves</li> </ul>   |
| Priority Habitats     | Priority habitats identified in existing habitat corridor mapping, where this was available, and/or the following (depending on feedback received from Council staff): <ul style="list-style-type: none"> <li>National Parks Estate (as above)</li> <li>Native vegetation mapping for the Sydney Metropolitan Area (OEH, 2013)</li> <li>Land Use Zoning from Local Environmental Plans: <ul style="list-style-type: none"> <li>E2 – Environmental Conservation</li> </ul> </li> <li>Detailed habitat mapping where provided by Council staff</li> </ul> |

|                     |  |
|---------------------|--|
|                     | <ul style="list-style-type: none"> <li>• Natural &amp; artificial wetlands from the NSW Government spatial database</li> <li>• Any additional habitat areas identified by Council staff during the review phase</li> </ul>   |
| Supporting Habitats | <ul style="list-style-type: none"> <li>• Vegetation mapped as 'Urban &amp; Exotic' by OEH (2013), which comprises 'generalised boundaries of mixed vegetation in a highly urbanised environment'</li> <li>• Any additional areas supporting habitat areas identified by Council staff during the review phase</li> </ul> |
| Supporting Areas    | All remaining areas within the corridors   |

The final version of the CCB habitat corridor map will be hosted on the GS LLS website, and the spatial data will be provided to Council staff. The map will then be updated annually as requested by Council staff and other land managers until 2020.