



August 2020

Assessment of biodiversity impacts



The impacts from planned urban growth and transport infrastructure have been assessed up front in the planning process to avoid, minimise and mitigate impacts to biodiversity.

Purpose of the assessment

The *Cumberland Plain Assessment Report* ([Assessment Report](#)) provides an independent evaluation of the *Draft Cumberland Plain Conservation Plan* (the Plan) to determine if the proposed conservation program meets the requirements of Commonwealth and NSW biodiversity legislation.

The Assessment Report considers how development proposed in the Plan may affect biodiversity values and other protected matters, and the commitments made to avoid, mitigate and offset impacts. A [summary](#) of the Assessment Report is available as part of the Plan package.

The area assessed

The Assessment Report examines the impacts to biodiversity in urban capable lands across four nominated areas: Wilton Growth Area, Greater Macarthur Growth Area, Greater Penrith to Eastern Creek Investigation Area, and Western Sydney

Aerotropolis. The report also examines the impacts to biodiversity of four major infrastructure corridors proposed within the Plan Area.

Land in these areas that is protected, owned by the Commonwealth, already developed or subject to a pending development approval was excluded from the assessment.

Legislative requirements

The Assessment Report aims to satisfy the requirements of NSW and Commonwealth biodiversity legislation for assessing the potential impacts of development under a strategic conservation plan.

The NSW *Biodiversity Conservation Act, 2016* (BC Act) requires the [Biodiversity Assessment Method](#) (BAM) to be applied when assessing the impacts on biodiversity values. The assessment carried out in the Plan Area was also considered the Terms of Reference made under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Data collection

The first stage of the assessment was to identify and map biodiversity values. Vegetation mapping was based on previous mapping in Western Sydney (by the former Office of Environment and Heritage). Within the nominated areas the map was updated by analysis of satellite imagery and other data, as well as surveys and field checking.

A total of 258 vegetation survey plots consistent with the BAM were completed in the nominated areas to confirm vegetation types and determine vegetation condition.

Data on threatened species was extracted from BioNet. Surveys were also completed on foot across large areas of the urban capable land to locate any threatened species.

Assessments of habitat and potential impacts for each species were based on predictive habitat modelling, and in some cases the opinions of approved experts.

Assessment of impacts

The assessment identified and quantified the impacts to biodiversity values and other protected matters resulting from the proposed clearing of native vegetation and the urban growth and infrastructure development facilitated by the Plan.

The impacts were assessed by following the BAM and Terms of Reference. An online BAM calculator quantifies the impacts, and offsets that are potentially needed to address impacts to biodiversity values.

Native vegetation

The total area of vegetation potentially affected by urban development and major infrastructure corridors in the nominated areas is 1777.8 hectares (see Table 1). An additional 89 hectares of vegetation listed under the EPBC Act will be impacted by major transport corridors in the Plan Area outside the nominated areas.

Threatened ecological communities

The Assessment Report identifies potential impacts to eight threatened ecological communities listed under the BC Act in the nominated areas. Five of these communities are also listed (or subject to listing) under the EPBC Act (see Table 2). Two ecological communities - Cumberland Plain Woodland and River Flat Eucalypt Forest (subject to listing under the EPBC Act) - will be impacted by the transport infrastructure corridors in the Plan Area outside the nominated areas.

Table 1. Impact to native vegetation in nominated areas

Nominated area	Impact (ha)
Wilton Growth Area	663.5
Greater Macarthur Growth Area	360.8
Western Sydney Aerotropolis	311.8
Greater Penrith to Eastern Creek Investigation Area	156.8
Major infrastructure corridors)	285.0
TOTAL	1,777.8

Table 2. Impact to threatened ecological communities in the nominated areas

Threatened ecological community	Impact (ha)
Shale Gravel Transition Forest	52.2
Cooks River/Castlereagh Ironbark Forest	36.9
Freshwater Wetlands on Coastal Floodplains	2.1
Moist Shale Woodland	0.1
River-Flat Eucalypt Forest	165.1
Cumberland Plain Woodland	1014.6
Shale Sandstone Transition Forest	487.7
Swamp Oak Floodplain Forest	19.2
TOTAL	1,777.8

Threatened species

The Assessment Report identifies impacts to the potential habitat of 49 threatened flora and fauna species listed under the BC Act and/or EPBC Act. Of these 49 species, 15 are identified as being at risk of residual adverse impacts from development under the Plan (see Table 3).

Direct offsets for these species will be targeted through the Plan's conservation program. This includes offsetting the potential impact to 260 hectares of important koala habitat in the Wilton and Greater Macarthur nominated areas.

Table 3. Species potentially at risk from residual impacts of development

Species name	Common name
<i>Cynanchum elegans</i>	White-flowered Wax Plant
<i>Dillwynia tenuifolia</i>	–
<i>Epacris purpurascens</i> var. <i>purpurascens</i>	–
<i>Grevillea juniperina</i> subsp. <i>juniperina</i>	Juniper-leaved Grevillea
<i>Hibbertia fumana</i>	–
<i>Hibbertia puberula</i>	–
<i>Lathamus discolor</i>	Swift Parrot
<i>Marsdenia viridiflora</i> subsp. <i>viridiflora</i> - endangered population	
<i>Meridolum corneovirens</i>	Cumberland Plain Land Snail
<i>Myotis macropus</i>	Southern Myotis
<i>Persoonia nutans</i>	Nodding Geebung
<i>Phascolarctos cinereus</i>	Koala
<i>Pimelea spicata</i>	Spiked Rice-flower
<i>Pultenaea parviflora</i>	–
<i>Pultenaea pedunculata</i>	Matted Bush-pea

Offsetting the impacts

The department has prepared the Plan as part of the environmental approvals for future development in the Plan Area. The Plan supports the delivery of infrastructure, housing and jobs in a planned way that also protects and maintains key biodiversity values in the region.

The Assessment Report includes an evaluation of the conservation program established through the Plan to determine if it will adequately address the identified impacts on biodiversity values and other matters protected under Commonwealth and NSW biodiversity legislation.

The evaluation of the impacts against the Plan's conservation program has identified that the Plan meets all legislative requirements to ensure all impacts to biodiversity values and other protected matters will be adequately avoided, mitigated and offset in perpetuity in the Cumberland subregion.

For further information see the fact sheet on the conservation program.

If English is not your first language, please call 131 450. Ask for an interpreter in your language and then ask to be connected to our Information Centre on 1300 305 695.

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