

38 Flora

38.1 Introduction

The conservation of existing native vegetation is a key objective of the project. This section outlines the existing vegetation, the effects of the project and proposed management measures for the Port Wakefield Road Upgrade.

Refer to Part D, Section 23 for a summary of the legislative requirements and the assessment methodology used, and details of pre-European vegetation present in the region and study area.

38.2 Existing conditions

The areas in the Port Wakefield Road Upgrade area are mostly degraded with nil or few remnant areas of native vegetation communities and species. The exception is the SA Water land at Bolivar, which contains an assemblage of communities and species that are almost unique in the region. This is primarily due to its location in the flood plain of the Little Para River and the conservation of these habitat areas.

The combined agricultural and urban character of the region dominates the vegetation. Most of this section of the study area is dominated by modified environments and areas of planted native vegetation, such as those adjacent to the Little Para River. A summary of native and introduced vegetation present in the area is given below.

38.2.1 Vegetation communities

As described by Kraehenbuehl (1996) and considered in the database of the SA Biological Survey (DEH, SA), there is very little remnant native vegetation and native flora present along Port Wakefield Road.

Detailed community and species information is available only for two sites, namely:

- the SA Water land on the flood plain of the Little Para River, and land areas along the length of this river which retain areas of remnant river red gum woodland (Smith and Brewer 2000, Berkinshaw 2004, Berkinshaw 2004a)
- the area from Dry Creek to the water treatment wetlands and adjacent samphire shrublands around Port Wakefield Road and Salisbury Highway at the southern end of the study area (PPK Consultants 1992, Cox 1993, Brown & Root 2000, KBR 2004).

38.2.2 Native flora species recorded in the study area

Full species list of plants identified in the project area are available in the *Flora Technical Paper*.

Native vegetation along Port Wakefield Road has been almost completely cleared.

Along the Little Para River and its flood plain is remnant river red gum woodland over a modified understorey. Common reed, cumbungi and spiny sedge are present along the watercourse corridor, in addition to a wide range of weed species. The river red gum woodland is the only remnant overstorey community in the study area. Several mature river red gums exist in the median and roadside reserve just north of the Little Para River.

Tall grassland of common reed is present along the Little Para River, in constructed stormwater detention basins and water treatment wetlands on the flood plain and in open drains in the region.

A complex of sedgelands originally occurred in the region. Remnants of all communities still occur. Cumbungi also occurs in similar sites to that of the common reed, although it tolerates higher salinity conditions and is also present in drains, wetlands and other sites which retain water. It forms an important component of the constructed wetlands at the southern end of the route.

Large areas of planted native vegetation and stormwater treatment wetlands occur throughout the region.

Threatened species

Figure 38.1 indicates the location of some of the most important threatened species identified in the Port Wakefield Road Upgrade section of the project.

Three nationally threatened species are predicted to occur in the broader region. Further information can be found in Part D, Section 23, regarding the nationally threatened species.

State-listed species (NPW Act) include black cottonbush (Endangered), hoary sea-rush (Vulnerable), barren canegrass and *Gahnia filum* (Rare), which occur at Bolivar on SA Water land, west of Port Wakefield Road.

Rosinweed, cottonbush and round-leaved *Wilsonia* (all regionally Vulnerable) occur on SA Water land at Bolivar with a small population of rosinweed recorded in the Whites Road drain. All sites are to the west of the Port Wakefield Road and are not affected by the road upgrade.

Lignum (regionally Rare) is associated with the Little Para River and its flood plain. It is present as isolated clumps or a few bushes along Port Wakefield Road and is more extensively distributed on SA Water land and in patches along the watercourse.

38.2.3 Introduced flora species

The understorey in the region, including along and adjacent to Port Wakefield Road, is dominated by introduced and invasive plant species. Some areas include shrub and overstorey weed species, especially in and adjacent to the Little Para River. The *Flora Technical Paper* includes a list of all introduced species recorded.

38.3 Effects of Port Wakefield Road Upgrade on the existing environment

The Port Wakefield Road corridor is highly disturbed and dominated by a range of annual and perennial weed species.

A number of the mature river red gums within the existing Port Wakefield Road corridor near Little Para River may require removal to accommodate the proposed works. The extent of these removals will be determined during detailed design and any approvals required will be obtained.

A few isolated clumps or bushes of lignum may be removed from the Port Wakefield Road corridor during works but can be transplanted to an appropriate location.

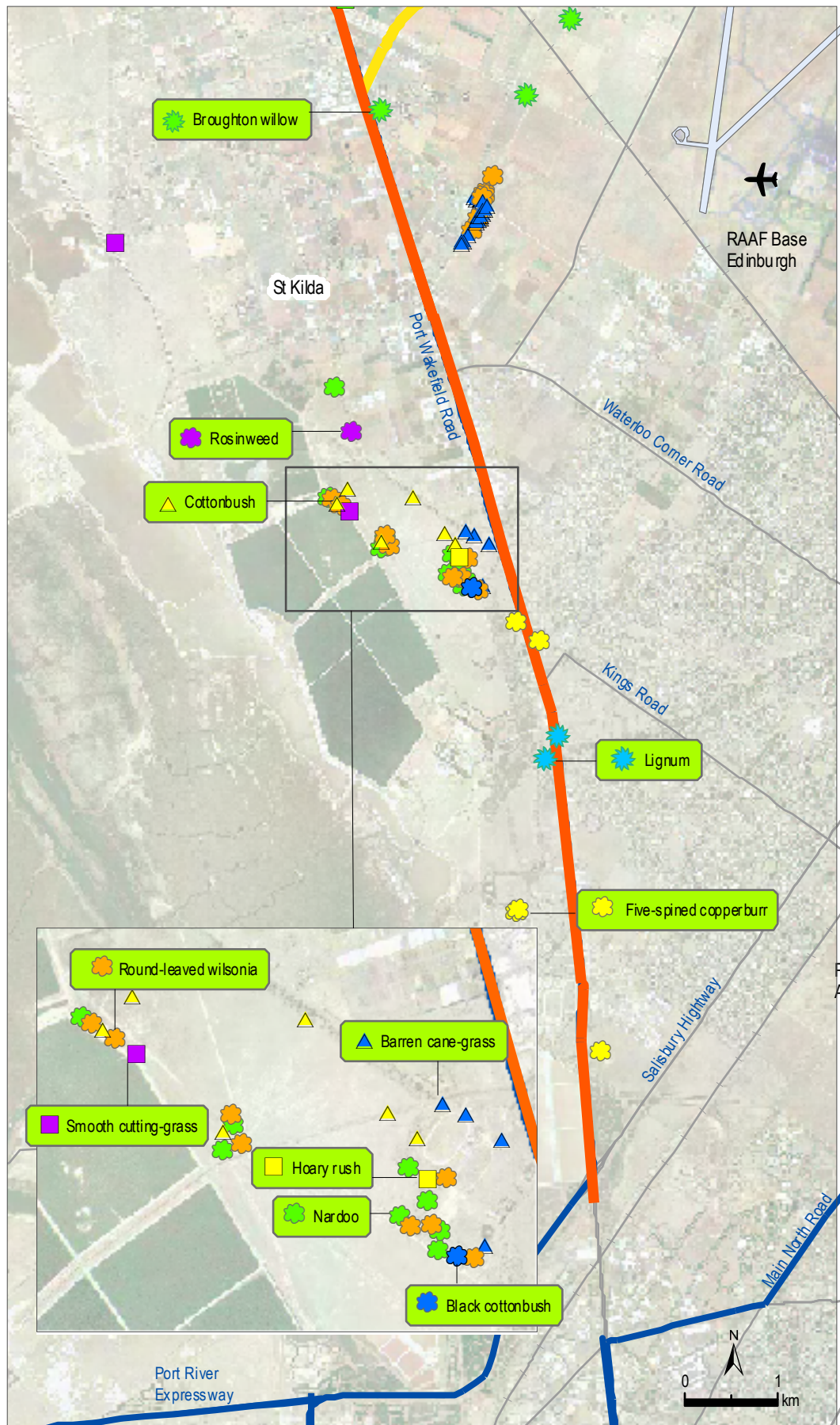


Figure 38.1 Significant native flora species along Port Wakefield Road

38.4 Environmental management

The principles and measures adopted to minimise effects during planning and design and during construction are the same as those described in Section 23 and these will therefore be adopted.

38.5 Conclusion

Port Wakefield Road passes through a disturbed and degraded area with relatively few native vegetation and flora values. Most of the roadside verges are weed infested or contain areas of planted native vegetation.

Port Wakefield Road Upgrade is likely to have minimal impacts on flora species given the disturbed nature of the region. Remnants of vulnerable, threatened or nationally listed species have not been found and are highly unlikely to occur in the areas where actual works are proposed or are small or isolated enough to be of low to nil significance. Further habitat fragmentation from both a flora and fauna perspective is likely to occur with the clearance of some areas of vegetation. Given the already degraded nature of the environment, the project is unlikely to seriously affect flora and fauna of the region.

A comprehensive landscape management plan will be prepared to provide a significant environmental benefit for any vegetation requiring removal.

In addition, a weed management plan will be prepared for the construction phase to minimise the spread of weeds during construction.

The project will not have a significant effect on any matter of national environmental significance and therefore no referral under the EPBC Act has been made.