

# Risk and Seasonal Surveying Methodology

## Methodology for Risk Assessment

A preliminary desktop assessment of the SWLP has been undertaken using available GIS spatial datasets. The purpose of this was to refine pipeline alignments to avoid impacts on known protected flora locations and fauna habitat based on DELWP data sets. This will be further verified during the design and assess phase prior to on-ground survey of the assessment corridor.

Desktop assessment of the wider Project Extent has been undertaken to provide an accurate reflection of the type of flora, fauna and vegetative communities that may be present within the broader survey corridor. This included an EPBC Act Protected Matters Search as well as interrogation of all valid State spatial datasets.

Data extracts from the Victorian Biodiversity Atlas (VBA) have been based on a 5km search buffer surrounding the Project Extent. A 1km buffer was applied to the Project Extent for the EPBC Protected Matters Search Tool (PMST). The extensive search areas applied during the flora and fauna database search are used to compensate for a potential lack of historical surveys within the Project Extent and its immediate surrounds. This approach also allows for the identification of mobile species such as birds which may have the potential to interact with the Project Extent on an intermittent and opportunistic manner. Analysis of this data has taken into consideration the ecological value and attributes of the Project Extent when compared to the broader landscape.

An assessment has been undertaken to assess the likelihood of Commonwealth and State listed threatened species occurring within proximity of the Project Extent based on desktop information. This method considers the habitat requirements of threatened species, as identified by desktop searches, along with how recently the species has been recorded within the search extent and quantities of past records. Due to this assessment being based on desktop information only, habitat for species identified in VBA search is unknown. Therefore, habitat for these species has been assumed present within and adjacent to the Project Extent for the purposes of this assessment. Subsequently, a greater emphasis is placed on how recent species were last recorded within the desktop search area. Following an on-ground habitat assessment, the likelihood status of species occurring within or adjacent to the Project Extent will likely change due to the presence or absences of suitable species habitat being known.

The following criteria were applied to determine the likelihood of species occurring within the Project Extent:

- Known: Species recorded within the Project Extent within the last 5 years
- Likely: Species recorded within or near the project in last 20 years and suitable habitat is likely to occur within the Project Extent
- Possible: Species recorded within or near the Project Extent with records >20 years old and/or little/low quality suitable habitat occurs within the Project Extent
  - Unlikely: Very old records (>40 years) and/or little/low/no suitable habitat within the Project Extent and/or other reason the species is unlikely to occur.

### **Methodology for targeting ideal survey period**

The species requiring targeted surveys will occur during the Early Works contract phase to identify the presence of significant species within the proposed pipeline alignment. This will be undertaken by:

1. Conducting flora and fauna surveys and habitat assessments of the preliminary system alignment to identify areas of sensitivity and verify presence or absence of environmental assets.
2. Reviewing the requirement for impact (i.e. is the section of pipeline really required or can other parts of the system be re-designed to meet the need of supply?)
3. Re-alignment around an identified environmental asset by re-design
4. Changing the proposed construction methodology by selecting HDD technology
5. Re-scheduling planned works to avoid the risk (i.e. plan works to avoid seasonal risks – breeding season, fish habitat in ephemeral waterway, etc.)

Flora species are required to be surveyed for when they are most detectable. This is generally when plants are flowering or fruiting. Many species listed under the *EPBC Act* have conservation listing advice which details appropriate survey periods and survey methods. Where this information is available this has been provided along with the information source. Where listing advice is not available, the flowering period has been provided as a reference. For some sub-species or species with affinities, the flowering period is not widely known. In such cases, the flowering period for the closest relative with a similar distribution has been provided.

It is important to note that for many flora species, in particular those in the shrub and canopy layer and aquatic plants, can be identified by diagnostic features other than the reproductive part of the plant. Therefore some species can be surveyed outside of flowering periods by a trained ecologist if suitable methods are used and plants contain adequate diagnostic features.

Survey periods for many threatened fauna are often difficult to determine with many species highly mobile and their ecology poorly understood. This is particularly true of those species

listed under state legislation, where often standardised survey guidelines are either not yet developed or not readily available. Where not specified, surveys are likely to be most effective in spring / summer when fauna activity is typically higher and foraging resources typically most abundant. This is particularly true for reptile and small mammal species that are often dormant / less active at colder times of the year. Prior to survey a detailed appraisal of site habitat and its potential to support a given species shall be undertaken. Habitat surveys are likely to dramatically reduce the number of fauna species requiring targeted survey.

Where initial surveys are undertaken at sub-optimal seasonal times for identified species, potential habitats will be identified during the initial survey and followed up in the appropriate season if the areas cannot be avoided through the design phase. This may require the construction of certain areas to be put on hold until the presence or absence of species is known. For some species a precautionary approach of assumed presence and the development of mitigation measures may be more appropriate.

Whilst mapping has identified potential environmental values that may be encountered during the Project the extent of impact will not be known until on-ground survey work, including seasonal surveys, has been undertaken and the principles of environmental management applied to the project in line with the approved CEMF, EMP and CEMP.