



For locations within the pipeline corridor where trenchless techniques are to be undertaken, the following guidelines should be followed wherever possible:

- The bore-drill holes should commence and finish away from native vegetation (as a minimum, at least 2m outside the drip-zone of the nearest tree);
- The drill-bore holes should be fenced at the completion of work each day using a solid mesh (or hessian) material and also secured tightly against the ground, to prevent animals falling in;
- Access to drill sites should not include routes where additional native vegetation needs to be removed; and
- Excavated materials should not be stored in areas of native vegetation.

#### **J. Protect and Maintain Waterways and Wetlands**

A number of recommendations are relevant to the protection and maintenance of waterways and wetlands.

- Retain waterways on their present course, rather than channelising or converting into pipelines;
- Revegetate banks and exclude livestock within and immediately surrounding any locations where disturbances occur during construction;
- Wherever possible, undertake construction activities in intermittent wetlands (where present) during the driest time of the year. Similarly, construction through intermittent waterways should also occur when they are dry, and when no major rainfall is predicted to occur;
- Protective fencing should be placed around wetland areas to be retained during the construction phase;
- Ensure suitable measures are developed and implemented to avoid and minimise erosion and sedimentation in waterways. Similarly, ensure appropriate procedures are in place to minimise or avoid the effects of accidental spills of oil or other chemicals upon local waterways and wetlands. These issues will be factored into the EMP; and
- Ensure construction vehicles do not enter waterways or wetlands unnecessarily.

#### **K. Minimising the introduction and spread of environmental weeds**

A Weed Management Plan will be developed and implemented for the construction phase to: (a) prevent the introduction of additional weeds into the site; and (b) control any weeds that establish at the site during the soil disturbance associated with construction

The Weed Management strategy will be developed and incorporated in the Vegetation Management Plan. The strategy should be developed prior to construction and should include a specific program to monitor and control any weed invasions arising from the proposed works. Any environmental weeds that establish following the works should be eradicated as a matter of high priority. Vehicle hygiene and wash-down points should be established (at the same location as



*Phytophthora* wash down points) to remove weed seeds from material attached to earth-moving equipment.

#### **L. Minimising the spread and reducing the impact of *Chytrid* Fungus**

A series of measures will be undertaken to prevent the introduction and/or minimise the spread of *Chytrid* Fungus between amphibians within the construction zone. These include the following;

- Undertaking a formal assessment of the presence and extent of *Chytrid* Fungus within the pipeline corridor;
- Avoid handling frogs, this should only be done by a qualified ecologist;
- Where it is necessary for contractors to handle frogs, contractors should wear plastic gloves at all times. Gloves should only be used to handle one animal and then they should be disposed of;
- Establishing wash-down points for boots, waders and vehicles and earthmoving equipment entering and departing waterbodies throughout the survey corridor, in order to prevent/minimise the spread *Chytrid* Fungus; and
- Minimising vehicular movement between any infected and uninfected areas, and/or closely monitoring access to infected areas.

Chloramine and Chlorhexidine based products such as Halamid<sup>®</sup>, Halasept<sup>®</sup> or Hexifoam<sup>®</sup> are the recommended products. These are suitable for use on hands, clothing and footwear, and instruments and other field equipment. The manufacturers recommended instructions should be followed during preparation of the solution

#### **M. Minimising the spread and reducing the impact of *Phytophthora cinnamomi***

A series of measures will be undertaken to prevent the introduction and/or minimise the spread of *Phytophthora cinnamomi* within the construction zone. These include the following:

- Undertaking a formal assessment of the presence and extent of *Phytophthora cinnamomi* within the survey corridor prior to the commencement of construction activities;
- Establishing wash-down points for vehicles and earthmoving equipment entering and departing the survey corridor (in particular Toolangi State Forest, Christmas Hills Escarpment and Sugarloaf Reservoir), in order to prevent/minimise the spread *Phytophthora cinnamomi*;
- Avoiding the use of *Phytophthora*-infected gravel in track construction works;
- Minimising the area of soil disturbance and new road/track development where possible;
- Coordinating construction activities over summer (where practicable) when soils are dry and least likely to facilitate the spread of the pathogen; and



- Minimising vehicular movement between any infected and uninfected areas, and/or closely monitoring access to infected areas.

Management of *Phytophthora cinnamomi* will be in accordance with the guidelines set by the Commonwealth Government (Environment Australia 2001).

#### **N. Rehabilitation of disturbed areas**

If native vegetation recolonisation is not successful via reuse of the retained topsoil, the following measures should be undertaken:

- Revegetate any areas of native vegetation disturbed by the project (these works should occur in addition to Net Gain offsets if revegetation of these areas is not part of the Off Set Management for this project);
- Any revegetation required as net gain offsets should also target roadsides with patchy vegetation, with the aim of re-establishing habitat links between the patches;
- Ensure that appropriate indigenous plant species are used in any revegetation of the pipeline corridor following construction works, and that revegetation is undertaken in accordance with DSE standards;
- Collect seed from native vegetation of the survey corridor and store at local seed banks for use in revegetation works; and
- Trees removed or branches lopped as part of construction works should be used as woody debris in revegetation areas. This woody debris helps provide important fauna habitat. In addition, it is also a useful source of organic matter to recently rehabilitated areas.

#### **O. Timing of construction activities**

The timing of construction to avoid the peak breeding season (e.g. August to December for most fauna species) is one of the most important mitigation techniques for native fauna. Where possible, the peak breeding season for native fauna should be avoided (this will vary depending on the species present within each LU – a zoologist should be consulted as to the appropriate times of survey within the study area). If it is not possible to avoid construction during this time-period, the necessary removal of trees or branches should be undertaken outside of this peak breeding period if possible.

#### **P. Development of an Off sSet Management Plan**

A Management Plan to offset native vegetation losses in line with the state government's Net Gain policy is currently being developed. The Off Set Management Plan (OMP) will include measures to protect and enhance existing native vegetation at an as yet to be identified offset site(s). The OMP may also include measures to revegetate strategic areas, e.g. to improve habitat links. The process of identifying a suitable site(s) is presently being determined by the Alliance.



## 6. Project Implications and Legislation

The following sections outline relevant biodiversity legislation and policy that will be needed to be considered as a result of the Sugarloaf Pipeline Project<sup>58</sup>.

As identified in the introduction to this report, the scope of this present flora and fauna assessment does not include aquatic biota (addressed in the *Aquatic Ecology Assessment*) and mostly addresses the implications of the construction footprint. This report does not address the broader implications of the transfer and use of water resources from the Goulburn River to Sugarloaf Reservoir (addressed in the *Hydrology, Water Resources and Water Crossings Assessment*).

### 6.1 Federal Legislation

#### 6.1.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act promotes the conservation of biodiversity by providing protection for seven Matters of National Environmental Significance (NES). Two of these pertain to this project - Threatened Species and Communities, and Migratory and Marine Species, while the five other Matters of NES are not expected to be impacted by the project. These Matters of NES are addressed below.

#### Definition of 'Significant'

The likelihood of impact for each species has been determined using the *EPBC Act Policy Statement 1.1 – Significant Impact Guidelines, Matters of National Environmental Significance* (DEH 2006). Page 4 of the Guidelines states the following:

##### *What is a significant impact?*

*A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity.*

##### *When is a significant impact likely?*

*To be 'likely', it is **not** necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a **real or not remote** chance or possibility.*

*If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of*

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<sup>58</sup>The information below is based upon the project teams understanding of the legislation and policy, and project teams experience with its implementation.



*scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.*

In addition, page 7 of the Guidelines states the following:

*However you should not conclude that a significant impact is not likely to occur because of management or mitigation measures unless the effectiveness of those measures is well-established (for example through demonstrated application, studies or surveys) and there is a high degree of certainty about the avoidance of impacts or the extent to which impacts will be reduced.*

### **6.1.1.1 Matters of NES relevant to the project**

#### **Threatened Communities**

One EPBC-listed ecological community, ‘White Box - Yellow Box - Blakely's Red Gum grassy woodlands and derived native grasslands’ may be located within 1km of the survey corridors. However this pipeline corridor is no longer being considered for the particular option where impacts were possible and as such it is considered unlikely that this ecological community will be affected by the project.

#### **Threatened Flora**

One EPBC-listed flora species, *Dianella amoena* (Matted Flax-lily), has been recorded within the survey corridor during the current surveys. *Dianella amoena* is listed as Endangered under the EPBC Act.

At least 39 patches of *Dianella amoena* were located at 15 sites within the option corridors (Sections A, G and H). It is ‘likely’ that construction works will have a significant impact on this species in the absence of any mitigation measures however, the extent of impact, and whether it is considered ‘significant’, will remain unknown until a final alignment is chosen and mitigation measures are determined. This is further discussed in Section 4.5 of this report.

The option corridor have potential habitat for four additional EPBC-listed flora species (see Table 14). While none of these species have been recorded during the current survey it is possible that they may occur within the final pipeline alignment. This, and the significance of any impacts, will be determined through further survey.

**Table 14 - Potential Threatened Flora species**

<b>Scientific Name</b>	<b>Common Name</b>	<b>EPBC Act Threatened Status</b>
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Vulnerable
<i>Caladenia rosella</i>	Little Pink Spider-orchid	Endangered
<i>Eucalyptus crenulata</i>	Buxton Gum	Endangered



Scientific Name	Common Name	EPBC Act Threatened Status
<i>Glycine latrobeana</i>	Clover Glycine	Vulnerable

A detailed investigation of the final pipeline alignment will be also made within areas of potential habitat to ensure all threatened species are considered in the micro-design of the alignment and in the development of other suitable mitigation measures.

### Threatened Fauna

A total of thirteen EPBC-listed threatened fauna species have been considered for the study area. Of these, there is suitable habitat within the survey corridors for ten species.

Species that the project is considered to have a ‘significant’ impact on are:

- The **Spot-tailed Quoll** (endangered) has been predicted to occur within 10km of the survey corridors<sup>59</sup>, having been detected as recently as 2003<sup>60</sup>. Furthermore, sections of the survey corridors contain suitable habitat for this species (particularly throughout Toolangi North and Toolangi South LUs). Without any mitigation measures, it is ‘likely’ that the project will have a significant effect on this species. However, if the appropriate mitigation techniques are developed and implemented, particularly the use of trenchless installation techniques for pipeline installation through the Toolangi section, the likelihood of a ‘significant’ impact will be reduced.

Relevant to Sections E and F.

- The **Southern Brown Bandicoot** (endangered) has been predicted to occur within 10 km of the survey corridors<sup>59</sup>, having been detected within 10km of the survey corridor as recently as 2004. Furthermore, the survey corridor contains suitable habitat for this species (particularly throughout Toolangi North and Toolangi South LUs). Without the implementation of any mitigation measures, it is ‘likely’ that the project will have a ‘significant’ effect on this species. If appropriate mitigation techniques are developed and implemented, particularly the use of trenchless installation techniques for pipeline installation through the Toolangi section, the likelihood of a ‘significant’ impact will be reduced.

Relevant to Sections E and F.

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<sup>59</sup> From the AVW database and EPBC Act Protected Matters Search Tool.

<sup>60</sup> 10km search of the AVW database, DSE 2007



- **Australian Painted Snipe** (vulnerable) has been predicted to occur within 10km of the survey corridors<sup>61</sup>. This species has not been documented within the survey corridor (AVW, 2005 and BA, 2007); however, wetlands and billabongs throughout the Yea River Floodplain LU contain suitable habitat for this species. If this species is present during the time of construction, and no mitigation measures are implemented, the project could have a ‘significant’ impact on this species. If appropriate mitigation techniques for this species are developed and implemented, it is unlikely that the project will have a ‘significant’ impact on this species.

Relevant to Sections A and G.

- **Swift Parrot** (endangered) has been predicted to occur within 10km of the survey corridors<sup>61</sup>. This species was documented in 1986 within the survey corridor (AVW 2007). Without any mitigation measures, it is ‘likely’ that the project would have a ‘significant’ effect on this species (mostly due to the loss of habitat). If appropriate mitigation techniques are developed and implemented, particularly the use of trenchless installation techniques for pipeline installation through the Toolangi section, the likelihood of a ‘significant’ impact will be reduced...

Relevant to Sections E, F, G and H.

- **Regent Honeyeater** (endangered) was previously recorded within from the immediate vicinity of the survey corridors, most recently in 1998 (AVW 2007). This species has also been confirmed to occur within the Toolangi North and Toolangi South LUs of the survey corridor by senior staff from DSE. Without any mitigation measures implemented, it is ‘likely’ that the project will have a ‘significant’ effect on this species. If appropriate mitigation techniques are developed and implemented, particularly the use of trenchless installation techniques for pipeline installation through the Toolangi section, the likelihood of a ‘significant’ impact will be reduced.

Relevant to Sections E, F, G and H.

- The **Striped Legless Lizard** (vulnerable) was detected during the current assessment within the Yea Rise LU. This population has been identified on the *National recovery plan for the Striped Legless Lizard (Delma impar) 1999-2003* (DEH, 1999) and is considered to be an important population. Additional targeted survey for this species throughout relevant habitat will be conducted to gain a better understanding of the extent of the population within the study area. Without the implementation of any mitigation measures, it is considered that the Sugarloaf Pipeline Project is ‘likely’ to have a ‘significant’ impact on this species. Even with the development and implementation of appropriate mitigation measures, the impact upon this species may still be considered significant.

Relevant to Sections A, B, C and D.



- The **Growling Grass Frog** (vulnerable) has been documented within the vicinity of the survey corridor as recently as 2003 (Wills, 2003), having been recorded at several locations during the Yarra Glen Bypass Project. There is a high likelihood that this species persists within the rivers, streams and possibly farm dams located within or near the survey corridors<sup>35</sup>. Assuming that the species is present, and that no mitigation measures are implemented, it is 'likely' that the Sugarloaf Pipeline Project would have a 'significant' impact on this species. If suitable mitigation techniques are developed and implemented, the likelihood of the project having a 'significant' impact on this species will be reduced.

Relevant to B, C, D, G.

- The **Golden Sun Moth** (critically endangered) has been documented within the vicinity of the survey corridors as recently as 2004 (AVW 2007). Although this species was not detected during the current surveys, large areas of suitable *Austrodanthonia* (Wallaby Grass) dominated habitat are present within the survey corridor and the Striped Legless Lizard *Delma impar* (a species which often occurs in similar habitat to this species) was detected. It is considered likely that this species will occur in some parts of the survey corridor (particularly to the north of the Great Dividing Range). Until further survey is completed and the species range confirmed, it cannot be concluded that the project will not have a 'significant' impact on this species. If appropriate mitigation measures are developed and implemented for this species, then the significance of any impact may be reduced.

Relevant to Sections A, B, C and D.

While predicted to occur by government databases, the project is considered unlikely to have a 'significant' effect on the following species:

- **Leadbeater's Possum** (endangered) has been recorded within the study area (AVW 2007) as recently as 2003. The presence of this species has also been confirmed by senior staff from DSE. However, within the survey corridors, there is no suitable habitat for this species (i.e. Leadbeater's Possum prefers Wet Forest habitat dominated by trees such as *Eucalyptus regnans* and/or *E. nitens*). If construction is limited to the survey corridors defined within this report it is unlikely that the project will have a 'significant' effect on this species.

Relevant to Section E.

- **Grey-headed Flying fox** (endangered) has been previously recorded within 10km of the survey corridors<sup>59</sup> as recently as 2000 (AVW 2007) and is likely to utilise a range of habitats throughout the survey corridors. Habitat removal resulting from this project may reduce the foraging area of this species; however, it is unlikely that this species will be significantly impacted by the project.

Relevant to Section E, F, G, H.



- The **Smoky Mouse** (endangered) has been predicted to occur within 10km of the preliminary survey corridors<sup>61</sup>. The current known distribution of this species indicates that it is unlikely to occur within any of the survey corridors.

Not Relevant to current preferred corridors

- **Plains Wanderer** (vulnerable) has been predicted to occur within 10km of the preliminary survey corridors<sup>61</sup>. This species has not been documented within the survey corridors (AVW, 2005 and BA, 2007) and is unlikely to occur within the survey corridors.

Not Relevant to current preferred corridors

- **Helmeted Honeyeater** (endangered) was previously detected within the immediate vicinity of the survey corridors<sup>59</sup>, although not since 1934. The current known range of this species indicates that it does not occur within the study area.

Not Relevant to current preferred corridors

### **Migratory Species**

The EPBC Act contains a list of species that are considered to be migratory in Australia. This includes all native fauna listed on international migratory fauna agreements to which Australia is a signatory - the China- CAMBA, JAMBA and the Bonn Convention.

Table 11 lists all of the migratory species detected during:

- Current field investigations
- Previously recorded within the local area, or
- Are predicted to occur in the local area (AVW, BA and PMST 2007).

It also identifies five species recorded during the present assessment as migratory:

- Great Egret *Ardea alba*;
- Cattle Egret *Ardea ibis*;
- Rufous Fantail *Rhipidura rufifrons*;
- Satin Flycatcher *Myiagra cyanoleuca*; and
- Clamorous Reed Warbler *Acrocephalus stentoreus*.

As the identified populations of species listed as migratory under the EPBC Act within the survey corridor are limited, it is not expected that the Sugarloaf Pipeline Project will have a ‘significant’ impact on these species.

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<sup>61</sup> From the EPBC Act Protected Matters Search Tool.



### 6.1.1.2 Other Matters of NES

Comment is made about the other five matters of NES as follows:

- World Heritage Properties - The PMST identifies that no World Heritage Properties occur within 10km of the survey corridor.
- National Heritage Places - The PMST identifies one National Heritage Place occurs within 10km of the survey corridor (Flora Fossil Site - Yea).
- Ramsar Wetlands of International Significance - The PMST identifies no Ramsar wetlands occurring within 10km of the survey corridor. However, the survey corridor is within the catchment of the Barmah Forest Ramsar site, which occurs downstream along the Murray River.

This flora and fauna assessment only considers the pipeline and footprint of the associated infrastructure, and does not consider the potential downstream ecological impacts that may occur to the Barmah Forest Ramsar Site as a result of water extraction from the Goulburn River.

- Commonwealth Marine Areas - There are no Commonwealth marine areas within or near the survey corridor. If appropriate mitigation measures are implemented, the construction of the pipeline and pump station is not expected to have a 'significant' impact on a marine environment.

Although twelve fauna listed under the EPBC Act as Marine have been recorded from the local area previously, the survey corridor is not considered to:

- Support an ecologically significant proportion of the population of a marine species; nor
  - Contain important habitat for a marine species.
  - As such, the project is not expected to have a significant impact on Commonwealth Marine Areas.
- Nuclear Actions - The project is not a nuclear action

### Conclusion

Of the items addressed within this report<sup>62</sup>, two matters of NES are relevant to the project (i.e. threatened species and communities, and migratory species). Field investigations have detected individuals of both threatened species and migratory species within the option corridors. Without the development and implementation of any mitigation measures, the Sugarloaf Pipeline Project is likely to have a significant effect on a number of EPBC-listed threatened species (but probably not migratory species). If appropriate mitigation measures are developed and fully implemented, the

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<sup>62</sup> Not including aquatic biota, cultural issues or broader water resource issues.



level of impact upon these species could be substantially reduced. However, there remains a possibility that the impact upon the vulnerable Striped Legless Lizard could still be considered significant, even following the implementation of mitigation measures.

## **6.2 State Legislation**

### **6.2.1 Flora and Fauna Guarantee Act 1988**

The *Flora and Fauna Guarantee Act 1988* (FFG Act) is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes.

The FFG Act is relevant to the Sugarloaf Pipeline Project as the project is to occur partially on public land and is being undertaken by a state government authority:

#### **Threatened ecological communities:**

One listed ecological community was identified within the survey corridor.

Key members of the '*Victorian Temperate Woodland Bird Community*' were recorded within the pipeline option corridors (Table 16), and species which indicate the presence of this community, were detected a number of others (Table 17).

The project may result in fragmentation and loss of habitat for this community and will contribute to incremental losses and disturbances to the habitats of this community throughout its local and Victorian distribution. Mitigation measures have been provided (in Chapter 1 of this report), to minimise and avoid impacts upon this community from the project, and to provide compensatory actions.

With the mitigation measures implemented, it is expected that this project may still result in fragmentation and loss of habitat for this community. This is expected to be most significant in areas where clearance of remnant vegetation cannot be avoided.

#### **Listed threatened flora:**

No FFG Act listed flora species have been recorded from within the survey corridor during the present assessments.

Based upon desktop analyses, there is the potential for four FFG-listed threatened flora species to be present in the survey corridor (Table 7). As the final pipeline alignment has not been determined, and as the ecological assessments are continuing, it is not yet possible to determine whether the Sugarloaf Pipeline Project will have a significant impact on FFG-listed flora species.



However, mitigation measures will be implemented to minimise any potential impacts on FFG-listed flora species.

#### **Protected Flora:**

Some plant species recorded from the survey corridor during the present assessment are listed as protected under the FFG Act. For example, this includes all ferns except *Pteridium esculentum*, all members of the Asteraceae, Epacridaceae and Orchidaceae families, and most *Acacia* species. A permit will be required for the removal of any of these species.

#### **Listed threatened fauna:**

Six FFG listed fauna species have been identified during the current field investigations as occurring within the survey corridor:

- Great Egret *Ardea alba*, Powerful Owl *Ninox strenua*,
- Hooded Robin *Melanodryas cucullata*,
- Chestnut-rumped Heathwren *Calamanthus pyrrhopygius*,
- Common Bent-wing Bat *Miniopterus schreibersii oceanensis*, and
- Striped Legless Lizard *Delma impar*.

An additional three species have been recorded as occurring within the pipeline corridors by senior DSE staff:

- Regent Honeyeater *Xanthomyza phrygia*,
- Brush-tailed Phascogale *Phascogale tapoatafa* and
- Damselfly *Hemiphysalia mirabilis*.

In addition to these species 31 species are predicted to potentially use the survey corridor to some extent, including

Lewin's Rail *Rallus pectoralis*,

Baillon's Crake *Porzana pusilla*,

Caspian Tern *Hydroprogne caspia*,

Australian Painted Snipe *Rostratula australis*,

Little Egret *Egretta garzetta*,

Intermediate Egret *Ardea intermedia*,

Little Bittern *Ixobrychus minutus*,

Australasian Bittern *Botaurus poiciloptilus*,

Blue-billed Duck *Oxyura australis*,

Musk Duck *Biziura lobata*,

Spotted Harrier *Circus assimilis*,

Grey Goshawk *Accipiter novaehollandiae*,

White-bellied Sea-Eagle *Haliaeetus leucogaster*,

Square-tailed Kite *Lophoictinia isura*,

Black Falcon *Falco subniger*,

Barking Owl *Ninox connivens*,

Masked Owl *Tyto novaehollandiae*,

Sooty Owl *Tyto tenebricosa*,

Turquoise Parrot *Neophema pulchella*,



Swift Parrot *Lathamus discolor*,  
Speckled Warbler *Chthonicola sagittata*,  
Painted Honeyeater *Grantiella picta*,  
Diamond Firetail *Stagonopleura guttata*,  
Spot-tailed Quoll *Dasyurus maculatus*,  
Leadbeater's Possum *Gymnobelideus leadbeateri*,  
Grey-headed Flying-fox *Pteropus poliocephalus*,

Eastern Horseshoe Bat *Rhinolophus megaphyllus*,  
Brown Toadlet *Pseudophryne bibronii*,  
Growling Grass Frog *Litoria raniformis*,  
Large Ant Blue Butterfly *Acrodipsas brisbanensis*, and  
Golden Sun Moth *Synemon plana*.

It is expected that the final pipeline alignment will have an effect on most species within the survey corridor and that for some of these species the effect will be significant. The mitigation measures outlined in this report will assist in reducing these impacts.

It should be noted that species considered to be significant on the DSE Advisory List (2007b) are not outlined within this section as they are not covered under legislation, however, their known or predicted occurrence within the study area is outlined in Table 9 and Table 10 and they should be considered throughout all phases of the project.

#### **Potentially Threatening Processes:**

Assuming no mitigation measures are undertaken, the following listed potentially threatening processes are relevant to the Sugarloaf Pipeline Project. Some of these processes are already operating in the local area;

- Degradation of native riparian vegetation along Victorian rivers and streams;
- Habitat fragmentation as a threatening process for fauna in Victoria;
- Increase in sediment input into Victorian rivers and streams due to human activities<sup>63</sup>;
- Infection of amphibians with Chytrid Fungus, resulting in chytridiomycosis;
- Input of toxic substances into Victorian rivers and streams;
- Invasion of native vegetation by 'environmental weeds';
- Predation of native wildlife by the cat, *Felis catus*;
- Predation of native wildlife by the introduced Red Fox, *Vulpes vulpes*;

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<sup>63</sup> Potential threatening processes (PTP) with Action Statements prepared. From the DSE website, accessed 31 August 2006,  
<http://www.dse.vic.gov.au/DSE/nrenpa.nsf/LinkView/617768308BCB666E4A25684E00192281E7A24BB36FF60A144A256DEA00244294#PTP>



- Reduction in biomass and biodiversity of native vegetation through grazing by the Rabbit, *Oryctolagus cuniculus*;
- Removal of wood debris from Victorian streams;
- Loss of coarse woody debris from Victorian native forests and woodlands;
- Loss of hollow-bearing trees from Victorian native forests;
- Prevention of passage of aquatic biota as a result of the presence of in-stream structures;
- Wetland loss and degradation as a result of change in water regime, dredging, draining, filling and grazing; and
- Alteration to the natural flow regimes of rivers and streams.

**Conclusion:**

*The Flora and Fauna Guarantee Act will apply to this project as a State Government Authority is managing the works, and the works are at least partially on State Government Land.*

*It is expected that the project will have an effect on species listed under the FFG Act and in some cases, this effect is likely to be significant. Where it is not possible to avoid these species, mitigation measures as outlined in Chapter 5 should be used to reduce the significance of the impact.*

*The project team is obliged to conduct this project in accordance with the aims and objectives of this Act. For listed items with Action Statements prepared, the project team is also obliged to conduct their project with consideration of these items.*

*A permit under this Act will be required for the removal of listed Protected Flora species.*

**The Permit Process**

The project will need to demonstrate that measures have been taken to avoid and minimise impacts upon listed threatened species and communities, and potentially threatening processes. The project team must also show that the works are not in contravention of prepared Action Statements.

For the permit to remove Protected Flora, the person taking the action in question, or an agent acting on their behalf (e.g. a consultant) can fill out the FFG permit application form. Permits are submitted to the regional DSE office in the area where the works are being undertaken. There is no statutory time frame for processing of FFG permits.

**6.2.2 Wildlife Act 1975 and Wildlife Regulations 2002**

In Victoria, the main legislation for protecting and managing wildlife is the *Wildlife Act 1975*. Under this Act, ‘wildlife’ has been defined as including indigenous vertebrate species (except



declared pest species), invertebrate species listed under the FFG Act and some introduced game species. This Act does not apply to fish as defined under the *Fisheries Act 1995*.

Penalties for the *Wildlife Act 1975* are prescribed within the Wildlife Regulations 2002. These include penalties for persons who damage, disturb or destroy any wildlife habitat without appropriate authorisation (Part 2, Section 9 of the Wildlife Regulations 2002). The Wildlife Regulations 2002 note that authorisation for habitat removal may be obtained under the *Wildlife Act 1975*. It may also be obtained through a licence granted under the *Forests Act 1958* or under any other relevant Act.

### **Conclusion**

*The proposed construction within the pipeline corridor will result in the loss of fauna habitat. A permit will be required for the removal of this habitat. Typically, an approval issued under the Planning and Environment Act 1987 for the removal of native vegetation would cover the loss of habitat and therefore a separate permit would not be required under the Wildlife Act 1975. If salvage and translocation of fauna are to be undertaken as part of the mitigation measures, then a permit will be required under this Act..*

*If salvage and translocation of fauna are to be undertaken as part of the mitigation measures, then a Management Authorisation will need to be obtained under this Act.*

### **6.2.3 Planning and Environment Act 1987**

Planning approval may be required under the Victoria Planning Provisions (pursuant to the *Planning and Environment Act 1987*) to remove, destroy or lop native vegetation on land which, together with all contiguous land in one ownership, has an area greater than 0.4ha, unless particular exemptions apply.

DSE is a referral authority for applications where native vegetation is planned to be impacted on public land (e.g. road reserve, rail reserve). A referral is now required in cases such as the present project where more than 15 scattered trees smaller than 40cm DBH are planned to be impacted, or more than five scattered trees greater than 40cm DBH are planned to be impacted. In addition, a referral is required to remove greater than 0.5ha of vegetation in an EVC with a bioregional conservation status of endangered, vulnerable or rare; or, in instances where removal of greater than 1 ha of vegetation is planned in an EVC with a bioregional conservation status of depleted or least concern.

### **Conclusion**

*The process by which the Sugarloaf Pipeline Project is to be facilitated is yet to be determined by the Minister for Planning.*