



■ **Table 4 - Land Reserved as National Park or Conservation Public Land Reservation Status**

Reserves Acts	Objectives	Traversing or Adjoining Corridor Impacts	Comments/Response
<p><b>Crown Land (Reserves) Act 1978</b></p>	<p>This Act covers the management and use of reserved Crown Land. Under Section 4, the Act allows for the reservation of land for public purposes including conservation areas of historic, aesthetic, archaeological or scientific interest.</p>	<p><b>Traversing the following pipeline corridors:</b></p> <ul style="list-style-type: none"> <li>■ 'Non-preferred' Corridors A1 and A3 - adjacent to the Goulburn River and Killingworth Road, and within Killingworth Reserve;</li> <li>■ 'Preferred' Corridor A2 – adjacent to the Goulburn River and Killingworth Road, and within Killingworth Reserve;</li> <li>■ 'Non-preferred' Corridor A1 – adjacent to Killingworth Road, and within the Yea River Reserve; and</li> <li>■ 'Non-preferred' Corridor B1a – adjacent to the Melba Highway, and within the Perts Reserve.</li> </ul>	<p>Land designated as Crown Land (Reserve) is represented in <b>Appendix B</b>, Maps 1 to 8.</p> <p>Where possible, the following issues should be addressed:</p> <ul style="list-style-type: none"> <li>■ Impacts on sensitive plant species will be reduced by transplanting or by salvaging and replanting after construction;</li> <li>■ Where possible, sensitive/significant vegetation will be identified, prioritised, and flagged for avoidance;</li> <li>■ Revegetation of disturbed areas will reduce visual impacts over time; and</li> <li>■ Minimise the construction corridor to a minimum.</li> </ul>
<p><b>Forest Act 1958, including Forest Management Zones</b></p>	<p>The objective of the <i>Forest Act 1958</i> is to manage, control, maintain natural resource uses, and protect the natural environment from adverse impacts.</p> <p>This also includes the implementation of Forest Management Plans and designated zones, specifically the Forest Management Plan for the Central Highlands.</p> <p>Forest Management Zones set priorities and permitted uses in different part of State forest. Management seeks to integrate zoning decisions with the aim of ensuring the zoning system maximises conservation values in Special Protection Zone while at the same time minimising impacts on forest industries</p>	<p><b>The following pipeline corridors traverse Forest Reserve:</b></p> <ul style="list-style-type: none"> <li>■ 'Preferred' Corridor D2 - adjacent to the Melba Highway and within Toolangi State Forest;</li> <li>■ 'Non-preferred' Corridor D1 – adjacent to the Melba Highway and within Toolangi State Forest;</li> <li>■ 'Preferred' Corridors E1 and E2 – adjacent to the Melba Highway and within Toolangi State Forest;</li> <li>■ 'Non-preferred' Corridor E3 – adjacent to the Melba Highway and within Toolangi State Forest; and</li> <li>■ 'Preferred' Corridors F1 and F3 – adjacent to the Melba Highway.</li> </ul> <p><b>The following pipeline corridors traverse Special Protection Zone:</b></p> <ul style="list-style-type: none"> <li>■ 'Non-preferred' Corridor D1 – adjacent to the Melba Highway;</li> <li>■ 'Preferred' Corridor D2 – adjacent to the Melba Highway;</li> <li>■ 'Preferred' Corridors E1 and E2 – adjacent to the Melba; and</li> <li>■ 'Preferred' Corridors F1 and F3 – adjacent to the Melba Highway.</li> </ul> <p><b>The following pipeline corridors traverse Special Management Zone:</b></p> <ul style="list-style-type: none"> <li>■ 'Preferred' Corridors E1 and E2 – adjacent to the Melba and within Toolangi State Forest;</li> <li>■ 'Non-preferred' Corridor E3 - adjacent to the Melba and within Toolangi State Forest; and</li> <li>■ 'Preferred' Corridors F1 and F3 – adjacent to the Melba Highway.</li> </ul>	<p>Management Guidelines for Areas of High Scenic Quality identified within the Forest Management Plan for Central Highlands, including Toolangi State Forest and adjacent Forest Reserves should include:</p> <ul style="list-style-type: none"> <li>■ Alterations to foreground landscape of these areas should be temporary, subtle and not evident to the casual observer;</li> <li>■ Where possible, new easements should be screened from view;</li> <li>■ Retention of buffering vegetation between roads should be the main method of screening;</li> <li>■ The width of the vegetation screening should vary with local variations in topography and vegetation type, although 20m should be a minimum;</li> <li>■ Landscape alterations in the middle ground may be evident in the short term, but should only be subtly apparent within five years of the alteration; and</li> <li>■ New easements in these areas should be shaped, positioned and timed minimise their visual impact.</li> </ul> <p>The aim of Forest Management Zones include:</p> <p><b>Special Protection Zone</b> The Special Protection Zone (SPZ) will be managed for conservation. Larger components of the zone are based on representative examples of vegetation communities and old growth, as well as localities of key threatened and sensitive flora and fauna species. Each component of this zone will be managed to minimise disturbances or processes that threaten their respective values and timber harvesting will be excluded.</p> <p><b>Special Management Zone</b> The Special Management Zone (SMZ) areas will cover a range of natural or cultural values and be managed to conserve specific features. The protection or enhancement of these values requires modification to timber harvesting or other land use practices rather than their exclusion. The zone contributes substantially to the conservation of important species, particularly fauna, as well as encompassing landscape values and water management issues. Timber and other forest produce may be harvested from this zone under certain conditions.</p> <p>Note: Forest Management Zones are not currently represented in <b>Appendix B</b>, Maps 1 to 8. GIS datasets will be available in the coming weeks.</p>



Reserves Acts	Objectives	Traversing or Adjoining Corridor Impacts	Comments/Response
<b>Heritage Rivers Act 1992</b>	This Act makes provision for Victorian heritage rivers by providing for the protection of public land in certain parts of rivers and river catchment areas in Victoria that have significant nature conservation, recreation, scenic or cultural heritage attributes.	<p><b>The following pipeline corridors traverse the Heritage River Management Overlay:</b></p> <ul style="list-style-type: none"> <li>▪ 'Non-preferred' Corridor A1 – adjacent to the Goulburn River and intake area; and</li> <li>▪ 'Preferred' Corridor A2 – adjacent to the Goulburn River and intake area.</li> </ul>	As listed in the <i>Heritage Rivers Act 1992</i> , Part 5 – Goulburn River Heritage Area, mitigation measures should ensure that the significant nature conservation, recreation, scenic or cultural heritage attributes of the area is protected.
<b>Heritage Act 1995</b>	<p>This Act provides protection and conservation measures for places and objects of cultural heritage significance, including cultural landscapes.</p> <p>Landscapes are valued for cultural significance, which includes aesthetic, historic, social, spiritual and scientific values.</p>	<p><b>The following pipeline corridors traverses the National Trust Landscape:</b></p> <ul style="list-style-type: none"> <li>▶ 'Non-preferred' Corridors H1 and H3 – from the intersection of Breakneck Road and King Street, along Glenview and Yarraview Roads, towards Sugarloaf Reservoir;</li> <li>▶ 'Preferred' Corridor H2 – from the intersection of Breakneck Road and King Street, along Glenview and Yarraview Roads, towards Skyline Road; and</li> <li>▶ 'Preferred' Corridor H4 – from the intersection of Breakneck Road and King Street, along Glenview Road, towards the start of Skyline Road.</li> </ul>	<p>Yarra Ranges Planning Scheme SLO4 – Upper Yarra River and Environs</p> <p>The Upper Yarra Valley is considered to be of aesthetic significance, due to the rich rural vineyard landscape.</p> <p>Consideration to minimise landscape impacts to land designated as the Yarra Ranges SLO4, as described in Table 3.</p>



### 3. Existing Landscape Character

The following chapter describes the existing landscape character surrounding both pipeline corridors and associated infrastructure. The assessment was prepared by:

- A field investigation;
- Desktop study, using a Geographic Information System (GIS);
- Identification of landscape character types; and
- Visual quality categories for each landscape character type.

#### 3.1 Desktop Study

The desktop study was undertaken using a GIS and provided initial guidance on the general landscape character of the pipeline corridors, and assisted in the identification of potential visual quality and exposure areas and sensitive receptors for the pipeline corridors and associated infrastructure. This desktop study was undertaken to assist in the following aspects:

- Gathering of spatial datasets such as digital aerial photography, contours, planning, vegetation and infrastructure layers. This served as a basis for defining areas of common landscape character;
- Providing a basis for identification of any special values or interests, such as the location of nature conservation or significant overlays; and
- Providing an overview of potential receptors of a visual effect, including residents, visitors and travellers through an area.

The existing landscape character assessment have been categorised, reviewed and described into different factors and included the following:

- Waterforms/Flood Plain;
- National Parks, reserves or forest;
- Vegetated areas;
- Mostly cleared areas/grazing land; and
- Urban areas.

In addition, each landscape character type will be assigned a 'Visual Quality Category' of low, medium or high, with some areas assigned two or three categories.

#### 3.1.1 Visual Quality Categories – Landscape Character

For the purpose of this assessment, visual quality categories have been developed by GHD at a desktop level only and will be applied to each landscape character category. A description of each visual quality category is listed in Table 5.



■ **Table 5 - Visual Quality Categories – Existing Environment**

Visual Quality Category	Description
Low	<p>Waterforms absent;</p> <p>Extensive areas of similar vegetation and very limited variation and texture and/or colour;</p> <p>Significant expanses of indistinctly dissected (rolling) landform that are not dramatically defined by adjacent landform;</p> <p>This landscape has little sensitivity to visual disturbance, particularly from the introduction of man-made elements;</p> <p>The ability of the viewer to absorb visual change is very low;</p> <p>The landscape is viewed only as background;</p> <p>This landscape is common to urban areas and urban industrial fringes; and</p> <p>Low visual intactness and unity.</p>
Moderate	<p>Intermittent watercourse or minor reservoir;</p> <p>Open and/or scattered forest combined with natural openings and species mix in pattern that offer some visual diversity;</p> <p>Undulating and/or rounded hills, ridges and peaks that are not visually distinctive;</p> <p>Some positive visual experiences such as the presence of natural open space intermixed with existing agricultural areas, or well maintained, landscape urban areas.</p> <p>The landscape integrity of the area provides some positive visual experiences, or; Reasonably attractive natural and human-made features/patterns, although they are not visually distinctive or unusual within the region.</p>
High	<p>Major watercourse, lake and reservoir;</p> <p>Strongly defined patterns resulting from combinations of eucalypt forest, naturally appearing open grassland and scattered pines;</p> <p>Isolated peaks or peaks with distinctive form and colour contrast that become focal points;</p> <p>Landscape reserved for National Park, conservation or recreational purposes, and;; and</p> <p>The landscape exhibits distinctive and memorable visual features (landform, rock) and patterns (vegetation/open space) that are largely undisturbed.</p>


### 3.2 Landscape Character Areas and Visual Quality

The description of landscape character areas and assigned visual quality assists in understanding of what the landscape is like, and how it may change in the future. Landscape character identifies a distinct recognisable pattern of elements that occur consistently over a particular study area, making each character type distinct and giving each its particular sense of place.

The existing landscape character and visual quality surrounding the associated infrastructure and pipeline corridors are represented in Appendix C, Maps 1 to 8 and detailed in **Table 7****Error! Reference source not found.****Error! Reference source not found.****Error! Reference source not found.** and **Table 8.**



■ **Table 6 - Associated infrastructure – Landscape Character and Visual Quality.**

Structure	Visual Quality	Location	Topography	Landscape Description
Low Lift Pump Station	Moderate	Adjacent to the Goulburn River and Killingworth Road  (On-site location and design not yet finalised)	Gentle slopes, 182m AHD	Low-lying riverine environment, including vegetated floodplains.  
High Lift Pump Station	Moderate	Adjacent to the Melba Highway, approximately 3km south of the Yea at 6277 Melba Highway.  (On-site location and design not yet finalised)	Gentle slopes, 244 m AHD	Undulating hills cleared mostly of vegetation and used for grazing land.
Balancing Storage	Moderate	Adjacent to the Melba Highway, approximately 3km south of the Yea at 6277 Melba Highway.  (On-site location and design not yet finalised)	Gentle slopes, 244m AHD	Undulating hills cleared mostly of vegetation and used for grazing land.




Structure	Visual Quality	Location	Topography	Landscape Description
				
Air Valves	NA – locations not yet identified	NA – locations not yet identified	NA – locations not yet identified	NA – locations not yet identified.



Table 7 -Pipeline Corridors – Landscape Character and Visual Quality

Category	Visual Quality	Location Along Pipeline Corridors and Viewpoint	Topography	Landscape Description
Waterforms / Flood Plain	High	<ul style="list-style-type: none"> <li>Adjacent to the Goulburn River and intake pump station and start of the pipeline corridors;</li> <li>Adjacent to the Yea River and associated flood plain, 'preferred' pipeline corridor A1, B1 and C2 and 'non-preferred' pipeline corridors B1 and C2 – Viewpoints 7 and 9, and;</li> <li>Sugarloaf Reservoir, outtake area, 'preferred' pipeline corridors H2 and H4.</li> </ul>	<ul style="list-style-type: none"> <li>150 to 250m AHD</li> <li>150 to 250m AHD</li> <li>150 to 250m AHD</li> </ul>	<p>Water forms and flood plains are generally exposed to elevated viewpoints on the surrounding hills and ridges.</p> <p>The pipeline traverses approximately 111 watercourse or drainage channel crossings as represented in Appendix C, Maps 1 to 8. These crossings are represented by light blue line.</p> <p>Sugarloaf Reservoir provides for an enjoyable scenic experience through bush walking, picnicking, bird watching, sailing and shoreline fishing.</p>
National Park, reserve or forest or crown land reserve	High	<ul style="list-style-type: none"> <li>Adjacent to the Goulburn River and low lift pump station is the conservation reserve Crown Land Reserve and stream-side area – Viewpoint 1;</li> <li>Adjacent to 'non-preferred' pipeline corridor A1 is the conservation reserve for the Yea River Wetlands walk – Viewpoint 9;</li> <li>Adjacent to 'non-preferred' pipeline corridor B1a is the Yea River, Perts Reserve – Viewpoint 11;</li> <li>Toolangi State Forest adjacent east to 'preferred' pipeline corridors E1 and E2 – Viewpoint 17;</li> <li>Kinglake National Park adjacent west of 'preferred' pipeline corridors E1, E2, F1 and F3 – Viewpoint 17 and 18, and;</li> <li>State Forest adjacent east to 'preferred' pipeline corridors F1 and F3.</li> </ul>	<ul style="list-style-type: none"> <li>150 to 250m AHD</li> <li>150 to 250m AHD</li> <li>150 to 250m AHD</li> <li>Moderate slopes, ranging from 250 to 650m AHD</li> <li>Moderate slopes, ranging from 250 to 650m AHD</li> <li>150 to 250m AHD</li> </ul>	<p>The Crown Land and Conservation Reserves are visited by tourists picnicking or travelling on adjacent transport corridors. Areas surrounding the Crown Land and Conservation Reserves include medium density to scattered grassy woodlands or forests, with low-lying waterform or flood plain landscape.</p> <p>'Preferred' pipeline Corridors E1 and E2 traverse the western edge of Toolangi State Forest. The western Forest fringe offers bushwalking and 4WD opportunities. The landscape is dominated by rolling to hilly topography, with defined drainage lines, and vegetated by open forest of tall eucalypt species mix with grassy understorey and scattered conifers.</p> <p>'Preferred' pipeline Corridors E1 and E2 traverse adjoin the eastern edge of Kinglake National Park. The Park provides opportunities to experience the exceptional scenery through driving, bushwalking and picnicking.</p> <p>The Park's main landform features are the Kinglake plateau and its southern escarpment. The plateau has an undulating surface with steeper slopes confined to stream valleys. This contrasts with the escarpment, which is characterised by a series of steep-sided ridges and valleys where slopes of up to 30 degrees are common.</p> <p>Contiguous forest on abutting private lands, important element in the backdrop to the northern suburbs of Melbourne. In addition, views of the Park are particularly important for travellers driving from Melbourne to the Park. (National Parks Service, 1996).</p>
Vegetated Areas	High	<ul style="list-style-type: none"> <li>Grassy dry and herb-rich foothill, adjacent west of 'non-preferred' pipeline corridor G2– Viewpoints 23 and south-west of 'preferred' pipeline corridor H2, and traversing 'non-preferred' pipeline corridors H1 and H3 – Viewpoints 29 and 30.</li> </ul>	<ul style="list-style-type: none"> <li>Gentle slopes adjacent to 'non-preferred' Corridor G2, 150 to 250m AHD, and</li> <li>Steep escarpment adjacent to 'preferred' Corridor H2 and traversing 'non-preferred' Corridors H1 and H3, &gt; 20% slopes.</li> </ul>	<p>Considerable variation in vegetation occurs as a consequence of the differing climate and the general lowering in elevation as the distance from the Eastern Highlands character type increases.</p> <p>The native forests retain their essential character today, although nearly all have been influenced to varying degrees by European settlement, logging, grazing and the introduction of new plant and animal species. On the relatively percentage a high percentage of private land, the forests and woodlands have generally been cleared or thinned. (Source: Landscape Character Types of Victoria, 1984.)</p> <p>Refer to the Flora and Fauna Impact Assessment for a detailed overview of corridor vegetation</p>
	Moderate	<ul style="list-style-type: none"> <li>Plantation vegetation, east of 'non-preferred' pipeline corridors C1 and C2;</li> <li>Possible pine plantation, adjacent west of 'non-preferred' pipeline corridors C1 and C2;</li> <li>Damp Forest, adjacent west of pipeline corridors 'preferred' E1 and E2, and;</li> <li>Lowland and shrubby foothill forest, adjacent east 'preferred' pipeline corridors E1 and E2 – Viewpoint 18.</li> </ul>	<ul style="list-style-type: none"> <li>150 to 250 m AHD</li> <li>Gentle slopes, 250 to 350m AHD</li> <li>Gentle slopes, 350 to 450m AHD</li> <li>Moderate slopes, 350 to 450m AHD</li> </ul>	
	Low	<ul style="list-style-type: none"> <li>Grassy dry forest, adjacent east of 'preferred' pipeline corridors F1 and F3, and;</li> <li>Grassy dry forest, adjacent to 'non-preferred' pipeline corridors H1 and H3 and 'preferred' pipeline corridor H4 – Viewpoints 29 and 30.</li> </ul>	<ul style="list-style-type: none"> <li>150 to 250m AHD</li> <li>Gentle slopes, 150 to 250m AHD</li> </ul>	



Category	Visual Quality	Location Along Pipeline Corridors and Viewpoint	Topography	Landscape Description
Mostly cleared areas/grazing land	Moderate	<ul style="list-style-type: none"> <li>■ Adjacent east and west of 'non-preferred' pipeline corridors A1 and 'preferred' pipeline corridor A2 – Viewpoints 2, 3, 4 and 5;</li> <li>■ Adjacent east of 'non-preferred' pipeline corridor A1, along Killingworth Road towards Yea township;</li> <li>■ Adjacent west of 'preferred' pipeline corridor B1 alongside the Melba Highway – Viewpoints 10 and 11;</li> <li>■ Adjacent east and west of 'none-preferred' pipeline corridors B1, C1 and C2, rural grazing area – Viewpoint 13;</li> <li>■ Adjacent predominately east and west of 'non-preferred' pipeline corridor C2 – Viewpoints 14, 15 and 16;</li> <li>■ Cleared grazing land surrounded by heavily vegetation east from 'preferred' pipeline corridor E1;</li> <li>■ Adjacent west of 'preferred' pipeline corridors F1 and F3 – Viewpoint 21;</li> <li>■ Adjacent east and west of 'non-preferred' pipeline corridor G2 and along Hunts Lane and Steels Creek Road, rural grazing land with scattered wineries and tourist accommodation – Viewpoints 22 and 23;</li> <li>■ Adjacent east and west of 'preferred' pipeline corridors G5 and G6, along the Melba Highway and Gulf Road, adjoining rural grazing land with scattered wineries – Viewpoint 24, 25 and 26;</li> <li>■ Adjacent west of 'non-preferred' pipeline corridors G2 and 'preferred' pipeline corridors , G5 and G6, along Steels Creek Road and adjacent to Yarra Glen township, rural grazing land with scattered wineries – Viewpoint 27;</li> <li>■ Adjacent east and west of 'non-preferred' pipeline corridors H1 and H3 and 'preferred' pipeline corridors , H2 and H4 and Glenview Road, rural grazing land with scattered wineries – Viewpoint 28, and;</li> <li>■ Adjacent east and west of 'non-preferred' pipeline corridors H1 an H3 and 'preferred' pipeline corridor H2 and Yarraview Road – Viewpoint 29.</li> </ul>	<ul style="list-style-type: none"> <li>■ Gentle slopes, 150 to 250m AHD</li> <li>■ Gentle slopes, 150 to 250m AHD</li> <li>■ Gentle to moderate slopes, 150 to 350m AHD, including high points of Mount Bullamalita and Mount Caroline</li> <li>■ 150 to 250m AHD</li> <li>■ Gentle slopes, ranging from 150 to 350m AHD</li> <li>■ Gentle to moderate slopes, 350 to 450m AHD</li> <li>■ Gently slopes, 150 to 250m AHD</li> <li>■ Gentle slopes, 150 m to 250m AHD</li> <li>■ 50 to 150m AHD</li> <li>■ Gentle slopes, 150 to 250m AHD</li> <li>■ 50 to 150m AHD</li> <li>■ Gentle to moderate slopes, 250 to 350m AHD</li> </ul>	<p>Land designated for grazing or rural purposes presents a vast component of land adjacent to the pipeline corridors.</p> <p>Variation in vegetation pattern created by adjacent land uses evident but not distinctive in the landscape. Patchwork effects of colour, texture and form evident over moderate to broad scale acreages.</p> <p>There is an apparent transition between agricultural land and adjacent forest land through sharp and geometric lines.</p> <p>There are scattered vineyards and other agricultural farms, with patterns evident throughout the plantation area, while not always naturally appearing, offering some visual variation in age, species and height found naturally in the surrounding landscape.</p> <p>(Source: Landscape Character Types of Victoria, 1984.)</p>
Urban Areas	Moderate	<ul style="list-style-type: none"> <li>■ Adjacent west from 'preferred' pipeline corridor B1 is Yea township, and;</li> <li>■ Adjacent to 'non-preferred' pipeline corridors G2 and 'preferred' pipeline corridors, G5 and G6 is Yarra Glen.</li> </ul>	<ul style="list-style-type: none"> <li>■ 150 to 250m AHD</li> <li>■ 50 to 150m AHD</li> </ul>	<p>Yea is located amongst pastoral farmland, at the junction of the Melba and Goulburn Valley Highways. There are several historical buildings within Yea, that provide for a pleasant visual experience. Also, adjacent to the township is the Yea River walk, providing views to vegetated floodplain landscape.</p> <p>Yarra Glen is located amongst wineries and pastoral land within the Yarra Valley, and adjacent to the Melba Highway. There are several historical buildings within Yarra Glen, particularly the Grand Hotel, that provide a distinct character within the landscape.</p>



## 4. Impacts on Landscape and Visual Values and Suggested Mitigation Measures

This section addresses the landscape and visual assessment of impacts and suggested mitigation measures for the ‘preferred’ ‘non-preferred’ and ‘rejected’ pipeline corridors and associated infrastructure during construction stages.

Landscape and visual values and impacts are assessed separately, although they are extremely dependant on each other. A landscape baseline, its analysis and the assessment of landscape effects all contribute to the baseline for visual assessment studies.

### 4.1 Methodology Summary

To assist in the identification of potential landscape impacts and the location of sensitive viewers along the ‘preferred’, ‘non-preferred’ and ‘rejected’ pipeline corridors and adjacent to the associated infrastructure, the following methodologies were adopted:

- Field investigation to establish significant landscape alterations and receptors that would be sensitive to visual change;
- Identification and positioning of the field investigation alterations and receptors via desktop study using GIS;
- The assessment of the importance and sensitivity or receptor groups and the nature, scale or magnitude and duration of change;
- Assessment of potential landscape and visual impacts, taking into account the magnitude of change and the sensitivity of potential receptors;
- Significance of the landscape and visual impact based on the sensitivity and magnitude classifications assigned; and
- Suggested mitigation measures for both landscape and visual impacts to reduce the immediate and future impacts of the pipeline corridors and associated infrastructure.

It must be recognised that this assessment is not intended to be accurate down to minor details but rather have been developed to show the scale and form of potential impacts.

### 4.2 Landscape Construction Impacts

Construction of the pipeline will involve clearing of a 20 to 30m wide corridor. The impacts from pipeline construction will depend on a number of factors including the final corridor, method of construction, depth to which the pipeline is laid, location of pump station and storage areas, time of construction and the length of time that construction takes.



It has been assumed that all vegetation within the 20 to 30m construction corridor will be removed. This will therefore result in changes to the vegetated landscape through the formation of a permanent easement, and in turn may reduce scenic quality in specified areas. Vegetation rehabilitation may only involve grass seeding along sections of the operational easement, and will not assume as a full management measure.

The pipeline corridors have been selected to avoid significant topographical features, thus traversing through relatively low slope areas of 0 - 20%, and thereby reducing potential landscape impacts.

However, there are specific areas in which both pipeline corridors traverse through slopes > 20%, these areas include:

- 'Preferred' Corridors E1 and E2, within the Toolangi State Forest;
- 'Preferred' Corridors F1 and F3, within State Forest access track and adjacent to the Melba Highway;
- 'Non-preferred' Corridor G2, along Hunts Lane,
- 'Preferred' Corridors H1, H2 and H4, crossing the escarpment, towards Skyline and Ridge Roads, towards Sugarloaf Reservoir; and
- 'Non-preferred' Corridors H1 and H3, crossing the escarpment, towards Skyline and Ridge Roads, towards Sugarloaf Reservoir.

Pipeline construction activities are expected to alter the existing topography of the area when the slope is greater than 20%. Other potential sources of impact during construction of the pipeline will include earthworks associated with removal of topsoil and temporary excavation and the creation of material stockpiles, and may lead to short-term soil erosion.

The permanent associated infrastructure such as the river pump station, balancing storage and high lift pump station will also be affected by landscape impacts during the construction stage. The on-site location and design of the associated infrastructure is currently being developed. It is assumed associated infrastructure will be constructed on a series of concreted pads of differing elevation, along with construction of an access track, and will therefore result in minor changes to the existing topography. Associated infrastructure may also require the removal of vegetation

#### **4.2.1 Landscape Impact Methodology**

For the purpose of these key landscape impacts, criteria tables have been used to define landscape sensitivity and the magnitude of landscape impact for the pipeline corridors and associated infrastructure. Elements of the Landscape Sensitivity and Magnitude of Landscape Impact criterion have been sourced from the *Guidelines for Landscape and Visual Impact Assessment, 2003*.

The 'Landscape Sensitivity' will broadly evaluate factors such as the existing landscape quality, value and contribution to the landscape character within the study area. This evaluation is then coupled with 'Magnitude' levels relating to landscape impacts caused by a proposed development. The 'Magnitude' of effects assists in quantifying specific effects by combining scale, extent and duration of any impact.