The Orchid Society of Canberra Incorporated
PO Box 221
Deakin West ACT 2600
e-mail: orcsoc@yahoo.com
http://www.canberraorchids.org
facebook.com/CanberraOrchidSociety

Submission to HumeLink Project. Application Number SSI-36656827

Name	**Mobile**	**Address**
Orchid Society of Canberra Conservation Group		
Derek Corrigan (Conservation Officer)	0418 696 731	46 Levine St, Evatt, ACT

The Orchid Society of Canberra Conservation Group Position

The Conservation Group acknowledges the importance of addressing the issue of climate change and the need to decarbonize the Nations and Worlds energy requirements in an attempt to save the planet from unacceptable temperature rise into the future. A temperature rise potentially destructive to both the Flora and Founa density and diversity of our planet. We also acknowledge the HumeLink EIS Technical Report 1 - Biodiversity Development Assessment Report 18 August 2023 prepared for Transgrid by Niche Environmental and Heritage.

The Orchid Society of Canberra Conservation Group's submission is directed to the potential damage this project places on orchid species in general and some critically rare and/or endangered orchid species in particular.

The Orchid Conservation Group considers it imperative that while pursuing a renewable energy solution the orchid flora is not also destroyed in the process. We have concerns with the current prepared report on a number of following issues:-

1. *Caladenia montana* excluded on inappropriate and contested assumptions. The statement in Table 7-1 '*There are records in the ACT and adjacent areas in NSW, but these are now referred to as Caladenia fitzgeraldii.*' to be neither correct or relevant and it is our understanding the Commonwealth agency charged with determining this has not changed its previous determination that the ACT species is *Caladenia montana.* Following the 2020 Namadgi National Park destructive fire it was *Caladenia montana* among other species we had a grant to survey for and the species we recorded.
2. Surveys claimed to have been conducted in search of Prasophyllum species in the McPhersons Plain area for *Prasophyllum bagoense, Prasophyllum innubum, Prasophyllum keltonii* were neither conducted at a time when these critically endangered orchids would have been either flowering or in their above ground growth period nor in appropriate places. Limited surveying

for orchids in October and November for species that only flower in December and January appears questionable and suggests inexperience regarding these species.

3. I was personally involved, as a volunteer, in orchid survey work conducted following the 2019/2020 fires in the McPhersons Plain area for *Prasophyllum bagoense, Prasophyllum innubum,* and *Prasophyllum keltonii* as part of a Commonwealth grant. We spent considerable time surveying the swamp the proposed Transmission Lines would cross in Figure 4-1 map reference 37. The orchids responded to those summer fires by an unprecedented flowering display in the following 2020/2021 summer revealing a greater density and distribution than previously known or recorded in that area and in greater numbers and locations than suggested in this report. The property the Transmission Line is proposed to pass over in this swamp was previously owned by Jim Kelton whom the *Prasophyllum keltonii* is named for and that swamp area contains all three of these critically endangered species plus *Prasophyllum candidum, Prasophyllum tadgellianum* and *Prasophyllum viriosum* previously only known in the ACT. This is a very orchid rich area and this property also included, according to Jim Kelton's records, several locations for *Pterostylis oreophila*.
4. Both *Prasophyllum innubum,* and *Thelymitra alpicola* are also recorded in the ACT higher elevations.
5. In Table 4-13: Threatened flora two-phase grid-based systematic survey effort, we have the following *Diuris ochroma* surveys in January for an orchid which flowers in November-December, *Prasophyllum innubum* surveys in March for an orchid which flowers in January. *Prasophyllum keltonii* surveys in January for an orchid which flowers in December, *Pterostylis foliata* with a long and varied flowering period only surveyed in November, and *Pterostylis oreophila* surveys in January for an orchid which flowers from November to January. All these appear inappropriate for these species.
6. In Table 4-14: Threatened flora parallel field traverse survey effort, we have Diuris aequalis being surveyed in the Snowy Mountains well away from its known and expected locations of Bungonia and Crookwell.
7. We consider the orchid survey work currently undertaken insufficient and inadequate for the purpose of ensure these orchids are sufficiently protected.

The Orchid Conservation Group wishes to assist so as to ensure the special orchid flora is neither damaged or destroyed by the construction or maintenance of this project into the future.
Below is an extraction of the orchid data as shown in the report tables and highlighting the areas of difficulties discussed above.
If required, I would be happy to provide further clarification or assistance.

HumeLink Project

Orchid Data Extracted from the,

EIS Technical Report 1 - Biodiversity Development Assessment Report

Highlighting areas of concern discussed above.

Table ES- 1: Potential impacts to threatened orchid flora species credit species

Species	Common name	BC Act status	Area of impact (ha)	Recorded/assumed present
Caladenia concolor	Crimson Spider Orchid	E	34.1	Assumed present
Caladenia tessellate	Thick Lip Spider Orchid	E	16.0	Assumed present
Diuris aequalis	Buttercup Doubletail	E	28.3	Assumed present
Diuris Ochroma	Pale Golden Moths	E	0.25	Assumed present
Diuris tricolor	Pine Donkey Orchid	V	1.4	Assumed present
Genoplesium superbum	Superb Midge Orchid	E	8.8	Assumed present
Prasophyllum bagoense	Bago Leek-orchid	CE	31.9	Assumed present
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	0.25	Assumed present
Prasophyllum keltonii	Kelton's Leek Orchid	CE	31.7	Assumed present
Prasophyllum petilum	Tarengo Leek Orchid	E	24.5	Assumed present
Prasophyllum sp. Wybong	Prasophyllum sp. Wybong	E	87.8	Assumed present
Pterostylis alpina	Alpine Greenhood	V	24.4	Assumed present
Pterostylis foliate	Slender Greenhood	V	36.5	Assumed present
Pterostylis oreophila	Blue-tongued Greenhood	CE	0.56	Assumed present
Thelymitra alpicola	Alpine Sun-orchid	V	0.56	Assumed present

Table 4-13: Threatened orchid flora two-phase grid-based systematic survey effort

Scientific Name	Common name	BC Act status	EPBC Act status	Months of survey	IBRA subregion					
					Bungonia	Crookwell	Murrumbateman	Inland Slopes	Bondo	Snowy Mountains
Caladenia concolor	Crimson Spider Orchid	E	V	Sep	N/A	N/A	138 surveys in Sep-21 (136.33 person hours)	No surveys conducted	No surveys conducted	N/A
Caladenia tessellate	Thick Lip Spider Orchid	E	V	Sep-Oct	51 surveys in Sep21 (70.67 person hours)	N/A	N/A	N/A	N/A	N/A
Diuris aequalis	Buttercup Doubletail	E	E	Oct-Nov	No surveys conducted	No surveys conducted	N/A	N/A	N/A	N/A
Diuris ochroma	Pale Golden Moths	E	V	Dec-Jan	N/A	N/A	N/A	N/A	N/A	19 surveys in Jan-22 (6.3 person hours)
Diuris tricolor	Pine Donkey Orchid	V	-	Sep-Oct	N/A	N/A	N/A	147 surveys in Oct21 (191.32 person hours)	N/A	N/A
Genoplesium superbum	Superb Midge Orchid	E	-	Feb-Mar	24 surveys in Feb22 (23.6 person hours)	N/A	N/A	N/A	N/A	N/A
Prasophyllum bagoense	Bago Leek Orchid	CE	CE	Dec	N/A	N/A	N/A	N/A	N/A	No surveys conducted
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	Feb-Mar	N/A	N/A	N/A	N/A	N/A	9 surveys in Mar22 (13.5 person hours)
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	Dec-Jan	N/A	N/A	N/A	N/A	N/A	19 surveys in Jan-22 (18.90 person hours)

Prasophyllum petilum	Tarengo Leek Orchid	E	E	Sep-Dec	N/A	N/A	138 surveys in Sep-21; 72 in Oct21; 89 in Nov-21; 69 in Dec-21 (414.75 person hours)	147 surveys in Oct21; 47 in Nov-21; 14 in Dec-21 (271.57 person hours)	N/A	N/A
Prasophyllum sp. Wybong	-	-	CE	Sep-Oct	N/A	N/A	N/A	147 surveys in Oct21 (191.32 person hours) 1.2 km of random meander in Oct-20 (ELA)	N/A	N/A
Pterostylis alpina	Alpine Greenhood	V	-	Aug Sep Nov	N/A	N/A	N/A	N/A	N/A	32 surveys in Nov-21 (43.83 person hours)
Pterostylis foliata	Slender Greenhood	V	-	Oct-Nov	N/A	N/A	N/A	N/A	N/A	32 surveys in Nov-21 (43.83 person hours) 61.31 km of random meander in Nov20 (ELA)
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	Dec-Jan	N/A	N/A	N/A	N/A	N/A	19 surveys in Jan-22 (18.90 person hours)
Thelymitra alpicola	Alpine Sun-orchid	V	-	Nov-Jan	N/A	N/A	N/A	N/A	N/A	19 surveys in Jan-22; 32 in Nov-21 (62.73 person hours)

Note: V = Vulnerable, E = Endangered, CE = Critically Endangered, Ex = Extinct

N/A = Species does not occur in the IBRA subregion

Table 4-14: Threatened orchid flora parallel field traverse survey effort

Scientific Name	Common name	BC Act status	EPBC Act status	Months of survey	IBRA subregion					
					Bungonia	Crookwell	Murrumbateman	Inland Slopes	Bondo	Snowy Mountains
Caladenia concolor	Crimson Spider Orchid	E	V	Sep	N/A	N/A	N/A	4.73 km in Oct20	N/A	N/A
Diuris aequalis	Buttercup Doubletail	E	E	Oct-Nov	N/A	N/A	N/A	N/A	N/A	4.46 km in Oct-20 (Snowy Mountains is not an associated IBRA subregion for this species)
Prasophyllum sp. Wybong	-	-	CE	Sep-Oct	N/A	N/A	N/A	5.47 km in Oct20 (Inland Slopes is not an associated IBRA subregion for this species)	6.78 km in Oct 20 (Bondo is not an associated IBRA subregion for this species)	N/A
Pterostylis foliate	Slender Greenhood	V	-	Oct-Nov	N/A	N/A	N/A	N/A	N/A	23.43 km in Nov-20

Note: V = Vulnerable, E = Endangered, CE = Critically Endangered, Ex = Extinct

N/A = Species does not occur in the IBRA subregion

Table 7-1: Candidate threatened orchid flora species credit species

Scientific Name	Common name	BC Act status *	EPBC Act status *	SAII	Habitat/ geographic constraints	IBRA subregion						Justification for inclusion/ exclusion
						Bon[3]	Bun[4]	Cro[5]	Mur[6]	Inl[7]	Sno[8]	
Caladenia concolor	Crimson Spider Orchid	E	V	Yes	West of Jingellic	-	-	-	Included	Included	-	Included There are two known populations, one population comprising of a few hundred plants on private property near Bethungra and the other of about 100 plants occurs in Burrinjuck Nature reserve.
Caladenia montana	-	V	-	-	See justification column	Excluded	-	-	-	-	Excluded	Excluded – Geographic limitations Species profile page states: "The species occurs mainly in the east alps section of the Alpine National Park in Victoria. There are records in the ACT and adjacent areas in NSW, but these are now referred to as Caladenia fitzgeraldii. Caladenia montana may occur in southern Kosciuszko National Park adjacent to Victoria." The project does not extend into the above National Park.
Caladenia tessellate	Thick Lip Spider Orchid	E	V	Yes	NA	-	Included	-	-	-	-	Included Associated with PCTs and habitat that occurs in the Bungonia IBRA subregion.
Diuris aequalis	Buttercup Doubletail	E	E	-	Within 20 km of the Great Dividing Range	-	Included	Included	-	-	-	Included The Buttercup Doubletail has been recorded in Kanangra-Boyd National Park, Gurnang State Forest, towards Wombeyan Caves, the Taralga - Goulburn area, and the ranges between Braidwood, Tarago, and Bungendore. Associated with PCTs and habitat that occurs in the project footprint.
Diuris ochroma	Pale Golden Moths	E	V	Yes	NA	-	-	-	-	-	Included	Included Recorded in south-eastern NSW on the sub-alpine plains of Kosciuszko National Park and the Kybean area. Associated with PCTs and habitat that occurs in the project footprint.
Diuris tricolor	Pine Donkey Orchid	V	-	-	NA	-	-	-	-	Included	-	Included Sporadically distributed on the western slopes of NSW, extending from south of Narrandera all the way to the north of NSW. Localities in the south include Red Hill north of Narrandera, Coolamon, and several sites west of Wagga Wagga. Associated with PCTs within the project footprint.
Genoplesium superbum	Superb Midge Orchid	E	-	Yes	NA	-	Included	-	-	-	-	Included The Superb Midge Orchid is restricted to the Central and Southern Tablelands of NSW

												where it has been recorded from 2 locations near Nerriga, about 20 km apart, and north of Wallerawang. Some plants occur in Morton National Park. Associated with PCTs and habitat that occurs in the project footprint.
Prasophyllum bagoense	Bago Leek Orchid	CE	CE	Yes	NA	-	-	-	-	-	Included	Included Currently known from a single population on land covered by a Crown Lease on State Forest near Tumbarumba on the Southern Tablelands of NSW. The species occurs over about 12 ha of subalpine grassy plain and wetland at an elevation of about 1,100 m. Its distribution may extend into adjacent woodlands. Recent annual surveys suggest that the number of individuals emerging at the site may fluctuate seasonally, with counts ranging from about 20 to 80 in the flowering seasons of 2000 and 2003.
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	Yes	NA	-	-	-	-	-	Included	Included The species is known from a single population comprising about seven small colonies, totalling about 400 individuals, from a small area about 30 km north-west of Cabramurra and about 17 km south of Talbingo, in the Tumbarumba Local Government Area. The species occurs in Bago State Forest and apparently also on adjacent Crown forestry lease and private freehold. The species is not known to occur in any conservation reserves.
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	Yes	NA	-	-	-	-	-	Included	Included Kelton's Leek Orchid is known from a single population that occurs in a small area known as McPhersons Plain, about 30 km north-west of Cabramurra and about 17 km south of Talbingo, in the Tumbarumba Local Government Area. The known population, which is intermingled with the Bago Leek Orchid, is recorded as comprising approximately 400 plants, of which about 380 occur on the Brandy Marys State Forest Crown Leases, and about 20 on an adjacent private property. Records provided by the NSW Forestry Corporation (2020) indicates a population occurs within sections of Bago State Forest intersecting the project footprint.

Prasophyllum petilum	Tarengo Leek Orchid	E	E	-	East of Binalong, south and east of Boorowa	-	-	-	Included	Included	-	Included Natural populations are known from a total of five sites in NSW. These are near Boorowa, Queanbeyan area, Ilford, Delegate and a newly recognised population 10 km west of Muswellbrook. It also occurs at Hall in the ACT. This species has also been recorded at Bowning Cemetery where it was experimentally introduced, though it is not known whether this population has persisted.
Prasophyllum retroflexum	Kiandra Leek Orchid	V	V	-	Treeless vegetation above 1,000 m in altitude /Kosciuszko National Park	-	-	-	-	-	Excluded	Excluded – Geographic Limitations All populations are thought to occur within Kosciuszko National Park (in the Long Plain, Kiandra, Tantangara area).
Prasophyllum sp. Wybong	-	-	CE	-	NA	-	-	-	-	Included	-	Included Endemic to NSW, it is known from near Ilford, Premer, Muswellbrook, Wybong, Yeoval, Inverell, Tenterfield, Currabubula and the Pilliga area. Most populations are small, although the Wybong population contains by far the largest number of individuals. Whilst this species is predicted to occur within the subregion, there are no previous records in the Inland Slopes IBRA subregion. However associated PCTs occur in the project footprint.
Pterostylis alpina	Alpine Greenhood	V	-	-	-	-	-	-	-	-	Included	Included The Alpine greenhood grows in moist forests on foothills and ranges, extending to montane areas in NSW, the ACT and Victoria. In NSW the species occurs in the Southern Tablelands south from Bondo State forest.
Pterostylis foliata	Slender Greenhood	V	-	-	NA	-	-	-	-	-	Included	Included Pterostylis foliata is found in NSW, ACT, Victoria, SA, Tasmania and New Zealand (type location). In NSW the species occurs mainly in the Southern Tablelands south from Batlow.
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	Yes	NA	-	-	-	-	-	Included	Included In NSW, the Blue-tongued Greenhood is known from a few small populations within Kosciuszko National Park and a population of about 40 plants (possibly now extinct) in Bago State Forest and adjoining Crown Leases south of Tumut. The known distribution includes parts of the Snowy River, Tumbarumba and possibly Tumut Local Government Areas. The Blue-tongued Greenhood is also known from the ACT (Brindabella Range) and in montane areas of far northeastern Victoria.

Thelymitra alpicola	Alpine Sun-orchid	V	-	-	NA	-	-	-	-	-	Included	Included T.alpicola is distributed in south–eastern NSW and north–eastern Victoria. The northern-most populations are in the upper Blue Mountains. The remainder of the New South Wales distribution is from the Snowy Mountains extending north–west to Bago State Forest and to the eastern part of the Great Dividing Range south from Braidwood.

* EPBC Act and BC Act conservation status: CE- Critically Endangered; E -Endangered; V- Vulnerable.

3 Bondo IBRA subregion

4 Bungonia IBRA subregion

5 Crookwell IBRA subregion

6 Murrumbateman IBRA subregion

7 Inland Slopes IBRA subregion

8 Snowy Mountains IBRA subregion

Table 7-2: Threatened orchid flora species confirmed or assumed present

Scientific Name	Common name	BC Act status *	EPBC Act status *	SAII	Associated PCTs	IBRA subregion	Species habitat status within IBRA subregion (BioNet, 2022)	Likelihood of occurrence				Assessment outcome	Likelihood of occurrence
								Excluded by field survey	Confirmed by field survey	Assumed presence	Total habitat		
Caladenia concolor	Crimson Spider Orchid	E	V	Yes	PCT 268, 280 and 290	Inland Slopes	Known	5.07	0	262.91	262.91	Assumed present	Caladenia concolor was not recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. Known populations are limited to a property near Bethungra and within Burrinjuck Nature Reserve (nearest known location is approximately 4 km from the project footprint), therefore the species is considered to have a low likelihood of occurrence.
						Murrumbateman	Predicted	0.15	0	34.61	34.61	Assumed present	
Caladenia tessellate	Thick Lip Spider Orchid	E	V	Yes	PCT 870, 1093, 1150 and 1330	Bungonia	Known	14.31	0	103.32	103.32	Assumed present	Caladenia tessellata was not recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. No known populations occur within proximity to the project footprint (nearest known location is approximately 55 km from the project footprint), therefore the species is considered to have a low likelihood of occurrence.
Diuris aequalis	Buttercup Doubletail	E	E	-	PCT 731, 1093, 1097, 1151 and 1191	Bungonia	Known	0	0	48.14	48.14	Assumed present	Diuris aequalis has not been recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. The likelihood of occurrence for this species is low due to the absence of records within 20 km of the project footprint (Bungonia IBRA subregion) and the absence of associated PCTs (Crookwell IBRA subregion).
						Crookwell	Known	18.99	0	284.70	284.70	Assumed present	
Diuris ochroma	Pale Golden Moths	E	V	Yes	PCT 1224	Snowy Mountains	Known	0	0	19.82	19.82	Assumed present	Diuris ochroma was not recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. Known populations of the species are limited to Kosciuszko National Park and the Kybean area in

													NSW (approximately 27 km from the project footprint) and therefore the likelihood of occurrence for this species is low.
Diuris tricolor	Pine Donkey Orchid	E	V	-	PCT 731	Inland Slopes	Known	0	0	19.82	19.82	Assumed present	Diuris tricolor was not recorded in the project footprint during targeted surveys, however the species has been assumed present over a portion of the project footprint due to survey limitations. The species is sporadically distributed on the western slopes of NSW, extending from south of Narrandera all the way to the north of NSW. There is only one record of the species within 20 km of the project footprint which is dated 1917. Therefore due to the lack of recent nearby records, the species is considered to have a low likelihood of occurrence.
Genoplesium superbum	Superb Midge Orchid	E	-	Yes	PCT 1150	Bungonia	Known	21.44	0	49.69	49.69	Assumed present	Suitable habitat for Genoplesium superbum was detected within the project footprint within the Bungonia IBRA subregion. Targeted flora surveys within the project footprint did not locate the species. Where survey effort was not adequate, species presence has been assumed within suitable habitat. The species is only known from two locations near Nerriga and Morton National Park in NSW (nearest known location is Suitable habitat for Genoplesium superbum was detected within the project footprint within the Bungonia IBRA subregion. Targeted flora surveys within the project footprint did not locate the species. Where survey effort was not adequate, species presence has been assumed within suitable habitat. The species is only known from two locations near Nerriga and Morton National Park in NSW (nearest known location is
Prasophyllum bagoense	Bago Leek Orchid	CE	CE	Yes	PCT 1196 and 1224	Snowy Mountain s	Known	0	0	101.61	101.61	Assumed present (recorded adjacent to the project footprint only).	Prasophyllum bagoense was recorded within the Snowy Mountains IBRA subregion adjacent to the project footprint (39 individuals), therefore it is assumed that species habitat would be impacted by the project.
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	Yes	PCT 1221	Snowy Mountain s	Known	0	0	8.83	8.83	Assumed present	Prasophyllum innubum was not recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. There are seven previous records in the IBRA subregion,

													two of which occur within 5 km of the project footprint. Given the close proximity of previous records, the presence of potential habitat in the project footprint and the low number of surveys undertaken, the likelihood of occurrence is considered high.
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	Yes	PCT 1196	Snowy Mountain s	Known	0	0	92.78	92.78	Assumed present (recorded adjacent to the project footprint)	Prasophyllum keltonii was recorded adjacent to (ie within 750 m) the project footprint within the Snowy Mountains IBRA subregion. A total of 14 individuals were recorded. 330 individuals have been historically recorded by the NSW Forestry Corporation (all during 2016) within the vicinity of the project footprint. Three of these historic records directly intersected the project footprint. Given the presence of known and historic records within the vicinity of the project footprint, the species is assumed present within impacted habitats.
Prasophyllum petilum	Tarengo Leek Orchid	E	E	-	PCT 277, 1191 and 1330	Inland Slopes	Known	22.07	0	133.61	133.61	Assumed present	Prasophyllum petilum was not identified during targeted surveys and there are no previous records in the Murrumbateman IBRA subregion, and 26 previous records in the Inland Slopes IBRA subregion, none of which occur within 20 km of the project footprint. This species' likelihood of occurrence is therefore considered low.
						Murrumb ateman	Predicted	54.77	0	145.92	145.92	Assumed present	
Prasophyllum sp. Wybong	-	-	CE	-	PCT 266 and 277	Inland Slopes	Predicted	111.33	0	976.17	976.17	Assumed present	Prasophyllum sp. Wybong was not recorded in the project footprint during targeted surveys and there are no previous records in the Inland Slopes IBRA subregion, but the species has been assumed present over a portion of the project footprint due to the extent of potential habitat and survey limitations. This species has a low likelihood of occurrence.
Pterostylis alpina	Alpine Greenhood	V	-	-	PCT 679 and 1196	Snowy Mountain s	Known	18.75	0	92.07	92.07	Assumed present	Pterostylis alpina was not recorded in the project footprint during targeted surveys, however the species has been assumed present over a portion of the project footprint due to survey limitations. The species occurs in the Southern Tablelands south from Bondo State forest, with one record from 2005 less than 1 km from the project footprint. This species is considered to have a moderate likelihood of occurrence.
Pterostylis foliata	Slender Greenhood	V	-	-	PCT 638,	Snowy Mountain s	Known	48.85	0	126.57	126.57	Assumed present	Pterostylis foliata was not recorded in the project footprint during targeted surveys,

					679 and 1196								however the species has been assumed present over a portion of the project footprint due to survey limitations. This species occurs mainly in the Southern Tablelands south from Batlow, with two records less than 2 km from the project footprint. This species is considered to have a moderate likelihood of occurrence.
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	Yes	NA	Snowy Mountain s	Known	0	0	2.95	2.95	Assumed present	Pterostylis oreophila was not recorded in the project footprint, however the species has been assumed present over a portion of the project footprint due to survey limitations. There are eight previous records in the IBRA subregion, four of which occur within 20 km of the project footprint, and three of which occur within 5 km of the project footprint. The species is considered moderately likely to occur and potential habitat for the species would be impacted by the project.
Thelymitra alpicola	Alpine Sun-orchid	V	-	-	PCT 939	Snowy Mountain s	Known	0	0	2.54	2.54	Assumed present	The species has not recorded within the project footprint but has been assumed present over a portion of the project footprint due to survey limitations. There is one record within 5 km in Maragle State Forest, therefore this species is considered moderately likely to occur.

* EPBC Act and BC Act conservation status: CE- Critically Endangered; E -Endangered; V- Vulnerable.

Table 11-2: EPBC Act listed threatened orchid flora species recorded or with the potential to occur within the project footprint

Scientific name	Common name	BC Act Status	EPBC Act Status	Associated PCTs	IBRA subregion	Assessment outcome
Prasophyllum bagoense	Bago Leek Orchid	CE	CE	PCT 1196 and 1224	Snowy Mountains	Recorded-39 individuals adjacent to the project footprint. within PCT 1224 and adjacent 953.
Prasophyllum innubum	Brandy Marys Leek-orchid	CE	CE	PCT 1221	Snowy Mountains	Assumed present
Prasophyllum keltonii	Kelton's Leek Orchid	CE	CE	PCT 1196	Snowy Mountains	Assumed present. Recorded adjacent to the project footprint.
Pterostylis oreophila	Blue-tongued Greenhood	CE	CE	PCT 939 and 9997 (waterbodies)	Snowy Mountains	Assumed present
					Inland Slopes	Assumed present
					Murrumbateman	Assumed present

* EPBC Act and BC Act conservation status: CE- Critically Endangered; E -Endangered; V- Vulnerable.