ACT Government
Health

REF: FOI:12-04

[redacted]

Dear [redacted]

I refer to your application under the ACT *Freedom of Information Act 1989* (the Act), received by the Directorate on **31 January 2012**, in which you requested access to information regarding the identification of orchid species near Calvary Hospital.

As acting Executive Director, Service and Capital Planning, ACT Government Health Directorate, I am an officer authorised to make a decision in respect of a request for information, under section 22 of the Act.

After conducting a search of all relevant ACT Government Health Directorate records, the Directorate has identified two documents in its possession that meet the scope of your request, as identified in the schedule attached to this letter.

I have decided that these documents are to be released to you in full, you will find them enclosed with this letter at Attachment A.

My decision is appealable under the Act. This means that if you are dissatisfied with this outcome you have a right to seek a review under section 59 of the Act. This right of review extends to a review of the adequacy of the search for documents undertaken by the Directorate. If you wish to seek a review you should write to:

The Principal Officer
c/- FOI Coordinator
Executive Coordination
Health Directorate
GPO Box 825
CANBERRA ACT 2601

You have 28 days from the date of this letter to seek a review of the outcome or such other period as the Director-General permits.

Under section 54 of the Act, if you are concerned about the processing of your request or related administrative matters, you may complain to the Ombudsman, who may

conduct an independent investigation into your complaint. There is no fee for this, and the contact details are as follows:

The Ombudsman
GPO Box 442
CANBERRA ACT 2601

Please be aware that under the ACT Government's Online FOI Publication Policy, information released to you under the Act may be published on the internet.

Information, the release of which would constitute an unreasonable disclosure of personal information or business affairs will not be made publicly available under this policy. If you believe the content of your request would contain such information, please inform me at your earliest convenience.

A copy of the policy, detailing what information may be published on the internet, is available online at:
http://www.cmd.act.gov.au/__data/assets/pdf_file/0016/250333/FOI_Web_Release_Policy_-_Final.pdf

If you have any queries concerning this Directorate's processing of your request, or would like further information, please contact the Freedom of Information Coordinator on: (02) 6205 1340 or via email at: fraser.powrie@act.gov.au

Yours sincerely

David Robertson
Acting Executive Director
Service and Capital Planning
ACT Government Health Directorate

27 February 2012

SCHEDULE OF DOCUMENTS

[redacted] **– FOI12-04**

FOLIO	ITEM	DATE	STATUS	REASON FOR EXEMPTION	Internet publication
1-3	Email providing map highlighting known orchid species requiring approval under *Nature Conservation Act 1980* for removal	15.08.11	Full release	Nil	Yes
4-13	Email regarding orchid sampling times with attachments for Orchid Flowering Times and confidentialised report on orchid survey 2002	16.08.11	Full release	Nil	Yes

(1)

Tomlins, George

File Northside

From: Mulvaney, Michael
Sent: Monday, 15 August 2011 10:32 AM
To: Tomlins, George
Subject: FW: Bruce Ridge/Gossan Hill
Attachments: Bruce Ridge_Gossan Hill.pdf

George this is the map I was referring to on Friday. The Map highlights the known location of species whose removal requires approval under the *Nature Conservation Act 1980.* All native orchids require such approval and nine different species were recorded near Cavalry as part of the GDE survey work. None of the nine recorded orchids are of particular conservation concern, though the dry forest habitat on the Black Mountain sandstone is a notable orchid habitat (including of several highly restricted species), so that any clearance of this habitat near cavalry should include an orchid survey and/or a report from an orchid expert with good knowledge of the area.

Cheers Michael Mulvaney

From: Cook, Emma
Sent: Monday, 15 August 2011 10:12 AM
To: Mulvaney, Michael
Subject: FW: Bruce Ridge/Gossan Hill

Emma Cook | Research Support Officer |
Phone: (02) 6205 8593 | Fax: (02) 6207 2122 | Email: emma.cook@act.gov.au |
Conservation Planning and Research | Environment and Sustainable Development |
ACT Government | GPO Box 158 Canberra ACT 2601 |

From: Cook, Emma
Sent: Monday, 1 August 2011 3:04 PM
To: Jeffress, Stuart
Subject: Bruce Ridge/Gossan Hill

Hi Stu,

Map attached for veg in the reserves. One thing to keep in mind is that the data is only what we have from areas actually surveyed ie. Gossan Hill has not had its woodlands surveyed to determine their quality and for things such as orchids we only have records from surveys done for GDE and from park groups or opportunistic records from our staff. So this data is not complete by any means but does give a very good indication of the quality of the area. Generally for development issues if we determine the veg/habitat to be of high value from a site visit we will request the developers supply a full ecological survey from a consulting group (some are better than others).

Let me know if you need anything else.

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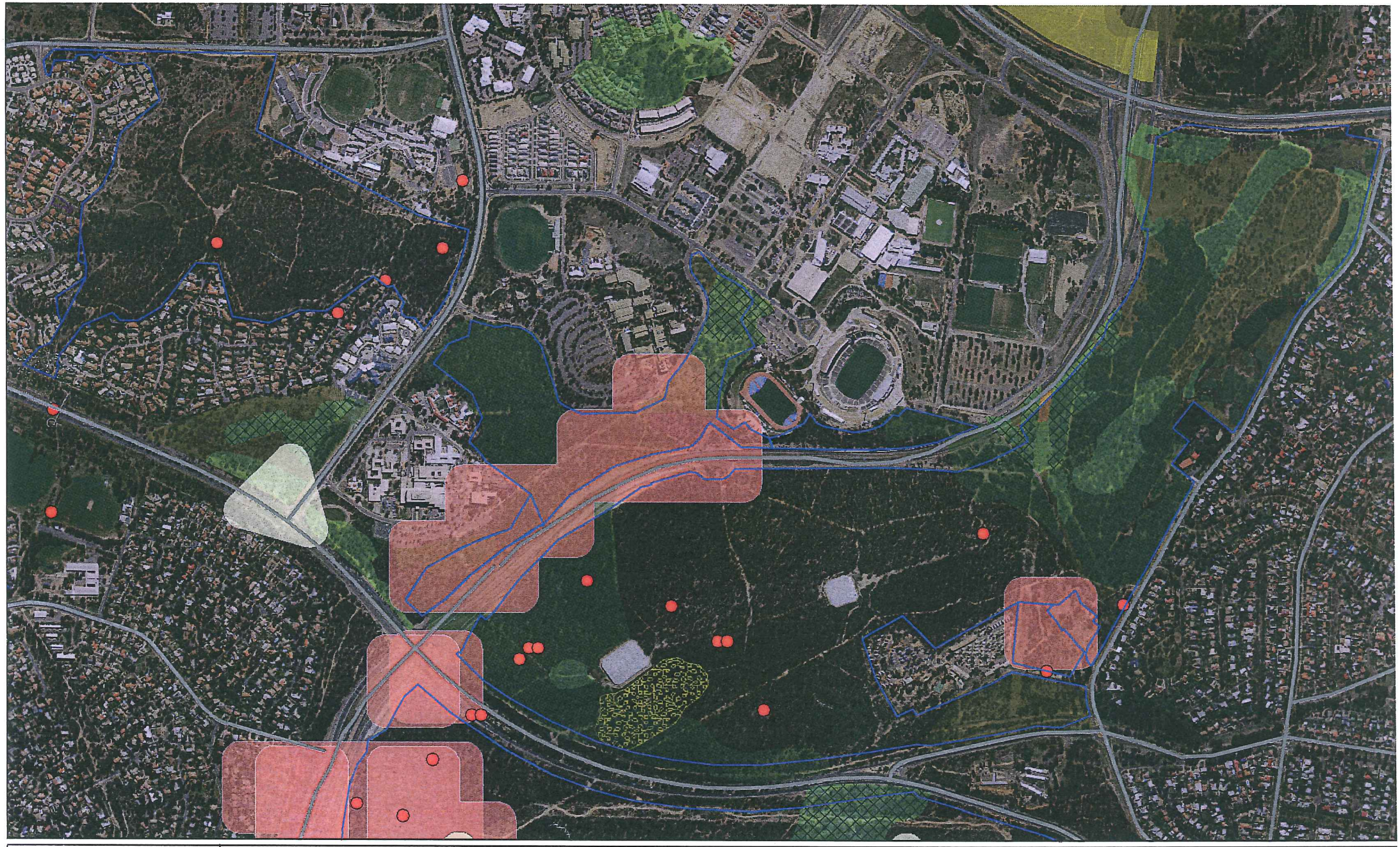
Conservation Planning and Research | Environment and Sustainable Development |



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1:13,000

0 30 60 120 180 240 Meters

Ecological Values: Bruce Ridge & Gossan Hill

- Reserves
- Main Roads
- Threatened Birds
- Allocasuarina verticillata
- Orchid habitat
- Orchids buffer
- Callitris endlicheri buffer
- NC listed YBRG woodland
- Partially modified woodland
- Moderately modified woodland
- Substantially modified woodland
- Natural Temperate Grassland

ACT Government
Environment and Sustainable Development

Date: 1 August 2011

Contact Details:
Conservation Planning and Research,
Environment and Sustainable Development Directorate.
PO Box 158
Canberra ACT 2601
Phone: 13 22 81

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(4)

Tomlins, George

From: Mulvaney, Michael
Sent: Tuesday, 16 August 2011 11:18 AM
To: Tomlins, George
Cc: Baines, Greg
Subject: RE: Bruce Ridge/Gossan Hill
Attachments: Caswell Drive Duplication.doc; Orchid flowering times.xls

Orchids are difficult in that different species pop up at different times and may only hang around for a matter of weeks. I have attached an excel spread sheet of orchid flowering times in the ACT. Half of ACT's 105 orchid species occur on Black Mountain. I suggest that a survey be largely conducted during peak orchid flowering time " late September -October" but that recognisance surveys occur over a greater time frame. I suggest that you employ orchid experts to do the survey who are able to make judgement on habitat quality and likelihood of orchids being present, even if they are not flowering. This was done for Caswell Drive back in 2002 – see attached report (minus orchid site locations). The development area would need to be inspected on several occasions.

Cheers Michael Mulvaney

From: Tomlins, George
Sent: Monday, 15 August 2011 5:08 PM
To: Mulvaney, Michael
Subject: RE: Bruce Ridge/Gossan Hill

Thanks Michael.
Very useful. When do they survey for orchids?
Cheers
George

From: Mulvaney, Michael
Sent: Monday, 15 August 2011 10:32 AM
To: Tomlins, George
Subject: FW: Bruce Ridge/Gossan Hill

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ORCHID FLOWERING TIMES

Species	ref	February				March				April				May				June				July				August				September				October				November				December				January			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Blue Caladenia	1																														P																		
Pink Caladenia	1																															P																	
Red Caladenia	1																																P																
Two-flowered Pink Caladenia	1																														P																	
Musk Caladenias	1																																			P												
Spider Caladenia	1																																		P												
Wax-lipped orchid	1																																P														
White wax-lipped orchid	1																																	P														
Gnat orchid	1																															P																
Beaked orchid	1																																	P														
Leppard orchid	1																																	P														
Tiger orchid	1																																			P												
Bearded orchid	1																																	P														
Late Bearded orchid	1																																											P				
Duck orchid	1																																									P						
Horned orchid	1																																										P				
Unspotted sun orchid	1																																		P														
Spotted sun orchid	1																																			P												
Pink sun orchid	1																																		P														
Late sun orchid	1																																				P												
Nodding Greenhood	1																														P																	
Long-leaved Greenhood	1																														P																	
Red -tipped Greenhood	1						P																																									
Autumn Greenhood	1							P																																								
Leak orchid	1																																		P														
Green midge orchid	1							P																																								
Red midge orchid	1						P																																									
Parson's bands orchid	1							P																																								
Onion orchids	1																																											P				

P = Peak blooming period

References

1 - "A simple guide to the orchids of Black Mountain" - Frank Bullen

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Caswell Drive Duplication – survey for orchids.

Interim report, January 2002.

D.L.Jones and K.J.FitzGerald
Centre for Plant Biodiversity Research
GPO Box 1600 Canberra ACT 2601.

Objectives

1. Assess the diversity of orchid species in the study area, including the approximate location of orchids found in relation to any environmental variables (eg. slope, aspect, soil type).
2. Assess the distribution and abundance of each species found in the nominated area in the context of their occurrence in Black Mountain Reserve, the Aranda Bushland and Bruce Ridge.
3. Assess the conservation status of each species in the ACT region, using ACT, NSW and Commonwealth government threatened species lists and, if appropriate, other information available.
4. Assess the potential threats to the orchid diversity of the study area.
5. Provide additional information that will assist in minimising the impact on the diversity of orchid species in the study area.

Study Area

The proposed duplication of Caswell Drive and extension of Gungahlin Drive is displayed in map 1. The study area consists of *Eucalyptus* forest on the western side of Black Mountain Reserve, at the intersection of Caswell Drive and Belconnen Way, Canberra ACT.

Black Mountain is entirely derived from sedimentary rocks, mainly fine grained quartz sandstone (Black Mountain Sandstone – Lower Silurian) with smaller areas on the western and northern sides of even older shales and siltstone (Pittman Formation – Middle Ordovician). The climax community is dry sclerophyll forest and woodland, dominated by *Eucalyptus rossii, E. mannifera* and *E. macrorhyncha.* In comparison to seemingly similar habitats such as Mt Ainslie and Mt Majura, the shrub and herbaceous layers are richer in the Black Mountain Reserve (Adams 1990). With over 500 plant species, Black Mountain is the most diverse of Canberra's Nature Parks.

The rise on the SE corner of Caswell Drive and Belconnen Way was named "Intersection Hill" for the purpose of this survey.

Background

The study area is a significant piece of relict vegetation, which, along with the adjoining section of the Canberra Nature Park system such as Aranda Bushland and Bruce Ridge, performs an important role as habitat for local flora and fauna. A number of recreational groups also use Black Mountain Reserve as well as other Canberra Nature Parks.
The flora of the ACT contains 104 known orchid species, of these 53 occur on Black Mountain (Jones, unpublished). A number of the known species have a restricted distribution in the ACT;
Caladenia actensis, has been recommended as endangered, and is restricted to the ACT (Jones 1999);
Caladenia aestiva, is known from a single record in the Brindabella Ranges;

Caladenia congesta, an uncommon species, which is prominent on Black Mountain;
Caladenia aff. *tentaculata*, generally uncommon in the ACT and well represented at one site on Black Mountain;
Calochilus aff. *campestris*, is possibly endemic to the ACT;
Genoplesium ectopum, has also had an endangered status recommended, and is restricted to the ACT (Jones & Clements 1999);
Cyrtostylis reniformis, rare in the ACT, is known from 2 colonies on Black Mountain;
Genoplesium sagittiferum, within the ACT, is known only from Black Mountain;
Lyperanthus suaveolens, within the ACT, known from only 2 sites on Black Mountain;
Orthoceras strictum, within the ACT is known from a single population of about 10 plants on Black Mountain;
Paracaleana minor, within the ACT, is restricted to about 3 populations on Black Mountain;
Pterostylis truncata, within the ACT, is restricted to 2 populations on Black Mountain;

Methodology

Surveys were carried out during the main orchid flowering season in spring by traversing the site at 5 metre intervals and targeting potentially good orchid habitat. The specific locality and latitude and longitude for sites supporting good orchid abundance and diversity were recorded and specimens collected. Abundance was recorded as "rare", "uncommon," "occasional", "frequent," or "common." Most orchids encountered were distributed generally over the site but when a different taxon was discovered specimens were collected and a geo-code recorded.

An initial survey of the study site was performed on 8 October 2001. On this date potential areas of botanical interest were noted, as were areas of severe disturbance, such as sealed walking tracks, dirt walking tracks, fire trails, and powerlines. Following this initial survey, periodic surveys (approx. 2 week intervals) of the area were performed until December 2001 when particularly hot and dry weather, resulted in the early cessation of flowering and many of the later flowering species aborting completely. However, above average rains in late January – February should result in a good autumn flowering season. Surveys are planned to commence again in March.

As well as collecting flowering species, observations were made of leaves of non-flowering plants. These sites were then revisited when the species was flowering. Known flowering times were considered in the periodic surveys so as not to miss any species. To date, most areas (85%) of the survey site have been covered at least twice. Orchids present have been collected and the potential of the habitat for non-flowering plants has been noted.

Herbarium specimens were made of orchid species collected from the study area. These specimens will be housed at the Australian National Herbarium (CANB) in Canberra. Duplicate material from these collections will be used in the Public Reference Herbarium at the Visitors Centre of the Australian National Botanic Gardens (ANBG).

Results to January 2002

A number of environmental variables could influence the diversity and occurrence of orchids in the Caswell Drive study area. Most orchids were recorded from areas of dense understorey, usually dominated by *Daviesia mimosoides* and *Joycea pallida*. Much of the western slopes of Black Mountain are stony, skeletal soils which hosts high numbers of a few of the more common species of orchid such as *Glossodia major, Caladenia carnea,*

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C.cucullata and *C.fuscata.* There are however, areas within the study area that are more sheltered and have deeper soils and an understorey of shrubs and grasses. These areas support a higher diversity of orchids such as *Caladenia congesta, C.* aff. *tentaculata, Genoplesium sagitterum* and *Lyperanthus suaveolens.*

The initial study of the proposed route has resulted in 18 species of orchid being collected (Appendix 2), however the season finished rapidly due to lack of rainfall and no further surveys were carried out after December 2001. Previous collections by Jones have identified a further 7 species of orchid as occurring in the survey site, giving a total so far of 25 species. Of these, the records of *Pterostylis truncata, Genoplesium* aff. *sagittiferum, Lyperanthus suaveolens* and *Paracaleana minor* are regarded as being significant as the only known records of these species within the ACT are from Black Mountain.

Although orchids occur throughout the study area, two sites have been identified as containing significant orchid diversity. Site 1 is on a rise near the powerlines (lat long to be inserted) and Site 2 is at the junction of Caswell Drive and the southern end of the proposed extension of Gungahlin Drive.

Conclusion

The significance of Black Mountain Nature Reserve as a site of orchid diversity should not be underestimated since it contains more than half (53 species) of the ACT orchid flora and a number of species that are found nowhere else in the ACT. By contrast, Mount Ainslie and Mount Majura have about 20 species of native orchids. A total of 25 species of orchids have been recorded from the Caswell Drive study site, representing almost half of the species recorded for Black Mountain.

The proposed route does not impinge on the populations of any orchid taxa that are listed as vulnerable or threatened on the the Nature Conservation Act (1980), or Briggs & Leigh (1996) but it does impact on 2 sites of significant orchid biodiversity. The most significant site (Site 1) is identified on a rise near the powerlines. Site 1 contains 22 species of Orchidaceae including the following significant taxa: *Caladenia congesta, Cyrtostylis reniformis, Genoplesium sagittiferum, Paracaleana minor* and *Pterostylis truncata.* This current survey has not yet recorded these species due to the season, but they have been collected from this particular site in previous years.

The second important site (Site 2) is in the vicinity of the junction of Caswell Drive and the southern end of the extended Gungahlin Drive. Site 2 differs from the first as it is a sheltered southern area and contains taxa not found at other sites (*Caladenia* aff. *tentaculata.* In all it contains 20 species of Orchidaceae including the following significant taxa: *Caladenia congesta, C.* aff. *tentaculata, Genoplesium sagitterum* and *Lyperanthus suaveolens.*

These 2 sites contain species that have a restricted distribution within the ACT. The conservation of Black Mountain Reserve, in particular, these 2 sites is imperative to the conservation of these species in the ACT.

Recommendations

To be formulated for the final report.

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Appendix 1.

A.C.T. ORCHID LIST (as to January 2002)

* denotes occurrence on Black Mountain
# denotes occurrence just outside ACT border
! denotes collected for Caswell Drive survey
✧Known occurrences in survey area

11

Acianthus R. Br.
✧ *Acianthus exsertus* R. Br.

Arthrochilus F.Muell.
Arthrochilus huntianus (F.Muell) Blaxell
ssp. *huntianus*

Caladenia R.Br.
Caladenia actensis D.L.Jones & M.A.Clem.
Caladenia aestiva D.L. Jones
Caladenia alpina R.S. Rogers
! *Caladenia carnea* R. Br
Caladenia clavigera Fitzg
Caladenia congesta R. Br.
!* *Caladenia cucullata* Fitzg.
! *Caladenia fuscata* H.G.Rchb.
!* *Caladenia gracilis* R. Br.
* *Caladenia mentiens* D.L. Jones
Caladenia montana G.W.Carr.
Caladenia phaeoclavia D.L.Jones
!* *Caladenia* sp. aff. *praecox*
!* *Caladenia* sp. aff *tentaculata*

Caleana R. Br.
Caleana major R.Br.

Calochilus R. Br.
* *Calochilus* sp. aff. *campestris* R. Br.
* *Calochilus* sp. aff. *gracillimus* Rupp
* *Calochilus paludosus* R. Br.
!* *Calochilus robertsonii* Benth.
* *Calochilus* sp. aff. *herbaceus*

Chiloglottis R. Br.
Chiloglottis chlorantha D.L. Jones
* *Chiloglottis trapeziformis* Fitzg.
* *Chiloglottis trilabra* Fitzg.
Chiloglottis turfosa D.L. Jones
* *Chiloglottis valida* D.L. Jones

Corybas Salisb.
Corybas diemenica Lindl.
Corybas fimbriata R. Br.
Corybas hispida D.L. Jones
* *Corybas incurva* D.L. Jones et M.A. Clem.

Cyanicula Hopper & A.P.Br.
! *Cyanicula caerulea* (R.Br) Hopper & A.P.Br.

Cyrtostylis R. Br.
✧* *Cyrtostylis reniformis* R. Br.

Dipodium R.Br.
Dipodium hamiltonianum F. Muell.

Dipodium punctatum (Smith) R.Br.
**Dipodium roseum* D.L. Jones

Diuris Smith
Diuris behrii Schltdl.
**Diuris chryseopsis* D.L. Jones
Diuris dendrobioides Fitzg.
Diuris monticola D.L. Jones
Diuris pardina Lindl.
Diuris pedunculata R. Br.
Diuris punctata Smith var. *punctata*
!**Diuris semilunulata* Messmer
!**Diuris sulphurea* R. Br.
! *Diuris aff. semilunulata*

Eriochilus R. Br.
✧**Eriochilus cucullatus* (Labill.) Rchb.f.
Eriochilus sp. aff. *cucullatus*

Gastrodia R. Br.
Gastrodia procera G.W. Carr
**Gastrodia sesamoides* R. Br.
Gastrodia sp. aff. sesamoides

Genoplesium R.Br.
Genoplesium ectopum D.L.Jones
Genoplesium nudum Hook.f.
✧* *Genoplesium sagittiferum* Rupp
Genoplesium turfosum D.L. Jones
!* *Genoplesium* sp. aff. *rufum*

Glossodia R. Br.
!**Glossodia major* R. Br.

Lyperanthus R. Br.
✧!**Lyperanthus suaveolens* R. Br.

Microtis R. Br.
**Microtis* sp. aff. *parviflora (benthamiana* Rchb.f.)
**Microtis unifolia* (G. Forst.) Rchb.f
Microtis sp. aff. *unifolia (montane).*

Orthoceras R.Br.
**Orthoceras strictum* R.Br.

Paracaleana Blaxell
✧**Paracaleana minor* (R. Br.) Blaxell

Prasophyllum R. Br.
Prasophyllum alpestre D.L. Jones
Prasophyllum australe R. Br.
**Prasophyllum brevilabre* (Lindl.) Hook.f.
Prasophyllum canaliculatum D.L. Jones
Prasophyllum montanum R.J. Bates et D.L. Jones

**Prasophyllum* sp. aff. *odoratum* R.S. Rogers
Prasophyllum petilum D.L. Jones et R.J. Bates
Prasophyllum tadgellianum R.S. Rogers

Pterostylis R. Br.
**Pterostylis aciculiformis* (Nicholls) M.A. Clem. et D.L. Jones
Pterostylis aestiva D.L. Jones
Pterostylis alpina R.S. Rogers
Pterostylis atrans D.L. Jones
**Pterostylis bicolor* M.A. Clem. et D.L. Jones
Pterostylis coccina Fitzg.
**Pterostylis curta* R. Br.
Pterostylis cycnocephala Fitzg.
Pterostylis sp. aff. *cycnocephala* (alpine)
Pterostylis sp. aff. *cycnocephala* (namadgi)
Pterostylis decurva R.S. Rogers
Pterostylis falcata R.S. Rogers
Pterostylis fischii Nicholls
Pterostylis hamata Blackmore & Clemesha
Pterostylis laxa Blackmore
**Pterostylis* sp. aff. *longifolia* (Black Mtn)
Pterostylis melagramma D.L. Jones
Pterostylis monticola D.L. Jones
**Pterostylis mutica* R.Br.
**Pterostylis nutans* R. Br.
Pterostylis oreophila Clemesha
Pterostylis sp. aff. *parviflora* (montane)