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31 May 2011

**Referral Business Entry Point, EIA Policy Section (EPBC Act)  
Approvals and Wildlife Division  
Department of Sustainability, Environment, Water, Population and Communities  
GPO Box 787  
Canberra ACT 2601**

**Email: [epbc.referrals@environment.gov.au](mailto:epbc.referrals@environment.gov.au)**

Dear Sir/Madam, (attention Katie Miller)

**RE: Xstrata Coal Queensland Pty Ltd/Mining/16km west of Rolleston in  
Central Queensland/QLD/Rolleston Coal Expansion Project  
Date Received: 17 May 2011 Reference Number: 2011/5965**

The following submission is made in accordance with the public consultation requirements under Section 95A of the *Environmental Protection and Biodiversity Conservation (EPBC) Act (1999)*. Capricorn Conservation Council (CCC) is the peak, non-government conservation group in Central Queensland and as such is concerned with sustainable development and the protection of the region's natural resources, species and their habitats.

This is the second mine expansion project of the existing Rolleston Coal Mine by Xstrata Coal Queensland (XCQ). It raises some serious environmental issues surrounding the impacts of the current proposed project (EPBC 2011/5965) and the previous referral (EPBC 2009/5175), already submitted and approved as a controlled action under the EPBC Act for mine expansion activities.

CCC has concerns about the following impacts associated with this current EPBC referral 2011/5965, namely, (1) the disturbance and removal of 2 endangered ecological communities, (2) the impacts on endangered, vulnerable and threatened (EVT) fauna species, (3) the impacts to impacts on endangered, vulnerable and threatened (EVT) flora species, (4) the indirect impacts on the Great Barrier Reef Marine Park, (5) the indirect impacts on Wetlands of International Importance (Ramsar wetlands), (6) cumulative impacts on matters of national significance (and national and local conservation significance) associated with the two expansion projects, and (7) the national and global implications of further coal mining, including climate change, loss of biodiversity, decline of water quality, decline in stream habitat and wetlands and the loss of productive agricultural lands. These issues and the cumulative issues for the two Rolleston Mine expansion projects form the basis of this submission. These comments and discussion will mostly be referred to and listed by the relevant section of the referral. Otherwise they will be referred to by the matter, issue or impact we have concerns about.

### **Section 1.9 and 2.2 Alternatives to the project**

XCQ has nominated that there are no alternatives to the proposed action. CCC suggest that there are alternatives to the proposed action. The first being not to undertake open cut mining operations in the expansion area at all because such mining operations have major direct environmental and conservation impacts at a national, regional and local level associated with the removal and destruction of Endangered Ecological Communities or other habitats that are essential for endangered species under the EPBC Act. A second alternative to the action would be the implementation of underground mining operations instead of open cut mining; this would result in the preservation and conservation of endangered and threatened flora, fauna and ecological communities, but may still result in other direct and indirect environmental impacts.

### **Sections 1.12 and 2.7 Part of a larger action**

These two sections of the referral are regarding whether the proposed action is part of a larger action. XCQ states 'nil', indicating that the proposed action is not part of a larger project or a staged development. CCC questions this statement on the basis that there are 3 other actions referred previously under the EPBC Act for mine operations or workers accommodation for the existing Rolleston Mine and the Rolleston Mine Expansions, suggesting it is a staged development or larger action. Further to this there are Coal Exploration Permits all over the surrounding area.

### **Section 1.15 Great Barrier Reef Marine Park (GBRMP)**

Whilst the proposed action is not within the GBRMP itself, it does have the potential to indirectly impact upon the GBRMP by way of downstream cumulative impacts to water quality as a result of mine water discharges loaded with contaminants and salts from more than 40 operational mines in the Fitzroy Basin. Further details of our reasons for objections are listed under our comments to Section 3.1 a) and 3.1 h) and 3.1 c).

### **Section 2.1 Description of proposed action**

It is identified in this section that additional exploration drilling was undertaken in 2008 and 2009, on areas that have now become MLAs 70415 and 70416; both areas are included in this referral. Given that the information of additional coal reserves was possibly evident in 2009, during which time the EPBC referral 2009/5175 was submitted for expansion of the existing Rolleston Mine operations, it is disappointing that it is now the subject of 2 separate actions. Of concern to CCC is the current preparation of the Draft Terms of Reference (ToR) for an EIS for the Rolleston Coal Expansion Project (RCEP) whilst this EPBC referral is in the decision process with DSEWPC; CCC requests that the EIS process is put on hold until a decision is made on this referral, so should approval for this action be given, the appropriate conditions for both expansion projects be listed in the draft ToR and the two projects are considered and consolidated into one EIS preparation.

### **3.1c Wetlands of International Importance (and water and wetland impacts)**

XCQ states the mine is unlikely to have direct or indirect impact on the Shoalwater & Corio Bay Ramsar Wetland. CCC disagrees as there is potential for indirect impacts associated at the project level and cumulative impact level upon water quality of the Fitzroy River and the marine receiving Great Barrier Reef waters and coastal environs, including the Corio Bay Ramsar wetland which is approximately 60km north of the Fitzroy River mouth.

While improvements have been made to mine water management, reporting and monitoring regimes in the Fitzroy Basin following the water quality disaster from Ensham Mine discharges in 2008, there are still significant gaps in knowledge of the accumulative impacts from mine water discharges and disturbances to aquifers on Basin stream health, and sedimentation of contaminants in water storages, river delta and ultimately into the Great Barrier Reef lagoon. XCQ should be required to provide more detailed studies into the wide range of climatic variables (e.g. long dry periods interspersed with very high localised rain events which could flood their site while not causing sufficiently high flows in the Comet River, or major whole of

catchment flooding from very high widespread rain events) to meet environmental authority (EA) dilution guidelines and reduce individual and cumulative impacts. For example the Fitzroy Water Quality Advisory Group recently recorded that, “water discharged by coal mines makes up about 8 percent of overall flow during periods of very low natural flows, to less than 1 percent during periods of high natural flow.” <http://www.fitzroyriver.qld.gov.au/meetings/april2011.html> XCQ should assess/study a complete range of water monitoring sites both down and upstream of existing and future mine operations to assist in determining direct and cumulative impacts. XCQ should assess a range of possible site overland flows or pit water discharges and the potential contribution to increased percentage of overall stream flow. This study should assess such events and the impacts on mine site flows to nearby wetland systems, local streams, Albinia National Park, Comet River and downstream into the Mackenzie and Fitzroy Rivers. The study should clearly demonstrate the application of the precautionary principle in considering so-called ‘extreme’ events such as flooding, and the predictions of more frequent severe storm events or more extended dry periods, in the environmental management of the project. For example the 2011 wet season, apart from causing mine flooding, destroyed significant rail and other infrastructure, and secondly, an extended dry would cause major water sources in the local area to become depleted thereby reducing the mines capacity to control dust and wash coal (with water), and support operations, accommodation facilities and achieve rehabilitation outcomes with limited water.

The area lying very close to the rangeland contains several permanent and semi-permanent wetlands which support significant habitats and migratory populations. Additional study should assess the potential impact of the mine on wetland recharge from springs and aquifers, from test drilling through to coal extraction and eventual rehabilitation.

### **Section 3.1 (a) and (h) World Heritage Properties & GBRMP**

XCQ states that the proposed action is ‘unlikely’ to have an indirect impact on the GBRMP which is a World Heritage Area. CCC disagrees and firmly believes that it is highly possible for the project to have an indirect impact on the GBRMP, both at an individual level and a cumulative level with other mine operations, through the downstream impacts associated with declining water quality (parameters including salinity, suspended sediments, nutrients and heavy metals) that result from mine activities such as stream diversions, mine water discharges, clearing of vegetation and general mine operations of the RCEP. It is therefore the opinion of CCC that the proposed action is likely/possible to have an indirect impact on the GBRMP and a World Heritage Property and has outlined some of the reasons why in the following paragraphs. The RCEP is located in the Fitzroy Basin; the largest catchment draining to the East Coast of Australia and the GBRMP. It is experiencing unprecedented coal and gas exploration and mining with more than 40 coal mines currently operating in the region and more than 20 in the advanced stages of planning. Further to this, the entire Basin has experienced major flooding and an extreme wet season for 2011 with 40 new Transitional Environmental Programs (TEPs) for Fitzroy Basin coal mines since 1 December 2010. The department has also approved 22 amendments to existing TEPs.

The mines operating under TEPs are given the authority to release or discharge water to the receiving environment because they are in a position where the water on the mine site is above or below the water quality parameters stipulated in their EA (Environmental Authority). With La Nina weather patterns now returned to the east coast of Australia, we can only expect prolonged and extreme rainfall patterns in coming years that will result in further and increased frequency of cumulative impacts to water quality in the Fitzroy Basin that are associated with mine operations and water discharges that contain high levels of contaminants/are of low quality, as the mines struggle to fulfil their water quality obligations under their EAs and consistently need to operate outside of these with TEPs. The Ensham Mine near Emerald (in the Fitzroy Basin), is an example of how an individual coal mine can cause great impacts to water quality (increased salinity levels and heavy metals in this case) downstream of the mine, all the way through to the marine environment and the GBRMP.

A whole of catchment approach is being developed to monitor cumulative impacts in the Fitzroy River by the State Government and its partners, however it must be acknowledged by XCQ that to only monitor water quality in the direct 'Receiving Environment' (and not further downstream) for the proposed action, is not sufficient enough to detect impacts associated with mine water releases and operations.

### **3.1 (d) Listed threatened species and ecological communities**

CCC finds XCQs comment, 'the proposed development will potentially result in some loss of EPBC listed threatened ecological communities and habitat for threatened and endangered flora and fauna', on the nature and extent of the likely impacts as unacceptable. CCC believes that there will be a significant impact associated with the removal of two threatened ecological communities (Brigalow and Native Grasslands), particularly with the removal of 826 ha of Natural Grasslands in this proposal and a cumulative total of 1,030 hectares across the two Rolleston Expansion EPBC referrals/actions (refer to later comments in this letter).

CCC believes that one preliminary study undertaken during 2010 is not sufficient enough in evidence to support the request to remove such threatened ecological communities and habitat for EPBC listed flora and fauna. Research data of some 5 years or more on the abundance and distribution of fauna should be undertaken before such a proposal is made, so that distribution patterns, abundance, diversity and habitat requirements of species (feeding or breeding grounds etc) are determined and understood before habitat and communities are removed. It is not acceptable that we rely heavily on desk top searches and short preliminary surveys that may not be conducted in the appropriate season to identify or locate flora and fauna.

#### **Threatened Flora**

CCC submits that more detailed flora studies are required to determine the presence, absence, abundance and distribution of EPBC listed flora species, particularly *Aristida annua*, *Dicanthium queenslandicum*, *Dicathium setosum* and *Digitaria porrecta* as these species are known to occur in the region and may well be associated with the regional ecosystems on the mining lease.

The list of threatened flora (in Table 1) is simply referenced as 'likelihood of occurrence' and CCC submits that this presence or otherwise needs to be checked and substantiated by further rigorous botanical field surveys to determine and validate absence/presence and distribution and abundance of the 'potential species'. The reference to grass species *Digitaria porrecta* as 'not previously identified on site' should be clarified with reference to the extent of preliminary studies undertaken. Furthermore, CCC would like to point out there is a major contradiction between XCQ's comment referring to *Dicanthium queenslandicum* as being 'identified on site during last year's reference sites' but then listing it as 'possible' in the likelihood of occurrence column of Table 1.

It is not acceptable that threatened flora are subjected to the inaccuracies of desk top studies and minor limited field studies (we don't know the details of the preliminary field studies because XCQ has failed to attach this information to their proposal in section 7.3 attachments) for a decision on their removal in this application.

#### Threatened fauna – general

Again, as stated in our earlier comments on threatened flora, CCC submits that more detailed fauna studies are required to determine the presence, absence, abundance and distribution of EPBC listed fauna species. XCQ makes reference to 'preliminary surveys for these threatened species were conducted in preliminary surveys in the proposed development area' and 'none of these species' (EPBC listed) 'were recorded within the proposed development area.' CCC submits that these comments need to be substantiated with the inclusion of the preliminary survey data and methods with the current proposal, so that evidence is provided on the validity and rigour of data. CCC requests that XCQ provide information pertaining to their survey/s; particularly spatial and temporal data and their associated methodologies, including frequency



and timing of monitoring before a determination on the removal of the potential habitat for the listed EPBC fauna is made.

#### Threatened fauna – Squatter Pigeon & Australian Painted Snipe

XCQ states that the Squatter Pigeon is ‘highly likely’ to occur, and that the Australian Painted Snipe is ‘unlikely’ to occur on the proposed development area. CCC strongly disagrees that the Painted Snipe is unlikely to occur, and strongly believes that the Squatter Pigeon would be present/found within the development footprint of the RCEP.

Personal communications with Allan Briggs (President of Birds Australia - Capricornia Group) confirms that the presence of the Australian Painted Snipe is a high possibility on the proposed development area. Little is understood about this species, which is very much a biome restricted species (only to wetland habitats), however it is known that it is in decline in the area. A thorough search is required to locate these birds when undertaking surveys because, a) they are enigmatic and very hard to see amongst grass or wetland vegetation, b) you can be within one metre of them before they will fly off and then can be readily identified, c) they feed early in the morning and late afternoon and d) a winter month survey would be required to identify their distribution and abundance because they migrate to southern areas of Australia in the summer months. Allan Briggs and Birds Capricornia Group will be undertaking a survey during the middle of June on “Springwood”, and believe they may find the presence of the Australian Painted Snipe.

Personal communications with Allan Briggs also confirmed that the Birds Australia Atlas should confirm the presence of the Squatter Pigeon in the area of, and located on the proposed development area.

CCC requests that XCQ undertakes a more rigorous search for the Australian Painted Snipe and Squatter Pigeon on the proposed development area with further surveys that account for the 4 points outlined above for the Painted Snipe, particularly since it appears there is wetland habitat on the development site. CCC also strongly encourages XCQ to view and utilise survey data from the initial site survey of 9 sites on the neighbouring property “Springwood” by Allan Briggs and Birds Capricornia during May 2010 (53 birds were identified), and the upcoming survey in June 2011.

#### Endangered Ecological Communities

CCC opposes the removal of the 806 hectares of Native Grasslands and 2.2 hectares of Brigalow on the proposed development area. CCC refers you to attachment 1 of this letter, (table information compiled by Patricia Julien of Mackay Conservation Council), regarding the representation of EEC representation in National Parks.

The 4 listed EEC communities listed in the Attachment are located within the proposed development area; two communities have not been reported by XCQ in the referral and the information collated in this attachment is gained from the Regional Ecosystem mapping available on-line from DERM for all of the lot and plans associated with the proposed development area.

CCC believes that the removal of 806 hectares of Native Grassland will have a significant impact upon this vegetation community in the region; it is a large area and the destruction at a local scale is simply unacceptable. CCC objects to the removal of this and the other EECs listed in Attachment A based on the fact that they are consistently being removed for mining in the region and it is common knowledge that the re-creation and establishment of these habitats/communities through replanting is not easy nor successful as a conservation measure for their survival; they are difficult to establish and CCC requests that XCQ provide an example of where a mine has successfully established and planted these communities. Furthermore, XCQ should be requested to provide an account of the percent remaining of each EEC in the region and what percentage the proposed removal of these communities in the development area actually is.

Additional site studies should be undertaken to validate desktop and preliminary assessments for the entire proposed development area and ecological communities/regional ecosystems. Direct

knowledge from local landholders of the landscape, vegetation and its history, suggest that the assessments “majority of the flatter areas have been cleared for agricultural use” and “Some of the grazing land is moderately degraded due to overstocking” are historically inaccurate and cursory. Further study - for example, historical mapping and aerial photography - should be done to determine the vegetation patterns which have been suggested to have been open woodland savannah which had only ever been lightly cleared.

Further comments pertaining to the cumulative removal of EEC’s by XCQ are outlined further on in this letter.

### **3.1 (e) Listed migratory species**

The Cotton Pygmy Goose has been identified and recorded during preliminary/initial surveys of the neighbouring property “Springwood” by the Birds Australia - Capricornia Group during May 2010 (pers. comm. Allan Briggs, President Birds Capricornia); the results of this survey were entered in to, and are available from Birddata, the Bird Atlas of Australia. This migratory species requires wetland habitat for survival, feeding on water lilies and emergent water-plant life. Whilst it may not have been identified on the proposed development area during preliminary surveys by XCQ consultants in 2010, it is very possible that the proposed development area contains habitat for this species should it contain/host lacustrine, palustrine or riparian wetlands. CCC has referenced the Queensland Wetlands database and confirmed that parts of the mine lease areas contain lacustrine and palustrine wetlands and remnant vegetation that contain 1-50% wetland mosaic units.

Of concern for CCC is the potential impact associated with increased mining activities and a closer proximity of RCEP mine operations to the wetland habitat for the Cotton Pygmy Goose and the extensive wetland systems themselves, which are present on the neighbouring property “Springwood” and some of the mine lease area. Increased and closer blasting would increase dust drift, lower air quality (we have seen existing visual evidence of nitrous oxide gas drifting across neighbouring properties from operational blasts in the existing Rolleston mine) and increase potential for lower water quality in wetland systems over “Springwood” and the mine lease due to mine dust settling on their surface. A further potential impact of this scenario would be a reduction in food availability for the Cotton Pygmy Goose and other wetland dependant fauna, through the reduced photosynthesis capabilities of submerged and emergent water/wetland plants caused by dust covering plants and the water surface, reducing the light penetration in the water column and light availability for photosynthesis.

XCQ should make reference to and utilise the data contained in the Bird Atlas of Australia in their EPBC referral; CCC requests that XCQ is asked to access and utilise this data.

Furthermore, they should also access and utilise future data that will be gathered from Bird Capricornia’s future bird survey and field trip to “Springwood” in the middle of June (refer to Birds Australia website), as this data will be entered into Birddata also.

CCC objects to the removal of any palustrine or lacustrine wetlands on the mining lease from proposed open cut mine activities.

### **3.3 (g) Current state of the environment**

It is stated that ‘some of the grazing land is moderately degraded due to overstocking and significant land clearing and heavily infested with Parthenium weed’. Upon checking the references, attachments and reliability and date of information sections of this referral, it was discovered that no further information is provided as to the source of this land condition, weed and pasture comment; this is unacceptable and CCC requests that the field survey and assessment of land condition, weed abundance and pasture species and condition be provided by XCQ to substantiate this comment. Too often this type of comment is made by coal companies to give the impression that graziers have created a degraded landscape which doesn’t have much conservation value so that it improves their position for development/mine approval.

### **3.3 (i) Indigenous heritage values**

XCQ states that there are ‘Nil’ indigenous heritage values. CCC questions the validity of this statement and has noted that the reference section of the referral does not mention any searches of the Aboriginal Cultural Heritage Register/Database for sites or values. It is the opinion of

CCC that a database search and a cultural heritage field survey should be undertaken prior to the EPBC referral to identify sites and artefacts of indigenous cultural significance; it appears this has not occurred and this is unacceptable.

### **3.3 (j) Other important or unique values**

XCQ fails to identify the very unique palustrine and lacustrine wetlands and riparian areas located upon and adjacent to the proposed development area. For example, “Springwood” contains 5 significantly sized wetlands that are worthy of mentioning and provide habitat for much fauna and flora; Currajong swamp, the lake or lake springwood, top meteor swamp, lower meteor swamp and Bapton’s swamp. Proposed development may impact upon these significant wetlands and habitat.

### **Cumulative impacts associated with two expansions of existing Rolleston Mine operations**

CCC has great concerns about the cumulative impacts associated with this current proposal on Mining Lease Application (MLA) 70415 & 70416, and the previous EPBC Referral 2009/5175 that was approved as a controlled action on ML 70307. Namely, these cumulative concerns are:

- (1) the cumulative total removal of 1030 hectares (ha) of endangered Native Bluegrass Grasslands (RE’s 11.8.11 and 11.8.5) listed as Endangered Ecological Communities (EEC) under the EPBC Act;
- (2) the cumulative total removal of 6.2 ha of endangered Brigalow Communities listed as Endangered Ecological Communities (EEC) under the EPBC Act;
- (3) the cumulative total removal of 19 ha of endangered Semi Evergreen Vine Thicket (only known to occur on ML 70307 with desktop assessment) listed as listed as Endangered Ecological Communities (EEC) under the EPBC Act;

CCC requests and urges the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) to consider and assess the cumulative impacts, as described above, to the Endangered Ecological Communities (ECC) under the EPBC Act. CCC requests that this be done prior to any decision being made on this referral application. CCC also requests that SEWPAC require, for this referral and all future referrals, to include consideration of the cumulative impact of removal of endangered communities and the associated impacts to flora and fauna species that require these communities as habitat or essential habitat.

CCC finds it very difficult to comprehend and understand the mixed message and actions being taken by the Australian Government in protecting EEC’s in the Central Queensland and Fitzroy Basin regions, particularly the Brigalow communities, Semi Evergreen Vine Thickets (SEVT) and Native Grasslands of Qld’s Fitzroy Basin & Central Highlands. For example, CCC understands that funding has been provided to the regional Natural Resource Management body (Fitzroy Basin Association) to improve the protection, conservation and management of these three EEC’s, however on the other hand we are consistently seeing many new coal mine and expansion coal mine projects being approved in the Fitzroy Basin region to remove (and maybe offset) these three Endangered Ecological Communities. The ongoing removal of these three EEC’s at an alarming rate is not acceptable and mining in the Fitzroy Basin is posing a great threat to the future existence of these communities. The good work that is being done by the Fitzroy Basin Association and the community at large, to protect these communities, is being undermined by the fact that only vegetation communities located in National Parks are protected from clearing/removal by mining activities.

### **“Springwood”**

The mining leases in this proposal overly the grazing property of “Springwood” on Lot 3 DSN 590. Further information should be sort from the property owners and managers to gain insight into the actual presence and absence and distribution of ecosystems, flora and fauna on this lot and plan and the surrounding landscape.

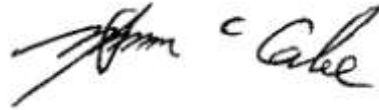
## Conclusion

CCC believes that this EPBC Referral, with reference number 2011/5965, is severely inadequate and lacks the field data and information to support XCQ's proposal and the actual and real impacts that will result from the proposed action/s. CCC requests that more information be submitted by XCQ regarding the issues identified in our submission (and other submissions and that identified by your staff) before a decision is made by your Department.

Yours sincerely,



Chantelle James  
Project Officer



Michael McCabe  
Coordinator



## ATTACHMENT 1

### EPBC-listed Endangered Communities present within Xstrata's Rolleston Proposed Mining Leases 70415 & 70416

All but one has low representation in the Protected Area Estate e.g. National Parks etc.

#### 1. Brigalow (Acacia harpophylla dominant and co-dominant)

REs Present: 11.4.8,11.4.9,11.9.1,11.9.5

R.E.	VMA	Biodiversity	Represented in a close National Park?	Description
11.4.8	E	E	No	Eucalyptus cambageana woodland to open forest with Acacia harpophylla or A. argyrodendron on Cainozoic clay plains
11.4.9	E	E	Carnarvon & Albinia	Acacia harpophylla shrubby open forest to woodland with Terminalia oblongata on Cainozoic clay plains
11.9.1	E	E	Carnarvon	Acacia harpophylla-Eucalyptus cambageana open forest to woodland on fine-grained sedimentary rocks
11.9.5	E	E	Carnarvon	Acacia harpophylla and/or Casuarina cristata open forest on fine-grained sedimentary rocks

#### 2. Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin

REs Present: 11.3.21,11.8.11

R.E.	VMA	Biodiversity	Represented in a close National Park?	Description
11.3.21	E	E	Carnarvon	Dichanthium sericeum and/or Astrebla spp. grassland on alluvial plains. Cracking clay soils
11.8.11	OC	OC	Carnarvon & Albinia	Dichanthium sericeum grassland on Cainozoic igneous rocks

#### 3. Weeping Myall Woodlands

RE Present: 11.3.2 (small patches within this regional ecosystem)

R.E.	VMA	Biodiversity	Represented in a close National Park?	Description
11.3.2	OC	OC	Carnarvon	Eucalyptus populnea woodland on alluvial plains (Weeping myall woodlands patches in this RE)

#### 4. Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar

Regions RE Present: 11.8.6 (High representation in Protected Area Estate but only in Carnarvon N.P.)

R.E.	VMA	Biodiversity	Represented in a close National Park?	Description
11.8.6	LC	OC	Carnarvon only in Queensland	Macropteranthes leichhardtii thicket on Cainozoic igneous rocks (Semi-evergreen Vine Thickets)

R.E.- Regional Ecosystem; VMA-Vegetation Management Act (QLD);

E-Endangered; OC-Of Concern; LC-Least Concern

