PROPOSED NORTHCLIFFE TO WINDY HARBOUR 22 KV DISTRIBUTION LINE

STATE ENERGY COMMISSION
OF WESTERN AUSTRALIA

Report and Recommendations
of the
Environmental Protection Authority

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The State Energy Commission of Western Australia (SECWA) has proposed the construction of a standard 22 kV three phase wood pole distribution line from Northcliffe to the Windy Harbour settlement, a distance of approximately 30 kilometres. For much of its length, the powerline would pass through the D'Entrecasteaux National Park and an area which has been proposed as national park under the Department of Conservation and Land Management's (CALM) Shannon Park and D'Entrecasteaux National Park Management Plan 1987/88 and the Management Plan for the Southern Forest Region (CALM 1987).

The Environmental Protection Authority determined that the project's potential for environmental impact required it to be formally assessed under Part IV of the Environmental Protection Act 1986. The Authority decided that a Public Environmental Report (PER) was required to assess the proposal.

Windy Harbour is a small settlement of 216 lease holders, of which 196 have completed dwellings. There are three permanent (professional fisherman) residents.

The State Energy Commission received representations to provide an electricity supply to Windy Harbour under the terms of the Contributory Extension Scheme (CES). This scheme permits rural land holders to jointly contribute to the capital cost of extending the existing electricity distribution grid. The SEC have also briefly examined alternative power supplies such as solar, wind and remote diesel generators. Under terms of a CES scheme, the existing electricity distribution grid must be utilised and therefore only a conventional or underground powerline could be funded by this means.

The potential environmental impacts of this proposal include the aesthetic intrusion on the landscape caused by the removal of trees required to accommodate the powerline easement, the resultant forest 'windows' where the line crosses the Windy Harbour Road, the risk of jarrah dieback and the significant impact caused when the powerline crosses the highly scenic, open coastal heath of the Chudalup Plain wetland areas. Most of the powerline would be visible either from the scenic lookout at Mt Chudalup or from the D'Entrecasteaux lighthouse area.

Vegetation in the D'Entrecasteaux National Park varies from tall karri (70 m) through karri/marri/jarrah to extensive wetland systems in the Chudalup plains. The park is extremely rich in landscape resources and still retains much of its natural character.

Removal of standing trees to accommodate the powerline easement will require the clearing of trees for a horizontal distance of 10 metres either side of the centre line. In addition, trees outside the easement which could fall onto the lines will also be removed. In the Mt Chudalup island karri stands, where karri trees of 70 metres are common, this could conceivably affect a strip more than 100 metres wide.

The (former) National Parks Authority in its 1987 D'Entrecasteaux National Park Study, identified four of the thirteen rare plant location sites referred to, as in the Mt Chudalup area. Apart from those four, there are at least seven other species of particular interest growing on or around this area.

As well, Jarrah dieback from Phytophthora cinnamomi is a significant disease threat to the Park. The area is identified by CALM as either affected by dieback or at risk. The risk of jarrah dieback associated with the deviation of the powerline around karri occurrences through jarrah woodland and open heathland, with an ancillary access road for maintenance purposes, is seen to be moderate on construction, but high in future years due to ongoing maintenance and emergency repair. If disease was introduced, the impact on the jarrah woodland and coastal heathland vegetation communities would be high.

Due to the likely effects on the aesthetic as well as the conservation values identified in this National Park, the Authority has concluded that the proposal to construct a conventional wood pole distribution line from Northcliffe to Windy Harbour is environmentally unacceptable.

However, there are a number of alternative power sources including wind solar, remote diesel generators and underground cabling. Alternative power sources, or combinations of power sources, would be considered by the EPA, so long as they avoided the environmental impacts identified in this assessment report.

RECOMMENDATION

The Environmental Protection Authority concludes that the proposal, as submitted by the State Energy Commission of Western Australia, is environmentally unacceptable and recommends it not proceed. However, the Authority would consider alternatives to the proposal for their environmental acceptability.

1. BACKGROUND

The State Energy Commission of Western Australia (SECWA) proposes to construct a standard 22 kV three phase wood pole distribution line from Northcliffe to Windy Harbour. The powerline route, for much of its length, passes through an area which is either National Park or has been proposed as national park under the Department of Conservation and Land Management's Management Plan for the Shannon/D'Entrecasteaux Parks (adopted by the National Parks and Nature Conservation Authority on 30 October 1987) and the Southern Forest Region Management Plan.

Windy Harbour is a settlement consisting of 216 lease holders, of which 196 have completed dwellings. There are three permanent (professional fisherman) residents, the remainder being holiday and weekend retreats. Windy Harbour is not a townsite and the settlement is not freehold land. The settlement began as a "squatter" settlement, but under Section 164 a and b of the Land Act (1980), the structures became the property of, and under the control of, the authority in which the land was vested. Consequently Windy Harbour (Reserve number A38881, 90.4 Ha) has been placed under the control of the Shire of Manjimup which leases about 200 cottage locations to individuals and groups. In addition, the Shire operates a public camping ground and rudimentary boat launching facilities are available.

Windy Harbour is surrounded to the north and east by National Park. Therefore services to the settlement must pass through the D'Entrecasteaux National Park. A portion of its water supply system is within the D'Entrecasteaux Park and road access to the community is also through the Park.

Windy Harbour is located within an area of high ecological and landscape value. The reserve and surrounding areas compose a fragile environment suitable for only limited low key use and development.

For some years the State Energy Commission has received representations to provide an electricity supply to Windy Harbour under the terms of the Contributory Extension Scheme (CES). The SEC Act (Section 61) states that "owners or occupiers" are eligible to apply to the CES. The Commission may use its discretionary powers with respect to "rural" landowners or occupiers. Rural land-holders may then be able to jointly contribute the capital cost of extending the existing electricity distribution grid to supply their needs. It is understood that to comply with the terms of this Scheme, the SEC must provide a supply by extension of the existing distribution grid system. Under the Contributory Extension Scheme then, the alternatives are a conventional powerline or an underground cable. These would comply with the condition that the existing electricity distribution grid would be extended, but underground would be more expensive and under the scheme, would still have to be funded by contribution.

Present power requirements are met by a range of sources including gas and kerosene appliances and small private electricity generators. Power demand would range from 5 or 6 permanent residents to a peak holiday demand of up to 300.

The Environmental Protection Authority determined that the proposal would require assessment under of the Environmental Protection Act 1986 and that a Public Environmental Report would be necessary to assess the environmental impacts of the proposal.

The SECWA has subsequently produced a report, detailing a proposal to construct a standard 22 kV three phase wood pole line from Northcliffe to Windy Harbour. Although alternate sources such as wind, solar and remote diesel generators may be excluded under the terms of the CES scheme, they were briefly considered by the SEC, along with underground cabling.

The SECWA concluded that, "for both economic and technical reasons, the Energy Commission is unwilling to consider supplying electricity to Windy Harbour by any means other than a conventional powerline".

2. PROJECT DESCRIPTION

The State Energy Commission of Western Australia proposes to construct a 22 kV three phase wood pole line from Northcliffe to the Windy Harbour settlement, a distance of approximately 30 km. (See Figure 1).

To quote from the Public Environmental Report (page 1):

> "the powerline route, for much of its length, passes through an area which has been proposed as National Park under the Department of Conservation and Land Management's (CALM) Management Plan for the Shannon/D'Entrecasteaux Parks (CALM 1987a). The Plan prescribes that, "In general, no utility corridors will be provided through the Parks." "Where it is proved to be essential for utilities to pass through the Parks they must avoid any impact on significant or fragile natural features" (CALM 1987a). The karri forest area around Mt Chudalup has been identified as containing such features."

The route for the proposed powerline cuts through the National Park diagonally from its NE to its SW borders. The area of National Park affected by the proposed powerline runs adjacent to the Windy Harbour Road, south from Northcliffe.

For the first few kilometres, the landform is flat to gently undulating, with cleared and partly cleared private or Crown land. The route then follows the road through about 2 km of cleared, fenced property before crossing about 8 km of wetlands. The wetlands are water logged flats and are commonly sedgeland, interspersed with thickets of scrubland as well as other woodland and forest associations.

For the following 5 km, the proposed route skirts the western side of Mt Chudalup with vegetation being jarrah/marri and karri forest of varying heights and density. The karri forest develops maximum height, and is best represented through the Mt Chudalup area.

South of Mt Chudalup the forest reverts to jarrah/marri/karri and then sedgeland wetlands and woodlands of jarrah, bullich, or peppermint trees for the 8-10 km to Windy Harbour. These wetlands are often seasonally inundated.

3. EXISTING ENVIRONMENT AND LAND USE

Windy Harbour is located some 300 km south of Perth, 29 kilometres by road from Northcliffe and is surrounded by the D'Entrecasteaux National Park (Figure 1).

The D'Entrecasteaux National Park contains the major coastal wetland and dune area reserved for conservation in the South-West.

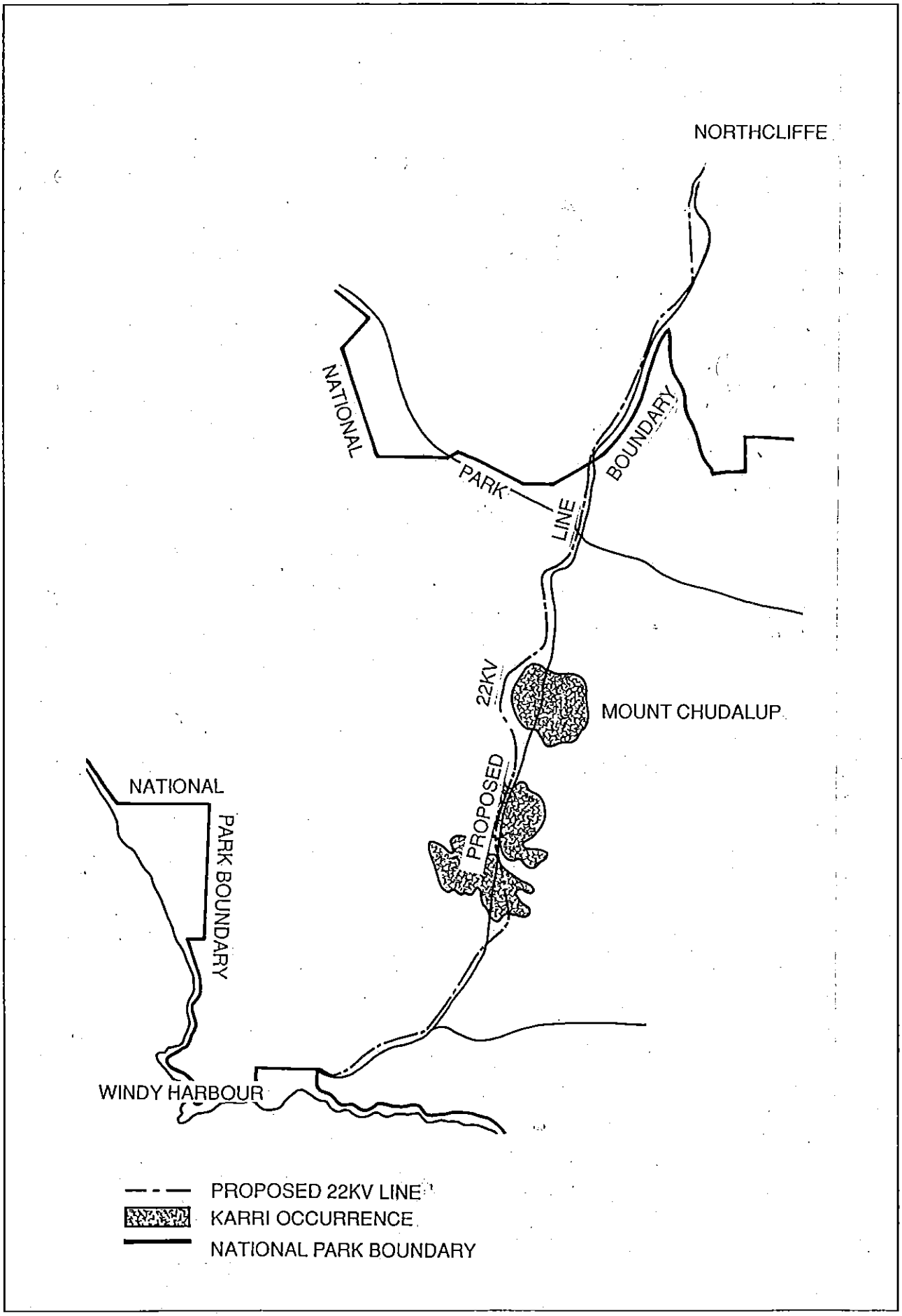


Figure 1. Location of Proposed 22 kV Distribution Line - Northcliffe Windy Harbour.

The Park stretches approximately 130 km along the southern coastline of the State, from Black Point in the West to Cliffy Head in the east (between Augusta and Walpole). The Park covers an area of 118 000 ha and extends from low water mark inland for distances ranging from 5 to 20 km. The nearest towns are Northcliffe, Pemberton, Walpole, Manjimup and Nannup. The boundaries of the D'Entrecasteaux National Park were proposed through the Conservation Through Reserves Committee (1974) and Environmental Protection Authority (1976), and subsequently endorsed by Cabinet.

The D'Entrecasteaux National Park is currently composed of six Class A reserves vested in the National Parks and Nature Conservation Authority. The remaining areas are either vacant Crown land, under pastoral lease, or reserved for other purposes. The area of vacant Crown land within the D'Entrecasteaux National Park has increased slightly over the last three years as several reserves have been cancelled and areas of State forest revoked in preparation for reservation of the whole area as National Park. Twenty-six freehold locations occur as enclaves within the D'Entrecasteaux National Park and there are also enclaves of Crown reserves vested in or under the control of the Shire of Manjimup: Windy Harbour; Camfield, on the north-eastern edge of Broke Inlet; and a reserve at the mouth of the Gardner River. In December 1987, the Government purchased 6 private land enclaves at a cost of $1 000 000 totalling 2 000 ha were purchased within the boundaries of the proposed Crown land extension to the D'Entrecasteaux National Park to ensure protection of the area's wilderness values.

Vegetation in the Park varies from very tall karri (70 m plus), through karri/marri/jarrah to extensive wetland systems in the Chudalup plains.

The Park has abundant ground and surface water and the associated natural systems are relatively undisturbed. The wetlands of the Park are of particular interest as a number of the plant and animal species recorded from these wetlands are rare or geographically restricted.

A number of species of interest are found in the wetland areas. Lombandra ordii and Reedia spathacea are two ornate rushes with very restricted distribution between Augusta and Walpole. Several other less conspicuous plants are found in swampy areas where their growth and survival is favoured, these include Cephalotus folliculoris and Deyeaxia inequalis. The wetland areas of the Parks are in general of great botanical interest.

To quote from the Shannon Park and D'Entrecasteaux National Park Management Plan 1987-1997 (page 33, 35):

> "The D'Entrecasteaux Park is extremely rich in landscape resources. Within a short distance, it is possible to experience cathedral-like stands of karri, savannah woodlands of peppermint, broad, seasonally inundated wetlands, wind swept dunes and towering seacliffs. It is a mosaic of landscapes of great diversity and beauty". "Despite some disturbance of the area, the Park still retains much of its natural character".

4. SUMMARY OF SUBMISSIONS

105 public submissions and 7 responses from State and Commonwealth agencies were received during the public review period. Of the submissions received, a high proportion supported the proposal. The reasons for support were mostly related to social and lifestyle arguments.

A detailed summary of the issues raised, is provided at Appendix 2.

The principal points from the public submissions were as follows.

SUMMARY OF SUPPORTING SUBMISSIONS

Most of the submissions supporting this proposal came from Windy Harbour lease holders. The submissions were very similar and were, quite reasonably, concerned with the quality of life in Windy Harbour.

Most of the reasons given in the submissions fell outside of the EPA's scope in that they did not address the environmental consequences of a standard wood pole powerline. However, the submissions were considered by the EPA when recommending that the Authority would consider alternative power proposals for environmental acceptability.

Reasons given for supporting the project included:

- *Refrigeration*

  Kerosene fridges are a fire hazard and a safety hazard. They smoke, have been known to explode and are difficult to get parts for. They are unsafe because it is difficult to teach visitors to use them and as a result many are discouraged from staying.

- *Lighting*

  Portable generators are a fire hazard and are very noisy. They require constant maintenance, have a short lifespan and are uneconomical. They create TV interference, are unsuitable to run a nebulizer for asthmatics and alternative sources of light are unsafe.

- *Power*

  Electric refrigerators/freezers are only possible if a 240 V power plant is run full time which disadvantages the three professional fishermen. Fuel transport and storage is a hazard.

- *Specialist Power Uses*

  These include power for a nebulizer, video, microwave, computer, electric blankets, coffee percolators, washing machines, television and food processors. Also discussed were electric pumps for water supply, power tools, light house, caravan park/camping ground, and public lighting.

- *Convenience*

  Many thought SEC power was required for convenience, that SEC power was everyone's right, that country people felt excluded from metropolitan people and that portable generators were difficult to start when arriving at night. SEC power was also seen as an essential service, a social and moral obligation and that locals were more important than tourists. Also other remote settlements such as Peaceful Bay and Point Moore have SEC power.

- *Other Benefits*

Included SEC power as essential for a growing tourist resort and future development, visitors, tourists and campers will also benefit. Occupation times will increase, as will the numbers of long term residents.

- *Other Reasons for Support*

It has never been regarded by the public that restrictive world standard management procedures and guidelines would be applied to a South Coast National Park. A reduced working life with a corresponding increase in leisure time will increase the demand on this area for recreation and leisure. A powerline maintenance track might help to contain bushfires. Not having SEC power contributes to poor eyesight.

SUMMARY OF OPPOSING SUBMISSIONS

The following points, printed in italics, were extracted from submissions opposing the proposal:

- *Clearing of Vegetation*

Not only would there be clearing of vegetation along a 20 metre wide swathe across the full width of the Park (Figure 2), but also a 4 metre wide 4-wheel drive access track would need to be maintained for locations away from the road reserve (PER, 5.1, p 17). In addition, trees outside the easement which could fall into the lines would be removed (Ibid). Such clearing is totally unacceptable in a national park (refer CALM Act, 5.56 (1)(c)).

- *Threat to Native Flora*

The description of the natural environment (4.1, p 14) and of the environmental effects of the protect (5.1, p 17) provided in the PER is not an adequate basis for assessing the environmental impacts of the project (the distribution line and the access tracks). Apparently, no survey of the vegetation or any flora was made along the proposed route.

For example, the term "heath vegetation" used in the PER (4.1, p 14) includes a wide range of plant communities, some of which contain various rare, geographically restricted, and otherwise noteworthy species.

The PER's Figure 1 indicates that the distribution line crosses not only two areas of island karri occurrence, none of which should be disturbed, but also an area in which there are populations of the restricted, relatively rare sedge Reedia spathacea the pitcher plant Cephalotus follicularis and other, smaller, possibly rare or restricted species. This area is west of the road and west south-west of Mt Chudalup.

Four of the 13 rare plant location sites referred to by the National Parks Authority units 1981 D'Entrecasteaux National Park Resource Study are in the Mt Chudalup area. They are noteworthy.

According to the Notes on Rare Plant Species in the Study, Reedia spathacea, Xyris, Cephalotus follicularis, and a very restricted species of Utricularia grow in the lowland vegetation here. Mt Chudalup and Lookout Rock have at least seven other species of particular interest

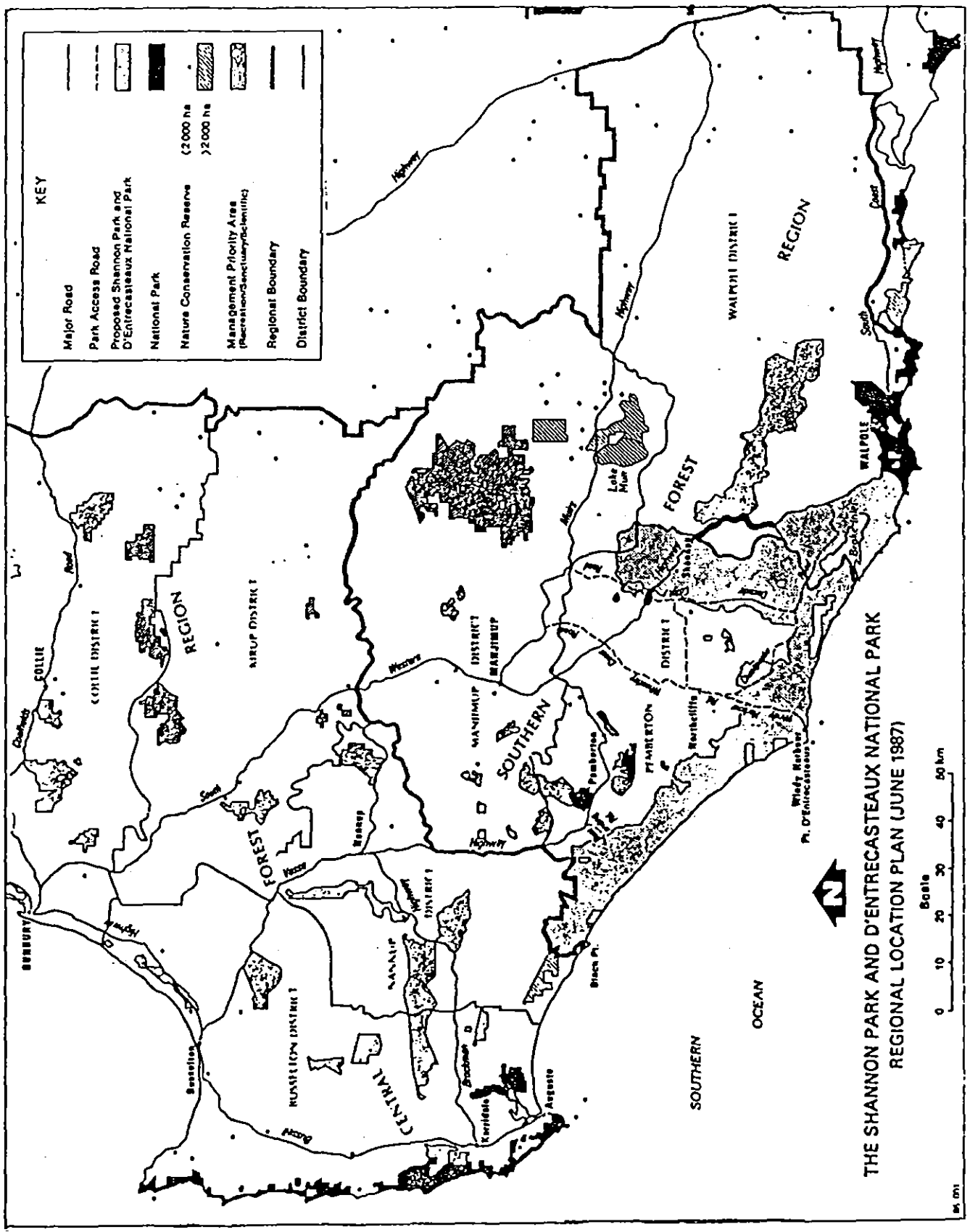


Figure 2. Shannon Park and D'Entrecasteaux National Park Regional Location Plan.

growing on and around them. These include Kennedia glabrata, Llotzkya aff ericoides, Darwinia vestita, Verticordia habrantha, Calectasia cyanea, Andersonia sprengelioides and species of Synaphea. Some of these are species which, though common further to the north and east, here apparently belong to a relict population.

- *The undertaking to carry out a detailed inspection along the easement prior to any disturbance (PER, 5.1, p 18) and the assurance that any rare plants located will be avoided by appropriate line placement (PER, 6, p 23) are futile. Once it has been decided that the project will proceed, it is too late. The time for a detailed inspection is during the preparation of the PER, and data obtained from the inspection should be part of the PER.*

- *Insufficient mention is made of the intention to build an all-weather trafficable road beneath the powerline if the preferred route is approved.*

- *No mention is made of the area of forest (in hectares) which will be cleared, if the preferred option is approved.*

- *The project should be rejected because of the threat it poses to flora, especially in the absence of a detailed flora survey along the proposed route.*

- *Serious ongoing threat from dieback*

  The threat and consequences of dieback (Phytophthora cinnamomi) within D'Entrecasteaux National park, and prescriptions to minimise them are spelt out in the Management Plan at 6.1 (pp 81-83). In fact, the project would contravene several of CALM's dieback prescriptions, notably Numbers 2 (prohibition on construction of new roads unless absolutely necessary); and 6 (compilation of accurate disease location maps prior to undertaking any activities). Even the stringent conditions enforced by CALM to prevent the spread of dieback are not totally successful. The risk of introducing and/or spreading dieback still remains. The vegetation and soils as described by the PER would be particularly susceptible to dieback infection and spread.

  The location for the project is an area identified as either already affected by dieback or at risk (Map 13, D'Entrecasteaux National Park Management Plan). Construction of the distribution line and the access routes, and continual intrusion into the area for maintenance would almost certainly spread dieback, despite all the promised precautions (PER, 6, p 23). On this ground alone, the project should not proceed.

- *Increased risk of fire in the Park*

  Despite assurances regarding the precautions that will be taken (PER, 6, p 23), the project would increase the risk of fire in the Park. The risk would be very great during construction, schedules for the drier months of 1988/89, (Ibid) and would continue in perpetuity, both from the line itself and from increased human presence required for maintenance.

- *Aesthetic effects of the power poles and the cleared strip*

  Wooden powerpoles, 11 metres high and spaced at 120 metre intervals (PER, 2.1, p 4) would cross the full width of the Park. Because of the flatness

of the land, the poles would be very obtrusive, not only for road users but for the increasing numbers of people who visit the Park on foot. The fact that the easement would for the most part follow the road reserve does little to ameliorate the situation.

In addition, there would be the visual pollution of the strip cleared of vegetation across a very beautiful part of the Park where many visitors go. Where the powerline is diverted to avoid areas of karri occurrence. Environmental and aesthetic disturbance to the National Park will occur. While this may be minimised it still contravenes the principles of National Park Management.

The powerline will present a permanent intrusion into the scenic qualities of the road to Windy Harbour. This road is used by many more people than those who have the privilege of a residence at the Windy Harbour settlement. Where the powerline diverts away from the road it will affect the aesthetic qualities of the Park for people travelling through it on foot. There is also no mention of the visual impact of a powerline from a prominent viewing point such as Mt Chudalup or D'Entrecasteaux lighthouse. In addition to this, the loss of visual amenity and the destruction of a percentage of a public resource (the Park itself) are added costs incurred by the broader Western Australian community by the proposal. These disbenefits would effect a large number of people, considerably more than the 170 consumers that could possibly receive power from the line.

- *Management Commitments*

No mention was made in this section regarding compensation for clearing land within the National Park for the purpose of powerline construction. CALM considers it appropriate that compensation be paid to enable purchase of a suitable enclave of private land for inclusion in the D'Entrecasteaux National Park. In this regard, the private property Nelson Location 1147 would make an important addition to the National Park, and the owner is known to be sympathetic to negotiating a sale for this purpose.

The preferred route crosses exploration licence areas EL 70/380, E 70/414, E 70/583 and E 70/584. The SEC should confirm with the licence construction.

5. ENVIRONMENTAL IMPACT ASSESSMENT

The major potential environmental impacts of this proposal are considered to be:

- aesthetic intrusion to the landscape;
- loss of flora;
- impacts on an area of special natural interest, and
- increased fire risk.

An additional potential impact is the possible spread of dieback disease.

5.1 AESTHETIC INTRUSION TO THE LANDSCAPE

Removal of trees will be required to accommodate the powerline easement and allow safe and efficient operation of the line. Trees will be removed or pruned along a line extending vertically 45° from the base of the easement centre line for a horizontal distance of 10 m either side of the centre line (Figure 3). Trees outside the easement which could fall into the lines will also be removed. In the Mt Chudalup area, where karri trees of 70 m are common, they would have to be removed if closer than 70 m to the easement. This would conceivably affect a strip over 100 m wide.

The proposed route, between Northcliffe and Windy Harbour, passes through two distinct areas. These are the forest areas which include the three major island karri occurrences adjacent to Mt Chudalup and the open coastal heath landscape between Mt Chudalup and Windy Harbour.

Where the powerline passes through forest areas and skirts the karri occurrences, some portions of the line may be concealed. However, because of the easements required to accommodate the powerline, "windows" are created where the line leaves and joins the Windy Harbour Road. In addition, the majority of the easement would be visible from the elevated Mt Chudalup and Point D'Entrecasteaux lighthouse areas. Mt Chudalup in particular, is a popular scenic look out with extensive panoramic views of the Park.

Where the powerline crosses the open coastal heath landscape, it would be highly visible and would significantly impact the highly scenic, and largely undisturbed landscape.

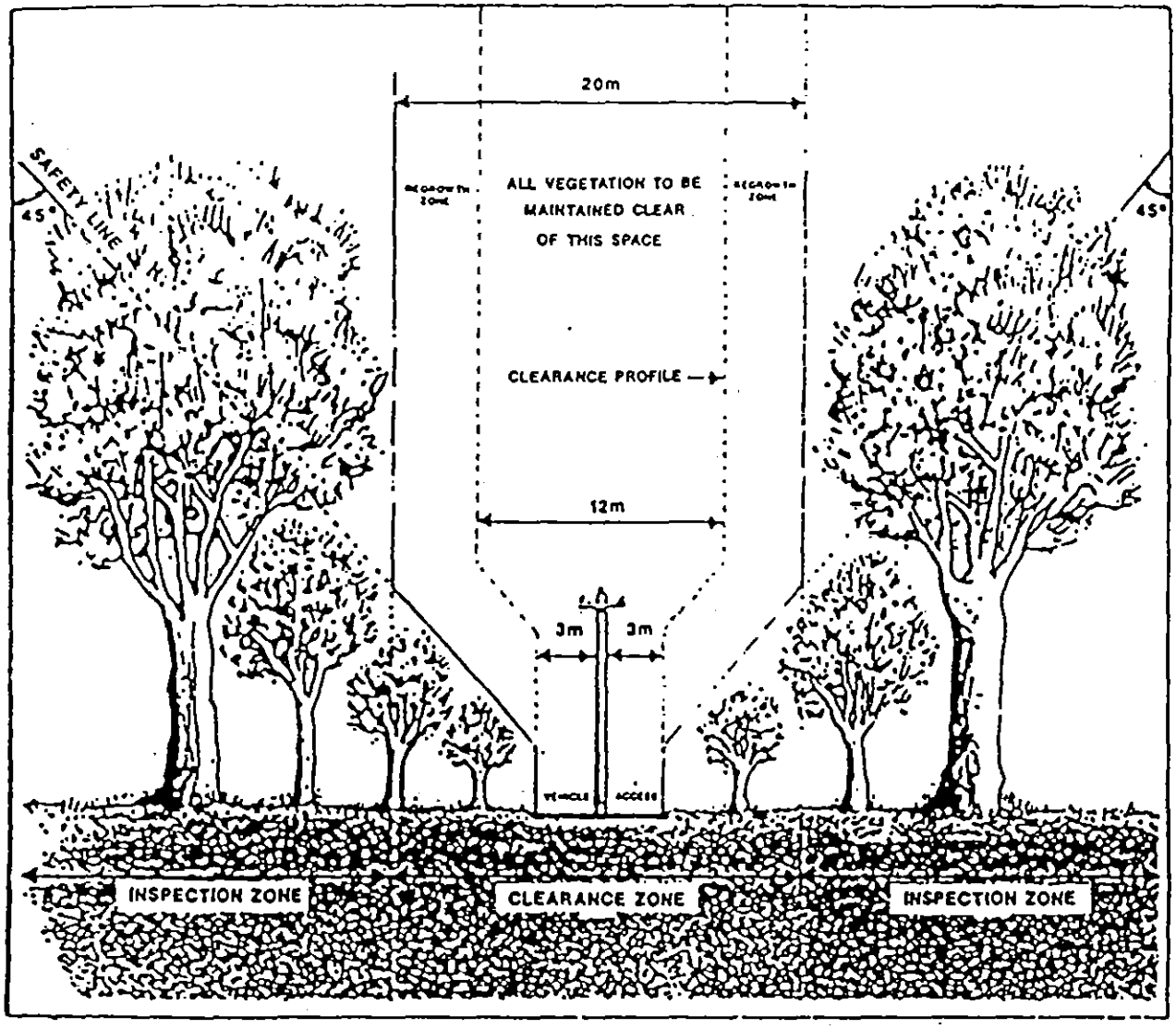
5.2 LOSS OF FLORA

The distribution line crosses at least two areas of Karri occurrence. Although the proposed line is sited within the road reserve for much of its length, a minimum 20 m of clearing will be required where the route passes through extensively treed areas. Affected forest areas would be the tallest timber stands adjacent to Mt Chudalup.

No preliminary centre line survey has been undertaken for this proposal. The line route was located following visual assessment of the proposal. The SEC have pointed out that as the PER was prepared in January/February 1988, no spring surveys of flora could be conducted. Hence, it was not possible to identify possible routes and so deviate a route away from plant associations or restricted flora.

The former National Parks Authority, in its 1987 D'Entrecasteaux National Park Study, identifies four of the thirteen rare plant location sites referred to, as in the Mt Chudalup area.

According to the Notes on Rare Plant Species in the Study, the restricted, relatively rare sedge Reedia spathacea, the pitcher plant Cephalotus follicularis, Xyris and a very restricted species of Utricularia grow in the lowland vegetation here. Mt Chudalup and Lookout Rock have at least seven other species of particular interest growing on and around them. These include Kennedia glabrata, Llotzkya affericoides, Darwinia vestita, Verticordia habrantha, Calectasia cyanea, Andersonia sprengelioides and species of Synphea. Some of these are species which, though common further to the north and east, here apparently belong to a relict population.



RECOMMENDED CLEARANCE PROFILES

RURAL AND FOREST AREAS

22kV DISTRIBUTION LINE

Figure 3. Recommended Clearance Profiles Rural and Forest Areas 22 kV Distribution Line (SECWA, Figure 2 of PER).

5.3 IMPACT ON AN AREA OF SPECIAL NATURAL INTEREST

Public utility corridors through national parks are often requested in order to provide State Energy Commission power or Telecom services for alienated lands within the parks or to shorten the route for these services to other nearby lands. The provision and maintenance of such corridors can place park conservation and amenity values at risk. The proposed route passes through areas affected or at risk of infection by dieback disease, areas of susceptibility to soil erosion and degradation, areas poorly represented, areas of fragile plant communities and areas of rare or restricted species (confirmed) (Figure 5).

Some area of the D'Entrecasteaux National Park have been subject to little disturbance. In addition, there are several geological features in the Park which are of particular interest, such as the major monadnock (rock outcrop) of Mt Chudalup with its extensive 360° views of the Park. Park management is designed such that natural processes are permitted to act on the existing natural environment without hindrance.

To quote from the recent Shannon D'Entrecasteaux National Park Management Plan 1987/97, "In general, no utility corridors will be provided through the Parks" but, "where it is proved to be essential they must avoid any impact on significant or fragile natural features".

5.4 POSSIBLE FIRE RISK

Overhead powerlines can directly cause fires when surrounding trees come into contact with suspended lines or in the rare circumstances where conductors fall to the ground and the circuit protection equipment fails to isolate the line.

The Commission have undertaken to inspect and wash powerline insulators regularly to prevent build-up of salt contamination and the associated risk of outage.

5.5 DISEASE THREAT

Jarrah dieback caused by the root fungus, Phytophthora cinnamomi, is the most significant disease threat to the Park. The location for the project is an area identified as either affected by dieback or at risk (Figures 4 and 5). In its publication, "Dieback on the South Coast", the Department of Conservation and Land Management (CALM) point out that many of the plants adapted to growing on the infertile south coast have very little resistance to dieback. They add that many of the plants which live in the national parks and reserves of the north coast are rare and endangered. These rare plants are not found anywhere else in the world. If dieback infects the areas where they grow, many species may be lost.

CALM has commented on the risks of dieback if the powerline is deviated around the karri occurrences through jarrah woodland and open heathland vegetation types, with an ancillary access road for powerline maintenance requirements. CALM considers that the risk of introduction and spread of dieback during the initial construction phase of the powerline and ancillary road would be moderate provided that appropriate hygiene prescriptions (including dry soil conditions and use of dieback free gravel) were used. However, ongoing maintenance and emergency repair (in all seasons) to the powerline in future years poses a high dieback on this portion of the route. If disease was introduced, the impact on the jarrah woodland and coastal heathland vegetation communities would also be high.

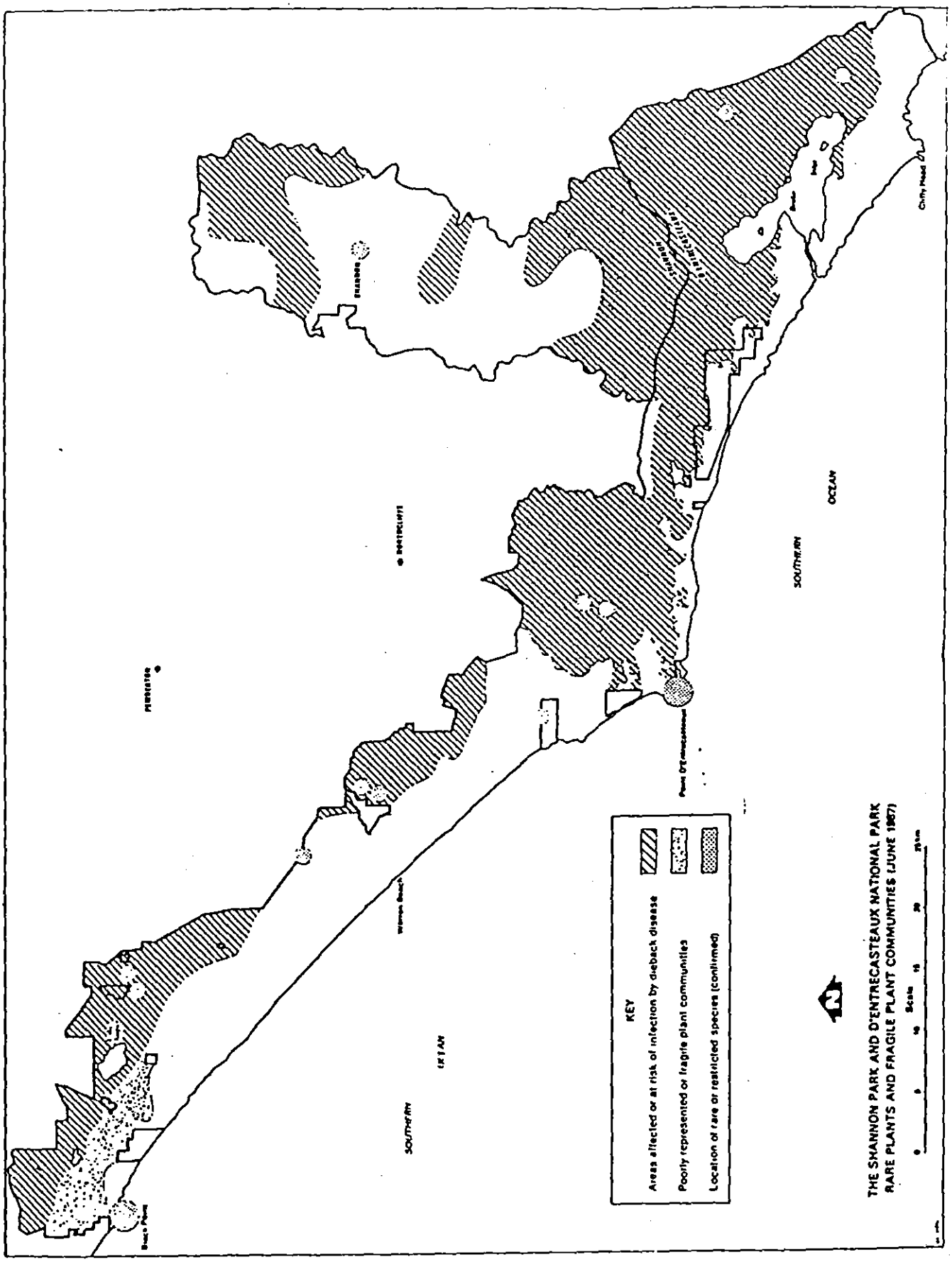


Figure 4. The Shannon Park and D'Entrecasteaux National Park Rare and Fragile Plants and Communities. (Department of Conservation and Land Management, Western Australia, Management Plan No 6.)

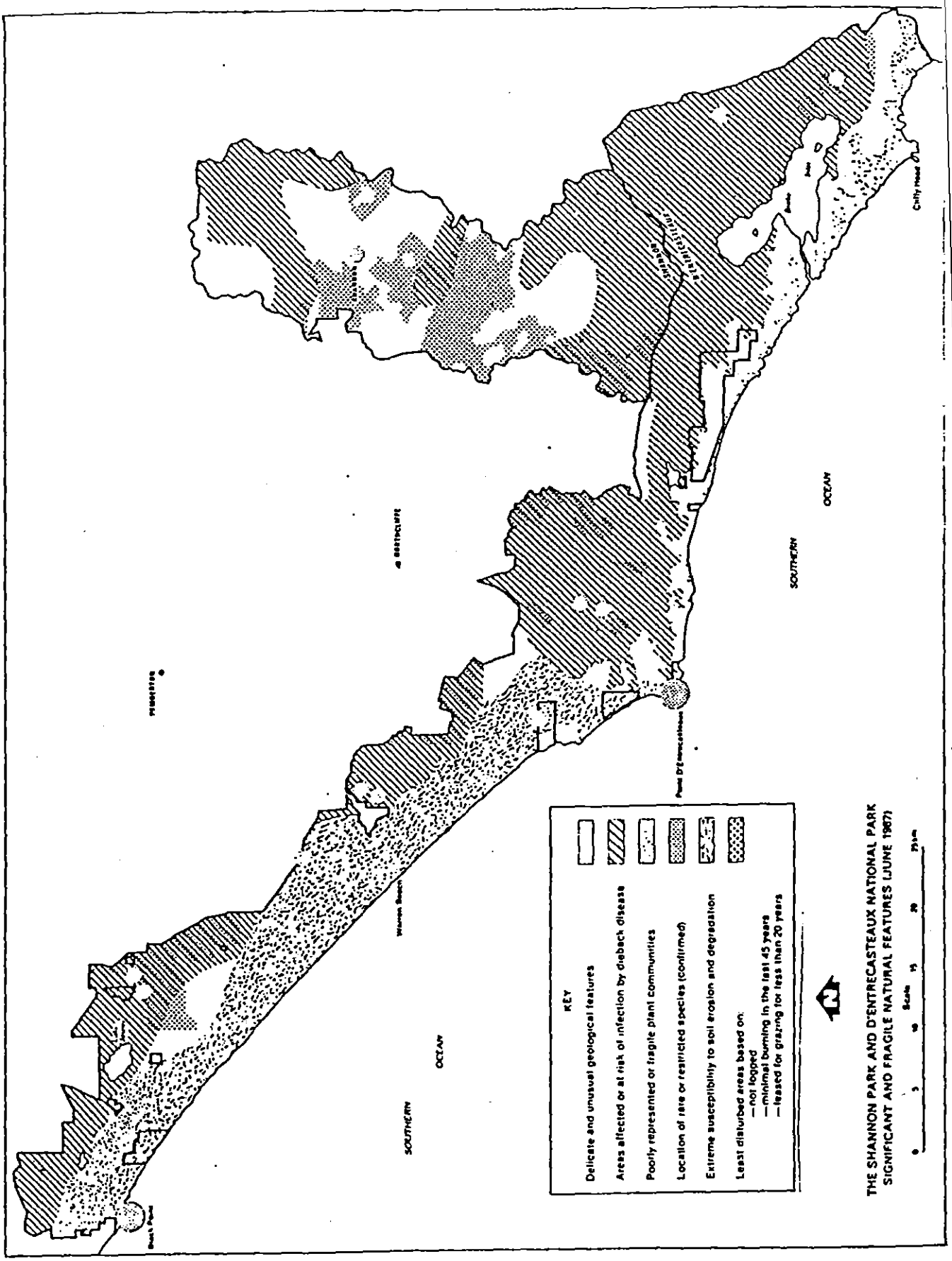


Figure 5. The Shannon Park and D'Entrecasteaux National Park Significant and Fragile Natural Features. (Department of Conservation and Land Management, Western Australia, Management Plan No 6.)

5.6 ALTERNATIVES

There are a range of alternative power sources which may be considered. Power sources could include wind powered, solar powered, remote diesel generators and combinations of these, together with battery back-up systems. In addition, the proposal to construct a standard wood pole line could be amended to include underground cable sections and sections following the existing Windy Harbour Road.

6. CONCLUSION

Windy Harbour is located within an area of high ecological and landscape value. The existing and proposed D'Entrecasteaux National Park comprises a fragile environment suitable for only low key use and development. The proposed powerline would have to pass through a sensitive part of the Park.

The D'Entrecasteaux National Park has long been recognised as a valuable area, extremely rich in landscape resources and still retaining much of its natural character. The Authority understands that the Government has recently spent $1 million buying private land enclaves within the boundaries of the proposed Crown Land extension to the D'Entrecasteaux National Park to ensure protection of the area's wilderness values.

The forest clearing of the easement associated with the powerline, together with the visual intrusion created by the powerline as it crosses the low coastal heath, would be aesthetically unacceptable. In addition, there would be unacceptable risks of jarrah dieback associated with this proposal. Therefore, while it is acknowledged that any increase in fire risk or potential for damage to rare or endangered flora could probably be acceptably managed to reduce environmental impacts, due to the likely effects on the aesthetic as well as conservation values identified in this unique National Park, the Authority has concluded that the proposal to construct a powerline from Northcliffe to Windy Harbour is environmentally unacceptable.

There are a number of alternative power sources available. In addition, the proposal for a conventional wood pole powerline could be amended to overcome some of the more pressing environmental concerns. While the SEC has concluded that for both economic and technical reasons, it is unwilling to consider supplying electricity to Windy Harbour by any means other than a conventional overhead powerline, the Authority would consider several alternatives to be environmentally acceptable. It is suggested, for example, that the underground cabling of a powerline, closely following and adjacent to the road reserve, could be environmentally acceptable.

7. RECOMMENDATION

The Environmental Protection Authority concludes that the proposal, as submitted by the State Energy Commission of Western Australia is environmentally unacceptable and recommends it not proceed. However, the Authority would consider alternatives to the proposal for their environmental acceptability.

APPENDIX 1

PUBLIC AND GOVERNMENT SUBMISSIONS

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PUBLIC AND GOVERNMENT SUBMISSIONS

Government Departments

State Planning Commission
South West Development Authority
Department of Conservation and Land Management
Water Authority of WA
Geological Survey of WA, Department of Mines WA
Western Australian Museum
Department of Transport and Communications

Public

Campaign to Save Native Forests
Organisation for Sensible Environmental Conservation
Karri D'Entrecasteaux Region Advisory Committee
Conservation Council of WA Inc
South West Forests Defense Foundation Inc
Australian Conservation Foundation
Manjimup Lions Club
South West Licenced Fishermans Association (Augusta)
Shire of Manjimup
Windy Harbour Board of Control

H D Evans, MLA Member for Warran
D R Jackson
K J and M S Paterson
R Trevorrow
B R and J A Gaudy
N F Pitts and J Fountanini
J Kerrigan
G Scantlebury
J Kammann
J W Aldersea
B Kristoffersson
D Austin
K J and E J Hayes
G Height
M Aldersea
M and F de Munck
E Bourne
D de Munck
P and M Y de Munck
S P and C C Martin
S D Rice
L H Clifton
G Moroni
T S and M B Waugh
A J Worthington
J L Williamson
M Collins
R Cresey
K J Sanders
R Wright
C Wright
B Highes
G Hadley
G H South
D R Edwards
K D Liddelow
R Rice
R O and R A Banks
A and E Banks
D R Beale
J Beale
E J Love
J Aldersea
G Adams
D Broderick
J O'Donnell
T G Hindley
E W Trevorrow
L V Richards
P D Omodei
J Ria
M M Halman
J M Waters
A J Lang
R J Allen
W Eaton
L G Look, 1B Freeman & D A Miner
A H Dorph-Petersen

PUBLIC AND GOVERNMENT SUBMISSIONS (cont'd)

J Rice
M Scantlebury
T Turpin
K H Hill
B Kelly
A L Dittmer
G O'Donnell
M Coverley
L Winter
L and M. East
V A Bignell
N Fountanini
P Bowden
T Scott
H R Mills
C Graham
C M Collins

P J Coverley
B Beale
M Rosman
J E Dittmer
R G Church
R and S Mitchell
E and B Anderson
G O'Donnell
L Byrue
G Cassells
H Churchward
H K Orr
W Dobson
T Douey
R Siewert
D Prior
S Gibbs
R Ellis

APPENDIX 2

REVIEW OF SUBMISSIONS

SUMMARY OF SUBMISSIONS REGARDING PUBLIC ENVIRONMENTAL REPORT - PROPOSED NORTHCLIFFE TO WINDY HARBOUR 22 kV DISTRIBUTION LINE

A total of 110 submissions have been received by this Authority. Three submissions offered no comment. 96 submissions (93 from Windy Harbour lease holders), supported the proposal and 10 submissions were received which opposed the proposal.

SUMMARY OF SUPPORTING SUBMISSIONS

Many of the supporting submissions are very similar. Most of the reasons given fell outside the range of the EPA's scope. Reasons for support include:

1. REFRIGERATION: Kero fridges are a fire hazard (30 submissions) and a safety hazard. They smoke (2), have been known to explode (26) and are difficult to get parts for (14). They are unsafe because it is difficult to teach visitors to use them (18) and as a result many are discouraged from staying (3).

2. LIGHTING : Portable generators are a fire hazard (6 submissions) and are very noisy (52). They require constant maintenance (5), have a short lifespan and are uneconomical (4). They create TV interference (2), are unsuitable to run a nebulizer for asthmatics (4), and alternative sources of light are unsafe (2).

3. POWER : Electric refrigerators/freezers are only possible if a 240 V power plant is run full time (9) which disadvantages the three professional fishermen. Fuel transport and storage is a hazard (14).

4. SPECIALIST POWER USES : These include power for a nebulizer (4), video (1), microwave (1), computer (1), electric blankets (3), coffee percolators (1), washing machines (1), television (3) and food processors (1). Also discussed were electric pumps for water supply (12), power tools (2), light house (2), caravan park/camping ground (13), and public lighting (3).

5. CONVENIENCE : Many thought SEC power was required for convenience (25), that SEC power was every ones right (3), that country people felt excluded from metropolitan people (1) and that portable generators were difficult to start when arriving at night (4). SEC power was also seen as an essential service (1), a social and moral obligation (2) and that locals were more important than tourists (2). Also other remote settlements such as Peaceful Bay and Point Moore have SEC power (4).

6. OTHER BENEFITS : Included SEC power as essential for a growing tourist resort and future development (5), visitors, tourists and campers will also benefit (6). Occupation times will increase, as will the numbers of long term residents (7).

7. OTHER REASONS FOR SUPPORT : It has never been regarded by the public that restrictive world standard management procedures and guidelines would be applied to a South Coast National Park (1). A reduced working life with a corresponding increase in leisure time will increase the

demand on this area for recreation and leisure (1). A powerline maintenance track might help to contain bushfires (1). Not having SEC power contributes to poor eyesight (1).

SUMMARY OF OPPOSING SUBMISSIONS:

The following summary of submissions is made up of quotations from submissions.

ENVIRONMENTAL CONSIDERATIONS

- Clearing of Vegetation

Not only would there be clearing of vegetation along a 20 metre wide swathe across the full width of the Park (Figure 2), but also a 4 metre wide 4-wheel drive access track would need to be maintained for locations away from the road reserve (PER, 5.1, p 17). In addition, trees outside the easement which could fall into the lines would be removed (Ibid). Such clearing is totally unacceptable in a national park (refer CALM Act, 5. 56 (1)(c)).

- Threat to Native Flora

The description of the natural environment (4.1, p 14) and of the environmental effects of the project (5.1, p 17) provided in the PER is not an adequate basis for assessing the environmental impacts of the project (the distribution line and the access tracks). Apparently, no survey of the vegetation or any flora was made along the proposed route.

For example, the term "heath vegetation" used in the PER (4.1, p 14) includes a wide range of plant communities, some of which contain various rare, geographically restricted, and otherwise noteworthy species.

The PER's Figure 1 indicates that the distribution line crosses not only two areas of island karri occurrence, none of which should be disturbed, but also an area in which there are populations of the restricted, relatively rare sedge Reedia spathacea the pitcher plant Cephalotus follicularis and other, smaller, possibly rare or restricted species. This area is west of the road and west south-west of Mt Chudalup.

Four of the 13 rare plant location sites referred to by the National Parks Authority in its 1981 D'Entrecasteaux National Park Resource Study are in the Mt Chudalup area. They are noteworthy.

According to the Notes on Rare Plant Species in the Study, Reedia spathacea, Xyris, Cephalotus follicularis, and a very restricted species of Utricularia grow in the lowland vegetation here. Mt Chudalup and Lookout Rock have at least seven other species of particular interest growing on and around them. These include Kennedia glabrata, Llotzkya aff ericoides, Darwinia vestita, Verticordia habrantha, Calectasia cyanea, Andersonia sprengelioides and species of Synaphea. Some of these are species which, though common further to the north and east, here apparently belong to a relict population.

- The undertaking to carry out a detailed inspection along the easement prior to any disturbance (PER, 5.1, p 18) and the assurance that any rare plants located will be avoided by appropriate line placement (PER, 6, p 23) are futile. Once it has been decided that the project will proceed, it is too late. The time for a detailed inspection is during the preparation of the PER, and data obtained from the inspection should be part of the PER.

- Insufficient mention is made of the intention to build an all-weather trafficable road beneath the powerline if the preferred route is approved.

- No mention is made of the area of forest (in hectares) which will be cleared, if the preferred option is approved.

- The project should be rejected because of the threat it poses to flora, especially in the absence of a detailed flora survey along the proposed route.

- Serious Ongoing Threat From Dieback

  The threat and consequences of dieback (Phytophthora cinnamomi) within D'Entrecasteaux National Park, and prescriptions to minimise them are spelt out in the Management Plan at 6.1 (pp 81-83). In fact, the project would contravene several of CALM's dieback prescriptions, notably Numbers 2 (prohibition on construction of new roads unless absolutely necessary); and 6 (compilation of accurate disease location maps prior to undertaking any activities). Even the stringent conditions enforced by CALM to prevent the spread of dieback are not totally successful. The risk of introducing and/or spreading dieback still remains. The vegetation and soils as described by the PER would be particularly susceptible to dieback infection and spread.

  The location for the project is an area identified as either already affected by dieback or at risk (Map 13, D'Entrecasteaux National Park Management Plan). Construction of the distribution line and the access routes, and continual intrusion into the area for maintenance would almost certainly spread dieback, despite all the promised precautions (PER, 6, p 23). On this ground alone, the project should not proceed.

- Increased risk of fire in the Park

  Despite assurances regarding the precautions that will be taken (PER, 6, p 23), the project would increase the risk of fire in the Park. The risk would be very great during construction, schedules for the drier months of 1988/89, (Ibid) and would continue in perpetuity, both from the line itself and from increased human presence required for maintenance.

- Aesthetic effects of the power poles and the cleared strip

  Wooden powerpoles, 11 metres high and spaced at 120 metre intervals (PER, 2.1, p 4) would cross the full width of the Park. Because of the flatness of the land, the poles would be very obtrusive, not only for road users but for the increasing numbers of people who visit the Park on foot. The fact that the easement would for the most part follow the road reserve does little to ameliorate the situation.

In addition, there would be the visual pollution of the strip cleared of vegetation across a very beautiful part of the Park where many visitors go. There the powerline is diverted to avoid areas of karri occurrence. Environmental and aesthetic disturbance to the National Park will occur. While this may be minimised it still contravenes the principals of National Park Management.

The powerline will present a permanent intrusion into the scenic qualities of the road to Windy Harbour. This road is used by many more people than those who have the privilege of a residence at the Windy Harbour settlement. Where the powerline diverts away from the road it will affect the aesthetic qualities of the Park for people travelling through it on foot. There is also no mention of the visual impact of a powerline from a prominent viewing point such as Mt Chudalup or D'Entrecasteaux lighthouse. In addition to this, the loss of visual amenity and the destruction of a percentage of a public resource (the Park itself) are added costs incurred by the broader Western Australian community by the proposal. These disbenefits would effect a large number of people, considerably more than the 170 consumers that could possibly receive power from the line.

- Management Commitments

No mention is made in this section regarding compensation for clearing land within the National Park for the purpose of powerline construction. CALM considers it appropriate that compensation be paid to enable purchase of a suitable enclave of private land for inclusion in the D'Entrecasteaux National Park. In this regard, the private property Nelson Location 1147 would make an important addition to the National Park, and the owner is known to be sympathetic to negotiating a sale for this purpose.

The preferred route crosses exploration licence areas EL 70/380, E 70/414, E 70/583 and E 70/584. The SEC should confirm with the licence holders prior to any commencement of construction.

ALTERNATIVE POWER SOURCES

- There are alternatives as cited by the SEC in the PER. In the section of the PER titled "The Favoured Alternative" the SEC states, "As stated at the beginning of this section, the most cost effective solution for community of Western Australia would be for residents of Windy Harbour to continue meeting their own power requirements by means most appropriate to their specific demands. Although not objectively assessed, this alternative would probably result in the lowest impact on the natural and social environment." (p 9)

- Section 2 Alternative Means of Supply

The Commission states that:-

"The continuation of the present arrangement, under which residents are responsible for providing their own power requirements would be considered to be the most appropriate arrangement for the Windy Harbour settlement since it is primarily a summer holiday retreat. This represents the no action alternative."

If this is the Commission's stated opinion, why does the Commission not hold firm and refuse to provide an electrical power supply to Windy Harbour for sound economic and environmental reasons?

- Section 2.1 - 22 kV Overhead Powerline

Is the stated construction cost of $450 000 based on average construction costs encountered elsewhere on a range of sites (cleared or uncleared), or is it an estimate for this specific job?

An examination of the preferred route reveals that more than 22 kilometre of the line would be built by erecting poles adjacent to the road edge. The vegetation clearing cost is almost nothing and the cost of getting construction equipment to each pole is very low. It is considered that the "unit cost" per kilometre for the bulk of this job would be extremely low compared with most other construction jobs. It is reasonable to suggest therefore that some of this construction "saving" could be used to subsidise the more expensive underground cabling through the sections of karri forest.

- Section 2.2 - 22 kV Underground Cable

Para 3 gives details of difficulties in locating and repairing faults on the underground cable. The long periods of time without supply is highlighted. No account is taken of the fact that back-up generators would probably be available in such cases, because each hut already has a generator installed.

- Section 2.6 - The Favoured Alternative

Para 5 states that "Cable installation and maintenance would have considerable potential to cause erosion, introduce dieback or spread it in areas already infected".

This statement is rejected because in comparison, the option to clear, form, grade, gravel and drain an access road beneath has far greater potential to cause erosion or spread dieback than installation of an underground cable adjacent to the road edge. Little or no consideration has been taken of the road construction beneath the overhead cable. The control of public access on this roadway has also not been addressed.

CALM accepts the financial argument that the use of alternative sources of supply cannot compete with conventional means of supply, however there is a strong case for the SEC to be conducting field scale experiments into alternative power generation. Windy Harbour would be an ideal site for such an experiment because lessees have back-up generators.

The Windy Harbour Road is the only route to and from Windy Harbour and provides the only constructed road access into the coast in this area of the National Park. The value of this route is therefore significant for tourists and those seeking a more wilderness orientated experience, a not unreasonable demand in what is a National Park. The powerline will, through its physical presence and the need to clear a swathe of vegetation along its route, present a major visual intrusion within the Park thereby having a negative impact on the natural character and amenity of the area. This surely contradicts the purpose behind setting aside a National Park.

It is believed that the supply of power to Windy Harbour should recognise the true purpose and function of the settlement and recognise the limited potential for growth of the settlement as it stands now and as a potential townsite. It should also recognise the high environmental cost involved of running overhead powerlines through a National Park into the area. Given this, it is believed that the option of a remote diesel station should be more thoroughly investigated.

OTHER CONCERNS INCLUDED ARE SUMMARISED BY THE FOLLOWING QUOTATIONS

- It appears from the PER that both the SEC and CALM oppose the project (PER 1.2, p 1, 1.3, p 2; 2, p 4, 6, p 22). Since they are the relevant State authorities, with the responsibility for constructing, supervising and maintaining the project, their view should carry more weight than the wishes of the very small number of self-interested persons who want the project to proceed. Section 2, page 4, stated:

- At this time the State Planning Commission would strongly oppose such a development for the following reasons:

  (i) remoteness of the locality and distance from any major service centre;

  (ii) high cost of servicing the settlement to typical townsite standard; and

  (iii) environmental significance of the immediate surrounds.

- The project contravenes prescriptions in the management plan for the Park.

- In compliance with the CALM Act, a Draft Management Plan and Management Plan for D'Entrecasteaux National Park have been prepared Both documents deal with Windy Harbour and public utilities (DMP, 6.4.5, p 114, 6.5.4.1, pp 126-127; MP, 2.4, pp 60-61; 11.7, pp 125-126). Of particular interest are the following:

  1. Any utilities which would be supplied to the settlement would have to pass through a sensitive part of the Park (DMP, 6.5.4.1, p 127).

  2. Windy Harbour is located within an area of high ecological and landscape value (Ibid).

  3. Work on the Windy Harbour road will take into account the risk of introducing or spreading dieback and the landscape amenity of the road (MP. 2.4, p 61).

- The provision of power via the proposed 22 kV above ground line violates the prescriptions relating to "Public Utilities" found in section 11.7.1 of the recently finalised Shannon D'Entrecasteaux National Park Management Plan 1987-97, which states that:-

  "In general, no utility corridors will be provided through the Parks" but, "Where it is proved to be essential (emphasis added) "they must avoid any impact on significant or fragile natural features".

- The question of location of public utility corridors within the D'Entrecasteaux National Park was addressed during the formulation of the Management Plan for that Park. The Summary of Public Submissions (August 1987) concluded "The proposal to "generally not provide" utility corridors was reasonably well received with congratulations offered for suggesting alternative methods for generating/providing power."

- The transmission line would pass through a sensitive area of high ecological and landscape value with the present road recognised as a cause of concern because it increases the risk of dieback.

- While the PER has gone to considerable trouble to fulfil the latter requirements of CALM's prescription, it has not proven that the powerline is essential. In fact the SEC has made it quite clear that the line is not essential in section 2.6. "The Favoured Alternative", which states that:-

  "the most cost effective solution for the community of Western Australia would be for the community of Windy Harbour to continue meeting their own power requirements by means most appropriate to their specific demands". SEC power for Windy Harbour has not been demonstrated as essential and the utility cannot avoid having an impact on significant and fragile natural features. If the powerline cannot be proven to be essential then its construction is in direct contravention of the Shannon Park and D'Entrecasteaux National Park Management Plan. Therefore the project appears to be unlawful and should not proceed.

- <u>The small number of cottages and very small number of permanent residents</u>

  According to the Draft Management Plan (p 126), there are only about 200 cottage locations leased to individuals and groups by the Shire of Manjimup. In the Management Plan (p 60) this estimate has been increased to 250-300 cottage locations "primarily used for holiday and recreation purposes". The PER gives the same figure, addition that only 5 or 6 are believed to be permanently occupied (1.3, p 2). There is a low occupancy level in many of the dwellings (PER, 2.6, p 9).

  There are actually 216 lease holders, of which 196 have completed dwellings. There are three permanent (professional fisherman) residents.

- <u>Low Demand for Power</u>

  The demand for power is stated to vary from 0 up to 200 or 300 kw (PER, 1.3, p 2). Elsewhere it is stated that there is a "small power load" at Windy Harbour (2.1, p 4). The demand for power is therefore acknowledged to be very low.

- <u>Better alternative sources of power for Windy Harbour</u>

  As the PER states (2, p 4), "The continuation of the present arrangement under which residents are responsible for providing their own power requirements would be considered to be the most appropriate arrangement for the Windy Harbour settlement since it is primarily a summer holiday retreat".

Alternatively, "all 170 residents who have signed agreements to take power could purchase a 1 kVA generator at a cost of around $1 000 each of $170 000 in total" (PER, 2.3, p 7).

- Supply of SEC power to Windy Harbour not cost effective

"A centralised supply and distribution system for Windy Harbour will be costly in absolute terms and in relation to the financial return to the State" (PER, 2.6, p 9). Given that the project is estimated to cost $650 000 (PER, 2.1, p 5), that contributions from customers would cover only part of the cost of even the cheapest scheme for supplying power and that income from sales of electricity would be restricted due to the low occupancy levels of many of the buildings (PER, 2.6, p 9), as the PER makes clear "the most cost effective solution for the community of Western Australia would be for residents of Windy Harbour to continue meeting their own power requirements by means most appropriate to their specific demands" (Ibid).

Although around 170 lease-holders have agreed to contribute to the cost of the project, some may change their minds when they discover that their buildings do not meet the standards set by Wiring Regulations and they would be put to some expense to being their buildings up to the standards prior to power connection (PER, 2.6, p 9). It is not stated whether the agreements are binding. If they are not, it may be suspected that the number of participants has been inflated in order to strengthen the case of those who would actually take SEC power and the number who finally contribute to the scheme may therefore be fewer than 170.

- Additional costs to lease-holders and others

Because many of the buildings do not meet the standards set by Wiring Regulations (PER, 2.6, p 9), in order to bring their buildings up to the standards prior to power connection the lease-holders would have expenses in addition to their contribution of $664. How many of the 176 residents who have signed agreements would also be prepared to pay the cost of rewiring their huts to accommodate SEC power? (CALM is informed that some $2000 - $3000 per hut could be involved in upgrading the internal wiring).

Furthermore, the lease-holders and visitors would suffer the visual pollution of the overhead distribution system through the settlement. This would affect those who do not participate in the scheme just as much as those who do (PER, 2.6, p 10).

- Better sources of power than the project may be available in future

If it is decided that the Windy Harbour settlement must get SEC power, it would nevertheless be advisable to wait as cheaper and/or more environmentally acceptable sources of power than the proposed distribution line may become available in the future. For example, whereas the use of insulated aerial bundle cables is presently not considered possible for the Windy Harbour power supply (PER, 2.1, p 5), this technology may one day provide a feasible alternative to the proposed distribution line. Alternatively, there is the possibility that aerogenerators, or solar power, either centralised or individually installed, may eventually become technically and economically feasible.

- Environmental Cost

The settlement at Windy Harbour is of considerable concern due to its existence inside the boundaries of the Park. The occupiers are in a privileged position in any case due to the settlement's position. Any further impact on the Park is totally unacceptable. The Park has already suffered as a result of Windy Harbour's existence. The provision of rubbish disposal facilities has already resulted in the alienation of a further 112 ha of Park land in addition to the 90 ha currently occupied by the reserve (No A38881). The provision of the 22 kV line would lead to further losses in area. It is totally inappropriate for a proposal of this nature to be developed inside a national park. The destruction caused by its establishment including the threat of dieback, clearance of native vegetation and loss of visual amenity do not justify by any stretch of the imagination, the provision of power to 170 or so individuals.

As outlined in the Review, of the 250 to 300 dwellings at Windy Harbour only 5 or 6 are occupied on a permanent basis with the remainder being holiday and/or weekend retreats, that would in general be occupied for no more than four weeks in each year. This low short term nature of occupancy, and the fact that only 170 residents were prepared to assist in funding the Scheme, must cast doubt on the need for the supply, particularly given the high cost to the general community of providing the service. The cost to the general community is not just the $538 000 shortfall after the residents contribution but also the environmental cost of the line itself and the increased user demand on the Windy Harbour area.

The vast majority of residents of the area are not permanent and have managed up until now without grid power. In fact when these people settled in the area they would have been aware of the lack of grid power. I consider the supply of grid power to the settlement not to be essential and therefore the further destruction of native vegetation is not warranted.

The majority of the Western Australian public is expected to bear the cost of supply and loss of visual amenity and the destruction of sections of National Park for the benefit of the 170 residents in the Windy Harbour settlement. There is no economic or environmental justification for the construction of this powerline.

The benefits of the project would mainly be to make a small number of holiday cottages more convenient for short periods for a small number of lease-holders. As power is already provided by the lease-holders themselves, the benefits would be minimal. To be weighed against these minimal benefits are the costs to taxpayers, who must subsidise the project, and the environmental damage and risks the project would cause. These costs are borne by the whole community in perpetuity. When the costs are weighed against the benefits, the project becomes indefensible.

While the proposal's environmental effects on the D'Entrecasteaux National Park provide ample grounds for the rejection of the proposal by the EPA, there is also a fundamental issue of equity. The SEC points out

the broader Western Australian community will end up subsidising the provision of power to the privileged residents of Windy Harbour. On page 9 of the PER, the SEC states, "A centralised supply and distribution system for Windy Harbour will be costly in absolute terms in relation to the financial return to the State. Although around 170 customers have agreed to contribute to the cost of the scheme, those contributions will cover only part of the cost of even the cheapest scheme for supplying power."

When making this point, it must be remembered that the vast majority of "residents" are not permanent, most dwellings at Windy Harbour are in fact "second homes".

The cost of the project to the community is not justifiable for the very small number of permanent residents at Windy Harbour especially considering that the power is not essential.

It is questioned whether the $650 000 figure quoted by the PER includes the cost of the time spent and to be spent in consultation with officers of CALM. One of the major problems in achieving adequate management of this state's National Parks is lack of funding. This includes the lack of funding for rangers in the park. We strongly disagree with CALM resources having to be used to protect the Park in this way when there are so many other areas of need.

INCENTIVE FOR FURTHER DEVELOPMENT

Windy Harbour is located within an area of high ecological and landscape value (Draft Management Plan, 6.5.4.1, p 127). It is ill-sited in what was a wilderness area of great significance.

Already the area of national park alienated for the settlement has been more than doubled (from 90 ha to 202 ha) in order to encompass the rubbish dump, and parts of the Park are used to supply water (Management Plan, 2.4, p 61). These pressures would increase if the settlement grows.

The provision of SEC power would undoubtedly make the Windy Harbour leases more valuable and more desirable and cause the settlement to grow. Such growth would be favoured and promoted by the Shire of Manjimup, in which the reserve is vested. Nothing should be done that would encourage the settlement to grow.

Windy Harbour is not a gazetted townsite, nor is it zoned for such a purpose in the Manjimup District Scheme. It is an A Class Reserve set aside for the purpose of recreation, camping, caravan park and holiday cottages, and veste in the Local Authority with the power to lease for 21 years, and is reserved for parks and recreation in the District Scheme.

The provision of power in this manner (22 kV line) would act as an added incentive for further development and the 22 kV line would attract considerable pressures for further development. The powerline would be "the thin edge of the wedge" in terms of it being a potential catalyst for further developments.

Provision of this service will result in an increase in the number of permanent residents living at Windy Harbour thereby increasing the demand for the type of goods and services normally associated with a residential

area. It is also likely to increase pressure for the freehold release and subdivision of lots and the more formal recognition of the settlement as a townsite.

It is believed that the provision of power to the Windy Harbour settlement would provide an incentive to further development inside the National Park which is considered to be undesirable. The people living in the settlement are in a privileged position to be living inside a National Park and the further impact on the park of this development is unwarranted.

One submission concluded that, "The rejection of this proposal is thereby called for on the grounds that it is environmentally unacceptable, uneconomic and inequitable."

APPENDIX 3

STATE ENERGY COMMISSION RESPONSE TO SUBMISSIONS

STATE ENERGY COMMISSION
WESTERN AUSTRALIA

Your Ref: 1/32/96
Our Ref: Mr C Morris
Enquiries: 326 4961
Telephone:

21 June 1988

Chairman
Environmental Protection Authority
1 Mount Street
PERTH WA 6000

ATT: MR M WAITE

Dear Sir

RESPONSE TO PUBLIC SUBMISSIONS -
NORTHCLIFFE TO WINDY HARBOUR 22kV DISTRIBUTION LINE

Please find below responses to issues raised in the Public Environmental Report for the above project. Issues have only been responded to where it is felt inadequate discussion was provided in the PER or where direct questions have required response.

Please contact this office should you require further clarification on these issues.

Yours faithfully

P J PEAKE
ACTING MANAGER
SYSTEM DEVELOPMENT

SD7046

L3/66dcb

019157

363-365 Wellington St., Perth, Box L921, G.P.O. Perth, W.A. 6001. T/grams: STATENECOM, Telex: AA92674 FAX: 3264595 Phone: 326 4911

COMMENTS ON OPPOSING SUBMISSIONS

2. The Proposal Appears Unlawful

The SECWA has referred to the recently finalised D'Entrecasteaux National Park Management Plan 1987-97, during the formulation of the PER and concurs with the prescriptions listed in Section 11.7.1, which states :

> "... Any proposed utility corridors will be subject to environmental review, including biological survey and analysis, both of alternative sites outside the parks and alternative methods of service provision (eg. wind or solar-generated power rather than grid-supplied)."

The Commission has responded accordingly, through the PER, by reviewing alternative methods of service provision, including underground cabling, remote diesel station, aerogeneration and solar voltaic cells. An alternative line route was also described in the PER which was proposed west of the Windy Harbour Road, closer to the coast. For reasons of line pollution, construction of additional utility corridors and and a longer route required, this option was not pursued.

Work on the construction of the power line will take into account the risk of introducing or spreading dieback. Commission officers have taken part in workshops developed by CALM, on dieback hygiene and management, and work to specifications under field guidance from CALM officers.

The SECWA's consulting landscape architect provided visual assessment of the route options discussed in the PER against the landscape amenity of the road.

Power is not classified as an essential service. There is no social or moral obligation to provide power for uneconomic power loads.

The SEC Act (Section 61) states that 'owners or occupiers' are eligible to apply to the Contributory Extension Scheme. The Commission may use its discretionary powers with respect to 'rural' land owners or occupiers.

3. Environmental Considerations

°Clearing Vegetation

The clearing of vegetation, as set down in the PER, 5.1, p.17 and Figure 2 is designed to protect the security of power supply and reduce the risk of fire which may result from vegetation interference with conductors. An access track is required to inspect and maintain line locations away from the road.

°Threat to Native Flora

No preliminary centre line survey has been undertaken for this proposal. In fact, the line route has been subjectively located, along the road reserve and around the two areas of island karri occurrence, following initial visual assessment of the proposal. Since spring surveys of the flora could not be conducted at the time of PER preparation (January/February 1988), it was not possible to identify possible routes and so deviate a route away from plant associations and restricted flora.

°The SECWA is unaware of any plans to upgrade the existing Windy Harbour Road. Access tracks below the power line will comprise of a single track, initially rolled by machine. Periodic inspection of the line on sections away from the road reserve will maintain a relatively discrete access with only wheel tracks discernable.

°The exact location of the line route or details of centre line survey have not been established. It is not possible therefore to estimate the area of forest which will be cleared.

°Serious Ongoing Threat from Dieback

The SECWA must rely on the prescriptions and conditions enforced by CALM for construction and maintenance of the powerline. The imposition of restrictions by CALM on the movement of vehicles could impose limitations on line maintenance, except for the mid summer months.

°Increased Risk of Fire in the Park

Airborne salt pollution affecting power line insulators will increase the risk of flashover and hence fire. Ready access to all section of the line is essential.

°Aesthetic Effects of the Power Poles and the Cleared Strip

The Commission has commented on the visual impact of a power line which deviates around the two island karri occurrences (PER p19 5.2). By keeping close to the karri/jarrah-marri fringe, it has been assessed that the power line will not be seen from either the Windy Harbour Road or atop Mt Chudalup.

°Management Commitments

Assuming that the proposed line would cross about 15km of CALM land, either adjacent to the Windy Harbour Road in the road reserve, or via deviations around the karri, the land cleared would approximate 9ha, if the clearing profile (Figure 2), is adhered to.

The SECWA acknowledges the existence of exploration licence areas.

4. Lack of Justification

Supply of SEC Power to Windy Harbour not Cost-Effective.
°The present status of agreement applications suggests that the agreements made by the lease-holders are binding. If one applicant withdraws the others must pick up the difference in contributions. If at the time of subscription to the scheme, the Commission considers the project uneconomic, the project will not be considered further.

SECTION 2 - Alternative Means of Supply

Representation was made to the SECWA to provide power to the Windy Harbour community. Through the PER, an assessment will be made on social and environment effects and acceptability of the project. The SECWA can ultimately refuse to provide power for uneconomic power loads.

SECTION 2.1 22kV Overhead Powerline

The stated construction cost of ($450,000) is an estimate for the proposed project. The unit cost per kilometre is higher than for average construction and clearing costs, due to the wet ground conditions (the area is subject to seasonal inundation). The distance from a major depot would also increase costs.

Estimates of line costs are now twelve months old. An additional 10% should reflect current costs.

SECTION 2.2 22kV Underground Cable

It is not possible to anticipate whether backyard generators will be maintained or retained, following the provision of a powerline supply.

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APPENDIX 4

SUMMARY OF COMMITMENTS TO ENVIRONMENTAL MANAGEMENT

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The following represents a summary of commitments made by the State Energy Commission in respect of environmental management of the proposed Northcliffe to Windy Harbour 22 kV distribution line.

1. The powerline would be constructed over the drier summer months of 1988/89, with completion expected in May 1989.

2. Construction and operation of the line would be in accordance with any management practices developed in conjunction with CALM, in addition to those principles contained in this PER and specifically listed below.

3. A detailed inspection for rare and/or endangered plant species would be conducted during line design. Any rare plants located would be avoided by appropriate line placement.

4. The powerline easement would be cleared and maintained in accordance with the specification contained in Section 5.1 and Figure 2.

5. Construction and maintenance work would be conducted in accordance with CALM approved hygiene precautions, including sourcing construction materials from die-back free areas and cleaning excavation equipment which might have operated in die-back infected areas.

6. At locations where the powerline crosses the Windy Harbour Road, vegetation up to 2 metres high would be retained or planted, as appropriate, to discourage public access and reduce visual effects of the line.

7. The Commission would inspect the powerline regularly to maintain prescribed vegetation clearances, so that the risk of fire from clashing or fallen conductors is minimised.