BOTANICAL BASIC ASSESSMENT OF PROPOSED NEW AREA OF CULTIVATION ON DEETLEFS ESTATE, RAWSONVILLE.

Compiled for : Boland Enviro cc, Worcester

Client: Deetlefs Estate, Rawsonville

16 June 2009
DECLARATION OF INDEPENDENCE
In terms of Chapter 5 of the National Environmental Management Act of 1998 specialists involved in Impact Assessment processes must declare their independence and include an abbreviated Curriculum Vitae.

I, N.A. Helme, do hereby declare that I am financially and otherwise independent of the client and their consultants, and that all opinions expressed in this document are substantially my own.

NA Helme

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Since 1997 I have been based in Cape Town, and have been working as a specialist botanical consultant, specialising in the diverse flora of the south-western Cape. Since the end of 2001 I have been working on my own and trade as Nick Helme Botanical Surveys.

Recent work in the area:
Fine Scale Conservation Plan of the Upper Breede River Valley (CapeNature 2007, 2008)
Stewardship assessment of Rainbow Chicken Sites (CapeNature 2007)
Stewardship assessment of Brandvlei Prison grounds (CapeNature 2007)
Botanical scoping and impact assessment of Worcester Island (SRK 2007)
Botanical assessment of Portion of Farm 517 Tois Kloof, Rawsonville (PHS Consulting 2007)
Botanical survey of Slanghoek Valley (Dept. Agriculture & CapeNature 2006)
EXECUTIVE SUMMARY

This botanical basic assessment was commissioned in order to help inform decisions regarding the proposed development of up to 9ha of new agricultural land on Deetlefs Estate, in the Rawsonville area. The site is located between existing vineyards and the channel of the Smalblaar river.

The study area is located within a bioregion known as the Upper Breede River Valley (UBRV), which lies within the Fynbos biome and the Cape Floristic Region (CFR). The CFR is one of only six floristic regions in the world, and is the only one confined to a single country. Both the SA vegetation map (Mucina & Rutherford 2006) and the Fine Scale Vegetation Mapping (FSP) project (Helme 2007) indicate that the original vegetation type in this area was Breede Alluvium Fynbos. This vegetation type is restricted to the UBRV, and is regarded as Endangered on a national basis, with 0% formally conserved, and less than 43% remaining. The site has been identified as part of a terrestrial and aquatic buffer Critical Biodiversity Area by the FSP.

The 9ha of land was for many years until 2006 heavily invaded by alien black wattle (Acacia mearnsii), which was then cleared and burned. Additional disturbance has been caused by the construction of a leiwat canal, and by dumping of rocks from the adjacent vineyards and grape residue from the winery. The natural vegetation on the site is now a fairly depauperate example of Alluvium Fynbos, and total indigenous species diversity is less than 5% of what would be expected in good quality veld of this type. No rare species were recorded, and the likelihood of any persisting is considered to be low, although rehabilitation potential is fairly good (especially if plants are reintroduced).

Assuming that the legal minimum 32m setback is maintained from the current river edge, and that the vegetation in this riverine buffer is moderately well managed from an ecological perspective the botanical impacts of the proposed development are rated Medium negative. These impacts could be reduced (to Low – Medium negative overall) by increasing the riverine buffer (setback) to 40m (to edge of new fields; 34m to edge of service track) and by ongoing (annual) ecological management of the vegetation in this riverine strip, and also by careful replanting of large numbers of appropriate locally indigenous riverine trees and shrubs. All management and
mitigation recommendations should be written into the EMP, and all management costs should be borne by the applicant.

The No Go scenario is likely to result in gradual, partial, natural rehabilitation of the vegetation in the study area, but it is uncertain what would happen in terms of the already present alien plant invasions, which require ongoing removal. If properly managed the No Go scenario could be the preferred alternative (Medium positive impacts), but if not properly managed it could be on a par with the post mitigation development alternative (Low – Medium negative). Furthermore, there is no guarantee that the area will not be developed in the long term, or properly rehabilitated, and it is thus not the preferred alternative.
1. INTRODUCTION
This botanical basic assessment was commissioned in order to help inform decisions regarding the proposed development of up to 9ha of new agricultural land on Deetlefs Estate, in the Rawsonville area. The site is located between existing vineyards and the channel of the Smalblaar river. As it is a legal requirement that the No Go alternative be assessed as part of a Basic Assessment this alternative is also examined in this report.

2. TERMS OF REFERENCE
Standard CapeNature and Botanical Society of South Africa Terms of Reference for biodiversity assessments were used as a basis for this report:

- Produce a baseline analysis of the botanical attributes of the property as a whole.
- This report should clearly indicate any constraints that would need to be taken into account in considering the development proposals further.
- The baseline report must include a map of the identified sensitive areas as well as indications of important constraints on the property. It must also:
  • Describe the broad ecological characteristics of the site and its surrounds in terms of any mapped spatial components of ecological processes and/or patchiness, patch size, relative isolation of patches, connectivity, corridors, disturbance regimes, ecotones, buffering, viability, etc.
  • In terms of biodiversity pattern, identify or describe:

**Community and ecosystem level**
a. The main vegetation type, its aerial extent and interaction with neighbouring types, soils or topography;
b. The types of plant communities that occur in the vicinity of the site
c. Threatened or vulnerable ecosystems (cf. SA vegetation map/National Spatial Biodiversity Assessment)

**Species level**
a. Red Data Book (RDB) species (provide location if possible)
b. The viability of and estimated population size of the RDB species that are present (include the degree of confidence in prediction based on availability of information and specialist knowledge, i.e. High=70-100% confident, Medium 40-70% confident, low 0-40% confident)
c. The likelihood of other RDB species, or species of conservation concern, occurring in the vicinity (include degree of confidence).

**Other pattern issues**

b. Any significant landscape features or rare or important vegetation associations such as seasonal wetlands, alluvium, seeps, quartz patches or salt marshes in the vicinity.

c. The extent of alien plant cover of the site, and whether the infestation is the result of prior soil disturbance such as ploughing or quarrying (alien cover resulting from disturbance is generally more difficult to restore than infestation of undisturbed sites).

d. The condition of the site in terms of current or previous land uses.

- In terms of **biodiversity process**, identify or describe:
  a. The key ecological “drivers” of ecosystems on the site and in the vicinity, such as fire.
  b. Any mapped spatial component of an ecological process that may occur at the site or in its vicinity (i.e. **corridors** such as watercourses, upland-lowland gradients, migration routes, coastal linkages or inland-trending dunes, and **vegetation boundaries** such as edaphic interfaces, upland-lowland interfaces or biome boundaries)
  c. Any possible changes in key processes, e.g. increased fire frequency or drainage/artificial recharge of aquatic systems.

- What is the significance of the potential impact of the proposed project – with and without mitigation – on biodiversity pattern and process at the site, landscape, and regional scales?

- Provide a map, at suitable scale, of key conservation areas and corridors.

- Recommend actions that should be taken to prevent or mitigate impacts. Indicate how these should be scheduled to ensure long-term protection, management and restoration of affected ecosystems and biodiversity.

- Indicate limitations and assumptions, particularly in relation to seasonality.

3. **LIMITATIONS AND ASSUMPTIONS**

The site visit was undertaken on 29 May 2009. This is at the start of the winter season and there were thus some seasonal constraints on the botanical findings, but given the context and size of the site these are considered to be relatively unimportant. Very few bulbs or annuals were evident at the time of the survey, but
this is probably mostly due to previous disturbance (notably dense woody aliens followed by a very hot fire) rather than seasonal constraints. Thus to some extent a habitat based approach was used to inform conservation value. In terms of placing the site in its regional context I was able to draw on extensive previous work in the general area, notably for the Upper Breede River Valley Fine Scale Vegetation Mapping project (Helme 2007b), for an assessment of the Brandvlei prison grounds (Helme 2007c), and on the nearby farm Tois Kloof (Helme 2007a). A high level of confidence (>80%) is consequently attached to the findings in this report.

4. METHODOLOGY

The site was walked and surveyed for habitat quality and presence of rare species, whilst recording all evident plant species. Unidentified species were taken to the Compton Herbarium at Kirstenbosch and were identified there against the available reference material. Protea Atlas Project distribution data was electronically accessed, as was the CapeRares plant database maintained by CREW. All other source material is referenced where appropriate.

Abbreviations used:

CFR: Cape Floristic Region
CBA: Critical Biodiversity Area
CREW: Custodians of Rare and Endangered Wildflowers
DWAF: Department of Water Affairs & Forestry
FSP: Fine Scale (Conservation) Plan
Pers. obs.: Personal observation
Pers. comm.: Personal communication
ROD: Record of Decision
RDB: Red Data Book of threatened plants of South Africa
UBRV: Upper Breede River Valley
Figure 1: Aerial view of study area (prior to alien clearing in 2006), showing designated edge of Smalblaar river channel and proposed minimum 40m ecological buffer. It is suggested that all new cultivation stay north of (above) the green line in this image.
5. OVERVIEW OF THE VEGETATION

5.1 Regional Context

The site is located within a bioregion known as the Upper Breede River Valley (UBRV), which lies within the Fynbos biome and the Cape Floristic Region (CFR). The CFR is one of only six floristic regions in the world, and is the only one confined to a single country. It is also by far the smallest floristic region, occupying only 0.01% of the world’s land surface, and supporting about 9000 plant species - almost half of all the plant species in South Africa. At least 70% of all the species in the Cape region do not occur elsewhere, and many have very small home ranges (these are known as narrow endemics). Most of the lowland habitats are under pressure from agriculture, urbanisation and alien plants, and thus many of the range restricted species are also under severe threat of extinction, as habitat is reduced to extremely small fragments. The latest data from the Red Data Book listing process currently being undertaken for South Africa is that fully 72% of the threatened plant species in the country occur only in the southwestern Cape, and these total over 1600 species (D. Raimondo et al - in press)! It should thus be very clear that the southwestern Cape is a major national and global conservation priority, and is quite unlike anywhere else in the country in terms of the number of threatened plant species. Developments in this area thus need to take this into account.

The UBRV Fine Scale Vegetation Mapping (Helme 2007) and Conservation Planning project (Pence 2008) was recently undertaken and finalised. This Fine Scale Planning (FSP) project has divided the original vegetation (prior to human impact) in the area up into much finer units than recognised in the South African vegetation map of Mucina and Rutherford (2006), and many of these are regarded as threatened on a national basis. Much of this habitat diversity is driven by the dramatic ecological gradients evident in the area, with key ecological drivers being differences in soil type (clays and loams derived from shales and granites, plus sands [alluvial or sandstone origin], plus limestone and ferricrete), plus very strong rainfall gradients (from < 500mm/a to 3500mm/a in less than 8km), often associated with massive topographic diversity. These gradients operate on many planes – east/west, north/south and altitudinal.

The soils in the area are sandy loams and stony sands, overlain by and intermixed by alluvial sands and cobbles beds of varying depth. These cobbles are a typical feature of alluvial sediments (floodplains), and in this case are water worn sandstones.

The SA vegetation map (Mucina & Rutherford 2006) and the FSP vegetation map (Helme 2007) both indicate that the original natural vegetation in this area would
have been Breede Alluvium Fynbos (prior to human disturbance). This vegetation type is restricted to the middle and upper Breede River valley, mostly on sandstone derived sandy alluvium. As it occurs on relatively flat valley bottoms, usually with good access to groundwater, it is a favoured area for agriculture, notably the cultivation of vines. As of 1996 (date of original data collection) only 42% of the original extent of this vegetation type was regarded as intact, and the situation has deteriorated since then, and is now probably closer to only 35% (pers. obs.). The national conservation target for this vegetation type is 30%, yet 0% is formally conserved, and the remaining vegetation is thus very vulnerable to habitat transformation, especially in the flatter valley areas. The vegetation type has been assessed as Endangered by the National Spatial Biodiversity Assessment (NSBA; Rouget et al 2004).

It is clear from Figure 1 that the proposed site is ecologically isolated by very extensive vineyard development on the flat floodplain of the Smalblaar river. The only remnant vegetation in the area is in the riverine area, and even this is reduced to a meagre 5 or 6m in places. The river channel itself (especially just downstream of the site) has been severely altered by ongoing reshaping by bulldozers, and by ongoing stone quarrying.
Figure 2: Extract from Fine Scale Plan Critical Biodiversity Area map (Pence 2008), showing context of study area (green outline). Note that it technically lies within a wetland buffer area and a terrestrial Critical Biodiversity Area.

Figure 2 indicates terrestrial CBAs as dark green patches, and it can be seen that the study area constitutes one of the larger CBAs in the immediate Rawsonville area, which has been heavily impacted by agriculture. Overlain on the terrestrial CBA is a
schematic and idealistic wetland buffer, which covers the whole proposed area, including some existing vineyards (hence idealistic and schematic). CBAs are supposed to be areas of high quality natural vegetation (or important corridor areas) that are identified in a FSP as priority natural habitat remnants that should be conserved. As a basic rule no development of any sort is recommended for CBAs, although if it can be well motivated based on a detailed site and contextual assessment then some sort of limited development could be considered.

5.2 Overview of the vegetation

The site was cleared of woody alien invasives in 2006 by a Working for Water team, having been under fairly dense Acacia mearnsii (black wattle) for at least ten years. It would appear that at least parts of the site were subsequently burnt, probably to clear the stacks of cut wood. Some large invasive gum trees (Eucalyptus sp.) along the river bank were also ringbarked and poisoned (see Plate 1).

Plate 1: View of study area, looking upstream. The shrubs in the foreground are indigenous Othonna parviflora, but there is relatively little other indigenous vegetation in this particular area. Note also the dead gum trees and the dumped stones (cobbles) from the nearby vineyards.

The previously disturbed nature of the site is evident in the reduced species diversity – less than 5% of the expected diversity is present (as compared to an undisturbed
site in similar habitat). Indigenous terrestrial species noted include *Othonna parviflora*, *Ehrharta rigida*, *Cynodon dactylon* (fynkweek), *Diospyros glabra*, *Athanasia trifurcata* (kouterbos), *Eragrostis curvula* (lovegrass), *Cliffortia ruscifolia*, *Oftia africana*, *Leonotis leonurus* (wildedagga), *Selago* sp., *Aspalathus hispida*, *Aspalathus cordata*, *Passerina vulgaris* (gonna) and *Dodonaea angustifolia* (ysterhout, koorsboom). Indigenous species dependant on shallow groundwater include *Psoralea aphylla* (bloukeur), *Calopsis paniculata*, *Imperata cylindrica* (speargrass), and *Rhus angustifolia* (smallblaar). No indigenous bulbs or annuals were noted during the site visit, which was a surprise, as I suspected to find at least a few species of both groups. Their absence suggest that very hot fires associated with the assumed stack burning of alien vegetation may have killed the shallowly buried bulbs and annual seedbanks – this is a documented phenomenon at a number of study sites (D. Euston Brown – pers. comm).

Alien invasive species include grasses such as *Pennisetum clandestinum* (kikuyu), *Lolium* sp. (ryegrass), *Avena* sp (wild oats), *Briza maxima* (quaking grass), herbs such as *Taraxacum* (dandelion), and shrubs such as *Ricinis communis* (castor oil) and *Rubus* sp. (bramble). Although the well established English oak trees (*Quercus robur*) near the lapa are alien species they are not invasive and hence do not need to be removed.

No rare or localised plant species were recorded in the study area, and the likelihood of such species (typically more sensitive than common species) persisting in viable numbers is deemed to be low.
Plate 2: View looking downstream in upper part of site, with river visible on right. Low to medium diversity indigenous vegetation (mostly Diospyros glabra) is visible in this area, intermixed with alien herbs and grasses. The dead gum trees at centre back are the same ones visible in Plate 1. Tangle of old barbed wire in foreground.

Plate 3: Slight depression in central part of site, with elevated soil moisture, supporting wetland indicator such as Calopsis paniculata (restio in foreground). Note also the numerous young (<1m tall) plants of the invasive Acacia mearnsii (black wattle), which have come up since the site was cleared in 2006.
Plate 4: Upstream view of vineyard edge and Smalblaar river at top end of study area, showing how the existing vineyards and adjacent compacted stone access road (approx. 6m wide) are well within the 32m setback recommended by DWAF.

5.3 Conservation Value
From a purely botanical perspective the site has a Low – Medium local (Rawsonville) and Low regional (UBRV) conservation value. The site is relatively small and isolated, and is previously disturbed, with a low indigenous species diversity and no rare species, but it also forms part of a designated CBA and a riverine corridor, albeit a highly modified one, and the original vegetation type is classified as Endangered on a national basis.

6. IDENTIFICATION OF ISSUES AND IMPACTS
The proposed development of a vineyard in the study area will cause permanent loss of the partly disturbed natural vegetation and natural habitat in the approximately 9ha area. This is the primary direct impact.

Impacts on vegetation occur at both the construction and operational phases, and the former are mostly direct impacts, and the latter mostly indirect impacts. Direct impacts are likely to be most important on this site, but indirect impacts are also likely to be regionally important (mainly for ecological connectivity).
6.1 Direct Impacts

The main direct impact is the permanent loss of vegetation during the construction phase. It is assumed that all the natural vegetation on development site will be lost, and that the total extent of vegetation lost will amount to less than 9ha.

Table 1 summarises the issues.

The extent is local, regional and national as the development impacts on a vegetation type restricted to the region between Tulbagh and Worcester. Duration is permanent as vegetation will be permanently replaced by vineyards. The intensity is by definition high as the vegetation is severely altered within the study area. Direct impacts are assessed as Medium - High negative on a local scale. Mitigation is suggested in order to reduce this level of impact.

![Table 1: Impact table for direct construction phase impacts on natural vegetation. *For mitigation see Section 7.](image)

6.2 Indirect Impacts

Operational Phase impacts are usually indirect impacts. In this case the indirect impacts would act on the remaining areas of natural vegetation on site (presumably within the 32m buffer area), and also at a regional scale (ecological connectivity).

Riverine communities like this, although subject to occasional fire, are not essentially fire driven systems and the likely absence of fire would not be deleterious for most species, and essentially a riverine Thicket would develop.

Many indirect impacts are virtually impossible to quantify without detailed long term studies on aspects such as effects of development and fragmentation on pollinators. In the case of alien plant invasion relatively simple monitoring will provide an indication of the extent of the problem. Other likely indirect impacts include alien plant invasion from disturbed edges – notably of invasive alien grasses such as kikuyu
(Pennisetum clandestinum), further dumping of foreign materials, pesticide and possibly fertiliser drift from adjacent vineyards and its negative effects on the natural vegetation, and possible disruption of soil moisture regime in the natural areas. In many cases these indirect impacts are already present on the site.

Given that the proposed development lies mostly within a designated CBA and wetland buffer area the indirect issues include regional effects (loss of connectivity, etc.).

<table>
<thead>
<tr>
<th>Nature of impact</th>
<th>Extent of impact</th>
<th>Duration of impact</th>
<th>Intensity</th>
<th>Probability of occurrence</th>
<th>Status of the impact</th>
<th>Degree of confidence</th>
<th>Level of significance</th>
<th>Significance after mitigation *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat fragmentation, loss of portion of populations and reduced viability, loss of portion of corridor, spray drift, possible change in soil moisture, etc.</td>
<td>Local and regional</td>
<td>Permanent</td>
<td>Medium to High</td>
<td>Probable to definite</td>
<td>Negative</td>
<td>High</td>
<td>Medium negative</td>
<td>Low negative</td>
</tr>
</tbody>
</table>

Table 2: Impact table for Indirect Impacts. *For mitigation see Section 7.

### 6.3 Cumulative Impacts

Cumulative botanical impacts are in most cases best viewed as the regional impacts. Although the actual loss of habitat on this site would be small, one needs to factor in the large scale previous habitat loss in the region, which is especially severe in the Rawsonville area (due to the very flat terrain). When very little natural habitat remains the loss of even small portions of natural vegetation can thus have high cumulative impacts.

The unmitigated cumulative impacts of this development would be significant, as over 40% of this vegetation type has now been lost to agriculture, with ongoing loss of habitat and rare species (pers. obs.). The only thing that reduces the the cumulative impact in this case is that the vegetation on site is already disturbed, the site is quite isolated, and that some mitigation is possible. The ongoing loss of natural habitat in the region is not being effectively mitigated, as only by increasing the conserved examples of this vegetation type can we hope to conserve the ecological processes and large scale pattern diversity in the region, which is known to support numerous
rare plant species (Helme 2007). Loss of ecological corridors is a particularly unfortunate and difficult to mitigate scenario.

6.4 The No Go Alternative
The No Go alternative is usually defined as maintenance of the status quo, but the actual meaning of this is not always clear cut, where no development or intensive agriculture has yet taken place on the land, although the land is zoned Agriculture. If the No Go alternative is taken to mean a continuation of the current scenario where it is technically zoned Agriculture but where no development occurs, the negative impacts on the vegetation will presumably be negligible to low negative. However, limited impacts are likely to (or may) continue, such as alien plant invasion, ongoing dumping, but no large scale loss of habitat will occur, and the ecological connectivity of the site will remain much as it is. The major problem with this alternative is that there is little guarantee that the site will remain undisturbed into the future, and thus the duration of the lack of significant impact is unknown. Furthermore there is no guarantee, or even likelihood, that parts of the site would be rehabilitated.

From a botanical perspective the No Go alternative is an attractive alternative, but is not necessarily the preferred alternative in the context of this site, especially where there are various future unknowns.

7. MITIGATION
All mitigation outlined below is considered essential and should be included in any Record of Decision as Conditions of Approval, as they have been factored into the Impact Assessment. All mitigation should also be included in the relevant EMP that is prepared for both the construction and operational phases.

7.1 Construction Phase mitigation
- A minimum riverine / ecological buffer of 40m must be maintained from the current designated edge of the Smalblaar river to the edge of any new vineyards and/or to the edge of any new cultivated land. No cultivation may take place within this 40m buffer, but an unsurfaced access track on the outer edge of the new vineyards (as seen in Plate 4), up to 6m wide, could be included within the buffer. This means that in effect a minimum 34m buffer is being applied in terms of disturbance from the edge of the river, which means that this application is within the DWAF guidelines for riverine buffers which suggest a minimum of 32m.
• A temporary two strand wire fence must be erected prior to any vineyard or site preparation, and this fence must run along the 34m buffer edge (which thus allows for a track north of this fence). No heavy machinery may enter the buffer area within this fenceline.

• Given that there are no bulbs or succulents within the proposed development area no Search and Rescue program is necessary prior to development.

7.2 Operational Phase Mitigation

• The 34m wide buffer area should be viewed as a designated conservation area and must be managed as such, although it is not necessary to involve the CapeNature Stewardship Program in this site.

• No further dumping of materials should take place within the conservation area at any time.

• All foreign material currently within the conservation area that can be removed (such as garden refuse and winery dumpings) should be removed within 3 months of any approval.

• Ongoing, annual alien clearing within the conservation area must be undertaken, using DWAF approved methodology. All visible alien plants should be removed annually.

• No herbicide spraying should take place within the conservation area, except in the case of control of *Pennisetum clandestinum* (kikuyu grass), where only Focus herbicide (kikuyu specific) should be used.

• A key part of the mitigation is rehabilitation and revegetation of the conservation area, with suitable locally indigenous riverine species, to supplement what is already there. Essential species that must be planted include *Calopsis paniculata*, *Psoralea aphylla* (bloukeur), *Diospyros glabra* (vliebos, kraabessie), *Virgilia oroboides* (keurboom), *Rhus angustifolia* (smalblaar; the river is probably named after this species), *Metrosideros angustifolia* (also known as smalblaar), *Brachylaena neriifolia* (waterwitels), *Ilex mitis* (Cape holly), *Merxmuellera cincta* (vleigras), *Willdenowia incurvata* (zonkwasriet), *Dodonaea angustifolia* (ysterhout, koorsboom), and *Brabejum stellatifolium* (wild almond; Van Riebeeck’s hedge). It is also suggested that *Prionum serratum* (palmiet) be planted along the edge of the river to stabilise the banks. It is important that each is planted in suitable microhabitat – some species are dependant on groundwater access, others prefer drier sites. At
least 100 plants of each species should be planted over a three year period, and more if possible. Some species may be difficult to source.

- All costs for all tasks outlined in Sections 7.1 and 7.2 must be borne by the applicant.

8. CONCLUSIONS

- The proposed development would have a Medium – High negative botanical impact (local scale) prior to mitigation, and would not be recommended in that form. Various essential mitigation elements are outlined for both the construction and operational phases which should reduce the overall post mitigation impacts to an acceptable Low – Medium negative level.

- The No Go alternative, whilst is would have no direct negative impact, could (or may) have some serious indirect negative impacts, and there is no guarantee of any future site improvement (alien clearing, rehabilitation, etc.) or long term security (positive impacts). Overall the No Go alternative is not deemed to be the preferred alternative, and it is suggested that the application be authorised, but with strict conditions, including all those outlined in Section 7.

9. REFERENCES


