

NATIVE VEGETATION OFF-SET STRATEGY – Mark IV (Aug 2009)

1.0 INTRODUCTION

CEMEX Australia Pty Ltd (CEMEX) propose to develop a quarry on a green field site some 500 meters south-west of their existing Chiltern Quarry; which is scheduled to close at the end of 2009 in accordance with the Chiltern- Mt Pilot National Park Management Plan. The proposed new Chiltern Quarry site currently finds use as a sheep grazing farm.

Native vegetation mapping on the proposed quarry reveals the development will result in the loss of:

- **15.9 Ha** of land with modified native vegetation equating to **6.2 Habitat Hectares** of very high conservation significance; and
- **37 Large Old Trees within patches** (including a staged removal with 20% of the trees not scheduled for removal for around 15 - 20 year post quarry commencement) and **1 scattered Large Old Trees**. [Biosis Research, 2009]

CEMEX's strategy for native vegetation off-set and management follows a three (3) staged approach (refer Attachment 1: Chronology of Events), as recommended in Victoria's Net Gain policy:

1. Avoidance of impact wherever practicable:

A review of alternative sites during 2005/06 concluded the western aspects of Skeleton Hill represented the only viable alternative as a replacement Chiltern quarry [Bird. D., 2009]. The review included a high level vegetation cover and flora/fauna component.

Design of the quarry has focussed on avoiding areas with native vegetation. Iterations to the initial concept design to avoid native vegetation include:

- Locating facilities so as to avoid Black Dog Creek vegetation (2007);
- Relocation of services to avoid Black Dog Creek riparian vegetation (2008); and
- Relocation of the processing operations into the area with predominantly introduced vegetation to avoid native grasses and trees with a chance of being frequented by Swift Parrott and Regent Honeyeater (2008).

2. Minimisation of unavoidable native vegetation impact:

The extraction pit has been downsized to minimise impact on native vegetation. Access roads will meander around large old trees and enter at Black Dog Creek Road at a gap in the tree line. Conveyor design is through gaps in the tree line within the road reserve to minimise tree removal.

3. Off-Sets for any approved vegetation removal:

Significant woodland habitat off-sets have been allocated to achieve a net gain outcome on the subject site.

The current land use at the property is sheep farming and the owner has the right to remove fallen trees. The off-set strategy has been devised with input from consulting ecologists with the aim of achieving a good conservation outcome; particularly against the current land use regime i.e.

‘Habitat for listed threatened fauna would be cleared at the site of the proposed quarry. However, this habitat is currently subject to ongoing decline in association with the existing farming land use. While the impact associated with the quarry is unlikely to be a significant impact on listed fauna, the balance of the habitat in this area will be subject to ongoing ecological management, effectively reversing the current ongoing decline.’ (Biosis Research, 2009)

2.0 OFF-SET PRESCRIPTION

According to Victoria’s Native Vegetation Management, A Framework for Action (the ‘Framework’), the following off-set requirements are calculated as a result of the projected native vegetation loss:

- Habitat Hectares = **12.43 Ha hectares.**
- Protection of **296 Large Old Trees** and recruitment of around **1500** in Woodland Habitat.

3.0 OFF-SET STRATEGY

CEMEX’s off-set strategy has through-out been based on advice from specialist ecologists with the intent of achieving an overall good conservation outcome to counter the loss of any native vegetation.

3.1 Proposed Off-Set Strategy Mark 1 (October 2008)

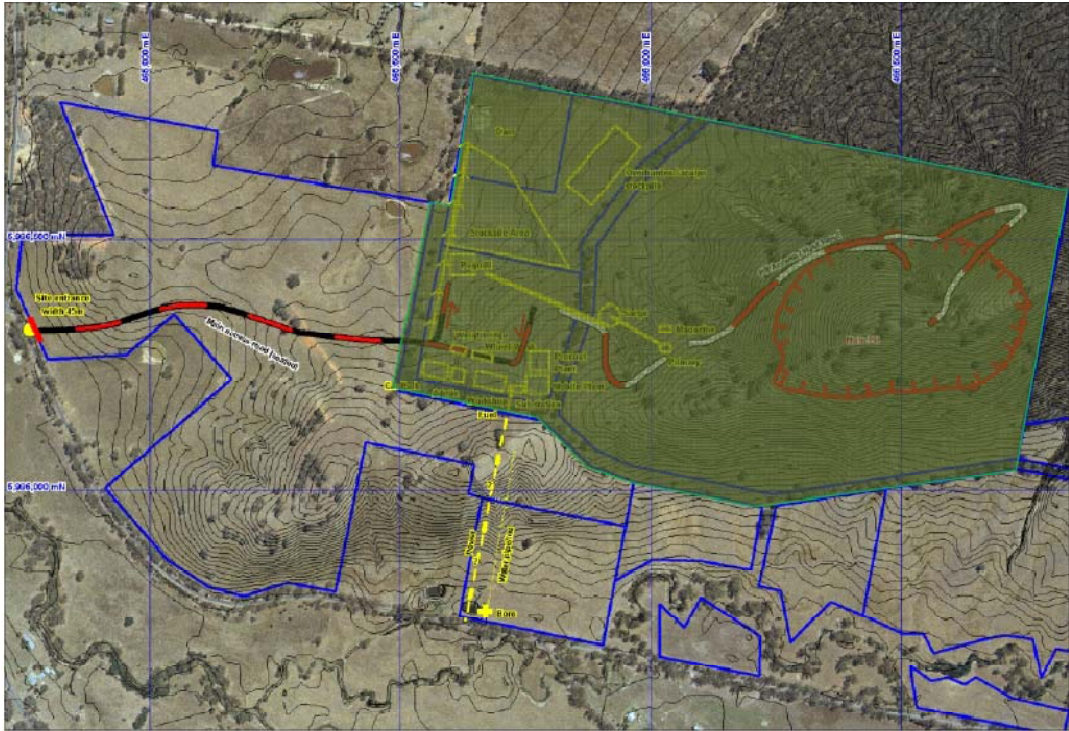
CEMEX’s initial strategy was to acquire the extraction pit property off the land owner, manage this area in its entirety over the life span of the quarry and ‘gift’ the property into the adjoining National Park.

The critically endangered Swainson –Pea (not found on property) was selected as the site Emblem and attempts will be made to re-introduce this species along the southern flank.

This option would have required CEMEX to purchase the property and the road reserves and integrate it into the National Park at the end of quarrying.

This option was not favoured by the DSE.

CEMEX reviewed what options were available with the land owner for gaining access to additional land on his property. The original agreement with the landowner specified any property outside the extraction pit and processing areas must be available on an ongoing basis for farming (i.e. sheep grazing). This original agreement was altered as a direct action to achieve sufficient off-set areas to satisfy DSE requirements.



Off-Set Strategy Version 1 Area – Gift area to National Park (Design Stage 3 November 2008)

Figure A: Initial Off-Set Strategy (acquire, manage for the life of the quarry and ‘gift’ green shaded area to Parks Victoria for integration into the National Park)

3.2 Off-Set Strategy Mark II - March 2009

A revised Off-set Strategy involving the provision of a Section 173 Agreement by the landowner to secure the land was negotiated.

CEMEX has an agreement to enter into a long term lease with the land owner – who will retain a S173 agreement over three (3) separate areas on his property falling across two (2) land titles. The option to pulse graze the non-extraction pit properties was requested by the landowner, and thus was agreed as DSE indicated pulse grassing was acceptable means to control fuel load.

These additional areas accounted for all habitat hectares requirements as required under the Framework. However, a deficit of Large Old Trees to be protected remained. The availability of purchasing the unused Crown Road Reserves was proposed by CEMEX where such roads were excess access requirement to Titles allotments. The availability to purchase such road reserves was stated by DSE to not be an ideal option. DSE requested off site acquisitions be pursued.

CEMEX commissioned a review to investigate the availability of off-site off-sets in accordance with strict like-for-like EVC off-sets and a report was prepared.

Note: Unused Road Reserves are held under a 99 year lease by the Landowner.



Figure B. 3x Off-set areas to be secured under S. 173 Agreement

The Report concluded that strict conformance with the like-for-like replacement prescription of the Framework would be extremely difficult to achieve. An extract from the off-site investigation report follows:

'... identifying a single property which supports more than 100 LOTS appears to be extremely difficult if not impossible and it appears that a good property is likely to support at best tens of LOTS. Achieving the protection of between 150 and 230 Grassy Woodland LOTS is therefore likely to require the involvement of at least 10 different property owners. The logistics of this is likely to be overwhelming and it highlights the value of the Eames property and the need to account for the remaining LOTS on that property [including unused road reserves as an option]. (Biosis Research, March 2009).

The time and cost requirements to quantify, negotiate and secure the ten (10) or more properties necessary to obtain the LOT requirements jeopardised the viability of the development.

DSE specified that the Off-set Strategy must meet the Net Gain specifications of the Framework. CEMEX's Off-set Strategy at the time was considered to still fall well short of LOT protection requirements. Acquisition of off-site properties was again suggested by DSE as an option to achieve Framework specifications.

4.0 MARK III OFF-SET PLAN (JULY 2009)

Negotiations re-commenced with the land owner associated with the aim of securing the upper east portion of his farm land. An in-principal commercial agreement was reached. The Eastern area, which contains several additional Large Old Tree patches, was then secured for off-set purposes.

This Eastern 'Block' would complement the three (3) areas on the leasehold proposed to be protected as off-sets; all are on the Eames property and totalling around 80 Hectares. The original sheep grazing property has largely now been proposed as a native vegetation off-set property with considerable linkage to the National Park and the western Flora Reserve.

Additionally, all road reserves under the Eames 99 year grazing Licence are proposed to be acquired, with all Large Old Trees within protected. This provides in excess of 280 Large Old Trees and 191 Medium Old Trees, all within a Woodland Habitat, and all on a single site that can be incorporated into the lease with the landowner enabling on-going management by CEMEX personnel directly under a Work Plan.



Figure 3: Off-set Areas: Olive Green= Main off-set areas; Yellow= Further area to protect LOT's

These areas proposed for Off-Sets are illustrated in Figure 3. These areas provide the following Off-sets as measured against the Net Gain provisions of the Framework (Biosis Research, 2009):

- The Off-set areas proposed equate to over **15 Habitat Hectares** predominantly within woodland habitat which is around 110% of the Nett Gain off-set requirement.
- Protection of **LOTs** on 3 main areas, the Road Reserve area held under Licence by Eames, and also the Eastern area of the Eames property provide:
 - 100% provision of LOT Nett Gain requirements for Box Ironbark Forest
 - 100% provision of LOT Nett Gain requirements for Valley Grassy Forest
 - 100% provision of LOT Nett Gain requirements for Diamond Firetail or Barking Owl habitat requirements.
 - 34% provision on a strict 'Like for Like' EVC Nett Gain basis for Grassy Woodland LOT's (i.e. require.200 have 74 in this EVC).

{Note: Of the 312 LOTs required, available LOTs equate to 286 and there are also

191 Medium Old Trees that will be protected in the Woodland Habitat. }

- Recruitment of **over 1560** trees via enhanced natural re-generation and planting within the proposed off-set areas, road reserves and Work Authority boundary.
- Re-introduction of Swainson-Pea (if possible) onto the extraction block – which is no longer found on the property.
- Support for Birds Australia research into Swift Parrott and Regent Honey-eater.

4.0 FINAL OFF-SET PLAN (Mark IV AUGUST 2009)

Bush Broker was again contacted during July and a formal request for LOTs with Grassy Woodland referred to them. Additionally, CEMEX made enquiries as to available land outside the immediate area. One property was available yet turned out to be Grassy Dry Forest EVC not the required Grassy Woodland EVC.

A further design review identified 3 further LOT that are to be avoided: 2x scattered trees and 1x within Grassy Woodland.

A summary of the net gain available on and surrounding the quarry site is:

Habitat Hectares (all Very High conservation significance)

EVC	Prescribed Offset	Offset Identified	Compliance
Box Ironbark Forest	1.07 hha	2.01 hha	188%
Creekline Grassy Woodland	0 hha	0.02 hha	NA
Valley Grassy Forest	1.79 hha	2.07 hha	116%
Threatened Bird Habitat	7.61 hha	7.61 hha	100%
Grassy Woodland	1.96 hha	3.19 hha	163%
Totals	12.43 hha	14.90 hha	120%

Large Old Tree Protection

EVC	Prescribed Offset	Offset Available	Compliance
Box Ironbark Forest	0	45*	NA
Creekline Grassy Woodland	0	2*	NA
Valley Grassy Forest	40	154 [#] (+121 MOTs)	385%
Threatened Bird Habitat*	64	64	100%
Grassy Woodland	192	73 (+70 MOTs)	38%
Totals	296	291 (+191 MOTs)	(98.3%)

* used as Threatened Bird Habitat offsets,

17 were used as Threatened Bird Habitat offset

CEMEX will manage these areas as part of the site Environment Management Plan that will accompany the DPI Work Plan.



Figure 4: Green shaded areas proposed as off-sets

5.0 ATTACHMENTS

1. Chronology Vegetation Off-sets Strategy Development (including Design changes)
2. Offset Management Plan for the Eames Property Chiltern, Victoria Biosis Research Pty Ltd, July 2009
3. Identifying Potential Grassy Woodland offset sites in the Northern Inland Slopes Bioregion. Steve Mueck, Biosis Research Pty Ltd, 12 March 2009.
4. Report Flora, Fauna and Net Gain Assessment of the proposed new Chiltern Quarry. Biosis Research Pty Ltd, August 2009.
5. Preliminary Flora and Fauna Assessment of Readymix Chiltern Quarry Development Options, Chiltern Victoria, Biosis Research 2005

6.0 REFERENCES

1. Victoria's Native Vegetation Management, A Framework for Action. Department of Natural Resources and Environment, Victoria.
2. Native Vegetation Guide for assessment of referred planning permit applications, DSE April 2007.

ATTACHMENT 1: Chronology – Vegetation Off-sets Strategy Development (including design changes)

Date	Stage	Outcome	Project Impact
2005/ 2006	Geo-Imaging mapping of likely extent of 'hornfels' rock resource. Initial Flora Fauna review of alternative properties	<ul style="list-style-type: none"> Resource extends predominantly beneath National Park and slight outside to west of Park on farmland. Black Dog Creek Riparian vegetation must be avoided as it provides sensitive habitat. 	<p>Only two areas suitable: Skeleton Hill and Cheeseman's Hill.</p> <p>Skeleton Hill only site economically viable to pursue.</p>
Mid 2007	Confirm land owner permission.	<ul style="list-style-type: none"> Lease option agreement over Skeleton Hill block – other areas to be retained for farming. 	Restricted areas permitted for quarrying
Dec 2007	Initial design outlay of proposed quarry – extraction pit, processing area and access road.	<ul style="list-style-type: none"> Design focussed predominantly on efficient operations coupled with amenity protection (i.e. access road away from residents). 	Access road to Black Dog Creek Road to add around 5% to cost of project – may impact native vegetation but no need to widen alternative access roads which could interfere with vegetation.
Dec 2007	Initial Site Flora Fauna Impact Assessment	<ul style="list-style-type: none"> Significant native vegetation is present in proposed Extraction Block. Habitat and species listed both within Federal (EPBC Act) and State (FFG Act). 	Referral to Minister required.
Jan 2008	Initial design of extraction pit and processing area sent to specialist consultants for input and commencement of studies.	<ul style="list-style-type: none"> Recommendation to amend design and minimise extraction pit size to mitigate native vegetation impact 	
July 2008	Re-design based on outcome of specialist studies. Comments received from specialists.	<ul style="list-style-type: none"> Extraction Pit footprint significantly reduced. Processing plant and stockpile area relocated into block that is predominantly covered by introduced vegetation. 	<p>Resource reduced by over 20%.</p> <p>Transfer of plant to new area is cost neutral.</p>

CEMEX new Chiltern Quarry

Date	Stage	Outcome	Project Impact
Aug 2008	Discussions and agreement from landowner to access additional land to the west.	<ul style="list-style-type: none"> • In principal agreement provided. • Reduction of impact on native vegetation but increased amenity risk (eg noise) as plant is now closer to residential houses. 	May require property acquisitions - >\$1 million anticipated.
Oct 2008	Final Draft Design Issued	<ul style="list-style-type: none"> • Weighbridge moved to west – avoids Road Reserve interference; • Buffer around site included (20m); • Access road moved to be in between Large Old Trees. 	Renewed lease agreement necessary with landowner. (Previous agreement took over six months – potential to delay project.)
Oct 2008	Initial Off-set strategy prepared under direction of Specialist Ecologist	<ul style="list-style-type: none"> • Strategy aims to achieve a Good Conservation Outcome by: <ul style="list-style-type: none"> - acquiring extraction block allotment, - acquiring un-used road reserves, - managing off-set areas over life of quarry; and - gifting these properties to the National Park at completion of quarrying. • Site conservation emblem selected – Mountain Swainson-Pea. 	Land-owner sign off required (and compensation). Will add 2-3% to up front project cost but enables management on-site.
Dec 2008	Final design amendment - addition of bunker; - re-design of north bund wall away from boundary; - removal of north-east bund wall due to native grass impact.	<ul style="list-style-type: none"> • Source noise controls as opposed to bund wall reduces native vegetation impact. • Bunker location made in consultation with ecologist to minimise native vegetation impact. 	Possible cost increase but not quantified.

CEMEX new Chiltern Quarry

Date	Stage	Outcome	Project Impact
Dec 2008	Letter to DSE outlining off-set strategy	<ul style="list-style-type: none"> Meeting scheduled for January to discuss strategy. 	
Dec 2008	Specialist ecologist investigates nearby properties as off-sets options through Trust for Nature/ Bush Broker.	<ul style="list-style-type: none"> No single properties identified as available and on the market. 'Door knock' required. 	
Jan 2009	Meeting with Parks Victoria	<ul style="list-style-type: none"> Would like corridor link in off-set strategy between extraction block property and the Black Dog Creek to the South if at all possible. 	Negligible, as existing Road Reserves at south would provide link under tree recruitment. Could be integrated into Off-set strategy.
Jan 2009	Meeting with DSE to discuss off-sets	<ul style="list-style-type: none"> Road reserves not to be used in off-set – unlikely to be sold. Like-for-like EVC (not habitat) replacement to be pursued. Need to evaluate off-site properties as part of strategy. Will not accept 'gifting of property' to National Park. Assistance with locations provided to aid off site review of suitable properties. 	<p>New agreement with land-owner required.</p> <p>Additional surveys by ecologist.</p> <p>Off-site options may take 1-3 years to secure (if available).</p>
Feb 2009	Discussions with land owner on approval to access more of his property for off-sets (restriction on sheep farming practices)	<ul style="list-style-type: none"> In principle agreement reached. 	<p>Additional compensation likely.</p> <p>Details of restrictive grazing may create conflict at later stage.</p>
Mar 2009	Referral on need for EES	<ul style="list-style-type: none"> <i>Decision expected by April</i> 	

CEMEX new Chiltern Quarry

Date	Stage	Outcome	Project Impact
Mar 2009	Review of off site properties to achieve like- for- like replacement	<ul style="list-style-type: none"> • Review of properties in the area by ecologist in association with Trust for Nature. • Some properties are suitable and will achieve the habitat hectare requirement but not LOT. • Strict conformance to EVC like-for-like LOT replacement will require several (and possibly 10x) properties. • One property recommended coupled with enlarged site allocation. 	<p>1x property adds around several hundred thousand dollars to project.</p> <p>10x properties will add millions (i.e. 5-10%) to project cost and potentially 1- 3 years.</p>
Mar 2009	Final Flora and Fauna Report	<ul style="list-style-type: none"> • Off-set recommendations to achieve Net Gain (according to Native Vegetation Framework) attainable on the proposed Work Plan properties and adjoining leased sites (other than LOT like-for-like). 	
Apr 2009	Legal advice (via QC Stuart Morris) sought on whether Extractive Industry must strictly conform to NVF.	<ul style="list-style-type: none"> • DSE involvement and direction as to off sets is necessary as part of DPI Work Authority referral process and is to be considered. • The Native Vegetation Framework can be used for guidance but cannot be used as a condition to impose off-site off sets. 	DSE may consider the issue of native vegetation, but cannot do this as if the Framework applied.
Apr 2009	Discussions held with Birds Australia	<ul style="list-style-type: none"> • Requested input on conservation plans associated with rehabilitation and the new Quarry. • BA would like: corridor link (eg 100m wide) between proposed off-set areas east and west linking habitat areas; and fertile area to south. 	<p>Link to fertile areas to south (along Black Dog Creek) again raised.</p> <p>Land owner will not release his prime grazing land for off-sets.</p>
Apr 2009	Referral of proposed action under EPBC Act	<ul style="list-style-type: none"> • Nominates 3x allotments (west, east and south-east in off-set strategy) on the Eames leasehold as part of proposed off-site strategy. 	

CEMEX new Chiltern Quarry

Date	Stage	Outcome	Project Impact
April 2009	Round table meeting facilitated by DIIRD to discuss: Water, Off-sets and Referrals.	<ul style="list-style-type: none"> Meeting scheduled with Regional Office to discuss a revised off-set strategy 	DSE satisfaction must be met prior to DPI considering the Work Plan for endorsement. Considerable time delays and excessive costs associated with 10x off-site properties.
May 2009	Revised Off-set strategy with numbers against the Framework received.	<ul style="list-style-type: none"> Detailed additional site areas and provided numbers against Framework specifications 	
June 2009	Revised Off-set strategy submitted for review.	<ul style="list-style-type: none"> Framework in compliance for habitat hectares. Unused, excess access needs road reserves form part of strategy LOT deficiency noted but provision of such trees very difficult to come by. 	
July 2009	Site visit with DSE, DPI, DEWHA and Council to review proposed off-set areas as identified in revised strategy	<ul style="list-style-type: none"> Review Complete. Comments at site suggested the off-property electrical route should also be considered in CEMEX off-set strategy. 	Delays now likely to jeopardise smooth transition from one quarry to the new Chiltern Quarry
July 2009	Extra LOT's counted to East of Work Plan area (on the Eames owned property)	<ul style="list-style-type: none"> 109 extra LOT and 121 MOTs are within the block and road reserves 	See below
July 2009	Mark III Off-set Strategy Prepared	<ul style="list-style-type: none"> DSE meeting specified that Framework EVC requirements are to be met. CEMEX reviewed options to further avoid trees (3 able to be avoided with design change). Bush Broker formally contacted LOT property Redbluff reviewed–wrong EVC 	Extra cost and time. Off-set areas are on subject site under one owner who has a 99 year lease for the road reserves as grazing land.
Aug 2009	Mark IV (and final version) – further trees avoided	<ul style="list-style-type: none"> Habitat Hectares met; 98% LOTs available 	Extra Engineering work

