



Office of
Environment
& Heritage

Your reference: MP 08_0142 Mod 1
Our reference: DOC12/46540; LIC11/367
Contact: Steve Lewer, 4908 6814

Mr Paul Freeman
Senior Planner, Mining Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr Freeman

RE: MACKAS SAND PROJECT - ACCESS ROAD MODIFICATION (08_0142 MOD 1) EXHIBITION OF ENVIRONMENTAL ASSESSMENT

I refer to your email dated 5 November 2012 requesting submissions and recommended conditions of approval in relation to the proposed Mackas Sand Pty Ltd project approval modification (08_0142 MOD 1).

The Office of Environment and Heritage (OEH) understands that this project approval modification relates to an alternative access road to the Mackas Sand quarry, Salt Ash, and that it relates to a different haul route to that proposed in original environment assessment to which OEH (formerly the Environment Protection Authority) provided comments on in correspondence dated 17 February 2012.

OEH has undertaken a review of the Environmental Assessment (EA) and has provided detailed comments in **Attachment A**. OEH acknowledges that in general the EA is considered adequate, however, OEH are unable to offer our overall support to the proposal until an number of outstanding issues are appropriately addressed, namely:

- appropriately timed targeted flora survey for *Cryptostylis hunteriana* and *Diuris praecox*
- the provision of biodiversity offsets for impacts considered not covered by the provision of the Worimi Local Aboriginal Land Council conservations lands (i.e. Worimi National Park and associated reserve), which represented the previous offset lands for the sand quarry project
- clarification of some Aboriginal cultural heritage matters (e.g. registration of sites, monitoring and evidence of consultation).

In summary, OEH still has a number of issues with some sections of the EA and requires further detail and information in order to properly assess the proposal. These issues are discussed further in Attachment A. As such, OEH have been unable to develop draft conditions of approval, but will provide these (if necessary) once the above issues have been resolved.

If you require any further information regarding this matter please contact Steve Lewer, Regional Biodiversity Conservation Officer, on 4908 6814.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'R Bath', with a long horizontal flourish extending to the right.

21 NOV 2012

RICHARD BATH
Head – Hunter Planning Unit
Regional Operations

Enclosures: Attachments A & B

ATTACHMENT A: OEH REVIEW – OUTSTANDING ISSUES

THREATENED SPECIES

In general, OEH is of the opinion that the EA adequately assesses the impacts of the proposal with respect to threatened species, ecological communities and their habitats, however, the following matters need to be addressed before OEH can offer its full support for this aspect of the proposal:

- appropriately timed targeted flora survey for *Cryptostylis hunteriana* and *Diuris praecox*; and
- the provision of biodiversity offsets for impacts considered not covered by the provision of the Worimi Local Aboriginal Land Council conservations lands (i.e. Worimi National Park and associated reserve), which represented the previous offset lands for the sand quarry project .

1. Targeted surveys – flora

OEH notes that four species of threatened flora have the potential to occur on the alternative haul route site based on suitable habitat and known records in the general locality (as specified in Appendix D of the Ecological Assessment of the EA), they are: *Angophora inopina* (Charmhaven Apple), *Cryptostylis hunteriana* (Leafless Tongue Orchid), *Diuris arenaria* (Sand Doubletail) and *Diuris praecox* (Newcastle Doubletail). According to the EA, targeted orchid surveying was undertaken on 6 and 20 September and 12 October 2012. No specific surveying appears to have been undertaken (or stated) for other threatened flora, such as *Angophora inopina*. With respect to potential presence of threatened orchids, OEH is of the opinion that the targeted surveys are likely sufficient to detect *Diuris arenaria* as they were undertaken at the appropriately flowering period, however, they are not adequate for *Cryptostylis hunteriana* or *Diuris praecox*.

OEH is of the opinion that the following threatened flora they have not been adequately sampled. As such, OEH recommends appropriately timed targeted surveys in accordance with OEH guidelines (DEC 2004) be undertaken for the following potential taxa, unless appropriate evidence is provided that such surveys have already been undertaken or appropriate justification (i.e. expert opinion) as to why these species are unlikely to be present on the subject site:

- **Charmhaven Apple (*Angophora inopina*)** – OEH notes that the EA does not specifically indicate whether target searches were undertaken for this species and as such requires further clarification on how this species was eliminated from further assessment. Appendix D of the ecological assessment of the EA implies that field surveys were undertaken for this species, as eleven individuals of *Angophora inopina* - *A. floribunda* hybrids were detected adjacent to the proposal, but no specific details are given. OEH expects that the original baseline vegetation surveys undertaken for the sand quarry project are likely sufficient for this species, but require specific details.
- **Leafless Tongue Orchid (*Cryptostylis hunteriana*)** – OEH considers the current sampling is inappropriate to detect this species, given they do not correspond with the species known flowering period (i.e. surveys undertaken in September and October are outside its known flowering period). OEH notes that this species occurs in a range of vegetation communities, including eucalypt forests and swamp forests which are present on site (or nearby vicinity). It is known to flower between November and February; Nicholls 1938, Jones 1993 and Harden 1993 state that in NSW flowering generally occurs from December to February, with Bell (2001) quoting an earlier November flowering period for Central Coast populations (i.e. Freeman's Waterhole, Vales Point and Wyee). OEH is of the opinion that targeted searches for this species is required during their known flowering period (i.e. between November and February). OEH recommends the use of a reference site / population to ascertain appropriate local flowering times.
- **Rough Doubletail (*Diuris praecox*)** – OEH considers the current sampling is inappropriate to detect this species, given they do not correspond with the species known flowering period i.e. surveys undertaken in September and October are outside its known flowering period). This species has a short flowering season, restricted to (late July) August to early September, and usually no more than 2 weeks (Benson & McDougall 2005), though Espallargas (2005) has recorded 3-4 weeks on Tomaree Peninsula. It occurs in open forest communities, which are present on site. EA assessment notes this species has potential to occur on the site. However, OEH does not concur with the EA assumption that the species was not identified during surveys, given that the targeted searches were undertaken in late September when the species would have likely finished flowering. As such OEH is of the opinion that targeted searches for this species is required during their known flowering period (i.e. between late July and early September). OEH recommends the use of a reference site / population to ascertain appropriate local flowering times.

OEH notes that the EA indicates that this species was specifically targeted in searches undertaken on 6 and 20 September and 12 October, however, a review of OEH 'Atlas of NSW Wildlife' database and discussions with a local orchid expert suggest that this species primarily flowers late July to early to mid-August. As such the surveys undertaken as part of this EA appear to have been undertaken too late to adequately sample for the presence of this species. OEH's database records indicate that within the local vicinity of the proposal and on Tomaree Peninsula in general, this species predominantly flowers in August (mid) with rare sporadic flowering observed on limited individuals in September. Furthermore, in 2012 this species appears to have flowered predominantly in early August due to the drier season and apparently had finished by the onset of September. As such OEH is of the opinion that surveys undertaken for this species are likely inadequate. Furthermore, the EA implies that 'reference' populations, based on 2011 surveys, were utilised in the design of the targeted surveys, but no specific details are provided. OEH notes that as part of the March 2012 modification proposal (which was later withdrawn), the ecological assessment noted the detection of 20 records of 57 records of *Diuris praecox* for Lot 229 DP 1097995, but these are not recorded on OEH's 'Atlas of NSW Wildlife' database. OEH is unsure whether or not these records have been submitted and does this represent the so called reference population(s). If so specific details on flowering would be useful.

2. Provision of Offsets / Compensatory Habitat

In general, OEH concurs with the EA that the dedication of the Worimi Conservation Lands was conditional to some parts of the Stockton sand dune system being allowed to be developed, and as such these lands specifically represented the conservation offsets for the approved sand quarry project (MP 08_0142). However, OEH is of the opinion that these lands should only be used to offset development impacts on lands specifically owned by the Worimi Local Aboriginal Land Council (WLALC) and not lands under different ownership which do not meet the general intent of the 'Memorandum of Understanding' regarding the set up of the Worimi Conservation Lands. OEH understands that the approved sand quarry project lies on WLALC lands where Mackas Sands are acting as the contractor in mining this resource. As such the specific quarry site (i.e. WLALC owned lands) can be legitimately offset with the Worimi Conservation Lands. However, OEH is of the opinion lands not specifically owned by WLALC do not meet the original intent of the offset agreement. OEH understands that the proposed alternative haul road is not on WLALC owned land. As such, the impact on 0.3 hectares of native vegetation which is considered habitat to a number of threatened species should be appropriately offset. This approach is consistent with advice OEH has given on projects which have impacted on only a small area of habitat (e.g. Midal Cables at Tomago are only impacting on a small area but have provided commensurate offsets via the NSW Biodiversity Banking and Offsets Scheme).

OEH does not concur with the EA that the Worimi Conservation Lands represent the appropriate offset for the alternative haul road proposal and as such recommends that an appropriate biodiversity offset is required to compensate the loss of threatened species habitat using either one of the following methodologies:

- OEH 'offsetting principles', as outlined on the website: 'Principles for the use of biodiversity offsets in NSW' (OEH website 2011 –: Appendix 1) can be used as general guide for offsetting and compensatory habitat requirements (www.environment.nsw.gov.au/biocertification/offsets.htm)
- a biodiversity assessment using BioBanking Assessment Methodology (BBAM) under Biodiversity Banking and Offsets Scheme, as outlined in the 'BioBanking Assessment Methodology and Credit Calculator Operational Manual' (OEH 2011a). This would provide details of the required ecosystem and species (threatened) credits that need to be retired to offset the impacts of the development.

OEH acknowledges that BioBanking is a voluntary process and not a requirement under residual Part 3A and new SSD / SSI proposals, but believes it provides a valuable insight and quantitative appraisal into what would be an acceptable offset package to compensate the likely impacts of the modification. Similarly, OEH's 2011 'NSW OEH Interim policy on assessing and offsetting biodiversity impacts of Part 3A, State Significant Development (SSD) and State Significant Infrastructure (SSI) projects' (OEH 2011b; the 'policy') can apply. The policy allows for modification to the BBAM under limited circumstances.

Note: On 1 April 2012, the BioBanking Credit Calculator Version 2 became the compulsory version of the tool to use for BioBanking assessments (see www.environment.nsw.gov.au/biobanking/calculator.htm for more details). The credit calculator is now web-based and no longer produces 'xml' files. Instead a copy of the assessment can be sent electronically to OEH by following the steps outlined in **Attachment B**. The requirement of submitting background files for OEH to use in checking the BioBanking

assessment still stands and is also explained in Attachment B, including details of what accompanying documentation, maps and files is required.

3. Conservation in Perpetuity of Offset Lands

Any offset proposed will need to be managed in perpetuity under an appropriate conservation mechanism, such as:

- the establishment of biobanking sites with biobanking agreements under the *Threatened Species Conservation Act 1995* (TSC Act)
- the dedication of land under the *National Parks and Wildlife Act 1974* (NPW Act)
- a Conservation Agreement under the NPW Act
- a Trust Agreement under the *Nature Conservation Trust Act 2001*
- a Planning Agreement under s 93F of the *Environmental Planning and Assessment Act 1979*.

4. Management Plan

Typically, OEH requires that an appropriate Management Plan (such as vegetation or habitat) be developed and implemented as a key amelioration measure, prior to any approvals. This will facilitate the assessment of the EA and whether or not it adequately addresses impacts on threatened species and their habitat.

OEH would expect the management plan / document would clearly outline how the offset / compensatory area, any retained vegetated areas or habitat features and proposed habitat management within the development footprint (e.g. buffer zones, habitat trees and nest boxes) will be managed and implemented with respect to long-term conservation and viability, including clear details on how they will be funded. The plan / document should cover, but not be limited to, the following issues (where applicable):

- weed management (both control and suppression) and monitoring
- management of retained native vegetation and habitat (including buffer zones)
- feral animal control
- fire management (including asset protection zones (APZs))
- public access (including restriction of increased traffic and associated impacts, such as increased refuse and pets)
- size and management of buffer zones
- minimisation of edge effects and fragmentation
- stormwater control and changes to hydrology (including stormwater / runoff control and sediment / erosion control measures)
- management of specific habitat enhancement measures (e.g. hollow / habitat trees, animal fencing to facilitate movement, artificial hollows and nest boxes etc.)
- fauna displacement and if appropriate translocation (including any licence requirements)
- proposed surveys, such as pre-extraction baseline, pre-clearance and rehabilitation surveys
- details of long-term monitoring (including proposed timing)
- details of any rehabilitation program, including details of timing (including proposed staging details), rehabilitation measures (including details of proposed revegetation and species mix), and post-rehabilitation monitoring
- measures to ensure conservation in perpetuity (e.g. transfer to National Parks reserves, conservation agreements or covenants)
- funding details of long-term financial commitment to any proposed conservation measures, including any mechanisms to be implemented to achieve this.

References

- Bell, S. (2001) Notes on population size and habitat of the vulnerable *Cryptostylis hunteriana* (Orchidaceae) from the Central Coast of New South Wales. *Cunninghamia*, 7(2): 195-204.
- Benson, D. and McDougall, L. (2005) Ecology of Sydney plant species - Part 10: Monocotyledon families Lemnaceae to Zosteraceae. *Cunninghamia*, 9(1): 16-212.
- DEC (2004) *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities*. Working Draft. November 2004. Department of Environment and Conservation (NSW). This document is available at: www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf.
- Espallargas, N. (2005) The Distribution and Threatening Processes of *Diuris praecox* and *Diuris arenaria* on the Tomaree Peninsula. Unpublished report to Port Stephens Council.
- Harden, G.W. (ed.) (1990-2002) *Flora of New South Wales: Volumes 1-4*. New South Wales University Press, Kensington.
- Jones, D.L. (1993) *Native orchids of Australia* Reed Books: Sydney.
- Nicholls, W.H. (1938) A new species of the genus *Cryptostylis* R.Br. *Victorian Naturalist* 54: 182-183.
- OEH (2011a) BioBanking Assessment Methodology and Credit Calculator Operational Manual. Office of Environment and Heritage (NSW), Goulburn Street, Sydney. www.environment.nsw.gov.au/biobanking/calculator.htm
- OEH (2011b) NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects. NSW Office of Environment and Heritage, Sydney, June 2011.

ABORIGINAL CULTURAL HERITAGE

1. Aboriginal cultural heritage values

OEH acknowledges the significance of the local environment to the local Aboriginal community. OEH notes the existence of numerous registered Aboriginal sites in the immediate locality and acknowledges that the proposed modified project area contains landforms which have yielded a significant volume of evidence of Aboriginal occupation. These sites include middens, artefact scatters, isolated finds, burials, ceremonial and spiritual sites and potential artefact deposits (PADs). There is also a strong possibility that currently undetected cultural material may be present within the project area in those areas where Aboriginal objects have not been previously identified. This is particularly evident in the southern 540 metres of the proposed alternative haul route. It is noted that the proponent's archaeological consultant and the registered Aboriginal parties also support this view.

OEH also acknowledges the results of the field assessment of the project area on 30 July 2012 which located four midden sites, identified as 'Locus 1', 'Locus 2', 'Locus 3', and 'Locus 4', and a PAD, previously identified as site 'A3'.

A search of the Aboriginal Heritage Information Management System (AHIMS) revealed that each of the four midden sites and PAD identified during the recent field assessment have not been registered in AHIMS. The proponent is therefore advised to promptly complete Aboriginal Site Recording Forms for each site and submit to the AHIMS Registrar, as per the requirements of Section 89A of the NPW Act. Any management outcomes for these sites must be included in the information provided to AHIMS. The proponent is also advised that penalties now apply to corporations for failing to fulfil these requirements. AHIMS contact details: Phone: 9585 6470, address: Level 6, 43 Bridge Street, Hurstville, NSW, 2220, e-mail: ahims@environment.nsw.gov.au.

It is noted that the development of the proposed alternative haul route is not likely to impact the four midden sites. However, the proposal is likely to impact or harm Aboriginal objects associated with site 'A3'. It is therefore expected that the proponent develop culturally appropriate management strategies in consultation with the registered Aboriginal parties for the project.

2. Management of Aboriginal cultural heritage

OEH refers to Section 4.4.6.1 of the EA. OEH acknowledges and supports the proponent's commitment to update the currently approved Aboriginal Cultural Heritage Management Plan for the project to incorporate the additional management of the Aboriginal cultural heritage values associated with the alternative haul route. It is also recommended that this process is undertaken in consultation with the RAPs for the project.

OEH refers to Section 4.4.6.2 of the EA. It is noted that the proponent has proposed additional management strategies for the PAD areas likely to be disturbed as part of the construction of the alternative haul route. OEH generally supports these proposals to manage the potential risk of harm on any Aboriginal objects which may be located in these areas.

However, it is also recommended that an experienced archaeological specialist manages this process. Further, the proponent should also provide the RAPs with a fair, reasonable and timely opportunity to participate in these processes. Any occupational health and safety or WorkCover matters should be addressed prior to implementing the programs. Records should be collected of any attendance and results accurately documented. It is also recommended these programs include separate methodologies or archaeological triggers in the event that that significant cultural/archaeological finds are identified. For example: human remains, hearths, knapping floors, rare artefacts, etc. Any additional methodologies developed will be required to comply with the requirements of the NPW Act.

OEH has released the 'Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (2010)'. This Code establishes the requirements for undertaking subsurface testing as part of an archaeological investigation and it is recommended that the proponent/developer utilises the Code as a guide in developing any additional appropriate investigation methodologies.

In the event that additional Aboriginal objects are uncovered during the surveying and monitoring programs, all works in the immediate area must stop and the objects are to be recorded and managed in compliance with the requirements of the NPW Act. Further, the results of these assessments should be documented and reported to OEH and the consent authority in accordance with OEH's 'Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW' (dated April 2011). These actions/procedures should also be detailed in the proposed ACHMP.

It is also recommended that the monitoring program is expanded to include any areas within the identified PADs where additional ground disturbance occurs following vegetation clearance (i.e. where cutting is required prior to creating a level surface to begin construction of the road and turning bay).

OEH refers to Table 6.1 of the EA. It is noted that the proponent proposes to collect surface artefacts from the four midden sites prior to the construction of the alternative haul road. OEH understands that these locations are not currently within the development footprint of the proposed route and therefore discourages this unnecessary impact to these sites. It is recommended that they remain in-situ and are not disturbed by the development proposal.

3. Local Aboriginal community consultation

OEH acknowledges a summary of the consultation with the local Aboriginal community has been provided by the proponent regarding the alternative haul route in Section 4.4.7 of the EA and in Section 2.2 and Appendix 1 of the Aboriginal Cultural Heritage Assessment. However, the proponent has provided no actual evidence of the consultation process from the RAPs in support or otherwise of the Aboriginal cultural heritage assessment process. The lack of evidence of consultation from the RAPs regarding: the draft assessment methodology, results of the field assessment, development of the management and mitigation measures presented in Section 4.4.6 of the EA and Section 9 of the Aboriginal Cultural Heritage Assessment indicates that the consultation process is incomplete.

In order to progress these inadequacies, OEH recommends that the proponent provide evidence of all comments/correspondence from all RAPs to form a complete submission. OEH would also expect the

proponent to detail any contrary or differing positions to those of the RAPs if there is some disagreement with the outcomes of the assessment process. OEH has drafted a recommended condition of approval below to address this matter.

OEH has developed the 'Aboriginal cultural heritage consultation requirements for proponents 2010' to assist proponents with consultation with the Aboriginal community. While these guidelines are aimed at proponents seeking an Aboriginal Heritage Impact Permit under the NPW Act, the guidelines provide a useful reference to guide broader community consultation during the development of a major project application.

OEH also encourages the proponent to maintain continuous consultation processes with the community for the entire life of the project and for all Aboriginal cultural heritage matters associated with the project area. As a general rule, gaps in the consultation process of six months or more will not constitute a continuous consultation process. Where a proponent or developer envisages a gap of more than 6 months it is recommended that RAPs are regularly informed of any progress.

4. Conclusion

OEH has no additional concerns with the Aboriginal cultural heritage assessment for the modified project application and recommends that the following additional conditions of approval for Aboriginal cultural heritage are reflected in any approval conditions for the project.

RECOMMENDED CONDITIONS OF APPROVAL FOR ABORIGINAL CULTURAL HERITAGE

1. The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request.
2. The proponent must update the existing Aboriginal Cultural Heritage Management Plan (ACHMP) for the modified project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.
3. The proponent is to provide fair and reasonable opportunities for the registered Aboriginal stakeholders to monitor any initial ground disturbance activities associated with vegetation clearance occurring within Lot 122 and Lot 218. In the event that additional Aboriginal objects are uncovered during the monitoring program, the objects are to be recorded and managed in accordance with the requirements of Sections 85A and 89A of the *National Parks and Wildlife Act 1974* and the approved and updated ACHMP.

ATTACHMENT B: Checklist of information required when utilising the BioBanking Assessment Methodology and Submitting BioBanking assessment to Office of Environment and Heritage using the BioBanking Credit Calculator v2.0

The 'Assessors' Guide to Using the BioBanking Credit Calculator v.2' has been finalised and it is now available for download from the Office of Environment and Heritage (OEH) website www.environment.nsw.gov.au/resources/biobanking/120182AssessGdeBBCC.pdf. The guide provides information on the operation and use of the web-based BioBanking Credit Calculator v2.0.

To submit your assessment to OEH open your assessment in *Edit* mode. Navigate to the *Assessment details* page and select the *Submit* button in the top right hand corner. A *Submit the assessment for approval* box will appear (Figure 1), where you can confirm submission (OK button) or cancel submission (*Cancel* button). Once a case has been submitted to OEH, the status of the case will change in your *My work* tab from *Work in progress (WIP)* to *submitted*. Please note that you cannot make any edits to an assessment that has been submitted, although you will be able to view the assessment.

Submit the assessment for approval



Are you sure you want to submit this assessment for approval?



Figure 1: Submitting an assessment

The following documentation must be submitted with your Environmental Impact Statement or Environmental Assessment report (in hard copy and soft copy):

- BioBanking Assessment Report including a list of dominant indigenous species for overstorey, mid-storey and ground cover for each vegetation type and, where required:
 - local benchmark data,
 - request for increase in gain of site value,
 - a description of the proposed development,
 - measures to avoid and mitigate the impacts of development,
 - an assessment of indirect impacts,
 - a statement of onsite measures,
 - a description of the application of the BioBanking Assessment Methodology, including details of and assumptions made in utilising the methodology, such as (but not limited to) placement of assessment circles, remnant value, connectivity and reasoning behind selection of vegetation types in the Biometric Vegetation Type database,
 - plot and transect values including a list of the indigenous plant species identified in each of the plots,
 - a description of targeted threatened flora and fauna surveys, and any general baseline surveys (incl. vegetation specific surveys). These should be also be provided schematically, and

Where required, the BioBanking Assessment Report should also include:

- expert reports,
- an application for a determination on red flag areas,
- more appropriate use of local data for vegetation types, benchmarks or threatened species,
- environmental contributions accompanied by a BioBanking Agreement Credit Report (if applicable), and
- application for deferred retirement arrangements (if applicable).

- Copies of completed field data sheets, and updated with correct plant taxonomy in instances where field names have been used.
- Maps (soft copy as A4 jpgs) of:
 - offset site / BioBanking Agreement boundary or development footprint
 - vegetation zones
 - management zones
 - and where required:
 - existing waste
 - existing erosion
 - existing structures (in waterways)
- Separate shape files should be supplied for all the maps mentioned above plus:
 - plots and transects
 - assessment circles
 - species polygons
 - polygons for adjacent remnant area
 - the location or habitat area of sensitive species, and the management area related to that sensitive species (as this information cannot be displayed publicly).

All maps must include:

- a title (as per the names above)
- the site's name, location and lot/DP numbers
- the scale
- the date it was prepared
- a legend.

Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible. Shape files must use GDA94 datum. Name each shape file as: 'biobank site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Photo points should be named A, B, C, D, E, F, G, etc. Photo points should be located in areas where change is expected, i.e. where replanting, natural regeneration, intensive weeding or other active management actions are to be carried out. As a rough guide, include at least one photo point in each management zone where active management actions will be undertaken. Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible.

Shape files must use GDA94 datum. Name each shape file as: 'biobank/development site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Additional requirements for offset sites that may be required (based on liaison with OEH):

- completed biobanking agreement management action template (provided in Word format), and
- Biodiversity Credits Pricing Spreadsheet

Once the case has been received OEH will review the data entered, and any supporting documentation. For State Significant Development (SSD), State Significant Infrastructure and residual Part 3A (under the *Environmental Planning and Assessment Act 1979*) this review will take place during the assessment of the Environmental Impact Statement or Environmental Assessment report (for Part 3A matters).