

MAIN ROADS WA - OFFSET PROPOSAL
Condition 16(b), CPS 818/4

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| Project: | Great Northern Highway Upgrade between Little Bindoon Hill to just south of New Norcia 20.5 km of widening and three realignments totalling 9.5 km at; Longbridge Gully 80.6 - 84.6 SLK, Hay Flat Road 88.0 - 90.2 SLK and Sevenmile Well 101.2 - 104.5 SLK. |
| Date: | 3 September 2008. |
| Manager: | Andrew Batty. |
| Clearing location: | Great Northern Highway between Little Bindoon Hill to just south of New Norcia. |
| Offset location: | Great Northern Highway between Little Bindoon Hill and Seven Mile Well Nature Reserve. |
| Offset description: | <ul style="list-style-type: none"> • Acquisition of land with remnant vegetation (offset blocks and widened road reserve). • Covenanteeing of land with remnant vegetation. • Revegetation of redundant road surface, widened road reserve and rehabilitation of existing road reserve. |
| Reason for offset & description of impacts: | <ul style="list-style-type: none"> • Clearing a total 23.22 ha of native vegetation over 30km of road upgrade. • Removal of high biodiversity vegetation (a) – of the 23.22 ha there is clearing proposed for 13.47 ha of vegetation ranging in good or better condition. • Removal of under-represented vegetation (e) – of the 23.22 ha there is clearing proposed for 13.87 ha of vegetation types with 30% or less of pre-European coverage remaining. • Vegetation removal from watercourses/wetlands (f) – there is clearing proposed for 0.35 ha of vegetation within degraded watercourses or wetlands. |
| Offset Principles addressed: | <p>Direct offsets:</p> <ul style="list-style-type: none"> • Total purchase/covenanteeing of 38.88 ha of vegetation made up of: • Purchase of 1.3 ha of wetland at 89 SLK in good to good-to-degraded condition. • Covenanteeing of 16.05 ha of marri, marri/jarrah and wandoo/marri mixed woodland in better than good condition near 91 SLK, adjacent to Udamung Nature Reserve. • Purchase of 9.9 ha of mixed York gum woodland in good-to-degraded condition near 103 SLK, opposite Seven Mile Well Nature Reserve. • Acquisition of 11.41 ha of vegetation within the widened road reserve • Revegetation of 24.91 ha of acquired land, plus further revegetation of 3.7 ha made up of old road surface and parking bays. <hr/> <p>Contributing offsets:</p> <p>All purchased land, covenanted land and revegetation areas will be fenced. An addition 4.33 ha of rehabilitation (infill planting) around degraded existing vegetation in the road reserve will occur with the revegetation of the acquired land.</p> |

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Hierarchy of avoidance, minimisation, rectification, mitigation:

See section 2.5 - Avoidance and Minimisation, of the '*Design Package 4&5 Environmental Impact Assessment Report*' (rev3.1).

Like for like or better:

All offset areas have been chosen because of their similarity to the vegetation being cleared, condition and size in relation to the cleared areas as well as their proximity to 'A' Class Nature Reserves.

Ratio greater than 1:1 :

The Access Alliance has developed its own general guiding principle for the ratios of cleared vegetation to offsets, in order to achieve a ratio greater than 1:1 as follows:

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| Clearing | | Acquisition of remnant native vegetation | | Revegetation |
| 1 | : | 1.5 | : | 3 |

Robust, consistent assessment:

Surveys of the flora along GNH have been carried out over the last three years with this information provided to DEC. The offsets have been determined suitable by the composition of vegetation and their position in the landscape (like for like).

Appropriateness:

The offset aims to protect, enhance and re-create wheatbelt native vegetation in a condition better than that being cleared.

No net loss / net gain:

With the Access Alliance's clearing ratio applied to this project there is a net gain and no net loss of vegetation meeting Main Roads' Objective number five (*Environmental Objective Targets and Indicators* 6707/024).

Statutory requirements met:

Seed collected for the revegetation offsets will be in accordance with DEC licenses.

Defined, documented, audited:

Offsets will be as defined in '*Design Package 4&5 Environmental Impact Assessment Report*' (Rev3.1) with reporting and auditing in accordance with the requirements of CPS 818/4.

Long-term benefit:

The widened road reserve and the acquisition of the remnant vegetation blocks will be under the tenure of Main Roads providing for long term protection. Covenanting of the remnant vegetation near 91 SLK, adjacent to Udamung Nature Reserve on Lot 3281 is supported by the landowner.

Environmental specialist advice:

Suitably qualified and experienced Maunsell environmental staff are members of the Access Alliance and have undertaken surveys of the flora and fauna to complement those conducted previously by Western Botanical, ATA Environmental and Biota Environmental Sciences. Maunsell and Main Roads' environmental staff have identified the suitable offset sites and will be involved in implementing the offset proposal.

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| | Proposed clearing | Proposed offset |
|--------------------------------------|---|--|
| Area: | <ol style="list-style-type: none"> 1. Clearing 0.35 ha of degraded riparian vegetation at Longbridge Gully. 2. Clearing 10.36 ha of under-represented vegetation associations featuring marri, wandoo and allocasuarina. 3. Clearing 3.51 ha of York gum (veg association 352) woodland of good to degraded quality. 4. Clearing 8.52 ha of vegetation associations with >30% remaining. | <ol style="list-style-type: none"> 1. Purchase of 1.3 ha of riparian vegetation in good condition at 89 SLK. 2. Covenanted of 16.05 ha of remnant vegetation near 91 SLK in very good condition and purchase of 11.41 ha of vegetation within the widened road reserve. 3. Purchase of 9.9 ha of mixed woodland near 103 SLK containing 5.63 ha of York Gum (veg association 352) in good condition. 4. Revegetation of 24.91 ha of acquired land, revegetation of 3.7 ha of old road surface and parking bays and rehabilitation of 4.33 ha of existing road reserve. |
| Species, Community Type & Condition: | See section 4 - Existing Environment and section 5.2 - Flora, of the <i>'Design Package 4&5 Environmental Impact Assessment Report'</i> (Rev3.1). | See section 6 – Offset and Mitigation, of the <i>'Design Package 4&5 Environmental Impact Assessment Report'</i> (Rev3.1). |
| Ecological function: | Narrow road reserve strips of vegetation. | Widening of the road reserve to one side creates a wider vegetated strip on one side of the road, improving ecological function through a reduction of “edge effect”. Remnant blocks are of a sufficient size and shape to be viable offsets. |
| Other values: | | Wider vegetated strip and joining remnants provides a better linkage corridor for fauna. |
| Monitoring commitments: | Ongoing monitoring will ensure successful establishment of the revegetation areas. Monitoring of these sites will be as per the Access Alliance <i>'Revegetation Strategy'</i> and during this time opportunistic monitoring will also occur in the remnant offset blocks. | |
| Management commitments: | Management of the offset sites and remedial actions will be undertaken if required following the monitoring. This will include infill planting and weed control to ensure successful establishment of revegetation and continued density and diversity in the remnant offset blocks. | |

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**Agencies
consulted &
submissions
received:**

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| Alan Kietzmann | District Manager | Dept of Environment and Conservation - Avon Mortlock |
| Stefan De Haan | District Nature Conservation Coordinator | Dept of Environment and Conservation - Perth Hills |
| Liesl Rohl | Native Veg Conservation Branch | Dept of Environment and Conservation |
| Terry Brooks | Land Use Planning | Department of Water |
| Andrew Watson | Commissioner | Soil and Land Conservation Commissioner |
| John Merrick | CEO | Shire of Chittering |
| Harry Hawkins | CEO | Shire of Victoria Plains |
| Susan Liddicoat | Acting Director | Conservation Council WA |
| Graeme Rundle | EWG representative | Conservation Council WA |
| Cressida Wilson | RCC - Executive Officer | Roadside Conservation Committee |
| Brian Moyle | Key contact | WA Wildflower Society |
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Submissions received are contained within the '*Design Package 4&5 Environmental Impact Assessment Report*' (Rev3.1) at Appendix A.