



1. Application details

1.1. Permit application details

Permit application No.: 6797/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Allsage Pty Ltd

1.3. Property details

Property: LOT 10792 ON PLAN 210152, KALBARRI
Colloquial name:
Local Government Authority: NORTHAMPTON, SHIRE OF
DER Region: Midwest
DPaW District: GERALDTON
LCDC:
Localities: KALBARRI

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
26		Mechanical Removal	Building or structure

1.5. Decision on application

Decision on Permit: Refuse

Application:

Decision Date: 18 April 2016

Reasons for Decision: The applicant has applied to clear 26 hectares of native vegetation.

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing is at variance to Principle (f), may be at variance with Principles (g), (h) and (i), is not likely to be at variance to Principles (a), (b), (c), (d) and (j) and is not at variance to Principle (e).

An assessment has determined that the proposed clearing will impact on a major non-perennial watercourse and an area of vegetation that is considered to be growing in association with a watercourse.

The proposed development does not have development approval from the Shire of Northampton. These factors were taken into consideration in the decision to refuse to grant a clearing permit.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 383 is described as shrublands comprising <i>Acacia rostellifera</i> scrub-heath (Shepherd et al, 2001)	The applicant proposes to clear 26 hectares of native vegetation within Lot 10792 on Deposited Plan 210152, Kalbarri, for the purpose of constructing a solar farm.	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	<p>The vegetation condition and description was determined by a level 1 flora, vegetation and fauna survey undertaken by Bio Diverse Solutions (2015).</p> <p>The vegetation under application is comprised of three vegetation types: <i>Acacia</i> shrubland, <i>Acacia</i> heath and to a lesser extent <i>Acacia</i> thicket associated with the proposed access road into the solar farm. These vegetation types are described below.</p> <p>The low open <i>Acacia</i> heath vegetation type comprises overstorey dominated by <i>Acacia oldfieldii</i>, <i>Labichea lanceolata</i>, <i>Olearia axillaris</i>, <i>Calothamnus quadrifidus</i>, <i>Melaleuca megacephala</i>, <i>Allocasuarina campestris</i>, <i>Calytrix brevifolia</i>, <i>Grevillea leucopteris</i> and</p>

Callitris arenaria. The understorey is dominated by *Thysanotus manglesianus*, *Leptosema aphyllum*, *Comesperma scoparium*, *Solanum lasiophyllum*, *Glischrocaryon aureum*, *Thryptomene denticulata* and *Astroloma glaucescens*, and sparse ground cover of *Trachymene omata*, *Podotrochea gnaphalioides*, *Gnephosis tenuissima*, *Muehlenbeckia adpressa*, *Arctotheca calendula*, *Stylidium* sp. Kalbarri, *Calandrinia polyandra* and *Desmocladius asper*.

The Acacia shrubland vegetation type comprises overstorey of *Acacia oldfieldii*, *Acacia scirpifolia*, *Labichea lanceolata*, *Jacksonia cupulifera*, *Allocasuarina campestris*, *Callitris arenaria*, *Grevillea leucopteris* and *Banksia prionotes*. Understorey species include *Baeckea robusta*, *Melaleuca megacephala*, *Solanum lasiophyllum*, *Lachnostachys eriobotrya* and *Scholtzia* sp. Red Bluff with ground cover of *Calandrinia polyandra*, *Trachymene omata*, *Podotrochea gnaphalioides*, *Arctotheca calendula*, *Goodenia berardiana*, *Austrostipa nitida* and *Schenkia australis*.

The dense Acacia thicket vegetation type is comprised of dense thickets of *Acacia scirpifolia*, *Melaleuca megacephala*, *Labichea lanceolata*, *Grevillea leucopteris* and *Jacksonia cupulifera*. Understorey of *Gompholobium tomentosum*, *Patersonia occidentalis* var. *latifolia*, *Stylidium* sp. Kalbarri, *Calandrinia polyandra* and *Comesperma scoparium*. (Bio Diverse Solutions, 2015)

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposed clearing is not likely to be at variance to this Principle

The applicant proposes to clear 26 hectares of native vegetation within Lot 10792 on Deposited Plan 210152, Kalbarri, for the purpose of constructing a solar farm to supply power to the Kalbarri townsite.

A level 1 flora, vegetation and fauna survey and targeted flora survey undertaken in September 2015 by Bio Diverse Solutions (2015) identified that the vegetation under application is in excellent (Keighery, 1994) condition and largely comprises a mixture of *Acacia* shrubland and open *Acacia* heath with a small area of dense *Acacia* thicket associated with the proposed access road into the solar farm. The area of dense *Acacia* heath is growing in association with a major non-perennial watercourse known as Wittecarra Gully.

The level 1 flora survey and targeted flora survey did not identify any rare or priority flora within the application area (Bio Diverse Solutions, 2015).

There are no threatened or priority ecological communities recorded within the local area (10 kilometre radius) and the flora surveys did not identify any vegetation communities within the application area that are representative of any threatened or priority ecological communities (Bio Diverse Solutions, 2015).

There are 18 conservation significant fauna species recorded within the local area (Department of Parks and Wildlife (Parks and Wildlife) 2007-). Of these, a fauna survey identified that suitable habitat exists on site for the malleefowl (*Leipoa ocellata*) and Tamar wallaby (*Macropus eugenii* subsp. *derbianus*) (Bio Diverse Solutions, 2015). Follow-up targeted fauna surveys identified evidence of Tamar wallaby activity on site in the form of old faecal material located within the eastern portion of the application area. The scats were well weathered and there was no evidence of recent activity, which indicates that this species is a transient visitor to the application area (Bio Diverse Solutions, 2015). No evidence of malleefowl activity was identified (Bio Diverse Solutions, 2015).

Whilst the Tamar wallaby was identified on site, the application area is not likely to contain significant habitat for this species as there are extensive areas of undisturbed remnant vegetation within the local area, which retains approximately 80 per cent native vegetation. A significant portion of this remnant vegetation is retained

within Kalbarri National Park (located 160 metres south and 240 metres east) which comprises approximately 183 000 hectares. The proposed clearing may however result in fauna deaths to Tamar wallabies. Management measures including clearing from a single point and in a west to east direction to allow for Tamar wallaby dispersal into Kalbarri National Park and adjoining vegetation would assist in mitigating this risk.

The proposed clearing will increase the risk of weeds spreading into adjacent vegetation and potentially into Kalbarri National Park. Weed management practices would assist in mitigating the spread of weeds.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Bio Diverse Solutions (2015)
Keighery (1994)
Parks and Wildlife (2007-)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)
Parks and Wildlife Tenure
NLWRA, Current Extent of Native Vegetation

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments **Proposed clearing is not likely to be at variance to this Principle**
There are 18 conservation-significant fauna species recorded within the local area (10 kilometre radius) (Parks and Wildlife, 2007-). Of these, a fauna survey identified that suitable habitat exists on site for the malleefowl (*Leipoa ocellata*) and Tamar wallaby (*Macropus eugenii* subsp. *derbianus*) (Bio Diverse Solutions, 2015).

Malleefowl, listed as 'rare or likely to become extinct' under the *Wildlife Conservation Act 1950*, are found within semi-arid shrublands and low woodlands dominated by mallee eucalypts and acacias, and feed opportunistically on a variety of flora, fungi and invertebrates (Parks and Wildlife, 2015b). Malleefowl often require sandy substrate and abundant leaf litter for breeding (Parks and Wildlife, 2015b). Several malleefowl records occur within 10 kilometres of the application area, however a fauna survey of the application area did not identify any malleefowl activity and it is unlikely that the proposed clearing will impact on this species.

Tamar wallabies, listed as Priority 5 by Parks and Wildlife, are found in coastal scrub, heath, dry sclerophyll forest, and mallee woodlands (Morris et al 2008). This species requires open grassy areas for feeding and low dense vegetation for daytime shelter (Morris et al 2008). Targeted fauna surveys identified evidence of Tamar wallaby activity on site in the form of old faecal material located within the eastern portion of the application area (Bio Diverse Solutions, 2015). The scats were well weathered and there was no evidence of recent activity, which indicates that this species is a transient visitor to the application area. Tamar Wallabies were re-introduced into the Kalbarri National Park in 2010 and recent records suggest that the population is persisting within the area (Bio Diverse Solutions, 2015).

Whilst the Tamar wallaby was identified on site, the application area is not likely to contain significant habitat for this species, or any other fauna species, as there are extensive areas of undisturbed remnant vegetation within the local area, which retains approximately 80 per cent native vegetation. A significant portion of this remnant vegetation is retained within Kalbarri National Park (located 160 metres south and 240 metres east) which comprises approximately 183 000 hectares. The proposed clearing may however result in fauna deaths to Tamar wallabies. Management measures including clearing from a single point and in a west to east direction to allow for Tamar wallaby dispersal into Kalbarri National Park and adjoining vegetation would assist in mitigating this risk.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Bio Diverse Solutions (2015)
Morrissey al (2008).
Parks and Wildlife (2007-)
Parks and Wildlife (2015)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)
Parks and Wildlife Tenure
NLWRA, Current Extent of Native Vegetation

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposed clearing is not likely to be at variance to this Principle**
There were no rare flora identified within a level 1 flora survey or follow-up targeted flora survey of the application area (Bio Diverse Solutions, 2015).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Bio Diverse Solutions (2015)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposed clearing is not likely to be at variance to this Principle**
There are no threatened ecological communities recorded within the local area (10 kilometre radius) and a flora survey of the application area (Bio Diverse Solutions, 2015) did not identify any vegetation on site representative of a threatened ecological community.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Bio Diverse Solutions (2015)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposed clearing is not at variance to this Principle**
The local area (10 kilometre radius) surrounding the application is extensively vegetated and retains approximately 80 per cent native vegetation.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The application area is within the Shire of Northampton and Geraldton Sandplains Bioregion which retain 74 and 45 per cent of their pre-European vegetation extents respectively. The mapped vegetation type on site (Beard vegetation association 383) retains 91 per cent of its pre-European vegetation extent within the Bioregion (Government of Western Australia, 2014).

Given that the abovementioned remaining vegetation extents are all considerably greater than the 30 per cent threshold, the proposed clearing is not considered to be within an extensively cleared area, and is therefore not at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion				
Geraldton Sandplains	3,136,038	1,404,375	45	40
Shire				
Northampton, Shire of	1,258,427	930,229	74	25
Beard Vegetation Association in Bioregion				
383	5,312	4,838	91	49

Methodology References:
Commonwealth of Australia (2001)
Government of Western Australia (2014)

GIS Databases:
NLWRA, Current Extent of Native Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposed clearing is at variance to this Principle

The closest wetland or watercourse to the application area is a major non-perennial watercourse known as Wittecarra Gully, which intersects a small portion of the application area associated with the proposed road into the solar farm area.

A flora survey identified dense thickets of *Acacia scirpifolia*, *Melaleuca megacephala*, *Labichea lanceolata*, *Grevillea leucopteris* and *Jacksonia cupulifera* within and immediately surrounding Wittecarra Gully (Bio Diverse Solutions, 2015), which differs from the remaining vegetation within the application area. Therefore, a small portion of the vegetation (approximately 0.35 hectares) is considered to be growing in association with a watercourse.

Given the above, the proposed clearing is at variance to this Principle. Prior to any clearing, the proponent would be required to provide additional information that outlines how impacts to Wittecarra Gully will be minimised during works.

Methodology References:
Bio Diverse Solutions (2015)

GIS Databases:
Hydrography, hierarchy
Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposed clearing may be at variance to this Principle

The application area is located within the Kalbarri Sandplain Zone in the Carnarvon Province whereby soils are dominated by pale deep sands, yellow deep sands, red deep sands and sandy duplexes with some pale shallow sands and bare rock (Bio Diverse Solutions, 2015). Soil mapping indicates that the application area includes loose siliceous sands, with some sandstone outcrops on hills, and other sandy soils (Northcote et al, 1960-68).

Sandy soils are highly permeable and not usually prone to water erosion, however there is the potential for some water erosion to occur in the small area proposed for clearing within Wittecarra Gully (approximately 0.35 hectares), which is a non-perennial watercourse. Whilst the watercourse is non-perennial, there is the potential for heavy flows post rainfall and the applicant is required to provide additional information on how water erosion and sedimentation would be minimised within this area.

Sandy soils are susceptible to wind erosion, and the proposed clearing of 26 hectares of native vegetation has the potential to result in appreciable land degradation in the form of wind erosion, therefore the proposed clearing may be at variance to this Principle.

To minimise the risk of wind erosion, the applicant has advised that vegetated buffers will be established and maintained around the solar farm at dimensions of 200 metres deep on the southern boundary and 310 metres deep on the eastern boundary (Bio Diverse Solutions, 2015).

Given the above, the proposed clearing may be at variance to this principle.

Methodology References:
Bio Diverse Solutions (2015)
Northcote et al. (1960-1968)

GIS Databases:
Soils, statewide
Hydrography, hierarchy

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposed clearing may be at variance to this Principle

The closest conservation area to the application area is Kalbarri National Park located approximately 160 metres south and 240 metres east. Kalbarri National Park is extensive and comprises an area of approximately 183 000 hectares.

Although the proposed clearing is not likely to have any direct impacts on the National Park, it may increase the risk of weeds spreading into the bordering vegetation adjoining Kalbarri National Park. This may lead to the incidental spread of weeds within the National Park, and therefore the proposed clearing may be at variance to this Principle. Weed management practices would assist in mitigating the spread of weeds.

Methodology GIS Databases
Parks and Wildlife Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposed clearing may be at variance to this Principle**
Groundwater salinity levels within the application area are mapped as 500 to 1000 milligrams per litre (marginal). Given this relatively low salinity level, it is not likely for the proposed clearing to lead to a perceptible rise in the watertable and thus an increase in groundwater salinity levels.

The closest wetland or watercourse to the application area is a major non-perennial watercourse known as Wittecarra Gully, which intersects a small portion of the application area associated with the proposed road into the solar farm area. Whilst Wittecarra Gully is non-perennial, significant water flow is expected after heavy rainfall and during winter months. The biggest impact on water quality will be the potential for increased sedimentation, as clearing is likely to increase the amount of sediment run off downstream.

Given the above, the proposed clearing may be at variance to this principle. Prior to any clearing, the proponent would be required to provide additional information that outlines how impacts to Wittecarra Gully will be minimised.

Methodology GIS Databases:
Hydrography, hierarchy
Hydrography, linear
Groundwater Salinity, Statewide

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposed clearing is not likely to be at variance to this Principle**
A small portion of the application area is within a major non perennial watercourse known as Wittecarra Gully, however, given the highly permeable sandy soils (Northcote et al 1960-1968) and low rainfall (500 millimetres per annum) within the application area, the proposed clearing is not expected to cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Northcote et al (1960-1968)

GIS Databases:
Rainfall, Mean Annual

Planning instruments and other relevant matters.

Comments The application area is zoned 'rural' under the town planning scheme.

The Shire of Northampton has advised that the applicant has not yet submitted an application for Development Approval for the proposed solar farm and the Shire is not supportive of the clearing application until the development approvals are in place. (Shire of Northampton, 2015).

The Department of Water (DoW, 2015) has advised that the proposed clearing is partially within the Priority 2 (P2) Kalbarri Water reserve. It is advised that solar energy production is compatible in P2 areas, and that the storage and use of hazardous substances such as chemicals and fuels in the Kalbarri Water Reserve should be in accordance with DoW's Water quality protection note (WQPN) 65 *Toxic and hazardous substances – storage and use*. It is advised that any abstraction and use of groundwater for the proposed clearing would require a licence from the DoW as it is proclaimed under the *Rights in Water and Irrigation Act 1914* (DoW, 2015).

The DoW has further advised that the applicant has undertaken on site consultation with DoW to determine an appropriate setback of the solar farm area from Wittecarra Gully, and as such, DoW have no objections to the proposed clearing (DoW, 2015).

There are no Aboriginal Sites of Significance mapped within the local area of the proposed clearing.

The application was advertised on 19 October 2015 for a 21 day submission period. There have been no submissions received from the public in response to the proposed clearing.

In February 2016 DER wrote to the applicant identifying two significant issues associated with the proposed clearing, and inviting the applicant to provide further information in respect to these matters. These issues related to the management of impacts to Wittecarra Gully, and the requirement for Development Approval from the Shire of Northampton. The applicant did not respond within the requested timeframe.

Methodology References:
DoW (2015)
Shire of Northampton (2015)

GIS Databases:
Aboriginal Sites of Significance
Town Planning Scheme Zones

4. References

- Bio Diverse Solutions (2015) Level 1 Flora, Vegetation and Fauna Survey. Lot 10792 George Grey Road, Kalbarri. Solar Farm and Wittecarra Creek Conservation Reserve. DER Ref A984415.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed December 2015.
- Department of Parks and Wildlife (2015b) Advice for Conservation Significant Fauna for Clearing Permit Application CPS 6752/1. Department of Parks and Wildlife, Perth, Western Australia. (DER Ref A1023019)
- Department of Water (2015) Direct Interest Advice for Clearing Permit Application CPS 6797/1. Received 24 November 2015. Department of Water, Perth, Western Australia. (DER Ref A1010868)
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Morris, K., Friend, T., Burbidge, A. & van Weenen, J. 2008. *Macropus eugenii*. The IUCN Red List of Threatened Species 2008: e.T41512A10483066. Downloaded on 14 January 2016.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Shire of Northampton (2015) Direct Interest Advice for Clearing Permit Application CPS 6797/1. Received 21 October 2015.