



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7850/1

File Number: DER2017/001975

Duration of Permit: From 17 February 2018 to 17 February 2020

PERMIT HOLDER

Allsage Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 10792 on Deposited Plan 210152, Kalbarri

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 26.45 hectares of native vegetation within the area hatched yellow on attached Plan 7850/1.

CONDITIONS

1. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

DEFINITIONS

The following meanings are given to terms used in this Permit:

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation; and

weed/s mean any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

A handwritten signature in blue ink, appearing to read "J Widenbar".

James Widenbar
MANAGER
CLEARING REGULATION


*Officer delegated under Section 20
of the Environmental Protection Act 1986*

19 January 2018

Plan 7850/1



Legend

-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



1:10,948

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

[Signature] Date 19/1/2018

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



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Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7850/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Allsage Pty Ltd
Application received date: 13 November 2017

1.3. Property details

Property: LOT 10792 ON PLAN 210152, KALBARRI
Local Government Authority: NORTHAMPTON, SHIRE OF
Localities: KALBARRI

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
26.45		Mechanical Removal	Water/gas/cable/pipeline/power installation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 January 2018

Reasons for Decision: 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).

The proposed clearing intersects a major non perennial watercourse known as Wittecarra Gully. The proposed clearing for the access road will remove a relative small amount (approximately 0.35 hectares) of vegetation association with this watercourse and may consequently cause short term sedimentation to the watercourse. The applicant's consultant has provided documentation which outlines the design of the culverts which will be constructed to ensure the natural flow of the watercourse will not be impacted. The Delegated Officer considers the use of culverts adequate to minimise impacts to the identified watercourse.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds into adjacent vegetation and incidentally into Kalbarri National Park. To minimise this impact, a condition has been placed on the permit requiring the implementation of weed management measures.

The Delegated Officer had regard to the development approval and related conditions issued by the Shire of Northampton in the decision to grant a clearing permit.

2. Site Information

Clearing Description The applicant proposes to clear 26.45 hectares of native vegetation within Lot 10792 on Deposited Plan 210152, Kalbarri, for the purpose of constructing a solar farm.

Vegetation Description Beard vegetation association 383 is described as shrublands comprising *Acacia rostellifera* scrub-heath (Shepherd et al, 2001).

The vegetation condition and description was determined by a level 1 flora, vegetation and fauna survey undertaken by Bio Diverse Solutions (2015).

The vegetation under application is comprised of three vegetation types: *Acacia* shrubland, *Acacia* heath and to a lesser extent *Acacia* thicket associated with the proposed access road into the solar farm. These vegetation types are described below:

The low open *Acacia* heath vegetation type comprises overstorey dominated by *Acacia oldfieldii*, *Labichea lanceolata*, *Olearia axillaris*, *Calothamnus quadrifidus*, *Melaleuca megacephala*, *Allocasuarina campestris*, *Calytrix brevifolia*, *Grevillea leucopteris* and *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 ornata*, *Podothea gnaphalioides*, *Gnephosis tenuissima*, *Muehlenbeckia adpressa*, *Arctotheca calendula*, *Stylidium* sp. Kalbarri, *Calandrinia polyandra* and *Desmodium 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 ornata*, *Podothea 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)

Vegetation Condition	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
Soil type	Murchison 2 Subsystem; Gently to moderately inclined dissected slopes; rocky and leached sandy soils.

3. Assessment of application against clearing principles

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

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

The applicant proposes to clear 26.45 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 town site.

A level 1 flora, vegetation and fauna survey and targeted flora survey undertaken in September 2015 by Bio Diverse Solutions (2015) identified that the application area 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).

As discussed in principle (b) six fauna species listed as specially protected under the *Wildlife Conservation Act 1950* have been recorded within the local area (10 kilometre radius) (Department of Biodiversity, Conservation and Attractions (DBCA) 2007-). 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).

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.

(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.

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

Six fauna species listed as specially protected under the *Wildlife Conservation Act 1950* have been recorded within the local area (10 kilometre radius) (DBCA, 2007-). 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 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, 2015). Malleefowl often require sandy substrate and abundant leaf litter for breeding (Parks and Wildlife, 2015). 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 DBCA, 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. The applicant, in consultation with Bio Diverse Solutions, has developed an Environmental Management Plan which proposes management measures including clearing from a single point, in a single direction allowing fauna to leave the area on their own accord. The applicant has also proposed to install a perimeter fence to exclude fauna, particularly Tamar wallabies.

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

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

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

No rare flora was identified in 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.

(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.

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 did not identify any vegetation on site representative of a threatened ecological community (Bio Diverse Solutions, 2015).

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

(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.

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, 2016).

Given that the abovementioned remaining vegetation extents are all 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	1,404,373	45	40
Shire				
Northampton, Shire of	1,258,429	930,229	74	25
Beard Vegetation Association in Bioregion				
383	5,312	4,839	91	49

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

Proposed clearing is at variance to this Principle

A major non-perennial watercourse known as Wittecarra Gully, intersects a small portion of the application area associated with the proposed road into the solar farm.

A flora survey identified dense thickets of *Acacia scirpifolia*, *Melaleuca megacephala*, *Labichea lanceolata*, *Grevillea leucoptervis* 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. The applicant's consultant has provided documentation which outlines the design of the culverts which will be constructed to ensure the natural flow of the watercourse will not be impacted. Given the relatively small area of riparian vegetation being impacted and the proposed use of culverts it is considered that the watercourse will not be significantly impacted.

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

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.

Sandy soils are susceptible to wind erosion, and the proposed clearing of 26.45 hectares of native vegetation has the potential to result in appreciable land degradation in the form of wind erosion.

Given the above, 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).

(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.

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.

(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.

Proposed clearing may be at variance to this Principle

Groundwater salinity levels within the application area are mapped as 500 to 1,000 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. 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. The applicant's consultant has provided documentation which outlines the design of the culverts which will be constructed to ensure the natural flow of the watercourse will not be impacted. Given the proposed use of culverts, impacts to water quality will be restricted to the development stage and no long term degradation is expected.

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

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.

Planning instruments and other relevant matters.

The Shire of Northampton advised that at their Ordinary Meeting held on Friday 20 October 2017 it resolved to grant Development Approval for stage 1 of a Solar Thermal Power Station. Two of the conditions on the Development Approval relate to clearing, being;

20. Clearing is only permitted to be undertaken for the portion of the development area that concerns Stage 1 facilities and infrastructure. Any soils disturbed or deposited on site shall be stabilised to the approval of the Local Government; and

21. The removal/clearing of existing remnant vegetation on the property outside of the indicated development area is not permitted, except for the establishment of the internal access roads and implementation of Bushfire Management Plan recommendations, unless otherwise approved in writing by the Local Government. (Shire of Northampton, 2017).

In regards to the above conditions the applicant advised that the full 26.45 hectares was required for Stage 1 of the development.

The former Department of Water (DoW, 2015) 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 was advised that any abstraction and use of groundwater for the proposed clearing would require a licence from the DoW (now Department of Water and Environmental Regulation (DWER)) as it is proclaimed under the *Rights in Water and Irrigation Act 1914* (DoW, 2015).

The then DoW 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 has no objections to the proposed clearing (DoW, 2015).

There are no Aboriginal Sites of Significance mapped within the application area.

The application was advertised on DWER's website on 30 November 2017 for a 21 day submission period. There have been no submissions received from the public in response to the proposed clearing.

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 Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed June 2017.
- Department of Parks and Wildlife (2015) 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. (DWER Ref: A1010868)
- Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. 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 (2017) Direct Interest Advice for Clearing Permit Application CPS 7850/1. Received 28 November 2017 (DWER Ref: A1572048).