



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8490/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mundillya Farm Pty Ltd
Application received date: 10 May 2019

1.3. Property details

Property: Lot 202 on Deposited Plan 419509
Local Government Authority: Shire of Carnarvon
Localities: North Plantations

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
14		Mechanical Removal	Horticulture

1.5 Decision on application

Decision on Permit Application: Granted
Decision Date: 1 April 2021

Reasons for Decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing is not at variance to principle (d) or (h) and not likely to be at variance to the remaining clearing principles.

It has been determined that the proposed clearing may result in wind erosion which could be managed through staged clearing.

The Delegated Officer also took into consideration that the application area has been identified within the Gascoyne Food Bowl Structure Plan (approved by the Western Australian Planning Commission in 2016) as a priority horticultural area.

Given the above, the Delegated Officer decided to grant a clearing permit subject to avoid and minimise and stage clearing conditions.

2. Site Information

Clearing Description: The applicant proposes to clear 14 hectares of native vegetation within Lot 558 on Deposited Plan 415841, North Plantations, for the purpose of horticulture. The application area is currently under Crown Lease L-593795 (**Figure 1**).

Vegetation Description: The application area is mapped as Beard vegetation association 308: Mosaic: Shrublands; *Acacia sclerosperma* sparse scrub / Succulent steppe; saltbush & bluebush (Shepherd *et al.*, 2001).

Level 2 flora and vegetation surveys were undertaken in 2016 and 2018 by Strategen (2018) that included the application area within the context of a larger area of approximately 920 hectares. Strategen (2018) confirmed the Beard vegetation association 308 and further delineated vegetation 'types' to association level. That is, to Level 5 using the methodology of the National Vegetation Information System (NVIS). Two vegetation types were identified and mapped over the application area, with type ASL (2) occurring over the majority of the application area:

- ASL (2): Tall Sparse Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* and/or *A. synchronicia* with a Sparse Chenopod Shrubland of *Atriplex amnicola* and *A. semilunaris* and Sparse Tussock Grassland of **Cenchrus ciliaris*.
- ASL (1): Tall Sparse to Open Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* and / or *A. synchronicia* with a Sparse to Open Shrubland of *Rhagodia eremaea* and *Alectryon oleifolius* subsp. *oleifolius* and an Open Tussock Grassland of **Cenchrus ciliaris* and/or *Chloris pumilio*.

Recent representative photographs of the application area confirm consistency with the above descriptions and Beard vegetation association 308 (**Figure 2**).

Vegetation Condition:

Strategen (2018) assessed the vegetation condition over the application area as Condition 3 (Some relatively slight signs of damage caused by human activities since European settlement) in consideration of the condition scale of Trudgen (1991). Photographs supplied corroborate this assessment (**Figure 2**). Introduced Buffel Grass (*Cenchrus ciliaris*) is present as an understorey component.

Soil type:

The application area is mapped as the following soil types (DPIRD, 2019):

- Gascoyne association - 'medium textured' phase.
- Brown association – sandplain phase.
- Gascoyne association over calcareous soils phase.
- Gascoyne association - 'heavy textured' phase.
- Coburn association - drainage depression phase.

Comments:

The local area referred to in the assessment of this application is defined as a 20 kilometre radius measured from the perimeter of the application area.

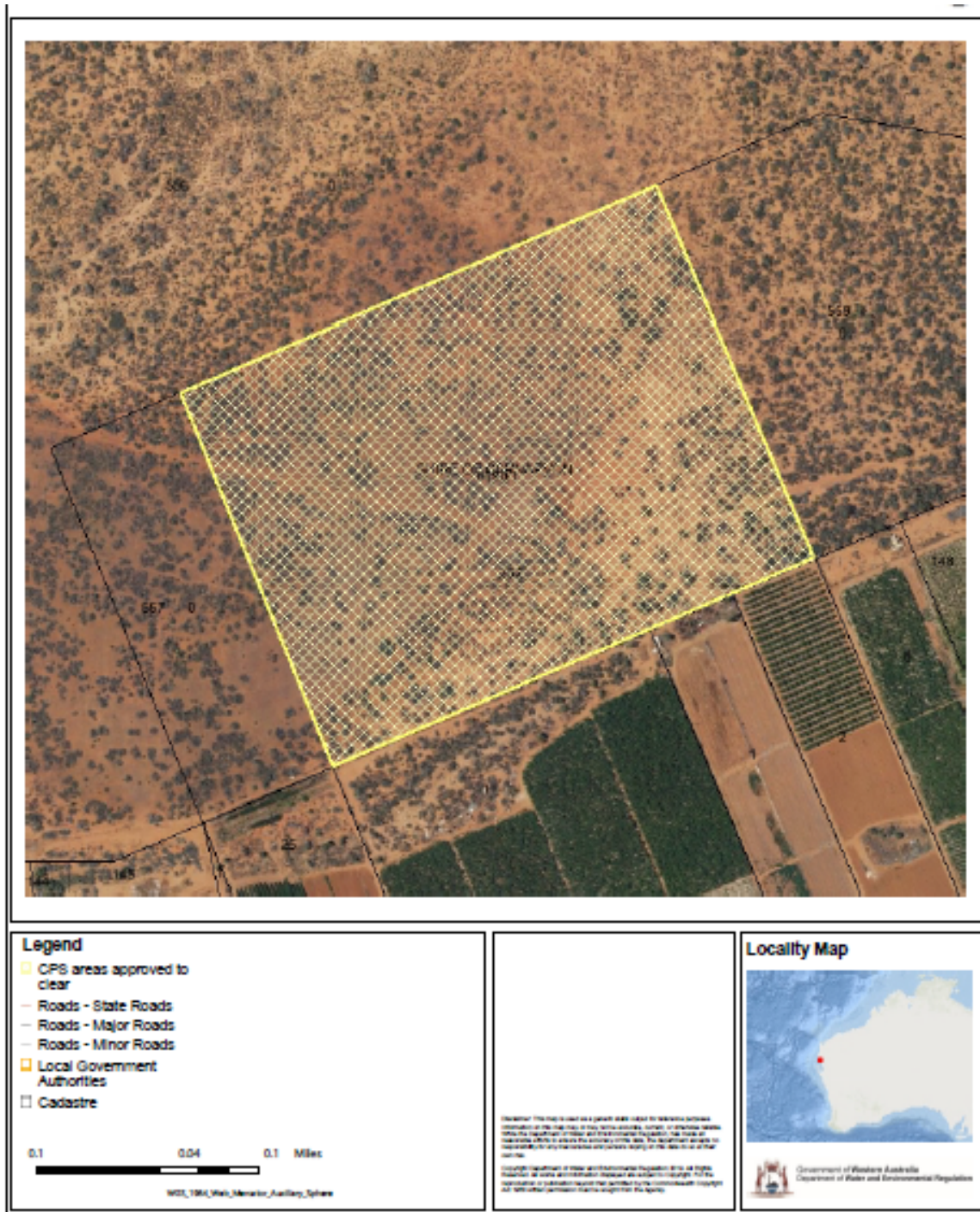


Figure 1: Application area (cross-hatched yellow)

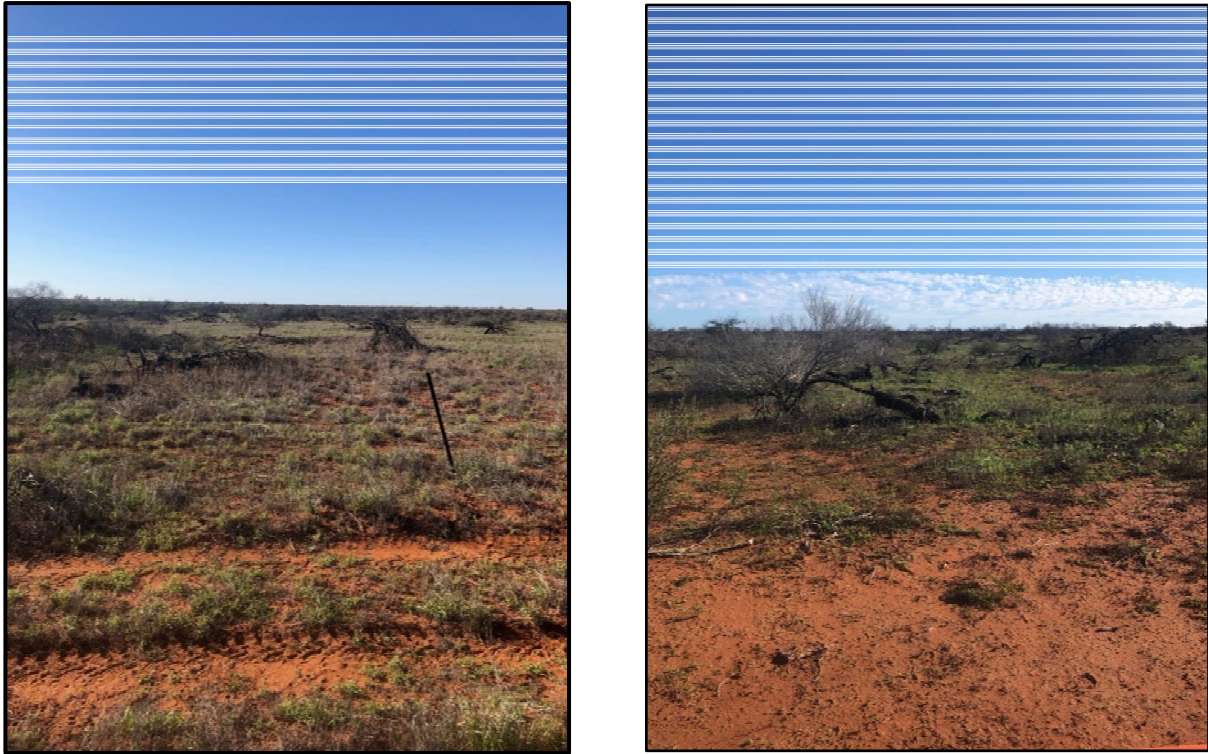


Figure 1: Example representative photographs of the vegetation present over the application area

3. Assessment of application against clearing principles, planning instruments and other relevant matters

The applicant proposes to clear 14 hectares of native vegetation within Lot 558 on Deposited Plan 415841, North Plantations, for the purpose of horticulture. The application area is located on the Gascoyne River floodplain. Surrounding areas east and west are utilized for intensive horticulture which stretches along the Gascoyne River for some 15 kilometres from the Gascoyne River mouth inland. Extensive uncleared areas of native vegetation occur to the north. The vegetation within the application area is mapped as Beard vegetation association 308: Mosaic Shrublands; *Acacia sclerosperma* sparse scrub / succulent steppe; saltbush and bluebush (Shepherd, 2009). Strategen (2018) confirmed this broad description, and vegetation types were further delineated to association level (Level 5) using the National Vegetation Information System (NVIS) methodology. Two vegetation types were identified and mapped over the application area; with ASL (2) occurring over the majority of the application area:

- ASL (2): Tall Sparse Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* and / or *A. synchronicia* with a Sparse Chenopod Shrubland of *Atriplex amnicola* and *A. semilunaris* and Sparse Tussock Grassland of **Cenchrus ciliaris*.
- ASL (1): Tall Sparse to Open Shrubland of *Acacia sclerosperma* subsp. *sclerosperma* and / or *A. synchronicia* with a Sparse to Open Shrubland of *Rhagodia eremaea* and *Alectryon oleifolius* subsp. *oleifolius* and an Open Tussock Grassland of **Cenchrus ciliaris* and / or *Chloris pumilio*.

Strategen (2018) assessed the vegetation condition over the application area as Condition 3 (Some relatively slight signs of damage caused by human activities since European settlement) in consideration of the condition scale of Trudgen (1991). Vegetation condition over the application area is described by Strategen (2018, p21) as “structure of vegetation in these areas was obviously altered from ongoing disturbance from feral animals or human activities”. Vegetation is likely to have been impacted from disturbances such as frequent fire, and edge effects from multiple existing tracks and adjacent cleared horticultural areas to the south. Introduced Buffel Grass (**Cenchrus ciliaris*) is present as an understorey component.

Vegetation present over the application area is analogous to Beard vegetation association 308 which retains over 99 per cent of its pre-European extent (Government of Western Australia, 2019). According to aerial imagery and remnant vegetation mapping, approximately 90 per cent remnant vegetation is retained within a 10 kilometre radius. Similarly, the application falls within the Carnarvon IBRA Bioregion which has 99.8 per cent of the pre-European extent remaining (Shepherd *et al.* 2001). The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750 (Commonwealth of Australia, 2001). Given that the broadly analogous surrounding vegetation remains mostly intact at approximately 90 per cent original cover it is unlikely that the application area represents an area that comprises a high level of biodiversity. Similarly the proposed clearing will not be of vegetation that is significant as a remnant within an extensively cleared area.

Strategen (2018) did not record any threatened flora over the application area, nor the broader survey area, and according to available databases no threatened flora species have been recorded within 20 kilometres of the application area. Strategen (2018) recorded one (very likely) Priority 3 species (*Corchorus ?congener*) approximately 2.2 kilometres west of the application area. Strategen (2018) ascertain that given that the 2016 survey was conducted during the prime flowering time for majority of the known conservation significant species it is highly unlikely that conservation significant species occur over the broader survey area (including the application area). The desktop assessment identified nine priority flora taxa recorded within 20 kilometres of

the application area. Given the soil types present and vegetation condition two of these: *Schoenia filifolia* subsp. *arenicola* (P1) and *Atriplex spinulosa* (P2) have the potential of occurring within the application area. *Schoenia filifolia* subsp. *arenicola* is known from the Carnarvon region and two records are located within 20 kilometres, with the closest at approximately 4.8 kilometres to the southwest. This species is known to occur in red clay, sand, and sub-coastal sand ridges with heath (Western Australian Herbarium 2019). *Atriplex spinulosa* is known from three disjunct and widespread areas in Western Australia including the Pilbara and Mid West (Western Australian Herbarium 2019), with one record 11.8 kilometres south of the application area in clay flats. Both *Schoenia filifolia* subsp. *arenicola* and *Atriplex spinulosa* are annual species likely to have been under-collected, and are likely to occur in similar habitats across their range (DPAW, 2017). Given the results of Strategen (2018), and a further assessment of desktop records, the proposed clearing is unlikely to impact upon any conservation significant flora taxa that have been recorded within the local area.

No conservation significant mammals, reptiles, amphibians or invertebrates were recorded within 20 kilometres of the application area from available database searches, once marine mammals and marine reptiles are discounted from results. Numerous bird species (>50) protected under International Agreements (particularly the Families: Scolopacidae, Charadriidae, and Glareolidae) have been recorded within 20 kilometres of the application area (DBCA 2019). The majority of the members from these Families are migratory (including threatened) shorebirds that breed in northern latitudes. The majority of these species inhabit littoral, estuarine and wetland habitats, which are not present within the application area. Most are coastal, but some species will also utilise inland waters and flooded areas. It is these species that possibly occur intermittently on the Gascoyne River floodplain. Migratory species arrive during the summer and depart during the winter to breed in northern latitudes. Although no littoral, estuarine or wetland habitats occur over the application area several of the identified migratory-listed species (Oriental Plover, Oriental Pratincole, Common Greenshank, and Marsh Sandpiper) may possibly occur during their time in Australia, particularly after summer-autumn flood events when any flooded areas may be temporarily utilised. The migratory-listed Osprey and Fork-tailed Swift, as well as the Peregrine Falcon (other specially protected fauna) may overfly the application area intermittently without utilising any of the habitats present. The Peregrine Falcon does not build a nest and requires cliffs, rocky outcrops, or large tree hollows to breed, none of which are present over the application area. The proposed clearing is therefore unlikely to impact upon any significant fauna habitat.

A submission noted concerns to trapdoor spiders. No conservation significant mygalomorph spiders were identified from database searches within 20 kilometres of the application area. The application area occurs approximately 120 kilometres north of the mapped area of potential habitat, or known distribution of, the threatened northern shield-backed trapdoor spider (*Idiosoma nigrum*). The vegetation is also not consistent with known habitat for this species. The Priority 3 Carnarvon trapdoor spider (*Idiosoma nigrum*) has a widespread (6,500 km²) near-coastal distribution (Rix, *et al.* 2018) extending to Zuytdorp and the Shark Bay peninsulas (Rix *et al.*, 2018). Neither species is considered likely to occur considering the proximity of records, vegetation type, and vegetation condition of the application area.

There are no conservation areas located within the application area. The nearest conservation area is the Chinaman's Pool Nature Reserve, located approximately 5.7 kilometres west of the application area, with One Tree Point Nature Reserve located approximately 7.8 kilometres to the west. Three Unmanaged Reserves occur within 5 kilometres of the application area: Crown Reserve 22823 is located approximately 1.9 kilometres south-west of the application area, Crown Reserve 15587 is located approximately 3.8 kilometres to the east, and Crown Reserve 21350 is located approximately 4.0 kilometres to the east of the application area. Considering the distances of the application area to any conservation areas it is unlikely that the proposed clearing will impact any ecological values associated with those areas.

No known State-listed threatened ecological communities (TECs) occur within the application area, or within a 20 kilometre radius of the application area. The Priority 3 Ecological Community (PEC); Coastal Saltmarsh - Subtropical and Temperate Coastal Saltmarsh occurs approximately 6.7 kilometres to the west of the application area. Vegetation of the application area is not analogous to this community and proposed clearing is therefore unlikely to impact upon any State-listed threatened ecological communities.

No watercourses or wetlands occur within the application area. The Gascoyne River is located approximately 1.47 kilometres south of the application area. The southern extent of the application area abuts the uppermost reaches of a small ephemeral flood channel, or minor drainage depression associated with the Coburn soil association (DPIRD, 2019). This appears to be a small oxbow or billabong that detains water that flows back into the Gascoyne River as floodwaters subside. The nearest wetland, the McNeill Claypan System, is listed in the Directory of Important Wetlands and located approximately 2.95 kilometres south of the application area on the opposite side of the Gascoyne River. The McNeill Claypan System, and the 50 meter buffer outside of the wetland boundary, is an Environmentally Sensitive Area (ESA). The application area is outside of the ESA boundary. The proposed clearing is therefore unlikely to impact upon any watercourses or wetlands.

Three Land Systems (River, Brown and Delta) occur over the application area, with five associated Soil Associations: Gascoyne Association (3 phases), Brown Association, and Coburn Association. The application area has a moderate to high capability of supporting annual and perennial horticulture if the area is effectively managed (DPIRD, 2019). In the western portion of the application area (Brown Association) wind erosion was assessed by DPIRD (2019) as moderate to high risk, due to the sandy nature of the soils. However, this may be managed by maintaining moist surface soil after tillage, or maintaining a ground cover if the soil is dry (DPIRD, 2019). A minor drainage depression associated with the Cockburn Association in the extreme southern section of the application area (approximately 1.4 per cent of the application area) has a moderate to high risk of water erosion. However, this rating likely exaggerates the hazard in this location because only a small portion of the upper slope margin will potentially be cleared, and the depression is unconnected to the wider drainage network (DPIRD, 2019). Water-logging is rated at very low to low, and is unlikely to occur (DPIRD, 2019). To address the potential impacts in relation to potential wind and water erosion, a condition on the permit that requires the applicant to plant the intended crops within three months of clearing, particularly within the sandy Brown Association and upper slopes of the Coburn Association is required. If the current perennial native plant cover is retained until crop establishment commences, and future management ensures the land is not abandoned in a 'bare soil' condition, the future risk of soil erosion can be considered low and manageable and the proposed clearing is unlikely to cause appreciable land degradation.

The application area is located on the Gascoyne River Floodplain within the proclaimed 'Gascoyne Groundwater Area', as well as the proclaimed 'Gascoyne River and Tributaries Surface Water Area'. Rainfall in the region is in the vicinity of 223 millimetres per year (Carnarvon Airport), with evapotranspiration at 300 millimetres per year (BOM, 2019). Most rain falls during events associated with cyclones and tropical low depressions. Rainfall is irregularly distributed during the year (BOM 2019). Groundwater occurs as alluvial aquifers beneath the Gascoyne River that are recharged primarily by river flows. Subsoil salinity is low, and it is unlikely that leaching of irrigation water would contribute to on or off-site salinity (DPIRD, 2019) and the proposed clearing is unlikely to impact groundwater quality. DPIRD (2019) advised that the removal of vegetation over the application area is unlikely to contribute to nutrient enrichment to either surface water or groundwater and eutrophication is unlikely to occur. The proposed clearing is therefore unlikely to impact upon surface water or groundwater quality.

The Carnarvon irrigation district is a floodplain with the majority of land (including the application area) having a C flood classification. That is, being inundated by floods on a 12 per cent annual exceedance probability. Therefore flooding may occur due to irregular extreme rainfall events, however, the proposed clearing will not increase the flood risk of the area (DPIRD, 2019).

In conclusion the vegetation types and fauna habitats proposed to be cleared within the application area are well-represented, and no watercourses or wetlands occur. Given the extent of similar vegetation at the local and regional scales, the vegetation under application is not considered to comprise significant habitat for fauna or flora; nor is it likely to contribute significantly to biodiversity (including priority flora) or conservation values at the local or regional scales (Principles a, b, c, d, e and f). Given the distance between the application area and regional conservation areas, the proposed clearing is not likely to have an impact on the environmental value of any conservation area (Principle H). If sound land management principles are implemented the proposed clearing is not expected to result in appreciable land degradation or water quality issues, nor increase the risk, frequency, or intensity of flooding (Principles g, i, and j). The proposed clearing therefore is unlikely to lead to an unacceptable risk to the environment and is not at variance to any of the clearing principles.

Planning instruments and other relevant matters.

The application area was one of the areas considered in the Gascoyne Food Bowl Structure Plan with respect to its capability for horticultural purposes (Department of Agriculture and Food 2017; DPIRD 2019). The Structure Plan was approved by the Western Australian Planning Commission in 2016. A Level 2 Flora and Vegetation Survey of the areas contained within the Gascoyne Food Bowl Initiative has been completed (Strategen Environmental 2018).

The Shire of Carnarvon Local Planning Strategy (2017) included the examination of land suitable for horticultural expansion noting that the Gascoyne Food Bowl Initiative will result in the release of additional land and water for future priority agriculture and horticultural development. The subject site falls within an area designated under Local Planning Scheme 10 (LPS 10) as Intensive Horticulture and within this zone Intensive Horticulture is a 'P' permitted use. Additionally under the draft Local Planning Scheme 13 (LPS 13) (Shire of Carnarvon 2019) the site is zoned Priority Agriculture.

With regard to the proposed clearing (CPS 8490/1), planning approval from the Shire of Carnarvon is not required as the use of this land for intensive agriculture (which will incorporate the clearing of the land) has been addressed through the Gascoyne Food Bowl Structure Plan (2017), the Level 2 Flora and Vegetation Survey of Strategen Environmental (2018), and the Shire of Carnarvon Local Planning Strategy (2017) (Mundillya Farm Pty Ltd 2020).

The application area is located within the proclaimed Gascoyne Groundwater Area, and the proclaimed Gascoyne River and Tributaries Surface Water Area (*Rights in Water and Irrigation Act 1914*). The proponent will require water to establish and maintain the horticultural development proposed, and any additional take would require an additional share allocation or water trading via the Gascoyne Water Co-operative Limited irrigation scheme that manages the irrigation business by way of an irrigation scheme water supply (DWER 2019).

The application area will have its water supplied from currently allocated water from the Gascoyne Water Co-operative Limited. Mundillya Farm Pty Ltd has acquired an additional water supply to support the horticultural development within the application area in addition to current entitlements (Mundillya Farm Pty Ltd 2020).

There is a Native Title application over the application area. Comments were received from the Native Title claimants regarding their native title rights and interests and that a heritage survey should be undertaken to identify significant sites within the application area. This correspondence has been provided to the applicant.

No heritage sites mapped over the application area. It is the applicant's responsibility to ensure that they comply with *Aboriginal Heritage Act 1972*.

One public submission has been received in relation to this application. In summary, the submission raised concerns regarding a precedent set for native vegetation clearing north of the existing horticultural area, and potential impacts to trapdoor spiders. Potential impacts to trapdoor spiders has been addressed in the assessment above.

In respect to setting a precedent for clearing to the north of the Gascoyne River, each application is based on its merits. The application area has been identified for horticultural expansion as part of Stage 1 of the Gascoyne Food Bowl Structure Plan.

The subject site was identified within the structure plan as being potentially suitable for rezoning to Intensive Horticulture under the Shire's Schemes which will facilitate the development of the lands for such purposes (Department of Agriculture and Food 2017; Mundillya Farm Pty Ltd 2020). The structure plan was approved by the Western Australian Planning Commission in 2016.

The application area has a moderate to high capability for annual and perennial horticulture and the proposed land-use is consistent with Shire of Carnarvon land-use planning. Under Local Planning Scheme No. 10 the application area is zoned both 'Intensive Horticulture' and 'Rural'. It is also a 'P' use under the Scheme, whereby the use is permitted provided it complies with the relevant standards within the Scheme. Under the Draft Local Planning Scheme No. 13 (endorsed by Council on 24 September 2019) the lot is zoned 'Priority Agricultural' and also 'Rural'. Lot 558 is also a 'P' use under Draft Local Planning Scheme No. 13.

A level 2 flora and vegetation survey has been conducted over the application area as well as a 920 hectare regional area. No watercourses or wetlands occur within the application area. Vegetation mapped over the application area is analogous to vegetation association 308 Mosaic Shrublands; *Acacia sclerosperma* sparse scrub / succulent steppe; saltbush and bluebush. This association retains over 99 per cent of its pre-European extent, and there is nothing to suggest that the application area is substantially different to surrounding vegetation.

4. References

- Bureau of Meteorology (BOM) (2019) Climate Data Online. Available online at: www.bom.gov.au/climate/data/index.shtml.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Agriculture and Food (2017) Gascoyne Food Bowl District Structure Plan Part 1: Implementation Report May 2017.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2019) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed 29/01/2019.
- Department of Parks and Wildlife (2017) now the Department of Biodiversity Conservation and Attractions (DBCA). Flora advice received in relation to clearing permit application CPS 7526/1, received 8 June 2017. (DER Ref: A1457185).
- Department of Primary Industries and Regional Development (DPIRP) (2019) Advice provided by the Commissioner of Soil and Land Conservation to the Department of Water and Environmental Regulation regarding CPS 8490/1 – Muindillya Farm Pty Ltd – application to Clear Native Vegetation within Lot 558 on Deposited Plan 415841, North Plantations, Shire of Carnarvon. 1st July 2019.
- DPLH (2019) *Pers. comm.* To Ms Erika Eto from Rachel Nelson. Senior Project Officer. Case Management North. Department of Planning, Lands and Heritage.
- Department of Water and Environmental Regulation (DWER) (2019) Regulatory Services–Water. *Rights in Water and Irrigation Act 1914* advice. Received by DWER on 2nd December 2019 (DWER Ref: A1848114).
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. Western Australian Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mundillya Farm Pty Ltd (2020) Supporting information provided for CPS 8490/1 (5th February 2020) (DWER Ref: A1864983)
- Rix MG, Huey JA, Cooper SJB, Austin AD, Harvey MS (2018) Conservation systematics of the shield-backed trapdoor spiders of the nigrum-group (Mygalomorphae, Idiopidae, Idiosoma): integrative taxonomy reveals a diverse and threatened fauna from south-western Australia. *ZooKeys* 756: 1–121. <https://doi.org/10.3897/zookeys.756.24397>
- Shire of Carnarvon (2017) Local Planning Strategy 2017 (March 2017)
- Shire of Carnarvon (2019a). Supporting Information for clearing permit application CPS 8490/1. Shire of Carnarvon. Received by DWER on 9th December 2019 (DWER Ref: A1850281).
- Shire of Carnarvon (2019b) Shire of Carnarvon - Local Planning Scheme 13 (24 September 2019)
- 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.
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- Strategen Environmental (2018) Gascoyne Food Bowl Initiative. Flora and Vegetation Survey. Draft. Prepared for the Department of Planning, Infrastructure and Regional Development. December 2018. (DWER Ref: A1873903.)
- Trudgen, M. E. (1991) 'Vegetation condition scale', in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.
- Western Australian Herbarium (2019) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/> Accessed November 2019

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Managed Tenure
- Geomorphic Wetlands Management Category
- Hydrography Linear – Linear
- Hydrography WA 250K – Surface Water Lines
- IBRA Australia

- Land Degradation Hazards
- SAC bio datasets
- Threatened and Priority Fauna Data November 2019
- TPFL Data March 2021
- WA Herb Data March 2021
- WA TEC-PEC Boundaries