

Contents

Appendices

Appendix 1. Previous Survey Areas Representing Project Option Domain (including adjacent AREH)	210
Appendix 2. Framework for Conservation Significant Flora: WA (DBCA)	213
Appendix 3. DBCA Definitions of Threatened Ecological Communities (TECs) and Priority Ecological Communities (PECs)	220
Appendix 4. Vegetation Condition Scale	227
Appendix 5. Protected Matters Search Tool Results.....	230
Appendix 6. NatureMap Search Results	233
Appendix 7. Declared Pests -s22(2) of the Broome and East Pilbara Local Government Areas (Shires)	239
Appendix 8. Consolidated Systematic Species List.	245
Appendix 9. 1:25,000 Scale Vegetation Mapping of the Winu Project	260
Appendix 10. Consolidated Vegetation Associations of the Winu Project.....	263
Appendix 11. Raw Quadrat Data	313
Appendix 12. Consolidated GPS Tracklogs at 1:25K.....	611

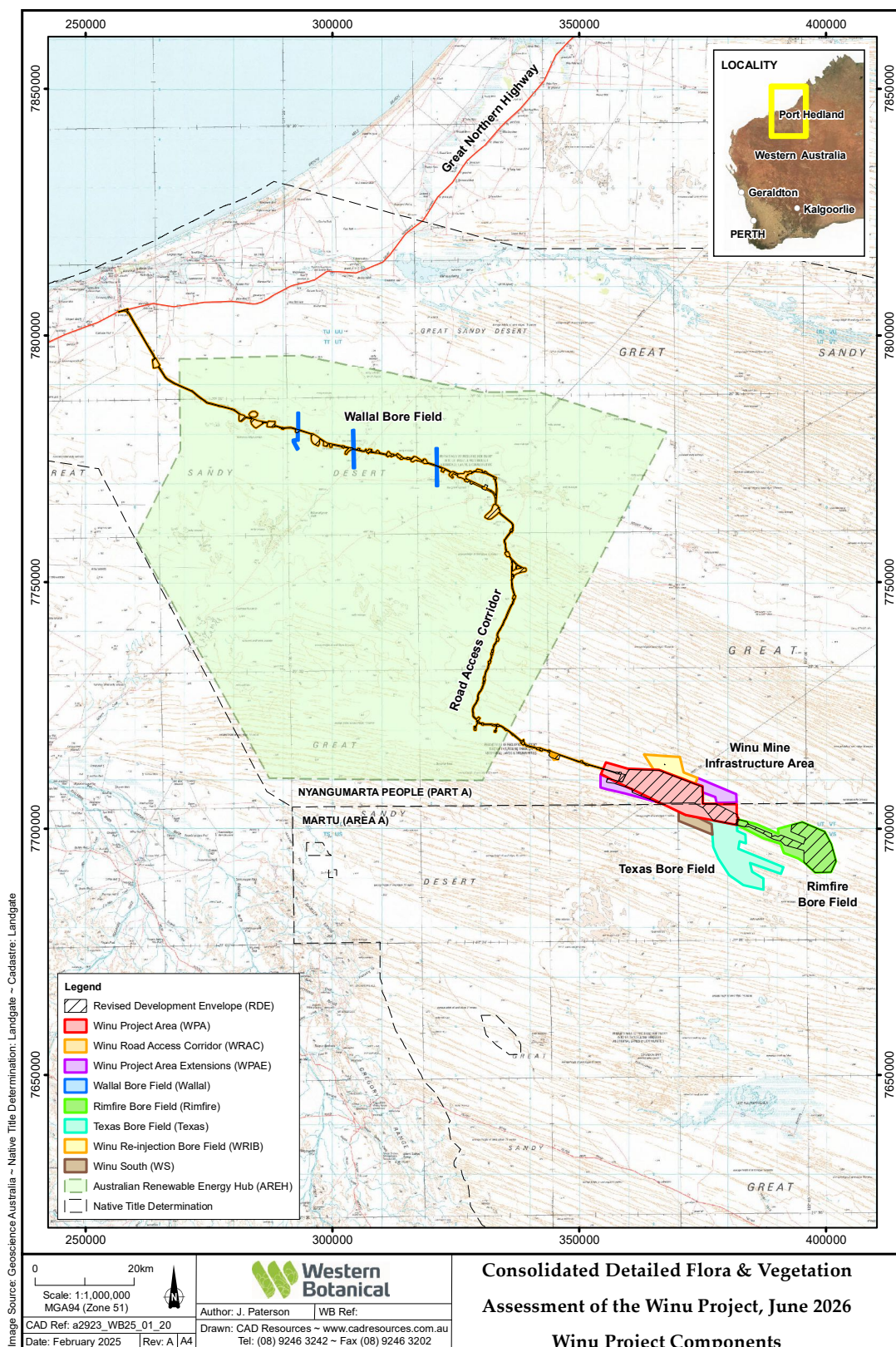
Vegetation Description – Plates

Plate 1. D1 - <i>Corymbia chippendalei</i> Low Open Woodland over <i>Triodia schinzii</i> (Biota 2021).....	264
Plate 2. D2 - <i>Owenia reticulata</i> Scattered Low Trees over <i>Triodia schinzii</i>	265
Plate 3. D3 - <i>Grevillea stenobotrya</i> , <i>Grevillea wickhamii</i> & <i>Acacia anaticeps</i> Tall Shrubland over <i>Triodia schinzii</i> (Biota 2021)	266
Plate 4. D4 - <i>Melaleuca lasiandra</i> Open Low Shrubland over <i>Triodia schinzii</i>	267
Plate 5. P1 - <i>Acacia platycarpa</i> (<i>Acacia tumida</i> var. <i>kulparn</i>) Open Low Shrubland over <i>Triodia schinzii</i>	268

Plate 6. P2 - <i>Acacia ancistrocarpa</i> Open Shrubland over <i>Triodia schinzii</i>	269
Plate 7. P3 - <i>Acacia drepanocarpa</i> subsp. <i>latifolia</i> Open Shrubland over <i>Triodia schinzii</i>	270
Plate 8. P4 - <i>Acacia orthocarpa</i> Open Shrubland over <i>Triodia schinzii</i>	271
Plate 9. P5 - <i>Acacia</i> spp. Scattered Shrubs over <i>Sorghum plumosum</i> var. <i>plumosum</i> & <i>Triodia schinzii</i> (Biota 2021).....	272
Plate 10. P6 - <i>Owenia reticulata</i> & <i>Erythrophleum chlorostachys</i> Scattered Low Trees over <i>Triodia schinzii</i> (<i>Triodia epactia</i>).....	273
Plate 11. P7 - <i>Calytrix carinata</i> Low Shrubland over <i>Triodia schinzii</i>	274
Plate 12. P8 - <i>Acacia eriopoda</i> & <i>Acacia sericophylla</i> Open Shrubland over <i>Triodia schinzii</i> (<i>Triodia epactia</i>).....	275
Plate 13. P9 - <i>Acacia ancistrocarpa</i> & <i>Acacia monticola</i> Open Shrubland over <i>Triodia schinzii</i> (<i>Triodia epactia</i>) (Biota 2021).....	276
Plate 14. P10a - <i>Corymbia zygophylla</i> Scattered Tree Mallees over <i>Triodia epactia</i>	277
Plate 15. P10b - <i>Corymbia zygophylla</i> Scattered Tree Mallees over <i>Triodia schinzii</i> and <i>Triodia epactia</i> (<i>Acacia stellaticeps</i>) (Biota 2021).....	278
Plate 16. P10c - <i>Corymbia zygophylla</i> Scattered Tree Mallees over <i>Triodia schinzii</i>	279
Plate 17. P10d - <i>Corymbia zygophylla</i> Scattered Tree Mallees over <i>Triodia brizoides</i>	280
Plate 18. P11 - <i>Grevillea refracta</i> (<i>Acacia ancistrocarpa</i> & <i>Acacia monticola</i>) Scattered Tall Shrubs over <i>Triodia epactia</i> (Biota 2021).....	281
Plate 19. P12 - <i>Grevillea refracta</i> , <i>Acacia monticola</i> & <i>Acacia colei</i> var. <i>colei</i> Open Shrubland over <i>Acacia adoxa</i> var. <i>adoxo</i> & <i>Triodia epactia</i> (Biota 2021)	282
Plate 20. P13 - <i>Gardenia pyriformis</i> subsp. <i>keartlandii</i> Scattered Low Trees over <i>Triodia schinzii</i> (Biota 2021)	283
Plate 21. P14 - <i>Acacia monticola</i> & <i>Acacia drepanocarpa</i> (<i>Acacia orthocarpa</i> & <i>Acacia ancistrocarpa</i>) Open Shrubland over <i>Triodia schinzii</i>	284
Plate 22. P15a - <i>Corymbia candida</i> Open Low Woodland over <i>Triodia schinzii</i>	285
Plate 23. P15b - <i>Corymbia candida</i> Open Low Woodland over <i>Acacia monticola</i> shrubland over <i>Triodia epactia</i>	286
Plate 24. P15c - <i>Corymbia candida</i> Open Low Woodland over <i>Triodia brizoides</i>	287
Plate 25. P16 - <i>Eucalyptus odontocarpa</i> Very Open Shrub Mallee over <i>Triodia schinzii</i>	288
Plate 26. P18 - <i>Corymbia opaca</i> Open Woodland over <i>Triodia schinzii</i>	289
Plate 27. P19 - <i>Melaleuca lasiandra</i> Low Open Shrubland over <i>Triodia schinzii</i>	290
Plate 28. P20 - <i>Acacia ancistrocarpa</i> & <i>Acacia orthocarpa</i> Open Shrubland over <i>Triodia schinzii</i> & <i>Triodia epactia</i>	291
Plate 29. P21 - <i>Acacia sericophylla</i> Open Shrubland over <i>Triodia schinzii</i>	292
Plate 30. P22 - <i>Acacia stipuligera</i> Open Shrubland over <i>Triodia schinzii</i>	293
Plate 31. R1 - <i>Acacia bivenosa</i> (<i>Acacia ancistrocarpa</i>) Scattered Shrubs <i>Triodia brizoides</i> (<i>Triodia schinzii</i>)	294

Plate 32. R2 - <i>Grevillea wickhamii</i> Scattered Tall Shrubs over <i>Mirbelia viminalis</i> (<i>Acacia hilliana</i>) & <i>Triodia brizoides</i> (<i>Triodia epactia</i>)	295
Plate 33. R3 - <i>Acacia hilliana</i> (<i>Acacia adoxa</i> var. <i>adoxo</i>) Low Open Shrubland over <i>Triodia epactia</i> (Biota 2021).....	296
Plate 34. R4 - <i>Ficus brachypoda</i> Scattered Low Trees over <i>Acacia monticola</i> , <i>Grevillea pyramidalis</i> & <i>Triodia epactia</i>	297
Plate 35. R5 - <i>Senna artemisioides</i> subsp. <i>oligophylla</i> , <i>Senna sericea</i> (<i>Acacia</i> <i>bivenosa</i>) Scattered Low Shrubs over <i>Triodia epactia</i> (<i>Aristida</i> <i>contorta</i> , <i>Dactyloctenium radulans</i>)	298
Plate 36. R6 - <i>Grevillea wickhamii</i> , <i>Acacia monticola</i> & <i>Acacia ancistrocarpa</i> Open Shrubland over <i>Triodia epactia</i>	299
Plate 37. C1 - <i>Eucalyptus victrix</i> Open Woodland over <i>Triodia epactia</i>	300
Plate 38. C2 - <i>Acacia bivenosa</i> Scattered Low Shrubs over <i>Triodia brizoides</i> & <i>Triodia epactia</i> (<i>Triodia schinzii</i>)	301
Plate 39. C3 - <i>Acacia bivenosa</i> (<i>Acacia stellaticeps</i>) Low Shrubland over <i>Triodia epactia</i>	302
Plate 40. C4 - <i>Acacia ancistrocarpa</i> Open Low Shrubland over <i>Eulalia aurea</i> & <i>Triodia epactia</i>	303
Plate 41. C5 – Claypan Playa (<i>Diplachne fusca</i> subsp. <i>muelleri</i> , <i>Eragrostis</i> <i>falcata</i>) with Scattered Herbs	304
Plate 42. C6 – Claypan (<i>Cullen pustulatum</i> , <i>Gossypium australe</i>) over <i>Eulalia</i> <i>aurea</i> (<i>Eragrostis xerophila</i>).....	305

Appendix 1. Previous Survey Areas Representing Project Option Domain (including adjacent AREH)



Appendix 2. Framework for Conservation Significant Flora: WA (DBCA)

DBCA Conservation Codes for Western Australian Flora

Under the Wildlife Conservation Act 1950, the Minister for the Environment may declare species of flora to be protected if they are considered to be in danger of extinction, rare or otherwise in need of special protection.

Specially protected flora are species which have been adequately searched for and are deemed to be, in the wild, either rare, at risk of extinction, or otherwise in need of special protection, and have been gazetted as such.

Categories of specially protected flora are:

T Threatened species

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for Threatened Fauna.

Threatened flora is that subset of ‘Rare Flora’ listed under schedules 1 to 3 of the Wildlife Conservation (Rare Flora) Notice 2018 for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species

Threatened species considered to be “facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for critically endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for critically endangered flora.

EN Endangered species

Threatened species considered to be “facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for endangered flora.

VU Vulnerable species

Threatened species considered to be “facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for vulnerable flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species

Species where “there is no reasonable doubt that the last member of the species has died”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for extinct fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for extinct flora.

EW Extinct in the wild species

Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act). Published as conservation dependent fauna under schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.

P Priority species

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1 Priority 1: Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 Priority 2: Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 Priority 3: Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Last updated 3 January 2019

Appendix 3. DBCA Definitions of Threatened Ecological Communities (TECs) and Priority Ecological Communities (PECs)

DEFINITIONS, CATEGORIES AND CRITERIA FOR THREATENED AND PRIORITY ECOLOGICAL COMMUNITIES

1. GENERAL DEFINITIONS

Ecological Community

A naturally occurring biological assemblage that occurs in a particular type of habitat.

Note: The scale at which ecological communities are defined will often depend on the level of detail in the information source, therefore no particular scale is specified.

A **threatened ecological community** (TEC) is one which is found to fit into one of the following categories; “presumed totally destroyed”, “critically endangered”, “endangered” or “vulnerable”.

Possible threatened ecological communities that do not meet survey criteria are added to DEC’s Priority Ecological Community Lists under Priorities 1, 2 and 3. Ecological Communities that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

An **assemblage** is a defined group of biological entities.

Habitat is defined as the areas in which an organism and/or assemblage of organisms lives. It includes the abiotic factors (e.g. substrate and topography), and the biotic factors.

Occurrence: a discrete example of an ecological community, separated from other examples of the same community by more than 20 meters of a different ecological community, an artificial surface or a totally destroyed community.

By ensuring that every discrete occurrence is recognised and recorded future changes in status can be readily monitored.

Adequately Surveyed is defined as follows:

“An ecological community that has been searched for thoroughly in most likely habitats, by relevant experts.”

Community structure is defined as follows:

“The spatial organisation, construction and arrangement of the biological elements comprising a biological assemblage” (e.g. Eucalyptus salmonophloia woodland over scattered small shrubs over dense herbs; structure in a faunal assemblage could refer to trophic structure, e.g. dominance by feeders on detritus as distinct from feeders on live plants).

Definitions of Modification and Destruction of an ecological community:

Modification: “changes to some or all of ecological processes (including abiotic processes such as hydrology), species composition and community structure as a direct or indirect result of human activities. The level of damage involved could be ameliorated naturally or by human intervention.”

Destruction: “modification such that reestablishment of ecological processes, species composition and community structure within the range of variability exhibited by the original community is unlikely within the foreseeable future even with positive human intervention.”

Note: Modification and destruction are difficult concepts to quantify, and their application will be determined by scientific judgment. Examples of modification and total destruction are cited below:

Modification of ecological processes: The hydrology of Toolibin Lake has been altered by clearing of the catchment such that death of some of the original flora has occurred due to dependence on fresh water. The system may be brought back to a semblance of the original state by redirecting saline runoff and pumping waters of the rising water table away to restore the hydrological balance. Total destruction of downstream lakes has occurred due to hydrology being altered to the point that few of the original flora or fauna species are able to tolerate the level of salinity and/or water logging.

Modification of structure: The understorey of a plant community may be altered by weed invasion due to nutrient enrichment by addition of fertiliser. Should the additional nutrients be removed from the system the balance may be restored, and the original plant species better able to compete. Total destruction may occur if additional nutrients continue to be added to the system causing the understorey to be completely replaced by weed species, and death of overstorey species due to inability to tolerate high nutrient levels.

Modification of species composition: Pollution may cause alteration of the invertebrate species present in a freshwater lake. Removal of pollutants may allow the return of the original inhabitant species. Addition of residual highly toxic substances may cause permanent changes to water quality, and total destruction of the community.

Threatening processes are defined as follows:

“Any process or activity that threatens to destroy or significantly modify the ecological community and/or affect the continuing evolutionary processes within any ecological community.”

Examples of some of the continuing threatening processes in Western Australia include: general pollution; competition, predation and change induced in ecological communities as a result of introduced animals; competition and displacement of native plants by introduced species; hydrological changes; inappropriate fire regimes; diseases resulting from introduced microorganisms; direct human exploitation and disturbance of ecological communities.

Restoration is defined as returning an ecological community to its pre-disturbance or natural state in terms of abiotic conditions, community structure and species composition.

Rehabilitation is defined as the re-establishment of ecological attributes in a damaged ecological community although the community will remain modified.

2. DEFINITIONS AND CRITERIA FOR PRESUMED TOTALLY DESTROYED, CRITICALLY ENDANGERED, ENDANGERED AND VULNERABLE ECOLOGICAL COMMUNITIES

Presumed Totally Destroyed (PD)

An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant **and either** of the following applies (A or B):

- A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats or
- B) All occurrences recorded within the last 50 years have since been destroyed

Critically Endangered (CR)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.

An ecological community will be listed as **Critically Endangered** when it has been adequately surveyed and s found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting any one or more of the following criteria (A, B or C):

A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and either or both of the following apply (i or ii):

- i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);
- ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.

B) Current distribution is limited, and one or more of the following apply (i, ii or iii):

- i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);
- ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;
- iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.

C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).

Endangered (EN)

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as **Endangered** when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting any one or more of the following criteria (A, B, or C):

A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement and either or both of the following apply (i or ii):

- i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);
- ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.

B) Current distribution is limited, and one or more of the following apply (i, ii or iii):

i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);

ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;

iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.

C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

Vulnerable (VU)

An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

An ecological community will be listed as **Vulnerable** when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium (within approximately 50 years) to long-term future. This will be determined on the basis of the best available information by it meeting **any one or more** of the following criteria (A, B or C):

A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.

B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.

C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long-term future because of existing or impending threatening processes

3. DEFINITIONS AND CRITERIA FOR PRIORITY ECOLOGICAL COMMUNITIES

Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community List under priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community. Ecological communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5.

Priority One: Poorly-known ecological communities

Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100 ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.

Priority Two: Poorly-known ecological communities

Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200 ha). At least some occurrences are not believed to be under immediate threat (within

approximately 10 years) of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.

Priority Three: Poorly known ecological communities

- (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or;
- (ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years), or;
- (iii) communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, inappropriate fire regimes, clearing, hydrological change etc.

Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Priority Four: Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

- (i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.
- (ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for a higher threat category.
- (iii) Ecological communities that have been removed from the list of threatened communities during the past five years.

Priority Five: Conservation Dependent ecological communities

Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

(Department of Environment and Conservation January 2013)

Appendix 4. Vegetation Condition Scale

Vegetation Condition Scale (Trudgen 1988) for use in the Eremaean and Northern Botanical Provinces (EPA, 2016a).

Code	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species
Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix 5. Protected Matters Search Tool Results



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 03/06/22 18:34:23

[Summary](#)

[Details](#)

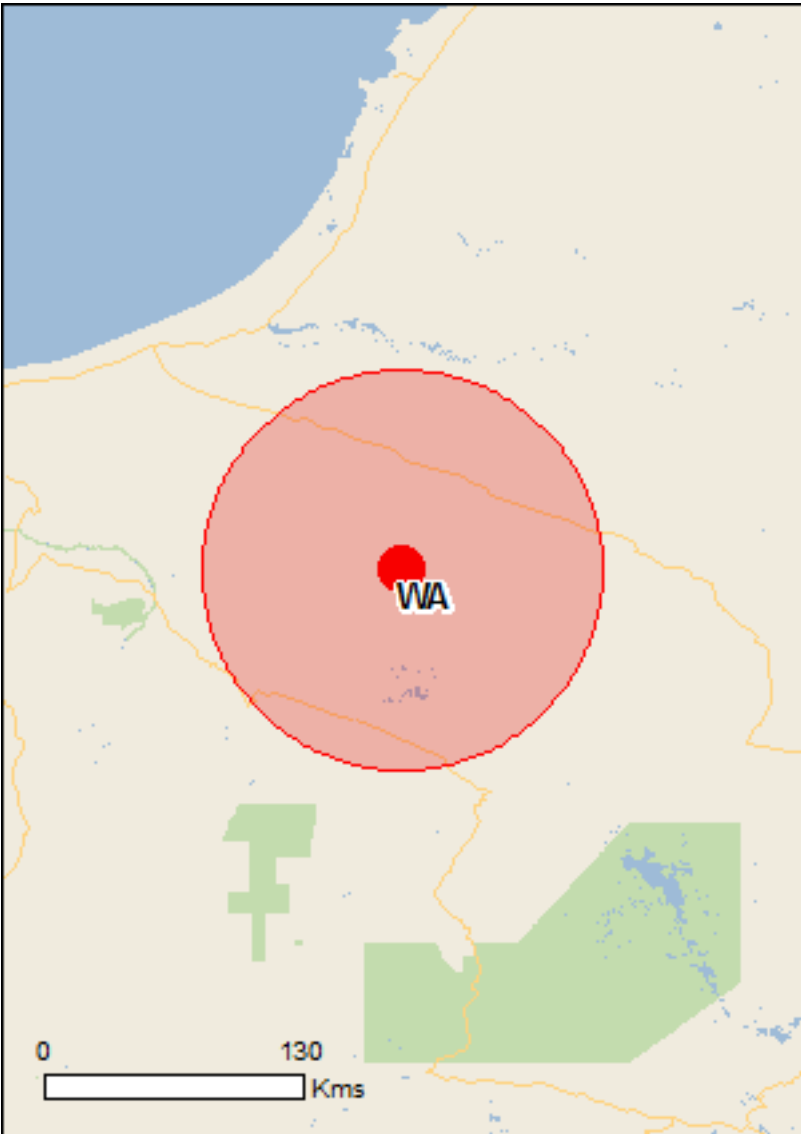
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

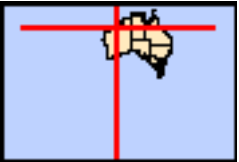
[Acknowledgements](#)



This map may contain data which are
©Commonwealth of Australia
(Geoscience Australia), ©PSMA 2015

[Coordinates](#)

Buffer: 100.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	13
Listed Migratory Species:	13

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	18
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	2
Regional Forest Agreements:	None
Invasive Species:	14
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Eighty-mile beach		Within Ramsar site

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat likely to occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Mammals		
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat known to occur within area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Rhinonictoris aurantia (Pilbara form) Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Liasis olivaceus barroni Olive Python (Pilbara subspecies) [66699]	Vulnerable	Species or species

Name	Status	Type of Presence
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji [83160]	Vulnerable	habitat likely to occur within area Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence
Pandion haliaetus Osprey [952]		area Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Nyangumarta Warrarn	WA
Walyarta	WA

Invasive Species

[[Resource Information](#)]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Mammals		
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Nationally Important Wetlands		[Resource Information]
Name	State	
Mandora Salt Marsh	WA	

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-20.77604 121.81187

Appendix 6. NatureMap Search Results

Taxon	Cons	Taxon	Cons
<i>Abutilon lepidum</i>		<i>Alectryon oleifolius</i>	
<i>Abutilon leucopetalum</i>		<i>Alternanthera nana</i>	
<i>Abutilon macrum</i>		<i>Amaranthus mitchellii</i>	
<i>Abutilon otocarpum</i>		<i>Ammannia baccifera</i>	
<i>Abutilon</i> sp. <i>Dioicum</i> (A.A. Mitchell PRP 1618)		<i>Amphipogon sericeus</i>	
<i>Acacia acradenia</i>		<i>Amyema bifurcata</i>	
<i>Acacia adoxa</i> var. <i>adoxo</i>		<i>Androcalva loxophylla</i>	
<i>Acacia adoxa</i> var. <i>subglabra</i>		<i>Aristida contorta</i>	
<i>Acacia adsurgens</i>		<i>Aristida holathera</i>	
<i>Acacia amplexiceps</i> x <i>bivenosa</i>		<i>Atalaya hemiglauca</i>	
<i>Acacia anaticeps</i>		<i>Atriplex codonocarpa</i>	
<i>Acacia ancistrocarpa</i>		<i>Bauhinia cunninghamii</i>	
<i>Acacia arida</i>		<i>Bergia henschallii</i>	
<i>Acacia arida</i> / <i>orthocarpa</i>		<i>Bergia perennis</i> subsp. <i>obtusifolia</i>	
<i>Acacia bivenosa</i>		<i>Bergia trimera</i>	
<i>Acacia colei</i> var. <i>colei</i>		<i>Blumea tenella</i>	
<i>Acacia coriacea</i> subsp. <i>pendens</i>		<i>Boerhavia coccinea</i>	
<i>Acacia dictyophleba</i>		<i>Boerhavia schomburgkiana</i>	
<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>		<i>Bonamia linearis</i>	
<i>Acacia heteroneura</i> var. <i>prolixa</i>		<i>Bulbostylis barbata</i>	
<i>Acacia hilliana</i>		<i>Byblis filifolia</i>	
<i>Acacia inaequilatera</i>		<i>Cajanus cinereus</i>	
<i>Acacia jensenii</i>		<i>Cajanus marmoratus</i>	
<i>Acacia ligulata</i>		<i>Calandrinia tepperiana</i>	
<i>Acacia maitlandii</i>		<i>Calotis multicaulis</i>	
<i>Acacia melleodora</i>		<i>Calotis plumulifera</i>	
<i>Acacia monticola</i>		<i>Calytrix carinata</i>	
<i>Acacia orthocarpa</i>		<i>Capparis spinosa</i> subsp. <i>nummularia</i>	
<i>Acacia pachycarpa</i>		<i>Capparis umbonata</i>	
<i>Acacia platycarpa</i>		<i>Carissa lanceolata</i>	
<i>Acacia pteraneura</i>		<i>Cassytha capillaris</i>	
<i>Acacia ptychophylla</i>		<i>Cassytha filiformis</i>	
<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>		<i>Cenchrus ciliaris</i>	
<i>Acacia retivenea</i> subsp. <i>retivenea</i>		<i>Centaurium clementii</i>	
<i>Acacia roborum</i>		<i>Centipeda minima</i>	
<i>Acacia sabulosa</i>		<i>Centipeda minima</i> subsp. <i>macrocephala</i>	
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>		<i>Chamaecrista symonii</i>	
<i>Acacia sericophylla</i>		<i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>	
<i>Acacia</i> sp.		<i>Chrysopogon fallax</i>	
<i>Acacia</i> sp. <i>Juliflorae</i> -flat, Eremaean region		<i>Cleome viscosa</i>	
<i>Acacia sphaerostachya</i>		<i>Clerodendrum</i> sp.	
<i>Acacia stellaticeps</i>		<i>Clerodendrum tomentosum</i> var. <i>lanceolatum</i>	
<i>Acacia stipuligera</i>		<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>	
<i>Acacia tenuissima</i>		<i>Codonocarpus cotinifolius</i>	
<i>Acacia trachycarpa</i>		<i>Comesperma sabulosum</i>	P3
<i>Acacia tumida</i> var. <i>kulparn</i>		<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	
<i>Acacia tumida</i> var. <i>pilbarensis</i>		<i>Corchorus parviflorus</i>	
<i>Acacia wanyu</i>		<i>Corchorus sidoides</i>	
<i>Acrachne racemosa</i>		<i>Corchorus sidoides</i> subsp. <i>sidoides</i>	
<i>Adriana tomentosa</i> var. <i>hookeri</i>		<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>	
<i>Aenictophyton reconditum</i>		<i>Corymbia aspera</i>	
<i>Aenictophyton reconditum</i> subsp. <i>reconditum</i>		<i>Corymbia candida</i> subsp. <i>dipsodes</i>	
<i>Aerva javanica</i>		<i>Corymbia chippendalei</i>	

Taxon	Cons	Taxon	Cons
<i>Corymbia hamersleyana</i>		<i>Eucalyptus camaldulensis</i>	
<i>Corymbia zygomphylla</i>		<i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>	
<i>Corynotheca asperata</i>	P3	<i>Eucalyptus gamophylla</i>	
<i>Corynotheca micrantha</i> var. <i>gracilis</i>		<i>Eucalyptus kingsmillii</i>	
<i>Crotalaria medicaginea</i>		<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	
<i>Crotalaria medicaginea</i> var. <i>neglecta</i>		<i>Eucalyptus victrix</i>	
<i>Crotalaria ramosissima</i>		<i>Euphorbia albrechtii</i>	
<i>Cucumis maderaspatanus</i>		<i>Euphorbia australis</i> var. <i>australis</i>	
<i>Cucumis variabilis</i>		<i>Euphorbia australis</i> var. <i>hispidula</i>	
<i>Cullen leucochaetes</i>		<i>Euphorbia australis</i> var. <i>subtomentosa</i>	
<i>Cullen martinii</i>		<i>Euphorbia bicovexa/coghlanii</i>	
<i>Cullen pogonocarpum</i>		<i>Euphorbia boophthona</i>	
<i>Cullen stipulaceum</i>		<i>Euphorbia myrtoides</i>	
<i>Cyanostegia cyanocalyx</i>		<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	
<i>Cymbopogon ambiguus</i>		<i>Euphorbia vaccaria</i>	
<i>Cymbopogon procerus</i>		<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>	
<i>Cyperus blakeanus</i>		<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	
<i>Cyperus vaginatus</i>		<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	
<i>Dampiera atriplicina</i>	P3	<i>Ficus brachypoda</i>	
<i>Dampiera candicans</i>		<i>Fimbristylis dichotoma</i>	
<i>Dampiera cinerea</i>		<i>Fimbristylis oxystachya</i>	
<i>Dicrastylis cordifolia</i>		<i>Fimbristylis rara</i>	
<i>Dicrastylis dorianii</i>		<i>Flaveria trinervia</i>	
<i>Diplopeltis stuartii</i> var. <i>stuartii</i>		<i>Flueggea virosa</i> subsp. <i>melanthesoides</i>	
<i>Dodonaea coriacea</i>		<i>Gardenia pyriformis</i>	
<i>Dolichandrone occidentalis</i>		Genus C sp.13	
<i>Drosera burmanni</i>		Genus C sp.15	
<i>Drosera finlaysonian</i>		Genus C sp.2	
<i>Duboisia hopwoodii</i>		Genus C sp.7	
<i>Dysphania cristata</i>		Genus F sp.2	
<i>Dysphania plantaginella</i>		<i>Glinus lotoides</i>	
<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>		<i>Glycine canescens</i>	
<i>Dysphania sphaerosperma</i>		<i>Gompholobium simplicifolium</i>	
<i>Echinochloa colona</i>		<i>Gomphrena affinis</i>	
<i>Ectrosia danesii</i>		<i>Gomphrena affinis</i> subsp. <i>pilbarensis</i>	
<i>Ehretia saligna</i> var. <i>saligna</i>		<i>Gomphrena cunninghamii</i>	
<i>Enneapogon caeruleus</i>		<i>Gonocarpus eremophilus</i>	
<i>Enneapogon polyphyllus</i>		<i>Goodenia armitiana</i>	
<i>Enneapogon robustissimus</i>		<i>Goodenia azurea</i>	
<i>Eragrostis dielsii</i>		<i>Goodenia azurea</i> subsp. <i>hesperia</i>	
<i>Eragrostis lanicaulis</i>	P3	<i>Goodenia hartiana</i>	P2
<i>Eragrostis speciosa</i>		<i>Goodenia lamprosperma</i>	
<i>Eragrostis tenellula</i>		<i>Goodenia microptera</i>	
<i>Eremophila latrobei</i> subsp. <i>glabra</i>		<i>Goodenia muelleriana</i>	
<i>Eremophila latrobei</i> subsp. <i>latrobei</i>		<i>Goodenia ramelii</i>	
<i>Eriachne aristidea</i>		<i>Goodenia scaevolina</i>	
<i>Eriachne benthamii</i>		<i>Goodenia stobbsiana</i>	
<i>Eriachne ciliata</i>		<i>Goodenia triodiophila</i>	
<i>Eriachne glauca</i>		<i>Gossypium australe</i>	
<i>Eriachne helmsii</i>		<i>Grevillea eriobotrya</i>	
<i>Eriachne pulchella</i>		<i>Grevillea eriostachya</i>	
<i>Eriachne pulchella</i> subsp. <i>dominii</i>		<i>Grevillea pyramidalis</i>	
<i>Erythrophleum chlorostachys</i>		<i>Grevillea refracta</i>	
<i>Corymbia hamersleyana</i>		<i>Eucalyptus camaldulensis</i>	
<i>Corymbia zygomphylla</i>		<i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>	

Taxon	Cons	Taxon	Cons
<i>Grevillea refracta</i> subsp. <i>refracta</i>		<i>Melaleuca linophylla</i>	
<i>Grevillea stenobotrya</i>		<i>Mirbelia viminalis</i>	
<i>Grevillea wickhamii</i> subsp. <i>aprica</i>		<i>Mitrasacme connata</i>	
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>		<i>Neobassia astrocarpa</i>	
<i>Grevillea wickhamii</i> subsp. <i>macrodonata</i>		<i>Neptunia dimorphantha</i>	
<i>Gyrostemon tepperi</i>		<i>Newcastelia cephalantha</i>	
<i>Hakea divaricata</i>		<i>Newcastelia cladotricha</i>	
<i>Hakea eyreana</i>		<i>Nicotiana benthamiana</i>	
<i>Hakea macrocarpa</i>		<i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>	
<i>Halgania solanacea</i> var. <i>solanacea</i>		<i>Nicotiana occidentalis</i> subsp. <i>occidentalis</i>	
<i>Halgania</i> sp.		<i>Oldenlandia crouchiana</i>	
<i>Halgania</i> sp. A Kimberley Flora (H.A. Johnson 5123)		<i>Oldenlandia pterospora</i>	
<i>Helichrysum luteoalbum</i>		<i>Orianthera centralis</i>	
<i>Heliotropium chrysocarpum</i>		<i>Owenia reticulata</i>	
<i>Heliotropium crispatum</i>		<i>Paractaenum refractum</i>	
<i>Heliotropium cunninghamii</i>		<i>Paspalidium clementii</i>	
<i>Heliotropium diversifolium</i>		<i>Paspalidium jubiflorum</i>	
<i>Heliotropium epacrideum</i>		<i>Paspalidium rarum</i>	
<i>Heliotropium europaeum</i>		<i>Pentalepis trichodesmoides</i> subsp. <i>trichodesmoides</i>	
<i>Heliotropium glabellum</i>		<i>Petalostylis labicheoides</i>	
<i>Heliotropium glanduliferum</i>		<i>Phoenix dactylifera</i>	
<i>Heliotropium pachyphyllum</i>		<i>Phyllanthus maderaspatensis</i>	
<i>Heliotropium skeleton</i>		<i>Pimelea ammocharis</i>	
<i>Heliotropium</i> sp.		<i>Pluchea rubelliflora</i>	
<i>Heliotropium tenuifolium</i>		<i>Polycarpaea corymbosa</i>	
<i>Heliotropium transforme</i>		<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	
<i>Heliotropium vestitum</i>		<i>Polycarpaea holtzei</i>	
<i>Hibiscus coatesii</i>		<i>Polycarpaea longiflora</i>	
<i>Hibiscus leptocladus</i>		<i>Polygala glaucifolia</i>	
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>		<i>Polygala isingii</i>	
<i>Hybanthus aurantiacus</i>		<i>Polymeria ambigua</i>	
<i>Indigastrum parviflorum</i>		<i>Polymeria</i> sp.	
<i>Indigofera ammobia</i>	P3	<i>Portulaca australis</i>	
<i>Indigofera boviparda</i> subsp. <i>eremaea</i>		<i>Portulaca oleracea</i>	
<i>Indigofera colutea</i>		<i>Portulaca pilosa</i>	
<i>Indigofera linifolia</i>		<i>Pseudognaphalium luteoalbum</i>	
<i>Indigofera monophylla</i>		<i>Psydrax latifolia</i>	
<i>Indigofera rugosa</i>		<i>Pterocaulon serrulatum</i>	
<i>Indigofera trita</i>		<i>Pterocaulon sphacelatum</i>	
<i>Ipomoea coptica</i>		<i>Ptilotus aervoides</i>	
<i>Ipomoea costata</i>		<i>Ptilotus arthrolasius</i>	
<i>Ipomoea muelleri</i>		<i>Ptilotus astrolasius</i>	
<i>Isotropis atropurpurea</i>		<i>Ptilotus auriculifolius</i>	
<i>Jacksonia aculeata</i>		<i>Ptilotus axillaris</i>	
<i>Lawrenzia cinerea</i>		<i>Ptilotus calostachyus</i>	
<i>Lepidium amelum</i>	P1	<i>Ptilotus clementii</i>	
<i>Lepidium pholidogynum</i>		<i>Ptilotus fusiformis</i>	
<i>Lobelia arnhemiaca</i>		<i>Ptilotus incanus</i>	
<i>Maireana villosa</i>		<i>Ptilotus obovatus</i>	
<i>Malvastrum americanum</i>		<i>Ptilotus polystachyus</i>	
<i>Marsilea hirsuta</i>		<i>Rhagodia eremaea</i>	
<i>Melaleuca glomerata</i>		<i>Rhodanthe stricta</i>	
<i>Melaleuca lasiandra</i>		<i>Rhynchosia bungarensis</i>	P4
<i>Grevillea refracta</i> subsp. <i>refracta</i>		<i>Rhynchosia minima</i>	
<i>Grevillea stenobotrya</i>		<i>Rostellularia adscendens</i> var. <i>latifolia</i>	P3

<i>Taxon</i>	<i>Cons</i>	<i>Taxon</i>	<i>Cons</i>
<i>Santalum lanceolatum</i>		<i>Tephrosia</i> sp. Dunes (J.R. Maconochie 938)	
<i>Sauropus huntii</i>		<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	
<i>Scaevola amblyanthera</i>		<i>Tephrosia supina</i>	
<i>Scaevola amblyanthera</i> var. <i>centralis</i>		<i>Thinicola incana</i>	
<i>Scaevola parvifolia</i>		<i>Thysanotus</i> sp. Desert East of Newman (R.P. Hart 964)	P2
<i>Scaevola parvifolia</i> subsp. <i>pilbarae</i>		<i>Tinospora smilacina</i>	
<i>Scaevola</i> sp. Isabella Range (R.D. Royce 1918)	P1	<i>Trachymene oleracea</i>	
<i>Schenkia australis</i>		<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	
<i>Schizachyrium fragile</i>		<i>Trianthema oxycalyptum</i> var. <i>oxycalyptum</i>	
<i>Schoenoplectus subulatus</i>		<i>Trianthema pilosum</i>	
<i>Sclerolaena costata</i>		<i>Trianthema triquetrum</i>	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>		<i>Tribulopsis angustifolia</i>	
<i>Senna artemisioides</i> subsp. <i>helmsii</i> x <i>artemisioides</i> subsp. <i>oligophylla</i>		<i>Tribulus hirsutus</i>	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		<i>Tribulus macrocarpus</i>	
<i>Senna curvistyla</i>		<i>Tribulus platypterus</i>	
<i>Senna glutinosa</i>		<i>Trigastrotheca molluginea</i>	
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>		<i>Triodia basedowii</i>	
<i>Senna glutinosa</i> subsp. x <i>luerssenii</i>		<i>Triodia brizoides</i>	
<i>Senna oligoclada</i>		<i>Triodia epactia</i>	
<i>Senna venusta</i>		<i>Triodia longiceps</i>	
<i>Sesbania cannabina</i>		<i>Triodia schinzii</i>	
<i>Sida arenicola</i>		<i>Triodia scintillans</i>	
<i>Sida clementii</i>		<i>Triodia</i> sp. Warrawagine (A.L. Payne PRP 1859)	
<i>Sida</i> sp.		<i>Triodia wiseana</i>	
<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)		<i>Triumfetta clementii</i>	
<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)		<i>Triumfetta deserticola</i>	
<i>Sida</i> sp. spiciform panicles (E. Leyland s.n. 14/8/90)		<i>Triumfetta johnstonii</i>	
<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)		<i>Triumfetta maconochieana</i>	
<i>Solanum centrale</i>		<i>Triumfetta propinqua</i>	
<i>Solanum diversiflorum</i>		<i>Typha domingensis</i>	
<i>Solanum gabriellae</i>		<i>Vachellia farnesiana</i>	
<i>Solanum gilesii</i>		<i>Velleia connata</i>	
<i>Solanum horridum</i>		<i>Vigna lanceolata</i>	
<i>Solanum lasiophyllum</i>		<i>Wahlenbergia tumidiflora</i>	
<i>Spermacoce occidentalis</i>		<i>Waltheria indica</i>	
<i>Sporobolus australasicus</i>		<i>Waltheria virgata</i>	
<i>Stackhousia muricata</i> subsp. <i>annual</i> (W.R. Barker 2172)		<i>Yakirra australiensis</i>	
<i>Stemodia grossa</i>		<i>Yakirra australiensis</i> var. <i>australiensis</i>	
<i>Stemodia viscosa</i>		<i>Zaleya galericulata</i> subsp. <i>galericulata</i>	
<i>Streptoglossa macrocephala</i>		<i>Zornia albiflora</i>	
<i>Streptoglossa odora</i>			
<i>Striga squamigera</i>			
<i>Swainsona formosa</i>			
<i>Swainsona microphylla</i>			
<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>			
<i>Synostemon arenosus</i>	P3		
<i>Synostemon rhytidospermus</i>			
<i>Tecticornia halocnemoides</i> subsp. <i>tenuis</i>			
<i>Tephrosia arenicola</i>			
<i>Tephrosia rosea</i> var. <i>clementii</i>			
<i>Tephrosia roycei</i>			
<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)			
<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)			

Appendix 7. Declared Pests -s22(2) of the Broome and East Pilbara Local Government Areas (Shires)

Declared Pests - s22(2) of the Broome and East Pilbara Local Government Areas (DPIRD, 2024c).

Taxon	Control categories	WoNS	Common name
* <i>Alhagi maurorum</i> Medik.	C3 Management		camelthorn
* <i>Asparagus asparagoides</i> (L.) Druce		Y	bridal creeper
* <i>Austrocylindropuntia cylindrica</i> (Juss. ex Lam.) Backeb.	C3 Management	Y	coral cactus, cane cactus
* <i>Austrocylindropuntia subulata</i> (Muehlenpf.) Backeb.	C3 Management	Y	Eve's pin, Eve's needle
* <i>Azadirachta indica</i> A. Juss Declared Pest in Shire of Broome, not East Pilbara Shire			Indian lilac, margosa tree, neem tree
* <i>Calotropis procera</i> (Aiton) W.T.Aiton			rubber bush, calotropis
* <i>Chondrilla juncea</i> L.	C2 Eradication		skeleton weed, rush skeleton weed, naked weed, hogbite, gum succory
* <i>Coccinea grandis</i>	C3 Management	Y	tindola,scarlet gourd,scarlet fruited gourd,roh,pepino cimarrón,pepasan,mughad,little gourd,kundree,ivy gourd,ekadala,arakis
* <i>Cryptostegia madagascariensis</i> Bojer ex Decne.			Rubbervine, Madagascar rubbervine
* <i>Cylindropuntia fulgida</i> (Engelm.) F.M.Knuth	C3 Management	Y	coral cactus, boxing glove cactus
* <i>Cylindropuntia imbricata</i> (Haw.) F.M.Knuth	C3 Management	Y	rope pear, devil's rope
* <i>Cylindropuntia kleiniae</i> (DC.) F.M.Knuth	C3 Management	Y	candle cholla, Klein's pencil cactus, Klein's cholla
* <i>Cylindropuntia pallida</i> (Rose) F.M.Knuth	C3 Management	Y	white-spined Hudson pear, Hudson pear (white-spined)
* <i>Cylindropuntia tunicata</i> (Lehm.) F.M.Knuth	C3 Management	Y	thistle cholla, brown-spined Hudson pear, Hudson pear (brown-spined)
* <i>Echium plantagineum</i> L.			Salvation Jane, Paterson's curse
* <i>Hydrocotyle ranunculoides</i> L. f.	C3 Management		water pennywort, spaghetti weed, hydrocotyle, grote waternavel, floating marsh pennywort
* <i>Jatropha gossypifolia</i> L.	C3 Management	Y	cotton-leaf physic-nut, bellyache bush
* <i>Lantana camara</i> L.	C3 Management	Y	wild sage, white sage, red-flowered sage, largeleaf lantana, common lantana

Taxon	Control categories	WoNS	Common name
* <i>Moraea flaccida</i> (Sweet) Steud.			one-leaf cape tulip
* <i>Moraea miniata</i> Andrews			two-leaf cape tulip
* <i>Onopordum acaulon</i> L.			stemless thistle
* <i>Opuntia elata</i> Salm-Dyck	C3 Management	Y	Riverina pear
* <i>Opuntia elatior</i> Mill.	C3 Management	Y	red-flower prickly pear
* <i>Opuntia engelmannii</i> Salm-Dyck ex Engelm.	C3 Management	Y	Engelmann's prickly pear, Engelmann's pear
* <i>Opuntia ficus-indica</i> (L.) Mill.	C3 Management		tuna cactus, sweet prickly pear, spiny pest pear, spineless cactus, prickly pear, mission prickly pear, grootdoringturksvy, Indian fig, Boereturksvy
* <i>Opuntia microdasys</i> (Lehm.) Pfeiff.	C3 Management	Y	teddy bear cactus, golden bristle cactus, bunny ears
* <i>Opuntia monacantha</i> Haw.	C3 Management	Y	drooping tree pear
* <i>Opuntia polyacantha</i> Haw.	C3 Management	Y	plains prickly pear
* <i>Opuntia puberula</i> Hort. Vindob. ex Pfeiff.	C3 Management	Y	nopal de tortuga, nopal de culebra
* <i>Opuntia stricta</i> (Haw.) Haw.	C3 Management	Y	erect prickly pear, common prickly pear
* <i>Opuntia tomentosa</i> Salm-Dyck	C3 Management	Y	velvet tree pear, velvet pear
* <i>Parkinsonia aculeata</i> L.	C3 Management	Y	parkinsonia
* <i>Pistia stratiotes</i> L.	C2 Eradication		water lettuce
* <i>Prosopis glandulosa</i> Torr. x * <i>Prosopis velutina</i> Wooton	C2 Eradication	Y	mesquite
* <i>Rubus anglocandicans</i> A.Newton	C3 Management	Y	Blackberry
* <i>Rubus laudatus</i> A.Berger	C3 Management	Y	early blackberry
* <i>Rubus rugosus</i> Sm.	C3 Management	Y	keriberry, Himalayan blackberry
* <i>Rubus ulmifolius</i> Schott	C3 Management	Y	elmleaf blackberry, Thornfree, Loch Ness, Blacksatin
* <i>Sagittaria platyphylla</i> (Engelm.) J.G.Sm.	C3 Management	Y	sagittaria, delta arrowhead

Taxon	Control categories	WoNS	Common name
* <i>Senna alata</i> (L.) Roxb.			seven-golden-candlesticks, ringworm shrub, ringworm bush, ringworm senna, empress-candle-plant, emperor's candlesticks, candlestick senna, candle bush, Christmas-candle
* <i>Senna obtusifolia</i> (L.) H.S.Irwin & Barneby			sicklepod senna, sicklepod, coffeeweed, Javabean, Chinese Senna
* <i>Silybum marianum</i> (L.) Gaertn.			variegated thistle, milkthistle, blessed milkthistle
* <i>Solanum elaeagnifolium</i> Cav.		Y	white horsenettle, silverleaf nightshade
* <i>Solanum linnaeanum</i> Hepper & P.-M.L.Jaeger			apple of Sodom
* <i>Tamarix aphylla</i> (L.) H.Karst.		Y	tamarisk, flowering cypress, athel tree, athel tamarisk, athel pine, athel
* <i>Themeda quadrivalvis</i> (L.) Kuntze Declared Pest in Shire of Broome, not East Pilbara Shire			grader grass, habana grass, kangaroo grass, oatgrass
* <i>Ulex europaeus</i> L.	C2 Eradication	Y	gorse, furze
* <i>Xanthium spinosum</i> L.	C2 Eradication		thorny burweed, spiny cocklebur, spiny clotbur, prickly burweed, piikkisappiruoho, dagger weed, dagger cocklebur, burweed, boetebos, Bathurst burr
* <i>Xanthium strumarium</i> L.	C2 Eradication		Sheepbur, sea burdock, rough cocklebur, kra chap, karheasappiruoho, kankerroos, hedgehog burweed, heartleaf cocklebur, ditchbur, common cocklebur, cocklebur, clotbur, buttonbur, burweed, abrojillo, Noogoora burr, Bathurst burr
* <i>Zantedeschia aethiopica</i> (L.) Spreng.			calla lily, arum lily
* <i>Ziziphus mauritiana</i> Lam.	C3 Management		Saucunazi, macaniqueira, m'sau, Indian jujube, Chinese apple

Control categories as listed under the Biosecurity and Agriculture Management Regulations 2013 (DPIRD, 2022c)

Category	Description
C1	Organisms which should be excluded from part or all of Western Australia.
C2	Organisms which should be eradicated from part or all of Western Australia.
C3	Organisms that should have some form of management applied that will alleviate the harmful impact of the organism, reduce the numbers or distribution of the organism or prevent or contain the spread of the organism.
Unassigned	Unassigned: Declared pests that are recognised as having a harmful impact under certain circumstances, where their subsequent control requirements are determined by a Plan or other legislative arrangements under the Act.

Appendix 8. Consolidated Systematic Species List.

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Aizoaceae	<i>Trianthema pilosum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Aizoaceae	<i>Trianthema triquetrum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Achyranthes aspera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Alternanthera nana</i>	RE 140 km E	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Amaranthus undulatus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Gomphrena cunninghamii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Gomphrena lanata</i>	RI 130 km	☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Gomphrena leptoclada</i> subsp. <i>leptoclada</i>	RE 180 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Ptilotus arthrolasius</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Ptilotus astrolasius</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Ptilotus calostachyus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Ptilotus exaltatus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Ptilotus fusiformis</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Amaranthaceae	<i>Ptilotus incanus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Amaranthaceae	<i>Ptilotus polystachyus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Apocynaceae	<i>Carissa lanceolata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Apocynaceae	<i>Cynanchum pedunculatum</i>	RI 250 km	☐	☐	☐	☐	☐	☐	☐		☐	☐
Araliaceae	<i>Trachymene oleracea</i> subsp. <i>oleracea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Asteraceae	<i>Pluchea ferdinandi-muelleri</i>	RI 120 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Asteraceae	<i>Pluchea tetranthera</i>	RI 110 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Asteraceae	<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Asteraceae	<i>Pterocaulon sphacelatum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Asteraceae	<i>Streptoglossa decurrens</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Asteraceae	<i>Streptoglossa macrocephala</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Asteraceae	<i>Streptoglossa odora</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Bignoniaceae	<i>Dolichandrone occidentalis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca chrysocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca cunninghamii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca diversifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca foliata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca glabella</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca leptalea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca ovalifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca pachyphylla</i>	RI 150 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Euploca transformis</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Boraginaceae	<i>Euploca vestita</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Boraginaceae	<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Boraginaceae	<i>Halgania solanacea</i> var. <i>solanacea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Boraginaceae	<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	RE 150 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Byblidaceae	<i>Byblis pilbarana</i>	RE 100 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Caryophyllaceae	<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Caryophyllaceae	<i>Polycarpaea holtzei</i>	RE 100 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Caryophyllaceae	<i>Polycarpaea longiflora</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Celastraceae	<i>Macgregoria racemigera</i>	RE 100 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Celastraceae	<i>Stackhousia</i> sp. swollen gynophore (W.R. Barker 2041)	RE 100 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Chenopodiaceae	<i>Atriplex</i> sp. Indet.		☐	☐	☐	☐	☐	☐	☐		☐	☐
Chenopodiaceae	<i>Dysphania platycarpa</i>	RE 360 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Chenopodiaceae	<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	RE 170 km N	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Chenopodiaceae	<i>Sclerolaena cornishiana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cleomaceae	<i>Areocleome oxalidea</i>	RE 215 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Cleomaceae	<i>Arivela microphylla</i>	RE 200 km W	☐	☐	☐	☐	☐	☐	☐		☐	☐
Cleomaceae	<i>Arivela uncifera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cleomaceae	<i>Arivela viscosa</i>	RE 130 km E	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Combretaceae	<i>Terminalia kumpaja</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Bonamia alatisemina</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Convolvulaceae	<i>Bonamia erecta</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Convolvulaceae	<i>Bonamia linearis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Bonamia oblongifolia</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Cuscuta victoriana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Evolvulus alsinoides</i> var. <i>decumbens</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Convolvulaceae	<i>Ipomoea muelleri</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Polymeria ambigua</i> sens. lat		☐	☐	☐	☐	☐	☐	☐		☐	☐
Convolvulaceae	<i>Polymeria</i> sp. Broome (K.F. Kenneally 9759)	Priority 3	☐	☐	☐	☐	☐	☐	☐		☐	☐
Cucurbitaceae	<i>Citrullus amarus</i>	Weed	☐	☐	☐	☐	☐	☐	☐		☐	☐
Cucurbitaceae	<i>Cucumis variabilis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Abildgaardia oxystachya</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cyperaceae	<i>Bulbostylis barbata</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cyperaceae	<i>Cyperus conicus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Cyperus iria</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Cyperus microcephalus</i> subsp. <i>microcephalus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Cyperaceae	<i>Fimbristylis ammobia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Fimbristylis depauperata</i>	RE 250 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Cyperaceae	<i>Fimbristylis dichotoma</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cyperaceae	<i>Fimbristylis simulans</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Elatinaceae	<i>Bergia perennis</i> subsp. <i>obtusifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Euphorbiaceae	<i>Euphorbia albrechtii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Euphorbiaceae	<i>Euphorbia australis</i> var. <i>subtomentosa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Euphorbiaceae	<i>Euphorbia myrtilloides</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Euphorbiaceae	<i>Euphorbia psilosperma</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Euphorbiaceae	<i>Euphorbia vaccaria</i> var. <i>vaccaria</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Euphorbiaceae	<i>Euphorbia wheeleri</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia ?drepanocarpa</i> × <i>trachycarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia adoxa</i> var. <i>adoxo</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia adsurgens</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia</i> aff. <i>drepanocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia anaticeps</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia ancistrocarpa</i>	RE 210 km N	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia aptaneura</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia arida</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia bivenosa</i>	RE 100 km NE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia colei</i> var. <i>colei</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia dictyophleba</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia drepanocarpa</i> subsp. <i>drepanocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia drepanocarpa</i> subsp. <i>latifolia</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia eriopoda</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Fabaceae	<i>Acacia eriopoda</i> × <i>monticola</i> (B.R. Maslin 7322)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia hilliana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia hilliana</i> × <i>stellaticeps</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia maitlandii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia melleodora</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia monticola</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia orthocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia platycarpa</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia ptychophylla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia retivenea</i> subsp. <i>clandestina</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia sabulosa</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia sericophylla</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia</i> sp. Nalgi (N.T. Burbidge 1317)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia sphaerostachya</i>	RE 100 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia spondylophylla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia stellaticeps</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia stipuligera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia tenuissima</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Acacia tumida</i> var. <i>kulparn</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Acacia tumida</i> var. <i>pilbarensis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Chamaecrista symonii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Crotalaria cunninghamii</i> subsp. <i>cunninghamii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Crotalaria ramosissima</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Cullen martinii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Fabaceae	<i>Cullen pustulatum</i>	RI 130 km S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Cullen stipulaceum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Erythrophleum chlorostachys</i>	RE 400 km S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Gompholobium simplicifolium</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Indigofera ammobia</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Indigofera boviperda</i> subsp. <i>boviperda</i>	RE 250 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Indigofera boviperda</i> subsp. <i>eremaea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Indigofera colutea</i>	RI 110k km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Indigofera hirsuta</i>	RI 160k km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Indigofera linnaei</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Indigofera monophylla</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Indigofera trita</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Jacksonia aculeata</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Leptosema anomalum</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Mirbelia viminalis</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Petalostylis cassioides</i>	RE 160 km N	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Petalostylis labicheoides</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Rhynchosia minima</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna ?ferraria</i> ×		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna artemisioides</i> subsp. <i>helmsii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna artemisioides</i> subsp. <i>oligophylla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna artemisioides</i> subsp. <i>oligophylla</i> × subsp. <i>helmsii</i>	Hybrid	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna costata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna curvistyla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Senna notabilis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Fabaceae	<i>Senna symonii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Swainsona microphylla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Tephrosia arenicola</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Tephrosia rosea</i> var. <i>clementii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Tephrosia rosea</i> var. <i>rosea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	Priority 1					outside					
Fabaceae	<i>Tephrosia simplicifolia</i>	RI 100 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 11601)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Tephrosia</i> sp. D Kimberley Flora (R.D. Royce 1848)		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fabaceae	<i>Tephrosia supina</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Thinicola incana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Zornia albiflora</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Fabaceae	<i>Zornia chaetophora</i>	RE 140 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Brunonia australis</i>	RE 140 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Brunonia australis</i> var. A Kimberley Flora (K.F. Kenneally 5452)		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Dampiera candicans</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Dampiera cinerea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Goodenia armitiana</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Goodenia azurea</i> subsp. <i>hesperia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Goodenia hartiana</i>	Priority 2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Goodenia lamprosperma</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Goodenia panduriformis</i>	RE 120 km S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Goodenia scaevolina</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Goodeniaceae	<i>Goodenia triodiophila</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Goodeniaceae	<i>Goodenia vilmoriniae</i>	RE 170 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Scaevola browniana</i> subsp. <i>browniana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Goodeniaceae	<i>Scaevola parvifolia</i> subsp. <i>parvifolia</i>	RI 180 km S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Gyrostemonaceae	<i>Codonocarpus cotinifolius</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Gyrostemonaceae	<i>Gyrostemon tepperi</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Haloragaceae	<i>Gonocarpus eremophilus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Haloragaceae	<i>Haloragis gossei</i> var. <i>gossei</i>	RE 100 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Hemerocallidaceae	<i>Corynotheca asperata</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hemerocallidaceae	<i>Corynotheca gracilis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Lamiaceae	<i>Clerodendrum floribundum</i> var. <i>floribundum</i>	RE 500km S	☐	☐	☐	☐	☐	☐	☐		☐	☐
Lamiaceae	<i>Clerodendrum tomentosum</i> var. <i>tomentosum</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamiaceae	<i>Cyanostegia cyanocalyx</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamiaceae	<i>Dasymalla chorisepala</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐		☐	☐
Lamiaceae	<i>Dicrastylis cordifolia</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamiaceae	<i>Dicrastylis doranii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamiaceae	<i>Dicrastylis exsuccosa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Lamiaceae	<i>Newcastelia cladotricha</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lamiaceae	<i>Newcastelia spodioptricha</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Lauraceae	<i>Cassytha capillaris</i>	RI 100 km S	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Lauraceae	<i>Cassytha filiformis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Loganiaceae	<i>Orianthera centralis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Loranthaceae	<i>Amyema ?miquelii</i>	RE 270km NW	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Loranthaceae	<i>Amyema sanguinea</i> var. <i>sanguinea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Abutilon leucopetalum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Malvaceae	<i>Abutilon otocarpum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Abutilon oxycarpum</i> sp. Prostrate (A. A. Mitchell PRP 1266)	RE 320 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Androcalva loxophylla</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Corchorus incanus</i> subsp?		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Corchorus sidoides</i> subsp. <i>sidoides</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Corchorus sidoides</i> subsp. <i>vermicularis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Gossypium australe</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Gossypium australe</i> (Burrup Peninsula Form)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Hibiscus leptocladus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Melhania oblongifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Seringia ×katatona</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Seringia exastia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Seringia nephrosperma</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida arenicola</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Sida echinocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida fibulifera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida platycalyx</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida rohlenae</i> subsp. <i>rohlenae</i>	RE 140 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida</i> sp. Articulation below (A.A. Mitchell PRP 1605)	RE 140 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Sida</i> sp. Pindan (B.G. Thomson 3398)		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Malvaceae	<i>Sida</i> sp. Western sand dunes (P.K. Latz 11980)		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Malvaceae	<i>Triumfetta deserticola</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Triumfetta incana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Malvaceae	<i>Triumfetta maconochieana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Marsileaceae	<i>Marsilea</i> sp. Indet.		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Meliaceae	<i>Owenia reticulata</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Menispermaceae	<i>Tinospora smilacina</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Molluginaceae	<i>Trigastrotheca molluginea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Montiaceae	<i>Calandrinia strophiolata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Moraceae	<i>Ficus brachypoda</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Calytrix carinata</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Myrtaceae	<i>Corymbia aspera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Corymbia candida</i>	RE 120 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Corymbia chippendalei</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Myrtaceae	<i>Corymbia opaca</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Corymbia zygophylla</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Eucalyptus odontocarpa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Eucalyptus victrix</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Myrtaceae	<i>Melaleuca lasiandra</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Nyctaginaceae	<i>Boerhavia coccinea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Nyctaginaceae	<i>Boerhavia gardneri</i>	RI 110 km E	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Nyctaginaceae	<i>Commicarpus australis</i>	RE 300 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Orobanchaceae	<i>Striga curviflora</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Phrymaceae	<i>Peplidium muelleri</i>	RE 120 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Phyllanthaceae	<i>Cathetus exilis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Phyllanthaceae	<i>Lysiandra eremica</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Phyllanthaceae	<i>Synostemon arenosus</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐		☐	☐
Plantaginaceae	<i>Stemodia grossa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Amphipogon caricinus</i> (hairy lamina) (J. Paterson WB41138)	SOI	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Amphipogon sericeus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Aristida contorta</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Aristida holathera</i> var. <i>holathera</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Aristida holathera</i> var. <i>latifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Aristida inaequiglumis</i>	RI 110 km E	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Cenchrus ciliaris</i>	Weed	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Chrysopogon fallax</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Cymbopogon ambiguus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Cymbopogon oblectus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Cynodon anisocarpus</i>	Priority 1	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Cynodon convergens</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Dactyloctenium aegyptium</i>	Weed; RI 220 km	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Dactyloctenium radulans</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Dichanthium sericeum</i> subsp. <i>humilius</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Digitaria brownii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Diplachne fusca</i> subsp. <i>muelleri</i>	RE 260 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Enneapogon polyphyllus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Eragrostis cumingii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Eragrostis dielsii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eragrostis eriopoda</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

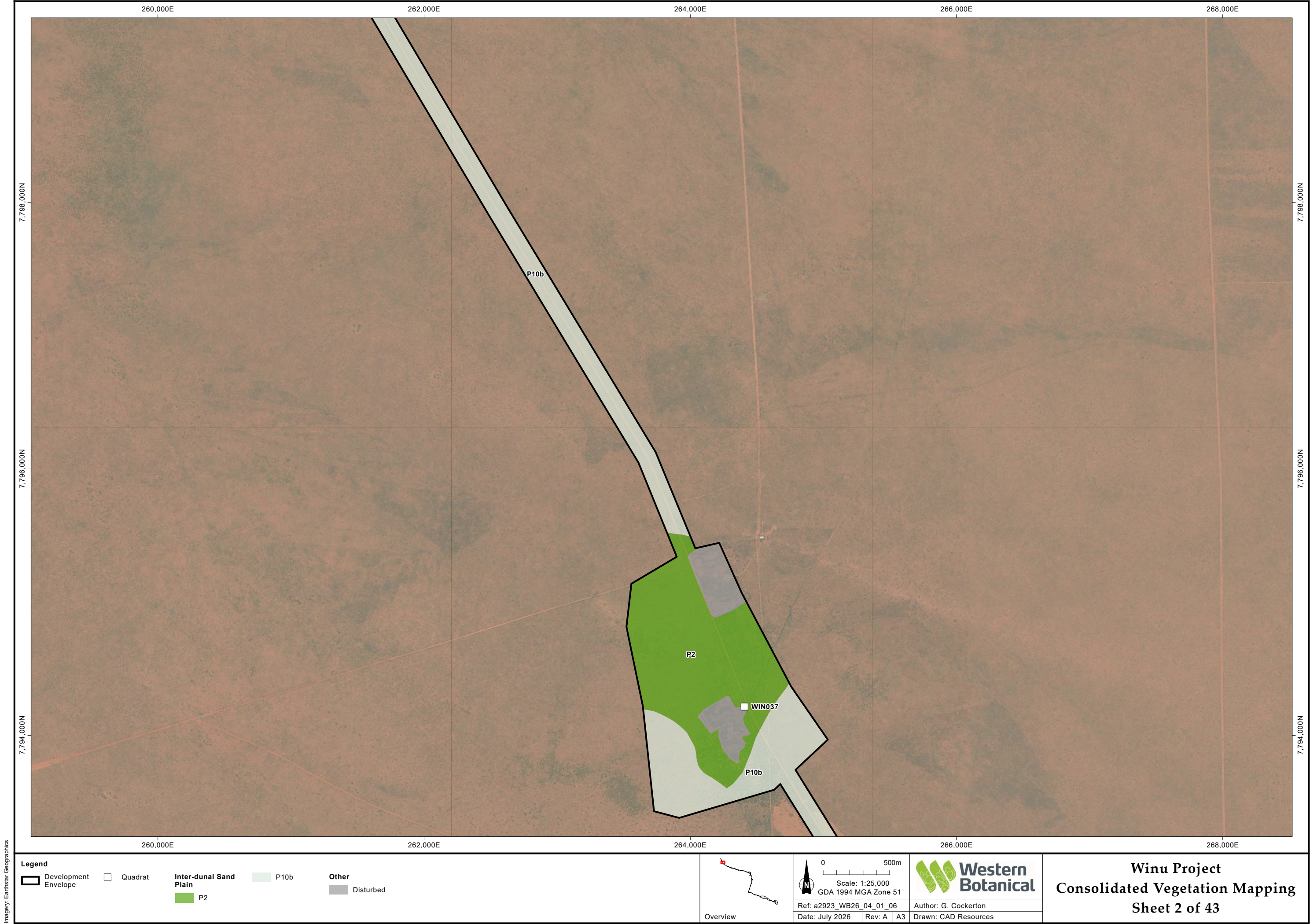
Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Poaceae	<i>Eragrostis exigua</i>	RE 190 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eragrostis falcata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eragrostis lanicaulis</i>	Priority 3							outside			
Poaceae	<i>Eragrostis speciosa</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eragrostis xerophila</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Eragrostis</i> sp. recurved spikelets (J. Paterson & N. Dakin WB1179)	SOI	☐	☐	☐	☐	☐	☐	outside	☐	☐	
Poaceae	<i>Eriachne aristidea</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne ciliata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne helmsii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Eriachne lanata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne mucronata</i> (desert form)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne mucronata</i> (typical form)		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne obtusa</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Eriachne pulchella</i> subsp. <i>pulchella</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne pulchella</i> subsp. <i>dominii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eriachne sulcata</i>	RI 100 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Eulalia aurea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Panicum australiense</i> var. <i>australiense</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Paractaenum refractum</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Paraneurachne muelleri</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Paspalidium clementii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Paspalidium rarum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Paspalidium reflexum</i>	RE 250 km NE	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Paspalidium tabulatum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Schizachyrium fragile</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Poaceae	<i>Setaria surgens</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Sorghum plumosum</i> var. <i>plumosum</i>	RE 140 km SE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Sporobolus actinocladus</i>	RE 150 km N	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Sporobolus australasicus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Themeda triandra</i>	RE 180 km N	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Triodia basedowii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Triodia brizoides</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Triodia epactia</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Triodia schinzii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Poaceae	<i>Triodia scintillans</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Tripogonella loliiformis</i>	RE 200 km E	☐	☐	☐	☐	☐	☐	☐		☐	☐
Poaceae	<i>Urochloa holosericea</i> subsp. <i>velutina</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Polygalaceae	<i>Comesperma sabulosum</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Polygalaceae	<i>Polygala glaucifolia</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Polygalaceae	<i>Polygala isingii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Portulacaceae	<i>Portulaca bicolor</i>	RE 300 km SW	☐	☐	☐	☐	☐	☐	☐		☐	☐
Portulacaceae	<i>Portulaca filifolia</i>	RE 160 km E	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Portulacaceae	<i>Portulaca oleracea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Proteaceae	<i>Grevillea eriostachya</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Proteaceae	<i>Grevillea pyramidalis</i> subsp. <i>pyramidalis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Proteaceae	<i>Grevillea refracta</i> subsp. <i>refracta</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Proteaceae	<i>Grevillea stenobotrya</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Proteaceae	<i>Grevillea wickhamii</i> subsp. <i>aprica</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Proteaceae	<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Proteaceae	<i>Grevillea wickhamii</i> subsp. <i>macrodonata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

Family	Species	Conservation Status	AREH	MIA	MIA Extensions	RAC	Revised DE	RIB	Rimfire & Texas	Winu South	Wallal	Winu Soak
Proteaceae	<i>Hakea lorea</i> subsp. <i>lorea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Proteaceae	<i>Hakea macrocarpa</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Proteaceae	<i>Persoonia falcata</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Dolichocarpa crouchiana</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Gardenia pyriformis</i> subsp. <i>keartlandii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Paranotis mitrasacmoides</i>	RE 260 km SW	☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Paranotis pterospora</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rubiaceae	<i>Spermacoce hillii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Spermacoce occidentalis</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Rubiaceae	<i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Santalaceae	<i>Santalum lanceolatum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Sapindaceae	<i>Dodonaea coriacea</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Sapindaceae	<i>Dodonaea hispidula</i> var. <i>arida</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Scrophulariaceae	<i>Eremophila latrobei</i> subsp. <i>glabra</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Solanaceae	<i>Duboisia hopwoodii</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Solanaceae	<i>Solanum centrale</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Solanaceae	<i>Solanum dioicum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Solanaceae	<i>Solanum diversiflorum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Solanaceae	<i>Solanum gilesii</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Solanaceae	<i>Solanum lycopersicum</i>	Weed	☐	☐	☐	☐	☐	☐	☐		☐	☐
Stylidiaceae	<i>Stylidium desertorum</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐
Thymelaeaceae	<i>Pimelea ammodaridensis</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Violaceae	<i>Afrohybanthus aurantiacus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Zygophyllaceae	<i>Tribulopsis marliesiae</i>	Priority 3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Zygophyllaceae	<i>Tribulus hirsutus</i>		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Zygophyllaceae	<i>Tribulus macrocarpus</i>		☐	☐	☐	☐	☐	☐	☐		☐	☐

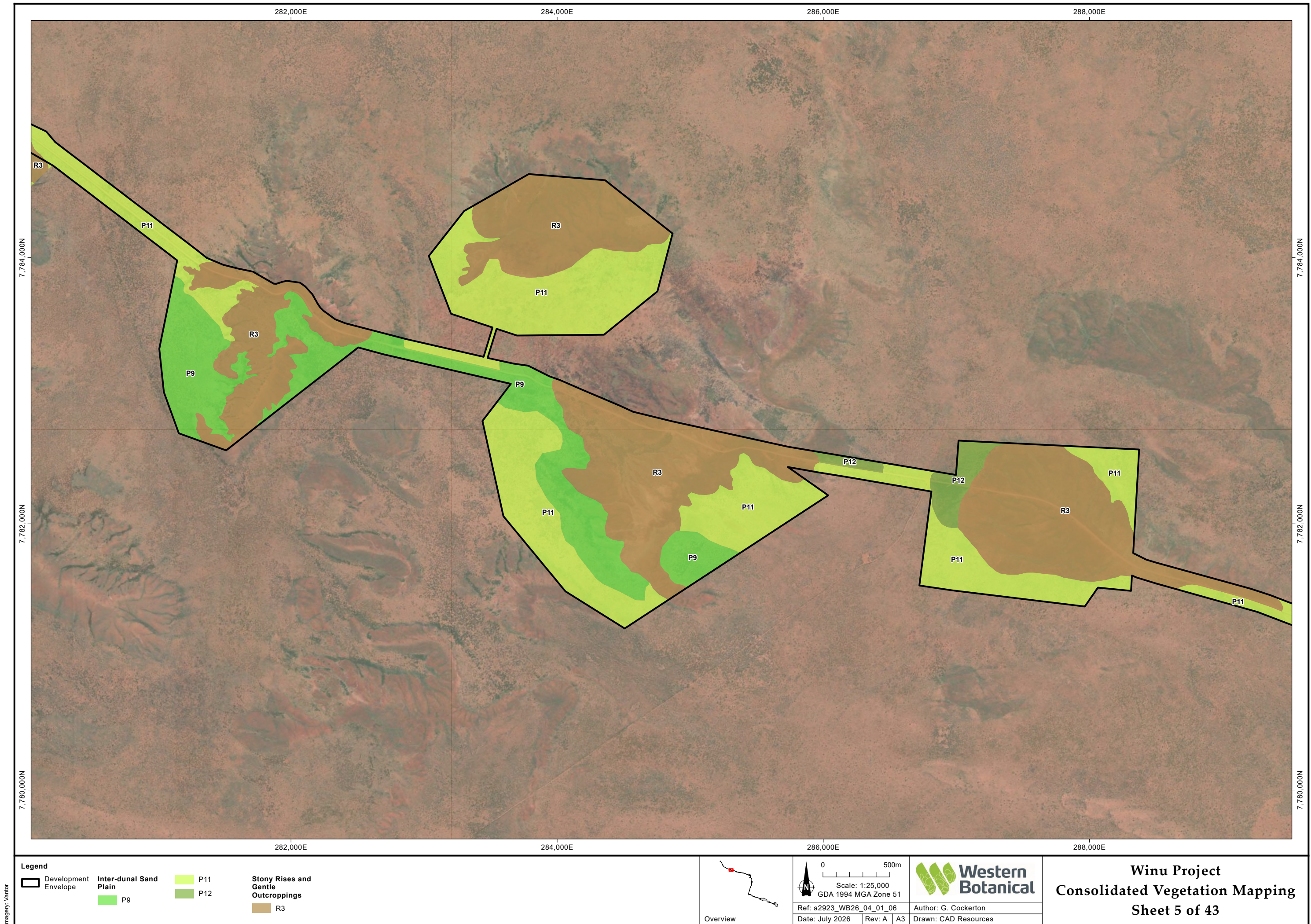
Appendix 9. 1:25,000 Scale Vegetation Mapping of the Winu Project

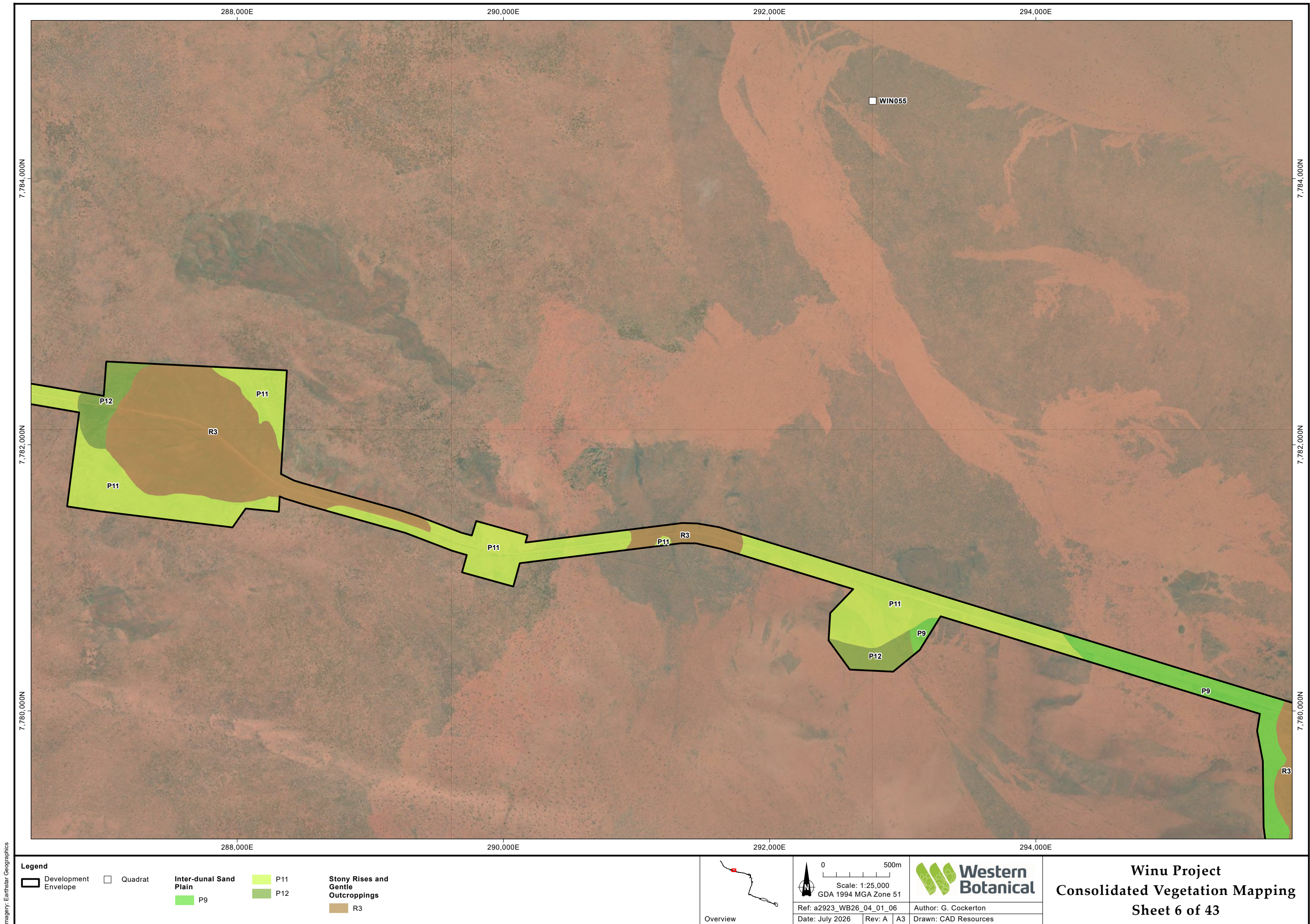


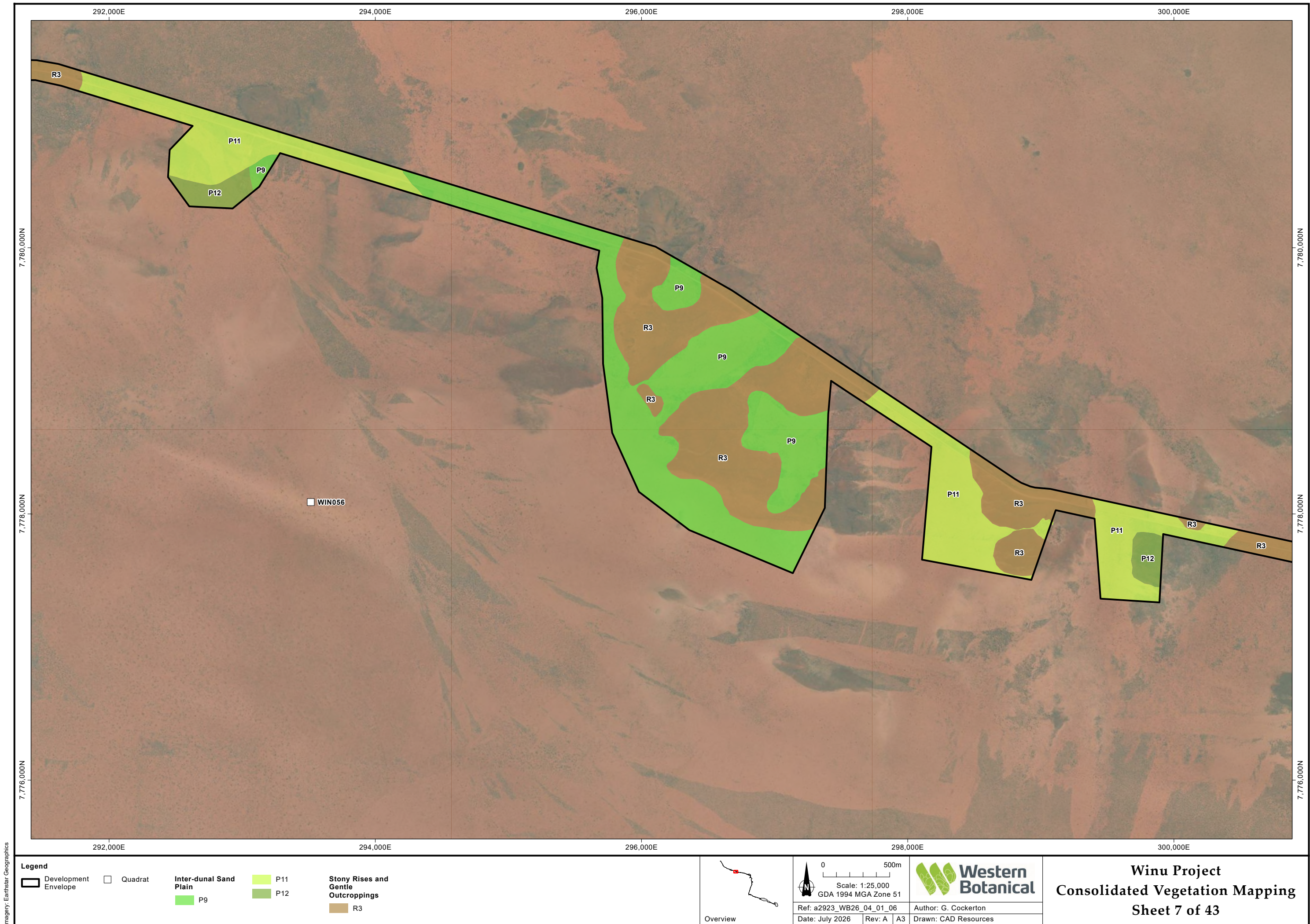


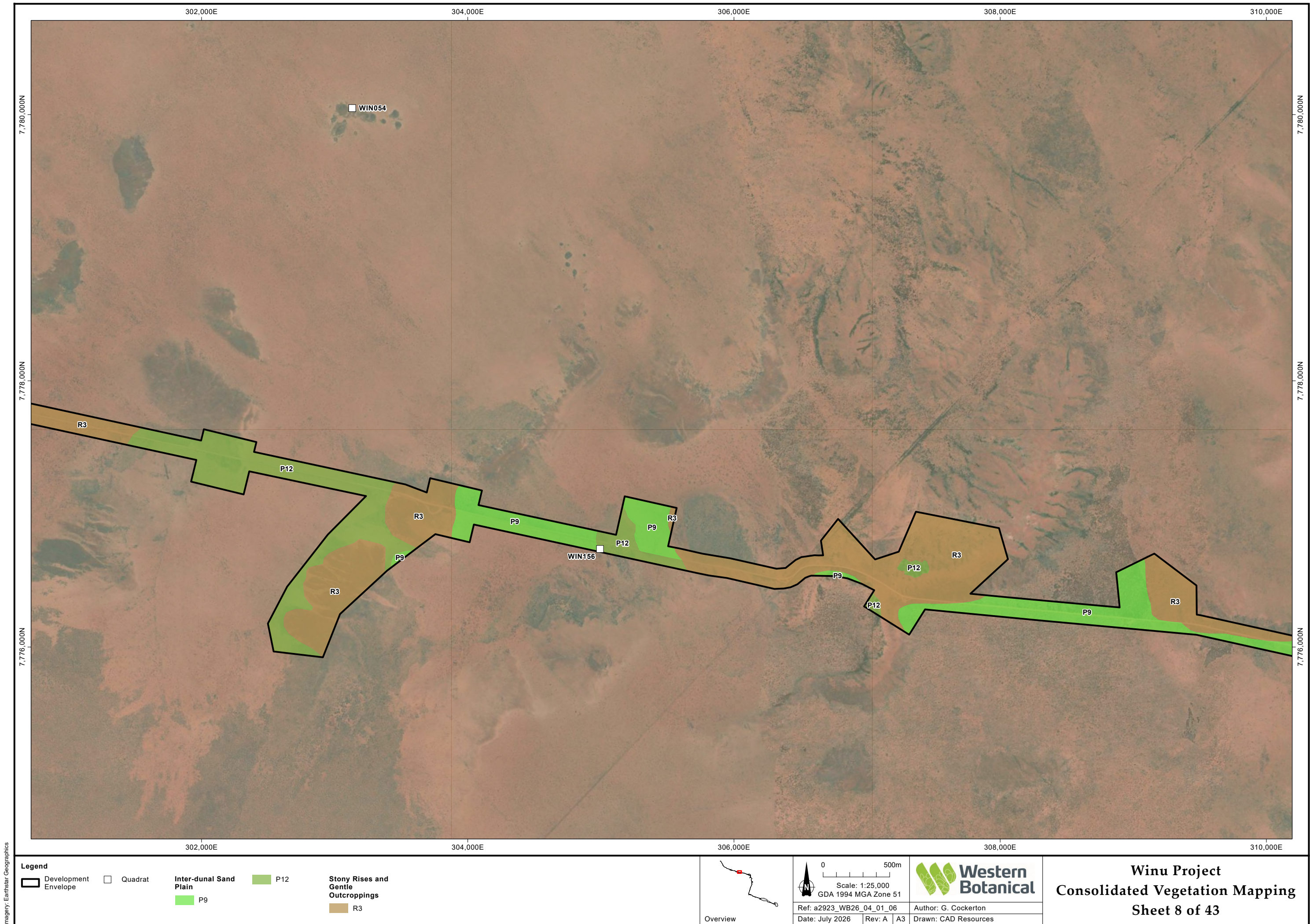


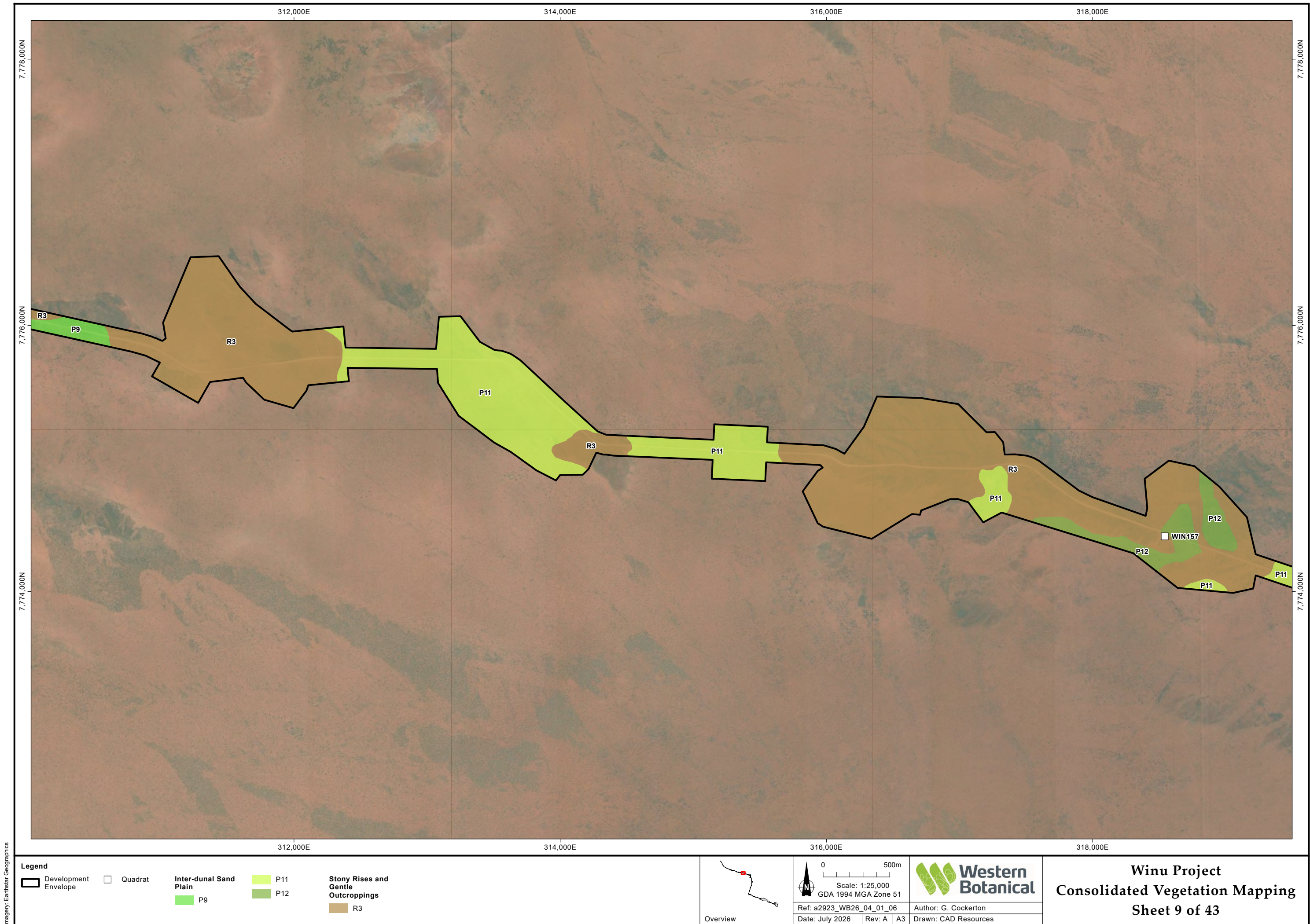
















Imagery: Earthstar Geographics

Legend

Development Envelope

Quadrat

Inter-dunal Sand Plain

P8

P9

P10a

P11

P12

Stony Rises and Gentle Outcroppings

R3

R4

Overview

0 500m

Scale: 1:25,000

GDA 1994 MGA Zone 51

Ref: a2923_WB26_04_01_06

Date: July 2026

Rev: A

A3

Western Botanical

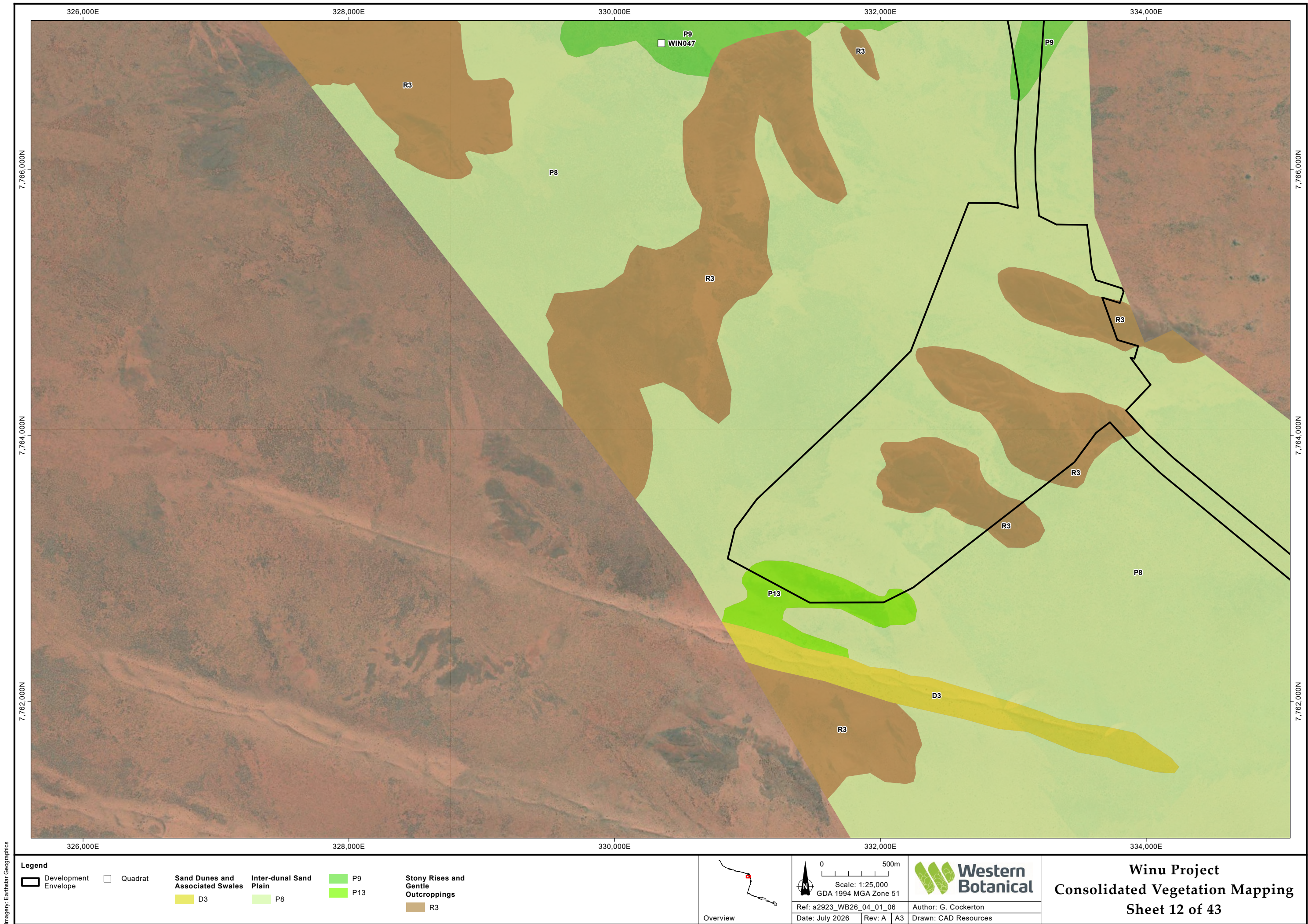
Author: G. Cockerton

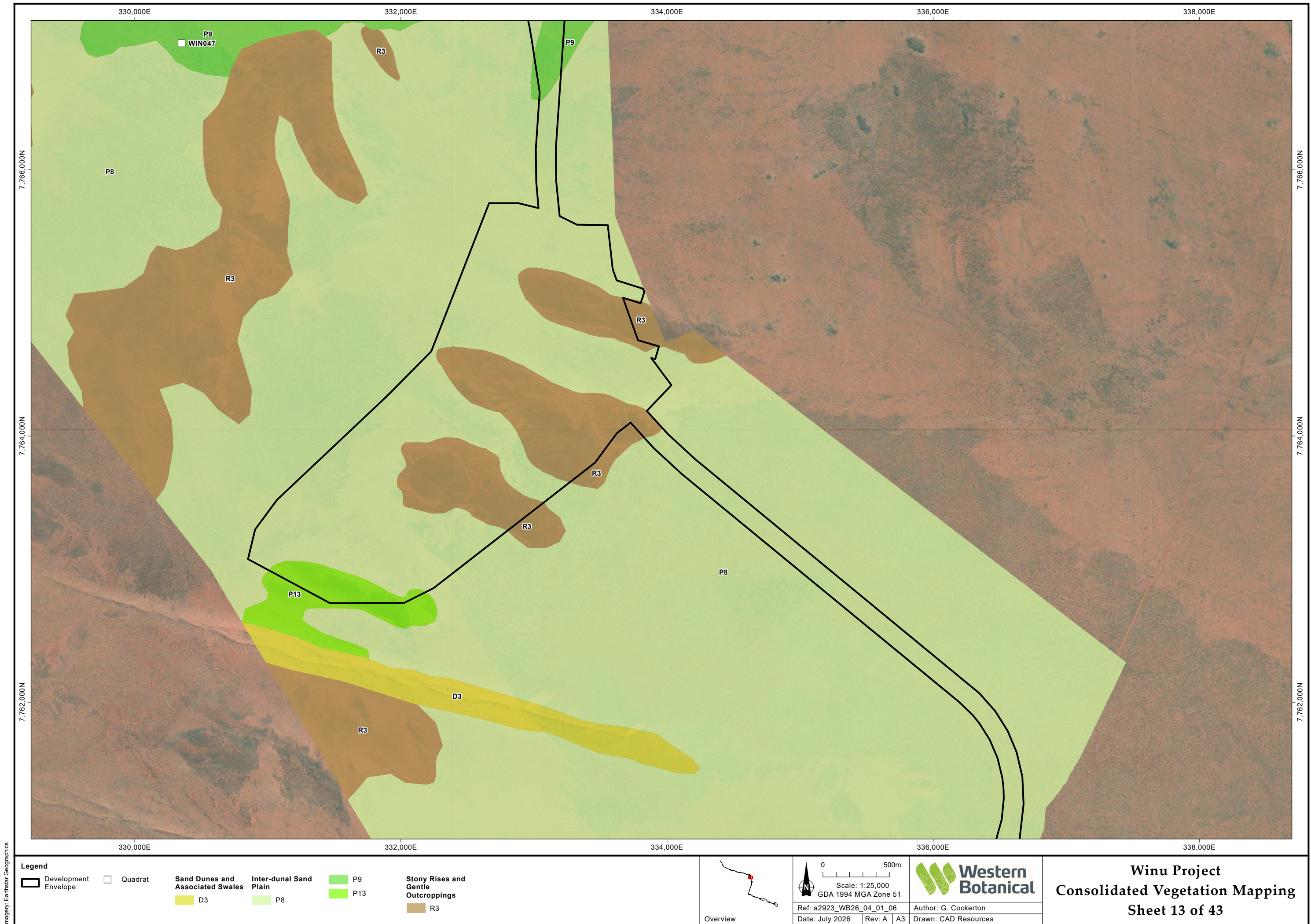
Drawn: CAD Resources

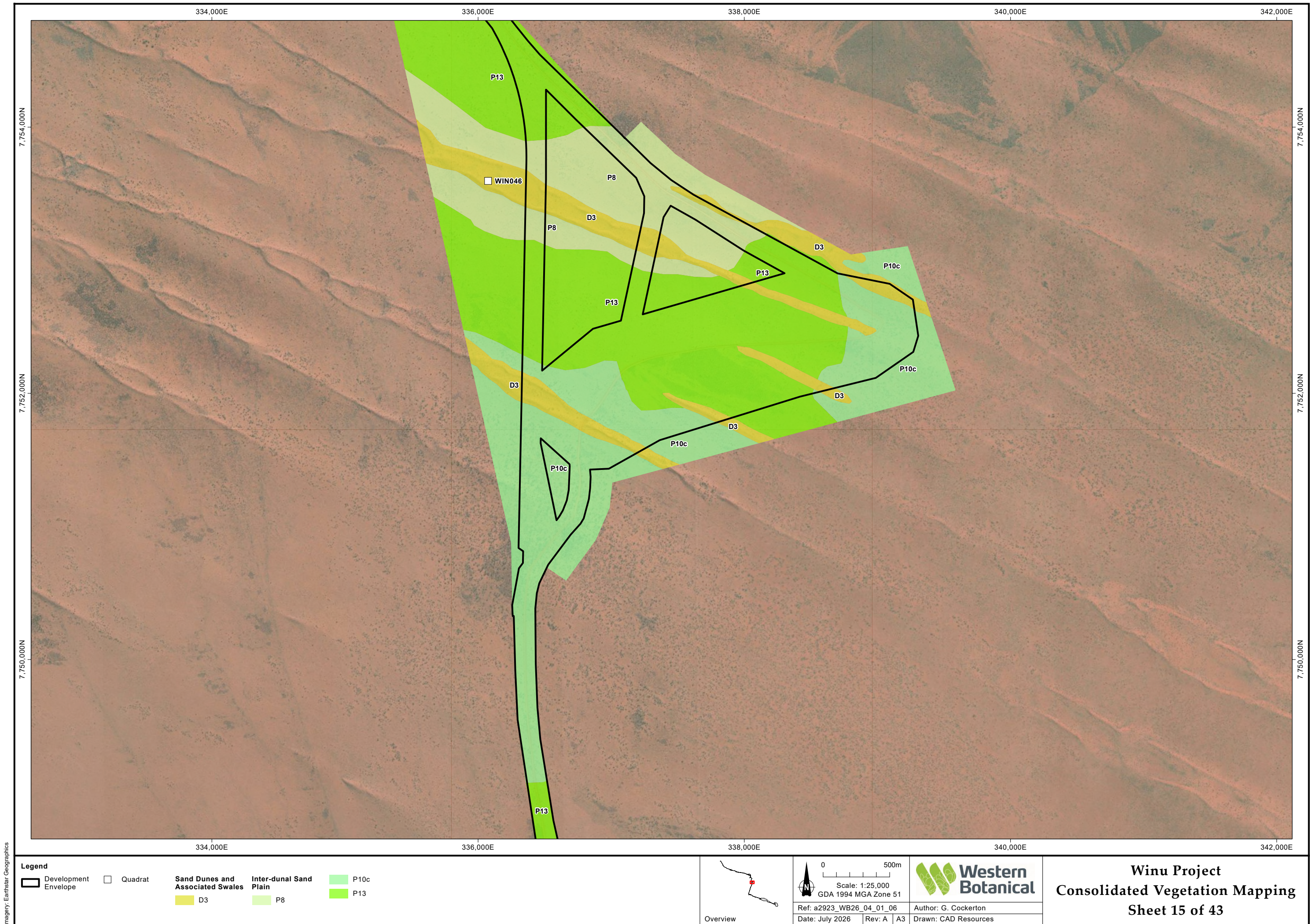
Winu Project

Consolidated Vegetation Mapping

Sheet 11 of 43







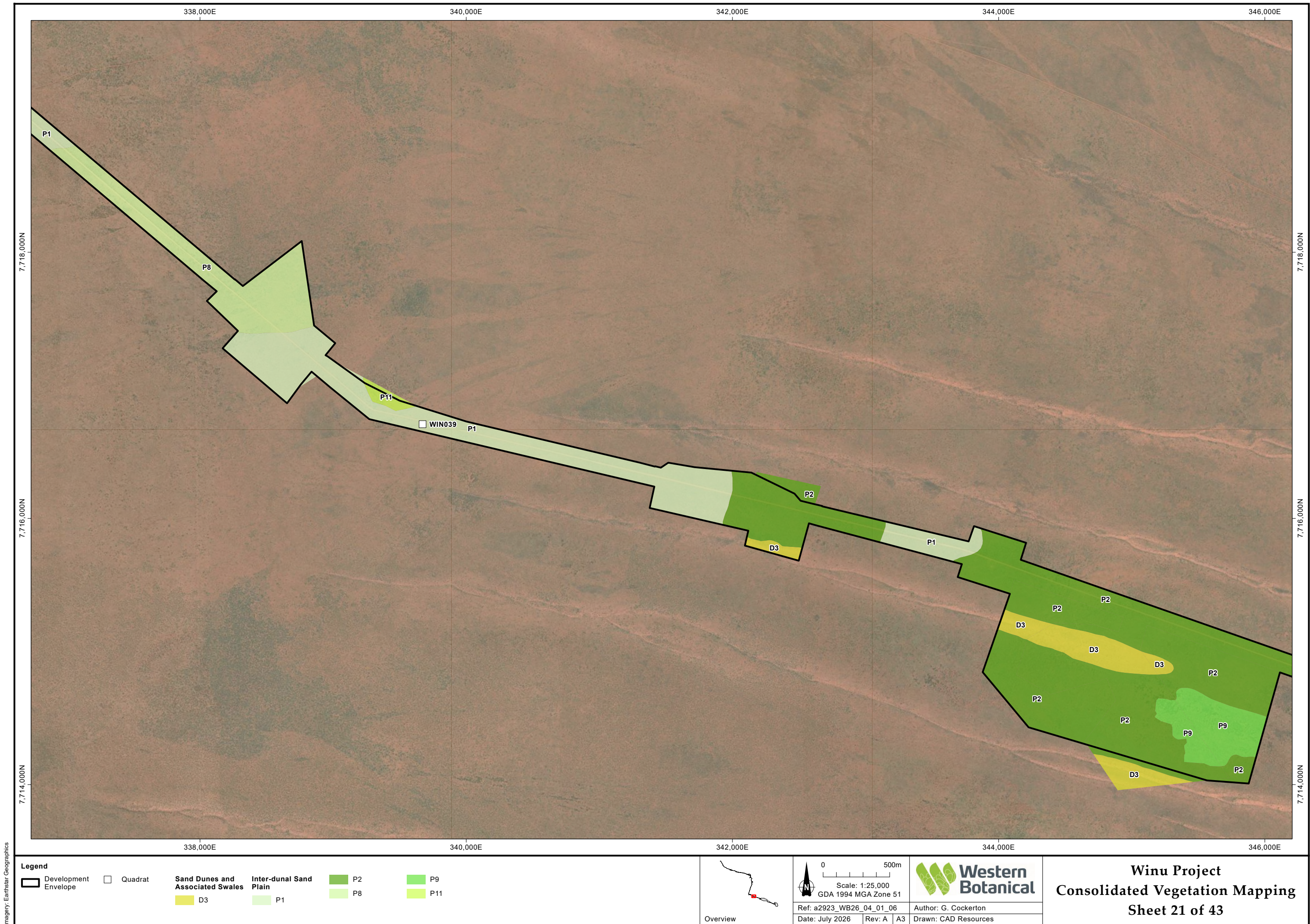


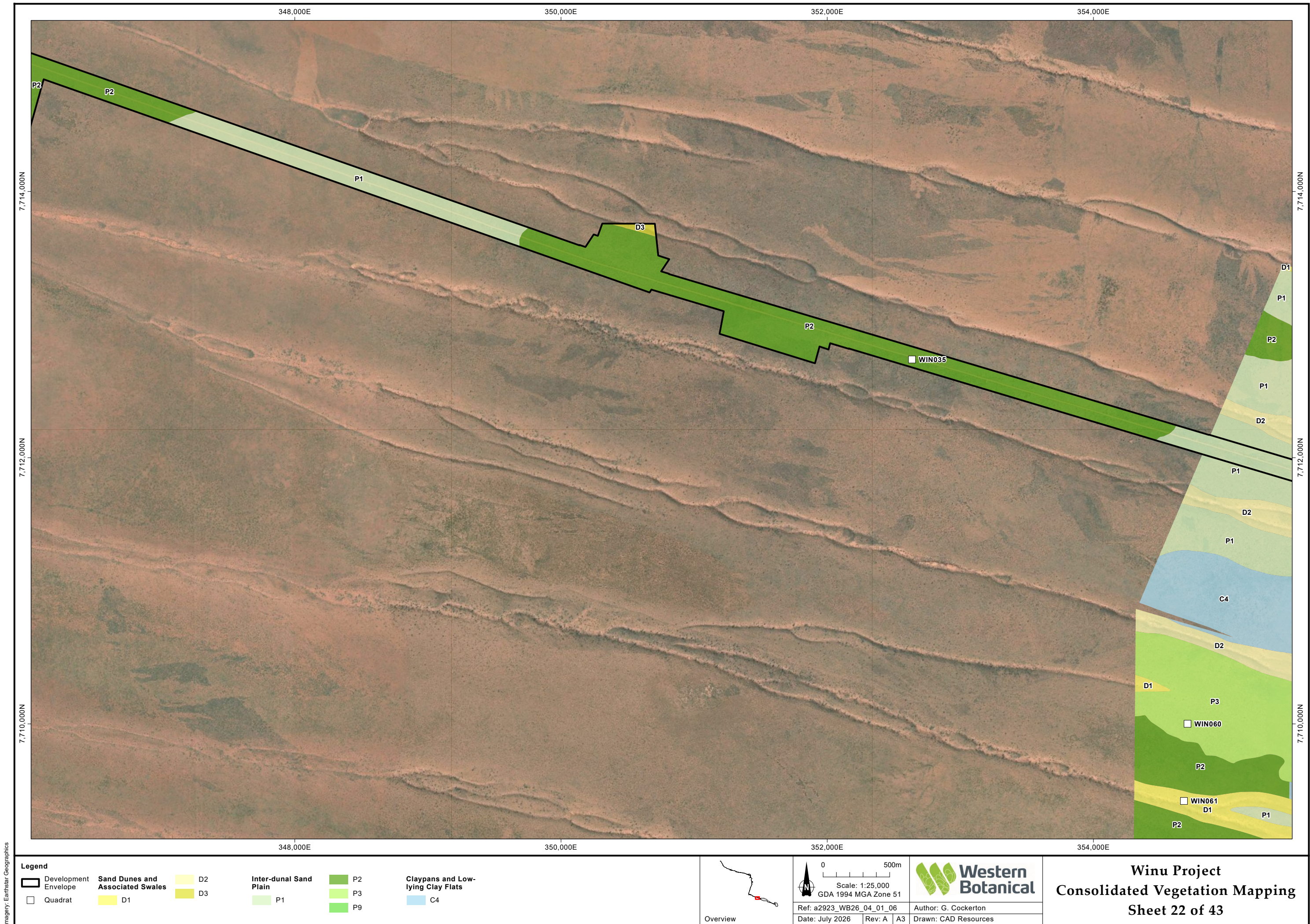


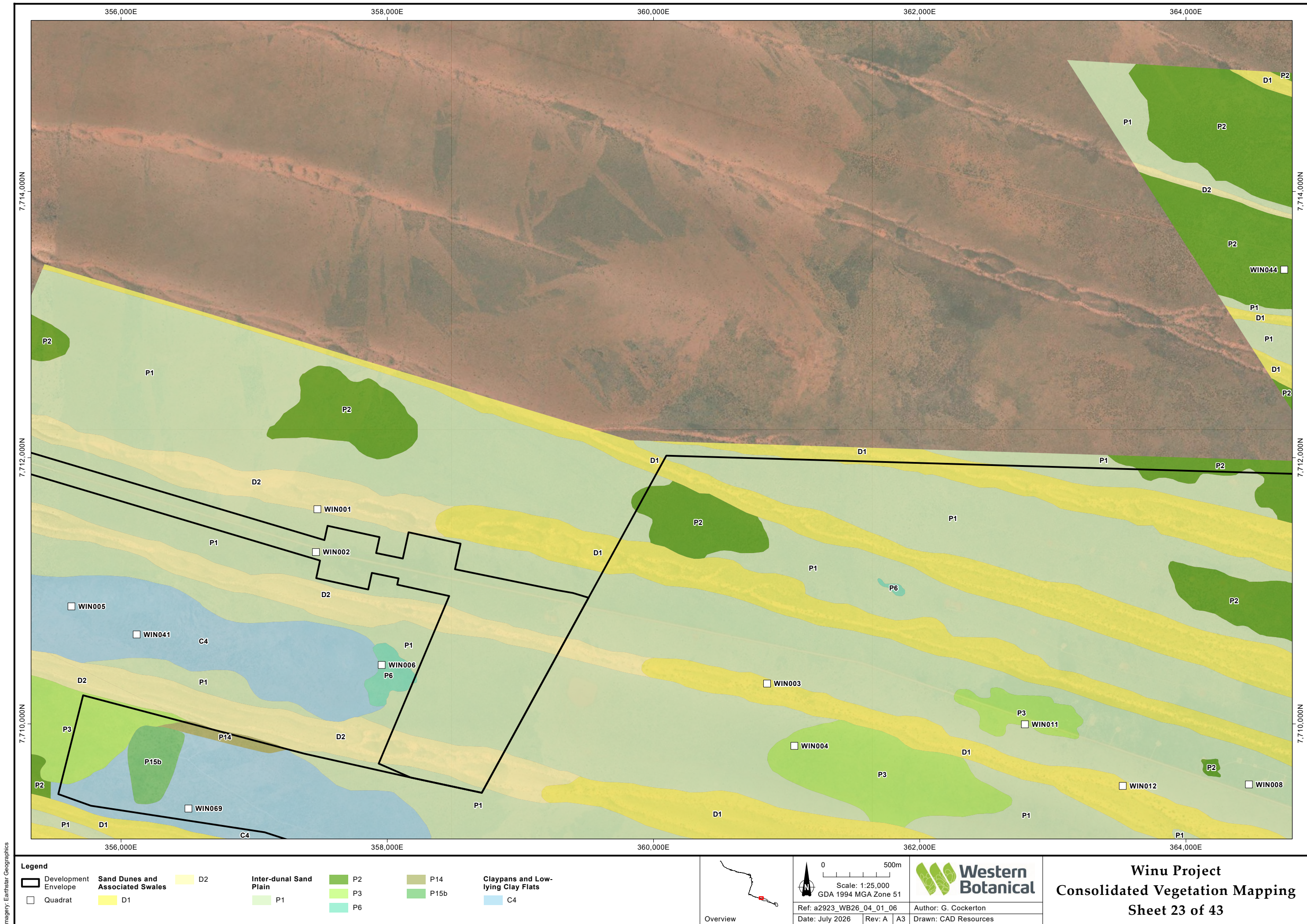




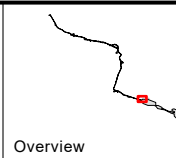








Imagery: Earthstar Geographics

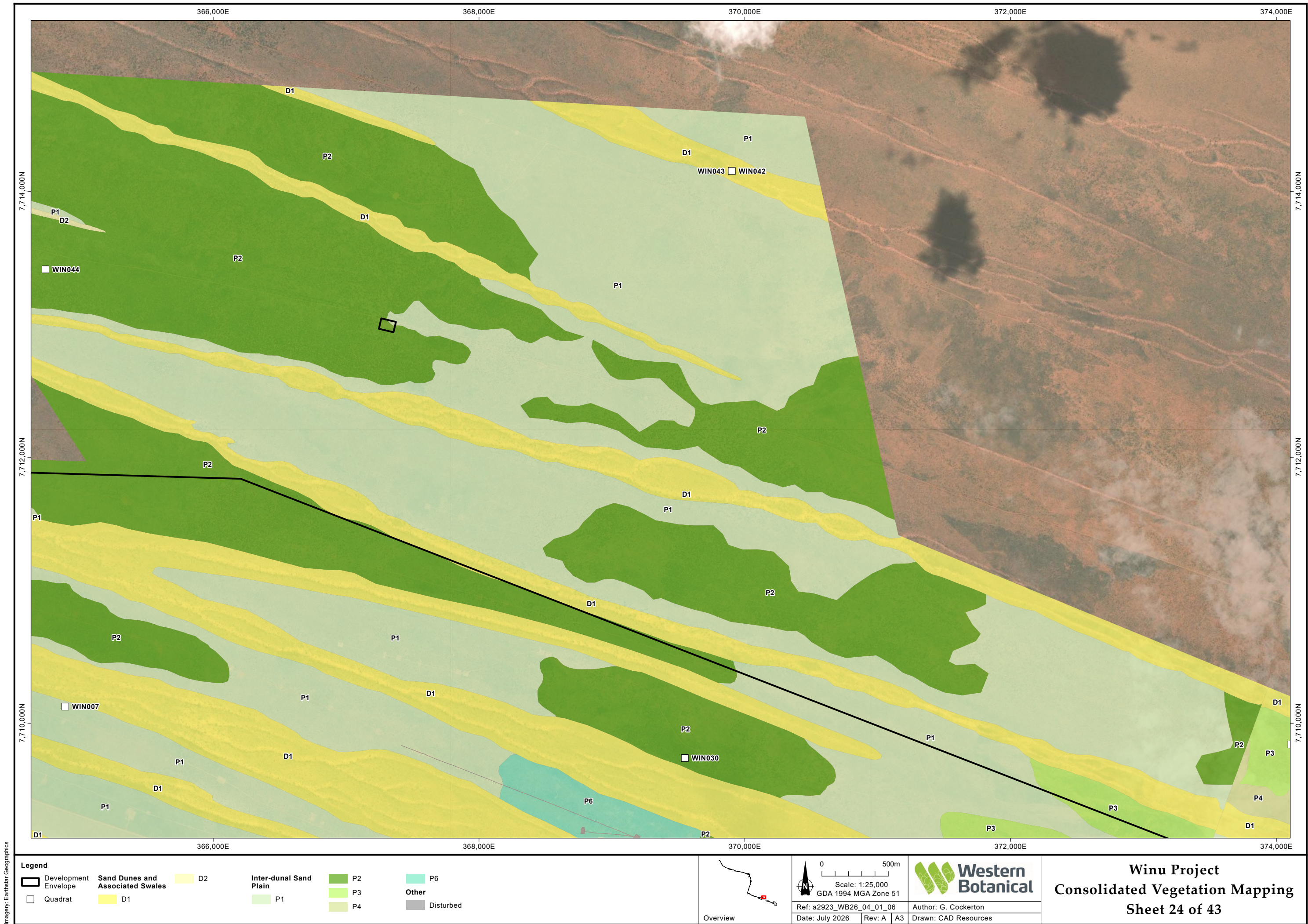


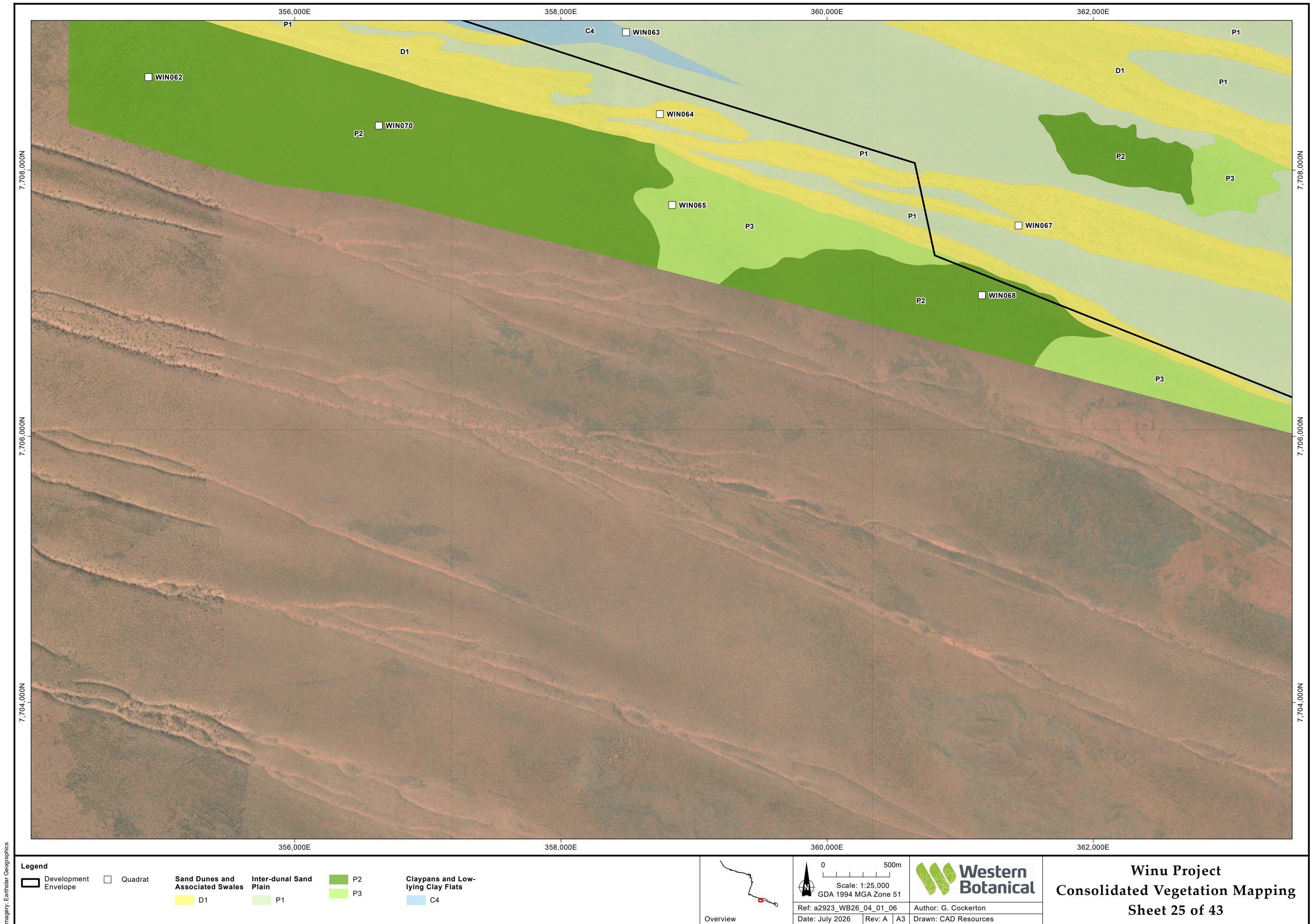
0 500m
Scale: 1:25,000
GDA 1994 MGA Zone 51

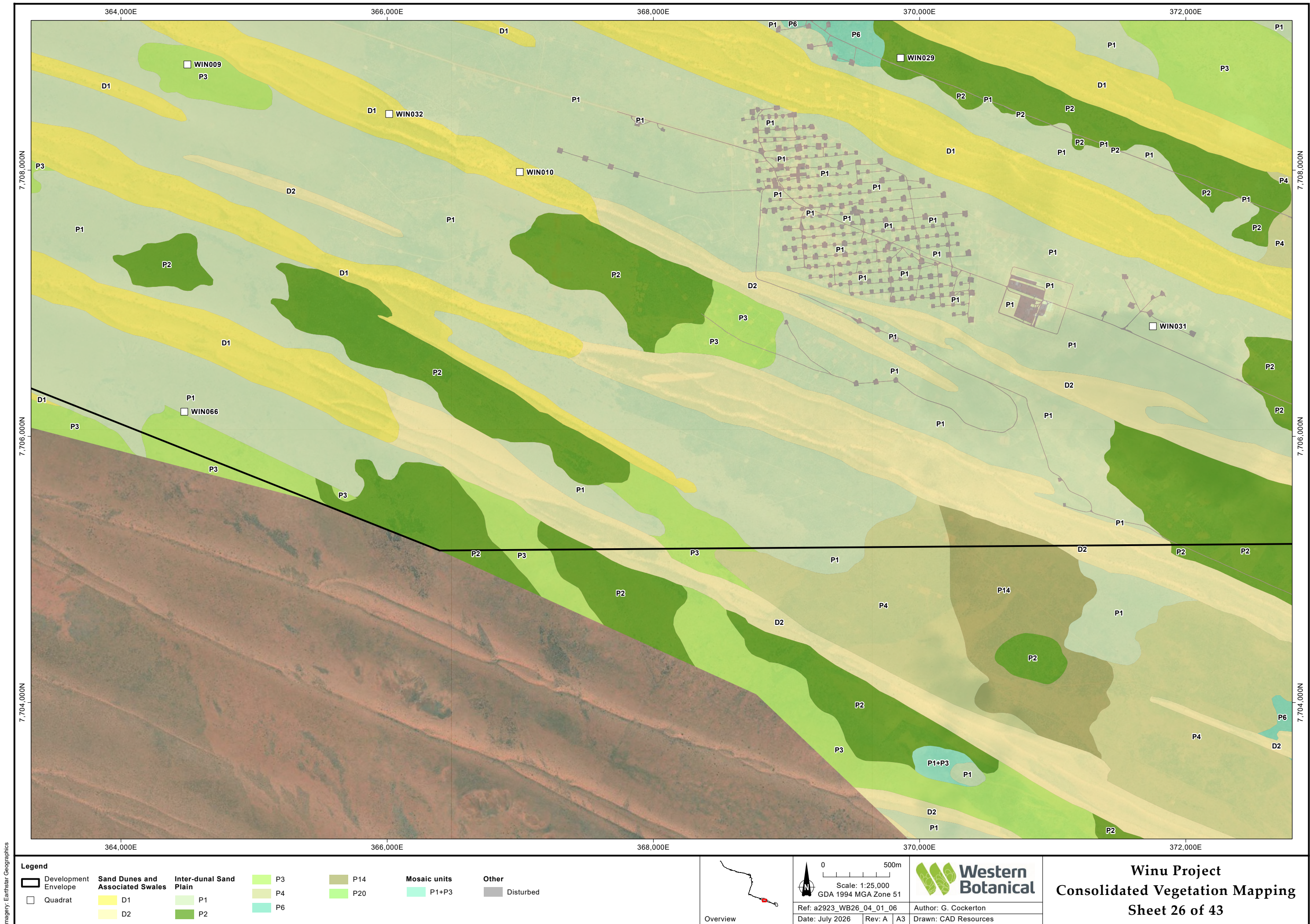
Ref: a2923_WB26_04_01_06
Date: July 2026

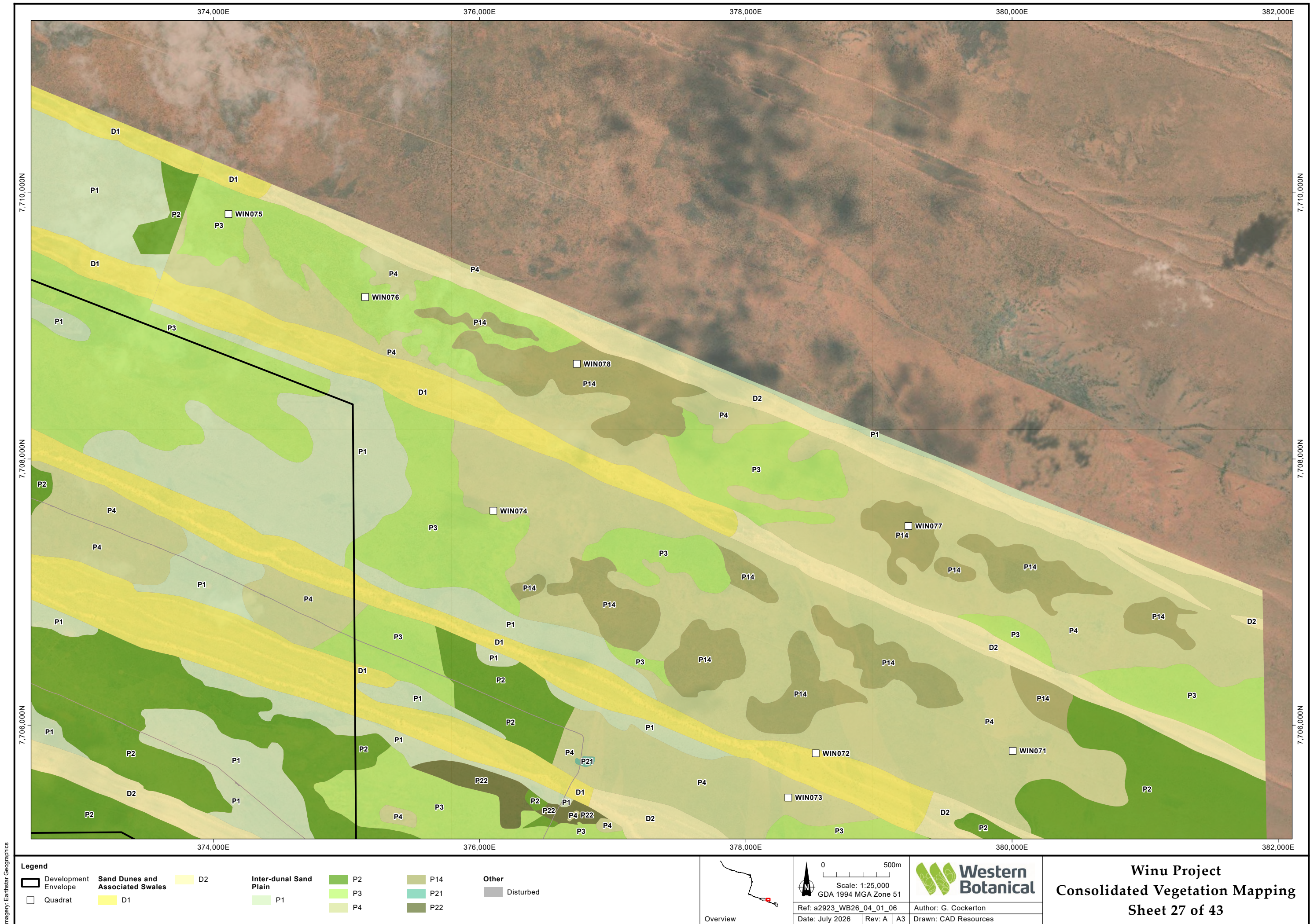
Western Botanical

Author: G. Cockerton
Drawn: CAD Resources

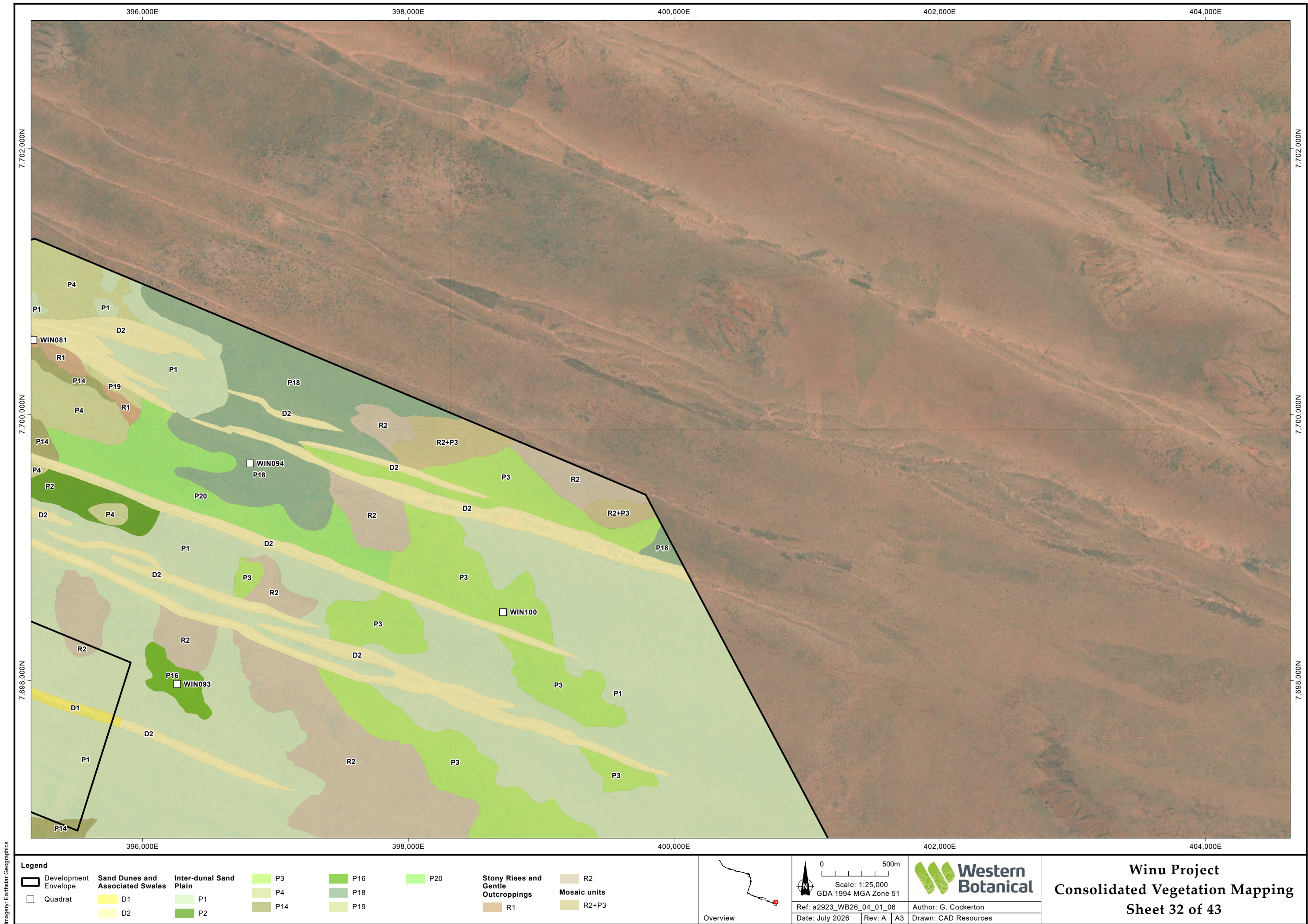




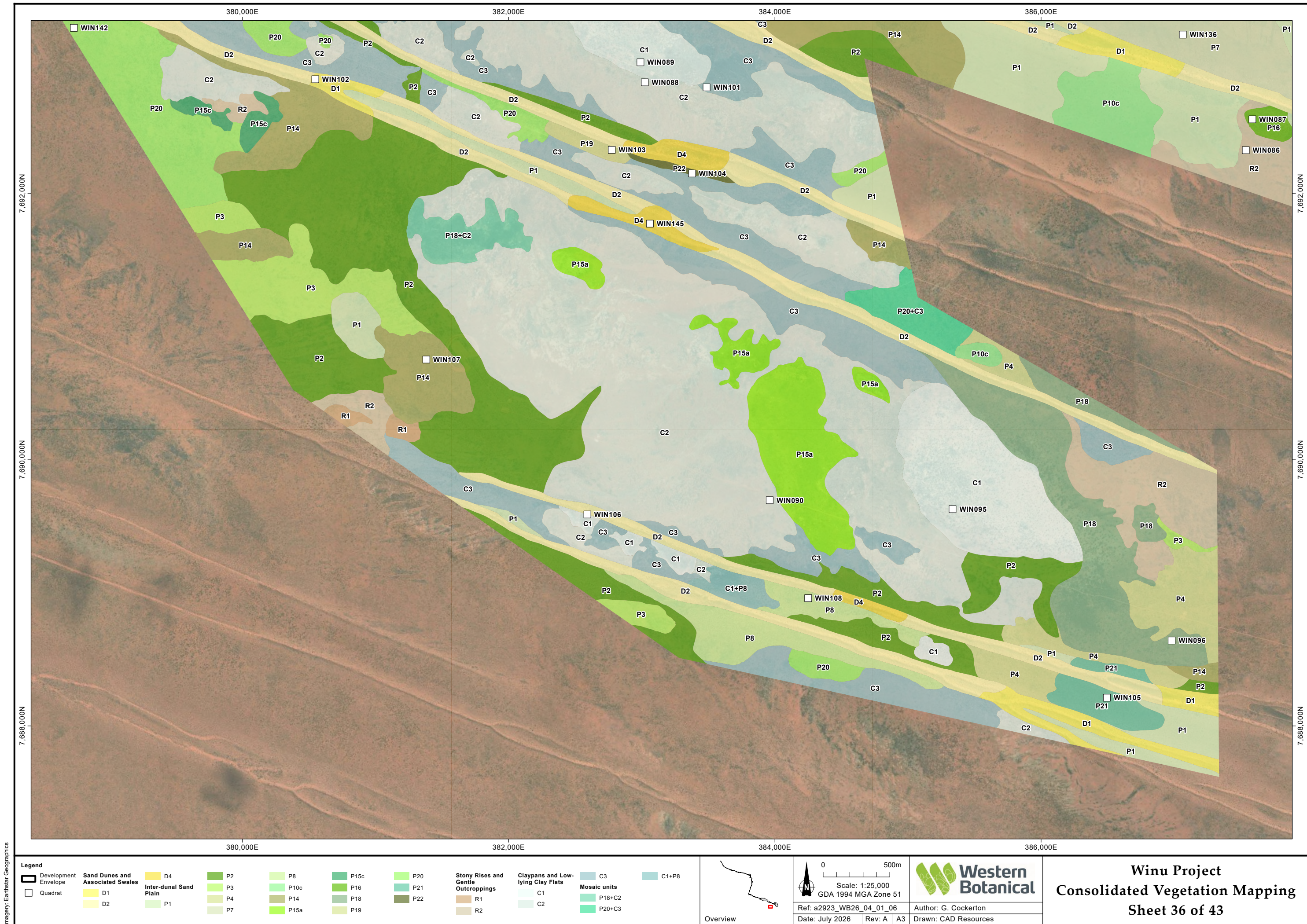








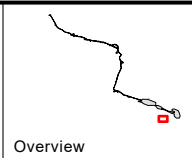




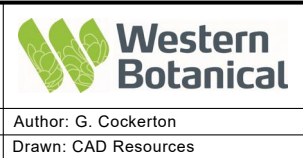
Imagery: Earthstar Geographics

Legend

- | | | | | | | | | | | |
|----------------------|----------------------------------|------------------------|----|------|------|-----|-------------------------------------|-----------------------------------|--------------|--------|
| Development Envelope | Sand Dunes and Associated Swales | D4 | P2 | P8 | P15c | P20 | Stony Rises and Gentle Outcroppings | Claypans and Low-lying Clay Flats | C3 | C1+P8 |
| Quadrat | D1 | Inter-dunal Sand Plain | P3 | P10c | P16 | P21 | R1 | C1 | Mosaic units | |
| | D2 | P1 | P4 | P14 | P18 | P22 | R2 | C2 | P18+C2 | P20+C3 |



0 500m
Scale: 1:25,000
GDA 1994 MGA Zone 51
Ref: a2923_WB26_04_01_06
Date: July 2026 Rev: A A3

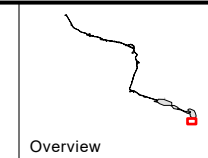


Winu Project
Consolidated Vegetation Mapping
Sheet 36 of 43

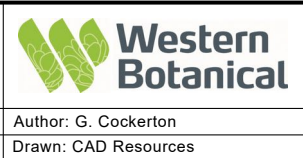


Imagery: Earthstar Geographics

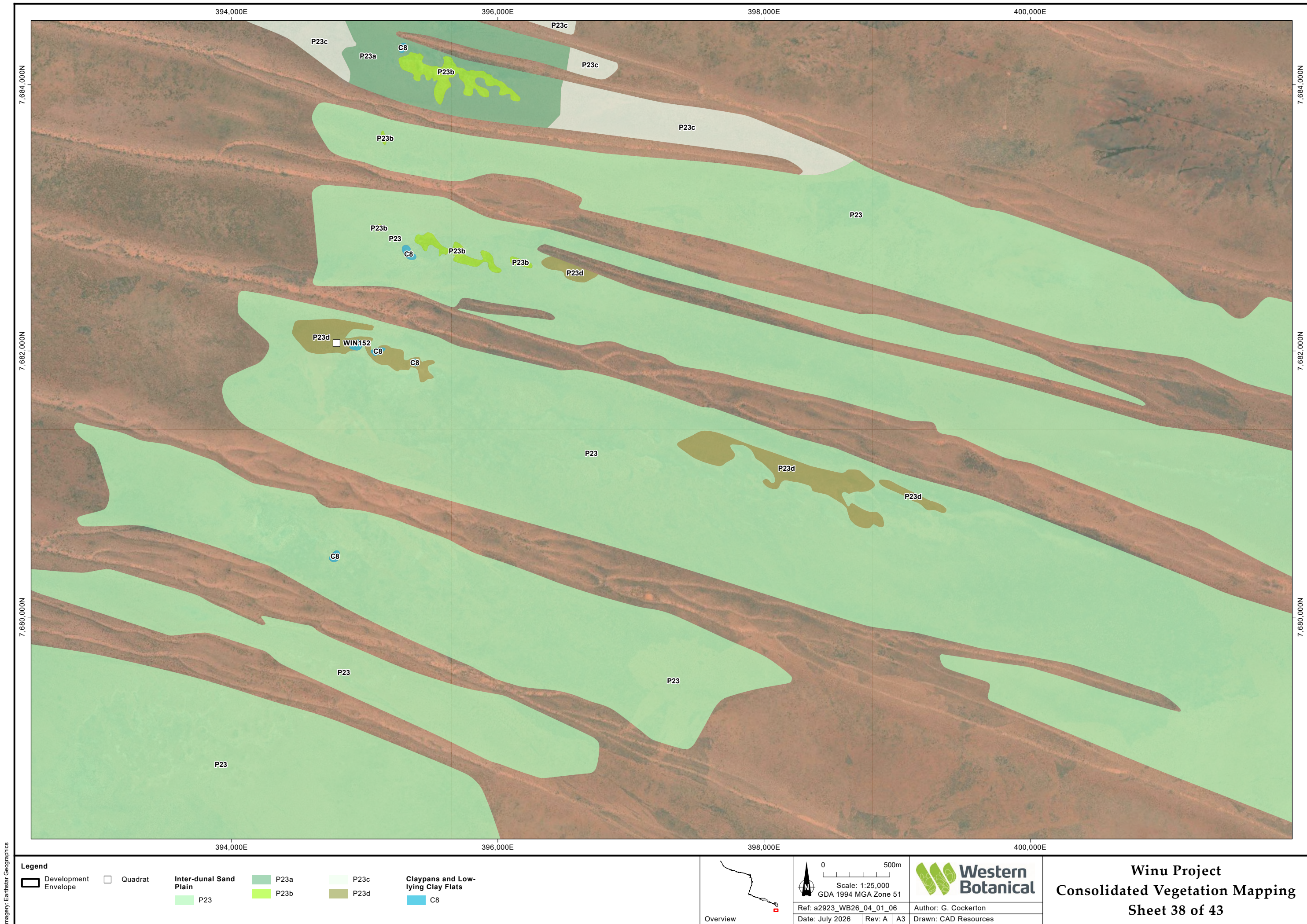
- Legend**
- Development Envelope
 - Quadrat
 - Sand Dunes and Associated Swales
D4
 - Inter-dunal Sand Plain
P23a
P23b
P23c
 - Claypans and Low-lying Clay Flats
C8
 - Mosaic units
C1+P23

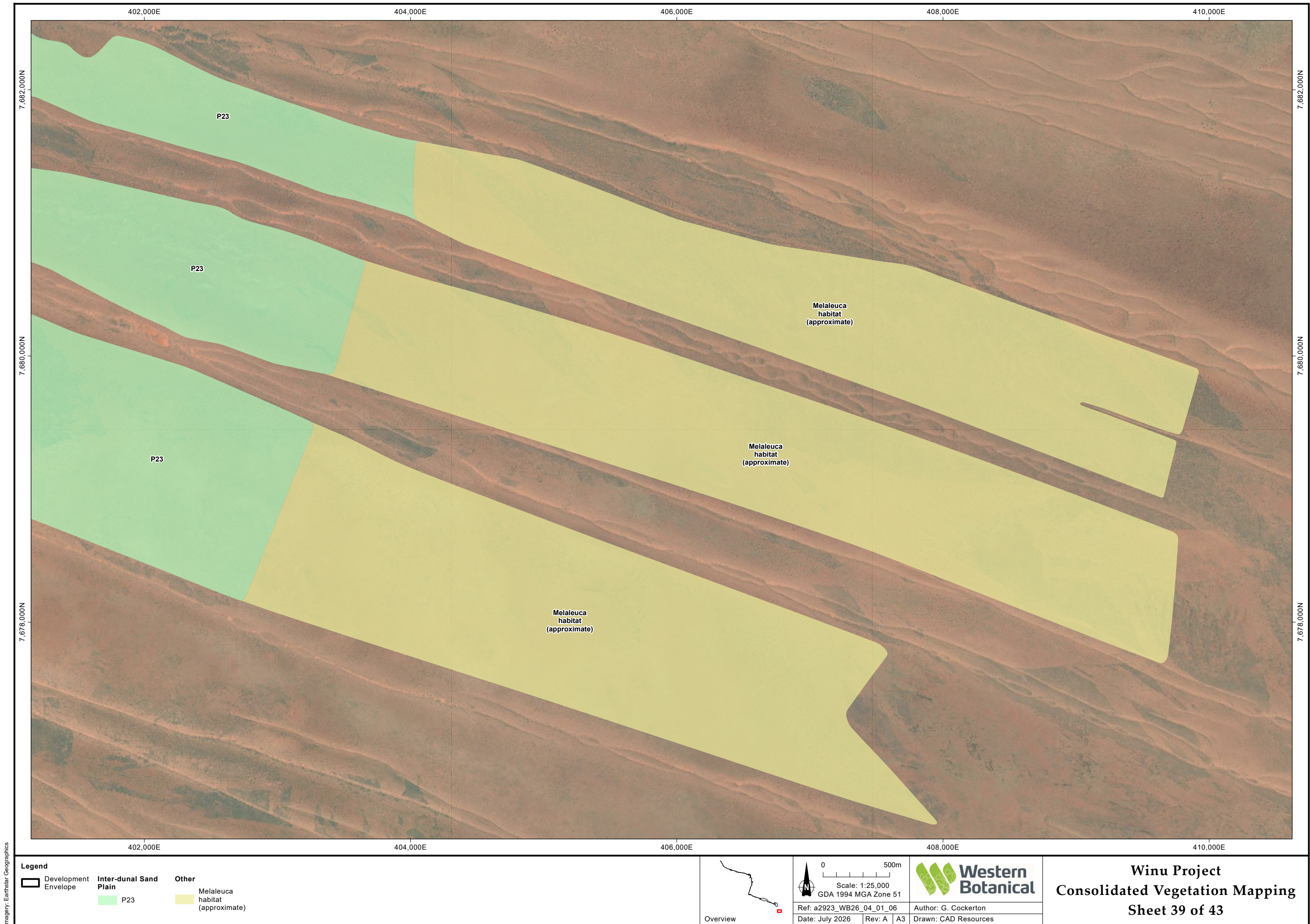


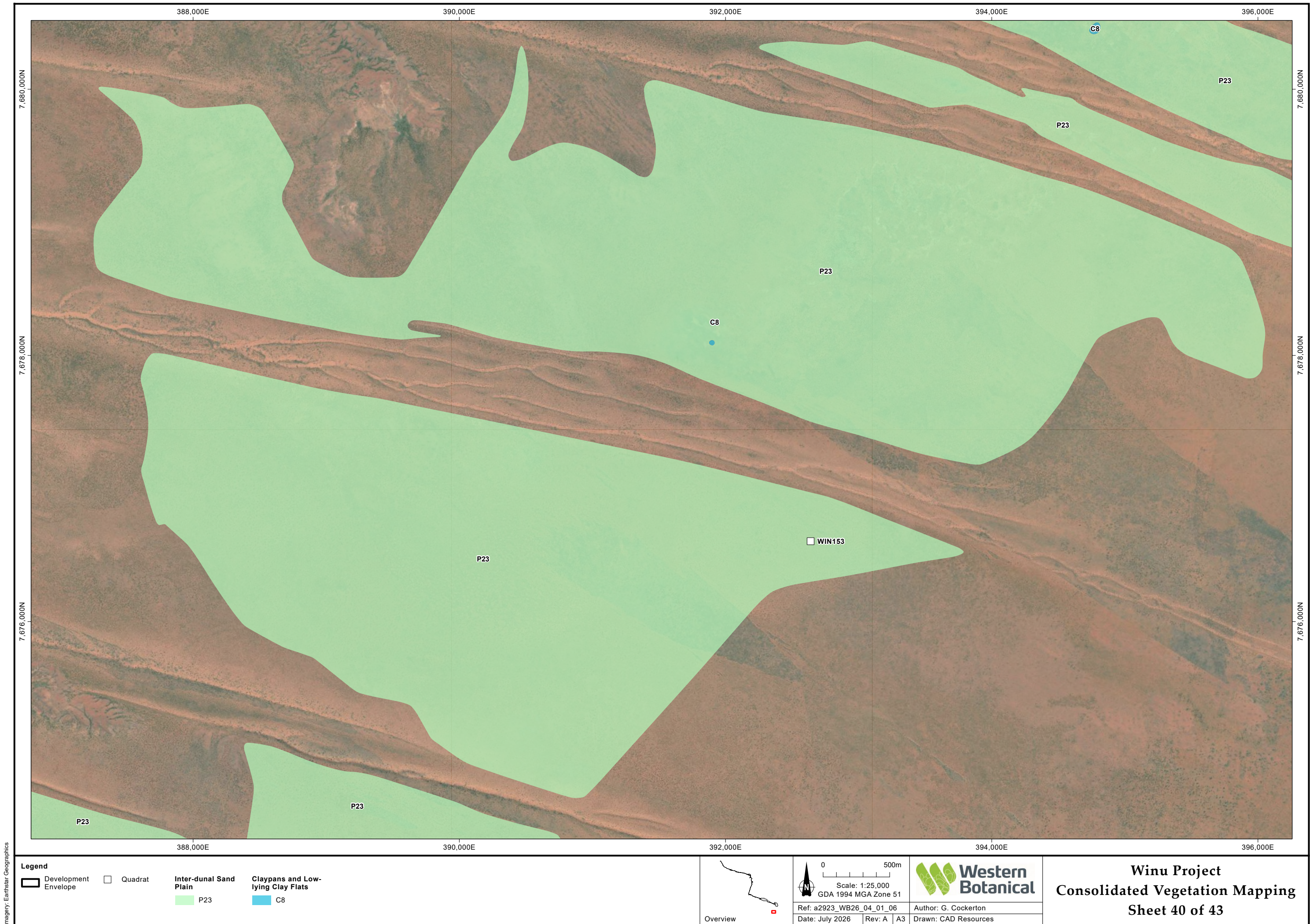
Scale: 1:25,000
GDA 1994 MGA Zone 51
Ref: a2923_WB26_04_01_06
Date: July 2026
Rev: A
A3



Winu Project
Consolidated Vegetation Mapping
Sheet 37 of 43













Appendix 10. Consolidated Vegetation Associations of the Winu Project

Sand Dunes and Associated Swales (D)

Vegetation Associations occurring on sand dunes throughout the Winu Project are closely related. The distinctive linear topography and deep red sandy soils support a number of species that are exclusive to such habitats. Larger sand dunes support scattered overstoreys of *Corymbia chippendalei* or *Owenia reticulata* while smaller dunes are dominated by low *Grevillea*, *Acacia* or *Melaleuca* shrublands over *Triodia schinzii* hummock grasslands.

D1 - *Corymbia chippendalei* Low Open Woodland over *Triodia schinzii*

The D1 – *Corymbia chippendalei* Low Open Woodland over *Triodia schinzii* Vegetation Association is associated with tall (~20m) linear sand dunes. The vegetation is comprised of an upper-stratum of *Corymbia chippendalei* 5-8 m and occasional *Owenia reticulata* 5 m with a PFC of 2-3%, over a mid-stratum dominated by *Acacia platycarpa* 2 m, *Acacia tumida* var. *kulparn* 2.5 m, *Crotalaria cunninghamii* subsp. *cunninghamii* 1.2 m, , *Grevillea stenobotrya* 3 m, *Sida* sp. Western sand dunes (P.K. Latz 11980) 1.8 m, *Thinicola incana* 2 m and , *Gyrostemon tepperi* 1.3 m PFC of 5-8%; over a lower-stratum of *Acacia sabulosa* 1.5 m, *Triodia schinzii* 1.5 m, *Gompholobium simplicifolium* 1 m, *Aristida holathera* var. *holathera* 0.5 m *Cyanostegia cyanocalyx* 0.7 m, *Dicrastylis doranii* 0.4 m, *Dampiera cinerea* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Eriachne aristidea* 0.4 m, *Euphorbia myrtilloides* 0.1 m, *Indigofera ammobia* (P3) 0.4 m, *Corynotheca asperata* (P3) 0.6 m, *Newcastelia cladotricha* 0.4 m, *Panicum australiense* var. *australiense* 0.1 m, *Paractaenum refractum* 0.4 m, *Paranotis pterospora* 0.1 m, *Scaevola parvifolia* subsp. *parvifolia* 0.3 m, *Spermacoce occidentalis* 0.1 m with a PFC of 10-15%.

The D1 association is separated from other sand dune associations due to the dominance of *Corymbia chippendalei*, and is most prevalent within the MIA. It is considered to be in Excellent condition. Conservation significant flora species typically occurring within this association include *Indigofera ammobia* (P3), *Corynotheca asperata* and *Synostemon arenosus* (P3).



Plate 1. D1 - *Corymbia chippendalei* Low Open Woodland over *Triodia schinzii* (Biota 2021)

D2 - *Owenia reticulata* Scattered Low Trees over *Triodia schinzii*

The D2 – *Owenia reticulata* Scattered Low Trees over *Triodia schinzii* is closely related to the D1 association. The upper-stratum is characterised by the presence of *Owenia reticulata* 5 m with a PFC of 1%, over a mid-stratum shrubland of *Erythrophleum chlorostachys* 1.5 m, *Acacia platycarpa* 1.2 m, *Acacia tumida* var. *kulparn* 1.5 m, *Thinicola incana* 1.5 m, *Acacia sericophylla* 1.8 m, *Grevillea stenobotrya* 2 m, *Grevillea wickhamii* 2.5 m, *Gyrostemon tepperi* 1.5 m, *Sida* sp. Western sand dunes (P.K. Latz 11980) 1.6 m, *Crotalaria cunninghamii* 1.6 m and *Triodia schinzii* 0.4-1.2 m, with a PFC of 20-30%, over a lower-stratum of *Dicrastylis doranii* 0.4 m, *Dampiera cinerea* 0.5 m, *Petalostylis cassioides* 1 m, *Gompholobium simplicifolium* 0.4 m, *Acacia anaticeps* 1 m, *Aristida holathera* var. *holathera* 0.3 m, *Calytrix carinata* 0.6 m, *Eriachne aristidea* 0.3 m, *Eragrostis eriopoda* 0.3 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Indigofera ammobia* (P3) 0.4 m, *Scaevola parvifolia* subsp. *parvifolia* 0.3 m, with a PFC of 20-30%.

The D2 association is separated from other sand dune associations due to the dominance of *Owenia reticulata*. It is dispersed throughout the MIA and Texas and Rimfire Bore Fields. The D2 association is considered to be in Excellent condition. Conservation significant flora species typically occurring within this association include *Indigofera ammobia* (P3), *Corynotheca asperata* (P3), *Synostemon arenosus* (P3) and occasionally *Comesperma sabulosum* (P3).



Plate 2. D2 - *Owenia reticulata* Scattered Low Trees over *Triodia schinzii*

D3 - *Grevillea stenobotrya*, *Grevillea wickhamii* & *Acacia anaticeps* Tall Shrubland over *Triodia schinzii*

The D3 - *Grevillea stenobotrya*, *Grevillea wickhamii* & *Acacia anaticeps* Tall Shrubland over *Triodia schinzii* Vegetation Association is characterised by a mid/upper-stratum of *Grevillea stenobotrya* 3.5 m, *Grevillea wickhamii* 3 m, *Erythrophleum chlorostachys* 3.5 m, *Acacia anaticeps* 4 m, and occasional *Gardenia pyriformis* subsp. *keartlandii* 4 m, *Acacia tumida* var. *kulparn* 2 m and *Grevillea eriostachya* 2 m, with a PFC of 5-20%, over a lower stratum hummock grassland dominated by *Triodia schinzii* 1.2 m with shrubs and grasses including *Sida* sp. Western sand dunes (P.K. Latz 11980) 1.2 m, *Aristida holathera* var. *holathera* 0.4 m, *Acacia stellaticeps* 0.4 m, *Calytrix carinata* 0.8 m, *Cassytha capillaris* 0.5 m, *Cyanostegia cyanocalyx* 0.7 m, *Corynotheca gracilis* 0.5 m, *Dampiera cinerea* 0.4 m, *Eragrostis eriopoda* 0.3 m, *Eriachne aristidea* 0.3 m, *Gyrostemon tepperi* 1.2 m, *Newcastelia cladotricha* 0.4 m, *Ptilotus arthrolasius* 0.5 m, *Spermacoce occidentalis* 0.2 m and *Trianthema pilosum* 0.1 m, with a combined PFC of 30%.

The D3 Vegetation Association occurs on lower sand dunes located within the RAC. The vegetation condition comprising this association is considered Excellent. Conservation significant flora species typically occurring within this association include *Corynotheca asperata* (P3).



Plate 3. D3 - *Grevillea stenobotrya*, *Grevillea wickhamii* & *Acacia anaticeps* Tall Shrubland over *Triodia schinzii* (Biota 2021)

D4 - *Melaleuca lasiandra* Open Low Shrubland over *Triodia schinzii*

The *Melaleuca lasiandra* Open Low Shrubland over *Triodia schinzii* Vegetation Association is characterised by a mid/upper stratum of *Melaleuca lasiandra* 1.8 m, *Thinicola incana* 1.6 m, *Acacia ancistrocarpa* 1.6 m, *Grevillea eriostachya* 1.2 m, and *Acacia tumida* var. *kulparn* 1 m, with a PFC of 8-10%, over a lower stratum of *Triodia schinzii* 1.5 m, *Acacia sabulosa* 1 m, *Jacksonia aculeata* 0.6 m, *Dicrastylis cordifolia* 0.4 m, *Mirbelia viminalis* 0.7 m, *Gompholobium simplicifolium* 0.6 m, *Aristida holathera* var. *holathera* 0.4 m, *Calytrix carinata* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Panicum australiensis* 0.1 m, with a PFC of 20-30%. The D4 association is strongly related to the other sand dune associations, separated by the lack of overstory species, *Eucalyptus chippendalei* and *Owenia reticulata*, and dominance of *Melaleuca lasiandra*.

The D4 Vegetation Association has a limited extent across the Winu Project, only occurring in Texas Bore Field. The vegetation is considered Excellent condition. While no Conservation significant flora have been recorded within this association, it is possible that it may contain *Comesperma sabulosum* (P3).



Plate 4. D4 - *Melaleuca lasiandra* Open Low Shrubland over *Triodia schinzii*

Interdunal Sand Plains

Vegetation Associations occurring on Interdunal sand plains are the dominant feature throughout the Winu Project, with each of the described Vegetation Associations closely related, and strongly correlated with depth of the underlying red to pale orange sands.

P1 - *Acacia platycarpa* (*Acacia tumida* var. *kulparn*) Open Low Shrubland over *Triodia schinzii*

The P1 - *Acacia platycarpa* (*Acacia tumida* var. *kulparn*) Open Low Shrubland over *Triodia schinzii* Vegetation Association occurs on deeper red sands associated with lower sand dune slopes or interdunal sand plains. It is characterised by a sparse upper-stratum of *Owenia reticulata* 8 m with a PFC of <1%, over a mid-stratum shrubland dominated by *Acacia platycarpa* 2 m, *Acacia tumida* var. *kulparn* 2.5 m, *Grevillea wickhamii* subsp. *hispidula* 3 m with occasional *Acacia sericophylla* 3 m, *Erythrophleum chlorostachys* 3 m, *Acacia ancistrocarpa* 2.5 m and *Grevillea eriostachya* 1.5 m with a PFC of 10-20%. This is over a lower-stratum hummock grassland dominated by *Triodia schinzii* 1.5 m with shrubs and grasses including *Gompholobium simplicifolium* 0.7 m, *Jacksonia aculeata* 0.8 m, *Calytrix carinata* 1 m, *Dicrastylis cordifolia* 0.5 m, *Dodonaea coriacea* 0.7 m, *Amphipogon sericeus* 0.4 m, *Aristida holathera* var. *holathera* 0.4 m, *Bonamia erecta* 0.2 m, *Cassytha capillaris* 0.5 m, *Dampiera candicans* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Indigofera boviparda* subsp. *eremaea* 0.4 m, *Eriachne lanata* 0.5 m, *Goodenia hartiana* (P2) 0.3 m with a combined PFC of 20-40%. *Acacia platycarpa*, *Acacia tumida* var. *kulparn* and *Grevillea wickhamii* subsp. *hispidula* have each been observed to dominate individually in different areas of the Winu Project.

The vegetation comprising the P1 association is considered to be in Excellent condition. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 5. P1 - *Acacia platycarpa* (*Acacia tumida* var. *kulparn*) Open Low Shrubland over *Triodia schinzii*

P2 - *Acacia ancistrocarpa* Open Shrubland over *Triodia schinzii*

The P2 - *Acacia ancistrocarpa* Open Shrubland over *Triodia schinzii* Vegetation Association consists of an upper stratum of scattered *Owenia reticulata* 8 m and *Erythrophleum chlorostachys* 4 m with a PFC 1%, over a mid-stratum shrubland dominated by *Acacia ancistrocarpa* 3 m, with *Acacia macrocarpa* 1.5 m, *Grevillea wickhamii* subsp. *hispidula* 3 m, *Acacia monticola* 2.5 m, *Acacia sericophylla* 2 m and *Dodonaea hispidula* 1.6 m with a combined PFC of 15%. Over *Triodia schinzii* 1.2-1.5 m, *Calytrix carinata* 1 m, *Dampiera cinerea* 0.5 m, *Dicrastylis cordifolia* 0.4 m, *Dodonaea coriacea* 1 m, *Eriachne aristidea* 0.3 m, *Eriachne lanata* 0.4 m, *Goodenia armitiana* 0.3 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Amphipogon sericeus* 0.5 m, *Aristida holathera* var. *holathera* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Goodenia armitiana* 0.4 m, *Indigofera boviparda* subsp. *eremaea* 0.5 m and *Bonamia erecta* 0.3 m, with a PFC of 15-40%. The P2 Vegetation Association is strongly related to sandplain associations P1-7 and P10c, containing an almost identical suite of understory shrubs and grasses.

The P2 Vegetation Association occurs on deep red sands, and is the most prevalent association across the Winu Project. The condition of the vegetation comprising the P2 Association is considered to be Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 6. P2 - *Acacia ancistrocarpa* Open Shrubland over *Triodia schinzii*

P3 - *Acacia drepanocarpa* subsp. *latifolia* Open Shrubland over *Triodia schinzii*

The P3 - *Acacia drepanocarpa* subsp. *latifolia* Open Shrubland over *Triodia schinzii* Vegetation Association is characterised by of an upper stratum of scattered *Owenia reticulata* 8 m and *Erythrophleum chlorostachys* 4 m, with a PFC of 1%, over a mid-stratum shrubland dominated by *Acacia drepanocarpa* subsp. *latifolia* 2.5 m, *Acacia platycarpa* 1.2 m, and occasional *Acacia ancistrocarpa* 2.5 m and *Grevillea wickhamii* subsp. *hispidula* 2 m, with a PFC of 10-15%, over a lower stratum hummock grassland dominated by *Triodia schinzii* 1.2 m, with shrubs and grasses including *Hakea macrocarpa* 1 m, *Calytrix carinata* 1 m, *Jacksonia aculeata* 1 m, *Dicrastylis cordifolia* 0.4 m, *Amphipogon sericeus* 0.3 m, *Aristida holathera* var. *holathera* 0.4 m, *Bonamia alatisemina* 0.1 m, *Eragrostis eriopoda* 0.3 m, *Eriachne lanata* 0.4 m, *Goodenia armitiana* 0.3 m, *Goodenia hartiana* (P2) 0.4 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Indigofera boviparda* subsp. *eremaea* 0.4 m, *Ptilotus astrolasius* 0.5 m and *Ptilotus arthrolasius* 0.5 m, with a combined PFC of 15-40%. The P3 Vegetation Association is strongly related to sandplain associations P1-7 and P10c, containing an almost identical suite of understory shrubs and grasses. Areas of high *Acacia drepanocarpa* subsp. *latifolia* cover also occur adjacent to rocky outcrops, where it mosaics with R2 vegetation.

The P3 Vegetation Association typically occurs on deep red sands. The vegetation condition is considered Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 7. P3 - *Acacia drepanocarpa* subsp. *latifolia* Open Shrubland over *Triodia schinzii*

P4 - *Acacia orthocarpa* Open Shrubland over *Triodia schinzii*

The P4 - *Acacia orthocarpa* Open Shrubland over *Triodia schinzii* Vegetation Association is characterised by of an upper stratum of scattered *Owenia reticulata* 8 m and *Erythrophleum chlorostachys* 4 m, with a PFC of 1%, over a mid-stratum shrubland dominated by *Acacia orthocarpa* 2.5 m, *Acacia ancistrocarpa* 2 m, *Acacia monticola* 1.5 m and *Grevillea wickhamii* subsp. *hispidula* 3 m, with a PFC of 5-10%. This is over a lower stratum hummock grassland of *Triodia schinzii* 1.4 m with shrubs and grasses including *Hakea macrocarpa* 1.2 m, *Amphipogon sericeus* 0.5 m, *Aristida holathera* var. *holathera* 0.4 m, *Bonamia erecta* 0.4 m, *Calytrix carinata* 1 m, *Dampiera candicans* 0.5 m, *Dicrastylis cordifolia* 0.4 m, *Eragrostis eriopoda* 0.4 m, *Eriachne lanata* 0.6 m, *Goodenia armitiana* 0.4 m, *Goodenia hartiana* (P3) 0.4 m, *Halgania solanacea* var. *solanacea* 0.4 m, *Indigofera boviperda* subsp. *eremaea* 0.5 m, *Paraneurachne muelleri* 0.5 m, *Ptilotus arthrolasius* 0.4 m, *Ptilotus astrolasius* 0.4 m, *Ptilotus calostachyus* 0.6 m, *Scaevola parvifolia* subsp. *parvifolia* 0.4 m, *Tephrosia arenicola* 0.7 m and *Trigastrotheca molluginea* 0.2 m, with a PFC 20-40 %. The P4 Vegetation Association is strongly related to sandplain associations P1-7 and P10c, containing an almost identical suite of understory shrubs and grasses.

The P4 Vegetation Association typically occurs on deep red sands. The vegetation condition is considered Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 8. P4 - *Acacia orthocarpa* Open Shrubland over *Triodia schinzii*

P5 - *Acacia* spp. Scattered Shrubs over *Sorghum plumosum* var. *plumosum* & *Triodia schinzii*

The P5 - *Acacia* spp. Scattered Shrubs over *Triodia schinzii* Vegetation Association is characterised by an upper-stratum of scattered *Owenia reticulata* 8 m and *Erythrophleum chlorostachys* 4 m, with a PFC of 1%, over a mid-stratum of scattered shrubs including *Acacia* spp., *Mirbelia viminalis* 1.5 m with *Calytrix carinata* 1.2 m and occasional *Grevillea wickhamii* subsp. *hispidula* 1.5 m PFC 10% over a lower stratum of *Triodia schinzii* 1.2 m *Amphipogon sericeus* 0.5 m, *Dampiera candidans* 0.3 m, *Dicrastylis cordifolia* 0.4 m, *Dodonaea coriacea* 0.6 m, *Jacksonia aculeata* 0.7 m, *Tephrosia arenicola* 0.9 m, *Bonamia erecta* 0.3 m, *Goodenia azurea* subsp. *hesperia* 0.4 m, *Halgania solanacea* subsp. *solanacea* 0.3 m, *Leptosema anomalum* 0.4 m, *Ptilotus calostachyus* 0.6 m, *Scaevola parvifolia* subsp. *parvifolia* 0.4 m, with a PFC of 35%. The P5 association is closely related to the R2 association, the species composition suggesting sub cropping rock at depth.

The P5 association predominantly occurs in the MIA, with some areas occurring in the Rimfire and Texas Bore Fields. The vegetation comprising the P5 association is considered to be in Excellent condition, however, all quadrat sites were established in post-fire successional communities.



Plate 9. P5 - *Acacia* spp. Scattered Shrubs over *Sorghum plumosum* var. *plumosum* & *Triodia schinzii* (Biota 2021).

P6 - *Owenia reticulata* & *Erythrophleum chlorostachys* Scattered Low Trees over *Triodia schinzii* (*Triodia epactia*)

The P6 - *Owenia reticulata* & *Erythrophleum chlorostachys* Scattered Low Trees over *Triodia schinzii* (*Triodia epactia*) Vegetation Association is characterised by a sparse upper to middle stratum of scattered *Owenia reticulata* & *Erythrophleum chlorostachys* 3-4 m with occasional *Acacia* spp. 2 m with a PFC of 1-3% , over a lower-stratum dominated by of *Sorghum plumosum* var. *plumosum* 1.5 m as well as *Triodia schinzii* 1.5 m and *Triodia epactia* 1.2 m, with *Calytrix carinata* 1 m, *Bonamia erecta* 0.3 m, *Dampiera candicans* 0.4 m, *Gompholobium simplicifolium* 0.5 m, *Eriachne lanata* 0.4 m, *Indigofera boviparda* subsp. *eremaea* 0.3 m, *Aristida holathera* var. *holathera* 0.4 m, *Dicrastylis exsuccosa* 0.5 m, *Ptilotus arthrolasius* 0.4 m, *Ptilotus astrolasius* 0.3 m and *Eragrostis eriopoda* 0.3 m, with a PFC of 30-40%. The P6 Vegetation Association typically occurs on shallower sands with an increased clay content, it is strongly related to with sandplain associations P1-7 and P10c, containing an almost identical suite of understory shrubs and grasses.

The condition of the vegetation is Excellent. Conservation significant flora species encountered within this association include and *Tribulopsis marliesiae* (P3).



Plate 10. P6 - *Owenia reticulata* & *Erythrophleum chlorostachys* Scattered Low Trees over *Triodia schinzii* (*Triodia epactia*)

P7 - *Calytrix carinata* Low Shrubland over *Triodia schinzii*

The P7 - *Calytrix carinata* Low Shrubland over *Triodia schinzii* Vegetation Association occurs on deep red sands. It is characterised by a sparse upper to middle stratum over dense *Calytrix carinata*. The upper stratum consists of scattered *Owenia reticulata* 6 m, with a PFC of 1%, over a mid-stratum of scattered shrubs including *Grevillea wickhamii* subsp. *hispidula* 3 m, and *Acacia ancistrocarpa* 3 m with a PFC 1%, over a lower stratum of *Calytrix carinata* 1.2 m (10-20%) and *Triodia schinzii* 0.4-1 m (20%) with occasional *Acacia tumida* var. *kulparn* 1 m, *Jacksonia aculeata* 0.5 m and *Ptilotus astrolasius* 0.2 m with a combined PFC of 50%. The P7 Vegetation Association is strongly associated with associations P1-6 and 10c, containing an almost identical suite of understory shrubs and grasses.

The P7 Vegetation Association has a limited distribution, located within the Texas Bore Field and Winu South. The condition of the vegetation comprising this association is considered Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2).



Plate 11. P7 - *Calytrix carinata* Low Shrubland over *Triodia schinzii*

P8 - *Acacia eriopoda* & *Acacia sericophylla* Open Shrubland over *Triodia schinzii* (*Triodia epactia*)

The P8 - *Acacia eriopoda* & *Acacia sericophylla* Open Shrubland over *Triodia schinzii* (*Triodia epactia*) Vegetation Association is characterised by an upper-stratum of scattered *Owenia reticulata* 5 m and *Erythrophleum chlorostachys* 4 m, with a PFC of 1%, over a mid-stratum shrubland dominated by of *Acacia eriopoda* 3.5 m and *Acacia sericophylla* 3 m with *Acacia ancistrocarpa* 2 m, *Acacia monticola* 2 m, *Grevillea wickhamii* 2 m and occasional *Acacia colei* var. *colei* 2.5 m and *Acacia tumida* var. *kulparn* 2 m, with a PFC of 5-10%. The lower stratum hummock grassland is dominated by *Triodia schinzii* 1.2 m with *Triodia epactia* 1.2 m and shrubs and grasses including *Acacia stellaticeps* 0.3 m, *Calytrix carinata* 0.5 m, *Cassytha capillaris* 0.4 m, *Corchorus sidoides* 0.2 m, *Eragrostis eriopoda* 0.2 m, *Eriachne lanata* 0.5 m, *Goodenia armitiana* 0.4 m, *Jacksonia aculeata* 0.6 m, *Ptilotus astrolasius* 0.4 m, *Sorghum plumosum* var. *plumosum* 1.2 m, *Aristida holathera* var. *holathera* 0.5 m, *Bonamia alatisemina* 0.1 m, *Arivela uncifera* 0.3 m, *Halgania solanacea* var. *solanacea* 0.4 m and *Trigastrotheca molluginea* 0.1 m, with a PFC of 20-35%.

The P8 Vegetation Association predominantly occurs around the RAC, as well as the Texas Bore Field. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 12. P8 - *Acacia eriopoda* & *Acacia sericophylla* Open Shrubland over *Triodia schinzii* (*Triodia epactia*)

P9 - *Acacia ancistrocarpa* & *Acacia monticola* Open Shrubland over *Triodia schinzii* (*Triodia epactia*)

The P9 - *Acacia ancistrocarpa* & *Acacia monticola* Open Shrubland over *Triodia schinzii* (*Triodia epactia*) Vegetation Association is characterised by an upper-stratum of scattered *Erythrophleum chlorostachys* 4 m, with a PFC of 1%; over a mid-stratum open shrubland dominated by *Acacia ancistrocarpa* 3.5 m, *Acacia monticola* 3-4 m and *Grevillea refracta* subsp. *refracta* 4 m with occasional *Acacia drepanocarpa* subsp. *drepanocarpa* 3 m and *Gardenia pyriformis* subsp. *keartlandii* 2.5 m with a PFC of 5-10%. The lower-stratum hummock grassland is dominated by *Triodia epactia* 0.4-1.5 m, and occasional *Triodia schinzii* 1.2 m with associated shrubs and grasses including *Sida arenicola* 1.2 m, *Hibiscus leptocladus* 0.5 m, *Aristida holathera* var. *holathera* 0.4 m, *Goodenia armitiana* 0.4 m, *Ptilotus astrolasius* 0.4 m, *Ptilotus calostachyus* 0.6 m, *Ptilotus polystachyus* 0.3 m, *Sorghum plumosum* var. *plumosum* 1 m, *Trianthema pilosum* 0.1 m, *Bonamia alatisemina* 0.1 m, *Bulbostylis barbata* 0.05 m, *Cassytha capillaris* 0.3 m, *Dodonaea coriacea* 0.5 m, *Euphorbia psilosperma* 0.1 m and *Trigastrotheca molluginea* 0.1 m, with a PFC of 20-30%.

The P9 Vegetation Association occurs on deep red sands, predominantly located around the RAC. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).

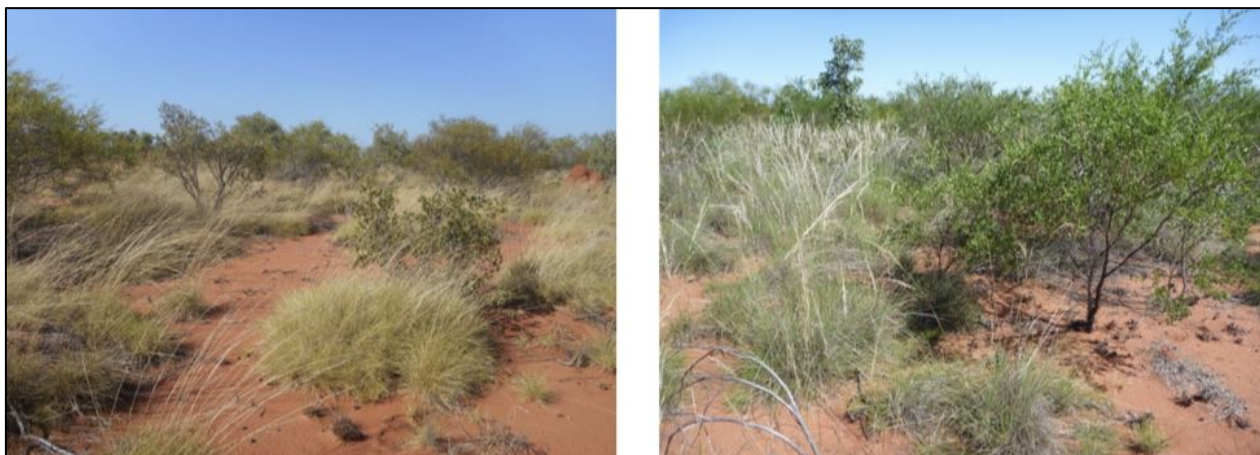


Plate 13. P9 - *Acacia ancistrocarpa* & *Acacia monticola* Open Shrubland over *Triodia schinzii* (*Triodia epactia*) (Biota 2021)

P10a - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia epactia*

The P10a - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia epactia* Vegetation Association is separated from other P10 associations based on the dominance of *Corymbia zygophylla* over *Triodia epactia*. It is characterised by an upper stratum of *Corymbia zygophylla* 3 m, with a PFC of 2-3%, over a mid-stratum of *Acacia ancistrocarpa* 2 m, *Acacia monticola* 2 m, *Acacia tumida* var. *kulparn* 2 m with occasional *Erythrophleum chlorostachys* 1.5 m, *Grevillea wickhamii* 1.5 m and *Acacia sericophylla* 2 m, with a PFC of 5-10%. The lower stratum hummock grassland is dominated by *Triodia epactia* 1.3 m with shrubs and grasses including, *Sorghum plumosum* var. *plumosum* 1.2 m, *Sida arenicola* 1 m, *Aristida holathera* var. *holathera* 0.5 m, *Corchorus sidoides* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Ptilotus calostachyus* 0.5 m, *Senna notabilis* 0.4 m, *Goodenia armitiana* 0.4 m, *Leptosema anomalum* 0.5 m, *Tephrosia* sp. D Kimberley Flora (R.D. Royce 1848) 0.1 m, *Boerhavia gardneri* 0.2 m, *Bulbostylis barbata* 0.05 m, *Euphorbia psilosperma* 0.1 m, *Panicum australiense* var. *australiense* 0.1 m, and *Trigastrotheca molluginea* 0.1 m with a combined PFC of 40-50%.

The P10a Vegetation Association predominantly occurs around the RAC, associated with red sands. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 14. P10a - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia epactia*

P10b - *Corymbia zygomphylla* Scattered Tree Mallees over *Triodia schinzii* and *Triodia epactia* (*Acacia stellaticeps*)

The P10b - *Corymbia zygomphylla* Scattered Tree Mallees over *Triodia schinzii* and *Triodia epactia* (*Acacia stellaticeps*) Vegetation Association is separated from other P10 associations based on the co-dominance of *Corymbia zygomphylla* with *Gardenia pyriformis* subsp. *keartlandii* over *Acacia anaticeps* and *Acacia stellaticeps* over *Triodia schinzii* and *Triodia epactia*. The upper stratum consists of *Corymbia zygomphylla* 2-3 m and *Gardenia pyriformis* subsp. *keartlandii* 3-6 m with *Erythrophleum chlorostachys* 2.5 m with a PFC 1-2% over a mid-stratum dominated by *Acacia anaticeps* 1.5 m, *Acacia tumida* var. *kulparn* 2 m and *Acacia sericophylla* 2 m, with a PFC of 5%. The lower stratum is a hummock grassland dominated by *Triodia schinzii* 0.5-1.5 m, and *Triodia epactia* 0.4-1.3 m with shrubs and grasses including *Gompholobium simplicifolium* 0.5 m, *Acacia stellaticeps* 0.4 m, *Aristida holathera* var. *holathera* 0.5 m, *Boerhavia gardneri* 0.4 m, *Corynotheca gracilis* 0.5 m, *Cyanostegia cyanocalyx* 0.7 m, *Eriachne obtusa* 0.5 m, *Gyrostemon tepperi* 1 m, *Jacksonia aculeata* 0.8 m, *Ptilotus arthrolasius* 0.3 m, *Ptilotus astrolasius* 0.3 m, *Sorghum plumosum* var. *plumosum* 1.2 m, *Tribulopsis marliesiae* (P3) 0.2 m, *Solanum diversiflorum* 0.2 m, *Bonamia alatisemina* 0.1 m, *Bonamia oblongifolia* (P3) 0.2 m, *Cassytha capillaris* 0.4 m, *Corchorus sidoides* 0.4 m, *Euphorbia psilosperma* 0.1 m, *Abildgaardia oxystachya* 0.1 m, *Bulbostylis barbata* 0.05 m, *Calandrinia strophiolata* 0.1 m, *Polygala isingii* 0.01 m, and *Trianthema pilosum* 0.01 m, with a combined PFC of 40%.

The P10b Vegetation Association occurs on deep red sand of highly eroded sand dunes or swales, located predominantly around section 1 of the RAC and Wallal Bore Field. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2), *Bonamia oblongifolia* (P3), *Polymeria* sp. Broome (K.F. Kenneally 9759), *Terminalia kumpaja* (P3) and *Tribulopsis marliesiae* (P3).



Plate 15. P10b - *Corymbia zygomphylla* Scattered Tree Mallees over *Triodia schinzii* and *Triodia epactia* (*Acacia stellaticeps*) (Biota 2021)

P10c - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia schinzii*

The P10c - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia schinzii* Vegetation Association is separated from other P10 associations based on the dominance of *Corymbia zygophylla* over *Triodia schinzii*. The upper stratum consists of scattered *Corymbia zygophylla* 2.5 m with a PFC of 1-10%, over a mid-stratum shrubland of *Acacia ancistrocarpa* 1-3 m, *Acacia drepanocarpa* 1.5 m, *Grevillea wickhamii* subsp. *hispidula* 3 m, *Acacia sericophylla* 2.5 m, *Acacia tumida* var. *kulparn* 1.8 m with occasional *Erythrophleum chlorostachys* 2-4 m and *Grevillea eriostachya* 2 m, with a PFC of 2-5%; over a hummock grassland dominated by *Triodia schinzii* 0.5-1.5 m with a PFC of 20-40%, with shrubs and grasses including *Gompholobium simplicifolium* 0.6 m, *Jacksonia aculeata* 0.8 m, *Calytrix carinata* 1 m, *Amphipogon sericeus* 0.5 m, *Aristida holathera* var. *holathera* 0.3 m, *Corchorus sidoides* subsp. *sidoides* 0.4 m, *Dampiera candicans* 0.4 m, *Dicrastylis cordifolia* 0.4 m, *Dodonaea coriacea* 0.7 m, *Eragrostis eriopoda* 0.3 m, *Eriachne lanata* 0.5 m, *Goodenia armitiana* 0.4 m, *Goodenia hartiana* (P2) 0.3 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Indigofera boviparda* subsp. *eremaea* 0.5 m, *Scaevola parvifolia* subsp. *parvifolia* 0.2 m, *Sida* sp. Pindan (B.G. Thomson 3398) 0.4 m, *Trigastrotheca molluginea* 0.1 m, *Ptilotus astrolasius* 0.3 m, and *Paraneurachne muelleri* 0.3 m, with a PFC of 20-50%.

The P10c Vegetation Association predominantly occurs around the Texas Bore Field, with minor areas also located along Section 2 of the RAC. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 16. P10c - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia schinzii*

P10d - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia brizoides*

The P10d - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia brizoides* Vegetation Association is separated from other P10 associations based on the dominance of *Triodia brizoides* – likely due to the presence of rock or gravel close to the surface. It consists of an upper-stratum of scattered *Corymbia zygophylla* 3.5 m and *Acacia colei* var. *colei* 3 m with a PFC of 2%, over a midstory shrubland of *Acacia ancistrocarpa* 2 m and *Acacia orthocarpa* 2.5 m, with a PFC of 2-3%. The lower-stratum hummock grassland dominated by *Triodia brizoides* 0.5-1 m with shrubs including *Jacksonia aculeata* 1 m and *Bonamia erecta* 0.3 m, with a PFC of 55%.

The P10d Vegetation Association occurs in the Texas Bore Field. The vegetation condition is considered as Excellent. No Conservation significant flora species have been recorded in this Association.



Plate 17. P10d - *Corymbia zygophylla* Scattered Tree Mallees over *Triodia brizoides*

P11 - *Grevillea refracta* (*Acacia ancistrocarpa* & *Acacia monticola*) Scattered Tall Shrubs over *Triodia epactia*

The P11 - *Grevillea refracta* (*Acacia ancistrocarpa* & *Acacia monticola*) Scattered Tall Shrubs over *Triodia epactia* Vegetation Association is characterised by a mid/upper stratum of scattered *Grevillea refracta* subsp. *refracta* 2-3.5 m, *Acacia ancistrocarpa* 2-3 m, *Acacia monticola* 2-3 m with occasional *Grevillea pyramidalis* 3.5 m and *Gardenia pyriformis* subsp. *keartlandii* 2 m, with a combined PFC of 2-5%, over a lower-stratum hummock grassland dominated by *Triodia epactia* 1 m and occasional *Triodia schinzii* 1.2 m, with shrubs and grasses including *Acacia sericophylla* 1 m, *Grevillea wickhamii* 1.5 m, *Sida arenicola* 1 m, *Sorghum plumosum* var. *plumosum* 1.2 m, *Aristida holathera* var. *holathera* 0.6 m, *Bonamia alatisemina* 1 m, *Cassytha capillaris* 0.4 m, *Eriachne obtusa* 0.5 m, *Ptilotus calostachyus* 0.5 m, *Ptilotus astrolasius* 0.4 m, *Eragrostis eriopoda* 0.3 m, *Panicum australiense* var. *australiense* 0.1 m, *Trigastrotheca molluginea* 0.1 m, *Bulbostylis barbata* 0.05 m, *Polycarpaea corymbosa* var. *corymbosa* 0.1 m and *Trianthema pilosum* 0.01 m, with a PFC of 20-25%.

The P11 Vegetation Association predominantly occurs around the RAC. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).

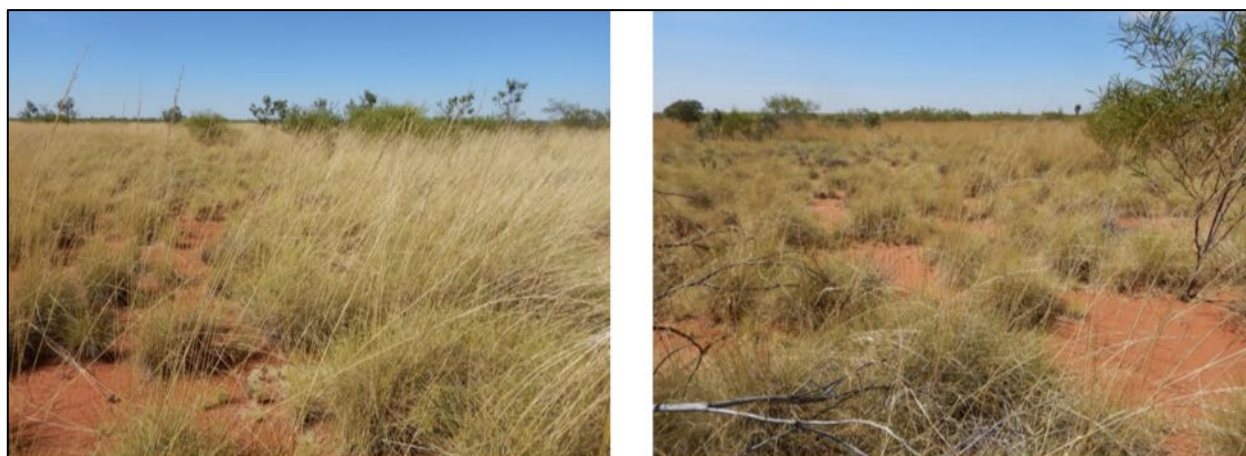


Plate 18. P11 - *Grevillea refracta* (*Acacia ancistrocarpa* & *Acacia monticola*) Scattered Tall Shrubs over *Triodia epactia* (Biota 2021)

P12 - *Grevillea refracta*, *Acacia monticola* & *Acacia colei* var. *colei* Open Shrubland over *Acacia adoxa* var. *adoxo* & *Triodia epactia*

The P12 - *Grevillea refracta*, *Acacia monticola* & *Acacia colei* var. *colei* Open Shrubland over *Acacia adoxa* var. *adoxo* & *Triodia epactia* Vegetation Association is characterised by an upper stratum of *Grevillea refracta* var. *refracta* 5 m and *Gardenia pyriformis* subsp. *keartlandii* 4 m with a PFC of 2%, over a mid-stratum shrubland of *Acacia ancistrocarpa* 2 m, *Acacia colei* var. *colei* 2.5 m, *Acacia monticola* 2.5 m and *Acacia sericophylla* 1.8 m, with PFC of 2-3%. The lower stratum hummock grassland is dominated by *Triodia epactia* 1.2 m with shrubs and grass including *Eulalia aurea* 0.6 m, *Ptilotus calostachyus* 0.6 m, *Sida arenicola* 0.8 m, *Corchorus sidoides* subsp. *vermicularis* 0.4 m, *Dodonaea coriacea* 0.8 m, *Goodenia azurea* subsp. *hesperia* 0.4 m, *Aristida holathera* var. *holathera* 0.4 m, *Eriachne obtusa* 0.4 m, *Sorghum plumosum* var. *plumosum* 1 m, *Panicum australiense* var. *australiense* 0.1 m, *Arivela viscosa* 0.4 m, *Boerhavia gardener* 0.3 m, *Cassytha capillaris* 0.3 m, *Euphorbia psilosperma* 0.1 m, *Ptilotus fusiformis* 0.3 m, *Trianthema pilosum* 0.01 m, and *Trianthema molluginea* 0.1 m with a PFC of 10-20%.

The P12 Vegetation Association is associated with sandy clay soils adjacent to low laterite rises along the RAC. The condition of the vegetation is considered as Excellent. While no Conservation significant flora species have been encountered to date within this association, considering the species composition, the record of *Goodenia azurea* subsp. *hesperia* may have been confused with *Goodenia hartiana* (P2) during initial surveys. It is likely that additional targeted surveys within this habitat may encounter *Goodenia hartiana* (P2) as well as *Tribulopsis marliesiae* (P3).



Plate 19. P12 - *Grevillea refracta*, *Acacia monticola* & *Acacia colei* var. *colei* Open Shrubland over *Acacia adoxa* var. *adoxo* & *Triodia epactia* (Biota 2021)

P13 - *Gardenia pyriformis* subsp. *keartlandii* Scattered Low Trees over *Triodia schinzii*

The P13 - *Gardenia pyriformis* subsp. *keartlandii* Scattered Low Trees over *Triodia schinzii* Vegetation Association is characterised by an upper-stratum of scattered *Owenia reticulata* 5 m with a PFC of 1%, over a mid-stratum open shrubland of *Gardenia pyriformis* subsp. *keartlandii* 2 m, with *Erythrophleum chlorostachys* 1.5 m, *Grevillea eriostachya* 1.2 m and *Grevillea wickhamii* subsp. *hispidula* 2 m with a PFC of 2%. The lower stratum hummock grassland is dominated by *Triodia schinzii* 1.2 m with shrubs and grasses including *Acacia anaticeps* 0.5 m, *Gompholobium simplicifolium* 0.6 m, *Calytrix carinata* 0.7 m, *Aristida holathera* var. *holathera* 0.3 m, *Dampiera cinerea* 0.4 m, *Ptilotus arthrolasius* 0.4 m, *Tinospora smilacina* 1 m, *Dicrastylis doranii* 0.4 m, *Newcastelia cladotricha* 0.5 m, *Cyanostegia cyanocalyx* 0.7 m, *Polygala isingii* 0.1 m and *Eragrostis eriopoda* 0.3 m, with a PFC of 30-40%. This association is floristically similar to P10b, separated by the lack of *Corymbia zygophylla*.

The P13 Vegetation Associations occurs along the RAC. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2).



Plate 20. P13 - *Gardenia pyriformis* subsp. *keartlandii* Scattered Low Trees over *Triodia schinzii* (Biota 2021)

**P14 - *Acacia monticola* & *Acacia drepanocarpa* (*Acacia orthocarpa* & *Acacia ancistrocarpa*)
Open Shrubland over *Triodia schinzii***

The P14 - *Acacia monticola* & *Acacia drepanocarpa* (*Acacia orthocarpa* & *Acacia ancistrocarpa*) Open Shrubland over *Triodia schinzii* Vegetation Association consists of an upper-to-mid storey shrubland dominated by *Acacia monticola* 2-4 m, with *Acacia drepanocarpa* 2.3 m, *Acacia orthocarpa* 2-3 m, and *Grevillea wickhamii* 2-3 m with a PFC of 10-20%. over an open shrubland dominated by *Gyrostemon tepperi* 0.7 m, *Ptilotus calostachyus* 0.6 m, *Sida arenicola* 0.6 m, *Calytrix carinata* 0.5 m, *Dicrastylis exsuccosa* 0.5 m, *Aristida holathera* var. *holathera* 0.4 m, *Amphipogon sericeus* 0.4 m, *Eriachne lanata* 0.4 m, *Goodenia armitiana* 0.4 m *Halgania solanacea* var. *solanacea* 0.3 m *Indigofera boviparda* subsp. *eremaea* 0.3 m, *Ptilotus astrolasius* 0.3 m, *Bonamia alatisemina* 0.1 m, and *Eragrostis eriopoda* 0.2 m with a PFC of 10-15% over a hummock grassland dominated by *Triodia schinzii* 0.5-1 m with a PFC of 10-25%.

This floristic unit occurs on interdunal sandplains, associated with red sandy soils and occasional lateritic and gravelly outcroppings. It is strongly associated with P2, P3, and P4, containing a very similar suite of understory shrubs and grasses. The condition of the vegetation comprising the association was considered Excellent, and it was observed to support *Tribulopsis marliesiae* and *Goodenia hartiana* (P3).



Plate 21. P14 - *Acacia monticola* & *Acacia drepanocarpa* (*Acacia orthocarpa* & *Acacia ancistrocarpa*) Open Shrubland over *Triodia schinzii*

P15a - *Corymbia candida* Open Low Woodland over *Triodia schinzii*

The P15a – *Corymbia candida* Open Woodland over *Triodia schinzii* Vegetation Association is characterised by an upper stratum dominated by *Corymbia candida* 8-10m, with a PFC of 1-5%. The midstory varies between being open to a dense cover of *Acacia* spp. including, *Acacia orthocarpa*, *Acacia drepanocarpa* subsp. *latifolia*, *Acacia eriopoda*, and *Acacia colei* var. *colei* from 1-3 m, with a PFC of 2-20%. The lower stratum hummock grassland is dominated by *Triodia schinzii* 1.2 m with *Triodia epactia* 1 m, and shrubs and grasses including *Aristida inaequiglumis* 1 m, *Sorghum plumosum* 1 m, *Eriachne lanata* 0.5 m, *Paraneurachne muelleri* 0.4 m, *Eulalia aurea* 0.6 m, *Eragrostis eriopoda* 0.4 m, *Goodenia armitiana* 0.3 m *Indigofera monophylla* 0.5 m, *Tephrosia arenicola* 0.5 m and *Ptilotus astrolasius* 0.3 m, with a PFC of 5-10%.

The P15a is separated from other P15 associated based on the dominance of *Triodia schinzii*. It occurs on shallow red sand over clay, predominantly within the Texas and Rimfire Bore Fields. The vegetation condition within this association is considered Excellent. Conservation significant flora species encountered within this association include *Tribulopsis marliesiae* (P3).



Plate 22. P15a - *Corymbia candida* Open Low Woodland over *Triodia schinzii*

P15b - *Corymbia candida* Open Low Woodland over *Acacia monticola* shrubland over *Triodia epactia*

The P15b - *Corymbia candida* Open Low Woodland over *Acacia monticola* shrubland over *Triodia epactia* Vegetation Association is separated from other P15 associations due to the dominance and density of *Corymbia candida*, *Acacia monticola* and *Triodia epactia* respective to the upper, mid and lower strata. The upper stratum consists of *Corymbia candida* 8-10 m, with a PFC of 4%, over a dense midstory shrubland of *Acacia monticola* 3 m, *Clerodendrum floribundum* var. *floribundum* 3 m, *Acacia ancistrocarpa* 3 m, *Acacia colei* var. *colei* 3.5 m, *Acacia drepanocarpa* subsp. *latifolia* 3 m, *Acacia sericophylla* 2.5 m and *Grevillea wickhamii* subsp. *hispidula* 3.5 m, with a PFC of 10-20%. The lower stratum hummock grassland is dominated by *Triodia epactia* 0.5-1.4 m, with shrubs and grasses including *Gossypium australe* 1.5 m, *Indigofera monophylla* 1 m, *Aristida inaequiglumis* 1 m, *Eulalia aurea* 0.6 m, *Sida arenicola* 1 m, *Pluchea tetranthera* 0.7 m, *Sorghum plumosum* var. *plumosum* 1.2 m, *Triodia schinzii* 1.2 m, *Aristida holathera* var. *holathera* 0.4 m, *Arivela viscosa* 0.3 m, *Eragrostis eriopoda* 0.4 m, *Evolvulus alsinoides* 0.2 m, *Goodenia armitiana* 0.4 m and *Paraneurachne muelleri* 0.3 m, with a PFC of 30-50%.

The P15b vegetation association is associated with clay soils of inward drainage areas, resulting in densely vegetated groves. It has a limited extent across the Winu Project, only occurring within the Texas Bore Field. The vegetation is considered to be in Excellent condition. While no Conservation significant flora species were encountered in this association, *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3) remain possible following targeted survey work.



Plate 23. P15b - *Corymbia candida* Open Low Woodland over *Acacia monticola* shrubland over *Triodia epactia*

P15c - *Corymbia candida* Open Low Woodland over *Triodia brizoides*

The P15c - *Corymbia candida* Open Low Woodland over *Triodia brizoides* Vegetation Association is separated from other P15 associations based on the dominance of *Triodia brizoides* in the lower stratum. It is also closely related to the R1 Association. The upper-stratum consists of scattered *Corymbia candida* 10 m with a PFC 2%; over a mid-stratum shrubland of *Acacia ancistrocarpa* 2.5 m, *Acacia sericophylla* 2 m, *Grevillea wickhamii* subsp. *hispidula* 2 m and *Acacia drepanocarpa* subsp. *latifolia* 3 m and with a PFC of 3%; over a lower-stratum hummock grassland dominated by *Triodia brizoides* 0.6-1 m, with *Acacia adsurgens* 1 m, and *Indigofera monophylla* 1 m, with a PFC of 35%.

The P15c association occurs on silty clay soils, with ironstone lag gravel present. It has a limited distribution, located within the Texas Bore. The condition of the vegetation comprising the P15c association is considered to be Excellent, with no evidence of disturbance. Conservation significant flora species encountered within this association include *Cynodon anisocarpus* (P1), present in small numbers across claypans within this association.



Plate 24. P15c - *Corymbia candida* Open Low Woodland over *Triodia brizoides*

P16 - *Eucalyptus odontocarpa* Very Open Shrub Mallee over *Triodia schinzii*

The P16 – *Eucalyptus odontocarpa* Low Mallee Woodland over *Triodia schinzii* Vegetation Association consists of occasional *Corymbia opaca* 4 m, *Corymbia zygophylla* 3 m and *Owenia reticulata* 5 m over a low mallee woodland dominated by *Eucalyptus odontocarpa* 2-4 m with a PFC of 3-4%. The mid-stratum is composed of *Grevillea wickhamii* 1-3 m with occasional *Hakea lorea* subsp. *lorea* 3 m, *Acacia sericophylla* 2 m, *Acacia ancistrocarpa* 1.5 m and *Acacia tumida* var. *kulparn* 2 m with a PFC of 5-10%. The lower storey was found to represent two separate species compositions and may constitute splitting into subgroups. Within the Texas Bore Field (Q87), the P16 is associated with gravelly soils, and contains understory species including *Calytrix carinata* 0.7m, *Acacia adoxa* var. *adoxo* 0.4m and *Tephrosia arenicola* 0.6m, with a PFC of 15%. Within the Rimfire Bore Field (Q93), it is associated with deeper sands, with an understory of *Jacksonia aculeata* 0.7m, *Triodia schinzii* 1m, *Acacia stellaticeps* 0.4m and *Bonamia erecta* 0.4m with a PFC of 35%.

The P16 – *Eucalyptus odontocarpa* Low Mallee Woodland over *Triodia schinzii* Vegetation Association has a limited distribution across the Winu Project. The vegetation within this association is considered to be in Excellent condition. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2).



Plate 25. P16 - *Eucalyptus odontocarpa* Very Open Shrub Mallee over *Triodia schinzii*

P18 - *Corymbia opaca* Open Woodland over *Triodia schinzii*

The P18 - *Corymbia opaca* Open Woodland over *Triodia schinzii* Vegetation Association is characterised by an upper stratum of open *Corymbia opaca* 6 m, with a PFC of 1-5% over a mid-stratum shrubland of *Acacia ancistrocarpa* 2 m, *Acacia drepanocarpa* subsp. *latifolia* 3 m, *Acacia sericophylla* 3 m, *Acacia orthocarpa* 2 m, *Acacia monticola* 2 m, *Acacia colei* var. *colei* 3.5 m, as well as *Grevillea wickhamii* subsp. *hispidula* 2-5 m and *Erythrophleum chlorostachys* 2 m, with a PFC of 5%. The lower-stratum hummock grassland dominated by *Triodia schinzii* 1 m with *Triodia epactia* 1 m and shrubs and grasses including *Bonamia erecta* 0.3 m, *Ptilotus astrolasius* 0.3 m, *Eragrostis eriopoda* 0.4 m, *Eriachne lanata* 0.4 m, *Aristida inaequiglumis* 0.5 m, *Paraneurachne muelleri* 0.3 m, *Aristida holathera* var. *holathera* 0.4 m, *Cassytha capillaris* 0.4 m, *Goodenia armitiana* 0.3 m, *Ptilotus astrolasius* 0.5 m, *Tribulopsis marliesiae* (P3) 0.2 m, *Ptilotus calostachyus* 0.5 m, *Amphipogon sericeus* 0.4 m, *Goodenia hartiana* (P2) 0.3 m and *Dodonaea coriacea* 0.4 m, with a PFC of 25-35%.

The P18 vegetation association is associated with orange sand and sandy clay, occurring in the Rimfire and Texas Bore Fields. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2) and *Tribulopsis marliesiae* (P3).



Plate 26. P18 - *Corymbia opaca* Open Woodland over *Triodia schinzii*

P19 - *Melaleuca lasiandra* Low Open Shrubland over *Triodia schinzii*

The P19 - *Melaleuca lasiandra* Low Open Shrubland over *Triodia schinzii* Vegetation Association is characterised by a mid/upper stratum dominated by *Melaleuca lasiandra* 1-2 m with *Acacia drepanocarpa* subsp. *latifolia* 2 m, *Acacia sericophylla* 1.8 m, *Acacia monticola* 2 m, *Acacia tumida* var. *kulparn* 1.5m and *Gyrostemon tepperi* 1 m with a PFC of 10%. The lower-stratum hummock grassland is dominated by *Triodia schinzii* 0.4-1 m with shrubs and grasses including *Gompholobium simplicifolium* 0.6 m, *Seringia exastia* 0.6 m, *Bonamia erecta* 0.4 m, *Dicrastylis cordifolia* 0.3 m, *Corchorus sidoides* subsp. *sidoides* 0.3 m, *Acacia melleodora* 1 m, *Eragrostis eriopoda* 0.3 m, *Hibiscus leptocladus* 0.4 m, *Ptilotus calostachyus* 0.5 m, *Sida* sp. Pindan (B.G. Thomson 3398) 0.4 m and *Tribulopsis marliesiae* 0.1 m, with a PFC of 25%.

The P19 Vegetation Association occurs on red sands. Its distribution appears to correspond with a surficial aquifer oriented in a north-south direction east of the Texas Bore Field, extending up through the southern portion of the Rimfire Bore Field. In such areas, the water table is reported to be approx. 4m from the surface, indicating the potential for it to be a Groundwater Dependant Ecosystem (GDE). As a potential GDE, P19 is treated as significant for the purposes of impact assessment.

The condition of the vegetation is considered Excellent. Conservation significant flora species encountered within this association include *Tribulopsis marliesiae* (P3).



Plate 27. P19 - *Melaleuca lasiandra* Low Open Shrubland over *Triodia schinzii*

P20 - *Acacia ancistrocarpa* & *Acacia orthocarpa* Open Shrubland over *Triodia schinzii* & *Triodia epactia*

The P20 - *Acacia ancistrocarpa* & *Acacia orthocarpa* Open Shrubland over *Triodia schinzii* & *Triodia epactia* Vegetation Association is characterised by a dominant upper/middle-stratum shrubland of *Acacia ancistrocarpa* and *Acacia orthocarpa* 1-3 m and occasional *Grevillea wickhamii* and with a PFC of 2-5% over a lower-storey mixed hummock grassland of *Triodia schinzii* 1.2 m and occasional *Triodia epactia* 1.2 m with shrubs and grasses including *Calytrix carinata* 0.5 m, *Dicrastylis cordifolia* 0.3 m, *Tephrosia arenicola* 0.6 m, *Ptilotus astrolasius* 0.4 m, *Eriachne lanata* 0.5 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Goodenia armitiana* 0.4 m, *Paraneurachne muelleri* 0.3 m, *Scaevola parvifolia* subsp. *parvifolia* 0.3 m and *Amphipogon sericeus* 0.4 m PFC of 10-30%. The P20 association is generally a mosaic of the P2 (*Acacia ancistrocarpa* dominated) and P4 (*Acacia orthocarpa* dominated) associations.

The P20 Vegetation Association occurs on deep red sand, typically located around the Rimfire and Texas Bore Fields. The vegetation condition is considered as Excellent. Conservation significant flora species encountered within this association include *Tribulopsis marliesiae* (P3).



Plate 28. P20 - *Acacia ancistrocarpa* & *Acacia orthocarpa* Open Shrubland over *Triodia schinzii* & *Triodia epactia*

P21 - *Acacia sericophylla* Open Shrubland over *Triodia schinzii*

The P21 - *Acacia sericophylla* Open Shrubland over *Triodia schinzii* Vegetation Association is characterised by a mid/upper stratum dominated by *Acacia sericophylla* 2.5 m with occasional *Erythrophleum chlorostachys* 2 m, *Hakea lorea* subsp. *lorea* 2.5 m, *Grevillea wickhamii* 2 m, and *Clerodendrum tomentosum* var. *tomentosum* 2 m, with a PFC of 10%. The lower stratum hummock grassland is dominated by *Triodia schinzii* 1.2 m, with shrubs and grasses including *Acacia tumida* var. *kulparn* 1 m, *Aristida holathera* var. *holathera* 0.4 m, *Jacksonia aculeata* 1 m, *Indigofera boviparda* subsp. *eremaea* 0.6 m, *Calytrix carinata* 0.7 m, *Ptilotus arthrolasius* 0.4 m, *Amphipogon sericeus* 0.4 m, *Dicrastylis doranii* 0.4 m, *Eragrostis eriopoda* 0.3 m, *Newcastelia cladotricha* 0.3 m, *Trigastrotheca molluginea* 0.1 m, *Tribulopsis marliesiae* (P3) 0.1 m and *Scaevola parvifolia* subsp. *parvifolia* 0.2 m, with a PFC of 25%.

The P21 Vegetation Association occurs on deep red sands, within the Rimfire and Texas Bore Fields. The Vegetation is considered Excellent. Conservation significant flora species encountered within this association include *Tribulopsis marliesiae* (P3).

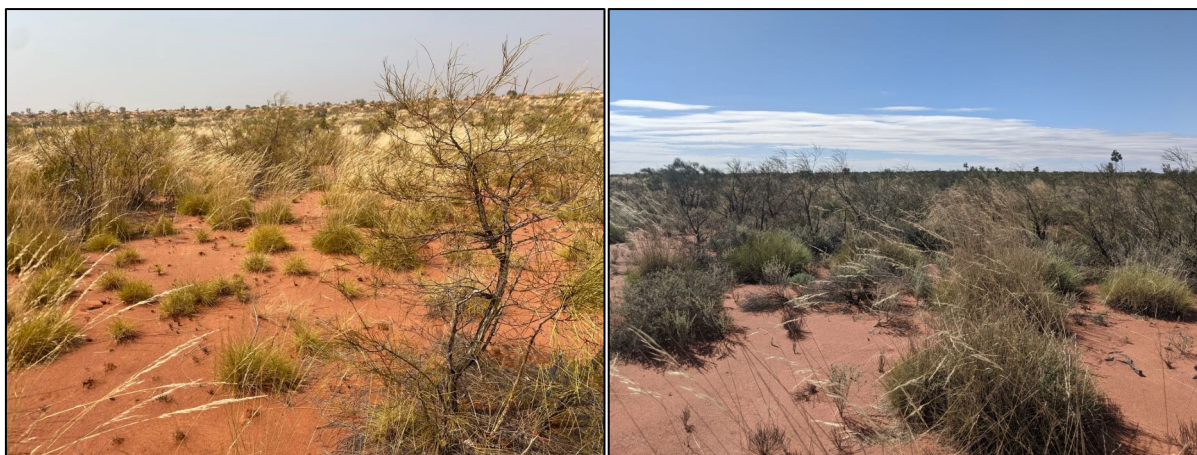


Plate 29. P21 - *Acacia sericophylla* Open Shrubland over *Triodia schinzii*

P22 - *Acacia stipuligera* Open Shrubland over *Triodia schinzii*

The P22 - *Acacia stipuligera* Open Shrubland over *Triodia schinzii* Vegetation Association is characterised by a mid/upper stratum dominated by *Acacia stipuligera* 2.5 m, with occasional *Acacia drepanocarpa* subsp. *latifolia* 2 m and *Melaleuca lasiandra* 2 m, with a PFC of 10-15%. The lower stratum hummock grassland is dominated with *Triodia schinzii* 1.2 m with shrubs and grasses including *Jacksonia aculeata* 1 m, *Leptosema anomalum* 0.5 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Dampiera candicans* 0.5 m, *Tephrosia arenicola* 0.7 m, *Aristida holathera* var. *holathera* 0.3 m, *Eragrostis eriopoda* 0.3 m and *Goodenia armitiana* 0.2 m, with a PFC of 25%.

The P22 Vegetation Association has a very limited extent across the Winu Project, occurring in two areas within the Texas Bore Field. It is associated with shallow sands over clays, occurring at the foot of sand dunes – typically those containing D4 Vegetation. The vegetation comprising this association is considered to be in Excellent Condition. No Conservation significant flora species were encountered in this association.



Plate 30. P22 - *Acacia stipuligera* Open Shrubland over *Triodia schinzii*

Stony Rises and Gentle Outcroppings

The six different Vegetation Associations described across the stony rises and gentle outcroppings are supported by shallow gravelly clay soils.

R1 - *Acacia bivenosa* (*Acacia ancistrocarpa*) Scattered Shrubs *Triodia brizoides* (*Triodia schinzii*)

The R1 - *Acacia bivenosa* (*Acacia ancistrocarpa*) Scattered Shrubs *Triodia brizoides* (*Triodia schinzii*) Vegetation Association is strongly related to the C2 and P15a associations. While the latter occur on shallow clays or sandy clays, respectively; the R1 association was recorded adjacent to gentle rocky rises.

The vegetation comprising the R1 association includes an upper-stratum of occasional *Corymbia candida* 5 m PFC <1%, over a mid-stratum of *Acacia bivenosa* 1 m, with occasional *Acacia ancistrocarpa* 1.5 m, *Acacia orthocarpa* 1.5 m, with a PFC of 2%. The lower stratum is dominated by *Triodia brizoides* 1 m, as well as *Indigofera monophylla* 0.8 m, *Aristida holathera* var. *holathera* 0.3 m, *Goodenia armitiana* 0.3 m, *Euploca pachyphylla* 0.2 m, *Eriachne aristidea* 0.4 m, *Dampiera candicans* 0.4 m, *Fimbristylis dichotoma* 0.1 m, *Halgania solanacea* var. *solanacea* 0.3 m, *Tribulus hirsutus* 0.01 m and *Cynodon anisocarpus* (P1) 0.1 m with a PFC of 30%. The R1 association like the C2 association also features extensive small open claypans which have been observed to support dense patches of annual grasses and herbs, including *Cynodon anisocarpus* (P1), following good seasonal rainfall condition.

The R1 association is distributed around the junction of the MIA, and the Rimfire and Texas Bore Fields. The vegetation condition comprising this association is considered as Excellent, however, areas around the Airstrip have been subject to multiple recent fires.

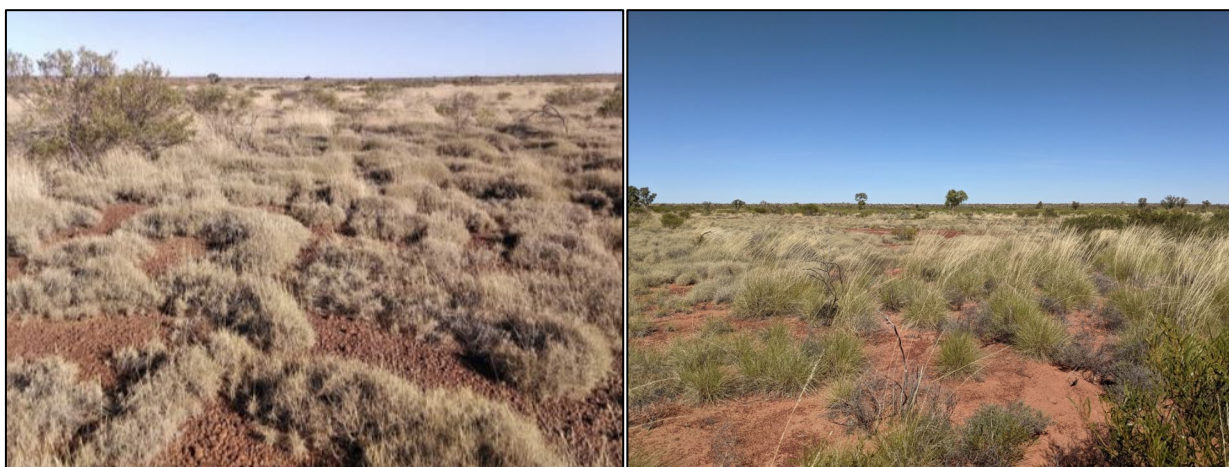


Plate 31. R1 - *Acacia bivenosa* (*Acacia ancistrocarpa*) Scattered Shrubs *Triodia brizoides* (*Triodia schinzii*)

R2 - *Grevillea wickhamii* Scattered Tall Shrubs over *Mirbelia viminalis* (*Acacia hilliana*) & *Triodia brizoides* (*Triodia epactia*)

The R2 - *Grevillea wickhamii* Scattered Tall Shrubs over *Mirbelia viminalis* (*Acacia hilliana*) & *Triodia brizoides* (*Triodia epactia*) Vegetation Association is characterised by a mid/upper-stratum consisting of *Grevillea wickhamii* 3 m, *Mirbelia viminalis* 2.5 m, *Acacia ancistrocarpa* 1.5 m with occasional *Acacia drepanocarpa* subsp. *latifolia* 2 m, *Acacia monticola* 2.5 m and *Gyrostemon tepperi* 2 m with a PFC of 2-8%. The lower stratum hummock grassland is dominated by *Triodia brizoides* 1 m with shrubs and grasses including *Acacia hilliana* 0.3 m, *Acacia adoxa* var. *adoxo* 0.4 m, *Jacksonia aculeata* 1 m, *Tephrosia arenicola* 0.7 m, *Goodenia azurea* subsp. *hesperia* 0.3 m, *Calytrix carinata* 0.6 m, *Ptilotus calostachyus* 1 m, *Triodia schinzii* 0.5-1.5 m, *Triodia epactia* 0.6-1.5 m, *Dampiera candicans* 0.3 m and *Halgania solanacea* var. *solanacea* 0.3 m with a PFC of 30-50%.

This vegetation is associated with stony rises and gentle outcroppings supporting gravelly clay soils. The R2 is most prevalent around the Rimfire and Texas Bore Fields, extending into the southern regions of MIA. The condition of the vegetation comprising the R2 association is considered Excellent. No Conservation significant flora species have been encountered within this association.



Plate 32. R2 - *Grevillea wickhamii* Scattered Tall Shrubs over *Mirbelia viminalis* (*Acacia hilliana*) & *Triodia brizoides* (*Triodia epactia*)

R3 - *Acacia hilliana* (*Acacia adoxa* var. *adoxa*) Low Open Shrubland over *Triodia epactia*

The R3 - *Acacia hilliana* (*Acacia adoxa* var. *adoxa*) Low Open Shrubland over *Triodia epactia* Vegetation Association is characterised by an mid/upper-stratum of *Grevillea refracta* subsp. *refracta* 4 m, *Grevillea pyramidalis* 4 m, *Acacia monticola* 2 m with occasional *Acacia ancistrocarpa* 3 m and *Acacia colei* var. *colei* 3 m, with a PFC of 5-10%. The lower stratum hummock grassland is dominated by *Triodia epactia* 1 m, with shrubs and grasses including *Acacia adoxa* var. *adoxa* 0.5 m, *Acacia hilliana* 0.5 m, *Aristida holathera* var. *holathera* 0.4 m, *Cassytha capillaris* 0.3 m, *Ptilotus calostachyus* 0.5 m, *Ptilotus astrolasius* 0.4 m, *Dodonaea coriacea* 0.7 m, *Eriachne lanata* 0.5 m, *Eriachne pulchella* 0.4 m, *Goodenia azurea* subsp. *hesperia* 0.3 m, *Halgania solanacea* var. *solanacea* 0.2 m, *Sida arenicola* 0.7 m, *Arivela viscosa* 0.3 m, *Trigastrotheca molluginea* 0.1 m, *Bulbostylis barbata* 0.05 m, *Fimbristylis simulans* 0.1 m, *Panicum australiense* var. *australiense* 0.1 m, *Paranotis pterospora* 0.1 m and *Polycarpaea corymbosa* var. *corymbosa* 0.1 m, with a PFC of 25-40%.

The R3 Vegetation Association is associated with low stony (gravelly) lateritic rises, occurring across the Nyangumarta Hwy (Section 2) of the RAC. The condition of the vegetation is Excellent. No Conservation significant flora species have been encountered within this association.



Plate 33. R3 - *Acacia hilliana* (*Acacia adoxa* var. *adoxa*) Low Open Shrubland over *Triodia epactia* (Biota 2021)

R4 - *Ficus brachypoda* Scattered Low Trees over *Acacia monticola*, *Grevillea pyramidalis* & *Triodia epactia*

The R4 - *Ficus brachypoda* Scattered Low Trees over *Acacia monticola*, *Grevillea pyramidalis* & *Triodia epactia* Vegetation Association occurs on rocky outcroppings, typically located around the RAC and Wallal. It is characterised by an upper stratum of *Ficus brachypoda* 5 m, with a PFC 1% over a mid-stratum shrubland consisting of *Grevillea refracta* subsp. *refracta* 3.5 m, *Grevillea wickhamii* 2.5 m, *Acacia monticola* 2 m and *Grevillea pyramidalis* 2 m, with a PFC of 10%. The lower stratum hummock grassland is dominated by *Triodia epactia* (10%) with shrubs and grasses including *Acacia hilliana* 0.4 m, *Indigofera monophylla* 0.5 m, *Amaranthus undulatus* 0.4 m, *Arivela viscosa* 0.4 m, *Achyranthes aspera* 0.5 m, *Eriachne ciliata* 0.1 m, *Ptilotus calostachyus* 0.4 m, *Sorghum plumosum* var. *plumosum* 0.7 m, *Trigastrotheca molluginea* 0.1 m, *Triumfetta maconochieana* 0.6 m, *Abutilon leucopetalum* 0.3 m, *Cucumis variabilis* 0.5 m, *Paspalidium tabulatum* 0.1 m, *Bulbostylis barbata* 0.05 m, *Calandrinia strophiolata* 0.1 m, and *Polycarpha corymbosa* var. *corymbosa* 0.1 m, with a PFC of 25%.

The R4 Vegetation Association has a very limited extent across the Winu Project. The condition of the vegetation comprising this association is considered Excellent. No Conservation significant flora species have been encountered within this association.



Plate 34. R4 - *Ficus brachypoda* Scattered Low Trees over *Acacia monticola*, *Grevillea pyramidalis* & *Triodia epactia*

R5 - *Senna artemisioides* subsp. *oligophylla*, *Senna sericea* (*Acacia bivenosa*) Scattered Low Shrubs over *Triodia epactia* (*Aristida contorta*, *Dactyloctenium radulans*)

The R5 - *Senna artemisioides* subsp. *oligophylla*, *Senna sericea* (*Acacia bivenosa*) Scattered Low Shrubs over *Triodia epactia* (*Aristida contorta*, *Dactyloctenium radulans*) Vegetation Association occurs on isolated rocky outcrops within the broader C2 and C3 associations. It is characterised by very sparse vegetation, including scattered *Senna artemisioides* subsp. *oligophylla* 1 m, *Senna sericea* 0.7 m and occasional *Acacia bivenosa* 0.7 m, over a very open hummock grassland of *Triodia brizoides* 0.4-0.8 m and *Triodia epactia* 1 m, with annual grasses including *Aristida contorta* 0.1 m, *Dactyloctenium radulans* 0.05 m and *Paspalidium gracile* 0.05 m, with a PFC of 2-10%.

The R5 Vegetation has a very limited extent across the Winu Project, occurring only in Texas Bore Field. The vegetation is considered to be in an Excellent condition. *Cynodon anisocarpus* (P1) was observed in this association, however, only on the lower slopes and adjacent clay flats.



Plate 35. R5 - *Senna artemisioides* subsp. *oligophylla*, *Senna sericea* (*Acacia bivenosa*) Scattered Low Shrubs over *Triodia epactia* (*Aristida contorta*, *Dactyloctenium radulans*)

R6 - *Grevillea wickhamii*, *Acacia monticola* & *Acacia ancistrocarpa* Open Shrubland over *Triodia epactia*

The R6 – *Grevillea wickhamii*, *Acacia monticola* & *Acacia ancistrocarpa* Open Shrubland over *Triodia epactia* Vegetation Association consists of an upper-stratum of *Grevillea wickhamii* 1- 3 m, *Acacia monticola* 1-1.8 m and *Acacia ancistrocarpa* 1 m, with a PFC of 5-10%. The lower-stratum hummock grassland is dominated by *Triodia epactia* 0.4-1 m, with shrubs and grasses including *Indigofera monophylla* 0.4 m, *Senna artemisioides* subsp. *helmsii* 0.5 m, *Sida* sp. *Excedentifolia* (J.L. Egan 1925) 0.3 m and *Sida arenicola* 0.5 m PFC of 20-30%.

The R6 Vegetation Association occurs on outcropping weathered /calcareous conglomerate with rounded quartz gravel; over red sandy clay. It was encountered in one area, within the Rimfire Bore Field. The vegetation condition within the association is considered Excellent. No Conservation significant flora species have been encountered within this association.



Plate 36. R6 - *Grevillea wickhamii*, *Acacia monticola* & *Acacia ancistrocarpa* Open Shrubland over *Triodia epactia*

Claypans and Low-Lying Clay Flats

C1 - *Eucalyptus victrix* Open Woodland over *Triodia epactia*

The C1 – *Eucalyptus victrix* Open Woodland over *Triodia epactia* Vegetation Association is characterised by an overstory of *Eucalyptus victrix* 4-5 m with occasional *Corymbia candida* 5- 6 m and *Corymbia opaca* 5 m with a PFC of 3-10%. The midstory consists of *Acacia ancistrocarpa* 1.8 m and *Acacia colei* var. *colei* to 1.8 m, with a PFC of 1%. The lower stratum is dominated by *Triodia epactia* 0.5-1.3 m and *Eulalia aurea* 0.5 m, with *Goodenia lamprosperma* 0.3 m, *Fimbristylis dichotoma* 0.4 m, *Sporobolus australasicus* 0.2 m and *Peplidium muelleri* 0.01 m with a PFC of 20%.

The C1 Vegetation Association occurs on clay basins associated with moisture-gaining clayey red-brown sand with shale/mudstone lag fragments common on surface. These areas are subject to periods of inundation following significant rainfall, in which the ephemeral aquatic plant species *Marsilea* sp. proliferates.

This Vegetation Association occurs exclusively within the Texas Bore Field. The vegetation condition comprising the C1 association is considered Excellent.



Plate 37. C1 - *Eucalyptus victrix* Open Woodland over *Triodia epactia*

C2 - *Acacia bivenosa* Scattered Low Shrubs over *Triodia brizoides* & *Triodia epactia* (*Triodia schinzii*)

The C2 – *Acacia bivenosa* Scattered Low Shrubs over *Triodia brizoides* & *Triodia epactia* (*Triodia schinzii*) Vegetation Association occurs on broad claypans overlain by shallow red sand. It is characterised by emergent *Acacia bivenosa* 1 m and *Senna artemisioides* subsp. *oligophylla* 1 m with a PFC <1%, over *Triodia* hummock grassland dominated by *Triodia brizoides* 1 m and *Triodia epactia* 1.2 m with a PFC of 20-40%. Other low grasses and herbs include *Ptilotus exaltatus* 0.4 m *Streptoglossa odora* 0.1 m, *Trianthema triquetrum* 0.1 m, *Fimbristylis dichotoma* 0.1 m, *Cynodon anisocarpus* (P1) 0.05 m, *Areocleome oxalidea* 0.05 with a PFC of 1%. Areas of deeper sand are dominated by *Triodia epactia*, while area shallower sands support *Triodia brizoides*. Areas of low relief exposed gravel/clay support patches of annual grasses including *Aristida contorta*, *Cynodon anisocarpus* (P1), *Trianthema triquetrum*, *Sporobolus australasicus*, *Tribulus macrocarpus* and *Trigastrotheca molluginea*. These areas also undergo periods of inundation during significant rainfall.

The vegetation in the C2 association is considered to be in an Excellent condition. This association predominantly occurs within the Texas Bore Field as well as the Rimfire Bore Field.

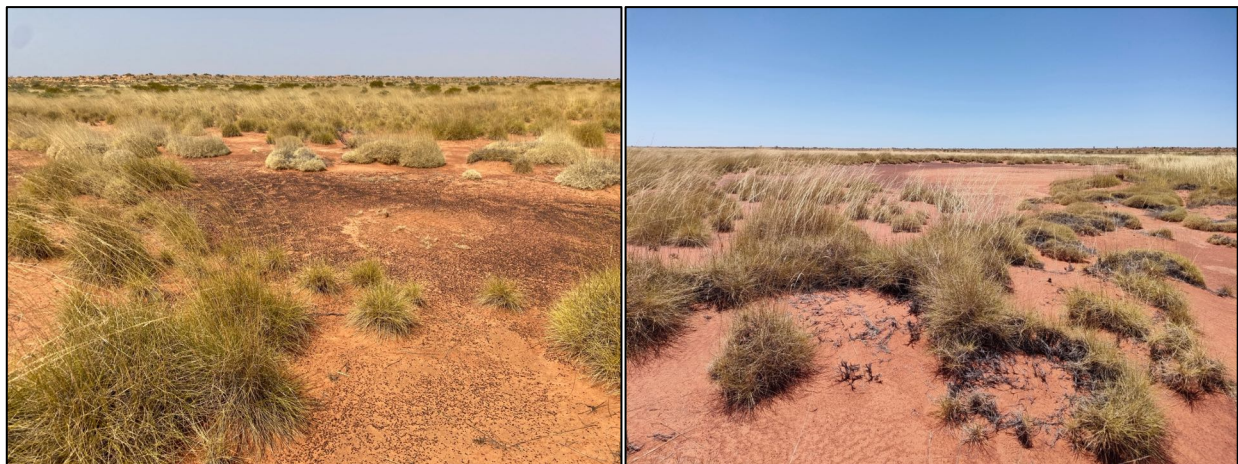


Plate 38. C2 - *Acacia bivenosa* Scattered Low Shrubs over *Triodia brizoides* & *Triodia epactia* (*Triodia schinzii*)

C3 - *Acacia bivenosa* (*Acacia stellaticeps*) Low Shrubland over *Triodia epactia*

The C3 - *Acacia bivenosa* (*Acacia stellaticeps*) Low Shrubland over *Triodia epactia* Vegetation Association is strongly affiliated with the C2 Association, occurring in slightly deeper sands. The upper-stratum consists of emergent *Acacia ancistrocarpa* 2 m and *Grevillea wickhamii* 3 m, with a PFC <1%, over a lower-stratum dominated by *Acacia bivenosa* 1.2 m, *Acacia stellaticeps* 0.5-1.2 m, *Triodia epactia* 1.5 m, *Triodia brizoides* 1 m with a PFC of 15-30%, other associated species include *Dampiera candidans* 0.5 m, *Eragrostis eriopoda* 0.3 m, *Fimbristylis dichotoma* 0.1 m, *Bulbostylis barbata* 0.01 m, *Amphipogon sericeus* (non-hairy form) 0.3 m *Cassytha capillaris* 0.3 m and occasional *Cynodon anisocarpus* (P1) 0.05 m with a combined PFC of 20- 25%.

This Association was typically observed to occur adjacent to the P2 Association, in slightly elevated areas, predominantly within the Texas Bore Field as well as the Rimfire Bore Field. In absence of claypans, the slightly deeper sandy clay soils appear to relate to denser and more diverse vegetation, compared to C2. The Condition of the vegetation comprising this association is considered to be Excellent.



Plate 39. C3 - *Acacia bivenosa* (*Acacia stellaticeps*) Low Shrubland over *Triodia epactia*

C4 - *Acacia ancistrocarpa* Open Low Shrubland over *Eulalia aurea* & *Triodia epactia*

The C4 - *Acacia ancistrocarpa* Open Low Shrubland over *Eulalia aurea* & *Triodia epactia* Vegetation Association occurs on sandy clay soils. The mid/upper-stratum consists of *Acacia ancistrocarpa* 2 m, and *Acacia adsurgens* 1.5 m, with a PFC of 1-15%. The lower stratum hummock grassland is dominated by *Triodia epactia* 0.6-1.5 m, *Eulalia aurea* 0.5 m *Aristida inaequiglumis* 0.5 m, *Themeda triandra* 0.7 m as well as *Aristida holathera* var. *holathera* 0.4 m, *Dodonaea coriacea* 0.6 m, *Sida arenicola* 0.7 m, *Dampiera candidans* 0.4 m, *Eragrostis eriopoda* 0.3 m, *Ptilotus astrolasius* 0.4 m, and occasional *Ptilotus calostachyus* 0.5 m *Eremophila latrobei* subsp. *glabra* 0.9 m with a PFC of 20-40%.

The vegetation comprising the C4 association is considered to be in an Excellent condition. Conservation significant flora species encountered within this association include *Goodenia hartiana* (P2).



Plate 40. C4 - *Acacia ancistrocarpa* Open Low Shrubland over *Eulalia aurea* & *Triodia epactia*

C5 – Claypan Playa (*Diplachne fusca* subsp. *muelleri*, *Eragrostis falcata*) with Scattered Herbs

The C5 - Claypan Playa (*Diplachne fusca* subsp. *muelleri*, *Eragrostis falcata*) with Scattered Herbs Vegetation Association occurs on bare open claypan playas. These areas are subject to periods of inundation following seasonal rainfall. The vegetation consists of scattered *Diplachne fusca* subsp. *muelleri* 0.5 m, occurring within the claypan, and *Eragrostis falcata* 0.5 m, *Alternanthera nana* 0.15 m, *Sporobolus australasicus* 0.2 m, *Cynodon anisocarpus* (P1) 0.1 m, *Bulbostylis barbata* 0.05 m, *Boerhavia gardneri* 0.01 m, *Trianthema triquetrum* 0.01 m, *Fimbristylis dichotoma* 0.3 m, and *Areocleome oxalidea* 0.01 m, with a PFC <1 %.

The vegetation condition within the C5 association is considered Excellent, however, there was evidence of recent grazing from feral camels. This vegetation association occurs outside of the Development Envelope.



Plate 41. C5 – Claypan Playa (*Diplachne fusca* subsp. *muelleri*, *Eragrostis falcata*) with Scattered Herbs

C6 – Claypan (*Cullen pustulatum*, *Gossypium australe*) over *Eulalia aurea* (*Eragrostis xerophila*)

The C6 - Claypan (*Cullen pustulatum*, *Gossypium australe*) over *Eulalia aurea* (*Eragrostis xerophila*) Vegetation Association occurs on clay depressions. These areas are subject to periods of inundation following rainfall. The vegetation consists of a low-upper stratum of *Grevillea wickhamii* subsp. *hispidula* 2 m, *Cullen pustulatum* 1.3 m, *Gossypium australe* 1 m, *Senna oligophylla* 1 m and *Eulalia aurea* 1 m with a PFC of 35%. Over *Eragrostis setifolia* 0.4 m *Boerhavia gardneri* 0.1 m, *Eragrostis eriopoda* 0.5 m and occasional *Tephrosia supina* 0.5 m, with a PFC of 10 %. This vegetation association is restricted across the Winu Project, occurring in one location in Winu South, outside of the Development Envelope.

The vegetation condition comprising the C6 association is considered as Excellent.



Plate 42. C6 – Claypan (*Cullen pustulatum*, *Gossypium australe*) over *Eulalia aurea* (*Eragrostis xerophila*)

Vegetation Association		Mine Infrastructure Area			Rimfire Borefield			Road Access Corridor			Outside DE		
Code	Total Mapped Area (Ha)	Patches	Area		Patches	Area		Patches	Area		Patches	Area	
			(Ha)	%		(Ha)	%		(Ha)	%		(Ha)	%
C4	378.6	1	137.6	36.3				1	8.1	2.1	7	232.9	61.5
D1	2999.9	11	1,950.7	65.0	1	0.5	0.02				22	1048.7	35.0
D2	3449.9	10	615.9	17.9	24	447.4	13.0	3	35.7	1.0	55	2350.9	68.1
P1	10725.0	25	4,156.2	38.8	25	2233.3	20.8	11	433.8	4.0	112	3901.7	36.4
P10c	1844.7	1	30.1	1.6	3	54.7	3.0	8	338.8	18.4	49	1421.1	77.0
P14	1099.0	2	19.0	1.7	16	298.6	27.2				51	781.4	71.1
P15b	86.5	1	18.8	21.7							2	67.7	78.3
P2	6045.0	28	1,272.4	21.0	11	234.7	3.9	11	470.9	7.8	102	4067.0	67.3
P2+P3	141.8	1	0.1	0.3	4	49.6	35.0				5	92.0	64.9
P3	3113.6	16	644.9	20.7	25	642.6	20.6	2	65.2	2.1	64	1760.8	56.6
P4	3325.0	6	324.9	9.8	15	396.8	11.9				55	2603.3	78.3
P5	551.9	10	540.6	98.0	1	10.7	1.9				1	0.6	0.1
P6	221.4	2	59.9	27.0	1	43.7	19.7	1	0.1	0.05	9	117.7	53.2
R1	641.7	3	146.1	22.8	8	87.6	13.7				15	407.9	63.6
R2	1870.8	16	189.5	10.1	29	1205.5	64.4				38	475.8	25.4
C2	1448.8				2	14.6	1.0				20	1434.2	99.0
P1+D2	2.6				1	2.6	100.0				0	0.0	0.0
P1+P14	37.0				1	5.3	14.3				3	31.7	85.7
P1+P18	38.9				1	8.1	20.7				1	30.8	79.3
P1+P4	15.3				2	7.2	47.0				2	8.1	53.0
P1+P5	86.8				1	86.8	100.0				0	0	0
P15a	221.1				3	49.4	22.3				13	171.7	77.7
P16	20.8				1	13.7	66.0				1	7.0	34.0

Vegetation Association		Mine Infrastructure Area			Rimfire Borefield			Road Access Corridor			Outside DE		
Code	Total Mapped Area (Ha)	Patches	Area		Patches	Area		Patches	Area		Patches	Area	
			(Ha)	%		(Ha)	%		(Ha)	%		(Ha)	%
P18	474.6				10	192.0	40.4				14	282.6	59.6
P19	319.5				3	243.1	76.1				4	76.4	23.9
P2+P14	16.5				1	11.4	69.0				1	5.1	31.0
P4+R1	10.0				1	2.1	20.6				1	7.9	79.4
P4+R4	1.5				1	1.5	100.0				0	0	0
R2+P3	133.7				5	133.4	99.7				3	0.3	0.3
R3	3113.7				2	17.6	0.6	36	1657.1		89.0	1439.1	46.2
R6	75.9				1	75.9	100.0				0	0	0
P20	921.3				5	248.5	27.0				22	672.8	73.0
D3	260.7				18	81.1	31.1				20	179.6	68.9
P10a	526.8							5	71.6	13.6	3	455.2	86.4
P10b	342.6							3	324.5	94.7	5	18.1	5.3
P11	1975.1							40	916.7	46.4	57	1058.4	53.6
P12	164.3							10	143.2	87.2	16	21.1	12.8
P13	942.2							17	624.5	66.3	37	317.7	33.7
P8	5143.2							18	919.1	17.9	37	4224.2	82.1
P9	731.9							22	532.5	72.8	35	199.3	27.2
R4	0.2							1	0.2	74.4	1	0.1	25.6
C1	229.6										15	229.6	100
C1+P23	21.1										1	21.1	100
C1+P8	11.2										1	11.2	100
C3	897.7										36	897.7	100
C5	4.8										1	4.8	100
C6	8.4										1	8.4	100

Vegetation Association		Mine Infrastructure Area			Rimfire Borefield			Road Access Corridor			Outside DE		
Code	Total Mapped Area (Ha)	Patches	Area		Patches	Area		Patches	Area		Patches	Area	
			(Ha)	%		(Ha)	%		(Ha)	%		(Ha)	%
C7	1.9										6	1.9	100
C8	3.4										10	3.4	100
D2+P8	33.7										1	33.7	100
D4	167.9										14	167.9	100
Melaleuca habitat (approximate)	4819.5										4	4819.5	100
P1+P2	49.7										1	49.7	100
P1+P3	16.0										2	16.0	100
P10c+P8	33.8										1	33.8	100
P10d	51.1										1	51.1	100
P15a+P3	36.8										1	36.8	100
P15c	105.5										4	105.5	100
P15c+P18	48.2										2	48.2	100
P18+C2	26.5										1	26.5	100
P2+C3	40.5										1	40.5	100
P20+C3	23.8										1	23.8	100
P21	45.4										5	45.4	100
P22	40.3										4	40.3	100
P23	7082.0										9	7082.0	100
P23a	929.4										5	929.4	100
P23b	92.5										21	92.5	100
P23c	565.5										10	565.5	100
P23d	49.8										4	49.8	100

Vegetation Association		Mine Infrastructure Area			Rimfire Borefield			Road Access Corridor			Outside DE		
Code	Total Mapped Area (Ha)	Patches	Area		Patches	Area		Patches	Area		Patches	Area	
			(Ha)	%		(Ha)	%		(Ha)	%		(Ha)	%
P3+P4+P14	7.6										1	7.6	100
P4+C7	7.7										1	7.7	100
P4+P14	32.2										2	32.2	100
P7	129.1										1	129.1	100
R1+C7	41.7										1	41.7	100
R2+P18	33.8										2	33.8	100
R2+P2	5.1										1	5.1	100
R2+P4	4.2										1	4.2	100
R5	1.0										3	1.0	100
R7	0.1										2	0.1	100

