

## **Clearing Permit Decision Report**

## 1. Application details

1.1. Permit application details

Permit application No.: 7408/2

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Mt Morgans WA Mining Pty Ltd

1.3. Property details

Property: Mining Leases: 39/18, 39/36, 39/228, 39/236, 39/272, 39/273, 39/282, 39/305, 39/390,

39/395, 39/403, 39/513

Miscellaneous Licences: 39/57, 39/244, 39/245

Local Government Area: Shire of Laverton

Colloquial name: Mt Morgans Gold Project

1.4. Application

Clearing Area (ha) No. Trees Method of Clearing For the purpose of:

740 Mechanical Removal Mineral Production and Associated Activities

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 10 October 2017

#### 2. Site Information

#### 2.1. Existing environment and information

## 2.1.1. Description of the native vegetation under application

**Vegetation Description** 

The clearing permit application area has been broadly mapped as the following Beard vegetation associations (GIS Database):

18: Low woodland; mulga (Acacia aneura);

39: Shrublands; mulga scrub; and

**389:** Succulent steppe with open low woodland; mulga over saltbush.

A flora and vegetation survey was conducted by Native Vegetation Solutions in March 2016 over the application areas and surrounding areas, covering a total area of approximately 4,641 hectares (Native Vegetation Solutions, 2016). A follow up targeted survey was completed by Native Vegetation Solutions on 3 August 2017 covering sections of the borefield that were not covered by the 2016 assessment (Mt Morgans WA Mining Pty Ltd, 2017).

The following vegetation communities were recorded within the broader survey area (Native Vegetation Solutions, 2016; Mt Morgans WA Mining Pty Ltd, 2017):

Rehabilitation Vegetation - Acacia aneura, A. mulganeura, Eucalyptus clendii, E. Campaspe, E. torquata, Maireana pyramidata, Atriplex vesicaria and Senna artemisioides subsp. filifolia;

Acacia aneura shrubland - Acacia aneura, A. mulganeura, A. pteraneura, A. craspedocarpa, Senna cardiosperma, Senna glutinosa subsp. chatelainiana, Eremophila platycalyx subsp. platycalyx and Eremophila compacta;

**Tecticornia shrubland** - Tecticornia species, Maireana glomerifolia, Sclerolaena cuneata, Atriplex vesicaria, elaleuca interioris and Casuarina obesa;

**Kopai dunes with Tecticornia and Casuarina** – Casuarina obesa, C. pauper, Acacia burkittii, Grevillea berryana, Exocarpos aphyllus, Tecticornia indica subsp. bidens, T. halocnemoides subsp. tenuis and T. disarticulata;

Acacia shrubland on emergent hills - Acacia aneura, A. pteraneura, A. grasbyi, A. tetragonophylla, Cratystylis subspinescens, Scaevola spinescens, Senna cardiosperma, Maireana sedifolia, and Eremophila oppositifolia subsp. angustifolia;

Acacia over Chenopod shrubland - Acacia aneura, A. mulganeura, A. pteraneura, Maireana pyramidata, Sclerolaena diacantha, Tecticornia indica subsp. bidens, T. peltata, T. undulata, Cratystylis subspinescens, Atriplex vesicaria and Atriplex bunburyana;

Acacia over Eremophila and sclerophyll shrubland on BIF Ridges - Acacia aneura, Eremophila georgei, Eremophila latrobei subsp. latrobei, Eremophila margarethae, Eremophila platycalyx subsp. platycalyx, Scaevola spinescens, Senna artemisioides subsp. helmsii, Solanum lasiophyllum and Dodonaea rigida;

Tecticornia shrubland within Laterite breakaways - Tecticornia disarticulata, T. indica subsp. bidens, T. peltata, Frankenia setosa, Dodonaea lobulata, Pittosporum angustifolium and Eremophila pantonii;

Acacia mulganeura over Eremophila forrestii and grasslands - Acacia mulganeura, A. caesaneura, A. aneura, A. craspedocarpa, Eremophila forrestii subsp. forrestii, Scaevola spinescens, Eragrostis eriopoda, Eremophila platythamnos subsp. exotrachys, Crenidium spinescens and Triodia basedowii.

Acacia aneura creekline vegetation - Acacia aneura, Acacia caesaneura, Acacia mulganeura, Acacia tetragonophylla, Eremophila oppositifolia subsp. angustifolia, Scaevola spinescens, Ptilotus obovatus, Senna artemisioides subsp. sturtii, Lepidium platypetalum, and Spartothamnella teucriiflora;

Acacia shrublands on undulating hills - Acacia resinimarginea, Acacia aneura, Calytrix erosipetala, Eremophila georgei, Eremophila forrestii subsp. forrestii, Dodonaea rigida, Chrysocephalum puteale, Eremophila latrobei subsp. filiformis and Senna artemisioides subsp. helmsii;

Acacia aneura woodland over Maireana sedifolia and Acacia victoriae mixed shrubland - Acacia aneura, A. pteraneura, Maireana sedifolia, Atriplex bunburyana, Maireana tomentosa, Acacia victoriae subsp. victoriae, Cratystylis subspinescens, Eremophila miniata, Solanum plicatile, Solanum austropiceum, Acacia kempeana and Eremophila longifolia;

Acacia shrubland on lower breakaways - Acacia kalgoorliensis, Tecticornia, peltata, T. pergranulata subsp. elongata, Frankenia georgei and Sida calyxhymenia;

Acacia oswaldii shrubland - Acacia oswaldii, Brachychiton gregorii, Acacia ligulata, Acacia caesaneura, Jacksonia arida, Eragrostis eriopoda, Enneapogon caerulescens, Gunniopsis quadrifida and Pimelea microcephala, subsp. microcephala;

Acacia burkittii shrubland - Acacia burkittii, Grevillea berryana, Acacia victoriae subsp. victoriae, Acacia tetragonophylla, Senna artemisioides subsp. filifolia, Acacia ayersiana, Acacia caesaneura, Melaleuca interioris and Enneapogon caerulescens;

Open Melaleuca shrubland - Melaleuca hamata, Duma florulenta, Spartothamnella teucriiflora and Rhagodia eremaea:

Melaleuca sheathiana over Tecticornia shrubland - Melaleuca sheathiana over Tecticornia shrubland;

Acacia aneura shrubland - Acacia aneura, A. mulganeura, A. pteraneura, A. craspedocarpa, Senna cardiosperma, Senna glutinosa subsp. chatelainiana, Eremophila platycalyx subsp. platycalyx and Eremophila compacta:

**Tecticornia Shrubland and Acacia over Chenopod shrubland** - Tecticornia species, Maireana glomerifolia, Sclerolaena cuneate, Atriplex vesicaria, elaleuca interioris and Casuarina obesa. Acacia aneura, A. mulganeura, A. pteraneura, Maireana pyramidata, Sclerolaena diacantha, Tecticornia indica subsp. bidens, T. peltata, T. undulata, Cratystylis subspinescens, Atriplex vesicaria and Atriplex bunburyana;

Acacia over Chenopod shrubland and Open Melaleuca shrubland – Melaleuca hamata, Duma florulenta, Spartothamnella teucriiflora and Rhagodia eremaea. Acacia aneura, A. mulganeura, A. pteraneura, Maireana pyramidata, Sclerolaena diacantha, Tecticornia indica subsp. bidens, T. peltata, T. undulata, Cratystylis subspinescens, Atriplex vesicaria and Atriplex bunburyana;

Acacia over Chenopod shrubland – Acacia aneura, A. mulganeura, A. pteraneura, Maireana pyramidata, Sclerolaena diacantha, Tecticornia indica subsp. bidens, T. peltata, T. undulata, Cratystylis subspinescens, Atriplex vesicaria and Atriplex bunburyana;

Acacia burkittii shrubland - Acacia burkittii, Grevillea berryana, Acacia victoriae subsp. victoriae, Acacia tetragonophylla, Senna artemisioides subsp. filifolia, Acacia ayersiana, Acacia caesaneura, Melaleuca interioris and Enneapogon caerulescens;

Melaleuca pauper over Tecticornia shrubland - Melaleuca pauper over Tecticornia shrubland; and

Bare Salt Lakes - no vegetation.

## **Clearing Description**

Mt Morgans Gold Project.

Mt Morgans WA Mining Pty Ltd proposes to clear up to 740 hectares of native vegetation within a boundary of approximately 3,567 hectares, for the purposes of mineral production and mining-related infrastructure. The project is located approximately 30 kilometres southwest of Laverton, within the Shire of Laverton.

## Vegetation Condition

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);

То

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

#### Comment

The vegetation condition was derived from a vegetation survey conducted by Native Vegetation Solutions (2016).

The proposed clearing is for mine pits, and mining related infrastructure (Dacian Gold, 2016). The application area consists of two minesite areas approximately 10 kilometres apart, and a connecting haulroad.

This permit occurs over the same footprint as existing clearing permit CPS 7290/1, which was granted by the Department of Mines and Petroleum to Dacian Gold Limited on 24 November 2016. Mt Morgans WA Mining Pty Ltd is a fully owned subsidiary of Dacian Gold Limited. The proponent has reapplied for the permit in order to change the name of the Permit Holder. Mt Morgans WA Mining Pty Ltd has now applied to surrender CPS 7290/1

Mt Morgans WA Mining Pty Ltd has applied to amend CPS 7408/1, for the purpose of increasing the permit boundary and the amount of authorised clearing, and to include additional tenure.

### 3. Assessment of application against clearing principles

#### Comments

Mt Morgans WA Mining Pty Ltd has applied to amend CPS 7408/1, to allow for increasing the amount of approved clearing by 107 hectares, increasing the permit boundary by 585 hectares, and to include additional tenure.

The application area is located within the Eastern Murchison subregion of the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). The Eastern Murchison subregion is characterised by broad plains of red-brown soils and breakaway complexes as well as red sandplains. The vegetation of this subregion is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002). The Eastern Murchison subregion supports a rich and diverse flora and fauna, however most species are wide ranging and not restricted to the subregion (CALM, 2002).

Flora and vegetation surveys were conducted by Native Vegetation Solutions in March 2016 and August 2017 over the application areas and surrounding areas (Native Vegetation Solutions, 2016; Mt Morgans WA Mining Pty Ltd, 2017). A total of 195 flora taxa were recorded during the survey, representing 32 families and 77 Genera (Mt Morgans WA Mining Pty Ltd, 2017). No Threatened or Priority flora were recorded within the application area (Native Vegetation Solutions, 2016). Following correspondence from the Department of Mines, Industry Regulation and Safety, Native Vegetation Solutions completed an additional check of the known occurrences of the following Priority species:

- Tecticornia sp. Lake Way P1
- Eremophila annosocaulis P3
- Goodenia lyrata P3
- Gunniopsis propingua P3
- Olearia mucronata P3
- Tecticornia cymbiformis P3

None of these species have been previously recorded in the proposed clearing areas and none were identified during either the 2016 or 2017 surveys (Mt Morgans WA Mining Pty Ltd, 2017).

No Threatened Ecological Communities have been recorded within or in close proximity to the application area, and none were found during the survey (Mt Morgans WA Mining Pty Ltd, 2017; GIS Database). A Priority Ecological Community (PEC) is mapped as overlapping a portion of the north-eastern application area. This PEC, "Mount Morgan calcrete groundwater assemblage type on Carey palaeodrainage on Mt Weld Station" (Priority 1) is mapped over a total area of approximately 2,779 hectares, and is identified as having a unique assemblage of invertebrates in the groundwater calcretes (Mt Morgans WA Mining Pty Ltd, 2017). The PEC refers to a stygofauna community in the groundwater and the proposed clearing of native vegetation is unlikely to have any significant impact on this PEC. Potential impacts to stygofauna are being managed through the Mining Proposal, specifically via a Stygofauna Management Plan (Mt Morgans WA Mining Pty Ltd, 2017).

A Level 1 fauna and habitat survey was conducted over the application area and surrounding areas in March 2016 (Western Wildlife, 2016). The survey comprised a desktop search of relevant fauna databases and a field reconnaissance survey. Eleven fauna habitats were identified in the application areas, comprising of:

- Acacia shrubland on low rocky hills;
- Acacia shrubland on plains;
- Banded Ironstone Formation (BIF) ridge;
- Chenopod shrubland;
- Claypans;
- · Creeklines;
- Mulga woodlands on plains;
- Salt lake;
- Samphire shrublands; and
- Sandy hills and islets.

None of these habitat types are restricted to either the clearing permit application areas or the broader survey area (Western Wildlife, 2016).

The application area falls within the Ararak, Brooking, Bullimore, Darlot, Jundee, Laverton, Nubev, Ranchland, Violet, and Yanganoo land systems (GIS Database). Of these systems, the Bullimore, Violet, Brooking, Laverton, Jundee and Nubex land systems have the potential to be susceptible to erosion (Pringle et. al., 1994). To minimise potential land degradation as a result of the proposed amendment, it is recommended to maintain the staged clearing condition.

The proposed amendment is not likely to have any significant environmental impacts above those already assessed under Clearing Permit CPS 7408/1.

## Methodology CALM (2002)

Mt Morgans WA Mining Pty Ltd (2017) Native Vegetation Solutions (2016)

Pringle et. al. (1994) Western Wildlife (2016)

#### GIS Database:

- IBRA Australia
- Pre-European vegetation
- Threatened Ecological Sites Buffered

# Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

#### Comments

There are no native title claims over the amended application area (Department of Planning, Lands and Heritage, 2017). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

According to available databases, there are several registered Sites of Aboriginal Significance located in the area applied to clear (Department of Planning, Lands and Heritage, 2017). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Sites of Aboriginal Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Biodiversity Conservation and Attractions and the Department of Water and Environmental Regulation, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The amended clearing permit application was advertised on 4 September 2017 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received.

Methodology Department of Planning, Lands and Heritage (2017)

#### 4. References

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Dacian Gold (2016) Purpose Permit Application. Assessment of Clearing Principles Mt Morgans Gold Project. Dacian Gold Limited, December 2016.

Department of Planning, Lands and Heritage (2017) Aboriginal Heritage Enquiry System. Department of Aboriginal Affairs. http://maps.dia.wa.gov.au/AHIS2/ (Accessed 2 October 2017).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mt Morgans WA Mining Pty Ltd (2017) Purpose Permit Application Amendment to CPS 7408-1 - Assessment of Clearing Principles Mt Morgans Gold Project. Report prepared by Mt Morgans WA Mining Pty Ltd, August 2017.

Native Vegetation Solutions (2016) Level 1 Flora and Vegetation Survey Dacian Gold Ltd Mt Morgans Gold Project. Report prepared for Dacian Gold Limited, by Native Vegetation Solutions, July 2016.

Pringle, H.J.R., Van Vreeswyk, A.M.E., and Gilligan, S.A. (1994) An Inventory and Condition Survey of the north-eastern Goldfields, Western Australia. Department of Agriculture, Western Australia.

Western Wildlife (2016) Dacian Gold Limited: Mt Morgans Gold Project. Report prepared for Dacian Gold Limited, by Western Wildlife, July 2016.

## 5. Glossary

#### Acronyms:

**BoM** Bureau of Meteorology, Australian Government

DAA Department of Aboriginal Affairs, Western Australia (now DPLH)
 DAFWA Department of Agriculture and Food, Western Australia (now DPIRD)
 DBCA Department of Biodiversity Conservation and Attractions, Western Australia

**DEC** Department of Environment and Conservation, Western Australia (now DBCA and DWER)

DEE Department of the Environment and Energy, Australian Government
DER Department of Environment Regulation, Western Australia (now DWER)
DMIRS Department of Mines, Industry Regulation and Safety, Western Australia

**DMP** Department of Mines and Petroleum, Western Australia (now DMIRS)

DPIRD Department of Primary Industries and Regional Development, Western Australia

**DPLH** Department of Planning, Lands and Heritage, Western Australia

**DRF** Declared Rare Flora

**DoE** Department of the Environment, Australian Government (now DEE)

**DoW** Department of Water, Western Australia (now DWER)

**DPaW** Department of Parks and Wildlife, Western Australia (now DBCA)

**DSEWPaC** Department of Sustainability, Environment, Water, Population and Communities (now DEE)

DWER Department of Water and Environmental Regulation, Western Australia
EPA Environmental Protection Authority, Western Australia (now DWER)

EP Act Environmental Protection Act 1986, Western Australia

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)

GIS Geographical Information System
ha Hectare (10,000 square metres)

IBRA Interim Biogeographic Regionalisation for Australia

IUCN International Union for the Conservation of Nature and Natural Resources – commonly known as the

World Conservation Union

PEC Priority Ecological Community, Western Australia

RIWI Act Rights in Water and Irrigation Act 1914, Western Australia

TEC Threatened Ecological Community

#### **Definitions:**

{DPaW (2017) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

#### T Threatened species:

Published as Specially Protected under the *Wildlife Conservation Act 1950*, listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

**Threatened fauna** is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

**Threatened flora** is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act.

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. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

## EN Endangered species

Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

#### VU Vulnerable species

Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

## EX Presumed extinct species

Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

## IA Migratory birds protected under an international agreement

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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

#### CD Conservation dependent fauna

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950*, in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

## OS Other specially protected fauna

Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

#### P Priority species

Species which are poorly known; or

Species that are adequately known, are rare but not threatened, and 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.

#### P1 Priority One - 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.

## P2 Priority Two - 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.

#### P3 Priority Three - 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.

#### P4 Priority Four - 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.

## Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(h)	Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
(i)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
<b>(j)</b>	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.
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