

# **Clearing Permit Decision Report**

# 1. Application details

1.1. Permit application details

Permit application No.: 4700/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Iron Ore Holdings Limited

1.3. Property details

Property: Iron Ore (Robe River) Agreement Act 1964, Mineral Lease 248SA (AML 70/248)

Local Government Area: Shire of Ashburton
Colloquial name: Buckland Hills Project

1.4. Application

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

1.28 Mechanical Removal Mineral Exploration

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 19 January 2012

### 2. Site Information

#### 2.1. Existing environment and information

# 2.1.1. Description of the native vegetation under application

# Vegetation Description

Beard vegetation associations have been mapped for the whole of Western Australia. Two Beard vegetation associations have been mapped within the application area:

**82:** Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and **609:** Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex/hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust (GIS Database).

No vegetation surveys have been undertaken over the application area, therefore, the vegetation communities have not been described or mapped for the areas in any further detail than Beard vegetation mapping.

# Clearing Description

Iron Ore Holdings Limited has applied to clear up to 1.28 hectares of native vegetation for the purpose of mineral exploration. The clearing will comprise of three access tracks to allow exploration drilling activities to be undertaken on a neighbouring tenement. The application area is located approximately 115 kilometres east-south-east of Onslow.

Vegetation will be cleared using a bulldozer with the blade raised where possible. Topsoil will be stockpiled and used in rehabilitation activities.

#### **Vegetation Condition**

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

#### Comment

The vegetation condition is based on site photographs supplied by Iron Ore Holdings (2011). Vegetation appears to be in very good condition with disturbance from previous access tracks.

# 3. Assessment of application against clearing principles

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

# Comments Proposal is not likely to be at variance to this Principle

The application area occurs within the Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). This subregion is generally described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

The vegetation within the application area is broadly mapped as Beard vegetation associations 82 and 609, both of which have approximately 100% of their pre-European vegetation extent remaining in the bioregion (Shepherd, 2009; GIS Database). No on-ground flora or vegetation surveys have been undertaken over the application area but site photographs of each of the proposed access tracks appear typical of Hamersley vegetation with bunch grasses, particularly spinifex, on the valley floor (Iron Ore Holdings, 2011).

According to available databases there are no known records of Declared Rare Flora or Threatened Ecological Communities within the application area or within a 100 kilometre radius of the application area (GIS Database). No Priority flora species have been recorded within the application area but on-ground flora surveys have not been undertaken (Iron Ore Holdings, 2011; GIS Database). Five Priority flora species have previously been recorded within a 20 kilometre radius of the application area: *Goodenia hartiana* (Priority 2), *Eragrostis surreyana* (Priority 3), *Terminalia supranitifolia* (Priority 3), *Triodia* sp. Robe River (Priority 3) and *Rhynchosia bungarensis* (Priority 4) (DEC, 2012). However, the site description and photographs of the application area do not correspond with the habitat preferences described for these Priority species (Western Australian Herbarium, 2011). The application area is not situated on sand, major drainage lines or soaks, hill tops or hill crests (Iron Ore Holdings, 2011). Therefore, it is unlikely that these Priority flora species occur within the application area.

The application area is located within the buffer of one Priority Ecological Community (PEC) and approximately 20 metres outside the buffer of another occurrence of the PEC (GIS Database). The PEC is 'Subterranean invertebrate communities of pisolitic hills in the Robe Valley' (Iron Ore Holdings, 2011; GIS Database). This PEC is described as troglofauna communities on a series of isolated low undulating hills in the Robe Valley, with the troglofauna having very short range distributions (DEC, 2010). No pisolitic hills will be impacted by the proposed clearing (Iron Ore Holdings, 2011) and the small amount of clearing (1.28 hectares) for access tracks is unlikely to have an impact on subterranean fauna.

The presence and abundance of weeds in the application area is unknown. The presence of weed species would lower the biodiversity value of the application area. Care must be taken to ensure that the proposed clearing activities do not spread or introduce weed species to non-infested areas. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A search of the Department of Environment and Conservation's NatureMap revealed records of three amphibian, 108 bird, 26 mammal and 79 reptile species within a 20 kilometre radius (DEC, 2012). The high number of fauna species recorded would reflect the fauna habitats the Jimmawurrada-Bungaroo Creek Valley and the surrounding ranges provide. While the locality may have relatively high fauna diversity, the application area itself is small and the access track locations have been selected to avoid specialised fauna habitat features (Iron Ore Holdings, 2011). The application area is not likely to comprise a higher level of fauna diversity than its surroundings.

The application area is not likely to comprise a greater diversity than nearby and similar areas within the bioregion and local area.

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

# Methodology CAL

CALM (2002)

DEC (2010)

DEC (2012)

Iron Ore Holdings (2011)

Shepherd (2009)

Western Australian Herbarium (2012)

GIS Database:

- IBRA WA (Regions Subregions)
- Pre-European Vegetation
- Threatened and Priority Flora
- Threatened Ecological Sites Buffered

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

#### Comments Proposal is not likely to be at variance to this Principle

No fauna surveys have been conducted over the application area. A threatened fauna database search was undertaken and site descriptions and photographs of the application area were supplied (Iron Ore Holdings, 2011).

The proposed tracks routes are located on the broad Jimmawurrada-Bungaroo Creek Valley. This broad drainage valley has a width of approximately 5 kilometres in the local area and forms a relatively flat basin filled with alluvial material (Iron Ore Holdings, 2011). The site photographs show the vegetation in the application area consists largely of *Acacia* shrubs over bunch grasses, with occasional Eucalypt trees, on the valley floor (Iron Ore Holdings, 2011). This vegetation description is typical of the Hamersley subregion (CALM, 2002) and the fauna habitats that it provides are likely to be widespread in both the local area and the subregion.

No significant habitat features such as caves, permanent water sources, major creek lines or gorges are present within the application area (Iron Ore Holdings, 2011; GIS Database). The clearing activities are at a scale where larger trees can be avoided in most instances (Iron Ore Holdings, 2011).

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

#### Methodology CALM (2002)

Iron Ore Holdings (2011)

GIS Database:

- Hydrography, Linear

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

# Comments Proposal is not likely to be at variance to this Principle

According to available databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database). The nearest record of DRF is located approximately 135 kilometres southeast of the application area (GIS Database).

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

#### Methodology GIS Database:

- Threatened and Priority 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.

## Comments Proposal is not likely to be at variance to this Principle

A search of available databases revealed there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database). The nearest recorded TEC, *Themeda* grasslands on cracking clays, is located approximately 100 kilometres south-east of the application area (GIS Database).

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

#### Methodology GIS Database:

- Threatened Ecological Sites Buffered

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

#### Comments Proposal is not at variance to this Principle

The clearing application area falls within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion in which approximately 99.9% of the pre-European vegetation remains (see table) (Shepherd, 2009; GIS Database). This gives it a conservation status of 'Least Concern' according to the Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment, 2002).

The vegetation of the clearing application area has been mapped as Beard vegetation associations:

**82:** Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*; and **609:** Mosaic: Hummock grasslands, open low tree steppe; bloodwood with sparse kanji shrubs over soft spinifex/Hummock grasslands, open low tree steppe; snappy gum over *Triodia wiseana* on a lateritic crust (Shepherd, 2009; GIS Database).

	Pre-European Area (ha)*	Current Extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Pilbara	17,804,193	17,785,001	~99.9	Least Concern	6.32
Beard Veg Assoc.  – State					
82	2,565,901	2,565,901	~100	Least Concern	10.24
609	74,186	74,186	~100	Least Concern	-
Beard Veg Assoc.  – Bioregion					
82	2,563,583	2,563,583	~100	Least Concern	10.25
609	74,186	74,186	~100	Least Concern	-

<sup>\*</sup> Shepherd (2009)

<sup>\*\*</sup> Department of Natural Resources and Environment (2002)

According to Shepherd (2009), approximately 100% of both of these vegetation associations remain at a state and bioregional level (see table). These vegetation associations would be given a conservation status of 'Least Concern' at both a state and bioregional level (Department of Natural Resources and Environment, 2002).

The vegetation under application is not a remnant of vegetation in an area that has been extensively cleared.

Based on the above, the proposed clearing is not at variance to this Principle.

#### Methodology

Department of Natural Resources and Environment (2002)

Shepherd (2009) GIS Database:

- IBRA WA (Regions Subregions)
- Pre-European Vegetation

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

#### Comments

#### Proposal is at variance to this Principle

There are no permanent watercourses or wetlands within the application area (Iron Ore Holdings, 2011; GIS Database).

The proposed access tracks are located at the margins of the broad Jimmawurrada-Bungaroo Creek Valley. This broad drainage valley has a width of approximately 5 kilometres in the local area and forms a relatively flat basin filled with alluvial material (Iron Ore Holdings, 2011). While the application area has been located to avoid major drainage channels in the area, there are several minor non-perennial watercourses that cross through the application area (Iron Ore Holdings, 2011; GIS Database). The vegetation of parts of the application area is likely to be associated with these ephemeral drainage lines.

Based on the above, the proposed clearing is at variance to this Principle. However, vegetation associated with minor drainage lines is widespread in the region and due to the minor nature of the proposed clearing for exploration activities there is unlikely to be significant impacts on any watercourse or wetland.

#### Methodology

Iron Ore Holdings (2011)

GIS Database:

- Hydrography, Linear

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

#### Comments

#### Proposal is not likely to be at variance to this Principle

According to available datasets the application area intersects the Boolgeeda and Newman Land Systems (GIS Database).

The Boolgeeda Land System is characterised by stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands (Van Vreeswyk et al., 2004). The vegetation is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The Newman Land System is characterised by rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands (Van Vreeswyk et al., 2004). Each of the landforms in the land system have a mantle of abundant pebbles of ironstone and other rocks, which translates to a low soil erosion risk (Van Vreeswyk et al., 2004).

Iron Ore Holdings has applied to clear up to 1.28 hectares for access tracks using machinery with the blade up, where possible, to ensure soil and rootstock is not removed (Iron Ore Holdings, 2011). The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the small size of the proposed activities, the clearing is not likely to result in appreciable land degradation.

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

#### Methodology

Iron Ore Holdings (2011)

Van Vreeswyk et al. (2004)

GIS Database:

- Rangeland Land System Mapping

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

### Comments

### Proposal is not likely to be at variance to this Principle

The application area is not located within a conservation reserve (GIS Database). The nearest conservation area is Cane River Conservation Park, which is located approximately 47 kilometres south-west of the

application area (GIS Database). At this distance the proposed clearing is unlikely to have any impact on the conservation area.

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

# Methodology GIS Database:

- DEC Tenure

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

### Comments Proposal is not likely to be at variance to this Principle

There are no permanent watercourses or wetlands within the application area (GIS Database). The application area has been located to avoid major drainage lines in the area (Iron Ore Holdings, 2011). There are several minor ephemeral drainage lines that cross the application area that would only flow following substantial rainfall events (Iron Ore Holdings, 2011; GIS Database). The proposed clearing is not likely to cause deterioration in the quality of surface water in the local area.

According to available databases the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). The nearest PDWSA is Millstream Water Reserve, which is approximately 55 kilometres to the east (GIS Database). The proposed clearing is unlikely to affect the water quality of the water reserve due to the large distance between it and the application area.

The small amount of proposed clearing (1.28 hectares) is unlikely to cause deterioration in the quality of underground water.

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

#### Methodology Iro

Iron Ore Holdings GIS Database:

- Hydrography, Linear
- Public Drinking Water Source Areas (PDWSAs)

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

#### Comments Proposal is not likely to be at variance to this Principle

The application area is located within the Robe River catchment area (GIS Database). Given the size of the area to be cleared (1.28 hectares) in relation to the size of the catchment area (757,138 hectares) (GIS Database), the proposed clearing is not likely to increase the potential of flooding on a local or catchment scale.

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

#### Methodology GIS Database:

- Hydrographic Catchments - Catchments

# Planning instrument, Native Title, Previous EPA decision or other matter.

### Comments

There is one Native Title Claim (WC99/12) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, 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*.

There are no registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water, 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 clearing permit application was advertised on 12 December 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received.

#### Methodology GIS Database:

- Aboriginal Sites of Significance
- Native Title Claims Registered with the NNTT

#### 4. References

- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Pilbara 3 (PIL3 Hamersley Subregion). Department of Conservation and Land Management, Western Australia.
- DEC (2010) Priority Ecological Communities for Western Australia. Species and Communities Branch, Department of Environment and Conservation, May 2010.
- DEC (2012) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. http://naturemap.dec.wa.gov.au/default.aspx (Accessed 16 January 2012).
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Iron Ore Holdings (2011) Supporting Documentation for Clearing Permit CPS 4700/1. Report Prepared by Iron Ore Holdings Ltd, November 2012.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) Technical Bulletin An Inventory and Condition Survey of the Pilbara Region, Western Australia, No. 92. Department of Agriculture, Government of Western Australia, Perth, Western Australia.
- Western Australian Herbarium (2012) FloraBase The Western Australia Flora. Department of Environment and Conservation. URL: http://florabase.dec.wa.gov.au (Accessed 16 January 2012).

# 5. Glossary

### **Acronyms:**

**BoM** Bureau of Meteorology, Australian Government

CALM Department of Conservation and Land Management (now DEC), Western Australia

**DAFWA** Department of Agriculture and Food, Western Australia

**DEC** Department of Environment and Conservation, Western Australia

**DEH** Department of Environment and Heritage (federal based in Canberra) previously Environment Australia

**DEP** Department of Environment Protection (now DEC), Western Australia

**DIA** Department of Indigenous Affairs

DLI Department of Land Information, Western Australia
 DMP Department of Mines and Petroleum, Western Australia
 DoE Department of Environment (now DEC), Western Australia

**DolR** Department of Industry and Resources (now DMP), Western Australia

**DOLA** Department of Land Administration, Western Australia

**DoW** Department of Water

**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

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

s.17 Section 17 of the Environment Protection Act 1986, Western Australia

TEC Threatened Ecological Community

# **Definitions:**

{Atkins, K (2005). Declared rare and priority flora list for Western Australia, 22 February 2005. Department of Conservation and Land Management, Como, Western Australia}:-

P1 Priority One - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P2 Priority Two - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P3 Priority Three - Poorly Known taxa: taxa which are known from several populations, at least some of which

are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.

- P4 Priority Four Rare taxa: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R Declared Rare Flora Extant taxa (= Threatened Flora = Endangered + Vulnerable): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X Declared Rare Flora Presumed Extinct taxa: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950]:-

- Schedule 1 Fauna that is rare or likely to become extinct: being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2 Schedule 2 Fauna that is presumed to be extinct: being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3 Birds protected under an international agreement: being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4 Other specially protected fauna: being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). Priority Codes for Fauna. Department of Conservation and Land Management, Como, Western Australia}:-

- P1 Priority One: Taxa with few, poorly known populations on threatened lands: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2 Priority Two: Taxa with few, poorly known populations on conservation lands: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3 Priority Three: Taxa with several, poorly known populations, some on conservation lands: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4 Priority Four: Taxa in need of monitoring: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

#### Categories of threatened species (Environment Protection and Biodiversity Conservation Act 1999)

**EX Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

**EX(W) Extinct in the wild:** A native species which:

- (a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
- (b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- **CR Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

**EN Endangered:** A native species which:

- (a) is not critically endangered; and
- (b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

**VU Vulnerable:** A native species which:

- (a) is not critically endangered or endangered; and
- (b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD	<b>Conservation Dependent:</b> A native species which is the focus of a specific conservation progrates cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.	m, the ngered
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