Government of **Western Australia**
Department of **Mines and Petroleum**

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3610/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Hamersley Iron Pty Ltd**

1.3. Property details

Property: *Iron Ore (Hamersley Range) Agreement Act 1963*, Mineral Lease 4SA (AML 70/4)
Local Government Area: Shire of Ashburton
Colloquial name: Marra Mamba West

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
25		Mechanical Removal	Mineral Production

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 at a 1:250,000 scale for the whole of Western Australia and are useful to look at vegetation extent in a regional context. The following Beard Vegetation Association is located within the application area (GIS Database):

567: Hummock grasslands, shrub steppe; mulga & kanji over soft spinifex and *Triodia basedowii.*

A flora and vegetation survey including the application area was undertaken by Keith Lindbeck and Associates between November 2006 and June 2007. The following vegetation communities were identified within the application area:

Hilltops with gently rounded slopes

H1-1: *Eucalyptus leucophloia* and *Eucalyptus gamophylla* scattered low trees over *Acacia hamersleyensis* and *Acacia bivenosa* open shrubland over *Triodia wiseana* hummock grassland;

H1-2: *Eucalyptus leucophloia* scattered low trees over *Acacia hamersleyensis* and *Acacia bivenosa* closed heath over *Triodia wiseana* hummock grassland;

Very steep serrated escarpments

H2-1: *Eucalyptus leucophloia* and *Acacia pruinocarpa* low woodland over *Dodonaea pachyneura* open heath over *Triodia wiseana* and *Triodia wiseana* hummock grassland with patches of *Themeda sp. Mt Barricade* tussock grassland;

Steep colluvial upper slopes

H3: Open shrubland over *Triodia wiseana* hummock grassland with patches of *Themeda sp. Mt Barricade* closed tussock grasslands. Sub-unit: *Eucalyptus leucophloia* low open forest (hillside drainage lines);

Moderately inclined colluvial mid and lower slopes

H4: *Corymbia hamersleyana* scattered low trees over high shrubland over *Triodia wiseana* hummock grassland;

Low rocky slopes

H7-5: *Corymbia hamersleyana* and *Eucalyptus leucophloia* scattered low trees over *Acacia marramamba* and *Codonocarpos cotinifolius* high shrubland over *Triodia spp.* hummock grassland;

Narrow incised shallow gorge

H15: *Acacia aneura var. pilbarana, Acacia citrinoviridis* and *Acacia pruinocarpa* low closed forest with open scrub and mixed spp. grassland;

Minor shallow sub-valley

H16: *Acacia bivenosa* open scrub over *Triodia wiseana* hummock grassland; and

Alluvial meadow

W4-1: *Acacia aneura var. pilbarana, Acacia citrinoviridis* and *Acacia pruinocarpa* low open forest over open herbland and open tussock grassland.

Clearing Description Hamersley Iron has applied to clear up to 25 hectares within an application area of approximately 31.2 hectares (GIS Database). The application area is located at the Tom Price mine site.

The purpose of the clearing is for the construction of a waste dump. An access ramp will be created for the ridge that passes through the application area to be able to clear the area below (Rio Tinto, 2010). Clearing will be by mechanical means.

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment Keith Lindbeck and Associates (2007) noted that a large proportion of the proposed clearing area had been burnt by fire in the past 2 - 5 years. Vegetation was reported to be in a healthy regrowth stage, most likely due to the favourable climatic conditions experienced in the area during 2006 (Keith Lindbeck and Associates, 2007).

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 may be at variance to this Principle

The application area occurs within the Hamersley (PIL3) Interim Biogeographic Regionalisation of Australia (IBRA) subregion (GIS Database). At a broad scale vegetation can be 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).

A flora and vegetation survey of the Tom Price Mine site identified 12 vegetation communities within the application area (Keith Lindbeck and Associates, 2007). This survey recorded a total of 295 taxa from 121 genera and 49 families (Keith Lindbeck and Associates, 2007). Whilst this is considered to be of high diversity, it is comparable with other regional studies and not considered to be a higher diversity than surrounding less disturbed areas (Keith Lindbeck and Associates, 2007).

No fauna surveys have been conducted over the application area, however, given the diversity of the habitats present it would not be unexpected for the area to support a high level of faunal diversity. These habitats are well represented throughout the bioregion and the fauna present is not likely to be of a higher diversity than surrounding less disturbed areas (Keith Lindbeck and Associates, 2007).

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

CALM (2002)
Keith Lindbeck and Associates (2007)
GIS Database
- IBRA WA (Regions – Sub Regions)

(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 may be at variance to this Principle

No detailed vertebrate or invertebrate fauna surveys have been conducted over the application area, however, the proponent has conducted a desktop search of the DEC's Threatened and Priority Fauna Database (Keith Lindbeck and Associates, 2007). The search revealed that the following conservation significant vertebrate fauna species have been previously recorded in the vicinity of the application area (Keith Lindbeck and Associates, 2007):

- Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4;
- Australian Bustard (*Ardeotis australis*) – Priority 4;
- Lakeland Downs Mouse (*Leggadina lakedownensis*) – Priority 4; and
- Peregrine Falcon (*Falco peregrinus*) – Schedule 4.

Western Pebble-mound Mouse mounds have been recorded at the Tom Price mine (Keith Lindbeck and Associates, 2007). Based on habitat preference, it and the Lakeland Downs Mouse could occur within the application area (Keith Lindbeck and Associates, 2007). The landscape unit H2 – Very Steep Serrated Escarpment has the potential to contain significant habitat features such as ledges, caves and overhangs (Keith Lindbeck and Assocaites, 2007). However, the landscapes and vegetation present within the application area are not restricted and considered widespread throughout the bioregion (Keith Lindbeck and Associates, 2007).

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology Keith Lindbeck and Associates (2007)

(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 records of Declared Rare Flora (DRF) or Priority Flora within the application area (GIS Database). Keith Lindbeck and Associates conducted a flora survey including the application area between November 2006 and June 2007. No DRF or Priority Flora was recorded within the application area (Keith Lindbeck and Associates, 2007).

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

Methodology

Keith Lindbeck and Associates (2007)
GIS Database
- Declared Rare and Priority Flora List

(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

According to available databases, there are no Threatened Ecological Communities (TEC's) within the application area (GIS Database). The vegetation survey did not identify any vegetation communities described as a TEC (Keith Lindbeck and Associates, 2007).

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

Methodology

Keith Lindbeck and Associates (2007)
GIS Database
- Threatened Ecological Sites
- 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 application area falls within the Pilbara Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.9% of the Pre-European vegetation remains (see table) (GIS Database, Shepherd, 2007).

The vegetation of the application area has been mapped as the following Beard Vegetation Association (GIS Database):

567: Hummock grasslands, shrub steppe; mulga and kanji over soft spinifex & *Triodia basedowii*.

According to Shepherd (2007) approximately 100% of this Beard Vegetation Association remains at both a state and bioregional level. Therefore the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

While a small percentage of vegetation types within the Pilbara bioregion are protected within conservation reserves, the bioregion remains largely uncleared. As a result the conservation of vegetation associations within the bioregion is not likely to be impacted by this proposal.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Pilbara	17,804,187	17,794,646	~99.9	Least Concern	6.3 (6.3)
Beard veg assoc. – State					
567	777,507	777,507	~100	Least Concern	22.3 (22.3)
Beard veg assoc. – Bioregion					
567	776,824	776,824	~100	Least Concern	22.4 (22.4)

* Shepherd (2007)
** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)
Presumed extinct Probably no longer present in the bioregion

Endangered	<10% of pre-European extent remains
Vulnerable	10-30% of pre-European extent exists
Depleted	>30% and up to 50% of pre-European extent exists
Least concern	>50% pre-European extent exists and subject to little or no degradation over a majority of this area

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

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2007)
GIS Database
- IBRA WA (Regions – Sub Regions)
- 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 not likely to be at variance to this Principle**
According to available databases, there are several ephemeral watercourses within the application area (GIS Database). The vegetation survey did not record any vegetation communities that would be considered riparian or associated with a watercourse. These watercourses are only likely to flow following significant rainfall events. Whilst these ephemeral watercourses will be impacted by the clearing, the vegetation communities present are not restricted to watercourses or the project area (Keith Lindbeck and Associates, 2007).

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

Methodology Keith Lindbeck and Associates (2007)
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 databases, the application area is comprised of the Newman, Rocklea and Boolgeeda land systems (GIS Database). All these land systems are largely erosion resistant (Van Vreeswyk, et al., 2004). However, the stony slopes and plains landform which is present within the Boolgeeda land system has been assessed as being vulnerable to soil erosion if disturbed (DAFWA, 2006). However, this landform only makes up a minor proportion of the application area.

Based upon the landscape units described by Keith Lindbeck and Associates (2007), the proposed clearing area consists largely of escarpments, hills and slopes. Some minor valleys and gorges are also present (Keith Lindbeck and Associates, 2007). Soils and landforms within the application area are generally non-erosive (Keith Lindbeck and Associates, 2007).

At a broad scale the surface soil pH in the application area ranges from 5.5 to 6.0 and there is a low probability of acid sulphate soils (CSIRO, 2009). The average annual evaporation rate is over eight times the average annual rainfall, so it is unlikely that the proposed clearing will result in increased groundwater recharge causing raised saline water tables (GIS Database).

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

Methodology CSIRO (2009)
DAFWA (2006)
Keith Lindbeck and Associates (2007)
Van Vreeswyk et al. (2004)
GIS Database
- Evaporation Isopleths
- Rainfall, Mean Annual
- 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**
According to available databases, the application area is not located within a conservation area or any DEC managed lands (GIS Database). The nearest conservation reserve is Karijini National Park located approximately 16.5 kilometres east of the application area (GIS Database). Based on the distance between the proposed clearing and the nearest conservation area, the project is not likely to impact the environmental

values of any 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

According to available databases, the application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There are no permanent waterbodies or watercourses within the application area, however there are a number of minor ephemeral creeks (GIS Database).

Rainfall in the area can be rather intense falls associated with cyclonic events or scattered falls associated with local thunderstorms (Van Vreeswyk et al., 2004). The average annual evaporation rate for the application area is 3,400 millimetres and the average annual rainfall is 400 millimetres (GIS Database). Therefore, during normal rainfall events water in the application area is likely to evaporate quickly. However, substantial rainfall events create surface sheet flow which is likely to have a higher level of sediments. During normal rainfall events, the proposed clearing would not likely lead to an increase in sedimentation of watercourses within the application area.

The groundwater salinity within the application area is between 500 – 1000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be potable water. The proposed clearing is not likely to cause salinity levels within the application area to alter (GIS Database).

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

Methodology Van Vresswyk et al. (2004)
GIS Database
- Evaporation Isopleths
- Groundwater Salinity, Statewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSA's)
- Rainfall, Mean Annual

(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

With an average annual rainfall of 400 millimetres and an average annual evaporation rate of 3,400 millimetres there is likely to be little surface flow during normal seasonal rains (GIS Database). Whilst large rainfall events may result in the flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.

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

Methodology GIS Database
- Evaportation Isopleths
- Rainfall, Mean Annual

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

Comments

The clearing permit application was advertised on 8 March 2010 by the Department of Mines and Petroleum inviting submissions from the public. There was one submission received stating no objections to the proposal.

There is one native title claim over the application area under application; WC97/089 (GIS Database). This claim has been registered with the Native Title Tribunal on behalf of the claimant group. However, the mining tenement 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 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.

Methodology GIS Database
- Native Title Claims
- Sites of Aboriginal Significance

4. Assessor's comments

Comment

The proposal has been assessed against the Clearing Principles, and the proposed clearing may be at variance to Principles (a) and (b) , is not likely to be at variance to Principles (c), (d), (f), (g), (h), (i) and (j) and is not at variance to Principle (e).

Should the permit be granted it is recommended that conditions be imposed on the permit for the purposes of weed management, rehabilitation, record keeping and permit reporting.

5. References

Commonwealth Scientific and Industrial Research Organisation (2009) Australian Soil Resource Information System. Available online at: http://www.asris.csiro.au/index_ie.html Accessed on 19 April 2010.

DAFWA (2006) Land degradation assessment report for clearing permit application CPS 1250/1. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia, dated 6 November 2006.

Department of Conservation and Land Management (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions.

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.

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

Keith Lindbeck and Associates (2007) Vegetation Survey and Land Clearing Information for Proposed Mining Areas; East, West and Central Pits, Tom Prince Mine Site. Unpublished report for Pilbara Iron, October 2007.

Shepherd, D.P. (2007) 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., Hennig, P. and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

6. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), 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, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
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	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

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 **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 **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 **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.

P5 **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 **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.