



# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 4115/1  
 Permit type: Purpose Permit

### 1.2. Proponent details

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

### 1.3. Property details

Property: Miscellaneous Licence 47/153  
 Miscellaneous Licence 47/185  
 Local Government Area: Shire of Ashburton  
 Colloquial name: Boolgeeda Aerodrome Project

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70		Mechanical Removal	Aerodrome upgrade and maintenance

### 1.5. Decision on application

Decision on Permit Application: Grant  
 Decision Date: 13 January 2011

## 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. One Beard vegetation association has been mapped within the application area (GIS Databsae).

18: Low woodland; mulga (*Acacia aneura*).

The application area was surveyed in 2004 by Biota Environmental Sciences. Based on this survey the following two broad vegetation types were recorded within the application area:

P14: *Acacia inaequilatera*, *Acacia exilis*, *Acacia bivenosa* open shrubland over *Triodia epactia* mid-dense hummock grassland; and  
 P7: *Corymbia deserticola* low open woodland over *Acacia atkinsiana* shrubland to tall shrubland over *Triodia epactia*, *Triodia wiseana* mid-dense hummock grassland (Biota Environmental Sciences, 2005a).

**Clearing Description** Hamersley Iron Pty Ltd is proposing to clear up to 70 hectares of native vegetation for the purpose of aerodrome upgrade and maintenance.

Vegetation will be cleared using a blade down technique and will be stockpiled and used in rehabilitation.

**Vegetation Condition** Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994);  
 To  
 Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

**Comment** The application area is located in the Pilbara region of Western Australia and is situated approximately 55 kilometres north-west of Tom Price (GIS Database).

### 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) subregion of the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). This sub region is characterised by sedimentary ranges and plateaux, dissected by gorges (CALM, 2002). At a broad scale, vegetation can be described as Mulga low woodlands 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 was conducted by Biota Environmental Sciences (2005a) over the application area. A total of two vegetation assemblages were recorded within the application area (Rio Tinto, 2010). These are:

P14: *Acacia inaequilatera*, *Acacia exilis*, *Acacia bivenosa* open shrubland over *Triodia epactia* mid-dense hummock grassland; and

P7: *Corymbia deserticola* low open woodland over *Acacia atkinsiana* shrubland to tall shrubland over *Triodia epactia*, *Triodia wiseana* mid-dense hummock grassland (Biota Environmental Sciences, 2005a).

Neither of these vegetation communities are regarded as being unique or of particularly high diversity (Rio Tinto, 2010). They are both typically well represented in the Hamersley sub region and are considered to be of low conservation significance (Biota Environmental Sciences, 2005a). The application area includes a previously cleared area, the existing airstrip, of approximately 34 hectares. This has been included due to the requirement to remove re-growth and maintain the airstrip.

Six weed species were recorded within the broader Brockman 4 survey area (Biota Environmental Sciences, 2005a). These are:

- Ruby Dock (*Acetosa vesicaria*);
- Buffel Grass (*Cenchrus ciliaris*);
- Birdwood Grass (*Cenchrus setiger*);
- Whorled Pigeon Grass (*Setaria verticillata*);
- Beggars Tick (*Bidens bipinnata*); and
- Spiked Malvastrum (*Malvastrum americanum*).

It is likely that some of these species occur within the application area. Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. This in turn can lead to greater rates of infestation and further loss of biodiversity if the area is subject to repeated fires. None of these species are listed as 'Declared Plant' species under the *Agriculture and Related Resources Protection Act 1976* by the Department of Agriculture and Food. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

A fauna survey conducted by Biota Environmental Sciences (2005b) of the broader Brockman 4 area recorded a total of 123 terrestrial vertebrate fauna taxa comprised of two amphibians, 49 reptiles, 57 birds, seven bats and eight non-volant mammals. The land systems, vegetation and habitats of the project area are common and widely represented both locally and regionally. The application area is not likely to comprise greater faunal diversity than other nearby areas.

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

##### Methodology

CALM (2002)  
Biota Environmental Sciences (2005a)  
Biota Environmental Sciences (2005b)  
Rio Tinto (2010)  
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 is not likely to be at variance to this Principle**

A fauna survey conducted by Biota Environmental Sciences (2005b) of the broader Brockman 4 area recorded a total of 123 terrestrial vertebrate fauna taxa comprised of two amphibians, 49 reptiles, 57 birds, seven bats and eight non-volant mammals.

Five primary fauna habitats were identified within the broader Brockman 4 area (Biota Environmental Sciences, 2005b). These are:

- Creeklines – comprising minor drainage lines to wide flood channels with *Acacia* shrublands over *Triodia epactia* hummock grasslands;
- Mulga – Dense *Acacia aneura* tall shrublands over *Triodia epactia* and *Triodia wiseana* hummock grasslands in drainage areas within plains;

- *Acacia* over *Triodia* – situated on stony soils and on soft soil in a wide valley;
- Gorge – gorges associated with the Brockman 4 range; and
- *Triodia* hilltop- crests of the Brockman 4 range.

Two of these habitats, Creeklines and *Acacia* over *Triodia*, are likely to occur within the application area (GIS Database). While creeklines are generally considered to be significant habitat, the small size and nature of the proposed clearing render it unlikely to significantly impact this habitat.

A total of 10 vertebrate fauna species considered to be of conservation significance potentially occur within the application area, two of which, the Australian Bustard (Priority 4) and *Notoscincus butleri* (Priority 4), were recorded within the Brockman 4 survey area (Biota Environmental Sciences, 2005b). The habitats within the application area are likely to be suitable for three conservation significant species:

- Australian Bustard – (*Ardeotis australis*) Priority 4, *Wildlife Conservation Act 1950*;
- Night Parrot – (*Pezoporus occidentalis*) Schedule 1, *Wildlife Conservation Act 1950* and Endangered, *Environmental Protection and Biodiversity Conservation Act 1999*; and
- Spectacled Hare-Wallaby – (*Lagorchestes conspicillatus* subsp. *leichardti*) Priority 3, *Wildlife Conservation Act 1950*.

The preferred habitat for these species is Spinifex grasslands with or without open woodlands and shrublands. Given the common nature of Spinifex grasslands both locally and regionally, it is unlikely that the proposed clearing will significantly impact the conservation status of any of these species.

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

**Methodology** Biota Environmental Sciences (2005b)

**(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 GIS databases there are no known records of Declared Rare Flora (DRF) within the application area (GIS Database).

A flora survey was conducted over the application area by staff from Biota Environmental Sciences (2005a). No DRF or species listed under the *Environmental Protection and Biodiversity Conservation Act 1999* were recorded within the application area (Biota Environmental Sciences, 2005a).

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

**Methodology** Biota Environmental Sciences (2005a)  
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 the available GIS Databases there are no known records of Threatened Ecological Communities (TEC's) within the application area (GIS Database). The nearest known TEC is located approximately 15 kilometres east of the application area (GIS Database). At this distance, there is little likelihood of any impact to the TEC as a result of the proposed clearing.

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 application area falls within the Pilbara Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2007) reports that approximately 99.95% of the pre-European vegetation remains in the Pilbara bioregion.

The vegetation within the application area is recorded as Beard vegetation association:

18: Low woodland; mulga (*Acacia aneura*).

According to Shepherd (2007) approximately 100% of this Beard vegetation association remains in the Pilbara bioregion (see table below).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,804,188	17,794,647	99.95	Least Concern	6.32
Beard vegetation associations - State					
18	19,892,305	19,890,195	99.99	Least Concern	2.13
Beard vegetation associations - Bioregion					
18	676,557	676,557	100	Least Concern	16.8

\* Shepherd (2007)

\*\* Department of Natural Resources and Environment (2002)

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 GIS Databases, there are no permanent wetlands or watercourses within the application area (GIS Database). Whilst there are numerous minor, non-perennial watercourses which intersect the application area, no watercourse associated vegetation communities were defined in the vegetation survey conducted by Biota Environmental Sciences (2005a).

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

**Methodology** Biota Environmental Sciences (2005a)  
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**  
The application area has been surveyed by the Department of Agriculture and Food (Van Vreeswyk et al., 2004), and lies within the Boolgeeda Land System (GIS Database).  
  
The Boolgeeda Land System is described as stony lower slopes and plains below hill systems supporting hard and soft Spinifex grasslands and mulga shrublands (Van Vreeswyk et al., 2004). This land system is not susceptible to erosion.

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

**Methodology** 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 closest conservation area is the Karijini National Park located approximately 63 kilometres east of the application area (GIS Database). Given the distance to the nearest area of conservation significance, it is not likely that the proposed clearing will significantly impact on 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). The nearest PDWSA is Millstream Water Reserve which is located approximately 32 kilometres north-east of the application area at its closest point (GIS Database). Given the distance separating the application area and the nearest water supply area, the proposed clearing is unlikely to impact on the water quality of the Millstream Water Reserve.

The application area is located in a semi-desert-tropical region, with an average annual rainfall of approximately 399.4 millimetres recorded from the nearest weather station at Tom Price approximately 55 kilometres south-east of the application area (BoM, 2010; CALM, 2002). The size of the proposed clearing area within the above climate is unlikely to result in significant changes to surface water flows.

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

**Methodology** GIS Database:  
- 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 experiences a semi-desert, tropical climate with an average annual rainfall of 399.4 millimetres recorded from the nearest weather station at Tom Price approximately 55 kilometres south-east of the application area (CALM, 2002; BoM, 2010).

Rainfall is usually experienced during summer months and can be either cyclonic or thunderstorm events (CALM, 2002). It is likely that during times of intense rainfall there may be some localised flooding in adjacent areas. Local flooding occurs seasonally within the Pilbara region as a result of cyclonic activity and sporadic thunderstorm events. Given the size and the nature of the proposed clearing, it is unlikely to significantly alter the intensity of flooding within the application area and surrounding areas.

The application area is located within the Ashburton River catchment area (GIS Database). However, the size of the area to be cleared (70 hectares) in relation to the size of the Ashburton River catchment area (7,877,743 hectares) (GIS Database) is not likely to increase the potential for flooding within the application area, local area or within the catchment.

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

**Methodology** BoM (2010)  
CALM (2002)  
GIS Database:  
- Hydrographic Catchments - Catchments

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

**Comments**

There are two Native Title Claims (WC97/89 and WC01/5) over the area under application (GIS Database). These claims have 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 20 December 2010 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to the proposed clearing.

**Methodology** GIS Database:  
- Aboriginal Sites of Significance  
- Native Title Determined  
- Native Title NNTT

## 4. References

- Biota Environmental Sciences (2005a) A Vegetation and Flora Survey of the Brockman Syncline 4 Project Area, near Tom Price. Unpublished report prepared for Hamersley Iron Pty Ltd, July 2005.
- Biota Environmental Sciences (2005b) Fauna Habitats and Fauna Assemblages of the Brockman No. 4 Project Area. Unpublished report prepared for Hamersley Iron Pty Ltd, January 2005.
- BoM (2010) BOM Website - Climate Averages by Number, Averages for TOM PIRCE. [www.bom.gov.au/climate/averages/tables/cw\\_007151.shtml](http://www.bom.gov.au/climate/averages/tables/cw_007151.shtml) (Accessed 29 December 2010).
- 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.
- Rio Tinto (2010) Statement Addressing the 10 Clearing Principles, Boolgeeda Aerodrome- Proposed Extension. Unpublished report, November 2010.
- 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.

## 5. Glossary

### Acronyms:

<b>BoM</b>	Bureau of Meteorology, Australian Government
<b>CALM</b>	Department of Conservation and Land Management (now DEC), Western Australia
<b>DAFWA</b>	Department of Agriculture and Food, Western Australia
<b>DEC</b>	Department of Environment and Conservation, Western Australia
<b>DEH</b>	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
<b>DEP</b>	Department of Environment Protection (now DEC), Western Australia
<b>DIA</b>	Department of Indigenous Affairs
<b>DLI</b>	Department of Land Information, Western Australia
<b>DMP</b>	Department of Mines and Petroleum, Western Australia
<b>DoE</b>	Department of Environment (now DEC), Western Australia
<b>DoIR</b>	Department of Industry and Resources (now DMP), Western Australia
<b>DOLA</b>	Department of Land Administration, Western Australia
<b>DoW</b>	Department of Water
<b>EP Act</b>	Environmental Protection Act 1986, Western Australia
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
<b>GIS</b>	Geographical Information System
<b>ha</b>	Hectare (10,000 square metres)
<b>IBRA</b>	Interim Biogeographic Regionalisation for Australia
<b>IUCN</b>	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
<b>RIWI Act</b>	Rights in Water and Irrigation Act 1914, Western Australia
<b>s.17</b>	Section 17 of the Environment Protection Act 1986, Western Australia
<b>TEC</b>	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** **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.