

# EPBC Act referral



Australian Government

Department of Agriculture, Water and the Environment

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| <b>Title of proposal</b>  | <b>2020/8834 - Bristile Holdings Pty Ltd, Cardup Brickworks, South of Byford, WA</b> |
| <b>Section 1</b>  |  |
| <b>Summary of your proposed action</b>  |  |
| <b>1.1 Project industry type</b>  | Manufacturing  |
| <b>1.2 Provide a detailed description of the proposed action, including all proposed activities</b>   |  |
| <p>Cardup Brickworks was initially established in 1914. The overall site is recognised as being of local heritage significance as the only remaining brickworks within the Shire of Serpentine -Jarrahdale. The brickworks manufacturing plant is still located on the southern boundary of the site adjacent to Kiln Road and is the only operating Austral Bricks manufacturing plant in the southern metropolitan area (the other plant at Armadale currently on a care and maintenance regime). Its redevelopment and expansion will cement the site as the key strategic manufacturing plant for the company in the southern metropolitan area, supplementing the plants at Bellevue and Caversham in the north. Clay extraction occurred in the northern portion of the site and was essentially completed around 5 years ago, although there are some resources remaining on the site that could be subject to future consideration.</p> <p>The remaining brickworks facility will be upgraded and modestly expanded as part of this current application. The upgrade will include many environmental benefits including:</p> <ul style="list-style-type: none"><li>• the installation of a highly efficient natural gas fired kiln which will minimise greenhouse gas emissions</li><li>• a baghouse scrubber which will minimise air pollutants</li><li>• energy efficient plant including robots to reduce the strain on the Western Australian electricity grid</li><li>• reconfiguration on-site drainage to capture stormwater and reduce discharge to Cardup Brook.</li></ul> <p>In summary, the proposal includes:</p> <ul style="list-style-type: none"><li>• Expanding the current factory footprint (including internal equipment replacement)</li><li>• Upgraded baghouse scrubber</li><li>• New hopper and conveyor</li><li>• New primary crusher</li><li>• Clay storage area located in existing unused pit area</li><li>• Internal road upgrades, including widening of creek crossings</li><li>• Rearrangement of storage areas</li><li>• Clearing of a small area of vegetation to facilitate the development.</li></ul> <p>The existing operational brickmaking plant, known as Cardup 3, is located within a 0.654ha plant building on the western portion of the site. The existing structure measures 38m by 172m.</p> <p>As part of this proposal, this structure will be expanded by 52m to the west, resulting in a total structure footprint of 1.548ha. Adjacent to this expansion is a proposed new Bag House Scrubber.</p> <p>As part of this application it is proposed to upgrade the internal vehicle movement network. While new internal access roads are not proposed, existing single-lane internal roads will be widened to allow for trucks to pass in opposite directions. As part of these upgrades, the two existing crossings of Cardup Brook will also be widened. As part of these crossing upgrades, appropriate drainage and kerbing will be installed to limit any runoff from the road or crossing entering the Brook. This is a significant benefit to the current crossings that have no gradient or kerbing to prevent runoff occurring.</p> |  |
| <b>1.3 What is the extent and location of your proposed action?</b>   |  |
| See Appendix B  |  |
| <b>1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland)</b>   |  |
| <p>The land on which the factory sits is relatively flat at approximately 75-80 metres Australian Height Datum (AHD). Cardup Brook flows from east to west from approximately 80 metres AHD to 65 metres AHD through the site.</p> <p>Geological information has been mapped by the Department of Mines, Industry Regulation and Safety (DMIRS). The State interpreted bedrock geology is 'Cardup Group (P_-CD-s)' which is described as 'Predominantly white to black shale with bands of conglomerate, quartz sandstone, and sandstone'. The surface geology identified by the 500 metres grid Regolith Map of WA (DMIRS 2019) as 'exposed rock, saprolite and saprock'.</p> <p>Soil types mapped by the Department of Primary Industries and Regional Development (DPIRD) are predominantly well-drained gravelly yellow or brown duplex soils with sandy loam or sandy topsoils. The soil type along the Cardup Brook is</p>  |  |



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described as semi-wet soil with deep yellow acidic yellow duplex soils.

**1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?**

Development footprint - 17.4 hectares  
Disturbance footprint - 0.7974 hectares  
Avoidance area - 3.0 hectares

**1.7 Proposed action location**

Address - 69 Kiln Rd, Byford, WA, 6122, Australia

**1.8 Primary jurisdiction** Western Australia

**1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?**

☐ Yes ☒ No

**1.10 Is the proposed action subject to local government planning approval?**

☒ Yes ☐ No

**1.10.1 Is there a local government area and council contact for the proposal?**

☒ Yes ☐ No

**1.10.1.0 Council contact officer details**

|   |                           |
|---|---------------------------|
| 1.10.1.1 Name of relevant council contact officer | Heather O'Brien           |
| 1.10.1.2 E-mail                                   | hobrien@sjshire.wa.gov.au |
| 1.10.1.3 Telephone Number                         | 08 9526 1111              |

|   |            |            |
|---|------------|------------|
| <b>1.11 Provide an estimated start and estimated end date for the proposed action</b> | Start Date | 10/01/2021 |
|   | End Date   | 13/01/2036 |

**1.12 Provide details of the context, planning framework and state and/or local Government requirements**

The site has been used as a clay extraction site and brick manufacturer for over 100 years, dating back to the early years of last century. The site is listed on the Shire of Serpentine-Jarrahdale Local Municipal Inventory as a local historic site.

**Environmental Protection Act 1986 (EP Act) – Part IV Works Approval and Licences**

A Works Approval and Licence is required under Part IV of the EP Act. The Works Approval and Licence can be issued by the Department of Water and Environmental Regulation (DWER). The current factory operates under an existing Licence issued by DWER and is known as a 'Prescribed Premise'. The applicant will apply for a Works Approval for the redevelopment.

The factory falls under Prescribed Premise category 41 which is 'clay bricks or ceramic products manufacturing: premises on which refractory products, tiles, pipes or pottery are manufactured – 1000 tonnes or more per year'.

**Planning and Development Act (PD Act)**

The proposal requires approval by the WAPC and the local government (Shire of Serpentine-Jarrahdale) under the PD Act. An application is currently being considered by a Joint Development Assessment Panel (JDAP).

**Metropolitan Region Scheme (MRS)**

The MRS identifies the southern portion of the site, where the proposed factory expansion is to take place, as zoned 'Rural'. The northern portion, encompassing the previous clay extraction area is currently zoned 'Urban Deferred'. A portion of the plant facilities and conveyors will be located in this area.

**State Planning Policy 4.1 – State Industrial Buffer Policy (SPP 4.1)**

SPP 4.1 provides guidelines for the protection and long-term security of industrial zones, transport terminals other utilities



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and special uses while also providing for the safety and amenity of surrounding land uses.

There are minor changes to the proximity to sensitive receptors with the expanded factory being around 20m closer to the nearest residence on Burgess Drive as part of this proposal however potential environmental impacts including air emission levels and noise will be assessed as part of the DWER Works Approval application. The closest residence (outside of the properties owned by the applicant) is approximately 430m from the proposed expansion which meets the minimum separation distance recommended by the EPA.

#### EPA Guidance Statement No. 3 Separation Distances between Industrial and Sensitive Land Uses

Guidance Statement No. 3 provides a guideline on the separation distances and buffers for a range of industrial land uses to sensitive land uses (such as residential dwellings). The distances stated in the policy assume the land use is not managed and, should best practice environmental management take place, these distances can be reduced.

The operations on site fit into the category 'clay bricks or ceramic/refractory products works' which is described as 'premises on which fired clay bricks, tiles, pipes or pottery are manufactured'. The potential impacts are listed as 'gas, noise, dust and odour'. The separation distance is given as 300-1000 metres, however this can be less with appropriate environmental management. The closest residence (outside of the properties owned by the applicant) is approximately 430m from the proposed expansion which meets the minimum separation distance.

DWER has assessed the separation distances in the past as part of previous Works Approval and Licence applications and concluded that the existing separation distances are adequate. These matters will again be addressed by the DWER as part of the future Licence application.

#### Shire of Serpentine-Jarrahdale Town Planning Scheme No.2.

The site is located within a 'Special Use' zone (No. 2, ESC) in the Shire's operative Town Planning Scheme No. 2. The Permitted Use associated with this area is:

'Extraction and storage of Shale and Clay and manufacture, storage and distribution of Masonry and related products.'

The proposed development clearly fits within this permitted use.

#### Shire of Serpentine-Jarrahdale Local Planning Strategy (draft)

At the time of writing, the Shire of Serpentine Jarrahdale has prepared a draft Local Planning Strategy. The strategy identifies the following uses across the site:

- Urban Settlement
- Development Investigation Area
- Regional Green Linkage

These uses are not conducive to the continued use of the site as a brickworks and will need review prior to the finalisation of the Strategy.

#### Draft Local Planning Scheme No. 3

At the time of writing, the Shire of Serpentine Jarrahdale has prepared a draft Local Planning Scheme No. 3. The draft scheme identifies the site as being within the 'Rural' zone. This zone is not conducive to the continued use of the site as a brickworks and will need review prior to the finalisation of the Scheme.

### **1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders**

The Development Application (Land Insights, 2019) has been advertised by the Shire of Serpentine-Jarrahdale (Cardup Brickworks DA Report - Oct2019). A copy of the submissions received by the public and government agencies is provided in the attached document (Brickworks Cardup - Public Submissions Aug2020). The Works Approval/Licence has not been publicly advertised as yet as the application is still being prepared, although the application will be advertised as part of the approvals process. A local Community Group has been advised of the project. This community group exists to allow for communication between Austral Bricks and the local community.

### **1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project**

Environmental information is provided in the Development Application (Land Insights, 2019) to the Shire of Serpentine-Jarrahdale and the State Department of Planning, Lands and Heritage (Cardup Brickworks DA Report - Oct2019). Detailed environmental information is provided in the Works Approval/Licence application to the State Department of Water and Environmental Regulation (please note that this application is still being prepared). The proposal is being considered by the Environmental Protection Authority who is currently deciding whether to formally assess the proposal.



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| <b>1.15 Is this action part of a staged development (or a component of a larger project)?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <b>1.16 Is the proposed action related to other actions or proposals in the region?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       |



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## Section 2

### Matters of national environmental significance

2.1 Is the proposed action likely to have any direct or indirect impact on the values of any World Heritage properties?

☐ Yes ☒ No

2.2 Is the proposed action likely to have any direct or indirect impact on the values of any National Heritage places?

☐ Yes ☒ No

2.3 Is the proposed action likely to have any direct or indirect impact on the ecological character of a Ramsar wetland?

☐ Yes ☒ No

2.4 Is the proposed action likely to have any direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

☒ Yes ☐ No

### Species or threatened ecological community

- ☐ Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*)
- ☐ Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*)
- ☐ Baudin's Black Cockatoo (*Calyptorhynchus baudinii*)

### Impact

The impact of the proposed action was determined using the Department's 'Referral Guidelines for Three Threatened Black-Cockatoo Species' ('The Guidelines') (DSEWPac 2012). A targeted black-cockatoo survey was undertaken by Western Wildlife on the 5th September 2019 (Western Wildlife – Cardup factory fauna 2019 v2) in accordance with the Guidelines. Each tree identified in the survey was assessed for health, species, diameter and the presence of hollows or multiple stems and recorded with a GPS location.

It should be noted that the targeted black-cockatoo survey focused on the areas proposed to be cleared and does not take into account that additional black cockatoo habitat may also be located elsewhere on the site.

The survey concluded that the three species of black cockatoo potentially occur in the Study Area, of which two were recorded:

- Forest Red-tailed Black Cockatoo – Recorded
- Carnaby's Black Cockatoo
- Baudin's Black Cockatoo – Recorded

All three black-cockatoo species are likely to be foraging visitors to the study area, with foraging by Baudin's Black Cockatoo and the Forest Red-tailed Black Cockatoo confirmed. The Eucalypt Forest habitat contains Marri, however, the survey found the area of foraging habitat identified is small at about 0.66ha. The Riparian Channel habitat is unlikely to be important for foraging. Although potential breeding habitat is present, only four trees with possible large hollows were recorded and it is unlikely that black-cockatoos currently breed in the study area. No signs of black-cockatoo roosting were detected.

#### Forest-red Tailed Black Cockatoo

The fauna study concluded that, although possible, it is very unlikely that this species currently breeds in the study area. The Forest Red-tailed Black-Cockatoo is confirmed as foraging in the study area, and there is the potential that birds breeding nearby may forage in the study area.

#### Carnaby's Black Cockatoo



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The study concluded that Carnaby's Black-Cockatoo is highly likely to forage in the Eucalypt Forest habitat, favouring Marri. The Eucalypt Forest habitat is located along the northern edge of the vegetation surveyed. Only a small portion is located within the area proposed to be cleared. The study also concluded that, although possible, it is very unlikely that this species currently breeds in the study area.

#### Baudin's Black Cockatoo

The fauna study concluded that, although unlikely to breed in the study area, Baudin's Black Cockatoo was recorded foraging on Marri during the site visit and is likely to be a seasonal foraging visitor to the study area.

#### Impact under the Guidelines

No known nesting trees will be impacted by the proposed clearing.

Clearing of breeding habitat can be determined through the identification of tree species, the size of trees (DBH 50cm or DBH 30cm (Wandoo)) and whether there are likely hollows present. The fauna survey identified trees of suitable size and whether there are likely to be hollows present. Tree species identified in the study area included Marri (*Corymbia callophylla*), Jarrah (*Eucalyptus marginata*), Flooded Gum (*E. rudis*) and Wandoo (*E. wandoo*). No trees with 'possible large hollows' are located in the area proposed to be cleared. The survey identified 21 trees DBH 50cm (Flooded gum) and DBH 30cm (wandoo) within the area proposed to be cleared. Three of these trees were identified as having small hollows and the rest had no visible hollows. None of these trees contained possible large hollows.

The amount of foraging habitat within the area surveyed was approximately 0.66 hectares. Of this, only a very small portion (a few trees) is proposed to be cleared. Clearing of less than 1 hectare of quality foraging habitat is not considered a 'significant impact' in the Guidelines.

No known roosting trees will be impacted by the proposed clearing.

The proposed clearing will no result in a gap of over 4km between patches of black cockatoo habitat.

#### Indirect impact

As the area proposed to be cleared is relatively small and areas of remnant vegetation will remain, the potential indirect impact is not significant. The vegetation is not connected to any important and high value black cockatoo habitat areas and therefore will not cause the introduction of weeds, disease and pests. The proposed clearing will also not cause fragmentation of habitat as there will be a substantial number of mature trees remaining on the property.

Only a small area is proposed to be cleared within the Bush Forever site. This will only be a few trees on either side of the existing accessway. It is not considered that the clearing of a few trees will have significant indirect impact as a vehicle crossing is already located in this area.

The proposed action will not degrade habitat through water drawdown.

The proposed action will not alter fire regimes or result in hot fires destroying breeding habitat.

#### 2.4.2 Do you consider this impact to be significant?

☐ Yes ☒ No

#### 2.5 Is the proposed action likely to have any direct or indirect impact on the members of any listed migratory species or their habitat?

☐ Yes ☒ No

#### 2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

☐ Yes ☒ No



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| <b>2.7 Is the proposed action likely to be taken on or near Commonwealth land?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| <b>2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
| <b>2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <b>2.10 Is the proposed action a nuclear action?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| <b>2.11 Is the proposed action to be taken by a Commonwealth agency?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| <b>2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |
| <b>2.13 Is the proposed action likely to have any direct or indirect impact on any part of the environment in the Commonwealth marine area?</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No         |



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## Section 3

### Description of the project area

#### 3.1 Describe the flora and fauna relevant to the project area

A 'Flora and Vegetation Survey' (Flora and Vegetation Survey Byford 2019-LR) was undertaken by Del Botanics in September 2019. The assessment was undertaken across the area proposed for clearing as well as the whole factory site, quarry and adjoining Bush Forever site. Four vegetation types were recorded at a local level during the survey. No species of Threatened or Priority Flora pursuant to the 'Biodiversity and Conservation Act 2016' were located during the time of the survey.

The vegetation community along the Cardup Brook (including the area proposed to be cleared) was identified as 'Eucalyptus rudis creekline'.

The vegetation condition along the Cardup Brook and surrounding the factory (including the areas proposed to be cleared) was found to be 'Completely Degraded'.

One Threatened Ecological Community (TEC) was located during the survey. This is the 'Banksia Woodland' and is located at the north-eastern corner of the site (north of the quarry) and over 500 metres from the area proposed for clearing.

Bush Forever site 271 is located across Lots 50 and 101 to the north-west of the project area. A small portion of the Bush Forever site runs along Cardup Brook. Some of this Bush Forever site is proposed to be cleared for one of the Cardup Brook creek crossings.

The 'Cardup Brickworks Level 1 Fauna Survey and Targeted Black Cockatoo Habitat Survey 2019' undertaken by Western Wildlife (Western Wildlife – Cardup factory fauna 2019 v2) concluded that the Riparian Channel habitat around Cardup Brook may have some local importance as refuge for fauna, where permanently damp areas are likely to be present all year. As a whole, the habitats are likely to provide an ecological linkage function as part of a regionally significant contiguous bushland/wetland linkage identified by Bush Forever (Government of Western Australia, 2000). On a local scale, the habitats are likely to provide linkage east-west along Cardup Brook. Baudin's Black-cockatoo and the Forest Red-tailed Black-cockatoo were recorded foraging in the Eucalypt Forest habitat. Although this habitat type is important for foraging black cockatoos, the overall size of the area is small at less than 1ha. It is unlikely that black cockatoos currently nest in the study area, and only four trees with possible large hollows were identified in the survey area (all are outside of the area subject to clearing).

#### 3.2 Describe the hydrology relevant to the project area (including water flows)

The Cardup Brook flows through the site, just to the north of the existing factory. It flows from east to west.

No wetlands are located within the project area.

The site is located within the Serpentine River surface water catchment area. This is a 'Proclaimed Surface Water Area' under the 'Rights in Water and Irrigation Act 1914'.

The site is located within the 'Serpentine' groundwater area. This is a 'Proclaimed Groundwater Area' under the 'Rights in Water and Irrigation Act 1914'.

There are no Public Drinking Water Source Areas within or surrounding the site.

#### 3.3 Describe the soil and vegetation characteristics relevant to the project area

The soil-landscape complex as mapped by the Department of Primary Industries and Regional Development is 'Forrestfield' complex (Landgate, 2020). The area occupied by the Cardup Brook comprises 'Forrestfield F4 Phase' which is described as 'incised stream channels within gentle slopes with deep acidic yellow duplex soils and sandy alluvial gradational brown earths.' The land on which the factory is located is mapped as 'Forrestfield F2 Phase' which is described as 'well drained gravelly yellow or brown duplex soils with sandy topsoil.'

The Flora and Vegetation Survey (Del Botanics, 2019) (Flora and Vegetation Survey Byford 2019-LR) states that the area lies in the Drummond Botanical Subdistrict within the Southwest Botanical Province as described by Beard (1990). Flora composition has been described by Beard (1990) as predominantly consisting of 'Banksia Low Woodlands on leached sands with Melaleuca swamps where ill drained and Woodlands of Eucalyptus spp. on less leached soils.' It also states that the area is a part of the 'Guildford' vegetation complex, which is described as 'a mixture of open forest to tall open forest of Eucalyptus calophylla – Eucalyptus wandoo - Eucalyptus marginata and woodland of Eucalyptus wandoo (with rare occurrences of Eucalyptus lane-poolei). Minor components include Eucalyptus rudis - Melaleuca raphiophylla occurs on fluvial deposits of the Swan Coastal Plain' (DCE, 1980).

The vegetation is located within System 6 Mapping Unit number 32.





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The Department of Primary Industries and Regional Development maps the pre-European vegetation as 'Pinjarra' complex which is described as 'mainly jarrah and marri (*Eucalyptus marginata*, *Corymbia calophylla*)' (Landgate, 2020).

The Flora and Vegetation Survey (Del Botanics, 2019) (Flora and Vegetation Survey Byford 2019-LR) did not record species of Threatened (T) or Priority Flora during the survey. In addition, no other flora, pursuant to subsection 2 of section 23F of the 'Wildlife Conservation Act 1950' and listed by the Department of Biodiversity, Conservation and Attractions (DBCAs) were located during the time of the survey. One threatened ecological community (TEC) was recorded in the survey. It is located approximately 600 metres from the application area, to the north-west of the quarry. The TEC is 'Banksia Woodlands of the Swan Coastal Plain'.

The Flora and Vegetation Survey (Del Botanics, 2019) (Flora and Vegetation Survey Byford 2019-LR) identified one vegetation community within the application area. The vegetation community is 'Eucalyptus rudis creekline' which is described as 'closed Forest of Eucalyptus rudis over low shrubland of \*Rubus discolor and \*Zantedeschia aethiopica over grassland of \*Cynodon dactylon over open herbland of \*Dipogon lignosus'.

The vegetation condition was mapped by Del Botanics (2019) as 'Completely Degraded'.

Bush Forever site 271 is located across Lots 50 and 101 to the north-west of the project area. A small portion of the Bush Forever site runs along Cardup Brook. Some of this Bush Forever site is proposed to be cleared for one of the Cardup Brook creek crossings.

#### **3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area**

A portion of the area proposed to be cleared is located within Bush Forever site number 271.

The Cardup Brook runs through the project area and part of the clearing proposed will be within the riparian zone in order to provide for the improvements to the creek crossings.

There are no other outstanding natural features on the site.

#### **3.5 Describe the status of native vegetation relevant to the project area**

Native vegetation within the project area is not a Threatened Ecological Community. The Flora and Vegetation Survey (Del Botanics, 2019) did not record species of Threatened (T) or Priority Flora during the survey (Flora and Vegetation Survey Byford 2019-LR).

The vegetation condition was mapped by Del Botanics (2019) as 'Completely Degraded'.

Bush Forever site 271 is located across Lots 50 and 101 to the north-west of the project area. A small portion of the Bush Forever site runs along Cardup Brook. Some of this Bush Forever site is proposed to be cleared for one of the Cardup Brook creek crossings.

#### **3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area**

The topography of the site is variable owing to the previous excavations within the northern part of the site. The land on which the factory sits at the southern end of the site is relatively flat at approximately 75-80 metres Australian Height Datum (AHD).

Cardup Brook flows from east to west from approximately 80 metres AHD to 65 metres AHD through the site.

#### **3.7 Describe the current condition of the environment relevant to the project area**

The condition of the environment is best described as 'degraded' as a result of long term use as a quarry and brick-manufacturing plant since the early 1900's.

The vegetation condition along the Cardup Brook and surrounding the factory (including the areas proposed to be cleared) was found to be 'Completely Degraded' in the Flora and Vegetation Survey by Del Botanics (2019) (Flora and Vegetation Survey Byford 2019-LR).

#### **3.8 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the project**

There are no Commonwealth Heritage places on the site.

The brick kilns on the eastern side of the site are listed on the Department of Planning, Lands and Heritage heritage register ('inHerit') as a heritage site in the Shire of Serpentine-Jarrahdale Municipal Inventory. The heritage site is described as 'a set of industrial buildings set back some distance from the main highway and within substantial grounds. Prominent chimney stacks' (Department of Planning, Lands and Heritage, 2020). The heritage site is mapped across Lot 53, part of Lot 30, part of Lot 12 and the southern section of Lot 50. The brick kilns and chimney stacks are located within a shed on Lot 50 only. The area proposed for clearing is outside of this heritage site.

A Heritage Assessment of the site was undertaken and submitted to the Shire as part of a previous demolition application



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for the older structures. These structures have not been demolished to date.

**3.9 Describe any Indigenous heritage values relevant to the project area**

There are no 'Registered Heritage Sites' as mapped by the Department of Planning, Lands and Heritage (DPLH) on the 'Aboriginal Heritage Inquiry System' (DPLH, 2020).  
The Cardup Brook is listed as 'Other Heritage Site' on the DPLH Aboriginal Heritage Inquiry System (ID 16108). This is a mythological site and covers the length of the watercourse.

**3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area**

Freehold – all lots owned by Bristle Holdings Ltd

**3.11 Describe any existing or any proposed uses relevant to the project area**

Clay extraction occurred in the northern portion of the site and was essentially completed around 5 years ago, although there are some resources remaining on the site that could be subject to future consideration.

The brickworks manufacturing plant is still located on the southern boundary of the site adjacent to Kiln Road. The earlier plant was located towards the eastern end of the property, with expansions to the west containing newer equipment be constructed. The Shire has recently re-issued a Planning Approval for demolition of the eastern-most, now-unused, brick kiln and associated infrastructure as it has fallen into disrepair. The current plant is located on the western side of the property. The proposed expansions and redevelopment will primarily occur to this existing building.

The site is also used for the storage of bricks and masonry products and this will continue into the foreseeable future.

The proposed land use will remain brickworks including the following upgrades:

- Expanding the current factory footprint (including internal equipment replacement)
- Upgraded baghouse scrubber
- New hopper and conveyor
- New primary crusher
- Clay storage area located in existing unused pit area
- Internal road upgrades, including widening of creek crossings
- Rearrangement of storage areas
- Clearing of a small area of vegetation to facilitate the development.



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## Section 4

### Measures to avoid or reduce impacts

#### 4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action

**Avoid:**

Areas proposed for clearing have been identified after careful and thorough consideration of the requirements for development. Areas that do not need to be cleared will be avoided.

The expansion of the factory has been designed to result in less clearing of vegetation for the bushfire protection areas. The orientation and direction of expansion has been changed from earlier drafts to avoid clearing as much as possible.

Existing internal roads will be used avoid clearing. It has been proposed to widen existing internal roads rather than create a new set of roads through the site to avoid clearing associated with this.

Clearing of vegetation will only take place when necessary. If development is delayed or does not take place then clearing will be avoided. In order to achieve this, clearing will generally only take place within 6 months to a year before the scheduled development. This means that areas can be avoided if development does not progress as anticipated.

**Reduce:**

The timing when clearing takes place will be considered as this will reduce the impact on potential black cockatoo breeding. Clearing will take place outside of the breeding time for Carnaby's Black Cockatoo and Forest Red-Tailed Black Cockatoo which can range between July and February.

As is stated above, clearing will be avoided (and therefore the impact reduced) where possible.

#### 4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved

Matters protected by the EPBC Act that may be affected by the proposed action is 'Listed Threatened Species and Communities', specifically habitat for Carnaby's Black Cockatoo, Baudin's Black Cockatoo and Forest Red-tailed Black Cockatoo.

The Targeted Black Cockatoo Survey (Western Wildlife, 2019) (Western Wildlife – Cardup factory fauna 2019 v2) identified 21 trees DBH 50cm (Flooded gum) and DBH 30cm (wandoo) within the area proposed to be cleared, none of these trees contained possible large hollows. Only 3 trees within the application area were identified as having 'small hollows', not of suitable size for Black Cockatoos. The remainder of the trees within the application area had no visible hollows.

The area proposed for clearing has been carefully planned by Austral Bricks to reduce the level of clearing as much as possible. The clearing associated with the redevelopment has been identified as essential (bushfire protection and site access) and has been avoided where possible. No trees identified as having 'potentially large hollows' will be cleared or impact from the proposed development.

The project only proposes to clear 0.79 hectares of vegetation for bushfire protection and to improve the existing creek crossings.

The factory redevelopment and upgrade will have many environmental benefits including:

- the installation of a highly efficient natural gas fired kiln which will minimise greenhouse gas emissions
- a baghouse scrubber which will minimise air pollutants
- energy efficient plant including robots to reduce the strain on the Western Australian electricity grid
- reconfiguration on-site drainage to capture stormwater and reduce discharge to Cardup Brook.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

## Section 5

### Conclusion on the likelihood of significant impacts

#### 5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- ☐ World Heritage properties
- ☐ National Heritage places
- ☐ Wetlands of international importance (declared Ramsar wetlands)
- ☐ Listed threatened species or any threatened ecological community
- ☐ Listed migratory species
- ☐ Marine environment outside Commonwealth marine areas
- ☐ Protection of the environment from actions involving Commonwealth land
- ☐ Great Barrier Reef Marine Park
- ☐ A water resource, in relation to coal seam gas development and large coal mining development
- ☐ Protection of the environment from nuclear actions
- ☐ Protection of the environment from Commonwealth actions
- ☐ Commonwealth Heritage places overseas
- ☐ Commonwealth marine areas

#### 5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action

No known nesting trees will be impacted by the proposed clearing.

The amount of foraging habitat within the area surveyed was approximately 0.66 hectares. Of this, only a very small portion (a few trees) is proposed to be cleared. Clearing of less than 1 hectare of quality foraging habitat is not considered a 'significant impact' in the Guidelines. Only 0.79 hectares of vegetation is proposed to be cleared in total.

No known roosting trees will be impacted by the proposed clearing.

The proposed clearing will not result in a gap of over 4km between patches of black cockatoo habitat.

While the Fauna Survey (Western Wildlife, 2019) (Western Wildlife – Cardup factory fauna 2019 v2) identified 21 trees DBH 50cm (Flooded gum) and DBH 30cm (wandoo) within the area proposed to be cleared, none of these trees contained possible large hollows. Only 3 trees within the application area were identified as having 'small hollows', not of suitable size for Black Cockatoos. The remainder of the trees within the application area had no visible hollows.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

## Section 6

### Environmental record of the person proposing to take the action

#### 6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Explain in further detail

Yes, Austral Bricks WA Pty Ltd have a long history of responsible environmental management. They have an Environmental Policy which guides their operations.

In addition, Austral Bricks WA Pty Ltd ensure they have appropriate environmental approvals before undertaking an action. For example, they have previously obtained approval from the Department under the EPBC Act for another site which proposed clearing for extractive industries (Lot 1 Morangup Road, Morangup). Another example is the existing environmental approvals Austral Bricks have obtained for the current factory operation from the State Department of Water and Environmental Regulation. A new Works Approval/Licence application will be submitted for the redevelopment.

#### 6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application

Austral Bricks has a current approval from the department under the EPBC Act for one of their clay extraction operations on Lot 1 Morangup Road, Morangup (EPBC 2013/6943). This approval is valid until 31st December 2069. As part of this approval, Austral Bricks have placed an area of approximately 130 hectares under Conservation Covenant as an offset to the clearing proposed. Austral Bricks has a good compliance record with the conditions of approval.

#### 6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

☒ Yes ☐ No

#### 6.3.1 If the person taking the action is a corporation, provide details of the corporation's environmental policy and planning framework

Austral Bricks WA Pty Ltd has an Environmental Policy Statement (please refer to the attached Austral Bricks Environment Policy 230817).

#### 6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

☒ Yes ☐ No

#### 6.4.1 EPBC Act No and/or Name of Proposal

Austral Bricks has a current approval from the Department under the EPBC Act for one of their clay extraction operations on Lot 1 Morangup Road, Morangup

EPBC reference number - EPBC 2013/6943

Name of Proposal – The expansion of a clay extraction operation Lot 1 Morangup Road, Morangup, Western Australia.

This approval is valid until 31st December 2069. As part of this approval, Austral Bricks have placed an area of approximately 130 hectares under Conservation Covenant as an offset to the clearing proposed. Austral Bricks has a good compliance record with the conditions of approval.



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

|  |
|--|
| <b>Section 7</b>   |
| <b>Information sources</b>   |
| <b>Reference source</b><br>Western Wildlife, (2019), Cardup Brickworks, Level 1 Fauna Survey and Targeted Cockatoo Habitat Survey 2019   |
| <b>Reliability</b><br>Assessment undertaken in accordance with the Commonwealth Guidelines.  |
| <b>Uncertainties</b><br>The limitations of the assessment are outlined in the report.  |
| <b>Reference source</b><br>Del Botanics, (2019), Flora and Vegetation Survey, Kiln Road, Byford.   |
| <b>Reliability</b><br>Assessment undertaken in accordance with the EPA Guidelines.   |
| <b>Uncertainties</b><br>The limitations of the assessment are outlined in the report.  |
| <b>Reference source</b><br>Commonwealth of Australia, (2012), EPBC Act Referral Guidelines for Three Threatened Black Cockatoo Species, Commonwealth of Australia, ACT.  |
| <b>Reliability</b><br>This publication provides reliable and useful information on threatened black cockatoo species.  |
| <b>Uncertainties</b><br>Low level of uncertainty associated with this publication.   |
| <b>Reference source</b><br>Commonwealth of Australia, (2017), Revised draft Referral Guidelines for Three Threatened Black Cockatoo Species, Commonwealth of Australia, ACT.   |
| <b>Reliability</b><br>This publication provides reliable and useful information on threatened black cockatoo species.  |
| <b>Uncertainties</b><br>Low level of uncertainty associated with this publication.   |
| <b>Reference source</b><br>Government of Western Australia, <a href="https://maps.slip.wa.gov.au/landgate/locate/">https://maps.slip.wa.gov.au/landgate/locate/</a> Accessed 2020.   |
| <b>Reliability</b><br>Online mapping provided by the State of Western Australia using best available information.  |
| <b>Uncertainties</b><br>Mapping for some features (such as vegetation and soils) done at a broad scale and requires on site confirmation.  |
| <b>Reference source</b><br>Commonwealth of Australia,<br>Protected Matters Search Tool,<br><a href="http://www.environment.gov.au/webgis-framework/apps/pmst/pmst.jsf">http://www.environment.gov.au/webgis-framework/apps/pmst/pmst.jsf</a><br>Accessed 2020. |



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

|   |
|---|
| <b>Reliability</b>  |
| Online mapping of Protected matters provided by the Commonwealth Government.  |
| <b>Uncertainties</b>  |
| Accurate mapping of Protected Matters throughout the country using best available information.  |
| <b>Reference source</b>   |
| Department of Planning, Lands and Heritage, Aboriginal Heritage Place Search, <a href="https://maps.daa.wa.gov.au/AHIS/">https://maps.daa.wa.gov.au/AHIS/</a> accessed 2020                                       |
| <b>Reliability</b>  |
| Online mapping of Aboriginal Heritage places providing by the State of WA.  |
| <b>Uncertainties</b>  |
| Accurate mapping of Aboriginal Heritage using the most up-to-date government data.  |
| <b>Reference source</b>   |
| Department of Planning, Lands and Heritage, Search Heritage Places, <a href="http://inherit.stateheritage.wa.gov.au/Public/">http://inherit.stateheritage.wa.gov.au/Public/</a> Accessed 2020                     |
| <b>Reliability</b>  |
| Online mapping of State Heritage places providing by the State of WA.   |
| <b>Uncertainties</b>  |
| Accurate mapping of State Heritage using the most up-to-date government data.   |
| <b>Reference source</b>   |
| Government of Western Australia, 2000, Bush Forever Volume 1, Perth, WA.  |
| <b>Reliability</b>  |
| Government document providing information on Bush Forever sites.  |
| <b>Uncertainties</b>  |
| Low level of uncertainty.   |
| <b>Reference source</b>   |
| Hedde, E.M., Loneragan, O.W. and Havel, J.J, (1980). Darling Systems – Vegetation Complexes. In: Atlas of Natural Resources Darling System, Western Australia. Department of Conservation and Environment, Perth. |
| <b>Reliability</b>  |
| Commonly used source on WA flora.   |
| <b>Uncertainties</b>  |
| Low level of uncertainty associated with this document, it is commonly used.  |
| <b>Reference source</b>   |
| Beard J. S, (1990). Plant life of Western Australia. Kangaroo Press, Perth.   |
| <b>Reliability</b>  |
| Commonly used source on WA flora.   |
| <b>Uncertainties</b>  |
| Low level of uncertainty associated with this document, it is commonly used.  |



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

|   |
|---|
| <b>Reference source</b>   |
| Landgate, (2020), SLIP Portal, <a href="https://maps.slip.wa.gov.au/landgate/locate/">https://maps.slip.wa.gov.au/landgate/locate/</a> , Accessed 2020. |
| <b>Reliability</b>  |
| Online mapping provided by the State of Western Australia using best available information.   |
| <b>Uncertainties</b>  |
| Mapping for some features (such as vegetation and soils) done at a broad scale and requires on site confirmation.                                       |
| <b>Reference source</b>   |
| Land Insights, (2019), Development Application, Factory Expansion and Ancillary Development, Perth, WA.   |
| <b>Reliability</b>  |
| This document provides information on the proposed development.   |
| <b>Uncertainties</b>  |
| Low level of uncertainty.   |





Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

## Section 8

### Proposed alternatives

#### Do you have any feasible alternatives to taking the proposed action?

☒ Yes ☐ No

#### 8.0 Provide a description of the feasible alternative

Alternatives for the design of the factory were considered in the design process. Redevelopment of the existing factory in other directions resulted in more impact to surrounding vegetation.

The other alternative is to not undertake the action. This will result in a 'business as usual' approach with no upgrades to the existing factory and equipment. This may result in less environmental benefit over time as new equipment will not be installed.

#### 8.1 Select the relevant alternatives related to your proposed action

- ☐ Timeframes  
☐ Locations  
☒ Activities

#### 8.9 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders

No public consultation was undertaken with regards to the alternatives. No consultation was required for the design of the factory as this was considered internally by the team at Austral Bricks.

#### 8.10 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project

No environmental impact assessments have been undertaken under Commonwealth, State or Territory legislation for the alternatives described above. However, the alternatives were assessed internally by the team at Austral Bricks to compare the environmental impact and benefit. This was undertaken as part of Austral Brick's environmental initiative to reduce environmental impact and to have the best possible environmental outcomes for their operations.

#### 8.12 Nominate any matters of National Environmental Significance that are likely to be impacted by this alternative proposal by ticking the relevant checkboxes

##### 8.12.1 Provide further information on potential impacts of matters of environmental significance that you have nominated above

#### 8.13 Describe any impacts on the flora and fauna relevant to the alternative proposal

The alternative factory redevelopment designs would have resulted in more clearing for the bushfire protection zone around the buildings and, therefore, more overall impact to flora and fauna.

The alternative of no action will result in no clearing required, and therefore less overall impact to flora and fauna. However, the redevelopment will result in better environmental outcomes overall through the use/installation of more advanced equipment.

#### 8.24 What are the proposed measures for any alternative action to avoid or reduce the impact?

The measure for avoiding or reducing impact was to redesign the factory redevelopment. This has resulted in the current design which forms part of the current application.

The alternative to undertake no action does not require any measures to avoid or reduce impact.

#### 8.25 Do you have another alternative?

☐ Yes ☒ No



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

**Section 9****Person proposing the action**

9.1.1 Is the person proposing the action a member of an organisation?

☒ Yes ☐ No

**Organisation**

Organisation name

AUSTRAL BRICKS (WA) PTY LTD

Business name

AUSTRAL BRICKS

ABN

34079711603

ACN

Business address

Harper Street, Caversham, 6055, Western Australia, Australia

Postal address

Main Phone number

92500523

Fax

Primary email address

david.johnson@australbricks.com.au

Secondary email address

9.1.2 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

☐ Small business

☒ Not applicable

9.1.2.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations \*

☐ Yes

☒ No

**9.1.3 Contact**

First name

David

Last name

Johnson

Job title

General Manager Austral Bricks WA

Phone

92500523

Mobile

0410563915

Fax

Email

david.johnson@australbricks.com.au

Primary address

Harper Street, Caversham, 6055, WA, Australia

Address

**Declaration: Person proposing the action**

David Johnson

I, \_\_\_\_\_, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity.

Signature: \_\_\_\_\_

Date: 30/11/20

I, \_\_\_\_\_, the person proposing the action, consent to the designation of \_\_\_\_\_ as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature: \_\_\_\_\_

Date: 30/11/20



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

**Proposed designated proponent****9.2.1 Is the proposed designated proponent a member of an organisation?**

☒ Yes ☐ No

**Organisation**

|                         |   |
|-------------------------|---|
| Organisation name       | AUSTRAL BRICKS (WA) PTY LTD                   |
| Business name           |   |
| ABN                     | 34079711603                                   |
| ACN                     |   |
| Business address        | Harper Street, Caversham, 6055, WA, Australia |
| Postal address          |   |
| Main Phone number       | 92500523                                      |
| Fax                     |   |
| Primary email address   | david.johnson@australbricks.com.au            |
| Secondary email address |   |

**9.2.2 Contact**

|                 |   |
|-----------------|---|
| First name      | David   |
| Last name       | Johnson                                       |
| Job title       | General Manager Austral Bricks WA             |
| Phone           | 92500523                                      |
| Mobile          | 0410563915                                    |
| Fax             |   |
| Email           | david.johnson@australbricks.com.au            |
| Primary address | Harper Street, Caversham, 6055, WA, Australia |
| Address         |   |

**Declaration: Proposed Designated Proponent**

I, David Johnson, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 30/11/20



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

**Referring party (person preparing the information)**

9.3.1 Is the referring party (person preparing the information) a member of an organisation?

☒ Yes ☐ No

**Organisation**

Organisation name The Trustee for Taylforth Family Trust  
Business name  
ABN 88755259718  
ACN  
Business address PO Box 289, Mt Lawley, 6929, Western Australia, Australia  
Postal address  
Main Phone number 9271 8506  
Fax  
Primary email address admin@landinsights.com.au  
Secondary email address

**9.3.2 Contact**

First name Sharee  
Last name Rasmussen  
Job title Senior Environmental Planner  
Phone 0419967840  
Mobile  
Fax  
Email sharee@landinsights.com.au  
Primary address PO Box 289, Mt Lawley, 6929, Western Australia, Australia  
Address

**Declaration: Referring party (person preparing the information)**

I, Sharee Rasmussen, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature: [Signature] Date: 11/11/2020



Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

| Appendix A                  |                          |  |
|-----------------------------|--------------------------|--|
| Attachment                  |                          |  |
| Document Type               |                          | File Name  |
| action_area_images          |                          | AvoidanceArea.shp  |
| action_area_images          |                          | DisturbanceFootprintSept2020.shp                                   |
| action_area_images          |                          | Cardup Brickworks Disturbance and Avoidance Areas.pdf              |
| govt_approval_conditions    |                          | Cardup Brickworks DA Report - Oct2019.pdf                          |
| public_consultation_reports | not published-superseded | Kiln Road Cardup - Public Submissions - Aug20.pdf                  |
| public_consultation_reports |                          | Brickworks Cardup - Public Submissions Aug2020.pdf                 |
| supporting_tech_reports     |                          | Western Wildlife - Cardup factory fauna 2019 v2.pdf                |
| supporting_tech_reports     |                          | Flora and Vegetation Survey Byford 2019-LR.pdf                     |
| flora_fauna_investigation   | not published-superseded | Austral Bricks Flora and Vegetation Survey Kiln Rd Byford 2019.pdf |
| corp_env_policy_docs        |                          | Austral Bricks Environment Policy 230817.pdf                       |

| Appendix B                       |
|----------------------------------|
| Coordinates                      |
| Area 1                           |
| -32.245748518359,116.01293259491 |
| -32.244579440971,116.01286621301 |
| -32.244245532668,116.01170540281 |
| -32.243557777165,116.01170540281 |
| -32.243427698428,116.0130189827  |
| -32.242960743894,116.01342181496 |
| -32.243110166428,116.01375402731 |
| -32.243154430404,116.01366646597 |
| -32.243179800702,116.01371753914 |
| -32.243149108881,116.01379132593 |
| -32.242715519891,116.01428039842 |
| -32.24335157456,116.01539775171  |
| -32.24363142377,116.01740658951  |
| -32.243398297578,116.01818708355 |
| -32.240971173823,116.0182519006  |
| -32.240926318679,116.01911219648 |
| -32.243071723728,116.01910411703 |
| -32.243607089421,116.01837043959 |
| -32.24500700063,116.01836032545  |
| -32.245308302912,116.01834971455 |
| -32.245769760648,116.01802435194 |
| -32.245748518359,116.01293259491 |