



Environmental Protection Authority

Mr Vern Newton
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Hanson Australia Pty Ltd
PO Box 187
VICTORIA PARK WA 6979

Our Ref: CMS14120, ER04-2013-0007
Enquiries: Elle Stewart, 6145 0840
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Dear Mr Newton

**NOTICE UNDER SECTION 39A(3)
*Environmental Protection Act 1986***

PROPOSAL: Sand Quarries within Gnangara Pine Plantation
LOCATION: E70-3279 Smokebush Hill, Two Rocks; E70-3275 Tamega Road, Pinjar; and M70-1306 Mulga Road, Gnangara
PROPONENT: Hanson Australia Pty Ltd
DECISION: Referral Examined, Preliminary Investigations and Inquiries Conducted. Proposal Not to be Assessed Under Part IV of EP Act. Advice Given. (Appealable)

The Environmental Protection Authority (EPA) understands that you wish to undertake the above proposal which has been referred to the EPA for consideration of its potential environmental impact.

This proposal raises a number of environmental issues. However, the overall environmental impact of the proposal is not so significant as to require assessment by the EPA, and the subsequent setting of formal conditions by the Minister for Environment under Part IV of the *Environmental Protection Act 1986*. Accordingly, the EPA has determined not to assess this proposal.

Nevertheless, the EPA has provided the attached advice to you as the proponent, and other relevant authorities, on the environmental aspects of the proposal.

The EPA's decision to not assess the proposal is open to appeal. There is a 14-day period, closing 19 December 2016, during which, on payment of the appeal fee, an appellant may ask the Minister to consider directing the EPA to reconsider this decision or conduct a formal assessment.

Information on the outcome of the appeals process is available through the Appeals Convenor's website, www.appealsconvenor.wa.gov.au, or by telephoning 6467 5190 after the closing date of appeals.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A Sutton', with a stylized flourish at the end.

Anthony Sutton
Director
Assessment and Compliance Division

Delegate of the Chairman of the Environmental Protection Authority
Under Notice of Delegation No. 33 published 17 December 2013

5 December 2016

Encl: Public Advice

**PUBLIC ADVICE UNDER SECTION 39A(7)
ENVIRONMENTAL PROTECTION ACT 1986**

CMS14120 - SAND QUARRIES WITHIN GNANGARA PINE PLANTATION

Summary

Hanson Australia Pty Ltd ('the proponent') proposes to develop three sand quarries within the Gnangara Pine Plantation on tenements E70/3279 (Smokebush Hill), E70-3275 (Tamega Road) and M70-1306 (Mulga Road) ('the proposal'). Smokebush Hill is located in Two Rocks, approximately 55 kilometres (km) north of Perth Central Business District (CBD). Tamega Road is located in Pinjar, approximately 47 km north of Perth CBD. Mulga Road is located in Gnangara, approximately 20 km north of Perth CBD. All three tenements are located within the City of Wanneroo, with Smokebush Hill also falling within the Shire of Gingin (Figure 1).

Smokebush Hill, Tamega Road and Mulga Road are located on the Gnangara Mound, within the Gnangara Underground Water Pollution Control Area (UWPCA) and managed as a Priority 1 Public Drinking Water Source Area (PDWSA). The proposal would involve excavation of sand material to a maximum depth of 3 metres (m) from the likely future maximum winter water table.

Attachment 1 provides a summary of the key characteristics of the proposal in accordance with the Environmental Protection Authority's (EPA) Environmental Assessment Guideline 1 – Defining the key characteristics of a proposal (EAG 1). The three disturbance footprints showing the maximum extent of excavation are shown in Figures 2, 3 and 4.

The proponent intends for the proposal to be implemented on vacant land, once harvesting of pines has been undertaken by the Forest Products Commission (FPC). Approximately 3000 to 4000 tonnes per day would be extracted from each individual sand quarry (a total of 80 million cubic metres (m³) over the combined life of mines).

The proposal was advertised for public comment and the EPA notes that 35 public comments were received, including a comment from the City of Wanneroo. All of the comments related specifically to Mulga Road. The majority of respondents requested the level of assessment to be set at Assessment of Proponent Information Category B (environmentally unacceptable), citing noise, dust and amenity as key issues. Other issues raised in the public comments related to the likely impact on Bush Forever Sites, Carnaby's cockatoo and the Gnangara Mound.

The EPA has examined the proponent's referral documentation, and conducted preliminary investigations and inquires on the further information received.

The EPA has considered the proposal in accordance with the requirements of the *Environmental Protection Act 1986* (EP Act) and the *Environmental Impact Assessment Administrative Procedures 2012*. In making its decision on whether to assess the proposal, the EPA considered the 10 aspects of the significance test as set out in clause 7 of the *Environmental Impact Assessment Administrative Procedures 2012*:

1. values, sensitivity and quality of the environment which is likely to be impacted;

2. extent (intensity, duration, magnitude and geographic footprint) of the likely impacts;
3. consequence of the likely impacts (or change);
4. resilience of the environment to cope with the impacts or change;
5. cumulative impacts with other projects;
6. level of confidence in the prediction of impacts and the success of proposed mitigation;
7. objects of the Act, policies, guidelines, procedures and standards against which a proposal can be assessed;
8. presence of strategic planning policy framework;
9. presence of other statutory decision-making processes which regulate the mitigation of the potential effects on the environment to meet the EPA's objectives and principles for Environment Impact Assessment (EIA); and
10. public concern about the likely effects of the proposal, if implemented, on the environment.

In considering the potential direct and indirect impacts of the proposal on Flora and Vegetation, Terrestrial Fauna, Hydrological Processes/Inland Water Environmental Quality, Heritage (Aboriginal Heritage), Amenity and implementation of Rehabilitation and Decommissioning, the EPA has had particular regard to:

- the outcomes and objectives of the Western Australian State Governments draft Strategic Assessment of the Perth and Peel Region (SAPPR) and accompanying action plans, including areas that have been identified for future raw material extraction;
- the environmental values within the three maximum disturbance footprints which have been designed to exclude wetlands, stands of remnant vegetation (including Bush Forever Sites) and a registered Aboriginal Heritage Site; and
- the impacts to flora and vegetation, which are not likely to pose a significant impact due to:
 - current use of the three sites as pine plantation, and the intended harvesting by FPC; and
 - the exclusion of, and provision of a 50 m buffer to Bush Forever sites and nature reserves;
- The potential impacts to Terrestrial Fauna, which are unlikely to be significantly impacted due to:
 - the scheduled clearing of pines by FPC regardless of sand extraction;
 - the proposal would be implemented on areas cleared of pine, which is likely to contain low quality foraging habitat for Carnaby's cockatoo; and
 - any regrowth that occurs between the clearing pines by FPC and sand extraction activities is unlikely to be suitable as native terrestrial fauna habitat.
- The potential impacts to Hydrological Processes/Inland Waters Environmental Quality, which are unlikely to be significantly impacted due to:
 - the compatibility of land use within a Priority 1 PDWSA;

- sand extraction is proposed to occur only above the water table, with the provision of a 3 m vertical buffer to the future maximum winter water table;
- the DoW's endorsement of the proponent's interim Water Management Plan; and
- the maximum disturbance footprints for Smokebush Hill, Tamega Park and Mulga Road, excluding all Conservation Category Wetlands (CCW) and a Resource Enhancement Wetland (REW), and the provision of a 50 m buffer.
- The potential impacts to Amenity in the form of dust and noise, which is unlikely to be significantly impacted due to:
 - the proposal is for extraction only and does not include a crushing or blasting component;
 - the proponent's dust suppression measures to minimise dust emissions from construction and operation;
 - the maximum disturbance footprints, designed to provide a suitable minimum 300 m buffer between sand extraction activities and residential areas;
 - the proponents commitment to utilise existing road networks to the west of Mulga Road as an interim measure only, until the completion of its purpose built haul road to the east of Mulga Road (Figure 4);
 - the requirement of the proponent to operate within the *Environmental Protection (Noise) Regulations 1997* (noise regulations); and
 - the requirement of the proponent to operate heavy vehicles within the *Road Traffic (Vehicles) Regulations 2014*, specifically in regard to noise emissions.
- The potential impacts to Heritage (Aboriginal Heritage), which is unlikely to be significantly impacted due to:
 - the inclusion of a desktop survey for Smokebush Hill, Tamega Road and Mulga Road;
 - the proponent undertaking consultation with the Native Title claimant group and an Aboriginal Heritage Survey detailing the archeological and ethnographic significance of one registered Aboriginal Site within Smokebush Hill, Smokebush Waterhole (Site 3574); and
 - the maximum disturbance footprint for Smokebush Hill, that excludes Site 3574 and provides it with a 50 m buffer;
- The provision of a Mine Closure Plan (MCP) that is consistent with the Department of Mines and Petroleum (DMP) and EPA Joint Guidelines for Preparing Mine Closure Plans.
- The presence of other statutory processes that can manage the potential impacts to Flora and Vegetation, Terrestrial Fauna, Hydrological Processes/Inland Waters Environmental Quality, Amenity, Heritage, and Rehabilitation and Closure, including:
 - the development of a Mining Proposal under the *Mining Act 1978* (Mining Act);

- the requirements of the *Metropolitan, Water Supply, Sewerage and Draining Act 1909* and planning processes associated with the Gnangara UWPCA; and
- the requirements of Part V of the EP Act, for the licensing and registration of prescribed premises, the issuing of works approvals and administration of environmental regulations.

In summary, although the proposal raises a number of environmental issues and has a degree of public interest about the environmental impacts, the EPA considers that its objectives for Flora and Vegetation, Terrestrial Fauna, Hydrological Processes/Inland Waters Environmental Quality, Amenity, Heritage, and Rehabilitation and Decommissioning can be met.

1. Environmental Factors

The EPA has identified the following preliminary environmental factors relevant to this proposal:

- a) Flora and Vegetation;
- b) Terrestrial Fauna;
- c) Hydrological Processes/Inland Water Environmental Quality;
- d) Heritage (Aboriginal Heritage);
- e) Amenity; and
- f) Rehabilitation and Decommissioning (integrating factor).

There were no factors, including the interaction between the environmental factors, that were determined to have significant environmental impacts that would require formal assessment under Part IV of the EP Act.

2. Relevant Policy and Guidance

The EPA has given due consideration to the following relevant published EPA policies and guidelines, noting that other published policies and guidelines pertaining to this proposal were considered but not determined to be relevant:

a) Flora and Vegetation

- Position Statement No. 2 (PS 2) – *Environmental Protection of Native Vegetation in WA*. December 2000. Environmental Protection Authority, Western Australia.
- Position Statement No. 3 (PS 3) – *Terrestrial Biological Surveys as an Element of Biodiversity Protection*. March 2002. Environmental Protection Authority, Western Australia.
- Guidance Statement 51 (GS 51) – *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia*. June 2004. Environmental Protection Authority, Western Australia.

b) Terrestrial Fauna

- Position Statement No. 3 (PS 3) – *Terrestrial Biological Surveys as an Element of Biodiversity Protection*. March 2002. Environmental Protection Authority, Western Australia.

- Technical Guide – *Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment*. December 2015. Environmental Protection Authority and Department of Parks and Wildlife, Western Australia.
- Guidance Statement 20 (GS 20) – *Sampling of Short Range Endemic Invertebrate Fauna for Environmental Impact Assessment*. May 2009. Environmental Protection Authority, Western Australia.
- Guidance Statement 56 (GS 56) – *Terrestrial Fauna Surveys for Environmental Impact Assessment in WA*. June 2004. Environmental Protection Authority, Western Australia.

c) Hydrological Processes/Inland Waters Environmental Quality

- Position Statement 4 (PS 4) – *Environmental Protection of Wetlands*. November 2004. Environmental Protection Authority, Western Australia.
- Guidance Statement No. 33 (GS 33) – *Environmental Guidance for Planning and Development*. June 2006. Environmental Protection Authority, Western Australia.

d) Heritage (Aboriginal Heritage)

- Guidance Statement 41 (GS 41) – *Assessment of Aboriginal Heritage*. April 2004. Environmental Protection Authority, Western Australia.

e) Amenity

- Environmental Guidance Statement 13 (EAG 13) – *Consideration of Environmental Impacts from Noise*. September 2014. Environmental Protection Authority, Western Australia.
- Guidance Statement 3 (GS 3) – *Separation Distance Between Industrial and Sensitive Land Uses*. June 2005. Environmental Protection Authority, Western Australia.

f) Rehabilitation and Decommissioning

- *Joint Guidelines for Preparing Mine Closure Plans*. May 2015. Department of Mines and Petroleum and Environmental Protection Authority.
- Guidance Statement 6 (GS 6) - *Rehabilitation of Terrestrial Ecosystems*. June 2006. Environmental Protection Authority, Western Australia.
- Environmental Protection Bulletin 19 (EPB 19) – *EPA Involvement in Mine Closure*. January 2015. Environmental Protection Authority, Western Australia.

3. Advice and Recommendations regarding Environmental Issues

a) Flora and Vegetation

The EPA's objective for this factor is to maintain representation, diversity, viability and ecological function at the species, population and community level.

The proposed sites occur within State Forest 65 in areas of the Gnangara Pine Plantation. The proposal does not include the clearing of pines or native vegetation. The proponent intends on implementing the proposal on cleared land after harvesting of pines has occurred by FPC. The EPA notes that the proponent intends on aligning its operations with FPC clearing so that extraction would occur within areas that have been recently harvested of pines.

Portions of Smokebush Hill, Tamega Road and Mulga Road have already been cleared of pines by FPC. The EPA notes that these areas are likely to contain regenerated native vegetation that is in 'degraded' condition.

The proponent undertook a Level 1 desktop flora and vegetation assessment for Smokebush Hill, Tamega Road and Mulga Road. The survey states that no declared rare, priority flora species, or threatened ecological communities would be impacted by the proposal.

The proponent has designed the maximum disturbance footprints of Smokebush Hill, Tamega Road and Mulga Road to avoid designated exclusion areas as mapped in the draft SAPPR (discussed further in Strategic Assessment of the Perth and Peel Region), and provided each exclusion area with a 50 m buffer.

The EPA notes that should the proponent wish to extract sand from areas that do not align with FPCs harvesting requirements (i.e. areas of pine not cleared by FPC), it may be required to submit a further referral to the EPA.

Summary

Having regard to:

- the current use of the three sites as pine plantation, and the intended harvesting by FPC;
- the condition of the majority of the vegetation in various states of regeneration;
- that no declared rare flora, priority flora, or threatened ecological communities would be impacted;
- the disturbance footprints for the proposal which maintain 50 m buffers to Bush Forever Sites and designated exclusion areas as mapped in the draft SAPPR;
- the exclusion of a portion of the Yeal Nature Reserve, that is situated in the north east section of Smokebush Hill; and
- Rehabilitation of the site with low water use native vegetation,

the EPA considers that the proposal can meet the EPA's objectives for Flora and Vegetation and that the likely environmental effects of the proposal are not so significant as to warrant formal assessment, provided that the proposal is implemented in accordance with the referral documentation and the EPA's advice.

The EPA notes that the proponent would be required to obtain a native vegetation clearing permit from DMP, given the need to clear any native vegetation that may have regenerated since removal of the pines, prior to implementing the proposal.

b) Terrestrial Fauna

The EPA's objective for this factor is to maintain representation, diversity, viability and ecological function at the species, population and assemblage level.

Desktop assessments were undertaken by the proponent in accordance with GS 56 and PS 3. These identified that pines within the three tenements are likely used as foraging habitat for Carnaby's cockatoo. The proponent states that implementation of the proposal would not directly impact Carnaby's cockatoo given that pines are designated to be cleared by FPC, prior to sand extraction.

The EPA notes that the proposal would be implemented on areas cleared of pine, which is likely to contain low quality foraging habitat for Carnaby's cockatoo. The proposal would not result in the clearing of good quality foraging habitat for Carnaby's cockatoo, given that the proponent has excluded these areas (e.g. Bush Forever sites) from the three disturbance footprints and provided a 50 m buffer.

Summary

Having regard to:

- the clearing of pines by FPC regardless of sand extraction;
- quarrying only occurring after pines have been cleared by FPC; and
- the unsuitability of cleared pine areas as habitat for Carnaby's cockatoo,

the EPA considers that the proposal can meet the EPA's objectives for Terrestrial Fauna and that the likely environmental effects of the proposal are not so significant as to warrant formal assessment, provided that the proposal is implemented in accordance with the referral documentation.

The EPA notes that the proponent would be required to obtain a native vegetation clearing permit from DMP, given the need to clear any native vegetation that may have regenerated since removal of the pines, prior to implementing the proposal. Impacts to fauna can be considered under a native vegetation clearing permit.

c) Hydrological Processes/Inland Waters Environmental Quality

The EPA's objectives for these factors are:

- *to maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected; and*
- *to maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.*

Smokebush Hill, Tamega Road and Mulga Road are located on the Gngangara Mound and, at least partially within Priority 1 PDWSA's of the Gngangara UWPCA. Smokebush Hill also contains a small portion of Priority 2 PDWSA. Wellhead Protection Zones (WHPZ) are located within the disturbance footprints of Tamega Road and Mulga Road.

Groundwater Management and Wellhead Protection Zones

Consistent with GS 33 the EPA has identified DoW as a key decision-making authority regarding PDWSA. Advice received from DoW states that Priority 1 PDWSA are defined to ensure there is no degradation of the water resource, and are managed with the principle of risk avoidance. Under the *Gngangara Land Use and Water Management Strategy* and *State Planning Policy 2.2 Gngangara Groundwater Protection*, mineral exploration and extractive industries (including sand quarries) are considered a compatible land use in Priority 1 areas provided that suitable conditions are applied to the proposal to protect the water resource.

The EPA notes that the proponent has prepared a Water Management Plan (WMP) and that its management actions and commitments have given regard to the policy and guidelines published by DoW to ensure groundwater quality is protected.

The EPA notes that the DoW has endorsed the proponent's interim WMP, demonstrating that the proponent is consistent with *Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas* (WQPN 25). WQPN 25 states that quarry activities may be acceptable within WHPZs, given the operator can demonstrate that the risk of water contamination is effectively controlled under all circumstances.

Acid Sulphate Soils

The EPA notes that the proponent has excluded areas identified as 'High to Moderate Risk' from the three maximum disturbance footprints and provided appropriate buffers.

Surface Water

The proponent has avoided all direct impacts to CCWs and the REW, excluding them from the disturbance footprints and maintaining a 50 m buffer between sand mining activities and significant wetlands. The avoidance of direct and indirect impacts to the wetlands and the provision of a 50 m buffer to wetlands is consistent with PS 4 and GS 33.

Summary

Having regard to:

- the location of the proposal in a priority 1 PDWSA;
- the compatibility of the land use within the PDWSA for the proposal;
- the DoW's endorsement of the proponent's interim WMP; and
- the maximum disturbance footprints of all three sites, avoiding CCWs, and the provision of a 50 m buffer,

the EPA considers that the proposal can meet the EPA's objectives for Hydrological Processes/Inland Waters Environmental Quality and that the likely environmental effects of the proposal are not so significant as to warrant formal assessment provided that the proposal is implemented in accordance with the referral documentation.

The EPA notes that given the need to wash extracted sand, the proponent would be required to apply to the DoW for a Licence(s) to Take Water.

d) Heritage (Aboriginal Heritage)

The EPA's objective for this factor is to ensure that historical and cultural associations, and natural heritage, are not adversely affected.

The proponent has undertaken consultation with the Yued and Whadjuk native title claim groups and their legal representative the South West Land and Sea Council for the proposal. The proponent has identified one registered Aboriginal Site within Smokebush Hill, namely the Smokebush Waterhole (Site 3574). The proponent has undertaken an Aboriginal Heritage Survey and designed the maximum disturbance footprint of Smokebush Hill to exclude Site 3574, and maintain a 50 m buffer.

Summary

Having regard to:

- the desktop and field survey undertaken by the proponent;
- the consultation with relevant Aboriginal representatives undertaken by the proponent; and

- the disturbance footprint for Smokebush Hill, that has been designed to exclude Site 3574 and maintain a 50 m buffer,

the EPA considers that the proposal can meet the EPA's objectives for the environmental factor of Heritage and the likely environmental effects of the proposal are not so significant as to warrant formal assessment provided that the proposal is implemented in accordance with the referral documentation.

The EPA also notes the legislative requirements of the proponent under the *Aboriginal Heritage Act 1972*

e) Amenity

The EPA's objective for this factor is to ensure that impacts to amenity are reduced as low as reasonably practicable.

The proponent has designed the maximum disturbance footprints of the three proposed sites to facilitate a minimum 300 m separation distance between its operations and residential areas. The EPA confirms that the buffer is consistent with the recommended buffer for sand mining within GS 3. The EPA notes that the proposal is for extraction of sand materials only, and does not include crushing or blasting of sand materials.

The following measures to mitigate noise emissions and dust generation, are described in the referral documentation:

- implementation of a 30 ha 'open' sand extraction footprint at any one time within each tenement;
- screening plants to be located behind stockpiles;
- mufflers and noise shielding devices to be implemented on mobile equipment;
- access roads to be constructed from crushed limestone and maintained as necessary;
- a water cart to be used at each site for dust suppression of haul roads, pit floors and stockpiles;
- sand materials to be transported offsite in covered vehicles;
- a minimum 300 m buffer to be maintained between mining activities and residential areas; and
- where there are sensitive receptors within 1000 m of proposed sand extraction, the hours of operation would be limited to between 7.00 am to 5.00 pm Monday to Saturday, to minimise the likelihood of noise nuisance.

The EPA advises that the disturbance footprints for Smokebush Hill, Tamega Road and Mulga Road maintain a minimum 300 m buffer between residential areas and extraction activities. A further referral would be required if sand extraction which could be significant in nature was proposed outside of the maximum disturbance footprints.

The EPA notes that the map provided for Mulga Road includes an access road running directly south from the tenement, joining to Gngangara Road. The proponent has stated that until the access road between Mulga Road and Gngangara Road is implemented, it intends on utilising existing infrastructure to the west of the Mulga Road tenement (namely Warbrook Road and Ross Street) in the interim.

The EPA notes the proponent's measures above and considers them to be in accordance with EAG 13 and GS 3.

Summary

Having particular regard to:

- the proposal is for extraction only and does not include a crushing or processing component;
- the proponent's dust suppression measures to minimise dust emissions and operation; and
- the maximum disturbance footprints, which have been designed to provide a minimum 300 m buffer between sand extraction activities and residential areas,

the EPA considers that the proposal can meet the EPA's objectives for Amenity and that the likely environmental effects of the proposal are not so significant as to warrant formal assessment provided that the proposal is implemented in accordance with the referral documentation.

The EPA notes that the proponent would be required to submit a works approval under Part V of the EP Act and meet the requirements of the noise regulations.

The EPA also notes that noise emissions created by vehicles on road networks is regulated under the *Road Traffic (Vehicles) Regulations 2014*, and that vehicles are required to undergo a vehicle noise assessment, prior to the granting of a registration of a heavy vehicle licence.

f) Rehabilitation and Decommissioning (integrating factor)

The EPA's objective for this factor is to ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner.

The EPA notes that the proponent has prepared a Mine Closure Plan (MCP) in accordance with Joint Guidelines for Preparing MCPs and DMP's Quarry Closure Guidelines.

The EPA notes that the proponent has committed to progressively rehabilitate mined areas in accordance with the final land-use determined by the outcomes and objectives of the SAPP (discussed below in Strategic Assessment of the Perth and Peel Region), including rehabilitation with low-water use native vegetation.

The EPA advises that at the conclusion of mining, the proposal as defined and referred to the EPA requires the proponent to:

- remove all buildings and infrastructure;
- register and remediate any contaminated sites as a result of the projects operations;
- rehabilitate roads;
- remove hard stand and lay down surfaces and re-contour the landscape; and
- rehabilitate all remaining open spaces.

The EPA notes that DMP, as outlined in EPB 19, is the lead agency for mine closure on sites regulated under the Mining Act.

Summary

Having regard to:

- the procedures outlined by the proponent to rehabilitate and decommission the site;
- the provision of a MCP that is consistent with the Guidelines for Preparing Mine Closure Plans; and
- the proponent's commitment to rehabilitate in accordance with the outcomes and objectives of the SAPPR, including the use of low-water use vegetation,

the EPA considers that the proposal can meet the EPA's objectives for Rehabilitation and Decommissioning and that the likely environmental effects of the proposal are not so significant as to warrant formal assessment provided that the proposal is implemented in accordance with the referral documentation.

The EPA notes the legislative requirements of the proponent under the Mining Act in regards to preparing a MCP.

Strategic Assessment of the Perth and Peel Region (SAPPR)

The EPA provides the following advice in relation to the specific draft action plans of the SAPPR:

Action Plan D – Basic Raw Materials (Action Plan D)

This proposal falls both inside and outside Action Plan D. Where it is within the class of action (i.e. mapped exclusion areas and future resource extraction areas) it is consistent with the draft Action Plan. The maximum disturbance footprint proposed for each site has been designed to avoid these mapped exclusion areas. The SAPPR exclusion areas were developed considering the following environmental values:

- Regionally significant natural areas (Bush Forever Sites, Peel Regionally Significant Natural Areas and Redbook areas) and conservation areas;
- Ramsar Wetlands, CCWs and Western Swamp Tortoise;
- Vegetation complexes less than 30% and less than 10% on the Swan Coastal Plain; and
- Threatened Ecological Communities, Threatened Fauna and Declared Rare Flora.

Where the proposal falls outside Action Plan D, the EPA has evaluated the values of environment as standard procedure. The proponent should consider referring areas outside of Action Plan D to the DEE under the EPBC Act for a determination as to whether implementation of the proposal is a controlled action, due to potential impact on the Carnaby's cockatoo, which is a matter of national environmental significance.

Action Plan E – Harvesting of pines and post-harvesting land use (Action Plan E)

The EPA notes that the draft Action Plan E commits the State Government to replant 5000 ha of pines to provide a continuous, dependent food source for Carnaby's cockatoo. The primary objective of these re-plantings is to provide foraging habitat for Carnaby's cockatoo, and reduce the overall impact on the species. Approximately 1500 ha of pine have already been replanted as part of this commitment, some of which occur within the proposed Smokebush Hill site. Given that it is not proposed for the proponent to undertake clearing of pines, and that extraction of sand is proposed

to follow clearing commitments by the FPC, it is unlikely that the proposal would be inconsistent with Action Plan E.

The EPA also notes that the proponent is compliant with Action Plan E in its commitment to rehabilitate areas with low-water use native vegetation, which would enable maximise groundwater recharge within the Gnangara Mound.

Action Plan H – Conservation Program (Action Plan H)

The EPA notes that this proposal would overlap areas that have been identified within Phase 1 and Phase 2 of the SAPPR conservation program, identified to be protected and managed under the *Conservation and Land Management Act 1984*. However, it is acknowledged that the extraction of basic raw materials from these same areas is also permitted under SAPPR. The intention is for these areas to become conservation reserves that will allow the extraction of basic raw materials, followed by rehabilitation. Rehabilitation of the three sites within this proposal would need to align with the outcomes and objectives of Action Plan H, particularly in areas that have been identified to go towards conservation reserves.

Attachments

Attachment 1 – Summary of key proposal characteristics

Attachment 2 – Figures

Attachment 1 – Summary of key proposal characteristics

Table 1: Summary of key proposal characteristics

Proposal title	Sand Quarries within Gnangara Pine Plantation
Proposal name	Hanson Australia Pty Ltd
Short description	The proposal is to develop and operate three sand quarries within tenements E70/3279 (Smokebush Hill), E70/3275 (Tamega Road) and M70/1306 (Mulga Road), located within the Gnangara Pine Plantation approximately 30 km to 50 km north of Perth CBD, including associated infrastructure (internal roads, mobile screening plant and site office). The proposal would be implemented on vacant land, once harvesting of pines has been undertaken by FPC (in accordance with its legislated obligations under State Agreements Acts).

Table 2: Proposal elements

Proposal Elements	
Element	Proposed Extent
<i>Smokebush Hill (E70/3279) - Figure 2</i>	
Mine pit	Progressive mining of no more than 5038 ha within a 7416 ha development envelope over a period of 50+ years. Approximately 30 ha of mine pit open at any one time, with progressive backfilling and rehabilitation.
Associated infrastructure	No more than 5 ha within a 5038 ha disturbance footprint. No clearing proposed by proponent.
Depth of mining excavation	Interim depth of 3 m from the historical maximum groundwater level. Once WMP has been approved, 3 m from the likely future maximum winter water table.

Water use	18 kL capacity water cart for dust suppression. Water may also may be required for washing sand. Likely sourced through application of a water licence or scheme water.
Transport	Semi-trailers from 10 m ³ to 40 m ³ capacity generating approximately 50 to 100 return truck movements per day of operation.
<i>Tamega Road (E70/3275) - Figure 3</i>	
Mine pit	Progressive mining of no more than 3554 ha within a 4868 ha development envelope over a period of 50+ years. Approximately 30 ha of mine pit open at any one time, with progressive backfilling and rehabilitation.
Associated infrastructure	No more than 5 ha within a 3554 ha disturbance footprint. No clearing proposed by proponent.
Depth of mining excavation	Interim depth of 3 m from the historical maximum groundwater level. Once WMP has been approved, 3 m from the likely future maximum winter water table.
Water use	18 kL capacity water cart for dust suppression. Water may also may be required for washing sand. Likely sourced through application of a water licence or scheme water.
Transport	Semi-trailers from 10 m ³ to 40 m ³ capacity generating approximately 50 to 100 return truck movements per day of operation.
<i>Mulga Road (M70/1306) - Figure 4</i>	
Mine pit	Progressive mining of no more than 164 ha within a 322 ha development envelope over a period of 10+ years. Approximately 30 ha of mine pit open at any one time, with progressive backfilling and rehabilitation.
Associated infrastructure	No more than 5 ha within a 164 ha disturbance footprint. No clearing proposed by proponent.
Depth of mining excavation	Interim depth of 3 m from the historical maximum groundwater level. Once WMP has been approved, 3 m from the likely future maximum winter water table.
Water use	18 kL capacity water cart for dust suppression. Water may also may be required for washing sand. Likely sourced through application of a water licence or scheme water.
Transport	Semi-trailers from 10 m ³ to 40 m ³ capacity generating approximately 50 to 100 return truck movements per day of operation. Use of existing roads to the west of the tenement as as an interim measure, until the access road to the east of the tenement becomes operational.

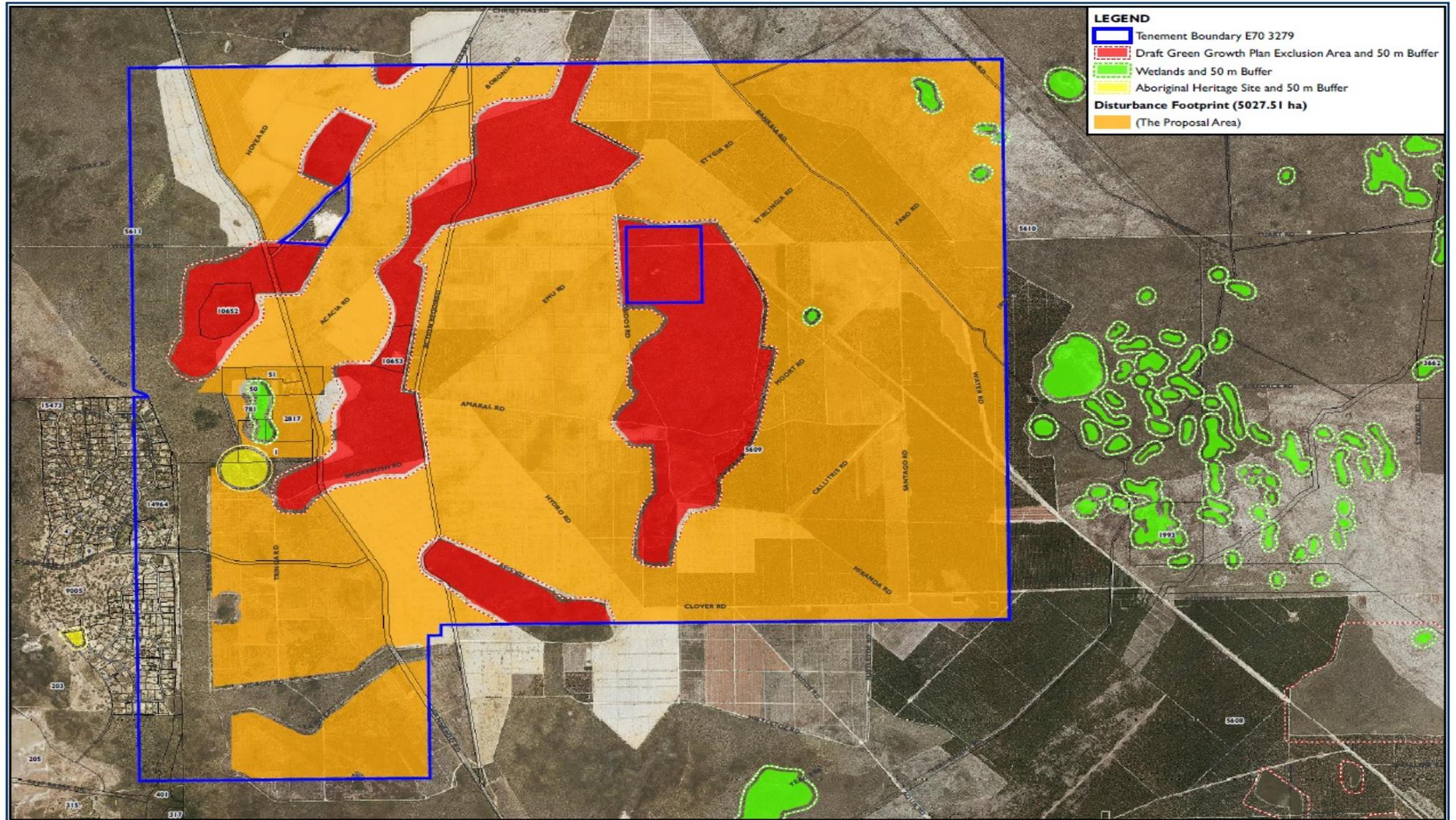


Figure 2 – Smokebush Hill maximum disturbance footprint

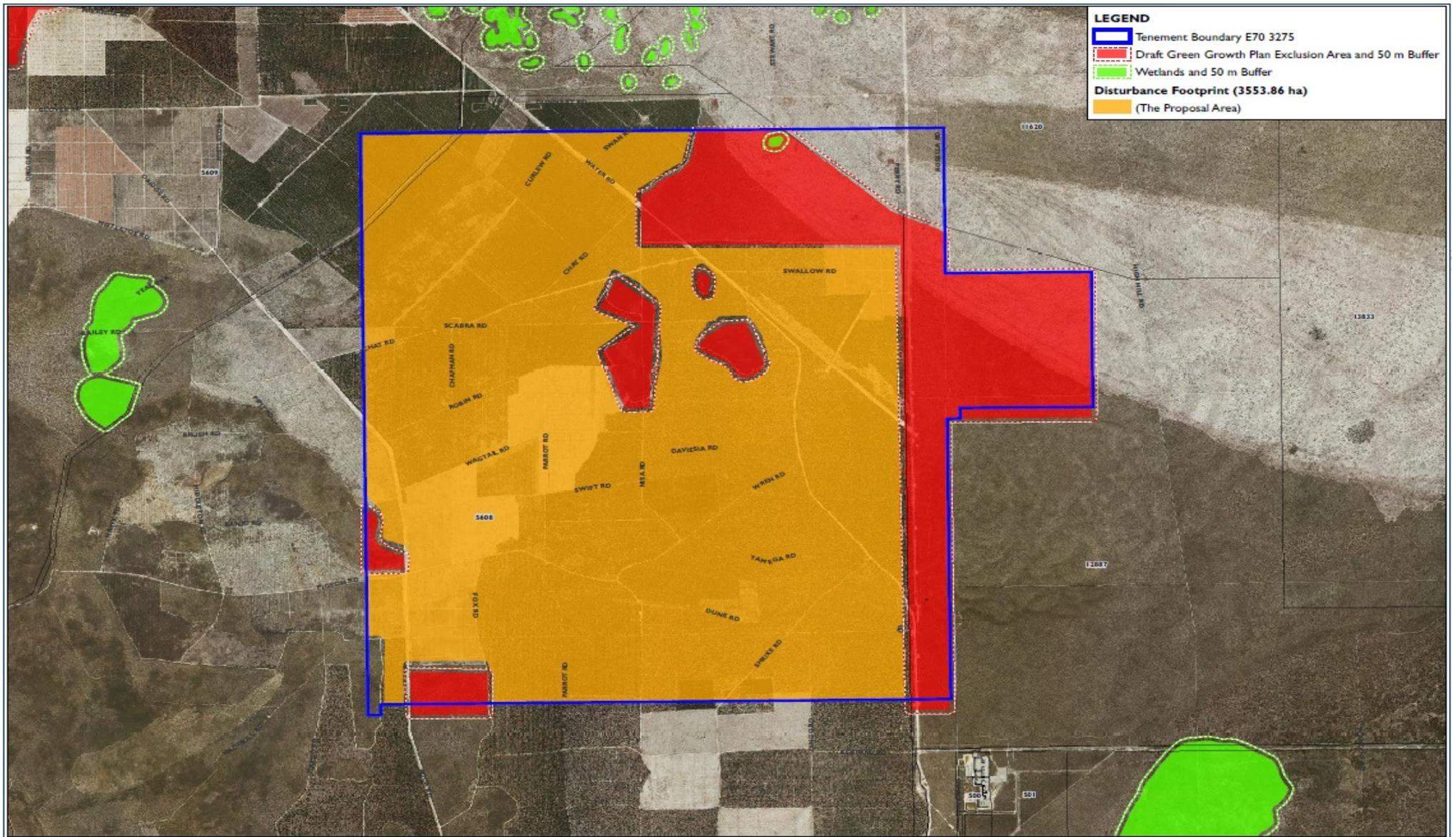


Figure 3 – Tamega Road maximum disturbance footprint

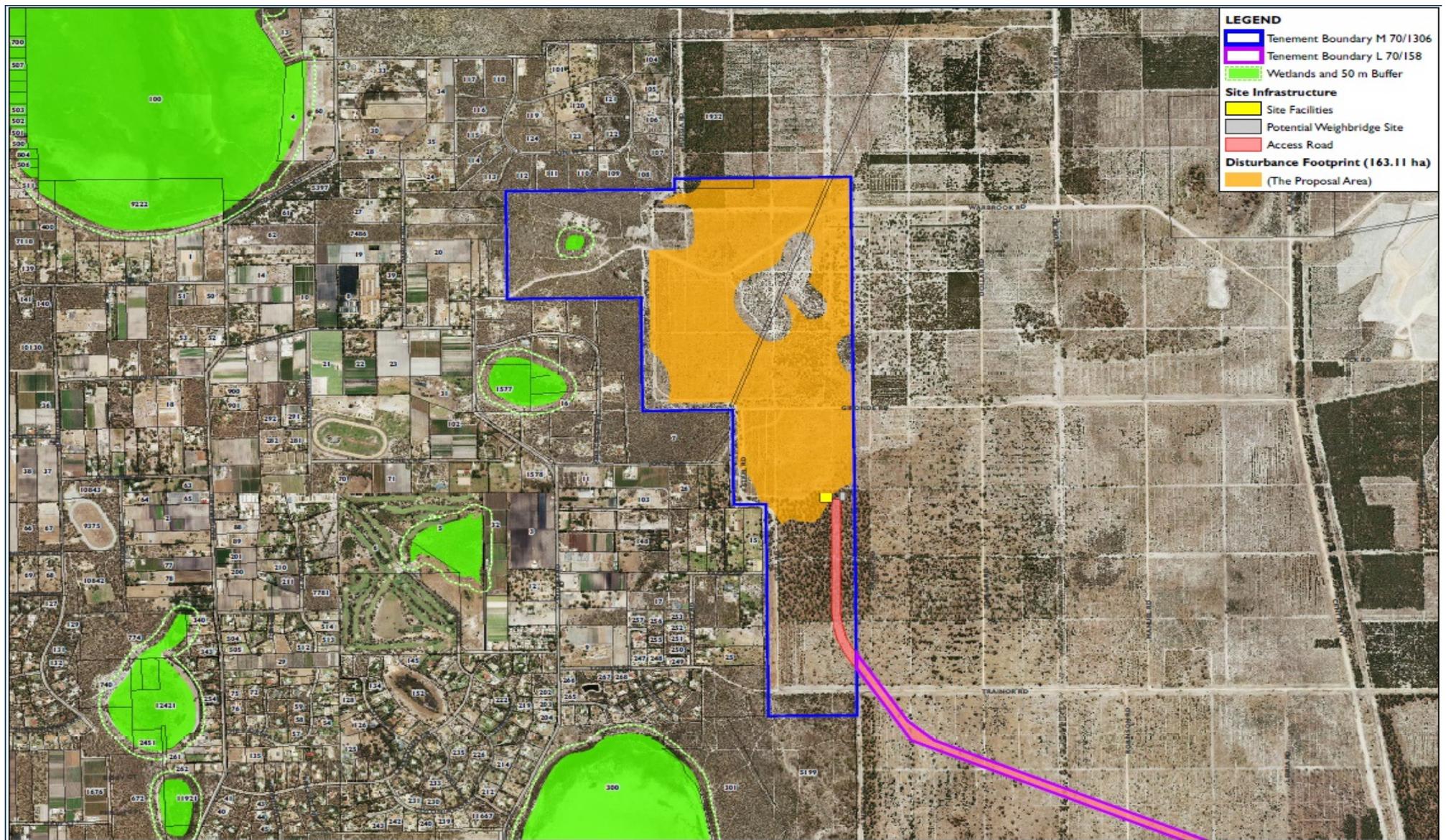


Figure 4 – Mulga Road maximum disturbance footprint