

Enquiries: John Braid 9323 6183

Our Ref: 15/8447

Your Ref:

24 June 2016

EPA Registrar
Office of the Environmental Protection Authority
Locked Bag 10
East Perth WA 6892

Dear Sir/Madam

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Ellenbrook Bus Rapid Transit Referral under the *Environmental Protection Act* 1986

Please find enclosed referral documentation, including a CD containing electronic information, for the proposed Ellenbrook Bus Rapid Transit. This referral was electronically submitted via the Registrat@epa.wa.gov.au email address.

If you have any queries regarding the referral, please contact me on 9323 6183 or via email at john.braid@mainroads.wa.gov.au

Yours/sincerely

John Braid

Principal Environment Officer

Enc:

EPA Referral Form
Figures 1-3
EBRT EIA and EMP
Northlink Drainage Strategy Report
CD containing all reports and spatial data

EPA REFERRAL FORM

Referral of a Proposal to the Environmental Protection Authority under Section 38 of the *Environmental Protection Act 1986*.

PURPOSE OF THIS FORM

Section 38 of the *Environmental Protection Act 1986* (EP Act) makes provision for the referral to the Environmental Protection Authority (EPA) of a proposal (significant proposals, strategic proposals and proposals under an assessed scheme) by a proponent, a decision making authority (DMA), or any other person.

The purpose of this form is to ensure that EPA has sufficient information about a proposal to make a decision about the nature of the proposal and whether or not the proposal should be assessed under Part IV of the EP Act. Information provided in the referral form must be brief (no more than 30 pages), sharp and succinct to achieve the purposes of this form.

This form does not prevent the referrer from providing a supplementary referral report. Should a referrer choose to submit a supplementary referral report please ensure the following.

- i. Information is short, sharp and succinct.
- ii. Attachments are below eight megabytes (8 MB) as they will be published on the EPA's website (exemptions apply) for public comment. To minimise file size, "flatten" maps and optimise pdf files.
- iii. Cross-references are provided in the referral form to the appropriate section/s in the supplementary referral report.

This form is to be used for all proposals¹ which can be referred to the EPA under section 38 of the EP Act; i.e. referrals from: **proponents** of proposals (significant proposals, strategic proposals, derived proposals, proposals under an assessed scheme); **DMAs** (significant proposals); and **third parties** (significant proposals).

This form is divided into several sections, including; Referral requirements and Declaration; Part A - Information of the proposal and proponent; and Part B Environmental Factors. Guidance on successfully completing this form is provided throughout the form and is also available in the EPA's Environmental Assessment Guideline for Referral of a Proposal under s38 of the EP Act (EAG 16).

Send completed forms to

Office of the Environmental Protection Authority Locked Bag 10, East Perth WA 6892

or

Email: Registrar@epa.wa.gov.au

Enquiries

Office of the Environmental Protection Authority Locked Bag 10, East Perth WA 6892

Telephone: 6145 0800

Fax: 6145 0895

Email: info@epa.wa.gov.au Website: www.epa.wa.gov.au

¹ Please note that this form consolidates and replaces the following forms: Referral of a Proposal by the Proponent to the EPA under section 38(1) of the EP Act, Referral of a Proposal by a third party to the EPA under section 38(1) of the EP Act, and Referral of a development proposal to the EPA by the decision making authority.

Referral requirements and Declaration

The following section outlines the referral information required from a proponent, decision making authority and third party.

(a) Proponents

Proponents are expected to complete all sections of the form and provide GIS spatial data to enable the EPA to consider the referral. Spatial GIS data is necessary to inform the EPA's decision.

The EPA expects that a proponent will address Part B of the form as thoroughly as possible to demonstrate whether or not the EPA's objectives for environmental factors can be met.

If insufficient information is provided the EPA will request more information and processing of the referral will commence once the information is provided or the EPA decides to make a precautionary determination on the available information.

Proponent to complete before submitting form	
Completed all the questions in Part A (essential)	⊠ Yes □ No
Completed all the questions in Part B	⊠ Yes □ No
Completed all other applicable questions	⊠Yes □ No
Included Attachment 1 – any additional document(s) the proponent wishes to provide	⊠Yes □ No
Included Attachment 2 – confidential information (if applicable)	☐ Yes ☐ No
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping but clearly separating any confidential information	⊠Yes □ No
Completed the Declaration	⊠Yes □ No
What is the type of proposal being referred? * a referred proposal seeking to be declared a derived proposal	
Do you consider the proposal requires formal environmental impact assessment?	☐ Yes
If yes, what level of assessment? API = Assessment of Proponent Information PER = Public Environmental Review	☐ API Category A ☐ API Category B ☐ PER

NB: The EPA may apply an Assessment on Proponent Information (API) level of assessment when the proponent has provided sufficient information about:

- the proposal;
- the proposed environmental impacts;
- the proposed management of the environmental impacts; and
- when the proposal is consistent with API criteria outlined in the <u>Environmental Impact</u> Assessment (Part IV Division 1 and 2) Administrative Procedures 2012.

If an API A formal level of assessment is considered appropriate, please refer to Environmental Assessment Guideline No. 14 *Preparation for an Assessment on Proponent Information (Category A) Environmental Review Document EAG 14* (EAG14).

Declaration

I, Mike Kapitola, *(full name)* declare that I am authorised on behalf of Main Roads Western Australia (being the person responsible for the proposal) to submit this form and further declare that the information contained in this form is true and not misleading.

Signature	Allo	Name (print) Mike	e Kapitola	
Position	Project Director	Organisation	Main Roads	Western Australia
Email	Email Mike.kapitola@mainroads.wa.gov.au			
Address	Street No.	Waterloo Crescent		
	East Perth		WA	6004
Date	24/6/16			

(b) Decision-making authority

The EPA expects decision-making authorities to complete applicable sections of Part A of the form and provide the proponent an opportunity to provide additional information in Part B of the form where appropriate.

Wherever possible the DMA should obtain relevant spatial information from the proponent and provide this to the EPA with the referral.

DMA to comp	lete before submittin	ng form			
Completed all the questions in Part A (essential)				☐ Yes	s 🗌 No
Provided Part	B to the proponent for	completion		☐ Yes	s 🗌 No
Completed all	other applicable quest	tions		☐ Yes	s 🗌 No
Included Attac	hment 1 – any suppor	ting information		☐ Yes	s 🗌 No
	lectronic copy of all re al data and contextual			☐ Yes	s 🗌 No
Completed the	below Declaration			☐ Yes	s 🗌 No
Do you consider the proposal requires formal environmental impact assessment?				☐ Yes	s 🗌 No
What is the typ	pe of proposal being re	eferred?		☐ significant p	oroposal
				significant p	oroposal under ed scheme
		, (full name) subgnificance of its impacts.		is referral to	the EPA for
Signature		Name (print)			
Position		Organisation			
Email					
Address	Street No.	Street Name			
	Suburb		Stat	te	Postcode
Date					

(c) Third Party

Third parties are asked to have consideration for the Significance Test outlined in Part A Section 1.5 of this form before referring a significant proposal to the EPA. The EPA will only consider proposals that are likely, if implemented, to have a significant effect on the environment.

Third parties are to provide sufficient information to clearly identify the significant proposal, the proponent, and their reasons for referring the proposal. This can be done by completing as much of Part A of the form as possible, taking into consideration the information available. Third parties may wish to fill in Part B of the form to advance their own views of the significance of the environmental impacts and the need for EPA assessment.

In most cases the EPA will seek additional information from the proponent. This will be to confirm or amend the identity of the proponent, the proposal, and to allow the proponent opportunity to provide its views on the significance of the environmental impacts and the need for EPA assessment.

Third Party to complete before submitting form				
Complete all a	Complete all applicable questions in Part A and B			☐ Yes ☐ No
Completed the	e Declaration			☐ Yes ☐ No
Do you conside assessment?	der the proposal requir	res formal environmenta	l impact	☐ Yes ☐ No
Declaration I,, (full name) submit this referral to the EPA for consideration of the environmental significance of its impacts.				
Signature	Signature Name (print)			
Email				
Position		Organisation		
Address	Street No.	Street Name		
	Suburb		State	Postcode
Date				

PART A: Information on the proposal and the proponent

All fields of Part A must be completed by the proponent and/or decision-making authority for this document to be processed as a referral. Third party referrers are only expected to fill in the fields they have information for.

1 PROPONENT AND PROPOSAL DESCRIPTION

1.1 The proponent of the proposal

Proponent and/or DMA to complete	
Name of the proponent	Commissioner of Main Roads Western Australia
Joint Venture parties (if applicable)	None
Australian Company Number(s)	Not applicable
Postal Address (Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State)	PO Box 3202 East Perth WA 6892
Key proponent contact for the proposal Please include: name; physical address; phone; and email.	Mike Kapitola Project Director Main Roads Western Australia Waterloo Crescent East Perth WA 6004 Ph: 9323 4776 mike.kapitola@mainroads.wa.gov.au
Consultant for the proposal (if applicable) Please include: name; physical address; phone; and email.	John Braid Principal Environment Officer Main Roads Western Australia Waterloo Crescent East Perth WA 6004 Ph: 9323 6183 john.braid@mainroads.wa.gov.au

1.2 Proposal

Proposal is defined under the EP Act to mean a "project, plan, programme policy, operation, undertaking or development or change of land use, or amendment of any of the foregoing, but does not include scheme". Before completing this section please refer to <u>Environmental Protection Bulletin 17 – Strategic and derived proposals (EPB 17)</u> and <u>Environmental Assessment Guideline for Defining the Key Characteristics of a proposal (EAG 1)</u>.

Proponent and/or DMA to complete	
Title of the proposal	Ellenbrook Bus Rapid Transit
What project phase is the proposal at?	☐ Scoping☐ Feasibility✗ Detailed design☐ Other
Proposal type More than one proposal type can be identified, however for filtering purposes it is recommended that only the primary proposal type is identified.	☐ Power/Energy Generation☐ Hydrocarbon Based – coal☐ Hydrocarbon Based – gas☐ Waste to energy

Proponent and/or DMA to complete	
	☐ Renewable – wind☐ Renewable – wave☐ Renewable – solar☐ Renewable – geothermal
	 ☐ Mineral / Resource Extraction ☐ Exploration – seismic ☐ Exploration – geotechnical ☐ Development
	☐ Oil and Gas Development ☐ Exploration ☐ Onshore – seismic ☐ Onshore – geotechnical ☐ Onshore – development ☐ Offshore – seismic ☐ Offshore – geotechnical ☐ Offshore – development
	☐ Industrial Development ☐ Processing ☐ Manufacturing ☐ Beneficiation
	□ Land Use and Development □ Residential – subdivision □ Residential – development □ Commercial – subdivision □ Commercial – development □ Industrial – subdivision □ Industrial – development □ Agricultural – subdivision □ Agricultural – development □ Tourism
	X Linear Infrastructure
	 Water Resource Development □ Desalination □ Surface or Groundwater □ Drainage □ Pipelines □ Managed Aquifer Recharge
	☐ Marine Developments☐ Port☐ Jetties

Proponent and/or DMA to complete	
	☐ Marina☐ Canal☐ Aquaculture☐ Dredging
	If other, please state below: Other
Proponent and/or DMA to complete	
Description of the proposal – describe the key characteristics of the proposal in accordance with EAG 1.	The Ellenbrook Bus Rapid Transit (EBRT) will provide a dedicated busway from the Ellenbrook town centre to Reid Highway, Bennett Springs. It involves: • construction of approximately 10 km of dedicated busway, • grade separations of the busway at road crossings, • upgrades of all existing intersections • three bus stations with Park and Ride facilities • realignment of Lord Street from Reid Highway to Youle-Dean Road and from Park Street to Gnangara Road • associated road infrastructure (for example drainage, lighting, safety barriers, noise walls as required) A key characteristics table is provided below (Table 1).
Timeframe in which the proposal is to occur (including start and finish dates where applicable).	Construction is likely to commence in late 2016 and will take approximately 15 months to complete.
Details of any staging of the proposal.	Not applicable
What is the current land use on the property, and the extent (area in hectares) of the property?	The current land use within the proposed development envelope is road and agriculture. The project footprint is 56.8ha within a development envelope of 185.2ha.
Have pre-referral discussions taken place with the	Metropolitan Regional Scheme (MRS) zoning within the development envelope includes 'Primary Regional Road,' 'Rural', 'Urban', 'Public Purpose (Special uses)' and 'Other Regional Roads' from the Parkway in Ellenbrook to Suffolk Street in Caversham. Pre-referral discussions with the OEPA were held on 3 November 2015 and
OEPA? If yes, please provide the case number. If a case number was not provided, please state the date of the meeting and names of attendees.	22 March 2016.

Proponent and/or DMA to complete

DMA (Responsible Authority) to complete

For a proposal under an assessed scheme (as defined in <u>section 3 of the EP Act</u>, applicable only to the proponent and DMA) provide details (in an attachment) as to whether:

- The environmental issues raised by the proposal were assessed in any assessment of the assessed scheme.
- The proposal complies with the assessed scheme and any environmental conditions in the assessed scheme.

Table 1 Key Proposal Characteristics

Summary of the Proposal

Proposal title	Ellenbrook Bus Rapid Transit
Proponent name	Main Roads Western Australia
Short description	Construction of a dedicated bus route connecting Ellenbrook town centre to south of Reid Highway and a realignment of Lord Street between Gnangara Road and Reid Highway. It involves construction of approximately 10 km of dedicated busway, grade separations at road crossings, upgrades of all existing intersections and three bus stations with Park and Ride facilities.

Physical Elements

1 Hydrodi Elemente			
Element	Location	Proposed Extent Authorised	
Clearing and disturbance for busway, drainage, bridges and culverts, noise walls bus stations and park and ride facilities		Clearing and disturbance of 56.8ha including no more than 21.1ha of native vegetation.	
Dewatering (construction of		No adverse impacts on water	
bridges/underpasses)		quality or native vegetation.	

Operational Elements

Element	Location	Proposed extent Authorised
Dewatering		No adverse impacts on water
		quality or native vegetation.

1.3 Strategic / derived proposals

Complete this section if the proposal being referred is a strategic proposal or you are seeking the proposal to be declared a derived proposal. Note: Only a proponent may refer a strategic proposal and seek a proposal to be declared a derived proposal.

Proponent to complete	
Is this referred proposal a strategic proposal?	☐ Yes ⊠ No
Are you seeking that this proposal be declared a derived proposal?	☐ Yes ⊠ No
If you are seeking that this proposal be declared a derived proposal, what is the Ministerial Statement number (MS #) of the associated strategic proposal?	MS #:

1.4 Location

Proponents and DMAs must provide spatial data. Please refer to <u>EAG 1</u> for more detail.

Proponent, DMA and Third Party to complete			
Name of the Local Government Authority in which the proposal is located.	City of Swan		
Location: a) street address; lot number; suburb; and nearest road intersection; or b) if remote the nearest town; and distance and direction from that town to the proposal site.	Between Lord Street and Reid Highway intersection to Gnangara Road, Drumpellier Drive intersection in Caversham, Brabham and Bennett Springs. Within "Public Purposes (Special Uses)" zoning from Gnangara Road to The Parkway, Ellenbrook.		
Have maps and figures been included with the referral (consistent with <u>EAG 1</u> where appropriate)? The types of maps and figures which need to be provided (depending on the nature of the proposal) include: • maps showing the regional location and context of the proposal; and • figures illustrating the proposal elements.			
Proponent and DMA to complete			
Have electronic copies of spatial data been included with the referral? NB: Electronic spatial (GIS or CAD) data, geo-referenced and conforming to the following parameters:			
 GIS: polygons representing all activities and named; CAD: simple closed polygons representing all activities and named; datum: GDA94; projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA); 	Indicative proposal footprintVegetation communitiesVegetation conditionFauna habitat mapping		
format: ESRI geodatabase or shapefile, MapInfo Interchange Format, Microstation or AutoCAD			

1.5 Significance test and environmental factors

Proponent, DMA and Third Party to complete		
What are the likely significant	☐ Benthic Communities and Habitat	
environmental factors for this proposal?	☐ Coastal Processes	
	☐ Marine Environmental Quality	
	☐ Marine Fauna	
	☐ Flora and Vegetation	
	☐ Landforms	
	☐ Subterranean Fauna	
	☐ Terrestrial Environmental Quality	
	□ Terrestrial Fauna	

Inland Waters Environmental Quality	Proponent, DMA and Third Party to complete		
the construction of the route. The proposal has been referred to the EPA to obtain certainty about whether MS 370 applies to this proposal or not.	Having regard to the Significance Test (refer to Section 7 of the EIA Administrative Procedures 2012) in what ways do you consider the proposal may have a significant effect on the environment and	 ☑ Inland Waters Environmental Quality ☑ Air Quality & Atmospheric Gases ☑ Amenity ☑ Heritage ☑ Human Health ☑ Offsets ☑ Rehabilitation and Decommissioning The likely significant environmental factors listed above can be readily managed through existing legislation, specifically: A clearing permit under Part V of the Environmental Protection Act 1986 Dewatering licence under the Rights in Water and Irrigation Act 1914 The proposal has been referred to the EPA due to Ministerial Statement 370 (MS 370). MS 370 refers to a "rapid transit route" along the alignment of this proposal. However it appears that MS 370 applies only to the planning of the rapid transit route and not to the construction of the route. The proposal has been referred to the EPA to obtain certainty about whether MS 370 applies to 	

1.6 Confidential information

All information will be made publically available unless authorised for exemption under the EP Act or subject to the Freedom of Information Act 1992.

Proponent to complete	
Does the proponent request that the EPA treat any part of the referral information as confidential?	☐ Yes ⊠ No
Ensure all confidential information is provided in a separate attachment in hard copy.	

2 REGULATORY CONSIDERATIONS

This section applies to the Local, State and Commonwealth regulatory considerations for the referred proposal.

2.1 Government approvals

2.1.1 State or Local Government approvals

DMA to complete	
What approval(s) is (are) required from you as a decision-making authority?	
Is rezoning of any land required before the proposal can be implemented? If yes, please provide details.	☐ Yes ☐ No

2.1.2 Regulation of aspects of the proposal

Complete the following to the extent possible.

Proponent to complete	
Do you have legal access required for the implementation of all aspects of the proposal?	□ Yes ⊠ No
If yes, provide details of legal access authorisations / agreements / tenure. If no, what authorisations / agreements / tenure is required and from whom?	Main Roads currently does not own or have legal access to all the land within the development envelope at this time. Prior to the commencement of construction, Main Roads will either acquire the land or obtain permission to access the land for the purpose of construction.

Outline both the existing approvals and approvals that will be / are being sought as a part of this proposal.

Proponent to complete			
Aspects* of the proposal	Type of approval	Legislation regulating this activity	Which State agency /entity regulate this activity?
Matters of National Environmental Significance	EPBC approval	Environment Protection and Biodiversity Conservation Act 1999	Australian Government Department of the Environment
Groundwater abstraction/ Dewatering	Dewatering licence	Rights in Water and Irrigation Act 1914	Department of Water
Vegetation clearing	Native vegetation clearing permit	EP Act 1986 – Part V	Department of Environment Regulation
Construction	Development Approval	Planning and Development Act 2005	Western Australian Planning Commission
Aboriginal Heritage	Section 18 consent to disturb an Aboriginal site	Aboriginal Heritage Act 1972	Department of Aboriginal Affairs

2.1.3 Commonwealth Government *Environment Protection and Biodiversity Conservation Act 1999* approvals

Refer to the <u>assessment bilateral agreement</u> between the Commonwealth of Australia and the State of Western Australia for assistance on this section.

Proponent to complete

(a) brief description of the action

(b) the name of the action

(c) the name of the proponent

(e) the matters of national environmental significance that

will be or are likely to be significantly impacted

(f) how the relevant documents may be obtained

(d) the location of the action

1.	Does the proposal involve an action that may be or is a controlled action under the <i>Environment Protection and</i>	⊠ Yes □ No		
	Biodiversity Conservation Act 1999 (EPBC Act)?	If no continue to Part A section 2.1.4.		
2.	What is the status of the decision on whether or not the	☐ Proposal not yet referred		
	action is a controlled action?	□ Proposal referred, awaiting decision		
		Assessed – controlled action		
		Assessed – not a controlled action		
3.	If the action has been referred, when was it referred and	Date: 24 June 2016		
	what is the reference number (Ref #)?	Ref #: <i>Unknown</i>		
4.	If the action has been assessed, provide the decision in an attachment. Has an attachment been provided?	☐ Yes ☐ No		
5.	Do you request this proposal to be assessed under the bilateral agreement?	☐ Yes ⊠ No		
Complete the following to the extent possible for the Public Comment of EPBC Act referral documentation.				
Pro	oponent to complete			
6.	Have you invited the public to comment on your referral documentation?	☐ Yes ⊠ No		
7.	How was the invitation published?	newspaper website		
8.	8. Did the invitation include all of the following?			

☐ Yes

☐ Yes

☐ Yes

☐ Yes

☐ Yes

☐ Yes

☐ No

☐ No

☐ No

☐ No

☐ No

☐ No

Proponent to complete				
(g) the deadline for public comments	☐ Yes ☐ No			
(h) available for public comment for 14 calendar days	☐ Yes ☐ No			
(i) the likely impacts on matters of national environmental significance	☐ Yes ☐ No			
(j) any feasible alternatives to the proposed action	☐ Yes ☐ No			
(k) possible mitigation measures	☐ Yes ☐ No			
Were any submissions received during the public comment period?	☐ Yes ☐ No			
Have public submissions been addressed? If yes provide attachment.	☐ Yes ☐ No			

2.1.4 Other Commonwealth Government Approvals

Proponent, DMA and Third Party to complete				
Is approval require Commonwealth G part of the propos	overnment/s for any	☐ Yes ☐ No If yes, please complete the table below.		
Agency / Authority	Approval required	Applic lodg		Agency / Local Authority contact(s) for proposal
		☐ Yes	☐ No	
		☐ Yes	☐ No	

3. SUPPORTING INFORMATION

Please attach copies of any relevant information on the proposal, supporting evidence and / or existing environmental surveys, studies or monitoring information undertaken and list the documents below.

Propo	Proponent, DMA and Third Party to complete			
(1)	Ellenbrook Bus Rapid Transit EIA & EMP	Aurecon Australasia	Environmental Impact Assessment and Environmental Management Plan. Contains biological assessment and dieback management plan	
(2)	Northlink Drainage Strategy Report	Northlink	DoW endorsed drainage strategy for the proposed Perth to Darwin National Highway through the Gnangara Mound P1 Public Drinking Water Source Area.	

PART B: ENVIRONMENTAL FACTORS

The purpose of Part B is to assist the EPA to determine the significance of the likely environmental impacts of the proposal in accordance with the EPA's *Environmental Assessment Guideline for Environmental factors and objectives* (EAG 8) and *Environmental Assessment Guideline for Application of a significant framework in the EIA process* (EAG 9). Referrers completing Part B should refer closely to EAG 8 and EAG 9.

The EPA has prepared <u>Referral of a Proposal under s38 of the EP Act EAG No.16 - Appendix A</u> (Appendix A) to assist in identifying factors and completing the below table. Further guidance can be found in the guidance and policy documents cited in Appendix A under each factor.

How to complete Part B

For each environmental factor, that is likely to be significantly impacted by the implementation of the proposal, make a copy of the table below and insert a summary of the relevant information relating to the proposal. The table can be broken down into more than one table per factor, if the need arises. For example the hydrological processes factor can be presented in two separate tables, one for surface water and one for groundwater, or similarly one for construction and one for operations.

For complex proposals a supplementary referral report can be provided in addition to the referral form. If this option is chosen the table must still be completed (summaries are acceptable) to assist the Office of the EPA with statistical reporting and filtering proposals for processing.

Proponents expecting an API level of assessment must provide information in accordance with the EPA's *Environmental Assessment Guideline for Preparation of an API-A environmental review document* (EAG 14).

For each of the significant environmental factors, complete the following table (Questions 1-10).

1	Factor, as defined in <u>EAG 8</u>	Hydrological Processes
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Guidance Statement 33 Environmental Guidance for Planning and Development Position Statement 4 Environmental Protection of Wetlands Interim strategic advice Perth and Peel @ 3.5 million: Environmental impacts, risks and remedies Western Swamp Tortoise Habitat Environmental Protection Policy Guidance Statement 7 Protection of the Western Swamp Tortoise Habitat, Upper Swan Bullsbrook State Planning Policy 2.2 Gnangara Groundwater Protection Policy Gnangara Land use and Water Management Strategy Water Quality Protection Note 13 Dewatering of soils at construction sites
4	Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including: anticipated level of public interest in the impact; consultation with regulatory agencies; and consultation with community. 	Anticipated low level of public interest in the impact. Consultation with the Department of Water (DoW) is has commenced and will continue in order to manage water impacts. General community consultation will be undertaken in regards to the project, but not specifically to address this factor.

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
5	Baseline information - describe the relevant characteristics of the receiving environment. This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.	The proposal footprint will partially transect Priority 2 and Priority 3 Source Protection Areas of the Gnangara Underground Water Pollution Control Area. Maximum depth to groundwater in the vicinity of the proposal footprint is 12.5 m in the north near the Parkway. From Gnangara Road to Reid Highway, the depth to groundwater varies from 4 m to 0 m, with 0 m recorded at the intersection of Lord Street and Youle-Dean Road.	
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	Groundwater abstraction and/or dewatering will result in localised lowering of the groundwater table. These impacts will be temporary during construction. Groundwater levels will return to preconstruction levels rapidly following the completion of abstraction and/or dewatering. Drainage basins will result in localised mounding of groundwater beneath the basin during operation. Where the grade separation of the busway is constructed as an underpass, the underpass structure will interfere with groundwater flow.	

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:	Where possible groundwater impacts will be avoided through: • Timing of construction works
	Avoidance - avoiding the adverse environmental impact altogether;	to avoid the need to dewater
	 Minimisation - limiting the degree or magnitude of the adverse impact; Rehabilitate – restoring the maximum environmental value that is reasonably 	Implementing the Northlink Drainage Strategy to reduce the number and extent of permanent drainage basins
	 Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity. 	Construction of overpasses instead of underpasses for the grade separation of the busway (where practicable)
	, and the second	Impacts will be minimised through:
		 Timing of excavation to minimise dewatering requirements
		 Water Sensitive Urban Design principles incorporated into road and carpark drainage
		Licensing of groundwater dewatering and abstraction
8	Residual impacts – review the residual impacts against the EPA objectives. It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require: • quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions; • putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and • comparison against any established environmental policies, guidelines, and standards.	Localised mounding of groundwater under drainage basins. The mounding is likely to be short term following rainfall events due to the high hydraulic conductivity of the soil. No long term residual impacts are expected from dewatering and groundwater abstraction. Lowering of water tables will be temporary during specific abstraction/dewatering activities and groundwater levels will rebound quickly on completion. Underpasses will result in a permanent structure sitting in the groundwater. This is likely to interfere with the flow of groundwater in the immediate vicinity of the underpass.
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? <i>Refer to</i> <u>EAG 9</u>	

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. particular mitigation measures or regulatory conditions.	Licensing of dewatering and abstraction activities	
		Dewatering and abstraction will only occur during construction and will have no long term impacts.	
		The Northlink Drainage Strategy will be implemented in the design and construction of this proposal.	

1	Factor, as defined in <u>EAG 8</u>	Inland Waters Environmental Quality
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
3		Guidance Statement 33 Environmental Guidance for Planning and Development Position Statement 4 Environmental Protection of
	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal? Consultation - outline the need for consultation and	Wetlands Interim strategic advice Perth and Peel @ 3.5 million: Environmental impacts, risks and remedies Western Swamp Tortoise Habitat Environmental Protection Policy Guidance Statement 7 Protection of the Western Swamp Tortoise Habitat, Upper Swan Bullsbrook Water Quality Protection Note 25: Land Use Compatibility in Public Drinking Water Source Areas Water Quality Protection Note 77: Risk Assessment of Public Drinking Water Source Areas
		Stormwater Management Manual for Western Australia Anticipated low level of public
4	the outcomes of any consultation in relation to the potential environmental impacts, including: anticipated level of public interest in the impact; consultation with regulatory agencies; and consultation with community. 	interest in the impact. Consultation with the Department of Water (DoW) is has commenced and will continue in order to manage water impacts. General community consultation will be undertaken in regards to the project, but not specifically to address this factor.

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
5	Baseline information - describe the relevant characteristics of the receiving environment. This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.	The EBRT footprint will partially transect Priority 2 (P2) and Priority 3 (P3) public drinking water source areas (PDWSA) of the Gnangara Underground Water Pollution Control Area (UWPCA). P2 classification areas are managed to maintain or improve the quality of the drinking water source with the objective of risk minimisation. Potential development in these areas is established low-risk land development. P3 classification areas are defined to manage the risk of pollution to the water source from catchment activities. The EBRT alignment does not cross any wellhead protection zones. There are no major creek or river crossings within the EBRT footprint; however, some minor tributaries and drainage lines will be traversed. There are a number of wetlands within and adjacent to the project footprint. The project footprint intersects three Multiple Use wetlands covering an area of 30.3ha, of which 10.2ha is vegetated. A further 1.1ha of Resource Enhancement wetland, supporting 0.6ha of remnant vegetation is proposed to be impacted.	
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	The project may contribute pollutants in road run-off to groundwater and wetlands. Hydrocarbon and other potential chemical spills during construction may impact the quality of groundwater.	

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	 Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed: Avoidance - avoiding the adverse environmental impact altogether; Minimisation - limiting the degree or magnitude of the adverse impact; Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity. 	The project will be designed in accordance with the principles of Water Sensitive Urban Design, to encourage in-situ infiltration of runoff. Measures may include infiltration systems, grassed/vegetated swales and buffer strips and bioretention/biofilter systems. Procedures will be in place during construction regarding the use and storage of hydrocarbons and other chemicals in order to minimise the risk of a spill occurring and to minimise the impact of a spill if one does occur. Any spills will be contained and remediated as quickly as possible after the incident.	
8	Residual impacts – review the residual impacts against the EPA objectives. It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require: • quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions; • putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and • comparison against any established environmental policies, guidelines, and	The project will not result in any residual impacts to groundwater or surface water quality in the vicinity of the project footprint.	
9	standards. EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9	 ∑ meets the EPA's objective 	
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. particular mitigation measures or regulatory conditions.	Water sensitive urban design principles incorporated into the drainage design.	

1	Factor, as defined in <u>EAG 8</u>	Flora and vegetation
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain representation, diversity, viability and ecological function at the species, population and community level.
3		Environmental Protection Bulletin 20: Protection of naturally vegetated areas through planning and development
		Guidance Statement 10: Level of Assessment for proposals affecting natural areas within the System 6 Region and Swan Coastal Plain portion of the System 1 Region
	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Guidance Statement 51: Terrestrial flora and vegetation surveys for environmental impact assessment in Western Australia.
		Position Statement 2: Environmental Protection of Native Vegetation, Clearing of Native Vegetation with particular reference to the Agricultural Area. Position Statement 3: Terrestrial Biological Surveys as an Element of Biodiversity Protection
		Interim strategic advice Perth and Peel @ 3.5 million: Environmental impacts, risks and remedies
4	Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:	Anticipated low level of public interest in the impact of clearing of native vegetation.
	 anticipated level of public interest in the impact; consultation with regulatory agencies; and 	MRWA will consult with OEPA, DPaW and DER as required, regarding clearing of native vegetation.
	consultation with community.	General community consultation will be undertaken in regards to the project, but not specifically to address this factor.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

5 Baseline information - describe the relevant characteristics of the receiving environment.

This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.

Three Heddle vegetation complexes have been identified within the proposal footprint: Bassendean Complex - North (71% remaining); Bassendean Complex - Central and South (26% remaining); and Southern River Complex (18% remaining). Vegetation condition varies from Very Good to Completely Degraded with the majority of vegetation considered Completely Degraded due to previous clearing. Of the 21.1ha of native vegetation within the project footprint, only 2.1ha is considered to be in Good to Very Good condition.

The remnant native vegetation within the proposal footprint consists of a number of community types (see Attachment 1 for more details). The more prevalent communities include:

- Marri and Melaleuca preissiana mid open forest
- Melaleuca preissiana low forest/woodland
- Melaleuca rhaphiophylla and Eucalyptus rudis low woodland
- Paperbarks over paddock
- Native eucalypts over paddock

No threatened or priority flora species, or threatened ecological communities (TECs) occur within the proposal footprint.

The remnant vegetation is not considered to be regionally significant.

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	Up to 21.1ha of native vegetation, of which 2.1ha is considered to be in Good to Very Good condition, will be cleared for the proposal. Of this 21.1ha, 8.2ha is paperbarks over paddocks (2.8ha) and eucalypts over paddocks (5.4ha). There will be no impact to threatened or priority flora species or TECs or priority ecological communities. The proposal footprint is considered to be within a "constrained area" where the target for conserving poorly represented vegetation complexes is 10%. The proposal will not reduce the representation of Heddle vegetation associations to below 10% of their pre-European extent.	
7	 Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed: Avoidance - avoiding the adverse environmental impact altogether; Minimisation - limiting the degree or magnitude of the adverse impact; Rehabilitate - restoring the maximum environmental value that is reasonably practicable; and Offsets - actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity. 	Where possible, the detailed design of the busway and realignment of Lord Street will seek to avoid and minimise impacts on native vegetation. Controls will be in place during construction to ensure that no over clearing occurs outside of the proposed design footprint.	

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
8	Residual impacts – review the residual impacts against the EPA objectives.	The proposal will result in the loss of 21.1ha of native vegetation.	
	It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:		
	 quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions; 		
	 putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and 		
	 comparison against any established environmental policies, guidelines, and standards. 		
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to EAG 9	 ∑ meets the EPA's objective □ may meet the EPA's objective □ is unlikely to meet the EPA's objective 	
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. particular mitigation measures or regulatory conditions.		

1	Factor, as defined in <u>EAG 8</u>	Terrestrial fauna
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
3		Environmental Protection Bulletin 20: Protection of naturally vegetated areas through planning and development
		Western Swamp Tortoise Habitat Environmental Protection Policy
		Guidance Statement 7 Protection of the Western Swamp Tortoise Habitat, Upper Swan Bullsbrook
	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	Guidance Statement 33: Environmental Guidance for Planning and Development
		Guidance Statement 56 Terrestria Fauna Surveys for Environmental Impact Assessment in Western Australia
		Position Statement 3: Terrestrial Biological Surveys as an Element of Biodiversity Protection
		Technical Guide – Terrestrial Vertebrate Fauna Surveys for EIA
		Interim strategic advice Perth and Peel @ 3.5 million: Environmental impacts, risks and remedies
4	Consultation - outline the need for consultation and	Anticipated low level of public
	the outcomes of any consultation in relation to the	interest in the impact.
	 potential environmental impacts, including: anticipated level of public interest in the impact; 	MRWA will consult with DPaW and DoE in relation to potential impact to black cockatoos.
	consultation with regulatory agencies; and	General community consultation
	consultation with community.	will be undertaken in regards to th project, but not specifically to address this factor.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

5 Baseline information - describe the relevant characteristics of the receiving environment.

This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.

Six conservation significant fauna species have been recorded or are considered likely to occur within the project footprint, including:

- Carnaby's Black Cockatoo (Schedule 2 – Endangered)
- Forest Red-tailed Black Cockatoo (Schedule 3 – Vulnerable)
- Baudin's Black Cockatoo (Schedule 2 – Endangered)
- Rainbow Bee-eater (Schedule 5 – Migratory bird under international agreement)
- Western Brush Wallaby (Priority 4)
- Quenda (Priority 4)

The fauna assemblage and habitats available are unlikely to be regionally significant given the extent of previous clearing and degradation.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.

Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.

Clearing of vegetation for the proposal will result in the direct loss of habitat for six conservation significant species.

The proposal will result in the loss of up to 11.2ha of foraging habitat (including 1.2ha pine plantation) for Carnaby's Black Cockatoo and Baudin's Black Cockatoo and 10.0ha for Forest Red-tailed Black Cockatoo. A further 106 mature Eucalypt trees with DBH greater than 500 mm, three of which contain hollows with an opening of 5cm or greater. At the time, one of these hollows was occupied by bees.

Given the availability of suitable foraging habitat outside of the proposal footprint and limited availability of suitable nest hollows, the proposal is not expected to significantly impact Carnaby's Black Cockatoo or Forest Redtailed Black Cockatoo. The proposal footprint is outside of the known breeding range of Baudin's Black Cockatoo; hence this proposal will only result in loss of foraging habitat.

Rainbow Bee-eater occurs over much of Australia and adapts well to disturbance. Loss of 10.02ha of suitable habitat is unlikely to significantly impact this species.

Western Brush Wallaby may be a transient visitor to the project footprint; however, given the species preference for areas with dense understorey, it is unlikely to occur regularly, or in large numbers, in the proposal footprint.

Quenda is likely to occur as a transient visitor; however, given lack of understorey, the proposal footprint is unlikely to provide adequate shelter for Quenda during the day. Suitable habitat is available for both Western Brush Wallaby and Quenda in the adjacent Whiteman Park and the Gnangara-Moore River state forest.

Propo	Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:	Clearing of fauna habitat will be avoided or minimised as much as possible during detailed design.	
	Avoidance - avoiding the adverse environmental impact altogether;	A fauna specialist will be engaged to inspect mature Eucalypts with DBH of 500 mm or greater within	
	 Minimisation - limiting the degree or magnitude of the adverse impact; 	project footprint for potential black cockatoo nesting prior to clearing vegetation.	
	Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and	If nests are active, clearing will only occur after fledging of young.	
	Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or	Active Rainbow Bee-eater nests will be avoided until nests are vacated.	
	activity.	Fauna will be allowed the opportunity to move on prior to clearing.	
8	Residual impacts – review the residual impacts against the EPA objectives.	The proposal will result in the net loss of 11.2ha of foraging habitat	
	It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA's objective for this factor would be met if residual impacts remain. This will require:	for Carnaby's Black Cockatoo and Baudin's Black Cockatoo and 10.0ha of foraging habitat for Forest Red-tailed Black Cockatoo. It will also result in the loss of 106 mature Eucalypts with DBH greater than 500 mm, including three with hollows.	
	 quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions; 	The proposal is predicted to result in the loss of 10.02ha suitable for Rainbow Bee-eater and Quenda	
	putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and	and 15.62ha considered suitable for Western Brush Wallaby.	
	comparison against any established environmental policies, guidelines, and standards.		
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal	☐ meets the EPA's objective	
	in relation to this factor? Refer to EAG 9	☐ may meet the EPA's objective☐ is unlikely to meet the EPA's objective	
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. particular mitigation measures or regulatory conditions.		

In circumstances where there was some uncertainty on the level of significance of a particular factor it is recommended that a brief summary (no longer than 1 - 2 paragraphs) is provided on the steps taken to determine why a factor was not considered to be significant.