

Environmental Protection Act 1986

Section 40(2)(a)

NOTICE REQUIRING INFORMATION FOR ASSESSMENT

PERSON TO WHOM THIS NOTICE IS GIVEN

City of Gosnells (ABN 18 374 412 891)
PO Box 662
Gosnells WA 6990

PROPOSAL TO WHICH THIS NOTICE RELATES:

Garden Street Extension, Southern River

Pursuant to section (s.) 40(2)(a) of the *Environmental Protection Act 1986*, I, as a delegate of the Environmental Protection Authority (EPA), require that you provide the EPA with the following information for its assessment.

General

1. All technical surveys/reports and assessments referenced within the s.38 Referral Supporting Document (RSD) (360 Environmental 2022) are to be provided to the EPA, which includes but is not limited to:
 - a. Woodman Environmental Consulting Pty Ltd (2004) Vegetation and Declared Rare and Priority Flora Assessment – Garden Street Extension
 - b. ENV Australia (2010) Ecological Assessment of Sutherlands Bushland City of Gosnells
 - c. 360 Environmental (2014) Targeted Flora Survey – Garden St Extension and Widening, Southern River
 - d. Natural Area Consulting Management Services (2016) Holmes Street Bushland North: Revegetation and Weed Management Plan
 - e. RPS Australia West Pty Ltd (2018) Floristic Analysis Report – Garden Street Wetlands
 - f. Spineless Wonders (2017) Native Bee Survey of Proposed Garden Street Extension, Southern River, Perth WA
 - g. PGV Environmental (2016) Targeted Conservation Significant Species Survey – Garden Street, Southern River
 - h. Natural Area Consulting Management Services (2016) Fauna Management Plan Holmes Street Bushland North
 - i. Terrestrial Ecosystems (2014) Black Cockatoo Assessment – Garden Street Extension
 - j. ENV Australia (2010) Ecological Assessment of Sutherlands Parks Bushland – City of Gosnells

- k. Natural Area Consulting Management Services (2016) Garden Street Road Reserve Environmental Assessment
 - l. Terrestrial Ecosystems (2016) Australasian Bittern Survey
 - m. PGV Environmental (2018) Garden Street Extension, Southern River: Targeted Wetland Vegetation Assessment.
2. All management plans associated with the proposal's mitigation hierarchy (management of potential impacts) are to be prepared in accordance with the EPA's instructions ([here](#)) and provided as part of the assessment:
 - a. Dewatering Management Plan (DMP) (if required, refer to scope item No.3)
 - b. Construction Environmental Management Plan (CEMP): covering environmental factors- Inland waters, Flora and vegetation, Terrestrial fauna, and Aboriginal heritage (if required, refer to scope 27)
 - c. Post Development Management and Monitoring Plan (PDMMP): covering environmental factors- Inland waters (Groundwater and surface water levels and water quality), Flora and vegetation, Terrestrial fauna
 - d. Cultural Heritage Management Plan (CHMP): covering environmental factor- Social surroundings (if required, refer to scope 27)
 - e. Revegetation Management Plan (RMP) or equivalent.

Inland waters

3. Please confirm whether dewatering will be required for the construction of the road. If this activity is required, provide an assessment which addresses (but not limited to):
 - a. Dewatering volumes and drawdown contours
 - b. Direct and indirect impacts to wetland vegetation and Acid Sulphate Soil risk
 - c. Mitigation and management measures, including any proposed management plans (refer to scope 2a).
4. Demonstrate how best practice water sensitive design principles will be implemented in the design of the infrastructure and in stormwater and drainage components to ensure hydrological regimes and groundwater quality are maintained. This should include:
 - a. Identification and discussion on the type of gross pollutant traps proposed to be installed and the efficacy to remove oil and other typical chemical contaminants for roads.
 - b. The efficacy for removal of typical levels of contaminant for larger rainfall event passing through the vegetated batters. Include references to support any conclusions.
 - c. A description of the culvert design considerations that have been made, including their size and location along the proposed road to minimise significant alterations to surface water regimes and allow for the movement of fauna (refer to Terrestrial fauna factor scope 18).
5. Provide a risk assessment matrix of potential impacts, management measures and monitoring for the Conservation Category Wetland (CCW). For example, chemical spills, or other pollution events. Refer to scope 2b and 2c.

6. It is recommended that Appendix D (Urbaqua 2022) Water balance modelling and outcomes be reviewed by an independent person or independent persons with relevant expertise. The review should assess whether these are adequate and whether the hydrological and wetland function impacts have been adequately addressed. The review should be provided as part of the revised documentation.

Flora and vegetation

7. Appendix B (Biologic 2022) does not meet the EPA's technical guidance (EPA, 2016a) and, therefore, the conclusions and assumptions within the referral supporting document cannot be verified. Items required to be addressed include the following:
 - a. Detailed surveys of linear infrastructure should incorporate vegetation unit characterisation of an area from 500m to 1000m on both sides of the infrastructure corridor. Refer to Section 6.6 of EPA (2016a). Provide additional survey information or justification to why the information is not required to support conclusions within the referral package. If additional survey information is provided, please amend Appendix B, specifically sections 3 and 4, to discuss the survey findings and assessment of impacts against the proposal.
 - b. Provide justification for the number of quadrats for each vegetation type and discuss how the current number adequately identifies the vegetation characteristics. Additional quadrats (three per vegetation type) may be required if appropriate justification is not provided.
 - c. Provide a brief outline in Table 3.2 of Appendix B stating methods, limitations, and compliance with EPA technical guidance for each historical survey referenced.
 - d. Map the locations of the historical surveys referenced and current surveys including the locations of quadrats and relevés in relation to the development envelope and disturbance footprint.
 - e. Update Figure 4.6: Vegetation types in the Study Area and Figure 4.9: Vegetation Condition in the Study Area to include the vegetation surrounding the development envelope and the quadrat locations.
 - f. Vegetation mapping outside the development envelope has not been provided. The extent of the TEC within the development envelope (and disturbance footprint) including the full patch size of the impacted areas is unknown and, therefore impacts of the proposal on the community (beyond the development envelope) cannot be assessed. Update Figure 4.7 to include all patches of Banksia Woodland Threatened Ecological Community (TEC) which intersect with the development envelope.
 - g. Update Figure 4.4 to include all the locations of flora of 'other significance' for context and visual comparison.
8. Provide the impact assessment of the proposal on the Southern River Vegetation Complex in the context of the Perth Metropolitan Region rather than the South-West Region. Please include statistics in this assessment.

9. The EPA considers flora to be significant for a range of reasons in addition to threatened and priority listing, such as range extensions and new records. Provide an impact assessment for impacts to 'other' significant flora or justification of why further consideration is not required.
10. Provide further detail and description of the environmental significance of BFS 125 in a local and regional context. The RSD does not adequately assess the impacts of fragmentation of BFS 125 on flora and vegetation values. Matters to be considered includes (but not limited to) ongoing impacts to vegetation from existing roads together with the proposed Garden Street extension. This should include increased disturbance (weed invasion) and edge effects) and increased risk of *Phytophthora dieback*.
11. Discuss long-term monitoring of the vegetation within the CCW. Provide detail within the PDMMP and include management measures to ensure that predicted (direct and indirect) impacts are not exceeded, provide triggers and threshold criteria, including contingency identified measures. Refer to scope 2c and 2b.
12. Records indicate that the development envelope is in close proximity to populations of *Caledonia huegelii* and *Drakea elastica* and is also likely to contain suitable habitat for these threatened flora species. Table 12 of the RSD indicates that there have been several targeted flora surveys for these species across the development envelope since 2003. It is unknown whether historical surveys were conducted at the appropriate times. Appropriate timing, survey area and intensity of these flora surveys, in line with EPA technical guidance (2016a) needs to be demonstrated.
13. Please provide the following further information (including surveys or investigations) to support the referral:
 - a. Data for quadrats in potential areas of the Claypans of the Swan Coastal Plain TEC should be analysed using the floristic data from Gibson et al. (2005) (*Threatened plant communities of Western Australia. 2. The seasonal clay-based wetland communities of the South West*). Biologic (2022) used a combination of cluster analyses and similarity testing to compare floristic data against Gibson et al. (1994) and Keighery (2012) data to determine which floristic communities the quadrats mostly resembled. The statistical analysis results should be provided in the documentation and the analyses should include comparison to data from Gibson et al. (2005). In addition, the vegetation associated with the Claypans of the Swan Coastal Plain TEC is mapped differently in the earlier EPBC Act referral to the current survey (Biologic 2022). Please confirm the vegetation composition and spatial extent.
 - b. Candidate *C. huegelii* leaves and fruit were found within the site. *C. huegelii* sprouts from a subterranean tuber after autumn rains, does not always produce a flower, is deciduous, and can remain dormant for a season without sprouting a leaf. A supplementary survey after autumn rains that includes a targeted search for *C. huegelii* and other threatened orchids that were determined to 'likely' occur in the site, such as *D. elastica* that is also known to sprout after autumn rains,

should be conducted. If a supplementary survey is not undertaken provide justification and what other scientific information was used to confirm whether these species are or are not present.

14. Review the previous Dieback study (2015) to determine the risk rating and whether updated dieback mapping is required. If not, the RSD needs to state that the mapping is conditional data due to its date validity. Mitigation and management of Dieback should be addressed in CEMP. Refer to scope 2b.

Terrestrial fauna

15. Items required to be addressed in Appendix B (Biologic 2022) include the following:
 - a. Appropriate figures that show the following
 - Fauna habitat as the base layer, to include (where necessary) fauna habitat extending outside of the development envelope
 - Survey sites/locations, to include the historical surveys
 - b. Please amend Figure 5.1 using different symbology and colours to differentiate between species records, currently the figure is unclear or provide a zoomed insert for the cluster of records adjacent to Nicolson Road.
 - c. The records do not appear to correspond with habitat relevant to these bird groups at the illustrated locations. Please verify the records for the waterbirds, shorebirds and seabirds, and amend Figure 5.1 appropriately.
 - d. A single, basic survey (2020) has been provided to support the RSD (Appendix B) and additional historical surveys have been briefly discussed as part of the desktop review. Some of the historical surveys potentially occurred within the development envelope. Please provide a summary of the methods and location (including maps) of the historical surveys identified in the desktop study that have been used to support the RSD.
 - e. It is stated that further investigation is required to confirm the presence of the Perth slider and black striped snake, and that future development of the study area should consider the impacts to these species and the fork tailed swift, in particular, the further fragmentation of existing populations. Demonstrate that there has been adequate survey for reptiles, swift and quenda, after the further surveys are undertaken, together with providing details of historical surveys where applicable.
16. Discuss whether there are any potential significant impacts from the proposal on aquatic invertebrate fauna within the CCW.
17. As part of the mitigation hierarchy assessment within the RSD (and CEMP) outline the specific management measures (construction and post construction) that are relevant to the fauna recorded. Refer to scopes 2b and 2c.
18. Provide detail on the underpasses/culverts, including justification of how the design and placement considers the fauna groups and fauna populations within Bush forever site 125. Refer to Inland waters scope 4c.
19. Discuss the impacts to those native fauna species which will not benefit from proposed mitigation measures. Fauna species that may not utilise the underpasses, such as invertebrates, should be identified.

20. Describe how the underpasses/culverts will be managed and monitored for use by the targeted fauna and what are the contingencies in the event the structures are not being used or if predation risks are increased. Refer to scope 2c.
21. Provide further detail and description of the environmental significance of BFS 125 in a local and regional context, including the cumulative impacts resulting from the bisection of the bushland remnant by existing roads. This includes description of potential loss of local populations of recorded Short Range Endemics (SRE's), increased predator activity, decreased movement of fauna. Refer to scope 31.
22. Appendix C (Phoenix 2022) notes that there are potential SRE habitats within the development envelope however these habitats are also located outside the development envelope within 40km of the proposal.
 - a. It is recommended that mapping in Figures 5 and 6 be expanded to support conclusion and assumptions that habitats (and species) are known outside the development envelope (particularly within the Bush forever site 125). This may assist in addressing survey requirements as presented in section 3.1.4 (risk-based approach) of the EPA's technical guidance (2016b) and presumption that SRE habitats are associated with "any habitat in excellent or better condition" for bee species.
 - b. Should a targeted surveys for SRE taxa be required at a suitable time of the year (May-October), using appropriate methods and survey effort, and in all potential habitat (not just excellent) should be undertaken. Provide site specific rainfall and temperature data for the collection period.
23. One targeted survey for native bees has been undertaken in the development envelope (Spineless Wonders 2017). The desktop assessment (Phoenix 2022) provides additional information on the potential occurrence of threatened native bees in the development envelope. Survey effort is insufficient, with only a small section of the development envelope being sampled and no sites outside the disturbance footprint. As acknowledged in the survey, the timing of the survey (15 -17 March 2017) was not at the most suitable time to target threatened and priority bees and recommended an additional survey be conducted in November/December when most native bees are likely to be active. Undertake a targeted survey for Critically Endangered bees, at a suitable time of the year, using appropriate methods and survey effort, and in all potential habitat (not just excellent) Provide site specific rainfall and temperature data for the collection period. If a targeted survey is not undertaken, provide justification and provision of further evidence/information to support conclusions and outcomes within Appendix C.
24. The RSD should be updated to include the following:
 - a. Survey findings and as part of the mitigation hierarchy avoidance and management measures for SRE and invertebrates.

Social Surroundings

25. The traffic impact study (Appendix A) and GHG assessment report (Appendix G), suggests that traffic volumes over 25,000 vpd are expected by 2036, which is within that 15-20 year planning horizon. Is it noted that the proposal may trigger State Planning Policy (SPP) 5.4 Road and Rail Noise. Please provide a noise assessment outlining the predicted noise levels as nearby sensitive premises consistent with State Planning Policy 5.4. Please outline the proposed mitigation measures to minimise noise impacts and achieve the noise targets within State Planning Policy 5.4.
26. Consider whether the proposal will have a visual impact upon residential properties adjacent to the development envelope. If so, apply and discuss the mitigation hierarchy.
27. Identify whether there are any Aboriginal heritage and cultural values that are going to be directly or indirectly impacted by the proposal. If there is a potential impact:
 - a. Assess the impacts of the proposal on heritage sites and/or cultural associations as a result of implementation of the proposal, including those arising from changes to the environment which may impact on ethnographic and archaeological heritage significance.
 - b. Characterise the heritage and cultural values of the development envelopes and any other areas that may be indirectly impacted to identify sites of significance and their relevance within a wider regional context.
 - c. Provide detail on any consultation undertaken with Traditional Owners and incorporate feedback on management and mitigation measures that could be implemented over time to reduce impacts to Aboriginal heritage i.e. CHMP.

Offsets

28. Determine the significance of any significant residual impacts on the identified environmental values by applying the Residual Impact Significance Model and WA Offset Template in the WA Environmental Offsets Guidelines (2014).
29. Where significant residual impacts remain, propose an appropriate offsets package that is consistent with the WA Environmental Offsets Policy and Guideline. Spatial data defining the area of significant residual impacts for each environmental value should be provided.
30. Discuss how the proposed offsets package is consistent with State Planning Policy 2.8: Bushland policy for the Perth metropolitan area and offset requirements for BFS 125.

Cumulative Impact

31. Provide a cumulative environmental impact assessment of the proposal. Cumulative environmental impacts are the successive, incremental and interactive impacts on the environment of a proposal with one or more past, present and reasonably foreseeable future activities. Refer to the EPA's *Procedures Manual* for further information on reasonably foreseeable future activities.

Identify the activities, boundaries and values relevant for the cumulative impact assessment in relation to each factor. Describe and assess the extent of any cumulative impacts within local, regional and state contexts as appropriate. Consider any individual values and overlapping values (such as areas remaining that contain Southern River vegetation complex, CCW [sumpland] and Bennett Brook Consanguineous wetland suite).

The EPA requires biodiversity survey reports and their underlying data to be submitted to the Index of Biodiversity Surveys for Assessments (IBSA). Please submit biodiversity survey reports and data to IBSA via IBSA Submissions. The resulting 'IBSA number' should be provided to EPA Services Directorate as evidence.

Please note that any survey reports or data that are revised after their initial acceptance into IBSA – e.g. as a result of the assessment process – should be updated in IBSA. Please contact ibsa@dwer.wa.gov.au for assistance in required.

It is recommended that the Referral Information (APP-0000095) on Environment Online Portal be revised to include and address the requested additional information above, including appending the requested Environmental Management Plans and peer review(s).

Please provide your response by 5 April 2023.

The EPA will not proceed with its assessment of the proposal until you have provided the requested information and it is considered to be adequate, or if you advise the EPA that the further information is not available and/or cannot be obtained.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'MAT' followed by a stylized flourish.

Prof. Matthew Tonts
CHAIR

15 February 2023

References:

360 Environmental (2022) Garden Street Extension, Southern River Section 38 Environmental Protection Act Referral Supporting Document. Rev4. Prepared for the City of Gosnells.

Biologic (2022) Garden Street Extension Ecological Survey: Biologic Environmental Survey. Rev 5. Prepared for the City of Gosnells.

EPA (2016a) Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment. Environmental Protection Authority, Perth.

EPA (2016b) Technical Guidance Sampling of short range endemic invertebrate fauna. Environmental Protection Authority, Perth

Natural Area Holdings (2016) Garden Street Road Reserve Environmental Assessment. Report, prepared for City of Gosnells.

Phoenix Environmental Science (2022) Short-range endemic and significant invertebrate desktop assessment for the Garden Street Extension Project. Version 1.1. Prepared for City of Gosnells.

Urbaqua (2022) Garden Street Extension: Gosnells Hydrology Study & Impact Assessment. Rev 4. Prepared for the City of Gosnells.