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Garden Street Extension, Southern River

Revegetation and Post Development Management and Monitoring Plan

Prepared for

City of Gosnells

November 2023

people planet professional

Addendum to the Garden Street Extension, Southern River, *Revegetation and Post Development Management and Monitoring Plan*

Revision History:

Date	Officer	Changes
7 August 2025	C.Bartron	Addendum
23 October	R.Brown	Body – Conditions table Reference to Ministerial Statement Reference to how EMP will be made publicly available Table 11 - Additional non-compliance reporting actions consistent with Ministerial statement
27 October	R.Brown	Table 11 - Amendment to Groundwater Levels and Quality Trigger and Threshold Criteria

In November 2023 360 Environmental prepared a *Revegetation and Post Development Management and Monitoring Plan* "Environmental Management Plan" for the City of Gosnells "the City" for the City's Garden Street Extension project.

On 10 July 2025 the EPA issued the City with Recommended Environmental Conditions.

On 19 August 2025 the Minister for Environment; Community Services; Homelessness issued Statement 1250 for the Proposal for the Garden Street Extension, Southern River.

Upon receiving the final approvals for implementation the City of Gosnells will publish the Environmental Management Plans and any addendums on the City Your Say Gosnells Page that relate to Garden Street.

The table below outlines the conditions contained within the statement and the sections of the Environmental Management Plan that address the requirements:

Condition	EMP Section
A1 Limitations and Extent of Proposal	
A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents are not exceeded: Development Envelope (Figure 1): 2.65 ha Direct disturbance of native vegetation within the Development Envelope: 2.04 ha	Figure 1 & Appendix A
B1 Flora and Vegetation	

B1-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes: (1) disturb no more than the following environmental values: (a) 1.58 ha vegetation representative of Central Banksia attenuata – Banksia menziesii woodlands of the Swan Coastal Plain Floristic Community Type (FCT) 23a; and (b) 1.2 ha of Bush Forever Site 125. (2) no adverse impacts to native vegetation within (50) fifty metres outside the development envelope.	2.3 2.5
B1-2: The proponent must: (1) implement hygiene protocols consistent with the Management of Phytophthora cinnamomi for Biodiversity Conservation in Australia, Part 2 National Best Practice Guidelines as amended or replaced from time to time; and (2) undertake weed control and management during construction activities to prevent the introduction or spread of environmental weeds.	2.3 2.5
B2 Terrestrial Fauna	
B2-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcome: (1) disturb no more than the following environmental values: (a)1.59 ha of very high quality foraging habitat for Carnaby's cockatoo (Zanda latirostris); and (b) 0.45 ha of low quality foraging habitat for Carnaby's cockatoo (Zanda latirostris).	Figure 1 & Appendix A
B2-2 The proponent must: (1) not plant known foraging species for black cockatoos within ten (10) metres of the Metropolitan Region Scheme (MRS) Other Regional Roads Reserve (Figure 1).	2.4
B3 Inland Waters	
B3-1 The proponent must ensure the implementation of the proposal achieves the following environmental outcomes: (1) construct the proposal to maintain the hydrological regime, water quality, ecological integrity, and ecological function of Conservation Category Wetland (UFI 15423); and (2) disturb no more than 0.45 ha of vegetation associated with the Conservation Category Wetland (UFI 15423).	3.1 3.2
B3-2 During construction, the proponent must: (1) not undertake dewatering; and (2) ensure no refuelling, chemical or hydrocarbon storage, or stockpiling occurs within the development envelope and within fifty (50) metres of Conservation Category Wetland (UFI 15423).	N/A – address via Construction Environmental Management Plan
B4 Revegetation and Post Development Management and Monitoring Plan (Environmental Management Plan)	
B4-1 The proponent must: (1) revise the Revegetation and Post Development Management and Monitoring Plan (Environmental Management Plan) to satisfy the requirements of condition C4-1 and condition C4-2 and demonstrate how the environmental outcomes in condition B-1 and condition B3-1 will be achieved, and how this achievement will be substantiated, and submit the plan to the CEO; and (2)within twelve (12) months of the completion of construction activities, revegetate 0.7 ha of disturbed areas in the road batters (within the development envelope) to achieve the completion criteria specified in the approved Revegetation and Post Development Management and Monitoring Plan (Environmental Management Plan).	2.3 2.5 3.1 3.2
B5 Environmental Offsets	

B5-1 The proponent must implement offsets to counterbalance the significant residual impacts of the proposal on the following environmental values: (1) Central Banksia attenuata – Banksia menziesii woodlands of the Swan Coastal Plain FCT 23a; (2) high quality foraging habitat for Carnaby's cockatoo (Zanda latirostris); (3) low quality foraging habitat for Carnaby's cockatoo (Zanda latirostris); (4) Bush Forever site 125: and (5) Conservation Category Wetlands.	N/A – addressed via the Garden Street Extension Offset Strategy
B5-2 The proponent must ensure the implementation of the offsets achieves the following environmental outcomes: (1) counterbalance the significant residual impacts to the environmental values identified in condition B5-1.	N/A – addressed via the Garden Street Extension Offset Strategy
B5-3 In accordance with the Offset Plan Framework at each of the Proposed Offset Conservation Areas meet the on-ground management completion criteria for: (a) vegetation condition; (b) revegetation area planting density; (c) revegetation area species diversity; (d) Carnaby's cockatoo (Zanda latirostris) foraging habitat; and (e) weed control.	N/A – addressed via the Garden Street Extension Offset Strategy
B5-4 The proponent must: (1) commence the revegetation/rehabilitation program (Offset Plan Framework) at each of the Proposed Offset Conservation Areas prior to ground disturbing activities in the development envelope; (2) continue to implement the Confirmed Offset Strategy and Offset Plan Framework until the CEO has confirmed in writing that condition B5-3 has been achieved; and (3) report on the outcomes of condition B5-2 and condition B5-3.	N/A – addressed via the Garden Street Extension Offset Strategy
C1 Environmental Management Plans: Conditions Related to Commencement of Implementation of the Proposal	
C1-1 The proponent must not undertake: (1) ground disturbing activities (construction activities) that would disturb flora and vegetation and wetland values within or adjacent to the development envelope until the CEO has confirmed in writing that the environmental management plan required by condition B4-1(1) meets the requirements of that condition and condition C4.	2.3 2.5 3.1 3.2
C2 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication	
Revegetation and Post Development Management and Monitoring Plan (Environmental Management Plan)	
C2-1 Upon being required to implement an environmental management plan under Part B, or after receiving notice in writing from the CEO under condition C1-1 that the environmental management plan(s) required in Part B satisfies the relevant requirements, the proponent must: (1) implement the most recent version of the confirmed environmental management plan; and (2) continue to implement the confirmed environmental management plan referred to in condition C2-1(1), other than for any period which the CEO confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making process, in which case the implementation of the environmental management plan is no longer required for that period.	Dependent upon DWER CEO final approval

C2-2 The proponent: (1) may review and revise a confirmed environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan; (2) must review and revise a confirmed environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the CEO; and (3) must revise and submit to the CEO the confirmed Environmental Management Plan if there is a material risk that the outcomes or objectives it is required to achieve will not be complied with, including but not limited to as a result of a change to the proposal.	4 5 6
C2-3 Despite condition C2-1, but subject to conditions C2-4 and C2-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased adverse impacts to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.	4 6
C2-4 If the proponent is to implement minor revisions to an environmental management plan under condition C2-3, the proponent must provide the CEO with the following at least twenty (20) business days before it implements the revisions: (1) the revised environmental management plan clearly showing the minor revisions; (2) an explanation of and justification for the minor revisions; and (3) an explanation of why the minor revisions will not result in new or increased adverse impacts to the environment or result in a risk to the achievement of the limits, outcomes or objectives which the environmental management plan is required to achieve.	4 6
C2-5 The proponent must cease to implement any revisions which the CEO notifies the proponent (at any time) in writing may not be implemented.	N/A
C2-6 Confirmed environmental management plans, and any revised environmental management plans under condition C2-4(1), must be published on the proponent's website and provided to the CEO in electronic form suitable for on-line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).	Addressed within this addendum
Offset Monitoring and Performance Report	
C2-7 The proponent must prepare an Offset Monitoring and Performance Report which details the monitoring, evaluation mechanisms for the targets and actions identified in the Confirmed Offset Strategy and Offset Plan Framework under condition B5-3 within twelve (12) months from the commencement of on-ground management of each Proposed Offset Conservation Areas required by B5-4(3) being confirm by the CEO.	N/A – addressed via the Garden Street Extension Offset Strategy
C3 Conditions Related to Monitoring	
C3-1 The proponent must undertake monitoring capable of: (1) substantiating whether the proposal limitations and extents in Part A are exceeded; and (2) detecting and substantiating whether the environmental outcomes identified in Part B are achieved (excluding any environmental outcomes in Part B where an environmental management plan is expressly required to monitor achievement of that outcome).	2.5 2.6 3.1 3.2

C3-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2, a compliance monitoring report that: (1) outlines the monitoring that was undertaken during the implementation of the proposal; (2) identifies why the monitoring was capable of substantiating whether the proposal limitation and extents in Part A are exceeded; (3) for any environmental outcomes to which condition C3-1(2) applies, identifies why the monitoring was scientifically robust and capable of detecting whether the environmental outcomes in Part B are met; (4) outlines the results of the monitoring; (5) reports whether the proposal limitations and extents in Part A were exceeded and (for any environmental outcomes to which condition C3-1 (2) applies) whether the environmental outcomes in Part B were achieved, based on analysis of the results of the monitoring; (6) reports any actions taken by the proponent to remediate any potential non-compliance; and (7) provides an annual summary of on-ground management in condition C2-7.	N/A – addressed via the Compliance Assessment Plan
C4 Environmental Management Plans: Conditions Relating to Monitoring and Adaptive Management for Outcomes Based Conditions	
Revegetation and Post Development Management and Monitoring Plan (Environmental Management Plan)	
C4-1 The environmental management plan required under condition B4-1(1) must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions are met, and must include: (1) threshold criteria that provide a limit beyond which the environmental outcomes are not achieved; (2) trigger criteria that will provide an early warning that the environmental outcomes are not likely to be met; (3) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies which will be used to measure threshold criteria and trigger criteria. Include methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future; (4) baseline data; (5) data collection and analysis methodologies; (6) adaptive management methodology; (7) contingency measures which will be implemented if threshold criteria or trigger criteria are not met; and (8) reporting requirements.	2.5 2.6 3.1 3.2
C4-2 The environmental management plan required under condition B4-1 is also required to include a monitoring program which undertakes the following: (1) determines the effectiveness of drainage infrastructure in achieving the environmental objective specified in condition B3-1; (2)groundwater monitoring for two (2) years from completion of construction activities, supported by quarterly manual groundwater level readings and quarterly groundwater and surface water quality sampling, including hydrocarbons and metals for assessment against predevelopment baseline data; (3) after completion of condition C4-2(2), if groundwater levels are consistent with surrounding regional groundwater levels and water quality results are consistently below trigger values, the groundwater loggers will be removed, and the program will continue with quarterly groundwater levels and groundwater and surface water quality for a further three (3) years; (4) if threshold criteria for groundwater levels are exceeded, then logger monitoring will continue for three (3) more years; and (5) if threshold criteria are exceeded and contingency actions are needed, the monitoring program required by C4-2 will be extended as required to the satisfaction of the CEO.	3.1 3.2

C4-3 Without limiting condition C3-1, failure to achieve an environmental outcome, or the exceedance of a threshold criteria, regardless of whether threshold contingency measures have been or are being implemented, represents a non-compliance with these conditions.	N/A
Offset Monitoring and Performance Report	
C4-4 The Offset Monitoring and Performance Report required under condition C2-7 must contain provisions which enable the substantiation of whether the relevant outcomes of those conditions B5-2 and B5-3 are met, and must include: (1) report the outcomes of B5-4(3); (2) report when the Proposed Offset Conservation Areas have been rezoned Parks and Recreation Reservation under the Metropolitan Region Scheme or Local Reserve under the City of Gosnells Town Planning Scheme No. 6 or assigned a management order 'reserve for conservation'; and (3) contingency measures which will be implemented if threshold criteria or trigger criteria are not met.	N/A – addressed via the Garden Street Extension Offset Strategy
C4-5 The Offset Monitoring and Performance Reports must be published annually on the proponent website and provided to the CEO.	N/A – addressed via the Garden Street Extension Offset Strategy
D1 Non-compliance Reporting	
D1-1 If the proponent becomes aware of a potential non-compliance, the proponent must: (1) report this to the CEO within seven (7) days; (2) implement contingency measures; (3) investigate the cause; (4) investigate environmental impacts; (5) advise rectification measures to be implemented; (6) advise any other measures to be implemented to ensure no further impact; (7) advise timeframe in which contingency, rectification and other measures have and/or will be implemented; and (8) provide a report to the CEO within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(7) above.	3.1 3.2
D1-2 Failure to comply with the requirements of a condition, or with the content of an environmental management plan required under a condition, constitutes a non-compliance with these conditions, regardless of whether the contingency measures, rectification or other measures in condition D1-1 above have been or are being implemented.	N/A
D2 Compliance Reporting	
D2-1 The proponent must provide an annual Compliance Assessment Report to the CEO for the purpose of determining whether the implementation conditions are being complied with.	3.1 3.1 & Compliance Assessment Plan
D2-2 Unless a different date or frequency is approved by the CEO, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent reports must be submitted annually from that date.	N/A – addressed via Compliance Assessment Plan
D2-3 Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.	N/A – addressed via Compliance

	Assessment Plan
D2-4 Each annual Compliance Assessment Report must: (1) state whether each condition of this Statement has been complied with, including: (a) exceedance of any proposal limits and extents; (b) achievement of environmental outcomes; (c) achievement of environmental objectives; (d) requirements to implement the content of environmental management plans; (e) monitoring requirements; (f) implement contingency measures; (g) requirements to implement adaptive management; and (h) reporting requirements; (2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any outcomes or any objectives are being met; (3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance; (4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance; (5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation; and (6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the CEO has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.	N/A – addressed via Compliance Assessment Plan
D2-5 The proponent must prepare a Compliance Assessment Plan which is submitted to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition D2-2, or prior to implementation of the proposal, whichever is sooner.	N/A – addressed via Compliance Assessment Plan
D2-6 The Compliance Assessment Plan must include: (1) what, when and how information will be collected and recorded to assess compliance; (2) the methods which will be used to assess compliance; (3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with; (4) the retention of compliance assessments; (5) the table of contents of Compliance Assessment Reports, including audit tables; and (6) how and when Compliance Assessment Reports will be made publicly available, including usually being published on the proponent's website within sixty (60) days of being provided to the CEO.	N/A – addressed via Compliance Assessment Plan
D3 Contact Details	
D3-1 The proponent must notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. 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.	N/A
D4 Time Limit for Proposal Implementation	
D4-1 The proposal must be substantially commenced within five (5) years from the date of this Statement.	N/A
D4-2 The proponent must provide to the CEO documentary evidence demonstrating that they have complied with condition D4-1 no later than fourteen (14) days after the expiration of period specified in condition D4-1.	N/A

D4-3 If the proposal has not been substantially commenced within the period specified in condition D4-1, implementation of the proposal must not be commenced or continued after the expiration of that period.	N/A
D5 Public Availability of Data	
D5-1 Subject to condition D5-2, within a reasonable time period approved by the CEO upon the issue of this Statement and for the remainder of the life of the proposal, the proponent must make publicly available, in a manner approved by the CEO, all validated environmental data collected before and after the date of this Statement relevant to the proposal (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.	Addressed within this addendum
D5-2 If: (1) any data referred to in condition D5-1 contains trade secrets; or (2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a person that would be, or could reasonably be expected to be, destroyed or diminished if the confidential information were published, the proponent may submit a request for approval from the CEO to not make this data publicly available and the CEO may agree to such a request if the CEO is satisfied that the data meets the above criteria.	N/A
D5-3 In making such a request the proponent must provide the CEO with an explanation and reasons why the data should not be made publicly available.	N/A
D6 Independent Audit	
D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this statement, including achievement of the environmental outcomes and/or the environmental objectives and/ or environmental performance with the conditions of this statement, as and when directed by the CEO.	N/A
D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the CEO to undertake the audit under condition D6-1.	N/A
D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the CEO. The audit report is to be supported by credible evidence to substantiate its findings.	N/A
D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner and form as a Compliance Assessment Report, or as otherwise directed by the CEO.	N/A

This addendum to the Environmental Management Plan is to satisfy the following condition:

B4-1 The proponent must:

*(1) revise the **Revegetation and Post Development Management and Monitoring Plan** (Environmental Management Plan) to satisfy the requirements of condition C4-1 and condition C4-2 and demonstrate how the environmental outcomes in condition B1 - 1 and condition B3-1 will be achieved, and how this achievement will be substantiated, and submit the plan to the **CEO**; and*

*(2) within twelve (12) months of the completion of **construction activities**, revegetate 0.7 **ha** of disturbed areas in the road batters (within the development envelope) to achieve the completion criteria specified in the approved **Revegetation and Post Development Management and Monitoring Plan** (Environmental Management Plan).*

Section 2.4.2 below replaces Section 2.4.2 of the Environmental Management Plan (page 14)

2.4.2 Planting

Tubestock will be planted in the batters (0.7ha) at a rate of five plants per m². Completion criteria is 4 plants per m^2, but planting will be undertaken at higher density to allow for losses.

Planting will be undertaken between May and prior to the end of July when sufficient soil moisture is present to adequately support the establishment of tubestock.

Tubestock will be sourced from a NIASA accredited nursery, hardened, vigorous and free of weeds, disease, and insect pests at the time of planting and will have adequate and healthy root mass readily evident when removed from the tube, sufficient to hold the potting medium together.

Each seedling is to be installed with pre-soaked TerraCottem soil conditioner (or similar), and watered in if insufficient rainfall at the time of planting.

Manual techniques (i.e Augering or hand trowel) will be used to install tubestock to minimise damage to erosion control matting and will adhere to the following planting methods:

- A small cut will be made into the geotextile/jute matting to allow room to install each individual plant
- Tubestock are to be planted immediately after removal from their pots to ensure the root ball is not left to dry out
- Pre-soaked TerraCottem soil conditioner (or similar) will be placed in the bottom of the hole and mixed with soil
- The plant will be placed into the hole and backfilled with soil free from weeds, stones, clods of sub soil, and other extraneous matter
- The soil will be lightly compacted by hand or foot to remove air pockets
- Plants will be set below the level of the adjacent soil creating a dish/soakwell to assist in water capture
- Tree guards will be installed around each tubestock

The City will monitor survival rates and plant health before undertaking any in-fill planting events in years 3, and 5 post construction as required to meet the completion criteria of 4 plants per m^2.

Section 2.5 below replaces Section 2.5 of the Environmental Management Plan (page 15)

2.5 On-going Maintenance and Monitoring

2.5.1 Maintenance

Following the completion of revegetation works, revegetated areas will be maintained and monitored to measure revegetation success and stabilisation of the batters.

In addition to maintaining the revegetated road batters, the City will also maintain and monitor a 50m (5.3ha) buffer outside the Development Envelope into retained vegetation in the Bush Forever Site (noting that this only extends into retained vegetation on City managed land).

The 50m maintenance area currently undergoes minimal maintenance by the City (maximum once a year weed control), therefore the proposed maintenance will be an improvement to current arrangements with the aim to prevent edge effects from the new road. These maintenance areas are shown on Figure 5 (in the Environmental Management Plan).

A baseline flora survey of the 50m maintenance and monitoring area was undertaken in October 2024 by Natural Area Consulting Management Services, *Garden Street Extension Baseline Flora, Vegetation and Weed Survey* (see Appendix 1). This survey will be used to inform post development weed control works and will be used as a baseline for the assessment of completion criteria.

Maintenance will consist of weed control, rubbish removal, and inspection of tree guards to ensure seedlings are sufficiently protected from rabbit predation.

Maintenance will be undertaken at the following frequency:

- Revegetation Area (approximately 0.7 ha):
  - Years 1, 2, and 3: Eight weekly between May and November (higher weed growth period), and twelve-weekly between December and April (lower weed growth period)
  - Years 4, and 5: Twelve weekly, in the event monitoring finds weed cover is >20%, weed control will remain at the same frequency as Years 1, 2, and 3.
- 50m maintenance and monitoring area:
  - Years 1, 2, and 3: Twelve weekly
  - Years 4 and 5: six monthly, in the event monitoring finds weed cover >10% weed control will remain at the same frequency as Years 1, 2, and 3.

Due to the variable rainfall patterns within the Development Envelope, the batters will be watered for the first two (2) years from the end of October to the end of March on a three-weekly basis.

2.5.2 Monitoring

A baseline flora survey of the 50m maintenance and monitoring area was undertaken in October 2024 by Natural Area Consulting Management Services, *Garden Street Extension Baseline Flora, Vegetation and Weed Survey* (see Appendix 1).

An annual spring monitoring programme will be implemented to assess revegetation success against the agreed completion criteria outlined in Table 6 (in the Environmental Management Plan), and the completion criteria in Table 7 (in the Environmental Management Plan) for the 50m maintenance and monitoring area over a period of five years post development.

Revegetation area:

Monitoring in the revegetation area will be conducted through quadrats, photo monitoring points, and an overall visual assessment of the revegetation area. Ten quadrats will be established for the revegetation area (five quadrats either side of the road). Quadrats will be 2m x 2m as appropriate for the narrow batters.

Quadrats will be established on completion of initial revegetation works. Revegetation works are to be completed within 12 months of project works. It is anticipated that revegetation will take place between the end of May and end of July 2026.

50 m maintenance and monitoring area:

Monitoring will be undertaken through 10m x 10m quadrats, photo monitoring points, and an overall visual assessment to ensure the new road is not negatively impacting on the adjoining vegetation in Bush Forever Site No. 125.

During the baseline monitoring survey Natural Area Consulting Management Services established 15 quadrats permanently marked in the north-west corner, 13 within the 50m maintenance and monitoring area, and two control quadrats outside of the 50m maintenance and monitoring area.

Quadrats were established in City managed land and were established on both sides of the development envelope to adequately assess potential impacts of the new road.

A minimum of two quadrats were established within each of the five vegetation units present within the 50m maintenance and monitoring area. Four quadrats were established within the *Banksia attenuata – Banksia menziesii* woodlands of the Swan Coastal Plan Floristic Community Type (FCT) 23a, including one control quadrat outside of the 50m maintenance and monitoring area.

Post development monitoring data will be compared to the baseline data.

The following will be assessed as part of the annual spring flora and vegetation monitoring programme:

- Flora species and origin (native/non-native)
- 'Foliage Projective Cover' (FPC) for each flora species
- Vegetation Condition using the scale in EPA *technical guidance flora and vegetation surveys for environmental impact assessment* (2016) adapted from Keighery (1994)
- Signs of disturbance (e.g. rubbish, clearing, pest animals, inappropriate access)
- Visual monitoring of areas containing significant species
- Visual assessment of condition and use of culverts and fauna fencing

Monitoring will be undertaken as per the methodology used in the baseline monitoring survey conducted by Natural Areas Consulting Management Services.

In addition to formal monitoring surveys, visual monitoring of weed cover and new weed infestations in the revegetation areas (road batters) and 50m maintenance and monitoring area will be undertaken by contractors and reported on through checklists during maintenance events.

An approximately 0.4 ha area of BF125 that falls within the 50m buffer is developer owned. This area is currently under developer maintenance through an approved wetland management plan. Should the area be maintained to the standard required in the wetland management plan this area will be handed over to the City on 18 June 2027. After handover this area will be maintained in the same fashion as the 50m maintenance and monitoring buffer.

2.7 Contingency Measures

Table 8 lists possible items and actions proposed to address or mitigate issues where monitoring indicates that the revegetation and/or 50m maintenance and monitoring area are not trending towards meeting the completion criteria, or has failed, or has been vandalised.

Table 8(a) below replaces Table 8 in the Environmental Management Plan (page 19)

Contingency measures below are to meet the completion criteria detailed in Table 6 on page 24 of the Environmental Management Plan.

Table 8(a). Revegetation Contingency Measures

Item	Issue	Possible Actions
Weeds	• Weed cover within revegetation area >20%	• Reassess and revise frequency of weed control activities and increase frequency as required • Audit weed control activities to monitor weed control activities are being undertaken in the correct manner
Grazing	• Obvious signs of grazing of tubestock	• Check integrity of tree guards • Repair or replace as needed until plants establish

		• Review type of tree guard being used and consider alternatives
Species diversity	• Species diversity completion criterion is not trending towards being met by year five	• Assess survivorship per species, do not use species with poor survivorship in in-fill revegetation • Trial new species found within the adjacent Bush Forever 125 site to maintain species diversity
Plant cover and abundance	• Plant cover and abundance completion criterion is not trending towards being met by Year 5	• Undertake infill planting in years 3 and 5 if required • Assess survivorship per species, do not use species with poor survivorship in in-fill revegetation events • Undertake infill revegetation using species which have a high survivorship • Assess weed control activities to mitigate risk of off target damage
Plant stress	• Notable death of tubestock or showing signs of stress	• Reassess frequency of scheduled watering events and/or duration of scheduled watering • Add provision for reactive watering events during extreme weather (e.g. heat waves) • Assess weed control activities to mitigate risk of off target damage

Table 8(b) below has been added to detail contingency measures to meet the completion criteria for the 50m maintenance and monitoring area as per section 2.6.2 detailed in Table 7 on page 24 of the Environmental Management Plan.

Table 8(b). 50m Maintenance and Monitoring Area Contingency Measures

Item	Issue	Possible Actions
Weeds	• Weed cover within 50m maintenance and monitoring area >10%	• Reassess and revise frequency of weed control activities and increase frequency as required • Reassess timing of weed control activities to ensure weeds are being targeted at the optimal treatment time • Audit weed control activities to monitor weed control activities are being undertaken in the correct manner
Litter	• Increased incidence of rubbish in comparison to the baseline survey	• Reassess and revise frequency of litter removal activities and increase frequency as required
Conservation significant flora	• Damage to, or removal of, conservation significant flora species,	• Ensure all plants are clearly flagged prior to commencement of any works, add marked survey pegs, or similar, to any plants that are of low visibility

	i.e. *Jacksonia gracillima* and *Styphelia filifolia*	• Potentially install temporary barrier around plants in high-risk areas • Undertake pre-works induction with staff undertaking works showing them all locations of plants within the 50m monitoring and maintenance area • Check all plants prior to each maintenance event to ensure all plants are still clearly marked
Native species flora cover and composition	• Decline of native species cover and composition in comparison to the baseline survey	• Reassess and revise frequency of weed control activities and increase frequency as required • Reassess timing of weed control activities to ensure weeds are being targeted at the optimal treatment time • Assess weed control activities to mitigate risk of off target damage • Assess if works have resulted in increased inappropriate access to the area, install fencing/barriers if required • Should a decline in health of *Phytophthora* Dieback susceptible species be observed in the area mapped as uninfested in the 2023 survey a *Phytophthora* Dieback survey will be undertaken • The most recent *Phytophthora* Dieback treatment event within the adjacent Bush Forever 125 was undertaken in 2023. A *Phytophthora* Dieback treatment event will be undertaken in summer (January or February) 2026 to align with best practice management
Vegetation Condition	• Decline in vegetation condition in comparison to the baseline survey	• Assess weed control activities to mitigate risk of off target damage • Reassess and revise frequency of weed control activities and increase frequency as required • Reassess timing of weed control activities to ensure weeds are being targeted at the optimal treatment time • Assess if works have resulted in increased inappropriate access to the area, install fencing/barriers if required • Should decline of *Phytophthora* Dieback susceptible species be observed in the area mapped as uninfested during the 2023 survey undertake a *Phytophthora* Dieback survey • The most recent *Phytophthora* Dieback treatment event within the adjacent Bush

	Forever 125 was undertaken in 2023. A *Phytophthora* Dieback treatment event will be undertaken in summer (January or February) 2026 to align with best practice management • Increase frequency of monitoring with inclusion of an autumn monitoring event in addition to the spring monitoring event • If implementation of mitigation activities above do not prove effective undertake revegetation works within areas where vegetation condition has declined.

Table 11 below replaces Table 11 on page 23 of the Environmental Management Plan

Table 11. Inland Waters – Outcome-based provisions

EPA Objective	To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected
Outcome	to mitigate and manage the hydrological impacts on UFI15423 as a result of clearing of 0.45ha of native wetland vegetation and the construction and use of the proposed road
Key Environmental Values	The proposed Garden Street extension will pass through a section of Sumpland (UFI 15423) that is classified as a CCW including an area that is inundated up to 300 mm in winter/spring
Key Impacts and Risks	flow regime, storm water runoff, water quality

Tigger Criteria **Threshold Criteria**	**Response actions:** **Trigger level actions** **Threshold contingency actions**	**Monitoring***	**Timing / frequency of monitoring**	**Reporting**
Trigger criteria: • Groundwater levels show a lowering of the water level by more than 10cm next to UFI15423 from pre-development monitoring results • Groundwater quality exceeds the predevelopment water quality results by 10%	**Trigger level action:** • Investigate the site, including balancing culverts and GPTs to determine if any blockages, sediment build-up or other observed pollutant sources are present • Remediate any identified issues **Threshold contingency actions:**	Figure 1 below is from the baseline monitoring event undertaken by Urbaqua in August and October 2024 Seven existing groundwater monitoring bores (see Figure 1 for locations, BH04 will be excluded as it will be impacted by works) will be monitored for ground water levels and water quality	The following monitoring regime will take place for a period of two (2) years post construction • Ground water level monitoring via loggers • Manual sampling ground water levels – quarterly • Water quality monitoring of both ground water and surface water – quarterly	• Quarterly – post monitoring report after each sampling event • Annual Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO

Threshold Criteria: • Groundwater levels show a lowering of water level by more than 10 cm next to UFI15423 from pre-development monitoring results • Groundwater quality exceeds guideline values the pre-development Water quality results recorded in the pre-development monitoring event by 20% Trigger and Threshold Criteria for groundwater quality and levels is defined as the average of the baseline monitoring results from 2020 – 2024 as found in the Urbaqua Water Quality Monitoring Report(Appendix 2).	• Investigate the site, including balancing culverts and GPTs to determine if any blockages, sediment build-up or other observed pollutant sources are present. Remediate any identified issues. • Repeat sampling and also sample DWER's bore T-75 to see if groundwater levels have lowered across the locality and therefore may not be linked to the road project. • If repeat samples continue to present similar deteriorated water quality, raise as an incident and appropriate remediation may be undertaken. This may include soil amendment, revegetation, modifications to drainage management or street sweeping.	Surface water quality will be monitored at three locations (see Figure 1) Samples will be analysed for the following parameters: • In-situ pH • In-situ Electrical Conductivity • In-situ temperature • Ammonia (NH_4) • Total Kjeldahl Nitrogen (TKN) • Total Nitrogen (TN – derived) • Nitrate (NO_3) • Nitrite (NO_2) • Total Phosphorous (TP) • Filterable Reactive Phosphorous (FRP) • **Filtered Metals (Al, As, Cd, Cr, Cu, Hg)** • **Total Metals (Al, Fe, Mn, Ni, Pb, Zn, Cr VI, Cr III)** • **Total Recoverable Hydrocarbons** • **BTEX**	If Threshold Criteria for groundwater levels are exceeded monitoring will continue as above for a further three (3) years post construction If Threshold Criteria are exceeded, and contingency actions required the above the monitoring regime will be extended as required to the satisfaction of the CEO If ground water levels are consistent with surrounding ground water levels, and water quality values consistently below trigger values he following monitoring will take place for a period of three (3) years post construction • Manual sampling ground water levels – quarterly • Water quality monitoring of both ground water and surface water – quarterly	within 21 days providing detail in relation the investigation and response to any non-compliance.

***Monitoring will be undertaken as per the methodology used in the baseline monitoring survey conducted by Urbaqua in 2024 (see Appendix 2)*

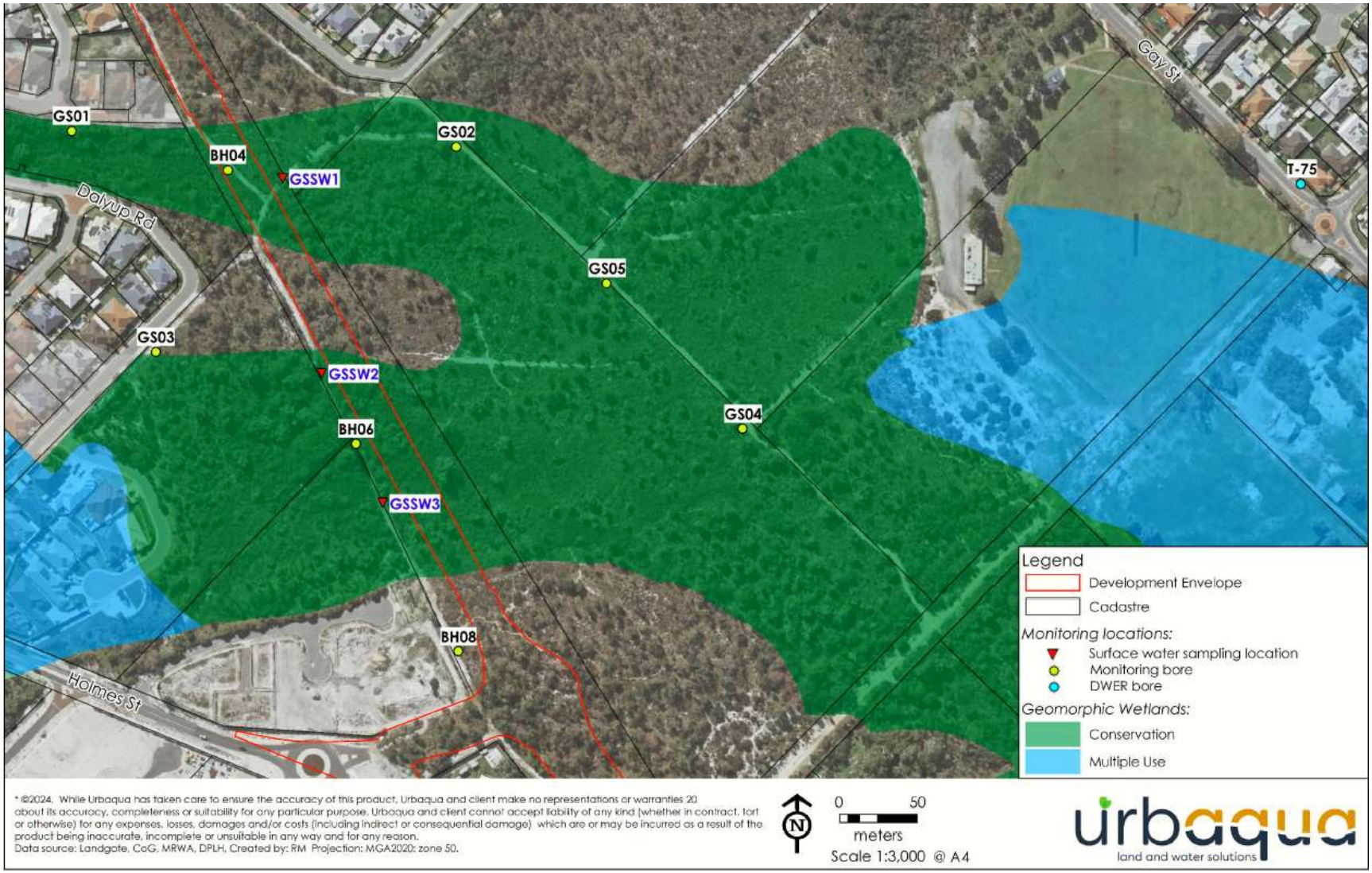


Figure 1. City of Gosnells – Garden Street Extension Water Monitoring Locations

Table 12 below replaces Table 12 on page 26 of the Environmental Management Plan

Table 12. Flora and Vegetation – Outcome-based provisions

EPA Objective	To protect flora and vegetation so that biological diversity and ecological integrity are maintained
Outcome	Minimise impacts to flora and vegetation and to maintain a similar level of quality as pre-development
Key Environmental Values	2.04ha of native vegetation
Key Impacts and Risks	The disturbance of up to 1.2ha of vegetation within Bush Forever site no. 125, and 1.58ha of vegetation representative of Central *Banksia attenuata – Banksia menziesii* woodlands of the Swan Coastal Plan Florisitc Community Type (FCT) 23a. Introduction and spread of weeds and *Phytophthora* Dieback, habitat fragmentation and edge effects

Management Targets*	Management Actions	Monitoring**	Timing / frequency of monitoring	Reporting
No direct or indirect impacts on known conservation significant flora species (*Jacksonia gracillima* – P3, and *Styphelia filifolia* – P3) within the 50m maintenance and monitoring buffer	• Flag all mapped *Jacksonia gracillima* and *Styphelia filifolia* outside of the development envelope prior to commencing works • Ensure workers involved in the project works are familiar with locations of flagged flora to avoid the threatened plants prior to commencing works • Ensure workers involved in weed control works are familiar with locations of flagged individuals prior to commencing works	• Targeted visual monitoring of *Jacksonia gracillima* and *Styphelia filifolia* during annual spring monitoring surveys • Photo point monitoring	• Annual spring monitoring surveys for five (5) years post construction	• Annual spring monitoring report • Annual Environmental Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21

	• Maintaining road batters and established 50 m maintenance area shown on Figure 5 extending from the edge of the Development Envelope as per section 2.5.2 of this addendum • Monitoring *Jacksonia gracillima* and *Styphelia filifolia* within the 50m maintenance and monitoring area for any changes • Implementation of contingency measures as per table 8(b) of this addendum as required			days providing detail in relation the investigation and response to any non-compliance.
No notable decrease in native flora species cover or composition attributable to the Garden Street extension project within the 50 m (5.3ha) maintenance and monitoring area	• Maintenance within the 50 m maintenance and monitoring area (including weed control and rubbish removal) as per section 2.5.1 of this addendum • Implementation of contingency measures as per table 8(b) of this addendum as required • Surface water flow and drainage to be maintained to avoid indirect changes to vegetation structure and floristic composition • Revegetation and maintenance of the road batters as per section 2	• Annual spring monitoring surveys for five (5) years post construction including floristic species cover and composition • Monitoring of thirteen (13) 10m x 10m quadrats within 50m maintenance area, including three (3) within FTC 23a • Monitoring of two (2) 10m x 10m control quadrats outside of the 50m maintenance and monitoring area, one within FTC 23a, and one within the CCW • Photo point monitoring	• Maintenance for five (5) years post construction as per section 2.5.1 of this addendum, with addition of contingency measures as per Table 8(b) of this addendum as required • Annual spring monitoring surveys for five (5) years post construction as per section 2.5.2 of this addendum	• Annual spring monitoring report • Annual Environmental Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21 days providing detail in relation the investigation and response to

				any non-compliance.
Weed cover is no more than 10% higher than predevelopment weed cover within the 50 m maintenance and monitoring area and <20% in the Revegetation Area.	• Maintenance within the batter revegetation area, and 50 m maintenance and monitoring area (including weed control and rubbish removal) as per section 2.5.1 of this addendum • Implementation of contingency measures as per tables 8(a), and 8(b) of this addendum as required	• Visual assessment of road batters and 50 m maintenance and monitoring area during post maintenance work audits • Annual spring monitoring surveys for five (5) years post construction including assessment of weed cover	• Maintenance for five (5) years post construction as per section 2.5.1 of this addendum, with addition of contingency measures as per Table 8(b) of this addendum as required • Annual spring monitoring surveys for five (5) years post construction as per section 2.5.2 of this addendum	• Maintenance checklists (submitted after each maintenance event) • Annual spring monitoring report • Annual Environmental Report – DWER. • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21 days providing detail in relation the investigation and response to

				any non-compliance.
No decline in vegetation condition attributable to the Garden Street extension project within the 50 m maintenance and monitoring area.	• Maintenance within the batter revegetation area, and 50 m maintenance and monitoring area (including weed control and rubbish removal) as per section 2.5.1 of this addendum • Implementation of contingency measures as per tables 8(a), and 8(b) of this addendum as required	• Annual spring monitoring surveys for five (5) years post construction including assessment of vegetation condition • Photo point monitoring • Visual assessment of road batters and 50 m maintenance and monitoring area post maintenance work audits	• Maintenance for five (5) years post construction as per section 2.5.1 of this addendum • Implementation of contingency measures as per Table 8(b) of this addendum as required • Annual spring monitoring surveys for five (5) years post construction as per section 2.5.2 of this addendum	• Annual spring monitoring report • Annual Environmental Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21 days providing detail in relation the investigation and response to any non-compliance.

No notable increase in the incidence of rubbish attributable to the Garden Street extension project in the 50 m maintenance and monitoring area	• Regular rubbish removal as per section 2.5.1 of this addendum • Implementation of contingency measures as per table 8(b) of this addendum as required • Monthly street sweeping • GPT's, sediment traps and drainage pits to be educted biannually.	• Visual assessment of road batters and 50 m maintenance and monitoring area during post maintenance work audits • Annual spring monitoring surveys for five (5) years post construction including recording presence of litter including photographic records	• Maintenance for five (5) years post construction as per section 2.5.1 of this addendum • Implementation of contingency measures as per Table 8(b) of this addendum as required • Annual spring monitoring surveys for five (5) years post construction as per section 2.5.2 of this addendum	• Maintenance checklists (submitted after each maintenance event) • Annual spring monitoring report • Annual Environmental Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21 days providing detail in relation the investigation and response to any non-compliance.

Compliance with pre-defined clearing limits within the Development Envelope	• Vegetation around culverts to be maintained only to the extent that to ensures effective functionality • Vegetation maintenance within the Development Envelope and 50 m maintenance and monitoring area will retain larger tree species (pruning only).	• Photo point monitoring	• Annual spring monitoring surveys for five (5) years post construction as per section 2.5.2 of this addendum	• Incident reports • Annual Environmental Report – DWER • Notify DWER CEO of any potential non-compliance within 7 days of becoming aware • Provide a report to the DWER CEO within 21 days providing detail in relation the investigation and response to any non-compliance.

***** *Management targets will be assessed against the baseline monitoring survey conducted by Natural Area Consulting Management Services in 2024 (see Appendix 1)*

*******Monitoring will be undertaken as per the methodology used in the baseline monitoring survey conducted by Natural Area Consulting Management Services in 2024 (see Appendix 1)*

Appendices

Appendix 1 – Natural Area Consulting Management Services (2024), *Garden Street Extension Baseline Flora, Vegetation, and Weed Survey, Spring 2024*

Appendix 2 – Urbaqua (2024), *Garden Street Extension Project – Water Monitoring 2024*

Appendix 3 – Environmental Protection Authority (2025), Recommended Environmental Conditions

CEO Approval and Endorsement

Date
CEO Name
CEO Signature

Document Reference	Revision	Prepared by	Reviewed by	Admin Review	Submitted to Client	
					Copies	Date
5413AB_Rev0	Internal Draft	V. Mugabe	A O'Brien	-	-	01/06/2023
5413AB_Rev1	Client Draft	M. Swift	K. Fox	LI	1x electronic	25/08/2023
5413AB_Rev2	Client Final	V. Mugabe	K. Fox		1x electronic	23/11/2023

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Executive Summary

Table 1: EMP Executive Summary

Proponent name	Garden Street Extension, Southern River
Ministerial Statement number	N/A
Purpose of the EMP	The Revegetation and Post Development Management and Monitoring Plan (RPDMMP) provides post development management and monitoring measures for inlands waters, fauna, flora and vegetation for the Garden Street Extension, Southern River project. The RPDMMP also includes a revegetation and monitoring plan for the project for the revegetation of batters within the Development Envelope.
Key environmental factor/s, outcome/s and/or objectives	The environmental outcomes for inland waters, terrestrial fauna and flora and vegetation area: **Inlands Waters** **Outcomes**: The Proposal will install drainage culverts, gross pollutant traps, and replant the batters (approximately 0.7 ha) with local drought tolerant nutrient retentive native species found within Bush Forever Site No. 125. The Proposal will result in the loss of up to 0.45 ha of vegetation associated with the CCW. Objectives: • Mitigate and manage the hydrological impacts on UFI15423 as a result of clearing 0.45 ha native wetland vegetation and the construction and use of the proposed road. **Terrestrial Fauna** **Outcomes:** The Proposal will avoid locations of potential tree hollows which are critical to the survival of threatened species. The Proposal will also result in the loss of up to 2.04ha of native vegetation consisting of 1.58ha Banksia woodland and 0.45ha Melaleuca thicket habitat. Objectives: • Minimise injury and mortality risks to fauna post development, Minimise disturbance of fauna habitat within the retained fauna habitat. **Flora and Vegetation:** Outcomes: No more than 2.04ha of clearing will be undertaken. Objectives: • Minimise impacts to existing flow regimes, Maintain or improve the existing wetland groundwater and surface water quality flora and vegetation and to maintain a similar level of quality as pre-development

Condition clauses (if applicable)	Controlled Action (EPBC 2016/7735) – note that the clearing area has reduced to 2.04 ha since the EPBC approval was issued: 1. For the protection of the EPBC Act listed species, the approval holder must not clear more than 4.58 hectares within the Proposal. 2. To mitigate and manage impacts to EPBC Act listed species, the approval holder must comply with and implement the Revegetation Management Plan, Landscape Management Plan and Environmental Management Plan. 3. Prior to the commencement of the action to install three artificial nesting hollows within 3 km of the Proposal: a) each artificial nesting hollow installed under condition 3 must be monitored and maintained in accordance with relevant artificial hollow guidance for the life of the approval, with maintenance actions, if required, undertaken outside of the breeding season and before the commencement of the next breeding season. Ministerial Statement: Approval Pending Further Ministerial Approval condition clauses may be implemented pending approval of the Proposal.
Key components in the EMP (if applicable)	N/A
Proposed construction date	Subject to approval, construction is due to commence as soon as possible during summer when the water table is at its lowest. Completion date is expected to be 18 months from the commencement of construction, with operational phase and project life in perpetuity.
EMP required pre-construction?	Yes ☒ No ☐

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Appendix B Garden Street Road extension, Huntingdale, City of Gosnells, Western Australia (EPBC 2016/7735) Approval
Appendix C Recommended Planting List

1 Context, Scope, and Rationale

1.1 Proposal

1.1.1 Context

The City of Gosnells (The City) is proposing to extend Garden Street between Harpenden Street and Holmes Street which will involve the construction of an 840m section of dual lane road (Appendix A). The Proposal is located predominantly within the suburb of Southern River, approximately 17km south-east of Perth Central Business District (CBD). The Development Envelope is 2.65ha in size and situated within bushland reserved as 'Other Regional Roads' under the Metropolitan Region Scheme (MRS) and Town Planning Scheme No. 6 (TPS) and is under the management of the City.

1.1.2 Scope

This Revegetation and Post Development Management and Monitoring Plan (RPDMMP) has been prepared to support the Environmental Protection Authority (EPA's) assessment of the Proposal being formally assessed under Part IV of the *Environmental Protection Act 1986*. The RPDMMP is to be submitted in conjunction with the environmental referral to satisfy the EPA that City of Gosnells can manage the Proposal so that any residual impacts on the environment are acceptable.

The RPDMMP describes the monitoring, monitoring criteria, contingency actions, management, and reporting requirements to occur post development and or during the operation phase of the Proposal to demonstrate that residual impacts to inlands waters, terrestrial fauna and flora and vegetation are not greater than predicted. This RPDMMP has been prepared in accordance with the EPA's Template and Instructions on how to prepare *Environmental Protection Act 1986* Part IV Environmental Management Plans (EPA, 2021) and using the EPA's Environmental Management Plans template.

1.2 Key Environmental Factors

The environmental factors identified as being relevant to the Proposal for post development monitoring and/or management are:

- Inland Waters
- Terrestrial Fauna
- Flora and Vegetation.

Table 2 details the activities, values, and potential impacts to key environmental factors.

Table 2: Key Environmental Factors and Impacts

Key Factor	Proposal Activities affecting the key factor	Potential Impacts to key environmental factor
Inland Waters	Any physical disturbance within vegetated portions of the wetland has the potential to impact on biodiversity values. The following activities are likely to affect inland waters: • Clearing, excavation and filling works • Road drainage discharge treatment • Contamination of surface and/or groundwater due to accidental fuel/chemical spills and contaminated stormwater runoff • Road compaction • Alteration of surface water flows.	• Direct impacts from the Proposal include loss of 0.45ha of native vegetation associated with a CCW • Changes to hydrological regimes due to alterations of surface drainage patterns. Indirect impacts associated with the Proposal are not expected to be significant. Indirect impacts include erosion and sedimentation, contamination of surface and/or groundwater due to accidental fuel/chemical spills and contaminated stormwater runoff.
Terrestrial Fauna	The clearing of native vegetation will result in loss of fauna habitat. Other impacts include: • Fragmentation of fauna habitat and loss of ecological connectivity • Degradation of habitat from edge effects and habitat modifications • Altered fauna behaviours due to noise, lighting, and human presence • Introduction and spread of weeds • Introduction and spread of Phytophthora Dieback.	• Direct impacts from the Proposal include loss of 2.04 ha of fauna habitat, which consists of the following overlapping fauna habitat values: ○ 1.59 ha of Banksia Woodland consisting of Carnaby's and Forest Red-tailed Black Cockatoos foraging and potential roosting habitat ○ 0.45 ha of low-quality foraging habitat consisting of Melaleuca Thicket for the Carnaby's Cockatoo ○ 0.9 ha of potential SRE habitat ○ 1.2 ha of potentially suitable habitat for two Threatened bee species (*Leioproctus douglasiellus* and *Neopasiphae simplicior*) comprised of Melaleuca thicket (0.3 ha) and Banksia Woodland (0.9 ha) ○ 2.04 ha of highly suitable Isoodon fusciventer (Quenda) [P4] ○ Potential fauna death from increased traffic ○ Migration of fauna to other areas. Indirect impacts associated with the Proposal are not expected to be significant. Indirect impacts include fragmentation of fauna habitat and loss of ecological connectivity, degradation of habitats from edge effects and

Key Factor	Proposal Activities affecting the key factor	Potential Impacts to key environmental factor
		habitat modifications, the potential introduction/spread of dieback (*Phytophthora cinnamomi*) and weeds, altered fauna behaviours due to noise, lighting and human presence.
Flora and Vegetation	The implementation of the Proposal will result in the loss of flora and vegetation through clearing. In addition: • Introduction and spread of weeds • Introduction and spread of Phytophthora Dieback • Increased edge effects.	• Clearing of up to 2.04 ha of native vegetation which consists of the following overlapping flora and vegetation values: ○ 1.87 ha in good or better condition ○ Up to 0.45 ha of native vegetation associated with a CCW ○ Up to 1.2 ha of native vegetation within a Bush Forever Site No. 125. ○ Up to 1.58 ha of SCP23a - Central *Banksia attenuata – Banksia menziesii* woodlands of the Swan Coastal Plain TEC. • Loss of significant flora individuals specifically: ○ Up to seven individuals of *Jacksonia gracillima* (P3) ○ Up to three individuals of *Styphelia filifolia* (P3). Indirect impacts associated with the Proposal are not expected to be significant. Indirect impacts include the potential introduction/spread of dieback (*Phytophthora cinnamomi*) and weeds, alteration of vegetation structure and floristic composition in adjacent and /or surrounding areas via changes to surface water drainage patterns and alteration of fire regimes.

1.3 Condition Requirements

State

The Project is currently being assessed under Section 38, Part IV of the *Environmental Protection Act 1984* (EP Act). This RPDMMP supports the referral of the Project to the Environmental Protection Authority (EPA) under Part IV of the EP Act.

Federal

The Proposal was deemed to be a Controlled Action (EPBC 2016/7735) and approval for the Project subject to conditions was received on 25 October 2018 and is valid until 31 December 2030. The EPBC Approval is contained in Appendix B.

Condition requirements include (but are not limited to the following):

- For the protection of the EPBC Act listed species, the approval holder must not clear more than 4.58 hectares within the Proposal
- To mitigate and manage impacts to EPBC Act listed species, the approval holder must comply with and implement the Revegetation Management Plan, Landscape Management Plan and Environmental Management Plan
- Prior to the commencement of the action install three artificial nesting hollows within 3km of the Proposal:
    - Each artificial nesting hollow installed under condition 3 must be monitored and maintained in accordance with relevant artificial hollow guidance for the life of the approval, with maintenance actions, if required, undertaken outside of the breeding season and before the commencement of the next breeding season.

Note that the clearing area has reduced to 2.04 ha since the EPBC approval was issued, so the 4.58 ha clearing limit has been reduced. It is noted that offset sites were put forward as part of the EPBC Act approval, which will need revising (along with the associated management plans) upon the Proposal being approved by the State, to ensure consistency between the State and Federal approvals.

1.4 Rationale and Approach

The RPDMMP has been prepared based on the potential impacts identified in the Garden Street Extension, Southern River, Section 38 Environmental Protection Act Referral Supporting Document (360 Environmental, 2023). The RPDMMP addresses the potential impacts to key environmental factors that were determined as being relevant to the revegetation and post-development aspects of the Proposal.

This RPDMMP adopts management provisions to achieve the environmental objectives for each key environmental factor, based on consideration of:

- Survey and study findings.
- Key assumptions and uncertainties.
- Avoidance measures.
- Environmental outcome or management objectives.
- Objective-based management objectives.
- Rationale for choice of provisions.

1.4.1 Survey and study findings

Table 3 summarises the relevant key studies and surveys that have been undertaken for each key environmental factor.

Table 3: Key Studies/Surveys

Study/ Survey	Key Findings
Inland Waters	
Hydrology Study and Impact Assessment, Garden Street Extension, Gosnells Urbaqua Land and Water Solution, 2022	The study concluded: • Post development flow rates from Garden Street are relatively small, will have minimal effect on wetland hydrology and are not expected to cause substantial erosion effects. Vegetation planting proposed on the batters will provide sufficient stability on the banks to manage erosion effects resulting from the expected flow velocities. • The compaction expected as part of road construction is not expected to significantly influence groundwater levels and/or flow. • Following construction of the road, evapotranspiration from the wetland will be reduced by approximately 2%, following planting of batters which is considered unlikely to significantly alter local groundwater levels in the CCW. • Any physical disturbance within vegetated portions of the wetland has the potential to impact on its biodiversity values and as such should be minimised.
Sutherlands Park Groundwater monitoring 2020-21 Urbaqua Lands Water Solutions, 2021	The results from the groundwater monitoring program at the Garden St wetland suggest a very low level of connectivity between the surface water and groundwater at the site. Any observations of surface water at the site historically were likely related to direct rainfall and runoff from the surrounding areas rather than an expression of groundwater.
Hydrology of the northern section of the Garden Street Extension Urbaqua Lands Water Solutions, 2021	The surface water catchment area of the Proposal is directly recharged by relatively small residential areas that are anticipated to feature retention of frequent rainfall events on lots based on the requirements of the Southern River Integrated Land and Water management Plan. The surface water runoff is not considered to be a driving factor in the local inundation. Shallow groundwater limits infiltration in the wetland, and runoff contributes to the waterlogging and inundation. The survey recommended additional groundwater monitoring to assist with revised groundwater modelling.
Garden Street Extension, Ground Water Monitoring Cardno, 2018	Groundwater levels recorded during the monitoring period time are sufficient should construction proceed to detailed design for assessment of groundwater interaction. Dewatering or any other groundwater disturbance should not be allowed to cause the lowering of the water level in a water body with environmental value (including a CCW) and should not lower the water level by more than 10 cm next to the body.

Study/ Survey	Key Findings
Report on Preliminary Acid Sulphate Soil and Groundwater Investigation – Proposed Garden Street Extension Between Harpenden and Balfour streets, Huntingdale Douglas Partners, 2018	Acid sulphate soils (ASS) were identified in the silty sand profiles at three locations, and it is noted that the anticipated maximum extent of the proposed excavations in the vicinity of these locations are not anticipated to intersect the silty sand profiles comprising ASS. Therefore, the management of ASS is not deemed to be warranted. Groundwater levels were recorded between 19.863 m AHD and 20.097 m AHD in December 2017. Provided excavations are completed during the dry season dewatering in unlikely to be required.
Terrestrial Fauna	
Biological Environmental Survey – Report to City of Gosnells Biologic Environmental Survey Pty Ltd (2023)	The survey recorded: • A total of 41 vertebrate fauna species • Three conservation significant species which included Carnaby's cockatoo, forest red-tailed black cockatoo and quenda • Three broad fauna habitats were mapped within the Development Envelope which include banksia woodland, Melaleuca thicket and cleared land.
Short-range endemic and significant invertebrate desktop assessment for the Garden Street Extension Project Phoenix Environmental Sciences (2023)	The desktop review recorded the following in within the desktop search area (within 40km of the Development Envelope): • A total of 62 taxa from ten invertebrate groups • No SREs have been recorded in the Development Envelope however 12 may potentially occur in the Development Envelope • 10 Threatened or Priority species: ○ 2 Mygalomorph spiders ○ 7 Insects ○ 1 Springtail. • 0.9 ha of potential SRE habitat in the Development Envelope (*Banksia* woodland in Excellent condition) which is also suitable habitat for *Neopasiphae simplicolor* (threatened bee species). • 0.3ha of *Melaleuca* thicket in the Development Envelope may provide suitable habitat for two species of Threatened bees (*Leioproctus douglasiellus* and *Neopasiphae simplicolor*).
Native Bee Survey of Proposed Garden Street Extension, Southern River, Perth WA Spineless Wonders (2017)	The survey recorded eleven native bee species, however none of these had formal conservation status listing.
Targeted Conservation Significant Species Survey – Garden Street, Southern River PGV Environmental (2016)	Survey did not identify any records of targeted species.
Australasian Bittern Survey Terrestrial Ecosystems (2016)	The survey did not record any Australasian Bitterns during the two-night survey period.

Study/ Survey	Key Findings
Fauna Management Plan Holmes Street Bushland North Natural Area Consulting Management Services (2016)	The survey recorded the following: • Majority of habitat is in good or better condition • One conservation significant mammal (Southern Brown Bandicoot) was recorded • Two conservation significant bird species recorded (Carnaby's Black Cockatoo and Rainbow Bee-eater).
Black Cockatoo Assessment – Garden Street Extension Terrestrial Ecosystems (2014)	The assessment recorded the following: • Four major fauna habitat types were present, one of which (Banksia Woodland) provides foraging habitat for black cockatoos • Within 2 km of the Proposal there are multiple Bush Forever sites that contain habitat suitable for black cockatoo foraging • No suitable nesting sites identified • Unlikely to contain significant roosting habitat for black cockatoos. • Abundance of Southern Brown Bandicoots were observed.
Ecological Assessment of Sutherlands Parks Bushland – City of Gosnells ENV Australia (2010)	The assessment recorded the following: • Eight bird species, including the Forest Red-tailed Black Cockatoo • One reptile species. • One introduced fauna species.
Flora and Vegetation	
Garden Street Extension Ecological Survey Biologic (2023)	Survey recorded: • 186 vascular plant species • 33 weed species including one WoNS (*Asparagus asparagoides*) • Two priority flora species recorded - *Jacksonia gracillima* (P3), *Styphelia filifolia* (P3) • Five vegetation types identified • Two vegetation types representative of SCP23a which is a component of the Banksia Dominated woodlands of the Swan Coastal Plain TEC • Vegetation in Excellent to Completely Degraded condition • Bush Forever Site 125 recorded within survey area • Vegetation associated with a CCW recorded within survey area.
Floristic Analysis Report – Garden Street Wetlands RPS Australia West Pty Ltd (2018)	The five Garden Street test quadrats had the greatest affinity (based on their floristic composition) to the Southern SCP quadrats assigned to FCTS02, FCT13, FCTS03, FCT05 and FCT04. None of these quadrats were identified as having a similarity with any of the Claypans of the SCP FCTs (7, 8, 9, 10a and 117).
Holmes Street Bushland North: Revegetation and Weed Management Plan Natural Area Consulting Management Services (2016)	Survey recorded: • 170 vascular plant species • 46 weed species including one WoNS (*Asparagus asparagoides*) • 12 vegetation types identified • Vegetation in Excellent to Completely Degraded condition • Bush Forever Site 125 • One priority flora species recorded - *Jacksonia gracillima* (P3). • No TEC or Priority Ecological Communities (PEC) identified.

Study/ Survey	Key Findings
Garden Street, Southern River Targeted Conservation Significant Species Survey PGV Environmental (2016)	Survey did not identify any records of targeted species.
Holmes Street Bushland North – Phytophthora Dieback occurrence assessment Glevan Consulting (2015)	The majority (84%) of the Holmes Street Bushland North study area was observed to be infested with Dieback. The majority of the infested area is associated with low-lying water-gaining sites, with the highest levels of expression present on the interface between the water-gaining sites and the Banksia Woodland.
Targeted Flora Survey – Garden St Extension and Widening, Southern River 360 Environmental (2014)	Survey did not record any species listed as Threatened pursuant to the EPBC Act or the *Wildlife Conservation Act*. Four individuals of *Jacksonia gracillima* (P3) were recorded during the survey.
Ecological Assessment of Sutherlands Bushland ENV Australia (2010)	Survey recorded: • 97 flora taxa • 16 weed species (no WoNS or Declared Pests) • Seven vegetation units identified including SCPS3, SCP4 and SCP21C • Vegetation in Excellent to Completely Degraded condition • SCP21C which is representative of a P3 PEC was not recorded within Bush Forever Site 125. • No priority or threatened flora species recorded.
Vegetation and Declared Rare and Priority Flora Assessment – Garden Street Extension Woodman Environmental Consulting Pty Ltd (2004)	Survey recorded: • 114 vascular plant species • Seven weed species (no Weeds of National Significance (WoNS) or Declared Pests) • Six plant communities identified • Vegetation in Excellent to Good condition • Bush Forever Site 125 – vegetation in Excellent to Very Good condition • No priority or threatened flora species recorded. No Threatened Ecological Communities (TEC) identified.

1.4.2 Key assumptions and uncertainties

The is following key assumptions and uncertainties are relevant to this RPDMMP:

- The Proposal activities are consistent with those described in the Garden Street Extension, Southern River Section 38 Environmental Protection Act Referral Supporting Document.
- This RPDMMP has been prepared based on the current level of knowledge of the environmental impacts of the Proposal. Any additional assessments or discoveries related to the environmental impacts of the Proposal or changes in legislation, regulations or best practice guidelines may affect the information contained in this RPDMMP.

- This RPDMMP provides an indication of the proposed provisions to manage the environmental impacts associated with the Proposal. The provisions described in this RPDMMP will be further developed and refined as part of the detailed design process which will be reflected in subsequent approval documentation.
- The biological surveys undertaken to support this RPDMMP to date accurately report the distribution and status of conservation species.
- The biological surveys referenced have been completed as per relevant technical guidance survey methods for all the key environmental factors, unless specified otherwise.

1.4.3 Objective-based EMP – risk-based approach

The proposal intends to manage the identified impacts in a conservative way. A hierarchical approach to manage the potential impacts from the proposal will include:

- Avoidance: measures taken to avoid impact
- Minimization: measures taken to reduce the duration, intensity and/or extent of impact
- Implementing: measures to monitor and manage the residual impacts.

1.4.4 Rationale for choice of indicators and/or management actions.

The RPDMMP has been developed using the potential impacts identified in the Garden Street Extension, Southern River Section 38, Environmental Protection Act referral supporting document. The RPDMMP describes the identified key environmental factors (inland waters, terrestrial fauna, flora, and vegetation) post development management and monitoring plans.

The potential impacts identified have been informed by technical studies and surveys undertaken for the Development Envelope and surrounding areas. Table 4 provides the rational for the provision of revegetation and post-development monitoring and management of the identified key environmental factors.

Table 4: Rational for provision of revegetation and post development monitoring and management of the identified key environmental factor

Environmental Aspect	Rationale for provisions
Flora and Vegetation	
Land Disturbance - Vegetation clearing	• Provisions have been adopted for land clearing as inadvertent clearing beyond the respective boundary may lead to illegal clearing reducing flora and vegetation population sizes and fauna habitats. Rehabilitation and or revegetation of accidentally cleared may be required post development.
Fragmentation of retained vegetation species	• Monitoring of the retained vegetation is required as increased interaction with the area may cause a deterioration in vegetation condition and potential loss of some species.

Environmental Aspect	Rationale for provisions
Introduction of weeds and diseases.	• Objective based provision to manage the potential introduction of weeds and diseases due to the use of the road. Biodiversity of an area can be significantly impacted by weeds due to their ability to outcompete native species and eventually dominate the area.
Terrestrial Fauna	
Habitat loss	• Provisions have been made to avoid continued loss of habitat around the Development Envelope and retained areas. Monitoring is also required post development to identify any changes which are likely to occur.
Species migration	• Due to the change of environment, some fauna species are likely to move away from the developed area. Provision has been adopted to ensure free movement of fauna species post development.
Fauna species injuries and death	• Due to the increase of traffic, there is likely to be an increase in fauna injuries or mortalities. Provision has been made to avoid, minimise, and manage the identified fauna impact post development.
Species behaviour change	• Objective based provisions have been adapted to avoid and minimise the potential change of species behaviour due to exposure to increased traffic noise, light, and modification of habitat.
Inland Waters	
Alteration of existing surface water regimes	• The construction of the road will alter the flow of water within the wetland. It will also minimise the rate of infiltration on hardstand areas. Objective based provisions have been made to manage these potential changes. • The change in surface water flow may impact also impact groundwater recharge.
Potential increase in surface and ground water pollution	• Hydrocarbon and chemical use from road use may increase chemical flow into the wetland during the wetter months. Measures have been provided to avoid and minimise pollution into the wetland.
Wetland vegetation loss	• Clearing of vegetation for development will lead to wetland vegetation loss. If monitoring and management of DE is not implemented, this has the potential to worsen post development. Provision has been made to reduce the potential continued loss of vegetation.

2 Revegetation and Bush Forever Management and Monitoring

2.1 Purpose

Revegetation and Monitoring will be implemented as a post development measure to minimise impacts on vegetation loss as a result of the project, to stabilise road batters, to restore evapotranspiration rates and to balance the hydrological processes within the Development Envelope. The RPDMMP is to identify effective practices that accelerate the growth of vegetation on the road batters cleared to support the Proposal within the Development Envelope.

2.2 Revegetation Objectives

The revegetation will be comparable to the naturally occurring vegetation in Bush Forever Site No. 125 and will reflect the vegetation communities present in the road reserve and adjacent areas. The width of the vegetation setbacks and clearances will be appropriate for the specific location and will be dependent on an assessment of the road design speed, road alignment and the roadside batter slopes. The revegetation objectives are to:

- Revegetate areas temporary cleared in the Development Envelope for road construction (road batters)
- Ensure roadside stability and minimise ongoing maintenance
- Ensure that conservation values and biodiversity area protected and enhanced
- Restore evapotranspiration rates and balance the hydrological processes within the Development Envelope
- Ensure local amenities and aesthetics are enhanced.

2.3 Implementation

2.3.1 Issues and considerations

Table 5 presents the issues relevant to revegetation of the Development Envelope that have been identified through the assessment of the existing environment. The following potential management measures have been identified.

Table 5: Revegetation issues identified within the Development Envelope.

Issue	Proposed Management
Presence of weed species in clearing and revegetation areas	• Implementation of weed hygiene measures during revegetation to minimise spread of weeds. • Implementation of weed control prior to revegetation activities to open up areas for planting. • Implementation of follow up weed control post planting for up to 5 years to reduce weed infestation levels.

Issue	Proposed Management
Presence of degraded areas and open, bare areas within revegetation area	Design completion criteria to address current vegetation condition. Undertake infill planting, seeding and topsoil spreading to improve plant density and diversity
Potential presence of dieback within the revegetation or surrounding areas	Ensure that relevant Phytophthora management strategies are in place for the revegetation program (e.g. purchase of Dieback free tubestock)
Success of revegetation susceptible to weather events such as flooding, fire, or drought	Undertake monitoring to identify where intervention required post weather events
Failure of revegetation	Implement contingency measures
Erosion and Sedimentation	Fill batters to be covered with geotextile/jute matting to prevent erosion and mobilisation of sediment.
Rubbish / Waste	Dispose waste that could cause environmental degradation in areas determined suitable. Regular rubbish removal.

2.3.2 Site preparation

The width of the vegetation setbacks and clearances will be appropriate for the specific location and will be dependent on an assessment of the road design speed, road alignment and the roadside batter slopes. Site preparation for revegetation will include three main steps explained in detail below:

- **Weed control**: Roadside planting areas generally have a high weed load requiring treatment, however, as 70% of the Garden Street extension Development Envelope is in Good to Excellent condition it is anticipated the weed cover will be manageable. At least two weed control events are to occur prior to planting the batters. Any imported fill needed for the project will be certified clean fill.
- **Topsoil respread**: topsoil will be uniformly respread over the revegetation area.
- **Geotextile/jute matting**: Geotextile/jute matting to stablise the batters
- **Tree guards**: Soft plastic tree guards to be installed with bamboo stakes to protect seedlings from rabbit predation.

2.3.3 Weed Management

Weed control shall be undertaken to ensure that total weed foliage cover remains low or not exceed at least a quarter of the total foliage cover. Weed control shall be undertaken prior to the removal of vegetation and topsoil and after the respreading of vegetation and topsoil as required during the maintenance and monitoring period. Control measures for weed management will include:

- Treatment of weeds such as using herbicide spraying, which will be carried out by licensed operators and herbicide shall be mixed and applied in accordance with manufacturer's instructions

- Ensuring all machinery is free of built-up soil and vegetative material before entering the site.

Exposed areas such as bare batters and borrow pits shall be promptly rehabilitated to reduce the ingress of weeds.

2.3.4 Weed control procedures and safety measures.

The following operating procedures and processes will be used while applying herbicide from motorised pumps:

- Ensure weather conditions are suitable for the spray technique, site and chemicals to be used
- Erect suitable signage at all major entrances and access ways prior to spraying
- Select the least toxic chemical to perform the work and the most suitable chemical for the weed species to be controlled
- Use measuring containers for all liquid herbicides and scales for accurately measuring granulated herbicides
- Ensure the presence/absence of susceptible, non-target species is known prior to commencing work
- Ensure the location of target species is understood to reduce the time spent searching and the amount of chemical used pointlessly blanket spraying
- Flag conservation significant flora prior to commencing weed control works and ensure contractors are aware to avoid the flagged individuals.

Preventable procedures will be followed to minimise the risk of accidental spills in the event any hydrocarbons or other hazardous materials are stored on site. However, remediation procedures are in place to contain, and if possible, remove the spill from the site. The main risk associated with the revegetation project is accidental herbicide spill. The procedures to minimise this and any other accidental spill are as follows:

- All chemical containers will to be regularly inspected for leaks to avoid the possibility of environmental or cross contamination. Leaking containers will have their contents transferred to an intact empty container of the same type, or if none is available, a thoroughly rinsed container which is then clearly labelled and used as soon as possible.
- Attapulgite, a shovel and a recovery drum will be present on all vehicles to clean up any spill.
- A chemical spill must be reported to the Department of Health if it involves more than one Litre (L) of concentrate chemical or 10 L of mix.

2.3.5 Hygiene Management

The proposed development has a potential to spread phytophthora Dieback within the Development Envelope and surrounding areas. The movement of vehicles during the clearing, construction and revegetation stage can increase the chances of the pathogens in the area. It is important that all machinery brought to site during revegetation is inspected prior to first use to ensure that machinery is clean and weed free.

To ensure that Dieback and weeds is not introduced to the revegetation areas, the following management strategies will be considered:

- Clean soil and vegetation from all plant, machinery, equipment, tools, and footwear of as per the clean down procedure prior to entry of clearing area or revegetation sites
- Restrict movement of machines and other vehicles to the limits of the adjacent clearing site and revegetation sites
- Avoid movement of topsoil in wet conditions
- All tubestock used for revegetation are to be sourced from an accredited Nursery Industry Accreditation Scheme, Australia (NIASA) nursery.

2.4 Vegetation Establishment

The vegetation establishment period will be for 5 years following the completion of the works. During this period, maintenance and monitoring will be undertaken.

2.4.1 Species selection

Tubestock species to be planted will be selected using local drought tolerant nutrient retentive native species found within Bush Forever Site No. 125. Tubestock will be sourced from nurseries accredited under the NIASA.

2.4.2 Planting

Tubestock will be planted in the batters in the first planting event at a rate of five plants per square metre (m²). The City is aiming for 4 plants per m^2 in completion criteria, but will plant at higher density to allow for losses.

Planting will be undertaken between May and August when sufficient soil moisture is present to adequately support the establishment of tubestock. Tubestock will be hardened, vigorous and free of Dieback, disease, and insect pests at the time of planting and will have adequate and healthy root mass readily evident when removed from the tube, sufficient to hold the potting medium together. Each seedling is to be installed with TerraCottem soil conditioner (or similar) and watered in if insufficient rainfall at the time of planting. Manual techniques (i.e Pottiputki or hand trowel) will be used to install tubestock to avoid damage to erosion control matting and will adhere to the following planting methods:

- A small section of the geotextile/jute matting will be cut to allow room to install each individual plant;
- minimise damage once tubestock are removed from their containers they will be planted immediately to ensure the root ball is not left to dry out;
- TerraCottem soil conditioner (or similar) will be placed in the bottom of the hole and covered with soil to ensure there is no contact between the roots and product;
- The plant will be placed into the hole and backfill with soil free from weeds, stones, clods of sub soil and other extraneous matter;
- The soil will be lightly compacted by hand or foot to remove air pockets;
- Plants will be set plumb and level with the adjacent soil – ensuring no soil is placed against the stem of the root crown; and
- Tree guards will be installed around each tubestock.

2.4.3 Species list

The City will select plant species from the recommended planting list provided in Appendix C, different plant species palettes will be used for parts of the batters intersecting 'Banksia Woodland' and Melaleuca Thicket' areas that are defined on Figure 4. The plant species list to be based on species that are nutrient retentive and drought tolerant but also locally native to the area, however may be substituted with other relevant species if unavailable. No trees are proposed, given the predominately narrow width of the batter and potential future maintenance issues being so close to the future road. All proposed plant species are known to occur within the relevant vegetation type within Bush Forever Site No. 125 based on the Biologic (2023) Ecological Survey.

2.5 Ongoing Maintenance and Monitoring

2.5.1 Maintenance

Following the completion of revegetation works, revegetated areas will be maintained and monitored to measure revegetation success and stabilisation of the batters. In addition to maintaining the revegetated road batters, the City will also maintain and monitor a 50 m buffer outside the Development Envelope into retained vegetation in the Bush Forever Site (noting that this only extends into retained vegetation on land the City manages and includes a 5.3 ha maintenance area). The 50 m maintenance area currently undergoes minimal maintenance by the City (maximum once a year weed control), therefore the proposed maintenance will be an improvement to current arrangements with the aim to prevent edge effects from the new road. These maintenance areas are shown on Figure 5. A baseline weed survey will be undertaken in the 50 m maintenance and monitoring area during spring prior to clearing to inform post-development weed control works.

Maintenance will consist of weed control, rubbish removal and inspection of tree guards to ensure seedlings are sufficiently protected from rabbit predation. Maintenance will be undertaken at the following frequency:

- Revegetation Area (approximately 0.7 ha):
  - For Years 1, 2 and 3: Eight weekly between May and November (higher weed growth period) and twelve weekly between December and April (lower weed growth period)
  - For Years 4 and 5: Twelve weekly in the event monitoring finds weed cover is less than 20%. If weed cover is >20%, weed control will remain at the same frequency as Years 1, 2 and 3.
- 50 m maintenance and monitoring area:
  - For Years 1, 2 and 3: Twelve weekly
  - For Years 4 and 5: six monthly in the event monitoring finds weed cover is no more than 10% higher than pre-development weed cover. If this is not achieved, weed control will remain at the same frequency as Years 1, 2 and 3.

Due to the variable rainfall patterns within the Development Envelope, the batters will be watered for the first 2 years between November and March.

2.5.2 Monitoring

A spring monitoring programme will be implemented to assess revegetation success against the agreed completion criteria outlined in Table 6. Vegetation monitoring in the revegetation area will be conducted through the use of quadrats (2x2m which are appropriate for the narrow batters), photo reference points and an overall visual assessment of the revegetation area. It is anticipated that ten quadrats will be established for the revegetation area (5 quadrats either side of the road).

Monitoring will also be undertaken within the 50 m maintenance and monitoring area through use of 10 x 10 m quadrats and an overall visual assessment to ensure the new road is not negatively impacting on the adjoining vegetation in Bush Forever Site No. 125. The post-development quadrat data for the 50 m maintenance and monitoring area will be compared to baseline spring flora and vegetation monitoring survey quadrat data. This baseline spring flora and vegetation monitoring survey will be undertaken prior to clearing and will include establishing monitoring quadrat locations and photo reference point locations. At least 3 randomly selected quadrats per vegetation type will be established in the future 50 m monitoring area outside the Development Envelope under the City's management to ensure they are representative of the vegetation units present (ie. 15 quadrats). Quadrats will be placed on both sides of the road to adequately assess potential impacts from the new road.

Post development flora and vegetation monitoring will be undertaken during spring within the revegetation area and 50 m maintenance and monitoring area over a period of five years post-development. The following will be assessed as part of the spring flora and vegetation monitoring programme (which will also be assessed pre-development):

- Flora species and origin (native/non-native)
- 'foliage projective cover' (fpc) for each flora species
- Vegetation condition using the vegetation condition scale in epa *technical guidance flora and vegetation surveys for environmental impact assessment* (2016) adapted from keighery (1994)
- Signs of disturbance (e.g. Rubbish, clearing, pest animals)
- Visual monitoring of areas containing significant species
- Visual assessment of condition and use of culverts and fauna fencing.

In addition to formal monitoring events, visual monitoring of weed cover and new weed infestations in the revegetation areas (road batters) and 50 m maintenance and monitoring area will be undertaken by contractors and reported on through checklists during maintenance events.

2.5.3 Reporting

A Spring Monitoring Report will be compiled following each annual spring monitoring event. The report will include the revegetation area and the 50 m maintenance and monitoring area. Each report will include the following:

- Assessment of revegetation area within the Development Envelope against the completion criteria listed in Table 6.
- Assessment of the post-development findings for the 50 m maintenance and monitoring area compared to pre-development quadrat data by comparison of mean values against the completion criteria in Table 7.
- Recommendations to improve revegetation success and/or to prevent degradation of the 50 m maintenance and monitoring area if vegetation in the 50 m maintenance and monitoring area is showing signs of decline.

2.6 Completion Criteria

2.6.1 Revegetation Area

The completion criteria are outlined in Table 6. The progress of revegetation will be assessed against the completion criteria and will determine if contingency measures are required.

Table 6: Completion Criteria for Revegetation Area

Characteristic	Completion Criteria
Vegetation condition and health	Vegetation is: • Well-formed and exhibits signs of healthy growth. • 70% free of disease symptoms (yellowing, wilting etc.). • 70% free from signs of insect pests.
Plant species diversity	70% species diversity representing the vegetation complex and strata
Native plant density	Four plants per m^2
Plant cover and abundance	80% coverage of native species within any revegetated area by Year 5
Weed cover	Less than 20% weed cover in the revegetation area

2.6.2 50 m Maintenance and Monitoring Area

The completion criteria are outlined in Table 7. The vegetation adjoining the Development Envelope will be assessed against the completion criteria post-development and will determine if contingency measures are required.

Table 7: Completion Criteria for 50 m Maintenance and Monitoring Area

Goal	Completion Criteria
Ensure that the Garden Street extension project does not negatively impact the vegetation within the adjacent portion of Bush Forever Site No. 125	No direct or indirect impacts on known conservation significant flora species
	No notable decrease in native flora species cover and composition attributable to the Garden Street extension project
	Weed cover is no more than 10% higher than pre-development weed cover
	No decline in vegetation condition attributable to the Garden Street extension project
	No notable increase in the incidence of rubbish attributable to the Garden Street extension project

2.7 Contingency Measures

Table 8 lists a number of possible items and actions proposed to address or mitigate issues where monitoring indicates that the revegetation and/or 50 m maintenance and monitoring area are not trending towards meeting the completion criteria, or has failed, or has been vandalized.

Table 8: Revegetation Contingency Measures

Item	Issue	Possible Actions
Weeds	Excessive weeds in revegetation area or 50 m maintenance and monitoring area	Employ weed control contractor before weeds set seed. Increase the frequency of weed control as required until targeted species are minimised.
Grazing	Excessive grazing of seedlings by rabbits	Check integrity of tree guards. Repair or replace as needed until plants establish.
Species diversity	Species diversity completion criterion is not trending towards being met by Year 5	Undertake infill planting with additional species in bare areas or where plants have died.
Plant cover and abundance	Plant cover and abundance completion criterion is not trending towards being met by Year 5	Undertake infill planting at 30% of the initial planting rate ensuring that species selected for planting are based on the species list used for planting. Or if species are continually failing, trial new species known to occur in the Bush Forever site.
Plant stress	Notable deaths of tubestock or showing signs of stress during the warmer months	Consider if the frequency of watering needs to be increased or extended past two years.

2.8 Timing And Scheduling of Activities

Timing and scheduling of revegetation activities will be undertaken as per Table 9. Monitoring and maintenance activities for revegetation areas will occur for 5 Years.

Table 9: Revegetation Schedule

Activity	Initial Revegetation Works					Year 1				Year 2				Year 3				Year 4				Year 5			
	spring	summer	autumn	winter	spring	summer	autumn	winter	spring	summer	autumn	winter	spring	summer	autumn	winter	spring	summer	autumn	winter	spring	summer	autumn	winter	spring
Spreading of topsoil	■	■																							
Install geotextile/jute matting		■																							
Initial Weed Control		■	■	■																					
Initial Planting				■																					
Infill Planting (as needed)								■				■				■									
Watering					■	■	■						■	■	■										
Regular maintenance (weed control and rubbish removal)				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Spring Monitoring							■				■					■				■					■

2.9 Summary Of Revegetation and Bush Forever Management Commitments

The City will be responsible for the implementation of the Revegetation Plan. Table 10 outlines the responsibilities assigned to each component of the Revegetation Plan.

Table 10: Summary of Revegetation and Bush Forever Management Commitments

Parameter	Control Measures	Person Responsible for implementation
Weeds and rubbish	Weed control by a licenced contractor and rubbish removal	City of Gosnells
Pests	Deterring rabbits from grazing on revegetation through installation of tree guards.	City of Gosnells
Revegetation	Topsoil management (including scalping, storage and spread) tubestock installation, infill planting and watering tubestock	City of Gosnells
Monitoring	Monitor revegetation success and condition of Bush Forever vegetation adjoining the Development Envelope against completion criteria annually during spring	City of Gosnells
Maintenance	Undertake additional infill planting, rubbish removal, watering of tubestock and pest control where required	City of Gosnells

3 EMP Components

The RPDMMP has been prepared following the EPA (2021) How to prepare *Environmental Protection Act 1986 Part IV Environmental Management Plans – Instructions.* The RPDMMP includes the following:

- **Outcome based provisions:** include monitoring and evaluating measurable outcomes and are typically driven by trigger and threshold criteria
- **Objective based provisions:** focus on monitoring and management actions, where specific trigger or threshold criteria may not be appropriate for the circumstances.

Annual Reporting

The City of Gosnells will prepare a Post Development Annual Environmental Report (therein referred to as the Annual Report) that will report on all measures in this management plan. The annual report will report against the progress of this management plan between 1 January and 31 December of the preceding calendar year and be provided on or before 30 June each calendar year. Monitoring reports for individual environmental factors will be submitted as appendices to the Annual Report.

Additional documentation including maintenance checklists (covering weed control and rubbish removal) will be included as an appendix to the Annual Report. Maintenance checklists will be provided to the City by contractors following each maintenance event and retained for inclusion in the Annual Report.

Management and monitoring commitments

The City of Gosnells will manage and monitor the revegetated road batters forming part of the Development Envelope (approximately 0.7 ha) plus a 50 m buffer outside the Development Envelope into retained vegetation in the Bush Forever Site (Figure 5). The buffer area referred to as ’50 m maintenance and monitoring area’ is limited to land under the City’s control and includes a 5.3 ha maintenance area. Details on this are included in Section 2.5.

3.1 Outcome-based provisions

This RPDMMP is to address potential impacts to environmental factors that were determined as being relevant to the Project.

Rationale: the proposed development has potential to alter surface water regimes and increase pollution levels within the Development Envelope and surroundings. The change in surface water flow may also impact groundwater recharge. Management measures have been adopted to manage and mitigate the potential changes in inland waters.

Table 11 details the outcome-based provisions for Inland Waters.

Table 11: Inland Waters – Outcome-based provisions

EPA Objective: To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.

Outcome: to mitigate and manage the hydrological impacts on UFI15423 as a result of clearing of 0.45ha of native wetland vegetation and the construction and use of the proposed road

Key environmental values: The proposed Garden Street extension will pass through a section of Sumpland (UFI 15423) that is classified as a CCW including an area that is inundated up to 300 mm in winter/spring.

Key impacts and risks: flow regime, storm water runoff, water quality

Trigger criteria Threshold criteria	Response actions: Trigger level actions Threshold contingency actions	Monitoring	Timing / frequency of monitoring	Reporting
Trigger criteria: • Groundwater levels show a lowering of the water level by more than 10cm next to UFI15423 from pre-development monitoring results. • Groundwater quality exceeds the pre-development water quality results recorded in the Urbaqua 2020-21 Groundwater Monitoring Program by 10%. **Threshold criteria:** • Groundwater levels show a lowering of the water level by more than 10cm	**Trigger level action:** • Investigate the site, including balancing culverts and GPTs to determine if any blockages, sediment build-up or other observed pollutant sources are present • Remediate any identified issues. **Threshold contingency actions:** • Investigate the site, including balancing culverts and GPTs to determine if any blockages, sediment build-up or other observed pollutant sources are present.	Monitoring of seven existing groundwater monitoring bores (excluding BH04 that will be impacted by works) quarterly for groundwater levels and annually for water quality for two years after construction to be compared to pre-development data. Refer to the sampling points in Figure 5. Samples will be analysed for the following parameters: • In-situ pH • In-situ Electrical Conductivity • In-situ temperature	• Quarterly for groundwater levels • Annually for water quality sampling • The monitoring will be conducted of a period of 2 years post construction.	Annual Report - DWER

Trigger criteria Threshold criteria	Response actions: Trigger level actions Threshold contingency actions	Monitoring	Timing / frequency of monitoring	Reporting
next to UFI15423 from pre-development monitoring results. • Groundwater quality exceeds guideline values the pre-development water quality results recorded in the Urbaqua 2020-21 Groundwater Monitoring Program by 20%.	• Remediate any identified issues. • Repeat sampling and also sample DWER's bore T-75 to see if groundwater levels have lowered across the locality and therefore may not be linked to the road project. • If repeat samples continue to present similar deteriorated water quality, raise as an incident and appropriate remediation may be undertaken. This may include soil amendment, revegetation, modifications to drainage management or street sweeping.	• Ammonia (NH4) • Total Kjeldahl Nitrogen (TKN) • Total Nitrogen (TN – derived) • Nitrate and Nitrite (NO3, NO2) • Total Phosphorous (TP) • Filterable Reactive Phosphorous FRP).		

3.2 Objective-based provisions

This RPDMMP is to address potential impacts to environmental factors that were determined as being relevant to the Project.

Rationale: this RPDMMP addresses potential impacts to environmental factors that were determined as being relevant post development and has been developed utilising an objectives-based approach to identify and prioritise management actions.

Tables 12 – 14 details the objective-based provisions for the four key environmental factors:

- Flora and Vegetation
- Fauna
- Inland Waters

Table 12: Flora and Vegetation – Objective-based provisions

EPA Objective: To protect flora and vegetation so that biological diversity and ecological integrity are maintained.

Project Objective: Minimise impacts to flora and vegetation and to maintain a similar level of quality as pre-development.

Key environmental values: 2.04ha of native vegetation

Key impacts and risks: The loss of up to 1.2ha of vegetation within Bush Forever site no. 125, introduction and spread of weeds and Phytophthora Dieback, habitat fragmentation and edge effects

Management targets	Management actions	Monitoring*	Timing / frequency of actions	Reporting
No direct or indirect impacts on known conservation significant flora species	• Maintaining road batters and established 50 m maintenance area shown on Figure 5 extending from the edge of the Development Envelope as per section 2.5.2 • Flag conservation significant flora prior to commencing weed control works and ensure contractors are aware to avoid the flagged individuals • Monitoring changes in conservation species within the 50 m maintenance and monitoring area.	• Visual monitoring of areas containing significant species during spring monitoring event • Monitoring through photographic reference points.	• Monitoring during spring surveys for 5 years post construction.	• Annual Environmental Report – DWER.

Management targets	Management actions	Monitoring*	Timing / frequency of actions	Reporting
No notable decrease in native flora species cover or composition attributable to the Garden Street extension project within the 50 m maintenance and monitoring area	• Surface water flow and drainage to be managed to avoid indirect changes to vegetation structure and floristic composition • Revegetation and maintenance of the road batters as per section 2 • Undertake infill planting on road batters to achieve the required planting density in winter using locally native species • Maintenance within the 50 m maintenance and monitoring area (including weed control and rubbish removal) as per section 2.5.1.	• Monitoring quadrats for any changes in flora species cover and composition in the 50 m maintenance and monitoring area post-development compared to pre-development conditions • Monitoring through visual assessment and photographic reference points.	• Maintenance for 5 years post construction as per section 2.5.1. • Monitoring during spring surveys for 5 years post construction as per section 2.5.2.	• Annual spring monitoring report • Annual Environmental Report – DWER.
Weed cover is no more than 10% higher than pre-development weed cover within the 50 m maintenance and monitoring area and <20% in the Revegetation Area.	• Regular weed control in the 50 m maintenance and monitoring area and Revegetation Area as per section 2.5.1.	• Visual monitoring of weed cover and new weed infestations in the revegetation area (road batters) and 50 m maintenance and monitoring area during maintenance events • Monitoring quadrats for any changes in weed cover in the 50m maintenance and	• Maintenance for 5 years post construction as per section 2.5.1 • Monitoring during spring surveys for 5 years post construction as per section 2.5.2.	• Maintenance checklists Annual spring monitoring report • Annual spring monitoring report • Annual Environmental Report – DWER.

Management targets	Management actions	Monitoring*	Timing / frequency of actions	Reporting
		monitoring area post-development compared to pre-development conditions • Monitoring through visual assessment and photographic reference points.		
No decline in vegetation condition attributable to the Garden Street extension project within the 50m maintenance and monitoring area.	• If a decline in vegetation condition is noted and it is found to be resulting from an increase in weed cover, the frequency of weed control is to be increased • If increasing the frequency of weed control for one year is not effective at improving vegetation condition, undertake infill planting in areas that have declined in condition • Increase monitoring within the 50 m maintenance buffer to include autumn monitoring events if a decline in vegetation condition is recorded until vegetation condition has improved.	• Monitoring quadrats for any changes in vegetation condition in the 50m maintenance and monitoring area post-development compared to pre-development conditions • Monitoring through visual assessment and photographic reference points.	• Maintenance for 5 years post construction as per section 2.5.1 • Monitoring during spring surveys for 5 years post construction as per section 2.5.2.	• Annual spring monitoring report • Annual Environmental Report – DWER.

Management targets	Management actions	Monitoring*	Timing / frequency of actions	Reporting
No notable increase in the incidence of rubbish attributable to the Garden Street extension project in the 50 m maintenance and monitoring area	• Regular rubbish removal alongside weed control as per section 2.5.1 • Monthly street sweeping • GPT's, sediment traps and drainage pits to be educted bi-annually.	• Monitoring quadrats for any changes in rubbish in the 50 m maintenance and monitoring area post-development compared to pre-development conditions • Visual assessment and photographic reference points, including within the revegetated road batters.	• Maintenance for 5 years post construction as per section 2.5.1 • Monitoring during spring surveys for 5 years post construction as per section 2.5.2.	• Annual spring monitoring report • Annual Environmental Report – DWER.
Compliance with pre-defined clearing limits within the Development Envelope	• Vegetation growing around culverts to be maintained only to the extent that to ensures they are functioning effectively • Vegetation maintenance withing the Development Envelope and 50 m maintenance and monitoring area will retain larger tree species (pruning only).	• Monitoring through visual assessment photographic reference points.	• Monitoring during spring surveys for 5 years post construction.	• Incident reports of change • Annual Environmental Report – DWER.

* refer to Section 2.5.2 for details on the proposed spring flora and vegetation monitoring

Table 13: Terrestrial Fauna - Objective-based provisions

EPA Objective: To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
Project Objective: Minimise injury and mortality risks to fauna post development, Minimise disturbance of fauna habitat within the retained fauna habitat.
Key Environmental Values: 2.04ha of Banksia woodland and Melaleuca thicket
Key Impacts and Risks: fragmentation of retained habitat, degradation of habitat from edge effects and habitat modification, introduction of weeds.

Management targets	Management actions	Monitoring	Timing / frequency of actions	Reporting
No incidents of terrestrial fauna injury or death from the new road	• Maintain the revegetated road batters and 50 m maintenance area. • Maintain and monitor fauna fencing and culverts. • Infra-red motion sensor cameras will be set up at all culvert entrances/exits for a period of 5 years to monitor fauna use, as a minimum during spring and autumn. • Undertake feral animal trapping twice a year in spring and autumn for a period of one week for each trapping period. • Infra-red motion sensor cameras to monitor for feral animal activity for a minimum of one week prior to feral animal trapping. • Where unexpected threatened fauna species are identified these	• Inspections of fauna fencing along the edges of the road to ensure it is appropriately directing fauna through the three culvert underpasses (each 1200 x 600 mm in size) • Visual inspections of the culvert underpasses including exits and entrances for signs of injured, trapped, or dead fauna • Monitoring of fauna activity using infra-red motion sensor cameras.	• Weekly inspections of fauna fencing, culverts, and fauna presence for the first six weeks after project completion. • Annual inspections of fauna fencing and culverts during spring surveys for five years after completion of works. • Infra-red motion sensor cameras at culverts for a period of 5 year, as a minimum in spring and autumn.	Annual Environmental Report - DWER including • Incident register • Inspection checklist • Findings from Infra-red motion sensor cameras set up at culverts • Feral animal trapping report.

Management targets	Management actions	Monitoring	Timing / frequency of actions	Reporting
	will be reported immediately to DBCA.			
No incident of fauna habitat clearing for road maintenance purposes	• Ensure maintenance activities do not adversely impact on the retained vegetation. • Any clearing outside the Development Envelope to be reported and a corrective action plan implemented.	• Photographic reference points of clearing to enable comparison between pre- and post-clearing environments.	• Annually during spring survey	• Photographic records of the clearing area pre- and post-clearing Annual vegetation reports. • Annual spring monitoring report • Annual Environmental Report - DWER
Successful use of the three culvert fauna crossings by native fauna	• Infra-red motion sensor cameras to be set up at all culvert entrances/exits for a period of five years to monitor fauna use, as a minimum in spring and autumn • Maintain and monitor fauna fencing and culverts • Visual inspections of culverts to be undertaken in conjunction with changing the memory cards on the Infra-red motion sensor cameras • Recording fauna incidents including encounters and observation of conservation significant fauna.	• Visual assessment of use of culverts as part of spring flora and vegetation monitoring and changing camera memory cards • Monitoring of fauna activity using infra-red motion sensor cameras.	• Infra-red motion sensor cameras: Memory cards to be changed and checked every two months during periods of use for the first year, then three monthly for the following four years. • Annual review of incident reporting.	• Findings to be included in Annual Environmental Report – DWER.

Management targets	Management actions	Monitoring	Timing / frequency of actions	Reporting
No incidents of native fauna injury or death from predators as a result of the culvert crossings	• Culverts will be maintained and monitored by the City • Infra-red motion sensor cameras will be set up at all culvert entrances/exits for a period of 5 years to monitor fauna use, as a minimum during spring and autumn • Undertake feral animal trapping twice a year in spring and autumn for a period of one week for each trapping period • Infra-red motion sensor cameras to monitor for feral animal activity for a minimum of one week prior to feral animal trapping	• Visual assessment of culverts as part of spring flora and vegetation monitoring • Infra-red motion sensor cameras to be monitored prior to feral animal trapping to monitor for predator activity.	• Feral animal trapping will be undertaken twice a year in spring and autumn for a period of at least one week each trapping period. • Camera traps to be monitored at least one week prior to trapping.	• Incident register • Feral animal trapping report • Findings from Infra-red motion sensor cameras set up at culverts • Annual Environmental Report – DWER.

Table 14: Inland Waters - Objective-based provisions

EPA Objective: To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.

Project Objective: Minimise impacts to existing flow regimes, Maintain or improve the existing wetland groundwater and surface water quality.

Key Environmental Values: Conservation wetland

Key Impacts and Risks: Increased stormwater runoff from hardstand areas, potential contamination of surface water and groundwater, change to surface water regime

Management targets	Management actions	Monitoring	Timing / frequency of actions	Reporting
Existing flow capacity of the wetland is maintained	• Overland sheet flow via vegetated batters to provide water treatment for larger events. • Undertake infill planting in winter on road batters to achieve the required planting density in winter. • The road will be sufficiently elevated through the wetland to prevent compaction issues from arising. • Piped system to discharge road runoff of up to the 20% AEP event from the cut section of the road to the existing street drainage systems.	• Visual inspections of the Development Envelope for signs of flooding following high rainfall events for the first two years.	• Sweeping of roads as required (min monthly) • Opportunistic during water monitoring events and following high rainfall events.	• Annual Environmental Report – DWER.

Management targets	Management actions	Monitoring	Timing / frequency of actions	Reporting
No adverse impact on quality of surface or groundwater attributable to the Garden Street extension project	• On-site retention of gross pollutants and the first 15mm of rainfall in soakage devices • Gross pollutant traps will be maintained at the frequency recommended by the manufacturer to ensure optimum performance. • Treatment of the runoff from the new road to minimize the export of pollutants to the wetland. • Sweep roads • GPT's, sediment traps and drainage pits to be educted bi-annually.	• Visual inspection of GPTs, sediment traps and drainage pits to ensure they are free from blockages, sediment build up or other observed pollutant sources.	• Opportunistic inspections • Eduction – bi-annually • Street sweeping – monthly (minimum).	Inspection Checklist Annual Environmental Report – DWER.

4 Adaptive management and review of the Management Plan

The adaptive management approach aims to reduce impacts of the project by monitoring, reporting, and implementing change (where required). This document applies the principles of adaptive management through monitoring, corrective actions and implementing changes. The adaptive management approach involves adjusting management and mitigation measures to meet the outcomes and objectives based on what is learned from the:

- Evaluation of post development monitoring data
- Review of the assumptions and certainties
- Re-evaluation of post development risks
- External and internal changes during the lifetime of the developed road.

In addition, the City has a number of policies to support and manage development their development activities. Policies relevant to the development and management of potential impacts associated with the Proposal are summarized in Table 15.

Table 15: City of Gosnells project related policy summary.

Policy Number	Policy	Purpose
Policy No. 6.2.2	Natural Areas, Retention, rehabilitation, and revegetation guidelines	To ensure consistent, quality rehabilitation and revegetation outcomes are achieved prior to handover of a natural area to the city for future maintenance
Policy No. 2.3.19	Trees and Urban Canopy	To clearly articulate Council's position in relation to tree planting and retention with the aim of expanding the tree canopy in the city
Policy No. CP 2.4.23	Subdivision and Development Works	To establish Council's requirements regarding the standard of earthworks and upgrading of existing roads associated with subdivisions and developments.

4.1 Environmental Monitoring and Corrective Action

The City will undertake regular evaluations for the proposed environmental management practices for inland waters, fauna and flora and vegetation. A review of the data collected from the monitoring reports and or incidents reports will be assessed for effectiveness for all project key environmental management measures by relevant project personnel.

The assumptions and certainties stated in this RPDMMP will be regularly reviewed during annual reporting to assess the effectiveness of the measures and maintain relevance during operations. Should there be a change in the conditions for the Proposal, management measures will be updated to meet the objectives of the RPDMMP.

4.2 Audits

Regular inspections and audits are required to ensure appropriate implementation of the management measures outlined in this plan. To ensure the management measures are being adequately implemented and comply with relevant management measures. Environmental commitments outlined within this RPDMMP will be audited annually for the five years post development to ensure compliance with the RPDMMP and environmental approval conditions. Audit results will be used to re-evaluate the identified risks and address them accordingly. Results of audits including identification of nonconformances, corrective actions and how they were addressed are provided in Annual Environmental Report

4.3 Post Development Management and Monitoring Review

This RPDMMP will be reviewed following the completion of construction to incorporate any updates required to ensure the proposed post development management and monitoring commitments remain relevant to addressing the key risks and meeting the EPA objectives. Thereafter, the RPDMMP will be reviewed and updated by a suitability qualified professional in the following scenarios:

- A major change to the road infrastructure
- Identification of a new risk pathway or potential impact of significance and/or
- As required by a regulating authority.

5 Stakeholder consultation

5.1 Key Stakeholders

The key main stakeholders for the Proposal:

- Environmental Protection Authority (EPA)
- Department of Water and Environmental Regulation (DWER)
- Department of Biodiversity Conservation and Attractions (DBCA)
- Department of Planning, Lands and Heritage (DPLH)
- Local Community.

5.2 Stakeholder Engagement Process

Table 16 summarises the strategy for consultation with each key stakeholder to date.

Table 16: Stakeholder engagement strategy

Stakeholder	Engagement Description	Timing
Department of Water and Environmental Regulation (EPA Services)	Pre-NVCP application discussions via phone and email.	June 2015
DWER	NVCP application discussions.	January 2015 – onwards
Local Community	Public display notices in the State Library, City of Gosnells Civic Centre and local libraries, the West Australian and local newspaper.	January 2017 July-August 2018
DPLH	Discussions regarding the clearing permit application and proposed road design.	May 2019 – onwards
DBCA	Discussions regarding CCW potential impacts.	June 2020 – onwards
EPA	Submission of s.38 referral document	October 2022

5.3 Stakeholder Consultation Outcomes

Table 17 summarises the results of stakeholder consultation to date. Consultation outcomes detailed below include local residents and regulatory bodies, excluding comments submitted to regulators during the submission of other approvals (NVCP, EPBC).

Table 17: Stakeholder Outcomes

Stakeholder	Date	Issues /topics raised	Proponent response / outcome
DWER	Jan 2015	• Clearing permit.	The City applied for a clearing permit through the Department of Environment Regulation. At a meeting in January 2015, Department officers advised that, due to the complexity of the proposal, the City should engage with the Office of the Environmental Protection Authority to discuss self-referral under section 38 of the Environmental Protection Act as a parallel process to the clearing permit application.
EPA	4-Jun-2015	• Clearing Permit.	Phone conversation and email correspondence.
Resident (280 m west of Development Envelope)	29-Apr-2016	• Proposal update • Congestion/speeding • Request for extension to be prioritised.	Proponent advised that congestion/speeding issue is currently being investigated and that plans are being developed and approvals and funding will be sought.
Public Display and Notices – State library, CoG Civic Centre, and libraries, West Australian and Comment News	17-18 Jan 2017	• EPBC Referral (EBPC 2016/7735).	12 submissions received.
Resident	11-Feb-2018	• Development of bushland.	Proponent advised that query was forwarded to the appropriate team (Infrastructure Directorate) for a response.
Resident (Directly adjacent to northern section of Development Envelope)	7-Mar-2018	• Request for confirmation regarding proposed extension • Concerns raised over the busy road during peak hours.	Proponent confirmed that extension is planned and that they are currently awaiting the approvals.

Stakeholder	Date	Issues /topics raised	Proponent response / outcome
Public Display and Notices – State library, CoG Civic Centre, and libraries, West Australian and Comment News	31-Jul-2018	• EPBC Referral (EBPC 2016/7735).	Advertising of submissions received and further referral documentation.
Resident	14-Aug-2018	• Proposal update • Delivery times.	Not available.
MLA	6-Sep-2018	• Delivery times • Clarification of Proposal components.	Proponent provided clarification on requested components of Proposal and advised unable to provide timeframes as still going through environmental approvals process.
DWER	13-Nov-2018	• Clearing permit CPS 8021/1.	Meeting with DWER officers.
Resident (260 m south of Development Envelope)	9-Feb-2019	• Proposal update • Public transport extension query • Seeking advice on local issues.	Not available.
Office of the Appeals Convenor	16-Apr-2019	• Proponent querying appeals made by local governments.	Discussion with Appeals Convenor regarding overturning appeals and local government appeals.
DPLH	May 2019	• Clearing permit and proposed road design.	Offering support to the City with clearing application.
MLA on behalf of Resident (Directly adjacent to Development Envelope)	14-May-2019	• Bushfire Management compliance issue relating to bushland in the Development Envelope.	
DWER and DPLH	18-Oct-2019	• Clearing permit.	As Garden Street is a blue road in the MRS, the DPLH assisted the City in discussion about best way forward regarding clearing permit.

Stakeholder	Date	Issues /topics raised	Proponent response / outcome
DWER and DPLH	19-Nov-2019	• Clearing permit.	Follow up to previous meeting. City advised that it would be referring the Proposal under S38 in accordance with EPAs requirements and ensuring impacts are minimised as much as possible.
DBCA	23-June-2020	• CCW impacts.	Ongoing discussion around potential impacts and mitigation measures.
Resident (Directly adjacent to Development Envelope)	12-Jun-2020	• Bushfire mitigation works in Bush Forever to improve saleability of properties • Proposal update.	Proponent acknowledged request for bushfire mitigation work but advised firebreak cannot be realigned in Bush Forever. Provided Proposal update.
Resident (Directly adjacent to Development Envelope)	19-Jun-2020	• Proposal update.	Proponent provided response regarding current status of Proposal.
DBCA/Urbaqua	23-Jun-2020	• Hydrology Study and Impact Assessment – DBCA's advice provided on clearing permit.	DBCA provided advice regarding the Departments inputs to the clearing permit process.
Resident	13-Jul-2020	• Local safety issues regarding footpaths.	Proponent provided response acknowledging issue and that Proposal should help alleviate some of these issues.
Resident	20-Aug-2020	• Proposal update.	Proponent advised that clearing permit application was not successful and City will be seeking approval from State government to progress Proposal.
DWER/Urbaqua	26-Aug-2020	• Hydrology Study and Impact Assessment – technical information requirements (bore locations).	Advice provided from DWER regarding monitoring bore locations.
Resident (Directly adjacent to Development Envelope)	18-Sep-2020	• Proposal update • Road safety issues.	Proponent advised that Proposal is being progressed. Advised that the City previously provided response regarding safety issue.

Stakeholder	Date	Issues /topics raised	Proponent response / outcome
MLA (440 m southwest of Development Envelope)	23-Mar-2021	• Proposal update • Concept Plan.	Proponent provided an update of approvals being sought and a copy of the most recent concept plan.
Resident (Directly adjacent to Development Envelope)	11-Nov-2021	• Request for Proposal update • Request for clarification on bushfire mitigation in Bush Forever.	Not available.
Resident	1-Feb-2022 9-Mar-2022	• Proposal update and request for commencement to be made a priority • Requesting reply to previous query.	Proponent provided an update of approvals being sought and advised that an application will be lodged in the second half of 2022. Proponent advised that a response has been sent.
Resident	7-Jul-2022	• Request for roundabout to be included in proposed extension raised with Main Roads.	Main Roads forwarded enquiry on to the City.
Resident	13-Jul-2022	• Delivery times.	Proponent advised that query was forwarded to the City's Road Safety Team for a response.
Resident	20-Sept-2022	• Inquiry about when construction will commence	Proponent provide an update of approvals being sought and expected start date.
Minister of Environment, Climate Action – Hon Reece Whitby	6-Oct-2022	• Adoption of the City of Gosnells Transport Position Statement • Inquiring if the minister could provide any support in relation to the extension of Garden Street	The minister responded on 28 October 2022.
Minister of Transport- Rita Saffioti	6-Oct-2022	• Submitting the City's Transport Position Statement • Inquiring if the minister could provide any support in relation to the extension of Garden Street	Responded on 30 March 2023.
Resident	20-March-2023	• Project timeline	Not available
Minister of Transport- Rita Saffioti	30-March-2023	• Response to the Mayors correspondence	The Minister informed Mayor of the upcoming State projects and corrected road zoning mentioned in the City's Transport Position Statement and that Garden Street remains under the City's control.

6 Changes to an Environmental Management Plan Table

Complexity of changes		Minor revisions ☐		Moderate revisions ☐		Major revisions ☐	
Number of Key Environmental Factors		One ☐		2-3 ☐		> 3 ☐	
Date revision submitted to EPA: DD/MM/YYYY							
Proponent's operational requirement timeframe for approval of revisionReason for Timeframe:				< One Month ☐	< Six Months ☐	> Six Months ☐	None ☐
Item no.	EMP section no.	EMP page no.	Summary of change	Reason for change			
1.							
2.							
3.							

7 Limitations

This report is produced strictly in accordance with the scope of services set out in the contract or otherwise agreed in accordance with the contract. 360 Environmental makes no representations or warranties in relation to the nature and quality of soil and water other than the visual observation and analytical data in this report.

In the preparation of this report, 360 Environmental has relied upon documents, information, data, and analyses ('client's information') provided by the client and other individuals and entities. In most cases where client's information has been relied upon, such reliance has been indicated in this report. expressly set out in this report, 360 Environmental has not verified that the client's information is accurate, exhaustive, or current and the validity and accuracy of any aspect of the report including, or based upon, any part of the client's information is contingent upon the accuracy, exhaustiveness, and currency of the client's information. 360 Environmental shall not be liable to the client or any other person in connection with any invalid or inaccurate aspect of this report where that invalidity or inaccuracy arose because the client's information was not accurate, exhaustive, and current or arose because of any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to 360 Environmental.

Aspects of this report, including the opinions, conclusions, and recommendations it contains, are based on the results of the investigation, sampling and testing set out in the contract and otherwise in accordance with normal practices and standards. The investigation, sampling and testing are designed to produce results that represent a reasonable interpretation of the general conditions of the site that is the subject of this report. However, due to the characteristics of the site, including natural variations in site conditions, the results of the investigation, sampling and testing may not accurately represent the actual state of the whole site at all points.

It is important to recognise that site conditions, including the extent and concentration of contaminants, can change with time. This is particularly relevant if this report, including the data, opinions, conclusions, and recommendations it contains, are to be used a considerable time after it was prepared. In these circumstances, further investigation of the site may be necessary.

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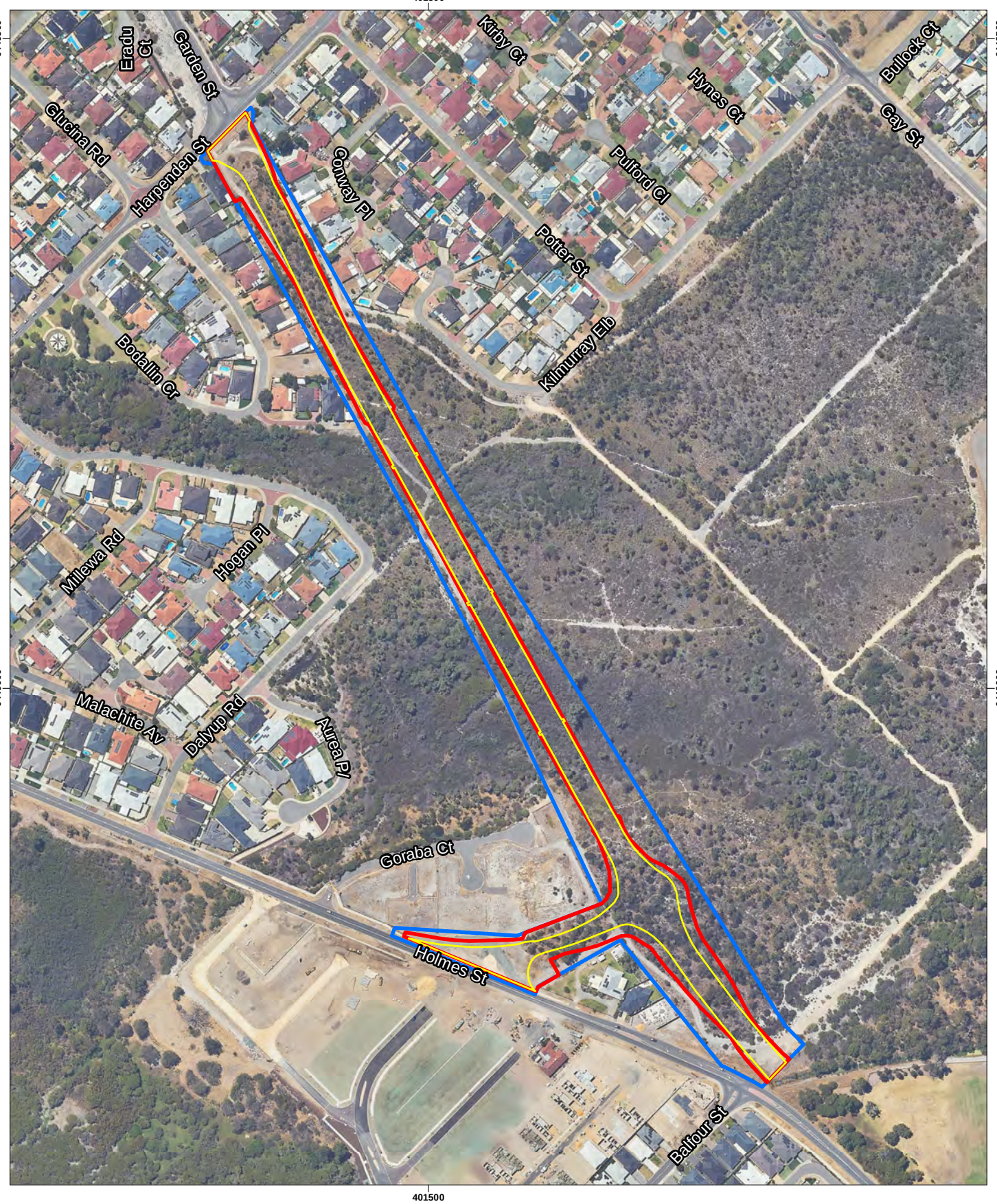
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Figures



Legend

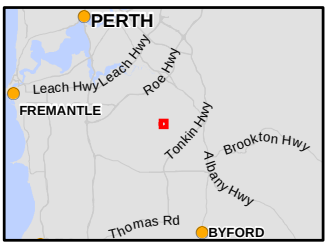
- Development Footprint (1.95 ha)
- Development Envelope (2.65 ha)
- Garden Street Extension Study Area - Metropolitan Region Scheme Boundary

0 40 80 120 Metres
1:4,000 @ A4

N

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY MAP



Powered By SLIP ENABLER

- LOCALITY MAP SOURCED FROM LANDGATE 2020
- OTHER DATA SOURCED LANDGATE 2020
- AERIAL PHOTOGRAPHY SOURCED LANDGATE 2020
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PROJECT ID	DATE
5413	30/05/2023

HORIZONTAL DATUM AND PROJECTION
GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
JH	KF	KF	0

City of Gosnells

Garden Street Extension, Southern River

Management Plan

Figure 1

Location and Development Envelope

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K:\Projects\9.0 APP\5413 City of Gosnells ERD\May2023_Figure Request for 5413 Garden Street Extension Southern River\5413 Fig 1 Regional Location and Development Envelope.mxd



Legend

- Development Footprint (1.95 ha)
- Development Envelope (2.65 ha)
- Garden Street Extension Study Area - Metropolitan Region Scheme Boundary
- Insignificant Trib

Geomorphic Wetlands Swan Coastal Plain DBCA_019

- Conservation
- Resource Enhancement
- Multiple Use
- Not

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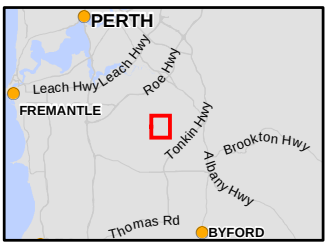
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N

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY MAP



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PROJECT ID	DATE
5413	30/05/2023

HORIZONTAL DATUM AND PROJECTION
GDA 1994 MGA Zone 50

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City of Gosnells

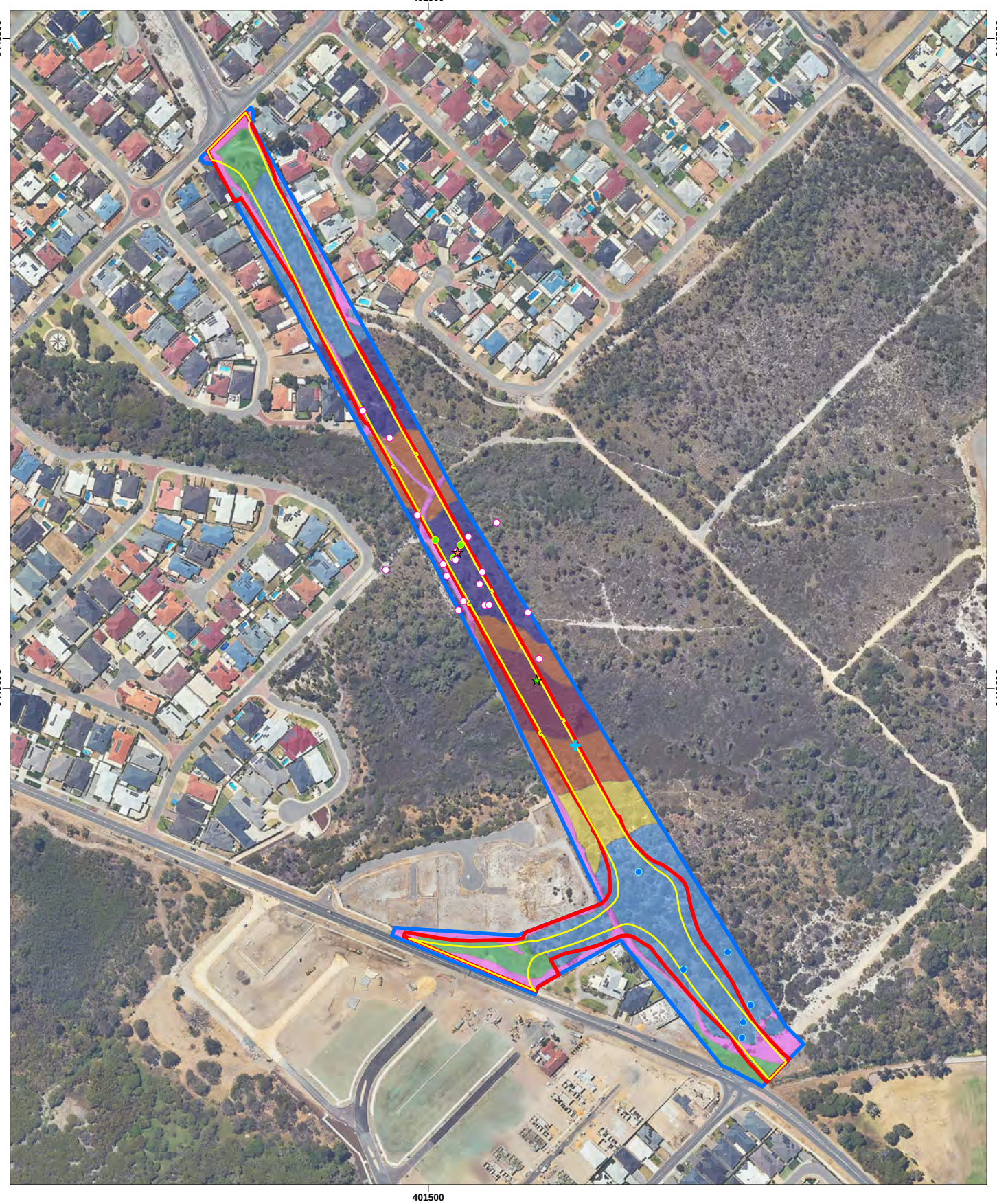
Garden Street Extension, Southern River

Management Plan

Figure 2
Wetlands and Hydrology

K:\Projects\9.0 APP\5413 City of Gosnells ERD\May2023_Figure Request for 5413 Garden Street Extension Southern River\5413 Fig 4 Wetlands.mxd

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Legend

- Development Footprint (1.95 ha)
- Development Envelope (2.65 ha)
- Garden Street Extension Study Area - Metropolitan Region Scheme Boundary

Vegetation Unit (Biologic, 2023)

- Adc Epp PcDea
- BaBmEt Kg Xp PcDbDa
- Mep MerHavPef Hya LsLelLepg
- BaBmAlf Adc HhStlAlh DeaBcDb
- Mep AdcKgAdo RcAaPef Hya SceHye
- Parkland Cleared
- Cleared

Flora Records (Biologic, 2023)

- **Asparagus asparagoides*
- *Jacksonia gracillima* (P3)
- *Styphelia filifolia* (P3)

Flora of other significance

RH - Range Extension

- *Gastrolobium acutum*

Flora of other significance

LH - Locality Hole

- *Goodenia pulchella subsp. Coastal Plain B (L.W. Sage 2336)*
- *Lepidosperma sp. Margaret River (B.J. Lepschi 1841)*

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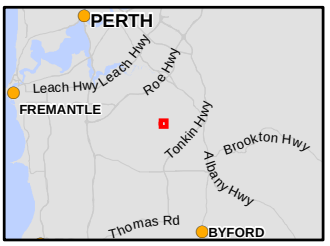
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City of Gosnells

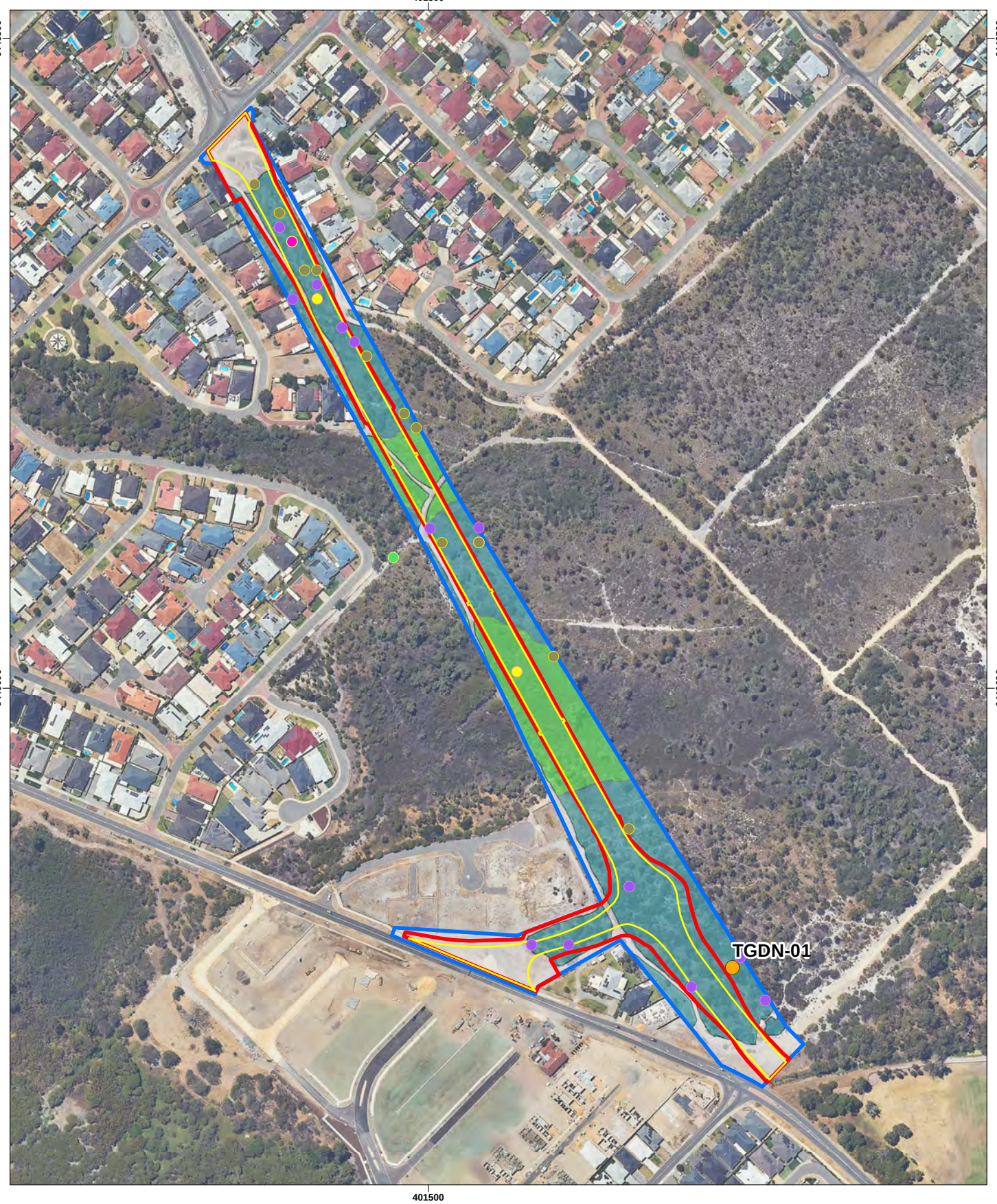
Garden Street Extension, Southern River

Management Plan

Figure 3
Vegetation and Flora

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K:\Projects\9.0 APP\5413 City of Gosnells ERD\5413 Figures Update Oct2022\5413 Figure Request - Garden Street Revised RSD, 5413\Edits 20102023\5413 Fig 3 Vegetation and Flora.mxd



Legend

- Development Footprint (1.95 ha)
- Development Envelope (2.65 ha)
- Garden Street Extension Study Area - Metropolitan Region Scheme Boundary

Potential Breeding Tree (Biologic, 2023)

- Jarrah (*Eucalyptus marginata*)

Fauna Habitat (Biologic, 2023)

- Banksia Woodland
- Melaleuca Thicket
- Cleared

Fauna Records (Biologic, 2023)

- Carnaby's Cockatoo - Foraging Evidence
- Carnaby's Cockatoo - Individual (alive)
- Forest Red-tailed Cockatoo - Individual (alive)
- Quenda - Digging
- Quenda - Individual (alive)

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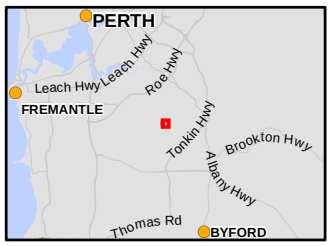
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0 40 80 120 Metres
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LOCALITY MAP



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GDA 1994 MGA Zone 50

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City of Gosnells

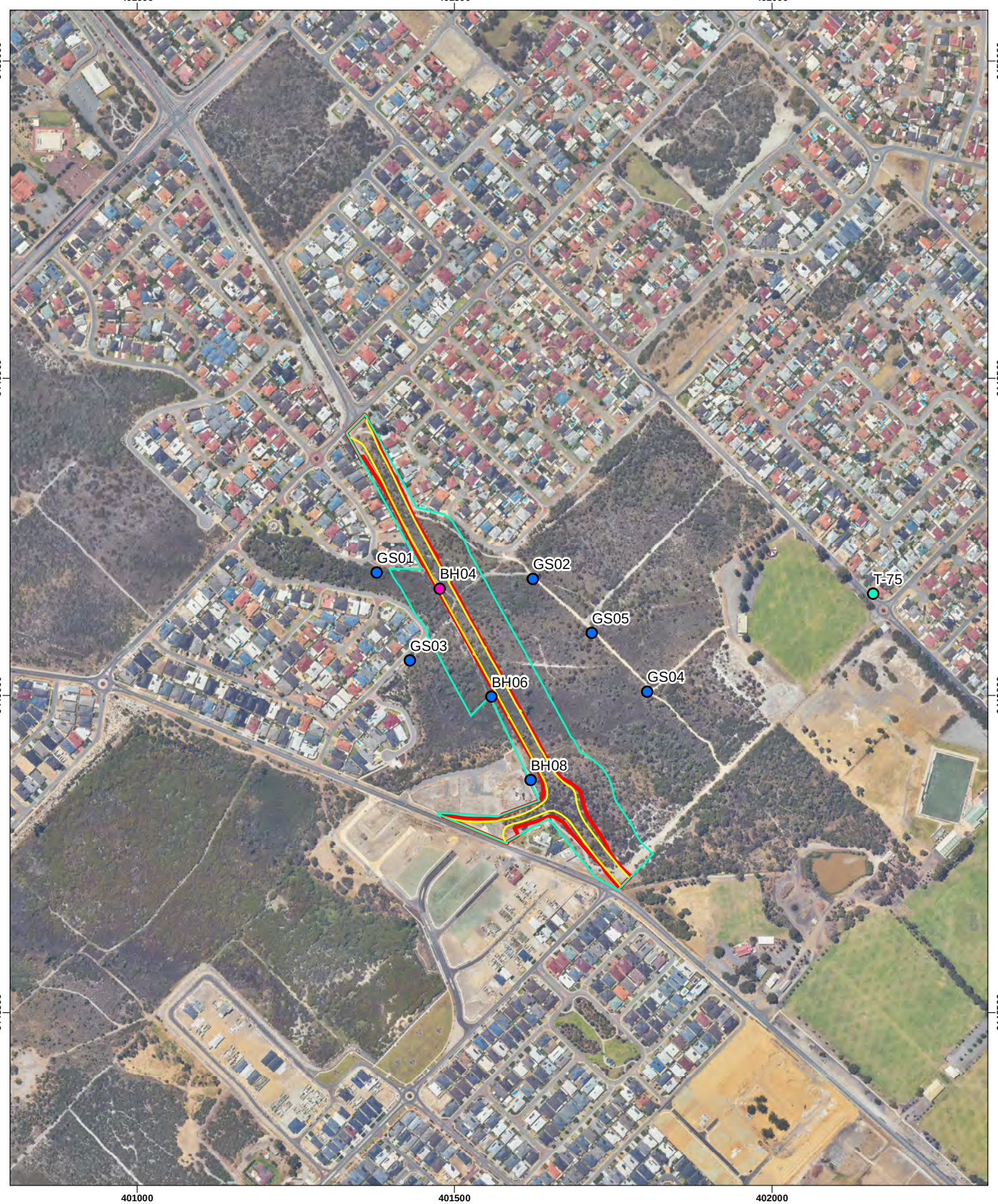
Garden Street Extension, Southern River

Management Plan

Figure 4
Fauna Habitat

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K:\Projects\9.0 APP\5413 City of Gosnells ERD\5413 Figures Update Oct2022\5413 Figure Request - Garden Street Revised RSD, 5413\Edits 20102023\5413 Fig 4 Fauna Habitat.mxd



Legend

- Development Footprint (1.95 ha)
- Development Envelope (2.65 ha)
- Garden St - 50 m buffer area
- Groundwater bore impacted by the Proposal
- Groundwater Monitoring Sites
- Contingency Monitoring Site (DWER bore)

0 80 160 240 N

Metres

1:8,194 @ A4

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LOCALITY MAP



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5413	21-Nov-2023

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CREATED	CHECKED	APPROVED	REVISION
EC	MS	KF	0

City of Gosnells

Garden Street Extension, Southern River

Management Plan

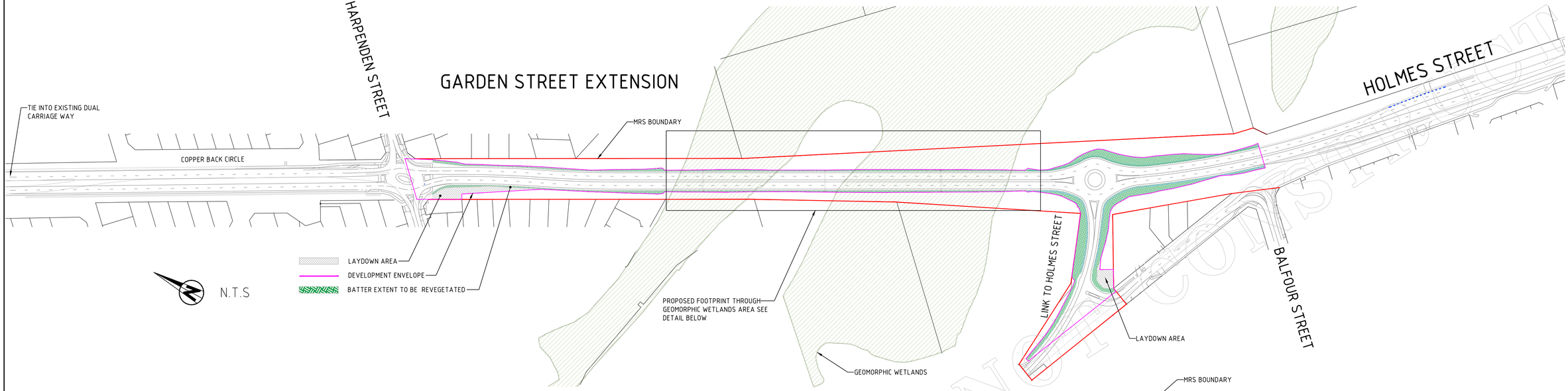
Figure 5
Maintenance and Monitoring Area

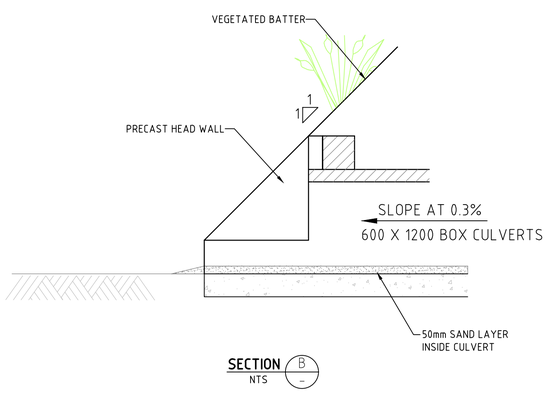
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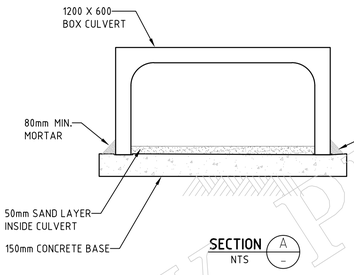
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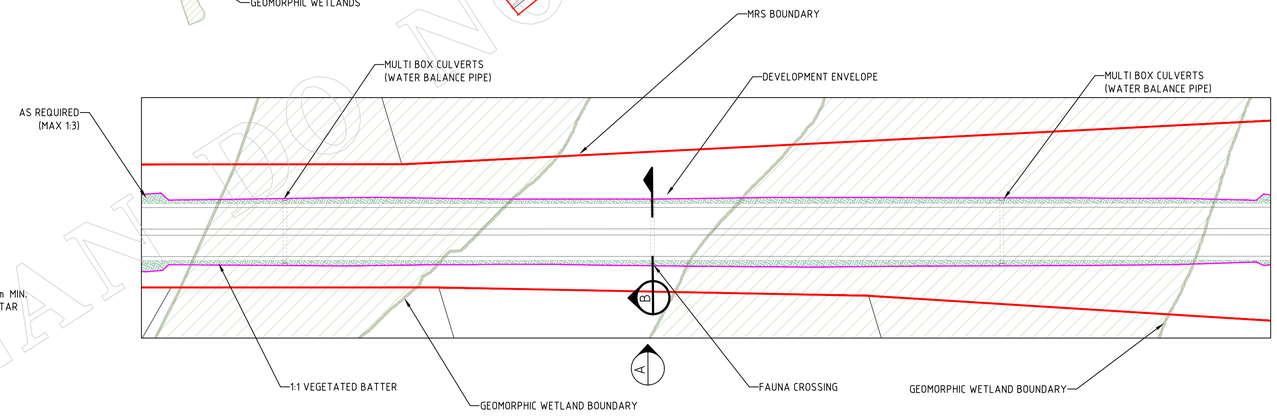
Appendices

Appendix A
Engineering Plan E90-18-016

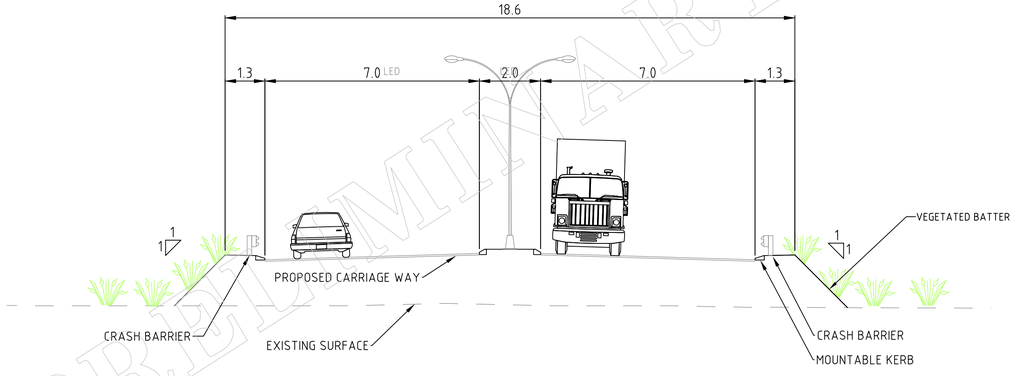




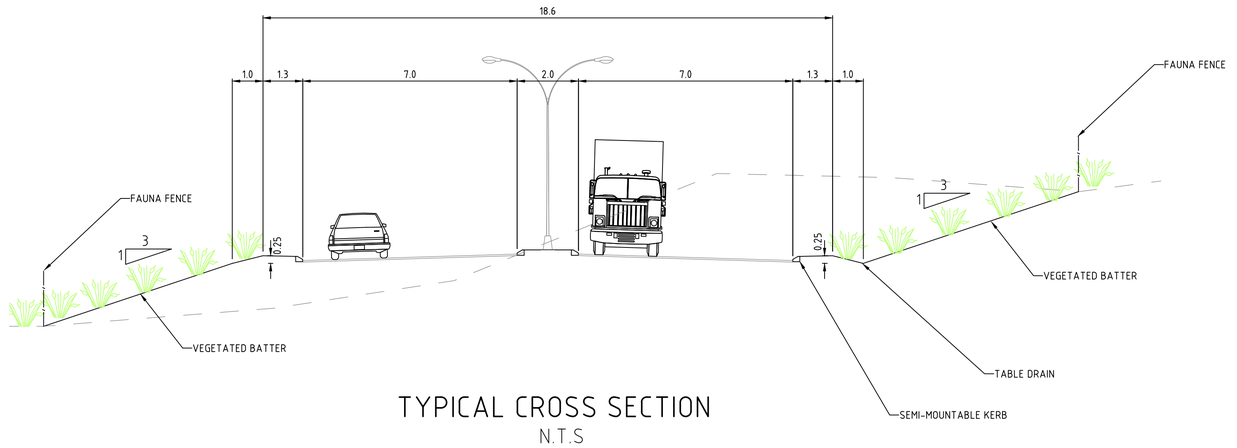




FOOTPRINT THROUGH GEOMORPHIC WETLAND



TYPICAL CROSS SECTION THROUGH GEOMORPHIC WETLANDS
N.T.S



TYPICAL CROSS SECTION
N.T.S

PRELIMINARY PLAN NOT FOR CONSTRUCTION

AMENDMENTS

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Western Australia
Telephone 08 9397 3000
Facsimile 08 9397 3333
Online www.gosnells.wa.gov.au

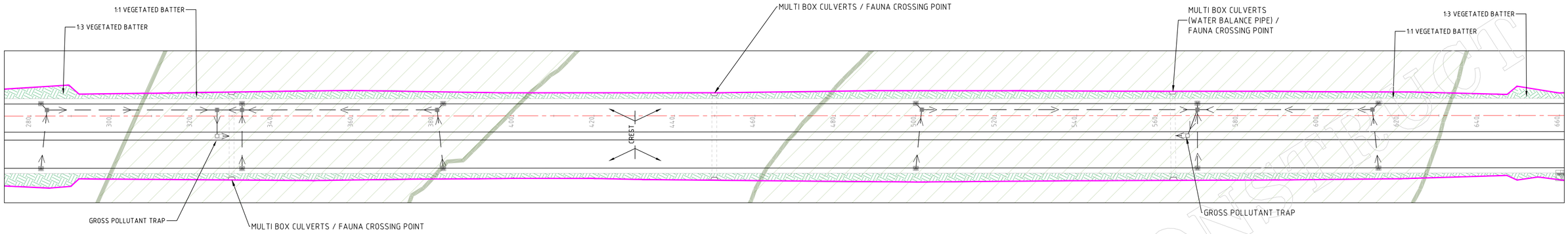
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RS	FEB-22	AHD
CHECKED		GRID SYSTEM
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AUTHORISED		JOB NUMBER

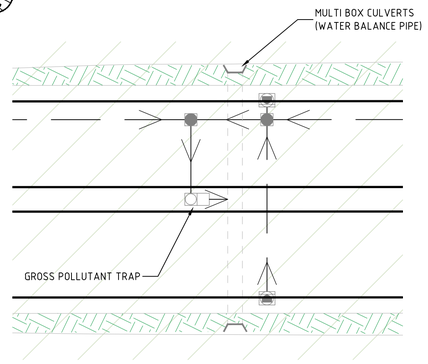
PROJECT
GARDEN STREET EXTENSION
HARPENDEN STREET TO BALFOUR STREET

DRAWING TITLE
DUAL CARRIAGEWAY DEVELOPMENT
FOOT PRINT AND TYPICAL CROSS SECTIONS

PLAN No E90-18-016 REV
CONCEPT A1
CHIEF ENGINEER
S. ASMUS 09/03/22
S. ASMUS DATE

14/03/2022 11:06:31 AM S:\CURRENT PROJECTS\GARDEN STREET HARPENDEN TO PASSMORE 2016 JOB 80310\DWG\E90-MINMALDUAL-HARPENDEN ROUNDABOUT 2.4.DWG

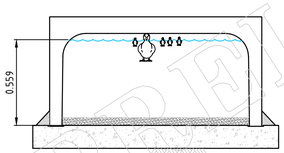




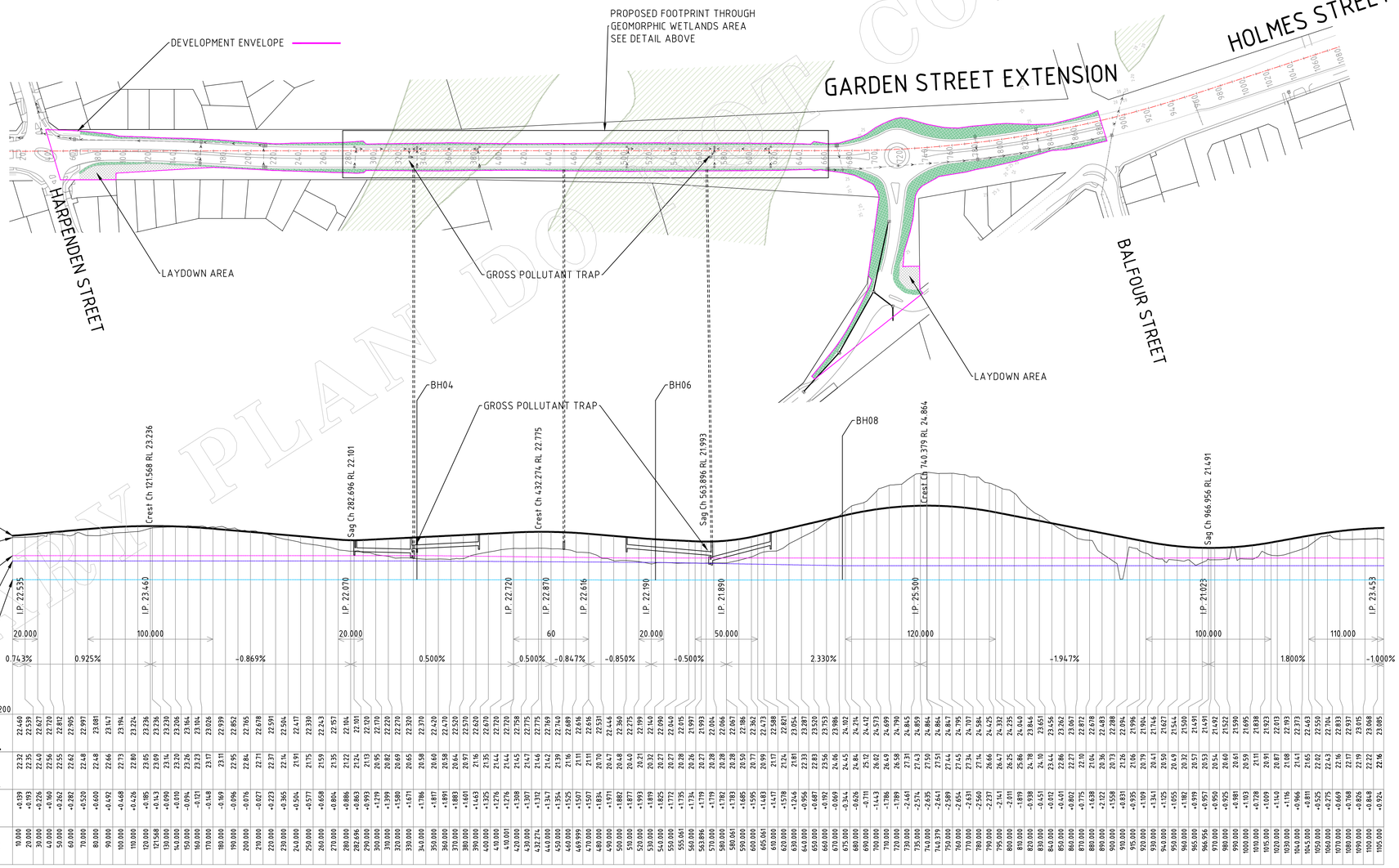
LEGEND

- TRAFFICABLE MANHOLE
- SIDE ENTRY GULLY
- GROSS POLLUTANT TRAP
- CULVERT HEADWALL

THE NORTH CULVERT (CH330)
CROSS SECTION DURING 1:10 YEAR STORM EVENT
SCALE: 1:20



THE SOUTH CULVERT (CH563)
CROSS SECTION DURING 1:10 YEAR STORM EVENT
SCALE: 1:20



LONGITUDINAL SECTION
DualWithRoundabout Ch 10.000 to Ch 1105.000
SCALES: HORIZONTAL 1:2000 VERTICAL 1:200

PRELIMINARY PLAN DO NOT CONSTRUCT

AMENDMENTS

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1	5/4/23	REVISED TO INCLUDE ADDITIONAL INFORMATION	RS		SA

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DESIGN GR	DATE MAY-21	SCALE HORIZ. 1:500 VERT. 1:200
DRAWN RS	DATE FEB-22	DATUM AHD
CHECKED		GRID SYSTEM PCG
AUTHORISED		JOB NUMBER

PROJECT
GARDEN STREET EXTENSION
HARPENDEN STREET TO BALFOUR STREET

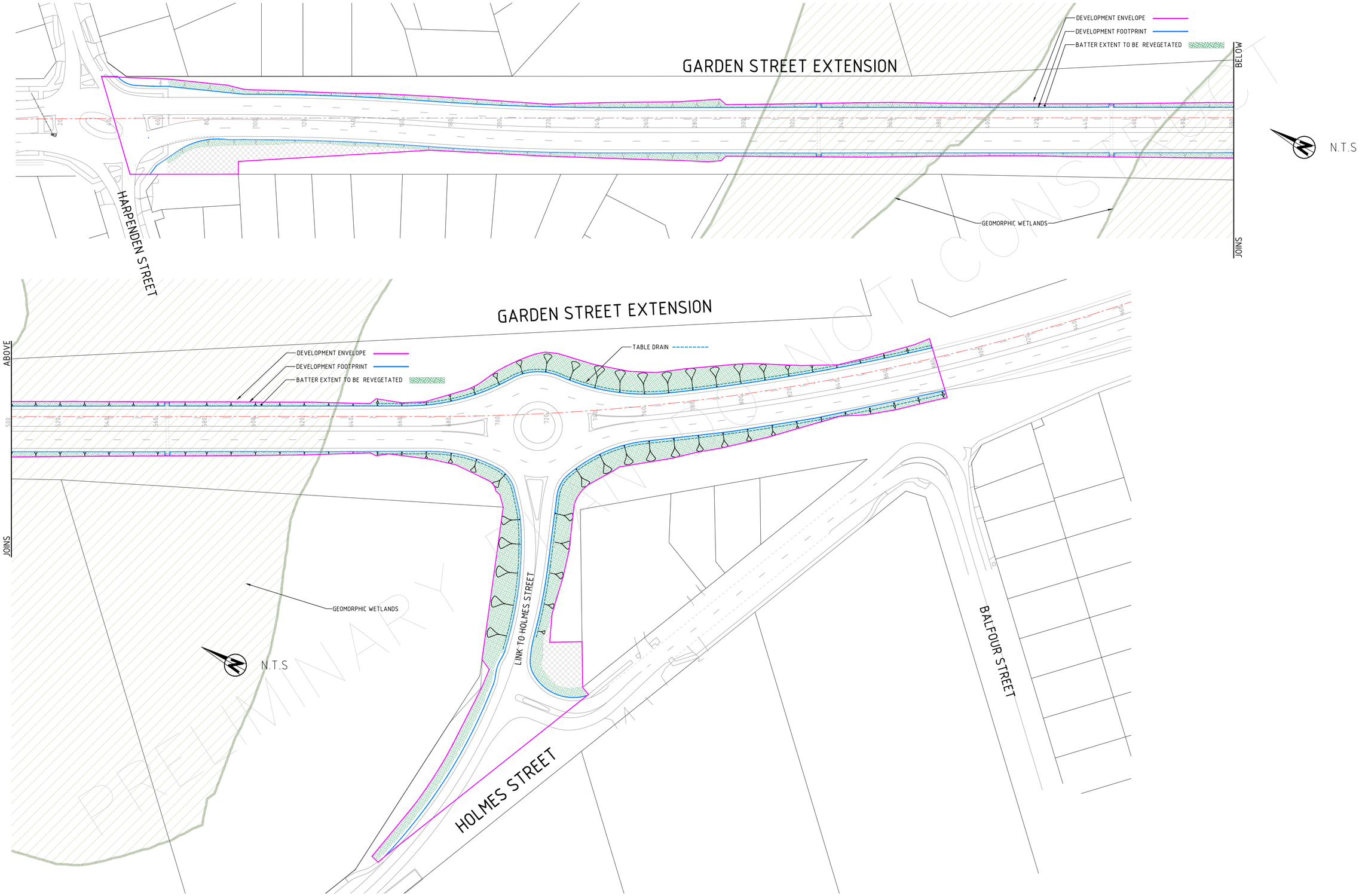
DRAWING TITLE
DUAL CARRIAGEWAY MINIMAL FOOTPRINT
DRAINAGE

PLAN No E90-18-017-1 REV

CONCEPT | A1

CHIEF ENGINEER
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S. ASMUS DATE

14/04/2023 1:16:46 PM S:\CURRENT PROJECTS\GARDEN STREET HARPENDEN TO PASSMORE 2016 JOB 8831\DWG\E90-MINIMALDUAL-HARPENDEN ROUNDABOUT 2.5.DWG



AMENDMENTS

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AUTHORISED			

SCALE HORIZ. 1:750 VERT.
DATUM
GRID SYSTEM
JOB NUMBER

PROJECT
GREEN STREET
HARPENDEN STREET TO BALFOUR STREET

DRAWING TITLE
PROJECT ENVELOPE PLAN

PLAN No E90-18-018 REV

A1

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Appendix B
Garden Street Road extension, Huntingdale, City of Gosnells, Western Australia (EPBC 2016/7735) Approval

Approval

Garden Street road extension, Huntingdale, City of Gosnells, Western Australia (EPBC 2016/7735)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted	City of Gosnells
proponent's ABN	ABN: 18 374 412 891
proposed action	To extend Garden Street in the suburb of Huntingdale, east Perth, in a south-westerly direction to join Holmes Street, and widen Holmes Street at the junction of Holmes and Garden Street [See EPBC Act referral 2016/7735].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

conditions of approval This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 December 2030.

Decision-maker

name and position	Gregory Manning Assistant Secretary Assessments (WA, SA, NT) and Post Approvals Branch
signature	
date of decision	25/10/18

Conditions attached to the approval

1. For the protection of the **EPBC Act listed species**, the approval holder must not **clear** more than 4.58 hectares within the **project area**.

2. To mitigate and manage impacts to **EPBC Act listed species**, the approval holder must comply with and implement the **Revegetation Management Plan, Landscape Management Plan** and **Environmental Management Plan**.

3. Prior to the **commencement** of the action install three artificial nesting hollows within 3 km of the **project area**

    (a) each artificial nesting hollow installed under condition 3 must be monitored and maintained in accordance with relevant **artificial hollow guidance** for the life of the approval, with maintenance actions, if required, undertaken outside of the **breeding season** and before the commencement of the next **breeding season**.

4. Within 30 days after the **commencement** of the action, the **approval holder** must advise the **Department** in writing of the actual date of **commencement**.

5. The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.

6. Upon the direction of the **Minister**, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

7. The approval holder may choose to revise a management plan approved by the **Minister** under condition 2 without submitting it for approval under section 143A of the **EPBC Act**, if the taking of the action in accordance with the revised plan would not be likely to have a **new or increased impact**. If the approval holder makes this choice they must:

    i. notify the **Department** in writing that the approved plan has been revised and provide the **Department** with an electronic copy of the revised plan;
    ii. implement the revised plan from the date that the plan is submitted to the **Department**; and
    iii. for the life of this approval, maintain a record of the reasons the approval holder considers that taking the action in accordance with the revised plan would not be likely to have a **new or increased impact**.

7A. The approval holder may revoke their choice under condition 7 at any time by notice to the **Department**. If the approval holder revokes the choice to implement a revised plan, without approval under section 143A of the EPBC Act, the plan approved by the **Minister** must be implemented.

7B. If the **Minister** gives a notice to the approval holder that the **Minister** is satisfied that the taking of the action in accordance with the revised plan would be likely to have a **new or increased impact**, then:

i. Condition 7 does not apply, or ceases to apply, in relation to the revised plan; and
ii. The approval holder must implement the plan approved by the **Minister**.

To avoid any doubt, this condition does not affect any operation of conditions 7, 7A and 7B in the period before the day the notice is given.

At the time of giving the notice the **Minister** may also notify that for a specified period of time that condition 7 does not apply for one or more specified plans required under the approval.

7C. Conditions 7, 7A and 7B are not intended to limit the operation of section 143A of the **EPBC Act** which allows the approval holder to submit a revised plan to the **Minister** for approval.

8. Unless otherwise agreed to in writing by the **Minister**, the approval holder must publish all management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within one (1) month of being approved by the **Minister** or being submitted under condition 7.i.

9. If, at any time after five (5) years from the date of this approval, the approval holder has not substantially **commenced** the action, then the approval holder must not substantially **commence** the action without the written agreement of the **Minister**.

Definitions

Artificial hollow guidance means WA Department of Parks and Wildlife publications *"How to monitor and maintain artificial hollows for Carnaby's cockatoo"* (2015), or as otherwise updated from time to time.

Breeding season for the **Carnaby's Black Cockatoo** is the period between 1 July and 28 February of any year.

Carnaby's Black Cockatoo is the **EPBC Act** listed Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*).

Clearing/clear/cleared means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.

Commencement/commence/commenced means the clearing of any vegetation or construction of any infrastructure, excluding fences and signage, associated with the proposed action.

Department ('s) is the Australian Government Department or any other agency administering the EPBC Act.

Environmental Management Plan means the plan submitted with the final preliminary documentation entitled *Environmental Management Plan*, dated 12 December 2017, version number 6, authored by PGV Environmental; or as revised under these conditions.

EPBC Act is the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

EPBC Act listed species means the **EPBC Act** listed King Spider-orchid (*Caladenia huegelii*), Purdie's Donkey-orchid (*Diuris purdiei*) and Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*).

Landscape Management Plan means the plan submitted with the final preliminary documentation entitled *Landscape Management Plan*, dated 12 December 2017, version number 6, authored by PGV Environmental; or as revised under these conditions.

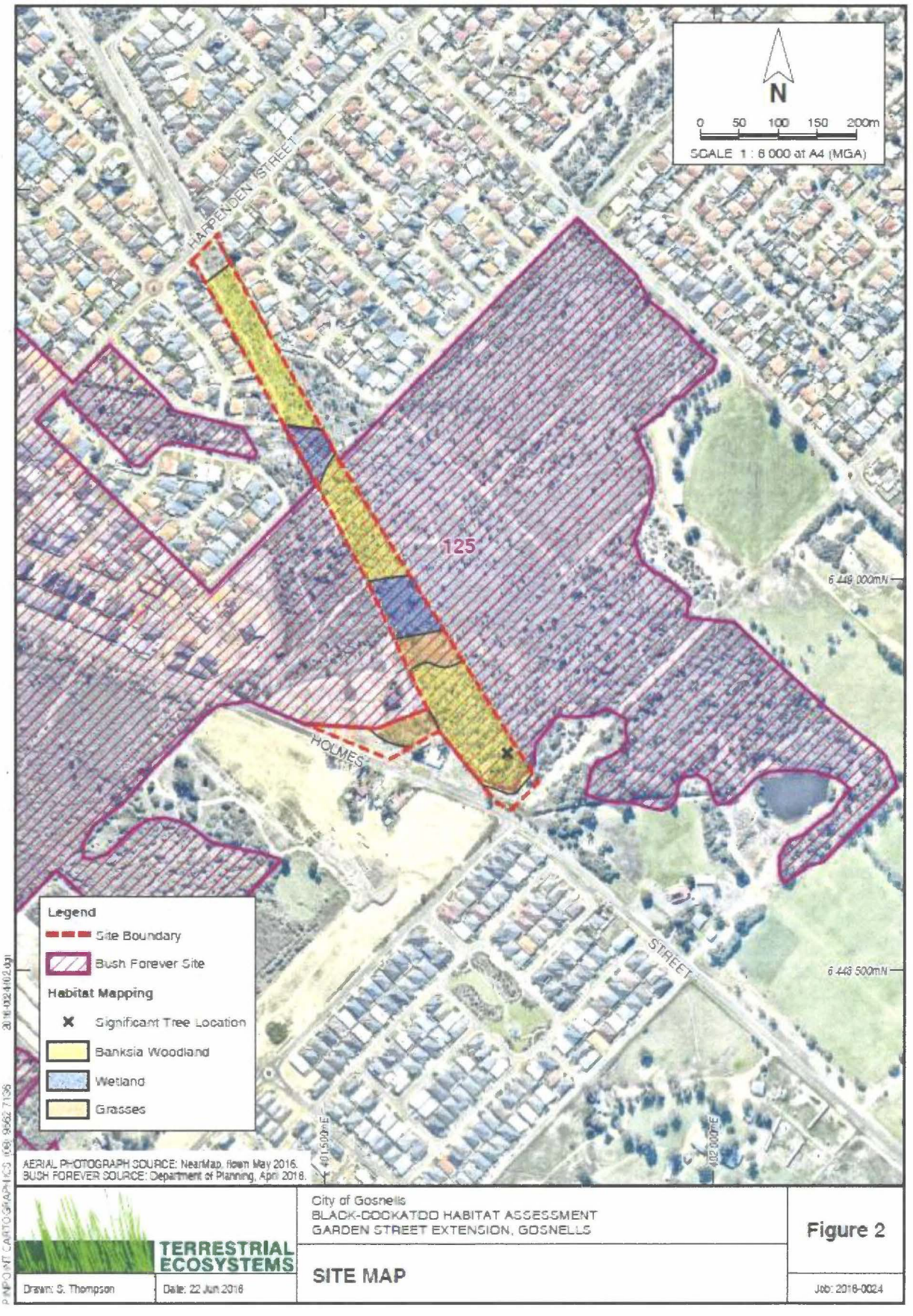
Minister means the Minister administering the EPBC Act and includes a delegate of the Minister.

New or increased impact means a new or increased impact on any matter protected by the controlling provisions for the action, when compared to the plan that has been approved by the **Minister**.

Project Area is the area shown in Attachment A, where it is depicted as 'Site Boundary', and marked with a red hashed line.

Revegetation Management Plan means the plan submitted with the final preliminary documentation entitled *Revegetation Management Plan* dated 14 March 2018, version number 7, authored by PGV Environmental; or as revised under these conditions.

Attachment A



Appendix C
Recommended Planting List

Species*	Form	Banksia Woodland	Melaleuca Thicket
Acacia pulchella	Shrub (>1.5 m)	X	X
Adenanthos obovatus	Small shrub (<1.5 m)	X	X
Allocasuarina humilis	Shrub (>1.5 m)	X	
Anigozanthos humilis	Groundcover (<0.5 m)	X	
Anigozanthos manglesii	Groundcover (<0.5 m)	X	
Calothamnus lateralis	Small shrub (<1.5 m)		X
Calytrix flavescens	Groundcover (<0.5 m)	X	
Conostylis juncea	Groundcover (<0.5 m)	X	
Dampiera linearis	Groundcover (<0.5 m)	X	X
Dasypogon bromeliifolius	Groundcover (<0.5 m)	X	
Desmocladus asper	Groundcover (<0.5 m)	X	
Eremaea pauciflora	Shrub (>1.5 m)	X	X
Ficinia nodosa	Sedge		X
Gompholobium tomentosum	Small shrub (<1.5 m)	X	X
Hakea varia	Shrub (>1.5 m)	X	X
Hemiandra pungens	Groundcover (<0.5 m)	X	
Hibbertia hypericoides	Small shrub (<1.5 m)	X	
Hibbertia subvaginata	Small shrub (<1.5 m)	X	
Hovea trisperma	Small shrub (<1.5 m)	X	
Hypocalymma angustifolium	Small shrub (<1.5 m)		X
Kennedia prostrata	Groundcover (<0.5 m)	X	
Leptocarpus scariosus	Sedge		X
Lepidosperma longitudinale	Sedge		X
Macrozamia riedlei	Small tree	X	
Melaleuca seriata	Small shrub (<1.5 m)		X
Melaleuca thymoides	Shrub (>1.5 m)	X	X
Patersonia occidentalis	Groundcover (<0.5 m)	X	X
Phlebocarya ciliata	Groundcover (<0.5 m)	X	X
Regelia ciliata	Shrub (>1.5 m)	X	X
Schoenus efoliatus	Sedge		X
Stirlingia latifolia	Small shrub (<1.5 m)	X	X
Xanthorrhoea preissii	Small tree	X	X

* Different plant species palettes will be used for parts of the batters intersecting ‘Banksia Woodland’ and ‘Melaleuca Thicket’ areas that are defined on Figure 4. No trees are proposed, given the predominantly narrow width of the batter and potential future maintenance issues being so close to the future road. All proposed plant species are known to occur within the relevant vegetation type within Bush Forever Site No. 125 based on the Biologic (2023) Ecological Survey.

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