

Appendix B – Mitigation Measures

This table identifies the mitigation measures for the project (excluding any mitigation measures that are built into the physical layout and design of the project and captured in the project description) as required by section 192 of the Environmental Planning and Assessment Regulation 2021.

Issue	Mitigation Measures	
Bushfire	All recommendations of the Bushfire Hazard Assessment prepared by GeoLink (Appendix N) will be implemented including the requirements listed in the following table.	
	Element	Requirement
	Asset Protection Zone	An asset protection zone is to be provided around the Main House and Garden House as shown in Illustration 4.1 of the Bushfire Hazard Assessment. The asset protection zone is to be managed to the standard of an Inner Protection Area in accordance with Section A4.1.1 of PBP 2019.
	Landscaping	Landscaping of the site is to comply with the Landscape Plan prepared by Wyer & Co.
Construction Requirements	The proposed dwellings are to be constructed as follows: <p>Main House:</p> <ul style="list-style-type: none"> The dwelling is to be constructed in accordance with AS 3959:2018 Section 3 and Section 7 (BAL 29) and PBP 2019 – Section 7.5.2, except that Section 7.5.3 of AS 3959:2018 is replaced by Section 7.5.4 of AS 3959:2018 for windows. <p>Garden House</p> <ul style="list-style-type: none"> The dwelling is to be constructed in accordance with AS 3959:2018 Section 3 and Section 7 (BAL 29) and PBP 2019 – Section 7.5.2, except that: <ul style="list-style-type: none"> - the eastern facade is to be constructed in accordance with AS 3959:2018 Section 3 and Section 9 (BAL FZ), except for the ground floor window and door; and 	

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		- Section 7.5.3 of AS 3959:2018 is replaced by Section 7.5.4 of AS 3959:2018 for BAL 29 windows.
	Fence	A 1.8 m high, non-combustible radiant heat shield is to be constructed along the eastern and western boundary of 8 Brownell Drive adjacent to the proposed Garden House.
	Services	Water, electricity and gas services are to comply with Table 7.4a of Planning for Bush Fire Protection 2019.
Biodiversity and Vegetation Management	<ul style="list-style-type: none"> • The direct and indirect mitigation measures identified in Part 6 of the Streamlined BDAR prepared by Australian Wetlands Consulting (Appendix L) will be implemented. • The ecosystem and species credits outlined in the Streamlined BDAR prepared by Australian Wetlands Consulting (Appendix L) are to be retired. • The Vegetation Management Plan prepared by Australian Wetlands Consulting (Appendix M) will be implemented. • The recommendations of the Arboricultural Impact Assessments (AIAs) for 1 Julian Place and 8 Brownell Drive will be implemented (Appendix P1 and P2 respectively). The AIAs identify the trees that are to be removed or retained and protected. The recommendations relate to pruning, access and storage, tree protection fencing, ground protection, excavation, underground services, soil composition, landscape works, inspection internals, supplementary protection measures and the CMP. • The construction of the development will be managed in accordance with the Preliminary Construction Management Plan (Appendix R). Section 12 of the PMP includes the following mitigation measures that are specific to the management of flora and fauna: <ul style="list-style-type: none"> ○ Where practicable, the civil works will be constructed outside of identified protected vegetation areas, ○ the identified protected vegetation will be assessed prior to construction by a suitably qualified Flora and Fauna specialist and managed in accordance with the sites Vegetation Management Plan, ○ appropriate fencing may be required to delineate the construction works and Vegetation Management zones prior to construction, ○ construction works should be completed with minimal disturbance to retained trees and vegetation, ○ where roots of trees may be exposed or trimmed, such works shall be performed under the guidance of an arborist, and ○ the contractor will be required to engage a licenced Fauna Spotter Catcher at least 24hrs prior to the removal of any vegetation, including provision of the relevant reporting and certification. <p>The final CMP is to be prepared in accordance with the recommendations of all relevant consultant reports, including the BDAR, AIA, SMR, Hydrological Report, and VMP.</p>	
Erosion and Sediment Control	<p>The Erosion and Sediment Control measures outlined Section 11 of the Preliminary Construction Management Plan prepared by Western Partners will be implemented. Prior to commencement of construction activities, a separate Erosion and Sediment Control Plan (ESCP) prepared by suitably qualified personnel will be completed for this project. On site Erosion and Sediment Control measures are to be established to all areas of soil disturbance prior to the commencement of construction works.</p>	

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Earthworks	<p>The recommendations of the Preliminary Geotechnical Investigation prepared by Pacific Geotech will be implemented (Report E of the EIS).</p> <p>The recommendations of the Preliminary Construction Management Plan prepared by Westera Partners (Appendix R) are to be implemented. Key recommendations to minimise the impact of the earthworks that are outlined in the PCMP are:</p> <ul style="list-style-type: none"> • No import of fill material is envisioned (use on site spoil for any fill required) • The construction access for exported cut material is expected to be from Julian Place via Marine Pde/Palm Valley Dr/Lighthouse Rd/ & Lawson St in order to minimise vibration, noise and disturbance to nearby residential properties. • The earthworks will be reinforced near vertically along the southern, eastern & western boundaries of the lower and upper house basements utilising layers of wrapped geofabric blankets, retaining walls and possibly rock anchors if required. • A temporary earth bund wall is to be installed around the perimeter of works to assist in the prevention of sediment migration onto the roadways as well as the receiving stormwater system. • Approximately 128m³ of cut material (sourced on site) will be required to achieve the proposed earthworks pad level • Approximately 3,349m³ of spoil material will be required to be exported off site to achieve the proposed earthworks pad level. This is considered to require 3 weeks for all material to be taken off site. (Assumed 30 trucks per day at 8m³ each, 5 days a week). 				
Stormwater	<p>Stormwater is to be managed in accordance with the Stormwater Management Report (Appendix I) and Stormwater Management Plans (preliminary civil drawings) prepared by Westera Consulting (Appendix H). By implementing the proposed stormwater management system, and providing adequate maintenance, the downstream environment and neighbouring properties will not experience any adverse deterioration of water quality or increase in peak stormwater flow as a result of the proposed development.</p>				
Groundwater	<p>The retention wall, behind wall drainage and underslab drainage considerations outlined in Section 7 of the Hydrological Report prepared by Pacific Geotechnical Report are to inform the final design (Appendix O).</p>				
Waste Management	<p>Construction and operational waste is to be managed in accordance with the construction methodologies and recommendations in the Site Waste Management Plan prepared by TTM (Report T of the EIS).</p>				
Air Quality	<p>The recommendations in section 10 'Air and Dust Management' of the Preliminary Construction Management Plan prepared by Westera Partners are to be implemented (Appendix R). Key measures outlined in the PCMP are summarised in the following table.</p> <table border="1" data-bbox="443 1174 2002 1374"> <thead> <tr> <th data-bbox="443 1174 734 1230">Hazard</th> <th data-bbox="734 1174 2002 1230">Control Measures</th> </tr> </thead> <tbody> <tr> <td data-bbox="443 1230 734 1374">Dust</td> <td data-bbox="734 1230 2002 1374"> <ul style="list-style-type: none"> • Site water to suppress the dust. • Avoid dust generating activities such as haulage during dry and windy conditions. • Engineering controls to stabilise exposed areas. For example, polymers, geofabric, mulch, seeding, re-vegetation </td> </tr> </tbody> </table>	Hazard	Control Measures	Dust	<ul style="list-style-type: none"> • Site water to suppress the dust. • Avoid dust generating activities such as haulage during dry and windy conditions. • Engineering controls to stabilise exposed areas. For example, polymers, geofabric, mulch, seeding, re-vegetation
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		<ul style="list-style-type: none"> • Limit temporary stockpiles to less than 2m in height • Temporary stockpiles are to be stabilized if in place for more than two weeks.
	Fumes – Plant and Equipment Fumes	<ul style="list-style-type: none"> • Machines are maintained and serviced regularly • Usage of modern fleet • Shutdown machines when not in use • Catalytic converters and exhaust filters (if available) • Correct fuel specification • Avoiding overloading • Appropriate height of discharge above ground level
	Odours – Paints, Solvents and Chemicals	<ul style="list-style-type: none"> • Appropriate usage and storage of paints, solvents, and chemicals. • Refuelling of machines away from nearby residents.
The neighbour complaint handling procedures set out in the Preliminary Construction Management Plan are to be implemented.		
Noise and Vibration	<p>The construction and vibration management measures outlined in the Construction Noise and Vibration Assessment by TTM will be implemented (Appendix N of the EIS). The noise and vibration measures outlined in the Preliminary Construction Management plan are also to be implemented (Appendix R).</p> <p>A Final Construction Management Plan (which includes Noise and Vibration Management) must be prepared as part of the construction certificate documentation.</p> <p>Neighbour complaint handling procedures set out in the Preliminary Construction Management Plan are to be implemented.</p>	
Preserving Aboriginal Cultural Heritage	<p>Brownell Drive AS01 (AHIMS ID 04-5-0388) will be partially directly impacted by the proposed development. The recommendations in Section 12 of the Aboriginal Cultural Heritage Assessment Report will be implemented. The recommendations include the following:</p> <ul style="list-style-type: none"> • An Aboriginal Heritage Impact Permit is applied for the Project Area (the entire site) to cover direct and indirect impacts to Brownell Drive AS01 (AHIMS ID 04-5-0388) and any unexpected finds that may occur. The recommended term of the AHIP is for three years. Salvage excavation is not recommended as a condition of the AHIP due to the highly disturbed nature of the Project Area and extremely low-density nature of the any potential archaeological deposit. Community collection and reburial, however, is recommended as a condition of the AHIP. • Consultation on-site with Bundjalung of Byron Bay (Arakwal) Aboriginal Corporation (BoBBAC) cultural officers revealed that their management preference is for community collection of the surface artefacts comprising Brownell Drive AS01 (AHIMS ID 04-5-0388) prior to the start of construction and permanent reburial. Reburial options to consider are as follows: 	

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	<ul style="list-style-type: none"> ○ Within the Cape Byron State Conservation Area adjacent to the Project Area. ○ Within a tree protection zone within the Project Area. • The following recommendations have been made as a result of in field consultation with BoBBAC cultural officers: <ul style="list-style-type: none"> ○ Monitoring by BoBBAC of any ground disturbing works (top 300 mm) must be undertaken. The monitors should include both female and male cultural representatives. ○ All discussions and negotiations for monitoring must be between the proponent or proponent’s representative and BoBBAC. The proponent will be responsible for the payment of the cultural heritage monitors. ○ It is recommended that the proponent maintain effective and open communication with BoBBAC concerning the timing and nature of the proposed works and the requirement for monitoring services. ○ At the commencement of works, BoBBAC will provide a cultural heritage induction with Project contractors in order to provide them with an understanding of the cultural values and sensitivity associated with the Project Area and surrounding landscape. • Native indigenous plants should be used for landscaping of the Project Area grounds in order to respect the cultural values of the place, that is the long occupation and traditions of the Arakwal people. If suspected human remains are discovered and/or harmed in, on or under the land within the Project Area, the following actions must be undertaken: <ul style="list-style-type: none"> ○ The remains must not be harmed/further harmed ○ Immediately cease all works at that particular location ○ Secure the area so as to avoid further harm to the remains ○ Notify the NSW Police and the Environment Line (Department of Planning and Environment) on 131 555 as soon as practicable and provide any details of the remains and their location ○ Do not recommence any work at that particular location unless authorised in writing by Department of Planning and Environment. • Unexpected Aboriginal objects remain protected by the <i>NPW Act</i>. If any such objects, or potential objects, are uncovered in the course of the activity, work in the vicinity must cease, and Heritage NSW, and BoBBAC be contacted for advice.
Contamination	The Unexpected Finds Protocol outlined in the Preliminary Contaminated Land Assessment prepared by Greg Alderson Associates (Appendix P of the EIS) will be implemented.
Construction Management	The recommendations of the Preliminary Construction Management Plan prepared by Westera Partners (Appendix N of the EIS) are to be implemented. A Final CTPMP is to be prepared and finalised prior to the commencement of works.