

Proposed Mundijong Precincts E1 & E2 Local Structure Plan - Schedule of Modifications

No	Section	Modification	Justification
<i>General</i>			
1.	LSP Part 1 Section 1.1.1 & Appendices	Update Appendix 3 Bushfire Management Plan, Appendix 6 Landscape Strategy, Appendix 7 Civil Servicing Report, and Appendix 8 Environmental Assessment Report to align with proposed LSP layout. Modify Section 1.1.1 to align.	These appendices do not reflect the current lot layouts, road networks and public open spaces proposed by the local structure plan.
2.	LSP Map and Text	Amend the Local Structure Plan to identify a density of Residential R15 for the lots backing onto the Tonkin Highway reserve/Water Corporation Infrastructure Corridor.	To reflect the R10-R15 density range identified by the Mundijong District Structure Plan.
3.	LSP Part 1 Section 4.4	Amend to state the below. The allocation of residential densities shall be in accordance with the following criteria: a) A density code of Residential R15 shall apply to the lots backing onto the Tonkin Highway Reserve/Water Corporation Infrastructure Corridor. b) A density code of Residential R30 shall apply as the base density code throughout the Structure Plan area, except where lots are identified for Residential R15, or subject to clauses b) i below: i. R40, R50 and R60 may apply to residential lots; <ul style="list-style-type: none"> • Abutting or overlooking Public Open Space or adjacent to the Primary School, and • Located at the end of street blocks to create a diverse streetscape and built form character. 	The densities proposed are required to be modified to appropriately reflect the density ranges identified by the Mundijong District Structure Plan, and to ensure compliance with the WA Planning Manual Guidelines for Structure Plans. The proposed 400m catchments around POS for higher density lots is inappropriate, as this would effectively encompass the entire structure plan area, resulting in the higher densities not necessarily being applied in close proximity to the high amenity locations. A modification is recommended to limit this to lots abutting or overlooking public open space or the Primary School, and at the end of street blocks.
4.	LSP Part 1 Section 4.5	Modify to state the below: The Structure Plan seeks to maintain existing mature trees within areas of POS where possible. A tree pick-up survey for fauna	Tree retention and a tree pickup survey should not be limited to 'retained vegetation shown by the structure plan map', and

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		habitat over the site is required at the subdivision stage to identify significant vegetation. As a condition of subdivision approval, proponents shall be required to ensure all development works including drainage, fill and earthwork programs take appropriate measures to protect any significant vegetation worthy of retention.	should instead cover any applicable vegetation within the subdivision site.
5.	LSP Part 1 Section 4	<p>Insert new subsection stating the below:</p> <p>A Fauna Management Plan shall be required as a condition of subdivision, to be undertaken prior to subdivision works and during clearing activities to protect the local fauna on site.</p>	The LSP states that the site holds almost no ecological value from a native fauna perspective. However, the LSP site provides remnant habitat to the endangered Black Cockatoo species, and Priority 4 species such as Bandicoots. A Fauna Management Plan is required as a condition of subdivision approval, given the fauna populations and remnant habitat on site.
6.	LSP Part 1 Section 4.7	<p>Remove the second dot point. Insert the below:</p> <p>A site-specific Bushfire Management Plan is required for each stage of subdivision.</p>	The current BMP associated with the LSP is at a broad-scale and does not account for detailed design of lot layouts, the road network, and vegetation at the subdivision stage.
7.	LSP Part 1 Section 4	<p>Insert a new subsection titled Road Infrastructure Requirements stating the below:</p> <p>At the subdivision stage, road infrastructure requirements are as follows:</p> <ul style="list-style-type: none"> - The existing portion of Taylor Road and Adams Street to be upgraded to an Integrator B standard. - Adams Street being extended to Mundijong Road and constructed to an Integrator B standard. - A roundabout intersection to be constructed at Mundijong Road and Adams Street. - Cockram Street being extended to Adams Street. 	<p>Commitments to road construction and upgrades are required to be demonstrated within the Part 1 of the LSP to ensure compliance. Infrastructure requirements have been prescribed as per the Mundijong District Structure Plan.</p> <p>Pedestrian connectivity must take place to the town centre and school as part of the first stage of subdivision. Given the likely first stage of subdivision occurring around the sewer pump station, the developer is required to extend the footpath network to ensure connectivity.</p>

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		<ul style="list-style-type: none"> - A roundabout intersection to be constructed at Adams Street and Cockram Street. - Adonis Street being converted to a cul-de-sac, or if shown possible a left in left out. - A roundabout intersection at Cockram Street and Adonis Street. - A roundabout intersection to be constructed at Richardson Street and Adams Street. - Pedestrian and Cycle Paths to be constructed along Taylor Road/Adams Street and Richardson Street at the first stage of subdivision. 	

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8.	LSP Part 1 Section 7	Insert rows stating the below requirements:	Mosquito management measures to address Department of Health submission, as the site is located within a mosquito


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		<ul style="list-style-type: none"> - Mosquito Management Plan as a condition of subdivision approval to the satisfaction of the Shire of Serpentine Jarrahdale. - Tree Pickup Survey as a condition of subdivision approval to the satisfaction of the Shire of Serpentine Jarrahdale. - Fauna Management Plan as a condition of subdivision approval to the satisfaction of the Shire of Serpentine Jarrahdale. 	<p>prone area, close to mosquito breeding sites and seasonal freshwater mosquito breeding habitats.</p> <p>To reflect requirements as per modifications 4 and 5 above.</p>
9.	LSP Part 1 Section 7	Replace reference to Bushfire Attack Level Assessment with Bushfire Management Plan.	To ensure that a complete Bushfire Management Plan, not only a BAL Contour Map, is prepared for each stage of subdivision.
10.	LSP	Remove references to Town Planning Scheme No.2 and amend to reference Local Planning Scheme No.3 throughout.	To reference the Shire's current Local Planning Scheme No.3.
11.	LSP Contents	Amend to include a subheading 'Part Two'.	Administrative.
12.	LSP Part 1 Section 4.2	Replace the reference to 'Plan 1' with 'the Structure Plan Map (Plan 1)'.	Administrative.
13.	LSP Part 1 Section 6.2	Remove dot point c.	Notifications on certificates of title are not required to advise of Local Development Plans.
14.	LSP Part 2 Section 3.7	<p>Add a statement to Section 3.7 stating the below:</p> <p><i>"If, during construction Aboriginal artefacts or sites are uncovered, that these are protected under the Aboriginal Heritage Act 1972 and that works will need to cease and suitably qualified experts will be brought in to survey the potential site, and if required permission under the Aboriginal Heritage Act 1972 to manage and disturb sites will be sought".</i></p>	The LSP acknowledges heritage sites overlapping with the western portion of the site, however these are classified as 'data stored/not sites'. The Environmental Assessment Report states that there is potential for future Aboriginal heritage sites to be found during works. The LSP should reflect the measures to account for this.

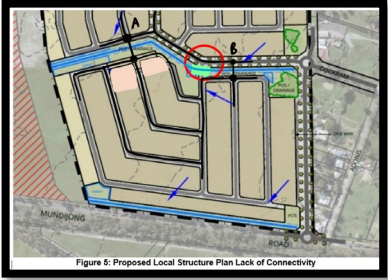
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<i>Movement Network</i>			
15.	TIA	Modify the Transport Impact Assessment to the satisfaction of Main Roads Western Australia and the Shire of Serpentine Jarrahdale.	MRWA provided detailed modifications required to the TIA.
16.	LSP & Appendices	Update the LSP and appendices to reflect Planning Control Area 179 Mardella Freight Rail Realignment, and land alterations to the Water Corporation Infrastructure Corridor.	The Tonkin Highway Extension has identified additional land requirements as shown in PCA 179, affecting the south-western portion of Lot 54, which has not been accounted for. The additional land requirements for the Mundijong Road/Tonkin Highway intersection not only impact the SW portion of the LSP site, but also result in alterations to the Water Corporation infrastructure corridor and must be reflected.
17.	LSP Part 2 Figure 11	Remove the 'site access' arrow from Scott Road onto Tonkin Highway and indicate the 'site access' arrow, as indicated below. <div data-bbox="779 906 1034 1270" style="text-align: center;"> </div>	Figure 11 infers that Scott Road may connect onto the future Tonkin Highway. Direct access to Tonkin Highway is not supported by Main Roads, and the road designs for the Tonkin Highway project show Scott Road as a cul-de-sac.
18.	LSP Part 2 Section 4.6.2, Plan 1, Figures	Demonstrate the Mundijong Road/Adams Street intersection to reflect the interim road design of the Tonkin Highway/Mundijong Road intersection as below.	Main Roads presented two scenarios relating to the site's access arrangements onto Mundijong Road, in relation to plans for the future Tonkin Highway/Mundijong Road intersection. Shire officers recommend Scenario 1, which involves the existing Adonis Street access being converted to

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	11, 12, 15 and 16 TIA	<ul style="list-style-type: none"> The Mundijong Road/Adonis Street intersection is to be removed and modified to become a cul-de-sac abutting Mundijong Road, or if shown possible a left in left out. Significant road design by the landowner/applicant is required to confirm that the form and function of the Mundijong Road/Adams Street intersection aligns with the Tonkin Highway Extension project. 	a cul-de-sac, and Adams Street being extended to a new intersection with Mundijong Road, of which the design will be dependent on the Tonkin Highway project. This is consistent with the Mundijong District Structure Plan, and is appropriate to address the expected vehicular traffic generated by the subject site.
19.	TIA Section 3.7.1, Table 3.5	Modify the TIA to investigate the level of service of the Mundijong Road/Adams Street intersection in a 2051 timeframe, including all costings and necessary intersection upgrades.	The document outlines a single lane roundabout at Mundijong Road / Adams Street is adequate for the 2041 year and that beyond this a further upgrade may be required if demand along Mundijong Road is realised. Further information is required regarding options for this 2051 and beyond timeframe, including costings and road infrastructure items.
20.	LSP Part 2 Section 4.6.2, Figures 15 and 16, and TIA	Modify to classify the portion of the Spine Road indicated below (in red) as a Neighbourhood Connector A. <div style="text-align: center;">  </div>	The LSP states that the main north-south movements through the site will be facilitated by a central spine road, and the LSP Concept Plan indicates that the spine road will continue to Scott Road. However, the Movement Network Plan shows that the portion of the Spine Road which connects to Scott Road will not be classed as a Neighbourhood Connector. It is recommended that the connection to Scott Road be identified as a Neighbourhood Connector, to allow for a central spine road to traverse the entire site.
21.	LSP and TIA Section 3.5	Modify the LSP and TIA to include details for the upgrade of Scott Road, and the construction of a roundabout at the Scott Road/Spine Road connection, and an appropriate intersection at Scott Road/Taylor Road.	The LSP does not reference intent for Scott Road upgrades or the intersection of Scott Road with the Spine Road or with Taylor Road. This is required, given that the Spine Road is intended to facilitate much of the traffic through the site.

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22.	TIA	Modify the TIA and SIDRA modelling to consider the Taylor Road/Bishop Road intersection.	Performance of the Bishop Road/Taylor Road intersection is critical considering its proximity to future Tonkin Highway / Bishop Road intersection.
23.	TIA	Modify the TIA and SIDRA modelling to provide further consideration and details as to the future upgrade of Mundijong Road.	The SIDRA modelling models Mundijong Road as a 4 lane road in 2051, but no details are provided about the future upgrades of Mundijong Road and how this will affect the LSP area.
24.	LSP and Appendices	<p>Reconfigure the LSP road layout to reduce the presence of looped, no-through roads within the southernmost residential precinct below. Modify to demonstrate connectivity at points A and B as shown below.</p>  <p style="text-align: center; font-size: small;">Figure 5: Proposed Local Structure Plan Lack of Connectivity</p>	Precincts containing looped, no-through roads is not supported by Shire officers as this creates poor vehicular and pedestrian connectivity for residential lots, and poor emergency services access.
25.	LSP and Appendices	Relocate the Primary School and Neighbourhood Public Open Space to align with the Mundijong District Structure Plan, to not be located within Lot 6 Adams Street and to instead be located within Lot 54 Mundijong Road.	To address Department of Education submission. The proposed location of the Primary School site is not supported by the Department of Education or Shire officers, is inconsistent with State Operational Policy 2.4 Planning for School Sites, Liveable Neighbourhoods, and the Mundijong District Structure Plan.
26.	LSP Part 2 Section 4.6.2 and TIA.	Include details for the upgrade of the existing portion of Adams Street/Taylor Road to the standard of a 30m wide Integrator B,	The LSP depicts the new portion of Adams Street as a 24m wide Neighbourhood Connector A, and does not include details for the upgrade of the existing portion of Adams

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		and modify to require the proposed extension of Adams Street to be constructed to this same 30m wide Integrator B standard.	Street. The Mundijong District Structure Plan identifies the existing Adams Street/Taylor Road to be upgraded and extended to a 30m wide Integrator B standard.
27.	LSP Part 2 Section 4.6.2 and TIA	Widen the proposed Neighbourhood Connector A road reserves to a width of 27.2m (with 4.5m wide verges and a 4m wide median).	The LSP proposes a 24m wide spine road. It is recommended that this be widened 27.2m, to accommodate street trees within the median strip.
28.	LSP Part 2 Section 4.6.2 and TIA	Modify road widths for Access Roads adjacent to Public Open Space to a width of 14m.	Liveable Neighbourhoods states that road reserves are to be reduced by 1m adjacent to POS.
29.	LSP Part 2 Section 4.6.3, and TIA	Update to reflect the Department of Transport's Long Term Cycle Network plans.	To address Department of Transport submission, reflecting the aspirational cycle routes identified within the Long Term Cycling Network Plan.
<i>Public Open Space</i>			
30.	LSP Part 2 Section 4.3, LWMS, and Landscape Strategy	Modify to include an irrigation strategy for POS, demonstrating sufficient groundwater licensing, the expected area of POS to be irrigated, anticipated groundwater requirements, and additional groundwater usage required for construction.	It is assumed that existing groundwater licenses will be utilised to irrigate POS. The LSP must clarify the irrigation requirements, as well as whether additional groundwater licensing will be required, as there is no additional groundwater available for allocation within the Byford 3 subarea.
31.	LSP Part 2 Section 4.3, and appendices	Reconfigure the POS to reduce the number of narrow, linear and restricted drainage-based POS, and incorporate an increased proportion of usable POS. Reduce the number of Multiple Use Corridors from five to three as shown below, ensuring that the 10% POS provision can be achieved across the LSP site.	The significant majority of POS is proposed to serve a drainage function, as narrow, linear drainage corridors and there is a lack of usable open spaces. This places high pressure on the NPOS for active recreation. The distribution of POS should more appropriately balance drainage and usable POS. This will reduce the amount of land consumed by MUCs and to also reduce the maintenance burden that these would otherwise create.

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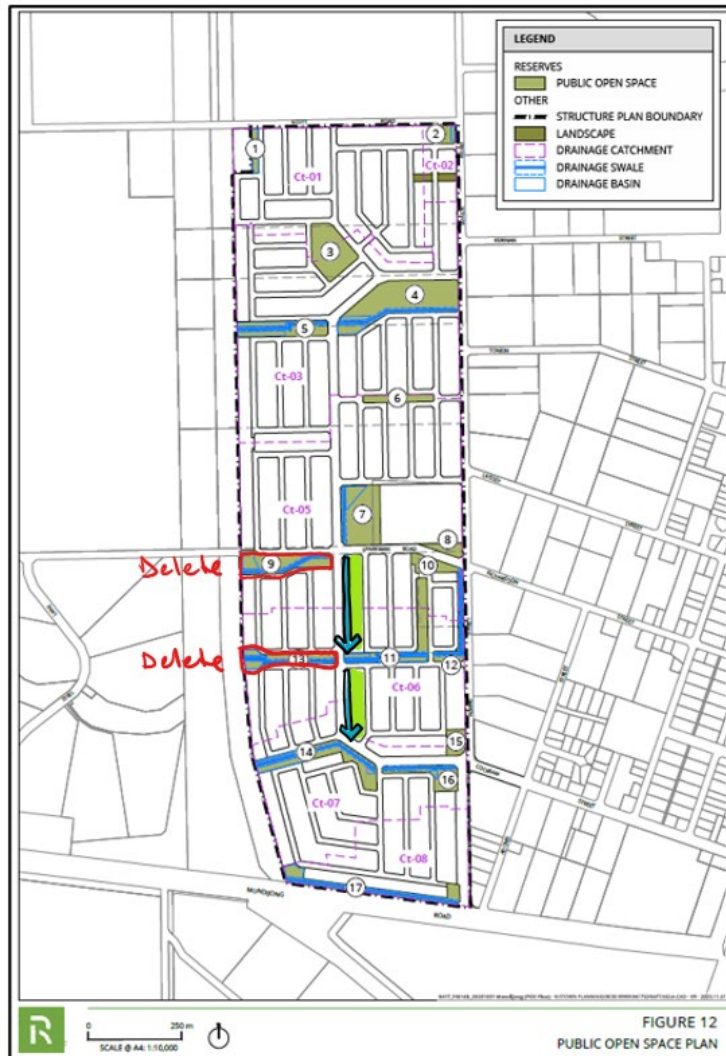
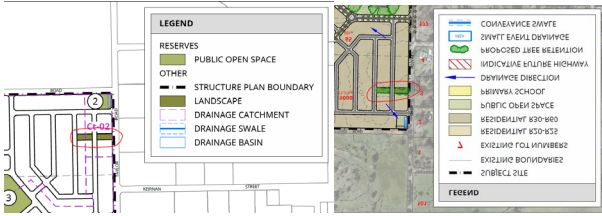


Figure 10: Public Open Space Plan


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32.	LSP Part 2 Section 4.3, and appendices	Widen POS 17 to allow for preservation of vegetation along Mundijong Road.	POS 17 is significantly drainage-based and is not sufficiently sized or designed to serve as a POS, nor as a transition between the Bush Forever site to the south of Mundijong Road as is claimed by the LSP.
33.	LSP Part 2 Section 4.3, and appendices	Modify and resize the NPOS (POS 7) to fully contain the playing fields, other amenities and any drainage requirements as required.	The LSP shows a 3.5ha primary school adjacent to the NPOS, with the playing fields contained within both lots. As primary school sites are required to be a minimum of 4ha, a shared use is assumed to be proposed. However, the LSP does not include the Department of Education support to such an agreement, and as the LSP must provide land separately for the NPOS and primary school.
34.	LSP Part 2 Section 4.1	Modify Table 4 Land Use Summary to clarify what constitutes the 'Landscape' area of 0.2 hectares, and the 'Drainage' area of 3.24 hectares.	The table shows 'Landscape', 'POS', and 'Drainage' as separate entries. However, given the drainage nature of much of the POS network, further clarification is needed.
35.	LSP Part Two Section 4.3	Clarify the intended land use of the area circled below consistently in Figures 12 and 15. 	This area is identified as 'Landscape' within Figure 12. This is the only area identified as 'Landscape', and it is unclear as to what this implies. Additionally, the green shades of this area and the rest of the POS are difficult to distinguish. Figure 15 shows this as a tree retention area, however there is also a dark green colour underneath which does not correspond to a legend entry. Reflect the intended land use consistently in both figures.
36.	LSP Part 2 Section 4.3 All appendices	Modify POS 6 to serve as a vegetated road reserve median, instead of a POS.	Proposed POS 6 is a linear, narrow POS which is not of a sufficient size or shape to serve a usable POS function, and is not proposed to contain drainage infrastructure. This POS would be more appropriately demonstrated as a vegetated road median.

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37.	LSP Part 2 Section 4.2	Amend Section 4.2 of the LSP to state 800m of a 'Neighbourhood Park' in place of 'District Park'.	The NPOS proposed is classified under Liveable Neighbourhoods as a 'Neighbourhood Park', not a 'District Park', due to its size and function.
<i>Environment</i>			
38.	LSP Part 2 Section 3.4.2	Modify to acknowledge the presence of threatened fauna species, and to include measures to address this.	The LSP states that the site holds 'almost no ecological value from a native fauna perspective' and does not acknowledge the presence of endangered fauna. However, the site provides remnant habitat to the endangered Black Cockatoo species, and Priority 4 Bandicoot species. This must be reflected.
39.	LSP Part 2 Section 3.3	Modify to state that the site is affected by Floodplain Development Control Areas, with several projected floodways which will reach a surface water level in a flood event.	The site is affected by a floodplain area, which in a flood event are modelled to run at or above surface level over wide areas.
40.	LSP, Environmental Assessment Report, LWMS	Update LSP, LWMS and Environmental Assessment Report to address the potential hydrological impacts on the threatened flora populations and the conservation category wetland located within the Bush Forever Site 360, and ensure that the proposed development of the site will not impact the threatened flora populations or the Conservation Category Wetland within Bush Forever 360, to the satisfaction of Department of Biodiversity, Conservation and Attractions and the Shire of Serpentine Jarrahdale.	To address DBCA submission. The LSP site is located adjacent to Bush Forever Site 360, which contains a Conservation Category Wetland and threatened flora species. The LSP and appendices do not adequately address the impacts of development on the hydrology and surface water of the CCW and its populations.
41.	LSP Part 1 Section 3.4	Update to state the below: Applications for the detailed planning for the site will be referred to the Commonwealth Department of Climate Change, Energy, the Environment and Water where required under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> .	To address DBCA submission.

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42.	LSP and Appendices.	Identify the below patch of vegetation for retention. 	There is a significant patch of vegetation which has not been accounted for. This vegetation holds amenity value, and should be retained either within POS or within a 'tree retention area'.
43.	Environmental Assessment Report	Update the Environmental Assessment Report to cover the LSP site, demonstrate the proposed LSP layout, and identify fauna and flora species and populations on site, demonstrating which vegetation areas hold value and should be retained.	The report does not align with the proposed LSP, and does not cover the LSP site. An updated EAR must be prepared, with accurate identification of fauna and flora populations on site, and demonstrating the linkage between vegetation which holds ecological value and the tree retention areas.
44.	LSP Part 1 Section 4.5, Part Two Section 3.4	Modify to state the percentage of existing canopy to be retained, and the projected canopy post-development.	The LSP states 'retaining 2,000m ² of existing vegetation within POS', however, does not state details such as the number of trees on site, or the existing and future canopy coverage.
45.	Environmental Assessment Report Section 3.8.1	Remove the incomplete sentence within Section 3.8.1 of the Environmental Assessment Report.	Administrative.
<i>Bushfire Management</i>			
46.	BMP	Modify the Bushfire Management Plan to the satisfaction of Department Fire and Emergency Services and the Shire of Serpentine Jarrahdale.	DFES provided detailed modifications required to the BMP.
47.	BMP and LSP	Modify the BMP and BAL Assessment to demonstrate all residential lots as achieving an acceptable level of bushfire risk	To reflect DFES comments and to achieve consistency with the Guidelines for Planning in Bushfire Prone Areas, ensuring

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		(BAL-29 or lower), in alignment with the Guidelines for Planning in Bushfire Prone Areas, taking into account the proposed Fire Service Access Route not being supported.	that a rating of BAL-29 or lower can be achieved for all lots, and that adequate separation is achieved from bushfire prone vegetation. The LSP proposes the westernmost lots to be rated BAL-40 or BAL-FZ, due to vegetation present to the west of the site. The LSP does not propose a perimeter road, as is required by the Guidelines to achieve separation from hazardous vegetation. The LSP proposes an FSAR within the Water Corporation infrastructure corridor. The Guidelines state that an FSAR is only to be used where a perimeter road cannot be achieved. Additionally, no evidence has been provided demonstrating that an FSAR located within this third-party land is achievable. Shire officers and DFES do not support the proposed FSAR, and recommend that a perimeter road be provided within the subject site.
48.	BMP	Modify the BMP to ensure that no Fire Service Access Routes or Asset Protection Zones are located within the future Tonkin Highway reserve, Water Corporation owned Infrastructure Corridor, Planning Control Area 179, or any land reserved as Primary Regional Road under the MRS.	The BMP shows an FSAR within the Water Corporation infrastructure corridor. There is no evidence that a FSAR can be achieved outside of the LSP site and within Water Corporation owned land.
49.	LSP Part 1 Section 4.7, and BMP	Modify the LSP and BMP to accurately classify the vegetation within POS. Remove all references to the maintenance of POS to a 'Low Threat' level.	These spaces will not be planted or maintained to a 'low threat' classification.
<i>Drainage</i>			
50.	LWMS	Modify the LWMS to the satisfaction of Department Water and Environmental Regulation, Water Corporation, and the Shire of Serpentine Jarrahdale.	DWER provided extensive modifications to the LWMS.
51.	LSP Part 2 Section 4.7, and LWMS	Modify to demonstrate the proposed drainage strategy within the infrastructure corridor to the satisfaction of Water Corporation and the Shire of Serpentine Jarrahdale.	Given that the drainage strategy is dependent on water discharge into the Water Corporation owned infrastructure

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			corridor, the proposed drainage strategy must be to the satisfaction of Water Corporation.
52.	LSP Part 2 Section 4.7 LWMS Section 8.7 and Figure 6	Modify to clarify the location of all Flood Storage Areas (FSAs) and amend to demonstrate no FSAs being located within the future Tonkin Highway road reserve, any MRS road reserves, or Planning Control Areas.	To address the submission from Main Roads. The LWMS shows the FSAs servicing Catchments 1, 3 and 5 as encroaching into the future Tonkin Highway reserve. The LWMS must clarify the locations of the FSAs. Main Roads object to the discharge of stormwater into Primary Regional Road reserves and PCAs.
53.	LSP Part 2 Section 4.7, LWMS Section 6.3.5 & 9.2	Add further detail on methods of discharge, contingencies for post-development of the Tonkin Highway, and the monitoring and maintenance responsibilities within the infrastructure corridor.	Given the high dependency of the LSP on the discharge into the infrastructure corridor, further details are required to demonstrate viability. Neither the Shire nor Water Corporation have accepted maintenance responsibilities.
54.	LWMS Section 6.1	Include justification that the proposed living streams and swales will offset the increased runoff from impervious areas within sub-catchment Ct-06.	The report states "An FSA for discharge from Ct-06 will not be required since pre-development discharge from the site at this location exceeds the inflow from upstream catchments". The DSP shows two basins being located either side of this discharge point. Therefore, justification is required to demonstrate that runoff will be addressed for this catchment.
55.	LWMS Table E1, Section 4.2, 4.3, 6.3.3, 6.3.5, and various.	Modify the LSP and LWMS to demonstrate groundwater separations as follows: <ul style="list-style-type: none"> • 1.2m from AAMGL and 1.5m from MGL for private lots • 500mm from MGL for POS, including BRAs and FSAs • 600mm from MGL for road reserves. 	To achieve adequate groundwater separation.
56.	LSP Part 2 Section 4.7	Remove reference to the soakwell and subsoil drainage strategy proposed within private lots, including the 'shared soakage structures' strategy.	Shire officers do not support subsoils within private lots. Due to the site's clayey soils, low infiltration rate and high

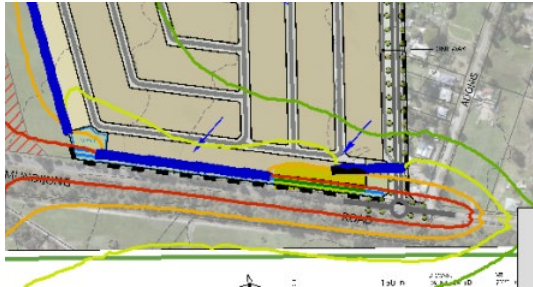
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	LWMS Section 7.2.2, 6.2.		perched water, Shire officers have concerns regarding the capacity for the soakwells to cater for impervious runoff.
57.	LSP Part 2 Section 4.7 LWMS Section 6.2	Modify to state that all residential lots over 300m ² are to contain the first 15mm of runoff on site via soakwells no less than 600mm deep, and that lots smaller than 300m ² require a direct connection to water infrastructure. Clarify that both pervious and impervious areas within the front of lots will retain the first 15mm of runoff.	The shared soakage strategy for lots under 225m ² is not acceptable. The Shire does not support such drainage infrastructure within lots under 300m ² . These sized lots should achieve a direct connection.
58.	LWMS	Modify the LWMS to demonstrate all outlets as having a free-draining outlet with 150mm separation to groundwater levels (including subsoils, with no bubble pits). Modify to provide emptying times for soakwells, and further detail on methods.	Lots are required to be free draining to ensure that there is no standing water within public open spaces and that the emptying times for drainage does not exceed 96hours, in accordance with <i>Better Urban Water Management</i> and Department of Water's <i>Stormwater Management Manual for Western Australia</i> , to prevent mosquito breeding habitats
59.	LWMS Section 6.5 Table 8	Modify to demonstrate that pre-development drainage outflows equal post-development outflows, and provide further detail on the treatment methods.	Include details of the calculated post development discharge for each sub-catchment within Table 8 to demonstrate that compliance is achieved with pre-development discharge rates.
60.	LWMS	Modify all cross-sections to show the top water levels, invert levels, MGL and batter levels for storm events, and include cross sections of the BRAs demonstrating these elements.	To better demonstrate groundwater levels and rainfall events.
61.	LWMS Section 3.4.2.1	Modify to provide an accurate infiltration rate for the clay-based soils on site.	The infiltration rate calculated does not account for the poor infiltration of the clayey soils which cover much of the site, as this was calculated within sand material.
62.	LWMS Section 6.3.2	Modify to show raingardens as being retained using limestone blocks, and include irrigation.	Raingardens should be retained using limestone blocks, and slopes of 1:3 are not accepted. Raingardens must have irrigation.

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63.	LWMS Section 6.3.3 Table 7	Modify to update the 2ha stated for biofiltration areas at 1:3 slope, as this slope is not supported.	Slopes of 1:3 are not accepted for BRAs, (slopes should be 1:4 or greater or utilize limestone blocks). Table 7 suggests that 2ha is required for BRAs, and 1:3 grades which are not supported, therefore this 2ha figure is likely to increase and require more space within POS.
64.	LWMS	Address post development monitoring to the satisfaction of the Shire of Serpentine Jarrahdale.	To ensure adequate monitoring and testing continues until the development reaches an acceptable progression, to the satisfaction of the Shire of Serpentine Jarrahdale.
65.	LSP Part 2 Section 4.7 LWMS Section 6.6 and Table 10.	Modify to state a consistent drying period for infiltration structures, removing contradicting periods of 96 hours and 13 hours.	The LSP states 96 hours, LWMS design criteria SW5 states 13 hours following rainfall events, and S6.3.3 and 6.5 states 96 hours.
66.	LWMS S3.6.3	Modify to demonstrate that water quality, pH levels, and nitrogen and phosphorus levels are acceptable for irrigation. Include complete water quality results within the appendix-	Groundwater sampling suggests that the water could be high in salt, nitrogen, phosphorus which may be problematic for irrigation systems within POS areas.
Noise Management			
67.	Noise Management Plan	<p>Update the Noise Management Plan to address the following:</p> <ul style="list-style-type: none"> • Include an assessment of the noise impacts from Planning Control Area 178 Mundijong Freight Rail Realignment and the future freight rail located within Lot 557 and 561 Mundijong Road, Planning Control Area 179 Mardella Freight Rail Realignment, and the West Mundijong Industrial Area. • Road and rail traffic parameters, noise predictions and treatment recommendations for 2044 in order to comply with the SPP 5.4 requirements for a 20-year planning horizon. 	<p>To address Public Transport Authority comments. The noise assessment currently only accounts for the noise impacts of the future Tonkin Highway extension and Mundijong Road, and must account for other considerations, such as Planning Control Areas and the West Mundijong Industrial Area. There has been insufficient assessment of rail noise undertaken.</p> <p>It is stated that the noise barrier may be a noise bund, acoustic fence, or a combination. This does not ensure compliance with the Shire's preferred outcome, and must be amended.</p>

Proposed Mundijong Precincts E1 & E2 Local Structure Plan - Schedule of Modifications

No	Section	Modification	Justification
		<ul style="list-style-type: none"> • Specify the type of chip seal for Mundijong Road, and utilize as an input for the noise modelling. • Discuss how both SPP5.4 daytime and night time noise targets can be met, with night-time noise predictions and associated treatment recommendations presented in the document. • Include requirements for the noise barrier to be constructed as a 2400mm noise wall. Amend to specify the density of the noise wall, and demonstrate consistency with the Shire's Local Planning Policy 4.25 Uniform Fencing. • Extend the noise barrier along the western interface of the northwestern-most residential lots. • Amend the location of the noise wall along the southern boundary of the subject site to remove disconnections and show a consistent wall along the boundary of the southern strip of POS. • Clarify inconsistencies regarding Figure 3 and Scenario 2 Figure. The figure for Scenario 2 demonstrates Package A for the lots highlighted below, however Figure 3 shows high noise exposure levels. <div style="text-align: center; margin-top: 10px;">  </div>	<p>Figure 03 of the Noise Management Plan demonstrates the noise wall as ending at the southern boundary of the north-westernmost residential lots. The noise wall should be extended along the interface of these lots, as this will create an inconsistent street outcome.</p> <p>The noise wall is also disconnected along the southern boundary of the site, with a portion proposed at the north of the POS. This will create a poor outcome regarding visual amenity and may impact drainage functions. The noise wall should extend along the southern boundary of the POS.</p>

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No	Section	Modification	Justification
68.	LSP Part 1 Section 4.6	Include the below: A site-specific Noise Management Plan is required for each stage of subdivision.	The current Noise Management Plan associated with the LSP is at a broad-scale and does not account for detailed design at the subdivision stage.