<u>Technical Report</u>					
Application No:	PA23/198				
Lodgement Date:	10 March 2023				
Address:	Lot 60, 394 Robertso	n Road, Cardup			
Proposal:	Retrospective and Prospective Concrete Product Manufacturing Facility				
Land Use:	Industry General	Permissibility:	P as designated under the LSP		
Owner:	Kandalee Pty Ltd and	nd Mecca Holdings Pty Ltd			
Applicant:	Harley Dykstra Pty L	td			
TPS2 Zoning:	Urban Development and Special Use	LSP Designation:	Industry General		
Delegation Type:	12.1.1	Officer:	David Quelch		
Site Inspection:		Yes			
Advertising:		Yes			
Internal Referrals:					

Building: A BA9 Occupancy Permit (unauthorised)Application is required. The Application must be accompanied by a BA18 (certificate of building compliance) which must be signed a registered (Level 1) building surveyor practitioner and contractor.

Please seek comment from DFES.

Please seek clarity for the provision of access and facilities for people with a disability as required by the NCC.

SS – Refer to email below in regard to number of toilets.

Compliance Department:

- Complaints received by the Shire relating to their current operating hours, noise and dust.
- Monitoring truck movements along Karbro Drive, Cardup in 2022 indicated applicants have been using this regularly as early as 5am and as late as 20:00. Can we clarify what roads they will be using as Karbro Drive should be for residents use. Not wide enough for trucks?
- Hours of operation proposed to be from 6:00am. Suggesting this be conditioned to commence from 7:00am. Staff would be currently arriving on site before 6:00am which may.
- Delivery hours are not clear, proposing to be anytime between 6:00am and 3:00am depending on requirements. Can they provide any data showing what they've been doing recently to get an indicate how to mitigate potential risks.

Development Contributions Department: NA – not within a DCA

Emergency Services Department: no comments received.

Environment: Remnant native vegetation occurs along the southern portion of the site and is associated with Bush Forever Site 361. It contains a Threatened Ecological Community (TEC), namely Floristic Community Type (FCT)3b

On its western boundary is the Robertson Road verge and the vegetation within the adjacent railway reserve is Bush Forever Site #350 it contains the same TEC SCP3b.

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The Cardup Business Park Local Structure Plan (March 2019) contains provisions related to:

- 5. On Site Effluent and Wastewater Management
- 7. On Site Stormwater Drainage Management and Reuse
- 9. Bush Forever Interface

The Cardup Business Park Local Structure Plan (March 2019) proposes the following for Industrial wastewater management.

The future management of industrial wastewater should be in accordance with the best practice recommendations outlined in Water Quality Protection Note 51 Industrial Wastewater Management and Disposal (DoW 2009b). The recommendations relating to the design and construction of industrial lots include, but are not limited to:

- Manage stormwater runoff effectively, in accordance with an approved UWMP.
- Industrial wastewater and the materials used for its treatment should be stored and used
 within weatherproof, chemically resistant or sealed containment compounds. Compounds
 should be built using low permeability materials, have chemically resistant or sealed surfaces,
 and be capable of storing at least 110% of the volume of the largest contained fluid storage
 vessel, plus 25% of the volume of all other containers within the compound.
- Containment compounds should effectively capture leaking tank contents, contaminated stormwater, jetting fluids and residues from equipment misuse.
- Contaminated fluids should be disposed of by draining into an internal collection sump for appropriate treatment, recovery or offsite disposal at an approved site.
- Fuelling facilities for vehicles, and machinery used for the treatment and disposal of wastewater should be constructed and operated to drain any spillage into holding tanks or well-maintained fuel recovery systems.
- Fuels, solvents, explosives and dangerous goods should be controlled and stored in accordance with the Dangerous Goods Safety Act 2004.

A Stormwater Management Plan (SMP) was prepared for the subject site by Civil Technology in 2014. The SMP (Civil Technology 2014), which was approved by the Shire of Serpentine Jarrahdale, proposed to utilise the Bush Forever site for disposal of stormwater runoff.

There was in the 2014 plan no discussion of the characteristics of wastewater coming from the casting process and washdown processes, there was no separation of stormwater from wastewater (wastewater in 2014 was generated from the concrete casting process, from wash down of concrete trucks from concrete cutting occurring on the hardstand areas) being delivered into the Bush Forever Site 361.

The Stormwater Management Plan submitted with this application is an update of the 2014 SMP. It also does not discuss the characteristics of water coming from the casting process and washdown processes, it does not separate the wastewater from the stormwater.

The Stormwater drainage control for 3 subcatchments is described –

The proposal is to capture 2 of the sub-catchments – 1 & 2 - in a basin with a capacity of 16,500 m³ claimed to be- "well above the storage volume required to be retained within the site." And that "The DRAINS model indicates that there is no outflow from Catchment 1 & 2 since the basin have the adequate storage capacity to store the surface runoff."

The drainage management plan shows spillway delivering from the basin overland toward the Bush Forever site #361 and being piped to the Robertson Road verge and via culvert toward Bush Forever site #350.

Catchment 3 is proposed to be directed to a planted vegetated area within the site. It actually is running via a spoon drain through the planted vegetation directly to a culvert under Robertson Road and then to BF Site# 350.

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Further Information:

- What is the nature of the industrial wastewater being generated?
- Is it recognised as having any deleterious effect on natural ecosystems?

Health:

SS - 10/7/23

Due to the acoustic report providing incorrect information (see example below) and following the observations made onsite, the Shire believes that the noise emissions cannot reasonably or practicably comply with the prescribed standard. It is therefore recommended that the proposal be refused or alternatively referred to the DWER for consideration under the EP Act.

Acoustic report

Influencing Factor at 440 Soldiers Road:

 $r=45m A = \pi r^2 = 636 000$

Area in industrial area = 74114 m²

% in Industrial Area = 11.65



Add percentages

 $I = (\% \text{ industrial small circle} + \% \text{ industrial large circle}) \times 1/10 = 1.2$

C = (% commercial small circle + % commercial large circle) x 1/20 = 0

Therefore influencing factor = +1dB at 440Soldiers Rd and an assigned Level of 46 dB applies not 48 dB as per acoustic report submitted to the shire.

As a result the Noise would not comply at 440 Soldiers Road for the majority of the scenarios where multipole stressing beds are operating.

Table 4-2: Normal Operations (LA10), dB(A)

Receiver	Stressing Bed 1 (existing)	Stressing Bed 2 (existing)	Stressing Bed 3 (proposed)	Stressing Bed 4 (proposed)	Daytime Assigned Noise Level	Assessment
390 Soldiers Road	44	43	39	43	48	Complies
440 Soldiers Road	46	45	39	45	48	Complies
7 Karbro Drive	46	43	39	45	48	Complies

Table 4-2 shows that all the receivers comply with the daytime assigned noise levels when each individual stressing bed is running independently.

4.1.3. Multiple Stressing Beds Operating (LA10)

The results for multiple stressing beds operating at the same time are provided in Table 4-3.

Table 4-3: Multiple Stressing Beds Operating (L_{A10}), dB(A)

Operations	390 Soldiers Road	440 Soldiers Road	7 Karbro Drive	Assessment
Stressing Bed 1+2+3+4 Operating	48	50	50	+2 dB
Stressing Bed 1+2+3 Operating	47	49	48	+1 dB
Stressing Bed 1+2+4 Operating	48	50	49	+2 dB
Stressing Bed 1+3+4 Operating	47	49	49	+1 dB
Stressing Bed 2+3+4 Operating	47	48	48	Complies
Stressing Bed 1+2 Operating	46	48	48	Complies
Stressing Bed 1+3 Operating	45	47	47	Complies
Stressing Bed 1+4 Operating	46	48	48	Complies
Stressing Bed 2+3 Operating	45	46	45	Complies
Stressing Bed 2+4 Operating	46	48	47	Complies
Stressing Bed 3+4 Operating	44	46	46	Complies

Table 4-3 shows that compliance is achievable at nearby receivers for some scenarios while multiple stressing beds are operating at the same time.

Matt Sargeson 2.5.2023

On the basis of scale and degree of risk this application should be referred to the Department of Water and Environmental Regulation (for licensing requirements under the Environmental Protection Act 1986), environmental noise impacts and the Department of Health for air quality and emissions assessment.

The proposed application has provided the following technical documents for environmental health assessment:

- Dust Management Plan (Accendo)
- Environmental Acoustic Assessment (Lloyd George Acoustics)
- Stormwater Management Plan (McDowall Affleck)

Land Use Compatibility Assessment:

The proposed retrospective development proposal is concrete manufacturing providing services to the largest scale projects in Western Australia.

The business falls within the Cardup Business Park Local. Importantly, the Cardup Business Park was approved on the basis that all emissions from industry within, would be contained.

The separation (buffer) distance for a concrete manufacturing premises where concrete or cement is mixed, prepared or treated at a throughput of more than 150 000 tonnes per year is prescribed

to be up to 1500 metres, in accordance with the EPA Guidance for Separation Distances between Industrial and Sensitive Land Uses (2005).

The development application proposes a throughput of 200T of concrete products per day. Section 3.4 appears to indicate that a buffer of 1000m is appropriate, by placing notification on the titles of all future sensitive receivers within this buffer.

Further information is required in regard to the maximum weight (tonnes) of product that may be manufactured over the course of a year, as opposed to a daily average. The design capacity of the premise must be provided to enable adequate assessment of off-site risks.

On the basis of the proposed throughput of greater than 150,000 Tonnes per annum, and giving consideration to the number of complaints received by the Shire over the course of normal existing operations, an appropriate buffer for this facility is 1,500m. Importantly, there are existing residential premises as close as 260 metres from the current hardstand footprint - indicating a known and significant risk of off-site impacts from this development.

Figure 1 shows the existing residents captured to the west of the development. In addition, consideration is given to future residents to developed to the north of Bishop Road and the extension of the Whitby Estate north into the buffer zone. The Local Structure plan for the Whitby precinct did not consider noise buffers from Permacast.

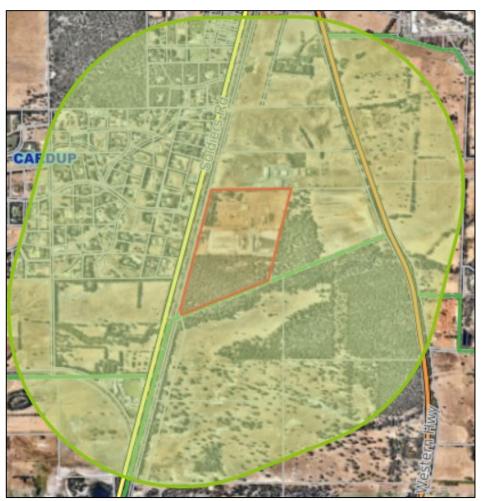


Figure 1. Footprint of impacts and existing sensitive receptors within a 1500m radius of the proposed concrete manufacturing facility.

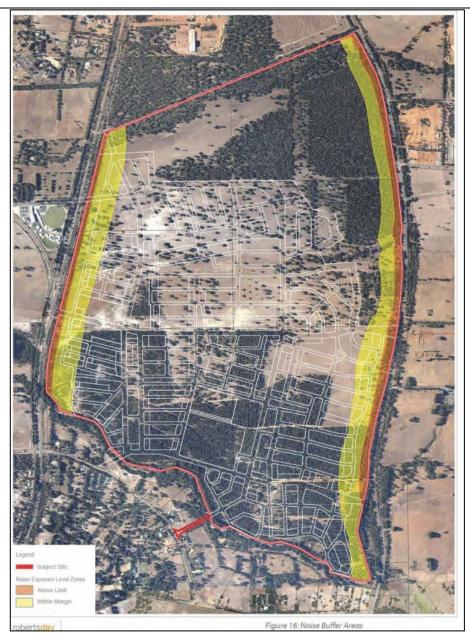


Figure 2. Extent of development under the Whitby Precinct Local Structure Plan and corresponding noise buffers to transport corridors, no consideration of Permacast emissions.

In the absence of adequate buffer zones, robust technical documents are therefore required to address known emissions from this industry:

- Noise
- Vibration
- Dust
- Wastewater
- Surface water

Environmental Noise and Vibration:

The Lloyd George report provides assessment of environmental noise from sources listed as vehicle operations (crane, truck, telehandler) and stressing beds (run simultaneously and independently).

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The conclusion of the assessment advises that the proposed operations are largely compliance with the exception of all beds four operating simultaneously, and three other scenarios where the of the beds operate simultaneously.

Low-frequency noise and vibration from these scenarios may cause significant disturbance over a range of distances. The following additional information is required to ensure the risk of noise and vibration are thoroughly considered and dealt with:

- Figure 4 -1 updated to show each vehicle point and line source noise emissions. A blanket area (pink)has been nominated and it is unclear how the predicted noise levels have actually been calculated.
- Assessment of the characteristics of the noise, including tonality, modulation and impulsiveness.
- Compliant stressing bed noise scenarios modelled to include all point and line source noise emissions that may be undertaken simultaneously across the site, including the mobile batching plant.
- Consideration to operational hours. The Shire has received complaints from concrete construction noise and vibration outside 070 to 1900 hours Monday to Saturday (day).
- Vibration assessment of stressing beds above and below ground, demonstrating that measured and predicted vibration does not exceed nominal and prescribed criteria at sensitive receptors, quantitative assessment of vibration is required.
- Consideration predicted noise and vibration impacts to future sensitive receptors south of the side in the Whitby Precinct Local Structure Plan.

The Development Application is also required to be supported by an Operational Noise and Vibration Management Plan including:

- a) Noise and vibration monitoring equipment.
- b) Monitoring record and documentation system with project, location, dates and times. instruments used and their set-up to allow repeatability, prevailing conditions.
- c) an effective community relations program.
- d) Regular compliance reporting to the Shire.

Dust:

Dust management has been prepared by Accendo and assessed the risk for the site as low. The Plan lists two site specific activities that may cause dust, being vehicle movement and wind erosion of exposed surfaces.

Dust is a significant consideration for concrete batching premises and is addressed specifically by the Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998. This is a high-risk activity that directly relates to risk of off-site sediment impacts after rain events.

Further information is required to be contained within the plan, addressing and managing the unique risks of dust associated with operation of the concrete manufacturing operations:

- Materials spilt during concrete manufacturing. i)
- Control of trafficable areas, treated with water or surfactants as often as is necessary. ii)
- Trafficable areas being swept, hosed and cleared of loose aggregate, sand, cement, concrete or other materials as often as is necessary.

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- iv) Storage of aggregate and sand.
- v) Storage of cement.
- vi) Movement of material on premises and loading of materials.
- vii) Premise cleaning program.
- viii) Disposal of waste concrete products.

Wastewater Management:

The development application does not address the following with respect to the control of wastewater associated with concrete manufacturing activities:

- a) all water draining off any area where agitators, mixers or moulds are loaded or where concrete is batched drains into a slurry pit;
- b) all water used to wash out agitators, mixers or moulds or
- c) to clean up spilt material drains into a slurry pit;
- d) all other water draining off sealed or paved areas of the premises and which is likely to contain waste material:
- e) drains into a slurry pit or settling pond; and
- f) any water removed from, or which might overflow from a slurry pit drains into a settling pond.

Additionally, the Work Health and Safety Act 2020 requires the business to provide adequate amenity facilities for the staff. The Shire has no record of an approved wastewater treatment system. Therefore, the applicant is required to provide details of the existing or proposed wastewater treatment system to cater to the number of staff that are proposed for the site.

Details provided 10/7/2023

Waste capacity sufficient -

Total 22 cubicles for:

Infrastructure: Stormwater to be contained on site. No discharge allowed into South Western Highway or Soldiers Road.

Referral to MRWA for the turning movements onto South Western Highway and possible widening of the intersection required. Approval is subject to MRWA support.

All proposed car park and manoeuvring areas to be sealed.

Stormwater management plan to show details on the basin – invert levels, depth, levels for the minor and major storm events. Ensuring pre-development and post development flows are the same.

Geotechnical report to be provided.

<u>Landscaping</u>: The proposed concrete manufacturing facility is located with the Cardup Business Park LSP. This document sets out provisions and expectation of future development. Failing that there has been no 'Cardup Business Park Design Guidelines' created (as yet – to my knowledge) to guide developments the following recommendations are what is expected of all future

F23/4730 Page 8 of 27 developments within the LSP area. For instance, there should be a setback from the primary street for vegetation screening, which has not occurred on this development site.

The development fronts Robertson Road, which runs parallel with Soldiers Road and the Railway land, also zoned Bush Forever. Soldiers Road is an important vegetation corridor to the Shire, being bush forever and a designated 'flora road' for tourists to drive and view the vegetation.

The developments western boundary has limited to no vegetation to screen the development. As seen below, the western boundary shows the drainage basin earth bund, which remains as sand – with no vegetation coverage.





On inspection, the development is somewhat visible from Soldiers Road.

Please see below photos. In particular, the sand bund is visible, as are the cranes. While it is not anticipated full screening of the site and cranes would occur, the sand bund and the service areas could be screened, with vegetation, to provide an improved visual appearance to the Bush forever site when viewed from Soldiers Road.





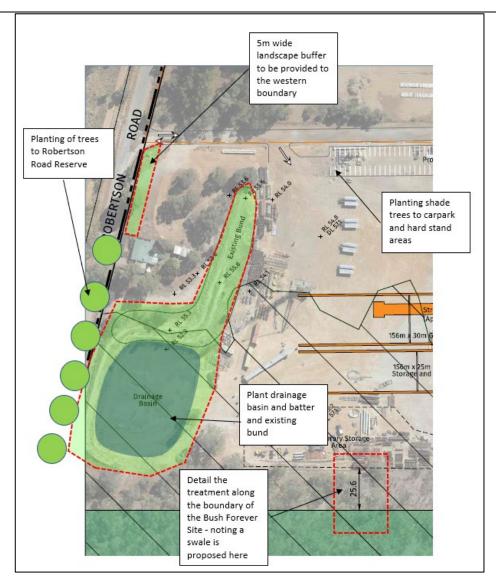
It is recommended that a 5m wide planted buffer along the western boundary is installed north of the existing office buildings, this is to screen the extensive car parking and overall development from Robertson and Soldiers Road.

Also recommended to plant the existing drainage basin, existing bund and Robertson Road reserve.

In addition, it is recommended that shade trees are planted within the carpark, this will provide shade, reduce the heat island effect, and visually soften the appearance of the extensive carpark. The carpark and hardstand areas may also have first flush treatments (first 15mm of run-off), which should be treated through planted raingardens or swales - these should also be demonstrated on a landscape plan.

This is in accordance with LPP2.2: Water Sensitive Urban Design Guidelines: Objectives 2 & 3 being: Ensure water sensitive design best management practices are implemented for all new proposals in the Shire & Improve water quality in the Shire and quality of water entering receiving water bodies.

Below is a diagram of the recommended landscape treatments to the development.



It is not considered unreasonable to request a landscape plan for this application prior to approval, noting that the site is located and subject to the Cardup Business Park, of stipulates that during the implementation of the LSP the following is required:

The following investigations and management plans shall be undertaken as a condition of subdivision/development approval:

A landscape management plan shall be undertaken as a condition of subdivision approval to address the implementation of the management elements for the applicable management areas in accordance with the integrated Landscape Management Strategy

The LSP also stated:

Appropriate interfaces/treatment that protect and maintain environmental values shall be provided along the boundaries of any Bush Forever sites. Subdivision and development applications shall provide details and illustrations of these treatments.

The Shires Draft Local Planning Scheme NO 3; Part 4 General Development Requirements, Stipulates:

Item 47. Landscaping states the local government may require landscaping to be provided for any new development within the scheme Area. This includes landscape works required to (particular items relevant to this development):

enhance the appearance of the streetscape and public realm; and

c) screen or minimise the visual impact of buildings, parking areas, open storage areas, drying areas and/or any other space which is considered by the local government to detract from visual amenity.

Additionally the LSP Integrated Landscape Management Strategy (IN14/11505) stipulated the following: See clause 4.2.4 Subdivision Area.

Visual amenity will need to be considered for lots in the southern portion of the site which are located within the Shire of Serpentine-Jarrahdale's Landscape Protection Policy Area, outlined in LPP 8 Landscape Protection (Shire of Serpentine-Jarrahdale 2002). Planting will be carried out around the boundaries of these lots adjacent to South West Highway, Norman Road and the Perth to Bunbury Rail, where required, in order reduce the visual impact of the development.

Figure 12: Management Areas – includes a landscape protection area along the western boundary of lot 60, this supports the recommendation of planting along this boundary.





The landscape plan should confirm plant species, numbers proposed and size at the time of planting. Plant species should be native species to the area and not likely to disperse seeds/weeds into the adjoining Bush Forever Sites.

Landscaping within the interface of Bush forever sites to consist of local native flora species, preferably dieback and fire resistant species. See local flora species list in Appendix C of the Integrated Landscape Management Strategy.

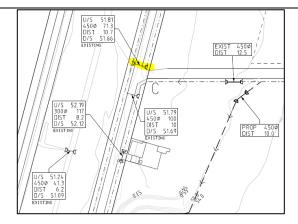
Regarding the submitted Stormwater Management Plan; the following items are to be addressed/clarified, prior to approval:

- There appears to be an overflow pipe into Robertson Road and the Bush Forever site. This is not supported.
- The document reports that the basin storage is well above the volume required, however at what level does the basin discharge by spillway or overflow pipe to Robertson Road? which is not supported.
- There is no description of the treatment of the run-off stormwater i.e "Pollutant and Sediment Control" This must be addressed in the report, including how to manage the water quality potentially impacting the groundwater via infiltration. The planting of basins and swales will assist in removing heavy metals and should be included in the SMP.
- There is no mention of basin emptying times and likely infiltration rates.
- There is no mention of depths to groundwater.
- The document is not clear what storage events occur in the basins and to what depths in the basins.
- It is unclear if the stormwater modelling is based on the site being asphalt sealed or compacted earth this would impact the volume as it sheds of the hardstand areas without infiltration.
- There is no mention of scour protection to the swales and basins.
- There is no discussion around sediment, particularly if the site remains unsurfaced compacted lateritic gravel, as stormwater flows through the site it will generally carry some gravel fines and silts – which will clog the stormwater system. This was evident in the previous SMP (2014), this new SMP must address this with sediment traps and or maintenance regimes etc.

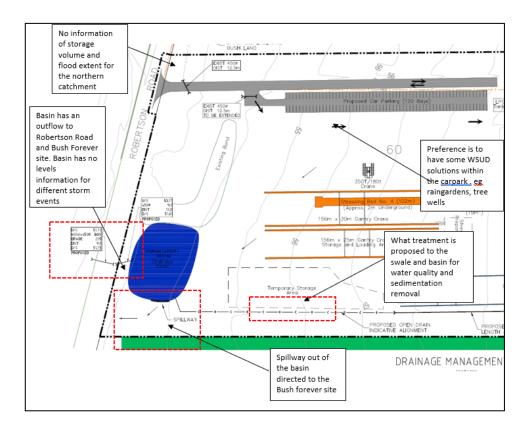


- The carpark and driveway extent of storage for all events are not clear, only showing pipe discharge north of the site. Again, provision to treat the first flush close to the source within the car park with raingardens and tree wells. It is not acceptable to simply discharge into existing bushland without treatment from a new carpark/driveway hardstand. There is an existing culvert which has been used in the past, it must be shown that drainage is not overflowed into Robertson Road.

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Report to include maintenance section to address sedimentation and required frequency of maintenance regime.



Strategic Planning: no comments received.

External Referrals:

Department of Biodiversity, Conservation and Attractions:

'DBCA supports the following recommendations that were provided by the Department of Planning Lands and Heritage's Policy Planning Manager, that,

No development, whether existing or proposed, is approved on that site where there is a risk of adverse impacts to bushland within Bush Forever area 361 and 350.

- Drainage infrastructure to serve the existing, proposed, and future development of Lot 60 is to be located outside Bush Forever area 361 and 350 with no overflow or discharge to be directed into any Bush Forever area.
- The existing drains and all drainage infrastructure that extends into the Bush Forever areas be decommissioned and remediated.
- All rubbish, structures, building materials and any other deleterious matter be removed from Bush Forever area 361.
- Remove and decommission the alternative/private access to Norman Road on the boundary of Lots 60 and 21 within the Bush Forever area and remediate the site.
- Update the Dust Management Plan to ensure that the Bush Forever sites are protected from dust.
- Provide fencing along the boundary of the development to restrict access into the Bush Forever area.

Department of Health:

'Thank you for your letter of 27 March 2023, requesting comments from the Department of Health (DoH) on the above proposal.

The DoH provides the following comment:

Water Supply and Wastewater Disposal

Potable water must be of the quality as specified under the Australian Drinking Water Quality Guidelines 2011.

In relation to the management of wastewater on site, DoH is unable support the proposal as there appears to be no information on the wastewater treatment system, disposal area, or number of staff that use site amenities. Therefore, to support the proposal, the following needs to be provided:

- 1. The number of staff on site.
- 2. Details of the existing onsite wastewater treatment and disposal method.
- 3. Evidence the above have been approved by the DoH.

As the proposal is for a retrospective approval, and if any of the above cannot be provided, the following will also be required that may require an upgrade of the wastewater treatment system:

- A. A specific Site and Soil Evaluation (SSE) report undertaken by a qualified consultant that is conducted during the wettest seasonal time of the year (mid-July - mid Sept), that needs to demonstrate permeability rates as per AS/NZS1547:2012 requirements.
- B. The location of the lot is now captured under the Government Sewerage Policy as an environmentally sensitive area that may require additional requirements along with meeting the Health (Treatment of Sewage and Disposal of Effluent and Liquid Wastes) Regulations 1974. These include:
 - I. to ensure minimum setbacks are met from natural water bodies such as creeks and streams or areas of high-water tables.
 - II. a Secondary Treatment System (STS) may be required as approved by the DoH and/or
 - III. the wastewater treatment system should be engineer Certified detailing the requirements as specified on the DoH website: Certification for installation of wastewater treatment systems (health.wa.gov.au);
- C. There were no detailed plans relating to the location of the onsite wastewater treatment system and disposal area. Scaled plans detailing the proposed building envelopes, land application area/s and exclusion zones such as car parks, trafficable areas and winter creeks may be required for the proposal.

D. There was reference to the recycling of wastewater. Treated wastewater intended to be recycled for beneficial purposes such as landscaping and garden bed irrigation requires a separate Recycled Water Quality Management Plan (RWQMP) that will need to be submitted to the DoH in accordance with the "Application Process for approval of a recycling water scheme": https://ww2.health.wa.gov.au/Articles/A E/Application-process-for-approval-of-recycling-waterscheme:

E. A formal application for the onsite wastewater treatment system/disposal area will be required to be submitted to the local government for assessment prior to them forwarding onto the department.

Should you have any queries or require further information please contact Chris Hill or Phill Oorjitham on 9222 2000 or eh.eSubmissions@health.wa.gov.au

Yours sincerely Dr Michael Lindsay EXECUTIVE DIRECTOR ENVIRONMENTAL HEALTH DIRECTORATE'

Department of Planning, Lands and Heritage:

"The development is not supported as the drainage associated with the development is diverted to Bush Forever area 361 - Norman Road Bushland, Whitby/Cardup and Bush Forever area 350 - Byford to Serpentine Rail/Road Reserve and Adjacent Bushland which is likely to be currently adversely impacting the bushland within the Bush Forever areas.

Bush Forever area 361 is within Lot 60, south of the development and within Lot 21 east of the development. Bush Forever area 361 contains Forrestfield vegetation complex, which only 6 percent of the original extent on the Swan Coastal Plain Portion of the Perth Metropolitan Region (Bush Forever study area) is proposed for protection in Bush Forever (Bush Forever Audit 2021, WAPC). The site is also inferred to contain state listed (under the Biodiversity Conservation Act 2016) threatened ecological communities (TEC) 20b Eastern Banksia attenuate and/or Eucalyptus marginata woodlands and 3b Eucalyptus calophylla – Eucalyptus marginata woodlands on sandy clay soils and federally listed (under the Environment Protection and Biodiversity Conservation Act 1999) Banksia Woodlands of the Swan Coastal Plain TEC. Bush Forever 354 immediately south of Norman Road is known to contain the 20b and 3b TEC and declared rare flora (DRF).

Bush Forever area 350 is west to the development, abutting Lot 60 within the Robertson Road reserve and in the railway reserve. This part of Bush Forever area 350 contains Guildford vegetation complex, which only 3 percent of the original extent on the Swan Coastal Plain Portion of the Perth Metropolitan Region is proposed for protection within Bush Forever (Bush Forever Audit 2021, WAPC). TEC 3b and DRF are mapped adjacent to Lot 60 within Bush Forever area 350.

Other concerns:

- The aerial photography shows rubbish, structures, or other deleterious matter in the Bush Forever area near the eastern side of Lot 60 and western side of Lot 21.
- The alternative access to Norman Road as noted in the Bushfire Management Plan (Appendix G), and visible on aerial photography has cleared Bush Forever area 361 bushland inconsistent with SPP 2.8.
- The Dust Management Plan (Appendix D) does not consider dust impacts on the bushland or provide any dust management measures to protect bushland within the adjacent Bush Forever areas.

As such the development is not supported and it is recommended that:

- No development, whether existing or proposed, is approved on that site where there is a risk of adverse impacts to bushland within Bush Forever area 361 and 350.
- Drainage infrastructure to serve the existing, proposed, and future development of Lot 60 is to be located outside Bush Forever area 361 and 350 with no overflow or discharge is to be directed into any Bush Forever area.
- Decommission the existing drains and all drainage infrastructure that extends into the Bush Forever areas and do all things necessary to facilitate the return of that land to natural bushland.
- Remove all rubbish, structures, building materials and any other deleterious matter from Bush Forever area 361.
- Remove and decommission the alternative/private access to Norman Road on the boundary of Lots 60 and 21 within the Bush Forever area and return the land to natural bushland.
- Update the Dust Management Plan to consider the surrounding Bush Forever areas as a sensitive receptor that must be protected from dust impacts, with no visible dust allowed to settle on vegetation within any Bush Forever area.
- Provide fencing along the boundary of the development and Bush Forever area to restrict access and delineate between the approved industrial activities and Bush Forever areas.
- Please note the Bush Forever boundary modification as part of MRS amendment 1380/57 was subject to negotiations with the landowners of Lot 60 and 21. These negotiations included an agreement for the removal of all drainage flows and infrastructure, rubbish, buildings and access out of Bush Forever, remediating the site to natural bushland and ceding the Bush Forever within Lots 60 and 21 to the Crown free of cost. Land Use Planning Policy considers this Development application to be inconsistent with that agreement.

Department of Water and Environmental Regulation:

The Department has identified that the retrospective concrete manufacturing facility at Lot 60 Robertson Road in Cardup has the potential for impacts on environment and water resource values and management. In principle, the Department does not object to the proposal, however key issues and recommendations are provided below and these matters should be addressed.

Issue

Industry Regulation

Advice

The Department regulates emissions and discharges from the construction and operation of prescribed premises through a works approval and licensing process, under Part V, Division 3 of the Environmental Protection Act 1986 (EP Act).

The categories of prescribed premises are outlined in Schedule 1 of the Environmental Protection Regulations 1987.

The EP Act requires a works approval to be obtained before constructing a prescribed premises and makes it an offence to cause an emission or discharge from an existing prescribed premises unless they are the holder of a works approval or licence (or registration), and the emission is in accordance with any conditions to which the licence or works approval is subject.

The Environmental Protection Act 1986 requires a works approval to be obtained before constructing a prescribed premises and makes it an offence to cause an emission or discharge unless a licence or registration (for operation) is held for the premises.

The Department has not received an application for a works approval or licence for the facility described in development approval application to date. As such, the Department recommends that the applicant lodge an application for a works approval with the Department. The applicant is advised to refer to the information and Guideline: Industry Regulation Guide to Licensing available

at http://www.der.wa.gov.au/our-work/licences-and-works-approvals or if they have queries relating to works approvals and licences to contact the Department at info@dwer.wa.gov.au or 6364 7000 for information on the application for a works approval.

The application will also need to demonstrate compliance with the general provisions of the EP Act and all relevant regulations e.g. Environmental Protection (Noise) Regulations 1997 and Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998.

Part of Lot 60 is a prescribed premises under Part V of the Environmental Protection Act 1986 (EP Act) under works approval W6658/2022/1 as a Category 77 Concrete Batching facility. The Works approval holder is Ransberg Pty Ltd trading as WA Premix. At the time the works approval was granted it was considered that the Permacast facility was not within the scope of the application and therefore was not assessed. The works approval is for the construction of a concrete batching facility only, once constructed the works approval holder is required to apply for Registration of the premises under Regulation 5B of the Environmental Protection Regulations 1987 (EP Regulations). At this time the Department has not received an Environmental Compliance Report required under condition 2 of the works approval confirming the concrete batching facility has been constructed in accordance with the works approval or a registration application from the works approval holder.

Please note that this advice is provided based on information provided. Should this information change, the works approval and/or licensing requirements may also change. Applicants are encouraged to contact the Department at the above contact details to clarify requirements, should there be changes to information.

Issue

Environmental Acoustic Report

Advice

The Department's Environmental Noise Branch has reviewed the development application document, as well as the Environmental Noise Assessment report prepared by Lloyd George Acoustics. Please find the Department's Environmental Noise Branch report attached as a separate document.

Issue

Stormwater Management

Advice

The proponent should manage stormwater in accordance with the 'Decision process for stormwater management in WA (DoW 2016)' and the 'Stormwater Management Manual for Western Australia (DoW 2004–2007)'. Specifically,

- The first 15 mm of stormwater runoff from roads and carpark areas should be designed to undergo water quality treatment via biofiltration.
- The proposed open channel drains should be constructed as vegetated biofiltration swales. Vegetated biofiltration swales will increase at-source infiltration, potentially improve the quality of runoff, reduce erosion and potentially reduce the required size of drainage basins. Vegetated biofiltration areas should be lined with amended soil with a PRI of at least 10. The amended soil should have a minimum thickness of 300 mm.

Other issues concerning the Stormwater Management Plan are,

- Section 3.5 Drainage Basin, proposes an overflow outlet arrangement from the site's drainage basin however no details are presented.
- The Stormwater Management Plan provided uses the Perth Groundwater Atlas to determine the maximum groundwater level (MGL) The use of the Perth Groundwater Atlas to determine MGL for stormwater infrastructure design is not supported as those MGLs are based on levels for May when MGLs are lower. The Atlas is a resource to assist drillers, irrigators and

householders and give them an indication of the locations and depth needed to drill and install groundwater bores. Therefore, this resource should not be used to determine maximum groundwater levels (MGLs).

• The Department prefers the use of historical MGL levels as it gives a higher degree of confidence in drainage basin design given the natural variations in yearly rainfall and likely increase in groundwater levels that occur through development. The Department's Lower Serpentine Region hydrological studies indicate a historical MGL in the west of the lot of approximately 48 metres AHD and 55 m AHD in the east of the lot and these levels should be used when determining inverts of drainage basins and biofiltration basins. Alternatively, the proponent may provide an on-site winter MGL and correlate this with a nearby Departmental long-term monitoring bores to determine an on-site MGL.

Issue

Groundwater

Advice

The subject lot is located within the Serpentine groundwater area (Byford 3 subarea) as proclaimed under the Rights in Water and Irrigation Act 1914. Any groundwater abstraction in this proclaimed area for purposes other than domestic and/or stock watering taken from the superficial aguifer, is subject to licensing by the Department.

The issuing of a groundwater licence is not guaranteed but if issued will contain a number of conditions that are binding upon the licensee. Please contact the water licensing section on 9550 4222 for further advice.

It is important to note that the Serpentine groundwater area is currently fully allocated and therefore there is no water available for licensing from the deeper Leederville or Cattamarra Coal Measures aquifers in the area. An application for a licence to construct a bore to take water from these aguifers would likely be refused.

There is also limited availability for licensing from the Superficial (shallower, water table Byford 3) aquifer. Owners considering using groundwater for irrigation purposes should contact the licensing section at the Department's Mandurah office on 9550 4222 for further advice.

Where the Department has a statutory role, planning applications should be considered prior to the Department issuing any relevant permits, licenses and/or approvals.

In the event that the applicant determines that a works approval or licence application is required under Part V of the Environmental Protection Act 1986 (EP Act), the advice provided in this communication does not prejudice and must not be considered to infer the outcome of the EP Act licence and works approval process.

In the event there are modifications to the proposal that may have implications on aspects of environment and/or water management, the Department should be notified to enable the implications to be assessed.

Advice on Noise Assessment

Introduction

This advice has been prepared for the Shire of Serpentine Jarrahdale in response to a request for comment made to the Department of Water and Environmental Regulation (DWER) dated 27 March 2023 on a retrospective development application for a concrete manufacturing facility at Lot 60 (No. 394) Robertson Road, Cardup.

Advice

The Department of Water and Environmental Regulation's Environmental Noise Branch (ENB) has reviewed the development application document, as well as the noise assessment report prepared by Lloyd George Acoustics (LGA). Based on LGA's report the concrete products manufacturing facility consists of two cranes, two trucks and two telehandlers, as well as four stressing beds (two existing and two proposed). LGA's noise modelling indicated that noise

emissions from the concrete products manufacturing facility would be able to comply with the daytime assigned noise levels at the neighbouring residences when each individual stressing bed is running independently, or during certain scenarios where there will be more than one stressing bed running together.

ENB has identified the following issues:

- 1. Based on Section 4.6 of the Development Application, the concrete products manufacturing facility will commence production from 6:00am and will continue until 6:00pm. However, the operational hours quoted in LGA's report are stated as between 7:00am and 7:00pm. It should be noted that the time before 7:00am is classified as night-time by the Environmental Protection (Noise) Regulations 1997 (Noise Regulations). If the morning operational hour specified in the application document is correct, LGA's assessment of the noise compliance with the daytime assigned noise levels would be incorrect. Noise from the facility would need to also comply with the night-time assigned noise levels.
- 2. Both the application document and LGA's report did not indicate if the concrete products manufacturing operation will occur on Monday-Saturday only (excluding Sunday and Public Holidays). Again, daytime noise assigned levels are different for Sunday and Public holidays, and LGA's assessment results do not apply to these days;
- 3. It is noted that there are existing operations within the PREMAcast site, such as the batching plant(s). Noise from the concrete products manufacturing facility is likely cumulative with the noise generated by the existing operations. PERMAcast needs to demonstrate compliance of the cumulative noise emission levels from its site with the Noise Regulations, not only the noise from the concrete products manufacturing facility alone;
- 4. Similarly, while the operations of the stressing beds and the vehicle operations were modelled separately, it is likely that they will be operating at the same time and hence the noise levels from those operations would also be cumulative. While the noise levels produced by the vehicle operations are much lower than those for the stressing bed operations, it is likely that more combinations of stressing beds operating would exceed the assigned levels when the cumulative noise is considered:
- 5. It is noted in section 3.2.4 of the LGA report that, for modelling purposes, the ground absorption for the entire area was considered to be at 100% (e.g. consistent with a grass covered surface). As the ground, particularly near the noise sources, appears to be at the very least, made of hard-compacted material, this would result in an underestimation of the predicted noise levels at the receivers; and
- 6. Noise from the concrete products manufacturing facility, particularly the stressing beds can be tonal, of which the adjustment for tonality may be required for the noise compliance assessment. It does not seem that LGA has conducted a tonality assessment in its report.

Limitations

Technical expert advice in any field is subject to various limitations. Important limitations to the advice include:

No attempt was made to verify the noise data collected by LGA between September and November 2022 to determine the sound power levels of the plant; and

No computer modelling was undertaken to verify LGA's modelled noise contours.

Main Road Western Australia:

'In response to your correspondence received on 29 March 2023, Main Roads has reviewed the application and is unable to provide a recommendation at this point in time.

Please provide the following items:

Revised development application and/or documentation that includes all land used for retrospective activities as well as proposed development being consistent.

Reason for information

Submitted documents do not include a consistent application area. The Transport Impact Assessment (TIA) includes both Lots 60 & 21 whereas other documents include only Lot 60. Either the application is to be amended to include Lot 21 or alternatively, the TIA is to be amended to reference only Lot 60 and demonstrate how the site will operate independently of Lot 21.

- Revised TIA that addresses the following comments.
 - The swept path analysis drawings must show road edge lines, road names and north arrow for better review of the drawings. From the submitted drawings it is not possible to understand the road edge lines / marking as the aerial image is either pixelated or the road surface is covered by trees / bushes.
 - Additional swept path analysis drawings to be provided to show the trucks carrying concrete beams making a right turn from Norman Road to South Western Highway.
 - Swept paths sheets 4 & 5 Shows that the vehicle is required to encroach to the opposite lane or on the road edge line. Swept paths to be updated to avoid such situations.
 - Swept Paths Sheets 6 & 7 Both tracking shows that the vehicle is required to drive outside the asphalt line both on the Norman Road and the South Western Highway. Please clarify how this additional paved area is going to be achieved,

on the South Western Highway?

- Swept Paths Sheets 6 & 7 These swept path analysis drawings shows a significant encroachment of the left turn vehicle to the southbound traffic lane of the South Western Highway and the vehicle continues to drive about 45m on the opposite lane before it drives on the allocated lane.
- Firstly, a full encroachment to the opposite lane is not acceptable.
- Secondly, it cannot be expected that the southbound vehicles on South Western Highway to give way approximately 45m in advance of the junction when these trucks are making a left turn.

Please update the junction design to avoid such situations.

Total HV% or volumes also to be shown in Figure 6-3 to Figure 6-7. It is difficult to verify the volumes used. The full movement summary tables should be included.

Section 6.1.1 shows the South Western Highway / Norman Road junction with a 15m long left turn pocket lane / auxiliary lane on the Norman Road approach, however there is no pocket lane that currently exist. Please clarify.

Reason for information

To address technical matters and ensure the safe and efficient operation of the State Road Network.

An intersection treatment warrant analysis for the South Western Highway / Norman Road intersection. A warrants spreadsheet is available on Main Roads Western Australia's website:

https://www.mainroads.wa.gov.au/technical-commercial/technical-library/road-trafficengineerinq/quide-to-road-design/mrwa-supplement-to-austroads-guide-to-roaddesign-part-4/#mcetoc 1ebke3nn5ukd)

Reason for information

The development seeking approval is serviced by heavy vehicle which may warrant changes to					
the intersection of South Western Highway/ Norman Road to ensure safe and efficient operation					
of the State Road network.'					
Within a Bushfire Prone Area:	Yes				

Deemed Provisions – Cl 67 Matters to be considered by Local Government

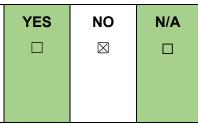
a) The aims and provisions of this Scheme and any other	YES	NO	N/A
local planning scheme operating within the area			

Comment: Clause 5.18 of TPS2 states that, "The purpose of the Urban Development zone is to provide for the orderly planning of large areas of land in a locally integrated manner and within a regional context, whilst retaining flexibility to review planning with changing circumstances." The objective is facilitated through the preparation of Structure Plans which guide the land use permissibility and development.

As previously mentioned, the majority of the subject site falls within the Cardup Business Park LSP and is zoned 'Industry General'. The purpose and intent of the zone under TPS2 is as follows:

"The purpose and intent of the General Industry zone is to provide for industries which require large areas of land for their operation".

b) The requirements of orderly and proper planning including any proposed local planning scheme or amendment to this Scheme that has been advertised under the Planning and Development (Local Planning Schemes) Regulations 2015 or any other proposed planning instrument that the local government is seriously considering adopting or approving



Comment: The majority of the site where the development is proposed to be zoned 'Industrial Development' under LPS3. The proposed concrete manufacturing facility would fall within the 'Industry' land use category under LPS3, which is defined as follows:

Industry – means premises used for the manufacture, dismantling, processing, assembly, treating, testing, servicing, maintenance or repairing of goods, products, articles, materials or substances and includes facilities on the premises for any of the following purposes -

- (a) the storage of goods;
- (b) the work of administration or accounting;
- (c) the selling of goods by wholesale or retail;
- (d) the provision of amenities for employees;
- (e) incidental purposes"

The 'Industry' land use is a 'D' land use within the 'Industrial Development' zone, which means that the use is not permitted unless the local government has exercised its discretion by granting development approval. This would require a merits based assessment to be performed against both the use component and the physical works component of the proposal.

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Notwithstanding the above, it is important to note that part of stressing beds no. 1 and no. 4, the temporary storage area and the drainage basin are located within the 'Rural' zone and the use of 'Industry' is a prohibited land use within the zone.
The most recent 'Modification 173' to draft LPS3 however, seeks to amend Scheme Map 2 by adjusting the boundary between the 'Industrial Development' zone and the 'Rural' zone of Lot 60 Robertson Road, Cardup and Lot 21 Norman Road, Cardup to match the

	dustrial' and 'Rural' zones under the Metropolitan Region S S 3 is imminent.	Scheme. T	he gazetta	l of draft
c)	any approved State planning policy	YES	NO	N/A
			\boxtimes	
Co	emment:			
•	Guidance for the Assessment of Environmental Facto Environmental Protection Act 1986) Separation Distan Sensitive Land Uses	•		
•	Environmental Protection Authority Draft Environmenta Separation Distances Between Industrial and Sensit Statement)			
•	State Planning Policy 2.8: Bushland Policy for the Perth Me	etropolitan	Region (S	PP2.8)
•	State Planning Policy 3.7: Planning in Bushfire Prone Area	s (SPP3.7).	
•	State Planning Policy 4.1: Industrial Interface			
Re	fer to Council Report for assessment against the above sta	ate plannin	g policies.	
,	any environmental protection policy approved under the vironmental Protection Act 1986 section 31(d)	YES	NO ⊠	N/A
Co	emment:			
•	Guidance for the Assessment of Environmental Facto Environmental Protection Act 1986) Separation Distan Sensitive Land Uses			
•	Environmental Protection Authority Draft Environmenta Separation Distances Between Industrial and Sensit Statement)			
	Refer to Council Report for assessment against the above	guideline	S.	
e)	any policy of the Commission	YES	NO	N/A
			\boxtimes	
Cc	mment:			
f) a	any policy of the State	YES	NO	N/A
		\boxtimes		
				\boxtimes

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Comment: As above.

g) any local planning policy for the Scheme area	YES	NO	N/A	
	\boxtimes			
Local Planning Policy 1.4 - Public Consultation on Planning	· ·	Policy		
Local Planning Policy 1.6 - Public Art for Major Developm	ents			
Local Planning Policy 4.11 - Advertising Policy				
Local Planning Policy 4.16 - Landscape and Vegetation F Secreta Council Barrant for a secretary and a secretary and the secretar	•			
Refer to Council Report for assessment against the above loc	aı pıannın	g policies.		
h) any structure plan, activity centre plan or local development plan that relates to the development	YES	NO	N/A	
development plan that relates to the development		\boxtimes		
Comment: the application site is designated as 'Industry Gene to the Table 1 – Zoning Table of TPS2, the land use of 'Industruse in the 'General Industry' zone.				
The LSP states (amongst other things):				
"General industrial land uses encompass a wide range of activities that may or may not result in emissions that could affect the amenity levels considered acceptable in residential areas or other nearby sensitive land uses. The extent of emissions from a particular activity will depend on site and process specific factors such as the scale of the operation, plant processes and emission controls, storage of raw material and waste, local wind patterns and topography.				
The design of the facility and the process controls and nation significant consideration when determining potential separation distances.				
Under the EPA Guidance Statement, it is recognised that the process controls and management measures imple mitigate potential impacts".		•	•	
The proposal includes activities which generate noise, dust and vibration activities, as per the EPA Guidance Statement that identifies noise and dust as associated impacts. The applicant has provided an acoustic assessment and vibration report for the development in addition to a Dust Management Plan (DMP). There are 29 sensitive receptors located in the 750m separation distance from the activities as seen in the previous image.				
To assist the Shire in its merits based assessment of the proposal, the acoustic assessment and vibration report were peer reviewed by independent consultants. The consultants concluded that the technical reports submitted did not adequately demonstrate that the development can be undertaken in a manner which will not result in adverse amenity impacts to nearby sensitive receptors and the broader locality. In terms of the DMP, the measure to address the dust generating activities were not based upon site specific information. These matters are discussed in greater detail in the Council Report.				
i) any report of the review of the local planning scheme that has been published under the <i>Planning and Development</i> (Local Planning Schemes) Regulations 2015	YES	NO	N/A ⊠	
Comment:				

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j) in the case of land reserved under this Scheme, the objectives for the reserve and the additional and permitted uses identified in this Scheme for the reserve	YES	NO	N/A ⊠
Comment:			
k) the built heritage conservation of any place that is of cultural significance	YES	NO	N/A
Comment:			
I) the effect of the proposal on the cultural heritage significance of the area in which the development is located	YES	NO	N/A ⊠
Comment:			
m) the compatibility of the development with its setting including the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development	YES	NO ⊠	N/A
Comment: refer to 'Planning Assessment' section of the Cou	ncil Repor	t.	
n) the amenity of the locality including the following – I. Environmental impacts of the development II. The character of the locality III. Social impacts of the development	YES	NO ⊠	N/A
Comment: refer to 'Planning Assessment' section of the Cou	ıncil Repor	t.	
o) the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource	YES	NO ⊠	N/A ⊠
Comment: refer to 'Planning Assessment' section of the Cou	ncil Repor	t.	
p) whether adequate provision has been made for the landscaping of the land to which the application relates and whether any trees or other vegetation on the land should be preserved	YES	NO ⊠	N/A
Comment: refer to 'Planning Assessment' section of the Cou	ncil Repor	t.	
q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bushfire, soil erosion, land degradation or any other risk	YES 🗵	NO	N/A

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Comment:				
r) the suitability of the land for the development taking into account the possible risk to human health or safety		NO	N/A ⊠	
Comment:				
s) the adequacy of –	YES	NO	N/A	
I. The proposed means of access to and egress from the site; and		\boxtimes		
II. Arrangements for the loading, unloading, manoeuvring and parking of vehicles.				
Comment: refer to 'Traffic' section of the Council Report.				
t) the amount of traffic likely to be generated by the development, particularly in relation to the capacity off the road system in the locality and the probable effect on traffic flow and safety	YES	NO ⊠	N/A	
Comment: refer to 'Traffic' and 'Car Parking' sections of the C	Council Re	port.		
u) the availability and adequacy for the development of the following –	YES	NO	N/A	
Public transport services				
II. Public utility services				
III. Storage, management and collection of waste				
IV. Access for pedestrians and cyclists (including end of trip storage, toilet and shower facilities)				
V. Access by older people and people with disability				
Comment:				
v) the potential loss of any community service or benefit resulting from the development other than potential loss that may result from economic competition between new and existing businesses	YES	NO	N/A ⊠	
Comment:				
w) the history of the site where the development is to be located	YES	NO ⊠	N/A	
Comment: refer to 'Relevant Previous Decisions of Council' and 'Existing Development' sections of the Council Report				

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x) the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals.	YES	NO ⊠	N/A	
Comment: refer to 'Planning Assessment' section of the Cou	ncil Repor	t.		
y) any submissions received on the application	YES	NO	N/A	
		\boxtimes		
Comment: refer to 'Community / Stakeholder Consultation' section of the Council Report.				
Za) the comments or submissions received from any		NO	N/A	
authority consulted under clause 66		\boxtimes		
Comment: refer to 'Community / Stakeholder Consultation' se	ection of th	ne Council	Report.	
Zb) any other planning consideration the local government	YES	NO	N/A	
considers appropriate			\boxtimes	
Comment:				

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