

720 Welshpool Road East Traffic Matters

Key:

- **Movement 1:** Vehicles entering the site from Welshpool Road East (WRE) by turning right, from the east, the Crystal Brook Road intersection and uphill. Drivers would need to turn right through the median break to enter the property.
- **Movement 2:** Vehicles entering the site by turning left, coming from the west from the Tonkin Highway intersection. Drivers would need to turn left into a turning lane to enter the property.
- **Movement 3:** Vehicles exiting the site, turning left, travelling east towards Crystal Brook Road intersection and up the hill. Drivers can turn left into either lane of Welshpool Road East.
- **Movement 4:** Vehicles exiting the site, turning right, travelling west towards the Tonkin Highway intersection. Drivers would need to cross two lanes and then the median break before turning right and joining traffic in the two west bound lanes.
- **Original Submission:** Information provided by the applicant during the assessment of the development application leading to the November 2021 Council report. This included designs, a Transport Impact Statement and a Road Safety Audit.
- **Report 11/03/2022:** Report dated 11/03/2022 provided by applicant during SAT Mediation addressing traffic matters.
- **Report 22/04/2022:** Report dated 22/04/2022 provided by applicant during SAT Mediation addressing traffic matters.
- **Report 22/08/2022:** Report dated 22/08/2022 provided by applicant during SAT Mediation addressing traffic matters.
- **Revised Submission:** Notable changes to the original submission by the applicant, for consideration by Council September 2022. Includes revised design and information received under SAT mediation.

Item	Applicant Submission and Response	Main Roads WA Response to Original Submission	City Appointed Traffic Expert (DVC) Advice	City Response
1. All mature trees within the verge and median are to be retained and protected.	For Movement 1, the applicant originally proposed a modified short right turning lane to prevent removal of trees. The median changes were modified to prevent the need to remove	N/A	Noted.	The final submission ensures all trees in the verge and median are retained and protected.

	<p>trees. Revised Submission was to not permit any drivers to turn right, thus no trees are impacted.</p> <p>For Movement 3, the applicant confirmed sight lines could be achieved without removing trees in the verge.</p> <p>No other movements are expected to impact on trees.</p> <p>Revised Submission: No change to the median islands or trees in the adjacent verges.</p>			
<p>2. Movement 1: Is a turning lane required by the standards, and can a complying turning lane be achieved without removing trees.</p>	<p>Provided reasons for why a turning lane is not required, and for the length if it was required, which would result in trees needing to be removed.</p> <p>Subsequently agreed to prevent access for drivers from the east.</p>	<p>Proposed right-in will impact the efficiency of the right lane of Welshpool Road East. If a right turn lane is cannot be provided in a safe position, this movement is not supported.</p>	<p>Reported crash history which includes four crashes in vicinity of the median break.</p>	<p>Proposal to prevent access for this movement was noted. City needed details on how this movement would be restricted. See further detail in the next row.</p>
<p>3. Movement 1: Applicant proposes Movement 1 will not be permitted</p>	<p>The median break configuration is left as-is. This has a sharp kerb radius that would restrict but not prevent vehicles turning right into the median break.</p> <p>Revised Submission:</p>	<p>N/A</p>	<p>Advised on ways to apply this restriction: no right turn signs with through arrows, and by physically preventing drivers from being able to enter the site from the median, such as by having a raised island at</p>	<p>The applicant has demonstrated appropriate physical and regulatory controls to prevent this movement. Note that regulatory signs would require Main Roads WA</p>

	No right turn sign proposed, and the entrance has a traffic island preventing this movement.		the property crossover or moving the crossover further west. Westbound drivers may choose to do a u-turn at the next median break.	approval, which is not gauranteed.
4. Movement 2: drivers accessing the site on their left need a complying turning ¹ (deceleration) lane due to the speed and volume of traffic on Welshpool Road East, and the number of vehicles generated by the development.	Original Submission was for an 97m long turning lane. During the SAT mediation, the applicant proposed that the Extended Design Domain (EDD) method of assessment could be used, which provides for shorter lane lengths in constrained locations. Revised Submission: Applicant continues to submit that EDD is appropriate. However, a 125m long turning lane is provided in plan PC16017-CI-1100-I.	Proposed lane length is substandard, as was also noted in the Road Safety Audit.	Advised that the use of EDD is not appropriate, and that a 125m turning lane length is needed as per the standards.	The use of EDD is not appropriate. A 125m turning lane length is needed and has been provided.
5. Movement 2: a PTA bus stop and embayment exists in the proposed turning lane.	In the Original Submission, the applicant advised that PTA had accepted the bus stop being within the future turning lane (97m long). Revised Submission: The bus stop location has been moved to an upstream position as recommended.	N/A	Standards advise that the bus embayment should be relocated however this is not feasible due to the proximity to the Tonkin Highway intersection. Recommend the bus stop be relocated as far	The bus stop location has been moved to an upstream position as recommended.

			'upstream' in the turning lane as possible.	
6. Movement 3: the turning movement plan (PC16017-CI-SK4) shows trucks joining the far lane in Welshpool Road East	Referenced Road Traffic Code showing that this movement is not regulated (Report 11/03/2022). For safe egress, any driver needs to have sight lines to the east. The sight lines to the east are compliant as provided in plan PC16017-CI-SK2.	N/A	N/A	Confirmed.
7. Movement 4: when turning right and crossing the median, the drivers need complying sight lines so they can see vehicles coming from the east and find the gaps in traffic.	In the Original Submission, sight lines were calculated using the speed limit. Subsequently revised to be in accordance with the standards (using operating speed). Arranged tree pruning with the City to demonstrate complying sight lines. Applicant asserted that a truck driver should be able to sight gaps in traffic and make the crossing in one full movement. Revised Submission: The entrance has a traffic island preventing this movement.	Sight lines not directly mentioned. See item 8 below.	Advised the design speed (90 km/hr) should be used for calculating the sight lines and lane lengths as it provides a greater margin of safety. Traffic count locations are influenced by peak hour traffic (<i>congested traffic has the effect of lowering the overall operating speed</i>), and so may not be representative of actual traffic speeds. Recommended using a different traffic count site west of Lewis Road.	The entrance has a traffic island preventing this movement. Any small vehicle driver attempting to use the median break would have to make a dangerous manoeuvre to do so.

<p>8. Movement 4: any vehicles over 8m long including sem-trailers that were not able to move across the median in one stage would have to stop and then block a eastbound through lane on Welshpool Road East</p>	<p>In the Original Submission, the applicant asserted that larger vehicles could make the crossing in one stage. Any stopping in the median would be short term and eastbound drivers would pass around them. Revised Submission: The entrance has a traffic island preventing this movement.</p>	<p>Right out movement is not supported. Vehicles would have to cross four lanes of traffic which is considered unsafe. Geometry of the road and posted 80 km/hr speed limit "creates an undesirable environment.. from a safety aspect". Concern regarding ability for a 19m semi-trailer to make the movement in one stage, and that such a movement would be "inefficient and dangerous". Such a vehicle would otherwise need to store in the median which is not wide enough.</p>	<p>Advised on a number of technical aspects that need to be considered. Confirmed the median space is not sufficient to store a vehicle over 6.4m long. The gap in traffic that a truck driver would need to cross and enter the westbound lanes is 10 seconds. Recommended the access location be moved further west (and become left-in, left-out) to prevent any trucks from being able to use the median space. In this situation, small vehicles would potentially be able to exit the site turning left, then cross to the existing right turn lane and make a u-turn in the median break.</p>	<p>The entrance has a traffic island preventing this movement.</p>
<p>9. Movements 1 and 4: The crossover being located opposite a median break creates an intersection, as well as there being an existing crossover on the other side. The median space is not</p>	<p>In the Original Submission, the applicant sought to gain approval through technical assessments as a crossover including sight lines, and not as an intersection. Revised Submission: The entrance has a traffic island creating a left-in left-</p>	<p>An additional full movement access would be confusing to motorists. Ultimately this provides four full-movement crossovers being serviced by one median opening. This is confusing and poses a safety risk. Quoted Driveway Policy,</p>	<p>Advised that Australian Standard AS 2890.1 Offstreet Parking Facilities Clause 3.2.3(b)(i) identifies that this proposed access should be treated as an intersection. This is on the basis of the number of parking bays being</p>	<p>The entrance has a traffic island creating a left-in left-out access only, and preventing this movement.</p>

<p>designed to operate as an intersection. Vehicles would be in conflict with many other vehicle movements.</p>	<p>out access only, and preventing this movement.</p>	<p>specifically “For divided roads, no driveways shall be permitted opposite median openings”.</p>	<p>provided, and the hierarchy of the road being accessed. Despite MRWA not being the managing authority for this section of Welshpool Road East, in the absence of its own policy the City should refer to it. A number of further details and advice provided regarding the risk of vehicles coming into conflict in the median from the various directions.</p>	
<p>10. The proposed development crossover is adjacent to another crossover (being 740 Welshpool Road East).</p>	<p>Standard crossover spacing is proposed. Other movements as outlined previously.</p>	<p>Existing crossover “has full movement access via the median break” and so may lead to driver confusion.</p>	<p>Advice provided that the property of 740 Welshpool Road East is already restricted to left-in left-out movements as a driver turning right would be travelling head-on to eastbound traffic.</p>	<p>The entrance has a traffic island creating a left-in left-out access only, thus removing conflicting movements from the median.</p>
<p>11. Is Road Safety Auditor independent of the designer?</p>	<p>RSA undertaken by Transcore. The designer is Peritas Consulting.</p>	<p>Raised by Main Roads WA</p>	<p>N/A</p>	<p>Contemporary RSA practice is that the auditor need only be a different person to the designer. No concerns.</p>

¹ the standards refer to these lanes as deceleration lanes, however in this report we are referring to them as turning lanes for ease of public understanding.