



Safety of Rodney House Roundabout

This report has been prepared by Paul Davis, Chair, Graven Hill Residents' Association (GHRA), and a resident of Graven Hill for six years.

Executive Overview

The Rodney House roundabout on the A41 at Graven Hill in Bicester has been of concern to Graven Hill residents for several years. This concern has been amplified by the increased volume of traffic to Graven Hill as the community continues to grow. Recent polling of residents found that 99% consider the roundabout to be unsafe, with nearly two-thirds believing it very unsafe.

This report highlights seven issues of concern with the design and operation of the roundabout, the most recent of which is the removal of portions of the guardrailing which is meant to direct pedestrians to the appropriate crossing points.

Residents and other users have experienced many incidents, shunts, crashes and near misses but, fortunately, there are no known reports of any serious injuries to date. There is, though, a widespread concern within the community that it is only a matter of time before one occurs, especially as there are several thousand more homes to be built at Graven Hill and its immediate vicinity.

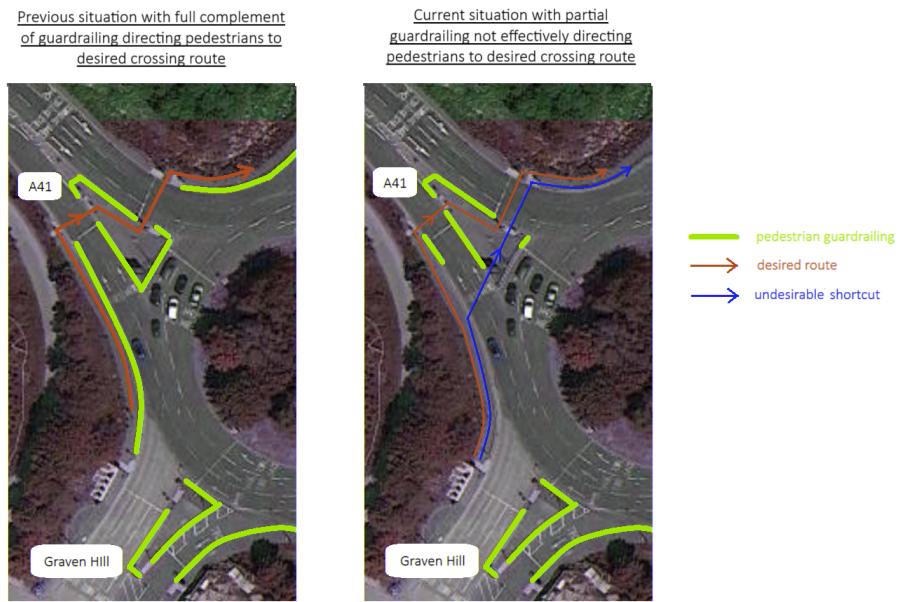
Discussion

There are seven issues with the roundabout:

- Removal of pedestrian guardrailing

The main purpose of pedestrian guardrailing is to direct pedestrians to the appropriate crossing point [Department of Transport, *LTN 2/09 Pedestrian Guardrailing* (April 2009), section 1.3.5, p.5, <https://assets.publishing.service.gov.uk/media/6116584a8fa8f53dc5ce0f76/ltn-209-pedestrian-guardrailing.pdf>]. A substantial portion of guardrailing at the roundabout was recently removed. This is highly problematic as impatient pedestrians seeking a shortcut can now cross much closer to the roundabout. In doing so, pedestrians will have less visibility of (speeding) vehicles coming around the roundabout, and

those drivers have less visibility of pedestrians crossing in an unexpected place. The fact that the guardrailings removed had been frequently mangled by vehicles losing control amplifies the significance of this point.



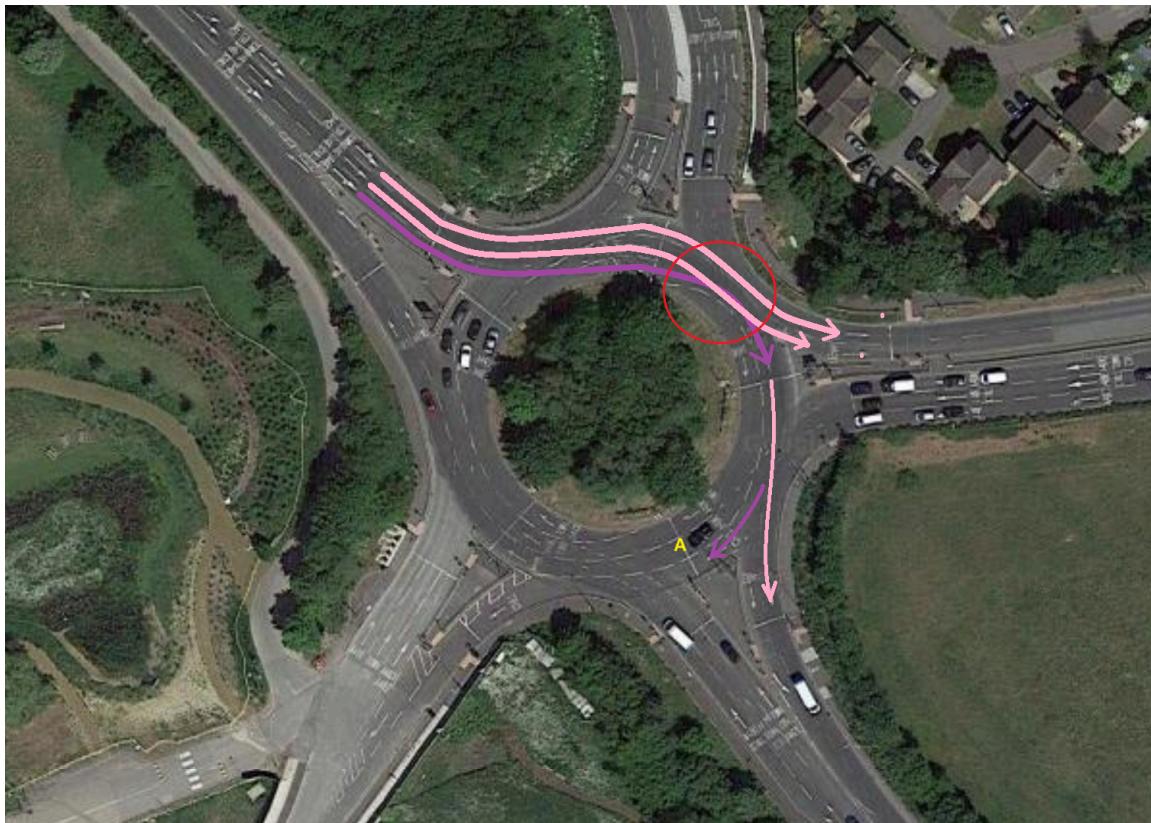
This is the case now for crossings on the East and West exits of the A41. The diagrams above show before and after views of the pedestrian crossing on the west exit of the A41. In the left image, the guardrailings used to guide pedestrians to the crossing about 20m away from the junction. The image on the right shows that because of the switchback on the central island to the second part of the crossing, the removal of guardrailings now provides a clear shortcut and desire path.

It is not obvious why the guardrailings were not replaced or alternatively, why other mitigating measures, such as a reduction in speed limit, not applied [DoT, 2.1.8. p.8]. It is true that studies have shown that the removal of guardrailings can lead to less accidents [DoT, 3.3.2, p.14] [Street Behaviour, Collisions Before And After Removal of Pedestrian Railings (July 2017), <https://content.tfl.gov.uk/pedestrian-railings-removal-report.pdf>].

However, results were very site specific, and not deemed significant for roundabouts, whilst also showing guardrailings at roundabouts were very effective at directing pedestrians to the correct crossing points [DoT, 3.3.4, p.14/15]. It is also indicated that the criteria for the removal of guardrailings should be based on how effective it is in directing pedestrians to the appropriate crossing point and so its removal at Graven Hill appears to be contrary to this guidance [DoT, 6.6.2, p.22]. Furthermore, it may be reasonably assumed that even when mangled, they were performing its intended role.

- Unintuitive merge required on roundabout

When entering the roundabout on the A41 from the west, traffic to Graven Hill needs to merge with traffic from the lane to the left staying on the A41 and heading east. This requires an unnatural change in line such that it looks like you are swerving into the natural line of the vehicle on your left. This is very problematic and causes a lot of confusion, some shunts and many near misses.

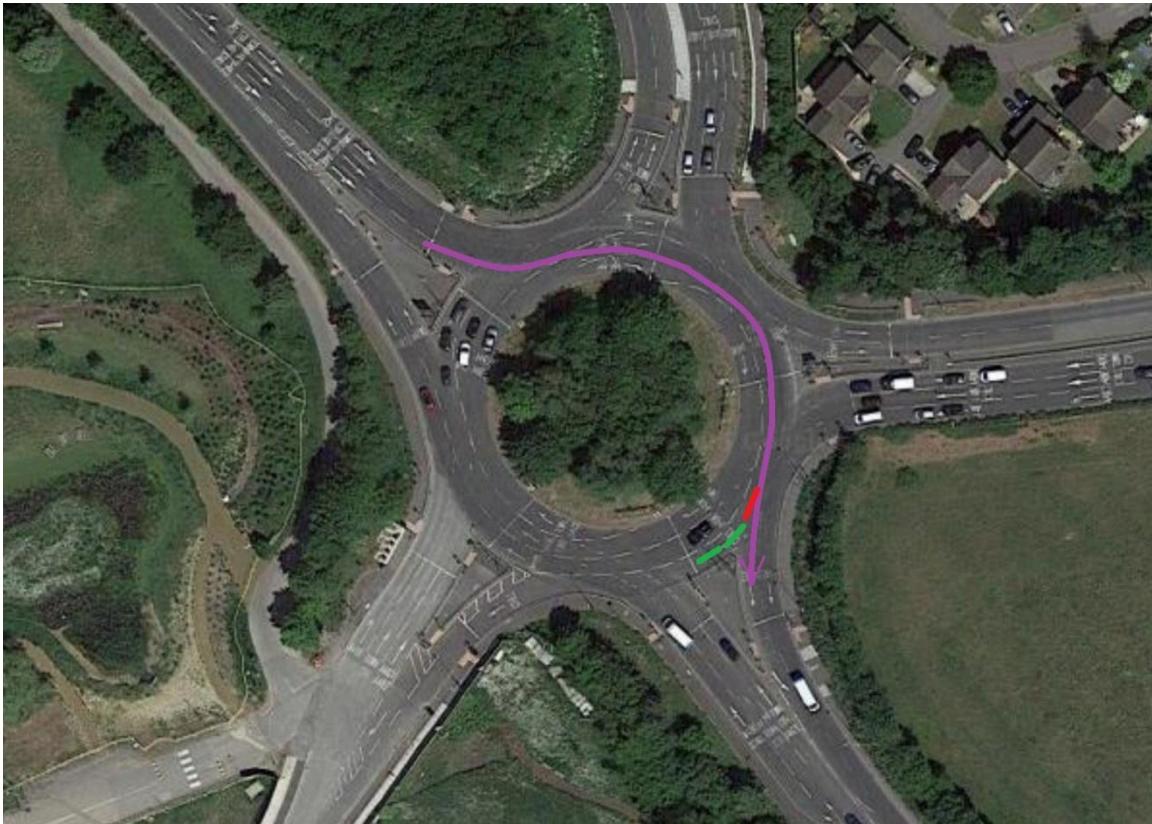


In the above diagram, consider a vehicle approaching from Oxford on the A41 (upper left) and travelling to Graven Hill. They stop at the roundabout in the right-hand lane. To their immediate left is a car travelling onwards to Aylesbury. Both cars are directed to merge into a single lane whilst on the roundabout, as shown by the red circle. The car travelling to Graven Hill (purple line) is explicitly directed away from the lane hugging the roundabout. So, for example, the car marked with an A in the diagram is not travelling to Graven Hill.

- Phasing on roundabout leads to stationary vehicles in path of unsuspecting traffic

When on the roundabout and waiting at the last set of traffic lights before entering Graven Hill, there is only room for two cars. A third car will overhang the roundabout exit heading east on the A41 and is vulnerable to being hit by vehicles either not paying attention or

speeding. This has been the cause of a number of accidents and near misses (dashcam footage on one such accident is available on request).



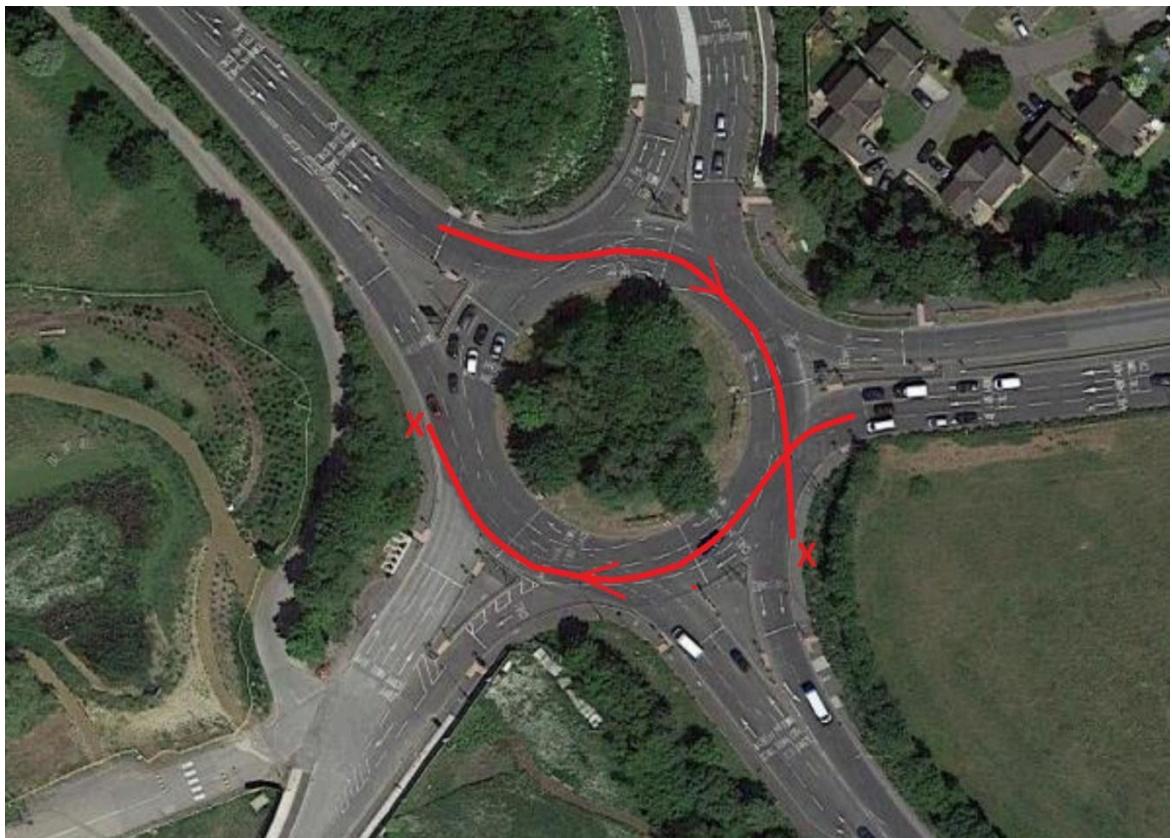
In the image above, there is a car waiting at the set of traffic lights on the roundabout immediately before traffic coming from the Aylesbury direction on the A41. As mentioned previously, this car is not travelling to Graven Hill as the lane markings indicate traffic for the A41 and London Road. A car travelling to Graven Hill stops alongside them to their left. If a few vehicles, also heading for Graven Hill, are waiting then the third (as indicated in red) overhangs the roundabout exit for the A41 to Aylesbury. The situation is compounded if the first vehicle is larger than a car, then there only needs to be two vehicles travelling to Graven Hill for there to be a potential problem. It is also particularly the case for traffic that has entered the roundabout on the far-right lane and continuing east on the A41 (as shown by the purple line).

- Drivers losing control on the roundabout

Many vehicles negotiate the roundabout too quickly and lose control on exit. This is particularly so for the two A41 exits, as evidenced by the frequent damage to guardrailings on these exits by the crossings.

The following diagram shows the two key problem points (marked "X"), although mishaps have happened with guardrailing elsewhere on the

roundabout too. The corresponding paths for those vehicles that run into trouble are indicated in red on the diagram and are consistent with where a vehicle might lose control if driving too fast.



- Drivers fail to stop at traffic light crossings

Residents have often seen vehicles not stop at the A41 pedestrian crossings by the roundabout exits, particularly the one on the western exit. This appears to be a speed and visibility issue coupled with not expecting to see a pedestrian crossing at this location.

- Drivers fail to stop at on-roundabout traffic lights

Residents frequently experience vehicles ignoring the red traffic light signals on the roundabout. This is particularly the case directly by Graven Hill (seen by drivers waiting to leave Graven Hill).

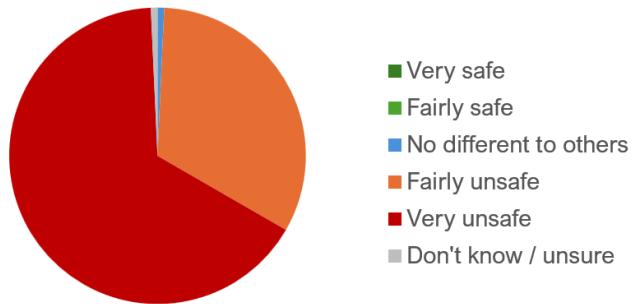
- Cyclists are very much an afterthought

Whilst there are toucan crossings, the roundabout is in no way optimised for cyclists who may be encouraged to navigate it by road, thus exposing themselves to all the issues described above.

Conclusion

As a result of the issues with the roundabout, residents have serious concerns about its safety. A single-question poll demonstrated that not only did 99% of respondents believe the roundabout was unsafe, but that 64% believed it to be very unsafe. No-one chose the “fairly safe” or “very safe” options.

From your personal experience as a pedestrian, cyclist or driver using the official lane markings, how safe in your view is the Rodney House roundabout at the entrance to Graven Hill?



In recent months, there has been an increase in the number of accidents reported. Some form of correlation between the number of incidents and the increasing number of residents at Graven Hill seems credible. If there is such a correlation, with the thousands of extra homes to be built at Graven Hill, Wretchwick Green and Alchester Parklands, if left unremedied, the current issues will only get worse.

Recommendations

Residents at Graven Hill and the Residents' Association that represent them strongly urge Oxfordshire County Council to conduct a safety review of the roundabout, considering the issues raised in this report.

Should this report not be compelling enough to initiate action, residents would like to understand what further information or evidence is required or what residents and the GHRA could do to alleviate their concerns and improve the safety of the roundabout.

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