

# **N25 GARRANMILLON LOWER TO LEMYBRIEN PAVEMENT SCHEME**



## **PROPOSAL TO ALTER TRAFFIC MOVEMENTS AT GARRAHLISH JUNCTION L7032/N25**

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## 1 INTRODUCTION

Transport Infrastructure Ireland (TII) have allocated €2.7m to Waterford City and County Council to carry out road resurfacing between Lemybrien and McGraths Cross on the N25. Waterford Council commissioned Tramore House Regional Design office to prepare the tender documents and do the design. TII safety section identified a number of road safety issues under their Road Safety Inspection Programme (RSI) along this section of road. As part of the design process those safety issues were examined. It is proposed to make alterations to the junction at Garrahylish to make it safer and this report outlines the options considered and the proposed preferred option. The preferred option will be subject to the Section 38 procedure for traffic calming works.

## 2 PROJECT JUSTIFICATION

The scheme is being promoted by Waterford City and County Council to address the primary safety issues identified on the site. THRDO has reviewed the layout of the crossroad junction on the N25 national primary road with the L7032 local road situated approximately 1.3km to the East of Lemybrien village. The junction is located in the townland of Garrahylish Co. Waterford (see Figure 1.1).



**Fig 1.1: Site location**

The L7032 is a local road which crosses the N25 to form a crossroad. There is number of safety issues noted by RSI at this location such as effects of see-through on approach to N25 from local road L7032, high embankment on junction approach, provision for pedestrians and cyclists lacking due to narrow hard shoulder throughout the junction, bridge parapet within clear zone etc. Video survey at the junction identified a number of centre line crossing and hazardous overtaking through the junction, in spite of continuous centre line being present at location.

There have been a number of near misses reported at this junction where cars waiting to turn right have narrowly missed being hit by cars overtaking. Current TII Design Standards for new road construction on National Roads does not permit cross roads as junction type. This cross roads is a legacy junction which will continue to operate on the national network.

### 3 OPTIONS CONSIDERED

Design team in consultation with Waterford City and County Council and TII Safety section, considered various options throughout design process to improve road safety before adoption of preferred option.

#### 3.1 Option 1 (Do Nothing)

Option 1 does not improve any of the safety issues highlighted at this location.

#### 3.2 Option 2 / Preferred Option (Conversion of local road junctions layout by – prohibiting right turning manoeuvre from the N25 mainline)

Preferred Option to be implemented and can be achieved as part of upcoming pavement scheme and significantly addresses safety concerns raised at the junction

#### 3.3 Option 3 (Removal of cross road layout by closing local road L7032 North of junction)

Option 3 will remove the crossroad layout which is not in accordance with current TII standards. Closure of L7032 North of junction will only be possible following appropriate legislative measures. This option cannot be achieved as part of upcoming pavement scheme.

#### 3.4 Option 4 (Closure of both junctions L7032 North and South of junction)

Option 4 proposes to close both local roads that form this crossroad junction with the N25. This would remove all access and egress movements at this location. The removal of the crossroad layout, which is not in accordance with TII standards, would improve the overall safety on this section of the N25, eliminating right turning movements on high speed section of the network, removing see through at the junction and reinstating the hard shoulder, providing for cyclists/pedestrians they may be travelling the route. There are safer alternative junctions East and West of Garrahylish junction at Lemybrien village (50kph zone) 1.9km to the West and McGraths Cross (with Ghost Island) 2.9km to the East. This option significantly addresses all safety issues identified at the location. Closure of both roads (L7032 North and south of junction) will only be possible following appropriate legislative measures. This option cannot be achieved as part of upcoming pavement scheme.

#### 3.5 Option 5 (Removal of cross road layout and introduction of staggered right left junction)

Land take required and CPO procedure must be finalised before option 5 can be implemented. Scheme cost is high compared to other options and not cost effective.

#### 3.6 Option 6 (Removal of cross road layout by Left Diverge Loop in combination with closing local road L7032 North of junction)

This junction is situated in a 3km length straight section where there is a currently a significant amount of overtaking. Drivers using the left diverge loop may not be aware of overtaking vehicles when deciding to carry out a crossing manoeuvre. In this situation the risk of collisions is increased. HGV's have been observed turning right off the N25. Closure of L7032 North of junction will only be possible following appropriate legislative measures. This layout would not be appropriate for HGV movement and the risk of conflict between turning vehicles and potential overtaking vehicles.

#### 3.7 Option 7 (Removal of cross road layout by Provision of Right Hand Turning lane to service L7032 (South) in combination with closing local road L7032 North of junction)

This was eliminated because the current level of vehicles turning right off the N25 at this location does not warrant the provision of a right turning facility. Closure of L7032 North of junction will only be possible following appropriate legislative measures.

This option cannot be achieved as part of upcoming pavement scheme.

#### 4 PROPOSAL OF PREFERRED OPTION OF SCHEME

**Preferred Option 2 proposes to prohibit right turns from the mainline on to the local road L7032 North and South of the N25. This would improve the overall safety for road users on this section of the N25 and specifically those carrying out right turning movements at this location. TII will provide funding to upgrade the local road network to improve the surface, the bends and the junction visibility on the alternative route, thus making the road network safer. Preferred Option will also significantly address the issue of see-through and cyclist safety identified by the Road Safety Inspection process.**

Road users affected by this will have safer alternative junctions East and West of Garrahylish junction at Lemybrien village (within a 60kph zone) 1.9km to the West and McGraths Cross (with Ghost Island) 2.9km to the East to access and egress the N25. Journey times will be slightly increased for a low volume of road users as a result, mainly those residents (approximately 8 properties) on the L7032(south), there are no residents on the L7032(north). Also will increase journey times for agricultural vehicles using the junction.

Number of maps indicating worst case diversions and added journey time, for people that live along side road Between Carriglea and Ballylynch Cross, with various options for full closure of side roads are included within this report as part of Appendix B.

The proposed works includes:

- resurfacing of the existing pavement,
- provision of new road signage and updated line marking layout,
- provision of channelizing island at junction mouth to mitigate effects of see through, identified within RSI report,
- re-locate existing Directional Signage to improve visibility and mitigate effects of see through, identified within RSI report,

This option will inconvenience a low volume of road users on the N25 that wish to make a right turn. As a result of the inconvenience, funding is to be provided to carry out a number of road improvement works on the local road network such as improvement to junction visibility, road surfacing improvement and improvement works at sharp bends on local road network, thus making the local road network safer.

Refer to drawing TH21023-P1-GA-001 – General Arrangement in Appendix A.

Refer to maps indicating diversions and added journey time in Appendix B.

## 5 CONCLUSION

The proposed scheme is consistent with the WCCC and TII objectives to improve safety for road users with a strong emphasis on improvement of the overall safety for road users on this section of the N25. The proposed scheme will make this section of the N25 road safer. It provides a solution for the N25 road safety issues identified at a feasible cost and also improves the local network.

Road users affected by this will have suitable alternative junctions East and West of Garrahylish junction at Lemybrien village to the West and McGraths Cross or adjacent junction (with Ghost Island or grade separation) to the East.

In conclusion, having examined all the options considered, it has been decided that the proposed design, as shown in Appendix A, is the optimum solution available and we recommend that **Preferred Option 2: Conversion of local road junctions layout by – prohibiting right turning manoeuvre from the N25 mainline**, is accepted as the preferred solution.

**APPENDIX 1 – PROPOSED PAVEMENT SCHEME LOCATION&PLAN**







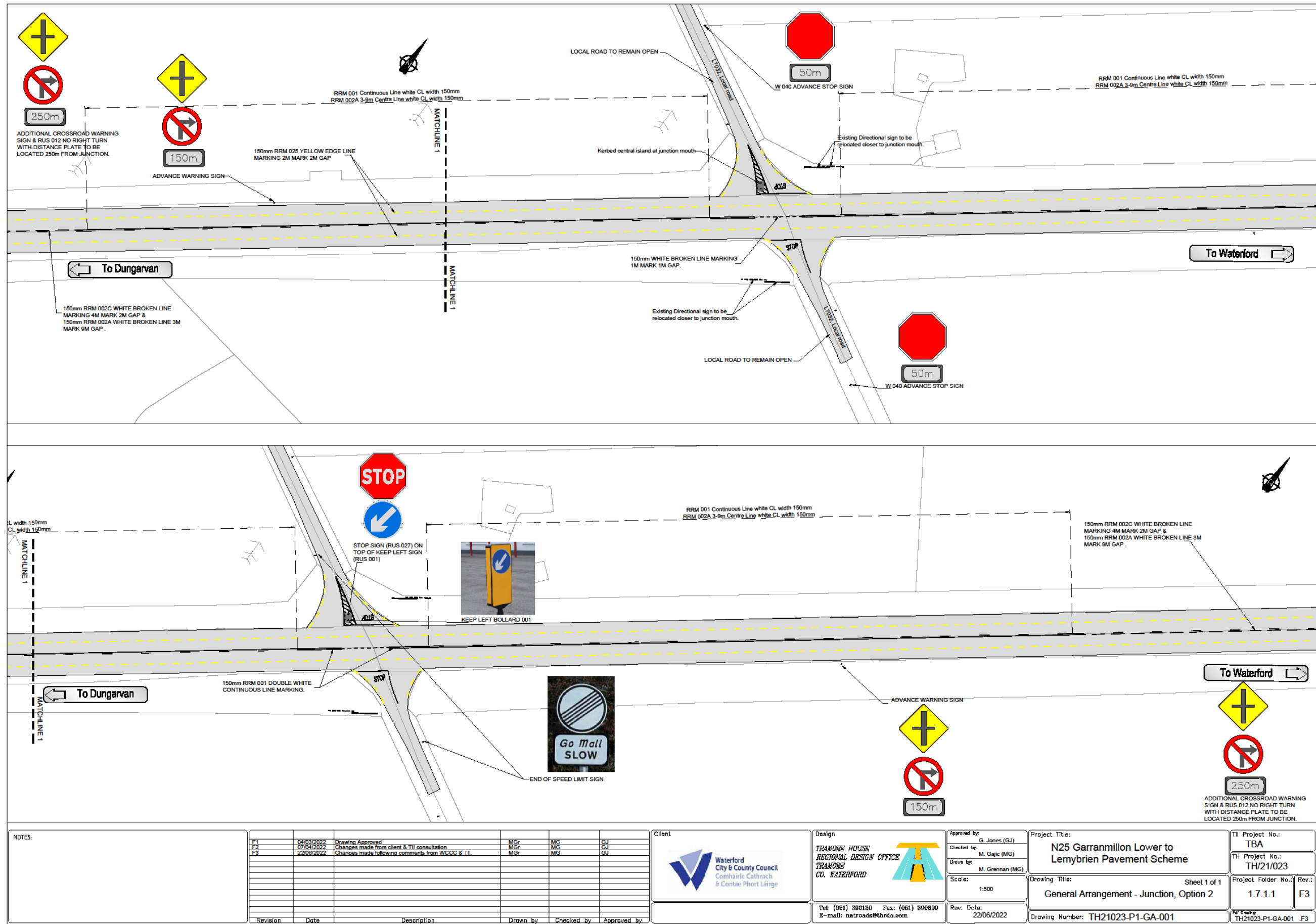
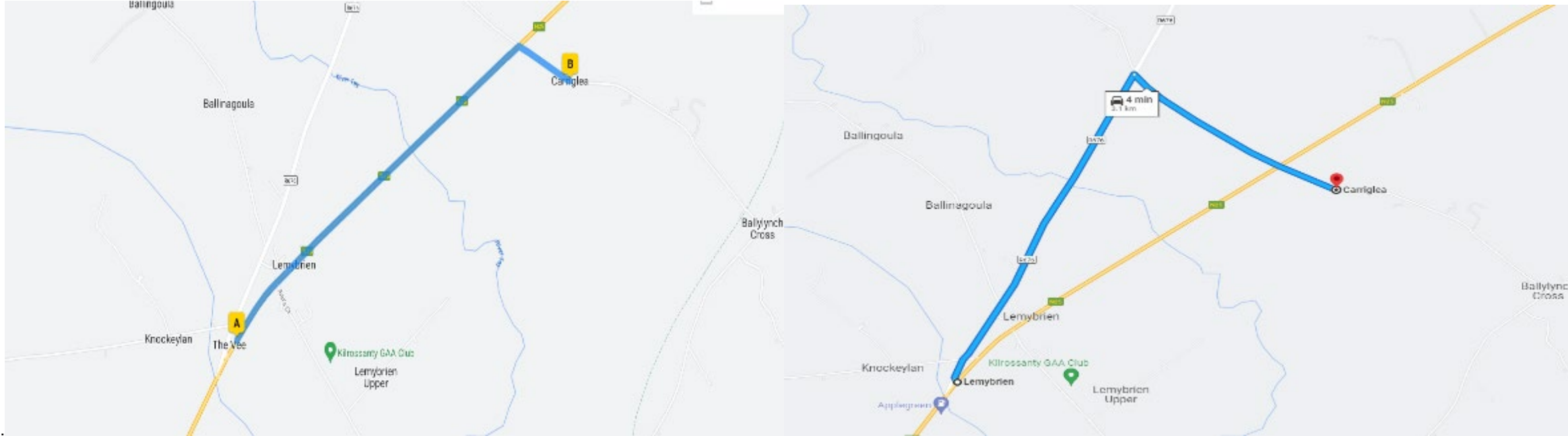


Figure 1.3: Pavement Scheme Preferred Option Plan

**APPENDIX 2 – MAPS INDICATING DIVERSIONS AND ADDED JOURNEY TIME IN APPENDIX B.**

Maps below indicating worst case diversions for people that live along side road Between Carriglea and Ballylynch Cross with conversion of local road junctions layout by – prohibiting right turning manoeuvre from the N25 mainline. There are possibly 8 dwellings and some farms on the side road between Carriglea and Ballylynch Cross.

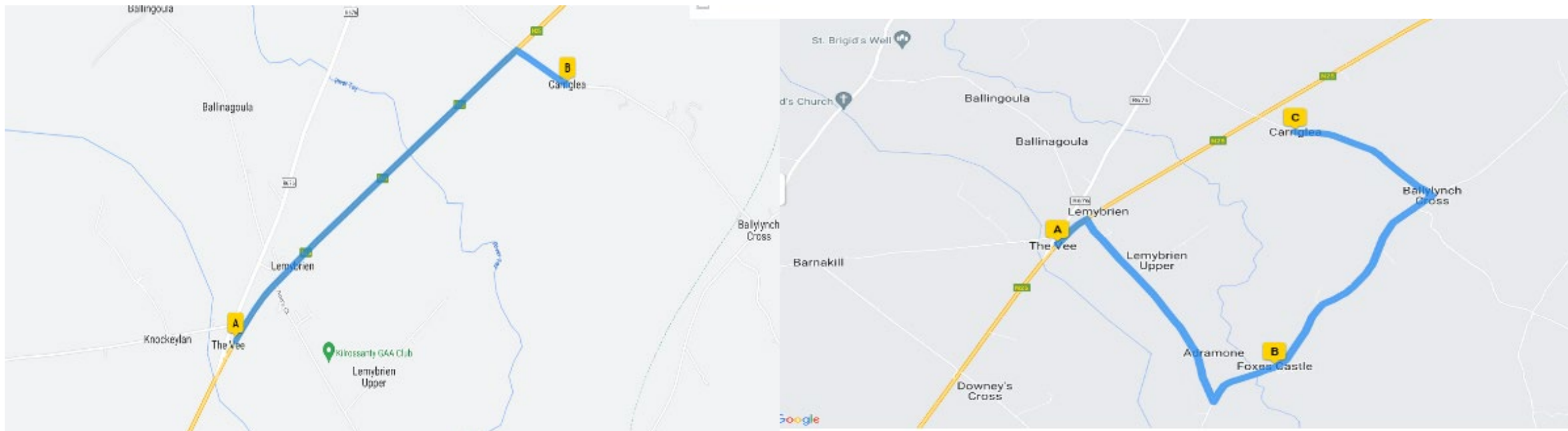


Map 1.

Existing journey time 2min / 2.2km

Journey time 4min / 3.1km with closure.

Extra 2 min and extra 900m in worst case scenario travelling from West using R676 on North side.

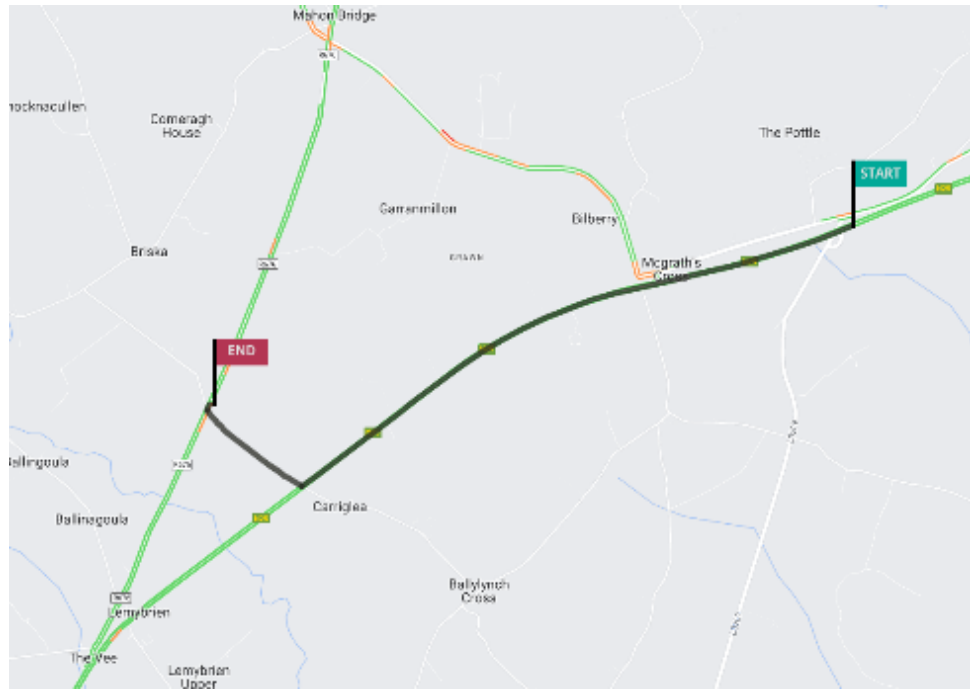


Map 2.

Existing journey time 2min / 2.2km

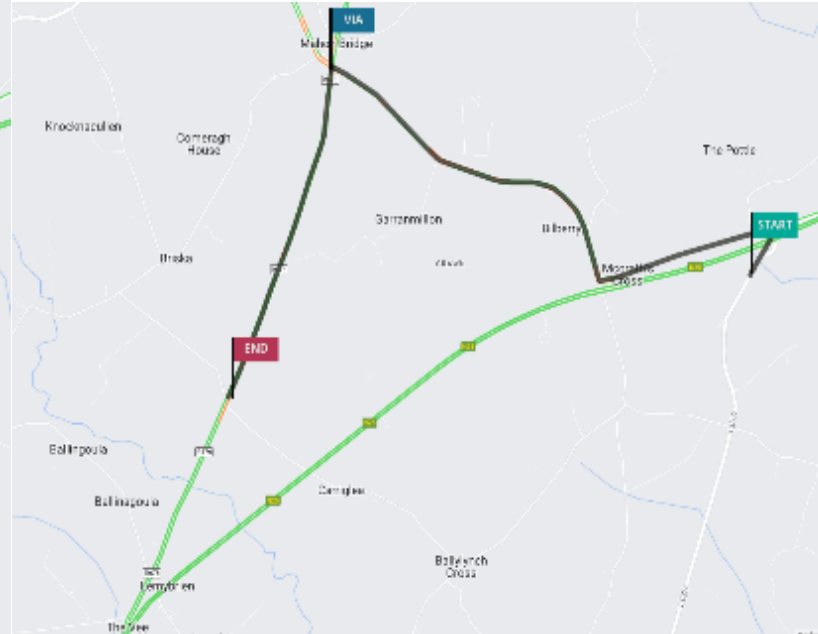
Journey time 7min / 6.0km with closure.

Extra 4 min and extra 3.8km in worst case scenario travelling from West using local roads on South side.

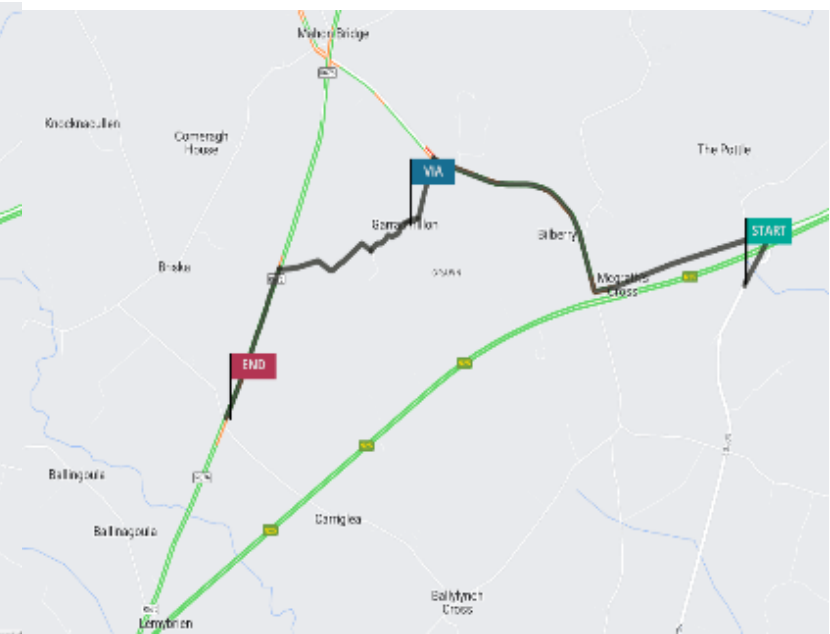


Map 3.

Existing journey time 5min / 6km



Journey time 7min / 8.0km with closure.  
Extra 2 min and extra 2km with closure.  
(Travelling from East, using left turn from N25 with under bridge, no right turn required)



Journey time 9min / 7.0km with closure.  
Extra 4 min and extra 1km with closure.  
(Travelling from East, using left turn from N25 with under bridge, no right turn required)



Map 4.

Existing journey time 1min / 1km

Journey time 3min / 4.0km with closure.  
Extra 2 min and extra 3km in worst case scenario travelling from N25 East to R676