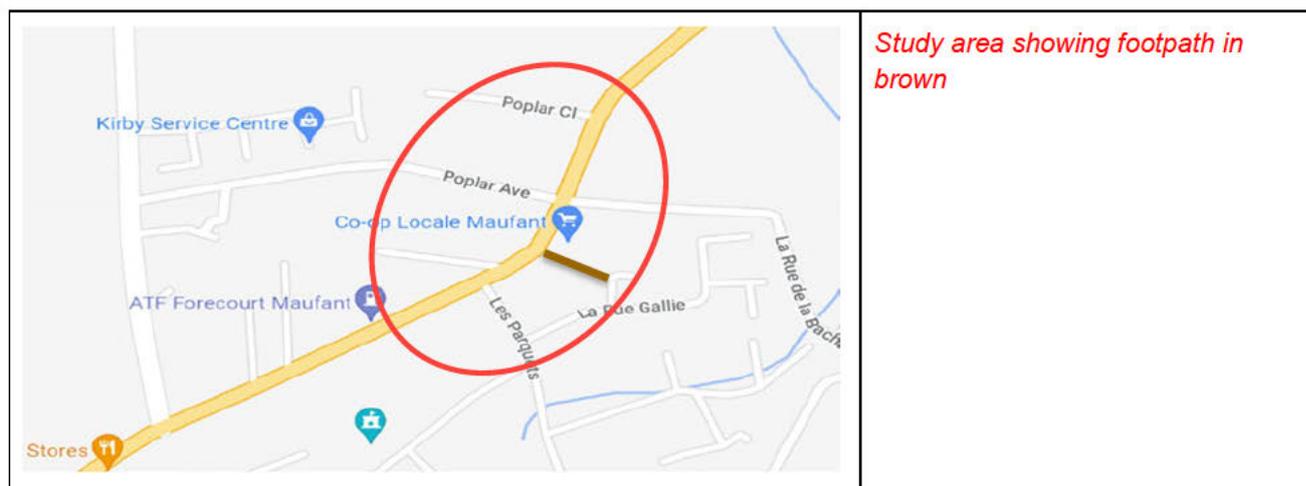


Technical Note

JOB TITLE	Maufant Crossing
PROJECT NUMBER	70081155
DATE	15 December 2022
CLIENT	Government of Jersey IHE
PREPARED BY	
AUTHORISED BY	

1. Introduction

Through the Road Safety Review Panel, requests have been received for a safer pedestrian crossing for the village of Maufant to facilitate pedestrian access to the Co-Op Locale Maufant and to the Youth Club. IHE has requested WSP to carry out a feasibility study of options for a new crossing for Maufant Village, adjacent to the Co-Operative, with the objective of making a safer crossing for pedestrians wishing to access the store by providing a safer and more attractive walking route.





Maufant Village

2. Site Conditions

La Grande Route de St Martin is one of 8 main arteries that lead from rural Jersey into the main town of St Helier and is approximately 3km in length. It runs from the Village of St Martin in the northeast to Five Oaks roundabout on the outskirts of St Helier town. Its speed limits vary between 30mph and 40mph, with the speed limit at Maufant village being 30mph. It runs through two villages including Maufant. There is a double white centre line in the carriageway to prevent overtaking at the bend.

The village of Maufant is made up of approximately 550 dwellings with La Grande Route de St Martin running through its heart. Towards the southwestern extent of the village centre there is a shop and post office, with a petrol station, Youth Centre and the Co-Op further towards the centre and northern extent of the village.

There is a pedestrian footpath along the side of the youth club that links La Grande Route de St Martin to La Rue Gallie. The line of desire for older pedestrians crossing appears to be between the footpath at the side of the youth club and the northside of the La Grande Route de St Martin. This route is used as a short cut for some residents to get to the Maufant Co-Op Locale that is 25m to the Northeast.

The Co-Op has a vehicular entrance that leads to a small car park and service area. The entrance is very close to the bend in La Grande Route de St Martin.

At present there are no crossing facilities in Maufant. The main desire line for pedestrians to cross appears to be in the vicinity of the bend, close to the footpath. The main focus of this study is to improve crossing facilities to serve this desire line.

3. Bus services

Maufant village has six bus stops, two of which are 80m from the potential crossing site. Route 3 serves Maufant, providing an hourly service. There is no pavement for pedestrians to board or alight on at stop 3658 which forces pedestrians waiting for the bus to use the Poplar Avenue as a place to stand whilst waiting for the bus. The southbound bus stops are generally used for boarding, and the northbound for alighting. Ticket sales southbound at the Poplar Avenue and Maufant Village stops average over 600 per month, with the Midland Stores stops averaging 1600 per month. (figures taken from 2018 data). The corresponding alighting figures are assumed to be a match to the boarding figures, suggesting that 200 two-way 600 trips per month for bus passengers would involve crossing the road at least once per trip in the vicinity of the potential crossing site.

The summer and winter monthly averages are similar, indicating that these stops are mostly used by local people rather than as a tourist service.

4. Footways

There is a footway throughout the entire extent of the village along the southern / eastern side of la Grande Route de St Martin. On the northern / western side, there is no footway west of La Route du Trot, or to the north of Poplar Avenue. This concentrates crossing movements in the vicinity of the potential crossing site which is approximately 50m south west of the end of the footway.

5. Visibility – Sight stopping distance requirements

Because the Co-Op is situated on the bend in the road visibility for pedestrians crossing the road from is limited. South of the bend, those crossing from west to east have good visibility to the south, but to the north this is limited to around 29m for south bound traffic. A vehicle approaching at 30-35 mph will cover this distance in around 2 seconds. This would not give pedestrians time to see a vehicle as it comes into view around the bend, judge its speed, step off the kerb, and clear its path safely.

Pedestrians moving further north around the bend face a similar problem in the opposite direction. Moving further north to a point where visibility is adequate in both directions will take them too far away from the desire lines in the central part of the village.

At 37mph Manual for Streets suggests a sight stopping distance of 59m, at 30mph a sight stopping distance of 43m is required and at 20mph this decreases to 25m. However these distances are recommended for motorists, and do not necessarily provide enough time for pedestrians to see a vehicle as it comes into view around the bend, judge its speed, step off the kerb, and clear its path safely.

6. Street lighting

There are two lighting columns positioned either side of the bend, one south of the petrol station, and three at the Route du Trot junction. This does not provide a consistent level of lighting through the village and consideration should be given to providing enhanced street lighting in areas where there is most pedestrian activity.

7. Collision Data

The latest 5 years of collision data which is from 2016 to 2021 shows there have been 6 injury collisions within the study area.

22/04/16 A car exiting La Route De Maufant onto La Grande Route De St Martin collided with a wall. The

04/09/16 A car hit the wall of a property opposite the Maufant Co-Op in the wet as it was traversing the lefthand bend,

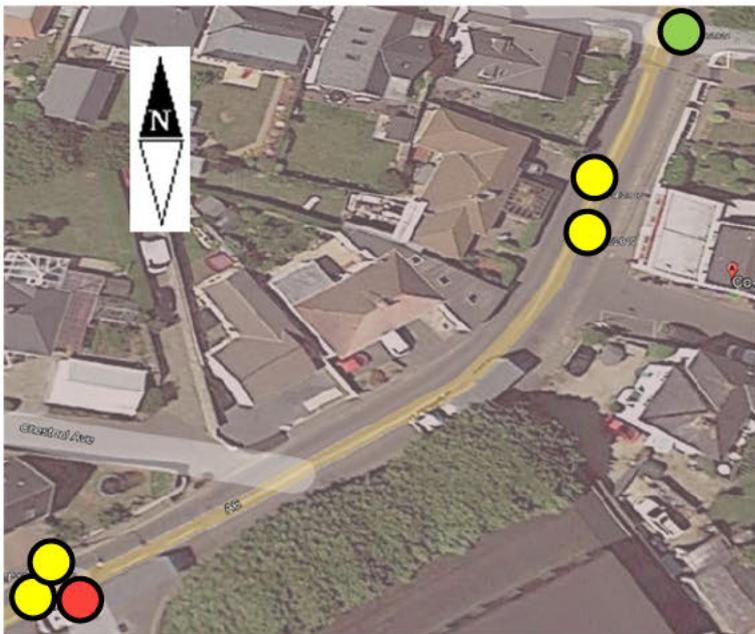
14/12/17 A head on collision between two cars outside the Maufant Co-Op on La Grande Route De St Martin, in the dark, with a wet road (no streetlamps)

25/04/18 a car travelling behind a truck on La Grande Route De St Martin, truck slows and stops quickly a second car travelling behind the first was slow to react and collided with the rear of the first car

03/01/20 Cyclist travelling along La Grande Route De St Martin when a car has emerged from Les Parquets without stopping, hitting the cycle, and

05/03/21 pedestrian got off the bus and crossed La Grande Route De St Martin in front of the stationary bus. Bus pulled away at slow speed and hit the pedestrian

Collision statistics 2016-2021



Pedestrian		Car		Cyclist	
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8. Traffic Data and pedestrian flows

Pedestrian and traffic flow information is not available. It is recommended that this is collected if required to support an application to the Minister for a crossing.

9. Site observations

Site observations were carried out during the morning of Friday the 9th of September 2022. During the site visit, the weather was warm and dry, and there was a steady light flow of traffic and few pedestrians as it was midmorning. The main desire line for pedestrians observed during the site visit was between the western side of La Grande Route de St Martin and the eastern side of La Grande Route de St Martin close to the entrance of the Locale Co-Op.

Traffic speeds appeared to be in excess of the 30mph posted speed limit, with southbound vehicles crossing the centre line. A local resident stated that speed was a problem and confirmed that the bend was the preferred crossing location for many people using the Co-Op, crossing part of the way when there were gaps in northbound traffic to gain a view of southbound traffic.

Options

The purpose of this scheme is to provide a crossing facility to facilitate residents safely crossing La Grande Route De St Martin from west to east, making it easier to access the Locale Co-Op and Youth Centre.

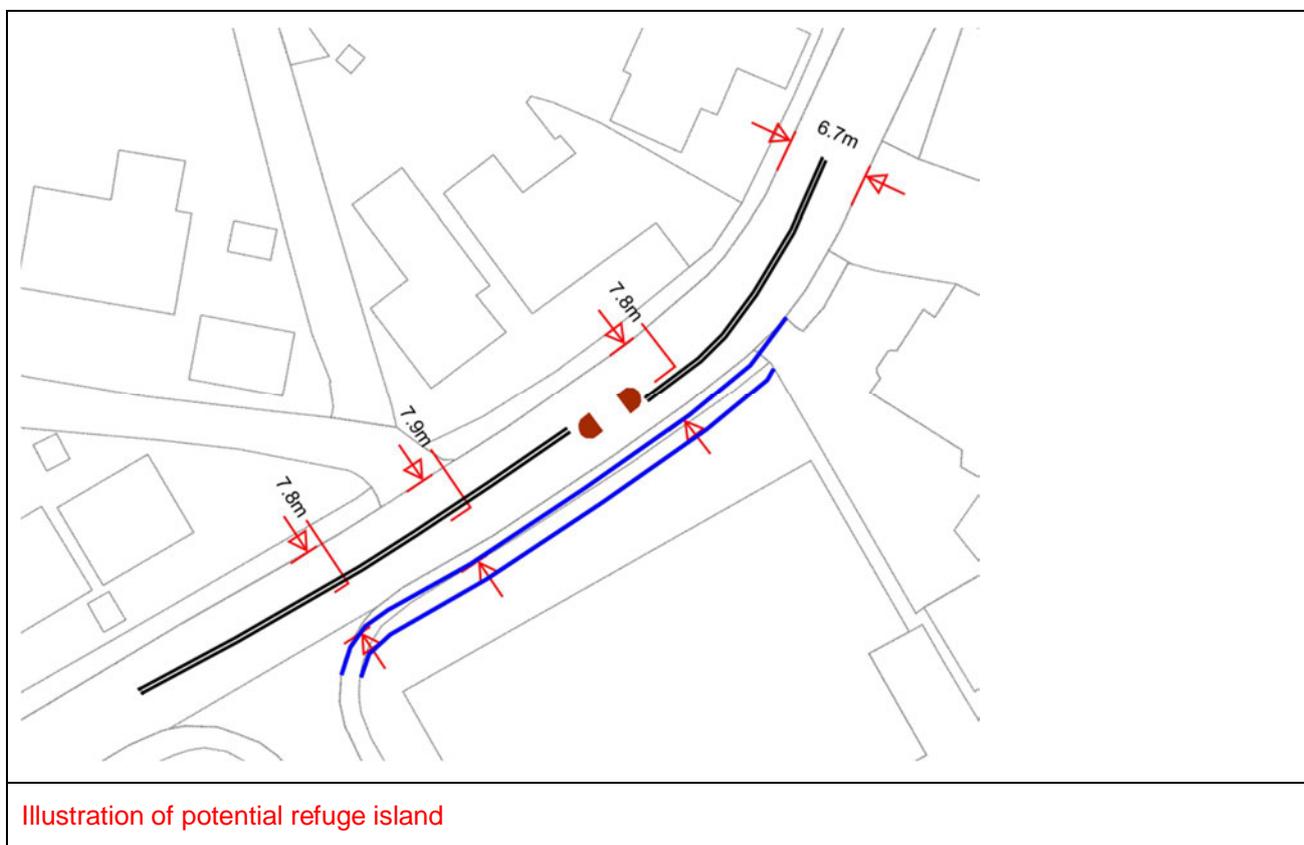
A number of elements are available that could be used in combination:

- **Speed limit reduction**

As Maufant is defined as a village, the speed limit framework suggests a 20mph speed limit would be appropriate throughout the village. A reduced speed limit would potentially bring down vehicle speeds at the bend, reducing the visibility requirements, and if desired, allowing road humps to be installed with or without improved street lighting. Within a 30mph speed limit, street lighting would need to be improved if speed humps or any sort are installed.

- **Pedestrian refuge island**

The road is around the bend is between 6.7 and 6.9m (taken from topographical survey) and is not wide enough for a central island. A total width of at least 7.8m would be required to accommodate a 1.8m island and 2.3m lanes. This could potentially be achieved along the frontage of the Youth Centre. This is illustrated below:



The relocated kerb and footway, shown here at 1.8m, would potentially require the removal of some of the trees fronting the Youth Centre. With a central refuge pedestrians would then have a greatly improved view of vehicles travelling south along La Grande Route De St Martin (approximately 61m).

Vehicle speeds are also likely to be constrained by the presence of an island at this location.

Further work to check that buses and refuse vehicles can pass an island with these dimensions would be required. The widening line indicates that there would be a minor pinch point at the eastern boundary of the footpath by the Youth Centre. It may be necessary to negotiate with the adjacent land owner to maintain a suitable footway width at this point, shown in the image below:



Potential widening line illustrated in yellow

- **Zebra Crossing**

A zebra crossing is suitable where speeds are less than 30mph, and where there is sufficient visibility for pedestrians and drivers to make eye contact and confirm that they are going to stop. A zebra crossing would only be considered appropriate if a refuge island is installed.

It should be noted that reducing the carriageway width to 6m by providing a kerb build out on the inside of the bend has been considered, but would not improve visibility sufficiently to accommodate a zebra crossing without a refuge island.

Belisha Beacons should be used to ensure that the crossing is visible, particularly on the northern approach where the alignment restricts visibility. The proximity of residential properties may require cowls to be fitted to the beacons, which could reduce their visibility to traffic approaching from the north.

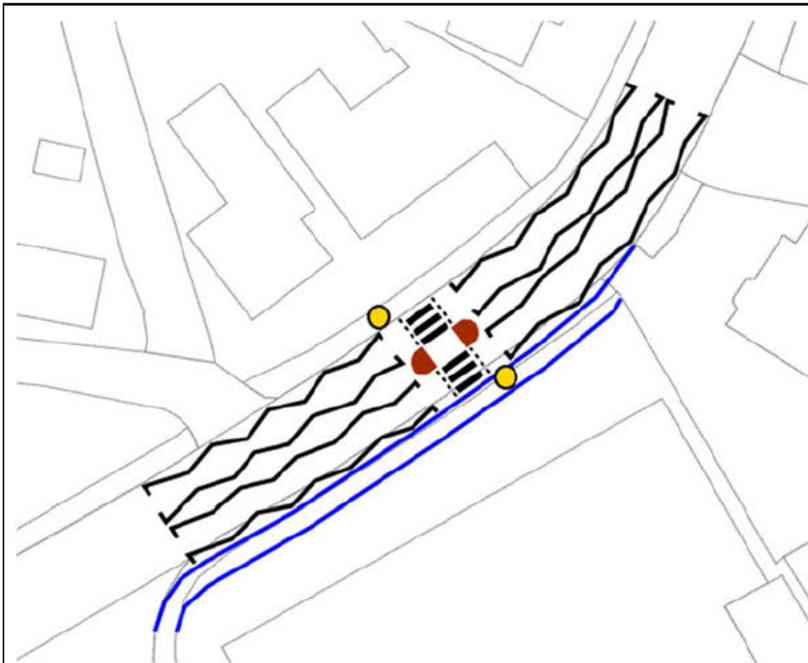


Illustration of potential zebra crossing with refuge

The illustration shows the full requirement of 8 zig zags. This can be reduced but in this case is recommended unless a 20mph speed limit is introduced and the overall speed of traffic is reduced.

An alternative is to install flashing amber road studs, omitting the beacons. Flashing studs without belisha beacons are not generally used on main roads, but could be considered if the speed limit is reduced to 20mph, and a hump is used.

- **Pelican Crossing**

If a refuge island is not provided, a pelican crossing is the most appropriate option. Pelican crossings give a positive indication to drivers that they must stop and to pedestrians that they can cross. With reduced visibility for southbound drivers, pedestrians crossing from west to east do not need to make eye contact with a driver.

The crossing location would be closer to Chestnut Avenue than desirable, however this is effectively a private driveway for around 10 dwellings and is considered to be low risk. The main access points at the Co-Op, and Les Parquets are a suitable distance from the crossing to allow drivers to adjust their attention and stop at the crossing.

An alternative location for a pelican crossing with no refuge has been considered to the south of Poplar Avenue. This has proved to be unsuitable due to the pavement being less than 1m wide on the west side, which would not accommodate a traffic signal.

There is potential for the green signal at the crossing to encourage drivers to take the bend at high speed. Without the refuge island there is a risk that vehicle speeds will increase, or at best will not reduce. A pelican crossing layout with a refuge island could also be used.

The benefit of a pelican crossing over all other types is the ability to include indication to visually impaired pedestrians, through rotating cone indicators.



Illustration of potential pelican crossing

- **Raised table crossing / road humps**

A raised table could be used to further slow traffic within any of the options presented. A table is permitted within a 30mph speed limit provided there is adequate street lighting. However, as this is part of the village centre, a 2-mph speed limit would be in line with the framework.

10. Conclusions and recommendations

A detailed design drawing and Road safety audit should be submitted to the Minister as part of any consultation with the Connétable.

Elements available within each option:

	Option 1 Simple pedestrian Refuge	Option 2 Zebra Crossing	Option 3 Pelican crossing
20mph Speed Limit	✓ (advised)	✓ (advised)	✓ (advised)
Refuge islands	✓	✓ (Required)	✓ (optional)
Raised Table	✓ (optional)	✓ (optional)	✓ (optional)
Belisha Beacons	×	✓ (advised)	×
Flashing Studs	×	✓ (optional)	×
Traffic Lights	×	×	✓

