

The background is a vibrant yellow. It is decorated with several abstract shapes in shades of blue and teal. These shapes include circles, teardrop-like forms, and elongated rounded rectangles, some of which contain white circles. The shapes are scattered across the page, creating a modern, geometric aesthetic.

TIA Appendix 4 Impact Assessments

Contents

Appendix 4.1 Pedestrian Infrastructure Assessment 3

Section 1 – Mayne River Avenue to R808 Gracefield Road – R107 Malahide Road 5

Section 2 – R808 Gracefield Road to R105 Marino Mart / Fairview– R107 Malahide Road 10

Appendix 4.2 Cycling Infrastructure Assessment 16

Section 1 – Mayne River Avenue to R808 Gracefield Road – R107 Malahide Road 18

Section 2 – R808 Gracefield Road to R105 Marino Mart / Fairview – R107 Malahide Road 19

Appendix 4.3 Average Bus Journey Times..... 20

Appendix 4.4 General Traffic Assessment 25

Appendix 4.1 Pedestrian Infrastructure Assessment

Table 1: Pedestrian Junction Assessment Criteria

Aspect	Indicator
Routing	Are pedestrian crossings (signalised or uncontrolled) available on all arms.
Directness	Where crossings are available, do they offer direct movements which do not require diversions or multistage staggers i.e. no or little delay required for pedestrians to cross in one direct movement.
Vehicular speeds	Are there measures in place to promote low vehicular speeds, such as minimally sized corner radii and narrow carriageway lane widths.
Accessibility	Where crossings exist, are there adequate tactile paving, dropped kerbs and road markings.
Widths	Are there adequate footpath and crossing widths in accordance with national standards.

Table 2: Pedestrian Junction Assessment LoS

LoS	Indicators Met (of a total of 5)
A	5
B	4
C	3
D	2
E	1
F	0

Table 3: Description of Impact for Pedestrian Qualitative Assessment

Magnitude of Impact	Change in LoS Rating
High	4 to 5
Medium	2 to 3
Low	1
Negligible	0

Table 4: Determining the Significance of the Impact for Pedestrian Qualitative Assessment

		Sensitivity of Existing Environment			
		High	Medium	Low	Negligible
Description of Impact	High	Profound	Very Significant	Moderate	Slight
	Medium	Very Significant	Significant	Moderate	Not Significant
	Low	Moderate	Moderate	Slight	Not Significant
	Negligible	Not Significant	Not Significant	Not Significant	Imperceptible

Section 1 – Mayne River Avenue to R808 Gracefield Road – R107 Malahide Road

Table 5: Section 1 – Walking Infrastructure Assessment

Junction	Chainage	Criteria	DoMinimum			DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met		
R107 Malahide Road / R139 Clarehall Avenue / R139 Northern Cross Route Extension signalised junction	A3200	Pedestrian Routing:	Signalised crossings available on all arms.	✓	Signalised crossings available on all arms.	✓	Medium Positive	
		Pedestrian Directness:	Crossings are staggered with four stages on all arms.	✗	Crossings are more direct (two stages on three arms rather than four), but are still staggered.	✗		
		Vehicular Speeds:	Generous turning radii and left-turn slip roads from each arm could encourage higher vehicle speeds for these movements.	✗	Tighter corner radii and removal of left-turn slip roads will decrease vehicular speeds.	✓		
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓		
		Footpath and Crossing Widths:	Existing footpaths are in excess of 1.8m wide, however, crossings are only 2.0m wide.	✗	Footpaths are a minimum of 2.0m wide (with wider footpaths at corners where left-turn lanes have been removed) and crossing widths are a minimum of 2.4m wide.	✓		
		Overall LoS	2 indicators met	D	4 indicators met	B		
R107 Malahide Road / Clarehall Shopping Centre Access signalised junction	A3500	Pedestrian Routing:	Signalised crossings available on all arms.	✓	Signalised crossing on two out of three arms. No crossing on the R107 Malahide Road South arm. Crossing on Malahide Road north arm is a Toucan crossing.	✗	Low Positive	
		Pedestrian Directness:	Crossings are staggered in two stages on the R107 Malahide Road South arm and in three stages on the R107 Malahide Road North and Clarehall Shopping Centre arm.	✗	Both crossings are direct with traffic islands for pedestrian refuge.	✓		
		Vehicular Speeds:	Left-turn slip road from R107 Malahide Road North to Clarehall Shopping Centre and generous corner radii between Clarehall Shopping Centre and R107 Malahide Road South could encourage higher vehicle speeds for these movements.	✗	Removal of left-turn slip lane and tightening of corner radii to and from the Clarehall Shopping Centre arm should reduce vehicle speeds.	✓		
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓		
		Footpath and Crossing Widths:	Existing footpaths are approximately 1.8m wide and crossings are 2.4m wide.	✓	Similar geometry to DoMinimum.	✓		
		Overall LoS	3 indicators met	C	4 indicators met	B		
R107 Malahide Road / Belcamp Lane priority junction	A3625	Pedestrian Routing:	Uncontrolled crossing on the Belcamp Lane arm only.	✗	No change from DoMinimum.	✗	Low Positive	
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓		
		Vehicular Speeds:	Informal raised speed table provided on the Belcamp Lane arm to reduce vehicle speeds.	✓	Fully compliant raised speed table provided on the Belcamp Lane arm and minimal corner radii will manage vehicle speeds.	✓		
		Accessibility:	Inadequate tactile paving, dropped kerbs and road markings at the junction.	✗	Fully compliant tactile paving, dropped kerbs and road markings at the junction.	✓		
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓		
		Overall LoS	3 indicators met	C	4 indicators met	B		
R107 Malahide Road / Grove Lane priority junction	A3750	Pedestrian Routing:	Uncontrolled crossing on the Grove Lane arm only.	✗	No change from DoMinimum.	✗	Low Positive	
		Pedestrian Directness:	Existing crossing is direct with traffic island provided for pedestrian refuge.	✓	Crossing is direct.	✓		
		Vehicular Speeds:	Generous corner radii and wide lanes could encourage greater vehicle speeds.	✗	Minimised corner radii, narrowed lane widths and provision of raised speed table to manage vehicle speeds.	✓		
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at the junction.	✓	Fully compliant tactile paving, dropped kerbs and road markings at the junction.	✓		
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide and crossing is approximately 2.0m wide.	✓	Similar geometry to DoMinimum.	✓		
		Overall LoS	3 indicators met	C	4 indicators met	B		

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
R107 Malahide Road / Blunden Drive / Priorswood Road (roundabout to signalised junction)	A3975	Pedestrian Routing:	Uncontrolled crossing on R107 Malahide Road North arm. Signalised crossings on other arms are remote from the junction by 40m – 80m.	✗	Signalised crossings available on all arms.	✓	Medium Positive
		Pedestrian Directness:	Direct crossings on Priorswood Road and Blunden Drive but over 30m away from junction. Uncontrolled crossing on the R107 Malahide Road North arm is in two stages. Remote crossing on R107 Malahide Road South arm is staggered in two stages.	✗	Direct crossings on Priorswood Road and Blunden Drive at the junction. Staggered crossings on both R107 Malahide Road arms in two stages at the junction.	✗	
		Vehicular Speeds:	Large roundabout with no particular restrains on vehicle speeds.	✗	Conversion to four arm signalised crossroads junction with tight corner radii will decrease vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs, road markings, and refuge island at remote crossings. However, no tactile paving at the R107 Malahide Road North uncontrolled crossing.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are approximately 2.0m wide and signalised crossings are a minimum of 3.0m wide.	✓	All footpaths are a minimum of 2.0m wide and all crossings are a minimum of 2.4m wide.	✓	
		Overall LoS	1 indicator met	E	4 indicators met	B	
R107 Malahide Road / Newtown Road priority junction	A4100	Pedestrian Routing:	Uncontrolled crossing on the Newtown Road arm only.	✗	No change from DoMinimum.	✗	Low Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	Speed bump approximately 10m back from stop line on the Newtown Road arm will manage vehicle speeds.	✓	Fully compliant raised speed table provided on the Newtown Road arm and minimised corner radii will manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	C	4 indicators met	B	
R107 Malahide Road / Retail Park Access priority junction	A4350	Pedestrian Routing:	Uncontrolled crossing on the Retail Park access arm only.	✗	No change from DoMinimum.	✗	Medium Positive
		Pedestrian Directness:	Crossing is made in two stages due to left-slip lane.	✗	Crossing is direct.	✓	
		Vehicular Speeds:	Raised speed table provided on the Retail Park access for right-turners, however, left-slip lane into the access for left-turners encourages greater vehicle speeds.	✗	Left-slip lane removed and raised speed table provided across whole access to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide.	✓	No change from DoMinimum.	✓	
		Overall LoS	1 indicator met	E	4 indicators met	B	
R107 Malahide Road / Newtown Cottages priority junction	A4550	Pedestrian Routing:	Uncontrolled crossing on the Newtown Cottages arm only.	✗	No change from DoMinimum.	✗	Low Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	Adequate raised speed table provided on the Newtown Cottages arm to manage vehicle speeds.	✓	Fully compliant raised speed table provided on the Newtown Cottages arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide and crossing is a minimum of 2.0m wide.	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	C	4 indicators met	B	
R107 Malahide Road / Crown Paints and Decorating Centre Access / Retail Park Emergency Access priority junction	A4700	Pedestrian Routing:	Uncontrolled crossings on both retail access arms only.	✗	No change from DoMinimum.	✗	Medium Positive
		Pedestrian Directness:	Both crossings are direct, but the Crown Paints and Decorating Centre access crossing provides a traffic island for pedestrian refuge.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	Gated emergency access is not for general use, however, no particular constraints on vehicle speeds at the Crown Paints and Decorating Centre access.	✗	Raised speed table provided on the Crown Paints and Decorating Centre access arm to manage vehicle speeds.	✓	

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present at both crossings.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are a minimum of 1.8m wide and crossing is a minimum of 2.0m wide.	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Greencastle Road signalised junction	A4875	Pedestrian Routing:	Signalised crossings on three arms only. No crossing on R107 Malahide Road South arm.	✗	Signalised crossings available on all arms.	✓	Medium Positive
		Pedestrian Directness:	Direct crossings on Retail Park and Greencastle Road arms, staggered two stage crossings on R107 Malahide Road North arm.	✗	Direct crossings on the Greencastle Road and Retail Park arms, however, crossings on the R107 Malahide Road are staggered in two stages.	✗	
		Vehicular Speeds:	Generous corner radii increase the vehicular speeds.	✗	Footpath build-out at corners of Greencastle Road to tighten corner radii and decrease vehicular speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	More compact junction design and corner radii is tightened by the introduction of kerb segregation for cyclists should reduce vehicle speeds.	✓	
		Footpath and Crossing Widths:	Existing footpaths are approximately 2.0m wide, however, crossings on the Retail Park arm are only 2.0m wide.	✓	All footpaths are a minimum of 2.0m wide and crossings are a minimum of 2.4m wide.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / R104 Brookville Crescent / R104 Tonlegee Road signalised junction	A5150	Pedestrian Routing:	Signalised crossings on three arms only. No crossing on R107 Malahide Road South arm.	✗	Signalised crossings available on all arms.	✓	Medium Positive
		Pedestrian Directness:	All crossings are staggered in three stages.	✗	Direct crossings on R104 Tonlegee Road and R104 Brookville Road arms, but staggered crossings in two stages on R107 Malahide Road arms.	✗	
		Vehicular Speeds:	Generous corner radii and left-turn slip lanes to and from R104 Tonlegee Road and from R107 Malahide Road to R104 Brookville Road could encourage higher vehicle speeds for these movements.	✗	Removal of all left-turn slip lanes and tighter corner radii by the introduction of kerb segregation for cyclists should decrease vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are approximately 2.0m wide and crossings are 2.4m wide.	✓	Similar footpath geometry to DoMinimum but footpaths widened at corners where left-turn lanes and parking bays have been removed.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Main Street priority junction	A5550	Pedestrian Routing:	Uncontrolled crossing on the Main Street arm and signalised crossing on the R107 Malahide Road.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Crossing on Main Street is direct, however, crossing on the R107 Malahide Road is in two stages.	✗	Similar to DoMinimum, but crossing on R107 Malahide Road is staggered.	✗	
		Vehicular Speeds:	Speed bump on the Main Street arm, however, it is located approximately 20m back from the stop line, behind the uncontrolled crossing.	✗	Raised speed table provided on the Main Street arm at the stop line should manage vehicle speeds more effectively for pedestrians.	✓	
		Accessibility:	Inadequate tactile paving, dropped kerbs and road markings at uncontrolled crossing on Main Street.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths:	Footpaths are approximately 2.0m wide, however, the signalised crossing on the R107 Malahide Road is only 2.0m wide.	✗	All footpaths and uncontrolled crossings are a minimum of 2.0m wide and the signalised crossing is a minimum of 2.4m wide.	✓	
		Overall LoS	1 indicator met	E	4 indicators met	B	
R107 Malahide Road / St Brendan's Drive priority junction	A5550	Pedestrian Routing:	Uncontrolled crossing on the St Brendan's Drive arm and signalised crossing on the R107 Malahide Road.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Crossing on Main Street is direct, however, crossing on the R107 Malahide Road is in two stages.	✗	Similar to DoMinimum, but crossing on R107 Malahide Road is staggered.	✗	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Raised speed table provided between St Brendan's Drive and St Brendan's Avenue to manage vehicle speeds.	✓	
		Accessibility:	Inadequate tactile paving, dropped kerbs and road markings at uncontrolled crossing on St Brendan's Drive.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths:	Footpaths are approximately 2.0m wide, however, the signalised crossing on the R107 Malahide Road is only 2.0m wide.	✗	All footpaths and uncontrolled crossings are a minimum of 2.0m wide and the signalised crossing is a minimum of 2.4m wide.	✓	

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
		Overall LoS	1 indicator met	E	4 indicators met	B	
R107 Malahide Road / R808 Gracefield Road / Ardlea Road roundabout to signalised junction	A6050	Pedestrian Routing:	Signalised crossings available on all arms.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Direct crossings on all arms of the roundabout with traffic islands for pedestrian refuge, however, crossings are and circuitous, set-back approximately 30m from the junction.	✗	Direct crossings on R808 Gracefield Road and Ardlea Road arms, however, staggered crossings on R107 Malahide Road arms in two stages.	✗	
		Vehicular Speeds:	Roundabout with no particular constraints on vehicle speeds.	✗	Conversion to four-arm signalised crossroads junction with minimised corner radii will decrease vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths:	Existing footpaths are approximately 2.0m wide, however, crossings are only 2.0m wide.	✗	All footpaths are a minimum of 2.0m wide and crossings are a minimum of 2.4m wide.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	

Negligible impacts to the quality in walking infrastructure are noted at the following junctions along Section 1 of the Proposed Scheme:

- R107 Malahide Road / Petrol Station Entrance and Exit priority junction; and
- R107 Malahide Road / Mount Dillon Court priority junction.

Section 2 – R808 Gracefield Road to R105 Marino Mart / Fairview– R107 Malahide Road

Table 6: Section 2 – Walking Infrastructure Assessment

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
R107 Malahide Road / Mornington Grove priority junction	A6200	Pedestrian Routing:	Uncontrolled crossing on the Mornington Grove arm only.	x	No change from DoMinimum.	x	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	x	Raised table provided on the Mornington Grove arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, but no tactile paving present.	x	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 2.0 wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Danieli Road priority junction	A6300	Pedestrian Routing:	Uncontrolled crossing on the Danieli Road arm only.	x	No change from DoMinimum.	x	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	x	Raised table provided on the Danieli Road arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, but no tactile paving present.	x	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are approximately 2.0 wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Local Shops Car Park Access priority junction	A6375	Pedestrian Routing:	Uncontrolled crossing on the Car Park access arm only.	x	No change from DoMinimum.	x	Low Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	x	No change from DoMinimum.	x	
		Accessibility:	Dropped kerbs provided, but no tactile paving present.	x	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are approximately 2.0 wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	3 indicators met	C	
R107 Malahide Road / Local Shops Car Park Egress priority junction	A6375	Pedestrian Routing:	Uncontrolled crossing on the Car Park egress arm only.	x	No change from DoMinimum.	x	Low Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	x	No change from DoMinimum.	x	
		Accessibility:	Dropped kerbs provided, but no tactile paving present.	x	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 2.0 wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	3 indicators met	C	
R107 Malahide Road / Mornington Business Park Car Park Access priority junction	A6475	Pedestrian Routing:	Uncontrolled crossing on the Car Park access arm only.	x	No change from DoMinimum.	x	Low Positive

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	No change from DoMinimum.	✗	
		Accessibility:	Dropped kerbs provided, but no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8 wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	3 indicators met	C	
R107 Malahide Road / Kilmore Road signalised junction	A6525	Pedestrian Routing:	Signalised crossings on two arms out of three; the R107 Malahide Road North and Kilmore Road arms.	✗	Similar to DoMinimum but signalised crossing moved from R107 Malahide Road North arm to R107 Malahide Road South arm.	✗	Low Positive
		Pedestrian Directness:	Direct crossings on R107 Malahide Road North and Kilmore Road arms.	✓	Direct crossings on R107 Malahide Road South and Kilmore Road arms.	✓	
		Vehicular Speeds:	Generous corner radii and left-turn slip lane from R107 Malahide to Kilmore Road movement encourages higher vehicle speeds for turning movements.	✗	Corner radii tightened by introduction of kerb segregation for cyclists should reduce vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are approximately 2.0m and crossings are 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	3 Indicators met	C	4 Indicators met	B	
R107 Malahide Road / St David's Wood / Killester Avenue signalised junction	A6775	Pedestrian Routing:	Crossings on three out of four arms only; signalised crossing on R107 Malahide Road South arm and uncontrolled crossings on the St David's Wood and Killester Avenue arms.	✗	Signalised crossings on all arms. Toucan crossings on both R107 Malahide Road arms	✓	Medium Positive
		Pedestrian Directness:	Existing crossings are direct.	✓	All crossings are direct.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Minimised corner radii and narrower traffic lanes with the introduction of cycle lanes should reduce vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs, road markings at crossings.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points.	✓	
		Footpath widths:	Existing footpaths and uncontrolled are approximately 2.0m wide, signalised crossing is 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	3 indicators met	C	5 indicators met	A	
R107 Malahide Road / Elm Mount Road signalised junction	A6975	Pedestrian Routing:	Signalised crossing on R107 Malahide Road South arm only and uncontrolled crossing on Elm Mount Road arm.	✗	Signalised crossings on all arms. Toucan crossings provided on both R107 Malahide Road arms.	✓	Medium Positive
		Pedestrian Directness:	Existing crossings are direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Raised speed table provided on Elm Mount Road arm will reduce vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at R107 Malahide Road crossing, but inadequate crossing on the Elm Mount Road arm.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8m wide and signalised crossing on the R107 Malahide Road is 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met	D	5 indicators met	A	
R107 Malahide Road / R103 Collins Avenue / R103 Collins Avenue East signalised junction	A7275	Pedestrian Routing:	Signalised crossings on R107 Malahide Road South and R103 Collins Avenue (West) arms only.	✗	Signalised crossings on all arms.	✓	Medium Positive
		Pedestrian Directness:	Direct crossing on R103 Collins Avenue arm but staggered crossing in four stages on R107 Malahide Road South arm.	✗	Direct crossings on all arms except Malahide Road south.	✗	
		Vehicular Speeds:	Left-turn slip lane from R103 Collins Avenue East to R107 Malahide Road South encourages higher vehicle speeds for turning movements.	✗	Corner radii tightened by introduction of kerb segregation for cyclists and removal of left-turn slip lane which will reduce vehicle speeds for vehicles turning.	✓	

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are approximately 2.0m wide and crossings are 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met:	D	4 indicators met	B	
R107 Malahide Road / St John's Court priority junction	A7475	Pedestrian Routing:	Uncontrolled crossing on the St John's Court arm only.	✗	No change from DoMinimum.	✗	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Raised speed table provided on the St John's Court arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	D	4 indicators met	B	
R107 Malahide Road / Clancarthy Road priority junction	A7550	Pedestrian Routing:	Uncontrolled crossing on the Clancarthy Road arm only.	✗	No change from DoMinimum.	✗	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds. Speed bump provided on the Clancarthy Road arm, however, it is approximately 15m back from the stop line.	✗	Raised speed table provided on the Clancarthy Road arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✗	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	D	4 indicators met	B	
R107 Malahide Road / Donnycarney Road priority junction	A7600	Pedestrian Routing:	Uncontrolled crossing on the Donnycarney Road arm and signalised crossing on the R107 Malahide Road arm, immediately south of the junction.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Uncontrolled crossing is direct, however, signalised crossing on the R107 Malahide Road is staggered in two stages.	✗	Both crossings are direct.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Raised speed table provided on the Donnycarney Road arm to manage vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs, road markings at the signalised crossing. However, dropped kerbs and no tactile paving present at the uncontrolled crossing.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 2.0m wide and signalised crossing is 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Casino Park signalised junction	A7750	Pedestrian Routing:	Crossings on two out of three arms; signalised crossing on the R107 Malahide Road South arm and uncontrolled crossing on the Casino Park arm.	✗	Signalised crossings on all arms.	✓	Medium Positive
		Pedestrian Directness:	Uncontrolled crossing is direct, signalised crossing on the R107 Malahide Road is staggered in two stages.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✗	Minimised corner radii and raised speed table provided on the Casino Park arm to manage vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs, road markings at the signalised crossing. However, dropped kerbs and no tactile paving present at the uncontrolled crossing.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 2.0m wide and signalised crossing is 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met	D	5 indicators met	A	

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
R107 Malahide Road / Golf Club Access / Nazareth House Access priority junction	A7825	Pedestrian Routing:	Uncontrolled crossings on the Golf Club and Nazareth House access arms only.	✘	No change from DoMinimum.	✘	Medium Positive
		Pedestrian Directness:	Both crossings are direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Raised speed tables provided on the Golf Club and Nazareth House access arms to manage vehicle speeds.	✓	
		Accessibility:	Inadequate tactile paving, dropped kerbs, road markings at crossings.	✘	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points.	✓	
		Footpath widths:	Existing footpaths and crossings approximately 2.0m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	
R107 Malahide Road / Mount Temple Comprehensive School / Dublin Fire Brigade Access Signalised Junction	A8025	Pedestrian Routing:	Uncontrolled crossings on the Mount Temple School and Fire Brigade Access arms and signalised crossing on the R107 Malahide Road arm.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Uncontrolled crossings are direct, signalised crossing on the R107 Malahide Road is staggered in two stages.	✘	All crossings are direct.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Raised speed tables provided on the Mount Temple School and Fire Brigade Access arms to manage vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs, road markings at crossings.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points.	✓	
		Footpath widths:	Existing footpaths and uncontrolled crossings are in approximately 2.0m, signalised crossing is 2.4m wide.	✓	Existing footpaths and uncontrolled crossings are in approximately 2.0m, signalised crossing is 3.0m wide.	✓	
		Overall LoS	3 indicators met	C	5 indicators met	A	
R107 Malahide Road / R102 Griffith Avenue / Copeland Avenue signalised junction	A8225	Pedestrian Routing:	Signalised crossings on three out of four arms. No crossing on the R107 Malahide Road South arm.	✘	Signalised crossings on three out of four arms. No crossing on the R107 Malahide Road South arm.	✘	Low Positive
		Pedestrian Directness:	Staggered crossings in two stages on R107 Malahide Road arms and R102 Griffith Avenue arm, direct crossing on Copeland Avenue arm.	✘	Staggered crossings in two stages on two arms.	✘	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Corner radii tightened by introduction of kerb segregation for cyclists should reduce vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are in approximately of 2.0m wide and crossings are 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	2 indicators met	D	3 indicators met	C	
R107 Malahide Road / Marino Avenue priority junction	A8325	Pedestrian Routing:	Uncontrolled crossing on the Marino Avenue Road arm only.	✘	No change from DoMinimum.	✘	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Raised speed table provided on the Marino Avenue arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✘	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	D	4 indicators met	B	
R107 Malahide Road / Charlemont Road priority junction	A8375	Pedestrian Routing:	Uncontrolled crossing on the Charlemont Road arm only.	✘	No change from DoMinimum.	✘	Medium Positive
		Pedestrian Directness:	Existing crossing is direct.	✓	No change from DoMinimum.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Raised speed table provided on the Marino Avenue arm to manage vehicle speeds.	✓	

Junction	Chainage	Criteria	DoMinimum		DoSomething		Impact
			Comment	Criteria Met	Comment	Criteria Met	
		Accessibility:	Dropped kerbs provided, however, no tactile paving present.	✘	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 1.8m wide (no distinct crossing width).	✓	No change from DoMinimum.	✓	
		Overall LoS	3 indicators met	D	4 indicators met	B	
R107 Malahide Road / Marino Crescent priority junction	A8675	Pedestrian Routing:	Uncontrolled crossing on the Marino Crescent arm only.	✘	No change from DoMinimum	✘	Low Positive
		Pedestrian Directness:	Existing crossing is direct	✓	No change from DoMinimum	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds	✘	Raised speed table provided on the Marino Crescent arm to manage vehicle speeds.	✓	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths and crossing are a minimum of 2.0m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	3 indicators met:	C	4 indicators met	B	
R107 Malahide Road / St Aidan's Park Road priority junction	A8700	Pedestrian Routing:	Uncontrolled crossing on the St Aidan's Park arm and signalised crossing on the R107 Malahide Road arm immediately south of the junction.	✓	No change from DoMinimum.	✓	Medium Positive
		Pedestrian Directness:	Uncontrolled crossing is direct, signalised crossing on the R107 Malahide Road is staggered in two stages.	✘	Both crossings are direct.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Raised table provided on the St Aidan's Park Road arm to manage vehicle speeds.	✓	
		Accessibility:	Dropped kerbs provided at the uncontrolled crossing, but no tactile paving present.	✘	Fully compliant tactile paving, dropped kerbs, road markings at the crossing point at the junction.	✓	
		Footpath widths:	Existing footpaths are a minimum of 2.0 wide and signalised crossing is a minimum of 2.4m wide.	✓	No change from DoMinimum.	✓	
		Overall LoS	2 indicators met	D	5 indicators met	A	
R107 Malahide Road / R105 Clontarf Road signalised junction	A8725	Pedestrian Routing:	Crossings on two arms only, the R107 Malahide Road and R105 Clontarf Road arms .	✘	No change to DoMinimum.	✘	Low Positive
		Pedestrian Directness:	Crossing on R107 Malahide Road is staggered in two stages and crossing on R105 Clontarf Road is direct.	✘	Direct crossings on both arms.	✓	
		Vehicular Speeds:	No particular constraints on vehicle speeds.	✘	Similar geometry to DoMinimum.	✘	
		Accessibility:	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✓	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath widths:	Existing footpaths are in in excess of 2.5m wide and crossings are 2.4m wide.	✓	Similar geometry to DoMinimum.	✓	
		Overall LoS	3 indicators met	C	4 indicators met	B	

Negligible impacts to the quality in walking infrastructure are noted at the following junctions along Section 3 of the Proposed Scheme:

- R107 Malahide Road / Elm Road priority junction;
- R107 Malahide Road / Brian Road priority junction;
- R107 Malahide Road / Crescent Place priority junction;
- Brian Road / St Declan's Road / Carleton Road priority junction;
- St Aiden's Park / Carleton Road / Haverty Road; and
- Marino Park Avenue / Haverty Road / Marino Mart.

Appendix 4.2 Cycling Infrastructure Assessment

Table 7: Cycling Assessment LoS

LoS	Segregation	No. of adjacent cyclists/width		Junction treatment
A+	High degree of separation. Minimal delay	2+1	2.5m	Cyclists get green signal priority at signalised junctions / has priority across uncontrolled junctions
A	Well separated at mid-link with some conflict at intersections	1+1	2.0m	Toucan crossings at signalised junctions for cyclists along CBC / Protected junctions not already classified as A+ for junction treatment
B	On-road cycle lanes or carriageway designated as 'quiet cycle routes'	1+1	1.75m	Cyclists share green time with general traffic and cycle lanes continue through the junction, for junctions not already classified as A or A+ for junction treatment
C	Bicycle share traffic or bus lanes	1+0	1.25m	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through
D	No specific bicycle facilities	1+0	0.75m	No specific bicycle facilities

Table 8: Description of Impact for Cycling Qualitative Assessment

Magnitude of Impact	Change in LoS Rating
High	3 to 4
Medium	2
Low	1
Negligible	0

Table 9: Significance of Effect Matrix

		Sensitivity of Existing Environment			
		High	Medium	Low	Negligible
Description Impact	High	Profound	Very Significant	Moderate	Slight
	Medium	Very Significant	Significant	Moderate	Not Significant
	Low	Moderate	Moderate	Slight	Not Significant
	Negligible	Not Significant	Not Significant	Not Significant	Imperceptible

Section 1 – Mayne River Avenue to R808 Gracefield Road – R107 Malahide Road

Table 10: Section 1 – Cycling Infrastructure Assessment

Location	Chainage	Cyclist Impact	DoMinimum	LoS Rating	DoSomething	LoS Rating	Impact
Mayne River Avenue to R139 Clarehall Avenue	A3050 - A3250	Segregation	No specific bicycle facilities	D	Well separated at mid-link with some conflict at intersections	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each cycle lane has capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	A+	Each cycle lane has capacity for cycling two abreast and / or overtaking (2.0 - 2.5m, 1+1)	A	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation	A	
		Overall		C		A	
R139 Clarehall Avenue to St Brendan's Park	A3250 - A5300	Segregation	On-road cycle lanes	B	Well separated at mid-link with some conflict at intersections	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1+0)	C	Each cycle lane has capacity for cycling two abreast and / or overtaking (2.0 - 2.5m, 1+1)	A	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation	A	
		Overall		C		A	
St Brendan's Park to R808 Gracefield Road	A5300 - A6050	Segregation	On-road cycle lanes	B	Well separated cycle track at mid-link with some conflict at intersections travelling northbound. Alternative quiet route along St Brendan's Avenue travelling southbound.	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1+0)	C	Each cycle lane has capacity for cycling two abreast and / or overtaking (2.0 - 2.5m, 1+1)	B	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation travelling northbound. Southbound, cyclist use the quiet route whereby cyclists would have priority along St Brendan's Avenue.	A	
		Overall		C		A	

Section 2 – R808 Gracefield Road to R105 Marino Mart / Fairview – R107 Malahide Road

Table 11: Section 2 – Cycling Infrastructure Assessment

Location	Chainage	Cyclist Impact	DoMinimum	LoS Rating	DoSomething	LoS Rating	Impact
Gracefield Road to Kilmore Road	A6050 - A6550	Segregation	On-road cycle lanes	B	Well separated at mid-link with some conflict at intersections	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1+0)	C	Each cycle lane has capacity for cycling two abreast and / or overtaking (2.0m, 1+1)	A	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation.	A	
		Overall		C		A	
Kilmore Road to St David's Wood	A6550 - A6800	Segregation	Bicycles share traffic or bus lanes	C	Well separated at mid-link with some conflict at intersections.	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each cycle lane has capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	A+	Each cycle lane has capacity for cycling two abreast and / or overtaking (1.75 - 2.0m, 1+1)	A	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cyclists share green time with general traffic and cycle lanes continue through the junction.	B	
		Overall		C		A	
St David's Wood to R102 Griffith Avenue	A6800 - A8250	Segregation	Bicycles share traffic or bus lanes	C	Well separated at mid-link with some conflict at intersections	A	Medium Positive
		Number of Adjacent Cyclists / Width	Each cycle lane has capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	A+	Each cycle lane has capacity for cycling two abreast and / or overtaking (1.75 - 2.0m, 1+1)	B	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation.	A	
		Overall		C		A	
R102 Griffith Avenue to Brian Road	A8250 - A8350	Segregation	On-road cycle lane travelling northbound. Cyclists share bus lane travelling southbound	C	Bidirectional cycle track with high degree of separation. Minimal delay	A+	Medium Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1+0)	C	Each cycle lane has capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	A+	
		Junction Treatment	Cyclists share green time with general traffic with cycle facilities (advanced stacking locations / cycle lanes) available up to the junction but don't continue through.	C	Cycle tracks unaffected by junctions.	A	
		Overall		C		A+	
Brian Road to R105 Clontarf Road	A8350 - A8750	Segregation	On-road cycle lane travelling northbound. Cyclists share bus lane travelling southbound	C	Alternative quiet route via Brian Road and Carleton Road - cyclists share traffic	C	Low Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1+0)	C	Each cycle lane has capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	A+	
		Junction Treatment	No specific bicycle facilities at junctions	D	Carriageway designated as quiet cycle routes with demand management measures to limit traffic flows or speeds	B	
		Overall		C		B	

Appendix 4.3 Average Bus Journey Times

Table 12: 2028 AM and PM Peak Hour Journey Times

PT Line	Direction	Peak Period	DoMinimum	DoSomething	Abs Diff	% Diff
4031	D1: Ballyowen_ Foxborough Estate to Clongriffin_ Main Street	AM Peak Hour	20.05	16.39	-3.66	-18%
		PM Peak Hour	19.84	16.49	-3.35	-17%
4032	D1: Clongriffin_ Main Street to Ballyowen_ Foxborough Estate	AM Peak Hour	22.39	18.19	-4.20	-19%
		PM Peak Hour	22.48	18.00	-4.48	-20%
4033	D2: Baldoyle Roundabout to Citywest_ Bianconi Avenue	AM Peak Hour	17.91	16.70	-1.21	-7%
		PM Peak Hour	16.92	16.29	-0.63	-4%
4034	D2: Citywest_ Bianconi Avenue to Baldoyle Roundabout	AM Peak Hour	17.40	14.72	-2.68	-15%
		PM Peak Hour	17.66	15.27	-2.40	-14%
4035	D3: Clongriffin_ Main Street to Nangor_ Saint Ronan's Church	AM Peak Hour	23.09	18.45	-4.64	-20%
		PM Peak Hour	23.82	18.34	-5.49	-23%
4036	D3: Nangor_ Saint Ronan's Church to Clongriffin_ Main Street	AM Peak Hour	19.95	16.62	-3.33	-17%
		PM Peak Hour	20.16	16.92	-3.24	-16%
4037	D4: Kilmore (Dublin City)_ Coolock Lane to Oldbawn_ Kiltipper Way	AM Peak Hour	9.59	9.56	-0.03	0%
		PM Peak Hour	8.81	9.14	0.33	4%
4038	D4: Oldbawn_ Marfield Estate to Santry_ Oak Park Estate	AM Peak Hour	8.87	8.25	-0.63	-7%
		PM Peak Hour	9.13	8.43	-0.69	-8%
4039	D5: Edenmore_ GAA Sports Ground to Tallaght_ The Square Shopping Centre	AM Peak Hour	11.52	10.00	-1.52	-13%
		PM Peak Hour	11.05	9.26	-1.78	-16%
4040	D5: Tallaght_ The Square Shopping Centre to Edenmore_ Blunden Drive	AM Peak Hour	9.40	9.48	0.08	1%
		PM Peak Hour	9.91	9.52	-0.39	-4%
4041	D9: Clare Hall_ Malahide Road (N32) to Marlborough Luas Stop	AM Peak Hour	23.09	18.43	-4.66	-20%
		PM Peak Hour	22.93	18.26	-4.67	-20%
4042	D9: Dublin_ Irish Life Mall to Clare Hall_ Malahide Road (N32)	AM Peak Hour	19.55	16.30	-3.24	-17%
		PM Peak Hour	20.15	16.74	-3.41	-17%
4065	N2: Clontarf Train Station to Heuston Station	AM Peak Hour	1.29	1.41	0.12	9%
		PM Peak Hour	1.22	1.24	0.02	2%
4066	N2: Saint John's Road West to Clontarf Train Station	AM Peak Hour	1.71	1.36	-0.34	-20%
		PM Peak Hour	2.34	1.61	-0.72	-31%
4138	L80: Clongriffin_ Main Street to The Helix	AM Peak Hour	5.04	3.72	-1.31	-26%
		PM Peak Hour	5.79	3.73	-2.06	-35%
4139	L80: The Helix to Main Street	AM Peak Hour	4.34	2.58	-1.75	-40%
		PM Peak Hour	3.96	2.68	-1.28	-32%
4221	20: Dublin_ National Lottery Head Quarters to Malahide_ COast Road (opp Seapark Estate)	AM Peak Hour	20.37	16.92	-3.46	-17%
		PM Peak Hour	20.69	17.57	-3.12	-15%
4222	20: Malahide_ Martello Tower to Dublin_ National Lottery Head Quarters	AM Peak Hour	23.28	18.49	-4.80	-21%
		PM Peak Hour	23.31	18.20	-5.11	-22%

TIA Appendix 4 Impact Assessments

PT Line	Direction	Peak Period	DoMinimum	DoSomething	Abs Diff	% Diff
4253	N8: Clongriffin_ Main Street to Blanchardstown_ Shopping Centre	AM Peak Hour	1.74	1.78	0.04	2%
		PM Peak Hour	2.31	1.36	-0.95	-41%
4254	N8: Blanchardstown_ Shopping Centre to Main Street	AM Peak Hour	0.26	0.34	0.08	31%
		PM Peak Hour	0.36	0.29	-0.07	-19%
4261	21: Swords_ Swords Business Park to Dublin_ National Lottery Head Quarters	AM Peak Hour	23.84	19.27	-4.57	-19%
		PM Peak Hour	23.62	18.59	-5.03	-21%
4262	21: Dublin_ National Lottery Head Quarters to Swords_ Swords Business Park	AM Peak Hour	20.34	16.85	-3.49	-17%
		PM Peak Hour	20.58	17.83	-2.75	-13%

Table 13: 2043 AM and PM Peak Hour Journey Times

PT Line	Direction	Peak Period	DoMinimum	DoSomething	Abs Diff	% Diff
4031	D1: Ballyowen_ Foxborough Estate to Clongriffin_ Main Street	AM Peak Hour	19.81	16.31	-3.50	-18%
		PM Peak Hour	20.42	17.02	-3.40	-17%
4032	D1: Clongriffin_ Main Street to Ballyowen_ Foxborough Estate	AM Peak Hour	22.31	18.22	-4.09	-18%
		PM Peak Hour	25.35	17.35	-7.99	-32%
4033	D2: Baldoyle Roundabout to Citywest_ Bianconi Avenue	AM Peak Hour	17.73	16.59	-1.13	-6%
		PM Peak Hour	20.61	16.37	-4.24	-21%
4034	D2: Citywest_ Bianconi Avenue to Baldoyle Roundabout	AM Peak Hour	17.35	14.96	-2.39	-14%
		PM Peak Hour	17.39	15.72	-1.67	-10%
4035	D3: Clongriffin_ Main Street to Nangor_ Saint Ronan's Church	AM Peak Hour	23.59	18.64	-4.95	-21%
		PM Peak Hour	27.68	18.28	-9.41	-34%
4036	D3: Nangor_ Saint Ronan's Church to Clongriffin_ Main Street	AM Peak Hour	19.54	16.71	-2.83	-14%
		PM Peak Hour	20.66	16.94	-3.72	-18%
4037	D4: Kilmore (Dublin City)_ Coolock Lane to Oldbawn_ Kiltipper Way	AM Peak Hour	9.77	9.24	-0.53	-5%
		PM Peak Hour	12.00	8.92	-3.08	-26%
4038	D4: Oldbawn_ Marfield Estate to Santry_ Oak Park Estate	AM Peak Hour	8.52	8.58	0.06	1%
		PM Peak Hour	9.29	8.21	-1.08	-12%
4039	D5: Edenmore_ GAA Sports Ground to Tallaght_ The Square Shopping Centre	AM Peak Hour	11.61	9.68	-1.93	-17%
		PM Peak Hour	13.88	9.08	-4.79	-35%
4040	D5: Tallaght_ The Square Shopping Centre to Edenmore_ Blunden Drive	AM Peak Hour	9.03	9.66	0.63	7%
		PM Peak Hour	9.74	9.51	-0.23	-2%
4041	D9: Clare Hall_ Malahide Road (N32) to Marlborough Luas Stop	AM Peak Hour	22.93	18.64	-4.29	-19%
		PM Peak Hour	27.30	18.24	-9.06	-33%
4042	D9: Dublin_ Irish Life Mall to Clare Hall_ Malahide Road (N32)	AM Peak Hour	19.94	16.36	-3.58	-18%
		PM Peak Hour	19.84	16.80	-3.04	-15%
4065	N2: Clontarf Train Station to Heuston Station	AM Peak Hour	1.34	1.28	-0.05	-4%
		PM Peak Hour	3.82	1.32	-2.50	-65%
4066	N2: Saint John's Road West to Clontarf Train Station	AM Peak Hour	1.65	1.51	-0.14	-9%
		PM Peak Hour	2.65	1.56	-1.09	-41%
4138	L80: Clongriffin_ Main Street to The Helix	AM Peak Hour	5.18	3.77	-1.41	-27%
		PM Peak Hour	5.52	3.59	-1.93	-35%
4139	L80: The Helix to Main Street	AM Peak Hour	4.19	2.61	-1.58	-38%
		PM Peak Hour	3.96	2.82	-1.14	-29%
4221	20: Dublin_ National Lottery Head Quarters to Malahide_ COast Road (opp Seapark Estate)	AM Peak Hour	19.82	17.24	-2.58	-13%
		PM Peak Hour	20.83	17.54	-3.29	-16%
4222	20: Malahide_ Martello Tower to Dublin_ National Lottery Head Quarters	AM Peak Hour	23.30	18.49	-4.81	-21%
		PM Peak Hour	26.93	18.17	-8.76	-33%

TIA Appendix 4 Impact Assessments

PT Line	Direction	Peak Period	DoMinimum	DoSomething	Abs Diff	% Diff
4253	N8: Clongriffin_ Main Street to Blanchardstown_ Shopping Centre	AM Peak Hour	1.90	1.61	-0.29	-15%
		PM Peak Hour	2.48	1.27	-1.21	-49%
4254	N8: Blanchardstown_ Shopping Centre to Main Street	AM Peak Hour	0.23	0.37	0.14	58%
		PM Peak Hour	0.24	0.31	0.07	28%
4261	21: Swords_ Swords Business Park to Dublin_ National Lottery Head Quarters	AM Peak Hour	23.77	19.24	-4.52	-19%
		PM Peak Hour	27.68	18.90	-8.77	-32%
4262	21: Dublin_ National Lottery Head Quarters to Swords_ Swords Business Park	AM Peak Hour	19.48	17.21	-2.27	-12%
		PM Peak Hour	20.42	17.34	-3.08	-15%

Appendix 4.4 General Traffic Assessment

Table 14: 2028 AM Peak Hour Junction Analysis

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	DoSomething VoC	Do Minimum VoC	Do Something VoC	
Eastern Side of Proposed Scheme	A.1	Grange Road	3	13240	Grange Road / St Donagh's Road	50	59.31	≤85%	≤85%	Negligible
				13292	Grange Road / Millbrook Avenue	52.12	51.21	≤85%	≤85%	Negligible
				17305	Grange Road / Ardara Avenue / Howth View Park	73.75	91.83	≤85%	85% - 100%	Low Negative
				17129	Grange Road / Donaghmede Shopping Centre	74.98	83.96	≤85%	≤85%	Negligible
				17131	Grangemore Road / Grange Road	70.27	80.24	≤85%	≤85%	Negligible
				17162	Grange Road / Newbrook Road	88.13	98.72	85% - 100%	85% - 100%	Negligible
				17132	Grange Road / Clarehall Avenue	70.27	80.24	≤85%	≤85%	Negligible
				17238	Grange Road / Belmayne Avenue	51.36	61.97	≤85%	≤85%	Negligible
		Belmayne Avenue	5	17240	Belmayne Avenue / Priory Hall	100.21	90.43	85% - 100%	85% - 100%	Negligible
		The Hole In the Wall Road	5	17176	The Hole In The Wall Road / The Hole In The Wall Road / / Grange Abbey Road	22.68	24.74	≤85%	≤85%	Negligible
				17201	The Hole In The Wall Road / Grattan Wood / The Hole In The Wall Road	13.22	14.51	≤85%	≤85%	Negligible
				17173	The Hole in the Wall Road / Grange Road	51.51	59.13	≤85%	≤85%	Negligible
				17204	The Hole in the Wall Road / Main Street / Priory Hall	100.51	106.93	>100%	>100%	Negligible
	A.2	Tonlegee Road	3	13288	Tonlegee Road / Grange Road / Kilbarrack Road	93.26	93.46	85% - 100%	85% - 100%	Negligible
				13242	Tonlegee Road / Raheny Road	54.57	57.82	≤85%	≤85%	Negligible
				13236	Tonlegee Road / Millbrook Drive	23.26	40.8	≤85%	≤85%	Negligible
				13289	Tonlegee Road / Millwood Villas	27.01	33.28	≤85%	≤85%	Negligible
				13294	Tonlegee Road / Millbrook Road	33.16	32.59	≤85%	≤85%	Negligible
				13387	Tonlegee Road / Tonlegee Avenue	18.38	19.7	≤85%	≤85%	Negligible
				13388	Tonlegee Road / Rathvale Drive	27.32	27.97	≤85%	≤85%	Negligible
				13384	Glenfarne Road / Tonlegee Road	19.19	22.68	≤85%	≤85%	Negligible
				13395	Tonlegee Road / Moatfield Road	33.6	42.45	≤85%	≤85%	Negligible
	A.3	Harmonstown Road	5	13300	Lein Park / Lein Park / Harmonstown Road / Harmonstown Road	6.95	11.93	≤85%	≤85%	Negligible
				13397	Springdale Road / Harmonstown Road / Springdale Road	13.13	18.64	≤85%	≤85%	Negligible
				13546	Ribh Road / Harmonstown Road / Harmonstown Road	12.01	20.6	≤85%	≤85%	Negligible
	A.4	Howth Road	3	13452	Howth Road / Collins Avenue East	80.03	73.44	≤85%	≤85%	Negligible
				13347	Dunseverick Road / Howth Road	66.56	72.07	≤85%	≤85%	Negligible
				13355	Howth Road / The Demesne	66.56	72.07	≤85%	≤85%	Negligible
				13356	Howth Road / Dunluce Road	74	73.56	≤85%	≤85%	Negligible
				13351	Howth Road / Furry Park Road (South)	74	73.56	≤85%	≤85%	Negligible
				13352	Howth Road / The Demesne / Furry Park Road	75.1	79	≤85%	≤85%	Negligible
				13373	Howth Road / Furry Park Road (North)	79.35	82.52	≤85%	≤85%	Negligible
13374				Howth Road / Brookwood Avenue / Sybil Hill Road	100.09	94.22	85% - 100%	85% - 100%	Negligible	
Vernon Avenue		4	13121	Vernon Avenue / Vernon Avenue / Vernon Avenue	23.38	33.02	≤85%	≤85%	Negligible	
			13429	Castle Avenue / Castle Avenue / Vernon Avenue	28.09	47.04	≤85%	≤85%	Negligible	
			13450	Dunluce Road / Vernon Avenue / Vernon Avenue / Vervill Court	9.02	14.99	≤85%	≤85%	Negligible	
			13451	Vernon Avenue / Grosvenor Court / Vernon Avenue	12.29	17.91	≤85%	≤85%	Negligible	
			A.5	Clontarf Road	3	13167	Marino Crescent / Clontarf Road	30.06	36.23	≤85%
13173	St Lawrence Road / Clontarf Road / Clontarf Road /	81.52				83.27	≤85%	≤85%	Negligible	
13175	Alfie Byrne Road / Clontarf Road / Clontarf Road	108.33				106.52	>100%	>100%	Negligible	

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	DoSomething VoC	Do Minimum VoC	Do Something VoC		
				13539	R105 / Malahide Road / R105 /	84.87	91.41	≤85%	85% - 100%	Low Negative	
				13541	Castle Avenue / Clontarf Road / Clontarf Road	91.8	92.17	85% - 100%	85% - 100%	Negligible	
				13544	Haddon Road / Clontarf Road / Clontarf Road	83.46	94.75	≤85%	85% - 100%	Low Negative	
				13494	Clontarf Road / Howth Road	95.08	81.75	85% - 100%	≤85%	Low Positive	
				13113	Clontarf Road / Hollybrook Road	100.73	94.53	>100%	85% - 100%	Low Positive	
	Western Side of Proposed Scheme	A.6	Clonshaugh Road	4	17115	Clonshaugh Road / R139	103.71	100.3	>100%	85% - 100%	Low Positive
					17250	Clonshaugh Avenue / Clonshaugh Heights	11.16	18.11	≤85%	≤85%	Negligible
					17161	Riverside Park / Clonshaugh Road	25.81	31.41	≤85%	≤85%	Negligible
					17122	Clonshaugh Road / R139 / Clonshaugh Road / R139	23.79	34.15	≤85%	≤85%	Negligible
			Clonshaugh Avenue	4	17155	Clonshaugh Avenue / Glin Road	20.94	40.04	≤85%	≤85%	Negligible
17160					Clonshaugh Road / Clonsaugh Avenue	61.73	85.1	≤85%	≤85%	Negligible	
Priorswood Road			4	17125	Priorswood Road / Marigold Avenue	26.9	26.78	≤85%	≤85%	Negligible	
				17153	Priorswood Road / Glin Road	28.29	38.86	≤85%	≤85%	Negligible	
				17241	Priorswood Road / Marigold Road	10.54	18.44	≤85%	≤85%	Negligible	
				A.7	M1 Southbound (Junction 3)	1	17111	M1 Southbound / R139	59.62	56.02	≤85%
38306	M1 Southbound / M1 Junction 3 Off-slip	81.01	85.17				≤85%	≤85%	Negligible		
A.8	Baskin Lane	5	35656	Baskin Lane / Clonshaugh Road / Stockhole Lane	105.34	110.94	>100%	>100%	Negligible		
			35867	Malahide Road / Baskin Lane	87.74	93.51	85% - 100%	85% - 100%	Negligible		
	M1 Southbound (Junction 3)	1	35967	M1 Junction 2 / Airport Motorway	81.51	85.37	≤85%	≤85%	Negligible		
	Chapel Road	5	35863	R124 / R124 / Chapel Road	70.01	79.37	≤85%	≤85%	Negligible		
36436			Chapel Road / Kinsealy Lane	53.04	53.3	≤85%	≤85%	Negligible			

Table 15: 2043 AM Junction Analysis

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
Eastern Side of Proposed Scheme	A.1	Grange Road	3	13240	Grange Road / St Donagh's Road	49.61	57.81	≤85%	≤85%	Negligible
				13292	Grange Road / Millbrook Avenue	49.87	50.92	≤85%	≤85%	Negligible
				17305	Grange Road / Ardara Avenue / Howth View Park	77.31	94.67	≤85%	85% - 100%	Low Negative
				17129	Grange Road / Donaghmede Shopping Centre	75.09	83.73	≤85%	≤85%	Negligible
				17131	Grangemore Road / Grange Road	72	78.3	≤85%	≤85%	Negligible
				17162	Grange Road / Newbrook Road	88.31	98.51	85% - 100%	85% - 100%	Negligible
				17132	Grange Road / Clarehall Avenue	72	78.3	≤85%	≤85%	Negligible
				17238	Grange Road / Belmayne Avenue	61.05	72.49	≤85%	≤85%	Negligible
		Belmayne Avenue	5	17240	Belmayne Avenue / Priory Hall	93.7	87.75	85% - 100%	85% - 100%	Negligible
		The Hole In the Wall Road	5	17176	The Hole In The Wall Road / The Hole In The Wall Road / / Grange Abbey Road	14.8	15.81	≤85%	≤85%	Negligible
				17201	The Hole In The Wall Road / Grattan Wood / The Hole In The Wall Road	13.07	14.21	≤85%	≤85%	Negligible
				17173	The Hole in the Wall Road / Grange Road	51.80	53.42	≤85%	≤85%	Negligible
				17204	The Hole in the Wall Road / Main Street / Priory Hall	100.28	106.63	>100%	>100%	Negligible
		A.2	Tonlegee Road	3	13288	Tonlegee Road / Grange Road / Kilbarrack Road	94.3	93.96	85% - 100%	85% - 100%
	13242				Tonlegee Road / Raheny Road	51.2	55.88	≤85%	≤85%	Negligible
	13236				Tonlegee Road / Millbrook Drive	21.67	29.66	≤85%	≤85%	Negligible
	13289				Tonlegee Road / Millwood Villas	24.06	25.31	≤85%	≤85%	Negligible
	13294				Tonlegee Road / Millbrook Road	31.82	27.98	≤85%	≤85%	Negligible
	13387				Tonlegee Road / Tonlegee Avenue	17.57	15.46	≤85%	≤85%	Negligible
	13388				Tonlegee Road / Rathvale Drive	22.84	22.88	≤85%	≤85%	Negligible
	13384				Glenfame Road / Tonlegee Road	17.7	19.92	≤85%	≤85%	Negligible
	13395				Tonlegee Road / Moatfield Road	31.32	33.12	≤85%	≤85%	Negligible
	A.3	Harmonstown Road	5	13300	Lein Park / Lein Park / Harmonstown Road / Harmonstown Road	4.9	6.62	≤85%	≤85%	Negligible
				13397	Springdale Road / Harmonstown Road / Springdale Road	11.61	13.17	≤85%	≤85%	Negligible
				13546	Ribh Road / Harmonstown Road / Harmonstown Road	8.47	11.43	≤85%	≤85%	Negligible
	A.4	Howth Road	3	13452	Howth Road / Collins Avenue East	76.6	67.98	≤85%	≤85%	Negligible
				13347	Dunseverick Road / Howth Road	60.19	67.98	≤85%	≤85%	Negligible
				13355	Howth Road / The Demesne	60.19	67.98	≤85%	≤85%	Negligible
				13356	Howth Road / Dunluce Road	72.17	75.05	≤85%	≤85%	Negligible
				13351	Howth Road / Furry Park Road (South)	72.17	75.05	≤85%	≤85%	Negligible
				13352	Howth Road / The Demesne / Furry Park Road	73.1	76.66	≤85%	≤85%	Negligible
				13373	Howth Road / Furry Park Road (North)	77.29	80.28	≤85%	≤85%	Negligible
				13374	Howth Road / Brookwood Avenue / Sybil Hill Road	99.83	93.18	85% - 100%	85% - 100%	Negligible
Vernon Avenue		4	13121	Vernon Avenue / Vernon Avenue / Vernon Avenue	20.36	24.54	≤85%	≤85%	Negligible	
			13429	Castle Avenue / Castle Avenue / Vernon Avenue	25.53	34.54	≤85%	≤85%	Negligible	
			13450	Dunluce Road / Vernon Avenue / Vernon Avenue / Vervill Court	8.35	11.21	≤85%	≤85%	Negligible	
			13451	Vernon Avenue / Grosvenor Court / Vernon Avenue	11.21	13.51	≤85%	≤85%	Negligible	
			A.5	Clontarf Road	3	13167	Marino Crescent / Clontarf Road	29.77	33.43	≤85%
13173	St Lawrence Road / Clontarf Road / Clontarf Road /	76.89				79.98	≤85%	≤85%	Negligible	
13175	Alfie Byrne Road / Clontarf Road / Clontarf Road	103.4				102.66	>100%	>100%	Negligible	

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
				13539	R105 / Malahide Road / R105 /	81.63	83.57	≤85%	≤85%	Negligible
				13541	Castle Avenue / Clontarf Road / Clontarf Road	91.15	90.46	85% - 100%	85% - 100%	Negligible
				13544	Haddon Road / Clontarf Road / Clontarf Road	81.65	83.08	≤85%	≤85%	Negligible
				13494	Clontarf Road / Howth Road	84.72	67.78	≤85%	≤85%	Negligible
				13113	Clontarf Road / Hollybrook Road	76.91	80.20	>100%	85% - 100%	Low Positive
Western Side of Proposed Scheme	A.6	Clonshaugh Road	4	17115	Clonshaugh Road / R139	101.01	100.6	>100%	>100%	Negligible
				17250	Clonshaugh Avenue / Clonshaugh Heights	11.37	17.2	≤85%	≤85%	Negligible
				17161	Riverside Park / Clonshaugh Road	25.23	28.73	≤85%	≤85%	Negligible
				17122	Clonshaugh Road / R139 / Clonshaugh Road / R139	24.05	34.02	≤85%	≤85%	Negligible
	Clonshaugh Avenue	4	17155	Clonshaugh Avenue / Glin Road	21.18	34.5	≤85%	≤85%	Negligible	
			17160	Clonshaugh Road / Clonsaugh Avenue	62.46	84.49	≤85%	≤85%	Negligible	
			Priorswood Road	4	17125	Priorswood Road / Marigold Avenue	26.65	27.09	≤85%	≤85%
	17153	Priorswood Road / Glin Road			26.61	36.41	≤85%	≤85%	Negligible	
	17241	Priorswood Road / Marigold Road			10.81	16.36	≤85%	≤85%	Negligible	
	A.7	M1 Southbound (Junction 3)	1	17111	M1 Southbound / R139	59.32	57.21	≤85%	≤85%	Negligible
				38306	M1 Southbound / M1 Junction 3 Off-slip	94.06	95.24	85% - 100%	85% - 100%	Negligible
	A.8	Baskin Lane	5	35656	Baskin Lane / Clonshaugh Road / Stockhole Lane	103.03	106.45	>100%	>100%	Negligible
				35867	Malahide Road / Baskin Lane	85.64	98.21	85% - 100%	85% - 100%	Negligible
M1 Southbound (Junction 3)		1	35967	M1 Junction 2 / Airport Motorway	89.76	88.78	85% - 100%	85% - 100%	Negligible	
Chapel Road		5	35863	R124 / R124 / Chapel Road	84	88.64	≤85%	85% - 100%	Low Negative	
			36436	Chapel Road / Kinsealy Lane	60.14	58.49	≤85%	≤85%	Negligible	

Table 16: 2028 PM Junction Analysis

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC		
Eastern Side of Proposed Scheme	P.1	Coast Road	3	29404	Main Street / Willie Nolan Road / Coast Road	97.08	99.31	85% - 100%	85% - 100%	Negligible	
				38036	Red Arches Road / Coast Road	58.79	73.76	≤85%	≤85%	Negligible	
				38038	Coast Road / Red Arches Road	35	46.71	≤85%	≤85%	Negligible	
		Main Street	3	29401	Main Street / Main Street	67.33	90.07	≤85%	85% - 100%	Low Negative	
				29514	R124 New Street / Main Street / Church Road / The Mall	87.14	93.93	85% - 100%	85% - 100%	Negligible	
				29589	R106 Main Street / Old Street	33.88	37.42	≤85%	≤85%	Negligible	
	P.2	Grange Road	3	13240	Grange Road / St Donagh's Road	70.72	70.08	≤85%	≤85%	Negligible	
				17129	Grange Road / Donaghmede Shopping Centre	68.18	69.62	≤85%	≤85%	Negligible	
				17131	Grangemore Road / Grange Road	102.52	101.15	>100%	>100%	Low Positive	
				17132	Grange Road / Clarehall Avenue	100	100	85% - 100%	85% - 100%	Negligible	
				17133	Grange Road / R139 / The Hole In The Wall	57.82	43.85	≤85%	≤85%	Negligible	
				17162	Grange Road / Newbrook Road	69.49	83.74	≤85%	≤85%	Low Negative	
				17173	Grange Road / The Hole In The Wall Road	51.34	46.92	≤85%	≤85%	Negligible	
				17305	Grange Road / Ardara Avenue	95.49	97.09	85% - 100%	85% - 100%	Negligible	
		Millbrook Avenue	5	13238	Millbrook Drive / Millbrook Avenue	32.27	33.99	≤85%	≤85%	Negligible	
				13292	Grange Road / Millbrook Avenue	53.75	55.26	≤85%	≤85%	Negligible	
				The Hole In The Wall Road	5	17204	The Hole In The Wall Road / Priory Hall	97.85	96.62	85% - 100%	85% - 100%
		40558	The Hole In The Wall Road / St Michael's Cottages			11.36	15.07	≤85%	≤85%	Negligible	
		82017	The Hole In The Wall Road / Marrsfield Avenue			34.03	43.51	≤85%	≤85%	Negligible	
		P.3	Tonlegee Road	3	13378	Tonlegee Road / Springdale Road	52.51	49.99	≤85%	≤85%	Negligible
					13384	Glenfame Road / Tonlegee Road	28.69	27.26	≤85%	≤85%	Negligible
	13387				Tonlegee Road / Tonlegee Avenue	24.95	24.18	≤85%	≤85%	Negligible	
	13388				Tonlegee Road / Rathvale Drive	31.67	29.85	≤85%	≤85%	Negligible	
	13395				Moatfield Road / Tonlegee Road	51.7	45.97	≤85%	≤85%	Negligible	
	P.4	Dublin Road	3	29527	Dublin Road / Yellow Walls Road	63.3	67.06	≤85%	≤85%	Negligible	
				29881	Dublin Road / Ard Na Mara	28.1	32.94	≤85%	≤85%	Negligible	
				39274	Dublin Road / O'Hanlon's Lane	39.25	42.43	≤85%	≤85%	Negligible	
		James Larkin Road	3	13496	Watermill Road / James Larkin Road / Causeway Road	91.03	90.98	85% - 100%	85% - 100%	Negligible	
				13497	Howth Road / James Larkin Road	69.58	69.79	≤85%	≤85%	Negligible	
				13531	Clontarf Road / James Larkin Road / Mount Prospect Avenue	83.78	84.07	≤85%	≤85%	Negligible	
		Kilbarrack Road	5	13271	Kilbarrack Avenue / Kilbarrack Road / Kilbarrack Road	11.1	15.8	≤85%	≤85%	Negligible	
				13272	St Margarets Avenue / Kilbarrack Road / Kilbarrack Road	12.3	17.23	≤85%	≤85%	Negligible	
				13276	Kilbarrack Road / Howth Road / Dublin Road	94.89	97.13	85% - 100%	85% - 100%	Negligible	
				13278	Kilbarrack Road / Kilbarrack Road / Verbena Avenue	13.37	17.68	≤85%	≤85%	Negligible	
				13279	Alden Road / Kilbarrack Road / Kilbarrack Road	11.93	16.31	≤85%	≤85%	Negligible	
	P.5	Clontarf Road	3	13102	Dollymount Park / Clontarf Road	78.39	78.4	≤85%	≤85%	Negligible	
13112				Clontarf Road / Seaview Avenue North / Clontarf Road	102.85	102.86	>100%	>100%	Negligible		
13123				Clontarf Road / Kincora Road / Clontarf Road	73.74	73.71	≤85%	≤85%	Negligible		
13146				Clontarf Road / Clontarf Road / Seaview Road East	73.74	73.71	≤85%	≤85%	Negligible		

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact		
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC			
				13147	Conquer Hill Road / Clontarf Road / Clontarf Road	75.93	74.87	≤85%	≤85%	Negligible		
				13150	Danes Court / Clontarf Road / Clontarf Road	78.39	78.4	≤85%	≤85%	Negligible		
				13173	St Lawrence Road / Clontarf Road / Clontarf Road /	107.66	108.14	>100%	>100%	Negligible		
				13529	Dollymount Avenue / Clontarf Road	78.39	78.4	≤85%	≤85%	Negligible		
				13530	Clontarf Road / Clontarf Road / Clontarf Road	83.78	84.07	≤85%	≤85%	Negligible		
				13541	Castle Avenue / Clontarf Road / Clontarf Road	83.02	82.17	≤85%	≤85%	Negligible		
				13544	Haddon Road / Clontarf Road / Clontarf Road	83.75	83.06	≤85%	≤85%	Negligible		
			Howth Road	3	13110	Copeland Avenue / Howth Road	90.77	87.91	85% - 100%	85% - 100%	Negligible	
					13490	Howth Road / Hollybrook Park	99.08	96.51	85% - 100%	85% - 100%	Negligible	
		P.10	Chapel Road		35863	Drumnigh Road / Chapel Road	75.99	74.37	≤85%	≤85%	Negligible	
				5	36436	Chapel Road / Gandon Lane / Kinsealy Lane	65.01	63.4	≤85%	≤85%	Negligible	
		Western Side of Proposed Scheme	P.6	Beaumont Road	4	13190	Beaumont Road / Beaumont Road / The Thatch Road	48.66	51.87	≤85%	≤85%	Negligible
						13196	Grace Park Road / Beaumont Road / Collins Avenue / Collins Avenue	106.58	106.78	>100%	>100%	Negligible
						13201	Dromawling Road / Shantalla Road / Beaumont Road	87.07	90.73	85% - 100%	85% - 100%	Negligible
13204	Coolatree Road (West) / Beaumont Road					31.01	35.42	≤85%	≤85%	Negligible		
13205	Beaumont Road / Beaumont Woods					59.57	63.68	≤85%	≤85%	Negligible		
13218	Coolatree Road (East) / Beaumont Road					26.32	30.99	≤85%	≤85%	Negligible		
13498	Beaumont Road / Coolgreena Road / Beaumont Road					31.01	35.42	≤85%	≤85%	Negligible		
13499	Beaumont Road / Beaumont Crescent / Skellys Lane					26.32	30.99	≤85%	≤85%	Negligible		
13502	Beaumont Road / Yellow Road / Beaumont Road					24.61	28.26	≤85%	≤85%	Negligible		
13653	Beaumont Road / The Park					46.43	51.92	≤85%	≤85%	Negligible		
	Kilmore Road			4	13326	Maryfield Drive / Kilmore Road / Kilmore Road	22.18	27.67	≤85%	≤85%	Negligible	
					13500	Kilmore Road / Maryfield Crescent	56.87	71.51	≤85%	≤85%	Negligible	
	Skellys Lane			4	13231	Elm Mount Park / Skellys Lane	39.82	36.16	≤85%	≤85%	Negligible	
					13336	Whitethorn Rise / Skellys Lane	33.47	43.3	≤85%	≤85%	Negligible	
					13443	Montrose Grove / Skellys Lane	29	27.73	≤85%	≤85%	Negligible	
					13545	Kilmore Road / Newlands Court Apartments	39.67	48.17	≤85%	≤85%	Negligible	
	P.7			Coolock Drive	5	13367	Coolock Drive / Bunratty Road	7.04	11.35	≤85%	≤85%	Negligible
						13486	Coolock Drive / Oscar Traynor Road	28.28	35.2	≤85%	≤85%	Negligible
				Oscar Traynor Road	3	13343	Oscar Traynor Road / Armstrong Walk / Oscar Traynor Road	20.66	31.81	≤85%	≤85%	Negligible
						13344	Barryscourt Road / Oscar Traynor Road	43.97	55.14	≤85%	≤85%	Negligible
						13364	R104 / Oscar Traynor Road / Malahide Road / Malahide Road	13.88	22.81	≤85%	≤85%	Negligible
						13365	Oscar Traynor Road / Beechlawn Avenue	21.21	27.23	≤85%	≤85%	Negligible
						13370	Oscar Traynor Road / Brookville Crescent / Coolock Village	23.91	39.04	≤85%	≤85%	Negligible
						13414	Beechpark Avenue / Oscar Traynor Road	14.93	23.88	≤85%	≤85%	Negligible
						13463	Oscar Traynor Road / Kilmore Road	98.89	102.45	85% - 100%	>100%	Medium Negative
	P.8			Clonshaugh Road	4	17115	Clonshaugh Road / R139 Northern Cross Extension	110.76	114.29	>100%	>100%	Negligible
				17118	R139 / Clonshaugh Road (North)	105.27	106.55	>100%	>100%	Negligible		
				17122	Clonshaugh Road / R139 / Clonshaugh Road / R139	25.94	42.47	≤85%	≤85%	Negligible		
				17155	Clonshaugh Avenue / Glin Road	40.22	54	≤85%	≤85%	Negligible		
				17160	Clonshaugh Road / Clonshaugh Avenue	52.07	86.69	≤85%	85% - 100%	Low Negative		

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
				17161	Riverside Park / Clonshaugh Road	32.76	37.71	≤85%	≤85%	Negligible
				17246	Clonshaugh Road / Newbury Wood	16.65	23.23	≤85%	≤85%	Negligible
				17250	Clonshaugh Avenue / Clonshaugh Heights	19.51	28.26	≤85%	≤85%	Negligible
				35656	Baskin Lane / Clonshaugh Road / Stockhole Lane	80.51	99.63	≤85%	85% - 100%	Medium Negative
				37853	Clonshaugh Road / Dublin Airport Hotel / Clonshaugh Service Station	32.91	39.53	≤85%	≤85%	Negligible
		Riverside Park	5	17150	Riverside Park / Riverside Drive	18.05	16.92	≤85%	≤85%	Negligible
				17156	Greencastle Road / Greencastle Road / Barryscourt Road /	35.13	27.98	≤85%	≤85%	Negligible
	P.9	M50	1	13181	M50 Northbound / Junction 2 On-slip	81.25	86.28	≤85%	85% - 100%	Low Negative
				17235	M50 Northbound / Junction 3 Off-slip	77.76	82.44	≤85%	≤85%	Negligible

Table 17: 2043 PM Junction Analysis

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
Eastern Side of Proposed Scheme	P.1	Coast Road	3	29404	Main Street / Willie Nolan Road / Coast Road	98.05	100.27	85% - 100%	85% - 100%	Negligible
				38036	Red Arches Road / Coast Road	60.08	79.24	≤85%	≤85%	Negligible
				38038	Coast Road / Red Arches Road	35.83	53.64	≤85%	≤85%	Negligible
		Main Street	3	29401	Main Street / Main Street	65.43	87.45	≤85%	85% - 100%	Low Negative
				29514	R124 New Street / Main Street / Church Road / The Mall	88.89	86.82	85% - 100%	85% - 100%	Negligible
				29589	R106 Main Street / Old Street	39.03	41.55	≤85%	≤85%	Negligible
	P.2	Grange Road	3	13240	Grange Road / St Donagh's Road	71.85	68.34	≤85%	≤85%	Negligible
				17129	Grange Road / Donaghmede Shopping Centre	71.53	67.61	≤85%	≤85%	Negligible
				17131	Grangemore Road / Grange Road	102.09	96.46	>100%	85% - 100%	Low Positive
				17132	Grange Road / Clarehall Avenue	100	96.46	85% - 100%	85% - 100%	Negligible
				17133	Grange Road / R139 / The Hole In The Wall	59.13	43.86	≤85%	≤85%	Negligible
				17162	Grange Road / Newbrook Road	70.53	90.57	≤85%	85% - 100%	Low Negative
				17173	Grange Road / The Hole In The Wall Road	52.72	44.54	≤85%	≤85%	Negligible
				17305	Grange Road / Ardara Avenue	96.91	96.22	85% - 100%	85% - 100%	Negligible
		Millbrook Avenue	5	13238	Millbrook Drive / Millbrook Avenue	34.54	24.97	≤85%	≤85%	Negligible
				13292	Grange Road / Millbrook Avenue	54.56	52.74	≤85%	≤85%	Negligible
		The Hole In The Wall Road	5	17204	The Hole In The Wall Road / Priory Hall	100	87.71	85% - 100%	85% - 100%	Negligible
				40558	The Hole In The Wall Road / St Michael's Cottages	11.82	10.86	≤85%	≤85%	Negligible
				82017	The Hole In The Wall Road / Marrsfield Avenue	40.46	39.5	≤85%	≤85%	Negligible
		P.3	Tonlegee Road	3	13378	Tonlegee Road / Springdale Road	47.75	45.55	≤85%	≤85%
	13384				Glenfame Road / Tonlegee Road	26.09	24.8	≤85%	≤85%	Negligible
	13387				Tonlegee Road / Tonlegee Avenue	22.98	22.33	≤85%	≤85%	Negligible
	13388				Tonlegee Road / Rathvale Drive	28.59	27.04	≤85%	≤85%	Negligible
	13395				Moatfield Road / Tonlegee Road	46.83	43.33	≤85%	≤85%	Negligible
	P.4	Dublin Road	3	29527	Dublin Road / Yellow Walls Road	63.18	70.37	≤85%	≤85%	Negligible
				29881	Dublin Road / Ard Na Mara	40.43	41.12	≤85%	≤85%	Negligible
				39274	Dublin Road / O'Hanlon's Lane	43.83	46.1	≤85%	≤85%	Negligible
		James Larkin Road	3	13496	Watermill Road / James Larkin Road / Causeway Road	90.88	90.71	85% - 100%	85% - 100%	Negligible
				13497	Howth Road / James Larkin Road	68.49	69.86	≤85%	≤85%	Negligible
				13531	Clontarf Road / James Larkin Road / Mount Prospect Avenue	83.08	83.59	≤85%	≤85%	Negligible
		Kilbarrack Road	5	13271	Kilbarrack Avenue / Kilbarrack Road / Kilbarrack Road	10.76	17.8	≤85%	≤85%	Negligible
				13272	St Margarets Avenue / Kilbarrack Road / Kilbarrack Road	11.94	20.32	≤85%	≤85%	Negligible
				13276	Kilbarrack Road / Howth Road / Dublin Road	95.04	96.82	85% - 100%	85% - 100%	Negligible
				13278	Kilbarrack Road / Kilbarrack Road / Verbena Avenue	12.5	19.02	≤85%	≤85%	Negligible
	13279			Alden Road / Kilbarrack Road / Kilbarrack Road	11.27	17.81	≤85%	≤85%	Negligible	
	P.5	Clontarf Road	3	13102	Dollymount Park / Clontarf Road	78	78.24	≤85%	≤85%	Negligible
				13112	Clontarf Road / Seaview Avenue North / Clontarf Road	102.85	102.85	>100%	>100%	Negligible
				13123	Clontarf Road / Kincora Road / Clontarf Road	73.44	73.73	≤85%	≤85%	Negligible
				13146	Clontarf Road / Clontarf Road / Seaview Road East	73.44	73.73	≤85%	≤85%	Negligible

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact			
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC				
				13147	Conquer Hill Road / Clontarf Road / Clontarf Road	75.78	75.33	≤85%	≤85%	Negligible			
				13150	Danes Court / Clontarf Road / Clontarf Road	78	78.24	≤85%	≤85%	Negligible			
				13173	St Lawrence Road / Clontarf Road / Clontarf Road /	107.52	107.83	>100%	>100%	Negligible			
				13529	Dollymount Avenue / Clontarf Road	78	78.24	≤85%	≤85%	Negligible			
				13530	Clontarf Road / Clontarf Road / Clontarf Road	83.08	83.59	≤85%	≤85%	Negligible			
				13541	Castle Avenue / Clontarf Road / Clontarf Road	83.22	82.7	≤85%	≤85%	Negligible			
				13544	Haddon Road / Clontarf Road / Clontarf Road	83.83	83.38	≤85%	≤85%	Negligible			
		P.10	Howth Road	3	13110	Copeland Avenue / Howth Road	86.81	87.3	85% - 100%	85% - 100%	Negligible		
					13490	Howth Road / Hollybrook Park	95.41	93.29	85% - 100%	85% - 100%	Negligible		
	Western Side of Proposed Scheme	P.6	Beaumont Road	4	35863	Drumnigh Road / Chapel Road	75.59	74.86	≤85%	≤85%	Negligible		
					36436	Chapel Road / Gandon Lane / Kinsealy Lane	62.57	60.58	≤85%	≤85%	Negligible		
					13190	Beaumont Road / Beaumont Road / The Thatch Road	35.44	40.1	≤85%	≤85%	Negligible		
					13196	Grace Park Road / Beaumont Road / Collins Avenue / Collins Avenue	101.44	101.91	>100%	>100%	Negligible		
					13201	Dromawling Road / Shantalla Road / Beaumont Road	86.64	87.96	85% - 100%	85% - 100%	Negligible		
					13204	Coolatree Road (West) / Beaumont Road	30.21	32.81	≤85%	≤85%	Negligible		
13205					Beaumont Road / Beaumont Woods	54.62	58.95	≤85%	≤85%	Negligible			
13218					Coolatree Road (East) / Beaumont Road	24.67	28.36	≤85%	≤85%	Negligible			
13498					Beaumont Road / Coolgreena Road / Beaumont Road	30.38	32.81	≤85%	≤85%	Negligible			
13499					Beaumont Road / Beaumont Crescent / Skellys Lane	24.67	28.36	≤85%	≤85%	Negligible			
13502		Beaumont Road / Yellow Road / Beaumont Road	24.86	27.13	≤85%	≤85%	Negligible						
13653		Beaumont Road / The Park	43.79	48.02	≤85%	≤85%	Negligible						
			Kilmore Road	4	13326	Maryfield Drive / Kilmore Road / Kilmore Road	24.59	26.35	≤85%	≤85%	Negligible		
					13500	Kilmore Road / Maryfield Crescent	55.82	71.99	≤85%	≤85%	Negligible		
					13231	Elm Mount Park / Skellys Lane	4	13336	Whitethorn Rise / Skellys Lane	36.16	39.25	≤85%	≤85%
	13443								Montrose Grove / Skellys Lane	25.61	25.23	≤85%	≤85%
P.7	Coolock Drive	5	13367	Coolock Drive / Bunratty Road	7.19	11.99	≤85%	≤85%	Negligible				
			13486	Coolock Drive / Oscar Traynor Road	28.96	36.63	≤85%	≤85%	Negligible				
	Oscar Traynor Road	3	13343	Oscar Traynor Road / Armstrong Walk / Oscar Traynor Road	23.39	31.99	≤85%	≤85%	Negligible				
			13344	Barryscourt Road / Oscar Traynor Road	42.45	49.73	≤85%	≤85%	Negligible				
			13364	R104 / Oscar Traynor Road / Malahide Road / Malahide Road	16.32	22.84	≤85%	≤85%	Negligible				
			13365	Oscar Traynor Road / Beechlawn Avenue	21.2	27.34	≤85%	≤85%	Negligible				
			13370	Oscar Traynor Road / Brookville Crescent / Coolock Village	28.34	39.09	≤85%	≤85%	Negligible				
			13414	Beechpark Avenue / Oscar Traynor Road	16.96	23.87	≤85%	≤85%	Negligible				
13463	Oscar Traynor Road / Kilmore Road	98.55	100.69	85% - 100%	>100%	Medium Negative							
P.8	Clonshaugh Road	4	17115	Clonshaugh Road / R139 Northern Cross Extension	105.81	113.69	>100%	>100%	Negligible				
			17118	R139 / Clonshaugh Road (North)	102.92	104.3	>100%	>100%	Negligible				
			17122	Clonshaugh Road / R139 / Clonshaugh Road / R139	25.96	44.92	≤85%	≤85%	Negligible				
			17155	Clonshaugh Avenue / Glin Road	39.67	62.72	≤85%	≤85%	Negligible				
			17160	Clonshaugh Road / Clonshaugh Avenue	51.1	88.67	≤85%	85% - 100%	Low Negative				
			17161	Riverside Park / Clonshaugh Road	29.33	32.57	≤85%	≤85%	Negligible				

Location						Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
Orientation	Map ID	Road Name	NavTeq Functional Class	Junction ID	Junction Name	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC		
				17246	Clonshaugh Road / Newbury Wood	15.16	21.5	≤85%	≤85%	Negligible	
				17250	Clonshaugh Avenue / Clonshaugh Heights	19.56	30.05	≤85%	≤85%	Negligible	
				35656	Baskin Lane / Clonshaugh Road / Stockhole Lane	100.41	107.22	85% - 100%	>100%	Medium Negative	
				37853	Clonshaugh Road / Dublin Airport Hotel / Clonshaugh Service Station	32.86	42.6	≤85%	≤85%	Negligible	
		Riverside Park	5	17150	Riverside Park / Riverside Drive	17.11	17.02	≤85%	≤85%	Negligible	
				17156	Greencastle Road / Greencastle Road / Barryscourt Road /	31.51	24.1	≤85%	≤85%	Negligible	
		P.9	M50	1	13181	M50 Northbound / Junction 2 On-slip	85.2	88.11	≤85%	85% - 100%	Low Negative
					17235	M50 Northbound / Junction 3 Off-slip	70.69	72.31	≤85%	≤85%	Negligible