

# Feasibility and Options Report

Pedestrian Crossing at Browne Roundabout

[N06GY\_147.8]

(Type: D)



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## 1 Introduction

The Browne Roundabout is a five-arm roundabout located at the junction of the N6, N59, R338 Seamus Quirke Road and the University hospital access road. It is a major junction which has no safe dedicated pedestrian or cycling crossing facilities. There is a large population living in Corrib Park/Newcastle area that need to transverse this junction to access UCHG, University of Galway and Galway City Centre. There is also a desire line for children heading from south of the junction to north of the junction to access St. Joseph Special School and Galway Educate Together National School.

Councillors/Stakeholders have identified several issues with the current layout of the roundabout related to safety of all road users, especially pedestrians and cyclists.

Surveys have been commissioned which has identified that this junction warrants a dedicated pedestrian and cycling crossing.

This report seeks funding from TII to design and construct a pedestrian and cycling crossing at Browne Roundabout.



Figure 1 – Site Location.

## 1.1 Stakeholders

#### Stakeholders:

- 1. GCC
- 2. TII
- 3. NTA
- 4. HSE
- 5. Public
- 6. Councillors
- 7. Service providers
- 8. Galway Cycling Campaign

## 2 Description of the Safety Problem and Collision History

## 2.1 Identification of Problem & Objective

The Browne roundabout is an unsafe obstacle in Galway City for vulnerable users to transverse. There is no dedicated crossing for pedestrians or cyclists.

On Friday the 13<sup>th</sup> of January 2023, the vehicle count on the R338 Seamus Quirke Road (west) was 21,448 vehicles (or 21,949 PCUs). This road has an am peak of 1608 vehicles per hour passing through the roundabout and a pm peak of 1497 vehicles per hour (January 2023 traffic survey).



Figure 2 – Browne Roundabout Arm Designation

Mr. David Greally (Executive Engineer) and Mr. Jarlath Moloney (Senior Executive Technician) on behalf of Galway City Council carried out a site assessment (see appendix A for Form PCS) on the Browne Roundabout on the 13/01/2023 at 14:30. We witnessed a number of able bodies crossing the Seamus Quirke Road leg of the roundabout. It was evident that the crossing of the Seamus Quirke Road has a difficulty of crossing rating of 5 – "impossible to cross safely at all times".

#### 2.1.1 National Statistics

In 2022, pedestrian fatalities on roads were the worst on record for over 10 years. There were 20 pedestrian road fatalities in 2021. This increased by 110% in 2022 to 42 pedestrian road fatalities. Cycling fatalities remain constant at 7 for 2021 and 2022. (RSA, 2023. Provisional Fatalities Statistics 2022).

The latest figures available for road casualties are for 2010-2019. In 2019, there were 1,119 pedestrian casualties. This is an increase of 15% on 2010 figures.

In 2010, there were 404 road cyclist casualties. In 2019, this increased by 182% to 1139 cyclist road casualties.

#### 2.1.2 Local Statistics – 2016-2020

Between 2016 and 2020, there were 6 collisions at the Browne Roundabout that resulted in injuries. Two of these collisions resulted in cyclists being injured, with one of the cyclist being seriously injured.

There was 36 collisions in the vicinity of Browne Roundabout that caused material damage.

Browne Roundabout is a hazard for vulnerable users. Road fatalities/casualties will reduce for vulnerable users at this location by installing a formalised crossing at Browne Roundabout.



18 material damage and 3 injury incidents (including 2 cyclists, 1 seriously injured) would be preventable if a toucan crossing was installed at the Browne Roundabout.

#### 2.2 Objectives:

- 1. Remove/reduce conflict between pedestrians, cyclists and vehicles crossing the Seamus Quirke Road
- 2. Prioritise pedestrians and cyclists over other road users as per Galway Transport Strategy, local, regional and national policy.
- 3. Encourage more people to walk and cycle by providing safer passage on desire lines.
- 4. Provide a Safe Routes to School route see section 2.3
- 5. Enhance safety of users crossing the junction
- 6. Encourage modal shift from private motor vehicles to active travel

## 2.3 Safe Routes to School (SRtS)

Galway Educate Together National School (GETNS) and St. Joseph's Special School are located 400m north of Browne Roundabout. GETNS has over 400 pupils and approximately 50 staff attending the school. St. Joseph's Special School offers educational programmes for pupils with moderate general learning disabilities. There are 73 students attending the school and their age ranges from 4 to 18 years. These schools are participating in the "Safe Routes to School" project. An Audit Report by "Safe Routes to Schools" was completed on these schools in January 2022. This report has specifically mentioned the Brown Roundabout and states;

"Two significant crossing which need to be improved along the routes to school include;

- Crossing of the N59 at the start of Moyola Lane it is suggested that the crossing on the N59 is changed to a single crossing as it is used frequently by large groups of students and by students cycling to school".
- Crossing of the Browne Roundabout"

"Crossing of Browne Roundabout needs to be improved. Might be useful to record traffic counts on all legs of this roundabout. N6 and R338 appear to be busiest routes with vehicle traffic followed by N59, ahead or legs leading to hospital and toward Newcastle Road. Limited pedestrian traffic on N6. Existing informal crossing on all legs. Propose improving crossing of entrance to hospital to prioritise pedestrians and inclusion of formal crossing on R338 leg. Consideration of over or under pass at this is a very busy route".

Galway City Council has progressed front of school treatment works at these schools under the SRtS.

Installing a toucan crossing at Browne Roundabout will significantly increase the SRtS project for these schools and aligns with the SRtS objectives.

## 2.4 Hazardous entrance onto R338 Seamus Quirke Road (west)

Vehicles entering the leg of the R338 Seamus Quirke Road (west) have two lanes to enter. The left lane turns into a bus stop and then into a bus lane from 40m from the roundabout. This is a hazardous point for pedestrians, as there are two vehicles entering into the roundabout at speeds of up to 79kph, with a free flowing 85% speed of 62kph. This junction will be treated (such as junction tightening, bus lane extension) to alleviate this hazard. The detail design will provide the optimum solution for this.



Two entry lanes onto R338 Seamus Quirke Road (West)

## 2.5 Traffic Survey

GCC commissioned IDASO to conduct a traffic speed survey on the entrance and exit of the Seamus Quirke Roads between Wednesday the 11<sup>th</sup> of January 2023 and Tuesday the 17<sup>th</sup> of January.

#### Seamus Quirke Road R338 (West)

A speed monitor was put in place on the Seamus Quirke Road R338 (West) as shown in the figure below.



Figure 3 - Seamus Quirke Road R338 (West)

The maximum number of vehicles heading east on the Seamus Quirke Road R338 (West) in a single day is 11,875 PCU. The peak travel time is 8am to 9am, with 974 pcu in one hour. The maximum speed recorded was 91.05kph.

The maximum number of vehicles heading west on the Seamus Quirke Road R338 (West) in a single day is 10,239 PCU. The peak travel time corresponding to the above time is 640 PCU. The maximum speed recorded was 79.58KPH.

The free flowing 85% speed is 62kph. The 85% speed at peak times is 47kph.

#### Seamus Quirke Road R338 (East)

A speed monitor was also put in place on the Seamus Quirke Road R338 (East) as shown in the figure below.



Figure 4 -Seamus Quirke Road (East)

The maximum number of vehicles heading east on the Seamus Quirke Road (east) in a single day is 3,331 PCU. The peak travel time is 8am to 9am, with 313 pcu's in one hour. The cumulative 85% speed is 36.13kPH. The maximum speed recorded was 53.46KPH.

The maximum number of vehicles heading west on the Seamus Quirke Road R338 (east) in a single day is 3,202 PCU. The peak travel time corresponding to the above is 158 PCU. The 85% speed is 28.85KPH, with a maximum speed of 57.04KPH.

## 2.6 Crossing Need Assessment (PV<sup>2</sup> Calculation)

Idaso carried out a pedestrian count at the junction of R338 Seamus Quirke Road (west) and the Browne Roundabout on Tuesday the 15<sup>th</sup> of November 2022. The survey was carried out from 7am to 7pm. The need for the crossing is determined by using TII's Pedestrian Crossing Assessment Method (PV<sup>2</sup>). As the crossing is rated as a 5 in terms of difficulty to cross (see appendix A), this adds 1x10<sup>7</sup> to the calculation. If the PV<sup>2</sup> calculation exceeds 1x10<sup>8</sup>, a signalised junction is warranted.

The table below outlines the figures of this calculation. There is a constant stream of pedestrians crossing this road throughout the day. The peak time for pedestrians crossing is at 8am to 9am with 130 pedestrians. This time also corresponds with the peak traffic flow, with 1570 cars. During this hour, the crossing warrants a signalised crossing by 3.3 times (or 330%) over the threshold value. The average number of pedestrians crossing this road is 86 per hour.

Time	Vehicles (V)	Pedestrians (P)	Difficulty Crossing Factor	PV <sup>2</sup>	Utilisation	Comment
07:00 to 08:00	1352	49	1.0E+07	1.0E+08	100%	At Threshold, Crossing warranted
08:00 to 09:00	1570	130	1.0E+07	3.3E+08	330%	Above Threshold, Crossing Warranted
09:00 to 10:00	1491	99	1.0E+07	2.3E+08	230%	Above Threshold, Crossing Warranted
10:00 to 11:00	1341	80	1.0E+07	1.5E+08	154%	Above Threshold, Crossing Warranted
11:00 to 12:00	1348	73	1.0E+07	1.4E+08	143%	Above Threshold, Crossing Warranted
12:00 to 13:00	1386	81	1.0E+07	1.7E+08	166%	Above Threshold, Crossing Warranted
13:00 to 14:00	1471	73	1.0E+07	1.7E+08	168%	Above Threshold, Crossing Warranted
14:00 to 15:00	1537	95	1.0E+07	2.3E+08	234%	Above Threshold, Crossing Warranted
15:00 to 16:00	1465	61	1.0E+07	1.4E+08	141%	Above Threshold, Crossing Warranted
16:00 to 17:00	1201	98	1.0E+07	1.5E+08	151%	Above Threshold, Crossing Warranted
17:00 to 18:00	1119	99	1.0E+07	1.3E+08	134%	Above Threshold, Crossing Warranted
18:00 to 19:00	1336	96	1.0E+07	1.8E+08	181%	Above Threshold, Crossing Warranted

## 2.7 Constraints:

- 1. Browne Roundabout
- 2. Cycle lane on both sides of the Seamus Quirke Road.
- 3. Bus stop on Seamus Quirke Road
- 4. Bus lane/left turning lane on eastern approach and bus lane on western approach
- 5. Central reservation/railing median strip separating western and eastern lanes.
- 6. Trees/railing between Corrib Park and Seamus Quirke Road
- 7. Road signage outlining Seamus Quirke Road Improvement Scheme
- 8. Existing public lighting
- 9. University College Hospital Galway (UCHG)
- 10. Known and unknown underground services (see Appendix B)
  - a. 450mm water main
  - b. Virgin media and Eir telecoms
  - c. Gas pipe
  - d. ESB lines

11. Public park adjoining UCHG – underground attenuation tank may be adjacent to land boundary



Approach to Browne Roundabout on North side of R338 Seamus Quirke road including footpath and cycle way

Approach to Browne Roundabout on North side of R338 Seamus Quirke road-nearer Browne Roundabout.



Westward view of R338 Seamus Quirke Road with central reserve.



Westward lanes on south side of Seamus Quirke road including footpath cycleway busstop and verge



View of rear access to hospital from Browne Roundabout

View of rear access to hospital from central reserve R338 seamus Quirke road including verge.



Seamus Quirk

## 2.8 Future Development / Scheme

It is an objective to upgrade the Browne roundabout to a signalised junction. The timeframe for this scenario is plus 5 years and the objectives for the signalisation of the Browne junction would not be completed without the diversion of the public transport services through the HSE grounds.

This diversion is included as part of the proposed UCHG masterplan and without this rerouting of buses through HSE grounds, there would be significant public transport delays as a result of installing a signalised junction at Browne roundabout. At present, HSE have not agreed their masterplan and it will be some time before this route can be finalised.

Accordingly, the installation of the pedestrian crossing is an interim solution and is required for safety reasons.

## 2.9 Active Travel & Public Transport at Browne Roundabout

The Galway Transport Strategy (GTS) outlines the transportation strategy for Galway City. It outlines the existing and proposed infrastructure for the traffic network, public transport and active travel such as cycling and walking. The GTS has indicated that Browne Roundabout will be a major junction for both active travel and public transport (see figure 5 & 6 below). In order to facilitate this, the Browne Roundabout will be transitioned from a roundabout to a signalised junction. This is outlined in the GTS as "Browne Roundabout – Conversion of roundabout to signalised junction with realignment of one arm, and provision of pedestrian crossing"

#### Existing Bus Routes at Browne Roundabout

There are 3 bus routes that pass through the Browne Roundabout from Seamus Quirke Road (East) onto Seamus Quirke Road (West). These routes are;

- 1. 405 Rahoon Eyre Square Ballybane
- 2. 411 Cappagh Road to Eyre Square
- 3. 412 Western Distributor Road to Eyre Square

The buses heading east on Seamus Quirke Road will stop at a bus stop 10m away from the proposed crossing. The buses heading west will stop at a bus stop that is 170m from the proposed stop.

#### Proposed Bus Routes at Browne Roundabout

The GTS outlines the proposed future bus routes and the buses will be rerouted through UCHG (see figure 5). The buses will travel along Seamus Quirke Road (west) but instead of travelling onto Seamus Quirke Road (east), the buses will be directed through the HSE grounds utilising a shared cyclists and bus priority route.



Figure 5 – Galway City Proposed Bus Network Routes

#### Existing Cycling Infrastructure

The Seamus Quirke Road & the N6 has raised cycle lanes but end abruptly at Browne Roundabout. The N59 (Thomas Hynes Road), Seamus Quirke road (West) and UCHG entrance road have no dedicated cycling facilities.

#### Proposed Cycling Infrastructure

As with the public transport, the Browne Roundabout will become a major junction for cycling infrastructure. The GTS has highlighted the Seamus Quirke Road (East), the N6 (Quincentennial Approach Road) and a new shared use cyclist and bus priority route through UCHG will be a primary cycle route. N59 (Thomas Hynes Road) and Seamus Quirke Road (West) will be designated as secondary cycle route. This can be seen in figure 6 below.



Figure 6 – Proposed Cycle Network from the Galway Transport Strategy

## 3 Proposed Options

## 3.1 Option 1 – Install Pedestrian Crossing (€300k)

This option involves installing a signal controlled crossing (toucan crossing) which traverses both inward and outward lanes on the Seamus Quirke Road R338 (west), approx. 30m west of the Browne Roundabout. The Toucan crossings comprises of a wider crossing walkway to allow for the crossing of both pedestrians and cyclists at the same time with two separate pushbutton units at each side of the road, one for cyclists and one for pedestrians. It also offers the advantage of advanced pedestrian detection technology that can vary the time that traffic is held if there are large groups of pedestrians such as schoolchildren or slower moving pedestrians such as the elderly or people with walking difficulties.

Once crossed, pedestrians/cyclists will be taken along the desire line to cross the road accessing the rear of UCHG. It is envisaged to install a raised zebra controlled crossing on UGH entrance and Seamus Quirke Road (east) to provide access to Inchagill housing estate, Snipe lawn and Snipe Avenue. These details will be developed further through detailed design.

As this works is in the interest of safety and within the existing road boundary, the works will be carried out under section 38 of the Road Traffic Act, 1994 which excludes the development from obtaining planning consent.

Refer to figure 7 for proposed crossings.

Timeframe – It is envisaged from feasibility to construction, that this option will be completed within 12 months.

Description	Cost/€	Total Estimate (ex VAT)
Series 100 Preliminaries	45,000	
Series 200 Site Clearance	1,500	
Series 300 Fencing	1,500	
Series 400 Safety Barrier	2,500	
Series 500 Drainage	15,000	
Series 600 Earthworks	15,000	
Series 700 Pavement	15,000	€ 300,000
Series 1100 Kerbs, footpaths	3,000	
Series 1200 Traffic Signs and Road Markings	15,000	
Advanced Works (e.g. Utilities Diversions estimated costs)	36,000	
Planning and Design (incl. GI & Topo) if applicable	50,000	
Road Safety Audit (estimate)		
Archaeology ( if applicable)	15,000	
Land ( if applicable)	_	

Description	Cost/€	Total Estimate (ex VAT)
Other costs (as applicable to scheme scope or complexity e.g. geotechnical)	45,000	



Figure 7 -Option 1- Install a toucan pedestrian crossing along Seamus Quirke Road (west), a controlled zebra crossing at rear entrance to UCHG and a controlled zebra crossing on the Seamus Quirke Road (East) road.

## 3.2 Option 2 – Install Pedestrian Bridge (€1m)

Option 2 involves constructing a pedestrian overpass over the Seamus Quirke Road, 30m west of the Browne Roundabout, see Figure 4.

This option requires planning consent and the timescale would be circa 2 years for footbridge to be installed.

Description	Cost/€	Total Estimate (ex VAT)
Series 100 Preliminaries	100,000	
Series 200 Site Clearance	10,000	
Series 300 Fencing	5,000	
Series 400 Safety Barrier	10,000	
Series 500 Drainage	10,000	
Series 600 Earthworks	10,000	
Series 700 Pavement	10,000	
Series 1100 Kerbs Footways and Paved Areas	5,000	£1 000 000
Series 1200 Traffic Signs and Road Markings	5,000	€1,000,000
Series 1700 Structural Concrete	75,000	
Series 1800 Structural Steel	200,000	
Series 1900 Corrosion	20,000	
Utilities Diversions (estimated)	80,000	
Planning and Design (incl. GI & Topo) if applicable	150,000	
Land Acquisition Cost (e.g. realignment of a bend)	150,000	
Road Safety Audit(estimate)	Incl. in design	
Archaeology ( if applicable)	10,000	
Other costs (as applicable to scheme scope or complexity e.g. Project Appraisals)	Incl. in risk	
Programme risk (e.g. Accommodation Works if applicable)	150,000	



Figure 4 – Pedestrian Footbridge

## 4 Preferred Option

## 4.1 Evaluation of Options

Each option has been evaluated under the following headings;

- Economy
- Integration
- Accessibility and social inclusion
- Safety
- Environment

The higher the score, the more favourable the option is.

#### Economy:

Option 1, signalised crossing provides the most economical solution with option 2, the pedestrian bridge providing a cross which is three times more expensive than option1.

#### Integration:

Option 2, the pedestrian bridge scores poorly due to excessive land take requirements. Option 1 can be integrated well into the surrounding environment and gets maximum score.

#### Accessibility & social Inclusion:

Option 2 scores poorly due to vulnerable users not being prioritised over other road users. Option 1 allows for the most direct desire line and therefore prioritises the vulnerable road user ahead of option 2.

#### Safety:

Option 2 and 1 obtain an average score as both solutions provide a safe crossing across the Seamus Quirke Road.

#### **Environment:**

Option 2 scores poorly under environment as it requires additional lands that are green at present. Option 1 scores well in environment as it utilises existing road network.

	Option 1 Signalised Crossing	Option 2 Pedestrian Bridge
Economy	5	1
Integration	5	1
Accessibility and Social Inclusion	3	1
Safety	3	3
Environment	5	5
Total	21	9

The above table outlines the Multiple Criteria Assessment of the options. Option 1 has been identified as achieving the best MCA scored with a score of 21. The preferred option is option 1, a signalised pedestrian crossing.

## 4.2 First Year Rate of Return (FYRR)

The First Year Rate of Return (FYRR) is a simple calculation assessing the economy of the scheme.

#### %FYRR= <u>Annual Accident Savings x 100</u> Scheme cost

The annual accident savings is based on assessing the data of previous accidents. Between 2016 to 2020, there was six collisions which caused injury. One of these collisions resulted in a serious injury to a cyclist. Another cyclist obtained minor injury while the other four were of passengers and obtained minor injuries.

The results of the injuries to cyclists show that the existing infrastructure is not suitable to cyclists. As the proposed scheme would provide a safe crossing for cyclists to transverse this junction, it is anticipated that the two cycling injuries would have been preventable. Also as described in **section 2.1.2**, there was an increase of 182% cyclist casualties between 2010 to 2019. With these facts, it is anticipated that the annual accident savings would result in a saving of at least 60% of cost of injuries.

The realignment of the entrance onto R338 Seamus Quirke Road (west) will provide a more formalised approach which will reduce the number of material impacts.



18 material damage and 3 injury incidents (including 2 cyclists, 1 seriously injured) would be preventable if a toucan crossing was installed at the Browne Roundabout.

#### HD 15 Site Assessment

## **Site Information**

Collisions	Existing Collision Numbers	Collision Costs	
Fatal Collision		0 €	-
Serious Injury		1 €	361,531
Minor Injury		5 €	178,035
Sum KSMI		6 €	539,566
Material Damage	3	6 €	102,564
Sum KSMIMat	4	2€	642,130
Assessme	nt Type to be used	Average Costs	
	Assessment Period		
Starting Year			2016
Ending Year			2020
			5
	Scheme Information		
Estimated Percentage Reduction	on in Collisions		60%
Estimated Cost of the Scheme		€	300,000
	First Year Rate of Return		
	Excluding Material Damage		
	Individual Costs	Average Costs	

	individual costs	Average costs	
Annual Collision Cost	€	107,913 €	152,772
FYRR		22%	31%
	Including Mater	ial Damage	
	Individual Costs	Average Costs	
Annual Collision Cost	€	128,426 €	248,039
FYRR		26%	50%

The FYRR including material damage result is 50% when a 60% estimated reduction in collision. The scheme will have repaid for itself within twos after being open.

## 5 Programme

Pedestrian Crossing	Year / Q ( 1-4 )	Costs (€ incl. VAT)
Technical Advisor	2023 Q1	
Preliminary Design completion (incl. Stage 1 RSA)	2023 Q1	€50,000
Departure Application to TII	N/A	
Part 8 process completed	N/A	
Detailed Design and Tender (incl. Stage 2 RSA)	2023 Q2	
Construction (incl. Stage 3 RSA)	2023 Q3/4	€250,000
Close out	2023 Q4	

## 6 Conclusions and Recommendation

Two options including various safety measures were identified by Galway City Council to reduce safety problems identified in the study area on Browne Roundabout. The proposed measures were considered by Galway City Council and it is recommended that Option 1 be implemented.

Based on the above recommendation, Galway City Council seek funding from TII Road Safety as outlined in the programme in Section 5 above.

Appendix A –Road Safety Inspections

SITE ASSESSMENT	FORM PC	S A1	Page 1 of 2
Name of Site	Browne Roundabout	Grid ref	ITM E=528679, N
Location description	Attach a plan		
Carriageway type	Single 1 way 2 way Dual No of lanes:		
Carriageway width	Dimensions: 17.6m Comments: West lane = 8.35m, Central Media East lane = 6.6m	n = 2.6	5m
Footpath width	Dimensions: Comments: North side, footpath = 1.86m and South side, footpath = 1.94m, bio	bicycle cycle la	lane = 2m ne = 2m
Refuge island (if existing)	Dimensions: 2.65m - central reservation - not is Dimensions in accordance with PCS section 3.1? Comments:	land	Yes No
Road lighting standard	Lighting type: Inspection by Lighting Engineer needed? Comments: TBD by engineer		Yes No
Visibility	Dimensions: All inter-visibility adequate in accordance with PCS section 4.2? Comments: N/A - no side road		Yes / No
Loading and parking restrictions	Sketch existing restrictions on plan Existing restrictions cover proposed crossing and its approaches? Comments:		Yes / No
Bus stops	Mark bus stops on plan Bus stops located near proposed crossing site? Bus stops need re-siting to avoid blocking of cross or visibility? Comments:	sing	Yes No Yes No
Skidding resistance of surface	Existing surface type: Is high friction surface needed? See PCS section Comments:	4.5	Yes No

Nearby junctions and accesses  Distance from crossing to vehicle in side road / access:    Comments:  The Browne Roundabout is located 30m east of the proposed crossing    Other pedestrian crossings close by  If present:  Distance to nearest crossing: Type of crossing:    Comments:  There is a signalised pedestrian crossing 220m west on the Seamus Quirke Road from the proposed crossing    School Warden crossing nearby  Sketch location on plan    If present:  School crossing warden site?    Yes No  Comments:
accesses  Comments:  The Browne Roundabout is located 30m east of the proposed crossing    Other pedestrian crossings close by  If present:  Distance to nearest crossing:    Comments:  There is a signalised pedestrian crossing 220m west on the Seamus Quirke Road from the proposed crossing    School Warden crossing nearby  Sketch location on plan    If present:  School crossing warden site?    Yes No  Comments:
Other pedestrian crossings close by  If present:  Distance to nearest crossing: Type of crossing:    Comments:  There is a signalised pedestrian crossing 220m west on the Seamus Quirke Road from the proposed crossing    School Warden crossing nearby  Sketch location on plan If present:  School crossing warden site?  Yes (No Signs and markings present?
School Warden crossing nearby    Sketch location on plan      If present:    School crossing warden site?    Yes (No      Signs and markings present?    Yes (No      Comments:    Comments:
Time to cross the road    Able pedestrians (sample)    20-40    second      Elderly or disabled people (sample)    Not determined second    second
Difficulty of crossing  Indicate degree of difficulty 1 - 5:    1  No difficulty, 1 or 2 second wait at peak times    2  Wait of 3 - 20 seconds for gap at peak times (able person)    3  Wait of 20 - 40 seconds for gap at peak times (able person)    4  Wait of more than 40 seconds at peak times (able person)    5  mpossible to cross safely at all times
Surrounding facilities likely Route to/from a school?
to generate pedestrian Route to/from shops? (Yes) No
demand Route to/from sheltered housing/hospital/doctor's yes No surgery?
Route to/from rail / bus station or stop?
Route to/from leisure facilities? (Yes) No
Route to/from community facility?
Commonter
Mark location of these facilities (if present) on plan
Mark location of these facilities (if present) on plan    Posted speed limit  awaiting survey    50 km/
Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Posted speed limit  awaiting survey  50 km/    Speed of traffic  85 percentile speed at peak times:  61 km/    85 percentile at free flowing times  47 km/
Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Speed of traffic  Posted speed limit  awaiting survey  _50 km/    85 percentile speed at peak times:
Continents:    Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Posted speed limit awaiting survey    Speed of traffic  Posted speed limit awaiting survey    85 percentile speed at peak times:  61 km/    85 percentile at free flowing times  47 km/    Summary of pedestrian flow at peak times  Adult  awaiting survey  per hou    Adult with pram/pushchair/buggy
Comments.    Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Posted speed limit  awaiting survey    Speed of traffic  Posted speed limit    Speed of traffic  85 percentile speed at peak times:    61  km/    85 percentile at free flowing times  47    Summary of pedestrian  Adult    flow at peak times  Adult    (Form PCS B1)  Unaccompanied child less than 16 years old
Comments:    Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Speed of traffic  Posted speed limit awaiting survey  _50_km/    85 percentile speed at peak times:  _61_km/    85 percentile at free flowing times  _47_km/    Summary of pedestrian flow at peak times:  _61_km/    Adult  awaiting survey  _per hou    Adult with pram/pushchair/buggy  _per hou    Unaccompanied child less than 16 years old  _per hou    Elderly/ Disabled  _per hou
Continients:    Mark location of these facilities (if present) on plan    Speed of traffic  Posted speed limit awaiting survey  50 km/    85 percentile speed at peak times:  61 km/    85 percentile at free flowing times  47 km/    Summary of pedestrian flow at peak times (Form PCS B1)  Adult awaiting survey per hou    Unaccompanied child less than 16 years old per hou
Comments.    Mark location of these facilities (if present) on plan    Mark location of these facilities (if present) on plan    Posted speed limit  awaiting survey    Speed of traffic  Posted speed limit    Specentile speed at peak times:  61 km/    85 percentile at free flowing times  47 km/    Summary of pedestrian flow at peak times  Adult  awaiting survey  per hou    Adult  awaiting survey  per hou  per hou    Unaccompanied child less than 16 years old  per hou  per hou    Elderly/ Disabled  per hou  per hou    Peak Time  Car/ van  1498 per hou



Appendix B – Maps

















lonad Ghnó Gheata na Páirce, Stráid Gheata na Páirce Baile Átha Cliath 8, Éire



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