Tallaght to Ballyboden Walking and Cycling Scheme

Orlagh Roundabout Review Report

March 2020

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Appendices

A Introduction

This report has been prepared in response to queries raised by Councillors at the RT ACM and via MembersNet. A site visit was held between Councillors and SDCC officers at the roundabout on 03.11.19 to more fully understand concerns.

B Description and Location

The R113 is a regional road, set in a suburban setting. It is of regional importance for the movement of traffic while having an increased local function not only for vehicles but also for pedestrians and cyclists. The R113 has numerous properties with frontage onto the road, which begin on the eastern arm of Orlagh roundabout and include St Colmcilles Community College.

The R113 (including the Orlagh roundabout) at the junction of Scholarstown Road and St Colmcilles Way, is used locally to access schools, the small retail premises on Orlagh Grove and the Knocklyon Shopping Centre, it is also an entry/ exit road for the M50, which informs a wider regional use of this road. It is a major distributor road within a regional context linking Knocklyon, Scholarstown and Ballyboden areas to the wider road network.

The roundabout and the approach roads form part of the National Transport Authorities Greater Dublin Area Cycle Network Plan acting as a feeder link between route SO5 and SO6. This scheme was recognised as a critical link between SO5 and SO6 as it connects the schools with the surrounding estates. There are a number of schools in the area including the largest primary school in the state, St Colmcille's National Primary School.

The scheme extends from the recently upgraded junction between Knocklyon Road and Scholarstown Road to the approaches of the Orlagh Roundabout which is located approximately 300m from the M50 Junction 12 diverging lane. The section of Scholarstown Road affected by the scheme is approximately 300m in length with residential developments on both sides. It had a posted speed limit of 50kph with a controlled pedestrian crossing on the southern end and bus stops located on the northern end facilitating bus route 15 travelling between Clongriffin and Ballycullen Road (Stocking Avenue).

C Roundabout Description as of 2015

In 2015, the Orlagh roundabout had three single-lane arms, and one two-lane arm which approached from the east on R113. The southern arm facilitating Orlagh Grove has a posted speed limit of 30kph with speed ramps located at the entrance to the housing estate. All other arms had a 50kph speed limit. Bus stops are located on the eastern and western arms of the Orlagh roundabout facilitating bus route 15 as described above and bus route 15-N travelling between D'Olier Street and Ellensborough.

<u>Pedestrian Facilities</u>

- Controlled pedestrian crossing exist on the following arms:
    - Scholarstown Road (N) – Crossing located 25m back from traffic island
    - R113 West (W) - Crossing located 20m back from traffic island
    - R113 East (E)– Crossing located 14m back from traffic island
- All crossings are single stage crossings
- There are no controlled crossings on the Orlagh Grove Road. Uncontrolled crossing provided through traffic island. No buff tactile provided.

<u>Cyclist Facilities</u>

- Scholarstown Road (N) – Off-road northbound cycle track from the R113 West to the pedestrian crossing, the lane does not extend up Scholarstown Road.

- R113 East (E) – Off-road cycle track westbound, 1.2m in width. This lane connects to the uncontrolled crossing at Orlagh Grove. The eastbound cycle track commences 60m to the east of the roundabout and is 1.25m in width. Both lanes are below the recommended cycle lane widths as outlined in the National Cycle Manual.
- R113 West (W) – Off-road east and westbound cycle tracks of varying widths (0.75m to 0.90m). The cycle lanes west of the pedestrian crossing have been upgraded to 1.75m in width.
- No cycle facilities on Orlagh Grove.
- No cycle lanes through the roundabout or at crossings.

Traffic Lanes

- All movements permitted.
- Single lane approach on three arms, however it is acknowledged that the Scholarstown Road (N) approach operated as a 2-lane approach.
- A 2-lane approach exists on the westbound approach from the R113 (E).

The original layout of the Orlagh Roundabout did not adequately cater for the needs of pedestrians and cyclists.

D Road Safety Audit (RSA) Stages 1/2/3/4

CSEA produced an options report for the scheme in June 2015 entitled; Tallaght to Ballyboden Cycle Route Scheme Phase 1, Preliminary Junction Appraisal and Traffic Analysis. This report identified 6 possible junction options for the upgrade of the Orlagh Roundabout.

Stage 1 and 2 RSA reports analysed the two preferred options as supplied by SDCC and provided the following comments only regarding the Orlagh Roundabout:

- Option 1, to provide entry angles on all four arms of the Orlagh roundabout that passively slows and aligns drivers approaching the roundabout, and to provide a signalised pedestrian crossing on both arms of the Scholarstown Road (northern and eastern arms).
- The report recommends for Option 2 to remove the second lane approach on the eastern arm of Orlagh roundabout to avoid side swipe collisions.

Following this report the preferred option was selected, which erroneously included the two-lane option and on 12.09.17 a report was brought to the RTT ACM under Section 38 of the Road Traffic Act 1994. This was approved.

Section 38 (7) states that 'A traffic calming measure provided under this section shall be deemed to be a structure forming part of the public road concerned and necessary for the safety of road users'. This was deemed to be necessary and taking into regard the Stage 1 and 2 RSA Report, the second lane approach was designed out.

RSA Stage 3 was issued in February 2019 having been prepared by CSEA Consultants, the following comments were issued:

- Entry angles associated with straight splitter islands has been addressed.
- The proposed zebra crossings and two lanes on the eastern arm are not applicable, as they were designed out.

- The report also comments that the toucan crossings on the approaches to Orlagh roundabout may result in excessive queues during peak times and recommends that the phases within the toucan crossings do not occur so close together that excessive queues form on the approaches (eg ensure an adequate minimum green time for vehicles between crossing phases during peak periods).

The Stage 4 RSA report, dated June 2019, was prepared by Bruton Consulting Engineers Ltd to compare and contrast the safety of the original roundabout facilities to the new roundabout facilities considering pedestrians, cyclists and vehicular traffic.

The following conclusions were made by the authors:

- In conclusion the recent changes have increased the safety at the roundabout compared to its original layout.
- In conclusion the current layout is an improvement in safety on the original layout for pedestrians.
- In conclusion the current layout is an improvement with regard to safety on the original layout for cyclists.
- Overall the current layout improves safety for HGVs with the exception of a swept path issue at Scholarstown Road (L4016).
- Key to this is the reduction of traffic speed through the use of tighter geometry and raised tables.
- The greatest benefit has been to vulnerable road users and this is the correct priority given the proximity of the local schools.
- It is important that capacity and safety are not confused. The capacity of the roundabout has been reduced and journey times are longer however it is not believed to be to such an extent that drivers would undertake dangerous manoeuvres from frustration.
- It is recommended that the tapers at the raised table and swept path of the buses be looked at on Scholarstown Road (L4016) along with the items raised in Section 6.0.

Four road safety audits were conducted, and the reports compiled are in respect of matters that have adverse effect on road safety and the perspective of all road users are considered. It must be noted here that road safety is not the same as road capacity.

SDCC would be required to provide a written response to the auditors should any of the recommendations with the road safety audit report be rejected, stating reasons for non-acceptance. South Dublin County Council accepted all recommendations within the RSA reports.

E Traffic and Traffic Counts

The country nears full employment and with an increasing population and increased residential and employment development taking place in Dublin, traffic across the entire Greater Dublin Area, and including within the South Dublin functional area, has increased substantially over the last 5 to 10 years. This strong economic activity coupled with an underinvestment in public transport in those areas of very high transport demand, results in high congestion levels**.**

A new report from the TomTom Traffic Index published on January 29th, 2020, shows that Dublin is the 17th most congested city in the world, with motorists spending an average of 8 days and 21 hours sitting in peak traffic, a year. The TomTom Traffic Index examined the traffic situation in 416 cities in 57 countries around the world. The report showed that congestion has risen across the country, especially in Dublin where traffic queue waiting times have risen on average by 3% in the last year.

Traffic volumes in the South Dublin's functional area also display a steady increase year on year in keeping with the results of the TomTom Traffic Index Report. This increase in traffic is evidenced in the TII traffic count stations on the M50 in the vicinity of Kilnamanagh and Ballycullen which show the following volume increases in the local area:

Year	Kilnamanagh	Ballycullen
2015	114431	106381
2016	118683	110213
2017	121605	113517
2018	122265	114021
2019	122729	114378
AADT – Annual Average Daily Traffic		

The figures show a 7.2% increase at Kilnamanagh from 2015, and a 7.5% increase at Ballycullen for the same time period.

In addition, more localised traffic counts, carried out by SDCC, on the Knocklyon Road at regular intervals show the following results:

Year	Knocklyon Road
2014	7783
2017	7012
2018	7706
2019	8276

These figures indicate that the traffic volumes dropped during the roadworks at the Scholarstown/ Knocklyon junctions but have since increased. With an increase of 6.33% from 2014, and a massive increase of 7.3% in one year alone from 2018 to 2019.

The following results show traffic counts, carried out by SDCC, on the Ballycullen Road near Hunsterswood:

Year	Ballycullen Road
2015	7102
2019	8089

These results show an increase of 13.9% from 2015 to 2019, almost double the increase shown by the count results of on the M50, carried out by the TII and more than double the increase shown by the count results of the Knocklyon Road, carried out by SDCC. The traffic counts for Knocklyon and Ballycullen Roads were carried out mid-week during school term from 07:00 to 19:00 as recommended. These are considered to be the busiest days of the week. In short all of this evidence demonstrates that the number of vehicles passing through Orlagh Roundabout has increased massively in last number of years. This increase in-and-of-itself is one of the primary reasons why there is increased congestion at this roundabout at peak times.

Comparison of Road Users November 2014 to February 2019

7am – 7pm	General Traffic	Buses	People on Buses*	Peds	Cyclist
Tuesday 25.11.14	18,975	214	19,260	1,112	401
Thursday 28.02.19	20,137	259	23,310	2,522	562
Increase	+6%	+21%	+21%	+133%	+40%

* assuming 90 people per bus as provided by NTA presentation 12.03.19

AM Peak Hour 8am-9am	General Traffic	Buses	Peds	Cyclist
Tuesday 25.11.14	1899	17	222	169
Thursday 28.02.19	1694	22	937	184
Increase	-11%	+29%	+322%	+9%

Share of Modes using the Roundabout

	2014 – mode share	**2019 – mode share**
General Traffic	2,468 (67%)	2,202 (49.5%)
Bus, Ped & Cycle	1,241 (33%)	2,221 (50.5%)
Total Capacity	**3,709**	**4,422**

*assuming 50 people per bus in this location and 1.3 per car (NTA approved assumptions)

Between November 2014 and February 2019 there was a decrease of general traffic by 11% at the Orlagh Roundabout during the peak hour of 08:00 to 09:00. This decrease should not be mistaken as implying an overall decrease in general traffic. In fact, and as set out in the preceding sections, there has been a big increase in amount of traffic on the roads in the area.

The decrease in the general traffic passing through the roundabout at peak time (i.e. between 8am and 9am) is for the following reasons

- Peak time has extended out beyond 8am to 9am.
- The number of buses passing through the junction at peak time has increased from 5 to 22 buses.
- Pedestrians moving through the junction during peak time has increased by over 700 people.
- The number of cyclists has increased by 15.

In total (as of Dec 2019) 4,442 people passed through this junction during the morning peak time, compared to 3,709 people (as of November 2014), which equates to a 20% increase in the number of people moving through the junction.

This 20% increase in people moving through the junction across a range of modes, serves to demonstrate that the project has helped to unlock additional capacity in the junction for a broader range of people. A project focused solely on improving capacity for vehicles would not provide such capacity improvements.

To further test the traffic numbers a further traffic count was carried out at the request of the Council in December 2019 show similar numbers to that of February 2019, they are as follows:

Comparison of 2019 Traffic Counts 7am – 7pm					
7am – 7pm	General Traffic	Buses	People on Buses*	Peds	Cyclist
Thursday 28.02.19	20,137	259	23,310	2,522	562
Tuesday 03.12.19	19,674	251	22,590	2,212	355
Wednesday 04.12.19	20,019	271	24,390	2,460	397

*An average of 90 people per bus

Over the course of the day the numbers of general traffic remain broadly consistent across the year, the number of buses has increased, the number of pedestrians has remained broadly consistent, but the number of cyclists has fallen.

Comparison of 2019 Traffic Counts AM Peak 8am – 9am				
AM Peak Hour 8am-9am	General Traffic	Buses	Peds	Cyclist
Thursday 28.02.19	1694	22	937	184
Tuesday 03.12.19	911	23	652	120
Wednesday 04.12.19	1785	21	386	94

The figure for general traffic is significantly lower on Tuesday 03.12.19 than the other dates. Pedestrian and cyclist numbers differ considerably with just less than half the number of pedestrians counted on Tuesday 03.12.19 when compared to Wednesday 04.12.19. The difference between the number of pedestrians counted on Thursday 28.02.19 to Wednesday 04.12.19 is a staggering difference of 551 less pedestrians. This is reflected similarly when considering the number of cyclists on these dates with a difference of 90, almost half the number of cyclists travelled through the junction on Wednesday 04.12.19 than on Thursday 28.02.19. This may be due to adverse weather conditions and cold temperatures.

No 15 Bus comparison September 2017 to September 2019

AVL data from Dublin Bus

		*Sept 2017**	*Sept 2019*	*Sept 2017*	*Sept 2019*
Route 15		**Am peak**	**Am peak**	**PM peak**	**PM Peak**
From B	***To A***	**1.5mins**	**2mins**	**1.5mins**	**1.5mins**
From A	***To B***	**1 min**	**1.5min**	**1m**	**1min**
Route 175					
From C	***To A***	**NA****	**6.5mins**	**NA****	**2min**
From A	***To C***	**NA****	**1 min**	**NA****	**1min**

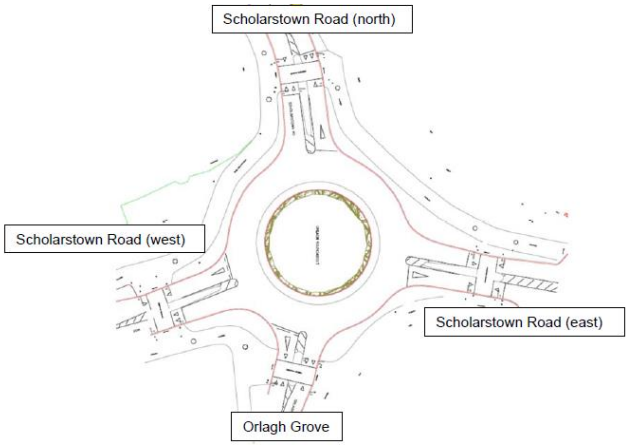
*** Junction under construction 2018**
**** Bus only started operating in Sept 2018**

Unfortunately bus no 175 only began operating in September 2018 and therefore there is no historic data. Reviewing historical data as provided on the Google maps traffic information platform, which is uncertified, it shows that the queuing time from C to A is coloured red and dark red, indicating between 4-7 minutes during the AM peak hour on all Tuesdays, Wednesdays and Thursdays during September 2017. With the increase in traffic in this area it is of no surprise that the queue time for Route 175 reflects this in its AVL data as supplied by Dublin Bus, in September 2019 the queue time was 6.5 minutes during the peak am hour.

F Traffic Light Signalling

In December 2019, SDCC carried out further queue and traffic counts, the council proceeded to change the pedestrian signals to increase the wait time for pedestrians, which should result in a decrease of queue time for vehicles, and again carried out queue and traffic counts following the change to assess the impact. These counts and traffic light amendments took place on the 03/ 04.12.19, while the pedestrian signals were reset before the 7am count took place on 04.12.19.

All pedestrian signal timings on the three existing crossings prior to the change were set at a minimum of 7 sec and a maximum of 40 sec. This means that once a pedestrian or cyclist pushes the button, the wait time for the green man/ bicycle is between 7 and 40 sec, this time is dependent on the volume of traffic, a traffic sensor exists at each traffic signal. The waiting time is 7 seconds when the volume of vehicle traffic is low and 40 seconds when the volume of traffic is high, as the case usually during peak hours.



Before 7am on 04.12.19 (and from then until the writing of this report) the pedestrian signal timings were reset to provide the following timings:

- Scholarstown Road (N): min 7 sec; max 40 sec
- St Colmcilles Way R113 (W): min 10 sec; max 60 sec
- Scholarstown Road R113 (E): min 10 sec; max 60 sec

Comparing the number of vehicles passing through each arm of the Orlagh roundabout junction, of the traffic counts taken during the December 2019 count, considering the AM peak hour of this count to be 08:30-09:30, pre and post-implementation of the pedestrian signal change, the count showed an increase of capacity of 3.2%. Additional capacity was noted on Scholarstown Road R113 (E), Orlagh Grove, St Colmcilles Way R113 (W) approaches. Percentage gains were +0.7%, +17% and +20.6% respectively.

The 20.6% increase in capacity on St Colmcilles Way R113 (W) approach is significant given that it connects to the on and off ramps of the M50 at J12. Any increase in capacity on this link will have a positive impact on the Strategic Road Network.

A reduction in capacity of 13.7% was recorded on Scholarstown Road (N). Effectively, changing the signal timing at the junction had the effect of increasing the overall capacity of the junction by 3.2% and reallocating time to the main traffic stream, east – west movement.

The table below shows the AM peak, 08:30-09:30, approach volumes at the Orlagh Roundabout pre and post signal change implementation:

Approach Arm	Pedestrian Signal Change	Number of Vehicles		% Change
		Pre-Implementation	Post-Implementation	
Scholarstown Road (E)	Yes	556	560	+ 0.7%
Orlagh Grove	No Signals	147	172	+ 17%
St Colmcilles Way R113 (W)	Yes	510	615	+ 20.6%
Scholarstown Road (N)	No	562	485	-13.7%
Total Vehicles Passing Through Junction		1775	1832	+3.2%

A queue of traffic is defined as those vehicles at a junction which are stationary or which have slowed down to walking speed or less.

Queue length information was recorded during the traffic count on 03.12.19 and 04.12.19. Wednesday 04.12.19 corresponds to post implementation of the reconfiguration of the pedestrian traffic signals at the Orlagh Roundabout.

The information in the table below shows the longest queue lengths recorded on each arm of the Orlagh Roundabout junction during the AM peak hour and during the 2 and a hald hour morning period for which the dignal change was made (07:00-09:30) pre-implementation on Tuesday 03.12.19, and post-implementation on Eednesday 04.12.19 of the pedestrian signal change.

Approach Arm	Period	Longest Queue Length 03.12.19 (m)	Longest Queue Length 04.12.19 (m)
Scholarstown Road R113 (E)	AM Peak Hour (08:30 – 09:30)	72.5+	70+
	Across Signal Change Period (07:00-09:30)	72.5+	75+
Orlagh Grove	AM Peak Hour (08:30 – 09:30)	15	15
	Across Signal Change Period (07:00-09:30)	40	40
St Colmcilles Way R113 (W)	AM Peak Hour (08:30 – 09:30)	15	0
	Across Signal Change Period (07:00-09:30)	15	5
Scholarstown Road (N)	AM Peak Hour (08:30 – 09:30)	20	35
	Across Signal Change Period (07:00-09:30)	25	45

The "+" figures in the queue data represent the longest queue that can be accurately seen.

The table below shows that the queue lengths recorded on Scholarstown Road R113 (E) and Orlagh Grove are similar pre and post-implementation. Comparing pre and post-implementation results, a reduction can be noted in the queue lengths on St Colmcilles Way R113 (W) approach following the change in the pedestrian signal timings. An increase can be seen in the queue lengths recorded on the Scholarstown Road (N) approach following the change in the pedestrian signal timings. A reduction in the queue lengths on St Colmcilles Way R113 (W) approach is significant given that it connects to the on and off ramps of the M50 at J12. Reduced queues on this link will have a positive impact on the Strategic Road Network.

G Junction Change Consideration

Option 1 Signalisied Roundabout

Signalising the Orlagh roundabout has been considered, the outcome of this consideration is that the Orlagh roundabout due to its lack of capacity is not suitable for this change. Vehicles waiting on the roundabout would block the carriageway for the vehicles with a green light.

Option 2 Full Signalised Crossroads

Removing the roundabout and having a full signalised crossroads junction has been considered. The outcome of this consideration is that the queue lengths would increase considerably, due to the requirement of adequate green time given to each major arm of the crossroads, Orlagh Grove is considered the only minor arm, including the contribution of added green time afforded to pedestrians and cyclists.

Option 3 Revert back to Two Lanes In, One Out

The consideration of reverting back to the original layout of the roundabout of two lanes in from the eastern arm (R113, Scholarstowns Road) and one lane out on the western arm (R113, St Colmcilles Way) is interdict. RSA 1 and 2 Report clearly states that this arrangement is unsafe for drivers, pedestrians and cyclists as it is reasonable to suggest that drivers may expect two lanes on the western

exit of the roundabout, which may result in side swipe collisions where the available width on the exit is not sufficient to cater for parallel vehicle entry, circulation and exit.

Option 4 Two Lanes In, Two Out

The introduction of two lanes in from the eastern arm (R113, Scholarstowns Road) and two lanes out on the western arm (R113, St Colmcilles Way) was considered and rejected on the grounds that

- The engineering advice (informed by traffic counts of 20,137 on Thursday 28.02.19) is that a single lane roundabout is adequate
- Segregation of cyclists is necessary and recommended above 6,000 vehicles per day and specific design features must be introduced to ensure the safety of cyclists and physical space is required to provide this segregated cycle infrastructure.
- The Cycle Manual informs that double or multiple gyratory lanes are not cycle friendly due to;
    - traffic weaving, and
    - the risk of side swipe

  Furthermore, physical space is required to introduce an extra lane and a segregated cycle lane in line with the Manual
- Improved and safer crossings for vulnerable road users is needed in this location in particular given the location of nearby schools and housing developments

Option 5 Keep Existing Roundabout

The RSA Stage 4 Report concluded that the current layout of the Orlagh roundabout in comparison with its original is best for safety for all road users except for buses.

The existing layout of the Orlagh roundabout allows for vehicular entry onto the roundabout between gaps in the traffic, this ensures that traffic moves slowly but flows consistently. The tight edged radii and tighter geometry design of roundabout in general ensures that traffic speeds are reduced. Slower traffic is safer for all road users, especially vulnerable road users.

The use of the roundabout by pedestrians and cyclists has increased dramatically, aligned with this the volumes of traffic has increased considerably over time also. The purpose of this scheme was to encourage use of walking and cycling to school for children and shorter journeys by foot or bicycle for all, and not to increase the capacity of the roundabout.

Keeping the existing roundabout and continually monitoring the pedestrian signals is the preferred option.

H Comments Received from traffic warden, local school and Dublin cycle campaign

<u>Traffic Warden</u>

On 31.01.19 the traffic warden, at the Orlagh roundabout reported the following positive feedback on the new roundabout layout:

- Safety in general is much better
- Speed has been significantly reduced
- The ramp adjacent to her crossing has greatly improved operations at her crossing
- Some children that would normally have been accompanied by their parent are now making their way to school on their own
- There are delays at peak times, but otherwise ok

- As she lives locally, she says people are not seeing the benefits of the new layout and are still very negative

On 29.10.19 the traffic warden, at the Orlagh roundabout reported the following positive feedback on the new roundabout layout:

- The works have made the junction a lot safer. The new position of the roundabout has reduced speeds on the Scholarstown Rd (E) arm
- Vehicles breaking pedestrian lights remains an issue
- Speed remains an issue from the M50 arm (W) and the Orlagh Grove (S) arm
- Queue times and lengths appear marginally higher. Peak time is 8:20-9:20am. Traffic was always an issue here and does not appear to be significantly worse. Traffic was traditionally backed up to Santa Maria on the Scholarstown Rd (E) arm but not anymore
- Clears at 9:20am and from then on speeds creep up
- Visible increase in walkers and cyclists to the junction

Cycling Campaign to MMA, on 10.03.19;

Our view is that we are pleased with the improvements to the cycling infrastructure and the fact that it has reduced traffic dominance. The increase in walking and cycling numbers is very welcome, and these numbers are likely to increase further as more people see it as an easier way to get around…

Headmaster, Colmcille Community College

The Councils Road Safety Officer met with Principal who is fully supportive of the improved safety at Orlagh for their students – who claimed over 90% of them walk/cycle to school. However, the Principal did mention challenges exiting the school for staff due to traffic volume and due to the increasing number of cyclists – there is a conflict between the design of their entrance intersecting the shared use path. He suggested that this needs to be improved as there have been a number of accidents. A cycle track along Scholarstown Road and Ballyboden Way is needed.

Vice Principal and Green School Coordinator, St. Colmcille's SNS, Idrone Avenue, Knocklyon

RSO met with Vice-Principal (VP) and Green-Schools Coordinator (GSC). The VP and GSC discussed the background to their needs in improving facilities for pedestrians and cyclists as a consequence of their temporary relocation to Sancta Maria during the building works at their current site on Idrone Avenue. The VP and GSC were in agreement that after the works were complete at Orlagh they believed that more people were walking and scooting, however, they both felt that they could not promote cycling to school due to the lack of connectedness to the improved facilities on Knocklyon Road/Scholarstown Road. The VP/GSC would welcome a count on pedestrians/cyclists that they could disseminate through the wider school community i.e. School Newsletter.

I Summary

Stage 1 through to stage 4 of the Road Safety Audit has been carried out by consultants and considered by the Council. The reports compiled by the road safety auditors are in respect of matters that have adverse effect on road safety and the perspective of all road users are considered.

A written response is required to the auditors should any of the recommendations within the road safety audit report be rejected, stating reasons for non-acceptance. South Dublin County Council accepted all recommendations within the RSA reports, having designed out all safety concerns.

The stage 4 report concluded that the recent changes have increased the safety at the roundabout compared to its original layout for all road users.

Traffic reports and traffic counts prove that there has been a significant increase in the amount of traffic accessing our roads at all times, and this is reflected in the traffic counts taken at the Orlagh roundabout junction.

The counts show that there is a considerable increase in the number of pedestrians and cyclists using this junction, which demonstrates that safety has improved for these road users.

The changes made to the pedestrian signal timings on Wednesday 04.12.19, have shown improved vehicle capacity on three approaches to the roundabout, but a reduction in capacity on Scholarstown Road (N). The junction capacity improved by 3.2% overall reallocating time to the main traffic stream of east – west. This has a positive impact on the Strategic Road Network. Queue length data reaffirmed this. A reduction of queue lengths was recorded on St Colmcilles Way R113 (W) approach, no change was made on the Orlagh Grove or Scholarstown Road (E) approaches, while an increase was recorded on the Scholarstown Road (N) approach. Again, producing a positive impact on the Strategic Road Network.

The consideration of reverting back to the original layout of the roundabout of two lanes in from the eastern arm (R113, Scholarstown Road) and one lane out on the western arm (R113, St Colmcilles Way) is interdict, having regard for the four road safety audits and the numerous traffic counts.

J Conclusion

Whilst it is acknowledged that queuing times have increased at this roundabout a lot of this has been caused because of general background traffic and overall congestion on the road network is getting worse. It is the Councils decision that the Orlagh Roundabout in its current format is;

- the safest design as supported by the road safety audit reports
- has facilitated an increase in the overall number of people being able to pass through the junction in the AM peak from 3,709 people in 2014 to 4,422 in 2019
- has resulted in a mode share shift weighted towards public bus, pedestrians and cyclists with an increase from 33% to 50% of people using the roundabout

On these grounds Council officers are not proposing to make any further changes to the roundabout.

Reference List

Minutes of past Rathfarnham Templeogue Terenure ACM's

Minutes of past Rathfarnham Templeogue Firhouse Bohernabreena ACM's

Tallaght to Ballyboden Cycle Route Scheme Phase 1, Preliminary Junction Appraisal and Traffic Analysis, CSEA, June 2015

Stage 1 and 2 Road Safety Audit, Scholarstown Road and Orlagh Roundabout Urban Improvement Works, CSEA, July 2017

Stage 3 Road Safety Audit, Scholarstown Road/ Orlagh Roundabout Improvements, CSEA, February 2019

Stage 4 Road Safety Audit, Comparative Safety Report Scholarstown Roundabout, Bruton Consulting Engineers, June 2019

Traffic Implications of changing Pedestrian Signals at Orlagh Roundabout Scholarstown Road, CSEA, February 2019

Presentation made by NTA to RTT ACM dated 12.03.19

TomTom Traffic Index Report dated 29.01.20

Appendices

1 Timeline of Events

Timeline Of Events		
Date	**Action**	**Description**
25 November 2014	Traffic Counts	Traffic counts on Orlagh RAB
June 2015	CSEA Options Report	
May 2017	Dwg No 12_098_00_2010	Drawing attached to S38 Report, show 2 lane entry (E)
July 2017	Stage 1/ 2 RSA	
July 2017	Dwg No 12_098_00_2010	Amended drawing, same no, shows one lane entry all entries
12 September 2017	S38 report to RTT ACM	Approved
23 May 2018	DMM Letter of Acceptance issued	
July 2018	DMM on site	
November 2018	DMM leave site	
February 2019	Stage 3 RSA	
June 2019	RSA 4	
28 February 2019	Traffic Counts	Traffic counts on Orlagh RAB
28 February 2019	Pedestrian Crossing Lights tweaked	Lights tweaked following traffic count
August 2019	Assessment of Orlagh RAB promised to RTT ACM	
03 November 2019	Site visit to Orlagh RAB	Unofficial traffic counts outcome is to carry out new official traffic counts & signal tweaking
04 December 2019	Traffic Counts	03/04.12.19 traffic counts occurred, wait time for peds increased
10 December 2019	Report to RTT ACM	

2 Rathfarnham Templeogue Terenure Area Committee Meeting

RTT ACM 12.09.17

Under Section 38 of the Road Traffic Act 1994, as amended, the report regarding the public consultation for the Scholarstown Road Improvements Works was brought before this committee.

The report noted that details of the proposed scheme was advertised in the Tallaght Echo on 01.06.17 and the closing date for submissions was 17:00 on Saturday 01.07.17. Fourteen submissions were received and responded to within the report.

Additional to the Section 38 Report a Drawing (CSEA Dwg No: 12_098_00_2010) was submitted, this drawing detailed a two lane entry onto the Orlagh roundabout from Scholarstown Rd eastern arm heading west.

All submissions received were in favour of the scheme, including two councillors. Only submissions, numbers 3, 9 and 12, made reference to the Orlagh roundabout.

The roads section presented the scheme and described the proposals as follows;

1. The provision of almost 0.5km of off-road shared cycle and pedestrian space from the Knocklyon Road Junction to and around the Orlagh Grove Roundabout.
2. Improved crossing facilities at the entrances to Beverley Drive and the Rookery housing estates.
3. Improved crossing facilities on all four arms of the Orlagh Grove roundabout.
4. Upgraded public lighting using efficient LED lighting.
5. Bus stop improvements with Real Time Passenger Information (RTPI) and improved set-down facilities.
6. Removal of numerous existing ESB and Eir overhead cables that span throughout the scheme.
7. Additional landscaping works throughout the scheme.
8. Provision of new and improved drainage.
9. Provision of new public lighting, road markings and cycle route signage.

The minutes of this meeting referenced a short description of the scheme and a summary of the works as listed above. Queries were raised by Councillors E Murphy, D O'Donovan and P Donovan, were responded and the report was noted.

RTT ACM 12.03.19

The NTA made a presentation to the RT ACM on 12.03.19 following a request from councillors, the presentation provided the councillors and spectators with;

- An overview of the remit of the NTA
- Highlighting effective management of transport demand
- The hierarchy of road users
- Informing on National, Regional and Local Policy
- Informing of the reasons for this scheme, catering for the largest national primary school and other nearby schools
- Highlighting accidents
- Informing on how roundabouts work well for pedestrians and cyclists only if designed to specifically address their needs and expectations, where the key is slower speeds and a 90 degree entry

3 Responses to RTT ACM

Date Of ACM	Query by	Response
08.07.19	Councillor D. S. Crowe, TD	Reinstatement of original RAB will not be considered. Overall increase in vehicles moving through RAB. Dramatic increase in pedestrians and cyclists moving through RAB.
09.04.19	Councillor D. O'Donovan	Stage 4 RSA, auditor to be appointed.
12.03.19	Councillor D. O'Donovan	No plan to reinstate two entry lanes at Orlagh RAB, these were removed due to independent RSA which determined that there was a risk of side swiping accidents on the Scholarstown Rd eastern arm heading west.
12.02.19	Councillor E. Murphy	Additional time provided to contractor due various reasons. NTA to attend next RT ACM.
12.02.19	Councillor D. O'Donovan	Synopsis of works at the Orlagh RAB provided, detailing planning and construction stages, and stating that the Stage 2 RSA determined the change at the RAB from two to one lane entry at the detailed design stage.
12.02.19	HEADED ITEM: M. McAdam	Report on the objectives of the scheme, construction stage, cost, and that the NTA will attend RT ACM 12.03.19.
08.01.19	HEADED ITEM: J. Coughlan	Report on the objectives of the scheme and construction stage and monitoring plans post construction.
08.01.19	Councillor D. O'Donovan	To invite the NTA to the February RT ACM, due to traffic chaos at the Orlagh RAB.
11.12.18	Councillor E. Murphy	Delays at the RAB causing public disquiet, the construction is not yet complete, contractor still on site, delays to be expected until completion.
11.12.18	Councillor P. Foley	Delays at the RAB causing public disquiet, the construction is not yet complete, contractor still on site, delays to be expected until completion.