Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

Report to the Chairperson and the Members of the North Central Area Committee Meeting

Report on the Proposal for Dublin City Council Special Speed Limit Bye-Laws, March 2021.

Senior Executive Engineer Willian Mangan
Executive Engineer Rossana Camargo

Technical Note

Project: Concept for Dublin City Council Special Speed Limit Bye-Laws, March 2021

To: The Chairperson and the Members of the North Central Area Committee meeting

Cc: Senior Engineer Bernard Lester

Cc: Senior Executive William Mangan Road Safety Section

Cc: Senior Engineer Patricia Reidy

Cc: Executive Engineer Rossana Camargo Road Safety Section

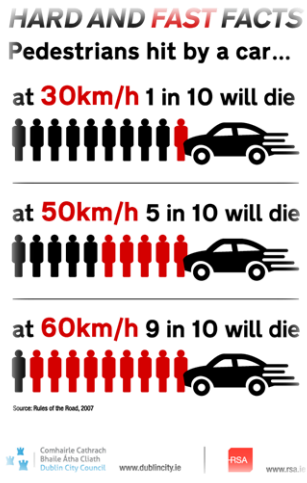
1. Summary on the Outcome on the last Public Consultation on Dublin City Council's Special Speed Limit Bye-Laws 2020 (COVID19)

The recent Phase 5 Speed Limit Bye-Laws 2020 (Covid-19) was not passed by the Council primarily due to some elected members raising different concerns including car design constraints for prolonged driving at lower speeds, delays for busses, difficulties to focus on the road while monitoring speedometer etc. The outcome of the related public consultation resulted in 56% of people opposing the Bye-Laws could also be a contributory factor to the Bye-Laws not receiving the council's approval.

- More enforcement and the needs for mobility education
- At the September full council meeting 2020, councillors requested to introduce 40 km/h on the following roads: Griffith Avenue, Collins Avenue, Oscar Traynor Road, Malahide Road and Ardlea Road junction to Fairview.
- From the Public submissions, member of the public requested to change the speed limit from 50 km/h to 30 km/h 0n the following roads: Amiens Street, Cork Street, Drimnagh Road, Crumlin Road, Dolphins Barn, Lucan Road, Martins Row, East Wall Road, North Circular Road, Drumcondra Road and Ballymun Road.

2. Benefits of introducing 30 km/h the differences 30 km/h and 40km/h for speed limit for the City

Benefits of 30 km/h



Lowering speed limits and lowering the speed differential between the active modes and motorised traffic will contribute to enhanced safety throughout the city.

The introduction of 30km/h speed limit in all roads of the city will make the city safer for more people to walk and cycle and will also assist in making the city a safer place for everyone.

Road accident statistics show lower speeds result in less fatalities, less injuries and severity of injuries with motorists benefiting most. A 5km/h difference in speed could be the difference between life and death for a vulnerable road user like a pedestrian.

- Hit by a car at 60km/h, 9 out of 10 pedestrians will be killed.
- Hit by a car at 50km/h, 5 out of 10 pedestrians will be killed.
- Hit by a car at 30km/h, 1 out of 10 pedestrians will be killed.

Figure 1: Hard and fast facts

- A calmer city, safer roads and shorter braking distance.
- It gives the driver a better view of their surroundings and makes
- It's easier for them to see any pedestrians crossing the road, cyclists and other vehicles. 30kph increases mobility for young people improves health as more walk or cycle and creates vibrant people-friendly spaces.
- Making the city a quieter and safer place to live.

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Example from Europeans cities that have introduced 30 km/h:

- London has 20mph (32km/h). A speed limit of 20mph has been imposed on all central London roads managed by Transport for London (TFL), in an attempt to reduce road deaths. The default speed limit in the city is part of a new Vision Zero road safety action plan to encourage more people to walk and cycle in London.
- Edinburgh, The speed limit in the capital was dropped from 30mph on the majority of streets, crashes fall by a third after Edinburgh's 20mph limit introduced. The research found that the average monthly number of road traffic collisions dropped from 95 in 2016 to 64 in 2018.
- Paris has 30km/h in its core to improve air quality, but also to reduce noise pollution and traffic accidents**.**
- Brussels has 30km/h in its core. Its first data from Brussels on average speeds since the new general 30 km/h limits was introduced on the 1st of January 2021. The recently speed survey shows a 9% average reduction in speed and no significant increase in journey times.

Stockholm Declaration' wants a general 30 km/h speed limit

The Stockholm Declaration explains that setting a speed limit of 30 km/h should become "the new normal" in all places where cars, cyclists, and pedestrians frequently interact:

> **Resolution 11** calls for: "Focus on speed management, including the strengthening of law enforcement to prevent speeding and mandate a maximum road travel speed limit of 30 km/h in areas where vulnerable road users and vehicles mix in a frequent and planned manner, except where strong evidence exists that higher speeds are safe, noting that efforts to reduce speed will have a beneficial impact on air quality and climate change as well as being vital to reduce road traffic deaths and injuries". (Declaration, 20 February 2020)

The declaration sets a clear message that the adoption of 30km/h limits as a default is necessary on urban and village streets where people live, work, play and shop. Research shows that the introduction of 30 km/h speed limits could improve road safety and air quality. It also shows that 30 km/h zones must be physically enforced; for example, by constructing road humps, plateaus, and road narrowing.

In the Stockholm Declaration endorsed by the Irish minister responsible for road safety, 30km/h was called for as the max speed where pedestrians and cyclists mix with motors unless there was clear evidence that a higher speed was safe.

Survivability at 30km/h v 40km/h

There is clear indication on the survivability at 30km/h v 40km/h.

Injury Risk

(European Commission Mobility and Transport Road Safety, 2021) Explains that risk is highest in light vehicles and for unprotected road users when a heavy and a light vehicle collide. The occupants of light vehicles are far more at risk to sustain serious injury. This is because the energy that is released in the collision is mainly absorbed by the lighter vehicle. Currently, the differences in mass between vehicles are very large. The difference between a heavy goods vehicle and a car can easily be a factor 20. But also the mass differences between cars are large and still increasing. A mass difference of a factor 3 is not an exception. Nevertheless, inappropriate speed remains a larger factor than mass differences in contributing to numbers of severe accidents.

Pedestrians, cyclists and moped riders have a large risk of severe injury when colliding with a motor vehicle. The difference in mass is huge and the collision energy is mainly absorbed by the lighter 'object'. In addition, pedestrians, cyclists and moped riders are completely unprotected: no iron framework, no seatbelts, and no airbags to absorb part of the energy. For a collision between a car and a pedestrian, the following relationship between speed and survival chance was established Ashton and Mackay (1979)

Car Speed	% fatally injured pedestrians
32 km/h	5
48 km/h	45
64 km/h	85

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The probability that a pedestrian will be killed if hit by a motor vehicle increases dramatically with speed. The probability of a fatal injury for a pedestrian colliding with a vehicle is illustrated in the below figure. The research from Road Safety Manual for Decision-Makers And Practitioners Word health Organization indicates that while most vulnerable (unprotected) road users survive if hit by a car travelling 30 km/h, the majority are killed if hit by a car travelling at 50 km/h

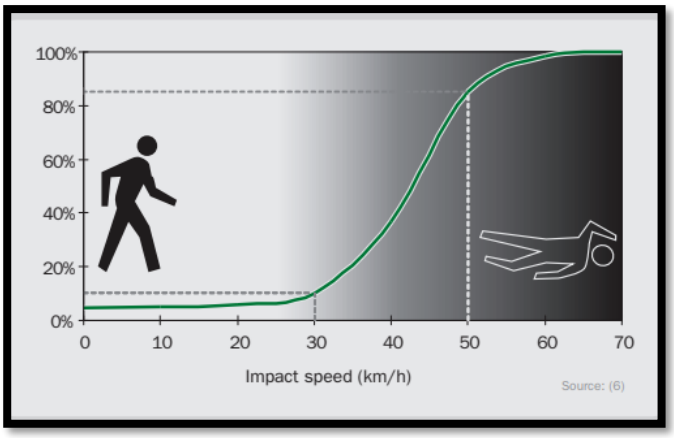

Figure 2: Probability of Fatal Injury for Pedestrian Colliding with Vehicle.

Stopping Distances.

The higher the speed, the longer the stopping distance. Even if a collision occurs, the consequences are less serious at a slower speed. Please see the following figure, Stopping distances from Speed management: a road safety manual World Health Organization.

A very important issue on busy streets is that, the distance a 30km/h car can stop of 13m a 40km/h car has only just had the brakes applied and will still be doing in excess of 30km/h. It's the difference between "stopping in time and missing a pedestrian" or "hitting them at 30km/h".

Figure 3: illustration of stopping distance in an emergency braking. Source World Health Organization Speed management a Road safety manual for decision maker and practitioners

Different speed limits will lead to a proliferation of signage throughout the city:

The best practice is to have standard speed limits on the roads and minimise the changes of speed limits on certain roads, where an exception to this speed limit applies. Speed limit signs are provided only at the points of entry to the speed limit zone and at the points of change from one-speed limit to another. If a designer implements different speed limits on the roads, this would lead to a proliferation of signs throughout the city and cause distraction and confusion for drivers.

30 km/h is the best practice as per the Stockholm Declaration. At a time when the world, including United Nations, World Health Organization, OECD, etc is saying that 30km/h should be the max unless there is clear evidence that higher is safe, a 40km/h limit (which endorses driving at 40km/h) is difficult as a designers to implement 40 km/h as the evidence are clear that the safer for vulnerable road users such as pedestrians, cyclists, moped riders and motorcyclists is 30 km/h.

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The importance to implement 30 km/h for Dublin city (School Zone)

As the city is expecting to be re-opening gradually, Dublin City Council needs to make sure that we adhere to the rules of this new way of living and working and continue to suppress the spread of the virus. Dublin City Council requires to implement lower speeds on all the roads of Dublin City in order to increase safety for the increased number of pedestrians and cyclists on the road network.

School Zones are designed to create a safer, calmer, attractive environment in front of schools. The Zones consist of gateway School Zone and painted circle road markings with pencil bollards.

The objectives of the zones is to make it safer for children to engage in active travel by walking and cycling to school. This is achieved through increased visibility of the zone which draws motorist attention to the presence of a school and discourage speeding and vehicle drop-off congestion in vicinity of the school.

Since the introduction of its first 2 School Zones, Dublin City Council has received over 100 applications from primary schools throughout the DCC area. To-date, 29 school zones have been installed on streets with 30kph speed limits. Feedback has been very positive. However, applications have been received from a large number of schools located within **50km/h** speed limit areas which are not suitable for the implementation of school zones. In accordance with NTA guidelines.

Figure 4: School Zones Lord Mayor of Dublin Hazel Chu at the first school zone at Francis Street School

The Road Safety Section recommended the reduction of the speed limit from 50 km/h to 30 km/h at all school locations in Dublin. This will reduce traffic congestion, improve air quality, and will encourage cycling and walking among children with the associated benefits of better physical and mental health and better concentration.

Figure 5: School Zones at Central Model School and Star of the Sea

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3. New proposal Dublin City Council's Special Speed Limit Bye-Laws 2021

The Road Safety section reviewed in the new proposal the observations received on the last public consultation from:

1. The September full council meeting 2020, councillors requested to introduce 40 km/h on the following roads: Griffith Avenue, Collins Avenue, Oscar Traynor Road, Malahide Road and Ardlea Road junction to Fairview.
2. The Public submissions, member of the public requested to change the speed limit from 50 km/h to 30 km/h on the following roads: Amiens Street, Cork Street, Drimnagh Road, Crumlin Road, Dolphins Barn, Lucan Road, Martins Row, East Wall Road, North Circular Road, Drumcondra Road and Ballymun Road.
3. The reviewed of the overall network of all the arterial roads was reviewed taking in consideration the following criteria:

3.1 General Criteria for the introduction of 30 km/h in the arterial roads:

1. Traffic Management Guidelines recommends 30 km/h for the speed limit on the main roads and villages as a default speed throughout the North Central Area.
2. There will be exceptions to this speed which are summarised below.(Table 1: Exclusion Road North Central Area)
3. Traffic Management Guidelines explains that the minimum length of a speed limit is normally 800 metres. This is to give drivers the opportunity to adjust their speeds and not confuse them with frequent changes of limits. Situations arise where it is better to curtail or extend a speed limit to clear a hazard such as a bend, a junction or a hump-backed bridge. **(TMG P.71).**
4. The reduction of speed limit was carried out following the specification setting on the Guidelines for Setting and Managing Speed Limits in Ireland chapter 6 and 7 (The Setting of Speed Limits – General Guidance and The Setting of Speed Limits – Detailed Guidance).
5. The presence of schools on the roads. The reduction of speed will give more protection to the School children and all road users including pedestrians and cyclists which are the most vulnerable.
6. Roads that are in residential Areas. The reduction of speed will give more protection to the residents and all road users including pedestrians and cyclists which are the most vulnerable.
7. The proximity of the villages in the North Central Area.

3.2 The Road Safety Section Assessment:

1. Table 1: Exclusion Road North Central Area

	Road	Current speed limit	Proposed speed limit	School present	Other amenities	Reason for not Changing
1.	**Number 2:** Santry bypass Northbound, from a point 135 metres south of the south face of the west abutment of the southern bridge of the Coolock lane interchange northwards to the Fingal County Council/ Dublin City Council boundary	80 km/h	80 km/h			Santry By Pass
2.	**Number 3:** Santry By-Pass, southbound between Fingal County	80 km/h	80 km/h			Santry By Pass

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	Road	Current speed limit	Proposed speed limit	School present	Other amenities	Reason for not Changing
	Council /Dublin City Council boundary and a point 250m south of the north face of the east abutment of northern bridge at Coolock Lane Interchange.					
3.	**Number 5:** N32 from its junction with the Malahide Road to Its Junction with M1/M50 Roundabout	60 km/h	60 km/h			Exit from Santry By Pass /Arterial route
4.	**Number 6** : Santry By Pass Northbound from the north face of the Shantalla Road over bridge to a point approx. 135 M south of the south face of the west abutment of the southern bridge of the Coolock Lane interchange	60 km/h	60 km/h			Santry By Pass
5.	**Number 7:** Northbound, diverging lane (exit ramp) of the Santry By Pass to Coolock Lane interchange, from its intersection with the Santry By-Pass Northbound mainline, to a point approx. 44m from the line of the south face of the west abutment of the southern bridge interchange	60 km/h	60 km/h			Santry By Pass
6.	**Number 8:** Santry By Pass southbound from a point 127m the south of the south face of the east abutment of the southern bridge at interchange to the north face of the east abutment of the Shantalla Road over bridge.	60 km/h	60 km/h			Santry By Pass
7.	**Number 9:** Southbound converging lane (entry ramp) from Coolock Lane Interchange to junction with Santry By Pass.	60 km/h	60km/h			Santry By Pass
8.	**Number 1:** Santry By-Pass**/**Sword Road from Shantalla over bridge to its junction with Iveleary road.	50 km/h	50 km/h			Santry By Pass
9.	**Number 10:** Howth Road from its junction with Brookwood Avenue/ Sybil	50 km/h	50 km/h			Arterial route

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	Road	Current speed limit	Proposed speed limit	School present	Other amenities	Reason for not Changing
	Hill to its junction with James Larkin Road					
10.	**Number 11:** James Larking Road from its boundary with Dublin City Council /Finglas County Council to its junction with Windmill Road	50 km/h	50 km/h			Arterial route
11.	**Number 12:** Hole in the Wall Road from its junction with Grange Road and Dublin City Council/ Fingal County Council's boundary.	50 km/h	50 km/h			Arterial route
12.	**Number 13:** Grange Road between Dublin City Council/ Fingal County Council's boundary to its junction with the Malahide Road	50 km/h	50 km/h			Arterial route
13.	**Number 14:** Malahide Road R107 from its junction with Ardlea Road and Dublin City Council/Fingal County Council's boundary	50 km/h	50 km/h			Arterial route
14.	**Number 15:** The northbound divergingging lane (exit ramp) of the Santry By Pass at the Coolock Lane interchange, from a point 120m from line of the south face of the west abutment of sourthern bridge at interchange, to its intersection with Oscar traynor road on the coolock lane interchange.	50 km/h	50 km/h			Arterial route
15.	Ballymun Road	50 km/h	50 km/h	St Michael House, a special education school		Arterial route

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Note: Dublin City Council Road Safety are aware that this road has 3 lanes and may not be suitable to be a 30km/h road but due to the presence of Schools on the Ballymun Road Dubin City Council Road Safety Section recommends lowering the speed limit to 30 km/h

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2. Table 2: Roads suggested at the September 2020 Full concil meeting to be designated 40 km/h

	Road	Current speed limit	Proposed speed limit	School present	Other amenities	Reason for implement 40 km/h
1.	Griffith Avenue from its juction with tolka estate road to its juction with the Malahide Road	50 km/h	40 km/h	• Glasnevin Educate Together National School • St Vincents De Paul Infant School • Scoil Mhuire		Councillor requested
2.	Collins Avenue from its juction with Ballymun Road, to its junction with Howth Road	50 km/h	40 km/h	• Our Lady of Consolation National School		Councillor requested
3.	Oscar Traynor Road/ Coolck lane from its junction with the Santry interchange to its juction with the Malahide Road	50 km/h	40 km/h	• School in the vicinity of the Road: Coláiste Dhúlaigh Post Primary School		Councillor requested
4.	Malahide Road from its junction with Ardlea Road to Fairview	50 km/h	40 km/h	• Mount Temple Comprehensive School • Malahide/Portmarnock Educate Together NS • St Paul's National Catholic School		Councillor requested

Note: Dublin City Council Road Safety Section recommends that these routes should be designated 30 km/h due to the number of schools along the routes. In order to protect pedestrian and facilitate the introduction of a slow zone at the school's gates.

3. Table 3: Reduction of speed limit from 50 km/h to 30 km/h at the North Central Area

	Road	Current speed limit	Propose speed limit	School present	Other amenities	Reason for change
1.	Richmond Road	50 km/h	30 km/h			Residential
2.	Fairview Strand	50 km/h	30 km/h	School at the vicinity: St Marys National School	• Harmony School of Music/Tipperary Fine Foods	School zone
3.	Annesley Bridge Road	50 km/h	30 km/h		• Fairview Park	Park
4.	Philpsburgh Avenue	50 km/h	30 km/h	• Holy faith secondary school	• Marino Medical Centre	School zone

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	Road	Current speed limit	Propose speed limit	School present	Other amenities	Reason for change
				• Billie Barry Stage School		
5.	Grace Park Road	50 km/h	30 km/h	• Rosmini Community School • St. Joseph's School for Children with Visual Impairment		School zone
6.	Clontarf Road from Fairview junction to James Larking Road	50 km/h	30 km/h	• Howth Road Mixed National School		School zones
7.	Alfie Byrne Road	50 km/h	30 km/h		• Clontarf Astro Pitches	Sport facility in the area
8.	Howth Road from Fairview junction to the junction with Brookwood Avenue	50 km/h	30 km/h	• At the area: Killester College Of Further Education • At the main road: St Brigid's Boys National School		School zone
9.	Brookwood Avenue from the junction of Malahide Road to Howth Road	50 km/h	30 km/h	• St Mary's Holy Faith Catholic School Killester		School zone
10.	Sybil Hill Road from the junction with Howth Road to Vernon avenue	50 km/h	30 km/h	• Little Sisters of the Poor • St Brigid's Boys National School		School zone
11.	Castle Avenue from Clontarf Road to Howth Road	50 km/h	30 km/h	• Little Stars Montessori School	• Clontarf Violin School	School zone
12.	Vernon Avenue from the junction of Castle Avenue to Sybil Hill	50 km/h	30 km/h		• Clontarf Junior Swimming Club	Residential area
13.	Vernon Avenue from Clontarf Road to Sybil Hill	50 km/h	30 km/h		• Vernon Avenue Health Centre	Residential area
14.	Seafiled Road East	50 km/h	30 km/h			Residential area

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	Road	Current speed limit	Propose speed limit	School present	Other amenities	Reason for change
15.	Causeway Road	50 km/h	30 km/h			Cyclist at the area
16.	Beaumont Road from the junction of Collins Avenue to Skelly's Lane	50 km/h	30 km/h			Residential area
17.	Skelly's Lane	50 km/h	30 km/h			Residential area
18.	Kilmore Road from Skelly's Road to Malahide Road	50 km/h	30 km/h		• Artane Castle Shopping Centre	Residential area
19.	Kilmore Road from Skelly's Road to Oscar Traynor Road	50 km/h	30 km/h	• St John of God Girls National School • St. David's Boys National School		School zone
20.	Shantalla Road	50 km/h	30 km/h			Residential area
21.	Ardlea Road	50 km/h	30 km/h			Residential area
22.	Barryscourt Road	50 km/h	30 km/h		• Northside Shopping Centre	Residential area
23.	Green Castle Road	50 km/h	30 km/h		• Stardust Memorial Park	Residential area
24.	Clonshaugh Road from the junction with Oscar Traynor Road to Dublin City Council boundary with Fingal County Council	50 km/h	30 km/h			Residential area
25.	Priorswood Road from the junction with Malahide Road to the junction with Glin Road	50 km/h	30 km/h			Residential area
26.	Clonshaugh Road from the junction with Glin Road to the junction with Priorswood Road	50 km/h	30 km/h			Residential area

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	Road	Current speed limit	Propose speed limit	School present	Other amenities	Reason for change
27.	Blunden Drive	50 km/h	30 km/h		• St Paul's Catholic Church, Ayrfield	Residential area
28.	Milbrook Road	50 km/h	30 km/h			Residential area
29.	Tonlegee Road from the junction with Malahide Road to the junction Grange Road	50 km/h	30 km/h			Residential area
30.	Kilbarrack Road from Raheny Road to Dublin City Council boundary with Fingal County Council	50 km/h	30 km/h			Residential area
31.	Raheny Road	50 km/h	30 km/h	• Ardscoil La Salle secondary school • St. Michael's Special School	• Dart View - Montessori School	School zone
32.	Station Road	50 km/h	30 km/h		• Our Lady Mother Of Divine Grace	Residential area
33.	Watermill Road	50 km/h	30 km/h	• Manor House School, Raheny • Nai-Scoil Ide - Raheny		School zone
34.	Springdale Road from the junction with Tonlegee Road to Station Road	50 km/h	30 km/h	• Springdale National School	• St. Malachy's Football Club	School zone
35.	Harmonstown Road	50 km/h	30 km/h			Residential area
36.	Grange Road	50 km/h	30 km/h	• Naíonra Dhúndroma		School zone
37.	Brookwood Rise	50 km/h	30 km/h			Residential area
38.	Swords Road from Griffith Avenue junction to Iveleary Road	50 km/h	30 km/h			Residential area
39.	Drumcondra Road Upper	50 km/h	30 km/h		St Patrick's College	Residential area
40.	Sword road from Santry Road to	50 km/h	30 km/h			Residential area

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	Road	Current speed limit	Propose speed limit	School present	Other amenities	Reason for change
	Shantalla road					

TIMELINE FOR IMPLEMENTATION OF NEW SPEED BYE LAWS

- **Stage 1** – Proposal presented at North Central Area Meeting on Monday the 15th of March 2021.
- **Stage 2** – Councillors given1 week to send feedback to speedreview@dublincity.ie.Feedback on the proposal must be given before 5pm on Monday the 22th of March 2021. If no feedback is received before this date, it will be presumed that the Councillor has no feedback relating to the proposal.
- **Stage 3** – The proposal will go up on the Consultation hub on Monday the 29th of March 2021 for a Non-Statutory Public Consultat\ion Process. This will be for 2 weeks from Monday 29th of March until Friday 9th of April.
- **Stage 4** – At the end of this process The Road Safety Section will circulate the final map and report for noting to the Councilors at the end of April.
- **Stage 5** – The report will be presented at the Traffic and Transport SPC meeting on the Wednesday 5th of May 2021.
- **Stage 6** – The report will be presented at the City Council Monthly Meeting on Monday 10th of May to obtain the approval to carry out statutory Public Consultation from the Monday 7th of June to the Monday 19th of July 2021.
- **Stage 7** – The report of the outcome of the statutory public consultation will be presented at the Traffic and Transport SPC meeting on the Wednesday 8th of September 2021
- **Stage 8** – The report of the outcome of the statutory public consultation will be presented at the City Council Monthly Meeting on the Monday 4th of October 2021.
- **Stage 9**– With the approval of the Councillors on the Special Speed Limit Bye-Laws, 2021 the Road Safety Section will carry out the implementation of signage starting on December 2021.

Bibliography

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European Commission Mobility and Transport Road Safety. (2021, 02 16). Retrieved from https://ec.europa.eu/transport/road_safety/specialist/knowledge/speed/speed_is_a_central_issue_in_road_safety/speed_and_the_injury_risk_for_different_speed_levels_en

Appendixes:

1. Map Proposal for Dublin City Council Special Speed Limit Bye-Laws, March 2021
2. North Central Area Map Proposal for Dublin City Council Special Speed Limit Bye-Laws, March 2021
3. Social media campaign February 2021 #Loving30

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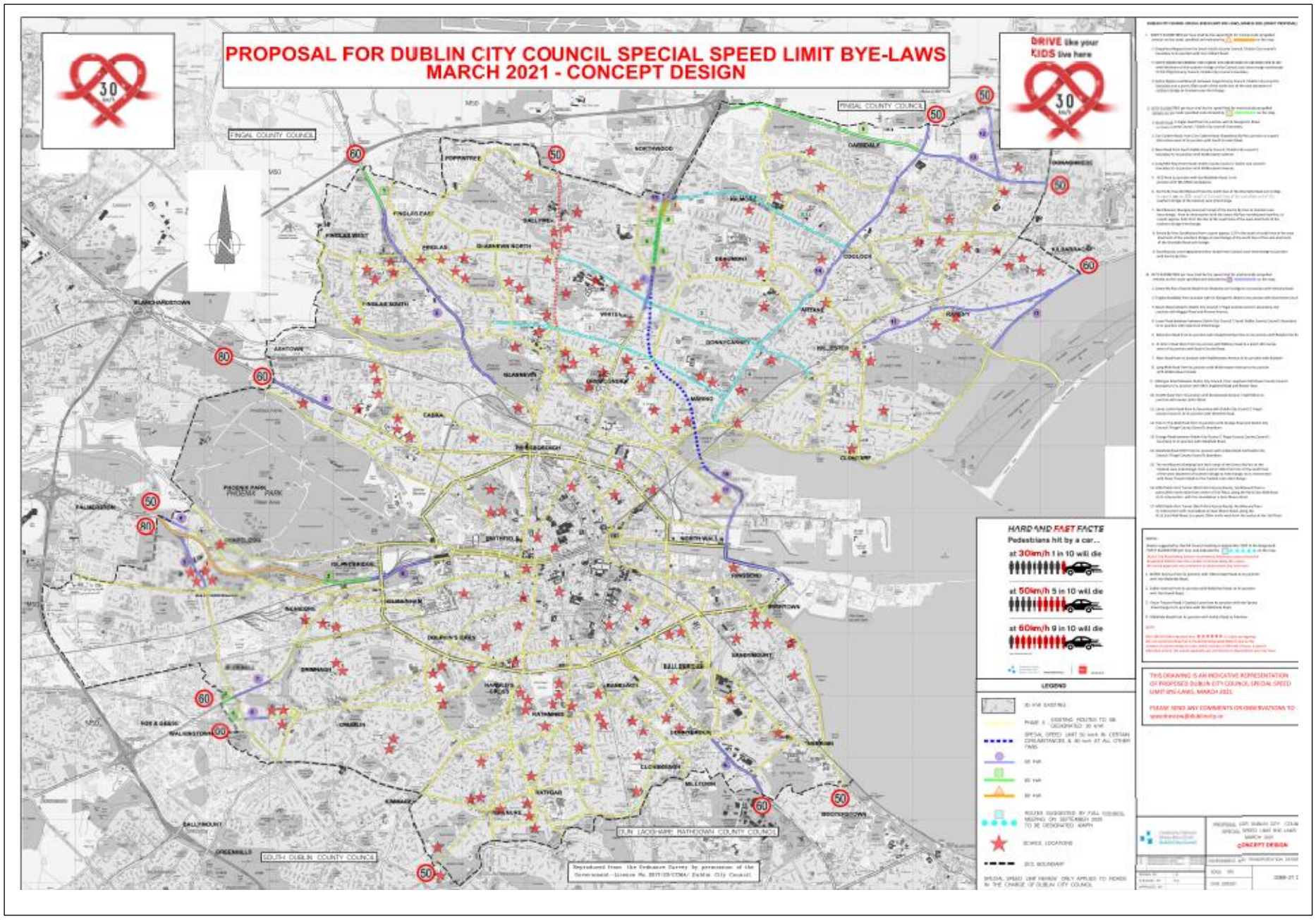

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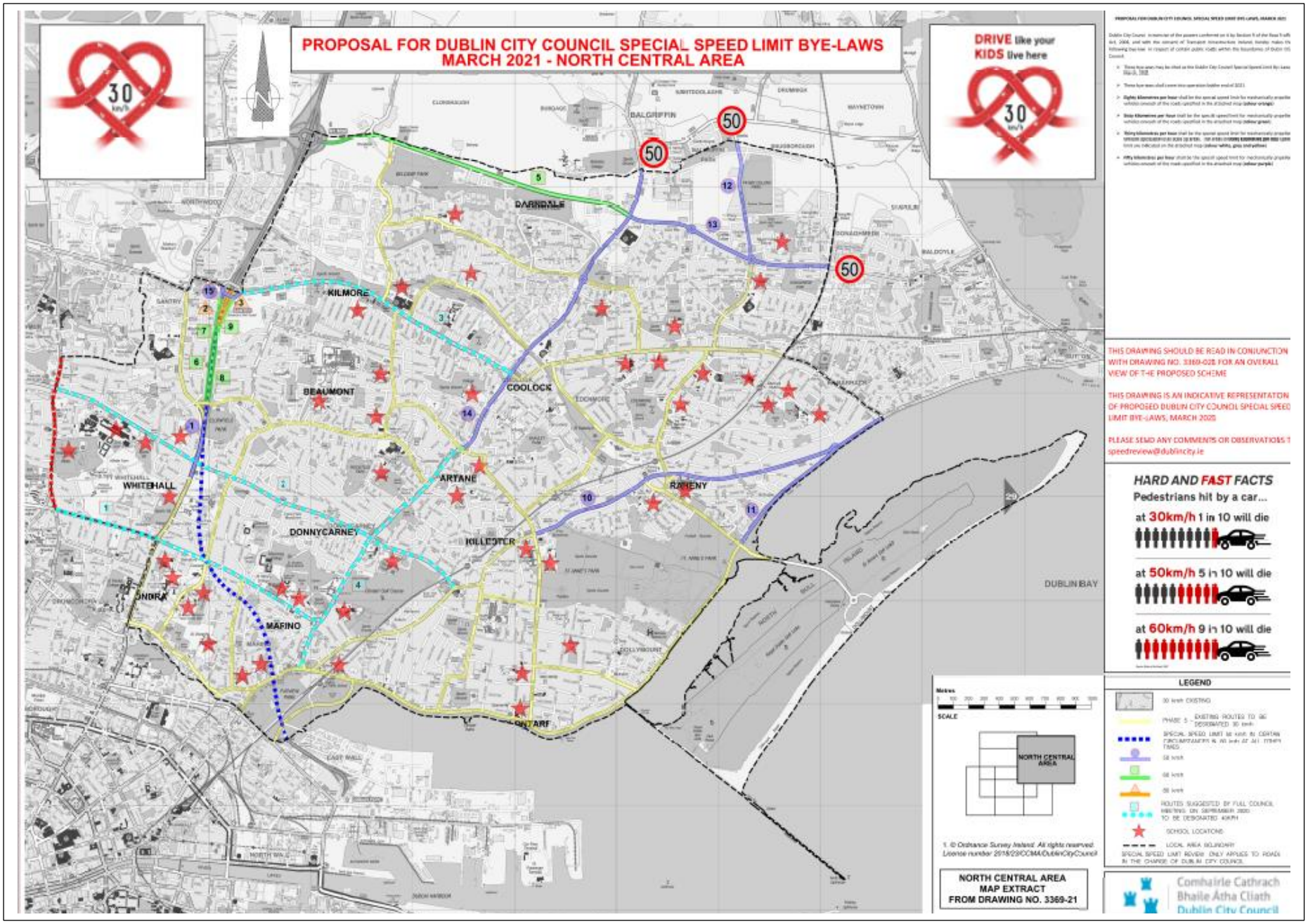

Technical Note

Social Media Campaign #Loving 30

- **Workshop Loving 30**

  The Road Safety Section organized a workshop on the Thursday 28th January 2021 on Microsoft Teams, in order to raise awareness and clarification on the importance of introducing 30 km/h as a safer measure. The link is available as follows: **https://www.youtube.com/watch?v=q2rYn412LsU.**

- **Social Media Campaign #Loving 30:**

Twitter/ Facebook Lord Mayor post	Twitter/ Samuel Beckett Bridge	Instagram GIF loving 30
		
• **Twitter Impressions: 33,540** • **Twitter Total engagement: 666** • **Facebook people reached: 4832** • **Facebook reactions: 121**	• Impressions 17,674 • Media views 3947 total engagement 689 • Retweets 147	• Reached 2038 • Impressions 2107