Options Selection Summary

Phase 1: Castletymon Road North Active Travel Scheme

Date: 18/11/22

Version	*Reviewer*	*Date*	*Issued to*
0	AG	04/10/22	Mc
1	MC/AG	17/10/22	NTA
2	AG	18/11/22	NTA (WIP)

Introduction

Context

Castletymon Road is Route 27a on the Cycle South Dublin Plan and will tie into the Castletymon District Enhancement (DE) scheme which is due to go into construction in early 2023. Castletymon DE has a cycle track in each direction and will be the diving point between phases of the scheme as it will be completed before both phases of the Castletymon Road Active Travel scheme.

Additionally, the Castletymon Road project was selected to be a Pathfinder Project. Pathfinder Projects is an initiative by the Department of Transport aimed at ensuring the projects selected are provided the impetus to deliver quickly and demonstrate what can be achieved with the right level of ambition and innovation. The 2022 launch identifies the Castletymon Road Active Travel scheme to facilitate a 10-minute neighbourhood, to enable residents to access most amenities within 10 mins via walking and cycling. This would require improved walking and new cycling facilities.

Need for the scheme

Castletymon Road is the connection between an existing and proposed cycle scheme with several schools and amenities along it, including the new Castletymon Library and Bancroft and Tymon Park. There are no existing cycle facilities on or near the alignment of Castletymon road, with the closest ones located in Tymon Park.

This project, through the re-distribution of the existing carriageway, will allow rapid implementation of safe cycle facilities to local amenities.

Project Objective:

- Improve the interconnectivity of the cycle work within South Dublin through the provision of cycle infrastructure along Castletymon Road, from Main Road to Greenhill road (R819), and the transition to neighbouring cycle facilities.
- Improve access to and within Bancroft park.
- Improve pedestrian and cycle connectivity between Bancroft Park and Tymon Park, with interconnection to the location destinations (New SDCC Library, National Basketball Arena, Castletymon Commerical Centre, and Local Area Schools (Tallaght Community School, St. Joseph's Special School, Scoil Aonghusa Junior National School, Coláiste de hÍde, etc))

Project Outcomes:

Improve pedestrian and cycle connectivity along Castletymon Road and within Bancroft Park, create Active Travel connections to location destinations, as well as to the wider network such as the

completed facilities along Main Road and the proposed bus connects corridor on Greenhills Road. The overall impact/outcomes are:

- Increased numbers of cyclists using the routes
- Reduction in car trips to the district centre by local residents and a corresponding increase in cycle/ped trips
- Slowing of speeds of vehicular traffic due to the reduction in road width - measured by before and after surveys
- Increased biodiversity and planting

Design Guidance

Development of this project will rely on relevant guidance documents and best practices for the design of the scheme, including, but not limited to the National Cycle Manual, DMURS, Traffic Signs Manual, Traffic Management Guidelines, NTA guidance notes, and Accessibility guidance documents.

Existing Conditions and Constraints

Constraints and Opportunities

Castletymon Road is the connection between an existing and proposed cycle scheme with several schools and amenities along it, including the new Castletymon Library and Bancroft and Tymon Park. The road is 9-9.37m with a painted medium in the centre and approximately 2m footpaths on each side, separated from the road by a 2m verge with trees and public lighting. There are no existing cycle facilities on or near the alignment of Castletymon Road, with the closest ones located in Tymon Park.

Castletymon Road is the only vehicular access point for the communities within and therefore a key link road. The junctions T-ing onto Castletymon Road are wide estate junctions, with a radius of +6-8m.

The trees within the verge the closes environmental constraints, with Bancroft and Tymon Parks running perpendicular and along the road. The area taken in charge includes the road, the verges, the footpaths, and several meters of open space on both sides of the footpath. This open space is a sloped grass lawn, draining towards the roadway. It is potentially an underground utility corridor, reducing the likelihood of utilities in the carriageway.

The initial desktop review uncovered no Protected structures nor Monuments and Heritage Sites within the alignment.

Assessment of existing and proposed transport network

There are two public bus routes which run along the full length of Castletymon Road, the 27 and 77a. They run an average of every 10 min throughout the day, both ending by 23:30. Main Road to the south has buses 54A and 65 on it and Greenhills Road is a key aerial towards city centre and is a future Bus Connects Spine.

Identification of key trip attractors

- Castletymon District Centre
- Castletymon Library

- Local Schools (Tallaght Community School, St. Joseph's Special School, Scoil Aonghusa Junior National School, Coláiste de hÍde, etc)
- St Aenus' Chruch
- National Basketball Arena

Pre-Project Traffic Survey 2022 Summary

Average Speed (Shopping centre)

- Mean Speed
    - 44.4 km/hr (Castletymon Road - south of St Josephs School Access)
    - 39.9km/hr (Castletymon Road - south of Main Shopping Centre Access)
- 85%ile Speed
    - 50.5km/hr (Castletymon Road - south of St Josephs School Access)
    - 47.1km/hr (Castletymon Road - south of Main Shopping Centre Access)

Result of parking being used

- Library Parking
    - 3 Spaces All Day
    - The rest spaces are short visits, most no longer than 1.5 hrs
- Residents Parking
    - 5-6 spaces are used in the evening
    - 2-4 spaces always have a car in them
        - Potential second car storage?
    - 60-70% full for more than 4 hr a day

Local Trips

- 38% of visitors to the library come in cars
- 100% of people who park in the southern parking spaces walk towards the houses within
- 48-54k vehicles per week

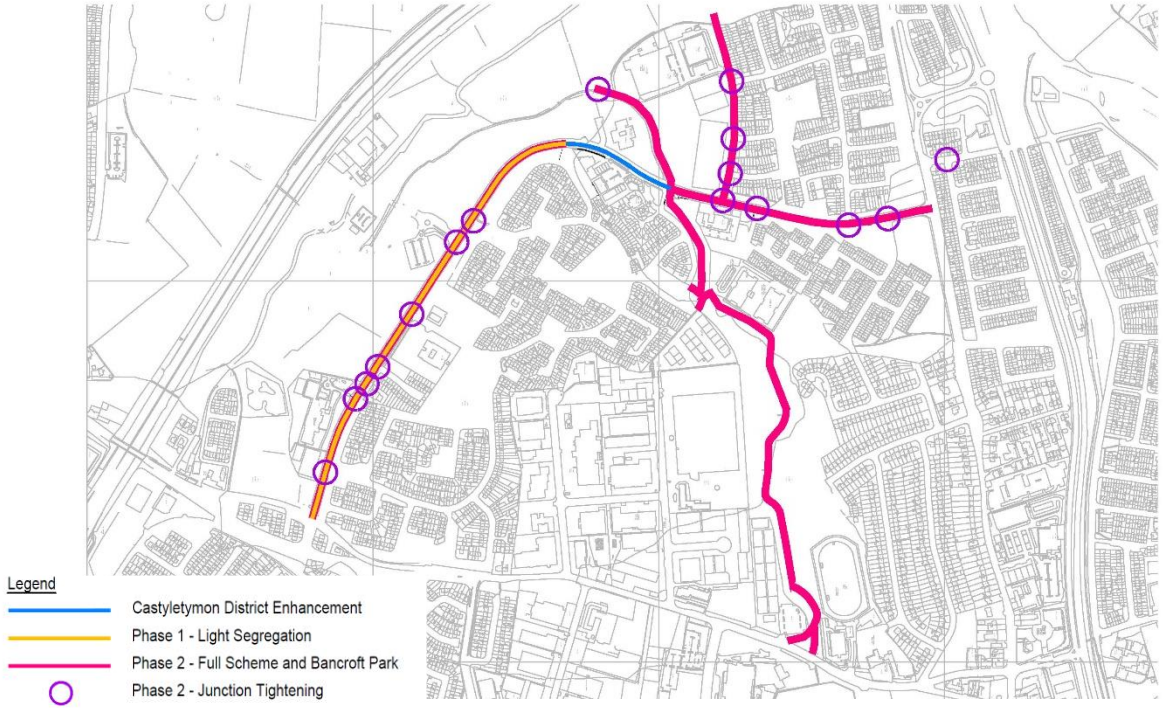
Option Development

Phasing

The Active Travel on Castletymon will be broken into two phases:

Phase 1: Rapid Implementation (Name: Castletymon Road North Active Travel Scheme)

Phase 2: Fully constructed walking and cycling facilities. (Name: Castletymon Road and Bancroft Park Active Travel Scheme)



The reasoning behind the division of the scheme is due to the timeline pressures and complexity of the site.

Phase 1: Rapid Implementation/Quick Build (Name: Castletymon Road North Active Travel Scheme)

Phase 1 would be between the Greenhills Road to the district enhancement scheme, which includes off-road infrastructure on both sides of the road. This section has a consistent width and junctions, which allows for rapid design and implementation. There are several amenities and schools within this section which will need site-specific design. If a temporary/light segregation scheme is implemented, a fully constructed scheme will need to replace it in the future.

Phase 2: Fully constructed walking and cycling facilities. (Name: Castletymon Road and Bancroft Park Active Travel Scheme)

Phase 2 will include Castletymon Road South, from the district enhancement project to Main Road, Bancroft Park, and local connections. These areas have issues which will require detailed analysis which could delay phase 1 if it was all contained as one project.

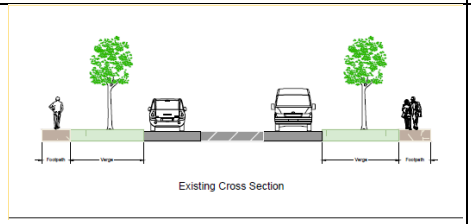
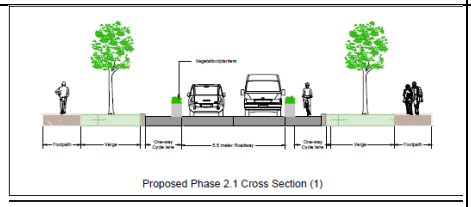
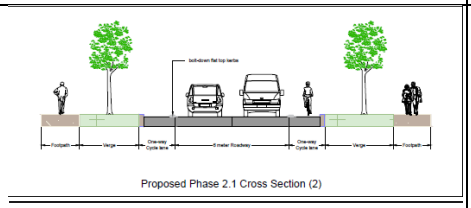
Emerging Preferred and Alternative Alignments

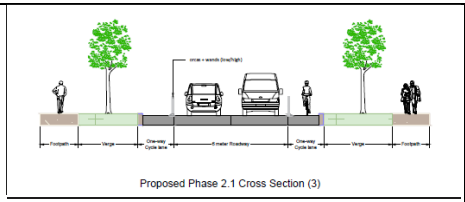
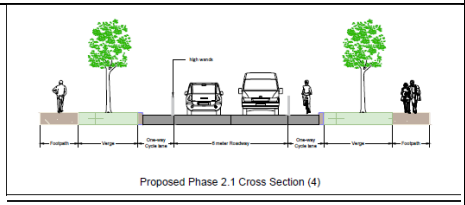
Castletymon Road is a feeder and link road between an existing scheme (Main Road) to the proposed scheme (bus connects on Greenhills Road). All roads which lead on to Castletymon Road have no alternative vehicular connection. There are existing permeability connections, except for a few missing links which are included in this scheme (under junctions).

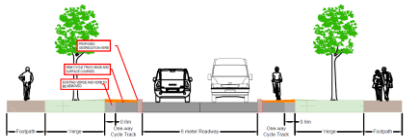
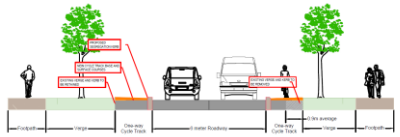
As this is a rapid build scheme, the existing carriageway is the most effective alignment to use and there are no other connecting roads nor wide roads which facilitate this connection in the area.

As for phase 2, a separate options report will be developed and will examine the alignment options at that time.

Infrastructure Options

Type	Image	Section		Notes
0) Existing		1 way 9.01 -9.37 m carriageway _____ 9.01 -9.37 Total		
1) Vegetation/ planters	 The Quays	1 way 0.75m Single CL 0.5 m Planter 6m carriageway 0.5 m Planter 0.75m Single CL _____ 9m Total		While asthenic pleasing and increases the sense of safety of the cyclist, the width of the road is confined and does not provide the min space for cyclists.
2) bolt-down flat top kerbs	 Seapoint	1 way 1.25m Single CL 0.25 m Kerb 6m carriageway 0.25 m Kerb 1.25m Single CL _____ 9m Total		The kerb will protect cyclists while not overly inhibiting the cycle lane. Bollards might be needed at junctions and intervals to alert drivers.

3) orcas + wands (low/high)	 Rathmines	<u>1 way</u> 1.3m Single CL 0.2 m orcas 6m carriageway 0.2 m orcas 1.3m Single CL _____ 9m Total	 Proposed Phase 2.1 Cross Section (3)	Providing the max width of the cycle lane while providing minimal protection from the carriageway.
4) high wands	 Wellington Lane	Same as above	 Proposed Phase 2.1 Cross Section (4)	Perception of safety is further reduced than previous options.

5) Templeville Rd Style Cycle Track	 Templeville Road	<u>1 way</u> 1.7m Single CL 0.25 m Kerb 6m carriageway 0.25 m Kerb 1.7m Single CL _____ 9.9m Total (400-900mm impacted on verge(s)	<u>Replace both kerb edges (TBD with survey)</u>  <u>Remove 1 kerb (TBD with survey)</u> 	Full build using the templeville style cycle track, reduces the overall timeline and road interruption. There are potential initial higher costs as there might be PL and kerb/verge impact. To be determined with a survey.

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Infrastructure Summary

Route Option	Option 1	Option 2	Option 3	Option 4	Option 5
Economy	2	3	4	5	**2**
Accessibility	2	4	4	4	**4**
Safety	4	4	2	1	**5**
Environment	4	2	2	2	**2**
Integration	3	3	2	2	**3**
Physical Activity	1	3	4	4	**4**
Total	*16*	*19*	*18*	*18*	*20*

*ranking scale 1-5, where 1 is highly negative and 5 is highly positive

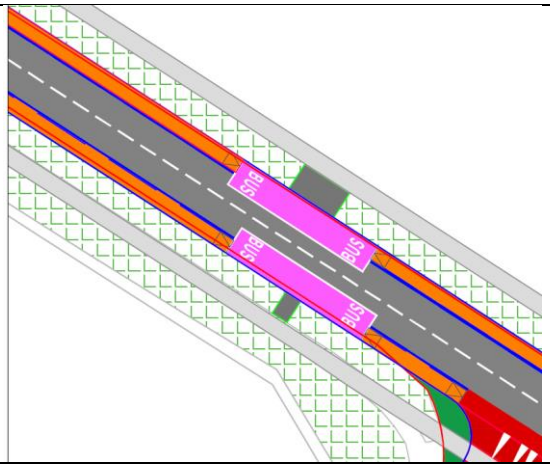
Emerging Preferred Option

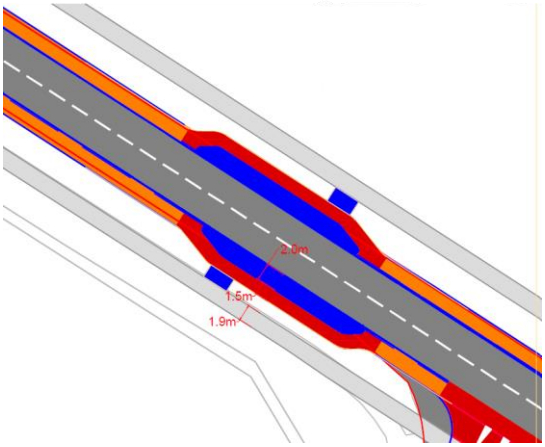
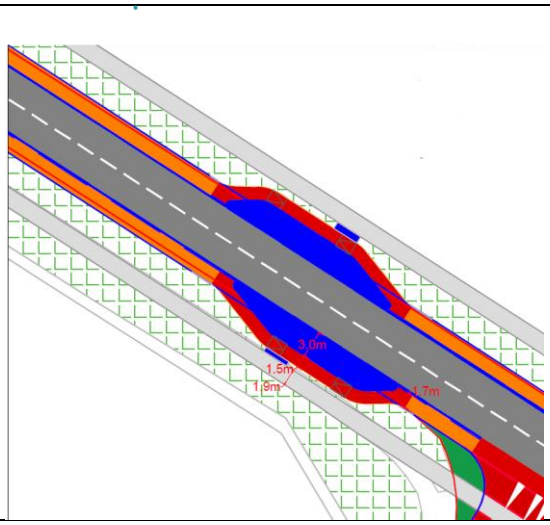
Originally, the bolt-down kerb method was the highest-rated option for this project. After a review with the NTA team, an additional option was assessed, known as the Templeville Rd style quick build cycle track. This method uses the existing carriage and a minimal section of verge, as well as building methods to reduce impact and costs.

After a review of the alignment and site constraints, it was deemed a potential option and the highest rated. The Templeville Rd Quick build option would be more expensive but not require a replacement scheme in the future. The raised cycle track would be accessible and safe with raised crossing and minimal conflict zone and a protected kerb. Pending a topo survey, the cycle track could have minimal impact on the verge and smoothly integrate into the existing carriageway area.

Bus Stop Option

In the development of the scheme, there are 3 Emerging Options for bus stops along Castletymon Road. Below is a breakdown of the options of bus stops which are feasible for the Castletymon Road Active Travel scheme.

Type	Plan	Advantages	Disadvantages
1) In-Line		• Minimal impact on existing verge/services • No pedestrian/cyclist conflict zone	• Unprotected section of cycle infrastructure

2) Bus Connects 1m Bus Island		• Low impact on existing verge/services • Minor diversion of the cyclist • Segregated infrastructure	• Minimal space for pedestrians to wait for a bus • Conflict between cyclists and pedestrians • May require the removal of trees (4-6 trees) • May require the moving of lighting/bus stops
3) NCM 3m Bus Island		• Segregated infrastructure • Minor diversion of the cyclist	• Conflict between cyclists and pedestrians • Will require the removal of trees (4-6 trees) • Will require the moving of lighting/bus stops

A conclusion on which bus stop options is the prefered option will be made after a discussion with the NTA.

Other Elements

Cost Estimate

Based on the preferred method, the following cost estimate was prepared using NTA guidance/publications and recently awarded active travel tenders in SDCC.

	Low	High
Templeville Phase 1	€990,000	€1,200,000

Timeline

This is an ambitious timeline and will be reviewed at each stage.

Phase 1:

Feasibility Design/ Site Surveys – August 2022

Non-Statutory Consultation with Cllrs and community groups – December 2022

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Procurement – January 2022

Installation of Quick Build/ Light separation – February 2023

Risk Register and Management

Risk Description	Mitigation
Objections from local community residents' groups	Develop communication strategy, and carry out early engagement
Impact of existing trees	Early survey to confirm the location
Multiple projects: village improvement and full-cycle scheme	Continuous communication and integration of design/management teams
Existing Services	ID area where additional SI might be required
Environmental Impacts within Bancroft Park	Commission Environmental reports early in the project
Reluctance to remove Kissing Gates in Bancroft Park	Engage earlier with Public Realm/Parks and the community to evaluate risk.

Measures of Success

- Increased pedestrian and cyclist movements on Castletymon Road.
- Increased in school children walking and cycling to school who live or attend school in the Castletymon Road area.