

Luas Finglas

Environmental Impact Assessment Report 2024

Appendix A4.3:
Mellowes Micro-Options Papers

Luas Finglas

Mellowes Micro – Options

Working Paper – Stage 2 Post NSPC

LFIN-ADW-0007

December 2020

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1 EXECUTIVE SUMMARY

Throughout the Non-Statutory Public Consultation (NSPC) for Luas Finglas, the published Emerging Preferred Route (EPR) was very strongly challenged by residents of Mellows Crescent and Court estates. TII attended a meeting with the residents and local public representatives to better understand their concerns and received written objections from the residents on the proposed route during the NSPC.

While the residents welcomed the Luas Finglas scheme to their area, they strongly objected to the route passing through Mellows Crescent and Court estates and noted that the current plans would divide their community in two. Issues reported by residents included: elimination of the quiet cul-de-sac, noise and disruption during construction and operation, safety risk for both children and elderly residents, devaluation of homes, lack of accessibility for emergency services, reduction in parking, increase in congestion and visual impact.

This report further develops and re-examines two alternative routes which were conceptualised in a previous paper. Micro-Option 4 is an optimised corridor through Mellows Crescent and Court and maintains the EPR Finglas Village Stop location. It arises from a proposal offered by DCC - made public as part of DCC Submission to the NSPC - to redevelop the Mellows Court apartments. Micro-Option 5 passes through the Finglas Garda Station carpark and runs adjacent to Ravens Court residential estate and repositions the Finglas Village Stop so that it is parallel, and not perpendicular to, Mellows Road. Both routes were explored and discounted prior to publishing the EPR in a previous Working Paper 1. However, following a recent more detailed technical review and additional information from DCC becoming available, improved routes have since been developed.

Micro-Option 4 has now been improved, delivering a better operational alignment than the EPR through Mellows Court and Crescent and building on the opportunity afforded by DCC's intention to redevelop the Court apartments complex.

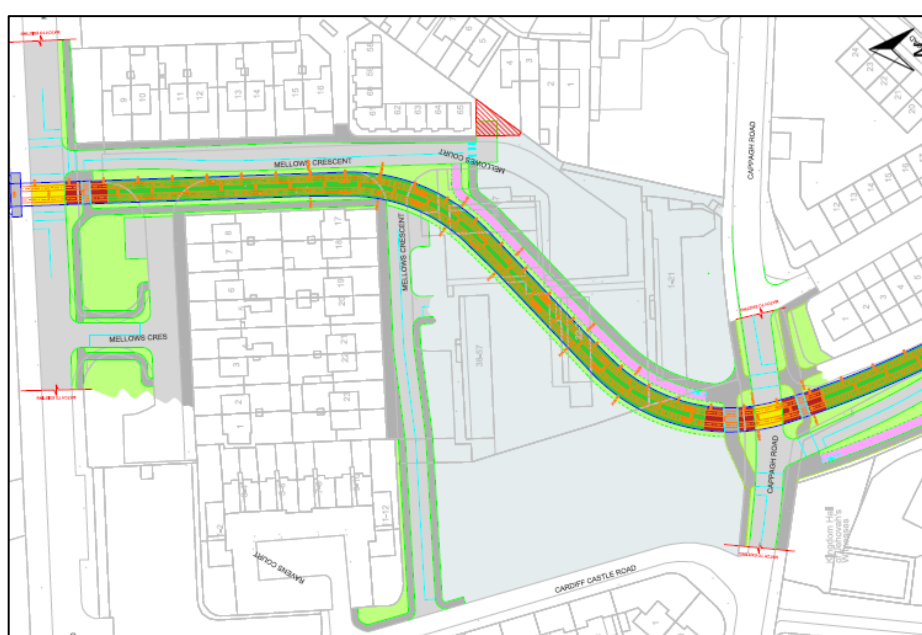


Figure 1 - Micro-Option 4 via Mellows Crescent and Court

Micro-Option 5 has also been optimised, with less of an impact on both the Garda station and Ravens Court when compared to the route initially considered, which - subject to positive engagement with An Garda Siochana (AGS) and residents of Ravens Court - may present a viable alternative to the EPR.

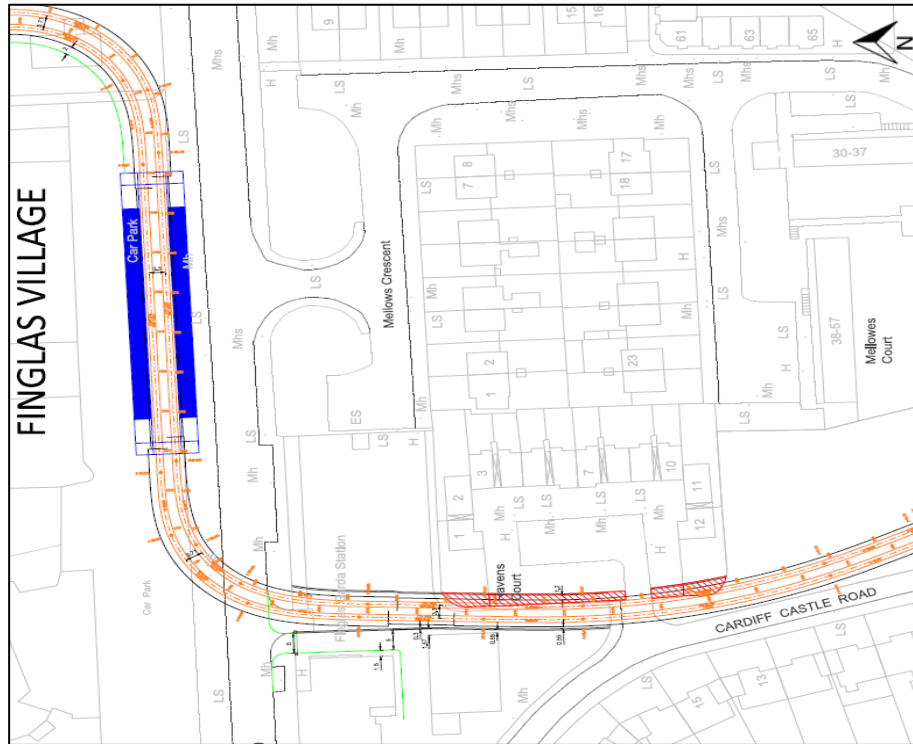


Figure 2 - Micro-Option 5 via the Garda Station Car Park

Improved Micro-Option 4, via a new alignment through Mellowes Court and Crescent, has the following additional benefits to the EPR:

- In terms of track alignment, the two sharp curves are replaced by much wider curves, thus reducing noise and operational constraints and overall length of the alignment.
- With the creation of separate road access points (3), the Luas corridor would have less interaction with residential streets and would cross a reduced number of roads. No vehicular Luas crossings would be necessary within Mellowes Crescent and Court.
- Depending on the boundary treatment, having the Luas corridor potentially fenced off either side would avoid opening the cul-de-sac and the use of Mellowes Crescent as a shortcut for pedestrians and cyclists.
- Access for cyclists and pedestrians would be co-located with the track alignment, enabling a continuous route across the full length of the scheme.

Improved Micro-Option 5, via the Garda Station and Ravens Court, has the following additional benefits to the EPR:

- The Luas Stop would be in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation and urban design and better access and visibility for Luas users.
- In terms of track alignment, the two sharp curves are located either side of the stop, optimising the clustering of tight bends with the road junction and stop, where the operational speed also needs to be low.

- c) The Luas corridor would have less interaction with residential streets and would cross a reduced number of roads.
- d) Access for cyclists and pedestrians would be co-located with the track alignment, enabling a continuous route across the full length of the scheme.

Following this initial analysis of the two micro-options it appears that both offer strengths and weaknesses, and both deliver a functional Luas infrastructure while minimising impacts to local residents and roads. Notwithstanding this, it is recommended to prioritise improved Micro-Option 5, via the Garda Station, as this option would offer a slightly reduced impact and a better stop location, while limiting disruption to local residents during construction and operation.

It is recommended that contact is made with An Garda Síochána (AGS) in the first instance to discuss Micro-Option 5, to understand the potential operational issues for the Garda station, both during construction and further to future operation of the Luas. Should the alternative be acceptable in principle to AGS, consultation will then be needed with the residents of Ravens Court. Failing this engagement with AGS, it is recommended that Micro-Option 4 be further investigated with DCC and local residents to explore potential for further improvements. For Micro-Option 4 to work, DCC and TII/NTA programmes of redevelopment/Luas construction becomes a critical factor in allowing the two schemes to proceed.

2 INTRODUCTION AND SCOPE

2.1 Background

Luas Finglas is the proposed extension to the Luas Green Line from the existing terminus at Broombridge to Charlestown, in the vicinity of the N2/M50 interchange.

A phase of Options Selection and Feasibility (Phase 1 of the National Transport Authority Guidelines) was concluded in January 2020 by TII, with the recommendation of an Emerging Preferred Route (EPR): Option 2A (see below).

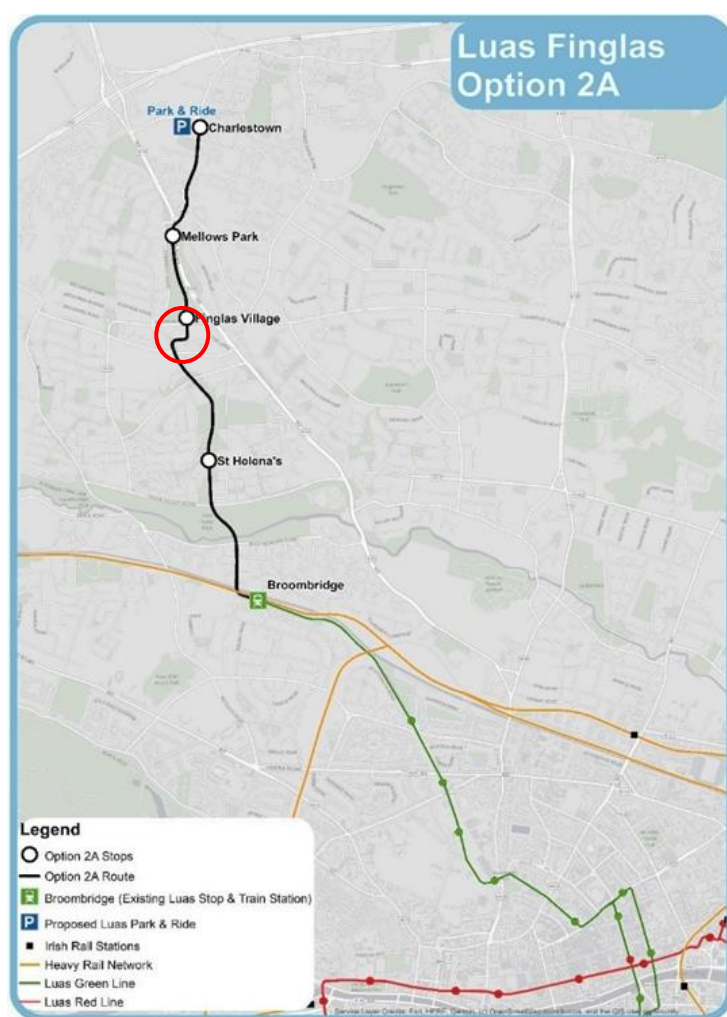


Figure 3 - Emerging Preferred Route for Luas Finglas, Option 2A

As part of Option 2A, approximately in the midpoint of the corridor, the line passes through the Mellows Crescent and Court estates with a sharp “S” combination of horizontal curves before crossing Mellows Road at a point some 40m west of the Finglas Fire Station. The area is circled in red in the Figure above.

The EPR was announced to the public in July 2020 and a Non-Statutory Public Consultation ran from July to September, with negative feedback received in relation to the Luas corridor in the Mellows Crescent and Court area.

Issues reported by residents included: elimination of the quiet cul-de-sac, noise and disruption during construction and operation, safety risk for both children and elderly residents, devaluation of homes, lack of accessibility for emergency services, reduction in parking, increase in congestion and visual impact. The residents also commented that the route should be via the Garda Station through the car park and then on to Mellows Park.

2.2 Options Reviewed Prior to NSPC

Following the selection of the EPR, a further Working Paper (WP) called “*Mellows Micro-Options Working Paper*” was produced in May 2020, prior to launching the Non-Statutory Public Consultation (NSPC) for Luas Finglas EPR in July 2020.

That WP was developed to investigate other potential “micro-options” in the area of Mellows, in consideration of the potential impact on the local community. The report was focused on the section of the EPR between Cappagh Road and Mellows Road, given its sub-optimal track alignment and impacts on the local residential area (including Mellows Court and Mellows Crescent).

The scope of the first WP was to describe all reasonably feasible micro-options for the routing of Luas Finglas EPR from Cappagh Road to Mellows Road (an approximately 250m long section of the corridor, corresponding to approximately 6% of the whole route) and considering the impact and constraints en-route, while taking account of relevant operational factors.

The conclusions of the first WP were:

- the EPR alignment (called “Micro-Option 1”, left hand side in the figure below) was still considered a viable and beneficial option, and
- a second possible alignment through the area (“Micro-Option 5”, right hand side in the figure below) emerged as a technically feasible and beneficial alternative from several viewpoints.



Figure 4 - Micro-Option 1: Emerging Preferred Route (left) and Micro-Option 5 (right)

From that initial comparison analysis “Micro-Option 1” (the “EPR”), was favoured slightly better than “Micro-Option 5”, primarily due to the negative impact on the operation of the Garda Station as the route impacted both an existing building and the main entrance to the station.

All other micro-options analysed in the first paper were deemed not to deliver better results than the EPR and were therefore abandoned at that early stage.



Figure 5 - Emerging Preferred Route

Among those there was “Micro-Option 4” (left), which showed the alignment veering right from Patrickswell Place, across Cappagh Road, avoiding the corner of the Focus Ireland housing development but cutting diagonally through the southern, middle and eastern blocks of Mellowes Court housing complex. It then continued along Mellowes Court Road – commandeering the green verge - across Mellowes Road to the stop adjacent to the youth centre, perpendicular to Mellowes Road.

The significant amount of property-take within Mellowes Court, comprising of demolition of the southern and eastern blocks of DCC housing complex, combined with property take at Finglas Youth Centre carpark (approx. 15m wide strip) as well as demolition and property take at DCC Municipal Depot and adjacent Lodge building, made this option worth considering only in the context of the regeneration and reconstruction of the whole area. It was therefore abandoned at that stage.

2.3 Outcome of the NSPC

The NSPC on Luas Finglas ran from the 28th July 2020 to the 17th September 2020, for approximately 6 weeks. During this consultation period the Mellowes area was given particular attention, due to the significant number of submissions and concerns from the local residents and public representatives. During this process, TII had several phone conversations with the residents and one Microsoft Teams presentation event. TII was also invited to a public meeting organised by the local residents in Mellowes, with the three local TDs in attendance, on the night of the 10th of September 2020 in the Finglas Resource Centre. Due to the Covid-19 pandemic and to adhere with the Government’s health guidelines, only 20 people in total attended, with social distancing in place and face masks used.

While the final NSPC report is being finalised, it can certainly be anticipated that a very strong and consistent local opposition emerged to the proposed scheme running through Mellowes Crescent, and this was evident in all the forms of engagement that TII undertook during the 6 weeks NSPC process. Following a request from the local residents, TII also agreed to extend the consultation deadline to the end of September for the Mellowes residents only.

Concerns raised focused on visual impact, noise and environmental impacts in general, safety risks, parking loss, loss of a calm and secluded amenity, destruction of the local community and anticipated anti-social behaviour.

Another point of concern emerging from the NSPC was in relation to the apparent lack of continuity of the cycle track from the Mellows Park to the Cappagh Road, across Mellows Road. This was highlighted by members of the public, cycling groups like Dublin Cycling Campaign, and by Dublin City Council.

As part of the NSPC, Dublin City Council expressed their desire to engage with TII/NTA to explore Luas options offered by their intention to re-develop the Mellows Court elderly residences, which included opening up boundaries of the current estate, and the potential provision of cycle track continuity through the area.

An extract of DCC submission is reported below:

Map 11: Mellows Court

DCC has prepared a feasibility study of Mellows Court to explore options for redevelopment of the senior citizen complex. This can be made available to TII.

The proposal is to open up the boundary between the existing senior citizen complex and the open space to the west for the Luas and pedestrians only. As above, given the number of local schools in the area, DCC would like to see the off-road cycle path continued here, as the road does not link through north to south.

2.4 Scope of this Report

Following the conclusions of the first WP, the outcomes of the NSPC for the Mellows Area with the strong local opposition to routing the corridor through Mellows Crescent and Court estates, and new information in relation to Mellows Court redevelopment, the scope of this report is to re-assess two of the previous options including:

1. Micro-Option 4: routing the alignment through a possible redevelopment of Mellows Court and Mellows Crescent, with a different configuration and road access arrangement to the EPR.
2. Micro-Option 5: routing the alignment through the Garda Station car park, past Raven's Court Estate to the DCC municipal parking area.

This report assesses those two options with respect to their impacts and technical feasibility. Both are subject to an agreement being reached with the main affected stakeholders.

In addition, following the NSPC, the scheme will now include the provision of a continuous, mostly off-road, cycle and walking facilities along the Luas alignment as part of both options.

The following constraints and design considerations are reviewed in more detail in Section 3 of this report:

- Cardiff Castle Road Public Open Space
- Ravens Court residential estate
- Mellows Crescent and Court estates
- Finglas Garda Station

-
- Mellowes Road Stop
 - Continuity of the cycle and walking track

A summary of the assessment undertaken for the two options is provided in Section 4 and 5 of this report.

Recommendations are then presented in Section 6 of this report.

3 CONSTRAINTS AND DESIGN CONSIDERATIONS

This section of the report examines the constraints and design considerations along the route of the two proposed Micro-Options 4 and 5 and outlines the differences with respect to the EPR.

3.1 Cardiff Castle Road - Public Open Space

The green area adjacent to Cardiff Castle Road comprises of public open space and clusters of semi mature trees. It provides an attractive amenity for local residents, dog walkers and local children. This green area is impacted by both the EPR, by Micro-Option 5 and by the proposed DCC redevelopment of Mellows Court.



Figure 6 - Cardiff Castle Public Open Space (Google)

3.2 Ravens Court Estate

Ravens Court is a housing estate comprising of 12 houses, with front gardens and a walled forecourt, which provides a degree of privacy for the residents. Ravens Court estate is not impacted by the EPR and Micro-Option 4, but it is impacted by Micro-Option 5.



Figure 7 - View from Cardiff Castle Road of Ravens Court Estate (Google)



Figure 8 - Aerial view of Ravens Court Estate (Google)

3.3 Mellows Court and Crescent

Mellows Court comprises of a series of modest, two-storey housing blocks in a mature courtyard setting. Amongst the local authority units, the complex contains sheltered housing and premises for the Finglas Suicide Network Centre, along with an associated community café. The development dates from the 1980s and has an established community of residents and well-used gardens and communal outdoor spaces. Mellows Crescent - which connects Mellows Court to Mellows Road - comprises of 24 private semi-detached houses served by a small network of narrow residential access roads with attractive green verges and lines of trees.

Mellows Court and Crescent is not impacted by Micro Option 5 but is impacted by the EPR and by Micro Option 4.



Figure 9 - Mellows Court (left) and Mellows Crescent (right)

3.4 Finglas Garda Station

Finglas Garda Station is the main Garda station for Northwest Dublin, situated on Mellows Road. Following a desk-based review, the following is reported:

- The 2009 built 1,700 m² An Garda Síochána station in Finglas replaced the previous 75-year old station.
- The upgraded station was provided to meet the operational needs of both the public and An Garda Síochána, combining secure areas for cells, interview rooms, evidence storage along with the office and welfare accommodation needs of staff and public.
- The station has one gated road access only from Mellows Road. Approx. 40 car park spaces are provided to the side of the station, with another approx. 6 spaces to the rear.
- Communications infrastructure includes a 50m high mast within the secure grounds.
- Operational security is paramount, and the building contains a number of custodial cells as well as secure Garda parking.

The Garda Station land is not impacted by the EPR and Micro-Option 4, but it is impacted by Micro-Option 5.



Figure 10 - View from Mellows Road of Finglas Garda Station (Google)

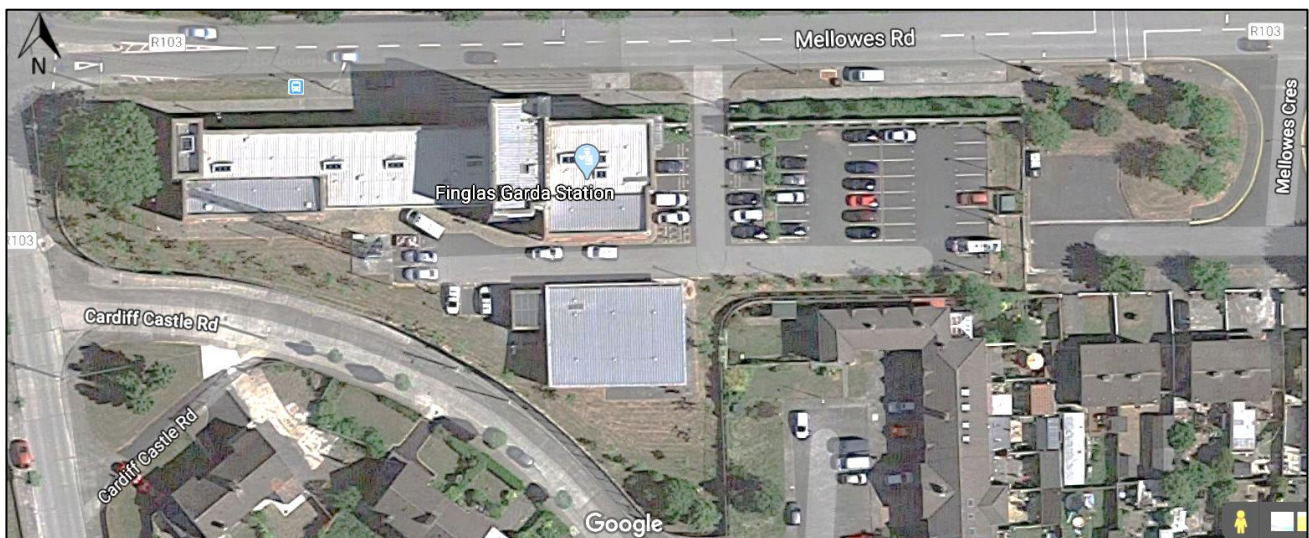


Figure 11 – Aerial View of Finglas Garda Station (Google)

3.5 Mellowes Road Stop

Finglas Village has been designated a Key District Centre (KDC) in the Dublin City Development Plan 2016-2022. As part of the EPR, it is proposed to locate the main Luas stop for Finglas village on Mellowes Road, adjacent to community facilities which comprise of a creche, a youth resource centre and a sports centre.

Several all-weather sports pitches are located to the rear of the community buildings, along with a children's playground and links to Mellowes Park. Dublin City Council has a municipal storage depot adjacent to the site and Finglas Fire Station is nearby. A private bungalow dwelling, known as the Lodge, is also located on the site. The area to the front of the community buildings, facing out onto Mellowes Road, is used extensively for carparking, although some limited space has been set aside for tree planting and seating benches. Bus routes 17a (from Blanchardstown to Howth Junction), 40b (Parnell Street to Swords) and 40d (Parnell Street to Tyrellstown) all serve Mellowes Road.



Figure 12 - Mellowes Road Community Facilities and Carparking Area (Google)

In all options it is proposed to demolish the municipal depot and the Lodge bungalow, either to make way for the alignment, or to create enough space around the stop, which would otherwise be unattractive and functionally sub-standard.

In Micro-Option 5, the Luas Stop would be in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation, multi-modal interchange and urban design. In the EPR and Micro-Option 4 the Luas Stop would be perpendicular to Mellowes Road, in a less prominent location, and only accessible from one point along Mellowes Road.

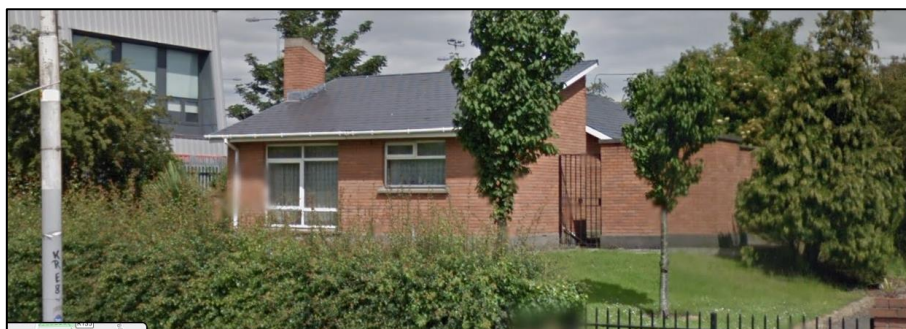


Figure 13 - The Lodge Bungalow on Mellowes Road (Google)

4 MICRO-OPTION 4 (MELLOWES COURT REDEVELOPMENT)

This section of the report describes the further developments made on Micro-Option 4 since the EPR was published.

4.1 Original Micro-Option 4

The following figure shows Micro-Option 4 developed as part of the Micro-Options WP 1.



Figure 14 - Original Micro-Option 4 (Initial Design)

The initial Micro-Option 4 route impacted several DCC-owned residential buildings in the Mellowes Court area. The provision of a continuous segregated cycle track was not considered as part of that study. Following stakeholder feedback during NSPC from Dublin City Council, Fingal County Council, Dublin Cycling Campaign and the local community, a continuous cycle and walkway is now planned to be included as part of the scheme.

4.2 Improved Micro-Option 4

Micro-Option 4 has been further analysed and refined as described below in order to minimise the impacts, address some of the residents' concerns in relation to the EPR and taking into consideration the opportunity afforded by DCC's intention to redevelop the Court site, while also having regard to the operational efficiency of the Luas line and other surrounding constraints.

The revised design option is presented in Figure 15.



Figure 15 - Improved Micro-Option 4 (Refined Concept Design for the Luas Corridor)

4.3 Cappagh Road Crossing

The Luas alignment crosses Cappagh Road in a north-south direction. To accommodate Luas and traffic movements, it is proposed to provide a traffic signal junction at this location. The junction will comprise of three arms: Cappagh Road arms in the west and east and Patrickswell Place arm in the south. The junction will include controlled pedestrian crossings on all carriageway arms and uncontrolled crossings on the Luas line, linking the footways in the vicinity and also the proposed cycling and pedestrian facilities provided as part of the Luas project.

South of Cappagh Road, the segregated cycle track and footway is proposed on the western side of the Luas and north of Cappagh Road, the segregated cycle track and footway is proposed on the eastern side of the Luas. Therefore, the Cappagh Road crossing provides an opportunity for cyclists and pedestrians to cross over and continue on their journey. However, further design development will seek to remove the changeover of cyclist facilities should Micro-Option 4 be progressed.

4.4 Mellows Court DCC Redevelopment

During discussions with TII, DCC confirmed that there are plans to demolish all four of the existing buildings currently located within Mellows Crescent. The intention will be to rebuild the development using the existing site and the extents of the adjacent Cardiff Castle Public Open Space.

Complementing the Luas route via Mellowes Court, DCC has produced a concept plan showing the reconfiguration of the new Mellowes Court in the land adjacent to the proposed Luas corridor. Figure 16 presents the concept plan produced by DCC in April 2020 and issued to TII in December 2020 for information. This plan is currently being revisited and updated by DCC after agreement in principle with TII on the refined Luas corridor presented in Figure 15. Micro-Option 4 builds on DCC's proposal which seeks to function well for the Luas and for the residents of Mellowes Court and Crescent.



Figure 16 - DCC's Proposed Concept Plan for Mellowes Crescent Plans (DCC Option B-Option 1)

4.5 Mellowes Court Reconfiguration

To implement Micro-Option 4, reconfiguration of the site - in terms of building siting and access arrangements - will be necessary to ensure that the function and the safe operation of the residential estate continues.

In Micro-Option 4, at least three of the four existing residential property blocks to the south of the estate are directly affected by the Luas alignment (Reference No. 4 in Figure 17). However, as discussed in Section 4.4, DCC is proposing to redevelop the entire area within Mellowes Court, in line with the Luas, including the demolition and reconstruction of the four existing housing blocks.

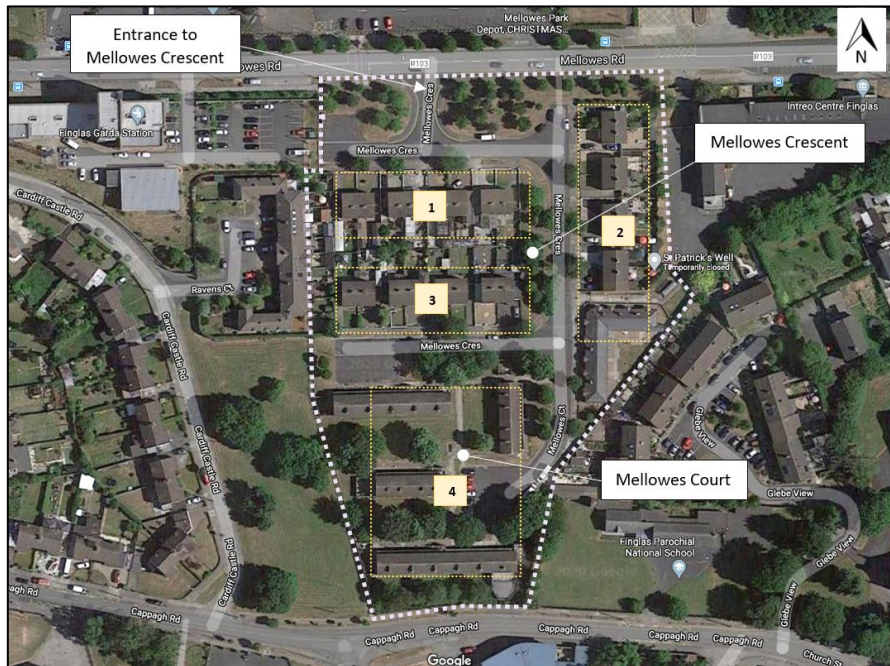


Figure 17 - Reference to Current Blocks of Properties in Mellows Crescent and Court

4.6 New Roads and Accesses Configuration

Mellows Crescent currently consists of one egress located to the north of the residential estate, off Mellows Road, as shown on Figure 17. This egress provides access to all of the property blocks on the site at present (references 1-4 in Figure 17).

With the provision of the Luas alignment via Mellows Crescent as per Figure 15, residents using the existing access and internal road system would be required to cross the Luas line once if accessing Block Reference No.2 and at least twice if they were to access Block Reference No. 3 and the redeveloped block No. 4.

To mitigate any potential risks associated with Mellows Crescent residents and traffic crossing the Luas line in an uncontrolled movement, it is proposed to change the function of the Mellows Crescent and Court estate into three individual cul-de-sacs to safely manage the internal operation of the area. The following interventions are proposed:

- Access to Block Reference No. 1

The existing egress off Mellows Road will be retained to access the properties 1-8. To prevent uncontrolled traffic movements across the Luas line, new kerbing will be provided adjacent to No. 8 to create a cul-de-sac, with the provision of a new turning point for vehicles. The proposed arrangement is shown in Figure 18. These works also provide the opportunity to reduce the radii at the entrance to the estate, resulting in a reduced crossing width for pedestrians on Mellows Road.

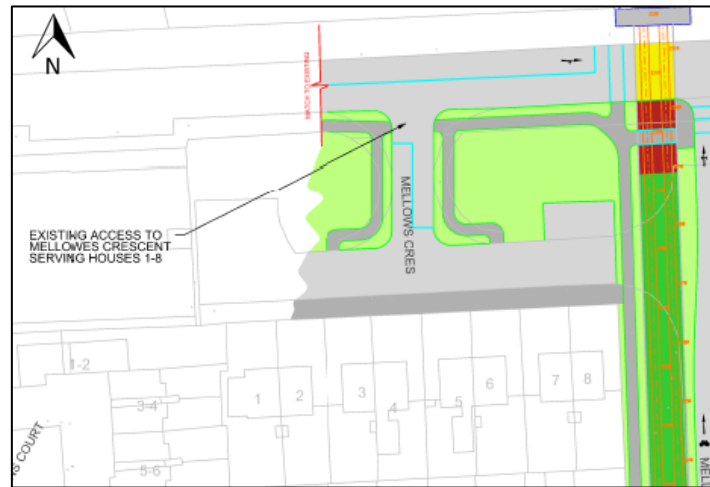


Figure 18 - Access to Properties 1-8

- Access to Block Reference No. 2

A new egress point is proposed from Mellowes Road to access a second cul-de-sac consisting of properties 9-16 and 58-65, as shown in Figure 19. The new egress will form part of a new three-arm traffic signal-controlled junction on Mellowes Road. The operation of the new junction will also include controlled Luas and pedestrian movements.



Figure 19 - Access to Properties 9-16 and 58-65

- Access to Block Reference No. 3 and 4

The third cul-de-sac will be provided via a new access point on Cardiff Castle Road as shown in Figure 20.



Figure 20 - Access to Properties 17-24

Note that each of these proposed interventions will be subject to further analysis and design development.

4.7 Luas-Pedestrian-Cyclists Corridor

Provision for cyclists and pedestrians runs parallel to the Luas track through Mellows Crescent and Court, connecting Cappagh Road to Mellows Road and enabling continuous cycling and walking for the full extent of the Luas Finglas Scheme, as shown in Figure 21.



Figure 21 - Cyclist and Pedestrian Provision on Eastern Side of Luas

The section of route through Mellows Crescent and Court would be segregated and off-road until the facility interfaces with the newly formed cul-de-sac on the eastern side of the estate.

At this point, pedestrians will be given priority over traffic to cross the carriageway and continue on their journey using the existing footway in front of the properties on the eastern side. Cyclists will join the Mellows Crescent carriageway to continue their journey to Mellows Road. The cycle symbol to Diagram M116 should be specified on the pavement surface to advise motorists that cyclists will be sharing this space resulting in a low-speed cul-de-sac environment.

4.8 Finglas Village Stop

The stop configuration in Micro-Option 4 would be the same as the EPR. The alignment crosses perpendicular to Mellows Road and comes to a stop on the other side, adjacent to the community facilities on Mellows Road. Bus routes 17a, 40b and 40d serve Mellows Road, with nearby stops located to the front of the community centre.

5 MICRO-OPTION 5 (VIA THE GARDA STATION)

This section of the report describes the further developments made on Micro-Option 5 since the EPR was published.

5.1 Original Micro-Option 5

The following figure shows Micro-Option 5 developed as part of the Micro-Options WP 1.

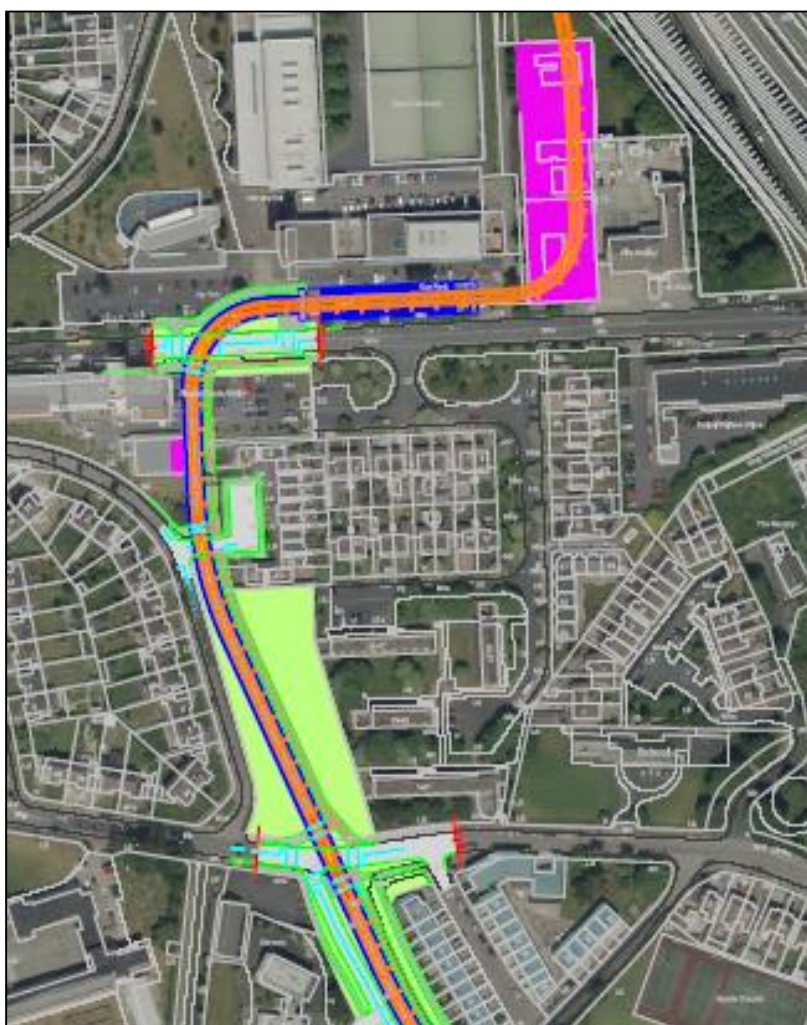


Figure 22 - Mellows Area Micro-Option 5 (Initial Design)

This route impacted both an existing building and the main entrance to the station. The provision of a continuous segregated cycle track was not considered as part of that study. Following stakeholder feedback during the NSPC from Dublin City Council, Fingal County Council, Dublin Cycling Campaign and the local community a continuous cycle and walkway is now planned to be included as part of the scheme.

5.2 Improved Micro-Option 5

Micro-option 5 has been further analysed and refined as described below in order to minimise the impacts, while having regard to the operational efficiency of the Garda Station and other surrounding constraints.

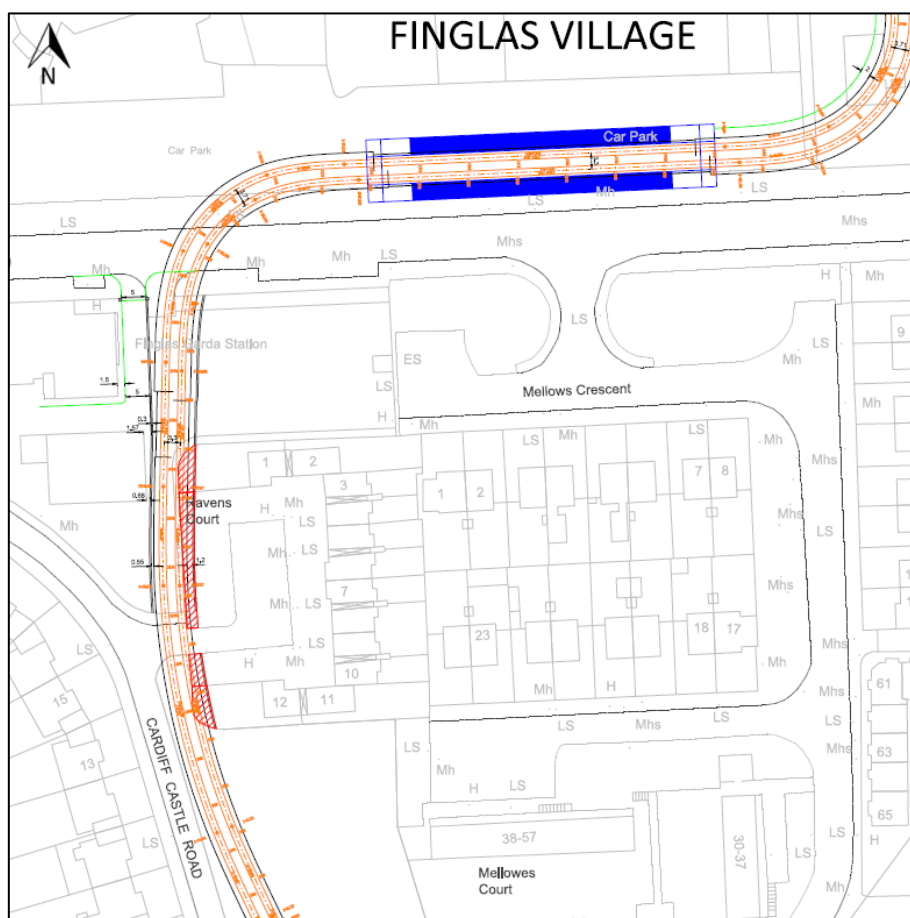


Figure 23 - Improved Micro-Option 5 (Refined Concept Design for the Luas Corridor)

5.3 Cardiff Castle Road - Public Open Space

Travelling north, the corridor proceeds along Patrickswell Place, across Cappagh Road, and continues through the public open space at Cardiff Castle Road, as per the EPR. At the point where the EPR turns east towards Mellows Crescent boundary, Micro-Option 5 keeps running north in a semi-straight alignment, passing Ravens Court estate entrance, towards Mellows Road.

5.4 Ravens Court Estate

At Ravens Court, the proposed optimised alignment would require taking a strip of land between 2m and 4m wide and approx. 60m long, which includes the common green with some small tree and shrub planting and two end-of-terrace private gardens (no.1 and no.12). The side garden of no.12 is expected to have an impact of approx. 4m (out of a current total length of approx. 14m) for the full width, while the side garden of no.1 is expected to have an impact of approx. 3.5m (out of approx. 14m) for the full width. The common estate green area is expected to be impacted for the full length, for a width of between 2 and 3m. There is scope to mitigate against this through landscape and boundary reconfiguration, such that these amenities can continue to be used by residents. The entrance gate and boundary will be reconstructed at an offset of between 2 and 3m, with attention to sight lines and safety considerations, as well as the privacy currently enjoyed by residents.

All dimensions are indicative at this early stage and subject to further design refinements and precise topographic survey.

The diagram is a technical site plan for a residential development. It features a proposed road layout with two main sections: a 3.3m wide section at the top and a 1.2m wide section at the bottom. The road is labeled 'RAVENS COURT' and 'CAV'. The plan includes property boundaries, existing structures, and a north arrow. The plan also shows a '1.2m' wide section and a '3.3m' wide section. The plan includes a north arrow and a scale bar.

This track alignment provides sufficient space to have an internal service/access road adjacent to the easterly façade of the main station building and to keep the entrance gate on Mellows Road in a similar position to the current one (shifted by approx. 5m to the west closer to the station building). The internal circulation road would be 5m wide, while a 1.5m wide internal footpath would also be provided, wrapping around the main station building.

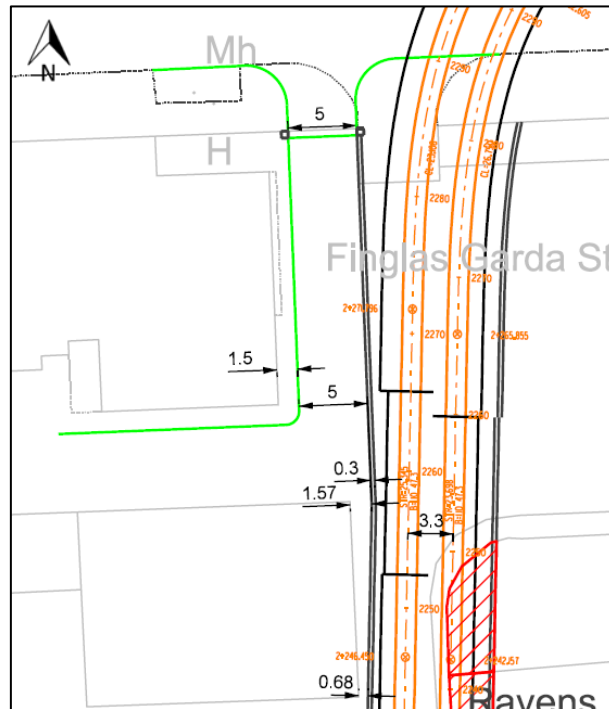


Figure 25 - Micro-Option 5 (Detail of the Garda Station and Distance from the Luas Boundary)

5.5.1 Internal arrangement of the Garda Station and its parking areas

The existing walled car park will be preserved as much as practicable but will be accessed off Mellows Road through a separate gate, some 15m east from the main station access gate, as the parking will be split from the main station by the Luas corridor.

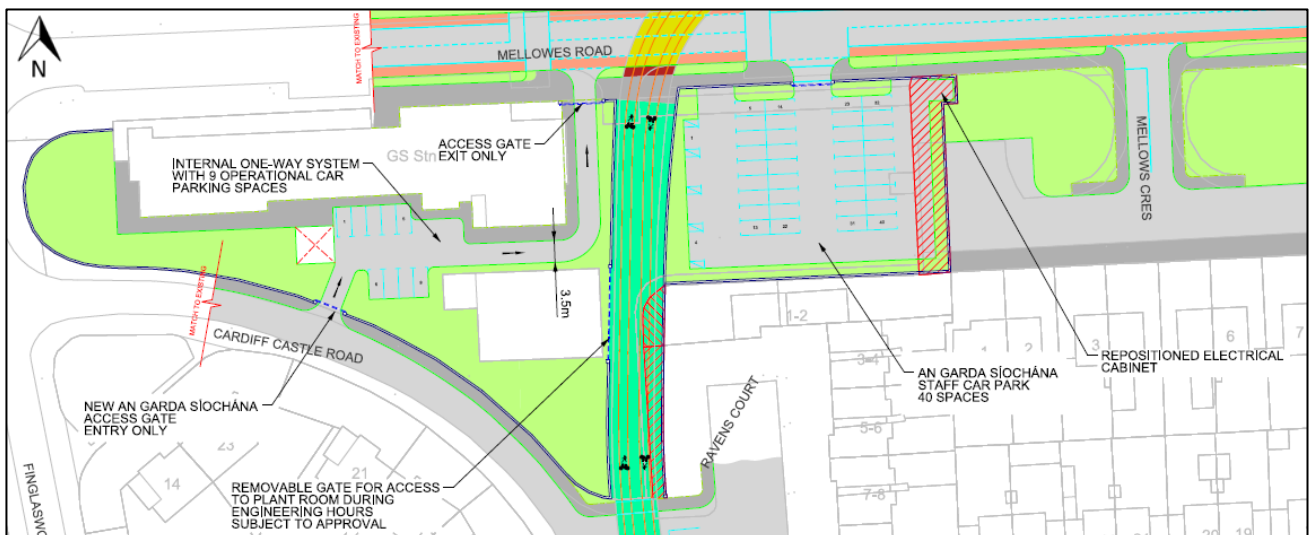


Figure 26 - Potential Reconfiguration of the Garda Station Enclosure

In this scenario, it is proposed that Garda personnel and employees parking in the main parking area will walk through the parking gate and enter the station via the public footpath leading to the main door on Mellows Road. A second option for additional security is the provision of controlled pedestrian gates either side of the Luas corridor to allow a direct link between the car park and the station via a dedicated at-grade pedestrian crossing over the Luas tracks.

In terms of the safety of this type of arrangement, trams will be running at 10kph through the corridor and visibility lines will be designed in the overall arrangement of the gates and fences to allow for a safe crossing at any time.

As part of this scheme, additional parking spaces could be built within the station grounds, in order to maximise the number of cars that can be parked within the main enclosure, for additional security. A second gate into the main station enclosure could also be provided to the rear, to allow ingress/egress from Cardiff Castle Road.

In the proposed configuration, 40 spaces are allocated to staff parking, as today, and 7 spaces are allocated to the proposed operational parking, within the enclosed station grounds.

All of these options will be subject to further discussions/changes and refinement following meetings with AGS to get a better understanding of the detailed operational requirements.

5.6 Mellowes Road Stop

The Micro-Option 5 corridor then proceeds across Mellowes Road while turning right onto the north side of the Road. Here the proposed stop is located in front of the sports centre, parallel to Mellowes Road.



Figure 27 - Micro-Option 5 (Visualisation of the Finglas Village Stop, on Mellowes Road)

This micro-option proposes to relocate the community centre carparking to the rear of the buildings, to facilitate the stop and to create a public space/interchange, facing on to Mellowes Road. It proposes a new entrance to the existing Garda carpark from Mellowes Road and an additional vehicular entrance from Cardiff Castle Road and may involve a realignment of the access to Ravens Court estate. In terms of track alignment, the two sharp curves are located either side of the stop, optimising the clustering of tight bends with road junction and stop, where the operational speed is reduced anyway.

The Luas Stop would be in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, multi-modal interchange and urban design, as well as improved intervisibility for users and improved links to Finglas Village, a designated Key District Centre (KDC).

5.7 Continuity of the Cycle Track

To provide continuity of the cycle track in the area, it is proposed to pass the Garda Station and Ravens Court in a shared configuration with the Luas. This shared configuration is considered necessary for the following reasons:

- As a result of space constraints, a separate cycle track cannot be provided without further impacting Ravens Court and the Garda station.
- If a cycle route is not provided, there is a high-risk that cyclists would still use the Luas corridor.

A shared configuration can be facilitated by the adoption of a special track system, where the traditional grooved rail is replaced with Vignole-type rails embedded in a road surface combined with additional rubber filler blocks. This flangeway-free road surface is suitable for both trams and cyclists in lightly trafficked or un-trafficked areas. Some examples are shown below for reference and a suitable detail would need to be further developed.

This solution will maximise the use of the most direct corridor between Mellowes Road and Cappagh Road, while limiting impacts on residents, delivering a shared off-road public transport/cyclists corridor, in a low speed section of the corridor where trams will operate at 10kph due to geometrical constraints and the presence of the road junction and the tram stop.

The proposed conceptual track configuration is shown below.



Figure 28 - Cycle-Friendly Track Configuration

Traffic on Mellowes Road could also be calmed with the use of a raised table at the track, pedestrian and cycle crossing points. The proposed cycle route through the Mellowes area is shown below.

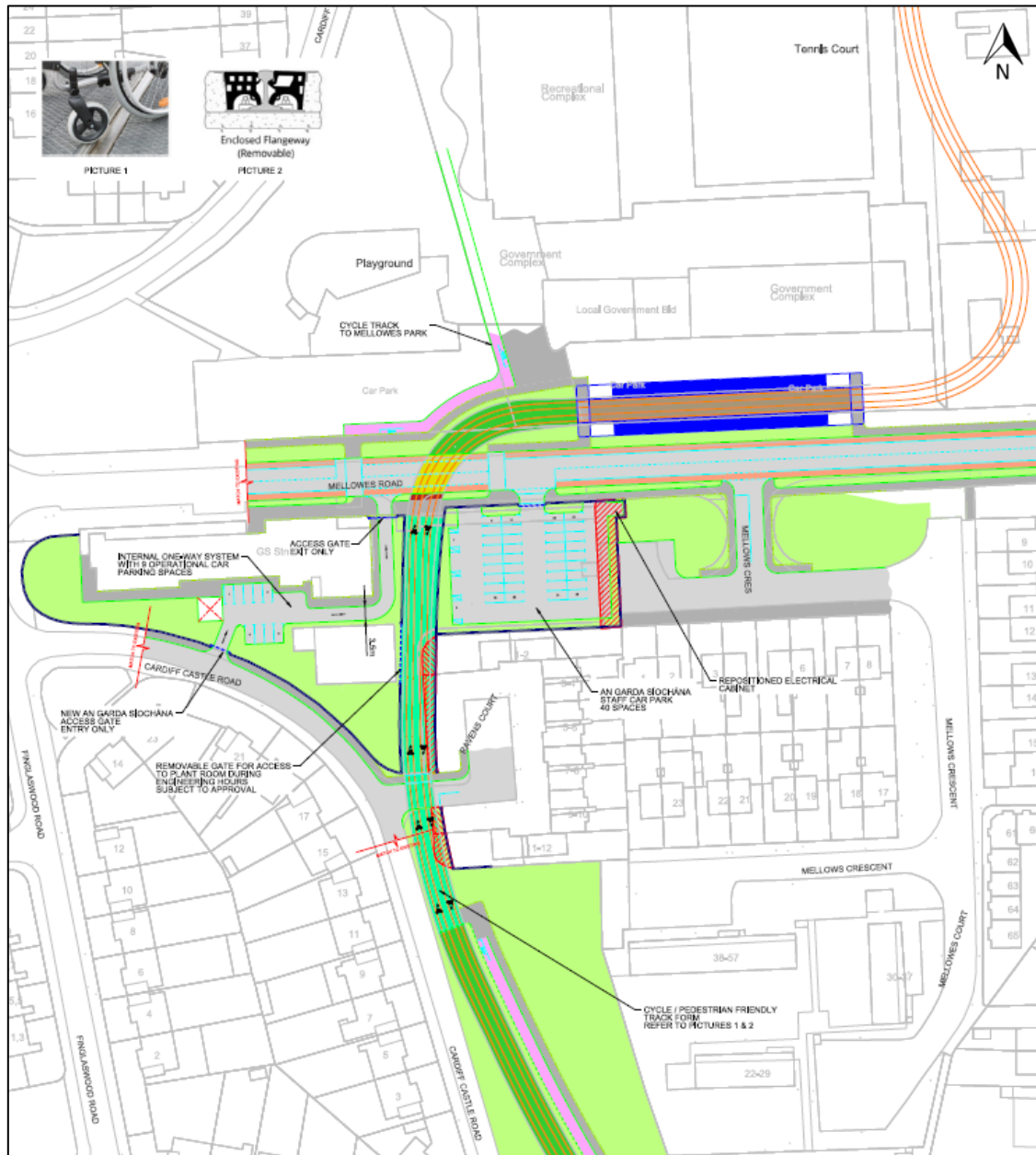


Figure 29 – Continuation of Cycle Track through Mellows Area

6 RECOMMENDATIONS

In consideration of the very strong objection to the route passing through Mellowes Crescent and Court estates by the local community, this report examined an alternative route to the EPR, which impacts both the Finglas Garda Station and the adjacent Ravens Court residential development. A similar alternative route was explored and discounted prior to publishing the EPR. However, following a recent more detailed technical review, an improved route has been developed.

This alternative route has less of an impact on the Garda Station in particular to the route initially considered and may present a viable alternative to the EPR, subject to consultation and agreement with An Garda Síochana (AGS) and the residents from Ravens Court.

The alternative route also has the following additional benefits to the EPR:

- a) The Luas Stop would be in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation and urban design.
- b) In terms of track alignment, the two sharp curves are located either side of the stop, optimising the clustering of tight bends with the road junction and stop, where the operational speed also needs to be low.
- c) The Luas corridor would have less interaction with residential streets and would cross a reduced number of roads.

TII recommends that Micro-Option 5 is taken forward for the following reasons:

1. Mellowes Crescent and Court estates are no longer impacted.
2. Impacts on local residents (Ravens Court) are limited and can be significantly mitigated.
3. Impacts on the Garda buildings are avoided.
4. Impacts on the Garda station operation have been minimised, essentially maintaining an equal number of parking spaces and maintaining an entrance onto Mellowes Road.
5. Continuation of the cycle track can be achieved, with a suitable cycle-friendly shared surface.
6. Micro-Option 5 is a more direct route than the EPR and the operational efficiency (combining curves with road junction and stops) is improved.
7. The overall noise impact is reduced, as residential receptors are far from the tight curves.
8. There is less impact on and interfaces with the local road network.
9. The Luas Stop is in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation and urban design.

It is recommended that contact is made with AGS in the first instance to discuss the alternative route and understand the potential operational issues for the Garda station, both during construction and future operation of the Luas. Should the alternative be acceptable in principle to AGS, consultation will then be needed with the residents from Ravens Court.

Note that Micro-Option 5 is compatible with a future DCC Redevelopment of Mellowes Court. However, unlike Micro-Option 4, it is not dependant on it.

Luas Finglas

Mellowes Micro – Options

Additional Information Note 1

LFIN-ADW-0007-AIN1

January 2021

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	APPENDIX A - DRAWINGS.....	2

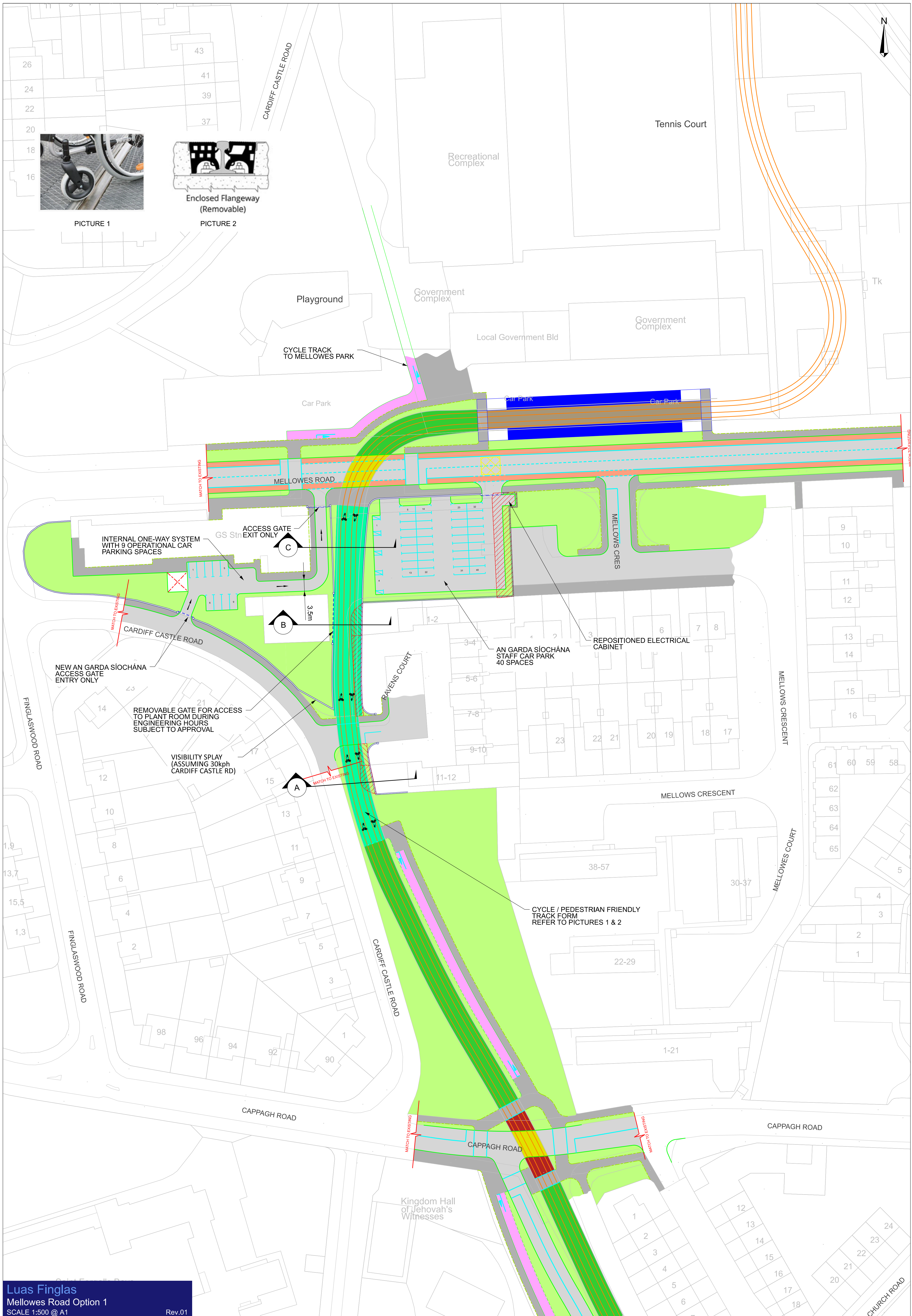
1 EXECUTIVE SUMMARY

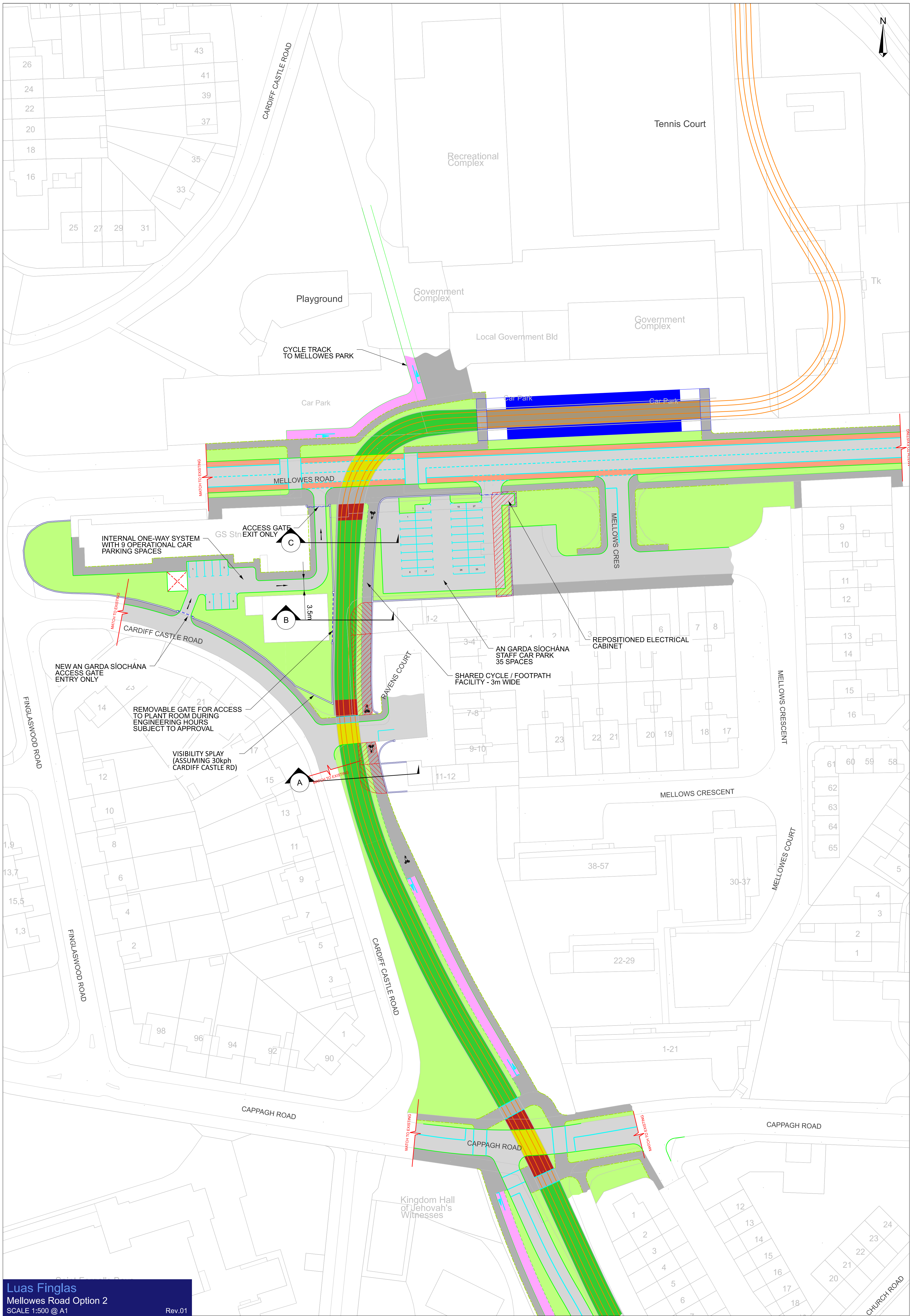
Following a request from NTA, additional drawings including detailed plans and cross sections have been prepared.

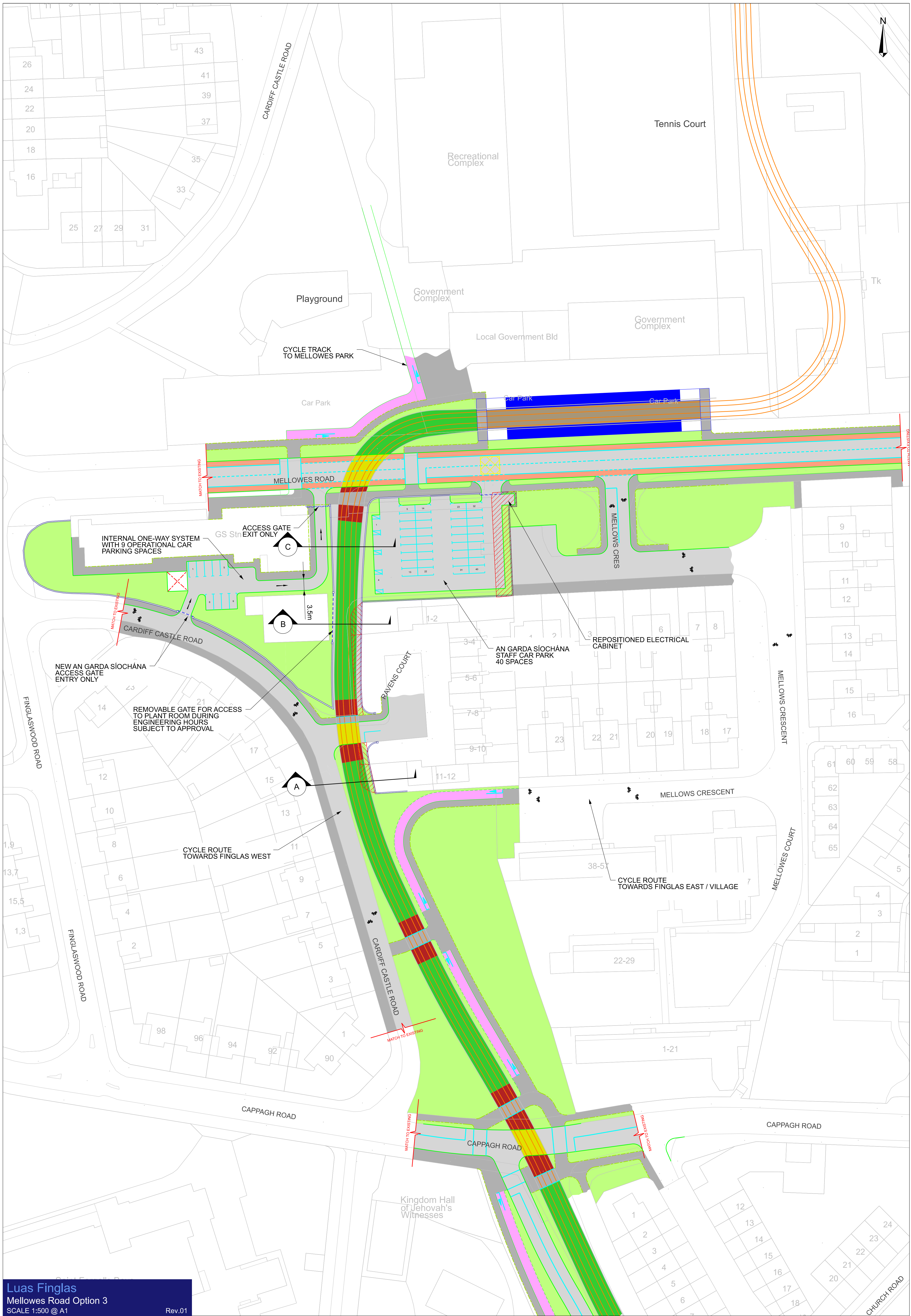
These are for NTA/TII information, to better inform possible options in advance of discussing with AGS.

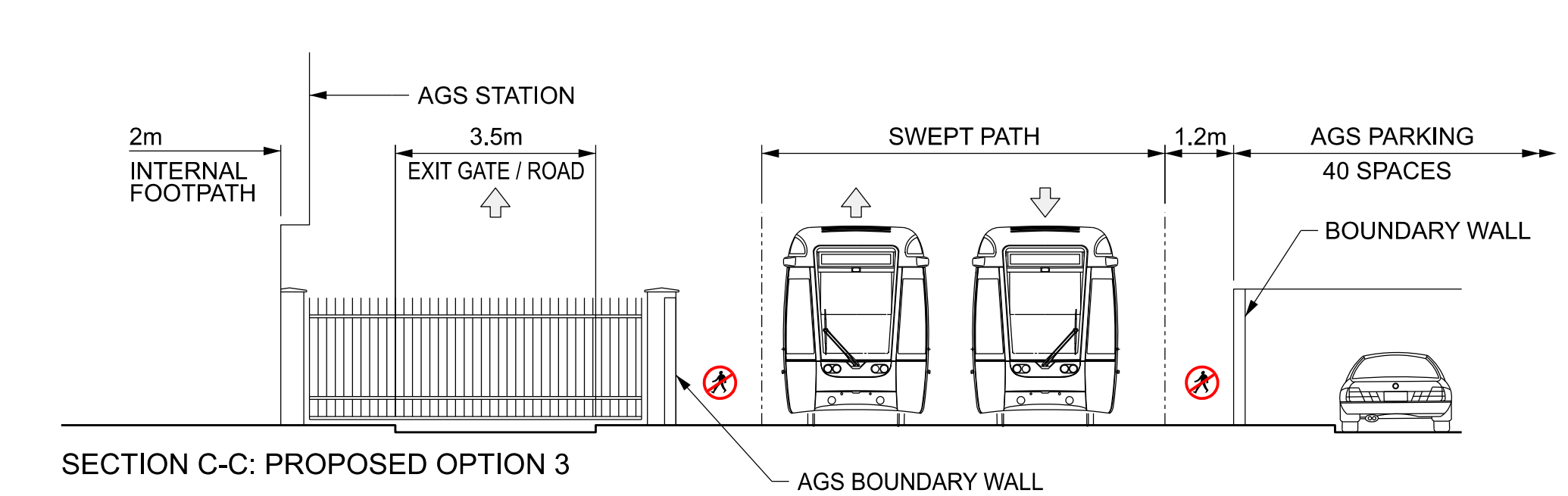
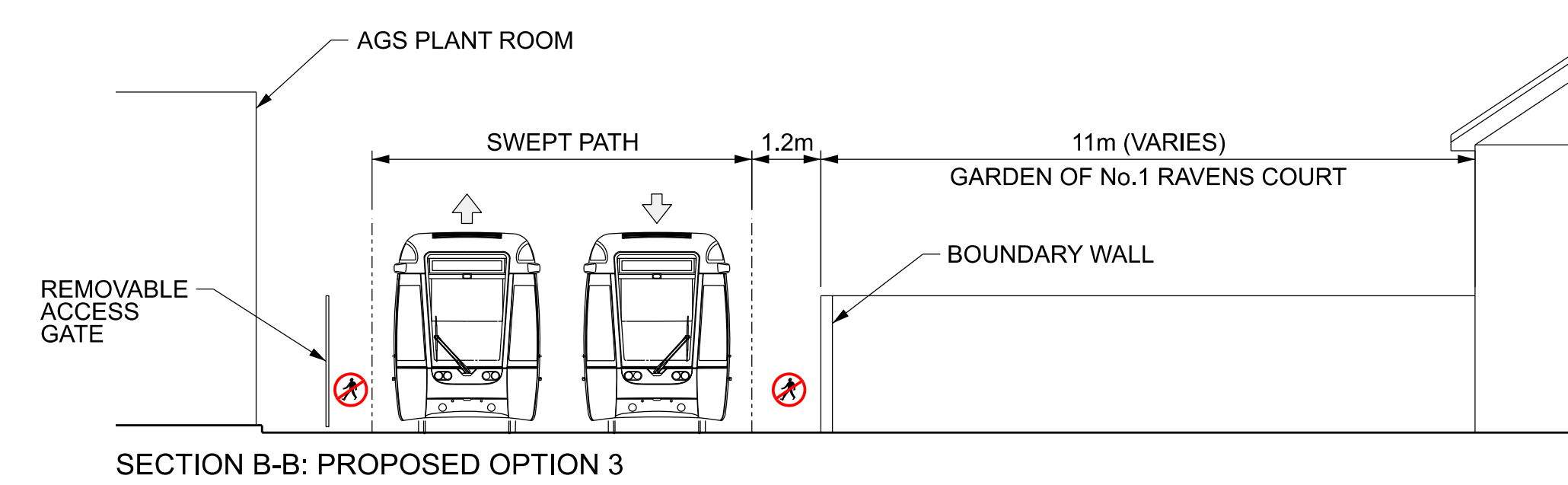
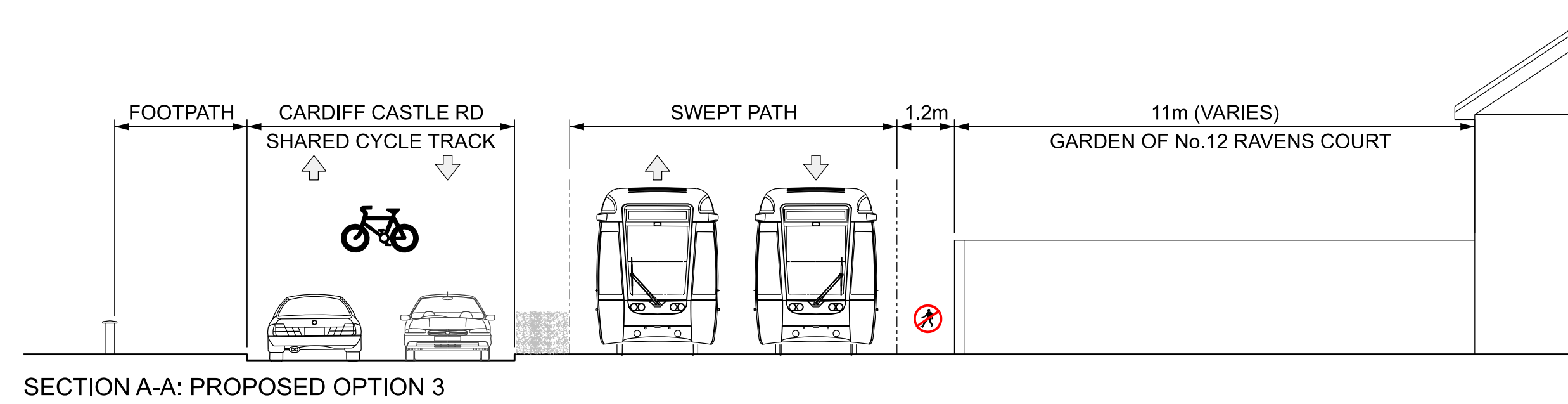
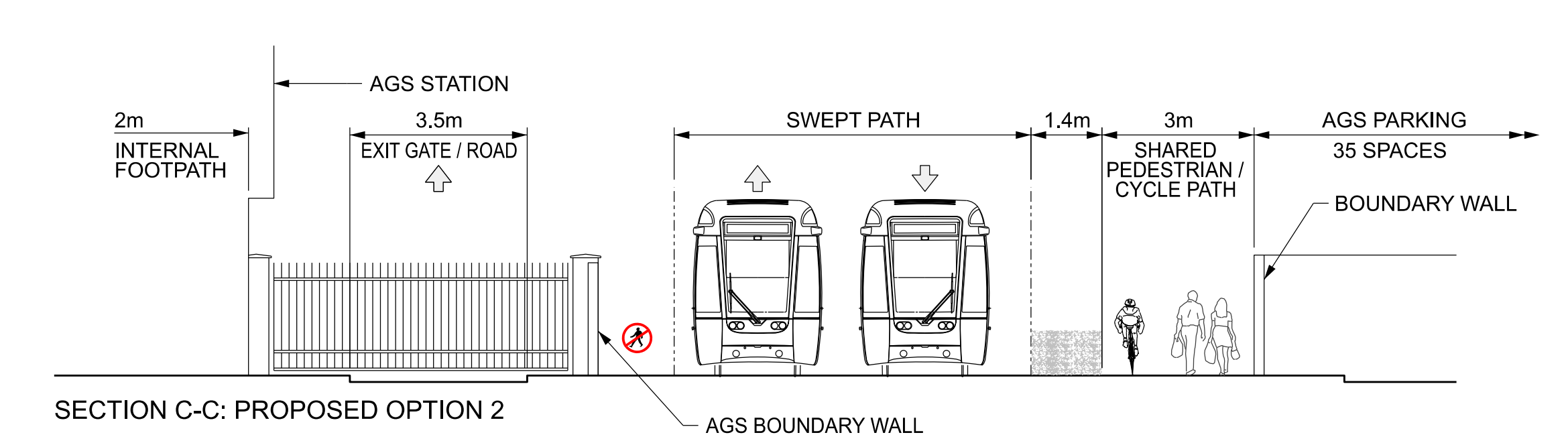
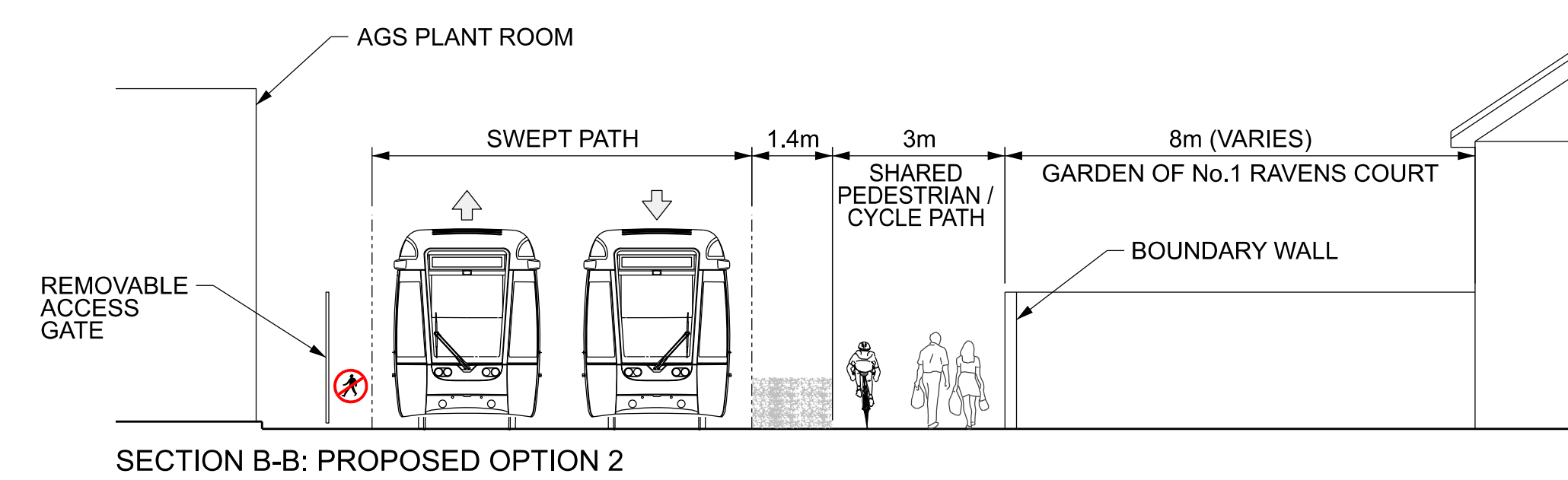
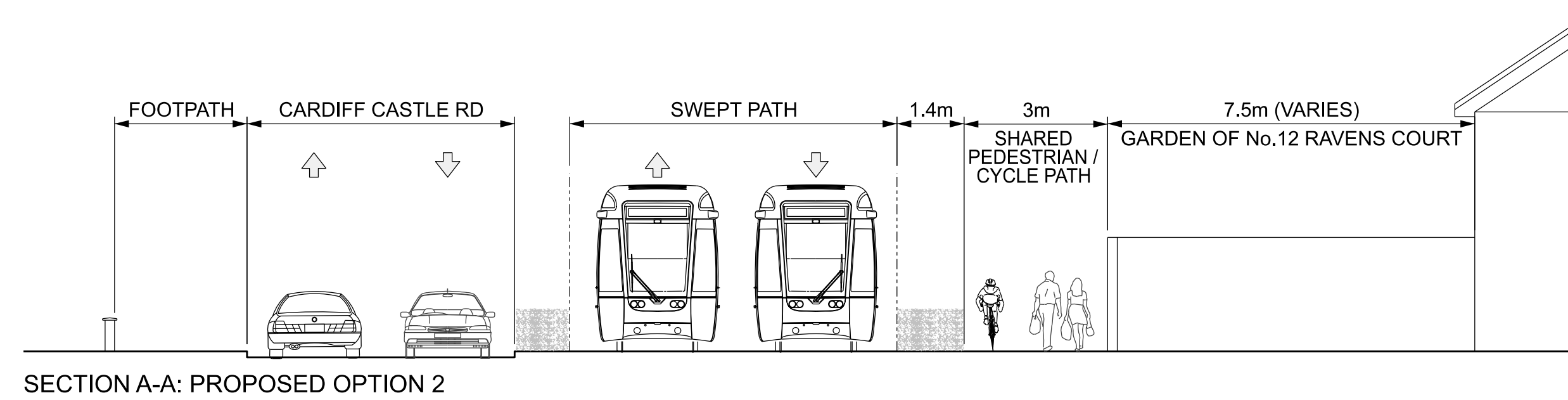
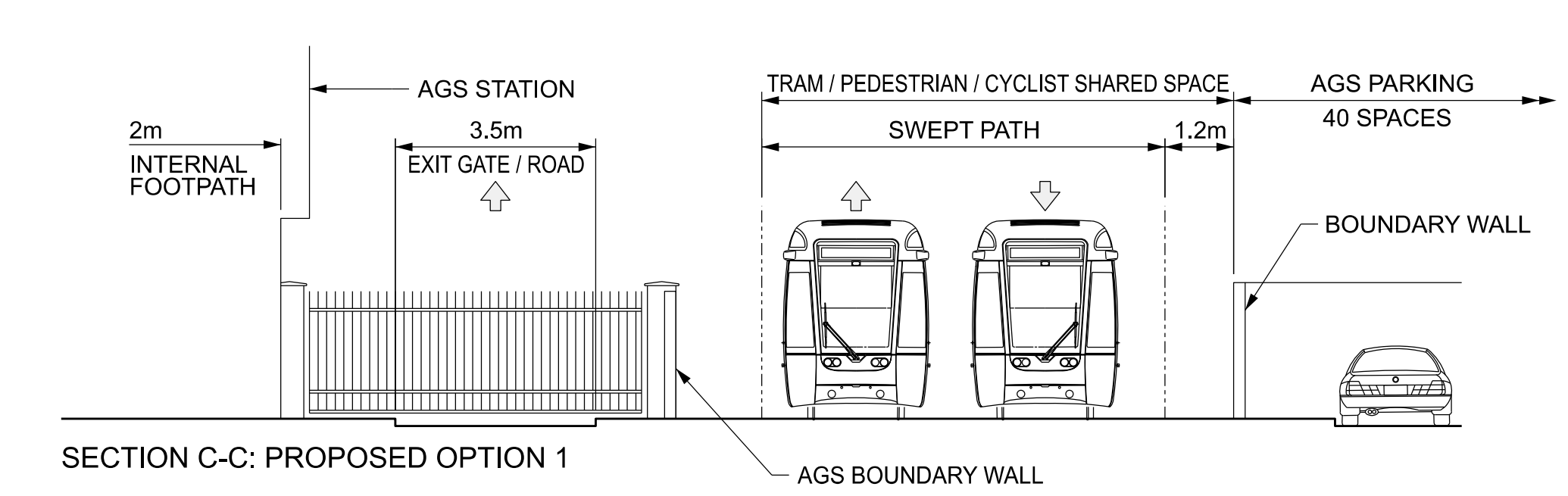
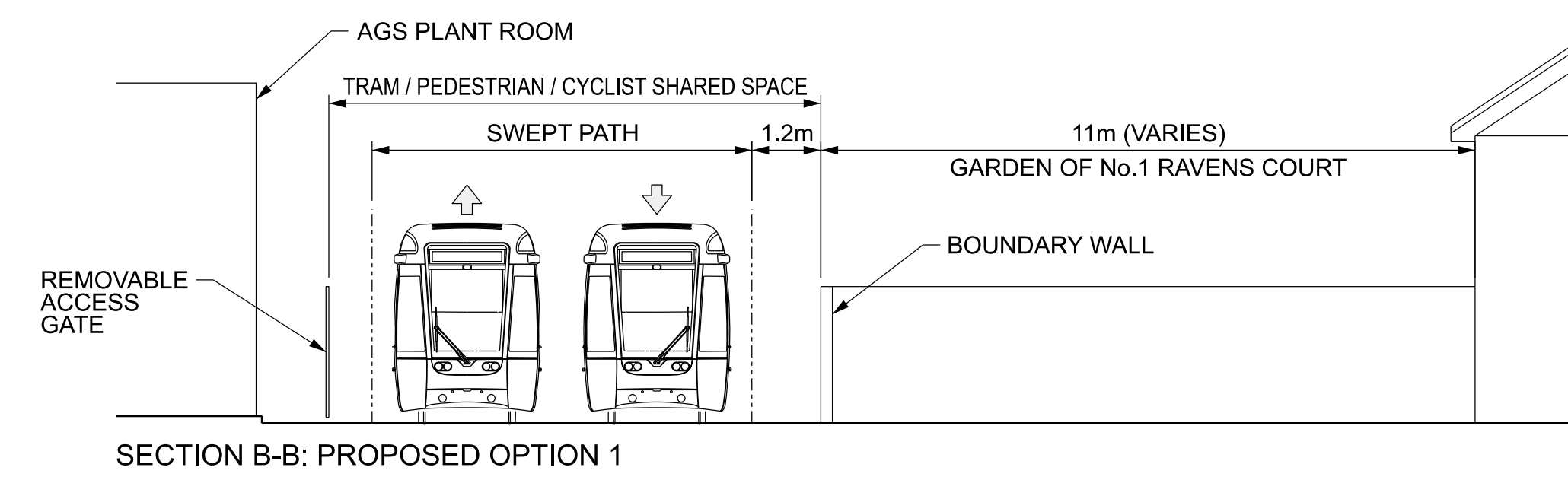
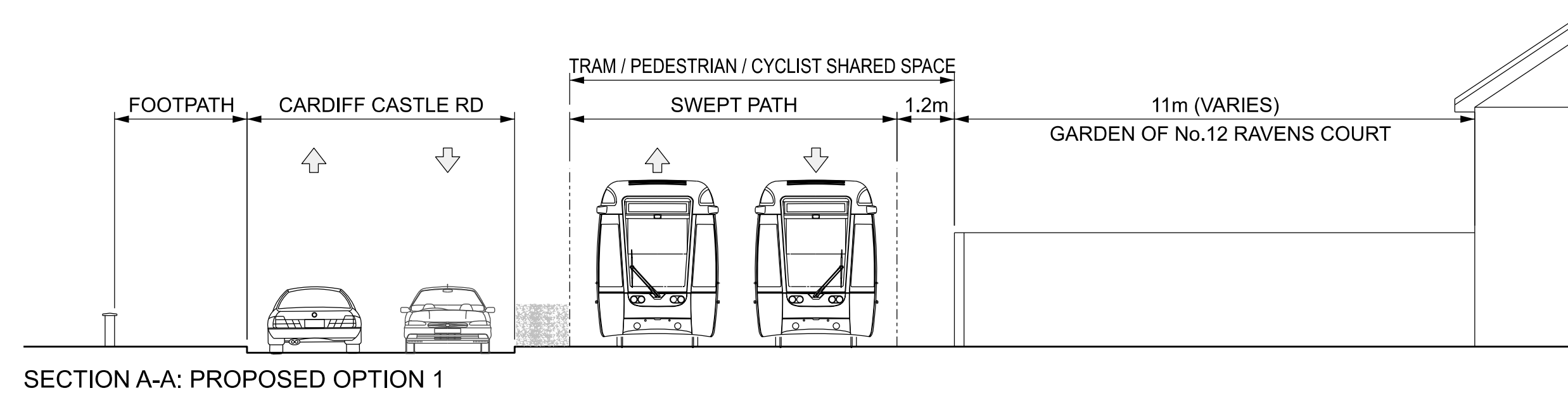
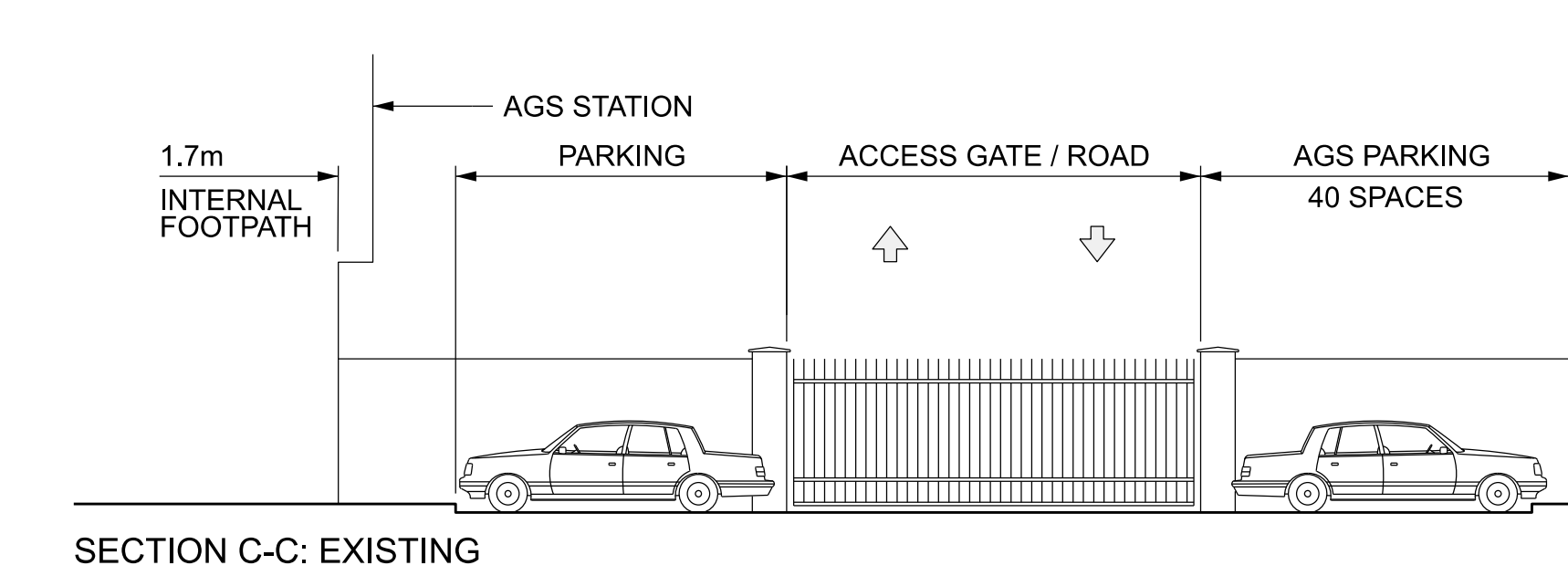
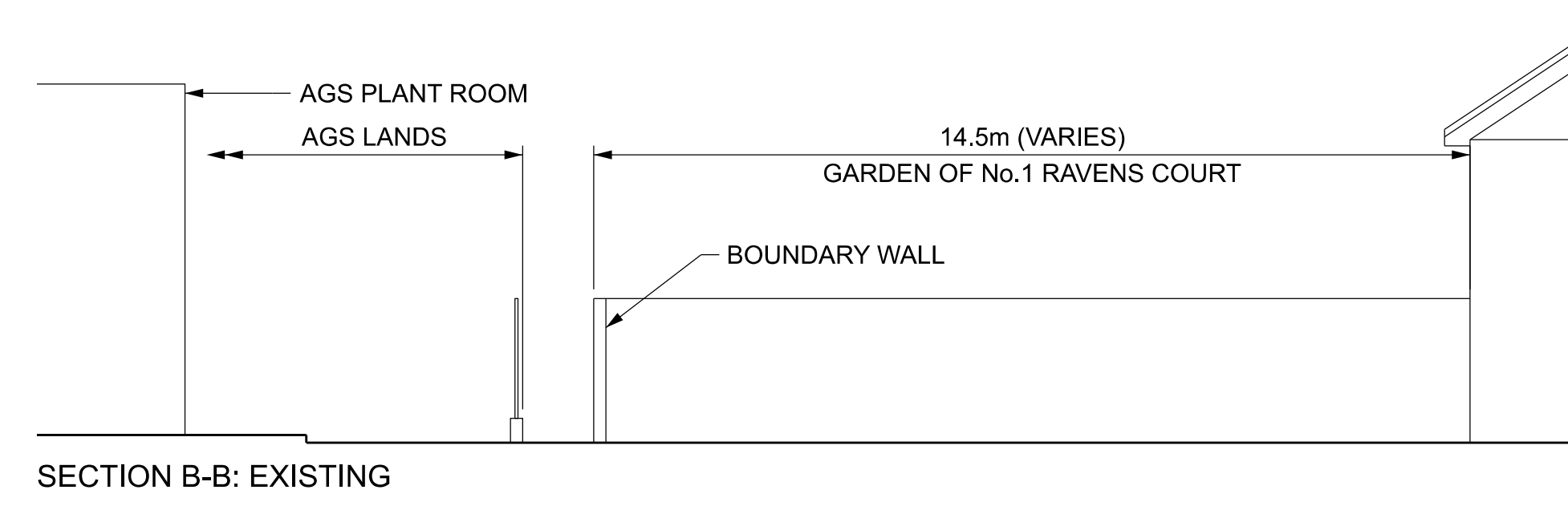
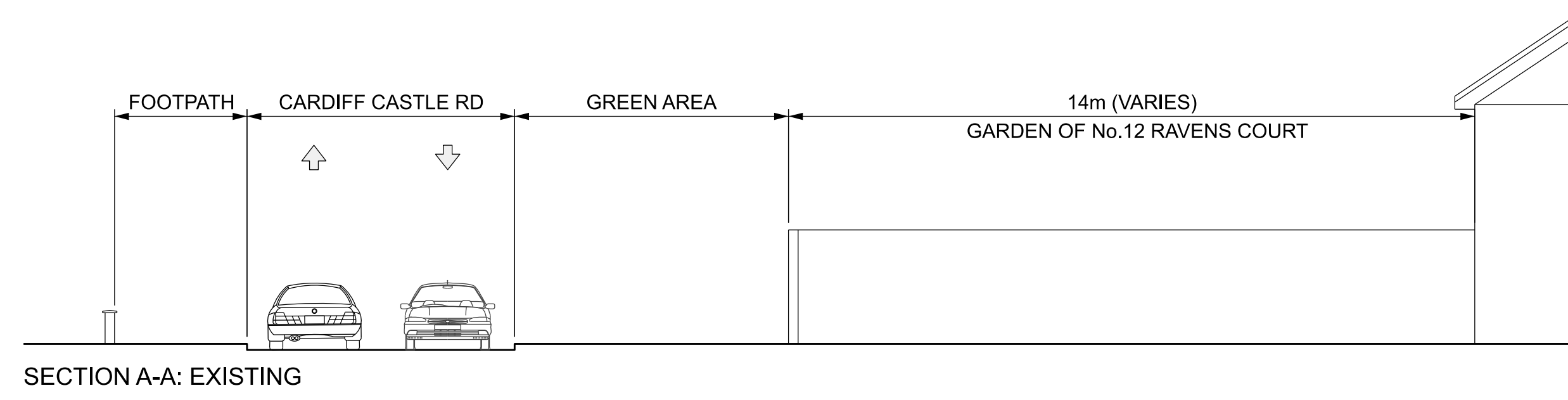
APPENDIX A - DRAWINGS

Sketch Reference	Content
Mellowes_Rd_Option_1_Rev1_20210128	Plan Option 1
Mellowes_Rd_Option_2_Rev1_20210128	Plan Option 2
Mellowes_Rd_Option_3_Rev1_20210128	Plan Option 3
Mellowes_Rd_Option_Cross Section_Rev1_20210128	Cross Sections









Luas Finglas

Mellowes Micro – Options

Additional Information Note 2

LFIN-ADW-0003-AIN2

July 2021

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1 EXECUTIVE SUMMARY

1.1 Introduction

This Additional Information Note (AIN) is an addendum to the LFIN-ADW-0003 Mellowes Micro Options Working Paper. The initial working paper outlined the proposed alternative micro-options for the Luas corridor in the vicinity of Mellowes Road as a result of very strong local opposition to the route passing through Mellowes Crescent and Court estates.

Transport Infrastructure Ireland (TII) recommended Micro Option 5 as an alternative route to the EPR, via the Garda Station due to the following identified benefits:

- a) The Luas Stop would be in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation, and urban design.
- b) In terms of track alignment, the two sharp curves are located either side of the stop, optimising the clustering of tight bends with the road junction and stop, where the operational speed also needs to be low.
- c) The Luas corridor would have less interaction with residential streets.

TII proposed that Micro Option 5 was taken forward for the following reasons:

1. Mellowes Crescent and Court estates are no longer impacted.
2. Impacts on local residents (Ravens Court) are limited and can be significantly mitigated.
3. Impacts on the Garda Station operation have been minimised, essentially maintaining an equal number of parking spaces and maintaining an entrance onto Mellowes Road.
4. Micro Option 5 is a more direct route than the EPR and the operational efficiency (combining curves with road junction and stops) is improved.
5. The overall noise impact is reduced, as residential receptors are far from the tight curves.
6. There is less impact on and interfaces with the local road network.
7. The Finglas Village Luas Stop is in a more prominent location on Mellowes Road, allowing for more integrated strategies for land-use, transportation, and urban design.

The initial working paper recommended that the next steps were to engage with An Garda Síochána (AGS) to discuss the alternative route and understand the potential operational issues for the Garda Station during construction and future operation of the Luas.

1.2 Recommendation

This AIN outlines the design and stakeholder-related developments to Micro Option 5 since the working paper and provides a high-level assessment of the weaknesses and strengths of the refined option in comparison to the EPR option and Micro Option 3 (DCC development option). Based on the outcome of the revised high-level SWOT analysis, TII recommend that the Micro Option 5 design layout is progressed and developed to form part of the Preferred Route.

1.3 Decision Needed

A decision is sought from the Project Board to replace the EPR with Micro Option 5.

2 DEVELOPMENT OF MICRO OPTION 5

This report sets out the design and stakeholder-related developments on Micro Option 5 since the initial working paper was issued to NTA.

2.1 Engagement with An Garda Siochana (AGS)

On completion of the concept design, TII engaged with AGS as follows:

- On receipt of approval from the National Transport Authority (NTA), TII contacted the Garda Station Facility Manager on 4th March 2021, who agreed to attend a meeting with TII.
- A high-level sketch, attached to an email describing the proposals for the Garda station, was emailed to AGS from TII on 26th March 2021.
- TII held a meeting with AGS on 30th March 2021 where the concept design was presented to attendees.
- The concept design was updated based on feedback from AGS and TII reissued the sketch to AGS on 13th April 2021.
- TII met AGS Facility Manager at Cabra station on 23rd April 2021 to discuss the relocation of the Property Evidence Management (PEM) building from Finglas station to the Cabra station site to accommodate the Luas corridor.
- An updated sketch and artistic impression of the Finglas Station proposals (see Figure 1 and 2) were sent to AGS on the 29th April 2021.
- TII received an email from AGS Facility Manager on the 4th May 2021 noting that TII would receive a 'Letter of Approval' from AGS in a few weeks.
- On 2nd July 2021, TII had a telephone conversation with AGS Facility Manager who provided verbal approval of the proposal, confirming that the Letter of Approval is being signed by the Garda Commissioner and will be circulated soon. AGS verbally confirmed that TII can proceed with the design via the Garda station on that basis.



Figure 1 Artistic impression of the Garda station proposals and adjacent Luas corridor (TII)

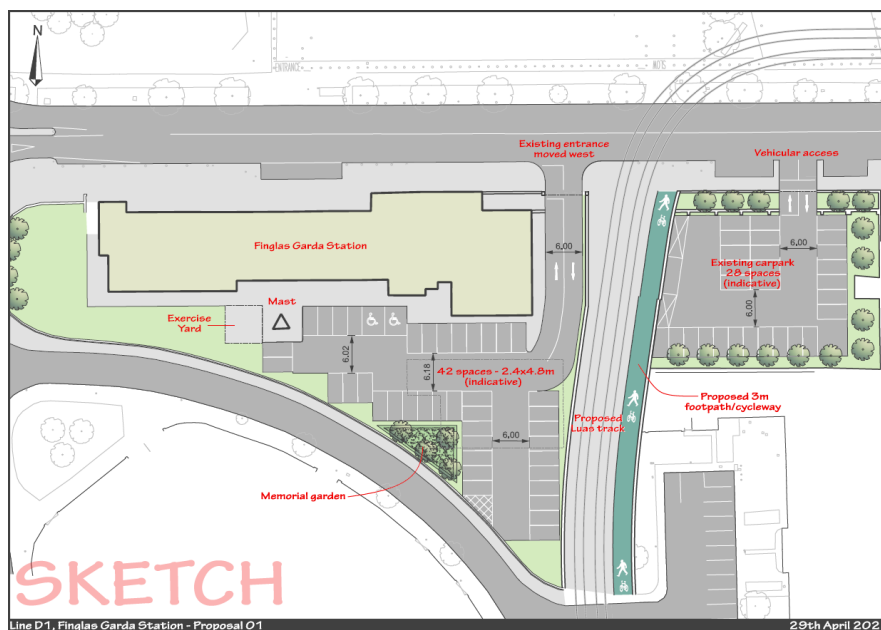


Figure 2 Proposed sketch showing Garda station proposals (TII)

2.2 Design Development

Based on AGS's approval in principle, the concept design for the Garda station and the wider area of Luas Finglas Village Stop on Mellows Road has been refined taking into consideration the track alignment, road layout, land-use, public realm, active travel and future DCC developments. Figure 3 presents the section of the Luas corridor through the Garda Station. The full plan for this area can be found in Appendix A.



Figure 3 - Concept design of Luas corridor through the Garda Station

2.2.1 Garda Station

To accommodate the Luas corridor, the existing Garda Station car park will be divided into two areas, with access from each onto Mellowes Road as per the existing arrangement. However, the proposed Luas track alignment is in conflict with the PEM building. Following initial discussions with AGS, a solution was explored whereby the existing PEM building is removed from Finglas Garda Station and a new PEM building constructed at an alternative Garda Station at Cabra.



Figure 4 – PEM building highlighted in red – single storey security depot for confiscated goods and materials

2.2.2 Finglas Village Stop

A key benefit of the alternative track alignment through the Garda Station is the new position of the Luas stop. Due to the track alignment of the EPR via Mellowes Crescent, the Luas Finglas Village Stop was located to the east of the leisure centre and in a position that was perpendicular to Mellowes Road. Micro Option 5 allows the Luas Stop to be at an orientation that is parallel to Mellowes Road and as a result will:

- Improve personal security by ensuring passive surveillance for people waiting at the stop due to its proximity to Mellowes Road,
- Provide better permeability from the stop to nearby active travel and bus connections,
- Create a public realm space for people to use at their leisure, enhancing social interaction in the area.

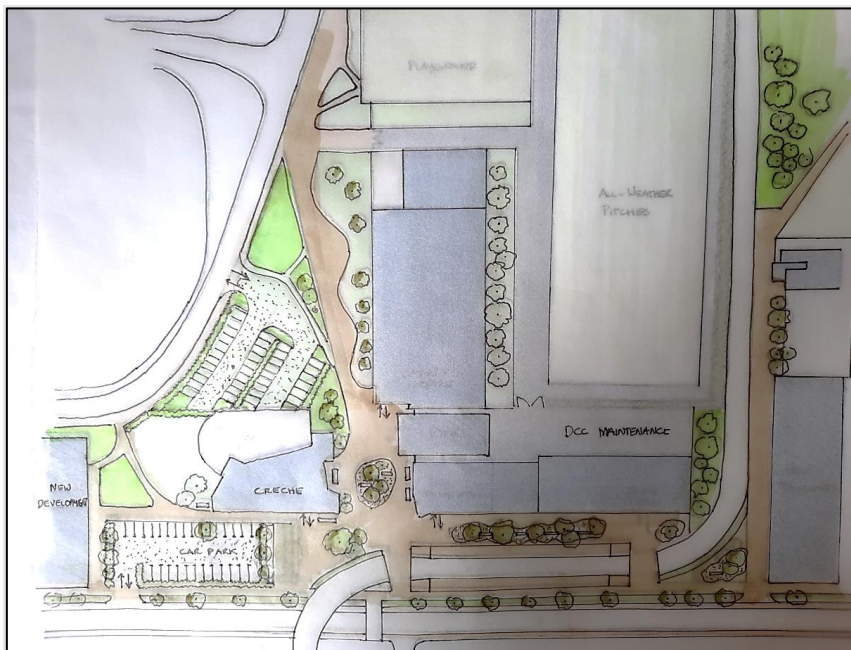


Figure 5 - Artistic sketch of Finglas Village Stop

2.2.3 Ravens Court

Some third-party land in the adjacent Raven's Court residential estate will need to be acquired to accommodate the track alignment via the Garda Station. To minimise the impact as much as is reasonably practicable, a cross section assessment was undertaken during concept design development. The assessment looked at several cross-section scenarios incorporating active travel zones for the length of the route in front of Raven's Court and through the Garda Station to Mellowes Road and understanding how this section connects with the wider cycling strategy in the locality. The cross-section assessment was outlined in LFIN-ADW-0003-MELLOWES_AIN1 issued previously to NTA.

To limit the impact on the residents of Raven's Court, the cross section, as shown in Figure 6 will be applied through this section of the Luas corridor.

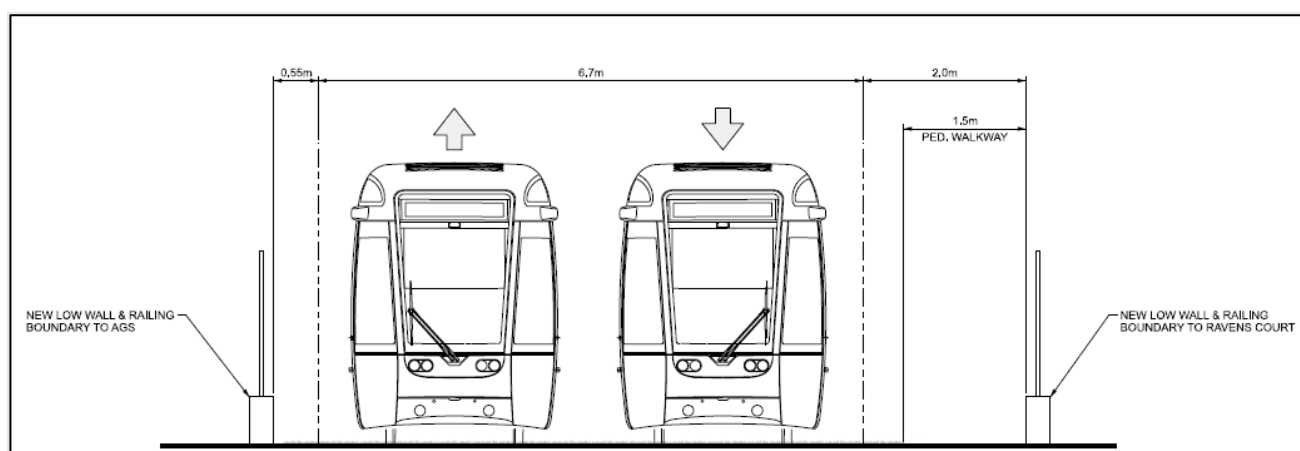


Figure 6 - Cross section in front of Raven's Court and through the Garda Station

Three areas of Raven's Court are affected by the proposals: a section of the common green area in the courtyard (Figure 7) and a section of two private gardens from Property No. 1 and 12 (Figure 8 and 9).

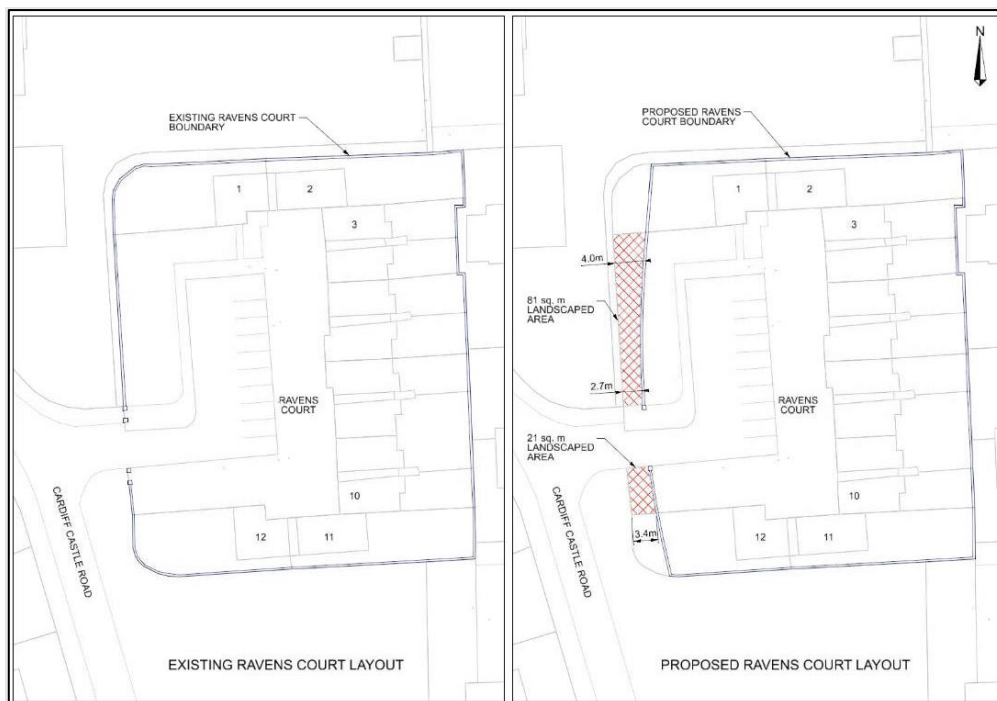


Figure 6 - Section of Raven's Court green area required to accommodate the Luas corridor



Figure 7 - Section of No. 1's garden required to accommodate the Luas corridor



Figure 8 - Section of No. 12's garden required to accommodate the Luas corridor

2.2.4 Cycle Connectivity

To minimise the impact on Raven's Court property, the cross section through this area will only include a 2m footway for pedestrians adjacent to the track. Including for cycling infrastructure would require a larger footprint of third-party land to accommodate the route. However, cycle connectivity for the proposed Luas Finglas is currently being addressed as part of an ongoing wider cycling strategy review and at this early stage, it has been identified that northbound cyclists can connect to cycle lanes on Mellows Road by joining Cardiff Castle Road in advance of this area, shown on plan in Appendix A. The cycle lanes will be implemented on Mellows Road as part of a future DCC scheme forming part of the Greater Dublin Area cycling network. Therefore, this alternative arrangement for cyclists via Cardiff Castle Road will mitigate the requirement for a wider corridor footprint through this section.

Additional track-based solutions can be adopted based on the risk assessment, to either discourage the use of the corridor by cyclists (slab open track with exposed rails) or else reduce risks for cyclists by embedding the rails in a "groove-less" solution, subject to further analysis.

2.2.5 Environmental Consideration

The key constraints at this location will be the potential (noise, vibration, air quality, climate and visual) impact of the revised EPR on nearby sensitive receptors. These receptors include residential properties such as those at Cardiff Castle Road, Finglaswood Road and Raven's Court.

Saint Fergal's Boys National School, Finglas Garda Station, Mellow Spring Childcare Development Centre and the Finglas Youth Resource Centre are also considered sensitive receptors which will require further environmental surveys and assessment by the appointed scheme consultants.

A radiation and stray current assessment will also be required with respect to Finglas Garda Station and any other sensitive receptors with respect to EMI/EMC.

There are no statutory or non-statutory ecological designations within 500m of the revised EPR at this location. Ecological surveys will be required on the existing open spaces, avenue and open space trees, hedgerows, or strips of vegetation which are required relevant to the ecological assessment by the appointed scheme consultants.

The revised stop location will result in a stop aligned with Mellows Road which allows for improved connectivity with the street and adjacent bus routes. The revised EPR will have an impact on the parking areas to the front of the Community Centre with the removal of parking areas to allow for an extended public realm area around the stop and incorporating pedestrian circulation.

In terms of land use, the open space amenity area south of Raven's Court is zoned for recreation and open space as part of the Dublin City Development Plan 2017 – 2023.

In terms of Cultural Heritage, the revised EPR at this location is partially located within a Recorded Monument and Place (RMP) comprising the historic town of Finglas (RMP DU014-066----). It is also located to the immediate north of, but does not directly impact, the zone of Notification for two further RMPs namely a 17th century house (RMP DU014-066003-) and the alignment off the town defences (i.e., King William's Ramparts (RMP DU U014-066008-). There are no known architectural heritage constraints (either on the Record of Protected Structures or the National Inventory of Architectural Heritage) within this section of the revised EPR, which lies to the northeast of a DCC Conservation Area. Cultural heritage surveys, the archaeological monitoring of surveys by other environmental disciplines, and a full cultural heritage assessment will be required to be carried out by the appointed scheme consultants.

The revised EPR at this location will allow for the continuation of the cycle track through the Mellows area which enhances connectivity and access for non-motorised users. The revised EPR at this location will also facilitate cycling initiatives as part of the National Transport Authority's Greater Dublin Area Cycle Plan (2013) the forthcoming Dublin City Development Plan 2022 – 2028.

A comprehensive environmental assessment will be carried out on the Revised Mellows Option (and any other potential reasonable alternatives) by the appointed Engineering Designer as part of the assessment process. This will include a full consideration of all environmental factors.

It is proposed that a comprehensive environmental assessment including environmental surveys and consultation will be carried out on the revised EPR at this location by the appointed Engineering Designer as part of the EIAR. This will include a full suite of mitigation measures for both the construction and operational stages as part of the Preferred Route.

2.3 Engagement with DCC

In a Townhall meeting held in June, TII tabled the design proposals for Micro Option 5 with Dublin City Council's (DCC) Planning, Housing and Urban Integration department. The sharing of information was caveated by advising DCC that TII's engagement with AGS was ongoing at that time and approval had not yet been received. DCC welcomed the proposal and verbally agreed to the revised layout. The refined option was presented again to DCC at the Townhall meeting held on 21st July 2021 and received a very positive reaction from DCC representatives.

2.3.1 DCC Opposition to Mellowes Crescent

The recommendation for the route option via the Garda Station is strengthened by DCC's opposition to the Micro-Option 3 (where the Luas corridor is routed via Mellowes Court and Mellowes Crescent, similar to the EPR, but assuming DCC full regeneration/reconstruction of their elderly housing blocks). DCC's Housing Manager strongly opposed the Luas corridor passing through Mellowes Crescent (as documented in a minute meeting and subsequent emails).

3 SUMMARY AND RECOMMENDATIONS

On the basis that the Micro-Option 5 concept design has been refined and approval to use the Garda Station land to accommodate the Luas corridor has been received from AGS, TII has re-evaluated the three route options;

1. the EPR,
2. Micro-Option 3 (via DCC redeveloped Mellowes Court)
3. Micro-Option 5 (via Finglas Garda Station),

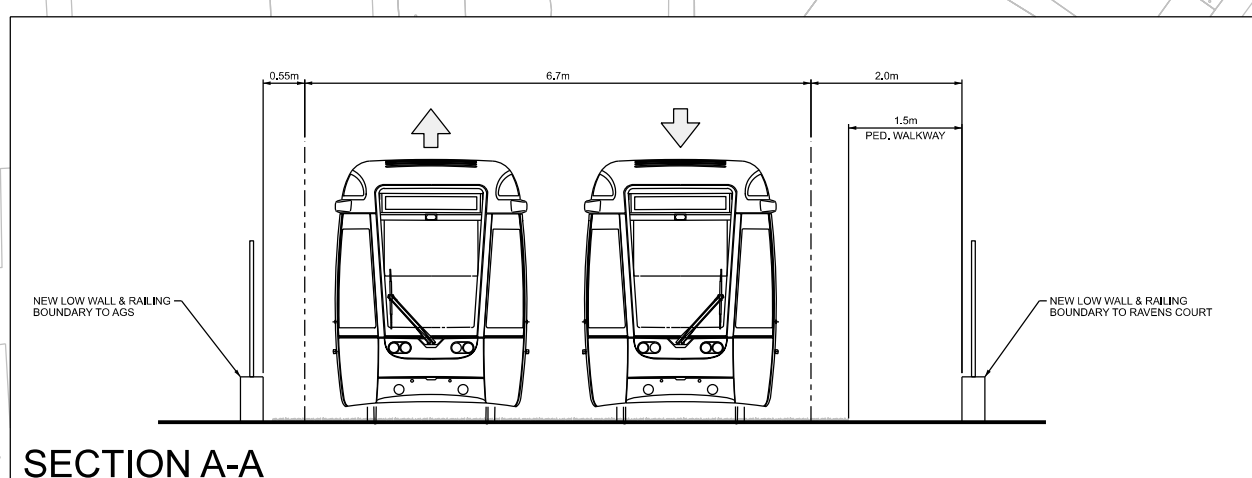
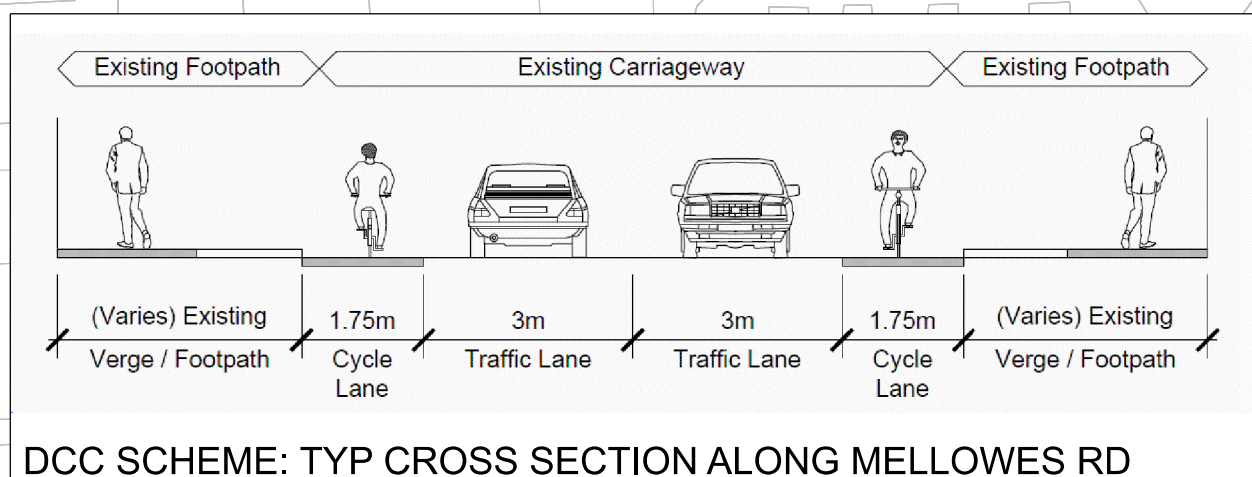
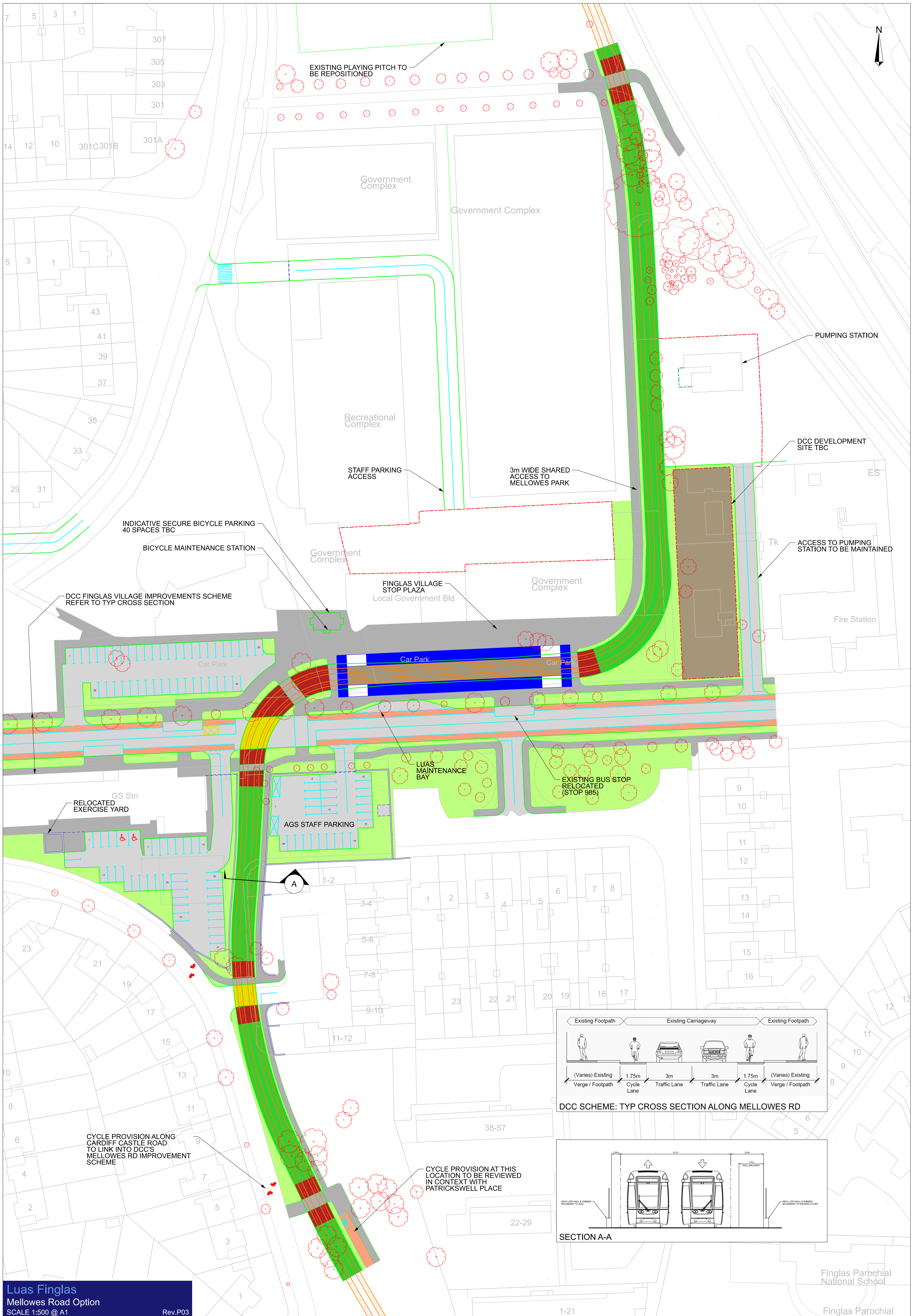
The results are outlined in the SWOT analysis in Appendix B, which outlines the high-level strengths, weaknesses, opportunities and threats of each option.

The high-level SWOT analysis finds that the recommended route is Micro Option 5. TII advises that the next step is to engage with representatives of Raven's Court to discuss the impact and opportunities that Micro Option 5 will present to the residents.

4 SUMMARY OF DECISION NEEDED

A decision is sought from the Project Board to replace the EPR with Micro Option 5.

5 APPENDIX A



6 APPENDIX B

OPTIONS	DESCRIPTION	COST SUMMARY	Element	INTERNAL (TII/NTA CONTROLLED)		EXTERNAL (OTHER STAKEHOLDERS): FCC/DCC/BUSINESSES/ETC)	
				STRENGTHS (HELPPFUL)	WEAKNESSES (HARMFUL)	OPPORTUNITIES (HELPPFUL)	THREATS (HARMFUL)
EPR	Route: EPR		1. Alignment		1. Alignment includes a number of curves through the Mellows estate.		1. Significant local opposition to the EPR route.
			2. Property	1. Alignment is generally within public lands and roads.			
			3. Road Connectivity		1. New accesses likely to be required into Mellows Estate to avoid crossing points of the track.		
			4. Cycling and pedestrian connectivity				1. Likely to form undesirable cycle and pedestrian routes via the residential estate.
			5. Other costs / risks		1. More interfaces with residential areas, which is an additional operational interface / risk in terms of public safety. Lower operational speeds would be required to minimise risks to public.		
			6. Luas Runtime	1. As EPR.			
			7. Integration, Compatibility with development plans		1. Setting of the stop is less ideal than if aligned with Mellows Road. 2. Low passive surveillance of stop due to perpendicular orientation to Mellows Road.		
Micro Option 3	Alignment via Mellows to suit future planned DCC development		7. Environmental		1. More sensitive receptors / residential properties in closer proximity to the alignment (18 houses in close proximity+DCC elderly apartment blocks in proximity- all within 15-20m from the Luas lines)		
			1. Alignment	1. Alignment has less curves in comparison to the EPR.			1. Likely to be significant local objection as will still divide the community, with new accesses needed to avoid crossing points of the Luas alignment.
			2. Property	1. Alignment is generally within public lands and roads.			
			3. Road Connectivity		1. New accesses likely to be required into Mellows Estate from Mellows Road and Cardiff Castle to avoid crossing points of the track.		
			4. Cycling and pedestrian connectivity				1. Likely to form undesirable cycle and pedestrian routes via the residential estate.
			5. Other costs / risks		1. More interfaces with residential areas, which is an additional operational interface / risk in terms of public safety. Lower operational speeds would be required to minimise risks to public.		1. Dependant on DCC plans progressing without local objections during Planning, including removal of green space adjacent to Cardiff Castle.
			6. Luas Runtime	1. Similar to EPR, or slightly better.			
			7. Integration, Compatibility with development plans		1. Setting of the stop is less ideal than if aligned with Mellows Road. 2. Low passive surveillance of stop due to perpendicular orientation to Mellows Road.	1. May be possible to align with DCC plans and co-develop schemes.	1. DCC members of Housing Department have raised objections with the Luas alignment and impacts that would have on the DCC development.
			7. Environmental		1. Several sensitive receptors / residential properties in closer proximity to the alignment (18 houses in close proximity+new redeveloped DCC elderly apartment blocks in proximity+ list of DCC cottages terrace - all within 15-20m from the Luas lines)		

Micro Option 5	Alignment via AGS lands		1. Alignment	1. Curves are localised to junction / platform approaches and exit, where speed will be restricted anyway, good cluster of speed restricted sections.			
			2. Property		1. Additional property costs due to reallocation of parking and relocation of PEM building. 2. Impact on two side gardens to be partly acquired (1 and 12 Ravens Court) and communal green area in Ravens Court. These could be compensated.	1. Support from AGS to acquire land needed to accommodate the Luas corridor. High level support by DCC mentioned in several meetings.	
			3. Road Connectivity	1. No new entrances to Mellows estate are needed.			
			4. Cycling and pedestrian connectivity	1. Less impact on local communities as cycle / pedestrian routes can be along existing roads instead of via. Cul de sac estate.			1. Cyclists may still choose to use the Luas tracks/footway although not accommodating cyclists via the Garda Station.
			5. Other costs / risks				1. More interfaces with municipal facilities and car park, which will require planning and agreements with DCC in particular.
			6. Luas Runtime	1. Slightly improved to EPR as curves are local to junction / platform and less interfaces within residential areas.			
			7. Integration, Compatibility with development plans	1. Improved setting of the stop, combining stop and Plaza design, providing better passive surveillance. Better interchange opportunities with BusConnects and Cycle facilities, the stop is more visible and prominent.		1. Notwithstanding works needed to re-allocate parking spaces and accesses, DCC have expressed a preference for the stop in this location.	
			7. Environmental	1. Less sensitive receptors / residential properties impacted with the alignment (12 houses, majority of which at approx 25m distance from the Luas lines and separated from it by a boundary wall, fence and landscape). No interaction with internal residential roads and playing areas/green areas once boundary line is relocated.			

OPTIONS	DESCRIPTION	COST SUMMARY	INTERNAL (TII/NTA CONTROLLED)		EXTERNAL (OTHER STAKEHOLDERS:	
			# STRENGTHS (HELPFUL)	# WEAKNESSES (HARMFUL)	# OPPORTUNITIES (HELPFUL)	# THREATS (HARMFUL)
EPR	Route: EPR		2	6	0	2
Micro Option 3	Alignment via Mellows to suit future planned DCC development		3	5	1	4
Micro Option 5	Alignment via AGS lands		6	2	2	2

