

Cycle Enfield - Section 4

A105 Lodge Drive to Osbourne Road

Stage 2 Road Safety Audit

Ref: 2759.03.04/032/A105/BOR/2016

Prepared for:

London Borough of Enfield

By:

Road Safety Audit, TfL Asset Management Directorate

Prepared by: Shane Martin, Audit Team Leader

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Approved by: Andrew Coventry

Version	Status	Date
A	Audit report issued to Client	11/01/2017



1.0 INTRODUCTION

1.1 Commission

- 1.1.1 This report results from a Stage 2 Road Safety Audit carried out on the Cycle Enfield - Section 4, A105 Lodge Drive to Osbourne Road proposals.
- 1.1.2 The Audit was undertaken by TfL Road Safety Audit in accordance with the Audit Brief issued by the Client Organisation on 25th November 2016. It took place at the Palestra offices of TfL on 16th December 2016 and comprised an examination of the documents provided as listed in Appendix A, plus a visit to the site of the proposed scheme.
- 1.1.3 The visit to the site of the proposed scheme was made on 16th December 2016. During the site visit the weather was sunny and the existing road surface was dry.

1.2 Terms of Reference

- 1.2.1 The Terms of Reference of this Audit are as described in TfL Procedure SQA-0170 dated May 2014. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and how it impacts on all road users and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit. An absence of comment relating to specific road users / modes in Section 3 of this report does not imply that they have not been considered; instead the Audit Team feels they are not adversely affected by the proposed changes.
- 1.2.2 This Safety Audit is not intended to identify pre-existing hazards which remain unchanged due to the proposals; hence they will not be raised in Section 3 of this report as they fall outside the remit of Road Safety Audit in general as specified in the procedure SQA-0170 dated May 2014. Safety issues identified during the Audit and site visit that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in Section 4 of this report.
- 1.2.3 Nothing in this Audit should be regarded as a direct instruction to include or remove a measure from within the scheme. Responsibility for designing the scheme lies with the Designer and as such the Audit Team accepts no design responsibility for any changes made to the scheme as a result of this Audit.
- 1.2.4 In accordance with TfL Procedure SQA-0170 dated May 2014, this Audit has a maximum shelf life of 2 years. If the scheme does not progress to the next stage in its development within this period, then the scheme should be re-audited.
- 1.2.5 Unless general to the scheme, all comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan located in Appendix B.

- 1.2.6 It is the responsibility of the Design Organisation to complete the Designer's response section of this Audit report. Where applicable and necessary it is the responsibility of the Client Organisation to complete the Client comment section of this Audit report. Signatures from both the Design Organisation and Client Organisation must be added within Section 5 of this Audit report. A copy of which must be returned to the Audit Team.

1.3 Main Parties to the Audit

1.3.1 Client Organisation

Client contact details: Demos Kettenis – London Borough of Enfield

1.3.2 Design Organisation

Design contact details: Deepak Sharma - Jacobs

1.3.3 Audit Team

Audit Team Leader: Shane Martin – TfL Road Safety Audit

Audit Team Member: Kevin Seymour – TfL Road Safety Audit

Audit Team Observer: None present

1.3.4 Other Specialist Advisors

Specialist Advisor Details: None present

1.4 Purpose of the Scheme

The purpose of the scheme is to provide 5.5km of two-way segregated cycle route with public realm improvements at town centres*.

*Taken directly from the Audit Brief.

1.5 Special Considerations

- 1.5.1 This Audit Report covers Section 4 (Sheets 6 - 10) of this route only, along the A105 from the Lodge Drive junction to North of Osbourne Road junction.
- 1.5.2 Full details of the traffic signal staging / timings have not yet been provided and therefore the Audit Team could not fully comment on this element of the proposals.

2.0 ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDITS

The proposals were subject to a Stage 1 Road Safety Audit carried out in March 2016 by TfL Road Safety Audit, Asset Management Directorate (Ref 2524/032/A105/BOR/2016). This report covered the whole route and therefore many of the issues raised are not specific to this (Section 4) part of the proposals. Items raised in the previous Audit Report deemed relevant to this section can be summarised as follows:

Problem 3.1.2 General to the scheme – town centre / shopping street areas – Narrowed footway areas in shopping streets may bring cyclists and pedestrians closer together and lead to pedestrian to cycle collisions.

This problem remains in the detailed design proposals and is therefore raised again within this report as problem 3.1.4.

Problem 3.1.3 Cycle lanes past junction locations - Segregated cycle lanes terminating just before side road junctions may increase left turning collisions between vehicles and cyclists

This problem remains in the detailed design proposals and is therefore raised again within this report as problem 3.1.10.

Problem 3.1.4 Side road cycle crossovers at raised junction tables - Drivers turning from main roads to side roads may brake late due to cyclists crossing side roads, leading to nose to tail collisions, or cycle to vehicle conflict.

This problem remains in the detailed design proposals and is therefore raised again within this report as problem 3.1.3.

Problem 3.1.5 Bus stops / loading bays close to side road junctions and accesses – may restrict visibility splays and lead to failure to give-way type collisions.

This problem remains in the detailed design proposals and is therefore raised again within this report as part of problem 3.4.2.

Problem 3.8.1 Side roads between Osbourne Road and Devonshire Road – Parking / loading bays close to the junctions may lead to failure to give-way type collisions, or cycle to vehicle conflict.

This problem remains in the detailed design proposals and therefore this is raised again as problem 3.4.2 in this Audit Report.

Items raised in the Stage 1 Road Safety Audit report that are outside the Terms of Reference:

Issue 4.1 The revised kerb lines at side roads may alter vehicle swept paths and it is not clear if these have been assessed or may result in conflicts between turning vehicles.

This issue is considered to remain in part and will therefore be raised again as part of problem 3.4.1 in this Audit report.

Issue 4.2 Bus boarders separated from the footways by cycle lanes may result in difficulties for some users to access the bus stop and may lead to low level cycle / pedestrian conflicts.

This issue is considered to remain in part and will therefore be raised again as part of problem 3.1.2 in this Audit report.

3.0 ITEMS RAISED AT THIS STAGE 2 ROAD SAFETY AUDIT

This section should be read in conjunction with Paragraphs 1.2.1, 1.2.2 and 1.2.3 of this report.

3.1 CYCLING FACILITIES

3.1.1 PROBLEM

Location: General to scheme, multiple locations

Summary: The use of 'Orcas' as a segregation measure may lead to trips / falls for cyclists and pedestrians

The proposals include 'Orcas' as a semi / soft segregation measure alongside the cycle tracks. The Audit Team are concerned that the 'Orcas' may not be adequately visible to road users, particularly pedestrians, cyclists and powered-two-wheelers.

Pedestrians crossing the carriageway may fail to appreciate the raised nature of the 'Orcas', with a potential for trips and falls within the carriageway.

Riders of two wheeled vehicles may fail to appreciate that the 'Orcas' are raised, particularly in inclement weather. Riders may become destabilised as they over-run the features, leading to an increased potential to become unseated, with a resultant potential for personal injury.

The potential for injury is exacerbated as the features are situated in positions where they are encouraged to be traversed, such as outside residential accesses.

RECOMMENDATION

It is recommended that any potential trip hazards are removed; this may require the use of an alternative type of segregation measure.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>The use of light segregation Orcas has been a proposed element of the scheme since initial development. The Orcas will be set inside the mandatory cycle lane marking (diag 1049B) and are white/black marked to stand out. In addition, the start and finish of an Orca line will be marked by a wand to further highlight the Orca line as it is approached. Orcas placed alongside vehicular access will be of a lower profile to allow vehicular over run. Orcas will be sited away from pedestrian crossing points to minimise the risk of trips</p> <p>Post construction monitoring is recommended at a number of agreed locations to determine if there are any issues and to allow for modifications if necessary.</p>	
Client Organisation Comments	
<p>Designer's response accepted – post implementation monitoring will be carried out.</p>	

3.1.2 PROBLEM

Location: General to scheme, multiple locations

Summary: Bus passengers boarding or alighting may result in collisions with cyclists on the track

The Audit Team are concerned that the proposed cycle tracks run immediately adjacent to the proposed bus stop boarders. Therefore bus passengers would board / alight a bus from / onto the cycle tracks. This may result in cyclists diverting away from the cycle track whilst their path is obscured, which may result in increased collisions with pedestrians or vehicles who may not expect cyclists diverting from the track.

In addition, bus passengers alighting may not anticipate or be able to see approaching cyclists immediately adjacent to the bus, which may result in cycle to pedestrian type collisions. Visually impaired pedestrians, particularly those alighting from a bus may follow the kerb line and inadvertently enter the carriageway. Visually impaired pedestrian unknowingly within the carriageway are at an increased potential for collisions with motorists.

RECOMMENDATION

It is recommended that the layouts of the bus stop boarders / cycle tracks are altered to mitigate the potential interactions with bus passengers. This may include, but is not limited to, providing tramline tactile paving prior to the ramps down to carriageway level and an increased separation between the boarding / alighting area and the cycle track.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>Bus boarders have been introduced with a 0.5m buffer at locations where there is not scope to introduce a bus stop by-pass, to deliver an acceptable level of route continuity particularly at conflict points such as bus stops, where buses will be pulling into the kerb, through the desire line of a cyclist. The proposed bus stop boarders will use different material/tones to clearly show a change in environment from a segregated facility to a shared space. This is not dissimilar to a shared space environment adjacent to a toucan crossing, where pedestrian and cycles mix.</p> <p>Monitoring can be undertaken post-implementation to review the safe operation of the proposed design.</p>	
Client Organisation Comments	
Designer's response accepted – operation of the bus stop boarders will be monitored post-implementation.	

3.1.3 PROBLEM

Location: General to the scheme – side road cycle crossovers at raised junction tables

Summary: Drivers turning from main roads to side roads may brake late due to cyclists crossing side roads, leading to nose to tail collisions, or cycle / vehicle conflicts

At a number of locations the off-road cycle facilities cross side roads at raised table areas. Drivers turning from the main road have a short stacking space between the main road and these cycle crossovers due to the location of the give-way lines to create priority for cyclists. Drivers may be confused by the arrangement and fail to give-way to cyclists, or may stop suddenly and remain partially within the main carriageway, which may lead to late braking nose to tail collisions. The potential for conflicts may be exacerbated at locations where parking is proposed close to the side road between the main carriageway and segregated cycle track.

Drivers entering the main road may be confused by the double give-way feature, and/or stop across the cycle lane, which may lead to nose to tail collisions or cycle to vehicle conflict.

There is inconsistency in the provision of give-ways at such crossing locations and this may confuse users and lead to failure to give-way type conflicts between cycles and vehicles, or vehicle to vehicle type conflicts where give-ways have not been provided as vehicles enter the main road.

RECOMMENDATION

It is recommended that priority at the side roads is clearly designated, and an appropriate stacking space is provided between the main road and cycle crossing to allow vehicles to wait between the main road and cycle crossing without encroaching in to the main carriageway or blocking the cycle crossing (reference London Cycle Design Guide). Any 'floating' loading / parking bays should be located to ensure that sufficient intervisibility is provided between cyclists and motorists. Additionally, it may be beneficial to provide a consistent layout of give-way markings at these locations.

Design Organisation Response	Accepted / Part Accepted / Rejected
As much stacking space as the constraints of the road layout allow has been provided. The entry treatment should slow vehicles down enough to ensure that late breaking nose to tail collisions and cycle to vehicle conflict does not occur. The double give way features should emphasise the need for drivers to be more careful and avoid conflict with others. However, the layouts will be checked for consistency and updated, if necessary.	
Client Organisation Comments	
Designer's response accepted	

3.1.4 PROBLEM

Location: General to the scheme - Town Centre / shopping street areas

Summary: Narrowed footway areas in shopping streets may bring cyclists and pedestrians closer together and lead to pedestrian to cycle collisions

Within the main shopping streets the proposed cycle lanes will reduce the effective footway width and segregate pedestrians from crossing points, bus stops and parking / loading bays. Pedestrians not contained or comfortable on the footway area may use the cycle lanes and be at a greater risk of collision with cyclists. Additionally, pedestrians crossing or waiting / walking immediately adjacent to the proposed cycle lanes may also be at an increased potential for collisions with cyclists.

RECOMMENDATION

It is recommended to provide a defined separation between footway / cycle lane, and cycle lane to carriageway. This may include but is not limited to providing a stepped facility at a different level for each facility. It may also be beneficial to incorporate contrasting colour and/or texture between cycle lane and footway; measures to address cycle speeds may be beneficial in ensuring safe pedestrian to cycle interaction.

Design Organisation Response	Accepted/ Part Accepted /Rejected
The cycle lane edging will comprise of 3 x 100x100mm cropped silver grey setts. The texture and differing contrast will indicate to visually impaired pedestrians that they should not enter the cycle lane.	
In addition, the cycle track will be surfaced in a suitable colour, to provide tonal difference with the surrounding footway.	
Client Organisation Comments	
Designer's response accepted	

3.1.5 PROBLEM

Location: General – various footway level sections of cycle track

Summary: Potential lack of delineation may lead to collisions with visually impaired pedestrians

The Audit Team are concerned that the proposed measures do not appear to indicate a delineator strip between the footway and cycle tracks provided at footway level. This could lead to visually impaired pedestrians inadvertently entering these sections of cycle lanes or potentially entering the carriageway via the ramp between the two facilities. Cyclists on the cycle track or motorists on the carriageway are unlikely to anticipate a visually impaired pedestrian and this may therefore result in increased collisions between these users.

RECOMMENDATION

It is recommended that as well as a good visual differentiation between the footway and cycle tracks, a detectable delineator should be provided to ensure that all users are aware of the edge of footway whilst not presenting a trip hazard.

Design Organisation Response	Accepted / Part Accepted / Rejected
As above (3.1.4).	

Client Organisation Comments

Designer's response accepted

3.1.7 PROBLEM

Location: General – Parking permitted adjacent to cycle track

Summary: Parking / loading permitted adjacent to the cycle track may result in users exiting or unloading within the cycle track

The proposals include retention of existing parking bays in this area. There appears to be a buffer of approximately 0.5m between the parking bays and the proposed cycle track. The Audit Team are concerned that pedestrians, users unloading and disabled users entering / exiting these vehicles, may do so within the cycle track which may result in an increased potential for collisions between southbound cyclists and people using the parking bays.

RECOMMENDATION

It is recommended that the buffer is increased to ensure that the cycle path is kept as clear as possible and suitable pedestrian and disabled user access to the parking bays is provided over the cycle track.

Design Organisation Response	Accepted / Part Accepted / Rejected
<p>Due to site constraints a minimum of 0.5m buffer has been provided throughout the scheme between the edge of cycle lane and the carriageway/parking or loading bays. This is considered wide enough to allow for opening doors and people to disembark from vehicles without causing an obstruction to the cycle lane.</p> <p>On occasions where passengers are unloading vehicles, visibility ahead is good and cyclists will be given enough time to check speed and warn of approach, if necessary.</p>	
Client Organisation Comments	
Designer's response accepted	

3.1.8 PROBLEM

Location: A – A105 Green Lanes near junction with Lodge Drive

Summary: Proposed footway loading bay may result in an increased potential for collisions with cyclists

The proposals include a footway loading bay within this area. The Audit Team are concerned that vehicles entering / exiting this bay may:

- Over-run the cycle track as they try to align themselves within the loading bay,
- Not have sufficient visibility of cyclists in the cycle tracks due to the angle of approach / entry and cyclists being in a potential blind spot,
- Result in dooring of cyclists in the cycle tracks.

This may therefore result in increased potential for injuries to cyclists as vehicles utilise this loading bay.

RECOMMENDATION

It is recommended to alter the loading provision so that it does not involve motorists entering (including dooring) or crossing the cycle tracks. This may require an increase in offset from the cycle facility and a physical measure such as a kerb upstand to physically deter vehicles from encroaching in to the cycle track.

Design Organisation Response	Accepted / Part Accepted / Rejected
A kerb with 125mm upstand will be provided at the edge of the parking to ensure that there is no over-run onto the cycle lane as they align themselves into the loading bay. Due to site constraints a minimum of 0.5m buffer has been provided throughout the scheme between the edge of cycle lane and the carriageway/parking or loading bays. This is considered wide enough to allow for opening doors and people to disembark from vehicles without causing an obstruction to the cycle lane.	
Client Organisation Comments	
Designer's response accepted	

3.1.9 PROBLEM

Location: B – commencements of full height kerbs south of Lodge Road and north of Osbourne Road

Summary: Motorists may not notice and collide with the commencement of a full height kerb

The Audit Team are concerned that motorists may not appreciate that the edge of the cycle track includes a full height kerb at this location. This kerbed physical segregation commences within the carriageway running lane and it may not provide a suitable feature to highlight its presence to approaching users or guide users alongside it. It may therefore not be clear or conspicuous. Motorists may collide with the kerb or swerve to avoid the feature if they are noticed within close proximity, which may result in loss of control type collisions / injury to those on or within the vehicle.

RECOMMENDATION

It is recommended to alter the layout to suitably guide vehicles alongside the kerbs. This may include but is not limited to providing a vertical illuminated feature such as an Illuminated Guide Post (IGP) to provide suitable guidance alongside the feature.

Design Organisation Response	Accepted / Part Accepted / Rejected
At this location the kerb has a 25mm upstand as it is on a raised table. Line marking to diagram no.1049B has been used to delineate the edge of carriageway. This line marking will also be offset 150mm from the edge of the kerb to ensure vehicles don't travel too closely to the kerb.	
Client Organisation Comments	
Designer's response accepted – in addition a 'wand' or similar feature could be added if necessary to increase the conspicuity of the kerbing.	

3.1.10 PROBLEM

Location: C – cycle lanes past junction with Park Avenue and Fox lane

Summary: Segregated cycle lanes terminating just before the side road junction may increase left turning collisions between vehicles and cyclists

The segregated cycle lane returns to the carriageway just before the side road junction. It may be difficult for both sets of road users to understand who has priority and this may lead to turning collisions involving cyclists, particularly as the bus stop and parking located on the southbound approach to junction may reduce inter-visibility of southbound cyclists approaching the junction. Cyclists may find it difficult to avoid vehicles entering or emerging from side roads if constrained by the segregation features, which could lead to increased risk of merging / failure to give-way type collisions.

RECOMMENDATION

It is recommended that the priority is clearly defined. Furthermore, research from TRL (PPR703 – Trials of segregation set-back at side roads) indicates that setting back cycle lanes by at least 20m from side roads may improve cyclist safety at junctions. Such an approach would have an effect on the proposed length of 'floating' parking / loading bays.

Design Organisation Response	Accepted / Part Accepted / Rejected
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TRL (PPR703 – Trials of segregation set-back at side roads) states that bringing segregation very close to the turning manoeuvre (<5m) combines both the merging conflict and the turning conflict into a single manoeuvre, requiring only one decision for the driver: whether or not to turn. Vehicle speeds are also likely to be slower due to the sharper angle required to turn into the junction, giving the driver more time to make the decision, and the approach angle closer to the perpendicular, placing approaching cyclists more directly in the driver's line of vision. The semi segregation ends 4.0m from the junction at Park Avenue.

At Fox Lane the set-back is approx. 10m. Due to the signalised crossing at this location and the alignment of the cycle track it is not possible to achieve at least a 20m set-back. Road markings to diag. 1057 have been provided on the carriageway to highlight to motorists that there is a cycle lane, the effective carriageway width has been reduced and the Table in Fox lane will again slow vehicular traffic as they approach and make the turn.

Client Organisation Comments

Designer's response accepted

3.2 ROAD MARKINGS

3.2.1 PROBLEM

Location: D – A105 Green Lanes junction with Lodge Drive

Summary: Proposed road markings may lead to an increased potential for kerb strikes as southbound vehicles reach the southern side of this junction

The Audit Team are concerned that the proposed give-way markings may increase the potential for southbound drivers to take alignment guidance from these markings and collide with the kerb buildout which protrudes significantly on the southern side of the junction. If drivers collide with the kerb build-out then vehicles occupants may be injured or a rider of a two wheeled vehicle could be dismounted. Additionally, if motorists notice the kerb build-out in close proximity late then evasive action may result in loss of control and / or collisions with oncoming vehicles.

RECOMMENDATION

It is recommended that the road markings are altered to provide positive guidance alongside the kerb build-out.

Design Organisation Response	Accepted / Part Accepted / Rejected
The line of sight for drivers should be taken from the zig zag markings, but the comment is noted and the give way markings will be amended.	
Client Organisation Comments	
Designer's response accepted.	

3.2.2 PROBLEM

Location: E – A105 Green Lanes junction with Park Avenue

Summary: Proposed bifurcation arrow may be misleading and potentially result in shunt type or side swipe type collisions

The Audit Team are concerned that the proposed bifurcation arrow at this location may be misinterpreted as an indication that southbound motorists can continue ahead from what is effectively lane 2. Southbound motorists, particularly those passing a waiting bus, may increase the potential for southbound drivers to assume that the right turn lane is intended for ahead movements, particularly whilst the right turn lane is occupied and therefore the right turn arrows may be obscured. If motorists attempting to continue ahead inadvertently enter the right turn lane this may result in shunt type or side swipe type collisions as motorists may unexpectedly encounter a queue and either brake hard or make a late evasive manoeuvre to avoid the queue / continue to the nearside ahead lane.

RECOMMENDATION

It is recommended that the road markings are altered to clarify the intended manoeuvres. This may include, but is not limited to, removing this bifurcation arrow.

Design Organisation Response	Accepted / Part Accepted / Rejected
The bifurcation arrow will be removed.	
Client Organisation Comments	
Designer's response accepted	

3.3 CROSSING FACILITIES

3.3.1 PROBLEM

Location: F – A105 Green Lanes junction with Devonshire Road

Summary: Proposed crossings may not suitably accommodate pedestrian desire lines

The Audit Team are concerned that the proposed crossing removal / relocation may not suitably accommodate established pedestrian desire lines. For example if pedestrians are travelling broadly east – west along Hazelwood Lane / Devonshire Road or vice versa they may not wish to divert further north to utilise the proposed crossing near the Fox Lane junction. Pedestrians crossing at undetermined locations and without the assistance of crossing facilities may be more vulnerable and less likely to be anticipated by cyclists and motorists which may lead to an increased potential for collisions between the two users.

RECOMMENDATION

It is recommended that alterations are incorporated to make the cycling and pedestrian routes more appealing and to cover the likely desire lines. This may include, but is not limited to, providing additional pedestrian crossing facilities.

Design Organisation Response	Accepted / Part Accepted / Rejected
Whilst noted, the crossing will be relocated a short distance from the existing crossing and within the stretch of retail units along this section of road. Design development has looked to provide, where possible, parking and loading provision to mitigate the impact of the scheme on businesses.	
Client Organisation Comments	
Designer's response accepted.	

3.4 JUNCTIONS

3.4.1 PROBLEM

Location: General to scheme, multiple locations

Summary: The altered kerb-lines may result in increased collisions as turning vehicles increasingly encroach into the path of another user

The proposals include various kerb-line alterations which may increase the potential for turning vehicles to encroach into another user's path. This could lead to an increased potential for head on or side impact type collisions as a user turning into or out of the side roads or accesses is encountered by a vehicle travelling in the opposing direction.

RECOMMENDATION

It is recommended to undertake / check swept path analysis and make alterations if necessary to ensure that the vehicles likely to use these roads can undertake typical manoeuvres with minimal intrusion into the path of another vehicle.

Design Organisation Response	Accepted / Part Accepted / Rejected
Vehicle tracking has been carried out.	
Client Organisation Comments	
Designer's response accepted	

3.4.2 PROBLEM

Location: General to the scheme – bus stops / loading / parking bays close to side roads

Summary: Stationary vehicles close to side road junctions and accesses may restrict junction visibility splays and lead to failure to give way type collisions

At many locations loading / parking bays are located close to side road junctions and accesses. Stationary vehicles close to side roads may restrict visibility for drivers emerging from the side roads and this may lead to failure to give way type collisions. Similarly, where bus stops are located close to the side roads the Audit Team are concerned that vehicles overtaking waiting buses may not suitably sight vehicles egressing from side roads which may result in side impact type collisions.

RECOMMENDATION

Appropriate visibility splays at side roads should be provided and kept free of obstruction and stationary vehicles. This may require alterations to the positioning and / or extent of the bus stops / parking / loading bays.

Design Organisation Response	Accepted / Part Accepted / Rejected
This is noted. However, the design has looked to mitigate the impact of the scheme on local businesses. As such, parking and loading, as well as bus stop locations have been provided where possible. The combination of road narrowing, side road entry treatments will combine to reduce traffic speed and overtaking manoeuvres.	
Client Organisation Comments	
Designer's response accepted.	

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End of list of problems identified and recommendations offered in this Stage 2 Road Safety Audit

4.0 ISSUES IDENTIFIED DURING THE STAGE 2 ROAD SAFETY AUDIT THAT ARE OUTSIDE THE TERMS OF REFERENCE

Safety issues identified during the audit and site inspection that are considered to be outside the Terms of Reference, but which the Audit Team wishes to draw to the attention of the Client Organisation, are set out in this section. It is to be understood that, in raising these issues, the Audit Team in no way warrants that a full review of the highway environment has been undertaken beyond that necessary to undertake the Audit as commissioned.

4.1 ISSUE

Location: Various – junctions with proposed raised tables

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety concern.

Various junctions are proposed to have raised tables implemented. The kerb details indicate that away from crossing points, where transition or flush kerbs are proposed, the kerbs will have an upstand of 125mm or to match existing. It is not clear therefore what the upstand will be at the raised tables.

It is assumed that these will provide an upstand which is detectable for visually impaired users.

Design Organisation Response	Accepted / Part Accepted / Rejected
Raised tables will have a 25mm upstand.	
Client Organisation Comments	
Designer's response accepted	

4.2 ISSUE

Location: Various – shared use cycle / footway

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety concern.

It is not clear what the extents of the shared use surfaces are as none of the shared use extents appear to be defined.

In order to avoid cyclists continuing on the footway and the potential for low level cycle / pedestrian conflicts / unexpected cycle manoeuvres, it may be beneficial to clearly determine what the intended cycle routes are. This may include but is not limited to appropriate tactile paving, dropped kerbs and road markings / signs to indicate the intended routes / manoeuvres.

Design Organisation Response	Accepted / Part Accepted / Rejected
Shared areas will be identified by appropriate signage and the change from specific cycle track surfacing (buff asphalt) to generic footway surfacing (paving slabs).	
Client Organisation Comments	
Designer's response accepted	

4.3 ISSUE

Location: Various – throughout this section

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety concern.

Planting / SuDs ‘Rain Gardens’ are proposed immediately adjacent to the carriageway / cycle lanes at various junctions throughout this section.

The full details of the proposed features have not been provided but it is assumed that these will be of a type / maintained so that they do not restrict visibility or overgrow into the live carriageway areas.

Design Organisation Response	Accepted / Part Accepted / Rejected
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That is correct.

Client Organisation Comments

Designer’s response accepted

4.4 ISSUE

Location: 1 – A105 Green Lanes footway on north-eastern corner of junction with Lodge Drive

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety concern.

The traffic signal pole occupies part of the tactile paving area and is set back approximately a metre and a half from the edge of the kerb. This provision may make it difficult for a visually impaired user to find the push button unit.

It is recommended to provide an additional traffic signal pole / push button unit kerbside; this may also require alterations to the alignment of the cycle track and may require relocation of the proposed traffic signal pole to ensure the layout is clear and appropriate for all users.

Design Organisation Response	Accepted / Part Accepted / Rejected
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The layout has since been amended as per TfL Signals and this is no longer an issue.

Client Organisation Comments

Designers response accepted.

4.5 ISSUE

Location: 2 – A105 Green Lanes footway on western footway at junction with Lodge Drive

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety concern.

The proposed cycle track at this location may result in the area between the cycle track and the carriageway not being fully utilised by pedestrians due to the segregation effect that the cycle track may have.

It may therefore be beneficial for pedestrian comfort to re-position the cycle track further east (closer to the kerb) so that it maximises the effective footway width (west of the track) for pedestrians.

Design Organisation Response	Accepted / Part Accepted / Rejected
The alignment follows the original kerb line on approach to the crossing point. Whilst the comment is noted the current proposed position allows cyclists to enter the crossing area set back from the waiting point and then to continue past the loading bay without needing to make a change in direction.	
Client Organisation Comments	
Designer's response accepted.	

4.6 ISSUE

Location: 3 – Sign face B03

Reason considered to be outside the Terms of Reference: Issue for clarification rather than a defined road safety problem

The sign face indicates a segregated dual use footway / cycleway. The sign face appears to show the footway and cycle way the wrong way around. The Audit Team considers this to be a drafting error and this should be resolved during finalisation of the design with the provision of a correctly indicated representation of the sign face.

Design Organisation Response	Accepted / Part Accepted / Rejected
This has been corrected.	
Client Organisation Comments	
Designer's response accepted	

5.0 SIGNATURES AND SIGN-OFF

5.1 AUDIT TEAM STATEMENT

We certify that we have examined the drawings and documents listed in Appendix A. to this Safety Audit report. The Road Safety Audit has been carried out in accordance with TfL Procedure SQA-0170 dated May 2014, with the sole purpose of identifying any feature that could be removed or modified in order to improve the safety of the measures. The problems identified have been noted in this report together with associated suggestions for safety improvements that we recommend should be studied for implementation.

No one on the Audit Team has been involved with the design of the measures.

AUDIT TEAM LEADER:

Name: Shane Martin MCIHT, MSoRSA Signed: 

Position: Principal Road Safety Auditor Date: 11/01/2017

Organisation: Transport for London, Road Safety Audit
Asset Management Directorate

Address: 4th Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ

Contact: shane.martin@tfl.gov.uk (020 3054 2590)

AUDIT TEAM MEMBER:

Name: Kevin Seymour Signed: 
B Sc, PG Dip TS, MCIHT, MSoRSA

Position: Principal Road Safety Auditor Date: 11/01/2017

Organisation: Transport for London, Road Safety Audit
Asset Management Directorate

Address: 4th Floor Palestra, 197 Blackfriars Road, London, SE1 8NJ

Contact: kevinseymour@tfl.gov.uk (020 3054 1037)

5.2 DESIGN TEAM STATEMENT

In accordance with SQA-0170 dated May 2014, I certify that I have reviewed the items raised in this Stage 2 Safety Audit report. I have given due consideration to each issue raised and have stated my proposed course of action for each in this report. I seek the Client Organisation's endorsement of my proposals.

Name: Colin Aarons

Position: Project Manager

Organisation: Jacobs

Signed: *Colin Aarons*

Dated: 22.02.17

5.3 CLIENT ORGANISATION STATEMENT

I accept these proposals by the Design Organisation.

Name: David Taylor

Position: Head of Traffic & Transportation

Organisation: LB Enfield

Signed: 

Dated: 14.03.2017

5.4 SECONDARY CLIENT ORGANISATION STATEMENT (where appropriate)

I accept these proposals by the Design Organisation.

Name:

Position:

Organisation:

Signed:

Dated:

APPENDIX A

Documents Forming the Audit Brief

DRAWING NUMBER	DRAWING TITLE
B240A024-DG-A105-0100-006 Rev -	Cycle Enfield A105 - General Arrangement Sheet 6 of 47
B240A024-DG-A105-0100-007 Rev -	Cycle Enfield A105 - General Arrangement Sheet 7 of 47
B240A024-DG-A105-0100-008 Rev -	Cycle Enfield A105 - General Arrangement Sheet 8 of 47
B240A024-DG-A105-0100-009 Rev -	Cycle Enfield A105 - General Arrangement Sheet 9 of 47
B240A024-DG-A105-0100-010 Rev -	Cycle Enfield A105 - General Arrangement Sheet 10 of 47
B240A024-DG-A105-0200-006 Rev -	Cycle Enfield A105 - Site Clearance Sheet 6 of 47
B240A024-DG-A105-0200-007 Rev -	Cycle Enfield A105 - Site Clearance Sheet 7 of 47
B240A024-DG-A105-0200-008 Rev -	Cycle Enfield A105 - Site Clearance Sheet 8 of 47
B240A024-DG-A105-0200-009 Rev -	Cycle Enfield A105 - Site Clearance Sheet 9 of 47
B240A024-DG-A105-0200-010 Rev -	Cycle Enfield A105 - Site Clearance Sheet 10 of 47
B240A024-DG-A105-0500-006 Rev A	Cycle Enfield A105- Proposed drainage plan Sheet 6 of 47
B240A024-DG-A105-0500-007 Rev A	Cycle Enfield A105- Proposed drainage plan Sheet 7 of 47
B240A024-DG-A105-0500-008 Rev A	Cycle Enfield A105- Proposed drainage plan Sheet 8 of 47
B240A024-DG-A105-0500-009 Rev A	Cycle Enfield A105- Proposed drainage plan Sheet 9 of 47
B240A024-DG-A105-0500-010 Rev A	Cycle Enfield A105- Proposed drainage plan Sheet 10 of 47
B240A024-DG-A105-0700-002 Rev -	Cycle Enfield A105 – Road Pavements General Sheet 6 of 47
B240A024-DG-A105-0700-002 Rev -	Cycle Enfield A105 – Road Pavements General Sheet 7 of 47
B240A024-DG-A105-0700-002 Rev -	Cycle Enfield A105 – Road Pavements General Sheet 8 of 47
B240A024-DG-A105-0700-002 Rev -	Cycle Enfield A105 – Road Pavements General Sheet 9 of 47
B240A024-DG-A105-0700-002 Rev -	Cycle Enfield A105 – Road Pavements General Sheet 10 of 47

Cycle Enfield - Section 4, A105 Lodge Drive to Osbourne Road

Stage 2 Road Safety Audit Report

B240A024-DG-A105-1100-006 Rev -	Cycle Enfield A105 - Kerbs footways and paved areas Sheet 6 of 47
B240A024-DG-A105-1100-007 Rev -	Cycle Enfield A105 - Kerbs footways and paved areas Sheet 7 of 47
B240A024-DG-A105-1100-008 Rev -	Cycle Enfield A105 - Kerbs footways and paved areas Sheet 8 of 47
B240A024-DG-A105-1100-009 Rev -	Cycle Enfield A105 - Kerbs footways and paved areas Sheet 9 of 47
B240A024-DG-A105-1100-010 Rev -	Cycle Enfield A105 - Kerbs footways and paved areas Sheet 10 of 47
	Cycle Enfield A105 - Traffic signs and road markings Sheet 6 of 47
B240A024-DG-A105-1200-007 Rev B	Cycle Enfield A105 - Traffic signs and road markings Sheet 7 of 47
B240A024-DG-A105-1200-008 Rev B	Cycle Enfield A105 - Traffic signs and road markings Sheet 8 of 47
B240A024-DG-A105-1200-009 Rev B	Cycle Enfield A105 - Traffic signs and road markings Sheet 9 of 47
B240A024-DG-A105-1200-010 Rev B	Cycle Enfield A105 - Traffic signs and road markings Sheet 10 of 47
B240A024-DG-A105-1300-006 Rev A	Cycle Enfield A105 – MCHW Series 1300 Road Lighting Column & Bracket Mainline Layout Plan Sheet 6 of 47
B240A024-DG-A105-1300-007 Rev A	Cycle Enfield A105 – MCHW Series 1300 Road Lighting Column & Bracket Mainline Layout Plan Sheet 7 of 47
B240A024-DG-A105-1300-008 Rev A	Cycle Enfield A105 – MCHW Series 1300 Road Lighting Column & Bracket Mainline Layout Plan Sheet 8 of 47
B240A024-DG-A105-1300-009 Rev A	Cycle Enfield A105 – MCHW Series 1300 Road Lighting Column & Bracket Mainline Layout Plan Sheet 9 of 47
B240A024-DG-A105-1300-010 Rev A	Cycle Enfield A105 – MCHW Series 1300 Road Lighting Column & Bracket Mainline Layout Plan Sheet 10 of 47

DOCUMENTS

- Safety Audit Brief
- Site Location Plan
- Traffic signal details
- TfL signal safety checklist
- Departures from standard
- Previous Road Safety Audits
- Previous Designer Responses
- Collision data
- Collision plot
- Traffic flow / modelling data
- Pedestrian flow / modelling data
- Speed survey data
- Other documents

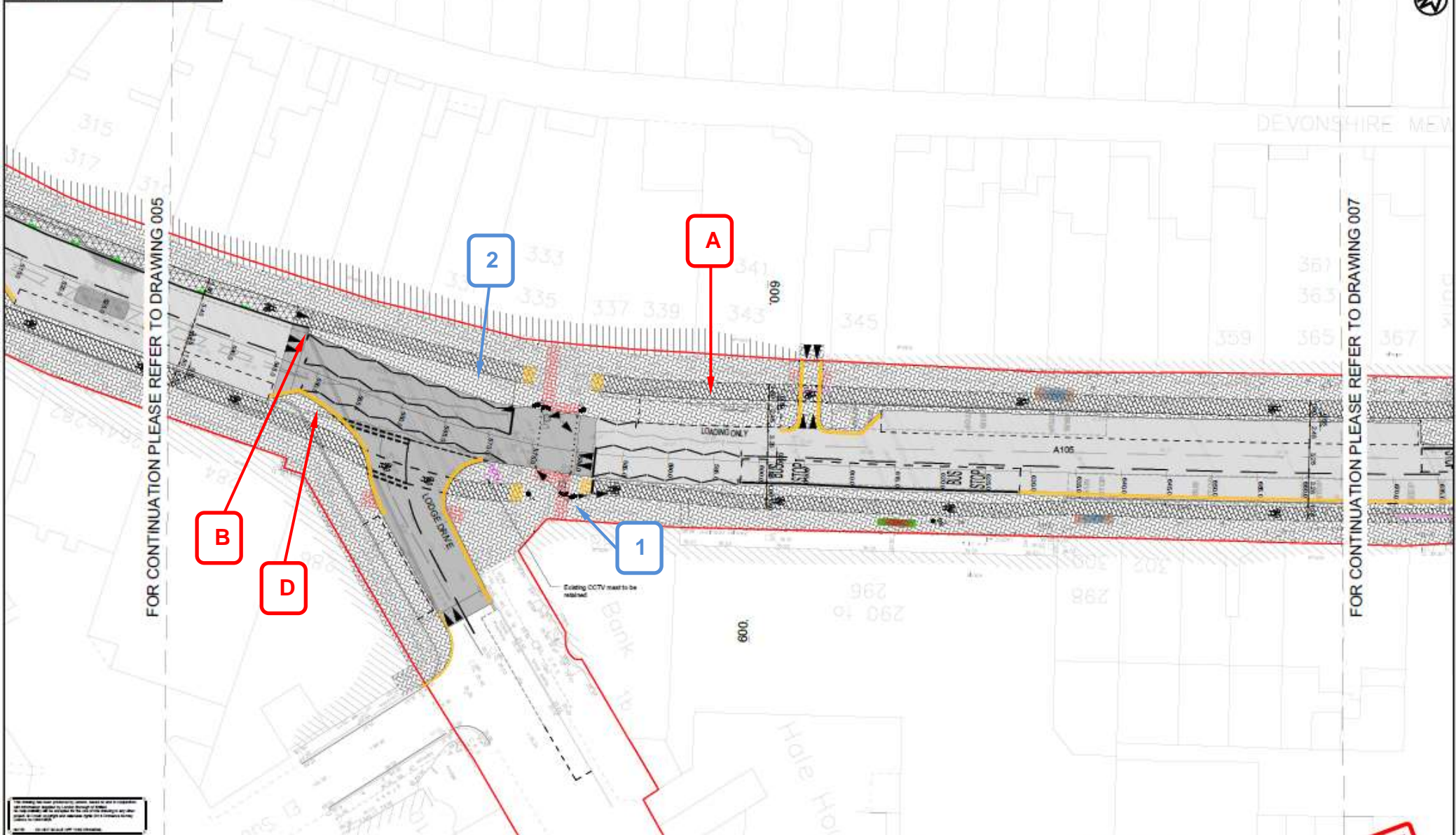
DETAILS (where appropriate)

2524/032/A105/BOR/2016

A105 Enfield - Proposed Road Marking Schedule
A105 Enfield - Sign Schedule - Section 4

APPENDIX B

Problem Locations



This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

Rev	Rev. Date	Proposed revision	Drawn	Checked	Appr.	Approved

<p>Site</p> <ul style="list-style-type: none"> Existing road Proposed road Proposed carriageway construction (refer to section 0705 drawings for details) Proposed kerbside paving (refer to section 0705 drawings for details) Proposed footway paving (refer to section 0705 drawings for details) Proposed cycle lane paving (refer to section 0705 drawings for details) Proposed bus stop paving (refer to section 0705 drawings for details) Proposed bus stop shelter Proposed bus stop bench Proposed bus stop seat Proposed bus stop table Proposed bus stop shelter and bench Proposed bus stop shelter and seat Proposed bus stop shelter and table Proposed bus stop shelter, bench and seat Proposed bus stop shelter, bench and table Proposed bus stop shelter, bench, seat and table Proposed bus stop shelter, bench, seat and table with canopy Proposed bus stop shelter, bench, seat and table with canopy and lighting Proposed bus stop shelter, bench, seat and table with canopy and lighting and CCTV mast Proposed bus stop shelter, bench, seat and table with canopy and lighting and CCTV mast and CCTV camera Proposed bus stop shelter, bench, seat and table with canopy and lighting and CCTV mast and CCTV camera and CCTV camera Proposed bus stop shelter, bench, seat and table with canopy and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera 	<p>Proposed</p> <ul style="list-style-type: none"> Proposed road Proposed road with kerb Proposed road with kerb and gutter Proposed road with kerb and gutter and drainage Proposed road with kerb and gutter and drainage and lighting Proposed road with kerb and gutter and drainage and lighting and CCTV mast Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera 	<p>Proposed</p> <ul style="list-style-type: none"> Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera and CCTV camera Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera and CCTV camera and CCTV camera Proposed road with kerb and gutter and drainage and lighting and CCTV mast and CCTV camera and CCTV camera and CCTV camera and CCTV camera and CCTV camera and CCTV camera
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ENFIELD COUNCIL

CYCLE ENFIELD - A105

GENERAL ARRANGEMENT SHEET 6 OF 47

DRAFT FOR COMMENTS ONLY

FOR APPROVAL

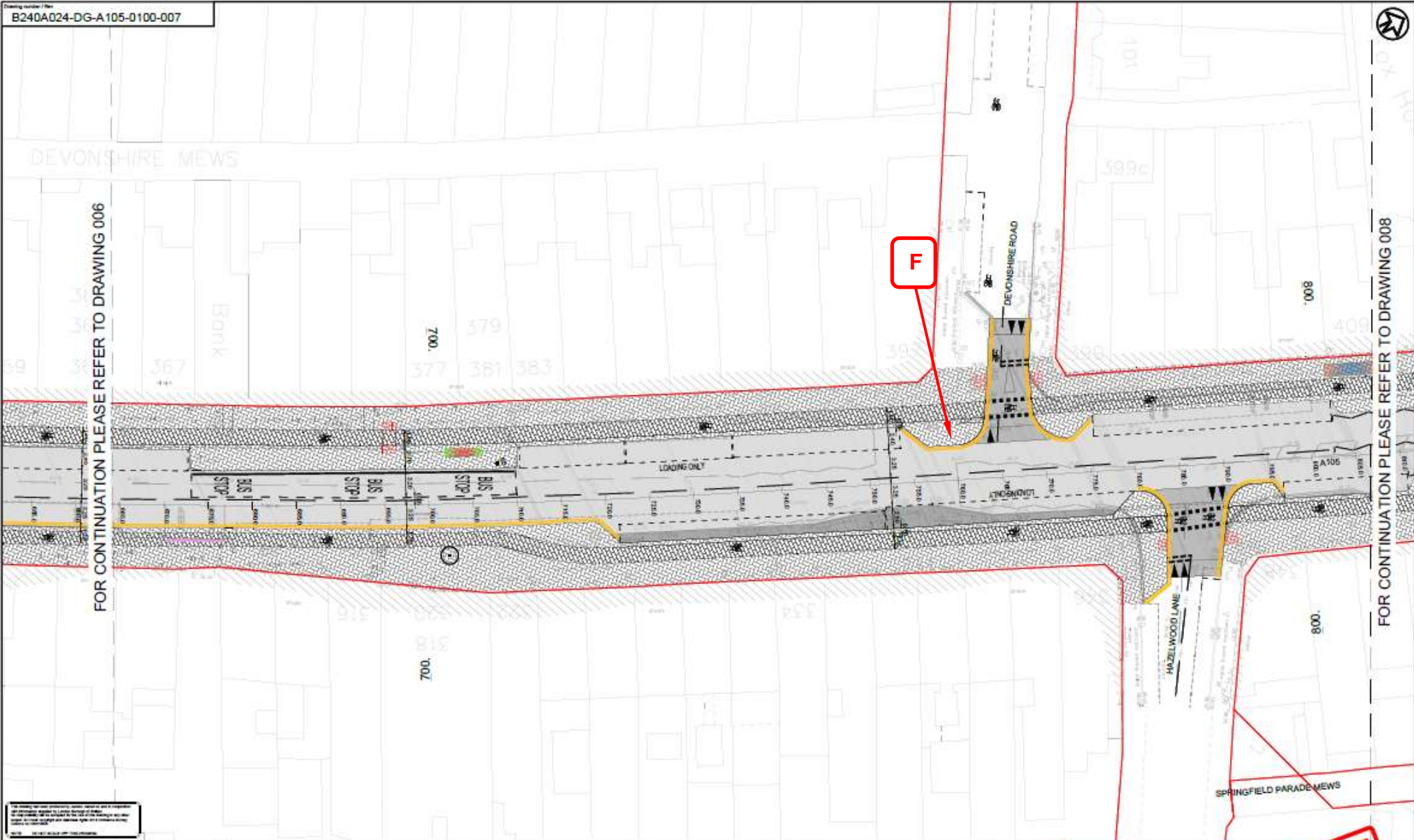
Issue: 01/06/2024

Scale: DO NOT SCALE

Client ref: 6240A024

Drawing number: B240A024-DG-A105-0100-006

Rev: -



FOR CONTINUATION PLEASE REFER TO DRAWING 006

FOR CONTINUATION PLEASE REFER TO DRAWING 008

THIS DRAWING IS A CONTRACT DOCUMENT AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. IT IS THE PROPERTY OF RINGWAY ACCORDS AND IS LOANED TO YOU FOR YOUR INFORMATION ONLY. IT IS TO BE USED ONLY IN CONNECTION WITH THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE. ANY REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF RINGWAY ACCORDS IS STRICTLY PROHIBITED.

FOR APPROVAL						
Rev	Rev. Date	Purpose of revision	Drawn	Checked	Examined	Approved

As per		As shown		As proposed	
[Hatching pattern]	Building levels	[Hatching pattern]	Building footprint	[Hatching pattern]	Proposed 200mm wide
[Hatching pattern]	Proposed layout	[Hatching pattern]	Proposed 300mm wide	[Hatching pattern]	Proposed 400mm wide
[Hatching pattern]	Proposed 300mm wide	[Hatching pattern]	Proposed 400mm wide	[Hatching pattern]	Proposed 500mm wide
[Hatching pattern]	Proposed 400mm wide	[Hatching pattern]	Proposed 500mm wide	[Hatching pattern]	Proposed 600mm wide
[Hatching pattern]	Proposed 500mm wide	[Hatching pattern]	Proposed 600mm wide	[Hatching pattern]	Proposed 700mm wide
[Hatching pattern]	Proposed 600mm wide	[Hatching pattern]	Proposed 700mm wide	[Hatching pattern]	Proposed 800mm wide
[Hatching pattern]	Proposed 700mm wide	[Hatching pattern]	Proposed 800mm wide	[Hatching pattern]	Proposed 900mm wide
[Hatching pattern]	Proposed 800mm wide	[Hatching pattern]	Proposed 900mm wide	[Hatching pattern]	Proposed 1000mm wide

Symbol	Description	Color	Description
[Blue line]	Building footprint	[Green line]	Proposed 200mm wide
[Red line]	Proposed 200mm wide	[Yellow line]	Proposed 300mm wide
[Green line]	Proposed 300mm wide	[Blue line]	Proposed 400mm wide
[Yellow line]	Proposed 400mm wide	[Red line]	Proposed 500mm wide
[Blue line]	Proposed 500mm wide	[Green line]	Proposed 600mm wide
[Yellow line]	Proposed 600mm wide	[Blue line]	Proposed 700mm wide
[Green line]	Proposed 700mm wide	[Yellow line]	Proposed 800mm wide
[Blue line]	Proposed 800mm wide	[Green line]	Proposed 900mm wide
[Yellow line]	Proposed 900mm wide	[Blue line]	Proposed 1000mm wide

Symbol	Description
[Red circle]	Proposed 200mm wide
[Blue circle]	Proposed 300mm wide
[Yellow circle]	Proposed 400mm wide
[Green circle]	Proposed 500mm wide
[Blue circle]	Proposed 600mm wide
[Yellow circle]	Proposed 700mm wide
[Green circle]	Proposed 800mm wide
[Blue circle]	Proposed 900mm wide
[Yellow circle]	Proposed 1000mm wide

1. All dimensions are in millimeters unless otherwise stated.
 2. Dimensions shown are for illustrative purposes. Contractor is to refer to relevant drawings for setting out details.
 3. Do not scale from this drawing.
 4. All road markings and signs to be in accordance with the Traffic Signs Regulations and General Directions 2016.
 5. Layouts are a combination of all topographical survey and Ordnance Survey. Where topographical survey information is not provided on drawings, all dimensions shown have been measured on site. The Station and descriptions to be brought to the attention of the Site Engineer.
 6. For further details of proposed signs please refer to Sign Notices.
 7. All existing damaged gully grates to be replaced.
 8. All gully grates with proposed kerbside cycle lane to be replaced with cycle friendly grates and undamaged existing grates to be retained in situ.
 9. Building safety signs to be replaced in accordance with the change to their current type when proposed surface works. Consideration will also be given to other signs.
 10. Lamp valance illuminated by vehicle will have indicators replaced by L.E.D. units, in which vehicle the on-highway to not carry rearward, it is to be replaced with LED and shown adjacent to the primeval cycle lane.

RINGWAY ACCORDS
 Transport & Logistics

ENFIELD
 COUNCIL

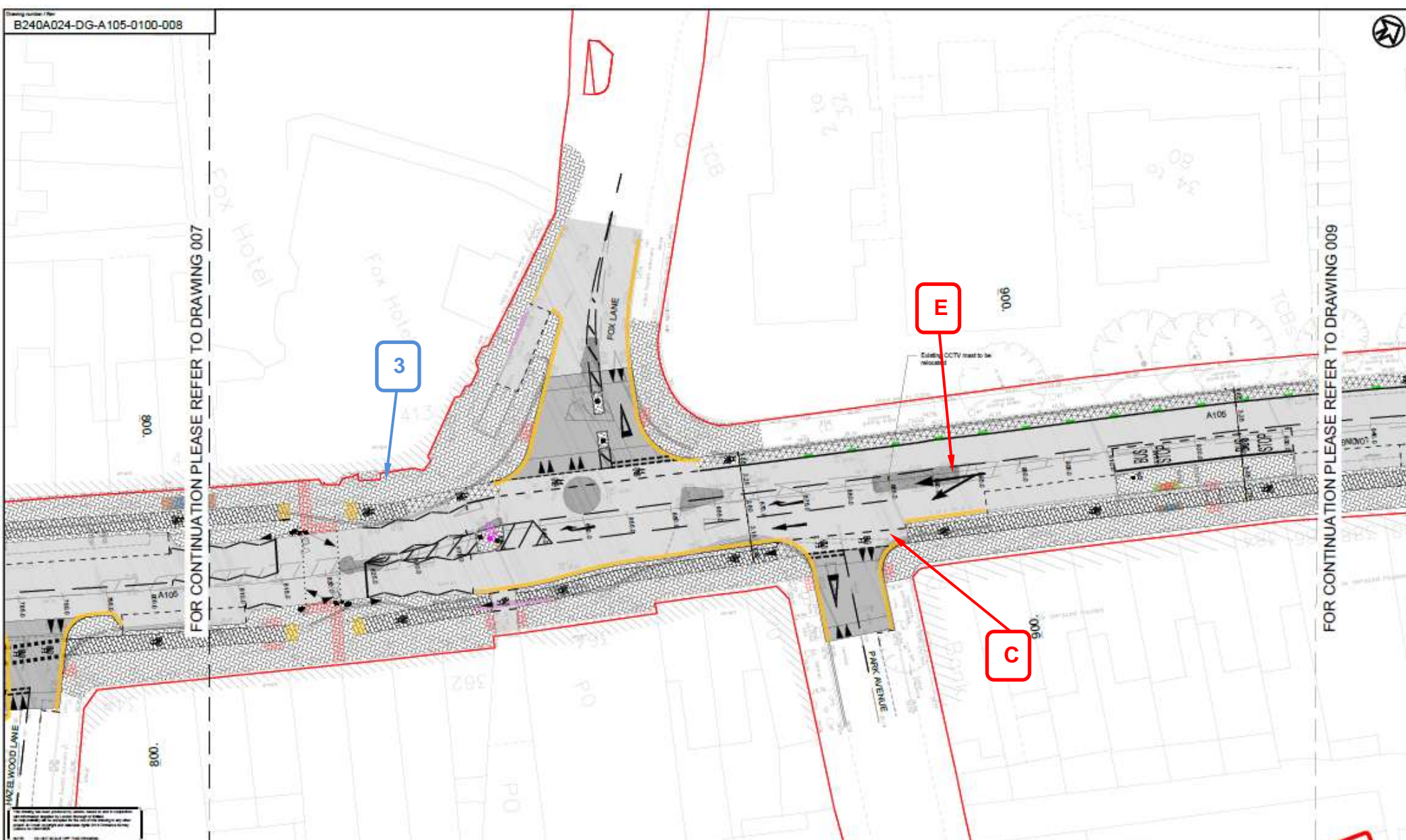
CYCLE ENFIELD - A105

DRAFT
 GENERAL ARRANGEMENT SHEET OF PARTS ONLY
 FOR COMMENTS ONLY

Client: [Redacted]

Project: [Redacted]

Issue: [Redacted]
 Date: 02/08/24
 Drawing number: B240A024-DG-A105-0100-007



FOR CONTINUATION PLEASE REFER TO DRAWING 007

FOR CONTINUATION PLEASE REFER TO DRAWING 009

Notes:
 1. All dimensions are in metres unless otherwise stated.
 2. Dimensions shown are for illustrative purposes. Continuation is to refer to sheets of drawings to which it applies.
 3. Do not scale from this drawing.
 4. All road markings and signs to be in accordance with the Traffic Signs Regulations and General Directions 2016.
 5. Landmarks are a combination of both geographical names and Ordnance Survey. Where geographical names information is not provided on drawings, all dimensions shown have been measured on the site. Check and dimensions to be brought to the attention of the Site Engineer.
 6. For further details of proposed signs please refer to the Roadside.
 7. All existing damaged gully plates to be replaced.
 8. All gully plates with proposed carriageway cycle lanes to be replaced with cycle friendly gully plates and underground wiring, cables to be removed in situ.
 9. Existing utility covers to be kept in concrete where required. Roadway covers within proposed cycle tracks are to be replaced, unless indicated on the drawings to be retained. Covers above proposed surface waters. Consultation will vary depending on existing situations.
 10. Lamp columns identified by white will have lanterns replaced by L.E.D. units, by others.
 11. Where the carriageway is not being resurfaced, a 100mm maximum depth has been shown adjacent to the proposed cycle lane.

<p>Proposed Cycle Lane</p> <p>Proposed cycle lane</p> <p>Proposed cycle lane (with tactile paving)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>	<p>Proposed Footway</p> <p>Proposed footway</p> <p>Proposed footway (with tactile paving)</p> <p>Proposed footway (with tactile paving) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>	<p>Proposed Cycle Lane</p> <p>Proposed cycle lane</p> <p>Proposed cycle lane (with tactile paving)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>	<p>Proposed Footway</p> <p>Proposed footway</p> <p>Proposed footway (with tactile paving)</p> <p>Proposed footway (with tactile paving) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>	<p>Proposed Cycle Lane</p> <p>Proposed cycle lane</p> <p>Proposed cycle lane (with tactile paving)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed cycle lane (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>	<p>Proposed Footway</p> <p>Proposed footway</p> <p>Proposed footway (with tactile paving)</p> <p>Proposed footway (with tactile paving) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p> <p>Proposed footway (with tactile paving) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced) (to be replaced)</p>
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<p>Client</p> <p>RINGWAY JACOBS</p> <p>ENFIELD Council</p> <p>Cycle Enfield - A105</p>	<p>Drawing title</p> <p>GENERAL ARRANGEMENT SHEET 8 OF 11 FOR APPROVAL</p> <p>Scale</p> <p>1:500 @ A1</p> <p>Do NOT SCALE</p>
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DRAFT FOR COMMENTS ONLY

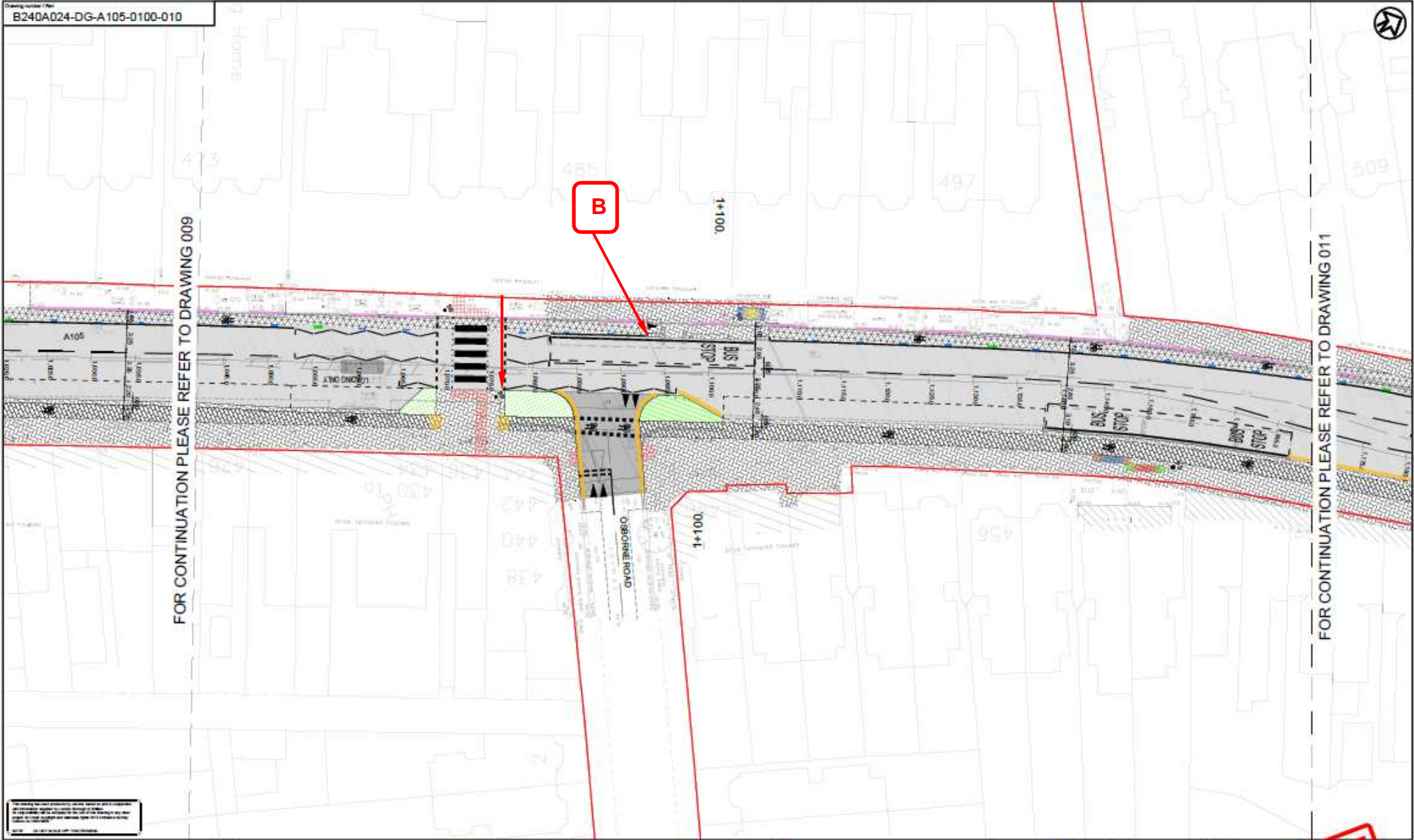
Rev	Rev Date	Purpose of revision	Drawn	Check	By	CA
1	28/02/2024	FOR APPROVAL				

This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.



FOR CONTINUATION PLEASE REFER TO DRAWING 009

FOR CONTINUATION PLEASE REFER TO DRAWING 011



Existing surface conditions shall be used and no provision for drainage shall be made for the road surface. It is the responsibility of the contractor to ensure that the road surface is laid to the correct level and that it is capable of supporting the proposed traffic load.

REV	DATE	DESCRIPTION	BY	CHKD	APPD
1	20/03/24	ISSUE FOR APPROVAL	JCC	CA	CA

This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

SYMBOLS

	Existing layout		Proposed road		Proposed cycle lane
	Proposed carriageway construction (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed parking (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane
	Proposed road works (refer to notes 2/50 coverage for details)		Proposed cycle lane		Proposed cycle lane

NOTES

- All dimensions are in millimetres unless stated.
- Dimensions above and below the roadline are to be used for setting out.
- Do not scale from this drawing.
- All road markings and signs to be in accordance with the Traffic Signs Regulations and General Directions 2016.
- Levels are a combination of both longitudinal and cross-section survey. Where longitudinal survey information is not provided or changed, all dimensions shown have been measured on site. The location and dimensions to be shown in the attention of the Site Engineer.
- No further details of proposed signs shall refer to Sign Schedule.
- All existing drainage gully grates to be replaced.
- All gully grates with proposed carriageway cycle lane to be replaced with cycle friendly grates and underground existing grates to be replaced with.
- Existing utility covers to be marked in accordance with relevant standards. Utility covers within proposed cycle lane are to be replaced, where indicated on the drawing, to meet current best practice proposed surface standards. Construction will vary depending on underlying conditions.
- Large vehicles unaffected by works will have bollards replaced by L.B.C. units, to allow the carriageway to remain available at all times. A 100 maximum speed limit sign shall be replaced by the proposed cycle lane.

CLIENT

ENFIELD
Council

PROJECT

CYCLE ENFIELD - A105

DRAWING TITLE

GENERAL ARRANGEMENT SHEET 10 OF 47

FOR APPROVAL

DATE

20/03/24

SCALE

DO NOT SCALE

DRAWING NUMBER

B240A024-DG-A105-0100-010

