

**ATKINS**

Member of the SNC-Lavalin Group

**Corstorphine Connections – Phase 2**  
Stage 1 and 2 Road Safety Audit  
City of Edinburgh Council

September 2023



# Notice

This document and its contents have been prepared and are intended solely as information for City of Edinburgh Council and use in relation to the proposed footway and carriageway amendments across south Corstorphine, Edinburgh.

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This document has 40 pages including the cover.

## Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	For Issue					28/09/2023

## Client signoff

Client	City of Edinburgh Council
RSA team organisation	Atkins
Report title	Corstorphine Connections – Phase 2 Stage 1 and 2 Road Safety Audit
Client Reference	-
Atkins reference	8003-676

# Table of contents

Chapter	Page
<b>1. Introduction</b>	<b>4</b>
1.1 Project Details	4
1.2 Terms of Reference	4
1.3 RSA Team	4
1.4 Site Visit	5
1.5 Scope	5
1.6 Report Outline	5
1.7 Notes and Clarifications	5
<b>2. Items Outstanding from Previous Audits</b>	<b>7</b>
<b>3. Items Raised at this Stage 1 and 2 RSA</b>	<b>8</b>
<b>4. RSA Team Statement</b>	<b>31</b>
<b>Appendix A. Drawings and Documents</b>	<b>38</b>
A.1. Drawings	38
A.2. Documents	38
<b>Appendix B. Location of Problems</b>	<b>39</b>

# 1. Introduction

## 1.1 Project Details

Report Title	Corstorphine Connections – Phase 2 Stage 1 and 2 Road Safety Audit
Date:	September 2023
Document Reference and Revision:	8003-676
Prepared by:	Atkins
Overseeing Organisation:	City of Edinburgh Council

Atkins has been commissioned by City of Edinburgh Council (CEC), to undertake a Stage 2 Road Safety Audit (RSA) on the proposed footway and carriageway amendments across south Corstorphine, Edinburgh. This report documents the outcome of the RSA in the form of identified road safety problems and associated recommendations.

To the knowledge of the RSA Team, this is the first RSA undertaken on this scheme.

## 1.2 Terms of Reference

The RSA has been conducted in accordance with GG 119 Road safety audit, in the Design Manual for Roads and Bridges. The RSA team has examined and reported only on the road safety implications of the highway scheme proposals and has not examined or verified the compliance of the designs to any other criteria. Where there are issues that may be of interest to the Design Organisation, but not necessarily within the scope of the RSA, these have been provided to the Overseeing Organisation separately.

In addition to GG 119, this RSA has been informed by the RSA brief prepared by [REDACTED] of [REDACTED] and approved by [REDACTED] of [REDACTED].

## 1.3 RSA Team

The RSA team, approved by [REDACTED] of [REDACTED], was as follows:

	BEng MSc CEng FCIHT MSoRSA RSA Team Leader, Atkins Transportation (Certificate of Competency in RSA, 2017)
	MSc MCIHT MSoRSA RSA Team Member, Atkins Transportation

## 1.4 Site Visit

The RSA comprised a desktop review of the information provided, and a site visit was undertaken during daylight hours on 13<sup>th</sup> July 2023 between 13:20 and 16:00 with all members of the RSA team in attendance. During the site visit the road surface was predominantly dry and the weather was overcast with a rainy spell. Traffic levels were moderate with no congestion evident. Pedestrian levels were moderate and cycle levels were low.

## 1.5 Scope

The scheme, which forms Phase 2 of the Corstorphine Connections project, proposes footway and carriageway amendments to provide a safer and more attractive walking and cycling environment across the area of south Corstorphine in west Edinburgh. The wider Corstorphine Connections relates to the trialling of a low traffic neighbourhood.

The streets concerned as part of Phase 2 of the project and this RSA include:

- Ladywell Road
- Corstorphine High Street
- Manse Road
- Saughton Road North
- Kirk Loan
- Dovecot Road
- Manse Street
- Featherhall Avenue
- Featherhall Terrace
- Tyler's Acre Avenue
- Lampacre Road
- Carrick Knowe Gardens
- Station Road
- Corstorphine Park Gardens
- St Johns Road

The above streets are subject to a posted 20mph speed limit, with street lighting and footways provided. The area comprises residential properties, two primary schools, parks and a variety of shops and amenities.

The measures include:

- footway widening and buildouts;
- speed bump installation;
- parking restrictions;
- cycle stand installation;
- school street signage around Corstorphine and Carrick Knowe Primary Schools;
- refuge island amendments and installation; and
- associated road marking and sign installation.

## 1.6 Report Outline

Section 2 of this report documents any outstanding issues identified from previous Audit Reports and Section 3 documents the findings of the current RSA stage. Section 4 comprises the RSA Team statement.

Details of the information provided about the scheme are included in Appendix A. Problems and recommendation locations for the current RSA stage are shown on the plan included in Appendix B.

## 1.7 Notes and Clarifications

The recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a

proportionate and viable means of eliminating or mitigating the identified problem; alternative methods should be considered by the Design Organisation. GG 119 provides requirements and advice on the process for responding to this RSA report including the production and agreement of a separate RSA response report. The RSA response report provides the full audit trail of decision making at each stage of the process and captures the changes made as a result of the recommendations made here.

The RSA team have recently undertaken a Stage 3 RSA on measures introduced under Phase 1 of the Corstorphine Connections project. This Phase included traffic calming and reduction measures at several locations outlined in Section 1.5. As a result of the overlap in scheme extents, some problems have been raised in both the Stage 1 and 2 and Stage 3 RSA.

## 2. Items Outstanding from Previous Audits

To the knowledge of the RSA Team, this is the first RSA undertaken on this scheme (Phase 2 of the Corstorphine Connections project).

### 3. Items Raised at this Stage 1 and 2 RSA

This section details the items raised in this Stage 1 and 2 RSA.

<b>Problem:</b>	3.1
<b>Location(s):</b>	Scheme extents
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701 to 60636731-SHT-C-P2-LTN-0706
<b>Summary:</b>	Worn road markings may give rise to unplanned driver behaviours.



Example of worn markings at Saughton Road North



Example of worn markings at Featherhall Road and Featherhall Terrace

**Description:**

Whilst it is appreciated some road markings are to be installed/refreshed as part of the scheme, it was observed on site that several road markings are worn, including:

- Give way markings
- Cycle markings
- Zig zag markings
- Waiting and loading restrictions

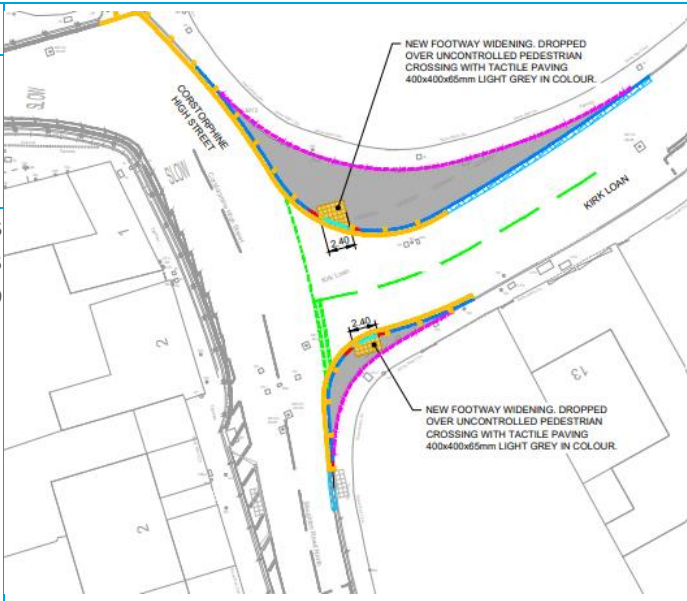
The worn markings increase the likelihood of drivers failing to give way, not moderating speed, obstructing junctions and other users by stopping/parking at adverse locations. These behaviours increase the likelihood of vehicle conflicts and collisions.

**Recommendation:**

It is recommended that worn road markings are refreshed across the scheme extents.



<b>Problem:</b>	<b>3.2</b>
<b>Location(s):</b>	Scheme extents
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701 to 60636731-SHT-C-P2-LTN-0706
<b>Summary:</b>	Risk of collisions resulting from vehicles being unable to simultaneously manoeuvre.



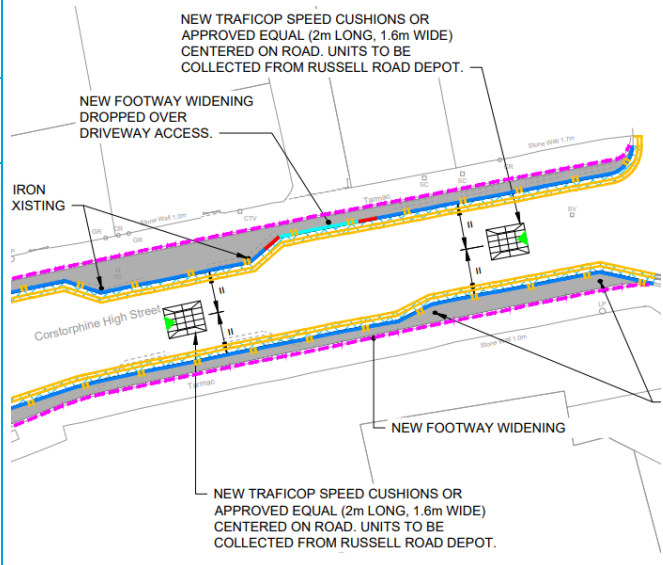
**Description:**

The existing carriageway geometry is to be amended at several junctions where footway widening, and buildouts are proposed. The reduced junction and carriageway widths may be unable to accommodate all vehicle manoeuvres without encroaching adjacent running lanes and footways. This increases the likelihood of side impact or head-on collisions.

**Recommendation:**

It is recommended that all anticipated vehicle manoeuvres can be safely accommodated.

<b>Problem:</b>	<b>3.3</b>
<b>Location(s):</b>	Corstorphine High Street, priority one-way working
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701
<b>Summary:</b>	Inconspicuous speed cushions could result in road user injury.



**Description:**

Two speed cushions are proposed on Corstorphine High Street at the priority one-way working between Ladywell Avenue and Corstorphine Primary School. The proposals indicate the provision of only one triangle marking on each speed cushion. The absence of triangle markings/dragon teeth in both directions could reduce driver visibility of the traffic calming features, particularly during the hours of darkness. This presents a risk to road users, especially those on two wheeled vehicles, who may be unsteadied and fall.

**Recommendation:**

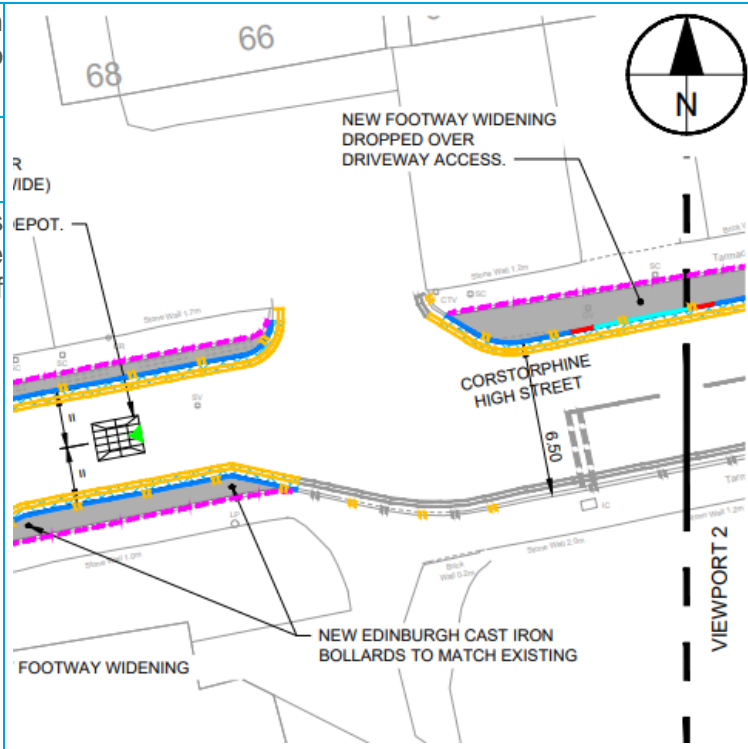
It is recommended that dragon teeth are installed on both approaches to the speed cushions.

**Problem:** 3.4

**Location(s):** Corstorphine High Street, access to house number 66

**Drawing(s):** 60636731-SHT-C-P2-LTN-0701

**Summary:** Risk of pedestrians suffering injury due to the absence of tactile paving.



**Description:**

The plans do not indicate the provision of tactile paving at the access to house number 66. The absence of tactile paving, which warns users they are transitioning from footway to carriageway and vice versa presents a risk to pedestrians, particularly those with visual impairments who may inadvertently enter the carriageway and be struck by passing vehicles.

**Recommendation:**

It is recommended that tactile paving is provided.

<b>Problem:</b>	<b>3.5</b>
<b>Location(s):</b>	Corstorphine High Street, access to the Church Hall
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0702
<b>Summary:</b>	Risk of pedestrians suffering injury due to the absence of dropped kerbs.



**Description:**

The proposals do not indicate the provision of dropped kerbs, or tactile paving, at the access to the Church Hall at Corstorphine High Street. The absence of dropped kerbs increases the likelihood of pedestrians tripping and falling over full height kerbs and impedes accessibility for pedestrians travelling with wheeled devices.

Furthermore, the absence of tactile paving increases the risk of visually impaired pedestrians inadvertently entering the carriageway.

**Recommendation:**

It is recommended that dropped kerbs and tactile paving are provided.

<b>Problem:</b>	<b>3.6</b>
<b>Location(s):</b>	Corstorphine High Street, priority one-way working
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701
<b>Summary:</b>	Risk of driver confusion and drivers failing to give way resulting in collisions.



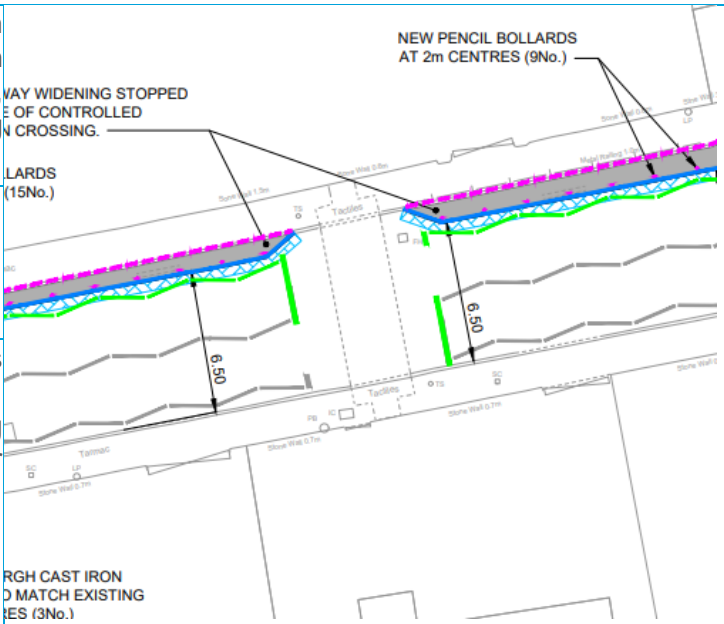
**Description:**

The existing give way sign associated with the priority one-way working between Ladywell Avenue and Corstorphine Primary School is located west of the give way road markings. During the site visit, a vehicle was observed giving way to eastbound traffic at the signage location and not at the road markings where the carriageway is wider to accommodate two-way traffic flows. The distance between the road markings and signage may confuse drivers as to the intended operation of the priority system and increases the risk of collisions should vehicles fail to give way at the location intended.

**Recommendation:**

It is recommended that the give way signage is relocated closer to the give way markings.

<b>Problem:</b>	<b>3.7</b>
<b>Location(s):</b>	Corstorphine High Street and Saughton Road North, signalised crossing facilities
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701 and 60636731-SHT-C-P2-LTN-0703
<b>Summary:</b>	Risk of pedestrians accessing/egressing from the crossing facilities tripping over kerbs.



**Description:**

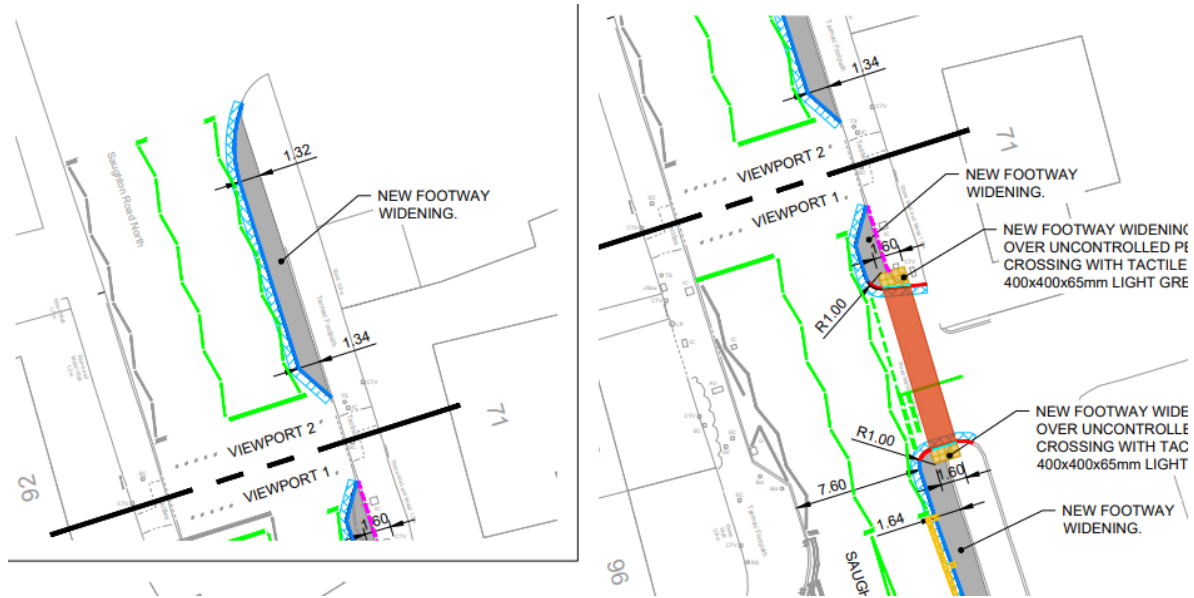
Footway widening is proposed on the north footway at Corstorphine High Street and east footway at Saughton Road North. The proposals indicate that the widened footways will taper into the existing kerb lines at the signalised crossing facilities. The tapered kerbs pose a trip hazard to pedestrians transitioning to/from the crossing facilities and to those travelling along the widened areas of footway.

This risk is exacerbated as the traffic signal poles are located within the middle of the existing footways. It is anticipated that pedestrians will choose to walk on the carriageway side of the signal poles to avoid the pinch point.

**Recommendation:**

It is recommended that a consistent kerb alignment is provided.

<b>Problem:</b>	<b>3.8</b>
<b>Location(s):</b>	Corstorphine High Street and Saughton Road North, signalised crossing facilities
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701 and 60636731-SHT-C-P2-LTN-0703
<b>Summary:</b>	Risk of pedestrians being struck by passing vehicles at the crossing facilities.



**Description:**

It is anticipated that the varying kerb lines between the approaches to the crossing facilities and the existing kerb lines to be retained at the crossing frontiers will give rise to pedestrians waiting on the carriageway for the crossing to activate. This increases the likelihood of pedestrians being struck by vehicles.

This risk is heightened during peak times, such as the start and end of the school day, where larger volumes of pedestrians may overshoot the footway and gather between the kerb lines due to space constraints.

**Recommendation:**

It is recommended that sufficient space is provided for pedestrians to congregate and pass one another on the footway, without needing to step on the carriageway.

<b>Problem:</b>	<b>3.9</b>
<b>Location(s):</b>	Corstorphine High Street, signalised crossing facility
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701
<b>Summary:</b>	Risk of pedestrians being stuck at the crossing facility or secondary collision resulting due to vehicles failing to stop.



**Description:**

It was observed during the site visit that the existing high friction surfacing at the signalised crossing facility on Corstorphine High Street is very worn. The worn surfacing could be an indication of frequent heavy braking as vehicles act upon a red traffic signal at this location. It is unlikely that the high friction surfacing is currently operating as intended due to its worn condition. This increases the likelihood of vehicles being unable to stop or act upon a red signal in time. This increases the likelihood of:

- crossing pedestrians and/or cyclists being struck;
- loss of control collisions; and
- rear end shunts resulting from sudden braking.

**Recommendation:**

It is recommended that the high friction surfacing is replaced.



**Problem:** 3.10

**Location(s):** Corstorphine High Street, south footway

**Drawing(s):** 60636731-SHT-C-P2-LTN-0701

**Summary:** Constrained footway may give rise to pedestrian travelling along the carriageway.



**Description:**

The footway on the south side of Corstorphine High Street appears narrow for the pedestrian levels observed. It is further constrained by a bus shelter and bin located adjacent to St Margaret’s Park, where a pedestrian was observed struggling to pass with a walking frame. Insufficient footway width increases the risk of pedestrians stepping into the carriageway to pass other users and/or avoid street furniture. This could lead to pedestrians being stuck by oncoming vehicles.

**Recommendation:**

It is recommended that the footway is sufficiently wide to accommodate all user types and volumes anticipated to use the footway.

<b>Problem:</b>	<b>3.11</b>
<b>Location(s):</b>	Corstorphine High Street, westbound carriageway
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0701
<b>Summary:</b>	Defective carriageway surface could be unsteady for two-wheeled vehicles



**Description:**

The westbound carriageway surface at Corstorphine High Street looks comparatively newer than the eastbound carriageway, however several defects and cracks are present. The uneven surface presents a risk to cycles and motorcycles who may become unbalanced and suffer injury from falls. Additionally, broken and loose surface material increases the risk of vehicles skidding and secondary collisions occurring due to reduced tyre grip.

**Recommendation:**

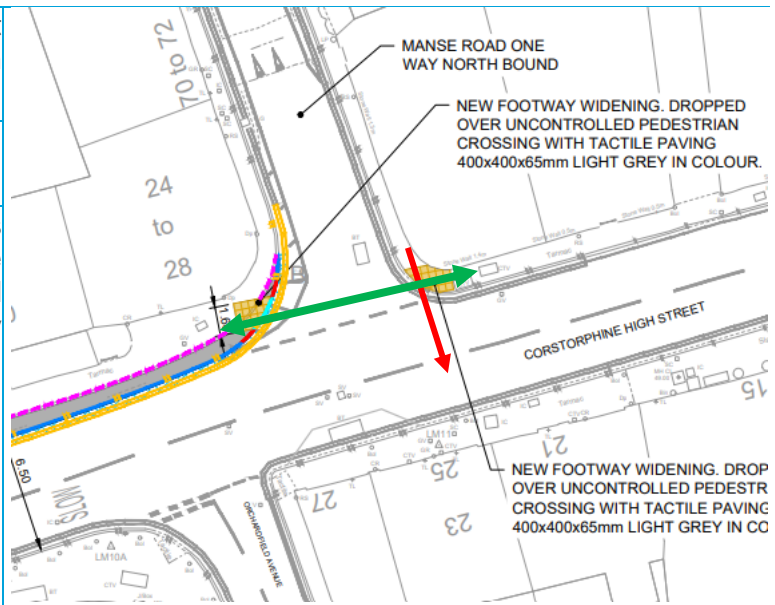
It is recommended that the carriageway is resurfaced.

**Problem:** 3.12

**Location(s):** Manse Road, at Corstorphine High Street

**Drawing(s):** 60636731-SHT-C-P2-LTN-0702

**Summary:** Risk of pedestrians entering the carriageway and being stuck by oncoming vehicles.



**Description:**

The tactile paving positioning relative to the radii of the junction could be interpreted in two ways. Pedestrians walking along Corstorphine High Street would be directed by the orientation of tactile paving across the side road correctly (indicated by the green arrow in the picture). However, those pedestrians walking along the Manse Road would also detect the tactile paving and crossing. In this case the tactiles would direct pedestrians across Corstorphine High Street, as indicated by the red arrow, where no connecting provision is provided. This increases the likelihood of pedestrian and vehicle collisions.

**Recommendation:**

It is recommended that the tactile paving is realigned to better direct visually impaired pedestrians to the intended crossing facility.

**Problem:** 3.13

**Location(s):** Kirk Loan, at Corstorphine High Street

**Drawing(s):** 60636731-SHT-C-P2-LTN-0702

**Summary:** Risk of surface water collection at the proposed footway.



**Description:**

Footway buildouts are proposed at Kirk Loan at its junction with Corstorphine High Street. The current profile of the existing footways and carriageway where the buildouts are proposed look to form a channel, as illustrated above. There is therefore a risk that surface water may collect in these channels on the widened footways. This could form trip and slip hazards for pedestrians, particularly during periods of cold freezing weather.

**Recommendation:**

It is recommended that sufficient drainage is provided.

<b>Problem:</b>	<b>3.14</b>
<b>Location(s):</b>	Northside of pedestrian crossing on Kirk Loan, at Corstorphine High Street
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0702
<b>Summary:</b>	Insufficient intervisibility at the crossing may result in pedestrian and vehicle collisions.



**Description:**

It was noted during the site visit that intervisibility between pedestrians and approaching vehicles at Kirk Loan is obstructed by parked vehicles. There is a risk of crossing pedestrians entering the carriageway into the path of an oncoming vehicle and being struck. This risk is exacerbated for smaller pedestrians who may be completely obstructed by a parked vehicle.

**Recommendation:**

It is recommended that sufficient visibility is provided at the crossing facility.

<b>Problem:</b>	<b>3.15</b>
<b>Location(s):</b>	Saughton Road North (east side), entrance and exit to the shops
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0703
<b>Summary:</b>	Risk of vehicle conflicts and collisions due to the introduction of two-way traffic.



**Description:**

It was observed during the site visit that the accesses to the minor road serving the shops located on the east side of Saughton Road North operates as a one-way, with vehicles entering to the north and exiting from the south. The plans indicate the installation of two-way give way markings at both accesses. It is anticipated that two-way vehicular traffic at these accesses and across the minor road will result in vehicle conflicts as drivers may not expect opposing movements. Additionally, the southern access is narrow, and vehicles were observed encroaching what would be the opposing running lane in order to manoeuvre out of the minor road. This could result in collisions.

**Recommendation:**

It is recommended that the one-way system is formalised.

<b>Problem:</b>	<b>3.16</b>
<b>Location(s):</b>	Saughton Road North (west side), adjacent to shops
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0703
<b>Summary:</b>	Restricted visibility may result in crossing pedestrians being struck.



**Description:**

A buildout and uncontrolled crossing facility is proposed between the existing parking spaces located outside the shops on the west side of Saughton Road North. There is a risk that parked vehicles either side of the buildout will restrict intervisibility to/from the crossing for pedestrians and approaching vehicles. This increases the risk of pedestrians entering the carriageway into the path of an oncoming vehicle and being struck.

**Recommendation:**

It is recommended that sufficient visibility is provided at the crossing facility.

<b>Problem:</b>	<b>3.17</b>
<b>Location(s):</b>	Saughton Road North, north of Broomfield Crescent
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0703
<b>Summary:</b>	Tree canopy creating dark spots and potentially reducing street lighting illumination at the footway and crossing facility.



**Description:**

During the site visit it was observed that tree canopies on the west side of Saughton Road North were creating dark spots over the western footway and at the pedestrian refuge island north of Broomfield Crescent. As a result, pedestrians were difficult to see, and the reduced visibility increases the risk of pedestrians crossing at the refuge island being struck.

Furthermore, two street lighting columns were obscured by the tree canopies. It is likely that the foliage is reducing the illumination capacities of the lighting columns, which may reduce the conspicuity of the refuge island and crossing users which could lead to collisions.

**Recommendation:**

It is recommended that the tree canopies are cut back to ensure sufficient illumination is provided and to remove the dark spot observed.



<b>Problem:</b>	<b>3.18</b>
<b>Location(s):</b>	Dovecot Road, at Ladywell Avenue
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0704
<b>Summary:</b>	Vegetation reduces visibility of and for crossing users.



**Description:**

Pedestrians crossing southwards at Dovecot Road have restricted visibility of vehicles travelling south on Ladywell Avenue due to vegetation around the junction. This increases the risk of pedestrians attempting to cross and vehicles entering Dovecot Road colliding due to poor intervisibility of one another.

**Recommendation:**

It is recommended that the overgrown vegetation is removed.

<b>Problem:</b>	<b>3.19</b>
<b>Location(s):</b>	Featherhall Road, at Featherhall Terrace
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0705
<b>Summary:</b>	Risk of vehicles colliding due to restricted visibility from the junction.



**Description:**

The buildout proposed at Featherhall Road, at its junction with Featherhall Terrace will locate northbound vehicles on the right side of the junction. As a result, driver intervisibility of vehicles approaching on Featherhall Terrace and of those exiting Featherhall Road is restricted by property lines and vegetation around the east side of the junction. This increases the risk of vehicles colliding whilst manoeuvring to and from the junction.

**Recommendation:**

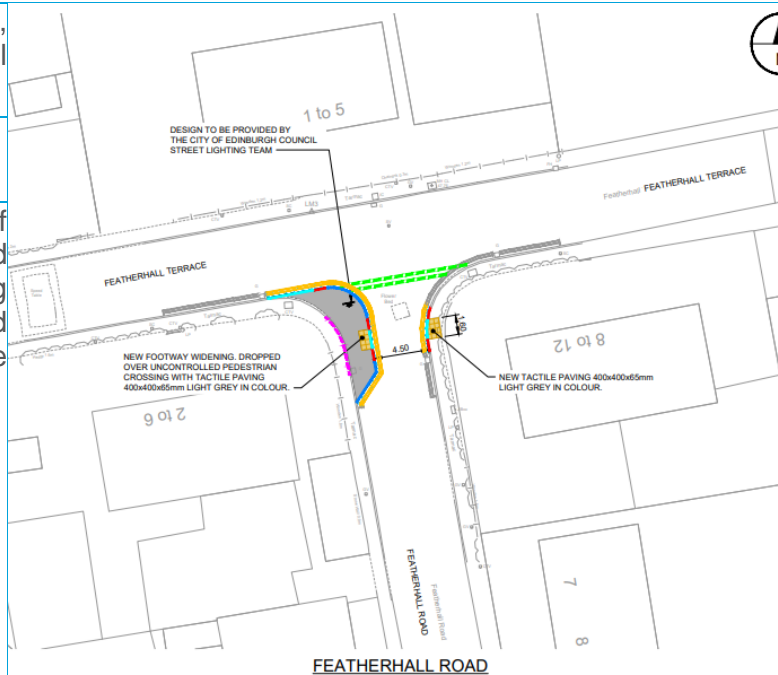
It is recommended that the proposed buildout is relocated to the east side of the junction to improve driver intervisibility.

**Problem:** 3.20

**Location(s):** Featherhall Road, at Featherhall Terrace

**Drawing(s):** 60636731-SHT-C-P2-LTN-0705

**Summary:** Risk of pedestrians and vehicles colliding due to restricted visibility from the junction.



**Description:**

The uncontrolled pedestrian crossing facility at Featherhall Road is proposed inset of the junction with Featherhall Terrace. In cognisance of Problem 3.22, the property boundaries and vegetation around the east side of the Featherhall Road and Featherhall Terrace junction obstruct intervisibility of pedestrians crossing from east to west and of vehicles approaching from Featherhall Terrace. This increases the risk of vehicles entering Featherhall Road striking pedestrian crossing the carriageway.

**Recommendation:**

It is recommended that the proposed buildout is relocated to the east side of the junction to improve driver and pedestrian intervisibility.

<b>Problem:</b>	3.21
<b>Location(s):</b>	Featherhall Road and Kirk Loan
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0703 and 60636731-SHT-C-P2-LTN-0705
<b>Summary:</b>	Risk of pedestrians tripping and falling in the carriageway.



Featherhall Road at Featherhall Terrace

Kirk Loan at Corstorphine High Street

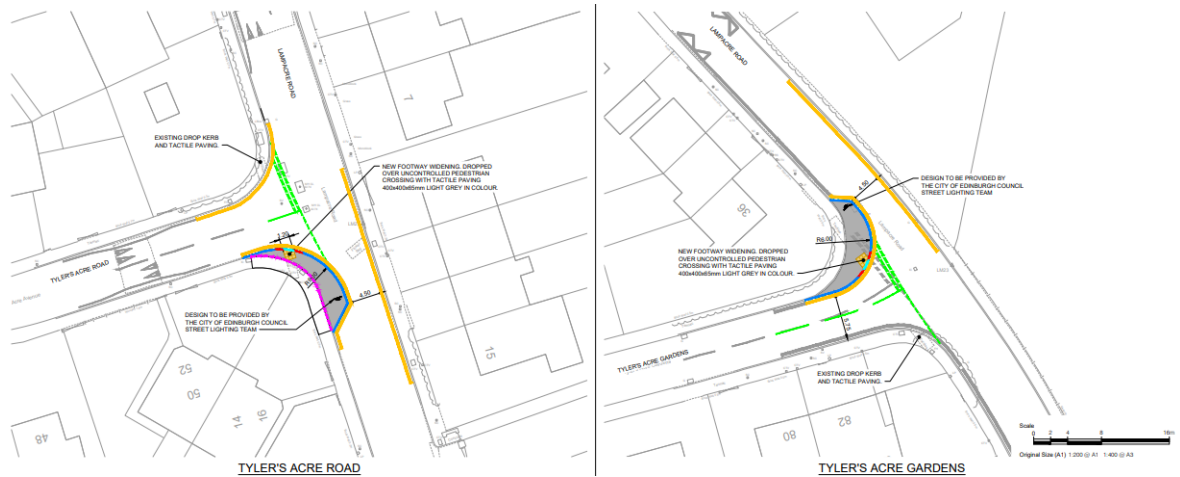
**Description:**

The carriageway surfaces at the proposed uncontrolled pedestrian crossing facilities at Featherhall Road at Featherhall Terrace and Kirk Loan at Corstorphine High Street are uneven with several voids evident. These carriageway defects increase the likelihood of a crossing pedestrian tripping and suffering injury from falls.

**Recommendation:**

It is recommended that the carriageway at the crossing locations are resurfaced.

<b>Problem:</b>	<b>3.22</b>
<b>Location(s):</b>	Lampacre Road, at Tyler's Acre Road and Tyler's Acre Gardens
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0706
<b>Summary:</b>	Risk of side swipe collisions occurring as vehicles try to manoeuvre simultaneously.



**Description:**

Buildouts are proposed on Lampacre Road at its junctions with Tyler's Acre Road and Tyler's Acre Gardens, either side of Carrick Knowe Primary School. Opposing vehicles may attempt to pass one another at these locations as measures are not proposed to instruct one direction to give way to another. This increases the risk of side swipe collisions and of vehicles mounting the footway, potentially colliding with pedestrians, whilst taking evasive action.

**Recommendation:**

It is recommended that a priority one-way working is installed on the approaches to the proposed buildouts.

<b>Problem:</b>	<b>3.23</b>
<b>Location(s):</b>	Lampacre Road, at Carrick Knowe Primary School
<b>Drawing(s):</b>	60636731-SHT-C-P2-LTN-0706
<b>Summary:</b>	Risk of unpermitted vehicle movements occurring due to absent School Street signage.



Scheme Ref.	CORSTORPINE LTN
Sign Ref.	SCHOOL STREETS SIGN
Letter colour	BLACK
Background	WHITE
Border	BLACK
Material	Class R3B Microprismatic
n-height	37.5
SIGN FACE	
Width	725mm
Height	1471mm
Area	1.07m <sup>2</sup>

**SCHOOL STREETS SIGN - 4No.**  
**(SIGNS TO BE SUPPLIED AND INSTALLED BY EDINBURGH COUNCIL UNDER SEPARATE CONTRACT)**

**Description:**

School Street signs are proposed at the junctions of Lampacre Road at Tyler’s Acre Road and Tyler’s Acre Gardens to restrict vehicles movements along Lampacre Road at the start and end of the school day. Tyler’s Acre Avenue, which is located between the two junctions concerned connects Saughton Road North to Lampacre Road. The absence of School Street signage at Tyler’s Acre Avenue will give rise to vehicles entering the proposed School Streets scheme, which increases the likelihood of road user conflicts and potentially collisions as pedestrians and cyclists may not expect the anticipated volumes inadvertently travelling at Lampacre Road.

**Recommendation:**

It is recommended that an additional School Street sign is installed.

## 4. RSA Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG119.

**AUDIT TEAM LEADER:**

Name: [REDACTED]

Position: Associate

Organisation: Atkins

Signed: [REDACTED]

Date: 27/09/2023

**AUDIT TEAM MEMBER:**

Name: [REDACTED]

Position: Engineer

Organisation: Atkins

Signed: [REDACTED]

Date: 27/09/2023

Road Safety Audit Response		RSA File Ref		8003-676	
PROJECT DETAILS					
Report Title		Corstorphine Connections - Phase 2 - Stage 1/2 RSA			
PREPARED BY					
Name				Date	27/11/2023
Position		Senior Engineer			
Organisation		AECOM			
Signed					
APPROVED BY					
Name				Date	27/11/2023
Position		Regional Director			
Organisation		AECOM			
Signed					
RSA DECISION LOG					
RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action	
3.1	Worn road markings may give rise to unplanned driver behaviours.	It is recommended that worn road markings are refreshed across the scheme extents.	Problem noted and accepted. Design proposals show locations where existing road markings are affected by our works and will be renewed. Any wider road markings not directly affected by the scheme are not within the scope / budget of the project.	As per design organisation's response	Noted for consideration under future schemes
3.2	Risk of collisions resulting from vehicles being unable to simultaneously manoeuvre.	It is recommended that all anticipated vehicle manoeuvres can be safely accommodated.	All junction modifications have had swept path analysis undertaken to determine radius / widths.	As per design organisation's response	No action
3.3	Inconspicuous speed cushions could result in road user injury.	It is recommended that dragon teeth are installed on both approaches to the speed cushions.	Problem noted and accepted - dragon teeth to be added on all approaches to speed cushions	As per design organisation's response	Dragon teeth to be added on all approaches to speed cushions
3.4	Risk of pedestrians suffering injury due to the absence of tactile paving.	It is recommended that tactile paving is provided.	Agreed. This was not originally within the scope or budget of the project. Recommend this is considered at future phase.	As per design organisation's response	Noted for consideration under future schemes



3.5	Risk of pedestrians suffering injury due to the absence of dropped kerbs.	It is recommended that dropped kerbs and tactile paving are provided.	Problem noted and accepted - consideration to be made to widen footway / accommodate dropped kerbs and tactile paving.	As per design organisation's response	Consideration to be given to widening footway
3.6	Risk of driver confusion and drivers failing to give way resulting in collisions.	It is recommended that the give way signage is relocated closer to the give way markings.	Problem noted and accepted - give way signage to be installed closer to markings	As per design organisation's response	Give way signage to be installed closer to markings
3.7	Risk of pedestrians accessing/egressing from the crossing facilities tripping over kerbs.	It is recommended that a consistent kerb alignment is provided.	Bollards are proposed on the west side and guardrail has been proposed on the east side which will both help to delineate the path edge. A new signalised crossing was not within the scope or budget of the project.	As per design organisation's response	Bollards to be added
3.8	Risk of pedestrians being struck by passing vehicles at the crossing facilities.	It is recommended that sufficient space is provided for pedestrians to congregate and pass one another on the footway, without needing to step on the carriageway.	A new signalised crossing was not within the scope or budget of the project. Site observations to be undertaken during school times to understand how the crossings are used.	As per design organisation's response	Site observations to be undertaken
3.9	Risk of pedestrians being stuck at the crossing facility or secondary collision resulting due to vehicles failing to stop.	It is recommended that the high friction surfacing is replaced.	No changes have been made to the crossing or associated carriageway as part of the scope of the project. It is understood the existing HFS is >15 years old and historic. The road is currently a 20mph speed limit and Edinburgh Council Street Design guidance does not require stand along crossings to be HFS on approach.	As per design organisation's response	Noted for consideration under future schemes
3.10	Constrained footway may give rise to pedestrian travelling along the carriageway.	It is recommended that the footway is sufficiently wide to accommodate all user types and volumes anticipated to use the footway.	The footway on the south side of the High Street was not part of the project scope.	As per design organisation's response, it can be considered as part of future schemes	Noted for consideration under future schemes

3.11	Defective carriageway surface could unsteady two-wheeled vehicles	It is recommended that the carriageway is resurfaced.	Problem noted, however this is outwith the scope of the project and funding. Active Travel team to raise with relevant internal department for consideration.	As per design organisation's response	Active Travel team to raise with relevant internal department for consideration.
3.12	Risk of pedestrians entering the carriageway and being stuck by oncoming vehicles.	It is recommended that the tactile paving is realigned to better direct visually impaired pedestrians to the intended crossing facility.	The footway on the north/east of the High Street is particularly narrow and the tactile layout provides the best balance of what is achievable at this constrained location. The tactile paving on the east side is set from the High Street kerbline and as such, it is intended that those with visual impairments will recognise the orientation of the tactile paving and cross in the intended direction.	As per design organisation's response	No action
3.13	Risk of surface water collection at the proposed footway	It is recommended that sufficient drainage is provided.	Drainage has been provided as part of the scheme. This has been monitored on site, during high rainfall periods and it has been noted that ponding does not occur on these channels.	As per design organisation's response	Drainage under assessment
3.14	Insufficient intervisibility at the crossing may result in pedestrian and vehicle collisions.	It is recommended that sufficient visibility is provided at the crossing facility.	Visibility checked against 20mph SSD @ 25m. Confirm that southern crossing point is suitable, however, that the northern crossing point is sub-standard and a section of parking removal is recommended	Removal of this parking will be considered as part of a future permanent scheme. It is not within the powers of current ETRO trial to reduce waiting/loading provision at this location.	Noted for consideration under future schemes
3.15	Risk of vehicle conflicts and collisions due to the introduction of two-way traffic.	It is recommended that the one-way system is formalised.	The operation of the car park has been maintained, with no changes as part of our proposals. Additionally, the car park is privately owned and no formal control of enforcement would be possible.	As per design organisation's response	No action

3.16	Restricted visibility may result in crossing pedestrians being struck.	It is recommended that sufficient visibility is provided at the crossing facility	Visibility checked against 20mph SSD @ 25m. We confirm that both crossing points are suitable.	As per design organisation's response	No action
3.17	Tree canopy creating dark spots and potentially reducing street lighting illumination at the footway and crossing facility.	It is recommended that the tree canopies are cut back to ensure sufficient illumination is provided and to remove the dark spot observed.	Problem noted and accepted - Active Travel to raise with relevant internal department for consideration	As per design organisation's response	Active Travel team to raise with relevant internal department for consideration.
3.18	Vegetation reduces visibility of and for crossing users.	It is recommended that the overgrown vegetation is removed	Visibility checked against 20mph SSD @ 25m. We confirm that both crossing points are suitable.	As per design organisation's response	No action
3.19	Risk of vehicles colliding due to restricted visibility from the junction.	It is recommended that the proposed buildout is relocated to the east side of the junction to improve driver intervisibility.	The streets are within a quiet residential neighbourhood with low volumes and speeds. The locations of the buildouts were recommended in consultation with the Council's Road Safety team who manage the proposed school streets signs. The buildout is intentionally on the west side at this location to help aid enforcement.	As per design organisation's response	No action
3.20	Risk of pedestrians and vehicles colliding due to restricted visibility from the junction.	It is recommended that the proposed buildout is relocated to the east side of the junction to improve driver and pedestrian intervisibility.	Same as item 3.19	As per design organisation's response	No action
3.21	Risk of pedestrians tripping and falling in the carriageway.	It is recommended that the carriageway at the crossing locations are resurfaced.	Problem noted, however this is outwith the scope of the project and funding. Active Travel team to raise with relevant internal department for consideration.	As per design organisation's response	Active Travel team to raise with relevant internal department for consideration.

3.22	Risk of side swipe collisions occurring as vehicles try to manoeuvre simultaneously.	It is recommended that a priority one-way working is installed on the approaches to the proposed buildouts.	The streets are within a quiet residential neighbourhood with low volumes and speeds. The locations of the buildouts were recommended in consultation with the Council's Road Safety team who manage the proposed school streets signs. The buildout is intentionally within the carriageway to help aid enforcement.	As per design organisation's response	No action
3.23	Risk of unpermitted vehicle movements occurring due to absent School Street signage.	It is recommended that an additional School Street sign is installed.	Problem noted and accepted - Tyler's Acre Avenue is to have a School Street sign installed	As per design organisation's response	School Street sign to be installed

DESIGN ORGANISATION STATEMENT			
<b>On behalf of the design organisation I certify that:</b>			
<b>1) the RSA actions identified in response to the road safety audit problems in the road safety audit have been discussed and agreed with the Overseeing Organisation.</b>			
Name		Date	27/11/2023
Position	Regional Director		
Organisation	AECOM		
Signed			
OVERSEEING ORGANISATION STATEMENT			
<b>On behalf of the Overseeing Organisation I certify that:</b>			
<b>1) the RSA actions identified in response to the road safety audit problems in the road safety audit have been discussed and agreed with the design organisation; and</b>			
<b>2) the agreed RSA actions will be progressed.</b>			
Name		Date	28/11/2023
Position	Senior Project Manager		
Organisation	City of Edinburgh Council		
Signed			

# Appendices



## Appendix A. Drawings and Documents

### A.1. Drawings

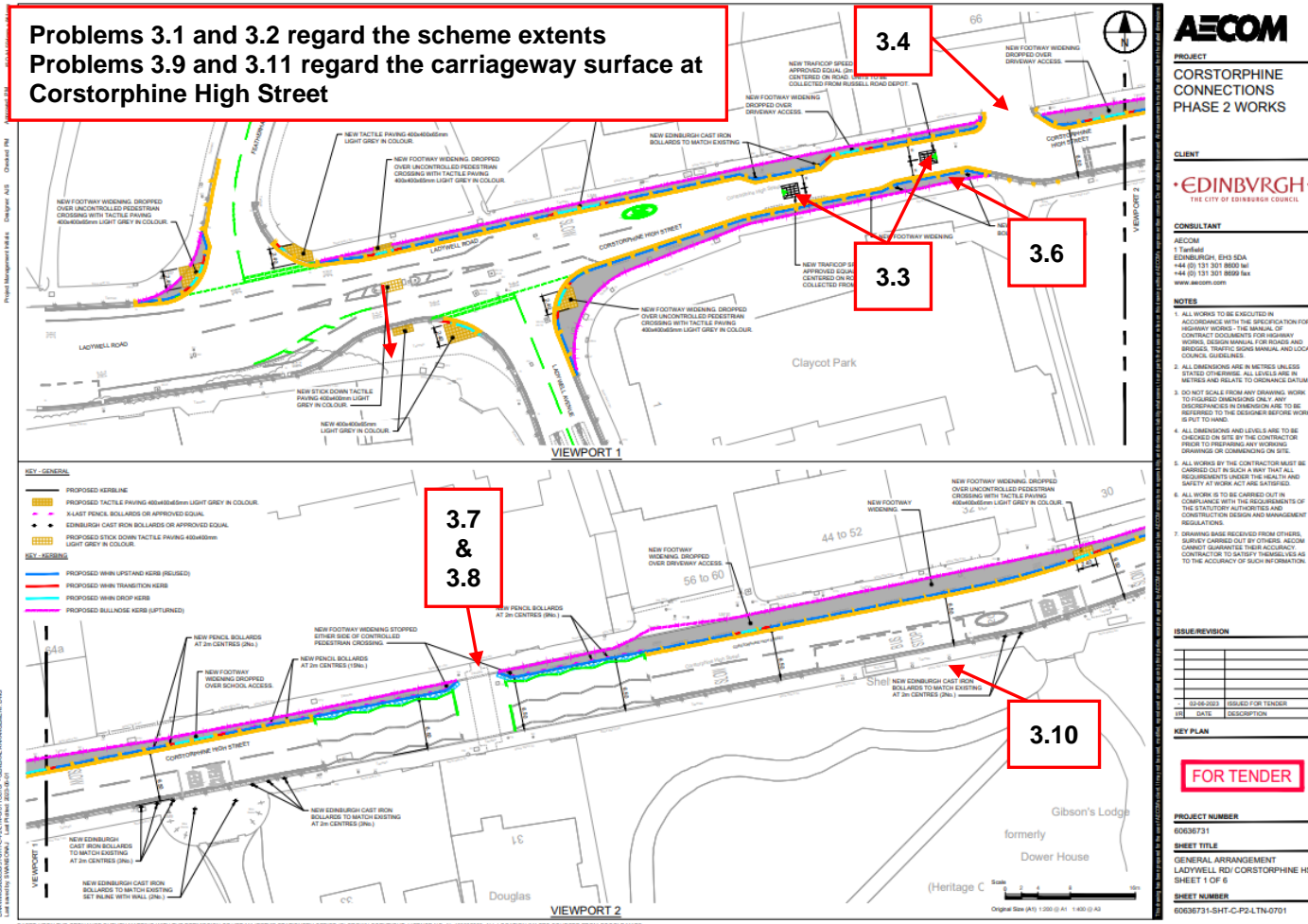
Reference	Description	Revision	Date
60636731-SHT-C-P2-LTN-0701 to 0706	General arrangement	-	02/06/2023
60636731-SHT-C-P2-LTN-1201 to 1206	Road markings and signage	-	02/06/2023
60636731-SHT-C-P2-LTN-1208	Signage	-	02/06/2023
CCLTN	Lighting design pack	-	November 2021
60636731-SHT-C-P2-LTN-501 to 506	Drainage	-	02/06/2023
60636731-SHT-C-P2-LTN-901 to 902	Standard details	-	02/06/2023

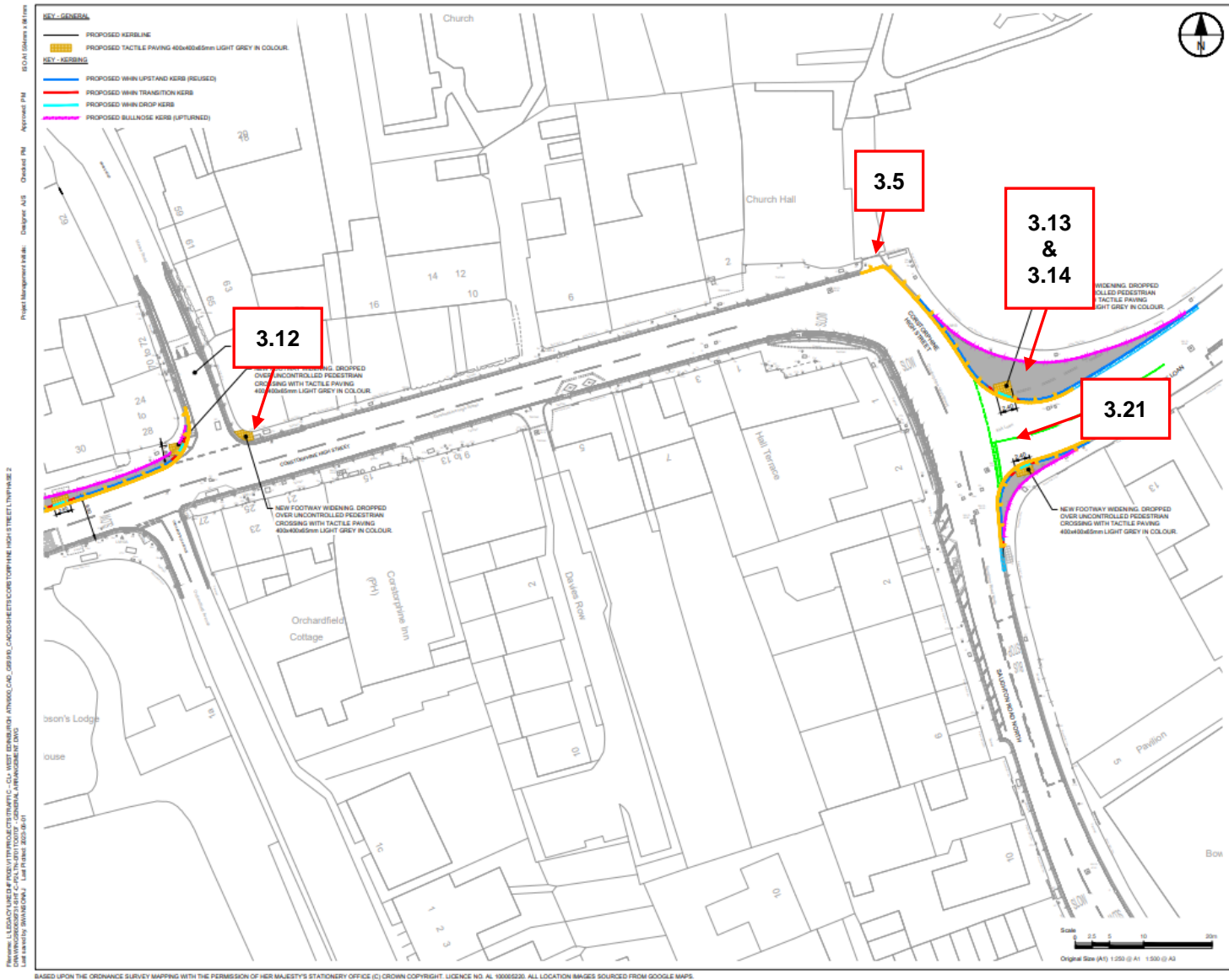
### A.2. Documents

Type	Reference	Revision	Date
RSA brief	RSA/21/045a	-	06/12/2021
Baseline Monitoring Report	Corstorphine Connections - Baseline Data Collection Summary Note	-	April 2022

# Appendix B. Location of Problems

Note: Locations of problems, and associated recommendations, are approximate only.





Project Management: AECOM, Designer: AUS, Checked: PM, Approved: PM, Scale: 1:500 (A1), 1:1000 (A2)



**PROJECT**  
CORSTORPHINE  
CONNECTIONS  
PHASE 2 WORKS

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- NOTES**
- ALL WORKS TO BE EXECUTED IN ACCORDANCE WITH THE SPECIFICATION FOR HIGHWAY WORKS, THE MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS, DESIGN MANUAL FOR ROADS AND BRIDGES, TRAFFIC SIGNS MANUAL AND LOCAL COUNCIL GUIDELINES.
  - ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM.
  - DO NOT SCALE FROM ANY DRAWING. WORK TO FIGURED DIMENSIONS ONLY. ANY DISCREPANCIES IN DIMENSION ARE TO BE REFERRED TO THE DESIGNER BEFORE WORK IS PUT TO HAND.
  - ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PREPARING ANY WORKING DRAWINGS OR COMMENCING ON SITE.
  - ALL WORKS BY THE CONTRACTOR MUST BE CARRIED OUT IN SUCH A MANNER THAT ALL REQUIREMENTS UNDER THE HEALTH AND SAFETY AT WORK ACT ARE SATISFIED.
  - ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE STATUTORY AUTHORITIES AND CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.
  - DRAWING BASE RECEIVED FROM OTHERS, SURVEY CARRIED OUT BY OTHERS. AECOM CANNOT GUARANTEE THEIR ACCURACY. CONTRACTOR TO SATISFY THEMSELVES AS TO THE ACCURACY OF SUCH INFORMATION.

**ISSUE/REVISION**

NO.	DATE	DESCRIPTION
1	22-06-2023	ISSUED FOR TENDER

**KEY PLAN**

**FOR TENDER**

**PROJECT NUMBER**  
60636731  
**SHEET TITLE**  
GENERAL ARRANGEMENT  
CORSTORPHINE HS/ KIRK LOAN  
SHEET 2 OF 6  
**SHEET NUMBER**  
60636731-SHT-C-P2-LTN-0702





**PROJECT**  
CORSTORPHINE CONNECTIONS  
PHASE 2 WORKS

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  6. ALL WORK IS TO BE CARRIED OUT IN COMPLIANCE WITH THE REQUIREMENTS OF THE STATUTORY AUTHORITIES AND CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.
  7. DRAWING BASE RECEIVED FROM OTHERS. SURVEY CARRIED OUT BY OTHERS. AECOM CANNOT GUARANTEE THEIR ACCURACY. CONTRACTOR TO SATISFY THEMSELVES AS TO THE ACCURACY OF SUCH INFORMATION.

**ISSUE/REVISION**

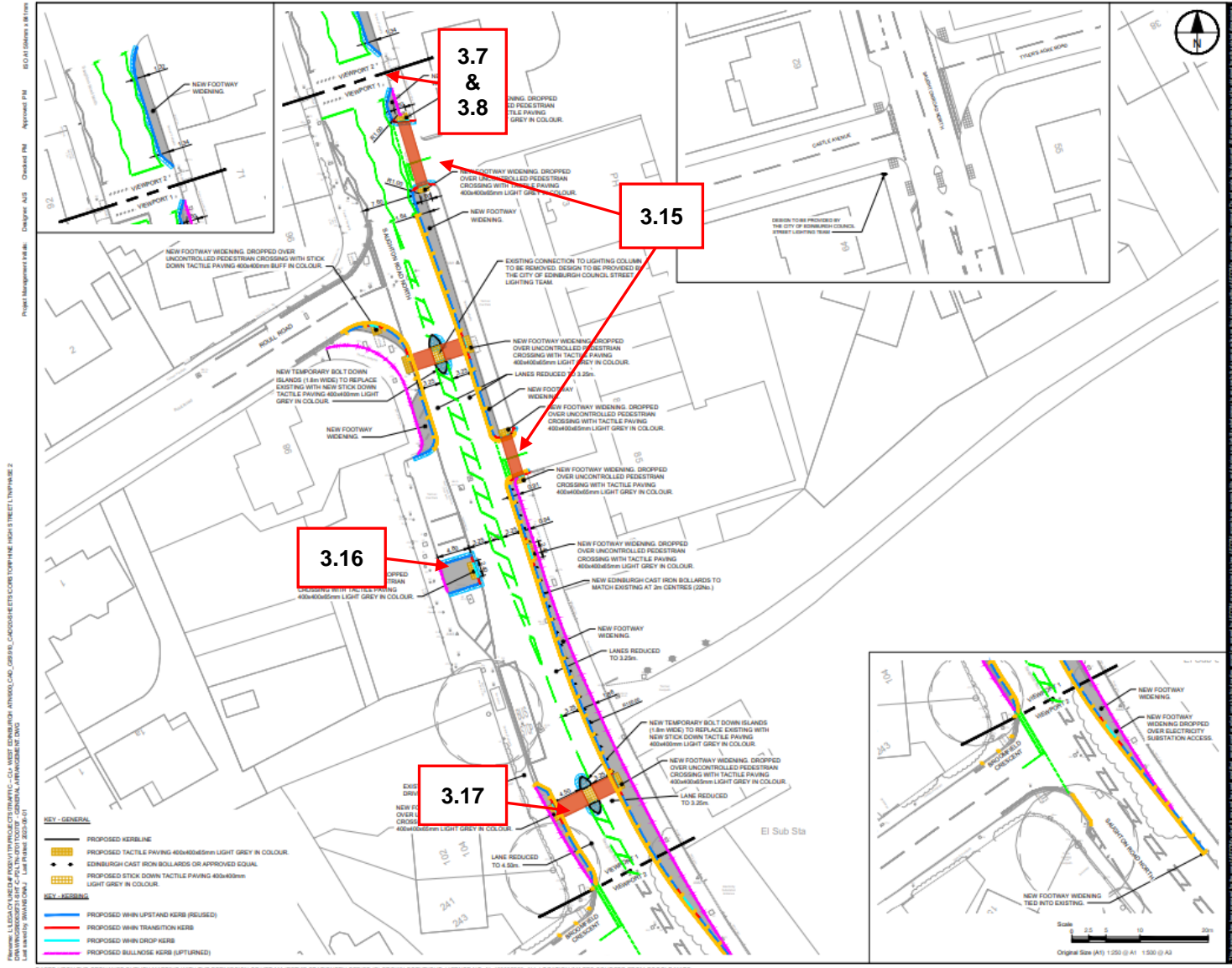
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10		

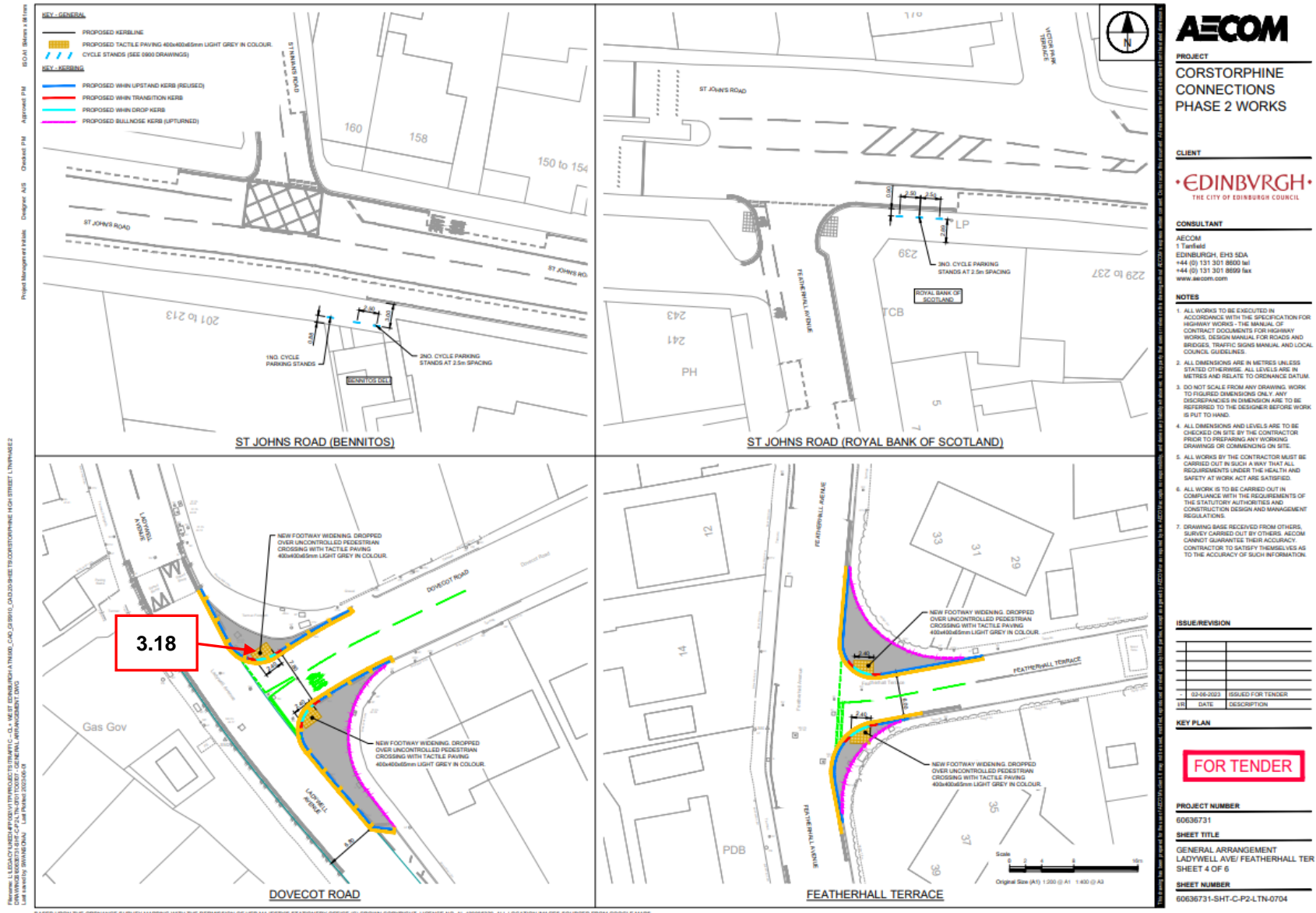
**KEY PLAN**

**PROJECT NUMBER**  
60636731

**SHEET TITLE**  
GENERAL ARRANGEMENT  
SAUGHTON ROAD NORTH  
SHEET 3 OF 6

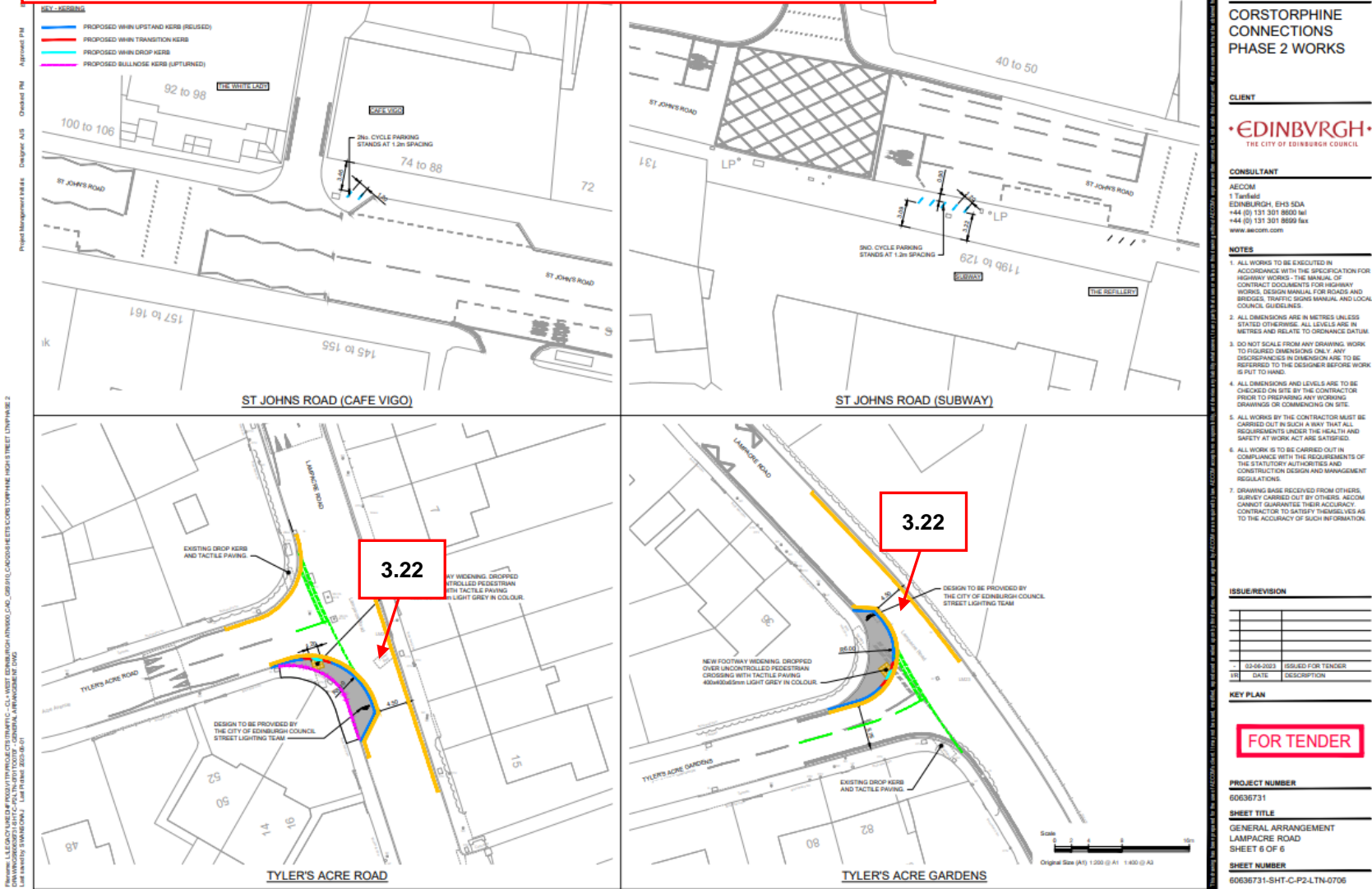
**SHEET NUMBER**  
60636731-SHT-C-P2-LTN-0703







**Problem 3.23 refers to the absence of School Street signage at Tyler's Acre Avenue**



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