SPROWSTON:
BLUE BOAR LANE CYCLE FACILITY

STAGE 2 SAFETY AUDIT

REPORT REF: C256/006
May 2020

Report Prepared for: **Highway Projects**
Norfolk County Council

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Report Status:

Issue	Status	Purpose	Name/Signature	Date
1	Stage 2 Safety Audit Report	Client Issue	Julian Fonseka 	27/05/2020
Choose an item.	Choose an item.	Choose an item.	…… ……	
3	NM Decision	Implementation of Safety Audit recommendations	Julian Fonseka 	19/08/2020

INTRODUCTION

This report contains the results of a Stage 2 Safety Audit carried out on the above scheme. The Audit was carried out at the request of Norfolk County Council Highway Projects .

The Audit Team membership was as follows:-

Julian Fonseka BSc(Hons) EngTech, MCIHT, MSoRSA (Audit Team Leader)	Engineer Network Safety + Sustainability Norfolk County Council
Kevin Allen BEng(Hons), I Eng, MCIHT, MSoRSA (Audit Team Member)	Project Engineer Network Safety + Sustainability Norfolk County Council

The Audit took place via online conferencing on 19 May 2020. The audit comprised an examination of the supplied documentation (see Appendix A) and a site inspection by the Audit Team Leader the same day at 1500 which lasted around 40 minutes. During the site visit the weather was sunny and the road surface dry. Traffic flows were low due to the Covid-19 situation at the time. Observed speeds appeared in line with the 30mph speed limit. The Audit submission provided all necessary supporting information.

The terms of reference are as described in Community and Environmental Services Highways Service Manual Procedure SP03-07-P01. The Auditors have examined and reported only on the road safety implications of the scheme within the main report.

The audited scheme involves provision of shared use cycling alongside Blue Boar Lane, together with a Toucan crossing at the junction with Linacre Avenue, and an off carriageway section which passes through woodland.

The auditors have reviewed the three year (to end December 2019) accident record for the location. There have been three personal injury collisions recorded over this period. These were: car turning right into Linacre Avenue hitting a cyclist that had emerged from the footway, car passing a cyclist too close near Linacre Avenue, motorcyclist losing control on a bend. The two cycle collisions may have been less likely to occur had the scheme been in place.

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A comments section has been included in Appendix B. The issues noted are not necessarily safety issues. They relate either to wider network implications, safety issues identified outside the scope of the audited scheme or suitability of a particular design choice.

ITEMS RAISED AT PREVIOUS AUDIT

A Safety Audit was undertaken on 2 December 2015 on a previous iteration of this scheme. However, this scheme differed significantly from the scheme Audited in this report and reference is made for the sake of completion.

ITEMS RAISED AT THIS STAGE 2 AUDIT

1.0 General

1.1 Problem – tail end collision / conflict with vulnerable users

Location – approaches to proposed crossing

Adequate skidding resistance is of upmost importance on the approach to controlled crossings where sudden and harsh braking may be expected. An absence of adequate skidding resistance increases the risk of conflict with crossing users and tail end collisions.

Recommendation – resurfacing to be undertaken with 60PSV stone on approaches to crossing.

Designer's Response:

Agreed. The approaches to the crossing are to be resurfaced with 60 PSV material.

Network Management Decision: Accepted, no further comment.

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2.0 Alignment

2.1 No comment

3.0 Junctions

3.1 No comment

4.0 Non-motorised Users

4.1 Problem – conflict between vulnerable users

Location – north section of proposed facility

The width of part of the proposed facility adjacent to the Tesco store is below that acceptable for a shared use facility. This presents a risk of conflict between cyclists and pedestrians.



Recommendation – if sufficient land cannot be acquired from the adjacent landowner to accommodate a 2.5m minimum then it is recommended that 'Cyclists dismount' sings be provided where widths are below this. Furthermore, existing vegetation is obstructing signing and should be crown raised as appropriate.

Designer's Response:

No further land is available so 'Cyclists Dismount' signs have been added. The existing vegetation is also noted as to be crown lifted to 2.5m.

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Network Management Decision: Accepted, no further comment.

4.2 Problem – cyclist loss of control / conflict with traffic

Location – south of supermarket site boundary

The proposed facility is too narrow at the southern edge of the Tesco site boundary (see Problem 4.1). A dropped kerb is present at the current termination point. Given the recommendation to Problem 4.1 it is considered likely that some cyclists will exit the facility at this point. However, no facility is present to allow them to rejoin.

Recommendation – provide additional dropped kerbs to the south to allow cyclists to rejoin the proposed facility.

Designer's Response:

Agreed. Dropped kerbs are provided to allow cyclists to re-join the shared use facility.

Network Management Decision: Accepted, no further comment.

4.3 Problem – lack of guidance increases risk to vulnerable users

Location – approaches to proposed Toucan crossing

There is a lack of guidance for road going cyclists on approach to the proposed crossing. This increases the risk of unsafe manoeuvring in the carriageway.

Recommendation – provide dropped kerbs and 'walking stick' type markings on the approaches to the crossing in order to provide access to road going cyclists.

Designer's Response:

Agreed. Dropped kerbs and marking have been added in the locations suggested.

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Network Management Decision: Accepted, no further comment.

4.4 Problem – risk of cyclist loss of control

Location – scheme tie in point at housing estate

A tactile pram crossing is proposed at the tie in to the existing housing estate. The reasoning behind this is unclear. This has resulted in a narrow dropped kerb which a cyclist must manoeuvre around at a sharp angle in order to access the proposed facility. This increases the risk of loss of control and a rider falling from their bicycle.



Recommendation – the tactile crossing should not be installed, instead, a longer run of dropped kerbs should be provided perpendicular to the proposed facility in order to ease access.

Designer's Response:

Agreed. The tactile crossing has been omitted and a longer run of dropped kerb is proposed.

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Network Management Decision: Accepted, no further comment.

4.5 Problem – conflict between cyclists and turning traffic

Location – Linacre Avenue junction

It is reasonable to expect cyclists on Linacre Avenue to wish to use the proposed crossing. However, no facility is provided for them to access the crossing. This presents a risk of either illegal usage via the footway crossing point, or of attempting to bump up the kerb with a risk of loss of control and conflict with turning traffic.



Recommendation – convert the south side of Linacre Avenue to shared use, with a longer dropped kerb, to enable a cyclist approaching the junction to access the proposed crossing.

Designer's Response:

Agreed. Additional dropped kerbs have been provided and the south side of the Linacre Avenue junction area is signed as shared use facility.

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Network Management Decision: Accepted, no further comment.

4.6 Problem – reduced width increases risk of conflict

Location – narrowing at Ch. 1445 – Ch. 1562

A narrowing is proposed in the vicinity of the two mature oak trees. The reason for this narrowing is understood and agreed with. However, the Auditors are concerned that the reduced width section is longer than necessary, increasing the risk of conflict.

Recommendation – no dig construction is proposed in other locations, allowing narrowed sections to be shorter in the vicinity of tree roots. It is suggested that this method be employed here.

Designer's Response:

Agreed. The shared use facility has been revised to employ a larger area of no-dig construction methods to enable a greater area to be surfaced.

Network Management Decision: Accepted, no further comment.

4.7 Problem – obstructed visibility / cyclist head strikes

Location – bend opposite Sprowston Social Club

Significant vegetation is present around this bend such that it may obstruct visibility to the north for cyclists exiting the facility in a southbound direction. Furthermore, some of the vegetation appears to be low enough to pose a risk of head strikes by passing cyclists.

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Recommendation – vegetation should be raised to a minimum of 2.3m in height to avoid being an obstruction.

Designer's Response:

Agreed. Noted on scheme drawings.

Network Management Decision: Accepted, no further comment.

5.0 Signs, Lighting and Markings

5.1 No comment

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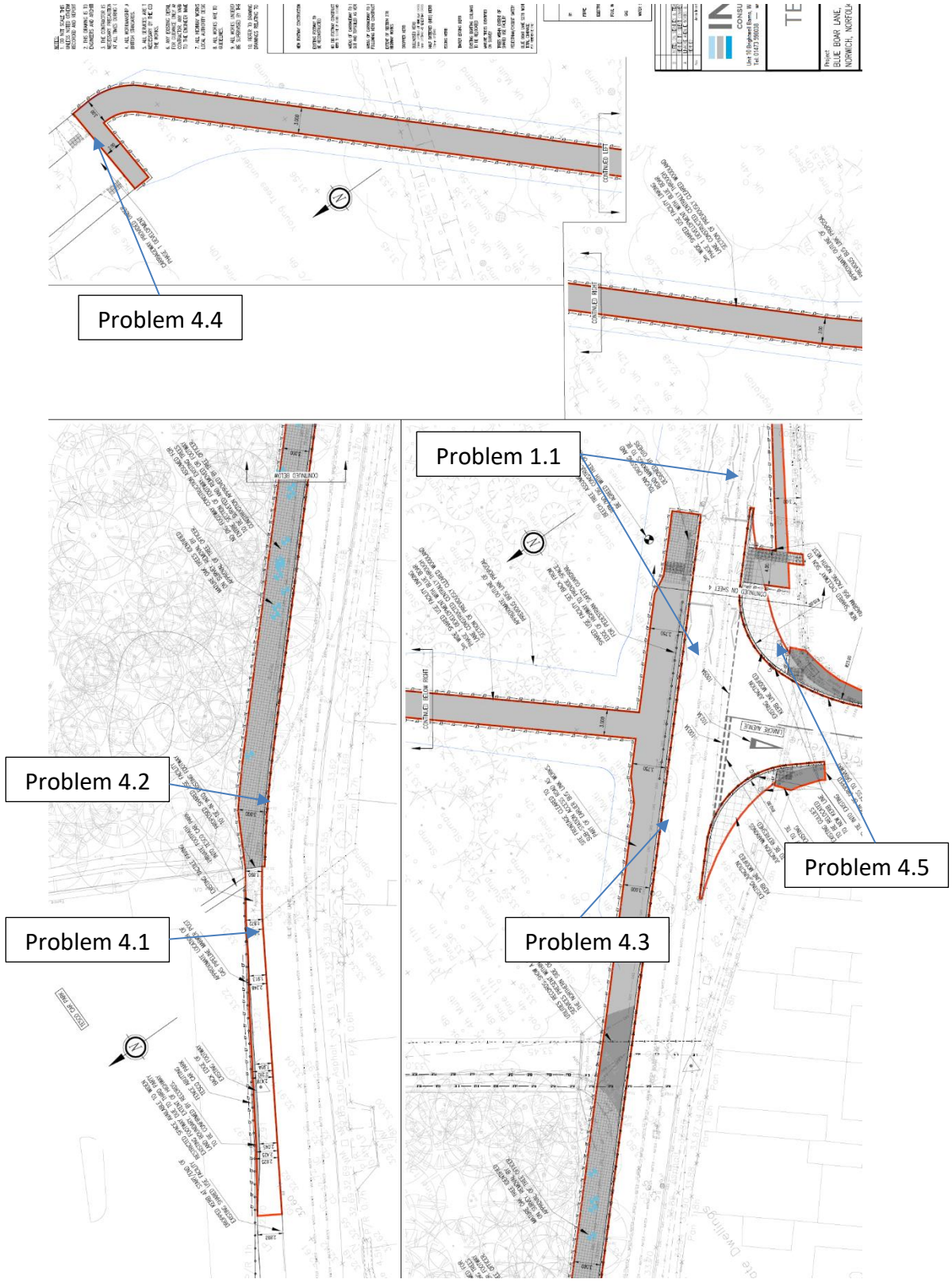
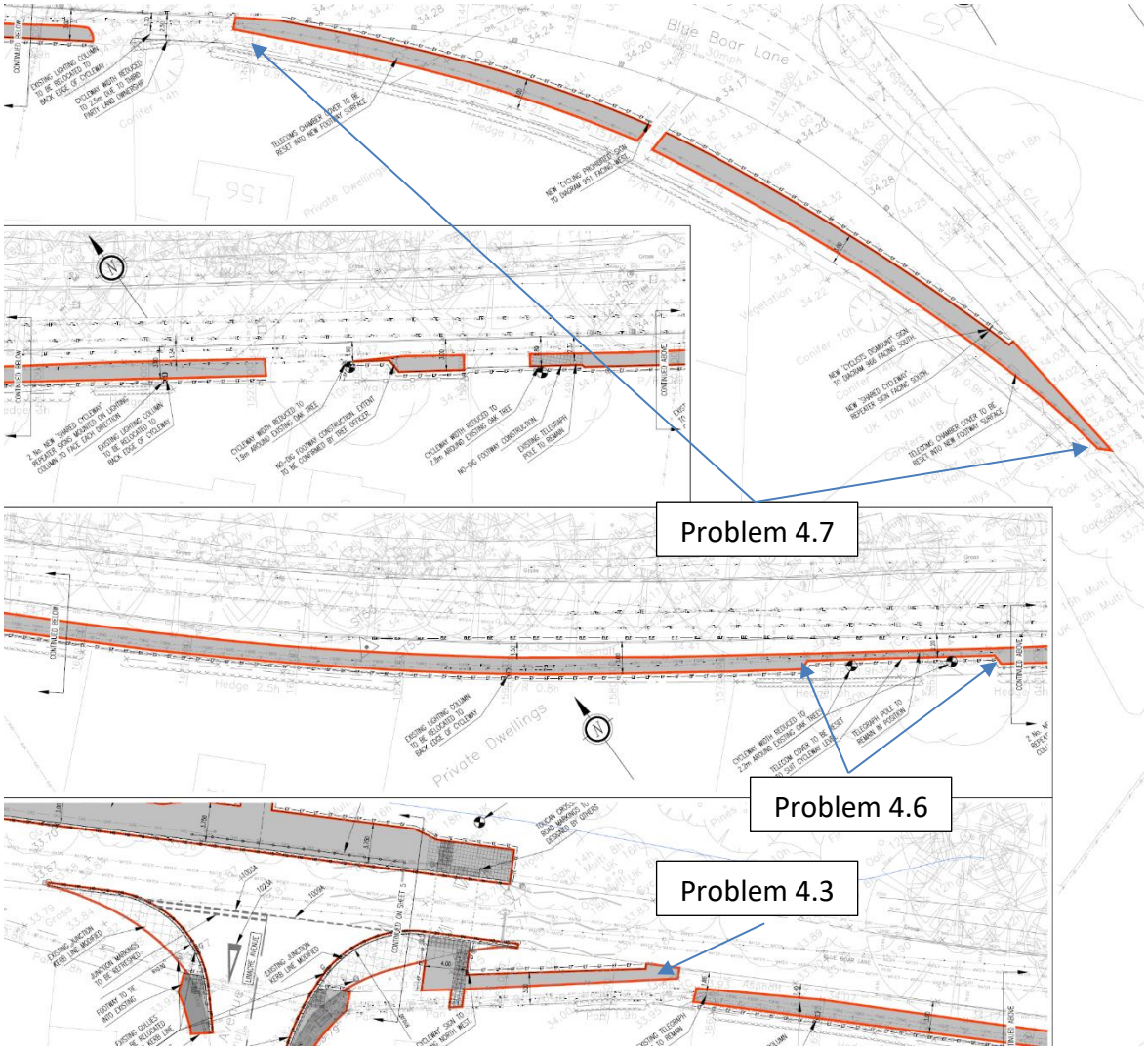
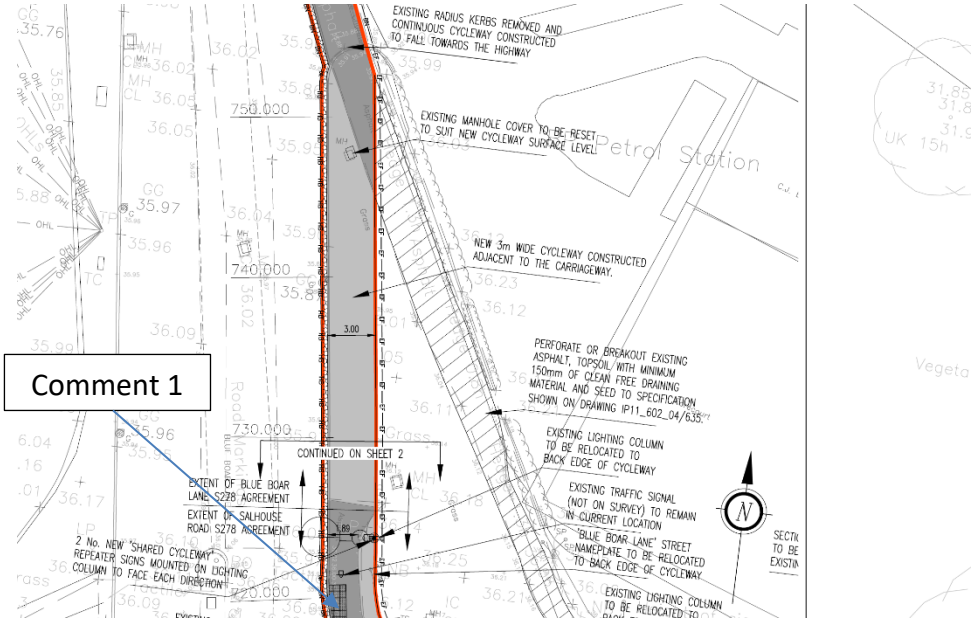
6.0 Problem Location Plan







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AUDIT TEAM STATEMENT

We certify that this audit has been carried out in accordance with Norfolk County Council Community and Environmental Procedure SP03-07-P01

Signed (ATL)		Julian Fonseka
Dated	01/06/2020	
Signed	.....	Kevin Allen
Dated	1 June 2020	

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APPENDIX A: Audit Brief

The following documents were submitted for this Road Safety Audit:

Document Ref.	Scale (if applicable)	Title
IP11_602_04_632F	1:200 @ A1	S278 works sheet 3
IP11_602_04_633E	1:200 @ A1	S278 works sheet 4
IP11_602_04_635G	Various	Construction details sheet 1
IP11_602_04_636C	1:200 @ A1	Section through Harrisons Wood
IP11_602_04_637A	Various	Harrisons Wood construction details
IP11_602_04_641	Various	Construction details sheet 2
IP11_602_04_645B	1:200 @ A1	S278 works sheet 5

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APPENDIX B: Comments

C.1 It is understood that this scheme will tie into another scheme at the Salhouse Road end. However, it is unclear from the submission how the construction of these two schemes will interact. Depending on construction timetables appropriate signing will be required in order to denote the southern end of the facility together with a dropped kerb in order return to the carriageway.

Designer's Response:

Noted. The intention is for both schemes to be installed concurrently so additional signing and dropped kerbs should not be necessary. To be reviewed and confirmed by Persimmon Homes and NCC Highways.

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