HAYWOOD HOMES
BERRY HILL ROAD, ADDERBURY, OXON
SECTION 278 AND 38 WORKS
STAGE 1 ROAD SAFETY AUDIT

SA 3808
September 2022

Waterman Aspen
5th Floor
1 Cornwall Street
Birmingham
B3 2DX
T: +44 (0)121 212 7700
F: +44 (0)121 212 7701

watermanaspen.co.uk

REV	ISSUE STATUS	PREPARED BY/DATE	CHECKED BY/DATE	APPROVED BY/DATE
1	DRAFT	KW 04 September 2022	DG 04 September 2022	
2	FINAL	KW 04 September 2022	DG 04 September 2022	ASD 04 September 2022

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AUDITORS' EVALUATION

APPENDICES

1.0 INTRODUCTION

1.1 This report is for a preliminary design Stage 1 Road Safety Audit (RSA) carried out on the proposed section 278 and section 38 works on a 38 dwelling residential development off Berry Hill Road, Adderbury, Oxfordshire. This report was requested by Banners Gate consultants

1.2 The RSA team, staff members from Waterman Aspen, present at the RSA were:

Keith Woodcock
Audit Team Leader

Darren Gotch
Audit Team Member

1.3 We confirm that no member of the Audit Team has been involved with the design process and that at least one member of the Audit Team holds the Highways England Certificate of Competency.

1.4 The site visit took place on Friday, 02 September 2022. The weather during the site visit was dry and sunny with a dry carriageway surface.

1.5 The RSA brief issued to the team comprised various elements listed at Appendix Two.

1.6 The scheme has been examined and this report compiled only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, in order 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 for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

1.7 All of the problems described in this report are considered by the RSA team to require action in order to improve the safety of the scheme and minimise collision occurrence. However, if any of the problems or recommendations within this Road Safety Audit report is not accepted, a copy of the signed exception report from the Overseeing Organisation should be sent to the Road Safety Audit Team Leader.

1.8 Any 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, in accordance with GG119, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

2.0 SCHEME DESCRIPTION

2.1 The scheme involves the construction of an access road into the development, at the end of which is a second cul-de-sac road. Footways are adjacent to the carriageways on both sides. It is also proposed to construct an infiltration basin at the northern end of road 2. Vehicular crossovers are proposed for most of the dwellings.

3.0 RECORDED INJURY COLLISION HISTORY

3.1 Two personal injury collisions (PICs) were recorded between 2017 and 2021, both were at the junction of A4260 Oxford Road and Berry Hill Road. One was of a slight nature and one was of a serious nature. Two vehicles were involved in both PICs and both had two casualties.

4.0 DEPARTURES FROM STANDARD

4.1 No departures from standard have been highlighted within the Audit Brief

5.0 DOCUMENTS AND INFORMATION NOT PROVIDED

5.1 The following information was not provided within the audit brief and therefore has not been considered with the audit:

- Highway boundary along Berry Hill Road
- Site clearance
- Landscaping details
- Typical highway construction details
- Visibility splays at the junction of development road and Berry Hill Road,
- Drainage along Berry Hill Road

6.0 MATTERS ARISING FROM THIS STAGE 1 ROAD SAFETY AUDIT

SECTION 278 WORKS

6.1 Problem

Location: Proposed footway from A4460 Oxford Road and Horn Hill Road Junction

Summary: Risk of pedestrian/vehicle conflict

The drawings submitted for audit show a proposal for a 1.5m footway, with a 0.5m verge between, adjacent to Berry Hill Road. The suggested 1.5m footway width is not wide enough for two pedestrians with pushchairs or buggies to pass each other. In this scenario, one pedestrian with a buggy would have to walk in the carriageway to pass the other pedestrian, with the increased risk of a collision with a moving vehicle. This may result in injuries.

Additionally, it is proposed to include a 3m footway/cycleway link into the development from Berry Hill Road. However, there are no details of the tie-ins with both the footway and the carriageway or cycleway, if proposed. As a consequence of this issue there is a risk of vehicles colliding with either pedestrians or cyclists.

Recommendation

It is recommended that the footway width is increased, in line with recommendation by the Design Manual for Roads and Bridges.

The designer should provide details of the tie-in from the 3m wide link from Berry Hill Road and the development.

6.2 Problem

Location: Development access road off Berry Hill Road

Summary: Risk of pedestrian/vehicle conflict

The drawings show a proposed uncontrolled pedestrian crossing with tactile paving at the junction of the development access road. However, at its shortest distance, the drawing shows a distance of 800mm, whereas it should be a distance of 1200mm. This is to ensure that partially and fully visually impaired pedestrians are able to find the edge of the footway and the start of the carriageway (junction), where it would be appropriate to cross. There is a risk, if the correct tactile is not installed, of a collision between pedestrians and vehicles taking place.

Recommendation

It is recommended that the tactile paving is installed in accordance with the Department of Transport document "Guidance on the Use of Tactile Paving Surfaces".

6.3 Problem

Location: Outside numbers

Summary: Risk of pedestrian/vehicle conflict

Image Nr 1

The drawings show a proposed inset uncontrolled pedestrian crossing point at the northern end of the proposed footway at the start of Horn Hill Road. Image number 1 above shows the approximate location of the crossing. However, as mentioned in Problem 6.1 above, the width of the proposed footway is inappropriate. It may be seen in the image above that the existing footway on the west side of Horn Hill Road also appears to be substandard as it is too narrow by current standards. This would become a particular issue when more that two pedestrians, especially those with buggies are crossing from east to west. This situation may result in collisions between vehicles and pedestrians, with injuries occurring.

Recommendation

It is recommended either that the crossing point is relocated to a safer site, or that more landing width is provided for pedestrians when using this crossing

6.4 Problem

Location: Berry Hill Road between "Last House" and A4460 Oxford Road

Summary: Risk of pedestrian/vehicle conflict

Image Nr 2

The Audit Team observed on their site visit that the trees and hedges were at their full growth, some of which were overhanging the carriageway. Currently pedestrians have to walk either on the verge or on the carriageway. There is an increased risk of collisions between vehicles and pedestrians, especially during the hours of darkness as pedestrians may not be seen resulting in injuries occurring.

Recommendation

It is recommended that the trees and hedges adjacent to the Berry Hill Road carriageway and verge are cut back so that there is sufficient visibility for drivers using this route. This is particular important as there is no street lighting system in place.

6.5 Problem

Location: Proposed Bus Stops north of Berry Hill Road / A4460 Oxford Road Junction

Summary: **Risk of head-on and side impact type of vehicle conflict**

Image Nr 3

The drawings submitted for audit show a proposed pedestrian central refuge located approximately at the start of the ghosted right turn from Oxford Road into Berry Hill Road, as seen in image number 3 above. Also included are two bus stops and their 'cages', one for a northbound bus and one for the southbound bus. The Audit Team are concerned with the location and configuration of the proposal as it could lead to vehicle collisions, in the following circumstances; if a bus had stopped at the southbound bus stop it is likely that a queue of traffic may occur behind it, wishing to overtake. However, because of the vertical alignment of Oxford Road, it is highly probable that the southbound driver would not be able to see either any northbound vehicles or pedestrians on the crossing. This situation may result in head-on or side impact collisions, with injuries occurring.

Recommendation

It is recommended that the designer ensures that there is adequate forward visibility when a bus has stopped in either of the bus cages and that southbound vehicles are able to see any pedestrians either waiting to cross or crossing Oxford Road.

Section 38 Works

6.6 Problem

Location: Southern End of Road 2 – 3m footway / cycleway link

Summary: Risk of pedestrian/vehicle collisions

The drawings submitted for audit show a 3m wide footway/cycleway link between the southern end of Road 2 of the development and berry Hill Road. The Audit Team are concerned that there is a risk of vehicles using this link in order to gain access from Road 2 to Berry Hill Road. No information has been provided to show how vehicles will be prevented from taking this action. As a consequence of this issue there is a risk that vehicles on Berry Hill Road may collide with either other vehicles trying to take this route or pedestrians

Recommendation

It is recommended that a barrier or appropriate street furniture is included as part of the link to prevent vehicles travelling from Road 2 to Berry Hill Road, together with proposed landscaping to prevent vehicles from travelling around the barrier.

6.7 Problem

Location: Infiltration Basin – northern end of Road 2

Summary: Risk of pedestrians drowning

The drawings submitted for audit show an infiltration basin at the northern end of developments Road 2. No information has been submitted to show how to prevent access to this area, either for a vehicle or a pedestrian. Without any prevention there is a risk of an errant vehicle driving into basin or a child playing in this area being drowned. Given that the longitudinal gradient of road two falls from south to north, it is even more of a hazard. The result may be serious injuries may occur.

Recommendation

It is recommended that a barrier and landscaping is installed to prevent access to errant vehicles or pedestrians.

6.8 Problem

Location: Turning head at the southern end of Road 2

Summary: Risk of collisions between pedestrians and vehicles

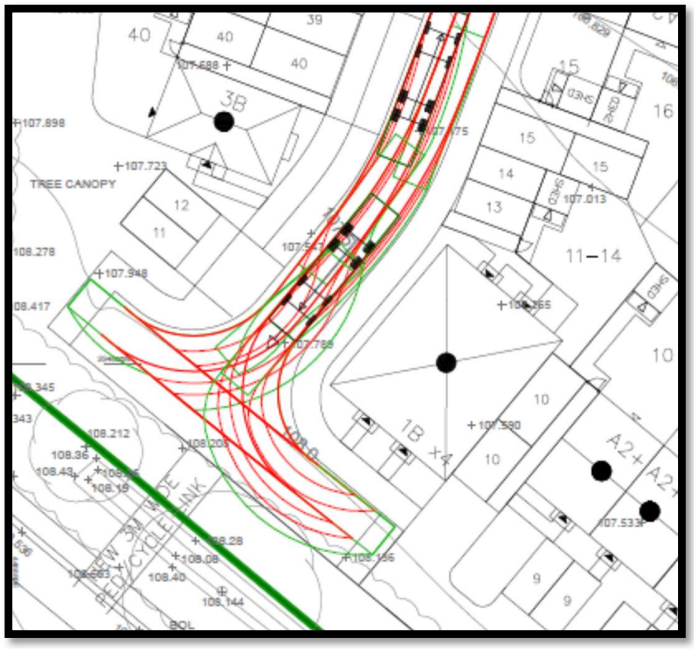

Image Nr 4

Drawings for vehicle swept paths for a 4-axle refuse vehicle and a fire appliance have been submitted for analysis. An extract of the swept path for a 4-axle refuse vehicle is shown in image number 4 above. The swept path shows how the vehicle will carry out a 180° manoeuvre to leave the turning head in a forward gear. Unfortunately, the swept path shows that the vehicle has to mount the eastern kerb in order to carry out this manoeuvre, with the risk of colliding with a pedestrian walking along the path. This situation may result in injuries.

Recommendation

It is recommended that the design of the turning head is adjusted to ensure that the swept path for a 4 axle refuse vehicle does not mount any kerbs and therefore prevents potential conflicts with pedestrians.

6.9 Problem

Location: Junction of development access (Road 1) and Berry Hill Road

Summary: Risk of side impact vehicle collisions

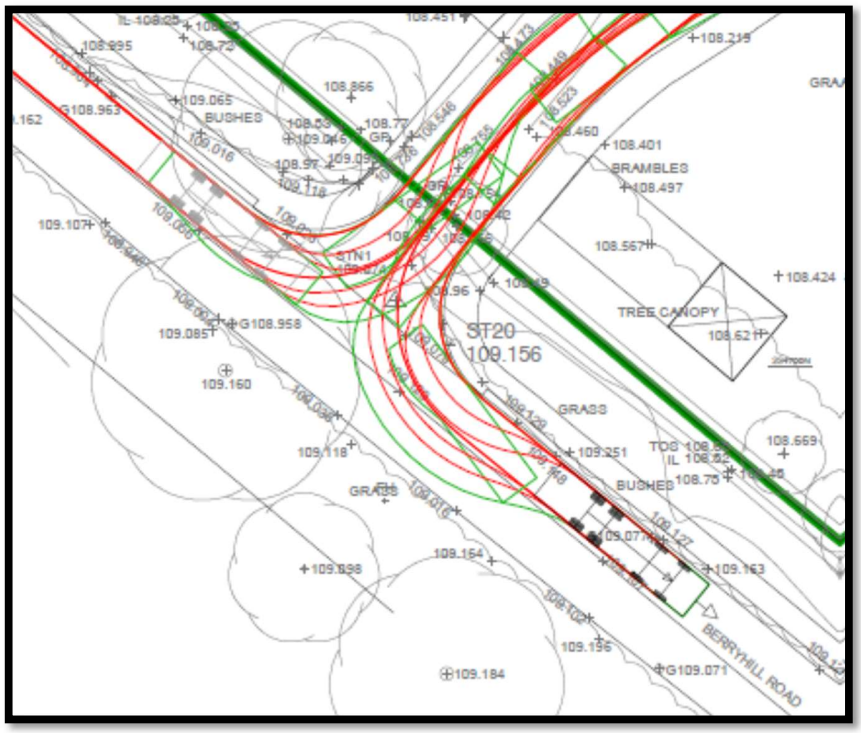

Image Nr 5

An extract of the swept path for a 4 axle refuse vehicle is shown in image number 5 above. The swept path shows how the vehicle will enter and leave the development Road 1. It also shows that when the vehicle leaves the site, it has to use the opposing lane in order to continue its journey eastwards. As Berry Hill Road is a very well used road, there is the risk of vehicle collisions between the refuse vehicles and other road users. This may result in injuries.

Recommendation

It is recommended that the design of the radii at the junction is amended to ensure that the swept path for the vehicle does not enter the opposing lane.

6.10 Problem

Location: Various

Summary: Risk of pedestrian slip/trip on transition from adopted to unadopted footway

At numerous locations, the drawings show the adopted footway ending at the same location as the ramp in the carriageway at the transition from adopted to unadopted footway. A pedestrian walking from the adopted footway to the unadopted area would either have to drop down/up a full height kerb, or use the ramp, both risking a trip/slip. This would be particularly hazardous for non-ambulant pedestrians such as pushchair/wheelchair users.

Recommendation

It is recommended that there is a smooth transition from the adopted area to the unadopted, or that a suitable facility is included such as dropped kerbs.

APPENDIX ONE

7.0 AUDIT TEAM STATEMENT

AUDIT TEAM STATEMENT

We certify that the audit has been carried out in accordance with the requirements set out in GG119. The problems identified have been noted in this report together with associated safety improvement suggestions which we recommend should be studied for implementation.

AUDIT TEAM LEADER

Keith Woodcock Eur Ing BSc CEng MICE MCIHT MSoRSA PGCHE FHEA
Senior Road Safety Engineer
Waterman Aspen
5th Floor
1 Cornwall Street
Birmingham
B3 2DX

Signed: ……

Date: 02 September 2022

AUDIT TEAM MEMBER

Darren Gotch MCIHT
Senior Road Safety Engineer
Waterman Aspen
5th Floor
1 Cornwall Street
Birmingham
B3 2DX

Signed: ……

Date: 02 September 2022

APPENDIX TWO

8.0 LIST OF DRAWINGS AND DOCUMENTS PROVIDED TO THE AUDIT TEAM

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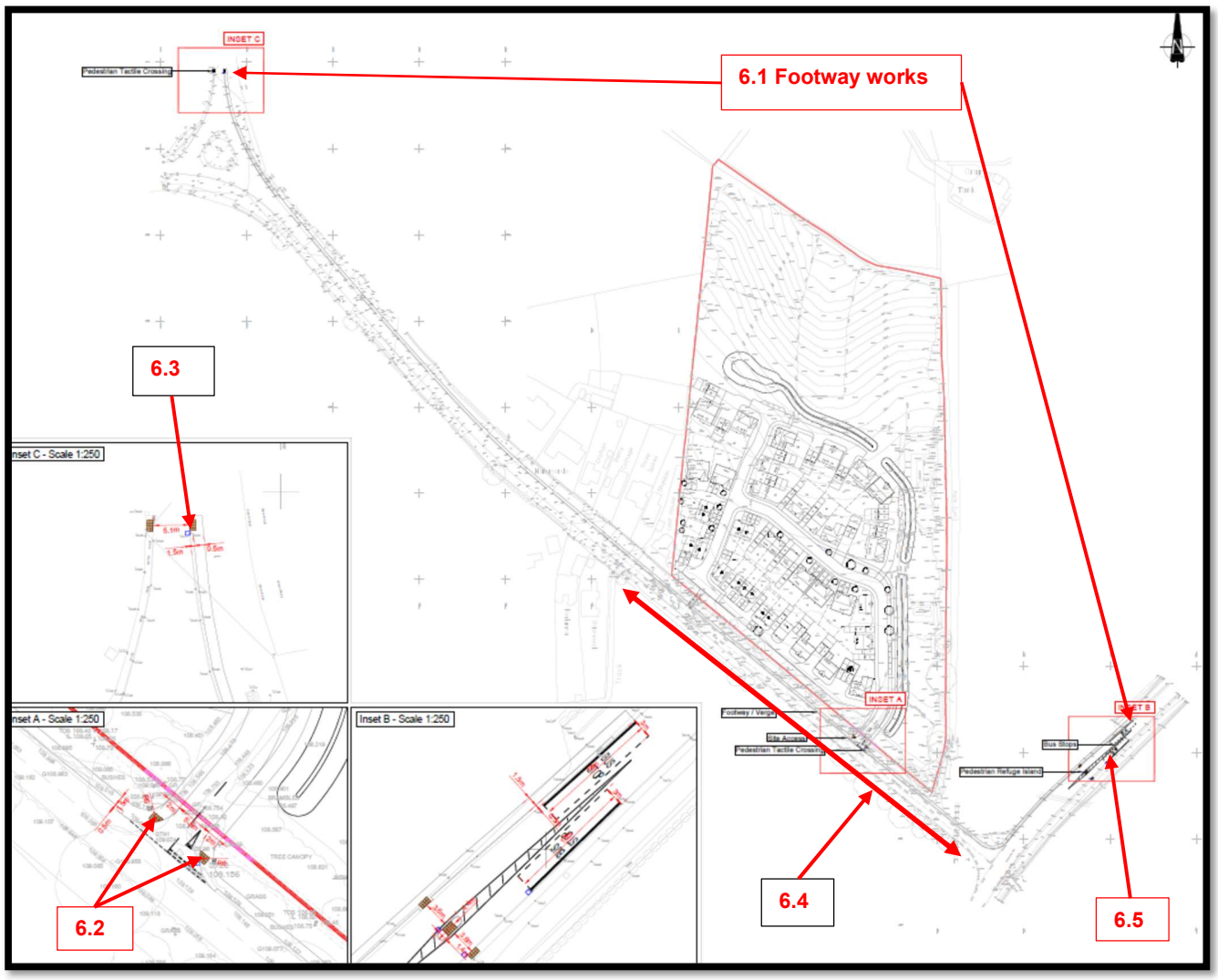
Drawings

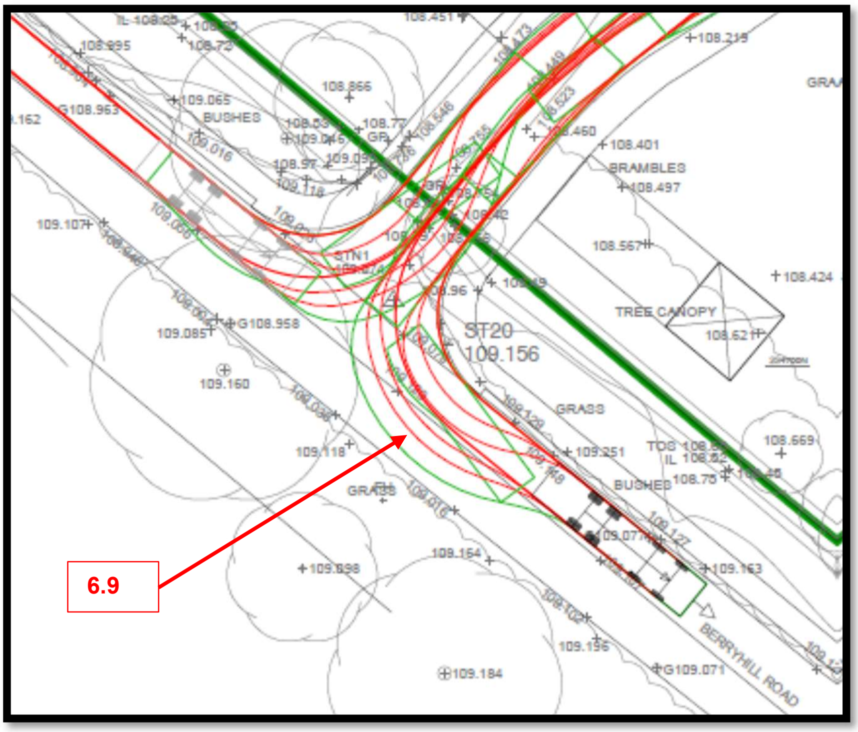
- 22021 / 400
- 22021 BGC-D / PL04B
- 22021 BGC-D / PL05B
- 22021 BGC-D / PL06B
- 22021 BGC-D / PL07B

APPENDIX THREE

9.0 PROBLEM LOCATION PLAN

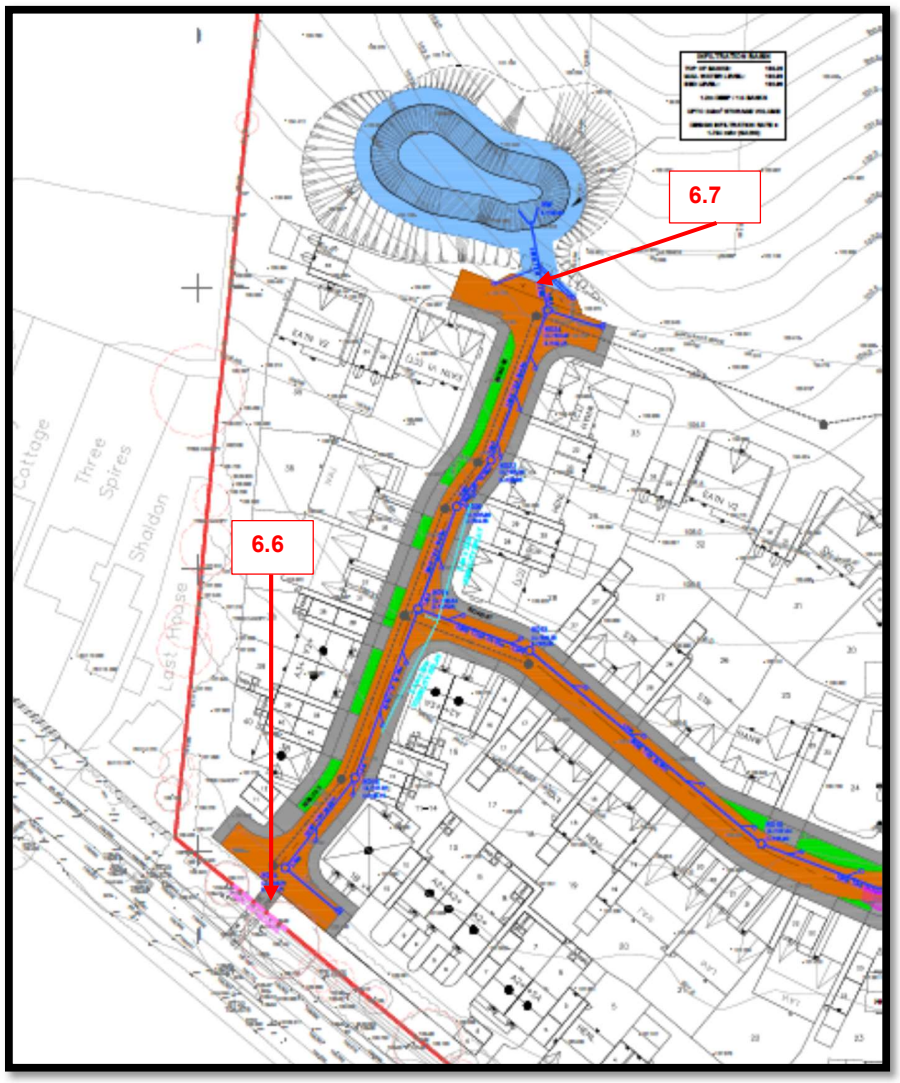
Section 278 works

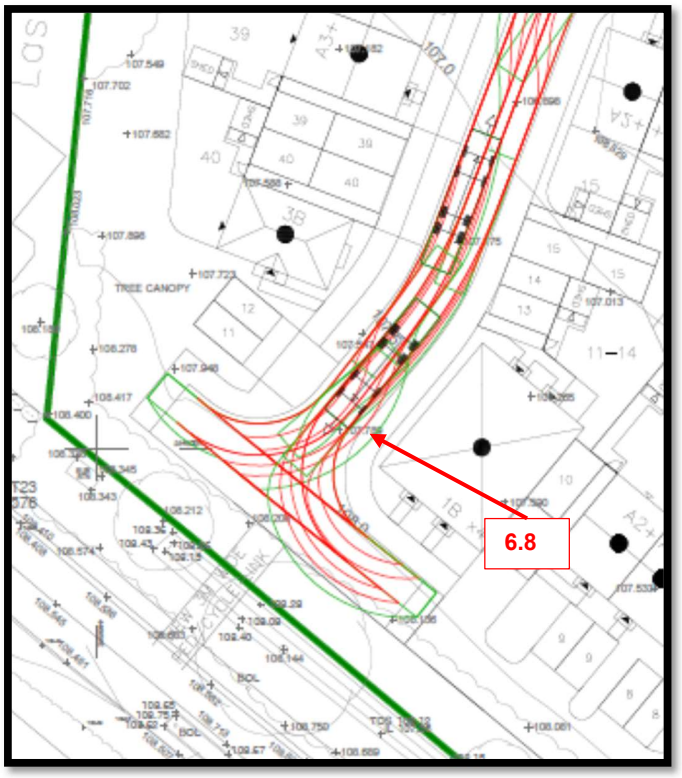




6.9
ST20
109.156
BERRYHILL ROAD
TREE CANOPY
BRAMBLES
GRASS
BUSHES

Section 38 Works





6.10 Various

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