



# Mitchells Way / Barnsley Road, Wombwell

Road Safety Audit  
Stage 1  
October 2018

Project No: 1386

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## Quality Management

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**Remarks**

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# 1. Introduction

## 1.1. Request for Road Safety Audit

1.1.1. AC Road Safety Audits have been asked on behalf of Paragon Highways to carry out a Stage 1 Road Safety Audit on the proposed development of a petrol station and its access, off the A633 Mitchells Way at its junction with Barnsley Road, Wombwell, Barnsley.

1.1.2. The overseeing Local Authority for the scheme is Barnsley Metropolitan Borough Council.

1.1.3. The Audit Team comprised:

<b>Alison Cockayne</b>	[Audit Team Leader for this Audit]
MIHE, BSc (Hons) Civil Engineering	
HE Cert. Comp	Principal Road Safety Engineer
<b>David Penty</b>	[Audit Team Member for this Audit]
	Group Engineer

1.1.4. This Audit was undertaken in accordance with HD 19 /15 'Road Safety Audit', which forms part of Volume 5 of the Design Manual for Roads and Bridges. It comprised an examination of the drawings and documents as provided with the audit brief; details of which are listed at **Appendix A**.

1.1.5. Alison Cockayne holds a Road Safety Certificate of Competency meeting the requirements of the European Directive 2008/96 EC and HD19/15 Annex J.

1.1.6. The Audit Team has examined and reported only on the road safety implications for the scheme as presented, and has not examined or verified the compliance of the designs to any other standards or criteria. The comments and suggestions for road safety improvements made in this report are aimed to address matters that might have an adverse effect on road safety in the context of the chosen design. To clearly explain a safety problem or recommendation to resolve a problem, the Audit Team may refer to a Design Standard.

1.1.7. A site visit was carried out on Friday 28<sup>th</sup> September 2018 at 18:00 hrs. The weather conditions were fine, visibility good and the road surface was dry. Vehicle volumes were high and pedestrian volumes were low.

1.1.8. Any safety related issues resulting from the Stage 1 Road Safety Audit identified on the scheme are reported in **Section 3**. Problem locations have been marked on the Problem Location plan given at **Appendix B** or as listed on drawings accompanying each individual identified problem.

- 1.1.9. Where the Audit Team has identified potential existing road safety design problems within this area, that fall outside the scope of the audit brief, these matters are reported under **Section 4** of this report. The Design Organisation and Contracting Authority should give due regard to the matters raised.

## 1.2. Scheme Description

- 1.2.1. The proposals are to build a petrol station on a site off the A633 Mitchells Way, Wombwell and provide an access off Barnsley Road. The scheme includes:

- A new priority junction into the site;
- A petrol forecourt including canopy with 6 standard pumps and 1 Ad blue pump;
- A Vac and Water / Air Bay
- A new shop building;
- Seven parking spaces including one for disabled;
- Footway and Carriageway resurfacing / construction;
- Landscaping and a retaining wall around the site.

## 1.3. Description of Locality

### 1.3.1. General Description

The site is located on a corner plot at the junction of the A633 Mitchells Way & Barnsley Road. The junction is a roundabout with four arms; the main route being the A633. This is the main road that leads to Barnsley Town Centre which is approximately four miles north west of the site.

The A633 Barnsley Road including the roundabout is subject to a 30mph speed limit. After the junction, the road becomes Mitchells Way and changes to 40mph. The road leading to Wombwell Town Centre is also called Barnsley Road and is subject to 30mph.

To the north and east of the site it is rural / industrial and to the south and west it is predominantly residential. There is an existing supermarket on Mitchells Way and a number of smaller retail outlets in the immediate vicinity including a shop and take-away opposite the site on Barnsley Road.

### 1.3.2. Relevant Factors which may affect Road Safety

The following factors have been identified that may affect road safety

- Location of Bus Stop on Barnsley Road adjacent site
- Proximity of existing shop / take-away & associated parking
- Speed of vehicles leaving roundabout & distance to new access.

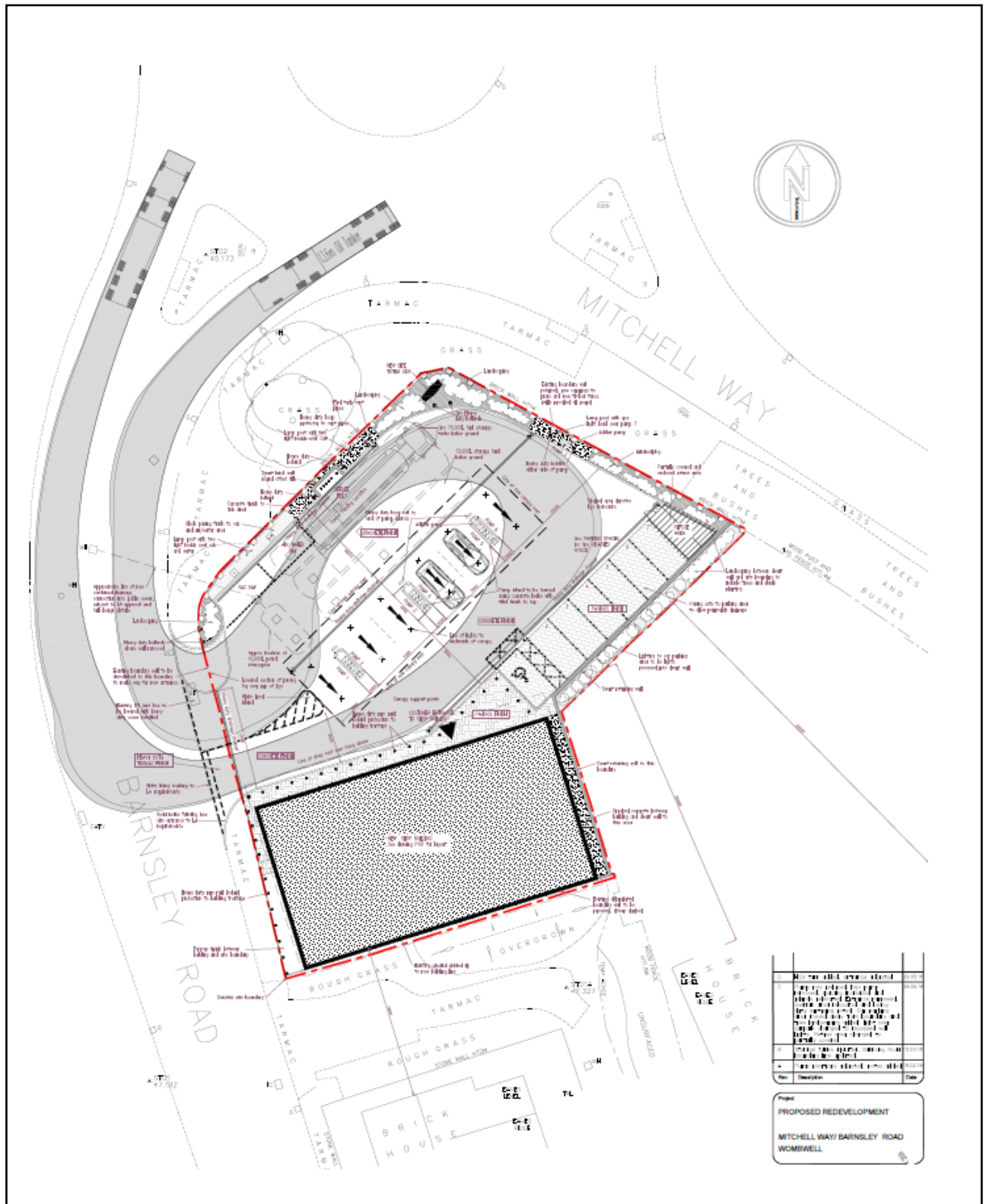
## 1.4. Supporting Information

- 1.4.1. The following information was provided to assist the Audit Team undertaking the Road Safety Audit.
- 1.4.2. The accident data, taken from CRASHMAP revealed that there have been 5 slight personal injury related collisions in the last five years near the site. Two occurred on Barnsley Road and the others were on Mitchells Way or at the junction with Barnsley Road.
- 1.4.3. No speed or traffic volume data was supplied.

## 1.5. Departures from Standard

- 1.5.1. The Audit Team are not aware of any departures from standard.

**Figure 1** indicates the extents of the scheme considered under this Stage 1 Road Safety Audit in accordance with the Audit Brief.



## 2. Matters Raised at Previous Road Safety Audits

### 2.1. Previous Audits

- 2.1.1. The Audit Team are not aware of any previous Road Safety Audits that have been carried out on this scheme.

### 3 Items Identified at This Stage 1 Road Safety Audit

#### GENERAL

##### 3.1.1 PROBLEM 1

**Location:** Barnsley Road at new access to petrol station and petrol forecourt.

**Summary:** Risk of flooding / standing water resulting in vehicles losing control.

**Detail:** The proposed site is lower than the existing carriageway level and there are no details of any new highway drainage at the junction with the new access, especially on the south side as the water will run downhill and into the petrol forecourt.

**Recommendation:** Ensure there is adequate drainage especially at the junction of the new access and Barnsley Road.

##### 3.1.2 PROBLEM 2

**Location:** East side of Barnsley Road at new access to Petrol Station

**Summary:** Risk of carriageway failure at new vehicular dropped crossing.

**Detail:** There is evidence of statutory undertaker's equipment in the footway at unknown depths along the frontage of the site where the new vehicular access is proposed. (See Image below)



Drawing No. P100D indicates that the BT manhole will be lowered with a heavy duty cover in a reinforced tarmac surface; however, there is no detail that any further equipment and associated ducts are being adjusted to an acceptable level. If vehicles are overrunning this area, especially larger vehicles it may cause the carriageway to fail resulting in exposed services and/or an uneven surface.

**Recommendation:** Ensure the services and all statutory undertakers equipment is lowered and protected to an adequate standard.

### 3.1.3 PROBLEM 3

**Location:** On Petrol Station Forecourt

**Summary:** Risk of vehicle collisions due to inadequate turning area from pumps 1 & 2

**Detail:** The space to exit from pumps 1 & 2 appears to be restricted especially from pump number 1. If vehicles, especially larger vehicles cannot turn in one manoeuvre to exit there is a risk of vehicle conflict if they have to make a number of turns.

**Recommendation:** Swept path analysis should be shown to demonstrate that vehicles especially larger vehicles can safely manoeuvre within the space and exit without having to reverse.

### 3.1.4 PROBLEM

**Location:** On Petrol Station Forecourt

**Summary:** Risk of vehicle collisions due to inadequate space for disabled parking.

**Detail:** The disabled space has hatching to the rear and nearside of the car but does not have any additional room on the driver's side. If the disabled person is the driver, they will need room to manoeuvre in and out of the car. They will also need additional room to reverse out of the space without conflicting with the vehicles using pumps 4 & 5.

**Recommendation:** Swept path analysis should be shown to demonstrate that vehicles using the disabled space can reverse safely without conflict with other vehicles using the petrol pumps.

### 3.1.5 PROBLEM 5

**Location:** On Petrol Station Forecourt

**Summary:** Risk of vehicle strike with forecourt canopy.

**Detail:** A forecourt canopy is proposed but there is no detail of its height. There is a risk that large vehicles may strike the canopy if it is too low.

**Recommendation:** Ensure the canopy is of sufficient height for vehicles to clear it and provide signs to warn over-height vehicles of its presence.

### 3.1.6 PROBLEM 6

**Location:** On Petrol Station Forecourt

**Summary:** Risk of vehicles collisions / collisions with surrounding infrastructure.

**Detail:** The swept path shown for the oil tanker appears to be tight and with potentially limited room for driver error.

**Recommendation:** Ensure that all types of vehicle expected to use the forecourt can turn and manoeuvre safely within the area without conflict with other vehicles or physical feature within the site.

### 3.1.7 PROBLEM 7

**Location:** South side of site boundary behind proposed new shop building.

**Summary:** Risk of movement of land/private access due to inadequate containment.

**Detail:** The boundary wall on the south side of the site appears to be retaining the land and access road above it, (See Image below). The ground is lower within the site and if the land is not retained sufficiently there is a risk of movement making it unstable. There is also the added risk, depending on the height of the proposed building, of security. If the roof is not significantly higher than the adjacent land, it may be possible to climb on it from the private road at the side of house no. 216.



**Recommendation:** Ensure the land is retained sufficiently and security of the building is not compromised.

## LOCAL ALIGNMENT

### 3.1.8 PROBLEM 8

**Location:** Barnsley Road at new access to Petrol Station.

**Summary:** Risk of collisions due to inadequate sightlines.

**Detail:** The sightlines to the north, when exiting the petrol station are restricted by the boundary wall and the bend in the road. (See Image below). Landscaping is also proposed in the corner of the site which could also restrict visibility. No visibility splays have been shown and the distance from the roundabout to the access is approximately 40 metres. With limited visibility there is also the risk that slower vehicles turning into the petrol station may be hit from behind.



**Recommendation:** Ensure the sightlines are adequate and comply with local standards.

### 3.1.9 PROBLEM 9

**Location:** Barnsley Road, south of new access.

**Summary:** Risk of collisions due to parked vehicles & congestion.

**Detail:** It was observed on site that parking occurs on the road especially at night by residents to the south of the access road and customers to the shop and take-away opposite, (See Image below). This parking may obstruct sightlines when accessing and egressing the new petrol station. The addition of a new access will generate more vehicle movements at this point and could increase the risk of collisions at this location.



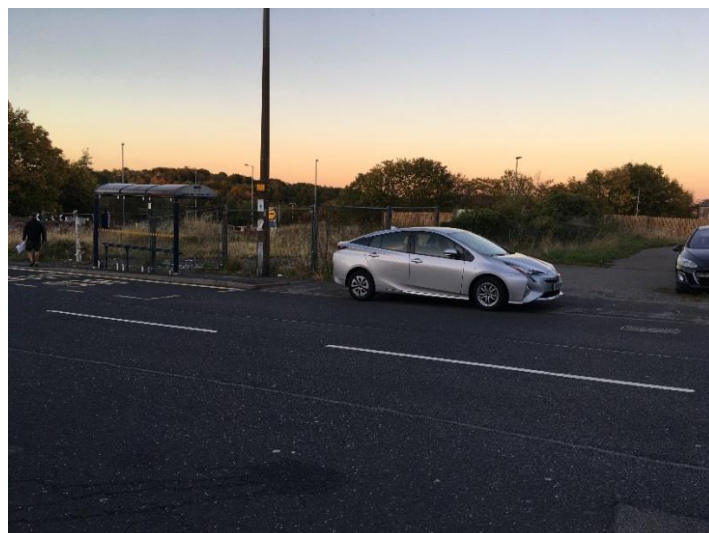
**Recommendation:** Monitor the parking and review the restrictions in the vicinity of the proposed access.

### 3.1.10 PROBLEM 10

**Location:** Barnsley Road at proposed access to Petrol Station.

**Summary:** There is a risk of collisions due to location of existing bus stop and shelter.

**Detail:** There is an existing bus stop and shelter (See Image below), located at the proposed location of the new access to the petrol station. There is no mention of the bus stop or shelter being relocated and if it remains in its present position could obstruct movement to and from the access and obstruct sightlines creating a potential hazard for egressing vehicles.



**Recommendation:** Relocate the bus stop & shelter to a more suitable location.

## NON-MOTORISED USER PROVISION

### 3.1.11 PROBLEM 11

**Location:** Barnsley Road at new access to Petrol Station

**Summary:** Risk of collisions between vehicles and pedestrians.

**Detail:** The proposals do not show any provision of dropped crossings on the proposed access to the Petrol Station, within the site at the entrance to the shop or at the existing private access above the site (See Image below). There will be an increase in pedestrian activity due to the provision of the new shop and failure to provide crossing points could lead to trips and falls or crossing at inappropriate locations resulting in collisions with vehicles.



**Recommendation:** Ensure there is adequate provision for pedestrians at this location.

### 3.1.12 PROBLEM 12

**Location:** Barnsley Road J/W Mitchells Way (North West of site boundary)

**Summary:** Risk of pedestrian trips and falls due to uneven ground.

**Detail:** There are two mature sycamore trees on the north-west side of the site where an informal footway has been formed through the grass verge, (See Images below).



Picture 1



Picture 2

The ground is already uneven and if the trees are allowed to grow bigger the roots may start to affect the ground even further. There is a low spot at the end of the formal footway where there is a disused access which looks like it floods during heavy rainfall (See Picture 2 above).

**Recommendation:** The route for pedestrians outside the site boundary should be improved and consideration given to removing the trees if it is thought they may affect the ground or infrastructure within the site.

### 3.1.13 PROBLEM 13

**Location:** Barnsley Road J/W Mitchells Way (North West of site boundary)

**Summary:** Risk of collisions between pedestrians & cyclists.

**Detail:** There is a shared route sign on Barnsley Road near to the junction with Mitchells Way (See Image below). It is unclear from the angle of the sign which direction the shared route goes or where it starts and ends. If cyclists are allowed to use the footway travelling south up Barnsley Road towards the entrance to the petrol station, there is a risk of a collision with pedestrians due to the bend and increased activity in this area.



**Recommendation:** Ensure the shared use footway is properly signed and it is clear where it starts and ends.

## LIGHTING, SIGNING & LINING

### 3.1.14 PROBLEM 14

**Location:** Petrol Forecourt

**Summary:** Risk of vehicle collisions due to inadequate signing.

**Detail:** It is assumed that the intended direction of travel around the forecourt will be one-way however no signs have been shown to indicate this. If it is unclear vehicles may travel in any direction especially if they decide they need to use the air / water or VAC bays.

**Recommendation:** Include signs to indicate the preferred direction of travel around the petrol forecourt.

### 3.1.15 PROBLEM 15

**Location:** Barnsley Road at junction with new access.

**Summary:** Risk of collisions between pedestrians & vehicles due to inadequate lighting.

**Detail:** No lighting details on the highway have been included in the proposals to serve the new access road and junction. There is an existing lamp column (See Image below) on the south side of the site boundary but no details have been provided to suggest it is being relocated or if the new access is sufficiently illuminated. If the junction is not suitably illuminated there is a risk that vehicles may not see pedestrians.

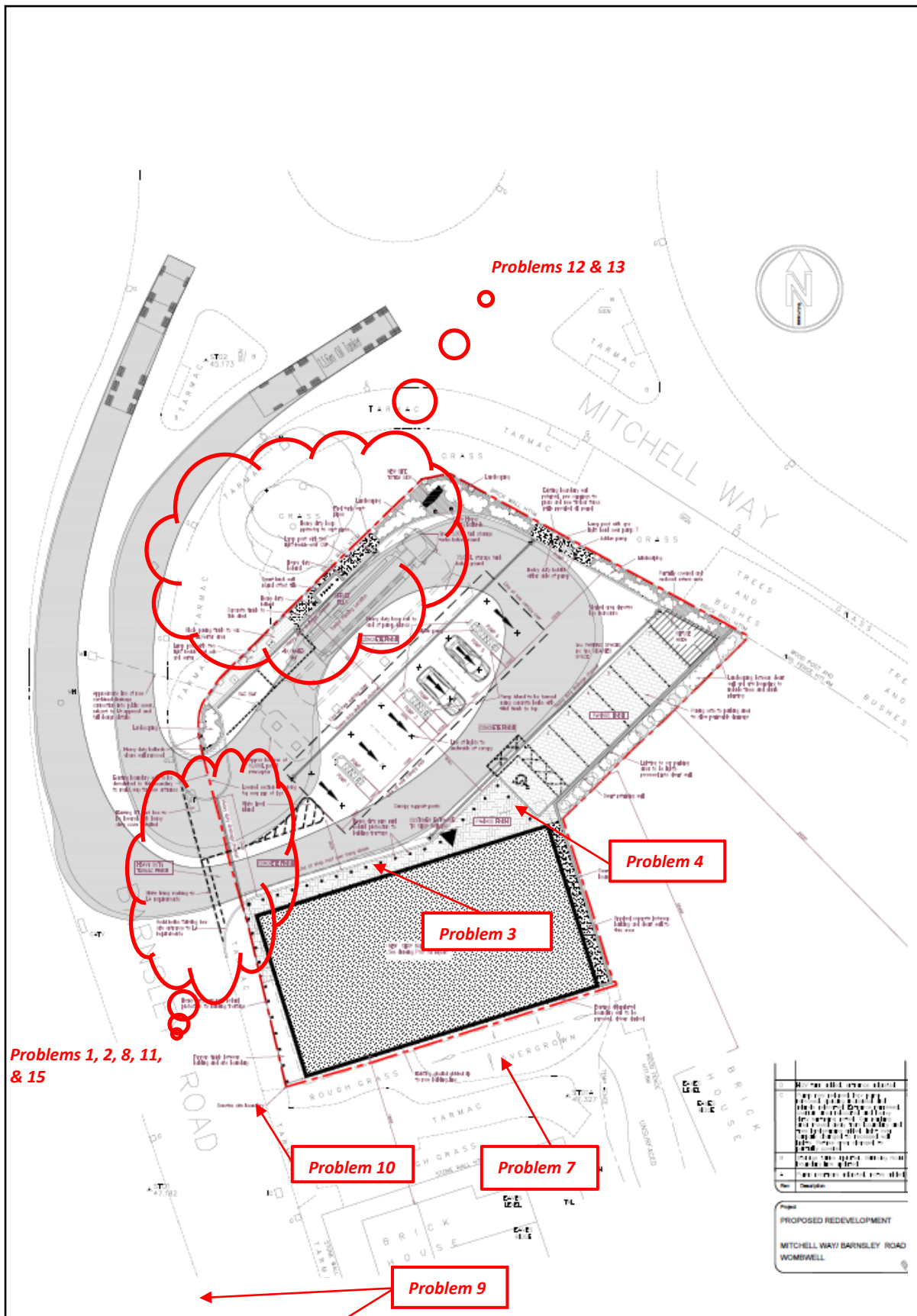


**Recommendation:** Provide adequate street lighting for the proposed development and at the junction.

## APPENDIX A – LIST OF DOCUMENTS PROVIDED

Drawing Number	Revision	Title
17-00 P100-101	D	Mitchells Way / Barnsley Road, Wombwell – Proposed Redevelopment – Site Layout
1386 -01		Mitchells Way, Barnsley – Proposed Access Tracking Detail

# APPENDIX B – PROBLEM LOCATION PLAN



- Problem 5 – Forecourt Canopy**
- Problem 6 – Swept Path**
- Problem 14 – One Way signs**