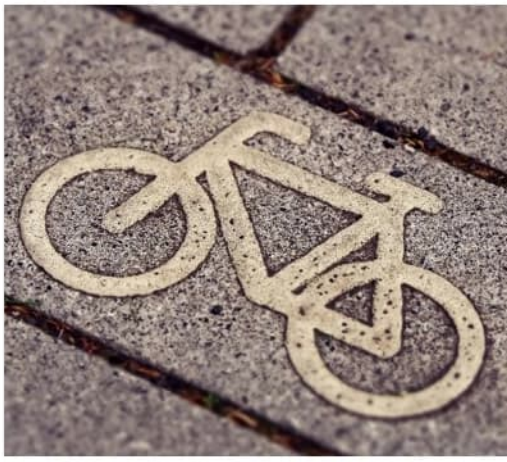
Blackmoorfoot Road
Huddersfield
Section 278 Design

Stage 2 Road Safety Audit Brief



sanderson associates
consulting engineers

Control Sheet

CLIENT:	Miller Homes
PROJECT TITLE:	Blackmoorfoot Road Huddersfield
REPORT TITLE:	Stage 2 Road Safety Audit Brief
PROJECT REFERENCE:	169635-SAN-BMF-RP-01_
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Issue & Approval Schedule

Issue 01 Final	Name	Signature	Date
Prepared by	Q Umar	A signed copy is available on request	12/02/2026
Checked by	D Bowker		12/02/2026
Approved by	D Bowker		12/02/2026

Issue Record

Issue	Date	Status	Description	Signature	
02	04.03.2026	Final	Audit Team Members revised	Prepared	Q Umar
				Checked	D Bowker
				Approved	D Bowker
03				Prepared	
				Checked	
				Approved	

Acknowledgements

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CV's for Audit

Appendix B

RSA Drawings

1. Project Summary

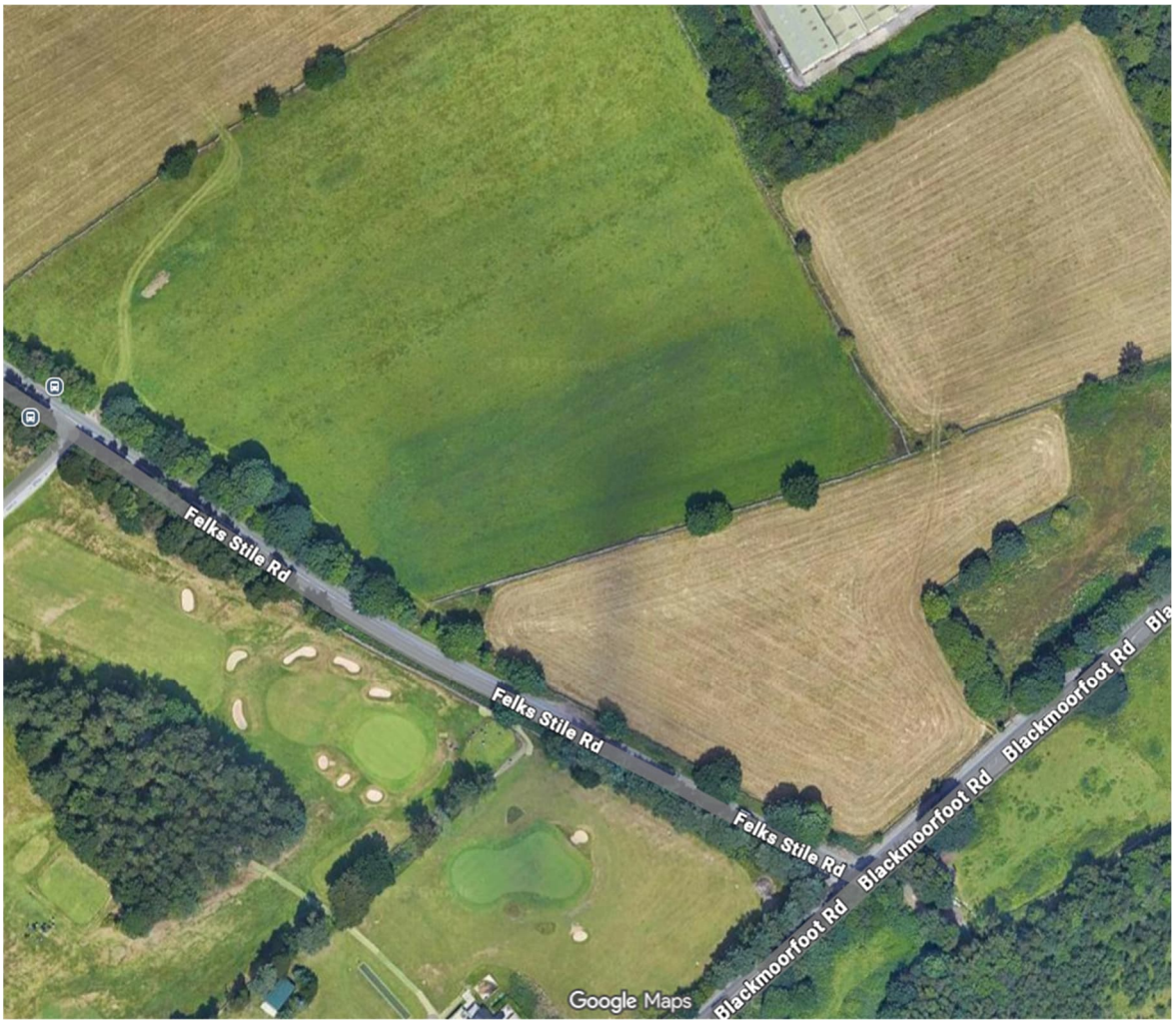
Table C.1 Project Summary	
Date:	4th March 2026
Document reference:	169635-SAN-BMF-RP-01_003
Prepared by:	Sanderson Associates Consulting Engineers
On behalf of:	Miller Homes
Authorisation Sheet	
Project:	Blackmoorfoot Road, Huddersfield - S278
Report title:	Stage 2 Road Safety Audit Brief
Prepared By:	
Name:	Q Umar
Signed:	Signed copy available on request
Organisation:	Sanderson Associates Consulting Engineers
Date:	4th March 2026
I approve the RSA Brief and instruct the RSA to take place on behalf of the Overseeing Organisation:	
Name:	
Signed:	
Organisation:	
Date:	

2. General Details

Table C.2 General Details				
General Details				
Highway Scheme Name and Road Number:		Blackmoorfoot Road, Huddersfield – Section 278 Design		
Type of Scheme:	Housing development			
RSA Stage tick as appropriate.	1	2 ✓	3	4
Overseeing Organisation Details		Design Organisation Details		
Kirklees Council Civic Centre 3 Market Street Huddersfield HD1 2EY		Fairhurst Group LLP T/A Sanderson Associates Consulting Engineers Sanderson House Jubilee Way Grange Moor Huddersfield WF4 4TD		
Police contact details		Maintaining agent contact details		
N/A		N/A		
RSA team membership				
→ Audit Team Leader – Martin Whittaker → Audit Team Member – James Stackhouse				
Terms of reference				
The Stage 2 Road Safety Audit is to be undertaken following the DMRB Volume 5 Section 2 GG119 Road Safety Audit (Formerly HD 19/15)				

3. Scheme Details

Table C.3 Scheme Details
Scheme Description/Objective
General
The Location of the Site is shown below



The proposed arrangement provides for the realignment of Felks Stile Road to create an access into the proposed residential development site. The eastern section of the existing Felk Stile Road is proposed to then form the minor arm of the junction with a build out proposed to create the necessary bell mouth alignment and visibility.

As part of the works, there is proposed carriageway and footway resurfacing along with proposed kerbing and tactile paving.

Proposed road markings and signage have been shown on the drawing: "169635-SAN-BMF-XX-DR-C-12_001-P01 – Road Markings and Signage"
Proposed highway drainage has been shown on the drawing: "169635-SAN-BMF-XX-DR-C-05_001-P01 – Proposed Drainage"

Drawing "169635-SAN-BMF-XX-DR-C-01_001 – General Arrangement" shows the scheme details while drawing "169823-SAN-MCR-XX-DR-C-01_002 – Vehicle Tracking" Provides swept path analysis of the proposed arrangement.

It is proposed to construct a new ghost island priority junction access onto Blackmoorfoot Road. The site access on Blackmoorfoot Road will be in the form of a ghost island right-turn T-junction. This access point will form one of two principal routes serving a major new housing development comprising approximately 700 dwellings, a 70-bed care home, and a local centre.

The site access proposals incorporate combined cycle/footways to enable pedestrians and cyclists to safely enter and exit the site and facilitate key turning movements (including outbound right turners) for cyclists away from general traffic, in accordance with LTN 1/20 principles. This includes shared cycle/footways along the full extent of the development sites Blackmoorfoot Road site frontage, which have been designed to enable these to be extended further north in future (e.g. associated with an adjacent Kirklees Local Plan development site). Further information showing the internal movement strategy is shown on the Movement Framework Plan (n2114_420 Rev M).

To accommodate the site access proposals, it is proposed to relocate the existing speed limit terminal points on Blackmoorfoot Road, as indicated on the site access drawings. A package of signing and lining improvements are also proposed on Blackmoorfoot Road to encourage better speed compliance and address existing speeding issues. These singing and lining proposals are shown on the drawing '08.24007-ACE-00-ZZ-D-C-2210 - S278 Road Markings & Traffic Signs Plan' Prepared by Adept Consulting Engineers.

Some of the key design issues relating to the proposed access arrangements are as follows:

<u>Blackmoorfoot Road Site Access</u>

- The site access works have been design based on 60B kph design speed and SSD parameters taken from CD109 of DMRB (e.g. 70-90m SSD).
- To discourage high traffic speeds though the junction, narrower 3.25m running lanes have been provided, which are the minimum width that would be accepted by the S278 Team. The narrower through lanes also enable a min. 0.5m wide kerbed hard margin to be provided on the south side of Blackmoorfoot Road, without requiring additional land take from the site, and helps to maximise the tapers at either end of the ghost islands markings.
- Whilst the ghost island tapers have been maximised, they are still below the recommended minimum of 1:20 (1:15 – 1:16 are achieved) identified in CD123 of DMRB (Section 6.1) and TSM Chapter 5. However, this is mitigated by the introduction of the required speed limit gateway improvements and staggered junction ahead warning signage (2 no. signs including secondary VAS) mentioned in the separate note relating to the speed limit changes.
- It is a requirement of the planning permission to close off all redundant site accesses, which includes the Standard Drive access (to the northeast of the proposed access). As part of these works, a 3m wide section of footway is to be provided across the redundant access, to enable the shared cycle / footway that is proposed along the site frontage to be extended north in future (e.g. in relation to the adjacent Local Plan site). To enable the exit

taper from the site access's ghost island to be maximised (but still below standard, as mentioned above), the drawing '08.24007-ACE-00-ZZ-D-C-2395 - S278 Geometry Plan' prepared by Adept Consulting Engineers, shows a minimum 1m footway being achieved within the existing highway boundary. The remaining 2m footway width will then need to be provided within the land at the back of highway, which is unregistered, but is within the development sites redline boundary. These additional works will need to be delivered in conjunction with the S278 works (and to highways specification); and once complete would seek to be adopted via the S228 process. In the unlikely event that the S228 adoption was unsuccessful for any reason, the design still enables a footway with a minimum width at the 'pinch-point' of 1m within the existing highway boundary, which would comply with the minimum footway width (for short lengths) set out in DfT guidance document 'Inclusive mobility'.

- A fully compliant right turn lane (RTL) is shown for the site access. The PICADY modelling from the TA for the original outline planning consent shows that the maximum right-turn queue from Blackmoorfoot Road to the site access is 1.5 pcus, and can therefore be accommodated.
- The radii and corner tapers on the minor arm of the site access are not in full accordance with the recommendations in CD123 (See paragraph 5.6.3). However, they have been informed by DMRB and local design guidance contained in the Kirklees Highway Design Guide SPD (e.g. with 10m junction radii). Based on the Swept Path Analysis (SPA) checks, the radii and corner tapers are adequate to allow the design vehicles to turn to/from the access 'in-lane' in all directions.
- Refuge islands are provided on Blackmoorfoot Road (1.5m wide) and the site access minor arm (2.5m wide). The island on the site access arm is below the recommended min. with of 3m in LTN 1/20 for cyclist use. However, this is considered to be adequate given it will be very lightly used, and as it can still accommodate the majority of cycle types. Whilst a wider island may be possible, this has not been shown, as it would further impact on tree loss, and is not considered necessary.
- Pedestrian visibility of 1m x 70m is achievable at the crossing point on the south side of the Blackmoorfoot, at the pedestrian refuge island. This should be adequate based on the '1 step below desirable minimum' SSD value in DMRB.
- A 1.2m wide splitter island is also proposed on Blackmoorfoot Road in advance of the cycle right turn pocket, to provide protection to waiting cyclists and discourage overtaking through the ghost island markings. The physical gaps between kerbs at the island is 3.7m, which is below the recommend min. width of 4m in LTN 1/20. However, the island is an important safety feature for cyclists waiting in the right turn pocket, and a wider gap (or narrower island) is not possible without compromising other design parameters. Deflection arrows are proposed on the southwest bound approach to the island, to discourage drivers overtaking cyclists on approach.
- Measures to improve safety for pedestrians accessing and waiting at the unmarked southwest bound bus stop on Blackmoorfoot Road, to the northeast of the site access and located in the carriageway, have been considered by the scheme designers and Kirklees Council (HDM in consultation with the Highway Safety Team). However, adequate improvements to the bus stop are not achievable, with the only viable option that has currently been identified being the provision of a 0.85m wide margin adjacent to the bus

stop. Whilst this may provide some improvement over the current situation, this would still not comply fully with design guidance (e.g. it would be below the recommended minimum width of a footway of 1m). Therefore, Kirklees HDM have consulted with WYCA to determine whether the southwest bound bus stop can be removed. Given that there are existing stops within 300m of this bus stop in either direction, and new high-quality facilities re to be provided within the development site, WYCA have accepted that this bus stop (but with marked northeastbound stop remaining) can be removed when the proposed site access is being implemented. The only physical change that would be necessary to accommodate the bus stop removal will be to amend the bus stop flag (the single flag located on the northeastbound stop side) to confirm that it ceases to be a 'both directions' stop.
Design standards applied to the scheme design
DMRB KC Local Guidance LTN 1/20 Traffic Signs Manual TSRGD
Design speeds
CD 109 Design Speed of 60B for Blackmoorfoot Road. CD 109 Design Speed of 70A for Felks Stile Road.
Speed limits
Existing speed limit on Felks Stile Road is the national speed limit and the proposed speed limit will reduce this to 40mph in the vicinity of the junction. 30mph at Blackmoorfoot Road site access, transitioning to 40mph at the relocated gateway terminal point to the southwest.
Existing traffic flows/queues
Existing traffic flows can be found within the Transport Assessment submitted in August 2024.
Forecast traffic flows
The aforementioned Transport Assessment presents information on the proposed traffic generation for the residential development.
Pedestrian, cyclists and equestrian desire lines
The aforementioned Transport Assessment presents information on the desire lines. Cyclists and pedestrians have been considered as part of the design and associated housing development. See movement framework diagram.
Environmental constraints
There are numerous TPO and other trees within the vicinity of the site accesses. Therefore, the works have been designed to minimise impact on these trees.

4. Locality

Table C.4 Locality
Description of Locality
The site is located approximately 3.5km to the south-west of Huddersfield Town Centre at the location of Blackmoorfoot Road and Felks Stile Road. Currently the site is undeveloped land and will have a new access at Felks Stile Road.
General description
Felks Stile Road which bounds the site to the west has a carriageway width of 6m and is subject to the National Speed Limit along the frontage of the application site. To the south-east it provides the minor arm of the Blackmoorfoot Road/Felks Stile Road priority-controlled junction whilst to the north-west it changes to Church Lane and provides a minor arm of the Cowlersley Lane/Church Lane priority-controlled junction Blackmoorfoot Road bounds the site to the south, with a carriageway width of approximately 6.5–7 m. The existing speed limit is 30 mph outside the site entrance. To the northeast, the road continues for approximately 2.5 km before reaching the minor arm of a priority-controlled junction with Manchester Road. To the southwest, it leads to the village of Blackmoorfoot, where the road name changes to Holt Head Road.
Relevant factors which may affect road safety
Increased numbers of pedestrians and cyclists at the Blackmoorfoot Road and Felks Stile Road junctions. Increased turning movements to and from the site accesses on Blackmoorfoot Road and Felks Stile Road.

5. Analysis

Table C.5 Analysis
Collision data analysis
Within the most recent five-year period of assessment, a single collision was recorded at the Felks Stile Road junction. The collision resulted in a slight injury and was recorded as involving two vehicles. No non-motorised users (NMU's) were recorded as being involved. In total, three incidents were recorded on Blackmoorfoot Road within the vicinity of the works (including speed limit alterations). One of the collisions was a fatal, one severe and one slight in severity. These incidents occurred on Blackmoorfoot Road to the southwest of the development site, which included the severe incident within the vicinity of the Blackmoorfoot Road/Felk Stile Road junction
Departures from standards
• The ghost island right-turn tapers are below the recommended minimum of 1:20 (1:15 – 1:16 are achieved) identified in CD123 of DMRB (Section 6.1) and TSM Chapter 5. However, this is mitigated by the introduction of the required speed limit gateway improvements and staggered junction ahead warning signage (2 no. signs including secondary VAS) mentioned in the separate note relating to the speed limit changes. • The radii and corner tapers on the minor arm of the site access are not in full accordance with the recommendations in CD123 (See paragraph 5.6.3). However, they have been informed by DMRB and local design guidance contained in the Kirklees Highway Design Guide SPD (e.g. with 10m junction radii). Based on the Swept Path Analysis (SPA) checks, the radii and corner tapers are adequate to allow the design vehicles to turn to/from the access 'in-lane' in all directions. • Refuge islands are provided on Blackmoorfoot Road (1.5m wide) and the site access minor arm (2.0m wide). The island on the site access arm is below the recommended min. width of 3m in LTN 1/20 for cyclist use. However, this is considered to be adequate given it will be very lightly used, and as it can still accommodate the majority of cycle types. Whilst a wider island may be possible, this has not been shown, as it would further impact on tree loss, and is not considered necessary. • Pedestrian visibility of 1m x 70m is achievable at the crossing point on the south side of the Blackmoorfoot, at the pedestrian refuge island. This should be adequate based on the '1 step below desirable minimum' SSD value in DMRB. • A 1.2m wide splitter island is also proposed on Blackmoorfoot Road in advance of the cycle right turn pocket, to provide protection to waiting cyclists and discourage overtaking through the ghost island markings. The physical gaps between kerbs at the island is 3.7m, which is below the recommend min. width of 4m in LTN 1/20. However, the island is an important safety feature for cyclists waiting in the right turn pocket, and a wider gap (or narrower island) is not possible without compromising other design parameters. Deflection arrows are proposed on the southwest bound approach to the island, to discourage drivers overtaking cyclists on approach.
Previous road safety audit stage reports, road safety audit response reports and evidence of agreed actions
Stage 1 RSA response undertaken on the Friday the 08th May 2025.

Strategic decisions
3.25m running lanes have been provided at the Blackmoorfoot Ghost Island junction, at the specific request of the Kirklees S278 Team, which is the minimum width they will accept in this situation.
List of included documents and drawings
Documents → Stage 1 RSA Designers Response report → AMA TA dated August 2024 → n2114_420M Movement Framework Plan
Drawings → 169635-SAN-BMF-XX-DR-C-01_001-P01 - General Arrangement → 169635-SAN-BMF-XX-DR-C-01_002-P01 - Vehicle Tracking → 169635-SAN-BMF-XX-DR-C-02_001-P01 – Site Clearance → 169635-SAN-BMF-XX-DR-C-05_001-P01 – Proposed Drainage → 169635-SAN-BMF-XX-DR-C-07_001-P01 – Proposed Pavements → 169635-SAN-BMF-XX-DR-C-07_002-P01 - Proposed Contours → 169635-SAN-BMF-XX-DR-C-07_003-P01 – Long Sections → 169635-SAN-BMF-XX-DR-C-07_004-P01 – Typical Cross Sections → 169635-SAN-BMF-XX-DR-C-07_005-P01 – Standard Details → 169635-SAN-BMF-XX-DR-C-11_001-P01 – Proposed Kerbing and Footways → 169635-SAN-BMF-XX-DR-C-12_001-P02 – Road Markings and Signage → 169635-SAN-BMF-XX-DR-C-12_003-P01 – Road Markings and Signage → 169635-SAN-BMF-XX-DR-C-12_004-P01 – Road Markings and Signage → 169635-SAN-BMF-XX-DR-C-12_005-P01 – Road Markings and Signage → 169635-SAN-BMF-XX-DR-C-01_003 – Visi Splays → 08.24007-ACE-00-ZZ-D-C- 2200 - P5 - S278 General Arrangement → 08.24007-ACE-00-ZZ-D-C- 2205 - P5 - S278 Buildup Plan → 08.24007-ACE-00-ZZ-D-C- 2210 - P4 - S278 Road Markings and Traffic Signs Plan → 08.24007-ACE-00-ZZ-D-C- 2220 - P4 - S278 Kerbing Layout → 08.24007-ACE-00-ZZ-D-C- 2230 - P5 - S278 Site Clearance Layout → 08.24007-ACE-00-ZZ-D-C- 2300 - P2 - S278 Drainage Layout → 08.24007-ACE-00-ZZ-D-C- 2310 - P5 - S278 Proposed Gully Area Plan → 08.24007-ACE-00-ZZ-D-C- 2311 - P4 - S278 Existing Gully Area Plan → 08.24007-ACE-00-ZZ-D-C- 2390 - P4 - S278 Contour Plan Sheet 1 of 2 → 08.24007-ACE-00-ZZ-D-C- 2391 - P4 - S278 Contour Plan Sheet 2 of 2 → 08.24007-ACE-00-ZZ-D-C- 2392 - P2 - S278 Setting Out Plan Sheet 1 of 2 → 08.24007-ACE-00-ZZ-D-C- 2393 - P2 - S278 Setting Out Plan Sheet 2 of 2 → 08.24007-ACE-00-ZZ-D-C- 2394 - P1 - S278 Setting Out Tables → 08.24007-ACE-00-ZZ-D-C- 2395 - P1 - S278 Geometry Plan → 08.24007-ACE-00-ZZ-D-C- 3001 - P1 - Site Location Plan

6. Checklist

Table C.6 Checklist			
Tick all that are included and provide reasons for those that are not included			
Site location plan	✓	Scale layout plans	✓ App B
Departures and relaxations from standards	✓	Construction/ typical details	✓ App B
Previous RSA reports	✓ App A	Previous RSA response reports and evidence of agreed actions	✓ App A
Collision data and collision data analysis	✓ App A	Road traffic collision plot	✓ App A
Traffic signal staging	N/A	Traffic counts	✓ App A
Speed surveys	✓ App A	Pedestrian, cyclist and horse-riding desire lines and volumes	✓ App A
Walking, cycling and horse-riding assessment and reviews	✓ App A	Items outside the scope of the RSA/ strategic decisions	N/A
Other factors that may impact on road safety	N/A	Design speeds / speed limits	✓
Design standards used	✓	Adjacent land uses	N/A

Appendix A

Stage 1 RSA Designers Response Report

Transport Assessment – AMA

CV's for Audit

Appendix B

RSA Drawings

Sanderson House, Jubilee Way, Grange Moor,
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