

Residential Development, Blackmoorfoot Road, Huddersfield

Highways Technical Note

Compliance of the proposed site layout against LTN 1/20 Cycle Infrastructure Design

23rd December 2024

AMA Project Number: 22224 / AMM

INTRODUCTION

This Highways Technical Note (HTN) has been prepared by Andrew Moseley Associates (AMA) in order to demonstrate that the proposed cycle infrastructure across the site complies with the Department for Transport (DfT) Local Transport Note (LTN) 1/20 Cycle Infrastructure Design July 2020.

The HTN will show that the proposed cycle infrastructure accords with LTN 1/20

PURPOSE OF LTN 1/20

The purpose of LTN 1/20 is the principle of inclusive design providing an accessible environment for young people, older people and disabled people. It should be noted that this guidance applies to cycle infrastructure only.

The document goes on to state that

‘There are five core design principles, which represent the essential requirements to achieve more people travelling by cycle or on foot, based on best practice both internationally and across the UK.

Networks and routes should be **Coherent; Direct; Safe; Comfortable** and **Attractive.**’

COMPLIANCE REVIEW

The primary loop road which connects both site access points on Blackmoorfoot Road (main access) and Felks Stile Road (secondary access) has been designed with a shared 3m footway / cycleway on the northern side. One of the key requirements of LTN 1/20 is to provide appropriate priority crossings for cycle tracks at side roads. There are three types of priority crossing for cycle tracks at side roads which are defined by the position of the cycle facility to the major road kerblin. These are shown at Figure 10.13 of LTN 1/20 and as follows:

- ▶ Full Set back – at least a car length (5m) from the kerblin;
- ▶ Partial Set Back – less than a car length from the kerblin; and
- ▶ No Set Back – at the kerblin

A full set back type arrangement is suitable where the traffic flows on the minor are up to around 2,000 PCU/day. A partial set back is typically required when less than 2,000 PCU/day and when there are frequent gaps in traffic on the major arm so that there is minimal queuing on the side road. No set back is only suitable for one-way tracks travelling in the same direction as the adjacent traffic lanes.

The anticipated level of PCU/day traffic flows across the site is shown on the attached diagram at **APPENDIX A**. The PCU/day traffic flows across the site have been derived based on the approved AADT for the site and the routes within the site that the future residential are most likely to use based on the dwelling locations.

The diagram at **APPENDIX A** shows that on the minor arms of the secondary loop road which are anticipated to carry the highest level of traffic movements beyond the primary loop road, the

PCU/day is significantly below 2,000 threshold. The highest level of PCU/day is anticipated to be 1,268 on the eastern extent of the secondary loop road. Table 1 shows the anticipating the level of PCU/day 2-way movements.

Table 1 – PCU/Day Across the Site

Link Roads	PCU/Day
Link 1 - Secondary Loop Road (Western Link)	1,208
Link 2 - Southern Street (Western)	91
Link 3 - Northern Street	151
Link 4 - Secondary Loop Road (Eastern Link)	272
Link 5 - Southern Street (Eastern)	29
Link 6 – Houses Accessed Directly from Primary Loop Road	1,268

On this basis, a partial set back is sufficient for the priority crossings on the minor arms on the northern side of the primary loop road. However, full set back priority crossings are provided at 5m which is over and above what is required to be compliant with LTN 1/20. The proposed site layout with the full set back priority crossings across the minor arms on the northern side of the primary loop road is attached at **APPENDIX B**.

In terms of the cycle infrastructure on the secondary loop road and the tertiary roads beyond, cyclists can mix with general traffic on carriageway due to the level of PCU/day and 20mph design speed in accordance with Figure 4.1 of LTN 1/20. However, a segregated footway (2m) / cycleway (3m) is provided along the western side of the eastern extent of the secondary loop road. The 3m cycleway then crosses the carriageway at the north-eastern part of the site and connects with the public footpath to the north-east.

On the western link of the secondary loop road a shared footway / cycleway (3m) is provided along the eastern side of the carriageway. The shared footway / cycleway (3m) continues around the secondary loop road until it meets the carriageway crossing of the segregated footway (2m) / cycleway (3m). There are shared footpaths / cycle-paths (3m) to the south of the LEAP and through the middle of the LEAP, connecting the eastern and western extents of the secondary loop road.

Given the number of tertiary roads that access the secondary loop road, the level of vehicle movements on the minor arms are below 1,000 PCU/day. On this basis, no specific cycle infrastructure is required, therefore, the proposed provision on the secondary loop road goes above and beyond what is required. In any event, the tree-lined grassed verges between the carriageway and the pedestrian / cycle infrastructure along the secondary loop road provide a natural partial set back.

GRADIENTS

LTN 1/20 includes guidance on gradients within Chapter 5. Table 5-8 within Chapter 5 of LTN 1/20 provides desirable maximum gradients over certain lengths. The maximum gradient referred to is 5% (1:20) over a length of 30m.

Through discussions with the Local Highway Authority (LHA) it has been that a maximum gradient of 1:15 can be provided along some sections of cycle infrastructure due to existing topography of the site. This is the case along significant sections of the primary loop road as well as other parts of the site. Long section plans showing the gradients across the site will be submitted to the LHA for approval.

CONCLUSION

This HTN demonstrates that the proposed cycle infrastructure across the site is LTN 1/20 compliant. Furthermore, it has been demonstrated that the updated proposed site layout provides a level of cycle infrastructure over and above that which is required to accord with LTN 1/20. On this basis, the proposed site layout plan should be considered acceptable.

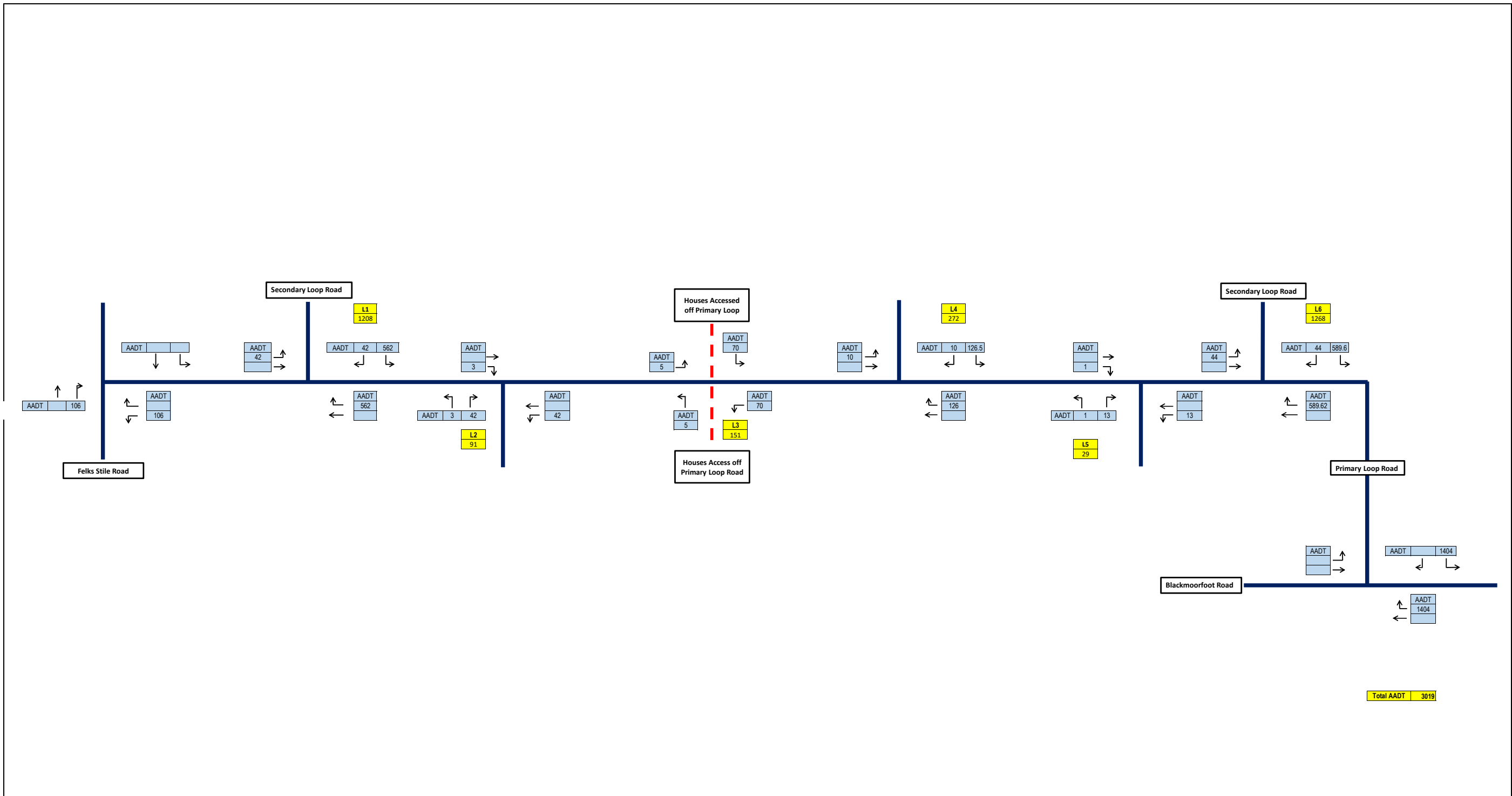
APPENDICES

Appendix A – Traffic Flow Diagram (PCU/Day)

Appendix B – Proposed Site Layout

Appendix A

Traffic Flow Diagram (PCU/Day)



Blackmoorfoot Road, Huddersfield

Development Flows (AADT)

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Figure 1

Appendix B

Proposed Site Layout