

Station Yard, Moor Row

784-B041101

Transport Statement

Nigel Kay Homes

November 2022



TETRA TECH

Tetra Tech Newcastle, 4th Floor, Rotterdam House, 116 Quayside, Newcastle upon Tyne, United Kingdom, NE1 3DY

Tetra Tech Environment Planning Transport Limited. Registered in England number: 03050297
Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

DOCUMENT CONTROL

Document:	Transport Statement
Project:	Station Yard, Moor Row
Client:	Nigel Kay Homes
Project Number:	784-B041101
File Origin:	Z:\Projects\784-B041101 Station Yard Moor Row\60 Project Output\61 Work In Progress\Transport Statement\2022 Transport Statement Final.docx

Revision:	0	Prepared by:	Jack Harding
Date:	31.10.2022	Checked by:	N Bunn
Status:	Draft	Approved By:	N Bunn
Description of Revision:	N/A		

Revision:	1	Prepared by:	Jack Harding
Date:	03.10.2022	Checked by:	Ellie Bunn
Status:	Final	Approved By:	Nick Bunn
Description of Revision:	Finalised for Issue		

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

Revision:		Prepared by:	
Date:		Checked by:	
Status:		Approved By:	
Description of Revision:			

TABLE OF CONTENTS

1.0	INTRODUCTION.....	4
2.0	EXISTING SITUATION	5
3.0	PROPOSED DEVELOPMENT	7
4.0	ACCESSIBILITY	8
5.0	TRIP GENERATION AND ASSIGNMENT	10
6.0	SUMMARY	11

LIST OF TABLES

Table 5-1: Vehicle Trip Rates and Generated Traffic for 80 Homes	10
---	-----------

APPENDICES

Appendix A: Figures

Appendix B: Traffic Survey Data

Appendix C: Drawings

1.0 INTRODUCTION

- 1.1 Tetra Tech have been engaged by Nigel Kay Homes to produce this Transport Statement (TS) in support of the planning application for a residential development of up to 80 homes on land at Dalzell Street in Moor Row, known as Station Yard. Figure 1 in Appendix A shows the site location.
- 1.2 The site was granted planning permission in outline for up to 80 homes with all matters reserved except access in 2017 under application number 4/16/2275/001. The planning permission has now lapsed, and the development proposals are being resubmitted for approval. The access and size of the development are unchanged from the consented application.
- 1.3 The previous application was supported by a Transport Statement produced by WYG (now known as Tetra Tech). The scope of the Transport Statement was agreed with Cumbria CC and included a capacity assessment at the Dalzell Street/ Site Access junction and at the Dalzell Street/ Church Street/ Pearson Close junction. The capacity assessments showed that in the 2026 With Development situation the site access junction had a maximum RFC of 0.08, and the Church Street junction had a maximum RFC of 0.46. Because both junctions were predicted to operate well within capacity and with minimal queues and delays, the capacity of these junctions has not been reassessed for this Transport Statement.
- 1.4 Confirmation of this approach was sought from Cumbria CC by email on 11 October 2022, but at the time of writing a response has not been received.
- 1.5 This TS has been produced having due regard for the advice contained in:
 - National Planning Policy Framework (NPPF) published by the Ministry of Housing, Communities & Local Government (MHCLG) in July 2021;
 - MHCLG's Transport Assessment and Travel Plan guidelines set out in Planning Practice Guidance;
 - Manual for Streets (MfS) published by the Department for Transport (DfT), March 2007, and Manual for Streets 2 (MfS 2) published by the Chartered Institution of Highways and Transportation (CIHT, endorsed by the DfT), September 2010;
 - Design Manual for Roads and Bridges (DMRB);
 - Cumbria County Council's (CCC) Design Guide, 2017;
- 1.6 The main purposes of this TS are to review the accessibility of the site for pedestrians, cyclists or users of public transport, and to consider the impacts of traffic generated by the proposed development on the local road network.
- 1.7 The TS has been prepared solely in connection with the proposed development. Whilst every reasonable effort has been made to ensure its accuracy, use of the information contained in the report by a third party for any other purpose is entirely at their own risk.

2.0 EXISTING SITUATION

Development Site

- 2.1 The site is located to the north of Moor Row in Cumbria as shown in Figure 1, Appendix A. It comprises the former Moor Row railway station and goods yard, and agricultural land immediately to the north. The site is bounded to the north and east by agricultural land, to the west by Dalzell Street and to the south by National Cycle Route 72 (Coast to Coast) which runs along the track bed of the former railway.

Local Transportation Network

- 2.2 Dalzell Street runs in a general north to south alignment past the development site. Dalzell Street has a carriageway width of approximately 7m in the vicinity of the site, with a grass verge on both sides of the road. The proposed site access junction lies within the 30mph speed limit for Moor Row, which changes to the National Speed Limit 85m north of the proposed site access.
- 2.3 To the south of the site, Dalzell Street rises to cross a bridge over the former railway line and present cycleway. On the bridge the carriageway is delineated by edge of carriageway markings to provide a 6m carriageway. After the bridge, the road continues south through Moor Row where there is footway on both sides of the road until a point just south of its junction with Church Street. To the north of the site, Dalzell Street continues for approximately 1.7km before reaching the priority junction with B5295 Keekle Terrace.
- 2.4 Church Street forms a staggered junction with Dalzell Street and Pearson Close in the centre of Moor Row, with the Dalzell Street to Church Street movement having priority. Pearson Close is a cul-de-sac which serves a small residential estate to the east. Church Street continues for a short distance to the west before becoming Scalegill Road, which continues for a further 1km before terminating at the priority junction with A595. To the south, Dalzell Street continues for approximately 2km before also connecting to the A595 south of Bigrigg.
- 2.5 To the north of the site, Dalzell Street connects with the B5295 at Keekle. The B5295 is the main road running between Cleator Moor, Hensingham and Whitehaven.
- 2.6 The A595 is located to the west of the site and is a major strategic link from the suburban areas of Whitehaven and Workington to employment areas near Moor Row, namely Sellafield, Westlakes Science & Technology Park and other coastal industries along the western side of Cumbria.
- 2.7 The A5086 runs between the A66 at Cockermouth in the north and the A595 at Egremont via Frizington, Cleator Moor and Cleator.

Walking and Cycle Connections

- 2.8 The southern boundary of the site is the track bed of the former railway which is now the NCN 72 Coast to Coast cycleway. It provides cycle connections to Egremont and Sellafield to the south and Whitehaven and Workington to the north, as well as to Cleator and Thornhill via connection routes.
- 2.9 The accessibility from the site to nearby destinations on foot or by bike is considered in more detail in Chapter 4.0 below.

Extant Planning Permissions

- 2.10 TT have not been made aware of any extant planning permissions whose traffic impacts need to be considered in this TS.

Traffic Surveys

- 2.11 The previous application was supported by an ATC survey on Dalzell Street in the vicinity of the site access undertaken between 24th February to Wednesday 2nd March 2016. The 2016 survey recorded the following average weekday 85th percentile speeds and peak hour (08.00-09.00 and 17.00 to 18.00) traffic volumes:
- Northbound = 42.2mph. AM Peak 82, PM Peak 241.
 - Southbound = 40.2mph. AM Peak 104, PM Peak 61.
- 2.12 For this application the ATC survey was repeated between 13th and 19th September 2022, inclusive, at the same location. The survey included Monday 19th September which was a Bank Holiday for the Queen's funeral. As a result, the traffic volume count for Friday 16th and Monday 19th have been excluded and the flows; Tuesday, Wednesday and Thursday were used to calculate the average peak hour flow. The 85th percentile traffic speeds were not so affected and all days were used to calculate the average.
- 2.13 The 2022 survey recoded the following 7-day average 85th percentile speeds and Tuesday to Thursday average peak hour traffic volumes:
- Northbound = 41.2mph. AM Peak 79, PM Peak 122.
 - Southbound = 39.5mph. AM Peak 70, PM Peak 92.
- 2.14 From a comparison of the results from the two surveys it can be seen that there has been a reduction in the 85th percentile traffic speeds and the AM & PM peak hour traffic volumes on Dalzell Street. The traffic survey report is attached in Appendix B.

Road Safety

- 2.15 The road safety record of Dalzell Street at the proposed access junction and for a distance of 150m either side of it has been reviewed using Crashmap.co.uk. The review considered the 5-year period ending 31st December 2019 so that the effects on accident history caused by the unusual traffic conditions during the Covid pandemic are excluded.
- 2.16 During the period in question there were no reported personal injury accidents in the area, as shown on Figure 2 in Appendix A.

3.0 PROPOSED DEVELOPMENT

- 3.1 The development proposal is for up to 80 homes. Access to the development site will be the same as that previously approved (WYG Drawing A096834/C003/B refers): a new priority junction on Dalzell Street with associated footway and speed reducing features. The proposed access and highways arrangement is shown on TT Drawing 784-B041101-TTE-00-XX-DR-O-0001-P02 attached at Appendix C.
- 3.2 As shown on the drawing, the junction kerb radii are 6m and a 5.5m wide carriageway with adjacent 1.8m wide footways is provided into the development in accordance with CCC's Development Design Guide. As previously agreed with Cumbria CC, a 1.25m kerbed path is to be provided over the railway bridge with accompanying carriageway reduction. Speed cushions are also proposed as in the consented scheme. The works associated with the site access are wholly deliverable within the adopted public highway or on land within the control of the applicant.
- 3.3 The existing access to the former station yard from Dalzell Street will be reduced to a vehicle crossover in order to retain access to third-party land to the south of the existing yard access.
- 3.4 As noted in the previous section there has been a small reduction in the 85th percentile traffic speeds on Dalzell Street between 2016 and 2022. The change is small and the appropriate visibility splays remain at 120m. This can be provided to the north, but to the south the railway bridge limits visibility to 76m and the series of speed cushions on Dalzell Street previously agreed will be retained. These are shown at TT Drawing 784-B041101-TTE-00-XX-DR-O-0001-P02 in Appendix C.
- 3.5 The proposed development includes pedestrian and cycle connections to the NCN72 Coast to Coast cycleway.
- 3.6 Resident parking at the development site will be provided in broad accordance with CCC's Development Design Guide.

4.0 ACCESSIBILITY

Walking

- 4.1 For this review an acceptable maximum walk distance of 1.95km from the centre of the proposed development has been adopted based on research published in LTT October 2017. This equates to approximately a 25 min walk (at a typical walking speed of 1.3m per sec).
- 4.2 Moor Row is limited with regards to local facilities and amenities. There is a Primary School and working mens club. However, there are a number of shops and health facilities within nearby Cleator Moor, in particular on High Street and its immediate surrounds, which can be reached within a 20-23 minute walk from the development site utilising the traffic-free NCN routes. Facilities within Cleator Moor include a pub, local convenience shop/ Post Office, hair salon, doctors' surgery, chemist, Montreal C of E Primary School and St Patrick's Catholic Primary School.
- 4.3 Westlakes Science Park is located nearby, which provides high quality office space, as well as research/ development and education/ training, and is currently home to more than 2000 professionals. Future residents at the development will be able to reach the Science Park within a 20-22 minute walk via the proposed footway to the south on Dalzell Street, followed by NCN Route 72 to the west and finally footway along the A595. Alternatively, there is a shorter walk (approx. 8 mins), which involves an on-carriageway stretch to the north along Dalzell Street before entering the park through the emergency vehicle access.
- 4.4 The site is located in a rural location with a small number of available facilities and services in the immediate locale. It has the same level of accessibility by foot as the existing housing in Moor Row. Residents at the proposed development have a reasonable level of accessibility on foot to a range of retail, education, employment and health opportunities particularly within Cleator Moor which can be reached within an acceptable walking distance. This level of walking accessibility was considered acceptable when the site was granted planning permission in 2017.

Cycling

- 4.5 Data on cycling for all purposes as the main mode of travel was interrogated using the 2010 to 2012 National Travel Survey (NTS) data to calculate the average and 85th percentile distances travelled. The survey data was collected from 7,700 to 8,200 fully co-operating households covering over 18,000 individuals. The analysis showed that, outside London, the average distance people cycle is 4.3km and the 85th percentile distance is 7.25km. Tetra Tech recommends the 85th percentile distance should be used to establish the cycling catchment.
- 4.6 For this review an acceptable maximum cycle distance of 7.2km has been adopted, which is approximately a 35-min ride.
- 4.7 All of the facilities that are within a 25- minute walk of the development site can be reached in just over a 10-minute cycle ride.
- 4.8 NCN 72 runs in an east to west direction south of the development on the former railway line. Locally, the NCN 72 provides access for journeys to Egremont and Sellafield to the south and Whitehaven and Workington to the north. Additionally, approximately 300m east of the development, the NCN 72 connects onto NCN 71. The NCN 71 provides a useful route to Cleator

Moor and further afield villages of Rowrah and Kirkland. Along the NCN routes there are a number of other designated local cycle routes which branch off to useful destinations including Cleator and Thornhill.

- 4.9 Utilising these routes, the surrounding towns of Whitehaven, Egremont and Cleator Moor, as well as the villages of Cleator and Frizington can all be reached within a 30-minute cycle ride of the development site.
- 4.10 Although residents at the proposed development can walk to the schools, convenience shop, pub and post office within Cleator Moor by a short walk, opportunities which they may view as beyond a reasonable walk can be reached by bike.
- 4.11 There are a number of large employment sites which can be reached within an accessible cycle ride of the development site. Leconfield Industrial Estate in Cleator Moor can be reached within a 10-minute cycle ride from the development site. Employment opportunities within Hensingham and at West Cumbria Hospital can be reached within a 20-minute cycle ride from the proposed development.
- 4.12 There are several education and leisure facilities which can be reached within an accessible cycle ride of the development site. Whitehaven School and Mayfield School can be reached within an 18-20 minute cycle northwest from the development site. West Lakes Academy to the south in Egremont is accessible via a 20-22 minute cycle. Cumbria Sports Academy can also be reached within an 18-20 minute cycle; the Academy provides a number of leisure activities including a running track as well as football and rugby facilities.
- 4.13 Residents at the proposed development have a good level of accessibility to retail, leisure, recreational and educational opportunities, and, in particular, employment opportunities, within a reasonable cycle distance. This level of cycle accessibility was considered acceptable when the site was granted planning permission in 2017.

Bus

- 4.14 There is currently no public bus provision within Moor Row, which is to be expected given its rural location and relatively small housing population. It is understood there is an existing school bus service that stops in Moor Row and facilitates journeys to West Lakes Academy in Egremont. Residents at the development would likely utilise this provision in the future. This level of bus accessibility was considered acceptable when the site was granted planning permission in 2017.

Conclusion

- 4.15 The site is located in a rural location with a small number of available facilities and services in the immediate locale and has the same level of accessibility by foot to as the existing housing in Moor Row. There are a number of employment sites that can be reached within an accessible walk or bike ride via designated cycle routes which include NCN 71 and 72. It is understood there is school bus provision serving Moor Row. This level of accessibility was considered acceptable when the site was granted planning permission in 2017.

5.0 TRIP GENERATION AND ASSIGNMENT

- 5.1 Trip generation and assignment has been taken from the approved Transport Statement submitted in support of the proposed development of up to 80 homes on this site in 2016, and which was granted planning permission in 2017. These are considered to be appropriate for consideration of the traffic impacts of this application.
- 5.2 The agreed trip rates and generated traffic flows are summarised in Table 5.1 below. The trip rates were derived from TRICS and agreed to in 2016; they are still considered to be suitable.

Table 5-1: Vehicle Trip Rates and Generated Traffic for 80 Homes

Time Period	Arrivals		Departures		Total
	Trip Rate	Vehicles	Trip Rate	Vehicles	
AM Peak Hour (08:00-09:00)	0.159	13	0.418	33	46
PM Peak Hour (17:00-18:00)	0.388	31	0.215	17	48

Trip rate is per dwelling

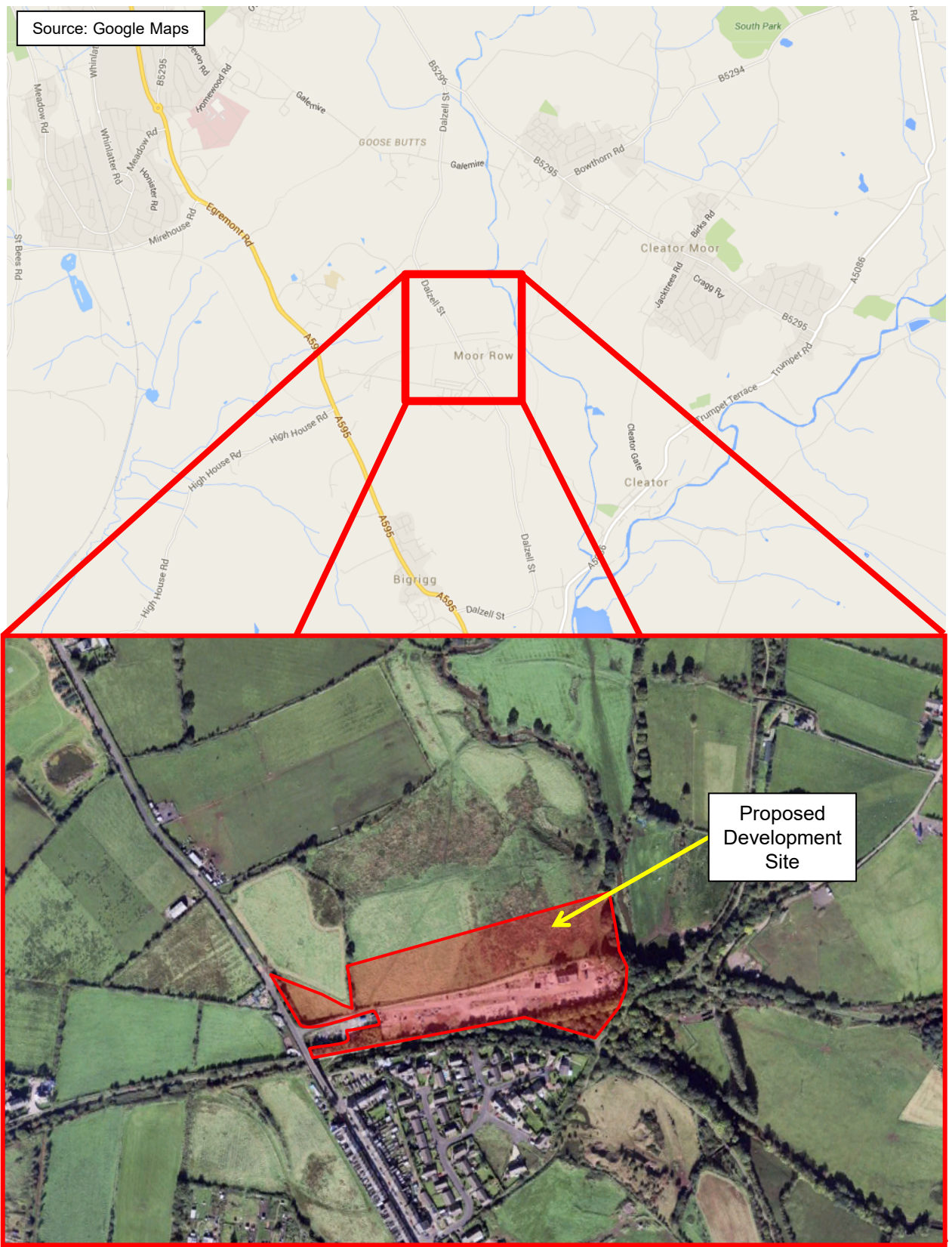
- 5.3 The approved TS from the 2016 application has an agreed traffic assignment: 60% of development traffic will travel to/ from the north towards the larger towns of Whitehaven, Workington and Distington, with the remaining 40% travel to/ from the south towards Egremont and Sellafield. This assignment is still considered to be appropriate. Figure 3 in Appendix A shows the generated traffic flows assigned at the site access junction in the AM and PM peak hours. These are identical to the flows approved in 2017.
- 5.4 The With Development flows at the proposed site access junction comprise the assigned generated traffic flows above plus the observed 2022 surveyed flows on Dalzell Street. The With Development AM and PM traffic flows are shown in Figure 4 in Appendix A. It should be noted that these flows are less than those approved for the previous application because of the reduction in the Dalzell traffic flows between 2016 and 2022.
- 5.5 The 2016 Transport Statement showed that the consented development had no material adverse impact on the local road network. The conclusion remains valid for the 2022 application.

6.0 SUMMARY

- 6.1 Tetra Tech have been engaged by Nigel Kay Homes to produce this Transport Statement in support of a planning application for a residential development of up to 80 homes on land at the former Moor Row railway station yard and adjoining agricultural land.
- 6.2 In January 2017 the site was granted outline planning permission for up to 80 homes with access from Dalzell Street (ref number 4/16/2275/001). The planning permission has now lapsed and the development proposals are being resubmitted for approval.
- 6.3 A traffic survey was carried out on Dalzell Street near the proposed site access between the 13th and 19th September 2022, inclusive. The results showed that traffic speeds have decreased from those recorded in 2016, as have traffic volumes.
- 6.4 Based on the 2022 survey results the visibility splays set out in Condition 6 for the approved site access junction (WYG Drawing A096834/ C003B) remain appropriate, and the details shown on the approved plan, including speed reducing features, are retained for this application, as shown at TT Drawing 784-B041101-TTE-00-XX-DR-O-0001-P02 attached at Appendix C.
- 6.5 The TS submitted in support of the 2016 application included a capacity assessment of the site access junction and the Dalzell Street/ Church Street junction. Both junctions were shown to operate well within capacity and with minimal queues and delays in the future with the development in place. The 2022 survey showed that the AM and PM peak hour traffic flows on Dalzell Street are less than those previously approved and therefore the capacity assessment has not been repeated.
- 6.6 The site is located in a rural area with a small number of available facilities and services in the immediate locale. The site has the same level of accessibility as the existing housing in Moor Row. There are a number of employment sites that can be reached within an accessible walk or bike ride via designated cycle routes which include NCN 71 and 72. It is understood there is an existing school bus which serves Moor Row. This level of accessibility was considered acceptable when the site was granted planning permission in 2017.
- 6.7 There have been no reported personal injury accidents on Dalzell Street at the proposed site access and for 150m either side in the 5-year period ending 31st December 2019. Accident data from 2020 and 2021 have not been assessed due to the impacts of covid on travel. There are no local road safety issues.
- 6.8 The proposed development was considered to be acceptable in highway terms for the previous consent and there have been no material changes in circumstance since which would warrant the refusal of planning permission on highway grounds.

APPENDIX A: FIGURES

Source: Google Maps

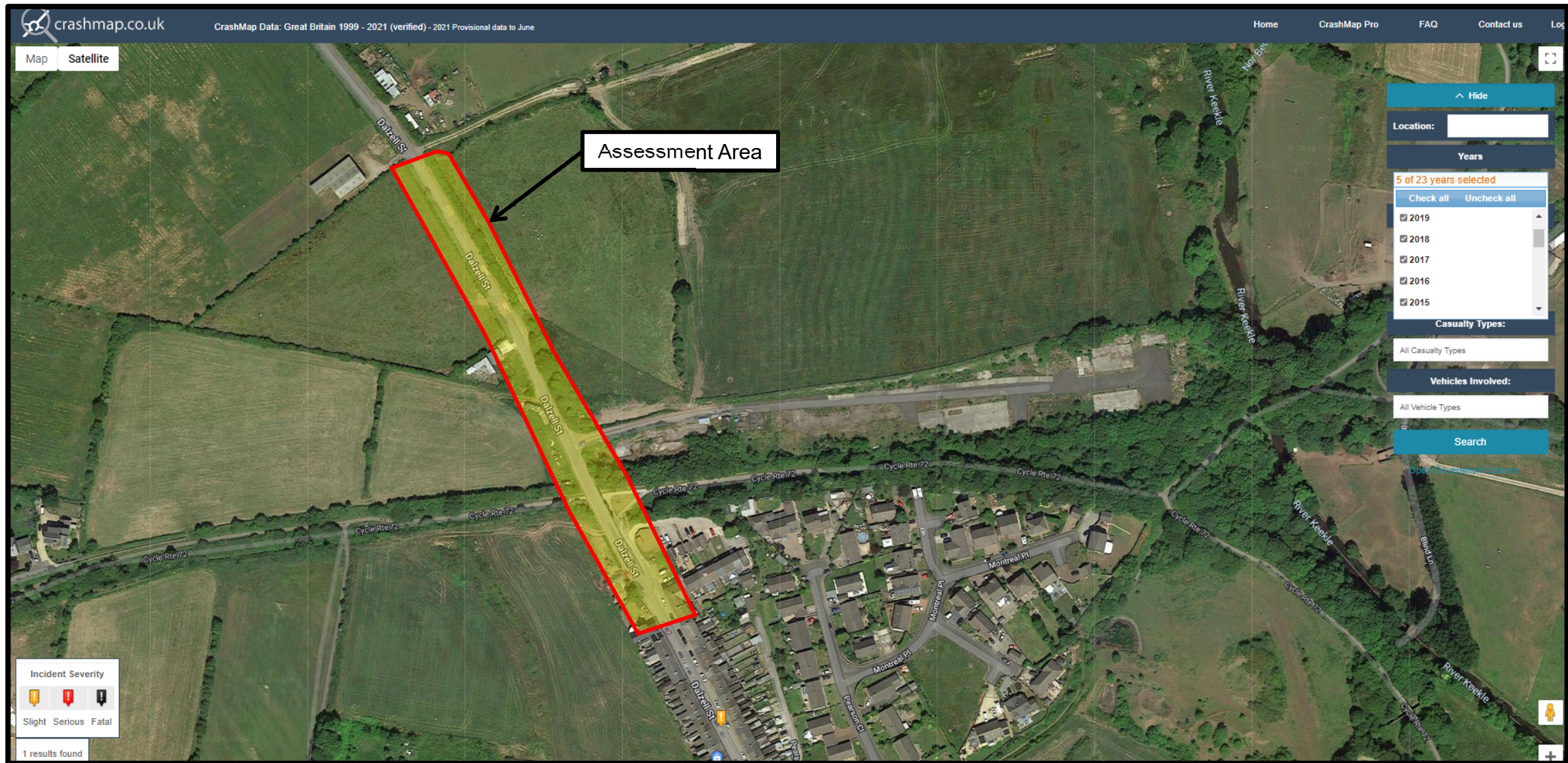


Station Yard, Moor Row

Site Location Plan

Figure 1

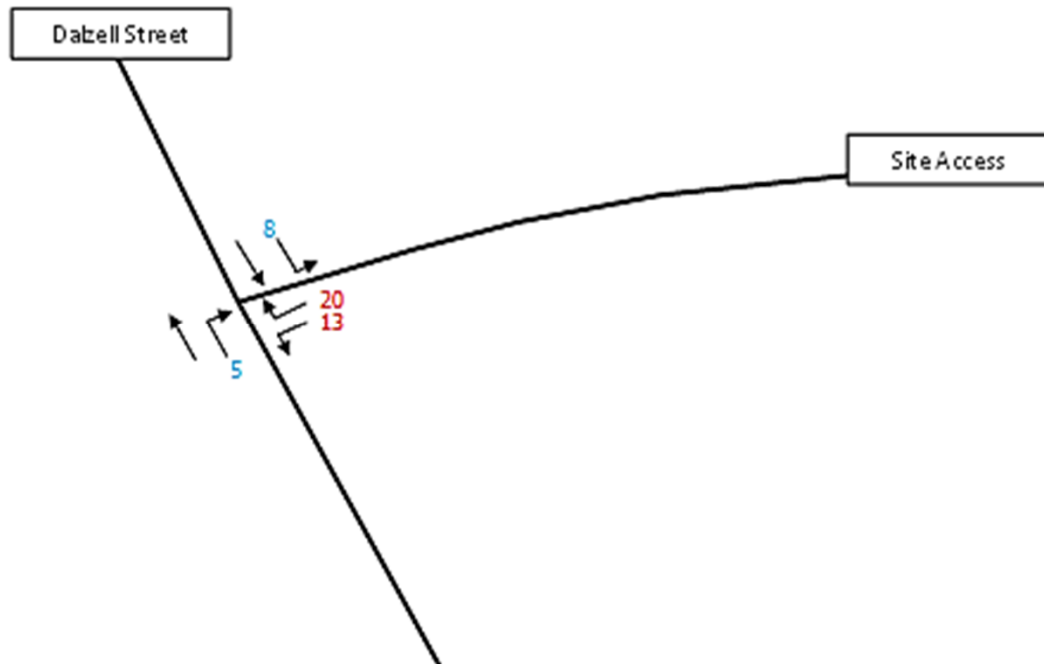




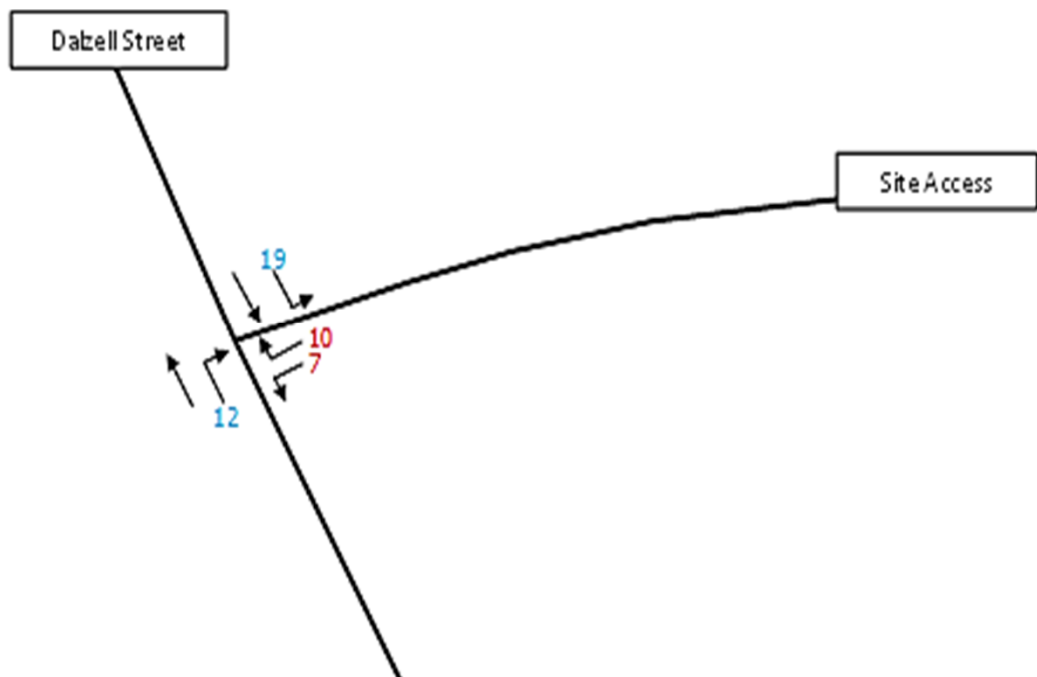
Station Yard, Moor Row
Crashmap Accident Data

Figure 2

AM Peak Hour



PM Peak Hour



Station Yard, Moor Row

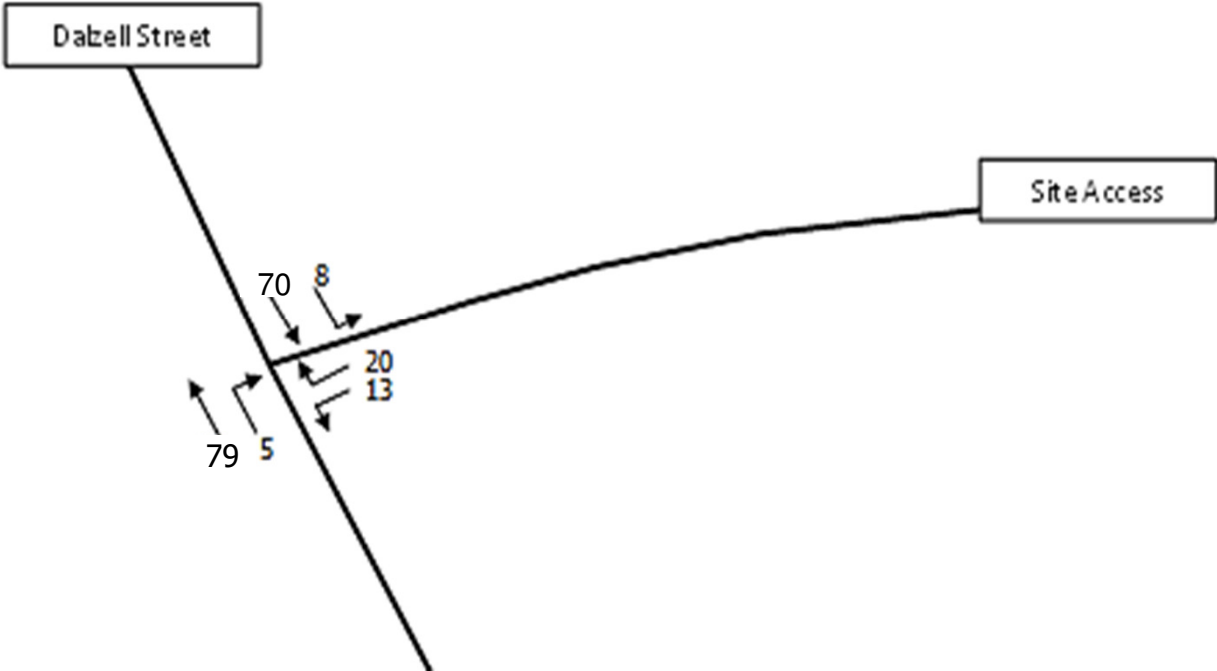
Development Generated Traffic Flows

Figure 3

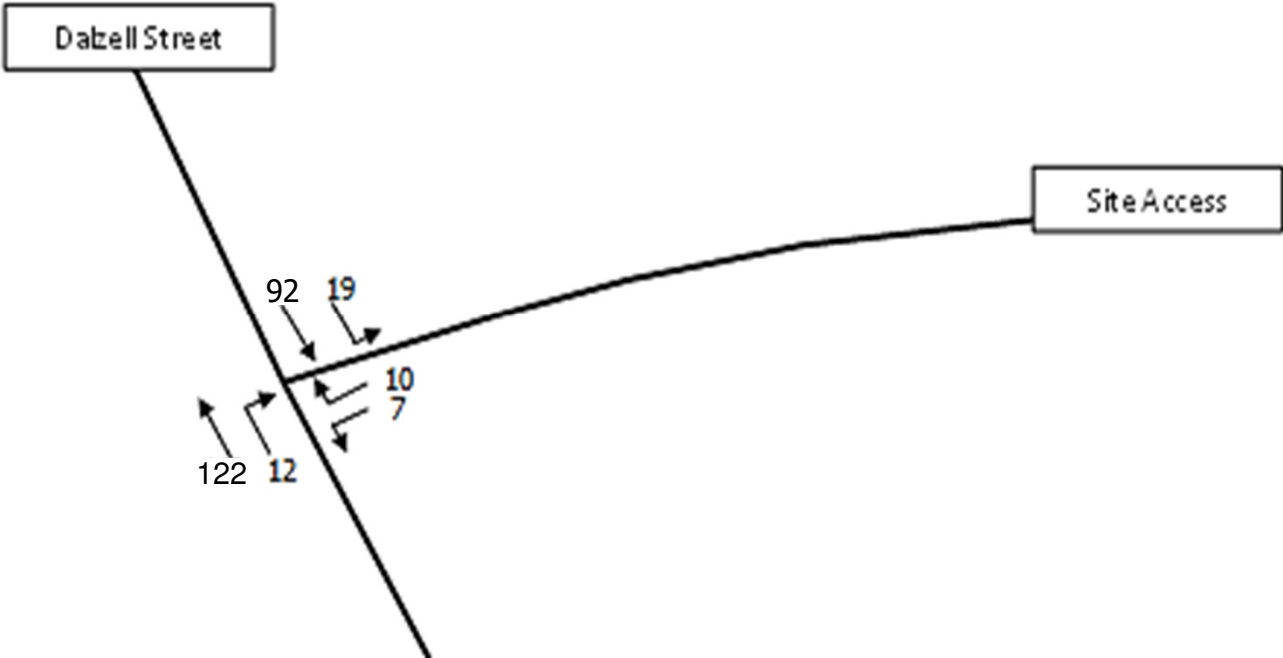


TETRA TECH

AM Peak Hour



PM Peak Hour



Station Yard, Moor Row

2022 With Development Traffic Flows

Figure 4



APPENDIX B: TRAFFIC SURVEY DATA

Automatic Classified Counts, Moor Row

LOCATION: DALZELL STREET
Direction : SOUTHBOUND

Tuesday 13/09/2022	VEHICLE CLASSIFICATION													TOTAL
	Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5	1	0	1	0	0	0	0	0	0	0	0	0	0	2
6	15	2	1	0	0	0	0	0	0	0	0	0	0	18
7	29	5	0	0	0	0	0	0	0	0	0	0	0	34
8	56	2	0	0	0	0	0	0	0	0	0	0	0	58
9	59	8	0	0	0	0	0	0	0	0	0	0	0	67
10	27	8	0	0	0	0	0	0	0	0	0	0	0	35
11	26	2	0	0	0	0	0	0	0	0	0	0	0	28
12	23	3	0	0	0	0	0	0	0	0	0	0	0	26
13	27	1	0	0	0	1	0	0	0	0	0	0	0	41
14	21	3	0	0	0	0	0	0	0	0	0	0	0	24
15	22	4	0	0	0	0	0	0	0	0	0	0	0	26
16	59	8	1	0	0	0	0	0	0	0	0	0	0	68
17	27	8	0	0	0	0	0	0	0	0	0	0	0	35
18	100	3	0	0	0	0	0	0	0	0	0	0	0	103
19	52	4	0	0	0	0	0	0	0	0	0	1	0	57
20	43	2	0	0	1	0	0	0	0	0	0	0	0	46
21	21	2	0	0	0	0	0	0	0	0	0	0	0	23
22	11	1	0	0	0	0	0	0	0	0	0	0	0	12
23	7	0	0	0	0	0	0	0	0	0	0	0	0	7
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-19	552	60	1	0	1	0	0	0	0	0	0	1	0	615
6-22	656	70	1	0	2	0	0	0	0	0	0	1	0	730
6-24	663	73	1	0	2	0	0	0	0	0	0	1	0	737
0-24	679	73	2	0	2	0	0	0	0	0	0	1	0	757

Direction : NORTHBOUND

Tuesday 13/09/2022	VEHICLE CLASSIFICATION													TOTAL
	Hr Ending	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	0	0	0	0	0	0	0	1
6	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7	20	1	0	0	0	0	0	0	0	0	0	0	0	21
8	35	8	0	0	0	0	0	0	0	0	0	0	0	43
9	66	13	0	0	1	0	0	0	0	0	0	0	0	80
10	39	6	0	0	0	0	0	0	0	0	0	0	0	45
11	36	2	1	0	0	1	0	0	0	0	0	0	0	40
12	33	5	0	0	0	0	0	0	0	0	0	1	0	39
13	38	4	0	0	0	0	0	0	0	0	0	0	0	42
14	47	5	0	0	0	0	0	0	0	0	0	0	0	52
15	73	3	0	0	0	0	0	0	0	0	0	0	0	76
16	181	20	1	0	0	0	0	0	0	0	0	0	0	202
17	245	22	0	0	1	0	0	0	0	0	0	0	0	268
18	110	11	0	0	0	0	0	0	0	0	0	0	0	121
19	56	2	0	0	0	0	0	0	0	0	0	0	0	58
20	36	0	0	0	1	0	0	0	0	0	0	0	0	37
21	22	3	0	0	0	0	0	0	0	0	0	0	0	25
22	11	0	0	0	0	0	0	0	0	0	0	0	0	11
23	7	0	0	0	0	0	0	0	0	0	0	0	0	7
24	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7-19	959	101	2	0	2	0	1	0	0	0	0	1	0	1066
6-22	1045	105	2	0	3	0	1	0	0	0	0	1	0	1160
6-24	1057	105	2	0	3	0	1	0	0	0	0	1	0	1169
0-24	1068	105	2	0	3	0	1	0	0	0	0	1	0	1180

survey and presentation by **trafficsense** Ltd.

Automatic Classified Counts, Moor Row

LOCATION: DALZELL STREET
Direction : SOUTHBOUND

Tuesday 13/09/2022	VEHICLE SPEED (MPH)													TOTAL
	Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	1	0	0	0	0	0	0	0	0	1
5	0	0	0	0	0	1	0	0	0	0	0	0	0	1
6	0	2	2	3	2	8	1	0	0	0	0	0	0	18
7	1	7	6	8	6	2	1	0	0	0	0	0	0	34
8	0	4	14	20	15	4	1	0	0	0	0	0	0	58
9	0	0	16	20	16	11	0	0	0	0	0	0	0	63
10	0	3	18	11	3	1	0	0	0	0	0	0	0	36
11	0	4	9	8	6	1	1	0	0	0	0	0	0	26
12	0	0	10	7	7	1	0	0	0	0	0	0	0	26
13	0	1	24	8	5	3	0	0	0	0	0	0	0	41
14	0	0	4	10	8	1	1	0	0	0	0	0	0	24
15	0	0	4	10	11	0	1	0	0	0	0	0	0	26
16	0	4	18	20	20	6	0	0	0	0	0	0	0	68
17	0	3	30	33	11	5	3	0	0	0	0	0	0	85
18	0	2	38	35	19	7	2	0	0	0	0	0	0	103
19	0	1	17	26	6	4	1	2	0	0	0	0	0	57
20	0	3	22	15	5	1	0	0	0	0	0	0	0	46
21	0	0	6	10	6	1	0	0	0	0	0	0	0	23
22	0	0	6	1	2	1	1	0	0	1	0	0	0	12
23	0	1	2	2	1	1	0	0	0	0	0	0	0	9
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-19	0	22	202	208	127	44	9	3	0	0	0	0	0	615
6-22	1	32	242	242	149	49	11	3	1	0	0	0	0	730
6-24	1	33	244	244	150	50	11	3	1	0	0	0	0	737
0-24	1	35	246	247	153	55	12	3	1	0	0	0	0	757

Direction : NORTHBOUND

Tuesday 13/09/2022	VEHICLE SPEED (MPH)													TOTAL
	Hr Ending	0-10	11-20	21-30	31-35	36-40	41-45	46-50	51-55	56-60	61-70	71-80	81-120	
1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3	0	0	0	0	1	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	1	0	0	0	0	0	0	0	0	0	1
6	0	0	0	1	4	0	1	1	0	0	0	0	0	7
7	0	3	1	12	3	6	1	0	0	0	0	0	0	24
8	0	3	11	14	12	6	0	15	5	5	0	0	0	43
9	0	3	1	12	38	20	7	2	0	0	0	0	0	80
10	0	1	25	9	7	3	0	0	0	0	0	0	0	45
11	0	4	12	8	12	1	1	2	0	0	0	0	0	40
12	0	0	6	20	5	3	1	0	0	0	0	0	0	30
13	0	1	10	15	11	4	0	0	0	0	0	0	0	42
14	0	1	11	24	11	5	0	0	0	0	0	0	0	52
15	0	1	14	21	25	8	5	2	0	0	0	0	0	76
16	0	9	21	83	61	21	7	0	0	0	0	0	0	202
17	0	3	40	92	102	26	3	1	0	0	1	0	0	268
18	2	14	20	34	35	13	2	0	1	0	0	0	0	121
19	0	1	10	18	16	6	6	1	0	0	0	0	0	58
20	0	0	6	9	11	4	2	0	1	0	0	0	0	37
21	0	1	9	9	4	2	0	0	0	0	0	0	0	25
22	0	0	3	5	3	0	0	0	0	0	0	0	0	11
23	0	0	1	3	0	3	0	0	0	0	0	0	0	7
24	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7-19	2	40	195	373	317	103	27	6	1	2	0	0	0	1066
6-22	2	42	217	408	338	112	30	7	2	2	0	0	0	1160
6-24	2	42	222	416	338	117	31	7	2	2	0	0	0	1180

Direction : SOUTHBOUND

Direction : NORTHBOUND

Direction : SOUTHBOUND

Direction : NORTHBOUND

1000

Direction : SOUTHBOUND

Direction : NORTHBOUND

Direction : SOUTHBOUND

Direction : NORTHBOUND

[illegible]

Direction : SOUTHBOUND

Direction : NORTHBOUND

Direction : SOUTHBOUND

Direction : NORTHBOUND

1000

Direction : SOUTHBOUND

Direction : NORTHBOUND

1000

Automatic Classified Counts, Moor Row

LOCATION: DALZELL STREET

Direction : SOUTHBOUND

Hr Ending	AVERAGE SPEEDS						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
1	-	39.7	38.0	38.0	34.3	31.4	-
2	-	33.0	33.0	-	-	-	40.5
3	-	-	-	29.3	48.0	-	-
4	38.0	15.5	38.0	48.0	-	33.0	33.0
5	43.0	26.8	43.0	23.0	15.5	35.1	32.2
6	36.1	34.4	33.2	42.5	37.2	32.2	33.6
7	29.6	30.2	31.0	31.0	24.9	28.5	38.0
8	32.2	33.8	33.0	34.8	33.4	33.0	38.3
9	34.1	32.6	33.0	33.2	31.2	31.5	33.4
10	28.5	31.4	31.1	32.5	32.2	32.6	30.7
11	29.5	32.0	31.5	30.0	32.2	27.4	33.8
12	32.6	30.5	28.4	31.5	31.0	30.9	30.5
13	29.5	30.0	29.5	30.3	31.6	30.0	34.0
14	34.5	29.0	29.0	33.2	32.3	32.8	31.7
15	34.5	32.8	29.1	34.3	30.6	32.0	30.6
16	32.3	30.6	31.9	30.6	29.8	29.9	33.0
17	31.5	29.8	32.1	32.4	32.4	31.2	30.8
18	31.8	33.1	33.7	32.5	33.1	33.7	30.5
19	32.6	33.2	31.0	30.7	34.4	33.9	33.8
20	29.0	32.9	30.7	33.9	31.4	31.8	32.6
21	32.8	30.6	31.6	30.5	31.2	33.4	33.3
22	34.3	35.3	30.0	42.7	34.9	36.4	32.6
23	30.5	43.0	22.2	30.5	32.4	39.7	41.8
24	-	38.0	41.3	35.5	35.9	33.0	-
10-12	31.1	31.2	29.9	30.7	31.6	29.1	32.2
14-16	33.4	31.7	30.5	32.4	30.2	31.0	31.8
0-24	32.8	32.1	32.4	33.6	32.3	32.4	33.3

Hr Ending	85th PERCENTILE						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
1	-	42.6	43.0	38.0	39.2	36.8	-
2	-	-	-	-	-	-	44.0
3	-	-	-	34.6	-	-	-
4	-	-	-	-	-	33.0	-
5	-	42.7	-	36.0	-	46.2	46.8
6	45.9	44.0	44.0	48.0	55.9	42.7	40.8
7	39.9	40.1	41.2	41.7	32.1	32.6	-
8	39.5	40.9	41.3	40.9	40.7	33.6	33.6
9	40.2	39.9	39.6	39.3	37.6	42.1	37.5
10	34.7	38.5	38.2	38.1	37.8	39.6	38.2
11	37.3	38.6	38.8	36.6	37.7	32.5	40.6
12	38.8	35.8	34.5	37.5	37.2	38.8	-
13	35.8	37.7	36.5	37.0	38.0	36.3	37.8
14	40.0	36.0	34.8	41.0	39.0	39.7	38.2
15	39.7	38.7	36.6	40.5	37.8	39.5	37.3
16	39.4	38.0	39.4	39.7	35.3	32.8	-
17	38.3	36.3	39.6	41.2	38.4	37.2	38.0
18	38.2	39.5	40.9	40.3	39.8	39.8	36.5
19	39.8	39.4	38.0	36.5	43.0	42.1	41.9
20	35.1	38.4	41.2	38.9	39.4	39.4	41.0
21	37.9	38.1	37.4	37.0	36.2	39.2	40.3
22	45.2	46.5	34.1	52.9	40.1	46.1	41.2
23	39.6	48.0	27.9	35.6	37.5	45.4	53.9
24	-	46.7	44.2	44.3	44.3	-	-
10-12	38.5	37.2	36.7	37.4	37.6	34.8	39.7
14-16	39.5	38.3	38.0	38.1	37.3	37.4	38.5
0-24	39.2	40.3	38.4	39.7	39.4	39.2	40.3

7 DAY AVERAGE SPEED	32.7
7 DAY AVERAGE 85th PERCENTILE	39.5

5 DAY OFF PEAK AVERAGE SPEED	31.5
5 DAY OFF PEAK AVERAGE 85th PERCENTILE	38.2

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Moor Row

LOCATION: DALZELL STREET

Direction : NORTHBOUND

Hr Ending	AVERAGE SPEEDS						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
1	38.0	-	25.5	26.5	40.5	38.2	35.5
2	43.0	25.5	-	38.0	40.5	-	43.0
3	33.0	-	-	-	40.5	38.0	43.0
4	-	-	-	-	-	32.2	38.0
5	25.5	25.5	48.0	43.0	38.0	37.2	25.5
6	35.5	38.8	35.5	48.0	33.0	32.0	38.0
7	34.7	35.4	33.8	36.2	37.2	35.5	28.6
8	32.7	31.8	32.8	34.7	31.9	32.5	30.5
9	34.2	34.7	34.7	33.3	32.4	30.8	34.5
10	29.8	31.8	33.9	31.8	32.5	33.9	30.3
11	32.1	32.6	33.6	35.7	31.9	33.9	31.9
12	32.6	32.4	31.3	34.4	33.7	32.1	34.3
13	33.8	33.2	33.6	34.1	33.3	31.1	34.5
14	33.1	35.5	32.9	35.1	32.5	35.0	36.7
15	35.6	35.4	34.5	33.7	34.2	32.5	32.0
16	34.5	34.3	34.4	34.9	30.4	32.3	33.5
17	34.9	35.0	34.8	33.3	31.0	33.0	35.1
18	32.3	34.9	35.5	34.9	35.0	35.5	35.5
19	35.7	36.9	36.0	32.8	32.4	33.7	33.8
20	35.8	32.2	34.6	34.7	32.4	33.2	36.5
21	31.2	35.2	35.9	36.3	35.9	34.4	37.8
22	32.3	39.9	34.6	36.8	35.3	35.2	38.5
23	36.2	38.3	38.6	37.4	37.0	33.0	34.7
24	25.5	39.7	31.8	29.7	36.5	41.3	15.5
10-12	32.4	32.5	32.5	35.0	32.8	33.0	33.1
14-16	35.1	34.8	34.5	34.3	32.3	32.4	32.8
0-24	33.6	34.2	34.6	35.1	34.8	33.9	33.5

Hr Ending	85th PERCENTILE						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
1	-	-	-	-	47.0	49.0	39.0
2	-	-	-	-	44.0	38.0	48.0
3	-	-	-	-	-	38.5	-
4	-	-	-	-	38.0	48.4	-
5	43.0	50.3	44.5	55.1	38.0	41.9	-
6	41.4	42.7	39.0	42.8	43.0	41.1	35.7
7	40.3	40.7	41.0	41.6	38.6	41.6	35.5
8	39.8	42.0	41.4	40.7	38.1	40.8	38.1
9	36.2	39.2	42.5	39.1	39.6	42.4	36.8
10	41.3	38.3	39.0	42.9	38.7	41.0	40.7
11	38.8	39.3	38.6	42.3	39.7	37.3	41.2
12	41.8	40.6	41.5	40.6	40.6	37.6	40.9
13	38.9	42.7	40.8	42.7	41.7	35.7	44.2
14	42.8	41.8	42.4	40.6	41.2	38.9	39.3
15	41.0	41.3	41.0	41.3	37.8	38.0	40.8
16	40.9	42.2	41.6	41.1	39.7	37.8	41.8
17	41.4	42.2	43.5	40.7	42.5	39.8	44.1
18	43.2	43.7	43.5	39.8	40.9	42.0	41.3
19	43.9	38.8	41.2	42.0	39.1	41.0	45.3
20	37.8	42.2	41.4	41.6	40.7	41.6	36.7
21	37.2	46.2	40.5	41.1	44.0	41.8	45.6
22	43.1	45.7	48.3	41.5	41.2	33.0	37.6
23	25.5	47.3	40.6	36.9	43.0	49.0	-
10-12	40.1	38.8	38.8	42.6	39.2	39.1	40.9
14-16	42.0	41.5	41.7	40.9	39.5	38.4	40.0
0-24	39.9	42.4	41.7	41.7	40.9	40.8	41.3

7 DAY AVERAGE SPEED	34.2
7 DAY AVERAGE 85th PERCENTILE	41.2

5 DAY OFF PEAK AVERAGE SPEED	33.7
5 DAY OFF PEAK AVERAGE 85th PERCENTILE	40.7

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Moor Row

LOCATION: DALZELL STREET

Direction : SOUTHBOUND

SPEED (MPH)	SPEED SUMMARY						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
0-30	282	292	287	252	178	170	116
31-45	459	480	446	462	270	252	188
46-60	16	18	16	28	14	8	5
61-120	0	0	0	0	0	0	1
TOTAL	757	790	749	742	462	430	310

survey and presentation by [trafficsense Ltd.](#)

Automatic Classified Counts, Moor Row

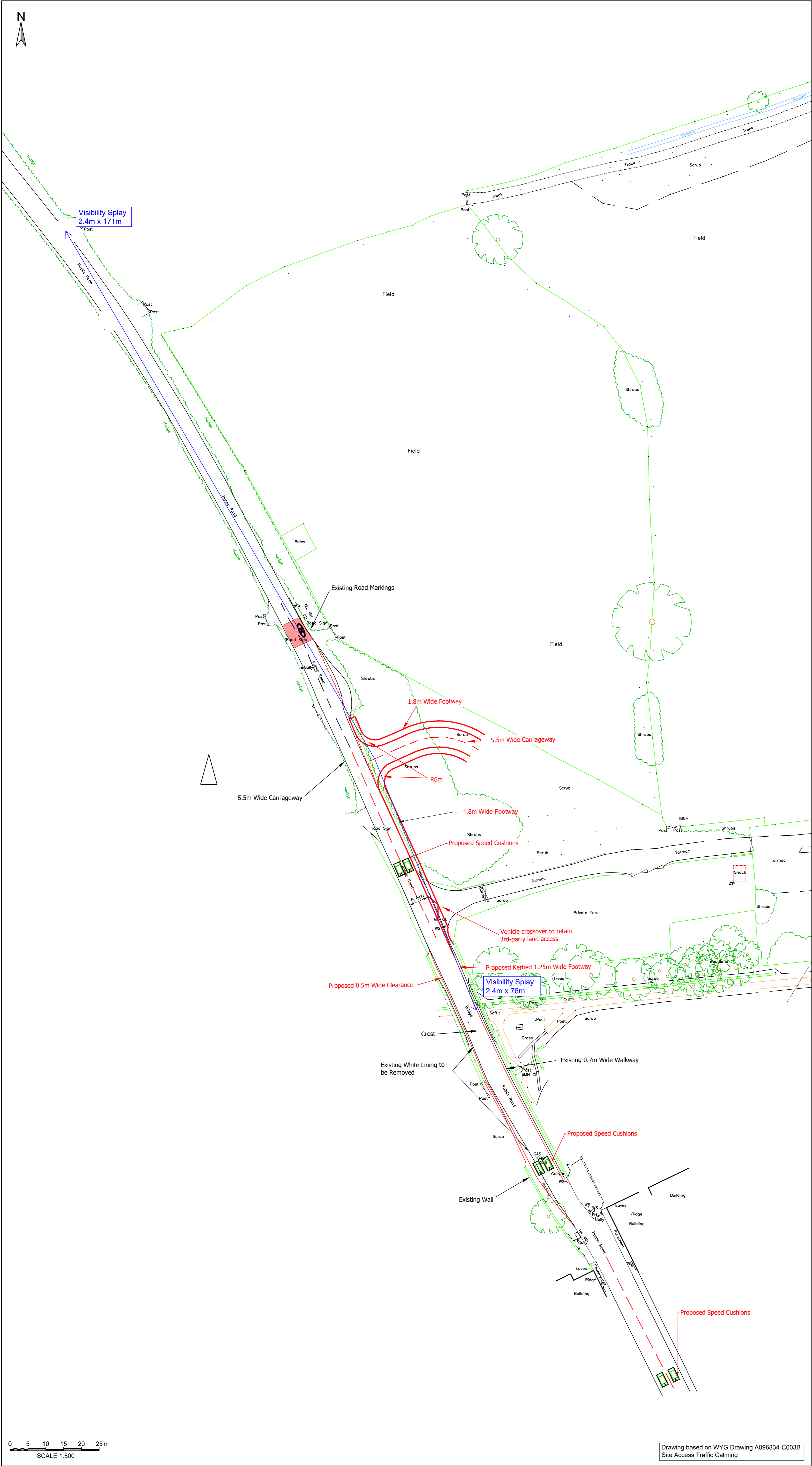
LOCATION: DALZELL STREET

Direction : NORTHBOUND

SPEED (MPH)	SPEED SUMMARY						
	Tuesday 13-Sep-22	Wednesday 14-Sep-22	Thursday 15-Sep-22	Friday 16-Sep-22	Saturday 17-Sep-22	Sunday 18-Sep-22	Monday 19-Sep-22
0-30	266	236	224	205	159	152	101
31-45	872	856	815	851	371	351	263
46-60	40	43	41	35	23	12	19
61-120	2	0	0	0	0	0	1
TOTAL	1180	1135	1080	891	553	515	384



APPENDIX C: DRAWINGS



FOR INFORMATION
ONLY

P02	AMENDED FOR ISSUE	03.11.2022	EB	EB	NB
P01	PRELIMINARY FIRST ISSUE	11.10.2022	JH	EB	EB
Rev	Description	Date	Drawn	Checked	Appr

Issuing Office
Tetra Tech Cockerthorpe
Lakeland Business Park, Lamplugh Road,
Cockerthorpe, Cumbria, United Kingdom,
CA13 0QT
Tel: +44 (0)19 0089 8600
www.tetratech.co.uk



Client
NIGEL KAY HOMES LTD

Project Name
FORMER STATION YARD, MOOR ROW

Sheet Title
ACCESS ARRANGEMENTS

TTE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Scale @ A1	Suitability
784-B041101	JH	Oct '22	EB	Oct '22	EB	Oct '22	As Shown	S2
Client Project Number	Originator	Volume/System Level/Location	Type/Code	Role	Number	Revision		
784-B041101	TTE	- 00 - XX	- DR - O -	0001	P02			