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PROPOSED RESIDENTIAL DEVELOPMENT, LAND NORTH OF BLACKMOORFOOT ROAD, HUDDERSFIELD (PLANNING REF:2020/92546) – TECHNICAL NOTE 05 (JUNE 2021)

Croft have been instructed by the Empire Knight Group to produce a Technical Note in support of proposals for a residential development on land to the north of Blackmoorfoot Road and east of Felks Stile Road in Huddersfield (Planning Ref: 2020/92546).

This note has been produced to assist the local planning authority to address comments raised by the Planning Committee on Wednesday 28th April 2021.

Traffic Generation

As requested by the highways officers during pre-submission scoping discussion the forecast traffic generation for the proposed development, was calculated using the trip rates agreed for the St. Luke's planning application. It was acknowledged at the time that the use of the trip rates would provide an extremely robust assessment of the impact of the proposed development, as typically larger residential development sites such as the one proposed exhibit lower level of traffic generation than smaller sites.

To demonstrate that the robustness of these trip rates reference has been made to average residential trip rates derived from the TRICS database (the standard industry tool), these trip rates and forecast traffic generation for 770 residential units are summarised below in Table 1.

Mode	Period	Trip Rate		Trips	
		Arr	Dep	Arr	Dep
Vehicle	AM Peak Hour	0.117	0.344	90	265
	PM Peak Hour	0.315	0.153	243	118

Table 1 – Proposed Development Trip Rates and Trips (770 Units) – Average Trip Rates from TRICS Database

As can be seen in the Table 1, using the average trip rates, the proposed development is forecast to generate 355 two-way trips in the Weekday AM peak and 360 two-way trips in the Weekday PM peak. Table 2 below compares the forecast traffic generation using the trip rates contained within the submitted Transport Assessment and the average trip rates detailed above.

Period	TA Trip Rates			TRICS Trip Rates			Difference		
	Arr	Dep	2 way	Arr	Dep	2 way	Arr	Dep	2 way
AM Peak Hour	173	385	558	90	265	355	+83	+120	+203
PM Peak Hour	366	236	602	243	118	360	+123	+118	+242

Table 2 – Comparison of Transport Assessment Trip Rates and Average Trip Rates from TRICS Database

As can be seen in Table 2, the trip rates contained within the TA and utilised for assessing the impact of the proposals on the surrounding highway network are substantially higher than if average trip rates using TRICS were utilised. In fact, the TA trip rates are between 36-40% higher than the average trip rates and therefore the use of these traffic flows provides an extremely robust and onerous assessment of the impact of the proposals on the local highway network.

It should also be noted that the above trip generation assessment does not take into account the long term impact of COVID 19 on travel patterns and traffic growth on the local highway network.

With regard to trip rates and travel patterns, it is important to recognise that advice set out in the TRICS Guidance Note titled 'Change in Travel Behaviour', which was published in July 2019. This study is based on several data sources including the DfT's Traffic Forecast 18 and TRICS trend analysis of historical trip rates for the three main land-uses (Food Retail, Office and Houses Privately Owned).

The findings of the study indicate that during the period from 2002 to 2017, residential trip rates have declined by around 12%. These reductions are the result of modal shift but more notably reductions in commuter and shopping trips during this period due to increases in homeworking and online deliveries. As a consequence, the study concludes, at paragraph 6.3, that:

'TRICS bank of data and historic trends analysis provides the context for TRICS users to recognise that change in travel behaviour is happening at a local level. This change in travel behaviour needs to be reflected in the analysis of trip generation for local development proposals.'

Paragraph 6.6 goes on to state that:

'It is important to remember that TRICS holds a valuable bank of data which when applied with the consideration of trends in changes of travel behaviour, can provide practitioners with a new view on trip generation'

That is to say, trip rates obtained from the TRICS database should be used as a starting point in determining the trip generation of future development, but account should be properly taken of the trends in travel behaviour which are clearly showing an overall reduction in the demand for travel. In light of the above and the changes in travel patterns as a result of COVID-19, it is concluded that the trip rates used within this impact analysis provide a robust assessment of the local highway network.

In addition, the planning application description provides the opportunity for the provision of elderly residential provision on the site (up to 70 units). The provision of this land-use would reduce the level of traffic generation from the site, especially in the peak periods and reduce the impact of the proposals on the local highway network.

Based on the above it is concluded that traffic generation assumptions used within the submitted Transport Assessment provide an extremely robust and onerous assessment of the impact of the proposed on the local highway network. In reality, the increases in traffic on the local highway network as a result of the proposals will be substantially lower than those assessed as part of the planning application.

Trip Distribution

In addition, to the robust traffic generation assumptions detailed above, there is robustness in the methodology used to assign the development to the local highway network.

As requested by the highway's officers at KC, the proposed development traffic has been assigned to the local highway network using a fixed route matrix as was used for the Local Plan Examination process. This assumes that 93% of traffic travels along Blackmoorfoot Road and 66% travelling through to the Manchester Road/Blackmoorfoot Road junction at the eastern end of the study area.

In reality, there are numerous other routes that drivers could take from the development which would reduce the level of vehicle movements at the junctions within the study area, examples of these routes include;

- Crossland Hill Road;
- Sands House Lane;
- Dryclough Road,
- Balmoral Road;
- Butternab Road; and

- Nabcroft Lane.

For the purposes of this note, if it were assumed that just 15% of the traffic forecast to travel along Blackmoorfoot Road dispersed along the routes above it would result in a reduction of between 84 and 94 two-way movements on the Blackmoorfoot Road. This would in turn equate to a reduction of around 1.56 vehicles per minute when compared to the assessments completed as part of the traffic impact analysis. Such a reduction would substantially reduce the impact of the proposals on the existing junctions along Blackmoorfoot Road.

These redistributed trips would be dispersed across the routes detailed above and therefore would have a minimal impact on the operation of these particular routes and no further analysis of the impacts of the development on these routes is required.

It is therefore concluded that the trip generation assumptions detailed above provide an extremely robust assessment of the impact of the development proposals on the local highway network.

Notwithstanding this, to assist with presenting information to members, traffic figures have been provided using the Local Plan distribution for the Transport Assessment trip rates and average trip rates and these are contained in **Figures A to D** which are attached to this note.

Traffic Impact of Junctions on Blackmoorfoot Road

Although the above sections of this Technical Note have demonstrated that the traffic impact analysis undertaken as part of the planning application is based on extremely robust assumptions. It is the results of this traffic impact analysis that the highways officers at KMBC have considered and have raised no highway objections.

Therefore, the following section of this note will consider the impact of the proposals at the individual junctions to assist with providing information to the planning committee. For the purposes of this exercise reference has been made only to the 2022 future year assessments due to the reasons detailed in the Technical Note 04 which are summarised below for ease.

"Given the constraints on the local highway network, its extremely unlikely that there would be 17% worth of peak hour growth on the network between 2017 and 2031, if there is any growth over the proposed/committed developments included within the modelling, this would in all likelihood result in peak spreading. Therefore, it is highly unlikely that there would be any traffic growth on the network during the peak periods.

Due to the above it is our strong view that limited weight should be applied to 2031 capacity results."

Impact at Blackmoorfoot Road/Park Road Signal Controlled Junction

Table 3 below summarises the average delay per vehicle in seconds at the junction over the modelled peak periods. These results are taken from the LINSIG outputs contained in Technical Note 04, as agreed with UTC, the operation of the junction has been assessed using the following two scenarios;

- Pedestrians Called Every Other Cycle – i.e. 16 times during the peak periods.
- No Pedestrian Stages Called.

In reality the pedestrian stages will be called somewhere between these two scenarios, there may be instances where the pedestrian stage isn't called for 3 or 4 stages which will mean more green time for vehicles. But there will also be instances where increased pedestrian activity means less green time for traffic.

Assessment Period	2022 Base	2022 With Development	Difference
2022 Peds Every Other Cycle – AM Peak	35.8	60.6	+21.5
2022 Peds Every Other Cycle – PM Peak	40.2	76.5	+36.3
2022 No Peds – AM Peak	31.1	50.6	+19.5
2022 No Peds – PM Peak	34.6	50.3	+15.7

Table 3 – Comparison of Average Delay Per Each Vehicle in Seconds – Blackmoorfoot Road/Park Road Signal Controlled Junction

As can be seen in Table 3, the largest increase in delay is that of 36.3 seconds per vehicle in the 2022 With Development PM peak (Pedestrians Every Other cycle), whilst all other delays are below 30 seconds.

It is likely that journeys through this junction will form part of a longer journey and therefore such an increase in delay to a longer journey would (in the real world) be imperceptible to drivers undertaking journeys during the peak period. Such a modest increase is likely to be considerably less than fluctuations in daily journey times that occur each day, due to the daily variation in traffic flows on the highway network. It cannot reasonably be considered to be a "severe" impact.

A62 Manchester Road/Blackmoorfoot Road Signal Controlled Junction

Table 4 below summarises the average delay per vehicle in seconds at the above junction over the modelled peak periods. These results are taken from the LINSIG outputs contained in Technical Note 04.

Assessment Period	2022 Base	2022 With Development	Difference
2022 – AM Peak	19.8	44.1	+24.3
2022 – PM Peak	17.9	23.8	+6.9

Table 4 – Comparison of Average Delay Per Second for Each Vehicle – A62 Manchester Road/Blackmoorfoot Road Signal Controlled Junction

As can be seen in Table 4, the largest increase in delay is that of 24.3 seconds in the 2022 With Development PM peak, whilst the forecast increase in delay per vehicle in the AM peak is 7 seconds.

Such a modest increase is likely to be considerably less than fluctuations in daily journey times that occur each day, due to the daily variation in traffic flows on the highway network. It cannot reasonably be considered to be a "severe" impact.

A616 Lockwood Road/B6108 Meltham Road/Swan Lane/Bridge Street Signal Controlled Junction

Table 5 below summarises the average delay per vehicle in seconds at the above junction over the modelled peak periods. These results are taken from the LINSIG outputs contained in Technical Note 04.

Assessment Period	2022 Base	2022 With Development	Difference
2022 – AM Peak	87.3	94.6	+7.3
2022 – PM Peak	77.4	98.5	+21.1

Table 5 – Comparison of Average Delay Per Second for Each Vehicle – A616 Lockwood Road/B6108 Meltham Road/Swan Lane/Bridge Street Signal Controlled Junction

As can be seen in Table 5, the largest increase in delay is that of 21.1 seconds in the 2022 With Development PM peak, whilst the forecast increase in delay per vehicle in the AM peak is around 7 seconds.

Again, such a modest increase is likely to be considerably less than fluctuations in daily journey times that occur each day, due to the daily variation in traffic flows on the highway network. It cannot reasonably be considered to be a "severe" impact.

It therefore concluded that even with the robust assumptions detailed above the proposed development will have minimal impact on the operation of the local highway network and the forecast delays will not result in a severe impact.

Accessibility to Colne Valley Secondary School

During the April planning committee, comments were raised regarding how pupils from the proposed development would access the Colne Valley Secondary School. It is acknowledged that there is no footway along Felks Stile Road/Church Road to access the school and as agreed with the highway's officers at KMBC there is no scope to provide such provision.

However, pupils would not be required to the travel to and from school via foot, as the 389 bus service operates along Felks Stile Road and is designated as bus route for pupils to use to travel to and from the Secondary School. Details from the WYMetro website are contained in **Appendix 2.** In summary the bus service arrives at the school at 0840 hours and departs and 1520 hours which coincide with the school day.

It is therefore concluded that there is a safe and convenient travel option for pupils of the proposed development to travel to and from the Colne Valley High School.

Summary

This Technical Note has been produced to provide the local planning authority with additional information to address comments raised by the planning committee, this note has concluded the following;

- The traffic impact analysis is based on extremely robust assumptions that provide a worst-case assessment of the impact of the proposals.
- The proposed development will have a minimal impact at the Blackmoorfoot Road/Park Road/Park West signal controlled junction
- The proposed development will have a minimal impact at the A62 Manchester Road/Blackmoorfoot Road signal controlled junction even based on the robust assumptions contained within the analysis.

- The proposed development will have a negligible impact at the A616 Lockwood Road/B6108 Meltham Road/Swan Lane/Bridge Street signal controlled junction.
- A safe and convenient travel option for pupils of the proposed development to travel to and from the Colne Valley High School is available via the 389 bus service

It is therefore concluded that the proposed development will not result in a severe impact, therefore planning permission should be granted in accordance with the Framework.

APPENDICES

APPENDIX 1

Proposed Development Traffic Figures

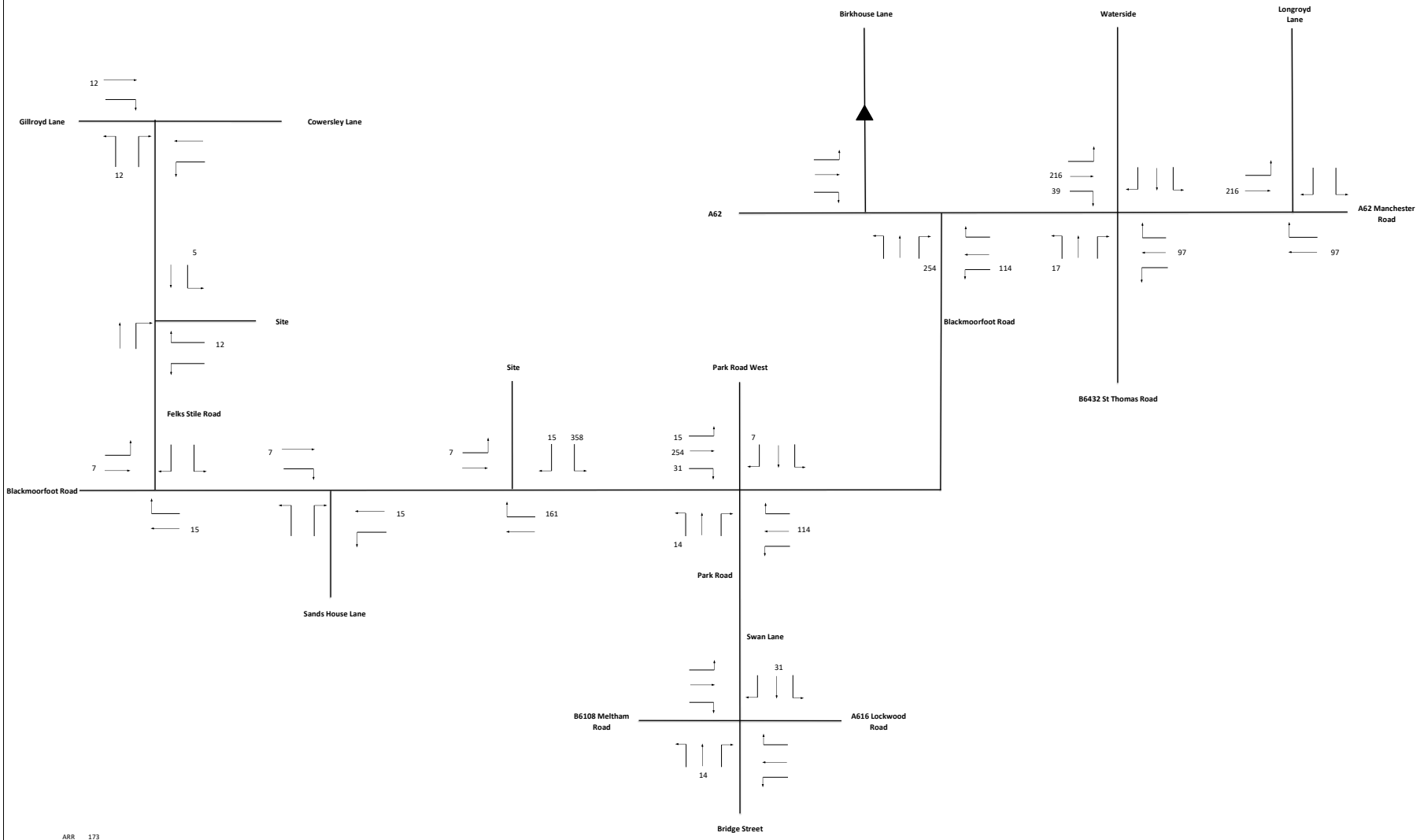

Figure A Proposed Residential Development Flows (TA Trip Rates) - Weekday PM Peak

croft
Transport Solutions
9 Jordan Street, Manchester M15 4PY
Tel: 0161 667 3746 www.crofts.co.uk info@crofts.co.uk

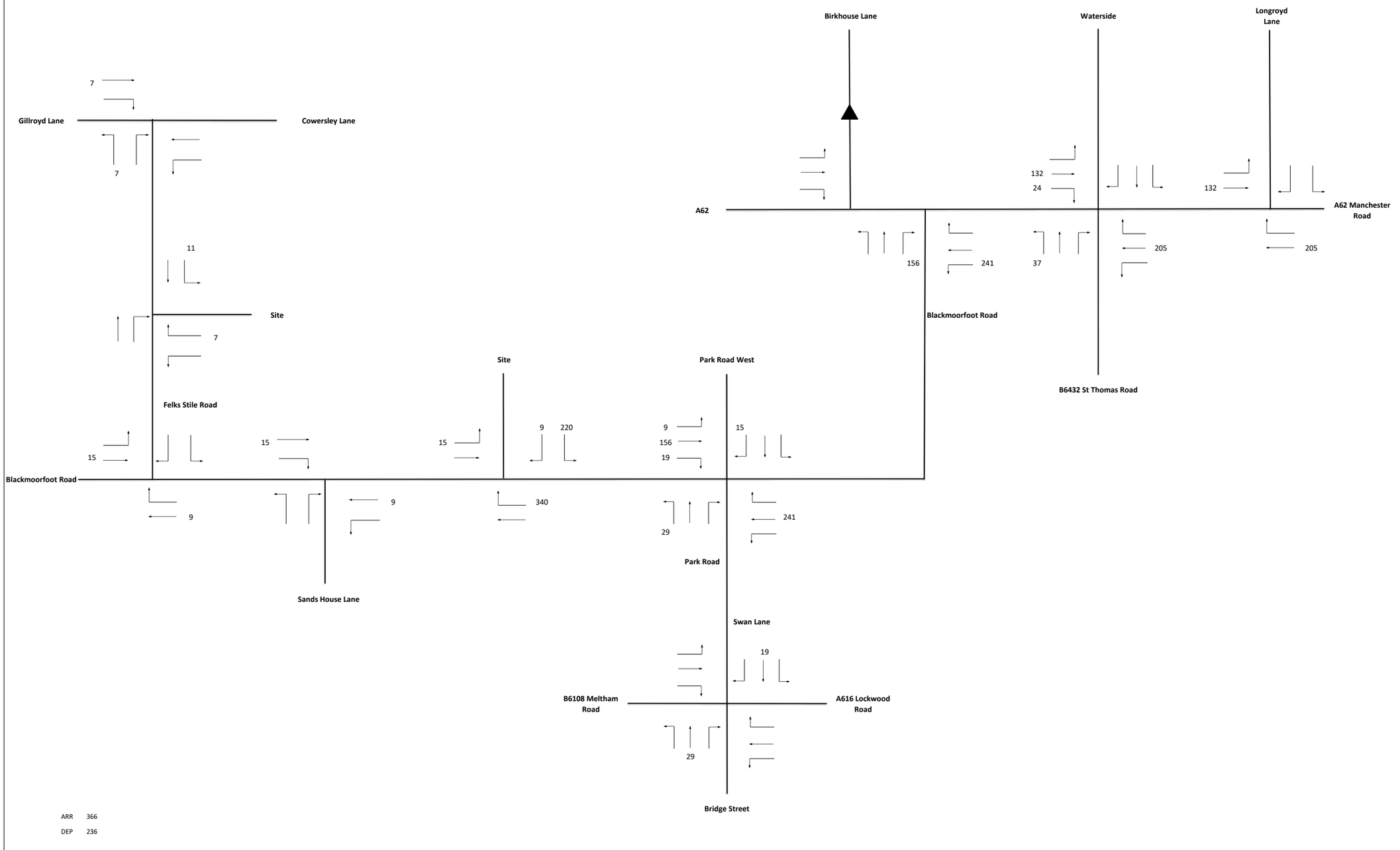

Figure B Proposed Residential Development Flows (TA Trip Rates) - Weekday PM Peak

croft
Transport Solutions
9 Jordan Street, Manchester M15 4PY
Tel: 0161 667 3746 www.croftts.co.uk info@croftts.co.uk

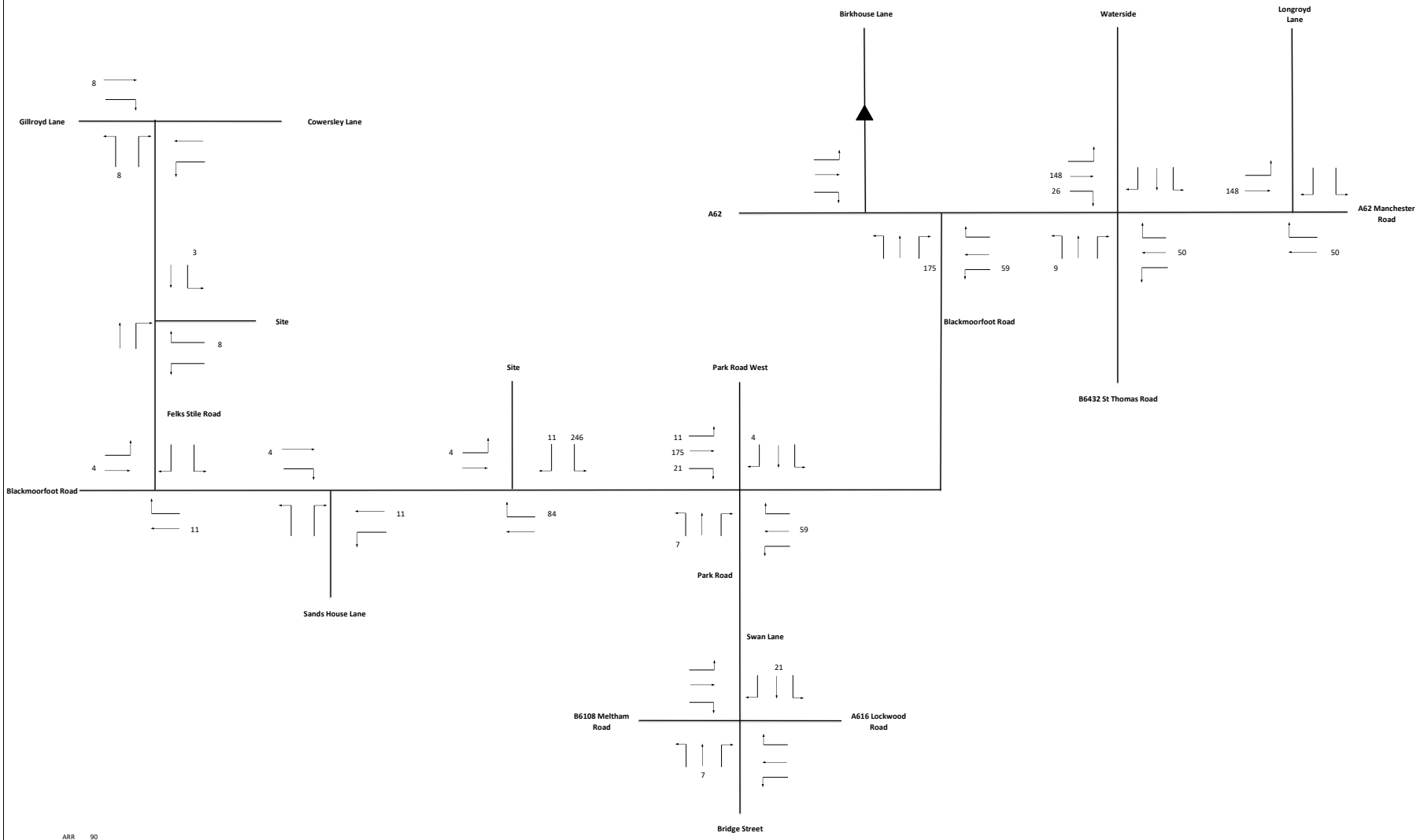

Figure C Proposed Residential Development Flows (Average TRICS Trip Rates) - Weekday AM Peak

croft
Transport Solutions
9 Jordan Street, Manchester M15 4PY
Tel: 0161 667 3746 www.crofts.co.uk info@crofts.co.uk

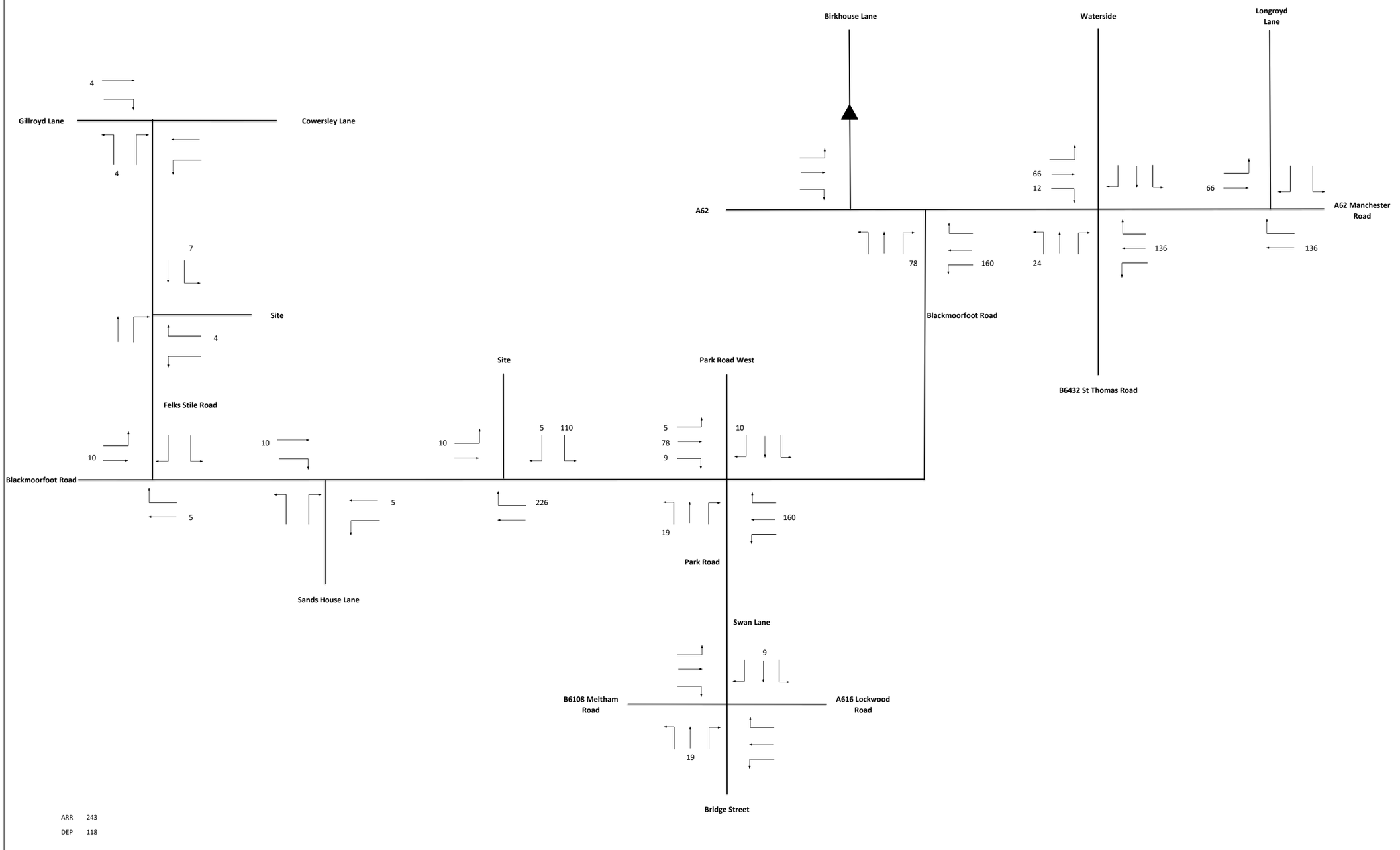

Figure D Proposed Residential Development Flows (Average TRICS Trip Rates) - Weekday PM Peak

croft
Transport Solutions
9 Jordan Street, Manchester M15 4PY
Tel: 0161 667 3746 www.croftts.co.uk info@croftts.co.uk

APPENDIX 2

WYMetro Bus Information

A-Z School Finder

Alerts 34 Bus

Find your school in the A to Z list to get school bus timetable information.

A B C D E F G H I J K L M N O P R S T W

- Calder High School
- Cardinal Heenan Catholic High School
- Carleton High School
- Carr Manor Community School
- Castle Hill Primary School
- Castleford Academy

Cockburn School

Colden J&I School

Colne Valley High School

Co-op Academy Priesthorpe

Cornholme J&I School

Corpus Christi Catholic College

Cottingley Village Primary School

Crawshaw Academy

Crofton Academy

Cross Gates Primary

Crossflatts Primary School

Crossley Heath School

Colne Valley High School

Gillroyd Lane, Linthwaite, Huddersfield, HD7 5SP
Tel. 01484 848680

Application form for Colne Valley High School

- IMPORTANT INFORMATION FOR PARENTS/CARERS – If you are using this information to choose your child's school, please be aware that these services are subject to change and may be withdrawn if there is a suitable public transport alternative. This may involve a journey of up to one hour and 15 minutes and a change of bus on route.

Timetables

A pass is required if this symbol is shown below 

SERVICE NUMBER
389 - view timetable

Meltham - Colne Valley High School

CV1 - view timetable

Motorman's Cafe - Colne Valley High School (Boarding Pass holders only)

CV2 - view timetable

Marsden Dirker - Colne Valley High School (Boarding Pass holders only)

CV3 - view timetable

Marsden Manchester Road/Peel Street - Colne Valley High School

K21 - view timetable

Wiberlee - Colne Valley High School

K22 - view timetable

Radcliffe Road - Colne Valley High School

K23 - view timetable

	Sycamore Avenue - Colne Valley High School
	K28 - view timetable
	Scapegoat Hill - Colne Valley High School
	K185 - view timetable
	New Hey Road / Slack Lane - Colne Valley High School
	ST11 - view timetable
	Lingards Road - Colne Valley High School

Service changes: from September 2020, the CV3 temporary sweeper bus that was introduced in the last school year will now be a permanent service.

Notes: routes CV1, CV2 and CV3 do not carry fare paying passengers. Passengers must hold a zero fare Boarding Pass in order to use one of these services. Please contact Kirklees Council for an application form on 01484 416982 or visit Kirklees Council's website.

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Metro is the transport network of the West Yorkshire Combined Authority

SERVICE 389 **Meltham Turning Circle - Colne Valley High**
Colne Valley High - Meltham Turning Circle

ROUTES

Towards Colne Valley High

From Parkin Lane, Holmfirth Rd, Station St, Slaithwaite Rd, Helme Ln, Slades Ln, Blackmoorfoot Road, Balmoral Ave, Foster Ave, Dryclough Rd, Blackmoorfoot Rd, Felks Stile Rd, Church Ln, Gillroyd Ln, Causeway Side, Hoyle House Fold, Manchester Road (Linthwaite), Back O' Dam, Britannia Rd, Carr Ln, Radcliffe Rd, Crimble Bank, Hill Top Rd, Royd St, Longlands Road, Heys Ln.

From Colne Valley High

From New St, Carr Ln, Britannia Rd, Back O' Dam, Manchester Road (Linthwaite), Hoyle House Fold, Causeway Side, Gillroyd Ln, Church Ln, Felks Stile Rd, Blackmoorfoot Rd, Crosland Hill Rd, Blackmoorfoot Rd, Dryclough Rd, Foster Ave, Balmoral Ave, Blackmoorfoot Road, Slades Ln, Helme Ln, Slaithwaite Rd, Station St, Meltham Safeways, Station St, Holmfirth Rd, Parkin Ln, Meltham Turning Circle, Parkin Ln.

TIMETABLE

Meltham Turning Circle	DEP	0805
Helme	DEP	0813
Blackmoorfoot	DEP	0819
Crosland Moor	DEP	0825
Linthwaite Church Church Lane	DEP	0831
Slaithwaite	DEP	0835
Wilberlee	ARR	0840

Linthwaite Church Church Lane	DEP	1520
Crosland Moor	DEP	1526
Blackmoorfoot	DEP	1532
Helme	DEP	1537
Meltham Morrisons	DEP	1542
Meltham Turning Circle	ARR	1545

NOTES

SCHOOLS SERVED: Colne Valley High, Gillroyd Lane, Linthwaite HUDDERSFIELD , HD7 5SP

OPERATOR: Stotts Coaches 01484 460463

For any more information, please contact Education Transport on 0113 348 1122 or visit www.wymetro.com/schools