

# Kirklees Local Plan Sites

*Prepared for*

Highways England

05/04/2017



CH2M HILL United Kingdom • COMPANY PROPRIETARY



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# Introduction

This report has been prepared in order to identify and summarise the anticipated impacts upon the strategic road network from proposed residential, mixed use and employment allocations within the Kirklees Council Publication Draft Local Plan Allocations and Designations document.

The development quantum shown in the table below represents the planned level of delivery by 2021 as provided by Highways England. National Planning Policy Guidance (Paragraph 18) states that Local Plan's should make clear (for at least the first 5 years) what infrastructure is required and how it relates to the anticipated rate and phasing of development. For the later stages of the plan period less detail may be provided as the position regarding the provision of infrastructure is likely to be less certain.

Within this report, information is presented for the first 5 years of the plan period delivery schedule (to April 2021) as well as for the total indicative capacity identified within the Publication Draft Local Plan Allocations and Designations document (to April 2031).

Site Ref	Residential Units (2021)	Employment	Relevant SRN Junctions
H1747	280 units		M62 J25 (Cooper Bridge)
MX1905*	225 units	122,500 sqm (B1)	M62 J28 (Tingley), M1 J40 (Ossett)
H2089	385 units		M62 J25 (Cooper Bridge), M1 J40 (Ossett)
MX1930*	0 units	44,258 sqm (B1)	M62 J23 (Outlane) and J24 (Ainley Top)
MX1911*	280 units	53,125 sqm (B1)	M62 J24 (Ainley Top)
E1832c*		162,187 sqm (B1)	M62 J25 (Cooper Bridge)
H69	150 units		M62 J26 (Chain Bar)
MDGB2134	400 units		M1 J39 (Durkar)
H559	150 units		M62 J28 (Tingley), M1 J40 (Ossett)
E1831*		41,020 sqm (B1)	M62 J26 (Chain Bar)
H706	200 units		M62 J24 (Ainley Top)

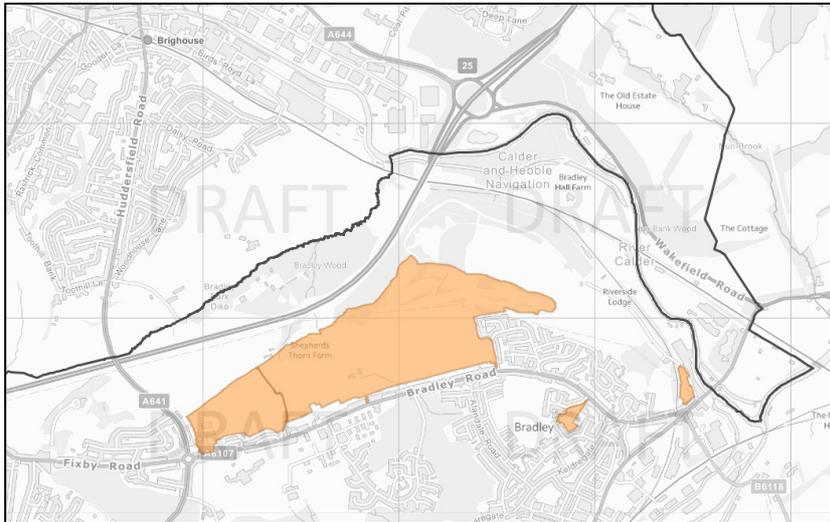
N.b. For the purpose of this study the employment component of sites (\*) has been assumed to be B1 Use Class (the highest traffic generating employment use class) and to have reached total indicative capacity by 2021. Hence the findings of this report should be considered to represent a 'worst-case' scenario. It is highly unlikely that employment floorspace will be entirely B1 Use Class and delivered in full by 2021.

The information presented in this document is from two sources:

- The Meso modelling summary has been derived from the West Yorkshire Infrastructure Study Final Report dated June 2016.
- The NAT information has been provided by Aecom.

# Site H1747

## 2.1 H1747 Site Summary



Site Address	Land north of Bradley Road, Bradley, Huddersfield
Residential Units (2021)	280 (total allocation 1,577)
Employment Space (2021)	N/A
Ownership	Council
SRN	Adjacent to M62 Junction 25 Cooper Bridge
Operation Summary	<p>The Meso model indicates that in 2022 in the do-minimum scenario, there is congestion at M62 Junction 25 on the east facing slips in the AM peak and on the west-facing slips in the PM peak, as well as the A644 southbound approach. With the indicative scheme, there is additional congestion on the gyratory and on the eastbound approach to the junction. In 2030, there is additional congestion eastbound after the junction, and in the do-something scenario there is excessive congestion eastbound through the junction, queuing back onto the gyratory and other arms. Higher traffic levels are modelled in this area due to the new J24a inducing traffic. Congestion is greatly increased as a result of congestion backing up from J26.</p> <p>The NAT model indicates that in 2021, a low level of additional trips that join the M62 in the direction of highest flow as the development is not fully built out. At full build-out, there are over 100 additional trips at the peak hour travelling in the direction of peak flow. This is likely to aggravate problems at the junction.</p>

## 2.2 H1747 Meso Summary

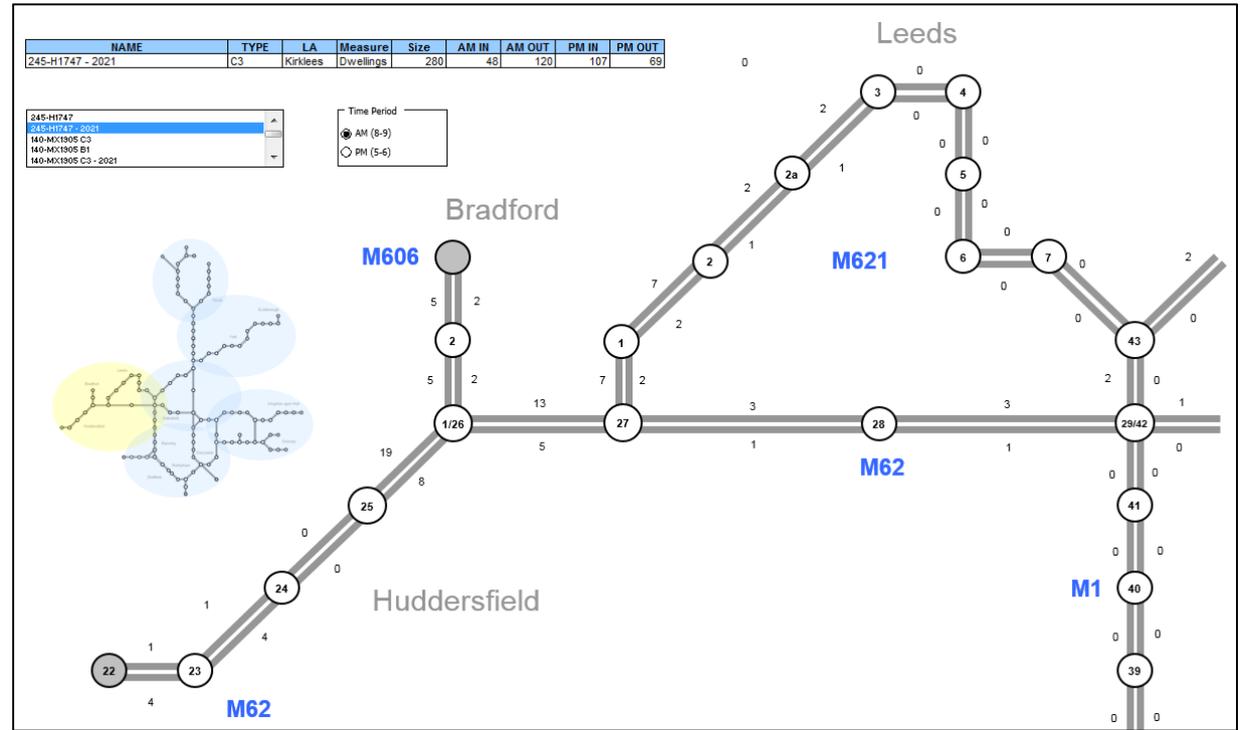
### 2.2.1 M62 Junction 25, Cooper Bridge

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: None</li> <li>Indicative potential scheme: Signalisation of all arms (in conjunction with the Cooper Bridge scheme)</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
There is a small level of congestion on the eastbound on-slip and westbound off-slip, but this does not impact upon the operation of the junction circulatory or M62 mainline.	Minimal delay is modelled at this location in the PM peak period.	Congestion is modelled on the eastbound mainline to the west of the junction, with no congestion on the eastbound on-slip, and increased congestion on the circulatory.	There is increased congestion on the westbound off-slip and on the circulatory.
			

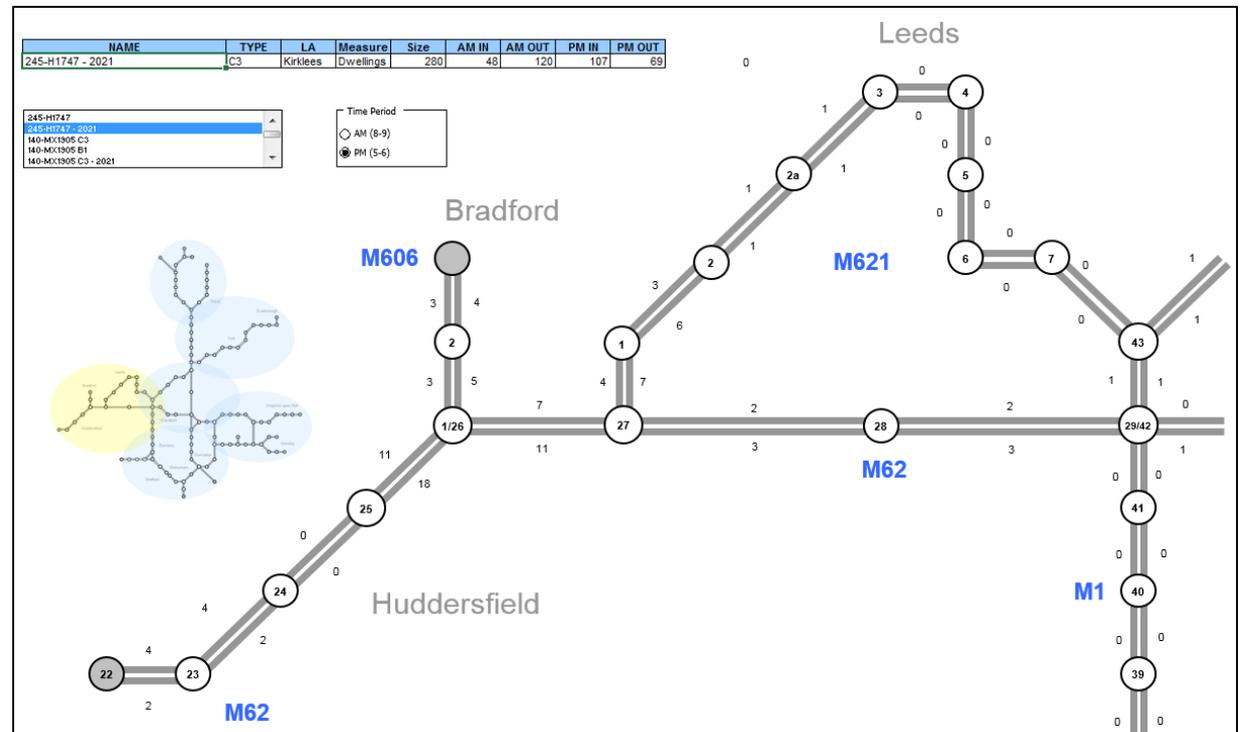
2030 Future			
<ul style="list-style-type: none"> <li>Committed scheme: Highway work to deal with congestion in and around the Cooper Bridge Gyratory junction to the east of Huddersfield and facilitate access to the development site. Includes road widening, junction improvements and a new relief road around Ravensthorpe</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
Eastbound on-slip traffic volume results in congestion back onto the circulatory. The A644 approach from the south is congested as a result of queuing traffic on the eastbound on-slip.	Congestion on the eastbound M62 mainline from J26 results in queuing traffic on the eastbound on-slip. This in turn results in LRN queuing. Westbound, traffic is relatively free flowing.	Higher traffic levels are modelled in this area due to the new J24a inducing traffic and providing better access to the SRN. Congestion is greatly increased at the junction circulatory as well as on the eastbound carriageway as a result of congestion backing up from J26.	
			

## 2.3 H1747 NAT Summary

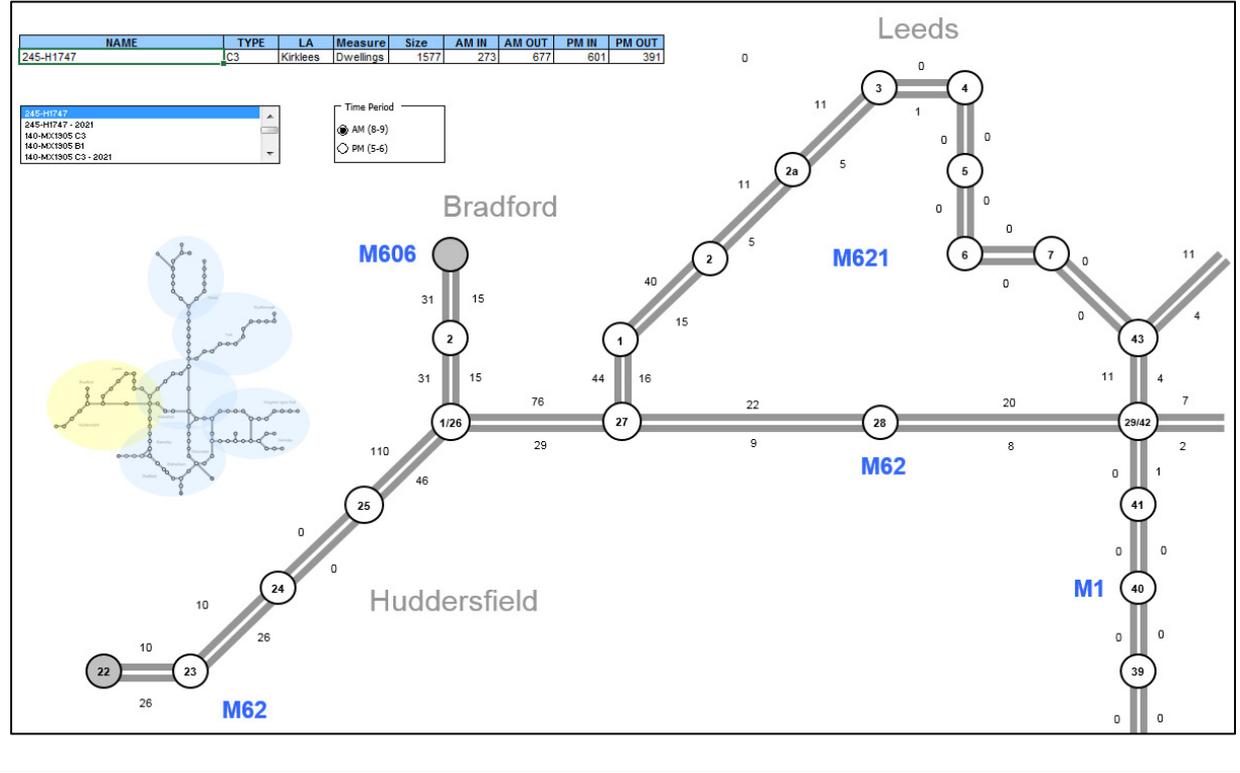
### 2021 Build Out AM Peak



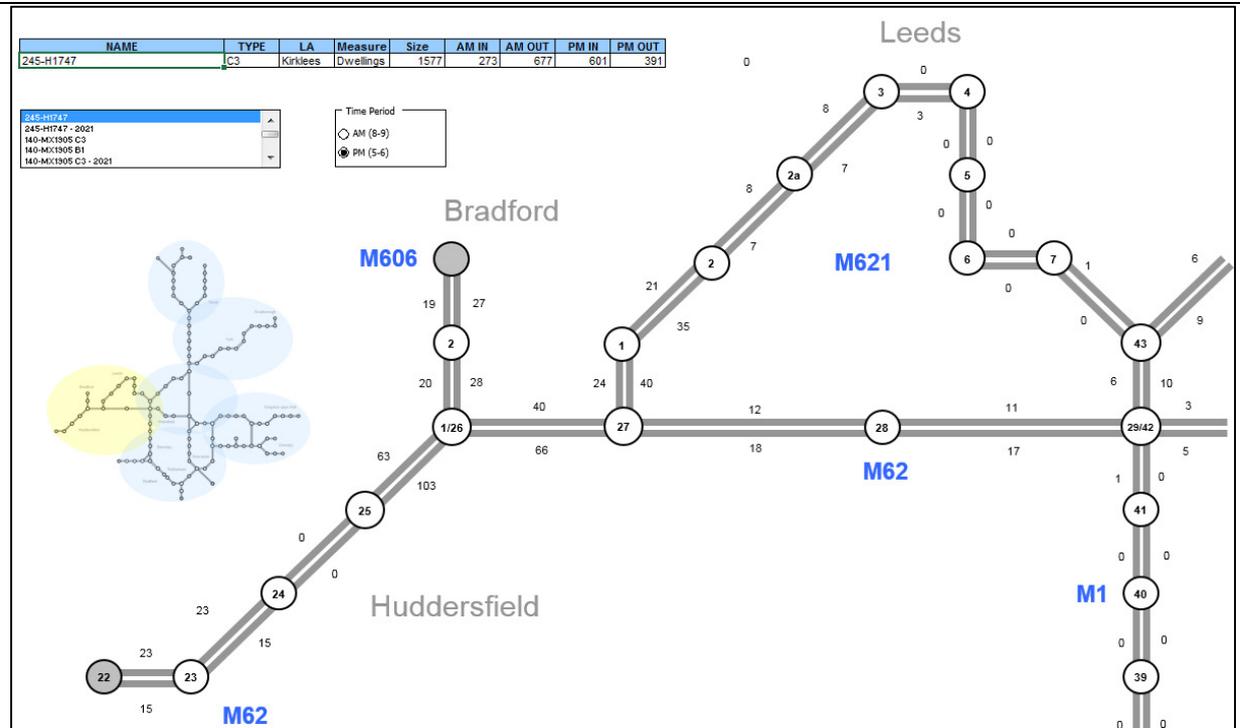
### 2021 Build Out PM Peak



Full Build Out AM Peak

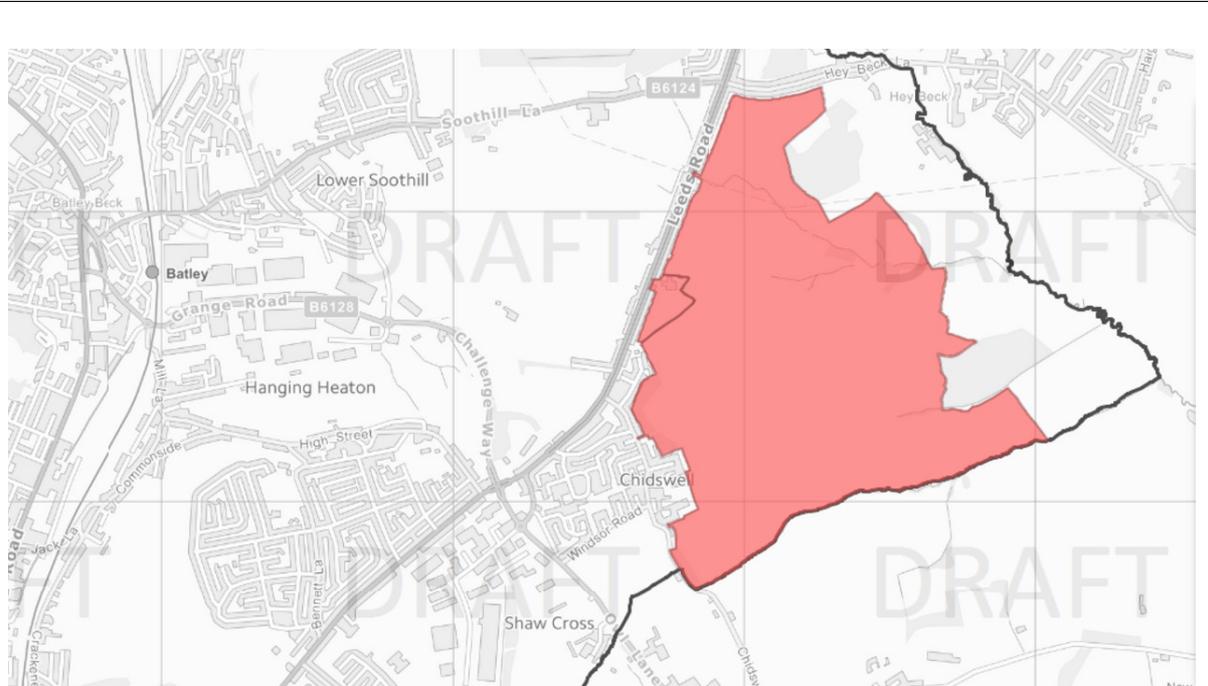


Build Out PM Peak



# Site MX1905

## 3.1 Site MX1905 Summary



Site Address	Land east of, 932-1110 Leeds Road, Shaw Cross/Woodkirk, Dewsbury
Residential Units (2021)	225 (Total Allocation 1,535)
Employment Space (2021)	122,500
Ownership	Private
SRN	M62 at Junction 28 Tingley, and M1 at Junction 40 Ossett
Operation Summary	<p>The Meso model indicates that in 2022, the Ossett Junction 40 on the M1 operates well in the do-minimum scenario, but with increasing congestion in 2030 on the northbound M1 carriageway through the junction, as well as on the eastern and western arms. In the do-something scenario the junction remains congested but with the SRN relatively free-flowing.</p> <p>At Tingley, the junction operates well in the 2022 do-minimum, but in the do-something scenario eastbound traffic backs up from Lofthouse interchange and disrupts J28. By 2030, congestion occurs at most points on the junction, and is only partly relieved by the committed schemes.</p> <p>NAT analysis shows that several additional journeys are felt on the SRN, although in 2021 these are at most in the low 20's. However, by 2030, these figures increase to approximately 50 journeys at M1 J40 and M62 J28. M62 J27 takes 70 additional trips, these additional trips may cause some localised problems.</p>

## 3.2 MX1905 Meso Summary

### 3.2.1 M1 Junction 40, Ossett

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: PPP Scheme to southbound off-slip</li> <li>Indicative potential scheme: The existing 3 lane section of the LRN approaches is to be extended to provide more stacking capacity</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
Minimal delay is modelled at this location in either the AM or PM time periods.		Small improvement to the junction circulatory and LRN. SRN operation unchanged.	Junction circulatory is more congested than within the 'do-minimum' because of higher LRN travel demand within the 'do-something' matrices. This does not affect the operation of the SRN.

2030 Future			
Do Minimum		Do Something	
AM	PM	AM	PM
The junction circulatory and northbound movements are impacted upon from congestion on the northbound mainline. This congestion is due to issues at junction 41. Southbound movements are free flowing.	Severe circulatory congestion but no effect on SRN mainline. There is however queuing traffic on the off-slips and waiting traffic off the LRN links.	Significant improvement in operation as reduced congestion backing up from M1 J41.	Operates as per the 'do-minimum' within this peak period. Slightly lower congestion on the southbound off-slip.

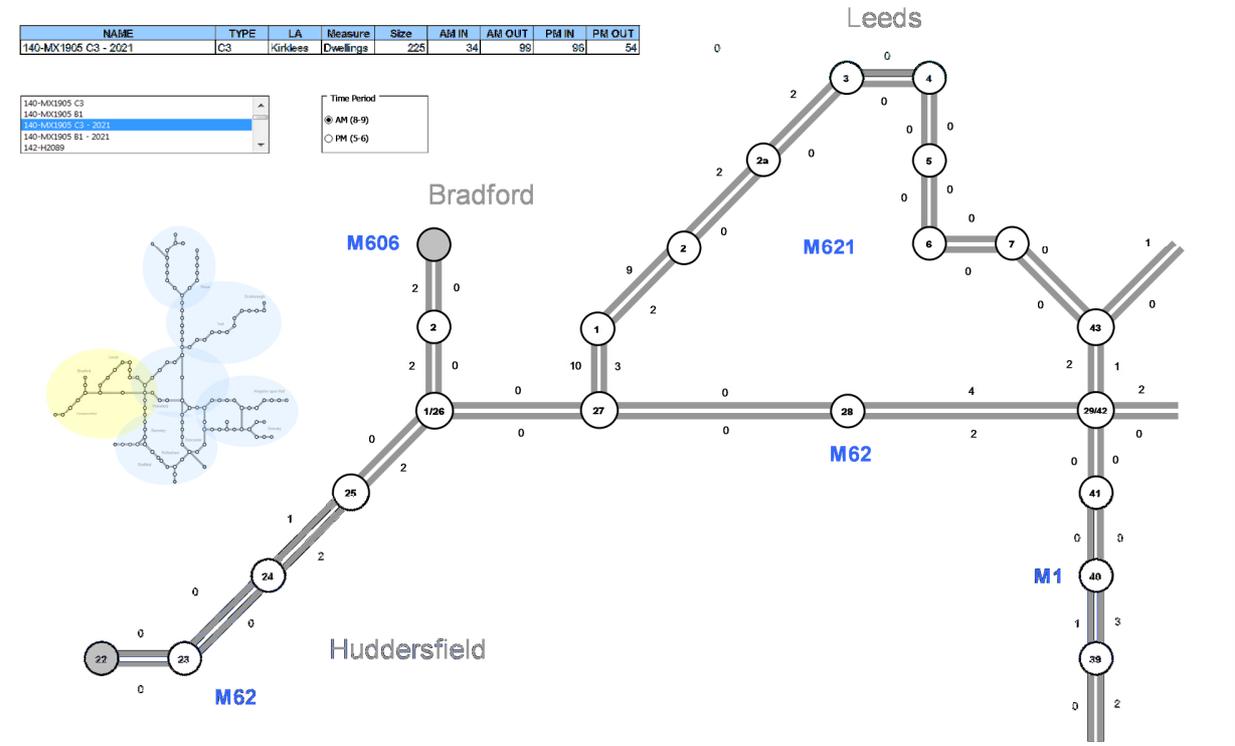
### 3.2.2 M62 Junction 28, Tingley

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: Widening westbound off-slip and circulatory carriageway</li> <li>Indicative potential scheme: Widening of circulatory carriageway to accommodate two lanes dedicated to the movement from the M62 westbound exit slip to the A650. Ramp metering of eastbound merge.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Mainline traffic is free flowing in both directions. The southern half of the circulatory is congested but this does not impact upon the SRN.</p>	<p>Congestion occurs at both the eastbound off-slip and on-slip. The resulting congestion backs up towards M62 J27. The southern half of the junction circulatory is also heavily congested but this does not impact upon the SRN.</p>	<p>The junction circulatory operates as per the 'do-minimum' however the eastbound mainline is more congested because of operational issues backing back from Lofthouse Interchange. Westbound carriageway is free flowing as per the 'do-minimum'.</p>	<p>Operates as per the 'do-minimum' within the PM peak period.</p>

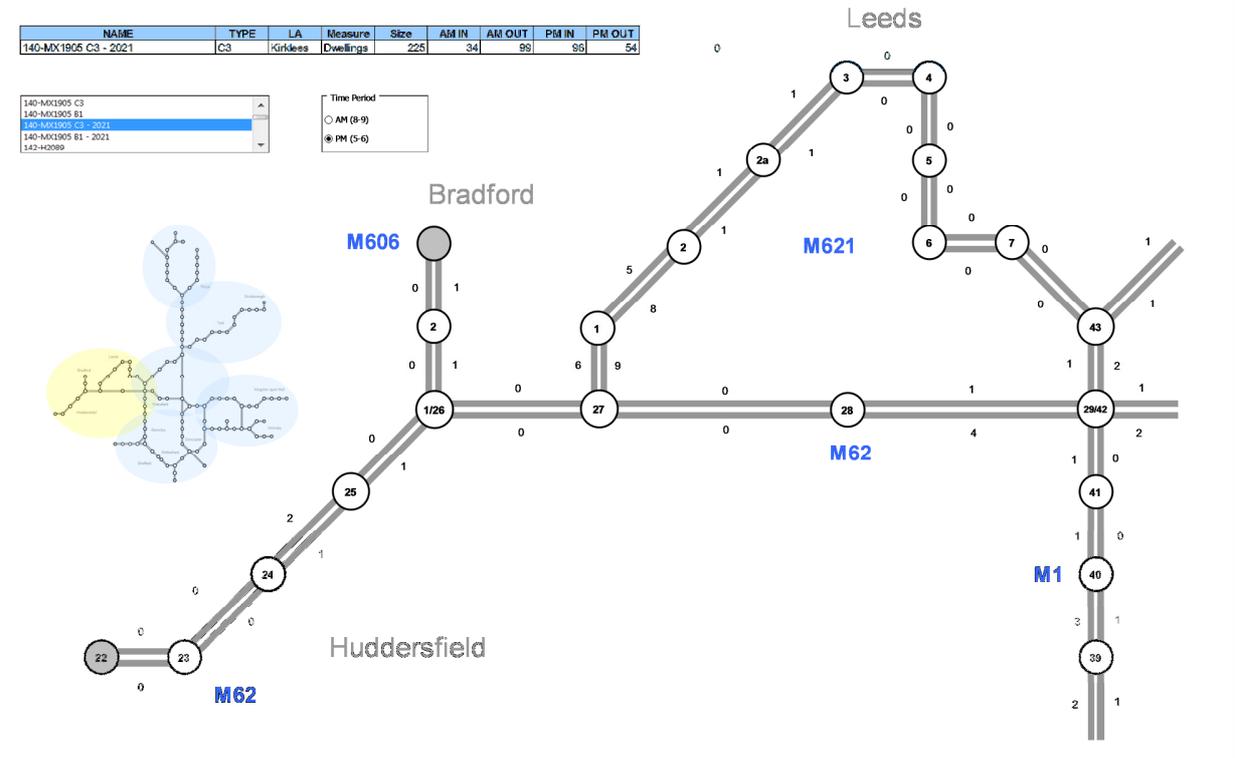
2030 Future			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>The circulatory is very heavily congested throughout the peak periods. This is a result of the merge at the eastbound on-slip, which backs up through the circulatory and causes congestion on the LRN as well. Congestion on the eastbound M62 mainline backs up through J26. Westbound flows are affected by issues generated at J26.</p>		<p>Congestion is prevalent on all sections of the junction. Compared to the do-minimum, congestion has worsened on the mainline through the junction in both directions.</p>	<p>Small improvement in traffic flows on the eastbound carriageway. Westbound, traffic flows are free flowing as per the 'do-minimum'. The junction circulatory is also less congested although there remains substantial congestion on some LRN arms.</p>

### 3.3 MX1905 NAT Summary

#### Residential AM 2021



#### Residential PM 2021



### Employment AM 2021

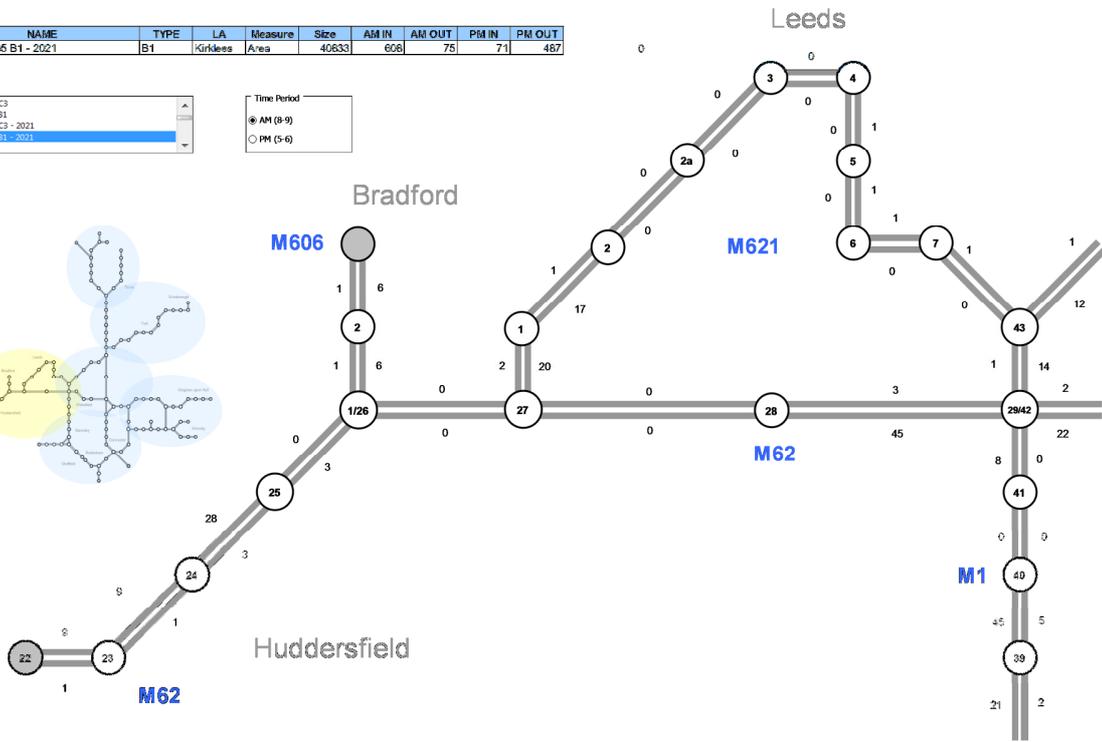
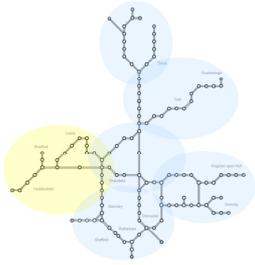
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 B1 - 2021	B1	Kirkless	Area	40833	606	75	71	487

- 140-MX1905 C3
- 140-MX1905 E1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H0989

Time Period

AM (9-9)

PM (5-6)



### Employment PM 2021

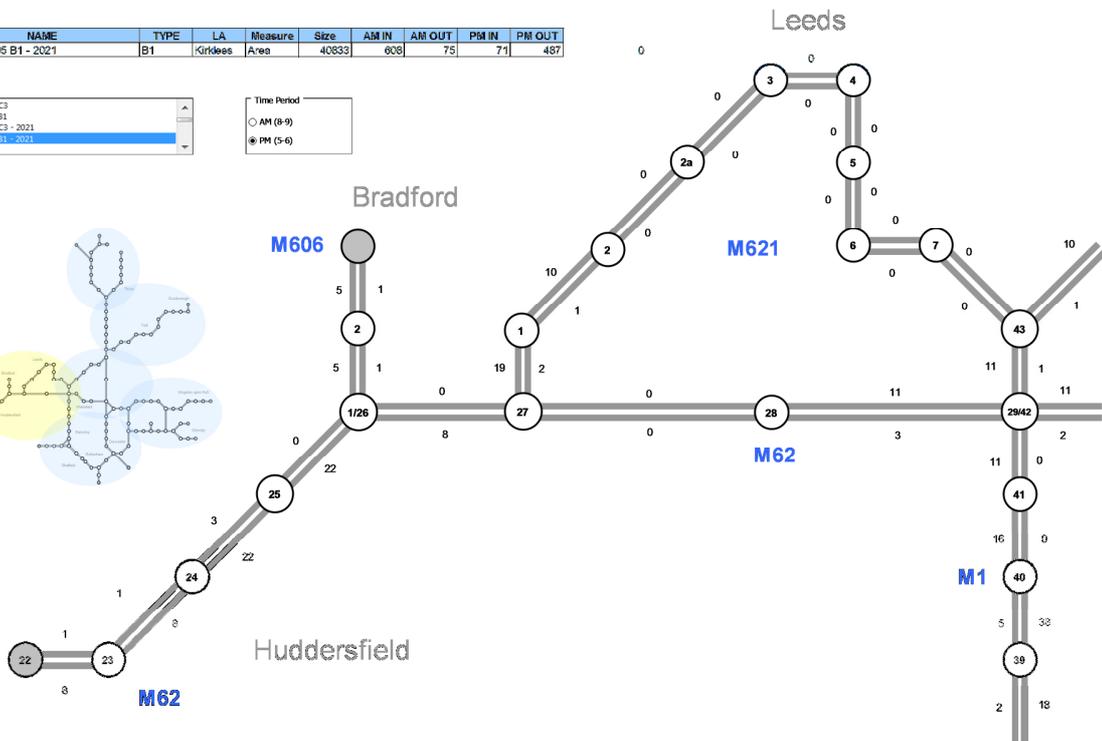
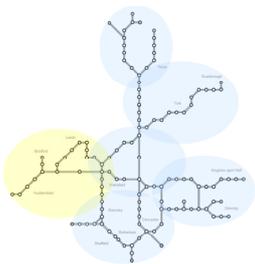
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 B1 - 2021	B1	Kirkless	Area	40833	606	75	71	487

- 140-MX1905 C3
- 140-MX1905 E1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H0989

Time Period

AM (9-9)

PM (5-6)



Residential AM Full Build-Out

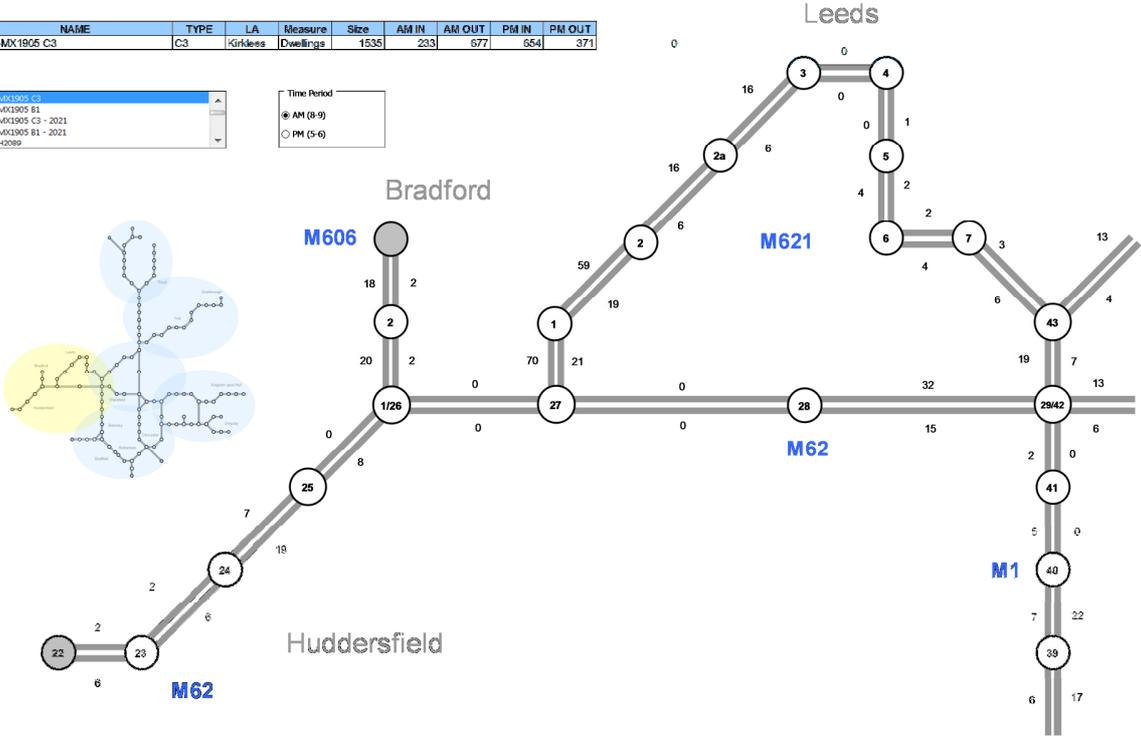
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 C3	C3	Kirkless	Dwellings	1535	233	677	654	371

- 140-MX1905 C3
- 140-MX1905 B1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H0289

Time Period

AM (8-9)

PM (5-6)



Residential PM Full Build-Out

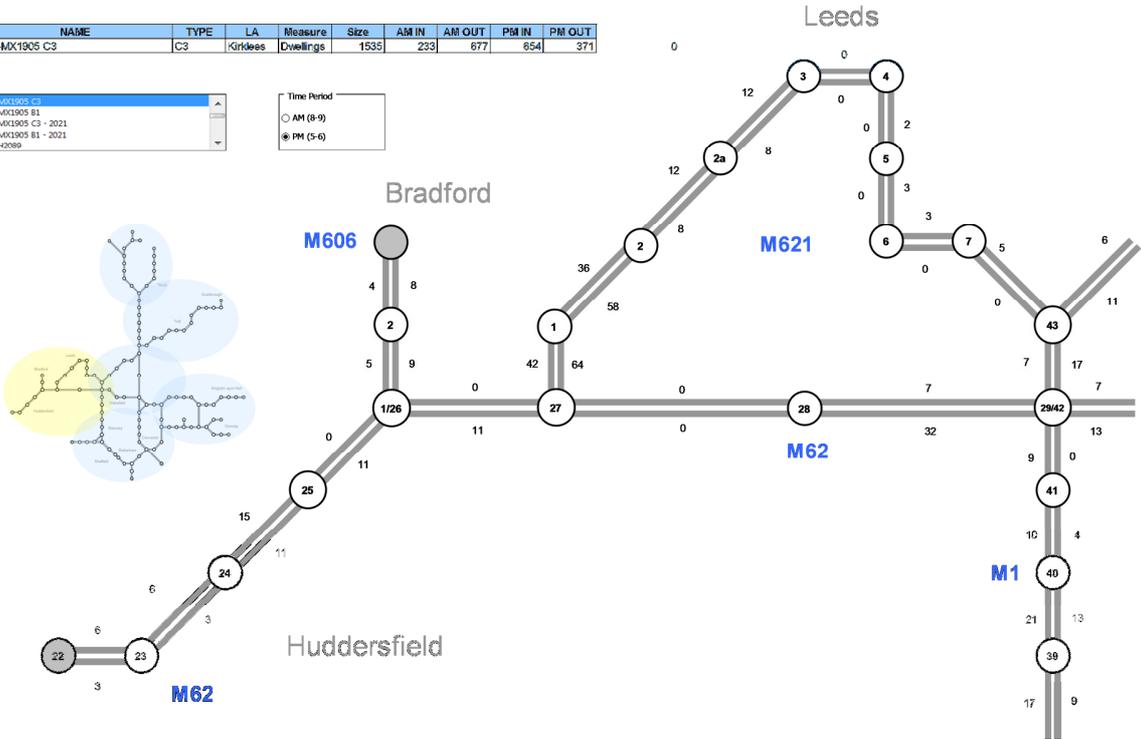
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 C3	C3	Kirkless	Dwellings	1535	233	677	654	371

- 140-MX1905 C3
- 140-MX1905 B1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H0289

Time Period

AM (8-9)

PM (5-6)



### Employment AM Full Build-Out

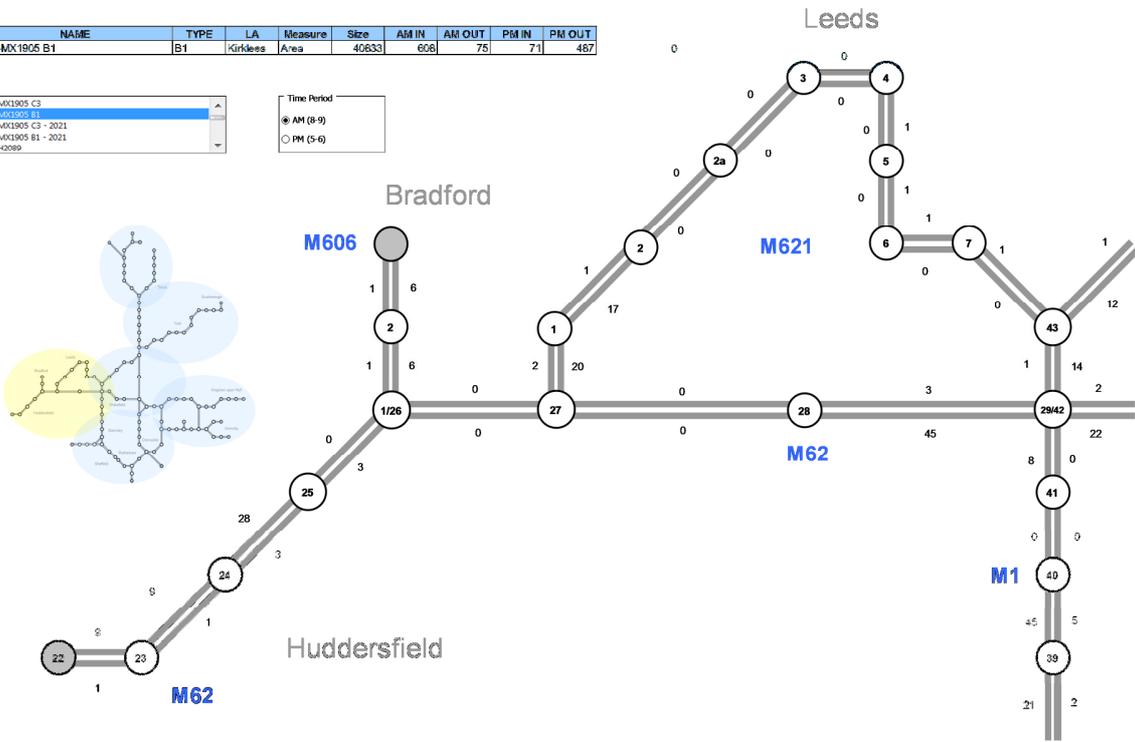
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 B1	B1	Kirkless	Area	40833	606	75	71	487

- 140-MX1905 C3
- 140-MX1905 B1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H2089

Time Period

AM (8-9)

PM (5-6)



### Employment PM Full Build-Out

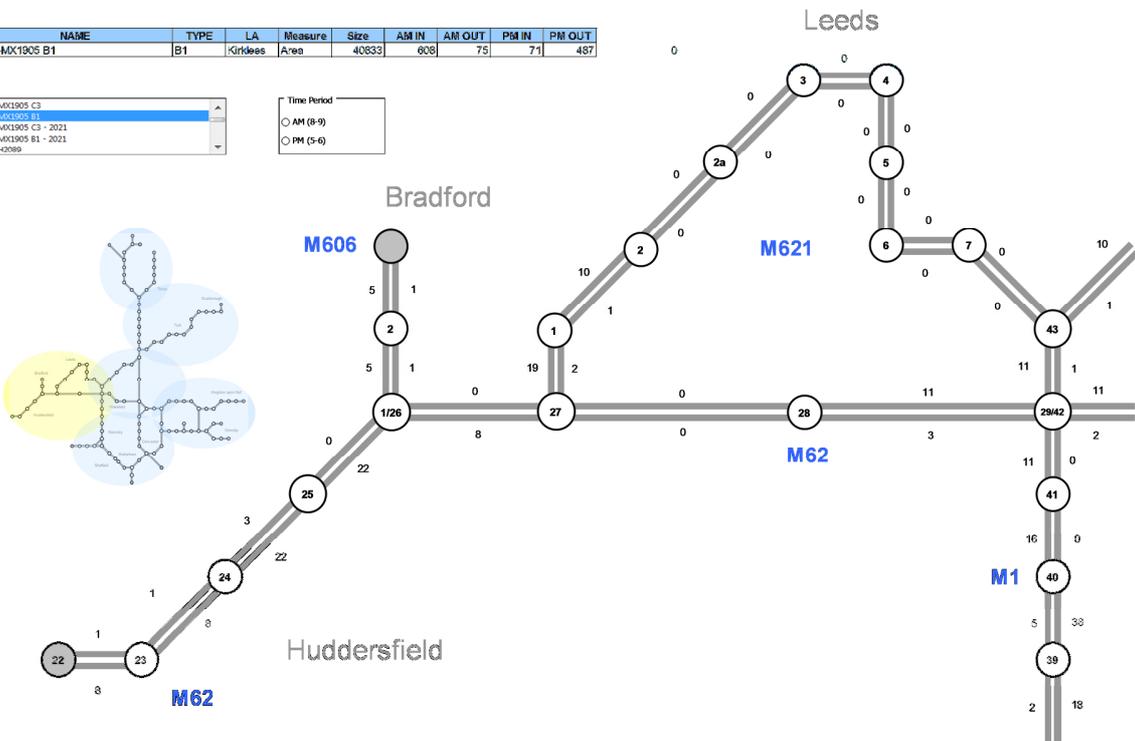
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
140-MX1905 B1	B1	Kirkless	Area	40833	606	75	71	487

- 140-MX1905 C3
- 140-MX1905 B1
- 140-MX1905 C3 - 2021
- 140-MX1905 B1 - 2021
- 142-H2089

Time Period

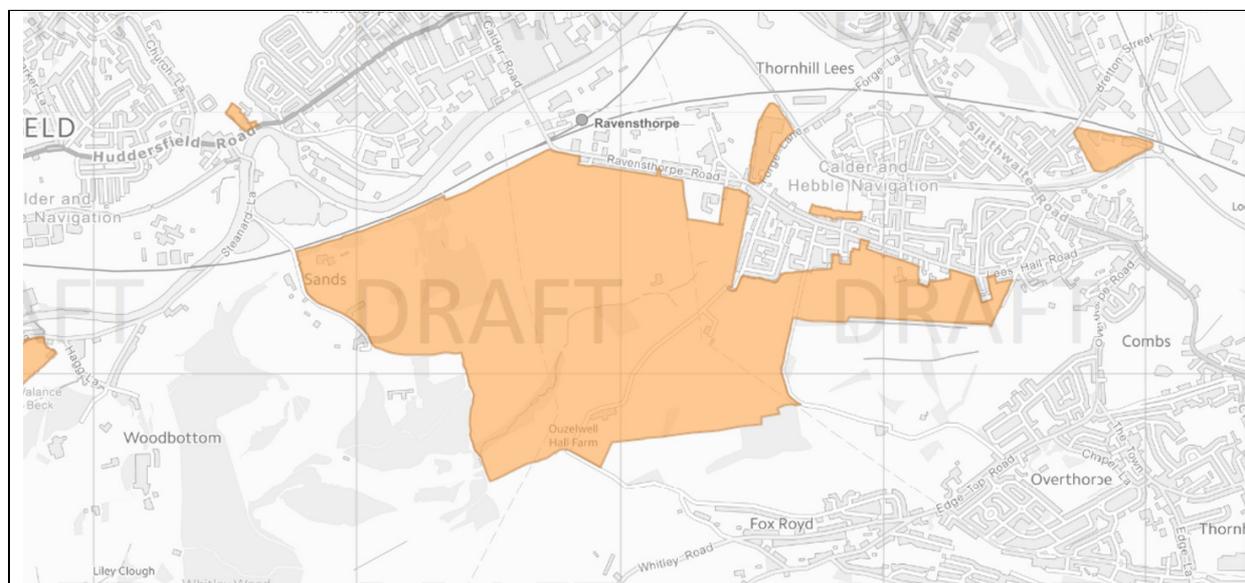
AM (8-9)

PM (5-6)



# Site H2089

## 4.1 H2089 Site Summary

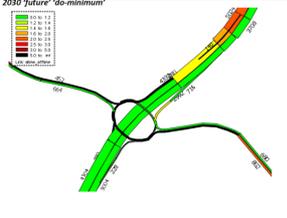
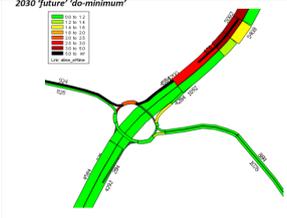
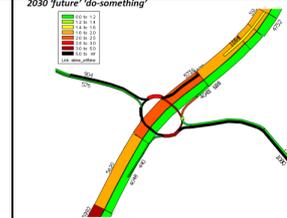


Site Address	Land to the south of, Ravensthorpe Road / Lees Hall Road, Dewsbury
Residential Units (2021)	385 (Total allocation 2,310 dwellings by the end of the Local Plan period, with a further 1,690 dwellings (totaling 4,000) beyond the plan period).
Employment Space (2021)	N/A
Ownership	Part Private/Council
SRN	M62 at Junction 25 Cooper Bridge and M1 at Junction 40 Ossett.
Operation Summary	<p>The Meso model indicates that in 2022 in the do-minimum scenario, there is congestion at M62 Junction 25 on the east facing slips in the AM peak and on the west-facing slips in the PM peak, as well as the A644 southbound approach. With the indicative scheme, there is additional congestion on the gyratory and on the eastbound approach to the junction. In 2030, there is additional congestion eastbound after the junction, and in the do-something scenario there is excessive congestion eastbound through the junction, queuing back onto the gyratory and other arms.</p> <p>The Meso model indicates that in 2022, the Ossett Junction 40 on the M1 operates well in the do-minimum scenario, but with increasing congestion in 2030 on the northbound M1 carriageway through the junction, as well as on the eastern and western arms. In the do-something scenario the junction remains congested but with the SRN relatively free-flowing.</p> <p>The NAT model indicates that multiple additional trips will be felt at these junctions, approximately 85 additional trips at Junction 40, and 95 additional trips at Junction 25, with lower numbers of trips also joining the SRN at Junction 27. These additional trips are likely to be problematic, particularly at Cooper Bridge.</p>

## 4.2 H2089 Meso Summary

### 4.2.1 M62 Junction 25, Cooper Bridge

<b>2022 Interim</b>			
<ul style="list-style-type: none"> <li>Committed scheme: None</li> <li>Indicative potential scheme: Signalisation of all arms (in conjunction with the Cooper Bridge scheme)</li> </ul>			
<b>Do Minimum</b>		<b>Do Something</b>	
<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>
There is a small level of congestion on the eastbound on-slip and westbound off-slip, but this does not impact upon the operation of the junction circulatory or M62 mainline.	Minimal delay is modelled at this location in the PM peak period.	Congestion is modelled on the eastbound mainline to the west of the junction, with no congestion on the eastbound on-slip, and increased congestion on the circulatory.	There is increased congestion on the westbound off-slip and on the circulatory.
			

<b>2030 Future</b>			
<ul style="list-style-type: none"> <li>Committed scheme: Highway work to deal with congestion in and around the Cooper Bridge Gyratory junction to the east of Huddersfield and facilitate access to the development site. Includes road widening, junction improvements and a new relief road around Ravensthorpe</li> </ul>			
<b>Do Minimum</b>		<b>Do Something</b>	
<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>
Eastbound on-slip traffic volume results in congestion back onto the circulatory. The A644 approach from the south is congested as a result of queuing traffic on the eastbound on-slip.	Congestion on the eastbound M62 mainline from J26 results in queuing traffic on the eastbound on-slip. This in turn results in LRN queuing. Westbound, traffic is relatively free flowing.	Higher traffic levels are modelled in this area due to the new J24a inducing traffic and providing better access to the SRN. Congestion is greatly increased at the junction circulatory as well as on the eastbound carriageway as a result of congestion backing up from J26.	
			

### 4.2.2 M1 Junction 40, Ossett

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: PPP Scheme to southbound off-slip</li> <li>Indicative potential scheme: The existing 3 lane section of the LRN approaches is to be extended to provide more stacking capacity</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
Minimal delay is modelled at this location in either the AM or PM time periods.		Small deterioration to the junction circulatory and LRN. SRN operation unchanged.	Junction circulatory is more congested than within the 'do-minimum' because of higher LRN travel demand within the 'do-something' matrices. This does not affect the operation of the SRN.

2030 Future			
Do Minimum		Do Something	
AM	PM	AM	PM
The junction circulatory and northbound movements are impacted upon from congestion on the northbound mainline. This congestion is due to issues at junction 41. Southbound movements are free flowing.	Severe circulatory congestion but no effect on SRN mainline. There is however queuing traffic on the off-slips and waiting traffic off the LRN links.	Significant improvement in operation as reduced congestion backing up from M1 J41.	Operates as per the 'do-minimum' within this peak period. Slightly lower congestion on the southbound off-slip.

# 4.3 H2089 NAT Summary

## AM 2021

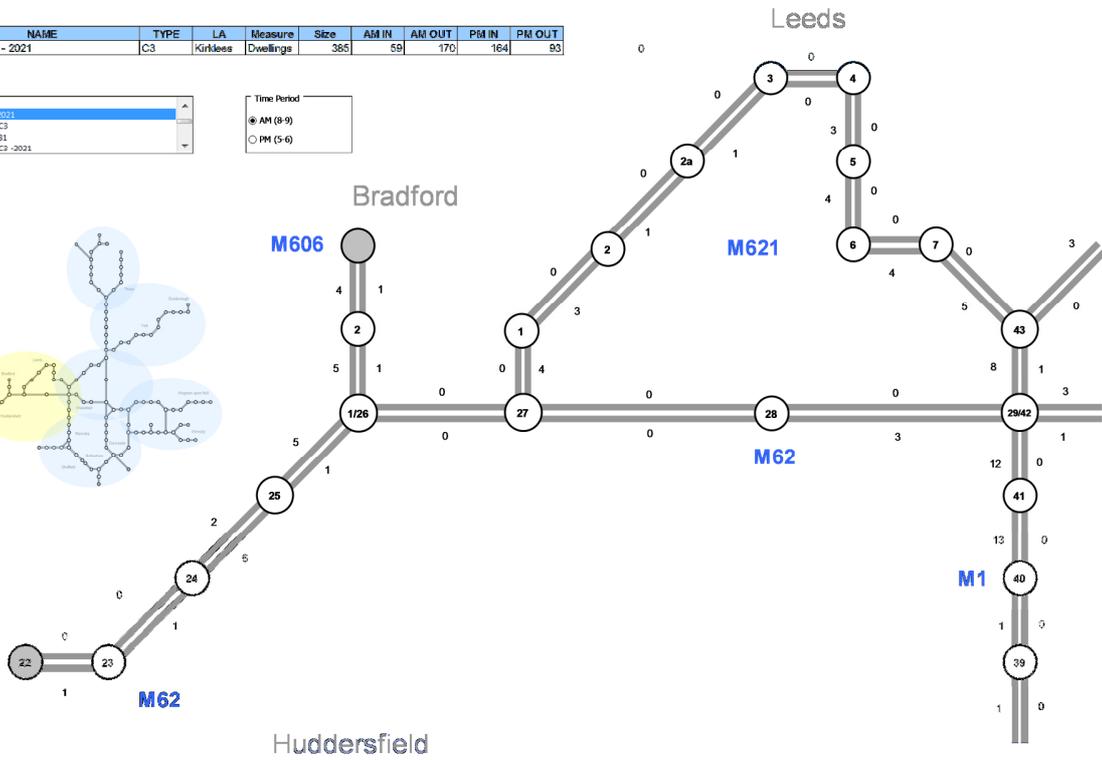
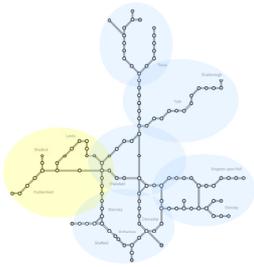
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
142-H2089 - 2021	C3	Kirklees	Dwellings	385	59	170	164	83

- 142-H2089
- 142-H2089 - 2021**
- 143-M01930 C3
- 143-M01930 B1
- 143-M01930 C3 - 2021

Time Period

AM (9-9)

PM (5-6)



## PM 2021

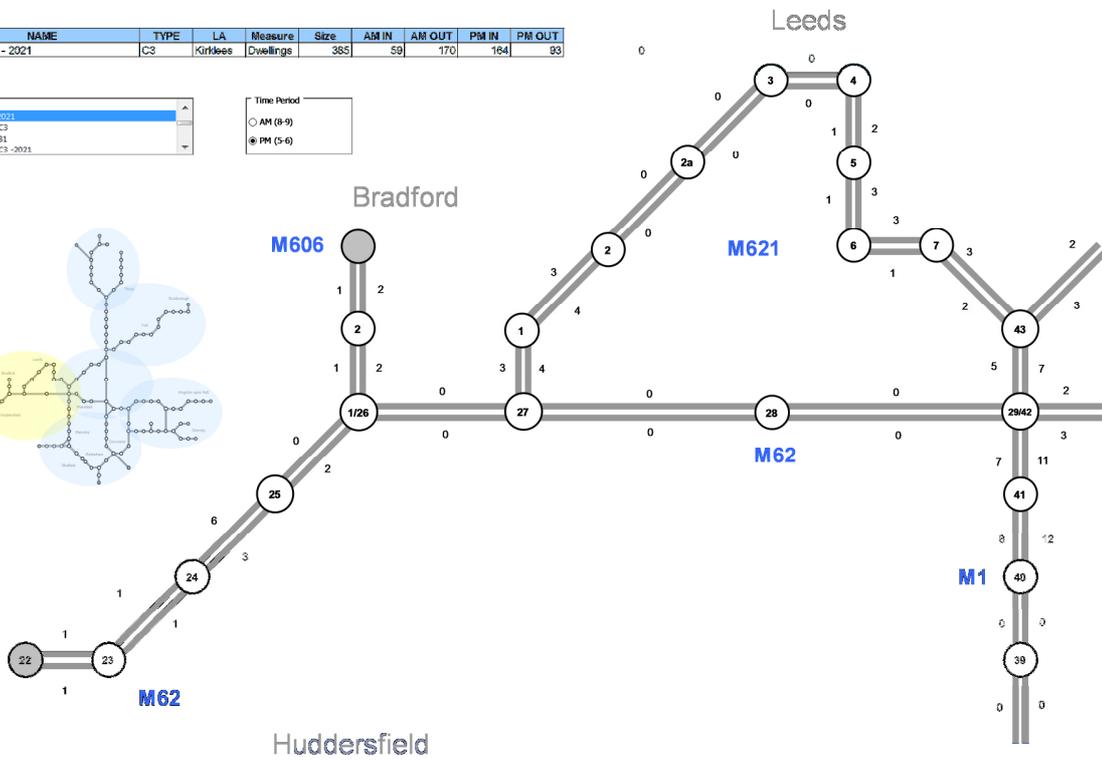
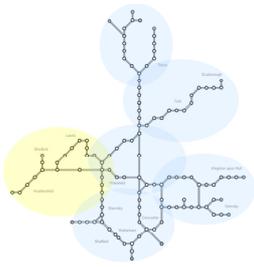
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
142-H2089 - 2021	C3	Kirklees	Dwellings	385	59	170	164	83

- 142-H2089
- 142-H2089 - 2021**
- 143-M01930 C3
- 143-M01930 B1
- 143-M01930 C3 - 2021

Time Period

AM (9-9)

PM (5-6)



AM Full Build-Out

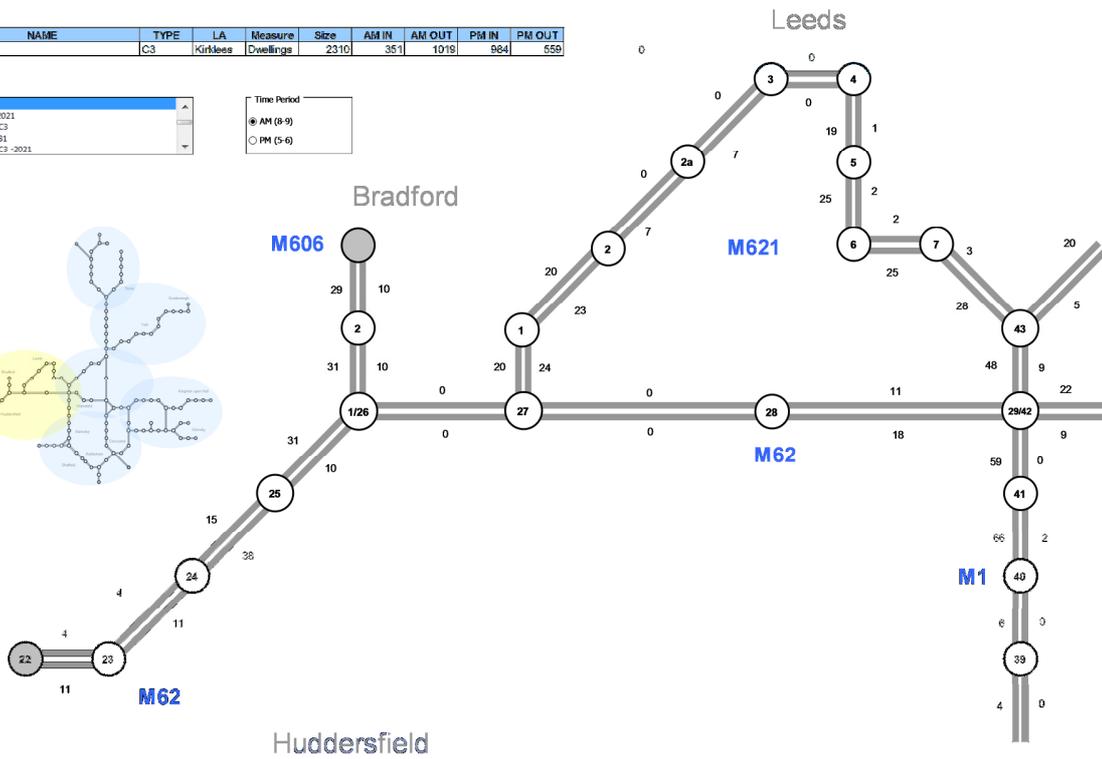
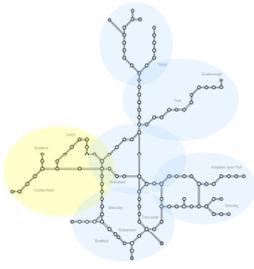
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
142-H2089	C3	Kirkless	Dwellings	2310	351	1018	984	559

- 142-H2089
- 142-H2089 - 2021
- 143-MM1930 C2
- 143-MM1930 B1
- 143-MM1930 C3 - 2021

Time Period

AM (8-9)

PM (5-6)



PM Full Build-Out

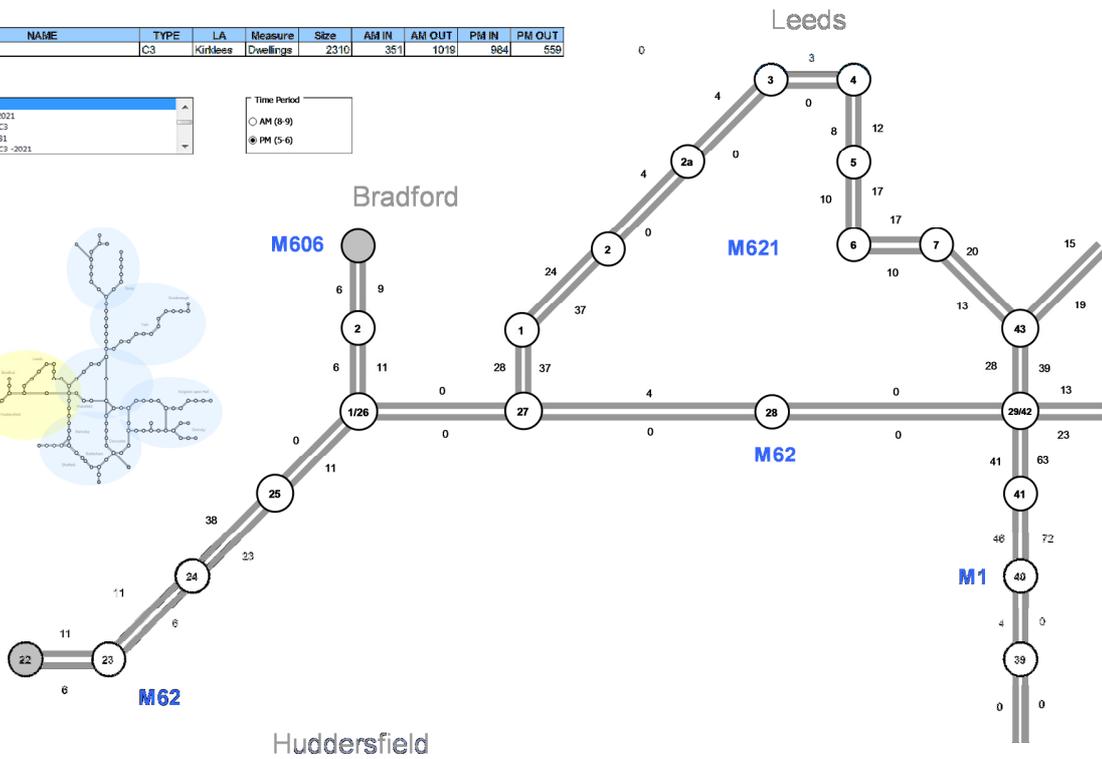
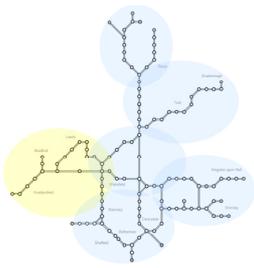
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
142-H2089	C3	Kirkless	Dwellings	2310	351	1018	984	559

- 142-H2089
- 142-H2089 - 2021
- 143-MM1930 C3
- 143-MM1930 B1
- 143-MM1930 C3 - 2021

Time Period

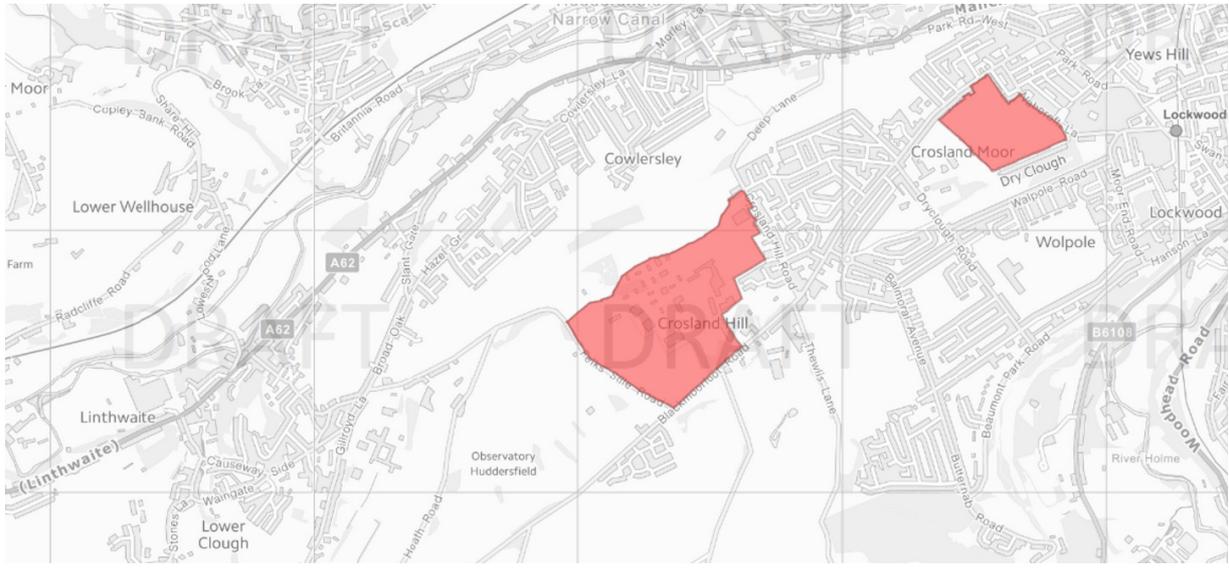
AM (8-9)

PM (5-6)



# Site MX1930

## 5.1 MX1930 Site Summary

	
Site Address	Land north of Blackmoorfoot Road, Crosland Moor, Huddersfield
Residential Units (2021)	None by 2021, (441 dwellings by end of plan).
Employment Space (2021)	44,258 sqm (B1)
Ownership	Private
SRN	M62 at Junctions 23 Outlane and 24 Ainley Top
Operation Summary	<p>The traffic generated by this development will likely be felt at both M62 Junction 23 Outlane and Junction 24 Ainley Top. However, Junction 23 did not form part of the West Yorkshire Infrastructure study so no reference to congestion diagrams is available. As concerns Ainley Top, the Meso model indicates that the junction will experience little congestion in 2021, with or without the planned schemes, but that it will only operate well in 2030 if the potential schemes come forward.</p> <p>The Nat model shows all traffic from the development loading onto the SRN at Junction 24. The numbers of trips perceived is relatively low, at only 40 for two-way flow in the full build-out scenario in the AM peak, with slightly more in the PM peak. At a junction that operates well, this is not likely to be an issue.</p>

## 5.2 MX1930 Meso Summary

M62 Junction 23 is not included within the WYIS.

### 5.2.1 M62 Junction 24, Ainley Top

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: M62 J20-25 Smart motorways across the Pennines, from Rochdale to Brighouse. Links 2 existing Smart motorway sections to create a continuous smart route from Leeds to Manchester.</li> <li>Indicative potential scheme: Three lanes approach from M62 westbound off-slip on A629 to provide more stacking capacity and weave section.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Junction largely operates well despite high levels of traffic around the southern circulatory in both the AM and PM peaks.</p>		<p>Operates as per the 'do-minimum' within both the AM and PM peak periods.</p>	
2030 Future			
<ul style="list-style-type: none"> <li>Indicative potential scheme: Two lane provision through top island to M62 westbound. Closure of southern circulatory arc.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Due to a lane restriction on the northern roundabout, congestion backs up through the southern roundabout and onto the westbound off-slip. This causes congestion on the westbound mainline within the AM peak.</p>		<p>Greatly improved operation because of the indicative potential scheme. Minimal congestion modelled.</p>	

# 5.3 MX1930 NAT Summary

## Employment AM 2021

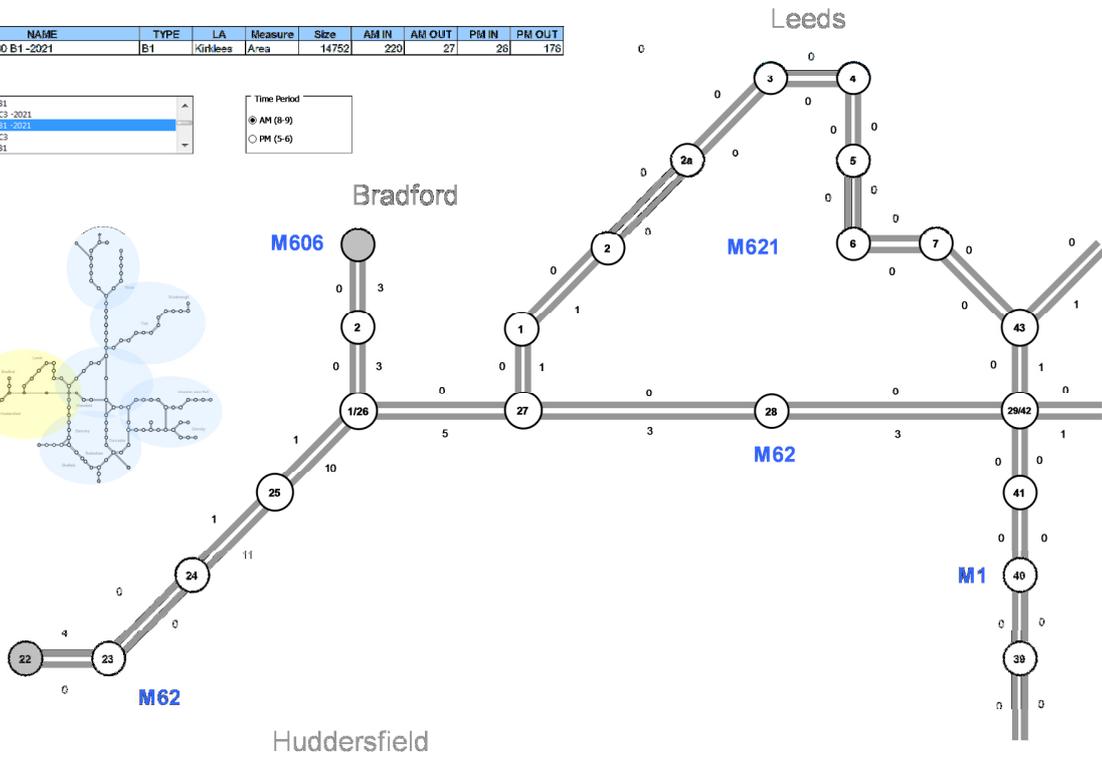
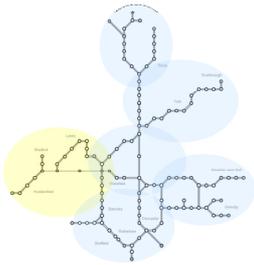
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 B1 -2021	B1	Kirklees	Area	14752	220	27	28	178

- 143-MX1930 B1
- 143-MX1930 C3 -2021
- 143-MX1930 B1 -2021
- 243-MX1911 C3
- 243-MX1911 B1

Time Period

● AM (8-9)

○ PM (5-6)



## Employment PM 2021

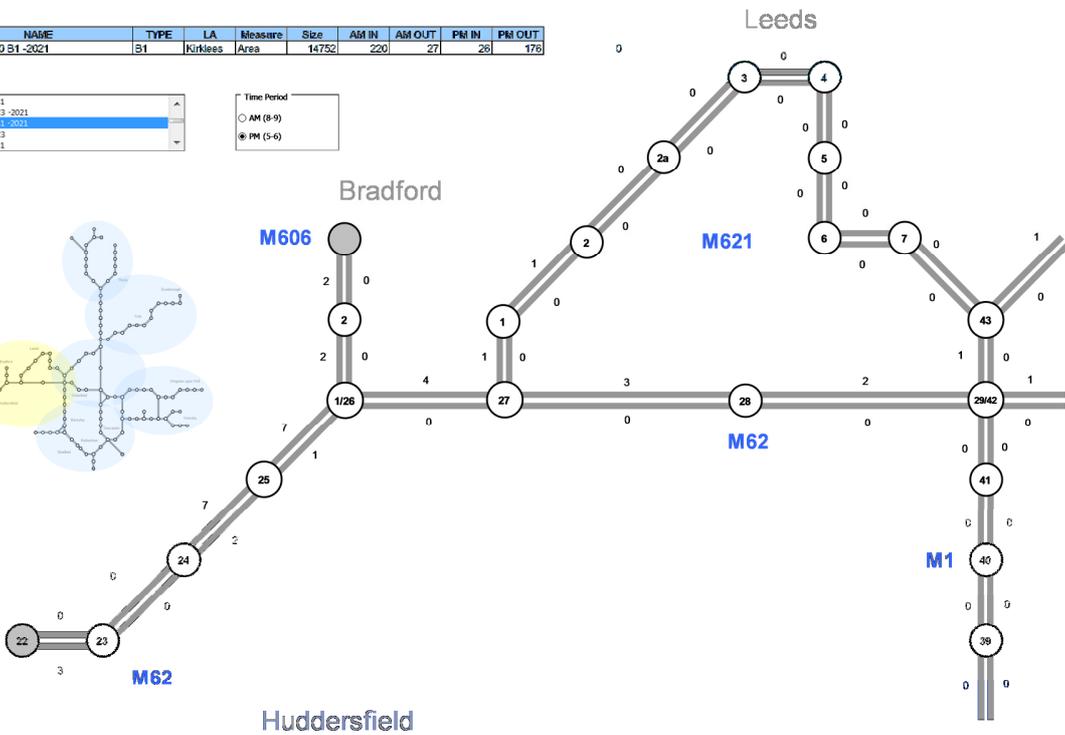
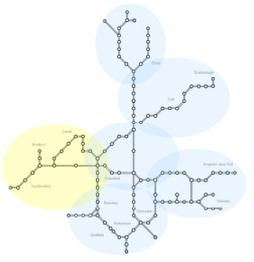
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 B1 -2021	B1	Kirklees	Area	14752	220	27	28	178

- 143-MX1930 B1
- 143-MX1930 C3 -2021
- 143-MX1930 B1 -2021
- 243-MX1911 C3
- 243-MX1911 B1

Time Period

○ AM (8-9)

● PM (5-6)



Residential AM Full Build-Out

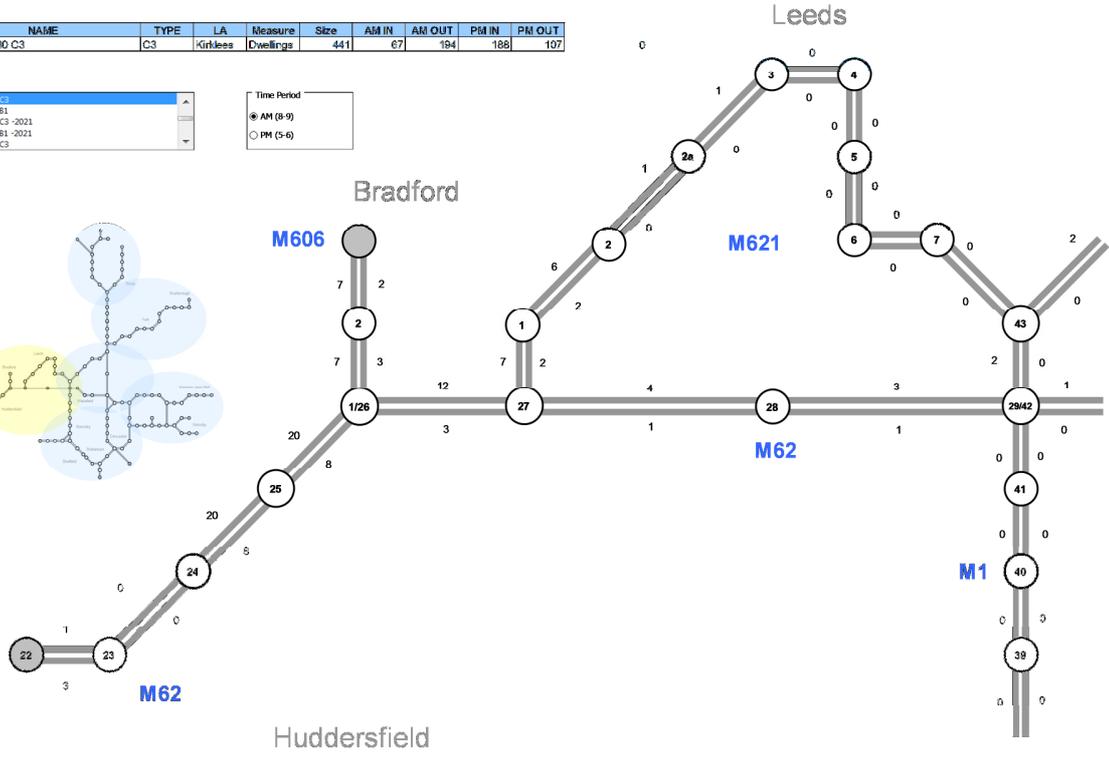
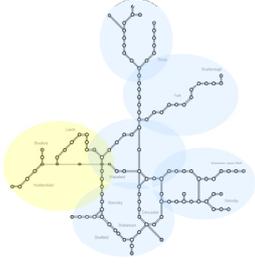
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 C3	C3	Kirkless	Dwellings	441	67	194	188	107

- 143-MX1930 C3
- 143-MX1930 B1
- 143-MX1930 C3 -2021
- 143-MX1930 B1 -2021
- 143-MX1911 C3

Time Period

AM (8-9)

PM (5-6)



Residential PM Full Build-Out

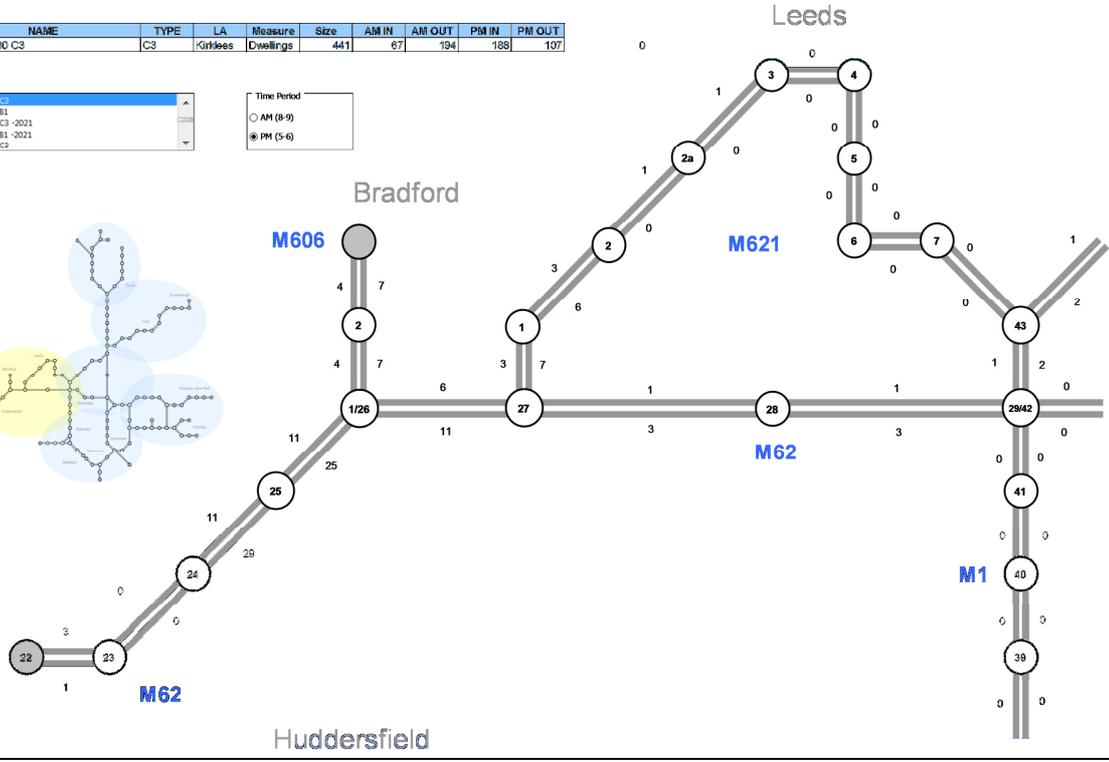
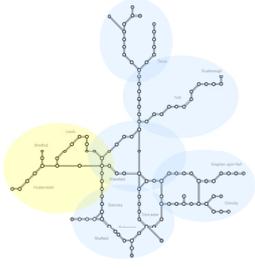
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 C3	C3	Kirkless	Dwellings	441	67	194	188	107

- 143-MX1930 C3
- 143-MX1930 B1
- 143-MX1930 C3 -2021
- 143-MX1930 B1 -2021
- 143-MX1911 C3

Time Period

AM (8-9)

PM (5-6)



Employment AM Full Build-Out

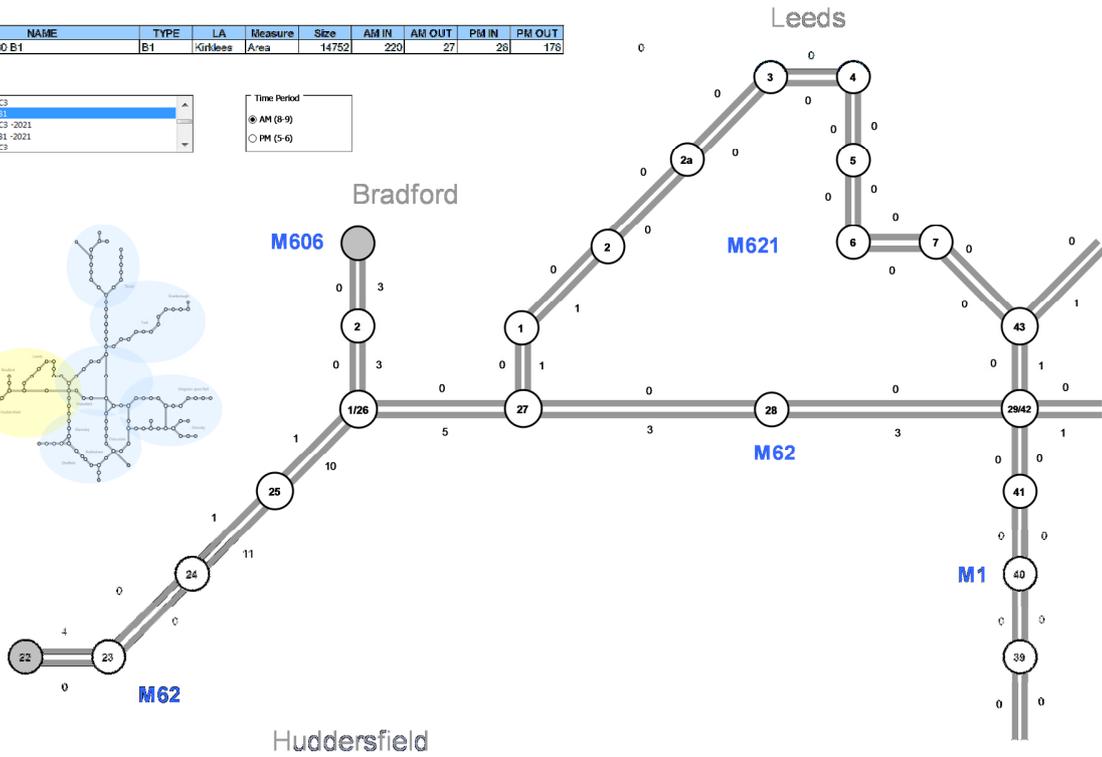
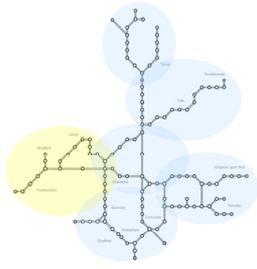
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 B1	B1	Kirkless	Area	14752	220	27	26	176

- 143-MX1930 C3
- 143-MX1930 C3 -2021
- 143-MX1930 E1 -2021
- 243-MX1911 C3

Time Period

AM (8-9)

PM (5-6)



Employment PM Full Build-Out

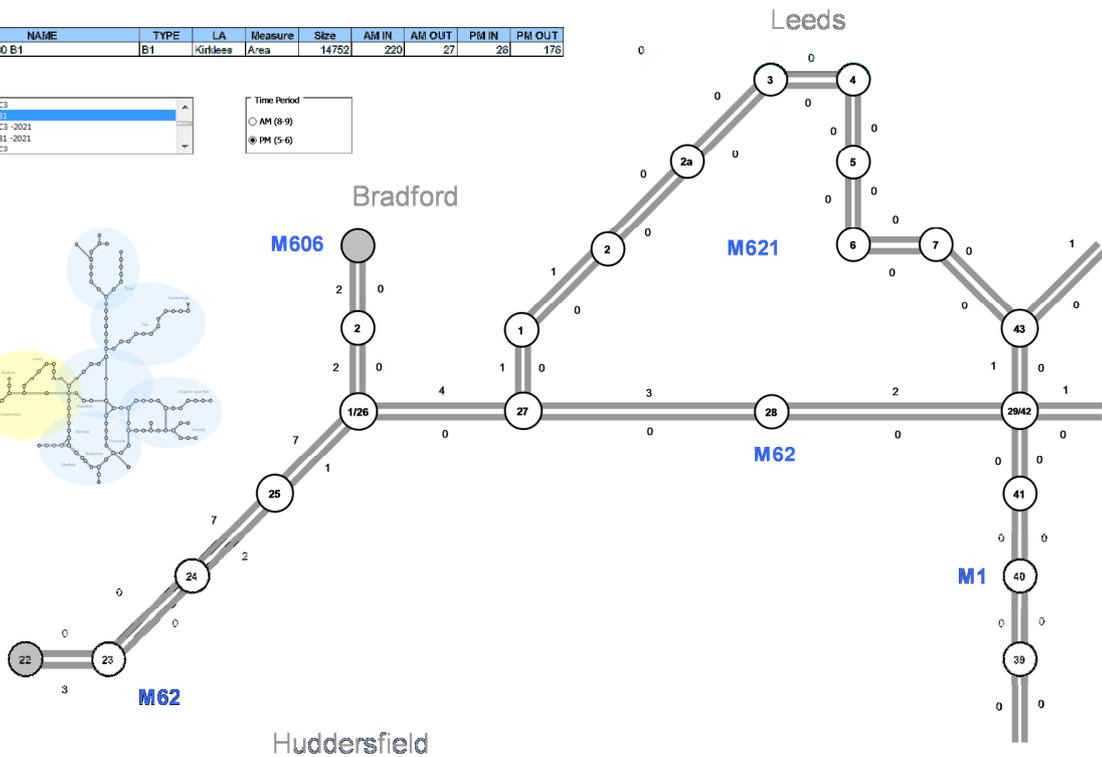
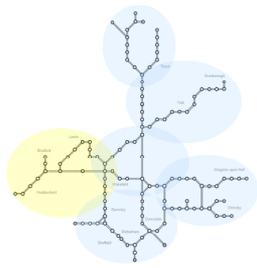
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
143-MX1930 B1	B1	Kirkless	Area	14752	220	27	26	176

- 143-MX1930 C3
- 143-MX1930 C3 -2021
- 143-MX1930 E1 -2021
- 243-MX1911 C3

Time Period

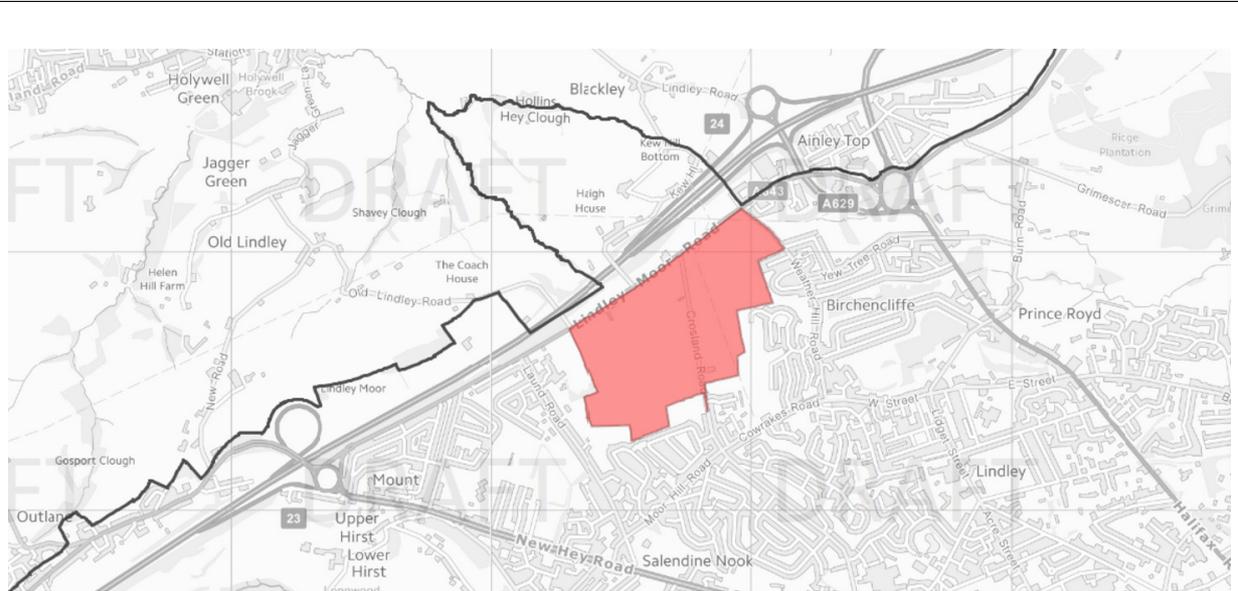
AM (8-9)

PM (5-6)



# Site MX1911

## 6.1 MX1911 Site Summary



Site Address	Land south of Lindley Moor Road, Lindley, Huddersfield
Residential Units (2021)	280 units (total allocation 533 units)
Employment Space (2021)	53,125 sqm (B1)
Ownership	Private
SRN	M62 at Junction J24 Ainsley Top
Operation Summary	<p>The traffic generated by this development will likely be felt at Junction 24 Ainsley Top. However, The Meso model indicates that the junction will experience little congestion in 2021, with or without the planned schemes, but that it will only operate well in 2030 if the potential schemes come forward.</p> <p>The NAT model indicates that there will be a significant number of extra trips at Junction 24 because of this development. In the AM full build-out, there over 100 two-way trips generated, likely to generate an impact at Junction 24, particularly on the approach roundabout.</p>

## 6.2 MX1911 Meso Summary

### 6.2.1 M61 Junction 24, Ainley Top

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: M62 J20-25 Smart motorways across the Pennines, from Rochdale to Brighouse. Links 2 existing Smart motorway sections to create a continuous smart route from Leeds to Manchester.</li> <li>Indicative potential scheme: Three lanes approach from M62 westbound off-slip on A629 to provide more stacking capacity and weave section.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Junction largely operates well despite high levels of traffic around the southern circulatory in both the AM and PM peaks.</p>		<p>Operates as per the 'do-minimum' within both the AM and PM peak periods.</p>	
2030 Future			
<ul style="list-style-type: none"> <li>Indicative potential scheme: Two lane provision through top island to M62 westbound. Closure of southern circulatory arc.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Due to a lane restriction on the northern roundabout, congestion backs up through the southern roundabout and onto the westbound off-slip. This causes congestion on the westbound mainline within the AM peak.</p>		<p>Greatly improved operation because of the indicative potential scheme. Minimal congestion modelled.</p>	

# 6.3 MX1911 NAT Summary

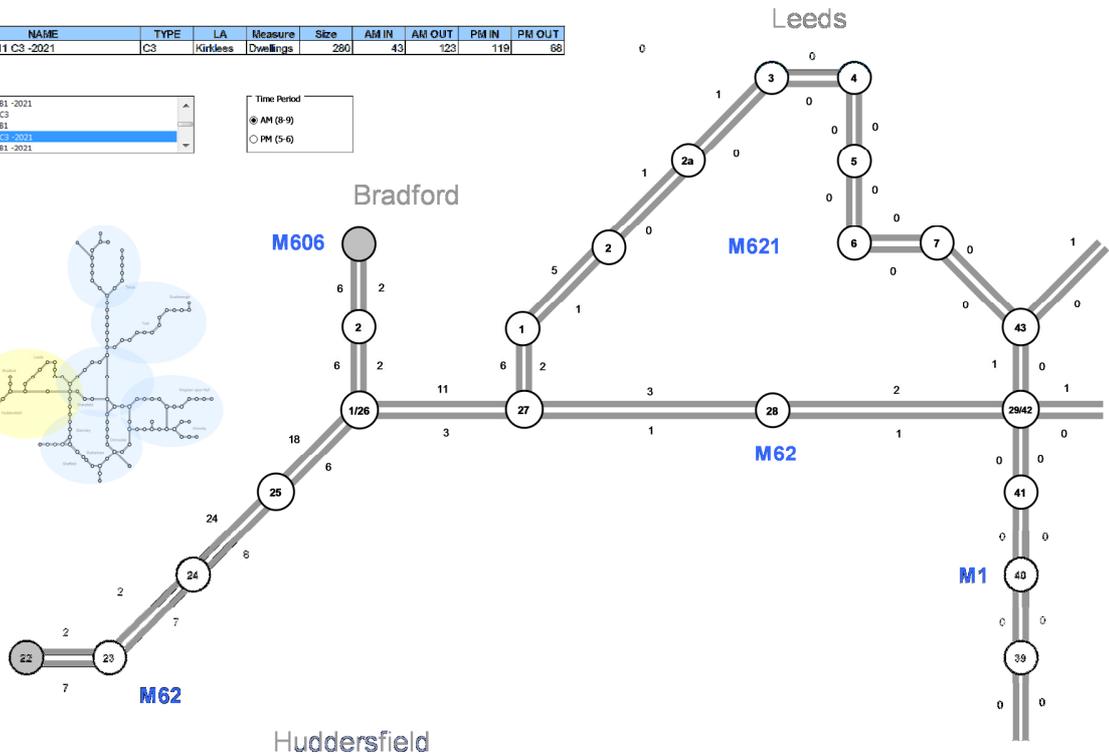
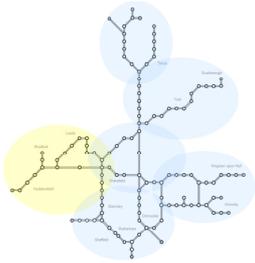
## Residential AM 2021

NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 C3 -2021	C3	Kirkless	Dwellings	260	43	123	119	68

- 143-MX1930 B1 -2021
- 243-MX1911 C3
- 243-MX1911 B1
- 243-MX1911 C3 -2021**
- 243-MX1911 B1 -2021

Time Period

- AM (9-9)
- PM (5-6)



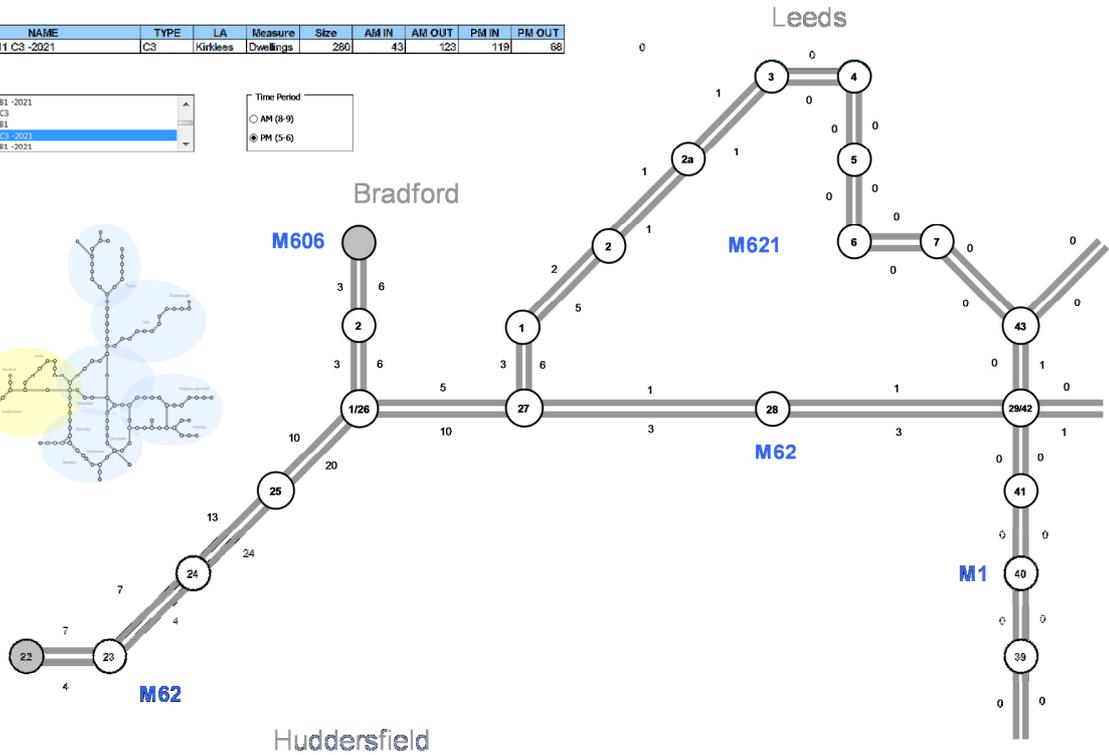
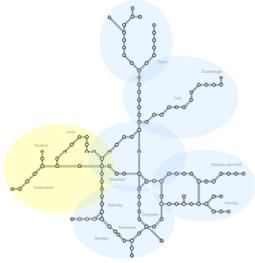
## Residential PM 2021

NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 C3 -2021	C3	Kirkless	Dwellings	260	43	123	119	68

- 143-MX1930 B1 -2021
- 243-MX1911 C3
- 243-MX1911 B1
- 243-MX1911 C3 -2021**
- 243-MX1911 B1 -2021

Time Period

- AM (9-9)
- PM (5-6)



### Employment AM 2021

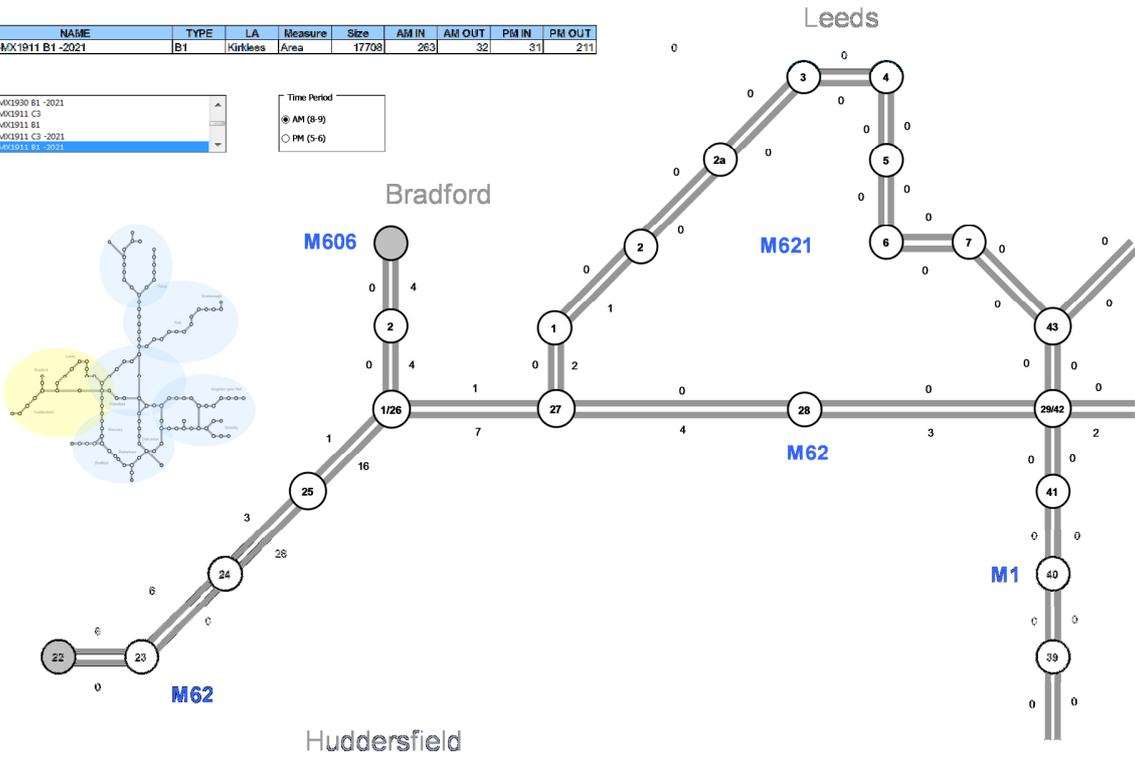
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 B1-2021	B1	Kirkless	Area	17708	26:3	32	31	211

- 143-MX1930 B1-2021
- 243-MX1911 C3
- 243-MX1911 B1
- 243-MX1911 C3-2021
- 243-MX1911 B1-2021

Time Period

AM (8-9)

PM (5-6)



### Employment PM 2021

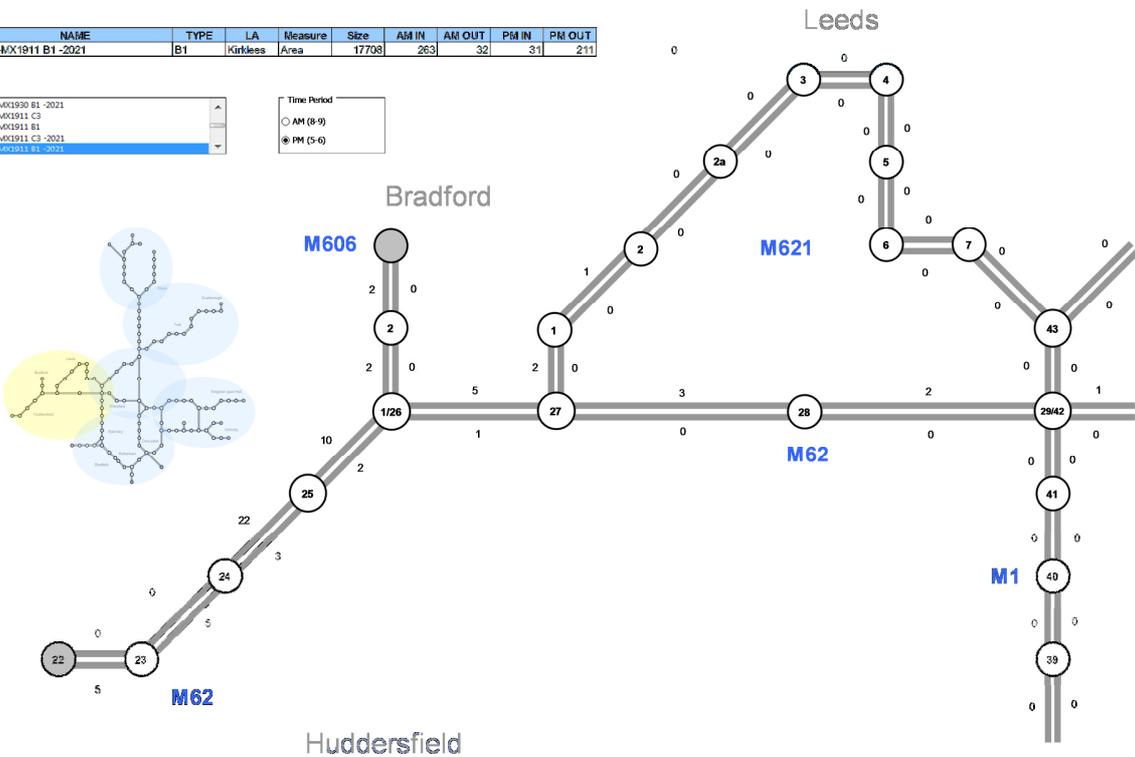
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 B1-2021	B1	Kirkless	Area	17708	26:3	32	31	211

- 143-MX1930 B1-2021
- 243-MX1911 C3
- 243-MX1911 B1
- 243-MX1911 C3-2021
- 243-MX1911 B1-2021

Time Period

AM (8-9)

PM (5-6)





### Employment AM Full Build-Out

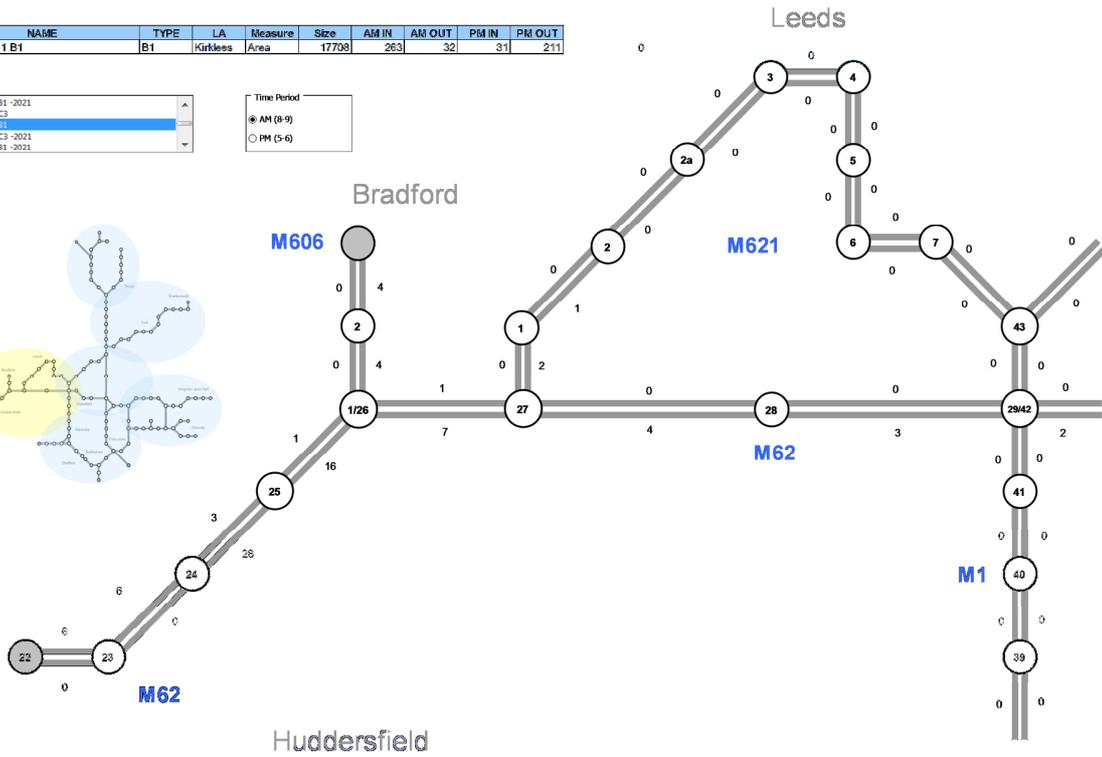
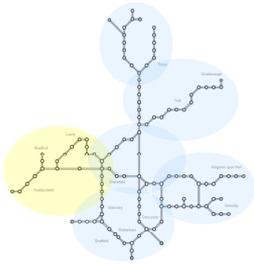
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 B1	B1	Kirkless	Area	17708	26:3	32	31	211

143-MX1930 B1 -2021
243-MX1911 C3
<b>243-MX1911 B1</b>
243-MX1911 C3 -2021
243-MX1911 B1 -2021

Time Period

AM (8-9)

PM (5-6)



### Employment PM Full Build-Out

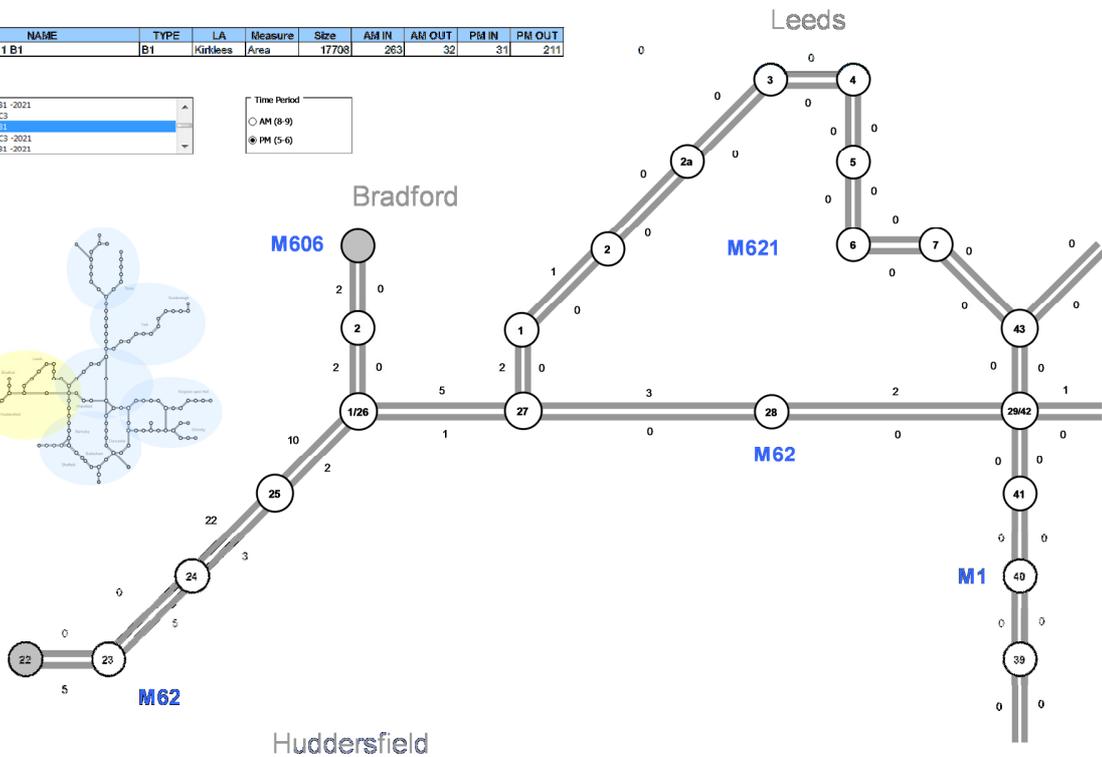
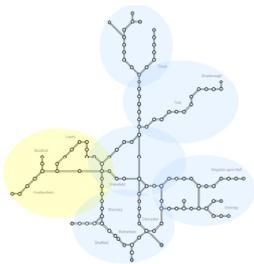
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-MX1911 B1	B1	Kirkless	Area	17708	26:3	32	31	211

143-MX1930 B1 -2021
243-MX1911 C3
<b>243-MX1911 B1</b>
243-MX1911 C3 -2021
243-MX1911 B1 -2021

Time Period

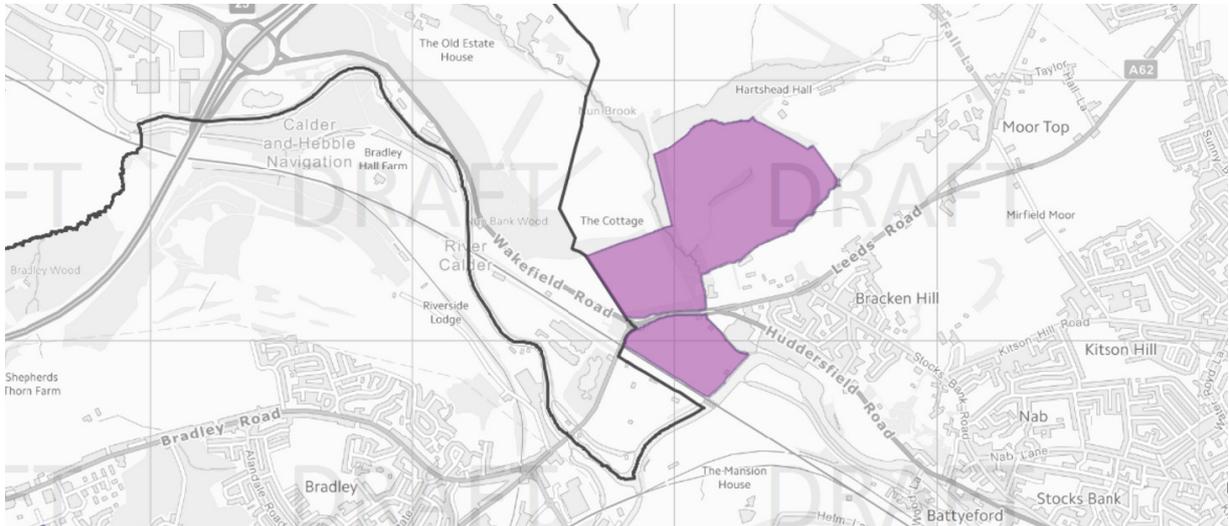
AM (8-9)

PM (5-6)



# Site E1832c

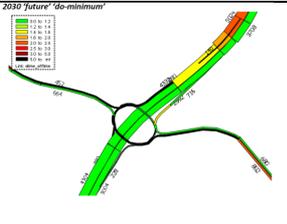
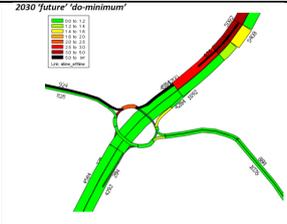
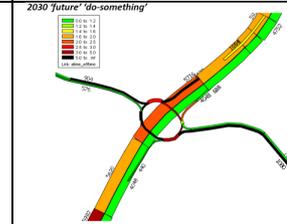
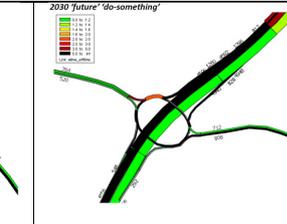
## 7.1 E1832c Site Summary

	
Site Address	Land north and west of the Three Nuns Pub and the former Cooper Bridge Waste Water Treatment Works, Leeds Road, Mirfield
Residential Units (2021)	N/A
Employment Space (2021)	162,187 sqm (B1)
Ownership	Private
SRN	M62 at Junction 25 Cooper Bridge
Operation Summary	<p>The Meso model indicates that in 2022 in the do-minimum scenario, there is congestion at M62 Junction 25 on the east facing slips in the AM peak and on the west-facing slips in the PM peak, as well as the A644 southbound approach. With the indicative scheme, there is additional congestion on the gyratory and on the eastbound approach to the junction. In 2030, there is additional congestion eastbound after the junction, and in the do-something scenario there is excessive congestion eastbound through the junction, queuing back onto the gyratory and other arms.</p> <p>The NAT model shows that this employment development generates a very considerable number of short additional trips, with flows of over 100 in the peak direction between junctions 24 and 25 on the M62. This number of additional trips is likely to generate some additional congestion at both points on the SRN.</p>

## 7.2 E1832c Meso Summary

### 7.2.1 M62 Junction 25, Cooper Bridge

<b>2022 Interim</b>			
<ul style="list-style-type: none"> <li>Committed scheme: None</li> <li>Indicative potential scheme: Signalisation of all arms (in conjunction with the Cooper Bridge scheme)</li> </ul>			
<b>Do Minimum</b>		<b>Do Something</b>	
<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>
There is a small level of congestion on the eastbound on-slip and westbound off-slip, but this does not impact upon the operation of the junction circulatory or M62 mainline.	Minimal delay is modelled at this location in the PM peak period.	Congestion is modelled on the eastbound mainline to the west of the junction, with no congestion on the eastbound on-slip, and increased congestion on the circulatory.	There is increased congestion on the westbound off-slip and on the circulatory.
			

<b>2030 Future</b>			
<ul style="list-style-type: none"> <li>Committed scheme: Highway work to deal with congestion in and around the Cooper Bridge Gyratory junction to the east of Huddersfield and facilitate access to the development site. Includes road widening, junction improvements and a new relief road around Ravensthorpe</li> </ul>			
<b>Do Minimum</b>		<b>Do Something</b>	
<b>AM</b>	<b>PM</b>	<b>AM</b>	<b>PM</b>
Eastbound on-slip traffic volume results in congestion back onto the circulatory. The A644 approach from the south is congested because of queuing traffic on the eastbound on-slip.	Congestion on the eastbound M62 mainline from J26 results in queuing traffic on the eastbound on-slip. This in turn results in LRN queuing. Westbound, traffic is relatively free flowing.	Higher traffic levels are modelled in this area due to the new J24a inducing traffic and providing better access to the SRN. Congestion is greatly increased at the junction circulatory as well as on the eastbound carriageway because of congestion backing up from J26.	
			

# 7.3 E1832c NAT Summary

AM 2021

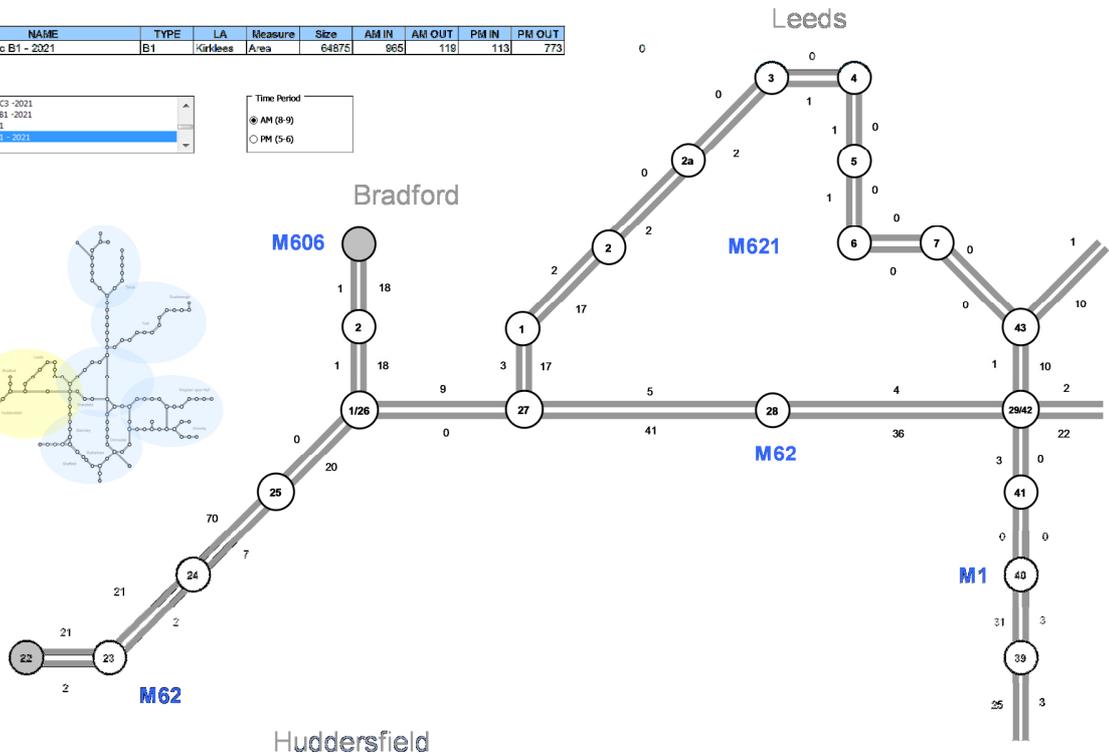
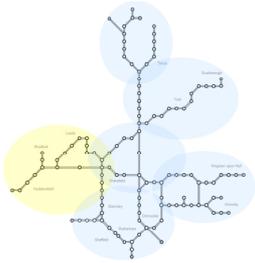
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
465-E1832c B1 - 2021	B1	Kirklees	Area	64875	965	118	113	773

- 243-M01911 C3 - 2021
- 243-M01911 B1 - 2021
- 465-E1832c B1
- 465-E1832c B1 - 2021**
- 250-469

Time Period

● AM (9-9)

○ PM (5-6)



PM 2021

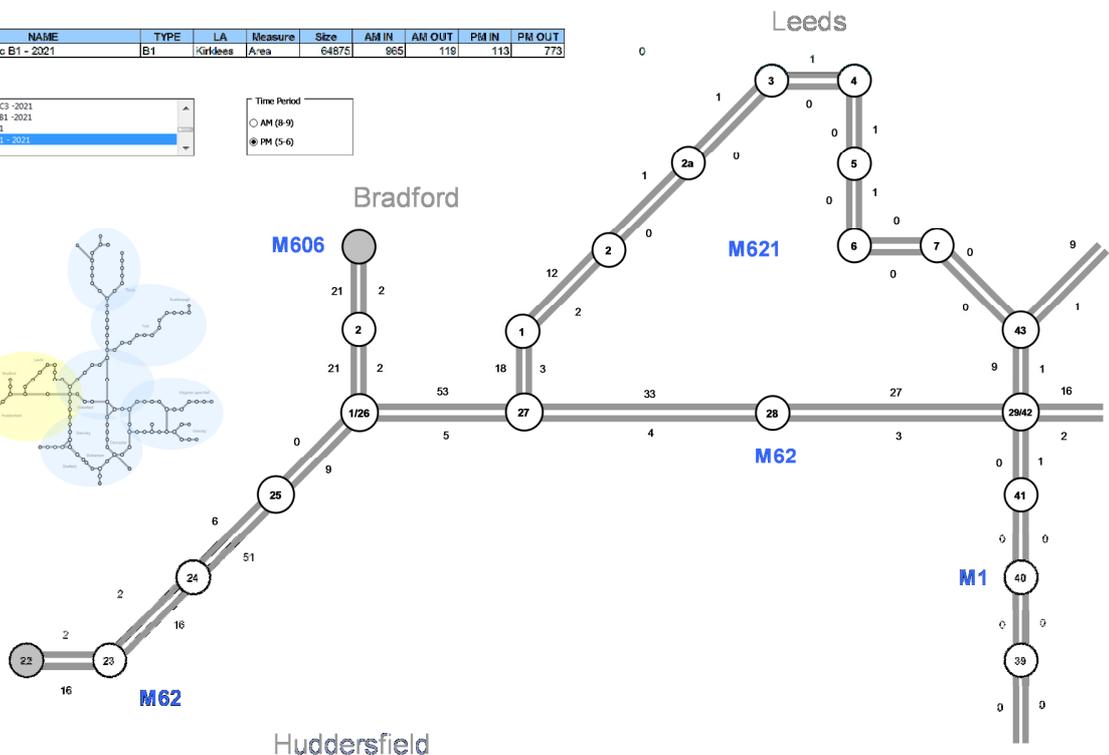
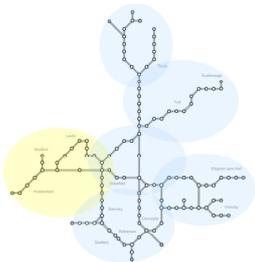
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
465-E1832c B1 - 2021	B1	Kirklees	Area	64875	965	118	113	773

- 243-M01911 C3 - 2021
- 243-M01911 B1 - 2021
- 465-E1832c B1
- 465-E1832c B1 - 2021**
- 250-469

Time Period

○ AM (9-9)

● PM (5-6)



AM Full Build-Out

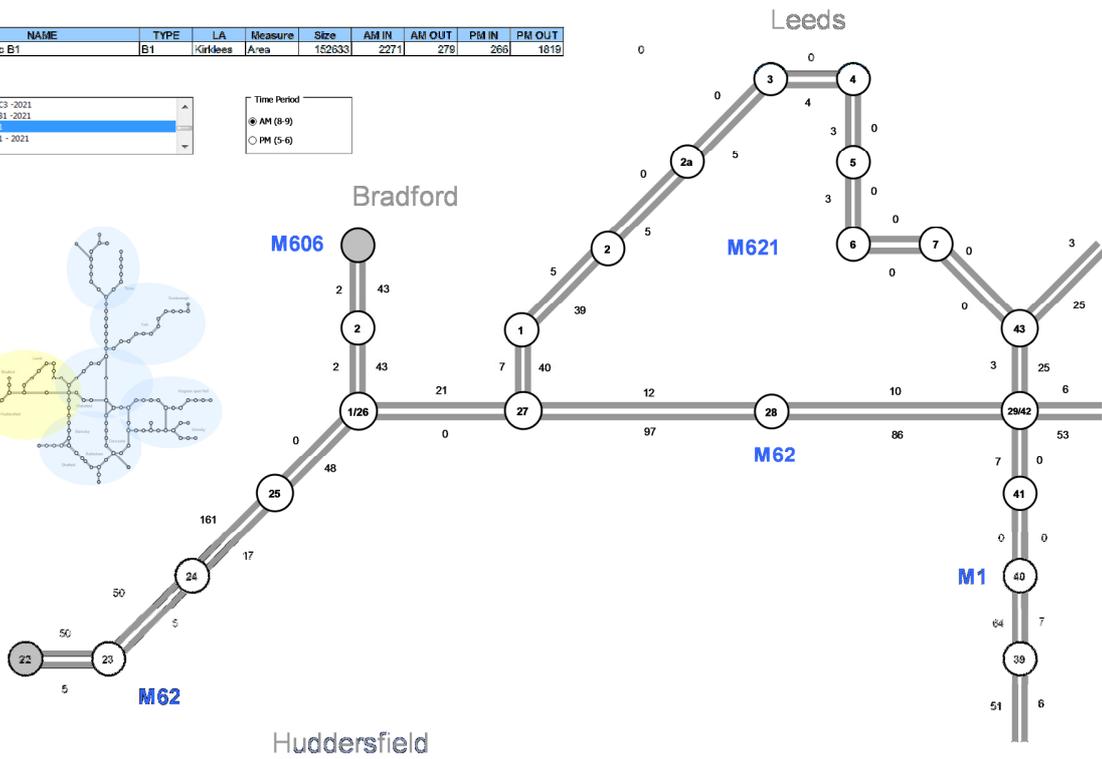
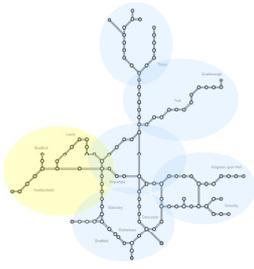
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
46S-E1832c B1	B1	Kirklees	Area	152633	2271	278	266	1819

- 243-M01911 C3 - 2021
- 243-M01911 B1 - 2021
- 46S-E1832c B1**
- 46S-E1832c B1 - 2021
- 250-449

Time Period

AM (8-9)

PM (5-6)



PM Full Build-Out

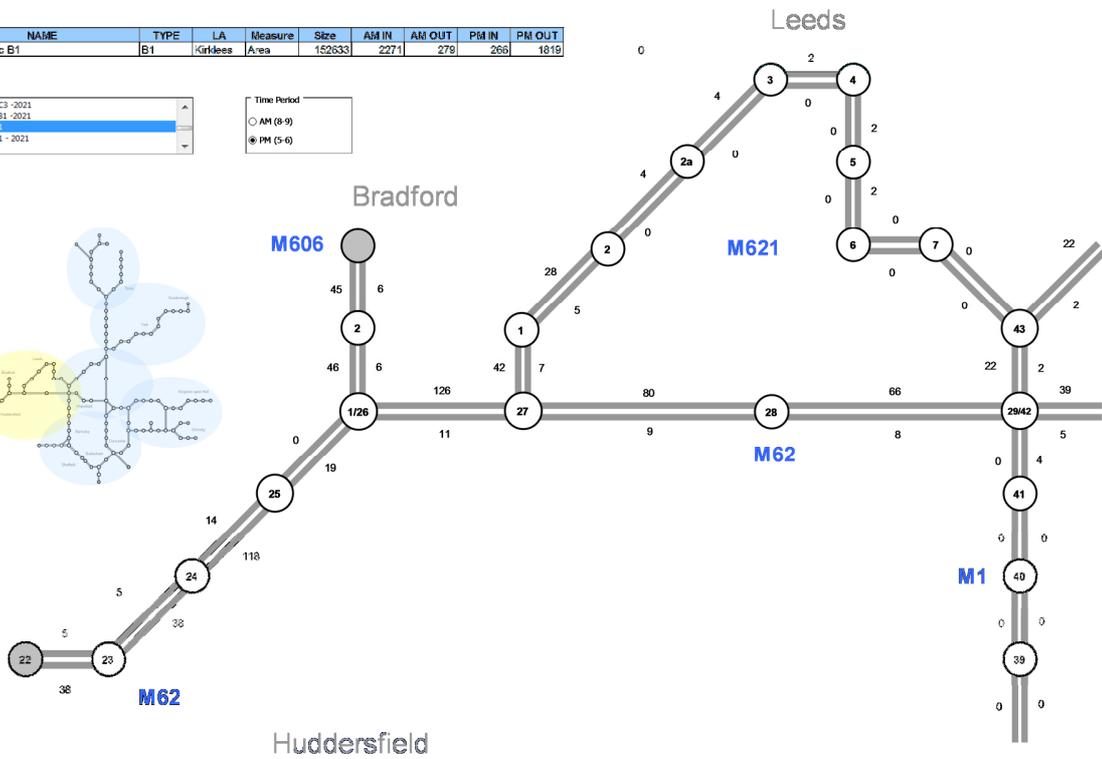
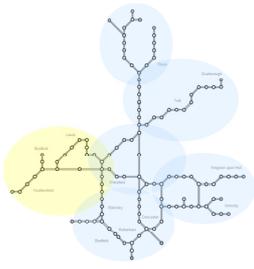
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
46S-E1832c B1	B1	Kirklees	Area	152633	2271	278	266	1819

- 243-M01911 C3 - 2021
- 243-M01911 B1 - 2021
- 46S-E1832c B1**
- 46S-E1832c B1 - 2021
- 250-449

Time Period

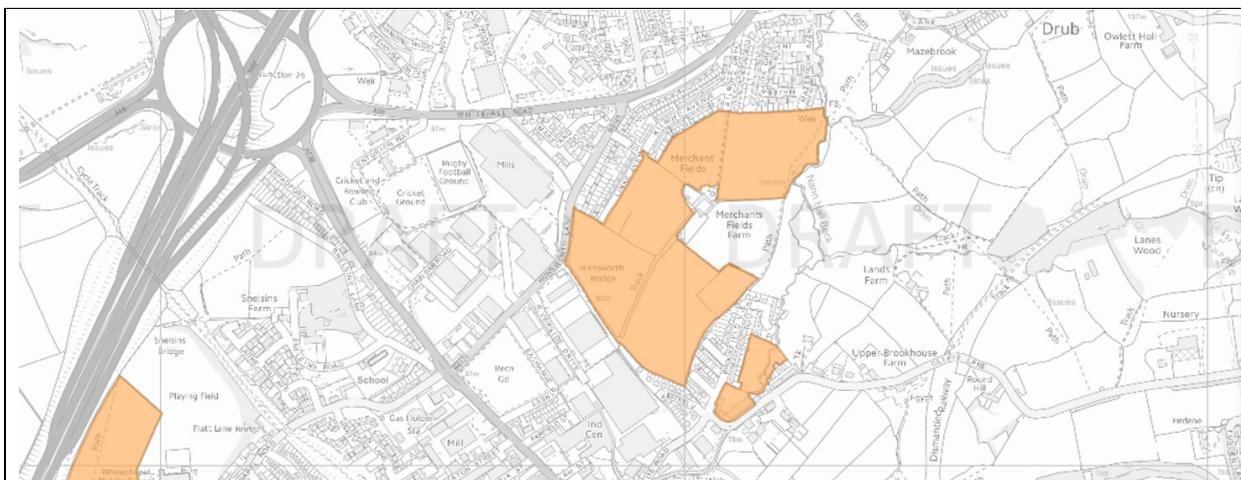
AM (8-9)

PM (5-6)



# Site H69

## 8.1 H69 Site Summary



Site Address	Merchant Fields, Hunsworth Lane, Cleckheaton
Residential Units (2021)	150 (total allocation 413)
Employment Space (2021)	N/A
Ownership	Private
SRN	M62 at Junction 26 Chain Bar
Operation Summary	<p>Most traffic to and from this development will be routed via M62 J26/M606 interchange at Chain Bar. The Meso model for this junction indicates congestion in 2022 on several parts of this junction, including the eastbound and westbound carriageways, and the eastern half of the circulatory. Congestion is worse overall in the AM peak. By 2030 there is only significant worsening in congestion on the westbound approach to the junction.</p> <p>The NAT model indicates that there will be over 100 additional two-way trips at the junction in both the AM at the PM peaks because of the development. This will likely create some localised issues across Chain Bar interchange.</p>

## 8.2 H69 Meso Summary

### 8.2.1 M62 Junction 26, Chain Bar

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: Capacity enhancements to the circulatory carriageway programmed 2015/16</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Congestion is modelled on the eastbound carriageway because of merging traffic. Westbound, more severe congestion is modelled on approach to the junction prior to the diverge. This congestion backs up towards J27.</p>	<p>Lower levels of congestion are modelled at this junction and on approach to this junction in the PM than the AM peak.</p>	<p>Eastbound movements are as per the 'do-minimum'. Westbound mainline congestion has increased at this location due to higher traffic demand within the network in this area because of M62 J24a. The congestion is generated by the diverge at M62 J26. This congestion is lower in the PM peak period.</p>	
<p>2022 'interim' 'do-minimum' AM</p>	<p>2022 'interim' 'do-minimum' PM</p>	<p>2022 'interim' 'do-something' AM</p>	<p>2022 'interim' 'do-something' PM</p>

2030 Future			
<ul style="list-style-type: none"> <li>Committed scheme: M62: J26 (M606 Chain Bar): provision of a direct link from the M62 westbound to the M606 northbound; reduces congestion from the main part of the existing junction</li> <li>Indicative potential schemes: Opening up of the HOV lane to all traffic and signalisation of the M606 approach to the roundabout. Upgrade of the M62 westbound diverge to type D1 ghost island or D2 Parallel Diverge.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Congestion is modelled on the eastbound carriageway because of merging traffic. Westbound, more severe congestion is modelled on approach to the junction prior to the diverge. This congestion backs up through J27 and beyond.</p>	<p>Congestion in the PM peak is broadly the same as in the AM peak, with some alleviation on the circulatory.</p>	<p>Operates as per the 'do-minimum' within this peak period.</p>	<p>Congestion in the PM peak is broadly the same as in the AM peak, with some alleviation on the circulatory, and less congestion westbound before the junction.</p>
<p>2030 'future' 'do-minimum' AM</p>	<p>2030 'future' 'do-minimum' PM</p>	<p>2030 'future' 'do-something' AM</p>	<p>2030 'future' 'do-something' PM</p>

# 8.3 H69 NAT Summary

## AM 2021

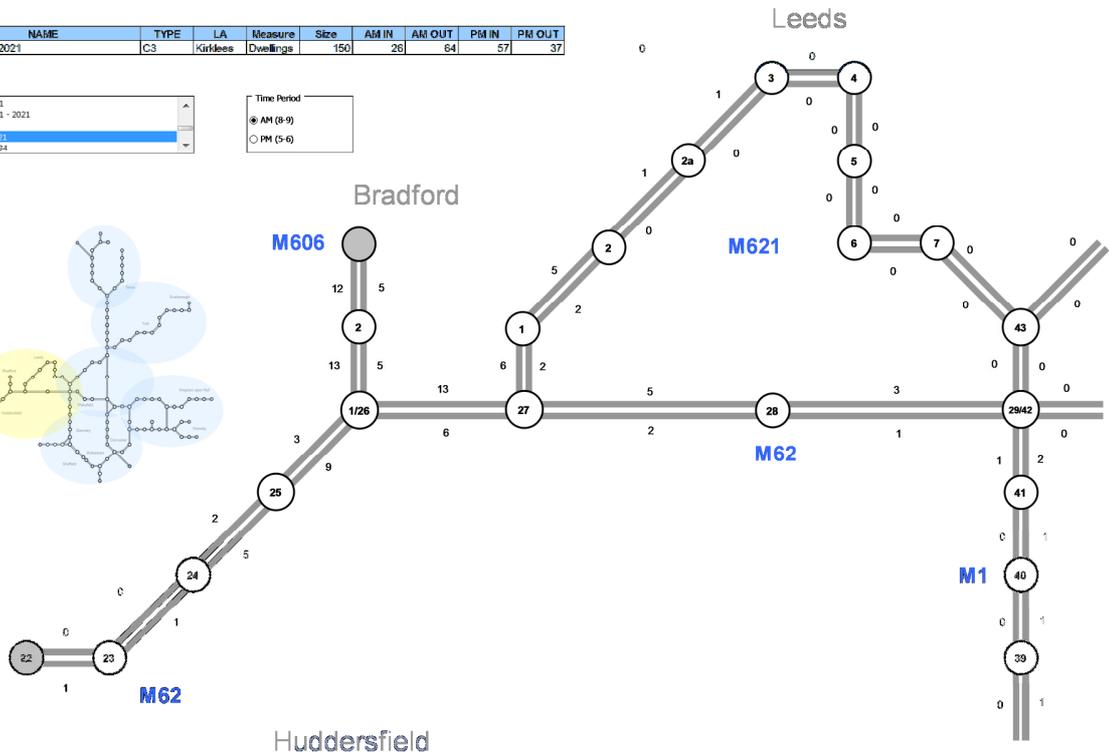
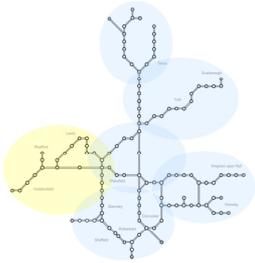
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
250-H69 - 2021	C3	Kirklees	Dwellings	150	26	64	57	37

- 465-E1832c B1
- 465-E1832c B1 - 2021
- 250-H69
- 250-H69 - 2021**
- 139-MD082134

Time Period

● AM (9-9)

○ PM (5-6)



## PM 2021

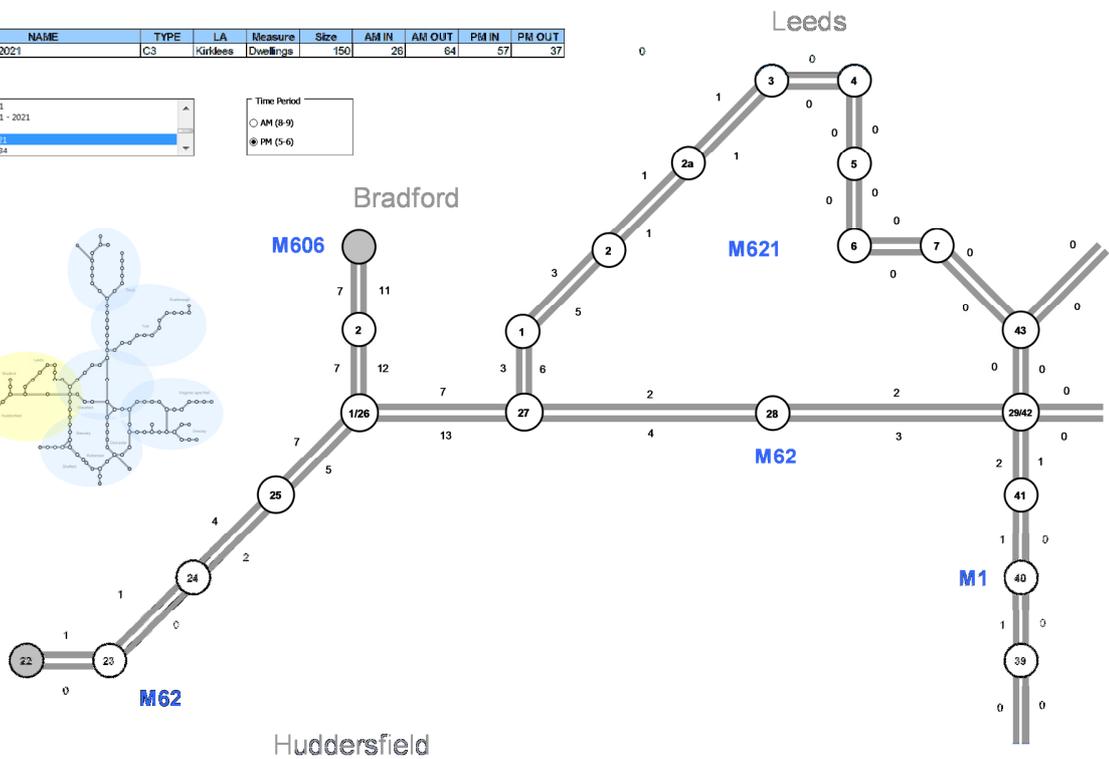
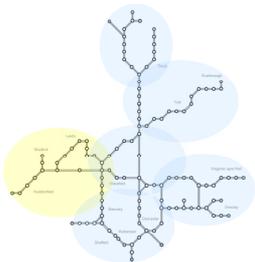
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
250-H69 - 2021	C3	Kirklees	Dwellings	150	26	64	57	37

- 465-E1832c B1
- 465-E1832c B1 - 2021
- 250-H69
- 250-H69 - 2021**
- 139-MD082134

Time Period

○ AM (9-9)

● PM (5-6)



AM Full Build-Out

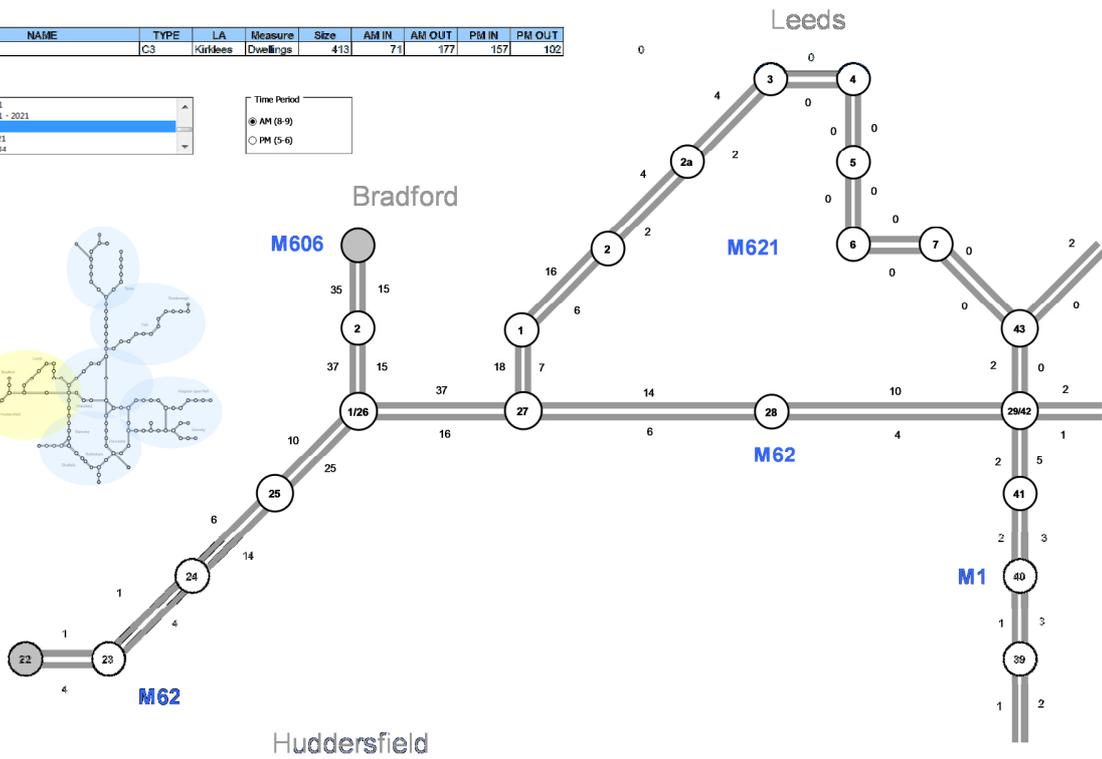
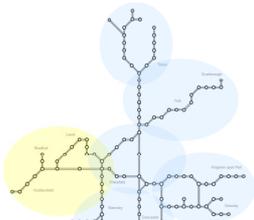
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
250-H69	C3	Kirklees	Dwellings	413	71	177	157	102

465-E1832c B1
465-E1832c B1 - 2021
250-H69
250-H69 - 2021
139-MDGR2134

Time Period

AM (8-9)

PM (5-6)



PM Full Build-Out

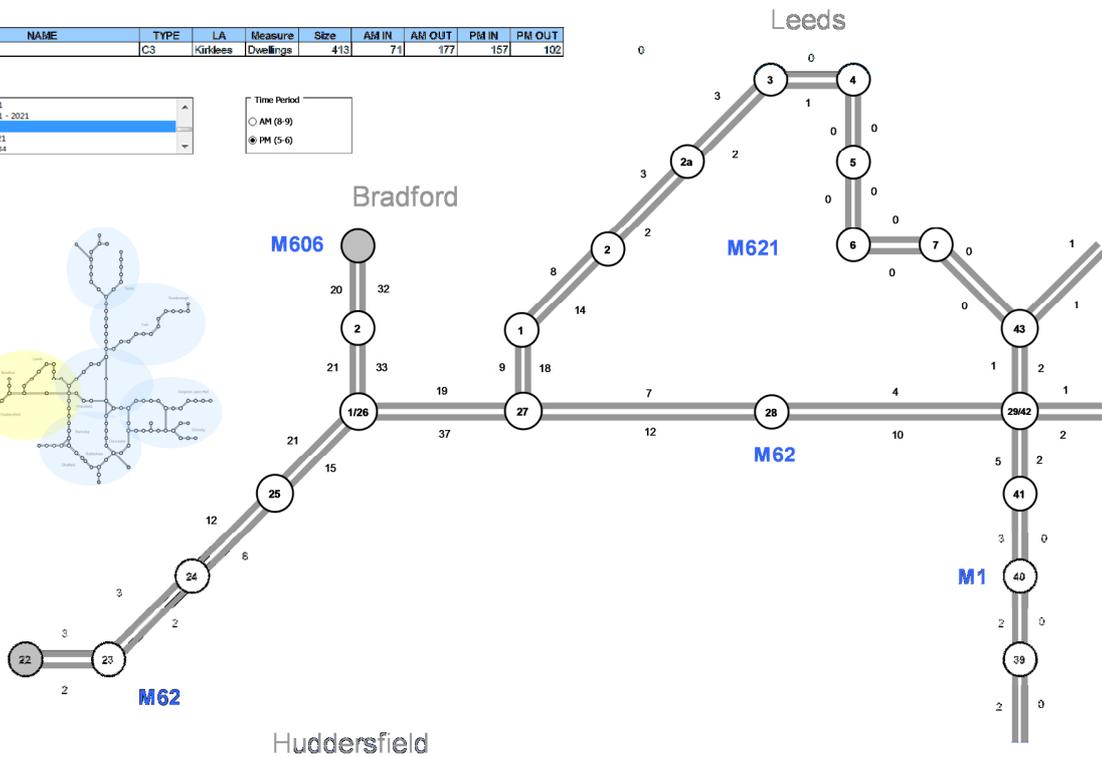
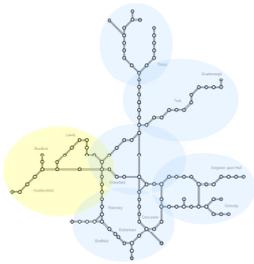
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
250-H69	C3	Kirklees	Dwellings	413	71	177	157	102

465-E1832c B1
465-E1832c B1 - 2021
250-H69
250-H69 - 2021
139-MDGR2134

Time Period

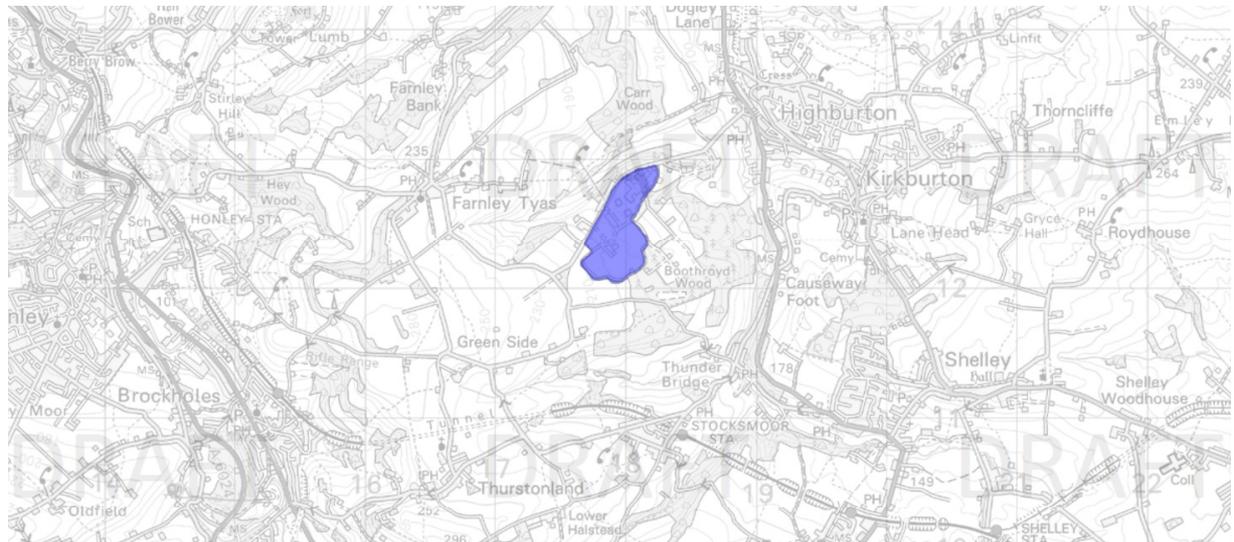
AM (8-9)

PM (5-6)



# Site MDGB2134

## 9.1 MDGB2134 Site Summary



Site Address	Land at Storthes Hall, Kirkburton
Residential Units (2021)	400 (Total allocation 505)
Employment Space (2021)	N/A
Ownership	Private
SRN	M1 Junction 39, Durkar
Operation Summary	<p>The Meso model indicates that in 2022, the Durkar Junction 39 on the M1 operates well in the do-minimum scenario, with congestion mainly on the Local Road network approaches, which is worse in 2030. However, with the committed schemes, congestion is low in the 2030 future year, and there is no congestion modelled on the SRN.</p> <p>The NAT model indicates the traffic is dispersed, but is felt mostly at Junction 40 of the M1. The additional flows at Junction 39 are approximately 40 vehicles in the peak hour in the full build-out scenario, which may generate some localised problems, but these are likely to be off the SRN. The interim 2021 scenario does not see significant extra trips on the SRN.</p>

## 9.2 MDGB2134 Meso Summary

### 9.2.1 M1 Junction 39, Durkar

#### 2022 Interim

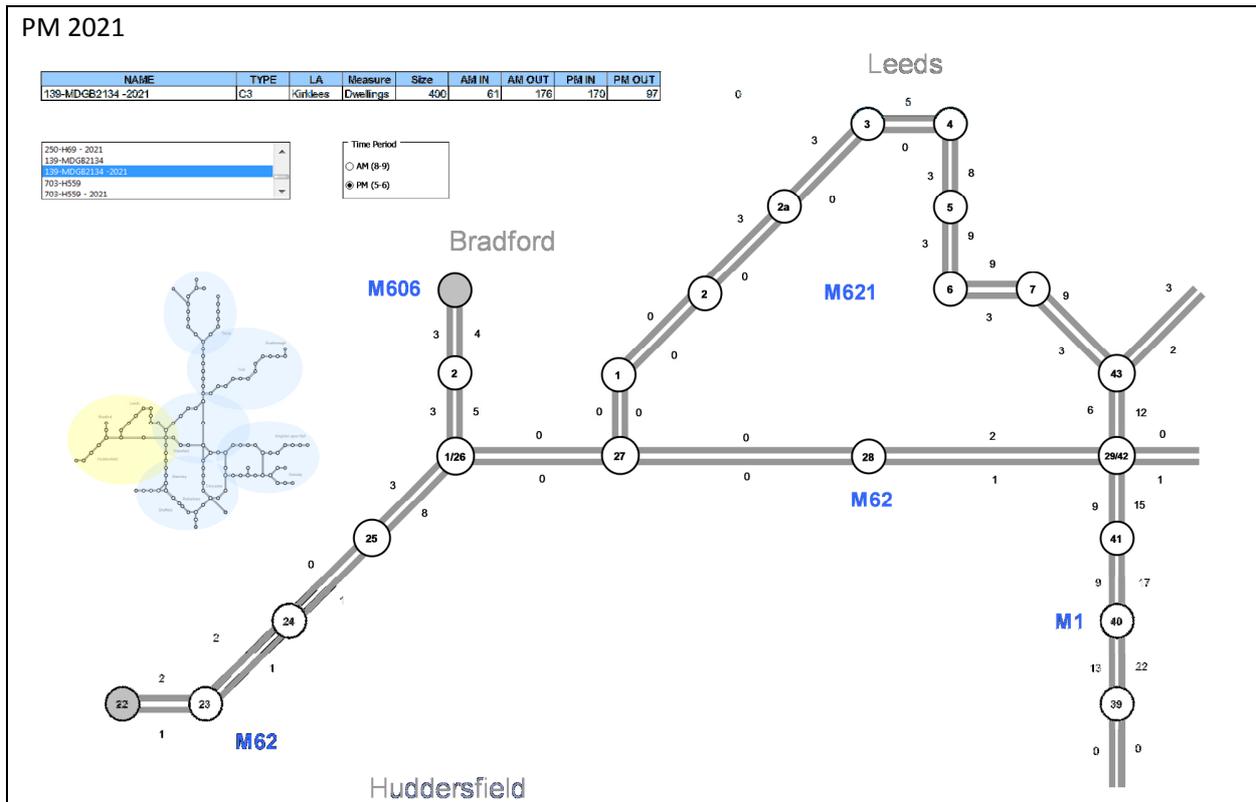
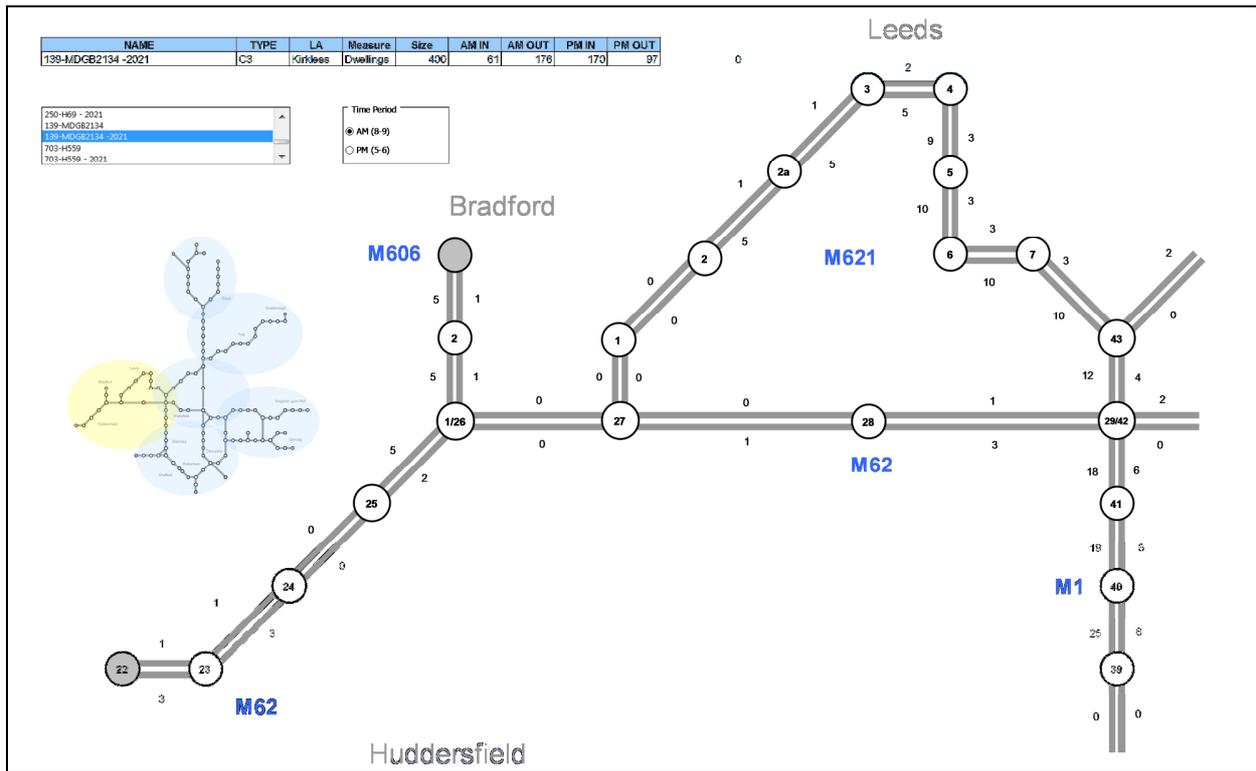
- Indicative potential scheme: Signalisation of all remaining non-signalised arms following the committed scheme construction. In addition, LRN approach links to the junction circulatory have been widened from 2 to 3 lanes to provide more stacking capacity.

Do Minimum		Do Something	
AM	PM	AM	PM
Minimal delay is modelled at this location in this time period.	Northbound merge congestion early within the modelled time periods which backs up and causes circulatory congestion which remains throughout the peak periods. This results in LRN congestion on the approach to the junction from Wakefield.	Small improvement to the junction circulatory and LRN. SRN operation unchanged.	

2030 Future			
<ul style="list-style-type: none"> <li>Committed scheme: M1 J35a-39 Smart motorway, smart motorways to link the existing Smart motorway sections around Sheffield and Leeds, which in turn connects up the trans-Pennine stretches identified in RIS1 and the London to Yorkshire route planned for RIS2.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
Minimal delay is modelled on the SRN at this location although there is queuing traffic on the LRN.		Operates as per the 'do-minimum' within both the AM and PM peak periods.	

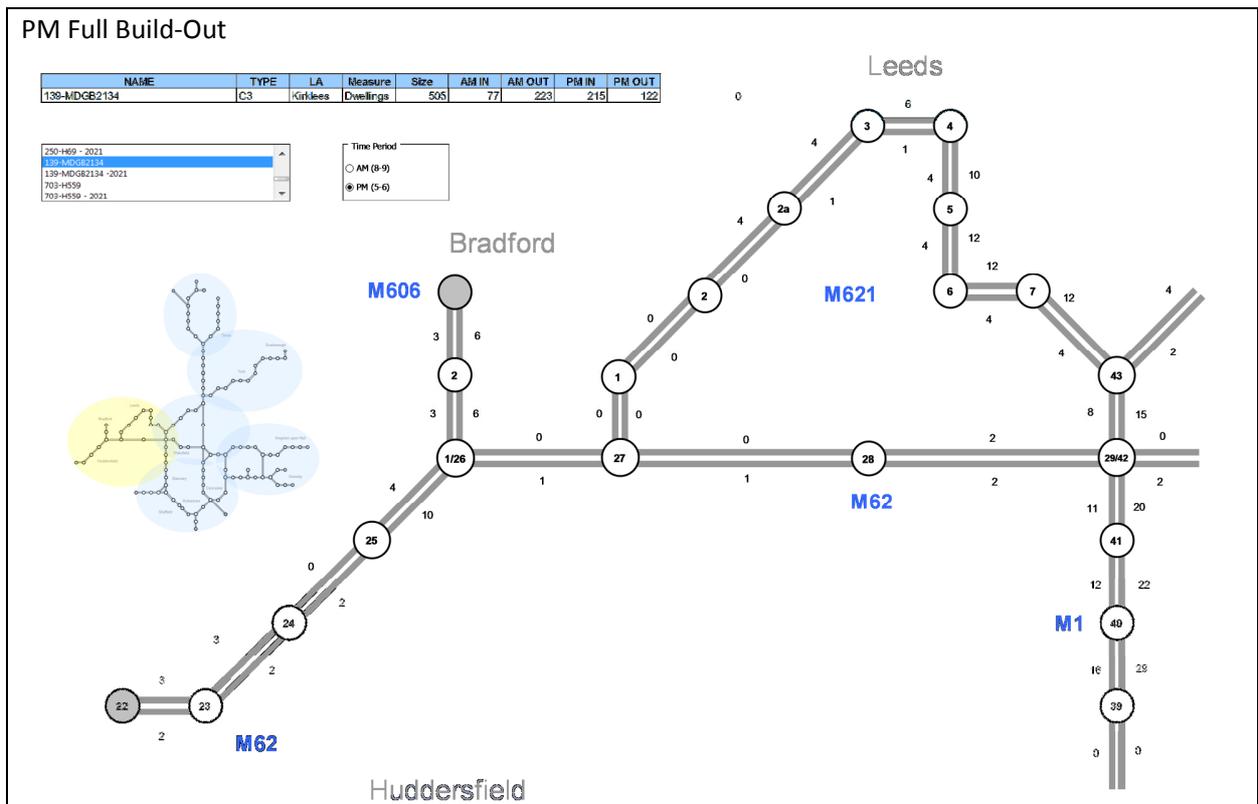
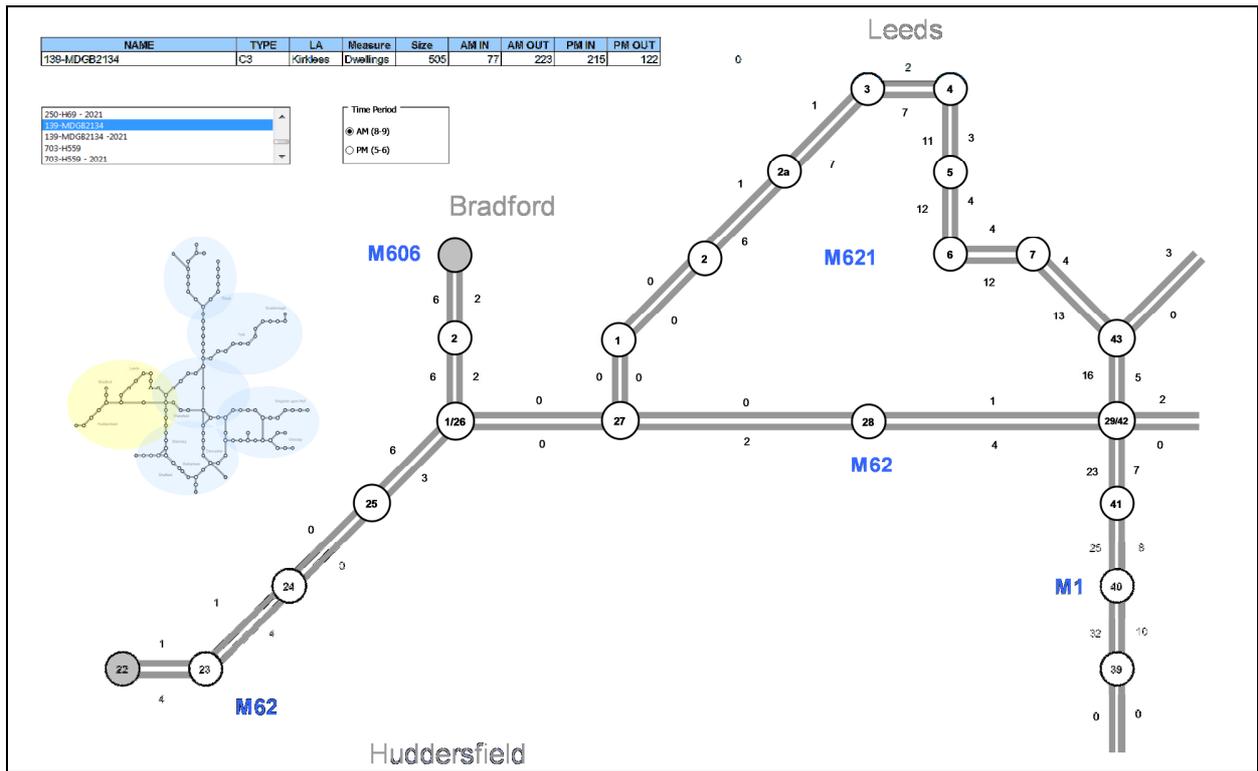
### 9.3 MDGB2134 NAT Summary

AM 2021
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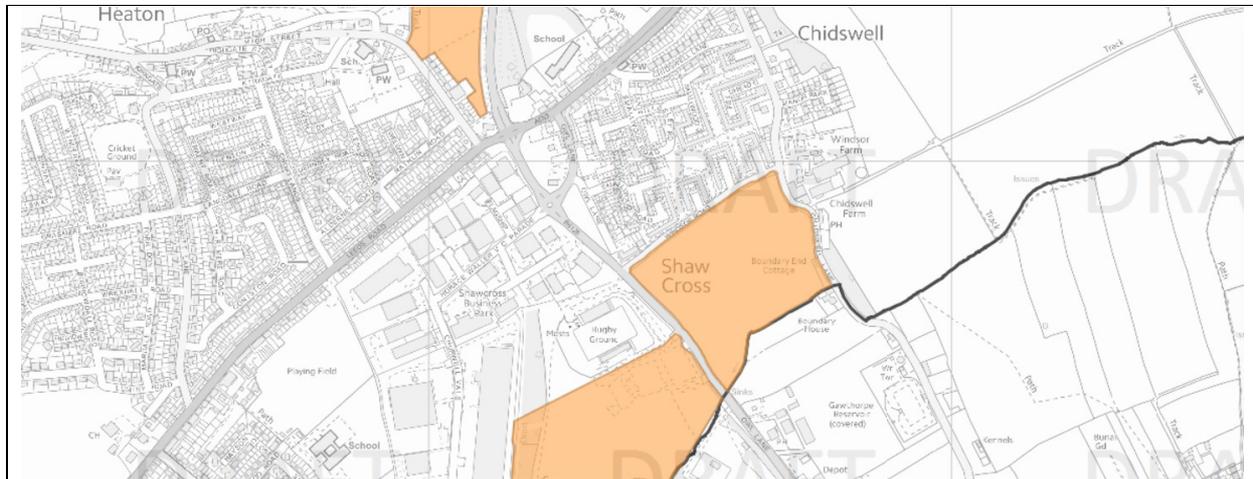
AM Full Build-Out

SECTION 9 – SITE MDGB2134



# Site H559

## 10.1 H559 Site Summary



Site Address	Land to the east of Leeds Road, Chidswell
Residential Units (2021)	150 (Total allocation 279)
Employment Space (2021)	N/A
Ownership	Private
SRN	M1 at Junction 40 Wakefield and M62 and Junction 28 Tingley
Operation Summary	<p>The Meso model indicates that in 2022, the Ossett Junction 40 on the M1 operates well in the do-minimum scenario, but with increasing congestion in 2030 on the northbound M1 carriageway through the junction, as well as on the eastern and western arms. In the do-something scenario the junction remains congested but with the SRN relatively free-flowing.</p> <p>At Tingley, the junction operates well in the 2022 do-minimum, but in the do-something scenario eastbound traffic backs up from Lofthouse interchange and disrupts J28. By 2030, congestion occurs at most points on the junction, and is only partly relieved by the committed schemes.</p> <p>The NAT analysis indicates most vehicles will use the already congested Junction 40 Ossett, with up to 40 additional two-way trips in the peak. This will likely generate issues at Junction 40 itself, but as this is a current bottleneck, the issues will not likely spread further onto the SRN, given the levels of trips.</p>

# 10.2 H559 Meso Summary

## 10.2.1 M62 Junction 28, Tingley

2022 Interim			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Mainline traffic is free flowing in both directions. The southern half of the circulatory is congested but this does not impact upon the SRN.</p>	<p>Congestion occurs at both the eastbound off-slip and on-slip. The resulting congestion backs up towards M62 J27. The southern half of the junction circulatory is also heavily congested but this does not impact upon the SRN.</p>	<p>The junction circulatory operates as per the 'do-minimum' however the eastbound mainline is more congested because of operational issues backing back from Lofthouse Interchange. Westbound carriageway is free flowing as per the 'do-minimum'.</p>	<p>Operates as per the 'do-minimum' within the PM peak period.</p>

2030 Future			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>The circulatory is very heavily congested throughout the peak periods. This is a result of the merge at the eastbound on-slip, which backs up through the circulatory and causes congestion on the LRN as well. Congestion on the eastbound M62 mainline backs up through J26. Westbound flows are affected by issues generated at J26.</p>	<p>The circulatory is very heavily congested throughout the peak periods. This is a result of the merge at the eastbound on-slip, which backs up through the circulatory and causes congestion on the LRN as well. Congestion on the eastbound M62 mainline backs up through J26. Westbound flows are affected by issues generated at J26.</p>	<p>Congestion is prevalent on all sections of the junction. Compared to the do-minimum, congestion has worsened on the mainline through the junction in both directions.</p>	<p>Small improvement in traffic flows on the eastbound carriageway. Westbound, traffic flows are free flowing as per the 'do-minimum'. The junction circulatory is also less congested although there remains substantial congestion on some LRN arms.</p>

### 10.2.2 M1 Junction 40, Ossett

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: PPP Scheme to southbound off-slip</li> <li>Indicative potential scheme: The existing 3 lane section of the LRN approaches is to be extended to provide more stacking capacity</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
Minimal delay is modelled at this location in either the AM or PM time periods.		Small deterioration to the junction circulatory and LRN. SRN operation unchanged.	Junction circulatory is more congested than within the 'do-minimum' because of higher LRN travel demand within the 'do-something' matrices. This does not affect the operation of the SRN.

2030 Future			
Do Minimum		Do Something	
AM	PM	AM	PM
The junction circulatory and northbound movements are impacted upon from congestion on the northbound mainline. This congestion is due to issues at junction 41. Southbound movements are free flowing.	Severe circulatory congestion but no effect on SRN mainline. There is however queuing traffic on the off-slips and waiting traffic off the LRN links.	Significant improvement in operation as reduced congestion backing up from M1 J41.	Operates as per the 'do-minimum' within this peak period. Slightly lower congestion on the southbound off-slip.

# 10.3 H559 NAT Summary

## AM 2021

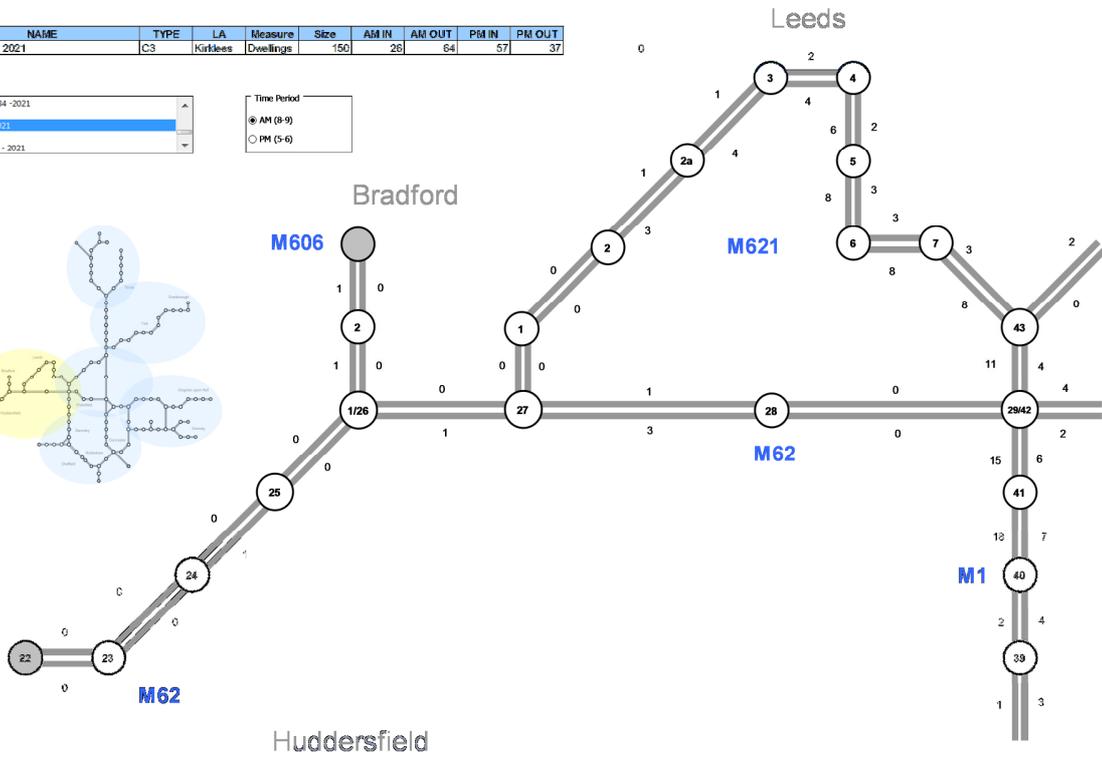
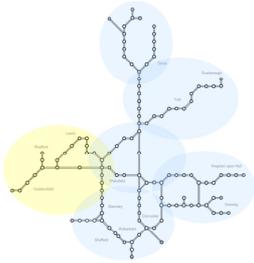
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
703-H559 - 2021	C3	Kirklees	Dwellings	150	26	64	57	37

139-MDGB2134 - 2021
703-H559
703-H559 - 2021
248-E1831 B1
248-E1831 B1 - 2021

Time Period

● AM (9-9)

○ PM (5-6)



## PM 2021

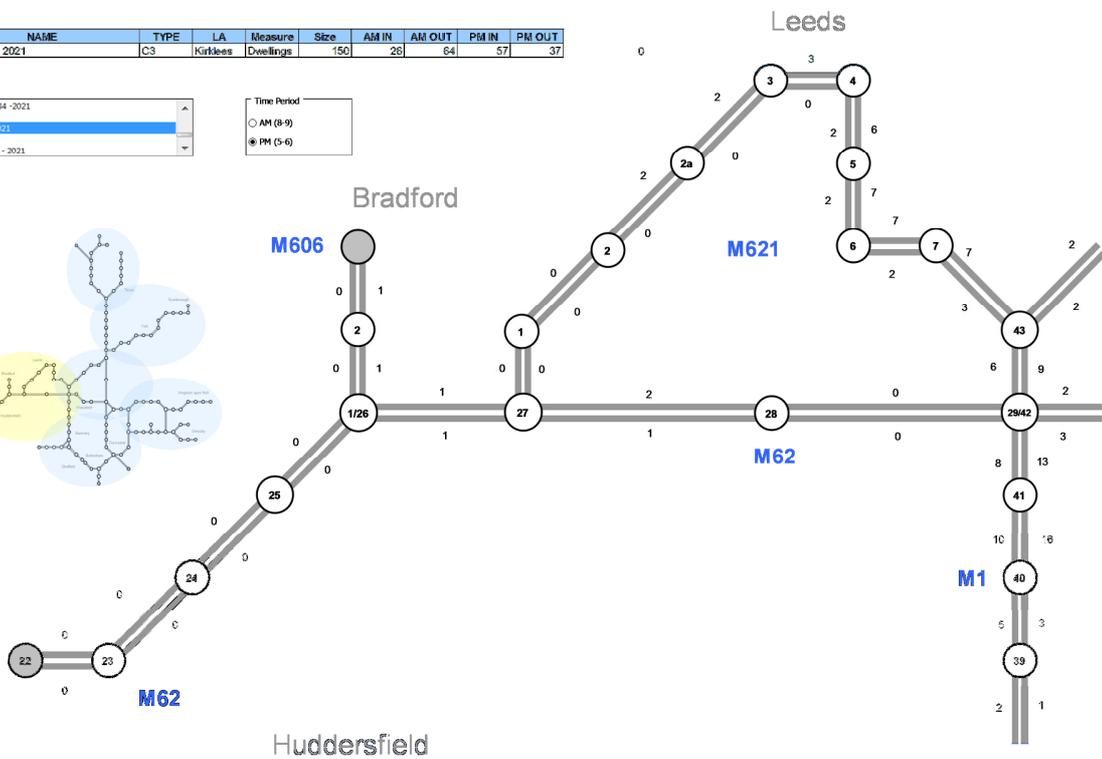
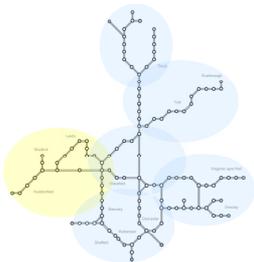
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
703-H559 - 2021	C3	Kirklees	Dwellings	150	26	64	57	37

139-MDGB2134 - 2021
703-H559
703-H559 - 2021
248-E1831 B1
248-E1831 B1 - 2021

Time Period

○ AM (9-9)

● PM (5-6)



AM Full Build-Out

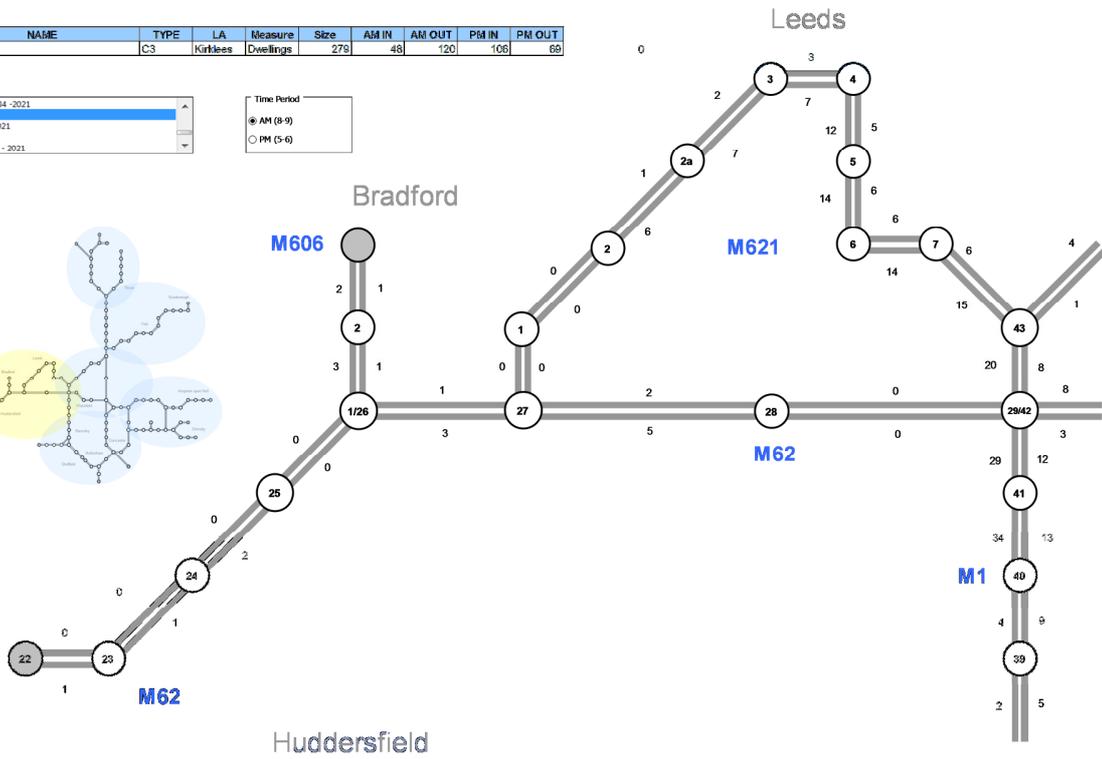
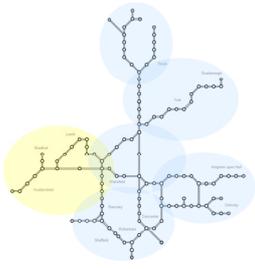
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
703-H559	C3	Kirkless	Dwellings	279	48	120	106	69

139-MDGB2134 - 2021
703-H559
703-H559 - 2021
248-E1831 E1
248-E1831 E1 - 2021

Time Period

AM (8-9)

PM (5-6)



PM Full Build-Out

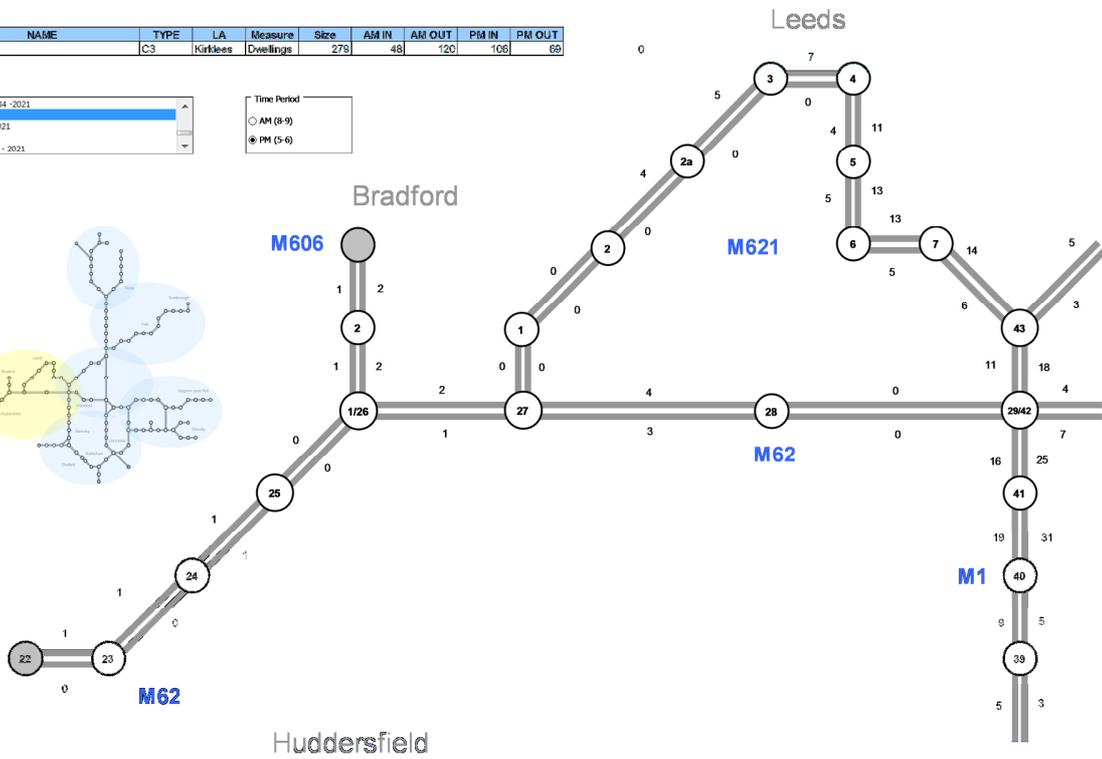
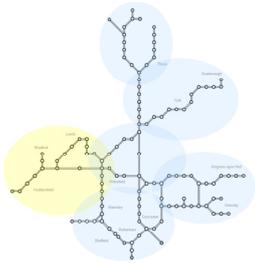
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
703-H559	C3	Kirkless	Dwellings	279	48	120	106	69

139-MDGB2134 - 2021
703-H559
703-H559 - 2021
248-E1831 E1
248-E1831 E1 - 2021

Time Period

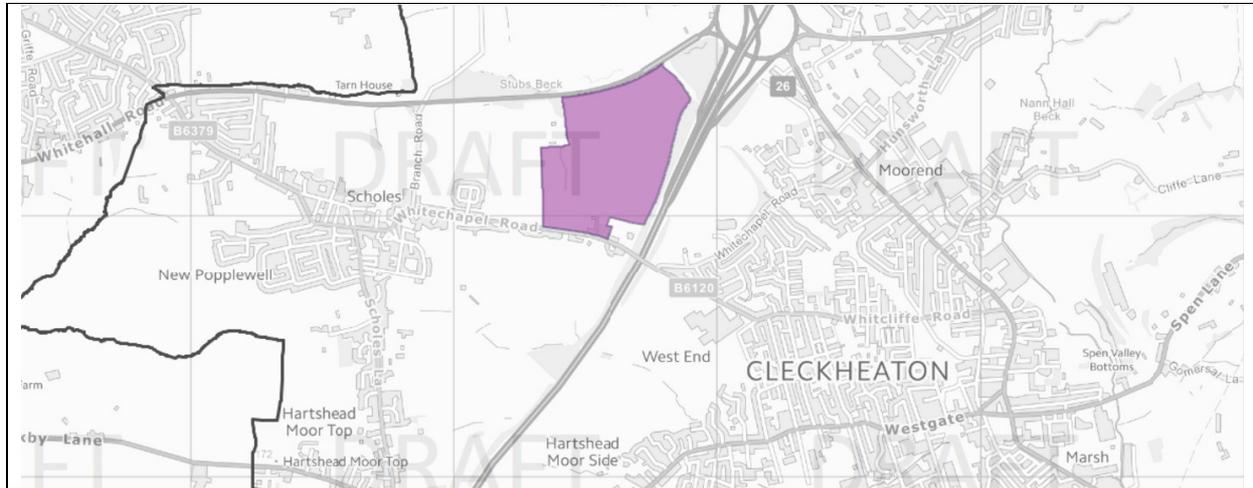
AM (8-9)

PM (5-6)



# Site E1831

## 11.1 E1831 Site Summary



Site Address	Land to the north and west of, The Royds, Whitechapel Road, Cleckheaton
Residential Units (2021)	N/A
Employment Space (2021)	41,020 sqm (B1)
Ownership	Private
SRN	M62 at Junction 26 Chain Bar
Operation Summary	<p>Most traffic to and from this development will be routed via M62 J26/M606 interchange at Chain Bar. The Meso model for this junction indicates congestion in 2022 on several parts of this junction, including the eastbound and westbound carriageways, and the eastern half of the circulatory. Congestion is worse overall in the AM peak. By 2030 there is only significant worsening in congestion on the westbound approach to the junction.</p> <p>The NAT model shows that there will be a limited number of additional trips in the interim 2021 year. These are not likely to generate significant issues. However, in the full build-out scenario, there are over 300 additional two-way trips at this location, a number which is likely to generate problems at several points on the junction as well as further upstream.</p>

# 11.2 E1831 Meso Summary

## 11.2.1 M62 Junction 26, Chain Bar

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: Capacity enhancements to the circulatory carriageway programmed 2015/16</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Congestion is modelled on the eastbound carriageway because of merging traffic. Westbound, more severe congestion is modelled on approach to the junction prior to the diverge. This congestion backs up towards J27.</p>	<p>Lower levels of congestion are modelled at this junction and on approach to this junction in the PM than the AM peak.</p>	<p>Eastbound movements are as per the 'do-minimum'. Westbound mainline congestion has increased at this location due to higher traffic demand within the network in this area because of M62 J24a. The congestion is generated by the diverge at M62 J26. This congestion is lower in the PM peak period.</p>	

2030 Future			
<ul style="list-style-type: none"> <li>Committed scheme: M62: J26 (M606 Chain Bar): provision of a direct link from the M62 westbound to the M606 northbound; reduces congestion from the main part of the existing junction</li> <li>Indicative potential schemes: Opening up of the HOV lane to all traffic and signalisation of the M606 approach to the roundabout. Upgrade of the M62 westbound diverge to type D1 ghost island or D2 Parallel Diverge.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Congestion is modelled on the eastbound carriageway because of merging traffic. Westbound, more severe congestion is modelled on approach to the junction prior to the diverge. This congestion backs up through J27 and beyond.</p>	<p>Congestion in the PM peak is broadly the same as in the AM peak, with some alleviation on the circulatory.</p>	<p>Operates as per the 'do-minimum' within this peak period.</p>	<p>Congestion in the PM peak is broadly the same as in the AM peak, with some alleviation on the circulatory, and less congestion westbound before the junction.</p>

# 11.3 E1831 NAT Summary

## AM 2021

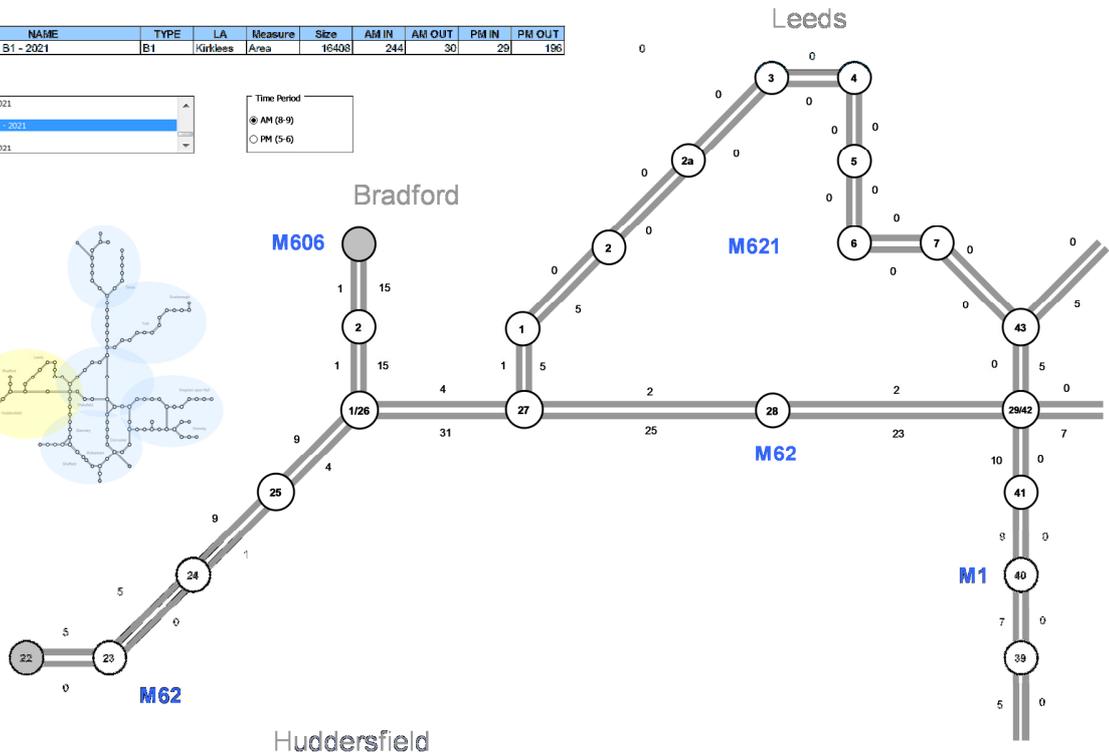
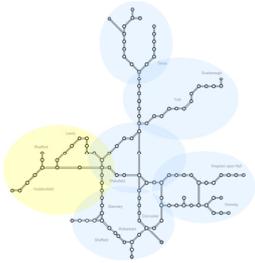
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
248-E1831 B1 - 2021	B1	Kirklees	Area	16408	244	30	29	196

703-H559 - 2021
248-E1831 B1
<b>248-E1831 B1 - 2021</b>
243-H706
243-H706 - 2021

Time Period

● AM (9-9)

○ PM (5-6)



## PM 2021

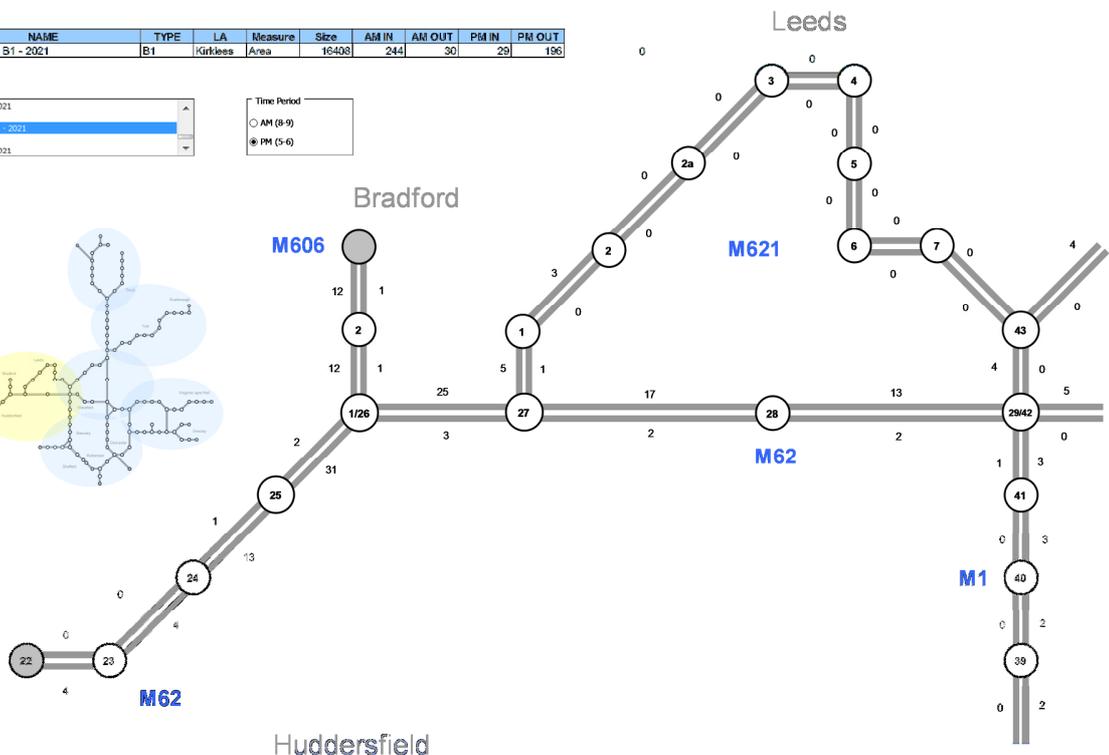
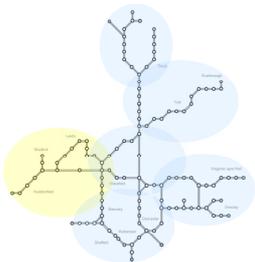
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
248-E1831 B1 - 2021	B1	Kirklees	Area	16408	244	30	29	196

703-H559 - 2021
248-E1831 B1
<b>248-E1831 B1 - 2021</b>
243-H706
243-H706 - 2021

Time Period

○ AM (9-9)

● PM (5-6)

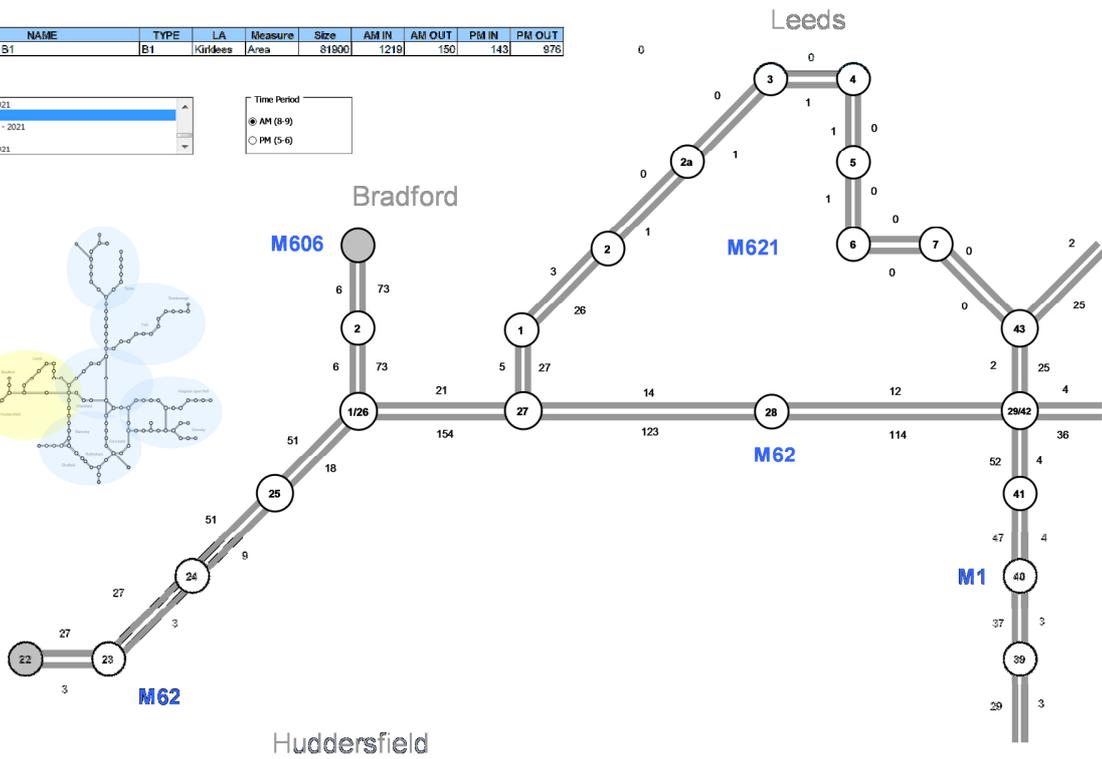
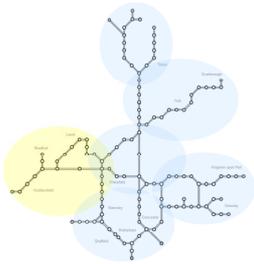


AM Full Build-Out

NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-E1831 B1	B1	Kirkstess	Area	81900	1219	150	143	976

- 703-H559 - 2021
- 243-E1831 B1
- 243-E1831 B1 - 2021
- 243-H706
- 243-H706 - 2021

- Time Period
- AM (8-9)
  - PM (5-6)

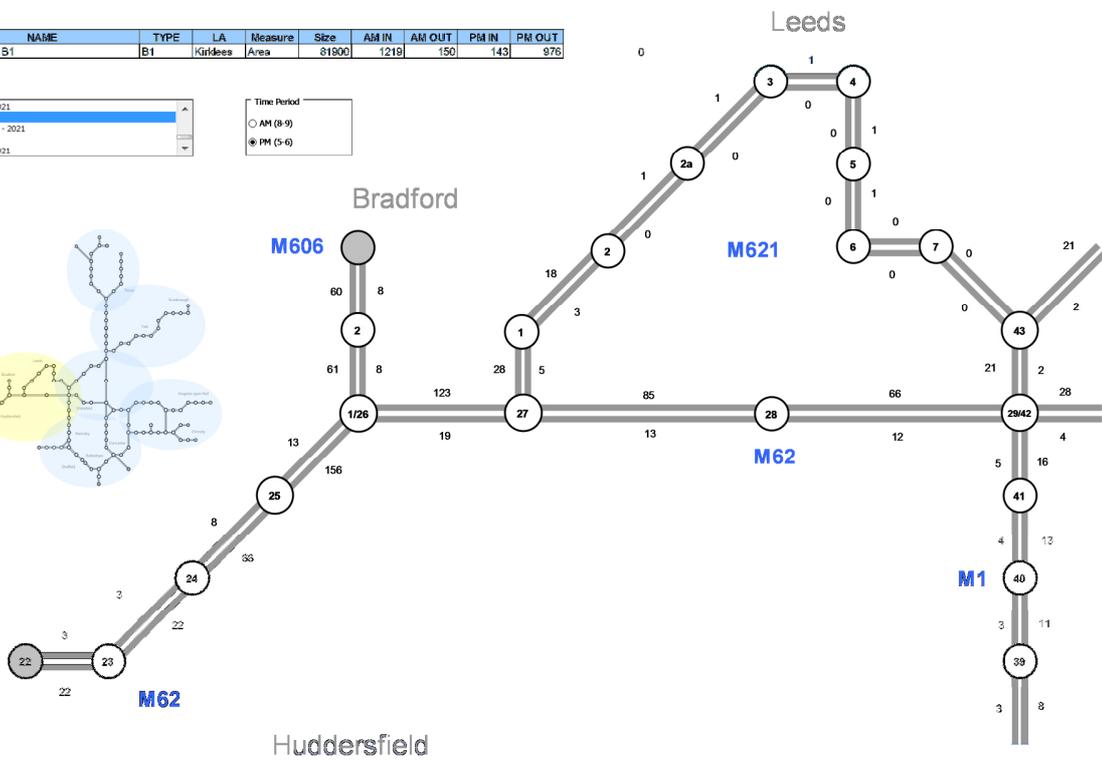
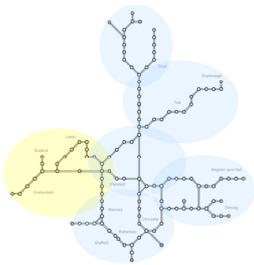


PM Full Build-Out

NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-E1831 B1	B1	Kirkstess	Area	81900	1219	150	143	976

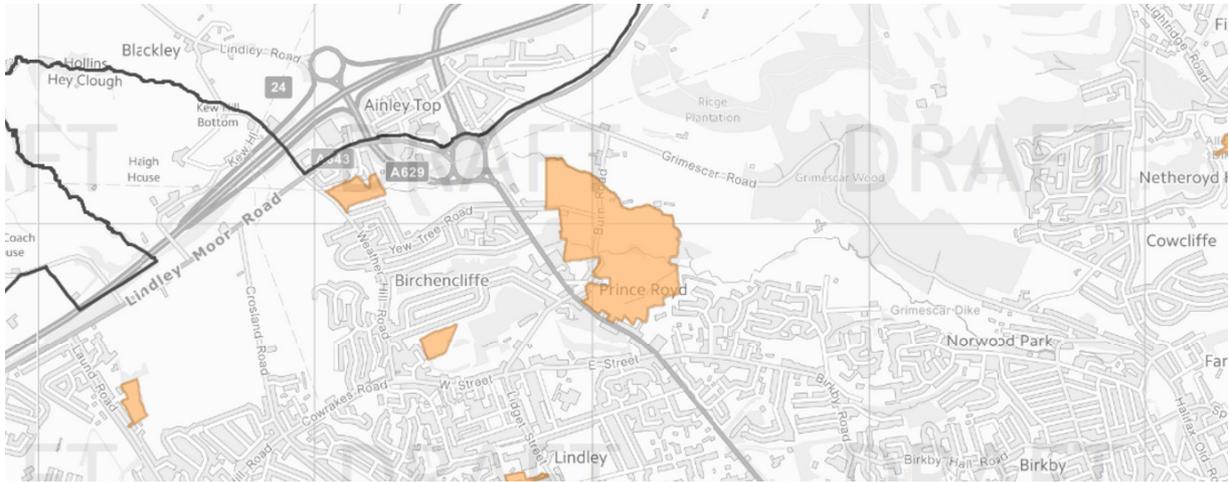
- 703-H559 - 2021
- 243-E1831 B1
- 243-E1831 B1 - 2021
- 243-H706
- 243-H706 - 2021

- Time Period
- AM (8-9)
  - PM (5-6)



# Site H706

## 12.1 H706 Site Summary



Site Address	Land east of Halifax Road, Birchencliffe, Huddersfield
Residential Units (2021)	200 dwellings (392 in future)
Employment Space (2021)	N/A
Ownership	Private
SRN	Adjacent to M62 junction 24 Ainley Top
Operation Summary	<p>The traffic generated by this development will likely be felt at Junction 24 Ainley Top. However, The Meso model indicates that the junction will experience little congestion in 2021, with or without the planned schemes, but that it will only operate well in 2030 if the potential schemes come forward.</p> <p>The interim 2021 NAT model sees a low number of additional trips at the junction at Ainley Top. By the time the full build-out is complete, there are approximately 50-60 additional two-way trips in the peak hours. This will likely generate additional congestion, but mainly on the approach roundabout, and there would not be significant impact on the SRN mainline operations.</p>

# 12.2 H706 Meso Summary

## 12.2.1 M61 Junction 24, Ainley Top

2022 Interim			
<ul style="list-style-type: none"> <li>Committed scheme: M62 J20-25 Smart motorways across the Pennines, from Rochdale to Brighouse. Links 2 existing Smart motorway sections to create a continuous smart route from Leeds to Manchester.</li> <li>Indicative potential scheme: Three lanes approach from M62 westbound off-slip on A629 to provide more stacking capacity and weave section.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Junction largely operates well despite high levels of traffic around the southern circulatory in both the AM and PM peaks.</p>		<p>Operates as per the 'do-minimum' within both the AM and PM peak periods.</p>	

2030 Future			
<ul style="list-style-type: none"> <li>Indicative potential scheme: Two lane provision through top island to M62 westbound. Closure of southern circulatory arc.</li> </ul>			
Do Minimum		Do Something	
AM	PM	AM	PM
<p>Due to a lane restriction on the northern roundabout, congestion backs up through the southern roundabout and onto the westbound off-slip. This causes congestion on the westbound mainline within the AM peak.</p>		<p>Greatly improved operation because of the indicative potential scheme. Minimal congestion modelled.</p>	

# 12.3 H706 NAT Summary

AM 2021

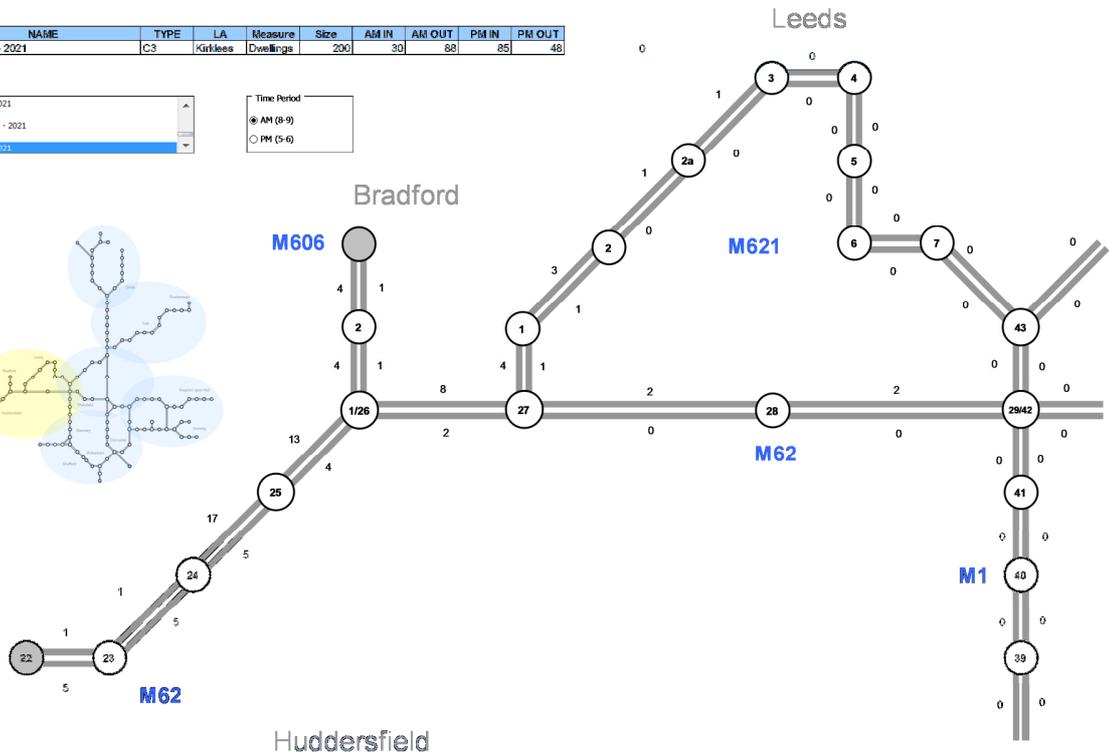
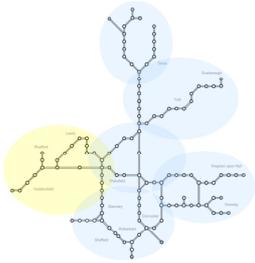
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-H706 - 2021	C3	Kirklees	Dwellings	200	30	88	85	48

- 703-H559 - 2021
- 248-E1831 B1
- 248-E1831 B1 - 2021
- 243-H706
- 243-H706 - 2021

Time Period

● AM (9-9)

○ PM (5-6)



PM 2021

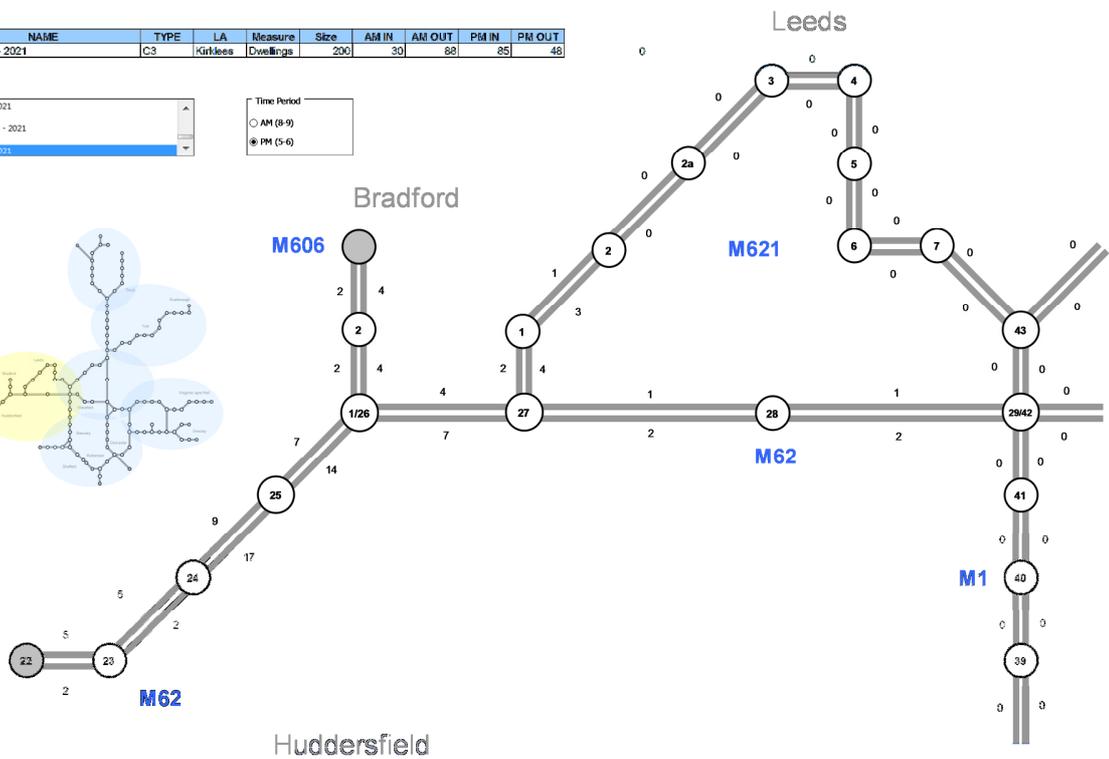
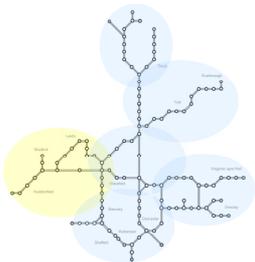
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-H706 - 2021	C3	Kirklees	Dwellings	200	30	88	85	48

- 703-H559 - 2021
- 248-E1831 B1
- 248-E1831 B1 - 2021
- 243-H706
- 243-H706 - 2021

Time Period

○ AM (9-9)

● PM (5-6)



AM Full Build-Out

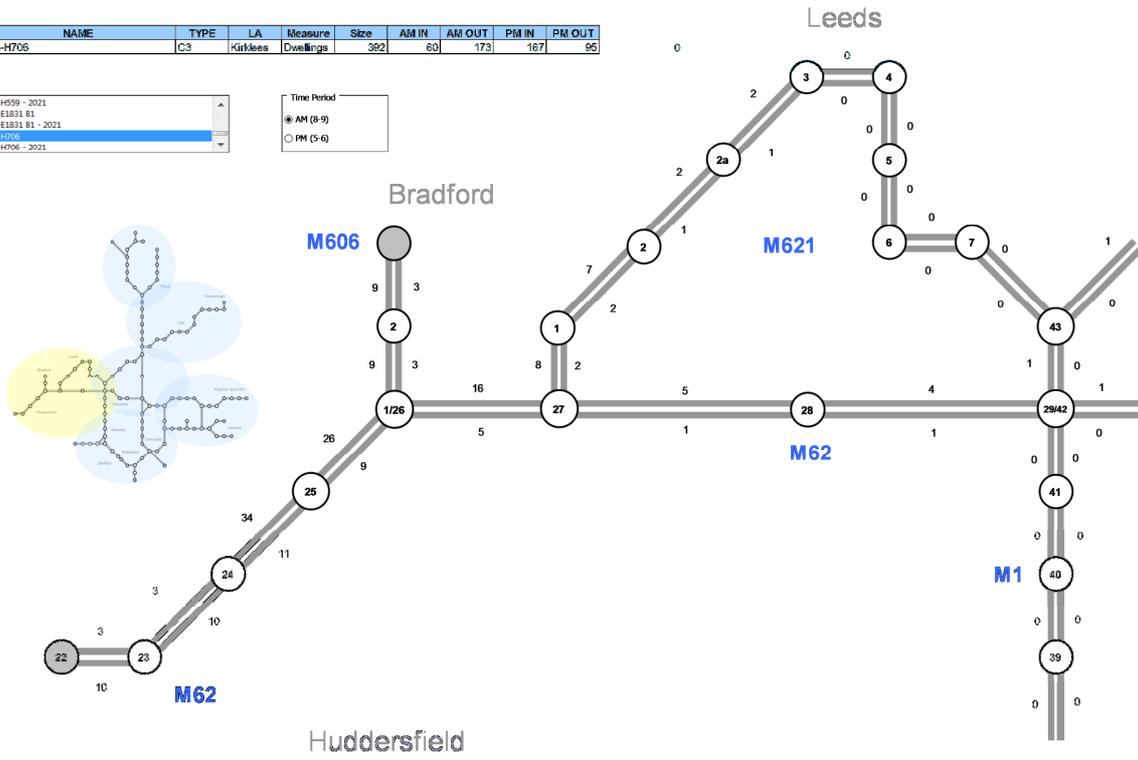
NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-H706	C3	Kirkless	Dwellings	382	60	173	167	85

703-H599 - 2021
248-E1831 B1
248-E1831 B1 - 2021
243-H706
243-H706 - 2021

Time Period

AM (8-9)

PM (5-6)



PM Full Build-Out

NAME	TYPE	LA	Measure	Size	AM IN	AM OUT	PM IN	PM OUT
243-H706	C3	Kirkless	Dwellings	382	60	173	167	85

703-H599 - 2021
248-E1831 B1
248-E1831 B1 - 2021
243-H706
243-H706 - 2021

Time Period

AM (8-9)

PM (5-6)

