Implications for housing developments within the proposed Wyre Local Plan

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Lancashire County Council

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Executive summary

In order to assess the capacity of the highway network to accommodate indicative development within Wyre this study recognises that localities within the vicinity of the A6 face different issues than those on the Peninsula. The overarching factor restricting development along much of the A6 is capacity constraints on M55 Junction 1. On the Peninsula corridor capacity constraints include the local highway network serving Poulton-le-Fylde, Thornton, the A585 (T) and M55 Junction 3. As a result localities have been assigned to either the A6 corridor or the Peninsula corridor depending on their proximity to each. This provides a platform to analyse the scope for indicative development and associated impacts on the highway network.

Following the introduction this study analyses congestion, public transport and personal injury accidents (PIAs) at a district level. This enables the identification of any areas of particular concern that should be considered further when assessing individual sites.

In order to assess congestion Highways Analyst, the GraHAM toolkit (toolkit) and Saturn have been utilised. Highways Analyst produces speed maps which have been used as an aid to identify areas of congestion on the current network. The GraHAM toolkit has modelled three different spatial development options highlighting congestion (volume/capacity) on links. Saturn has modelled M55 Junctions 1 and 3 using the same spatial development options.

Collectively the information shows that on the Peninsula corridor areas of concern include the A586 through Poulton-le-Flyde to the boundary of Blackpool, A588 from the junction with A586 up to and including Shard Road / Shard Bridge, large sections of the A585 (T) and M55 Junction 3. On the A6 corridor congestion is forecasted on M55 Junction 1 westbound off-slip where traffic queues back on to the mainline link creating a safety issue.

Public transport information shows that the bus network is more comprehensive and frequent on the Peninsula corridor, and particularly so with the presence of a tram

service. It also recognises that Poulton-le-Flyde railway station is set to benefit from a fully electrified line between Blackpool North and Preston as well as brand new electric trains. Consequently it is anticipated the volume of passengers using the service will increase. As such, where possible, development should be located where it can best utilise public transport services and infrastructure which predominantly is on the Peninsula corridor.

Personal injury records (PIAs) for the last 5 complete years have been analysed (2011-2015). As expected this shows a proportionately high concentration of injuries as a result of road traffic accidents in urban areas which are predominantly located within the Peninsula corridor.

The study suggests a quantum of development within each locality by first looking at the A6 corridor followed by the Peninsula corridor.

The study concludes that the overarching restriction affecting the majority of localities within the A6 corridor is the ability of the M55 Junction 1 to accommodate development traffic. Currently traffic queues from the westbound off slip on to the mainline link (M55 and beyond) for periods of the day extending beyond the traditional weekday peaks. This creates safety and operational concerns. Consequently restriction zones have been applied to localities depending on their proximity and propensity to use M55 Junction 1. Using this methodology and a desktop assessment (DA) when necessary, the following quantum is suggested within the A6 corridor.

Suggested quantum of development on the A6 corridor

Locality	**Restriction zone**	**Maximum number of dwellings, based on historic analysis**
Garstang (south and central)	n_1	See Appendix E for LCC statutory comments including dwelling numbers and triggers.
Bowgreave	n_1	
Nateby	n_1	

Churchtown	n_1	
Catterall	n_1	
Bilsborrow	n_1	
Barton	n_1	
Winmarleigh	n_1	
Inskip	n_2	Up to a maximum of 200 between localities within n_2
St Michael's on Wyre	n_2	Up to a maximum of 200 between localities within n_2
Forton	n_3	450
Scorton	n_3	0
Hollins Lane	n_3	80
Calder Vale	n_3	0

Note: M55 junction 1 has been re-examined and analysed with new traffic data and includes the use of a wider strategic model (Saturn) to consider the influence of a new M55 J2, and other highway changes to the local network, including the M55 junction 1. This work has been undertaken with the support of Highways England (HE).

The DA takes a broad brush approach which is not as detailed as a transport assessment (TA). TAs for individual sites have not been possible as no detailed site information is provided at this stage. Instead using accessibility measures, congestion data, public transport information and engineering judgement a DA gives a strategic indication on a reasonable quantum of development within each locality.

The Peninsula corridor primarily utilises DAs to assess a reasonable quantum of indicative housing development within individual localities. In most cases it removes itself from analysing the effect development will have on the strategic road network, as this comes under the remit of Highways England (HE). It does however highlight if traffic will queue back onto the local road network from pinch points on the strategic road network.

The Department for Transport's Road Investment Strategy (RIS) identified the Windy Harbour to Skippool section of the A585 (T) as a major improvement scheme. The scheme is anticipated to have a positive effect in aiding development within the Peninsula corridor. However at the time of writing the exact form of the scheme is unknown. As a result, in most cases, a reasonable estimation has been made on the positive effect the HE scheme would have and its effect on the local highway network. This assessment has explicitly stated where this has not been possible and instead suggested a quantum based on the current road network. In such a case the study tool provided to Wyre BC should be used to aid in adjusting the quantum. The HE study tool expands on the implication various iterations of schemes on the A585 (T) and M55 Junction 3 have on the quantum of development.

Suggested quantum of development on the Peninsula corridor

Locality	**Permitted number of dwellings**	**Additional information[1]**
Poulton-le-Fylde	390	A proportion of dwellings to be located to the north of Poulton, in close proximity to the town centre. This requires delivery of the mitigation strategy, as per Appendix F.
Thornton	835	
Cleveleys	40	
Fleetwood	220	
Great Eccleston	500	
Hambleton, Stalmine, Knott End/ Preesall	250	Total across all sites in area. Also Total here + 1/3 Pilling <= 300
Pilling	300	See above for relationship with Hambleton, Stalmine and Knott End/ Preesall

[1] IO references relate to the potential development sites shown in the Issues and Options document.

Section one - Introduction

1.1 Background

The Wyre Local Plan Issues and Options document was published in summer 2015 for public consultation and set out three spatial development options each looking to potentially deliver between 6,800 and 9,700 dwellings[2] over the Plan period 2011 to 2031. The potential number of dwellings allocated to each settlement under each option was not stated in the document. However, for the purposes of analysing the potential impacts of the different options Wyre Borough Council produced some indicative figures to show how the options may look in terms of quantum of development at each settlement. The figures are based on the quantum of development that could come forward on the sites shown in the Issues and Options document. In some settlements these figures represent the theoretical maximum number of dwellings that could be located there however for other settlements additional land could potentially come forward in order to deliver the OAN requirement for housing. The indicative distribution of the three broad spatial options is described below. Option 1 - Focus development on the Fylde Coast peninsula main urban area (Fleetwood, Thornton, Cleveleys and Poulton-le-Fylde) with the remainder of new development being split between settlements on the A6 corridor (Garstang, Catterall, Bilsborrow, Bowgreave and Barton) and other defined rural settlements.

[2] The 2013 Joint Fylde Coast Strategic Housing Market Assessment showed that the objectively assessed need (OAN) lay between 340 and 485 dwellings per year.

Table 1: Indicative distribution of Housing Development under Option 1

Option 1 – Fylde Coast Peninsula Main Urban Area Focus		
Area	% of Total Number of Dwellings	Number of Dwellings
Fylde Coast Peninsula (Fleetwood, Thornton, Cleveleys and Poulton-le-Fylde)	60%	4,800 – 5,400
A6 Corridor (Garstang, Bowgreave, Catterall, Bilsborrow and Barton)	25%	2,000 – 2,250
Remaining rural settlements (including Great Eccleston, Hambleton, Knott End/Preesall, Stalmine and Inskip)	15%	1,200 – 1,350
Winmarleigh and Nateby	0%	0

Option 2 - Directs a greater proportion of new development on settlements located on the A6 corridor including Garstang, Catterall, Bilsborrow, Bowgreave and Barton. A moderate level of development will also be directed to the Fylde Coast peninsula and, as with option 1, some development would be directed in other defined rural settlements. Unlike option 1, this would also consolidate and expand Winmarleigh and Nateby, both of which are in relatively close proximity to the A6 corridor and Garstang.

Table 2: Indicative distribution of Housing Development under Option 2

Option 2 – A6 Corridor Focus		
Area	% of Total Number of Dwellings	Number of Dwellings
Fylde Coast Peninsula (Fleetwood, Thornton,	35%	2,800 – 3,150

Cleveleys and Poulton-le-Fylde)		
A6 Corridor (Garstang, Bowgreave, Catterall, Bilsborrow and Barton)	40%	3,200 – 3,600
Remaining rural settlements (including Great Eccleston, Hambleton, Knott End/Preesall, Stalmine and Inskip)	15%	1,200 – 1,350
Winmarleigh and Nateby	10%	800 – 900

Option 3 - Development will be dispersed more evenly across the Borough. This would result in a significantly greater proportion of development being directed to rural settlements. As with option 2, it would also consolidate and expand Winmarleigh and Nateby.

Table 3: Indicative of Housing Development under Option 3

Option 3 – Dispersal		
Area	% of Total Number of Dwellings	Number of Dwellings
Fylde Coast Peninsula (Fleetwood, Thornton, Cleveleys and Poulton-le-Fylde)	35%	2,800 – 3,150
A6 Corridor (Garstang, Bowgreave, Catterall, Bilsborrow and Barton)	30%	2,400 – 2,700
Remaining rural settlements (including Great Eccleston, Hambleton, Knott End/ Preesall, Stalmine & Inskip)	25%	2,000 – 2,250
Winmarleigh and Nateby	10%	800 – 900

For a visual indication of the potential number of dwellings at specific settlements please see Appendix A.

This report considers sites individually and collectively (within reason) and does not provide support, or a conclusion, to any one option proposed by Wyre Council. This allows the opportunity for a hybrid option to be progressed having regard to key highway/transport constraints.

1.2 Purpose of this document

Wyre Borough Council, Highways England, (HE) and Lancashire County Council, (LCC) have worked together for some time in consultation with Fylde and Blackpool Councils to establish the transport impacts of a number of strategic scenarios for housing provision in Wyre.

This document seeks to identify the theoretical spare capacity of the local highway network to accommodate further development as at the date of publication of the Report. In doing so it provides a strategic overview by advising on the maximum number of residential units (for definition see note below) that can be accommodated before it has a severe impact on the road network. Further to this, it provides a guide on the suitability of potential sites to accommodate housing development from a highway perspective. The two elements combined enable LCC to give strategic advice to Wyre Borough Council on the scale of housing development at different locations within the Borough between 2011 and 2031. In some cases, where the network currently faces network constraints, or is forecast to suffer from severe congestion in the future, mitigation measures will be required, where deliverable. These measures are to be funded, and in most cases delivered, by the developer.

Individual sites brought forward would be done so on their own merits and require a satisfactory detailed transport assessment/statement.

Note residential units for the purpose of this report includes all housing types under user class C3 including dwellings, flats, small business at home, communal housing of elderly and or handicapped, sheltered accommodation etc.

The comments provided consider the residential aspect of the local plan in a reasonable level of detail as presented; consideration has been given to other land use types such as employment/commercial. The cumulative impacts of residential development assumes that most employment needs are within existing employment locations and that there will be a propensity to travel towards those existing locations, of which a high proportion will be beyond the local residential catchment and probably beyond the boundary of the district i.e. employment leakage. Employment within the boundaries of Wyre, whether on the periphery of the built environment or beyond, will still have impacts. However, employment located in the District, whether an extension to an existing employment area/zone or new and or being closer to its customers (i.e. rural employment) should reduce the level of employment leakage and wider impact. Thus supporting the sustainability of Wyre and the ability to better serve and satisfy its own needs whilst also reducing distance travelled to employment (for those influenced residents) or as part of commercial activity.

Whilst it is recognised that employment such as manufacturing or warehousing/distribution in itself results in an outward movement, it is also accepted that logistics of business does reside in locations that does satisfy its own business needs i.e. in close proximity to employees, customers or other suppliers as part of a chain or primary/strategic network. Whilst outward movement is inevitable, from an operations perspective, employers often seek to limit outward impacts during network peaks to support business efficiency.

With regard to locations for employment, access to a suitable network is of paramount importance so that can be supported, having regard to the business type and need. Access from sites must have regard to vehicle types and local constraints, whether highway or amenity related. Access should be available to support all movement types, including non-motorised, to maximise a sites sustainability credentials and linkages to the wider network on suitable roads. Internal layouts must cater for all needs and impacts whether sustainability related, parking or manoeuvring.

It is important that housing and employment types complement each other to maximise benefits, and limiting impacts, however it is accepted this is not always in the control of Wyre Council.

The County Council supports the principle of growth in the county's key economic centres, its strategic employment sites, and to support its town centres and coastal visitor economy, with the important proviso that delivery of the scale and potential distribution of housing development envisaged in Wyre to meet its housing supply will require, where necessary, major additional transport infrastructure.

The evidence presented in this Report is strategic in nature and proportionate to the Local Plan process. More detail assessment will be required to support each planning application, at that time.

1.3 Understanding the network

In order to provide clarity it is necessary to understand how the network currently operates. Fundamental to this is acknowledging existing constraints and understanding the concept of corridors and the extent of them. Figure 1 shows the key routes which will form the basis of the analysis and the foundation on which the concept of the corridors is based.

Key routes include the A585 (T) and A6 and their interaction with the M55, in particular pinch points at Junctions 1 and 3 respectively. The A585 (T) forms the basis of the Peninsula corridor and the A6 the basis of the A6 corridor.

The A585 (T) links Fleetwood, North Blackpool, Thornton-Cleveleys and Poulton-le-Fylde with the M55 at Junction 3. There are significant traffic volumes travelling to and from the Fleetwood peninsula via the A585 (T), which at times struggles to cope with the current level of traffic.

The A585 is a trunk road and as a result Highways England is responsible for managing and maintaining this key route. Proposed development within Wyre Local Plan will no doubt have an impact on the A585 (T). As a result, in order to ensure the A585 (T) operates as effectively as possible along its entire length, LCC will work with Highways England to carry forward a programme of cost effective, reliable improvements which will where possible accommodate some level of housing development. A major step towards this aim is The Department for Transport's Road Investment Strategy (RIS) which identified the Windy Harbour to Skippool section of

the A585 (T) as a major improvement scheme. The scheme is anticipated to have a positive effect in aiding development within the Peninsula corridor. However at the time of writing the exact form of the scheme is unknown.

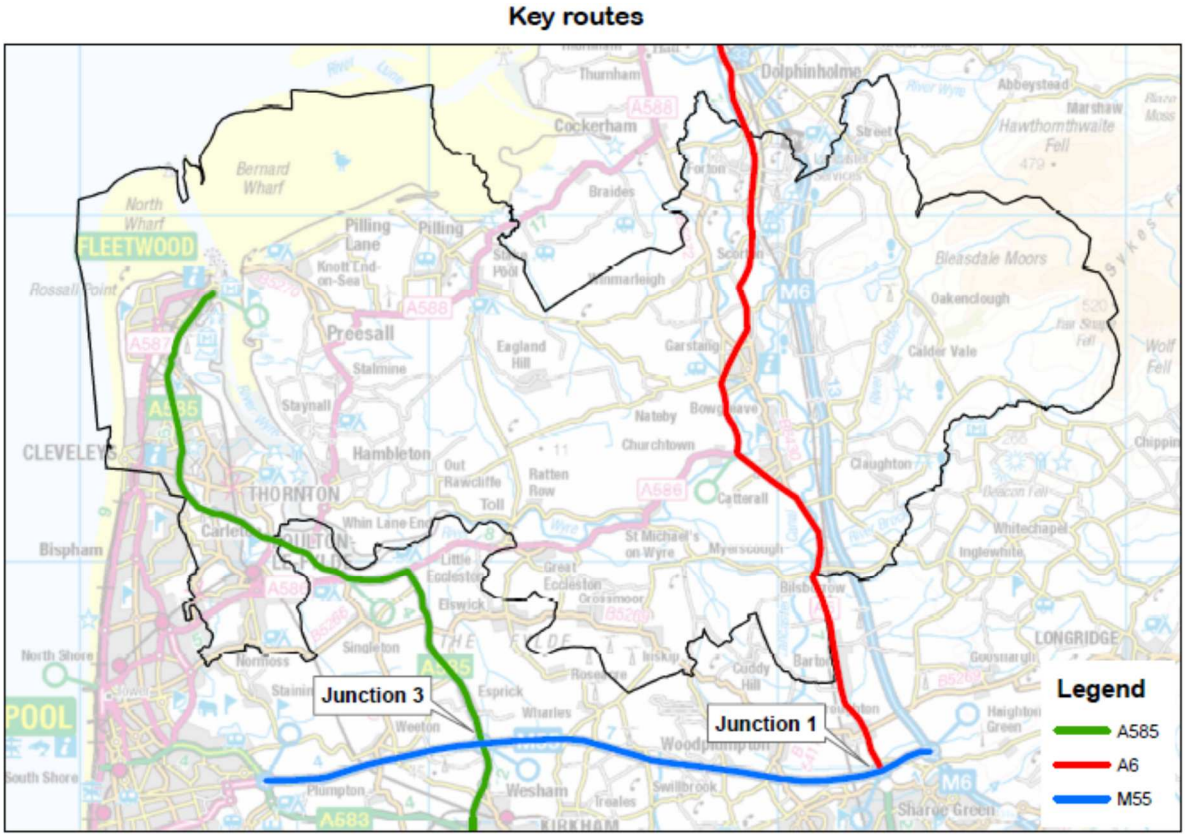


Figure 1

To the east of the Borough, the A6 provides connectivity between Garstang and the rural areas and the M6 and Preston. From the A6 there is no direct access to the M6 south of Junction 33 and instead a key access point is via Junction 1 of the M55. This contributes to congestion which exists in the Broughton area and at Junction 1 which has significant implications for travel into Preston.

The idea/suggestion of a new motorway junction between junctions 32 and 33 of the M6 has been the subject of successive approaches from Wyre Borough Council to Highways England. Highways England has consistently cited policy as a reason which would preclude a new motorway junction in this general location, on a principal section of the national motorway network, to serve primarily local journeys. Lancashire County Council separately has pointed to the considerable costs of introducing a new junction

in this area, partly due to the close proximity of the West Coast Main Line and Lancaster Canal along large sections of the A6-M6 route. At present there are policy, engineering (local and strategic highway networks) and financial/delivery obstacles that result in a new junction being not considered viable. Therefore the addition of a new junction within this plan period is unlikely and has not been considered further in this report.

Separately construction is currently underway on a bypass to relieve congestion in Broughton; this will be completed late summer, 2017. The bypass will greatly reduce traffic in the centre of Broughton and improve journey times for motorists by creating a new route from the Broughton roundabout at Junction 1 of the M55 to the A6 north of the village. The bypass will also provide some benefit to M55 junction 1 at its intersection.

1.4 Extent of the corridors

Towns and villages within Wyre will be categorised to either the Peninsula or A6 corridor. These are defined based on which of two strategic pinch points, identified in Section 2.2, M55 Junctions 1 and 3, are most likely to be affected. Those with a higher chance of contributing to congestion at M55 Junction 3 have been categorised as being in the Peninsula corridor and those likely to affect M55 Junction 1 in the A6 corridor.

With this rationale in mind, the proximity of towns and villages to the Peninsula or A6 corridor has been used to allocate them to their respective corridors. Towns and villages located east of the A6 are categorised under the A6 corridor, as are Winmarleigh and Nateby, both of which are in relatively close proximity west of the A6 corridor. Figure 2 provides a list of the towns and villages which have been classified in the Peninsula or the A6 corridor.

Figure 2 – corridor classification

Peninsula corridor (A585)	**A6 corridor**
Poulton-le-Fylde, Thornton, Cleveleys, Fleetwood, Hambleton, Knott End, Preesall, Stalmine, Pilling, Great Eccleston, Inskip and St. Michael's on Wyre	Barton, Bilsborrow, Catterall, Bowgreave, Garstang, Nateby, Winmarleigh, Scorton, Forton, Churchtown, Hollins Lane, Calder Vale, Inskip and St. Michael's on Wyre

It is acknowledged that classifying indicative development localities is not an exact science. The villages of Inskip and St. Michael's on Wyre are equally as likely to have interaction with strategic pinch points in either corridor. Consequently the two villages have been categorised in both to satisfy constraints which apply to respective corridors.

1.5 Sources of information

The sources of information within this report include:

- Assessment of the implication of future housing development in the Wyre Borough (Jacobs, January 2016)
- Journey time statistics: Access to services: Notes and definitions. Department for Transport (December 2015)
- Northern Rail, north west electrification http://www.networkrail.co.uk/North_West_electrification.aspx
- Road Safety Foundation http://www.roadsafetyfoundation.org/news/2015/9/15/how-much-do-road-crashes-cost-where-you-live.aspx
- Wyre Local Plan – A585(T) corridor evidence base (CH2M, April 2016)
- Poulton-le-Fylde Congestion study (Jacobs)

1.6 Structure of the document

Following this introduction, this report consists of a further three sections. Section two presents background evidence which includes assessing the outputs of transport models, public transport and personal injury accident data. The evidence presented in this section is not specific to indicative sites outlined in the emerging Wyre Local Plan.

Instead it is a district wide analysis which provides a platform from which to analyse specific localities.

Section three utilises the evidence provided in section two and applies it to indicative localities within the emerging Wyre Local Plan. Further to this it suggests a quantum of development within each locality. However as no detailed site information is provided at this stage it is not possible to undertake a transport assessment (TA). Section four provides a conclusion for the document.

The main body of text within this report will be structured as follows:

Section 2 - Background evidence

- 2.1: Introduction
- 2.2: Congestion
- 2.3: Public transport network
- 2.4: Personal Injury Accidents (PIAs)

Section 3 - Recommendation

- 3.1: Introduction
- 3.2: Sample Desktop Assessment (DA)
- 3.3: A6 corridor
- 3.4: Peninsula corridor

Section 4

- 4.1: Conclusion

Section two - Background evidence

2.1 Introduction

This section assesses congestion public transport and personal injury accidents (PIAs) at a district level. This enables the identification of any areas of particular concern that should be considered further when assessing individual sites within section three.

2.2 Congestion

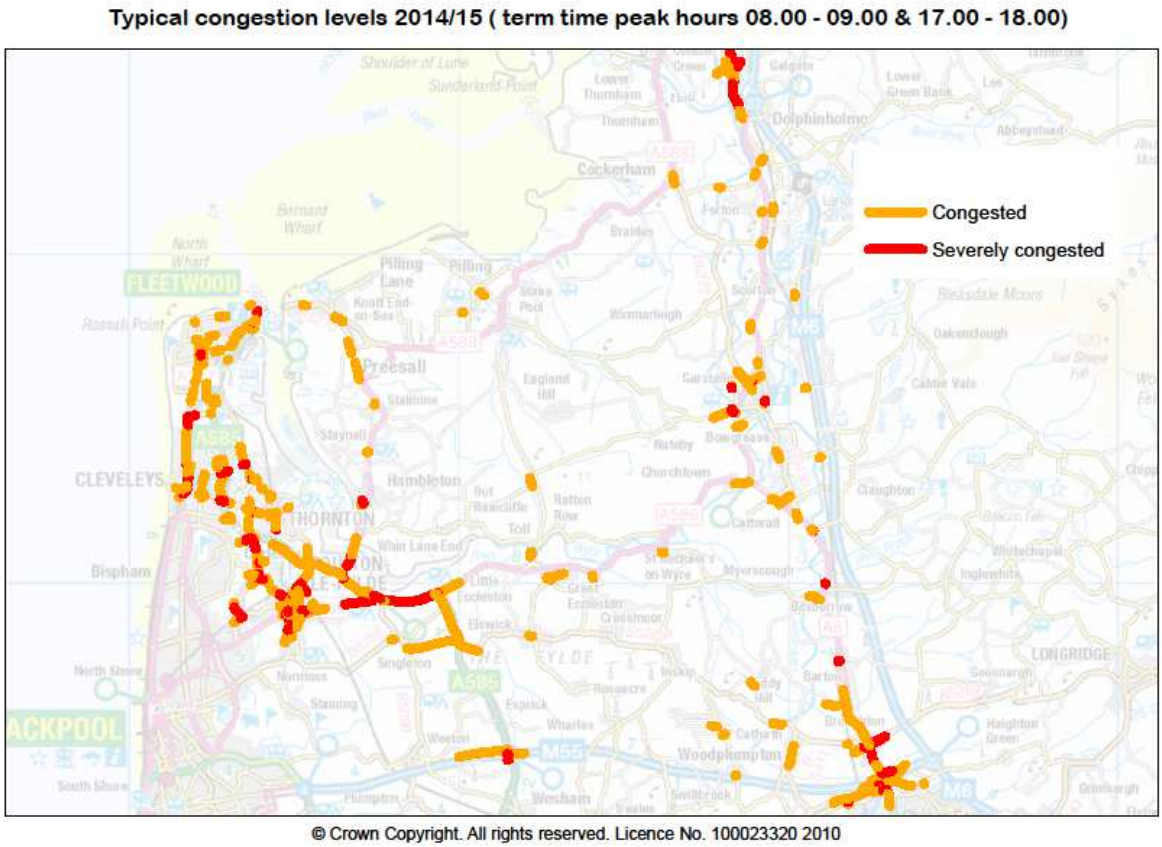
A key aspect of assessing the impact of indicative housing development on the highway network is understanding the extent of any additional congestion it may cause. In order to do this three specialised software packages were used, Highway Analyst, the GraHAM toolkit and Saturn. Additional work was also undertaken by CH2M with respect to M55 Junction 3 and A585(T).

1) Highways Analyst: this analyses the Trafficmaster dataset provided by the DfT to produce speed and congestion maps. The maps provide an evidence based indication of local highway network operation, as opposed to discrete elements or links, and can assist in identifying those sections of the network that experience delay during the peak and off peak hours. Factors which may affect the speed of traffic along a link can include volume of traffic, link capacity, junctions, geometry, pedestrian crossings, pinch points, private accesses and parked or stationary vehicles.

The map shown in Figure 3 represents the output of the Highways Analyst programme. The following parameters were applied when analysing the data:
Date range: 1st September 2014 to 31st August 2015, week days, term time only
Time periods: AM Peak (08:00 – 09:00) and PM peak (17:00 – 18:00)
[3]Severe congestion definition: < 30% of free flow speed, during either peak
Congestion definition: 30% to 60% of free flow speed, during either peak

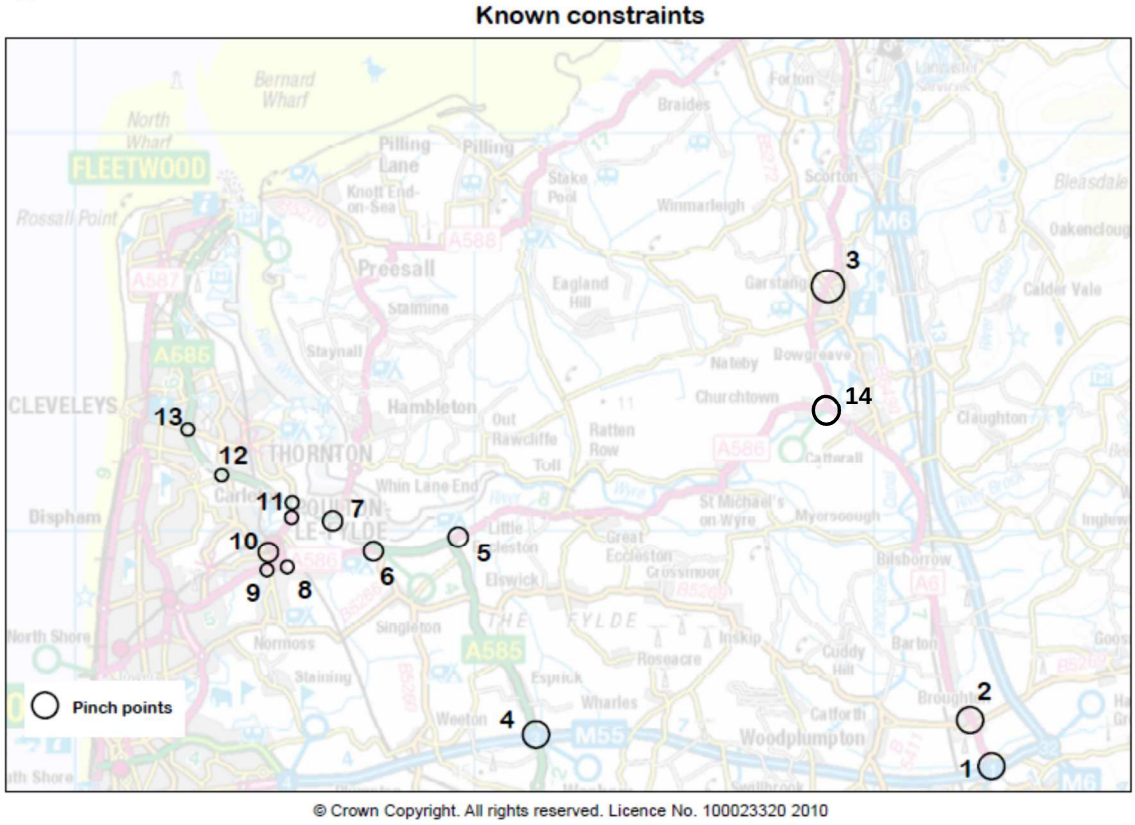
[3] Used in this study solely for the purposes of presenting an illustration of current network conditions , and should not be used for the purpose of defining severe impact in NPPF terms

Figure 3



With the aid of Figure 3 it is possible to identify congestion pinch points. These have been highlighted in Figure 4.

Figure 4



Note points 15-17 are not included on the above plan, however 15 and 16 are located close to points 8-10 and 17 is located close to point 3

Some of the highlighted pinch points within Figure 4 have some form of mitigation in place or have allocated funding for improvements. Mitigation will not necessarily ease congestion and safety concerns to a level which may enable additional housing development over the Local Plan period. Highlighted junctions include:

1) M55 Junction 1 - LCC are still working with developers who are progressing with large development proposals in order to facilitate and secure developer contributions to support the delivery of a junction improvement and other linked corridor measures, in line with CIL Regulations.
2) A6 / B5269 junction (Broughton) - Broughton bypass will ease congestion at this pinch point. This will be completed late summer 2017.
3) A6/ Croston Barn Lane / Cockerham Road / Green Lane / Croston Road
4) M55 Junction 3.

5) Garstang Road (A586) / Garstang New Road (A585) / Windy Harbour - Highways England have recently realigned and widened the existing cross roads to create extra lanes through the junction to ease congestion.
6) Garstang Road (A586) / Garstang New Road (A585) / Pool Foot Lane - Highways England A585(T) Windy Harbour to Skippool scheme will ease congestion.
7) Shard Road (A588) / Mains Lane - Highways England A585(T) Windy Harbour to Skippool scheme will ease congestion.
8) Lower Green (A588) / Garstang Road East.
9) Garstang Road West / Garstang Road East / Hardhorn Road / Higher Green (A588)
10) In and around Breck Road / Blackpool Old Road Junction - Hardhorn link road and pedestrian crossing will ease congestion.
11) Skippool roundabout / Breck Road and Skippool Road / Skippool roundabout - Highways England A585(T) Windy Harbour to Skippool scheme will ease congestion
12) Norcross roundabout A585(T) - LCC are working closely with Wyre BC and HE to progress the opportunity for suitable mitigation at this pinch point.
13) B5412 / A585(T) roundabout - LCC are working closely with Wyre BC and HE to progress the opportunity for suitable mitigation at this pinch point
14) A6/A586 priority junction – LCC are working closely with developers to deliver an improved junction here. Its delivery can be phased in line with funding, but the completed improvement will be a signalised junction.
15) Garstang Road East / Moorland Road (not shown on plan).
16) Garstang Road East / Aldon Road (not shown on plan).
17) A6 / Longmoor Lane – LCC are working closely with developers to deliver an improved junction here (not shown on plan).

In addition to the above congestion constraints LCC have developed an A6 Barton to Garstang Sustainable Transport Strategy (including safety and network efficiency). The strategy will deliver a number of improvements that will address concerns over highway safety and promote walking, cycling and public transport use as well as junction/network efficiency. Its delivery with other highway changes maximises the level of development that can be accommodated, its funding is from development.

Note: The new junction 2 on the M55 will provide some relief to junction 1 as NW Preston traffic will use junction 2. An internal road through the D'urton Lane / Eastway development in north Preston will provide a route linking D'urton Lane (near Broughton Bypass) to Eastway. This will deliver an alternative route bypassing Junction 1 of the M55 for light vehicles (weight restriction to be imposed), once the road is adopted by LCC. The new junction 2 will also provide some relief to Junction 3 of the M55, by providing an alternative route for traffic to BAE Systems and the Enterprise Zone at Warton.

The above are key locations on the main routes, it is not intended to be a comprehensive list of junctions/locations with issues, others, such as Thornton Hall bend on Skippool Road exist on the network.

Figures 3 and 4 show a number of areas within the Peninsula corridor which are a cause for concern. Of particular note is the congestion/severe congestion highlighted within Poulton-le-Fylde, the A586 to the boundary with Blackpool, large sections of the A585(T) and Shard Bridge/Shard Road. On the A6 corridor Junction 1 of the M55 is a particular concern.

It is appreciated that congestion at its current level on Shard Road / Shard Bridge (A588) is manageable and is largely due to traffic light timing at the A588/A585(T) junction which gives priority to the A585(T). However due to the severity of congestion on the A585(T) and the volume of traffic on the trunk road there is no scope to adjust traffic light timings to favour the A588. Therefore it is anticipated that on the current network congestion will worsen on Shard Road / Shard Bridge (A588) as a result of significant development (pinch point number 7, Figure 4). The A588/A585(T) junction however is part of a HE improvement scheme between Skippool roundabout and Windy Harbour traffic lights.

2) The GraHAM toolkit: this is a rudimentary model used to forecast growth on the Strategic Road Network (SRN). In this case, additional roads were 'turned on' and were subsequently populated with traffic counts data. This resulted in additional outputs for key roads which are not part of the SRN.

The toolkit provides a ratio of volume/theoretical capacity on links, it takes no account of junction capacities which are the major cause of delay on the network. It provides no junction analysis which traditional transport models produce. Furthermore the model is not a traffic re-assignment model as traffic is loaded on to the network at specific points and the output produced shows an increase in congestion on only the quickest origin to destination route. This results in certain routes forecasting higher congestion and others lower congestion than would otherwise be observed in a traditional transport model or in real life. This can be taken as a limitation of the model.

In addition, while the model takes into consideration the construction of Broughton Bypass, it does not consider the potential additional relief provided by the proposed Preston Western Distributor, M55 Junction 2, East West Link road, Cottam link, A585 Windy Harbour Skippool improvements and M55 Junction 1 slip road and circulatory improvements.

Due to the limitations of the model, in isolation, the output can only be used to provide an indication of congestion rather than a basis for an in-depth analysis. However traffic growth figures as a result of indicative development (TEMPRO) contained within the toolkit can be used as a basis to provide advice on the quantum of development.

Appendix B provides all outputs for the year 2030 (when all development has been loaded on to the network) for the GraHAM toolkit. A summary of the output for the GraHAM toolkit and Saturn model is provided in Figure 5.

3) Saturn: this is a traditional traffic re-assignment model which provides junction analysis. Work undertaken as part of the Central Lancashire transport model has been extended to assess the implications of the three scenarios at Junctions 1 and 3 of the M55.

The model takes into consideration all planned future improvements on the road network (e.g. M55 Junction 2, A585 Windy Harbour Skippool improvements).
The output produced by Saturn (see Appendix C) has been utilised in conjunction with the GraHAM toolkit to provide a strategic overview (see Figure 5).

Figure 5 - Strategic overview of the effect of the spatial development options

No Development (2034): *The no development scenario indicates that the vast majority of links are operating within capacity. However the A588 south of Hambleton (Shard Bridge / Shard Road), A585(T) on Mains Lane and just north of M55 Junction 1 show congestion. Congestion is also present for movements in a north/south direction on M55 Junction 3 and mainline links on Junction 1 of the M55 as a result of traffic queuing back from the westbound offslip. Overall this indicates the number of developments on the Peninsula and the A6 corridor will need to be restricted. Congestion is also present between Junctions 31 and 32 of the M6.*

Option 1: Congestion has become acute and more widespread on the Peninsula corridor. Severe congestion is present on Shard Lane/Shard Road to the junction with the A585(T) and on the A588 south of the A585(T). Severe congestion stretches from Poulton-le-Fylde A586 to the Wyre BC boundary with Blackpool. The A585(T) also shows wide spread congestion which is severe on large sections of the road. There is very little difference in absolute flow change at Junction 3 of the M55 regardless of the scale of development due to existing capacity constraints particularly in the north/south direction. The additional traffic output instead re-routes to Junctions 1 and 4.

The A6 corridor for example shows congestion from Bilsborrow to Junction 1 of the M55 in the PM peak (it is also congested in the am peak). Junction 1 shows congestion on mainline links, southern arms of the A6 and westbound-off slip despite infrastructure improvements on Junction 1. Traffic queuing back on to the mainline from the westbound-off slip causes reliability and safety concerns. This suggests that capacity limitations at Junction 1 would not be able to accommodate development i.e. circa 2,000 dwellings (indicative figure within option 1) on the A6 corridor.

Option 2: The A585(T) shows widespread congestion from Junction 3 of the M55 to the junction with B5268 (Fleetwood Road South), however we are aware that HE currently do not consider it severe. As with option 1, severe congestion is present on the A588 on Shard Bridge/Shard Road and in and around Poulton centre. Junction 3 of the M55 is once again indicative of a capacity constrained junction with traffic re-routing to Junctions 1 and 4, although the re-routing is not as severe as in option 1.

The A586 through Poulton-le-Fylde shows, as a complete corridor it is approaching a state of congestion. Isolated sections of road with committed development, will result in the existing network will be operating at its theoretical capacity, when delivered.

Severe congestion is forecast on the A6 south of Catterall to Junction 1 of the M55. At Junction 1 congestion is present on mainline links, southern arms of the A6 and westbound-off slip despite infrastructure improvements on Junction 1 (only). Traffic queuing back on to the mainline from the westbound-off slip causes reliability and safety concerns.

Option 3: Congestion is forecast on the A6 from south of Catterall to Junction 1 of the M55. At Junction 1 capacity constraints as with options 1 and 2 exist. The severity of congestion particularly on the A6 is not as severe as in option 2, but more so than option 1.

Congestion on the A585(T) once again provides a major constraint for development on the Peninsula corridor but it is considered much more manageable than option 1, however does not mean that the network can support unlimited development. Congestion is present from Hambleton to Junction 3 M55 along sections of A588 and A585. Congestion is also present on the A586 from Little Poulton westwards towards Blackpool.

4) Paramics model: Highways England commissioned CH2M to model the impact indicative development would have on the A585(T). The work also includes modelling of M55 Junction 3 which factors in the cumulative impact of indicative development within Wyre and Fylde. A report entitled 'Wyre Local Plan – A585(T) corridor evidence base' provides analysis on the outcome of the modelling. Accompanying the report is a study tool which aids in understanding the level of development which can be progressed with or without suitable mitigation in place. Both the report and study tool should be used by Wyre BC as an evidence base for M55 Junction 3 and A585(T).

Key points (congestion)

- *The Peninsula corridor*

  - congestion hotspots include the A586 through Poulton-le-Fylde to the boundary with Blackpool, A588 from the junction with A586 up to and including Shard Road/Shard Bridge, large sections of the A585(T) and M55 Junction 3
- *The A6 corridor*

  - indicates very little scope to accommodate additional dwellings without addressing congestion issues at Junction 1 of the M55 and connecting highway

corridors. Particular concern is raised with traffic queuing back on to the mainline link from the westbound off slip

- *The CH2M study tool should be used to assess the impact of development on the A585(T) and M55 Junction 3*

2.3 Public transport

This section will focus on public transport infrastructure and services. These are vital as a good public transport network can act as a catalyst for removing car based traffic and aid the potential for housing development.

It is important that larger sites includes public transport which travels through the site with the point of access being different to point of egress, not disadvantaging existing patrons.

2.3.1 Bus services

The following information is a snap shot of frequency. Is subject to change at short notice, for this reason specifics cannot be relied upon. Figure 6 shows bus services which operate on Tuesday between 7am and 10am and Figure 7 presents the information on a map. Please note that the parameters chosen are in accordance with DfT accessibility guidance outlined in '*Journey Time Statistics: Access to Services: Notes and Definitions*' (December 2015). Buses which operate during term time only are not included.

Figure 6 – Bus services operating Tuesday (7am – 10am)

Bus service	**Frequency**
1 (Fleetwood - Cleveleys – Blackpool)	20 minutes
2C (Blackpool - Victoria Hospital - Poulton - Knott End)	30 minutes
3 (Cleveleys Park - Cleveleys - Blackpool - Mereside)	20 minutes
4 (Cleveleys - Blackpool - Mereside)	20 minutes
7 (Cleveleys - Blackpool - St Anne's - Lytham - Saltcotes)	15 minutes
9 (Blackpool – Cleveleys)	20 minutes
9A (Blackpool – Cleveleys)	30 minutes
10 (St. Anne's – Blackpool - Poulton)	Hourly

14 (Fleetwood - Thornton - Blackpool)	10 minutes
15 (Blackpool south circular)	30 minutes
16 (Blackpool south circular)	30 minutes
17 (St. Anne's – Blackpool - Poulton)	Hourly
22 (Fleetwood - Cleveleys - Blackpool)	Hourly
23 (Cleveleys – Cleveleys Park – Pheasants Wood – Cleveleys)	40 minutes *service starts at 09.20*
24 (Poulton – Thornton – Cleveleys)	30 minutes
40 (Preston - Broughton - Garstang - Lancaster)	Approximately 40 minutes
41 (Preston - Garstang – Lancaster – Morecambe)	Hourly
42 (Lancaster - Garstang – Blackpool)	Approximately 1 hour 30 minutes
74 (Fleetwood - Thornton - Poulton - Blackpool)	Hourly
75 (Preston - Kirkham - Poulton)	Hourly
78 (St. Anne's - Lytham - Kirkham - Great Eccleston - Poulton)	Hourly
80 (Myerscough - Great Eccleston - Elswick - Preston)	2 hours
89 (Knott End - Pilling - Lancaster)	Only 1 bus during this time period
89H (Knott End - Polling - Lancaster)	Only 1 bus during this time period

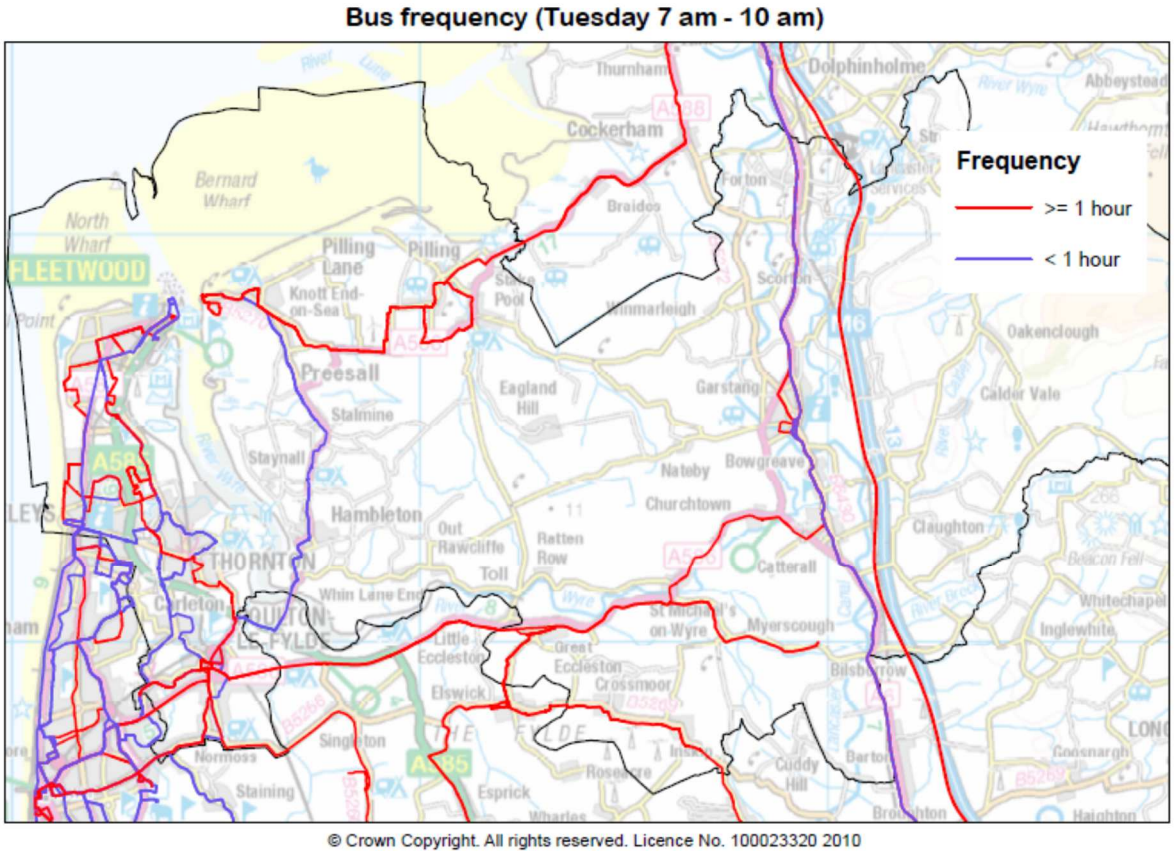


Figure 7

It is clear bus services on the Peninsula corridor are more frequent and extensive than the A6 corridor. However the presence of a bus service does not necessarily mean it is accessible from indicative development sites. Planning for Public Transport and Developments published by the Institute of Highways and Transport states 'the bus route through a development should be as direct as possible, with destinations for bus passengers either side of the route in a corridor whose width involves walks up to 400m, and preferably no more than 300m, to the route'.

These parameters shall be used when assessing accessibility between indicative sites and an operating bus service. This is addressed as part of a desktop assessment (see 3.2 Desktop Assessment).

As of 2nd April 2016 bus service subsidies funded by Lancashire County Council ceased. Consequently operating bus services and any decision made are fully commercial.

2.3.2 Rail services

Light rail: The tramway provides an important service linking residents of Fleetwood, Cleveleys and Bispham into central Blackpool and in the future, directly into Blackpool North and South stations. There is currently a lack of direct interchange between the tramway and the railway. An extension of the upgraded tramway from the Promenade at North Pier to Blackpool North railway station will improve access to the UK rail network from Blackpool, Fleetwood and Cleveleys. Indicative funding has been allocated to this scheme with work commencing 2017/18, subject to value for money being demonstrated to Transport for Lancashire.

Heavy rail: There is one railway station in Wyre located at Poulton. The station is on the Blackpool North line and has frequent services to Preston and direct services to Manchester stations including Manchester Airport. There is also a direct service to Leeds but the rolling stock on this line is poor and journey times are slow.

Network Rail is undertaking works to fully electrify the route between Blackpool North and Preston. Furthermore a Government announcement in December 2015 revealed that the rail service across the North-West will undergo unprecedented improvements through new franchise deals. The transformation will mean brand new carriages will operate on the Blackpool North line.

Brand new electric trains and the potential for direct services to London and Scotland as a result of the electrified line between Blackpool North and Preston would fundamentally transform the nature of Poulton railway station to a significant commuter station. It is anticipated that as a result of this investment the number of commuters using Poulton railway station will increase.

Car parking at Poulton station to accommodate the potential for additional commuters is limited. There are approximately 20 spaces at the station with limited railway land to expand the capacity. However, opportunities may exist to utilise other land within walking distance for these purposes and delivered where possible through developer funding or by other bodies such as Network Rail or Wyre Council.

Large parts of the Borough do not have a direct bus service during the weekday AM peak (8am to 9am) to Poulton railway station. This includes parts of Fleetwood, Cleveleys, St. Michael's on Wyre, Pilling, Inskip and all indicative locations on the A6 corridor. However residents of Fleetwood and Cleveleys travelling by public transport are more likely to travel to Blackpool North station via the tramway or the frequent bus service (bus number 1 and 14 (Blackpool Transport)) which provides a service within a reasonable walking distance of Blackpool North railway station.

Key points (public transport)

- *Public transport is more comprehensive and frequent on the Peninsula corridor, as such, where possible, development should be located where it can best utilise public transport services and infrastructure which predominantly is on the Peninsula corridor.*
- *Operating bus services are commercial decisions.*
- *Poulton railway station is on the Blackpool North line and is set to benefit from a fully electrified line between Blackpool North and Preston and brand new electric trains.*

2.4 Accidents data

Analysis includes all accidents within the study area boundary and certain highlighted routes (see Figure 8). The highlighted routes stretch beyond the boundary of the study area, as any development within Wyre has implications for the accident rate along the full length of these routes.

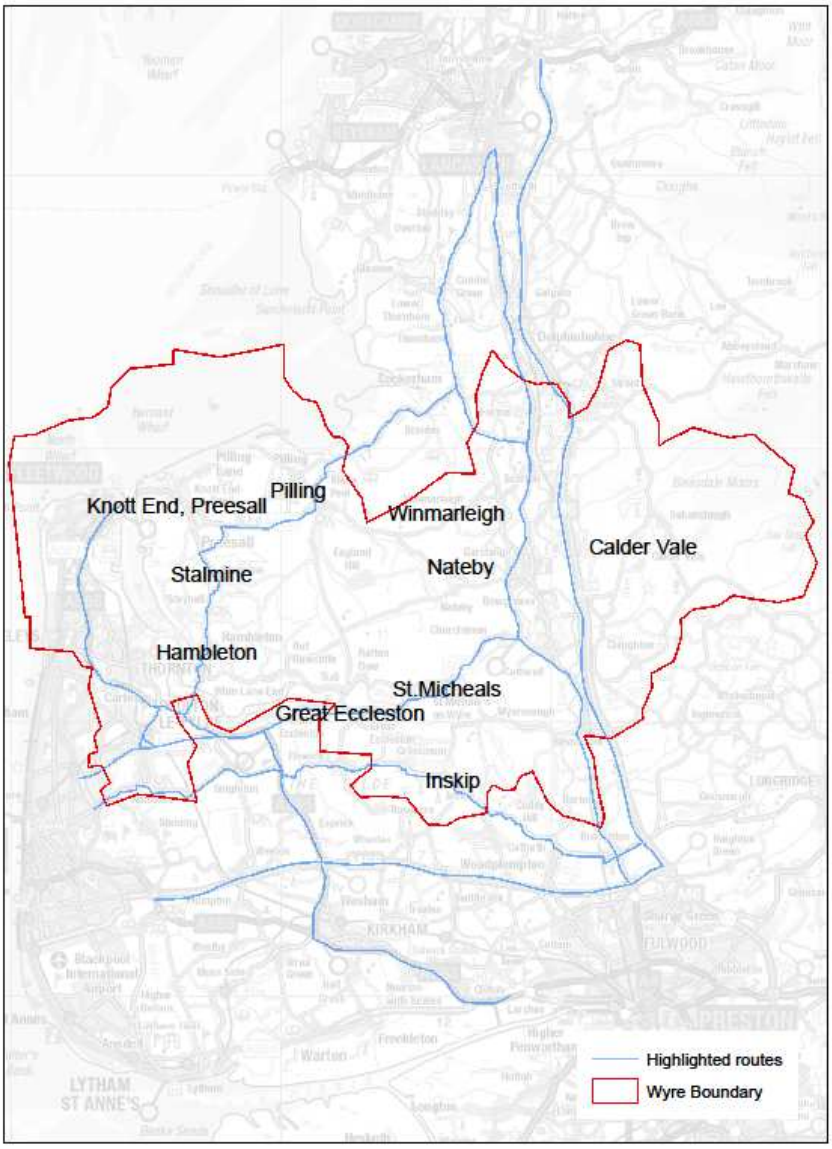
Personal Injury Accident (PIA) data has been obtained from the STATS 19 accident database. This database includes all reported road accidents on the highway in which one or more vehicles are involved, where human death or personal injury occurs and the police are notified within 30 days of the incident.

Accident data has been collected for the most recent five year period which includes data for the years 2011 to 2015. Accidents are classified as either slight, serious or fatal. It should be noted that a single PIA may result in multiple casualties. Furthermore

STATS 19 is not a complete record of all injury accidents and resulting casualties, as some accidents are not reported.

Figure 8

Stats 19 data - area and routes covered



Note: study area includes M55 and M6.

Slight accidents are defined as those in which a casualty only requires roadside attention (e.g. cuts and bruises). Serious injuries are defined as those in which a casualty is detained in hospital or sustains serious injuries (e.g. fractures or internal

injuries). Fatal accidents are defined as those in which a casualty sustains injuries which cause death within thirty days of the accident.

A summary of all PIAs is presented in Figure 9, in which accidents are categorised according to their severity. Appendix D represents the PIA data on maps.

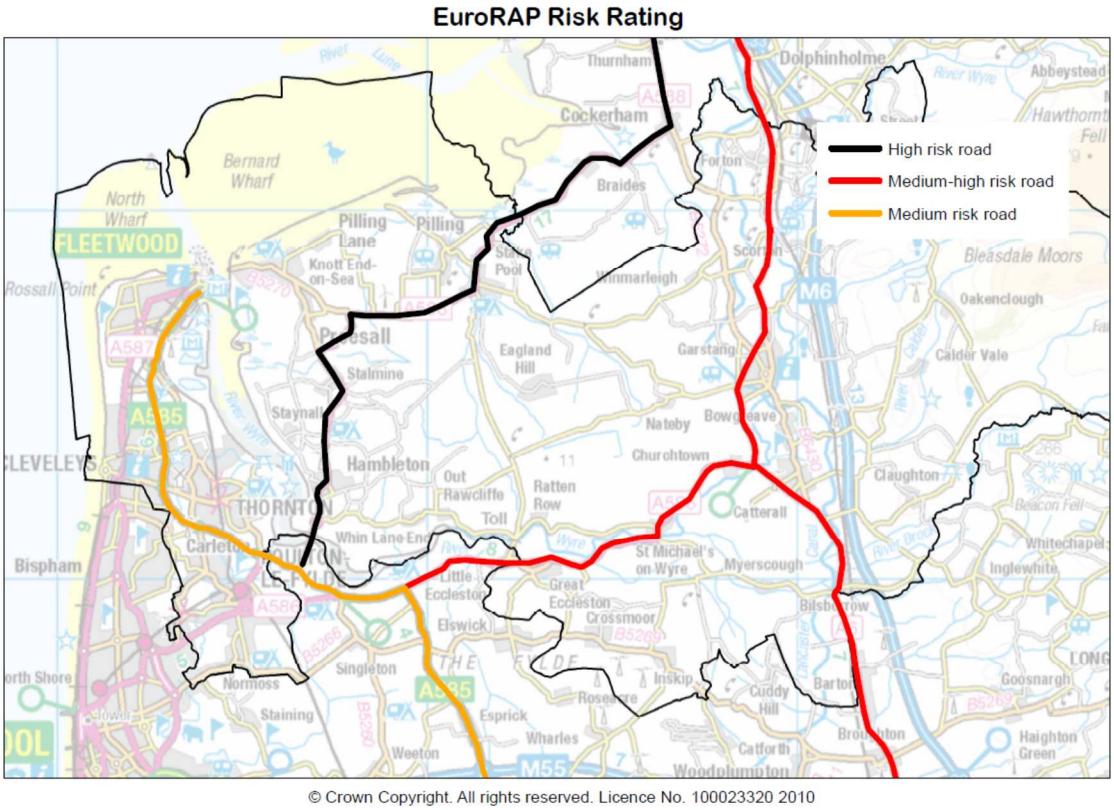
Figure 9 - Stats19 2011 to 2015 (severity of accident)

Severity of accident				
Year	Slight	Serious	Fatal	Total
2011	304	79	8	**391**
2012	341	67	7	**415**
2013	338	88	5	**431**
2014	337	87	4	**428**
2015	296	92	4	**392**
Total	**1616**	**413**	**28**	**2057**
Percentage	**78.56%**	**20.08%**	**1.36%**	

There were a total of 2057 PIAs recorded during the period 2011 to 2015. Unsurprisingly a higher concentration of accidents are found in urban areas, particularly in the Peninsula corridor. This includes the towns of Fleetwood, Cleveleys, Thornton, Poulton-le-Fylde and Hambleton. On the A6 corridor the urban area of Garstang shows a concentration of PIAs.

The European Road Assessment Programme (EuroRAP) has assessed 'A' roads within the North West showing the statistical risk of death or serious injury on the network for 2011-2013. The risk is calculated by comparing the frequency of road collisions resulting in death and serious injury on every stretch of road with how much traffic each road is carrying. For example, if there are 20 collisions on a road carrying 10,000 vehicles a day, the risk is 10 times higher than if the road has the same number of collisions but carries 100,000 vehicles. In accordance to this methodology roads were rated black (high risk roads), red (medium-high risk roads), orange (medium risk roads), yellow (low-medium risk roads) or green (low risk roads). Figure 10 shows the result of this study within the study area.

Figure 10

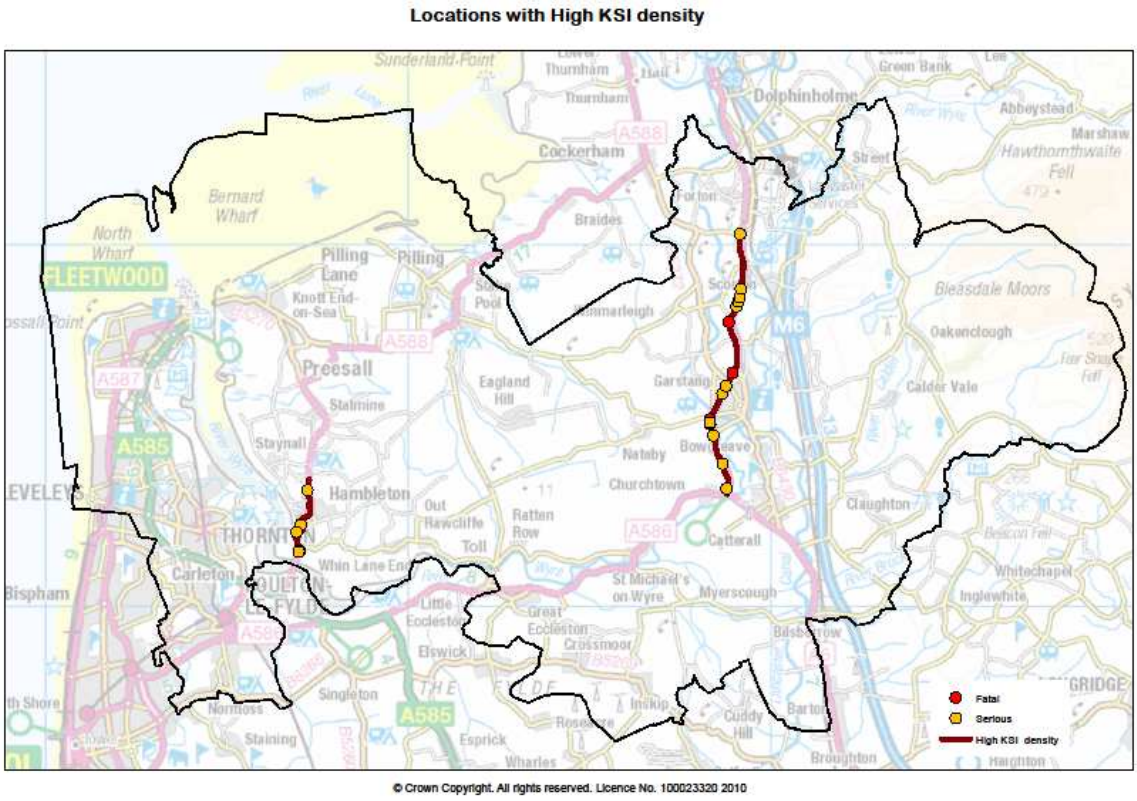


Further analysis was undertaken within Wyre Borough to assess if there were any specific stretches on the highlighted routes within Figure 10 which showed a concentrated area where people were killed or seriously injured (KSI) due to road accidents using the last 3 complete years of data (2013-2015). Figure 11 shows the result of this analysis and Figure 12 the respective locations.

Figure 11 – Road lengths showing a high KSI density

Locality	Road No	Start	End	Length	Killed	Seriously Injured	KSI Density (km)
Hambleton	A588	Shard Bridge	Sower Carr Lane	2360.25	0	6	2.54
Garstang	A6	A586	Hollins Lane	7492.11	3	13	2.14

Figure 12



Casualty rates should be used to highlight a wider network issue which may have an effect on certain developments within the immediate vicinity resulting in suitable mitigation where necessary. The specifics of the mitigation required to address KSI issues will not be addressed in this document. Instead it should be addressed as part of the planning process within the Transport Assessment.

Key points (PIAs)

- *A high concentration of accidents are found in urban areas which are predominantly located within the Peninsula corridor*
- *The A588 through Hambleton has a proportionately high concentration of KSI's*

Section three - Recommendation

3.1 Introduction

Section three takes the evidence provided in section two and applies it to indicative localities within the emerging Wyre Local Plan and builds on this for each locality highlighting opportunities. However, as no detailed site information is provided at this stage it is not possible, nor reasonable, for the local highway authority to undertake a transport assessment (TA), which is necessary evidence provided by the applicant to support an application. Instead when necessary a desktop assessment (DA) will be utilised. Consequently the quantum of development suggested is based on a strategic outlook based on the information at the time. The suitability of sites relates to highway matters only, other constraints, such as flood risk and education provision, are not assessed here.

This section will first present a sample DA sheet and accompanying methodology. Following this it will address indicative development on the A6 corridor followed by the Peninsula corridor.

3.2 Desktop assessment

To assess the suitability of potential sites outlined in the Wyre Local Plan a 'Desktop Assessment' (DA) is utilised in the majority of cases. This process is not detailed as per the documentation/evidence required to support an application such as a transport assessment (TA). Instead the DA will take a broad brush approach and as a result there are a number of issues that cannot be concluded at this stage to allow a site to be delivered (which is typical) i.e. detailed mitigation/its deliverability, accessibility requirements for all modes of transport, details of individual/multi-site access requirements / funding, influence of other commitments or other requirements. Such requirements would ensure that a site could be made sustainable from a transport perspective and that a safe access could be provided. In some cases, where it is found a strategic pinch point does not allow for any development within the locality, a DA has not been undertaken.

A sample DA sheet with guidance on how to complete it is provided in Figure 13. Where numerous indicative development sites are in the same locality, they will be assessed using a single DA sheet.

Figure 13 – Sample DA sheet

Each DA sheet is accompanied by a map showing potential development sites. The A site's IO reference is taken form the Issues and Option document.

Site information	
Corridor:	e.g. Peninsula
Locality and site references:	e.g. Hambleton, Site references e.g. IO_xx, IO_xy
Recommended number of dwellings	Number of dwellings recommended by LCC that can be accommodated by the local highway network.
Predicted increase in two way vehicle trips during peak hour based on the recommended number of dwellings	Possible increase in trips on the network. This calculation is based on trip rates of 0.514/household during peak hour. The trip rate was derived using the TRICS software database and resultant vehicle trips distributed appropriately across the network.

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	Observed speed data was used to assess congestion. Identifying narrow lanes was undertaken via google street view. In general development scale <75 one vehicular access, <300 one vehicle access and emergency access, >300 more than one vehicle access. These are advisory requirements.

Vehicles	Will it significantly contribute to congestion on known strategic pinch points?	Contribution to the following (as per '2.2 Congestion'): 1) M55 Junction 1 2) M55 Junction 3 3) A585 Shard Bridge / Shard Road 4) 'A' roads in and around Poulton
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	e.g. Stalmine
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	See section 2.3.1 bus services.
	If yes - what is the frequency?	e.g. 10 minutes
Pedestrian	Pedestrian access to and around the site:	A brief evaluation of the width of pedestrian footways which provide accessibility to the site. General required footway width 2m, combined cycleway/footway 3.5m. Heavily patronised routes will require greater width (see Manual for Streets 1 and 2, Creating Civilised Streets and DfT's Inclusive Mobility)

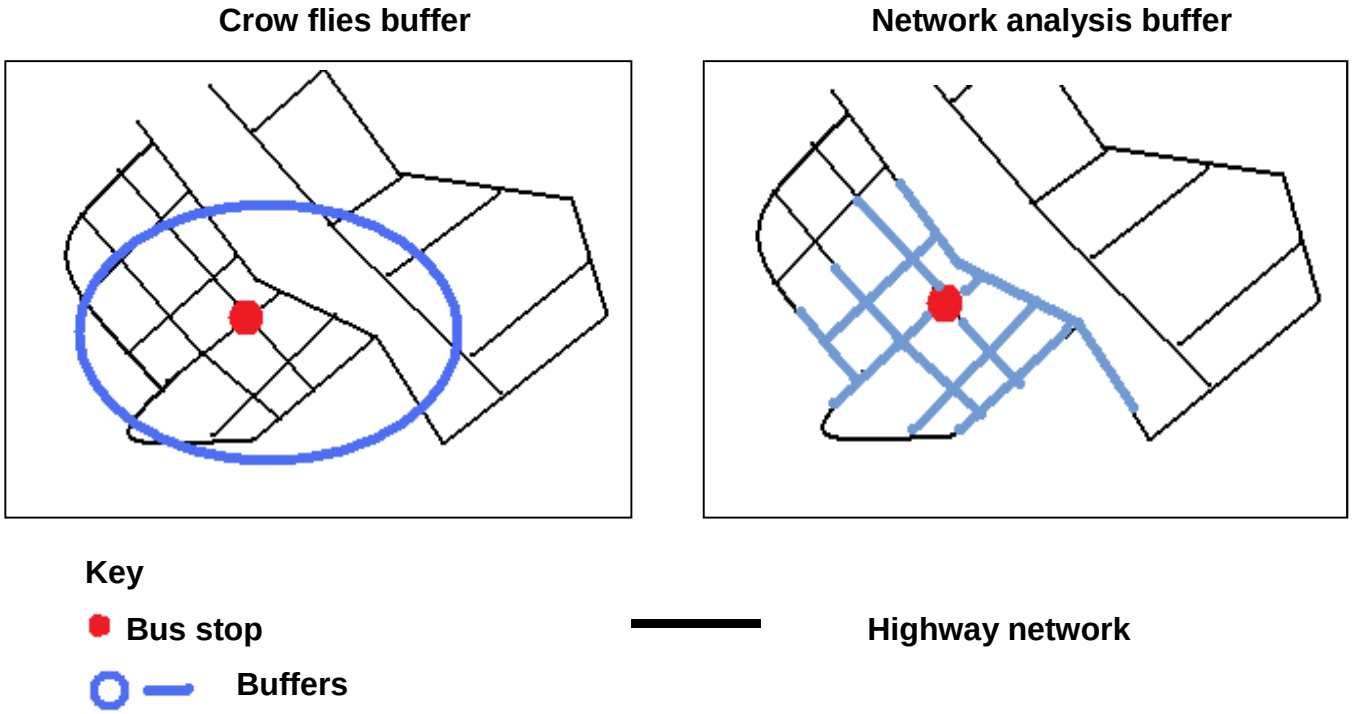
Accessibility	Distance to nearest local centre:	Accessibility is defined as the site's proximity as the crow flies (using walking distances from the furthest part of the site) to local centres, primary schools and GP surgeries. Local centres have been defined within the draft 2008 Wyre Local Centres Study[4]. The rating bands are: 0 - 800m Good 800m - 1600m Adequate Over 1600m Poor
	Distance to nearest primary school	See above *'distance to nearest local centre*'
	Distance to nearest GP:	See above *'distance to nearest local centre*'

Comments
Maximum number of dwellings recommended – XX (In most cases this can be split between sites up to the maximum recommended, although there may be some individual sites where no development can be supported.)
Further comments and summary section. Where a master planning approach is recommended, the expectation is that this would be carried out by the local planning authority and/or prospective applicant(s) in conjunction with landowner(s), developer(s) and other local stakeholders. The highway authority should be involved in the process.

[4] The draft 2008 Wyre Local Centres Study was only ever published as a draft. The study is being updated as part of the Local Plan process.

It is noted that the accessibility measure within the DA applies an ‘as the crow flies' buffer rather than a ‘network analysis’ buffer. Figure 14 highlights the difference between the two.

Figure 14 – Buffer types



The ‘as the crow flies’ buffer shows that more of the network has access to the bus stop. This is because the ‘as the crow flies’ buffer does not factor if an individual can travel to the bus stop via the existing network. Whilst the ‘as the crow flies’ buffer approach is appropriate at the Local Plan stage, at planning application stage the ‘network analysis’ approach is more appropriate and it expected to be used.

3.3 A6 corridor

The A6 corridor has strategic pinch points, the most significant pinch point restricting housing development is Junction 1 M55. Congestion at this point severely restricts the level of additional housing development along the A6 corridor from Junction 1 up to and including south and central Garstang (severe restriction zone (n_1)) where there is a propensity to travel southbound along A6 (rather than northbound towards M6 J33).

Despite being located northwest of Garstang, currently Winmarleigh is also included within the severe restriction zone (n_1). This is due to the road layout where vehicles are likely to travel south on Park Lane and contribute to congestion at M55 Junction 1 and A6/ Croston Barn Lane / Cockerham Road / Green Lane / Croston Road pinch points.

To the west of the severe restriction zone (n_1) lie the indicative development areas of Inskip and St. Michael's on Wyre. On the current network traffic generated from both localities will contribute to congestion at M55 Junction 1 but to a lesser extent than the severe restriction zone (n_1). Therefore they are classified under a restriction zone (n_2). However it is appreciated that the addition of M55 Junction 2 will significantly reduce the impact Inskip will have on Junction 1. A planning application has been submitted for Junction 2 M55 and a decision is expected 2017 (second quarter). Funding is approved in principle and the new junction is expected to be operational in 2021. Additionally any development within these localities would also need to satisfy limitations on the Peninsula corridor (see 3.4 Peninsula corridor).

North of Garstang it is anticipated that the movement of traffic is likely to travel north towards Lancaster and Junction 33 of the M6. Indicative development located within this location is deemed outside the restriction zone (n_3) and any restriction applied is primarily governed by local highway constraints. Despite this it is recognised that a small element of traffic is likely to use the M55 Junction 1 via the M6 southbound, forming part of the background traffic growth. However routeing is dependent on conditions at the time of travel.

Figure 15 lists the indicative development localities which fall under respective restriction zones and Figure 16 represents them on a map.

Figure 15 - A6 restriction zones

Severe restriction zone (n_1)	Restriction zone (n_2)	Outside restriction zone (n_3)
Garstang, Winmarleigh, Bowgreave, Nateby,	*Inskip* and *St Michael's on Wyre*	Forton, Scorton, Hollins Lane Calder Vale

Churchtown, Catterall, Bilsborrow and Barton		

Please note that Inskip and St Michael's on Wyre also fall under a Peninsula corridor restriction zone

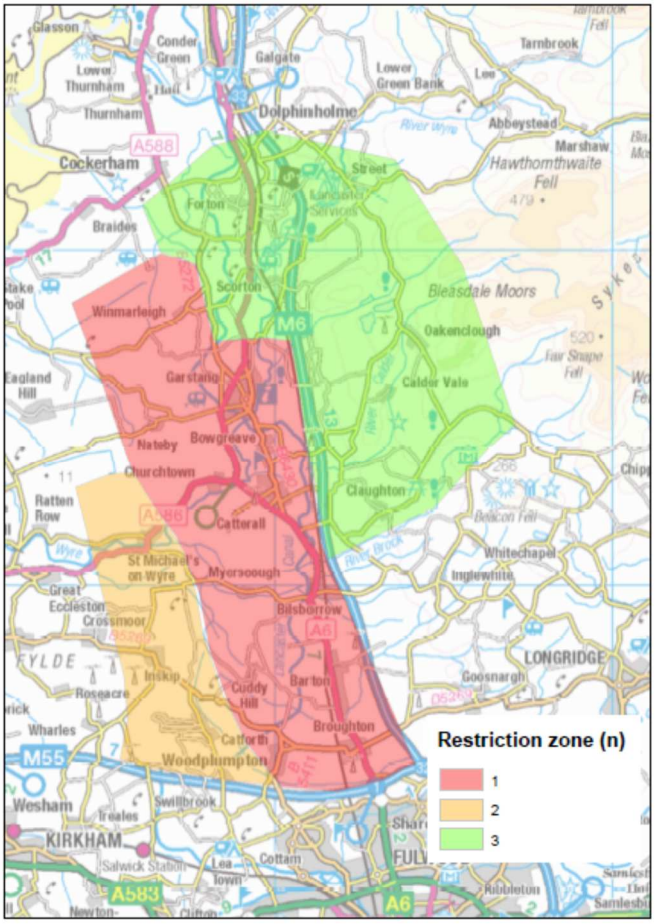


Figure 16 - Map of A6 restriction zones

3.3.1 A6 Severe restriction zone (n_1)

Saturn outputs indicate that northern approaches to M55 Junction 1 benefit from improvements associated with Broughton Bypass and are not a cause for concern. Congestion is present on the southern arm of the A6 which is approaching capacity in all scenarios and most significantly M55 Junction 1 west bound off slip which has reached operational capacity (102%) even in the no development scenario.

The scope for additional development on the A6 corridor will therefore be limited by the ability of the local and wider network to safely accommodate additional development traffic. There is a safety hazard at the M55 at junction 1 when conditions exist which results in vehicles queuing back from the off slip on to the M55 main line.

Localities within the severe restriction zone (n_1) are deemed to have a high chance of contributing to congestion at Junction 1. This is due to a proportionately high percentage of vehicles likely to travel to Preston during peak hours with the limited alternative routes available.

Limited land availability does influence the improvements that are deliverable at the motorway junction. Other changes in the area does provide some limited opportunity for the A6 impacting developments whether in Wyre, Preston or Ribble Valley.

It is concluded that no further development should be allocated to any localities within the severe restriction zone (n_1) above that which has been considered in the modelling work by the County Council carried out at the end of 2016 or considered in the statutory comments in appendix E. However, if some of the considered development is not approved or supported a similar amount on the corridor could be considered subject to a further review and background changes.

In addition to the main improvements set out above, further development along the A6 will require a number of additional necessary highway works as set out in the A6 Strategy, as included in Appendix E.

3.3.2 A6 Restriction zone (n_2)

St. Michael's on Wyre and Inskip lie beyond the severe restriction zone (n_1) due to vehicles originating from these localities having alternative reliable routes to Preston and the motorway network. It is also appreciated that M55 Junction 2 when built will reduce the impact St Michaels and Inskip will have on Junction 1. Vehicles could access the motorway network jct 2 on the M55 via the B5269 through Woodplumton. Despite this, indicative development would still need to be restricted given the impact development of a significant scale would have on rural roads through villages. Development will also need to be phased to occur after junction 2 on the M55 is operational.

It is advised that a maximum of 200 dwellings should be allocated within the restriction zone (n_2). The distribution of dwellings may be split between the two localities or distributed to a single locality. This quantum has been decided with the aid of a DA which satisfies the criteria for the Peninsula corridor restriction.

3.3.3 Outside restriction zone (n_3)

A desktop assessment (DA) is necessary for developments outside the restriction zone. The DA's will determine the scope for indicative development within the localities.

Note: Forton and Hollins Lane can be joined together.

Forton

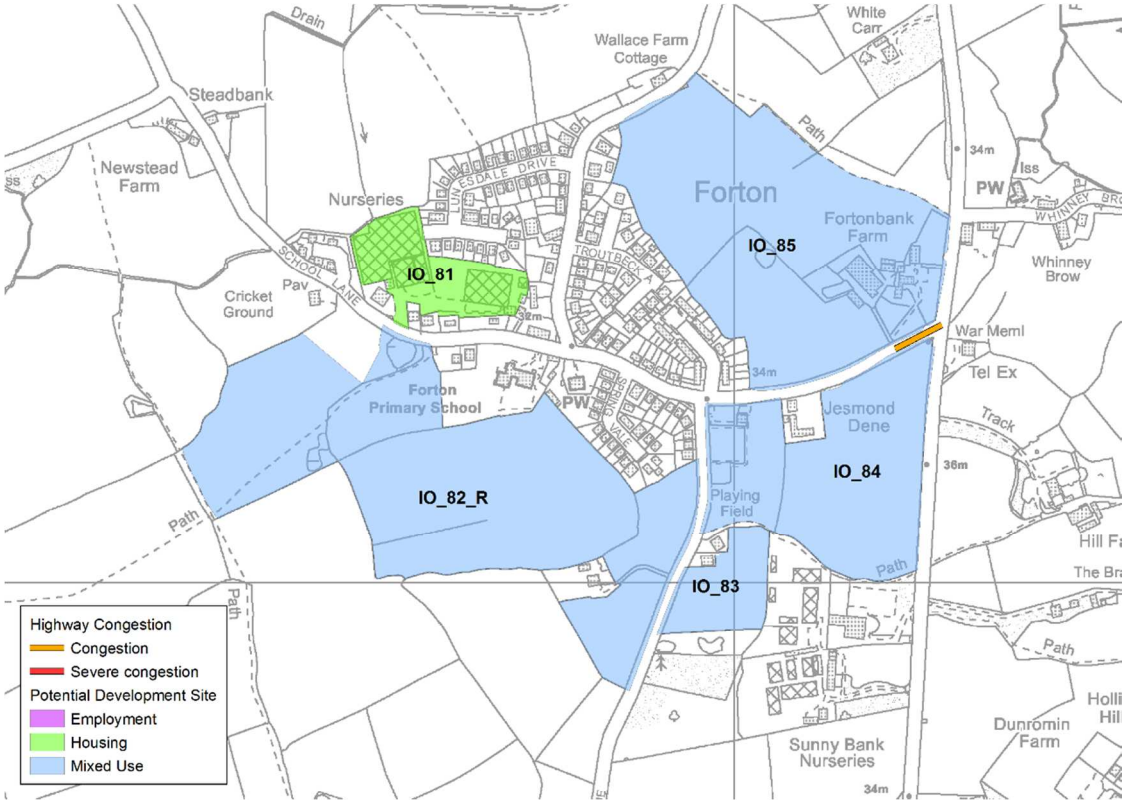
Site information	
Corridor:	A6
Locality and site references	Forton, IO_85, IO_84, IO_83, IO_82_R, IO_81
Recommended number of dwellings	450
Predicted increase in two way vehicle trips during peak hour:	230

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it significantly contribute to congestion on known strategic pinch points?	No
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	_
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	The majority of sites have access to bus number 40 (Preston – Garstang – Lancaster –Morecombe)
	If yes - what is the frequency?	Approximately every 40 minutes
Pedestrian	Pedestrian access to and around the site:	1.5m - 2m

Accessibility	Distance to nearest local centre:	Poor (>1600m)
	Distance to nearest primary school	Good (0m - 800m)
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 450
The majority of sites are within a reasonable walking distance to bus number 40 (Preston – Garstang – Lancaster –Morecombe) which operates on a frequency of every 40 minutes during the Tuesday AM peak. Accessibility to the measured services is generally poor. Individual sites brought forward would be done so on their own merits and require a detailed transport assessment/statement. It is highly likely that local roads, including junctions, will need some changes to accommodate carriageway and footway improvements/widening and to satisfy visibility splays, using land within the highway boundary or land within the development site(s). This assessment advises a maximum of 450 dwellings be allocated at Forton subject to a masterplan requirement in the Local Plan allocation policy covering the whole allocation. In the absence of a strategic intervention piecemeal development would prevent the delivery of the maximum housing capacity at the settlement.

Indicative housing sites within Forton



Scorton

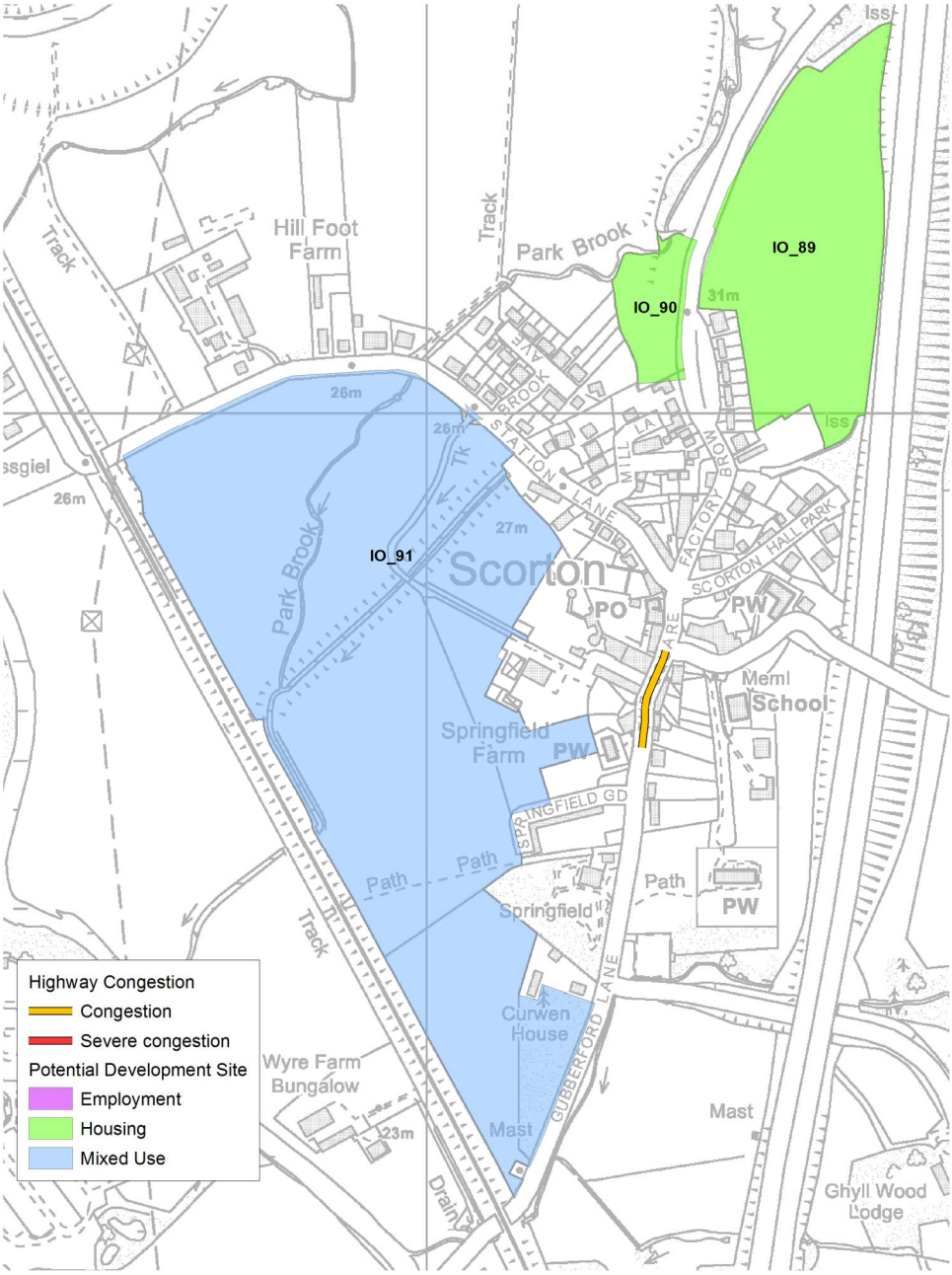
Site information	
Corridor:	A6
Locality and site references:	Scorton: IO_91, IO_90, IO_89
Recommended number of dwellings	0
Predicted increase in two way vehicle trips during peak hour:	0

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage	Single lane arched bridges with restricted height on Station Lane and Gubberford Lane and a further bridge on Station Lane (bridging the River Wyre) with weight restriction
Vehicles	Will it contribute to congestion on known strategic pinch points?	No
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	_
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	No
	If yes - what is the frequency?	_
Pedestrian	Pedestrian access to and around the site:	1.2m - 1.5m

Accessibility	Distance to nearest local centre:	Poor (>1600m) A shop is present in the village providing a suitable alternative
	Distance to nearest primary school:	Good (0m - 800m)
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 0
Indicative sites have poor access to public transport. A single lane arched bridges with height restriction under the railway line on Station Road, another on Gubberford Lane, and a single lane 3t weight restricted river crossing (with no footways) over the River Wyre, provide the only access points into the village from the A6. Development will result in an increase of trips during peak hour which is likely to be all car based. This raises significant concern, in terms of construction activity as well as residential traffic, when considering the current capacity constraints. For these reasons, it is considered that there is not a satisfactory means of managing these impacts (including construction activity) to support development.

Indicative housing sites within Scorton



Hollins Lane

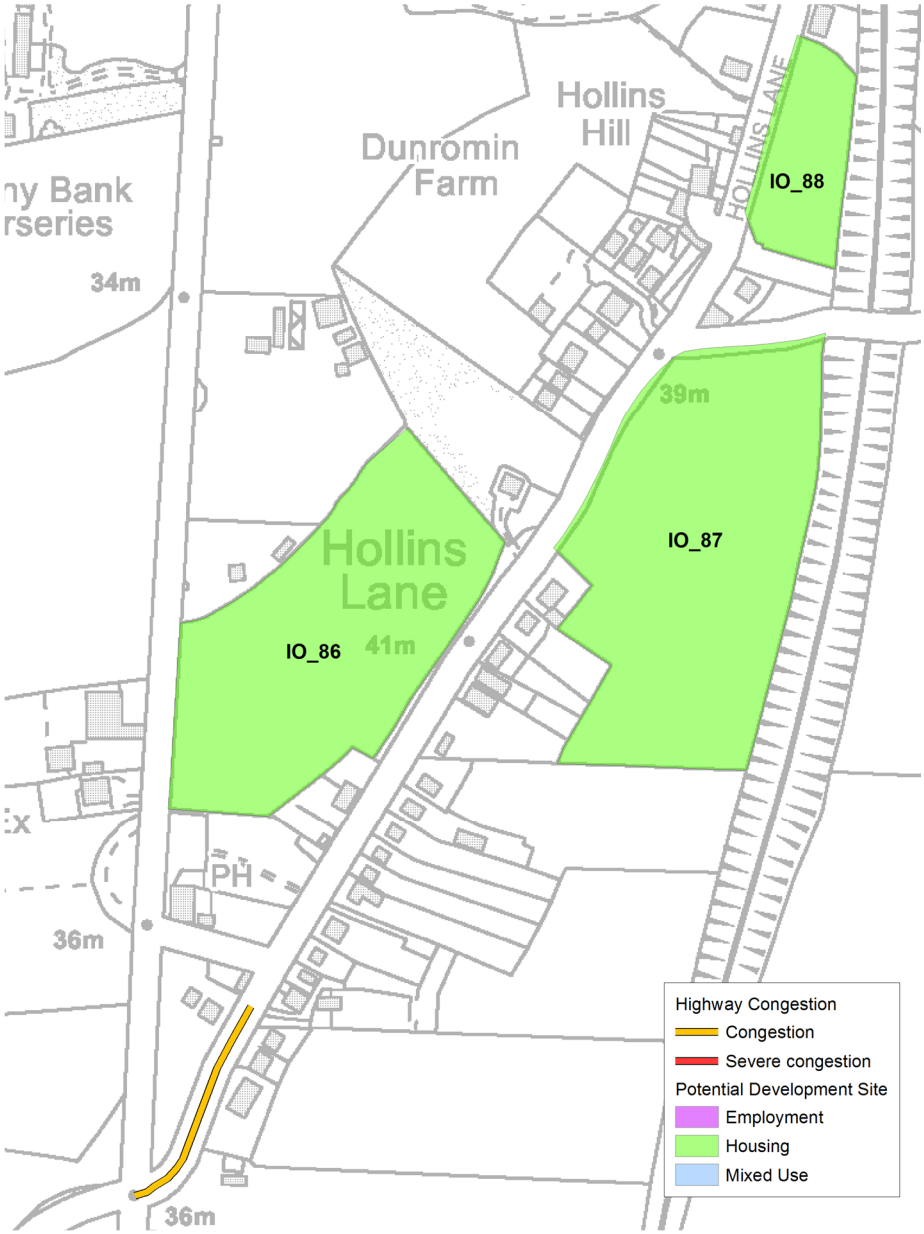
Site information	
Corridor:	A6
Locality and site references:	Hollins Lane; IO_86, IO_87, IO_88
Recommended number of dwellings	80
Predicted increase in two way vehicle trips during peak hour:	40

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it contribute to congestion on known strategic pinch points?	No
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	-
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Yes - bus number 40 (Preston – Garstang – Lancaster –Morecombe) for IO_86 No for IO_87 and IO_88
	If yes - what is the frequency?	Approximately 40 minutes
Pedestrian	Pedestrian access to and around the site:	<1.2m
Accessibility	Distance to nearest local centre:	Poor (>1600m)

	Distance to nearest primary school	Adequate (800m - 1600m)
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 80
Only site IO_86 has a bus service within a reasonable walking distance and this service is approximately every 40 minutes during a typical morning peak. With mitigation in the form of suitable pedestrian access between Hollins Lane and the A6 development of a maximum 80 dwellings will raise no significant highway concern. However what should be noted is the KSI density on the A6 near Hollins Lane shown in Figure 11. It is highly likely that local roads, including junctions, will need some changes to accommodate carriageway and footway improvements/widening and to satisfy visibility splays, using land within the highway boundary or land within the development site(s). IO_86 can provide improved pedestrian/cycling permeability through the site to A6 to support the existing settlement.

Indicative housing sites within Hollins Lane



Calder Vale

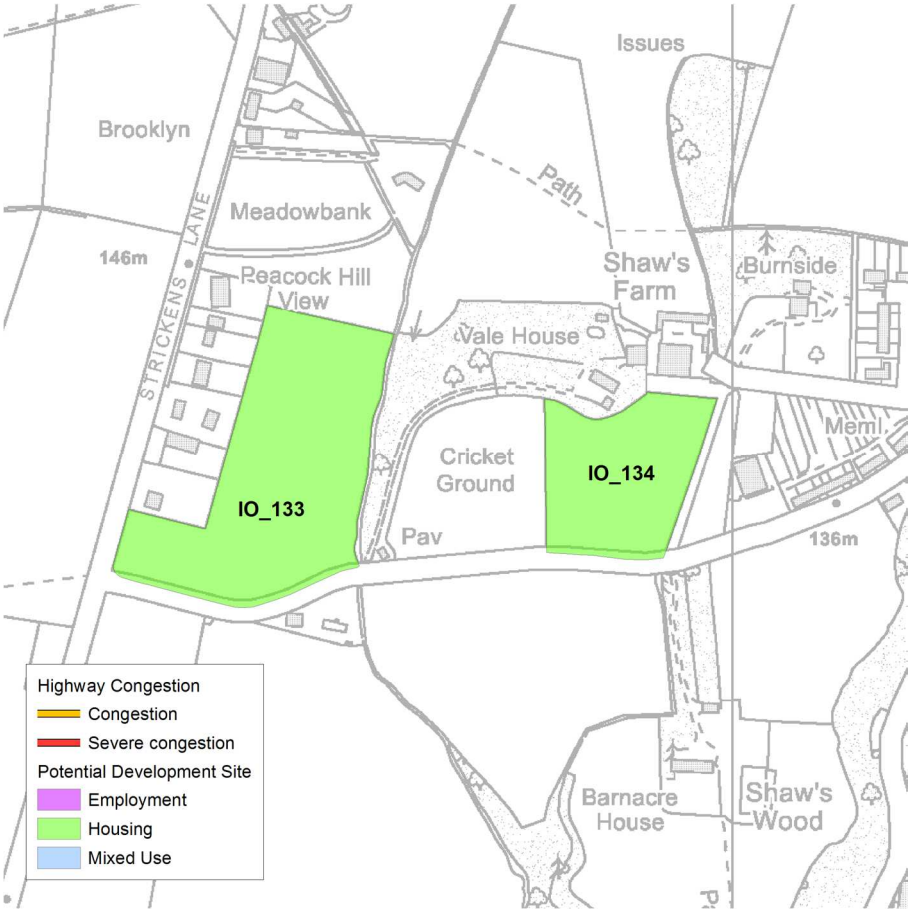
Site information	
Corridor:	A6
Locality and site references:	Calder Vale; IO_134 & IO_133
Recommended number of dwellings	0
Predicted increase in two way vehicle trips during peak hour:	0

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it contribute to congestion on known strategic pinch points?	No
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	No
Public transport	I Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	No
	If yes - what is the frequency?	-
Pedestrian	Pedestrian access to and around the site:	<1.2m

Accessibility	Distance to nearest local centre:	Poor (>1600m)
	Distance to nearest primary school:	Adequate (800m - 1600m)
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 0
Calder Vale has poor accessibility to measured local services with no bus service in close proximity. In highway terms, when considering the indicative scale of development, the location is not deemed to directly contribute to congestion at strategic pinch points. Whilst no significant local highway concern is raised at strategic pinch points, the locality suffers from very poor accessibility to measured services and sustainable travel provision. This assessment advises no further development be allocated at Calder Vale.

Indicative housing sites within Calder Vale



3.3.4 Summary of A6 corridor

Figure 17 provides a summary on the number of dwellings each locality can accommodate.

Figure 17 - A6 corridor housing numbers

Locality	**Restriction zone**	**Maximum number of dwellings recommended with current calculations**
Garstang	n_1	See Appendix E for LCC statutory comments including dwelling numbers and triggers.
Bowgreave	n_1	
Nateby	n_1	
Churchtown	n_1	
Catterall	n_1	
Bilsborrow	n_1	
Barton	n_1	
Winmarleigh	n_1	
Inskip*	n_2	Up to a maximum of 200 between localities within n_2 once the new junction 2 on the M55 is operational.
St Michael's on Wyre*	n_2	Up to a maximum of 200 between localities within n_2 once the new junction 2 on the M55 is operational.
Forton	n_3	450
Scorton	n_3	0
Hollins Lane	n_3	80
Calder Vale	n_3	0

* Details of Inskip and St Michael's on Wyre are included in Peninsula corridor

3.4 Peninsula corridor

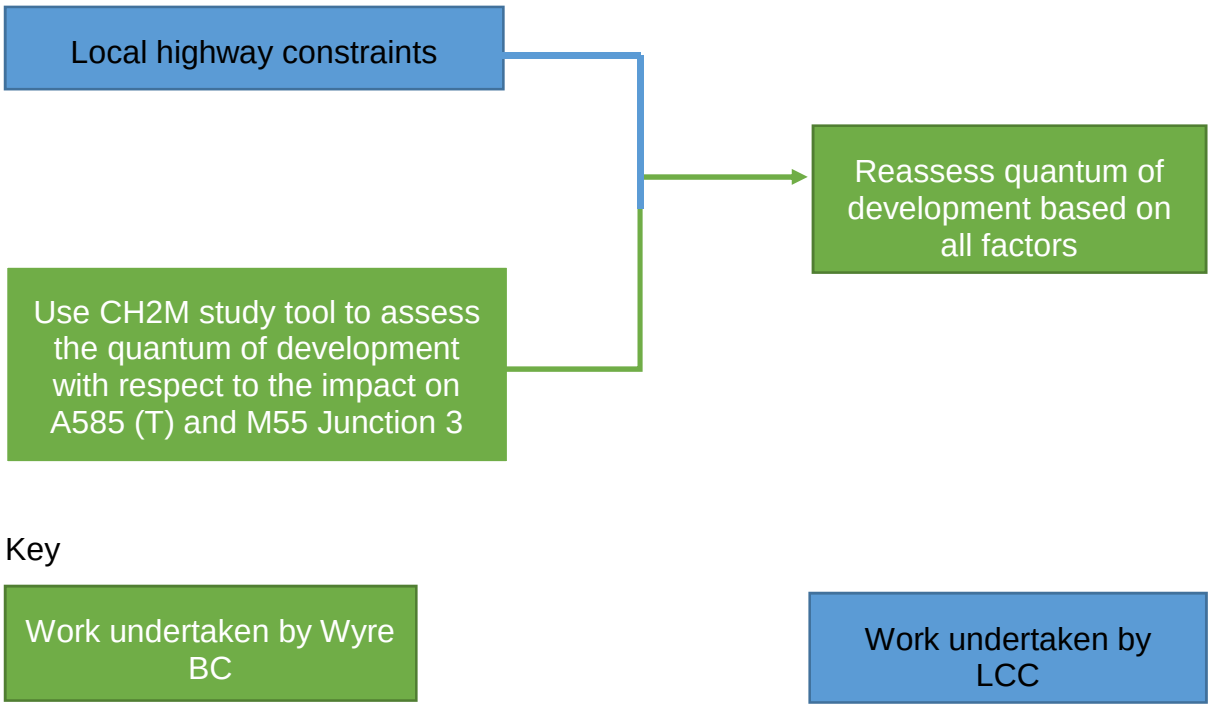
The Peninsula corridor has numerous factors which need to be considered when assessing the potential for housing development. This includes the impact indicative development will have on key pinch points on the A585 (T) (see Figure 4), M55 Junction 3 and on the local highway network. An additional consideration which needs to be taken into account is potential highway improvement schemes which may aid development over the Local Plan period.

3.4.1 Peninsula corridor approach

The Peninsula corridor primarily utilises DAs to assess the potential quantum of housing development within individual localities. In most cases it removes itself from analysing the effect development will have on the strategic road network, as this comes under the remit of Highways England. It does however highlight if traffic will queue back onto the local road network from pinch points on the strategic road network.

The Department for Transport's Road Investment Strategy (RIS) identified the Windy Harbour to Skippool section of the A585 (T) as a major improvement scheme. The scheme is anticipated to have a positive effect in aiding development within the Peninsula corridor. However at the time of writing the exact form of the scheme is unknown. As a result, in most cases, a reasonable judgement has been made on the positive effect the HE scheme would have and its effect on the local highway network.

Figure 18 – Methodology flow diagram



3.4.2 Local highway constraints

Local highway network analysis will be undertaken on the following localities within the Peninsula corridor.

Figure 19 - Peninsula Corridor localities

Peninsula Corridor
Poulton-le-Fylde, Thornton, Cleveleys, Fleetwood, Hambleton, Knott End/Preesall, Stalmine, Pilling, Great Eccleston, *Inskip and St. Michael's on Wyre* *Please note that Inskip and St. Michael's on Wyre will have some influence on the A6 corridor and other competing corridors*

In order to assess the potential for development within localities on the Peninsula corridor a 'Desktop Assessment' (DA) is undertaken. A sample DA sheet with guidance on how to complete it is provided in Figure 13.

Poulton-le-Fylde

Site information	
Corridor:	Peninsula
Locality and site references:	Poulton-le-Fylde; IO_31, O_32, IO_33 & IO_34, IO_19, DS_05, DS_07, DS_08
Recommended number of dwellings	390
Predicted increase in two way vehicle trips during peak hour:	200

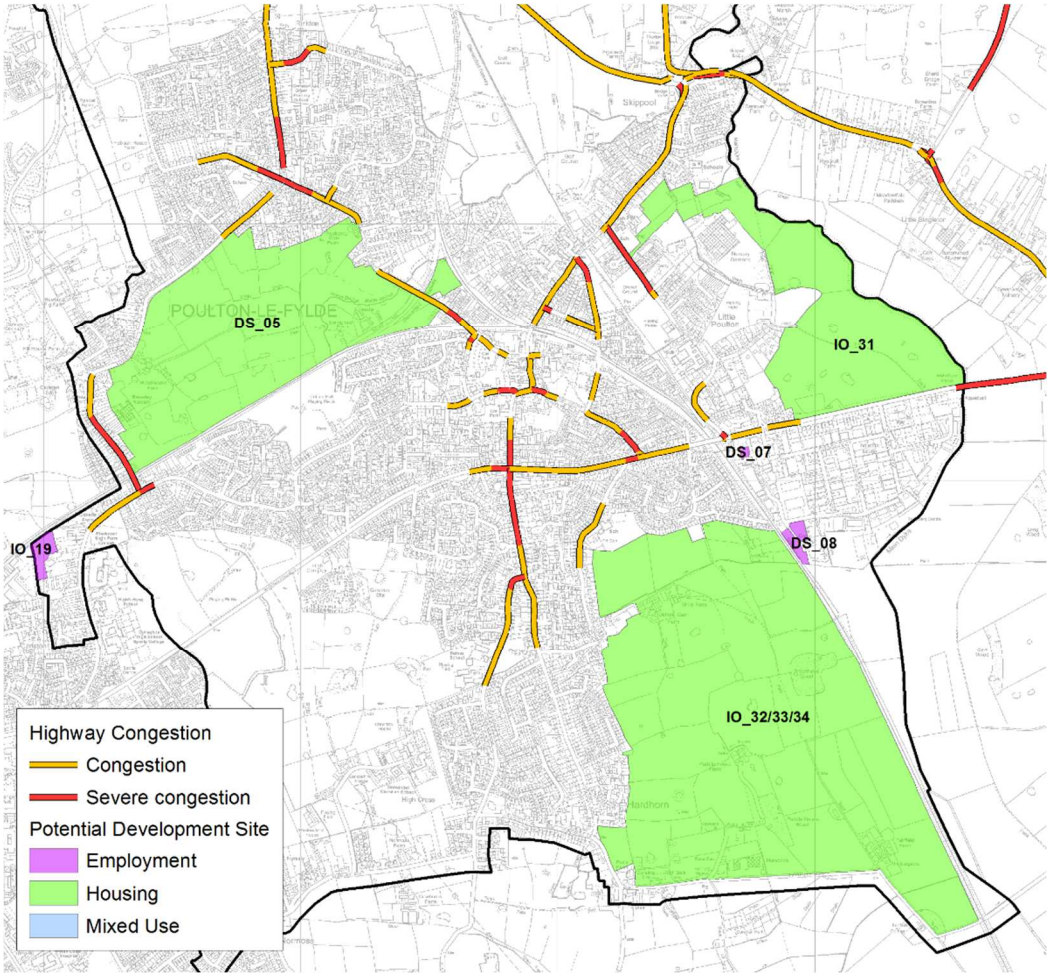
Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	Highlighted in accompanying map
Vehicles	Will it contribute to congestion on known strategic pinch points?	1) M55 Junction 3 2) 'A' roads in and around Poulton
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	M55 Junction 3 - Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	No
	If yes what is the frequency?	_
Pedestrian	Pedestrian access to and around the site:	1.5m - 2m

Accessibility	Distance to nearest local centre:	Adequate (800m - 1600m) for DS_05, IO_31, IO_32 & IO_34. Poor (>1600m) for IO_33
	Distance to nearest primary school:	Adequate (800m – 1600m) for IO_31 & IO_32, DS_05. Poor (>1600m) for IO_33
	Distance to nearest GP:	Adequate (800m – 1600m) for DS_05. Poor (>1600m) for all other sites

Comments
Maximum number of dwellings recommended – 390
The severity of the existing congestion issues in and around Poulton is highlighted in the accompanying map. A Technical Report has been commissioned to consider in detail the capacity of the local network within Poulton-le-Fylde. The commissioned report within its conclusion states that '*developments generating **significant** additional traffic cannot come forward without worsening the existing above demonstrated congestion issues where two of the 11 junctions analysed are already failing in the AM and PM peak periods. Therefore transport intervention is required to accommodate any future development and even to cater for background traffics growth*'. A Poulton mitigation strategy, see appendix F has been developed in conjunction with the commissioned report and working with developers. The delivery of the strategy will provide a level of benefit that could be used to support a limited number of additional dwellings to the south of Garstang Road East/West, and to the north of Poulton. With regard to sites there is some merit to the eastern section of site DS_05 with vehicle access from Poulton Road/Tithebarn Street. The site would have merit as the access would be in close proximity to the town centre with its services and also have a route to the A585 without passing through the town centre. A site coming

forward in this location would also need to include a car park for town centre uses, as highlighted in the mitigation strategy. This is required to accommodate further town centre demand as a result of additional dwellings and parking displacement that will occur. The residual dwellings that can be accommodated from the south, IO 32 has benefit as it can access Poulton Industrial Estate (for sustainable modes) and the food retail within. IO 32 to deliver other key elements of the strategy. Combined DS_5 and IO_32 with that already committed to deliver the whole strategy.

Indicative housing sites within Poulton-le-Fylde



Thornton

Site information	
Corridor:	Peninsula
Locality and site references:	Thornton; IO_21, IO_22, IO_01/02/23/24_R, IO_25,IO_26, IO_27, IO_28_R, IO_29, IO_30_R, IO_03, DS_01
Recommended number of dwellings	835
Predicted increase in two way vehicle trips during peak hour:	450

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	See accompanying map
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Bus 14 (Fleetwood - Thornton – Blackpool) for DS_01, IO_21, IO_01/22/23/24_R, IO_29/30 Bus 74 (Fleetwood - Thornton - Poulton - Blackpool) for DS_01, IO_01/22/23/24_R, IO_28_R & IO_29

		Bus 22 (Fleetwood - Cleveleys - Blackpool - Mereside) for IO_30_R
	If yes what is the frequency?	Bus 14 - 10 minutes Bus 74 - Hourly Bus 22 - Hourly
Pedestrian	Pedestrian access to and around the site:	1.2m – 1.5m in most cases. <1.2m on Raikes Road and Underbank Road
Accessibility	Distance to nearest local centre:	Adequate (800m – 1600m)
	Distance to nearest primary school:	Good (0m-800m) for IO_26/27/28/29_R. Adequate (800m-1600m) for DS_01, IO_21/22/23/24_R & IO_30_R
	Distance to nearest GP:	Adequate (800m-1600m) for IO_29. Poor (>1600m) all other sites

Comments
Maximum number of dwellings recommended – 835
Accessibility to local services is good, as is access to a bus service within a reasonable walking distance. Bus 14 and 22 stop near Blackpool North railway station. Additionally sites IO_26 & IO_27 have access to bus 24 which is a half hour service which stops near Poulton railway station. Site IO_27 (that part consented) is obligated to provide enhancements to existing bus services. However due to the size of IO_26 & IO_27 remaining parts of those sites will remain outside reasonable walking distance of the nearest bus stop with an operating service and will necessitate further enhancements. To support IO_27 and IO_28 would require new highway infrastructure to overcome the existing constraints on Skippool Road for example around Thornton Hall bend. The infrastructure is expected to take the form of a new road, funded and delivered by development, forming part of their access strategy.

The viability of delivering this scale of transport intervention might suggest a greater concentration of dwellings across these particular sites, subject to necessary improvements to the A585 Skippool roundabout satisfying demand and routeing needs. The sites should be subject to a masterplan requirement in the Local Plan allocation policy covering the whole allocation. In the absence of a strategic intervention piecemeal development would prevent the delivery of the maximum housing capacity at the settlement. A master planning approach with a phasing and delivery strategy is strongly recommended to determine the form of infrastructure needed to achieve the delivery of these sites.

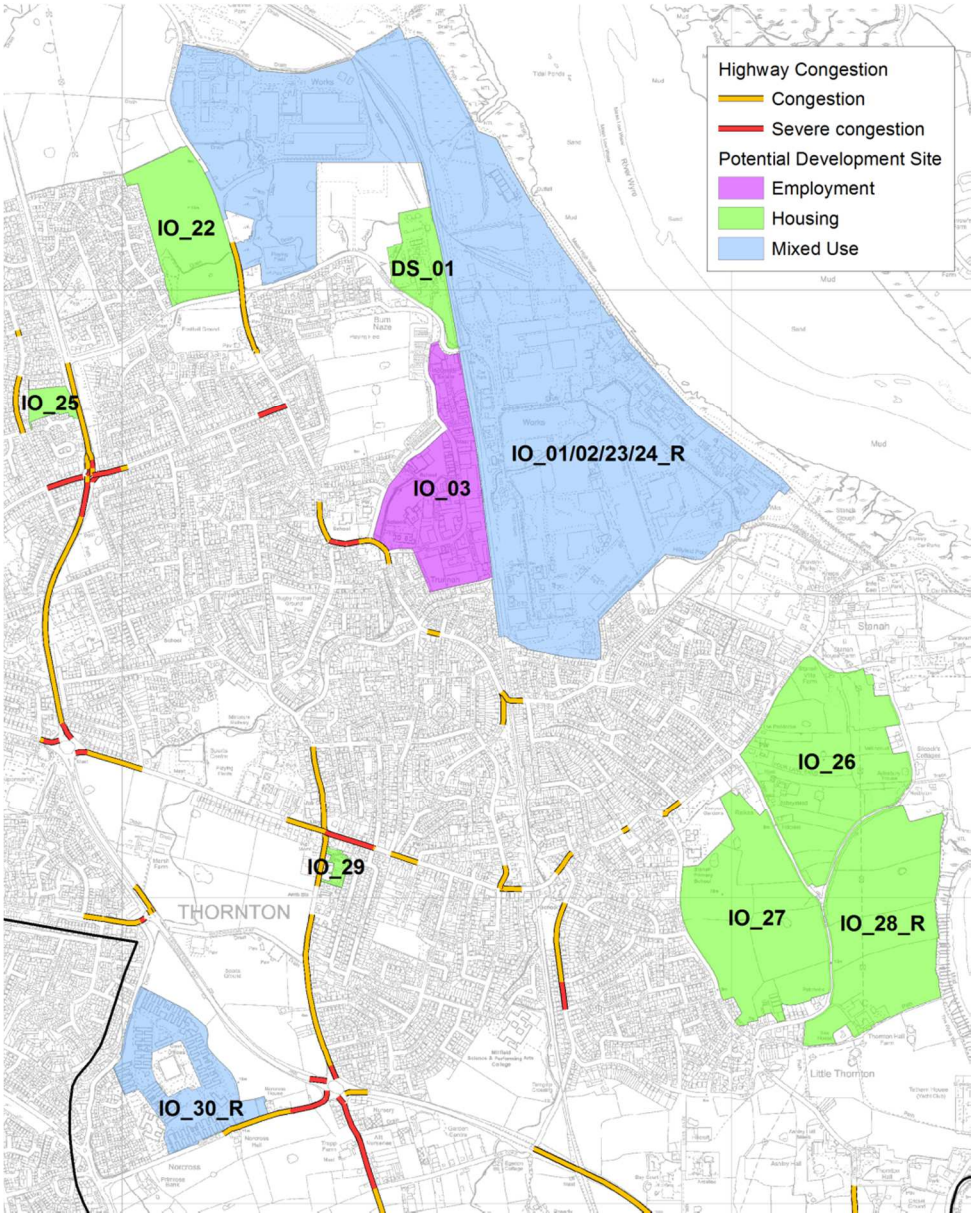
The cumulative impact of development on sites in Little Thornton will have an adverse effect on the Skippool roundabout junction resulting in traffic queuing on the local highway network. Alternative options for traffic accessing the A585 (T) from these sites include the Norcross roundabout and B5412 / A585 (T) roundabout both of which will also result in traffic queueing on the local highway network.

From IO_29 the primary access on to the A585 (T) is from Norcross roundabout and B5412 / A585 (T) roundabout. From IO_30 the primary access is Norcross roundabout. Under current conditions both will result in traffic queueing on the local highway network which would be a significant concern.

Improvements to the A585 (T) would need to be brought forward through Highways England (currently supported by a RIS bid) which would provide a measure of relief, but only to the extent that a total of up to 835 additional dwellings could be accommodated by the improved trunk road network.

It must be noted that development in the north of Thornton at IO_22 to IO_24 inclusive will contribute to traffic at key pinch points on the A585 (T) resulting in traffic queuing on the trunk network, also influencing the local network.

Indicative housing sites within Thornton



Cleveleys

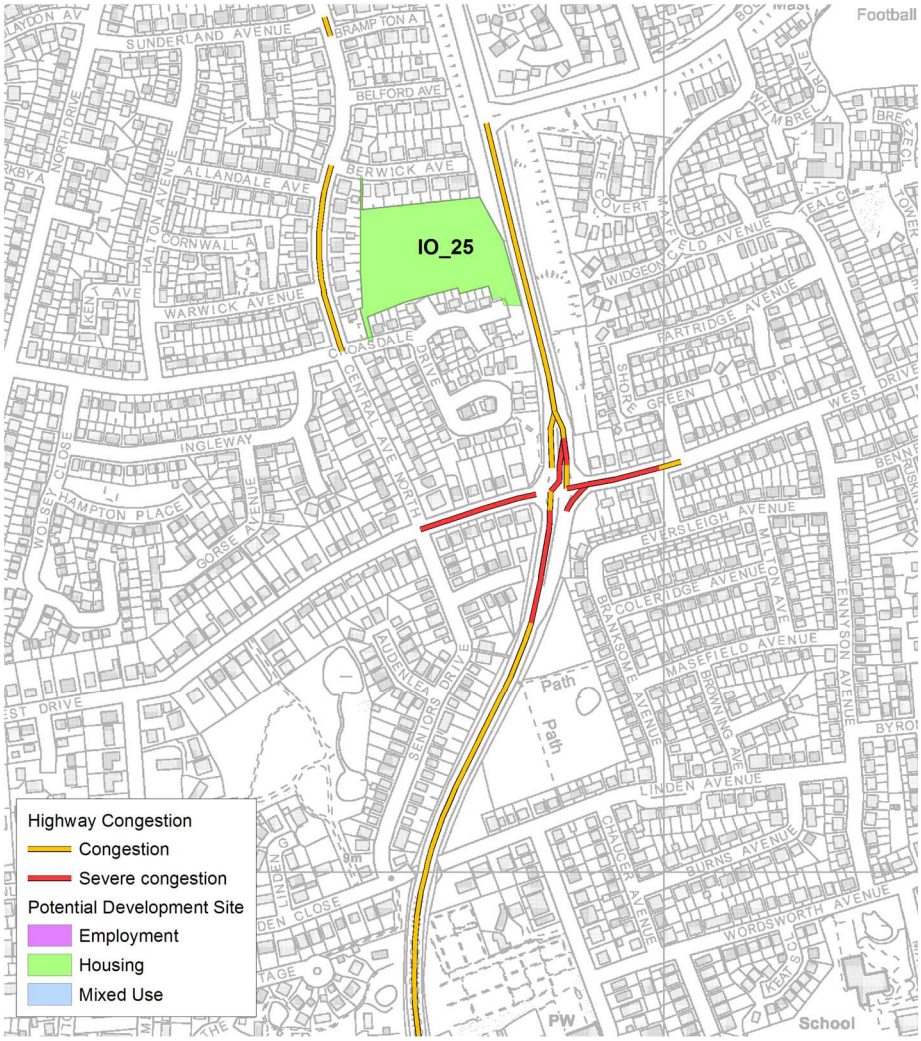
Site information	
Corridor:	Peninsula
Locality and site references:	Cleveleys; IO_25
Recommended number of dwellings	40
Predicted increase in two way vehicle trips during peak hour:	20

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	Amounderness Way between Bourne Way and Victoria Road West (see accompanying map).
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Bus 3 (Cleveleys Park - Cleveleys - Blackpool - Mereside) Bus 74 (Fleetwood - Thornton - Poulton - Blackpool)
	If yes what is the frequency?	Bus 3 -20 minutes Bus 74 - Hourly
Pedestrian	Pedestrian access to and around the site:	1.5m – 2m
Accessibility	Distance to nearest local centre:	Good (0m – 800m)

	Distance to nearest primary school:	Good (0m – 800m)
	Distance to nearest GP:	Adequate (800m – 1600m)

Comments
Maximum number of dwellings recommended – 40
Accessibility to local services is good as is pedestrian access. Despite Amounderness Way showing congestion / severe congestion (see accompanying map); the scale of development is deemed to be reasonable partly due to good public transport accessibility. Bus 3 operates within a reasonable walking distance every 20 minutes during the AM peak and gives access to Blackpool North railway station. An area of concern is the impact it may have on the accident rate on the A585 (T) / Victoria West roundabout.

Indicative housing sites within Cleveleys



Fleetwood

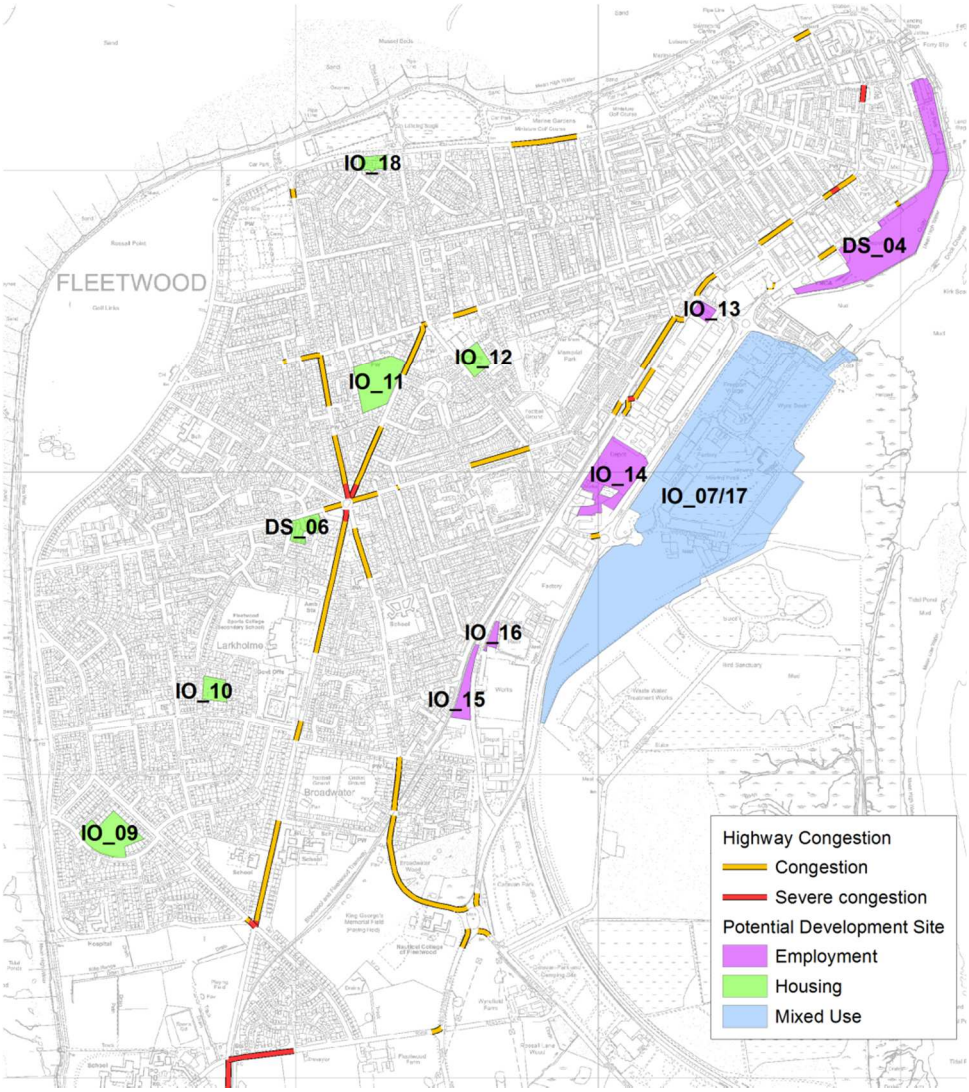
Site information	
Corridor:	Peninsula
Locality and site references:	Fleetwood; IO_9, IO_10, IO_11, IO_12, IO_13, IO_14, IO_15, IO_16, IO_7/17 & IO_18, DS_06, DS_04
Suggested number of dwellings	220
Predicted increase in two way vehicle trips during peak hour:	115

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	See accompanying map
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Bus 14 (Fleetwood - Thornton – Blackpool) for DS_06, IO_10, IO_11 & IO_12. Bus 1 (Fleetwood - Cleveleys – Blackpool) for DS_06, IO_11 & IO_12 Bus 22 (Fleetwood - Cleveleys - Blackpool - Mereside) DS_06, IO_09, IO_10, IO_11 & IO_12.

		Bus 74 (Fleetwood - Thornton - Poulton - Blackpool) IO_11 & IO_12
	If yes what is the frequency?	Bus 14 - 10 minutes Bus 1 - 20 minutes Bus 22 - Hourly Bus 74 - Hourly
Pedestrian	Pedestrian access to and around the site:	1.5m to >2m
Accessibility	Distance to nearest local centre:	Excellent (<400m) for DS_06, IO_10, IO_11, IO_12 & IO_18. Good (400m – 800m) for IO_9 & IO_17
	Distance to nearest primary school:	Excellent (0-800m) for DS_06, IO_9, IO_10, IO_11, IO_12 & IO_18. Adequate (800m – 1600 m) for IO_17
	Distance to nearest GP:	Good (0-800m) for DS_06, IO_10, IO_11 & IO_12. Adequate (800m – 1600m) for IO_9, IO_12, IO_17 & IO_18

Comments
Maximum number of dwellings recommended – 220
Existing accessibility to services is excellent. With the exception of site IO_17 all sites have a public transport service within reasonable walking distance. Bus 14 and 1 operate frequently during the AM peak hour. Bus 1 and 22 give access to Blackpool North railway station within a reasonable walking distance. Pedestrian access to all sites is also very good. Concern is raised with the A587 / Chatsworth Avenue / Hatfield Avenue roundabout and would need to be addressed.

Indicative housing sites within Fleetwood



Great Eccleston

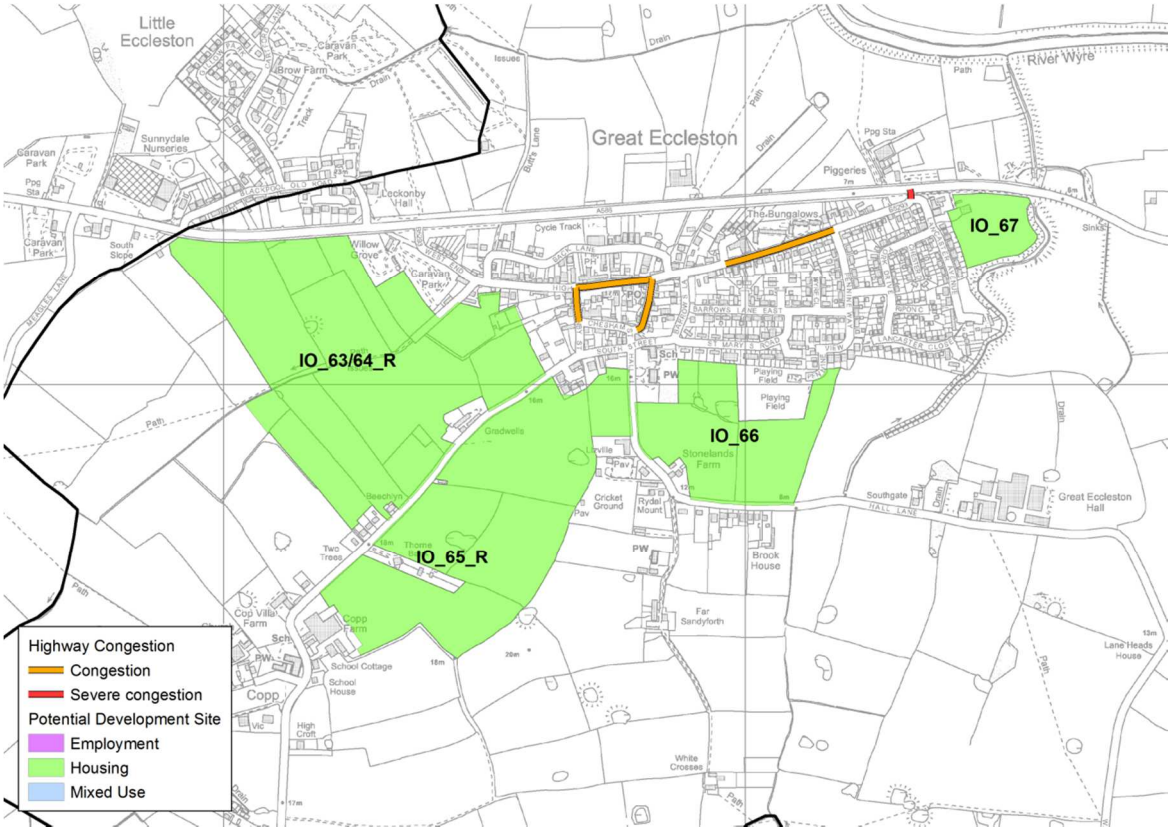
Site information	
Corridor:	Peninsula
Locality and site references:	Great Eccleston; IO_63, IO_64, IO_65, IO_66 & IO_67
Recommended number of dwellings	500
Predicted increase in two way vehicle trips during peak hour:	257

Site overview		
Access	Are there congestion problems or any other issues on access points?	Unsuitable width in and around Great Eccleston centre (i.e. High Street, Leckonby Street, Chapel Street, Chesham Street, South Street, St. Mary's Road & Pennine Way)
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Knott End, Preesall, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Yes, bus 78 (St Anne's - Lytham - Kirkham - Great Eccleston – Poulton) for all sites except IO_66
	If yes what is the frequency?	Hourly
Pedestrian	Pedestrian access to and around the site:	Between 1.2m and 2m on the majority of village streets.<1.2m on South Street and Barrow's Lane

Accessibility	Distance to nearest local centre:	Good (0m – 800m) for IO_63, IO_64, IO_65 & IO_66. Adequate (800m – 1600m) for IO_67
	Distance to nearest primary school:	Good (0m – 800m)
	Distance to nearest GP:	Good (0m – 800m)

Comments
Maximum number of dwellings recommended – 500
Indicative development sites have excellent accessibility to local services. With the exception of IO_66, all sites have access to an hourly bus service (bus 78 (St Anne's - Lytham - Kirkham - Great Eccleston – Poulton)) within reasonable walking distance providing a service to Poulton railway station. Significant concern is raised on the suitability of access points. IO_63 and IO_67 will require direct access to the A586. Using the existing network sites IO_64, IO_65 and IO_66 require access through the village using narrow unsuitable roads. If suitable access to the A586 is provided via site IO_63 it could overcome this issue. Suitable pedestrian access between indicative development sites and the village centre must also be provided. The sites should be subject to a masterplan requirement in the Local Plan allocation policy covering the whole allocation. In the absence of a strategic intervention piecemeal development would prevent the delivery of the maximum housing capacity at the settlement. A master planning approach with a phasing and delivery strategy is strongly recommended to determine the form of infrastructure needed to achieve the delivery of these sites.

Indicative housing sites within Great Eccleston



Inskip

Site information	
Corridor:	A6 and Peninsula
Locality and site references:	Inskip; IO_68, IO_69, IO_70, IO_71, IO_72, IO_73, IO_20
Recommended number of dwellings	200 spread between Inskip and St Michael on Wyre.
Predicted increase in two way vehicle trips during peak hour:	103

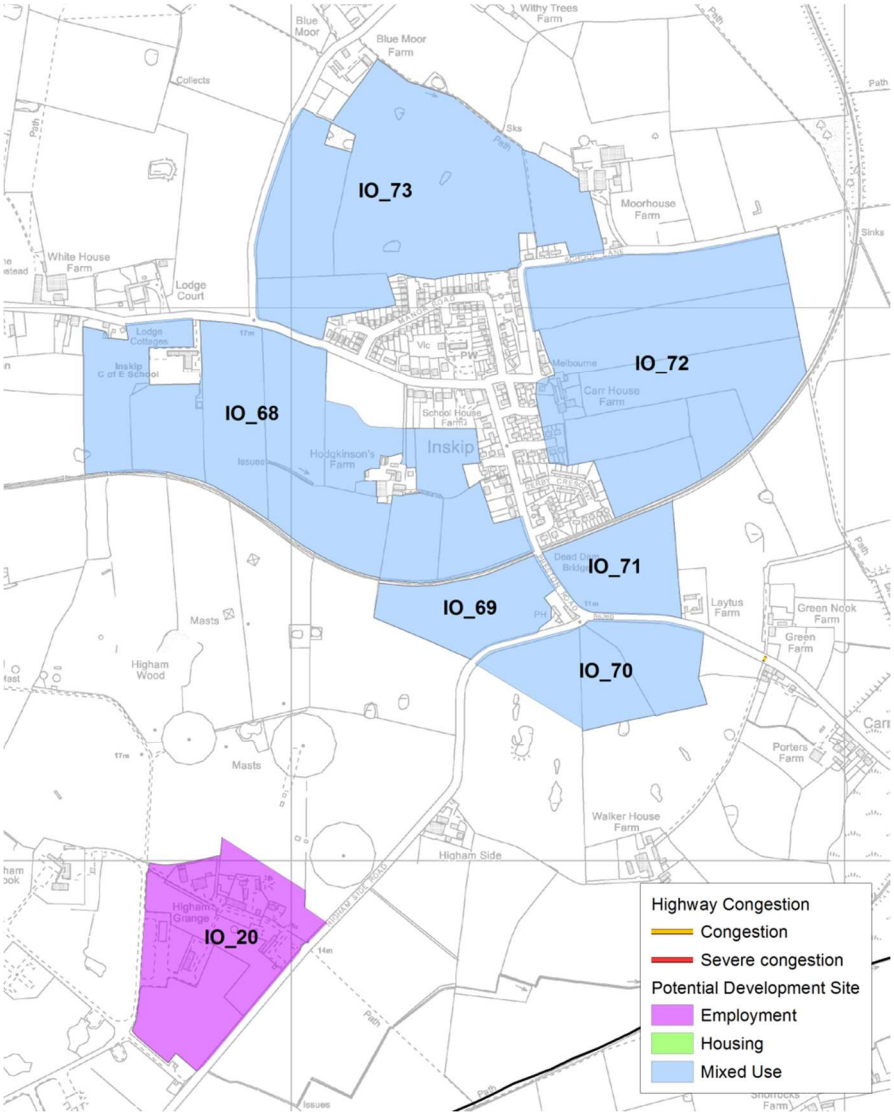
Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	Inappropriate width School Lane
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3 M55 Junction 1
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	1) M55 Junction 3: Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Pilling & St Michael's on Wyre 2) M55 Junction 1 severe contribution: Garstang, Nateby, Bowgreave, Churchtown, Catterall, Bilsborrow and Barton M55 Junction 1 contribution: Forton, Scorton, Hollins Lane, Winmarleigh and St Michael's on Wyre
Public transport	Is the whole site within 400m of a public transport stop (bus or tram) with an	No

	operating service during the weekday AM peak (08.00 – 09.00)?	
	If yes what is the frequency?	_
Pedestrian	Pedestrian access to and around the site:	<1.2m – 2m
Accessibility	Distance to nearest local centre:	Poor (>1600m)
	Distance to nearest primary school:	Good (0m – 800m) for IO_68, IO_69 & IO_73. Adequate (800m – 1600m) for IO_70, IO_71 & IO_72.
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 200 at Inskip or spread between Inskip and St. Michael's on Wyre
In general development sites have poor accessibility to measured local services and no bus service within reasonable walking distance. Speed data shows no congestion issues within the locality. Additional traffic generated as a result of housing development will contribute to congestion at M55 junction 1 which is a limiting factor restricting the scope for development within this locality. The new junction 2 on the M55 will provide a realistic alternative route via Woodplumton. However it is advised that the scale of development should be limited to 200 dwellings (see also St Michaels) because of limiting capacity of rural local roads through Woodplumpton. Development should be restricted until junction 2 is committed i.e. it has planning permission. Additionally it is noted that School Lane is narrow and development coming forward of a significant scale must address this within its TA. The sites should be subject to a masterplan requirement in the Local Plan allocation policy covering the whole allocation. In the absence of a strategic intervention piecemeal development would prevent the delivery of the maximum housing capacity at the settlement. A master planning approach with a phasing and delivery

strategy is strongly recommended to determine the form of infrastructure needed to achieve the delivery of these sites.

Indicative housing sites within Inskip



St. Michael's on Wyre

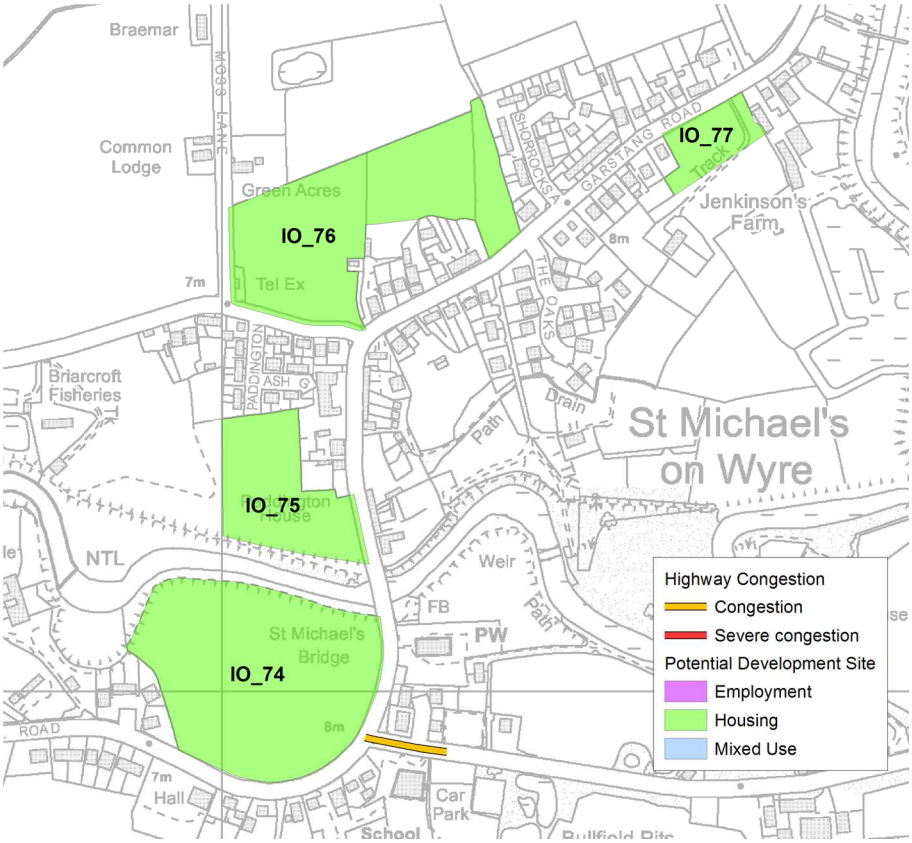
Site information	
Corridor:	A6 and Peninsula
Locality and site references:	St Michael's on Wyre; IO_74, IO_75, IO_76 & IO_77
Recommended number of dwellings	200 spread between Inskip and St Michael on Wyre.
Predicted increase in two way vehicle trips during peak hour:	103

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it contribute to congestion on known strategic pinch points?	1) M55 Junction 3 2) M55 Junction 1
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	1) M55 Junction 3: Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip & Pilling 2) M55 Junction 1 severe contribution: Garstang, Nateby, Bowgreave, Churchtown, Catterall, Bilsborrow and Barton M55 Junction 1 contribution: Forton, Scorton, Hollins Lane, Winmarleigh & Inskip

Public transport	Is the whole site within 400m of a public transport stop (bus or tram) with an operating service during the weekday AM peak (08.00 – 09.00)?	No
	If yes what is the frequency?	_
Pedestrian	Pedestrian access to and around the site:	Varied, <1.2m to 2m on A586
Accessibility	Distance to nearest local centre:	Poor (>1600m)
	Distance to nearest primary school:	Good (0m – 800m) for IO_74, IO_75. IO_76 & IO_77
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 200 at St Michael on Wyre or spread between Inskip and St. Michael's on Wyre
Indicative development sites must have suitable vehicular and pedestrian access to and along the A586 within the village. In general indicative development sites have poor accessibility to measured local services and education, and no bus service within reasonable walking distance. These issues will need to be addressed in each sites TA. Additional traffic generated as a result of housing development will contribute to congestion along the A6 corridor. The new junction 2 on the M55 will provide a realistic alternative route via Woodplumton. However it is advised that the scale of development should be limited to 200 dwellings (see also Inskip) because of limiting capacity of rural local roads through Woodplumpton. Development should be restricted until junction 2 is committed i.e. it has planning permission.

Indicative housing sites within St. Michael's on Wyre



Shard Road/Shard Bridge restriction zones

The speed map (Figure 3) shows congestion and in parts severe congestion on Shard Bridge / Shard Road and the GraHAM toolkit shows congestion even in the no development scenario (Appendix B). Therefore indicative development which further contributes to congestion at this pinch point should be restricted. This includes development within the localities of Hambleton, Knott End / Preesall and Stalmine. Additional traffic generated at Pilling as a result of development is less likely to travel south and have an impact of Shard Bridge / Shard Road due to a higher number of suitable route alternatives. Consequently development within the locality of Pilling will be restricted but to a lesser extent.

Figure 11 shows a high concentration of KSIs as a result of road accidents on the A588 through Hambleton. While this should not in itself stop development, it is a further issue to bear in mind.

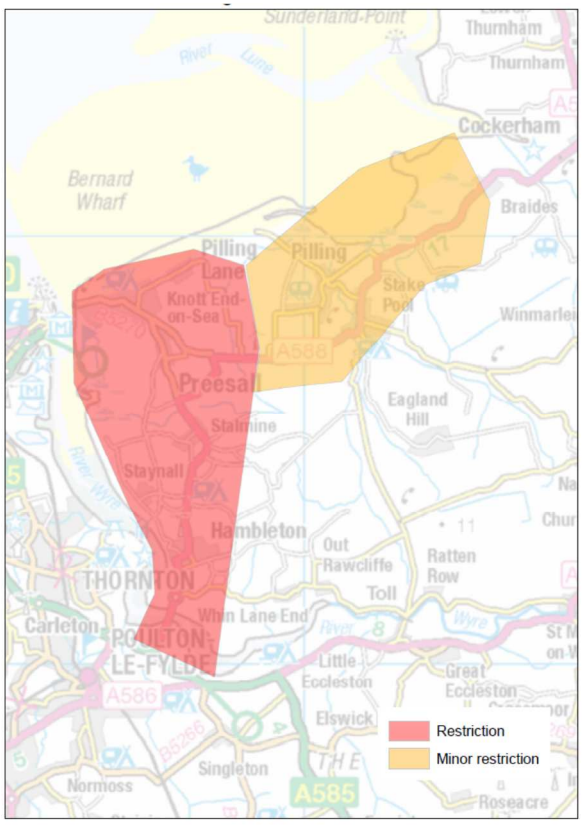


Figure 20 – Shard Bridge / Shard Road restriction zone

Congestion on Shard Road / Shard Bridge (A588) is largely due to traffic light timing at the A588 / A585 (T) junction which gives priority to the A585 (T). Due to the severity of congestion and the volume of traffic on the A585 (T) there is no scope to adjust traffic light timings to favour the A588. With this mind it is anticipated that on the current network congestion will worsen to an unacceptable level on Shard Road / Shard Bridge (A588) as a result of significant development.

The Highways England Windy Harbour to Skippool scheme will ease congestion at the A588 / A585 (T) junction which will result in reduced congestion on Shard Bridge / Shard Road. At the time of writing the extent of congestion relief brought about by the Highways England scheme is unknown, and is difficult to assess its effect on Shard Bridge / Shard Road. Therefore with regards to development within Hambleton, Knott End / Preesall, Stalmine and Pilling only a reasonable level of development on the current network can be given. The GraHAM toolkit shows that approximately 800 additional dwellings on the Peninsula corridor north of A588 / A585 junction results in 330 additional trips on Shard Road / Shard Bridge. On the current network it is estimated that a reasonable level of growth is 100 additional trips during peak time. With this rationale in mind an acceptable quantum across Hambleton, Knott End / Preesall, Stalmine and a proportion of Pilling can be rounded up to 250 dwellings.

Given the relative location of Pilling a lower percentage of traffic will travel southbound on the A588 contributing to congestion at Shard Road / Shard Bridge when compared to localities within the restriction zone. This proportion is estimated to be one third. Due to the congestion contribution the number of dwellings within Pilling will have to be restricted. The total for Hambleton, Knott End, Stalmine and Preesall plus one third of Pilling should not exceed 250.

Development in Over Wyre (and to a lesser extent Pilling) should be focused as close as possible to the A585 corridor. This will reduce the influence on the rural road network.

Hambleton

Site information	
Corridor:	Peninsula
Locality and site references:	Hambleton; IO_46, IO_47, IO_48, IO_49 & IO_50,
Recommended number of dwellings	250 shared across Hambleton, Knott End / Preesall, Stalmine and Pilling
Predicted increase in two way vehicle trips during peak hour:	n/a

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	A588 Shard Road (see accompanying map)
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Yes bus 2C (Blackpool - Victoria Hospital - Poulton - Knott End) for IO_46 & IO_47
	If yes what is the frequency?	30 minutes

Pedestrian	Pedestrian access to and around the site:	<1.2m on Kiln Lane, Church Lane, Marsh Lane, Grange Road & Moss Lane
Accessibility	Distance to nearest local centre:	Good (0m – 800m) for IO_49, IO_46 & IO_47. Adequate (800m -1600m) for IO_48 & IO_50
	Distance to nearest primary school:	Good (0m – 800m) for IO_50. Adequate (800m – 1600m) for IO_46, IO_47, IO_48 & IO_49
	Distance to nearest GP:	Good (0m – 800m) for IO_46 & IO_47. Adequate (800m-1600m) for IO_48, IO_49 & IO_50

Comments
Maximum number of dwellings recommended – 250 shared with Stalmine, Knott End/Preesall and a third of the development at Pilling
Accessibility to local services in Hambleton is very good. Bus service 2C operating every 30 minutes during the AM peak serves the A588 through Hambleton giving access to Poulton railway station. However due to the size of the indicative sites in the Issues and Options document much of the land is outside a reasonable walking distance to the bus service. Pedestrian access for many of the sites is also poor and would need to be addressed. Concern is raised on the impact development will have on A588 Shard Road to the A585 (T) junction. Congestion, and in parts severe congestion, is present on the current network on Shard Road and Shard Bridge. Indicative development of a significant scale would result in unacceptable queue length on the A588 queuing back from the junction with A585 (T). As a result, on the current network, indicative development within Hambleton should be restricted. Concern is also raised with the proportionately high concentration of accidents on the A588 through Hambleton. In order to maximise the potential for development in Hambleton work undertaken as part of the A585 Windy Harbour to Skippool junction scheme would need to significantly reduce congestion at the A588 / A585 junction. On the current network

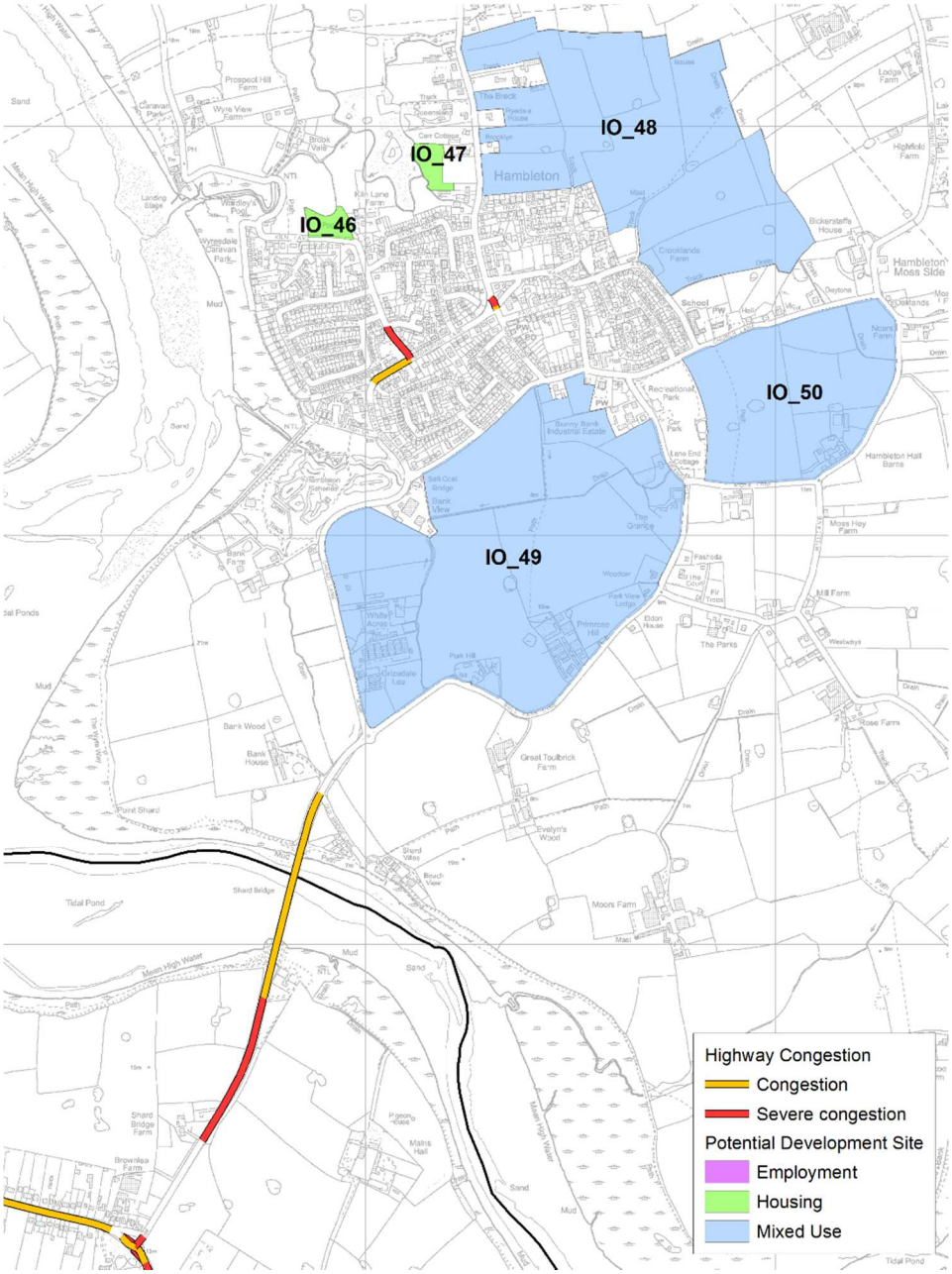
maximum of 250 dwellings should be allocated at Hambleton. Alternatively this may be spread across Hambleton, Knott End / Preesall, Stalmine and a proportion at Pilling.

Currently it is not possible to predict the influence of improvements to the Highways England network at Shard Bridge and Little Singleton. The prospect for further development over and above current recommendations is dependent on Highway England's eventual scheme.

Site IO_49, being the most southerly, is the most preferable.

The sites should be subject to a masterplan requirement in the Local Plan allocation policy covering the whole allocation. In the absence of a strategic intervention piecemeal development would prevent the delivery of the maximum housing capacity at the settlement. A master planning approach with a phasing and delivery strategy is strongly recommended to determine the form of infrastructure needed to achieve the delivery of these sites.

Indicative housing sites within Hambleton



Knott End / Preesall

Site information		
Corridor:		Peninsula
Locality and site references:		Knott End / Preesall; IO_135, IO_35, IO_36, IO_37, IO_38, IO_39, IO_40, IO_41, DS_10
Recommended number of dwellings		250 shared across Hambleton, Knott End / Preesall, Stalmine and Pilling
Predicted increase in two way vehicle trips during peak hour:		n/a
Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Yes bus 2C (Blackpool - Victoria Hospital - Poulton - Knott End) for IO_39, IO_40, IO_41 & IO_135
	If yes what is the frequency?	30 minutes
Pedestrian	Pedestrian access to and around the site:	1.2m to good– 2m for the majority of sites

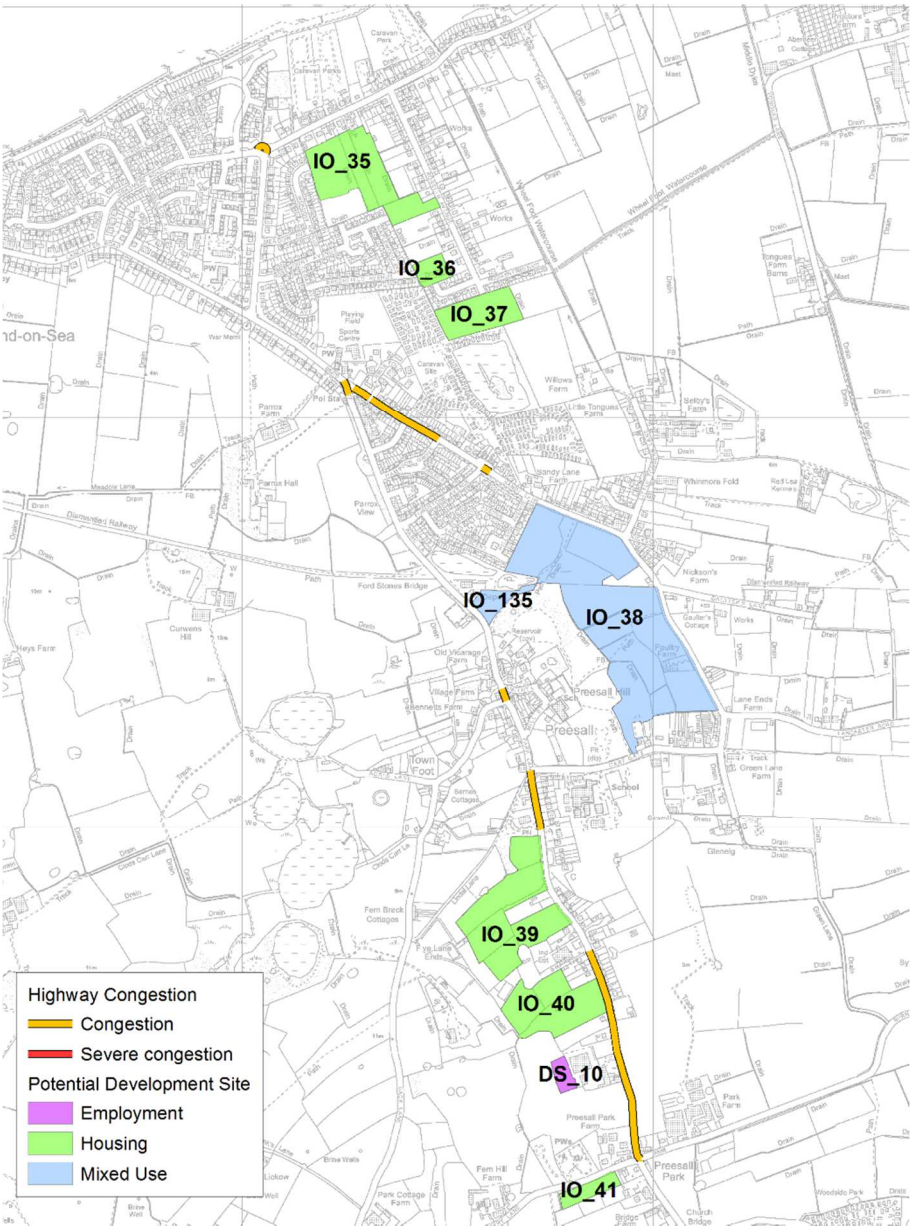
Accessibility	Distance to nearest local centre:	Adequate (1.2m – 1.5m) for IO_35, IO_36 & IO_37. Poor (> 1600 m) for IO_135, IO_38, IO_39, IO_40 & IO_41
	Distance to nearest primary school:	Good (0m – 800m) for IO_135, IO_38, IO_39 & IO_40. Adequate (800m – 1600m) for IO_35, IO_36, IO_37 & IO_41
	Distance to nearest GP:	Good (0m – 800m) for IO_35, IO_36 & IO_37. Adequate (800m – 1600 m) for IO_38, IO_135. Poor (>1600 m) for IO_39, IO_40 & IO_41

Comments
Maximum number of dwellings recommended – 250 but shared within Stalmine, Hambleton and a third of the development at Pilling.
Accessibility to local services is generally good and the majority of sites have access to a bus service within reasonable walking distance. The bus service operates on a 30 minute frequency during the weekday AM peak and gives access to Poulton railway station. The cumulative impact of development within Hambleton, Stalmine, and Knott End/Preesall will contribute to congestion on Shard Road / Shard Bridge and impact on the high accident rate on the A588 through Hambleton. There are concerns over development relying on the A588 / B5377 junction, which currently has a high accident rate and challenging geometry which would be difficult to overcome within the highway boundary, this forms a limiting factor which would need to be overcome. Some limited development could be accommodated to the north of this junction supported by improvements to the junction and approach roads within the highway boundary. It is highly likely that local roads, including junctions, will need some changes to accommodate carriageway and footway improvements/widening and to satisfy visibility splays, using land within the highway boundary or land within the development site(s).

In order to maximise the potential for development in Knott End/Preesall work undertaken as part of the A585 Windy Harbour to Skippool junction scheme would need to significantly reduce congestion at the A588 / A585 junction. On the current network maximum of 250 dwellings should be allocated within Knott End/Preesall. Alternatively this may be spread across Hambleton, Knott End / Preesall, Stalmine and a proportion of Pilling.

Currently it is not possible to predict the influence of improvements to the Highways England network at Shard Bridge and Little Singleton. The prospect for further development over and above current recommendations is dependent on Highway England's eventual scheme.

Indicative housing sites within Knott End / Preesall



Stalmine

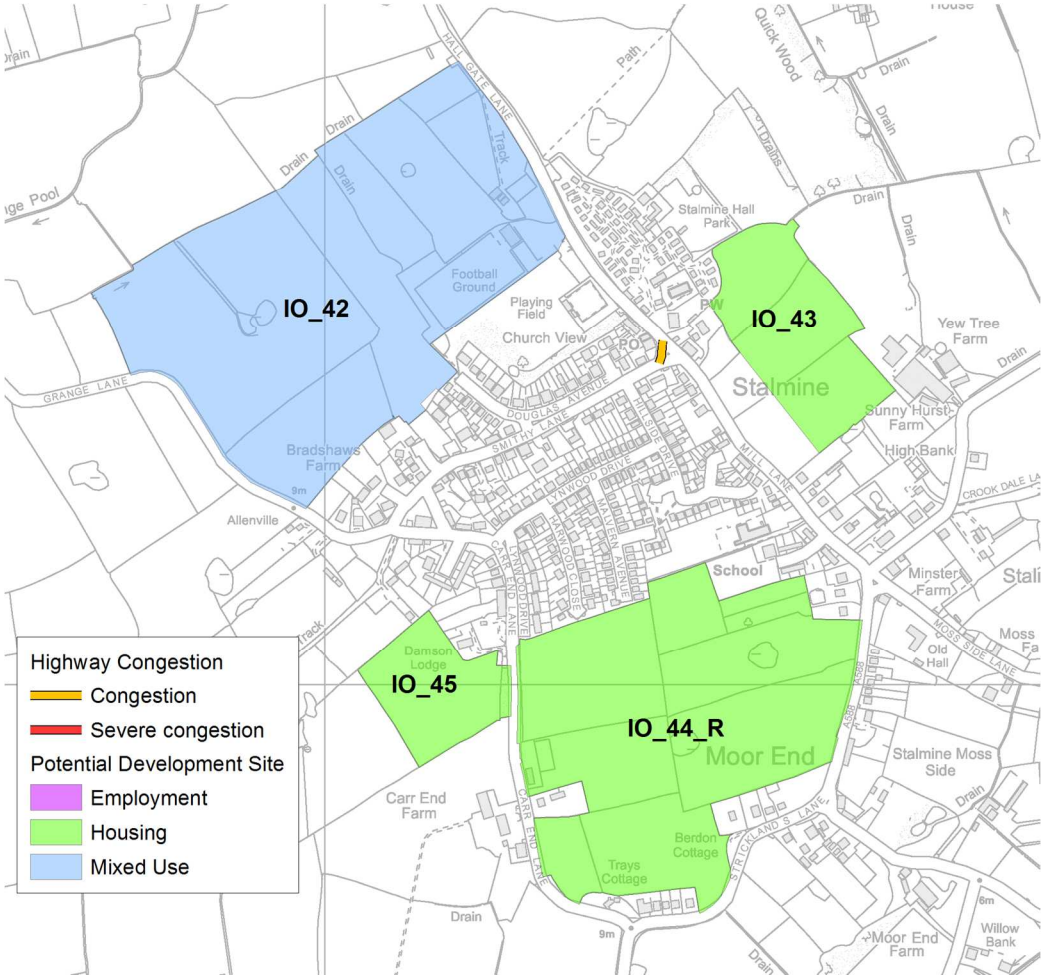
Site information	
Corridor:	Peninsula
Locality and site references:	Stalmine; IO_42, IO_43, IO_44_R, IO_45
Recommended number of dwellings	250 shared across Hambleton, Knott End / Preesall, Stalmine and Pilling
Predicted increase in two way vehicle trips during peak hour:	n/a

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	Inappropriate width Grange Lane & Carr End Lane
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip, Pilling & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	Yes bus 2C (Blackpool - Victoria Hospital - Poulton - Knott End) for IO_43 & IO_44R
	If yes what is the frequency?	30 minutes
Pedestrian	Pedestrian access to and around the site:	Generally 1.5m – 2m.<1.2m on Grange Lane & Carr End Lane

Accessibility	Distance to nearest local centre:	Poor (>1600 m)
	Distance to nearest primary school:	Good (0m – 800m) for IO_43, IO_45 & IO_44R. Adequate (800m – 1600m) for IO_42
	Distance to nearest GP:	Poor (>1600 m)

Comments
Maximum number of dwellings recommended – 250 shared with Hambleton, Knott End/Preesall and a third of the development at Pilling
Suitable mitigation in the form of appropriate width for vehicular and pedestrian access on Grange Lane and Carr End Lane to access sites is required. Accessibility to measured services is generally poor and the majority of sites have access to a bus service within reasonable walking distance. The bus service operates on a 30 minute frequency during the AM peak and gives access to Poulton railway station. In order to maximise the potential for development in Stalmine work undertaken as part of the A585 Windy Harbour to Skippool junction scheme would need to significantly reduce congestion at the A588 / A585 junction. On the current network maximum of 250 dwellings should be allocated within Stalmine. Alternatively this may be spread across Hambleton, Knott End / Preesall, Stalmine and a proportion of Pilling. Currently it is not possible to predict the influence of improvements to the Highways England network at Shard Bridge and Little Singleton. The prospect for further development over and above current recommendations is dependent on Highway England's eventual scheme.

Indicative housing sites within Stalmine



Pilling

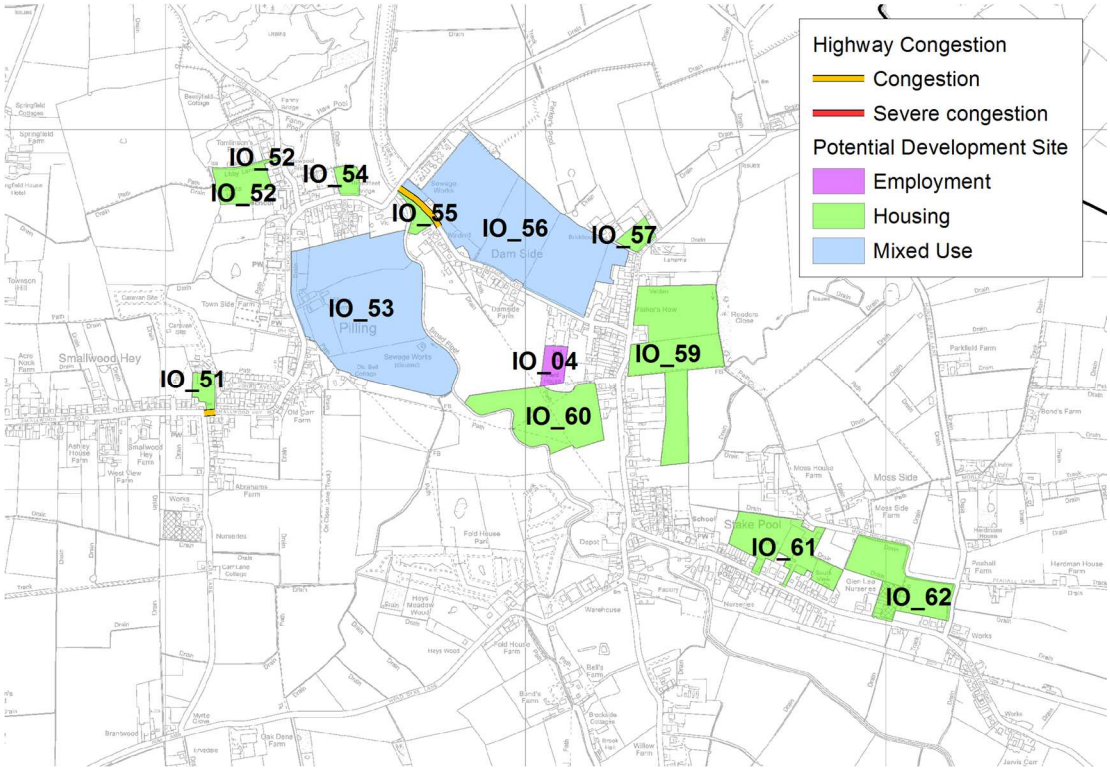
Site information	
Corridor:	Peninsula
Locality and site references:	Pilling ; IO_51, IO_52, IO_53, IO_54, IO_55, IO_56, IO_57, IO_58, IO_59, IO_60, IO_61, IO_62, IO_04
Recommended number of dwellings	250 shared across Hambleton, Knott End / Preesall, Stalmine and Pilling
Predicted increase in two way vehicle trips during peak hour:	n/a

Site overview		
Access	Are there congestion problems or any other issues affecting the potential access frontage?	No
Vehicles	Will it contribute to congestion on known strategic pinch points?	M55 Junction 3
	Are there other development sites within the area of influence which compounds congestion problems at strategic pinch points?	Poulton-le-Fylde, Thornton, Hambleton, Stalmine, Great Eccleston, Knott End, Preesall, Fleetwood, Cleveleys, Inskip & St Michael's on Wyre
Public transport	Is the whole site within 0-400m of a public transport stop (bus or tram) with an operating service during Tuesday 07.00 to 10.00	No
	If yes what is the frequency?	_
Pedestrian	Pedestrian access to and around the site:	<1.2m for the majority of sites

Accessibility	Distance to nearest local centre:	Poor (>1600m)
	Distance to nearest primary school:	Good (0m – 800m)
	Distance to nearest GP:	Poor (>1600m)

Comments
Maximum number of dwellings recommended – 250 shared with Hambleton, Knott End/Preesall and a third of the development at Pilling
Generally, sites within Pilling have poor accessibility to measured local services and no bus service during the weekday AM peak (08.00 – 09.00). Suitable pedestrian access on Taylor's Lane and in and around School Lane must be provided. It is highly likely that local roads, including junctions, will need some changes to accommodate carriageway and footway improvements/widening and to satisfy visibility splays, using land within the highway boundary or land within the development site(s). Although remote from sites at Pilling extra development traffic through the A588 / B5377 junction raises concerns. This junction currently has a high accident rate and challenging geometry which would be difficult to overcome within the highway boundary. In order to maximise the potential for development in Pilling work undertaken as part of the A585 Windy Harbour to Skippool junction scheme would need to significantly reduce congestion at the A588 / A585 junction. On the current network a maximum of 300 dwellings should be allocated within Pilling. The cumulative effect of development across Hambleton, Knott End / Preesall, Stalmine and Pilling on Shard Bridge/Shard Road must also be considered. Consequently the total for Hambleton, Knott End / Preesall, Stalmine and one third of Pilling should not exceed 250. Currently it is not possible to predict the influence of improvements to the Highways England network at Shard Bridge and Little Singleton. The prospect for further development over and above current recommendations is dependent on Highway England's eventual scheme.

Indicative housing sites within Pilling



3.4.3 Summary of Peninsula corridor

Figure 21 provides a summary on the number of dwellings each locality can accommodate within the Peninsula corridor.

It is noted that the Windy Harbour to Skippool improvement scheme, further improvements on the A585 (T) and M55 Junction 3 will aid development on the Peninsula corridor.

Currently it is not possible to predict the influence of improvements to the Highways England network at Shard Bridge and Little Singleton. The prospect for further development over and above current recommendations is dependent on Highway England's eventual scheme.

Figure 21 - Peninsula corridor housing numbers

Locality	Permitted number of dwellings	Additional information
Poulton-le-Fylde	390	Subject to delivery of the Poulton Mitigation Strategy
Thornton	835	
Cleveleys	40	
Fleetwood	220	
Great Eccleston	500	
Hambleton, Stalmine, Knott End/ Preesall,	250	Total across all sites in area. See also relationship with Pilling Total here +1/3 Pilling <= 250
Pilling	300	See also relationship with Hambleton, Stalmine, Knott End/ Preesall Total there +1/3 Pilling <= 250

Section four - Conclusion

This study has been informed by evidence gathering and a series of technical assessments produced by independent transport consultants and by the County Council and Highways England. The technical assessments presented in this study point to a number of constraints on the existing highway network, such that key parts of the existing network are not able to accommodate the level of predicted additional trips under various potential development scenarios without a significant and severe impact on network performance, including on the strategic road network. Particular problem locations are Junctions 1 and 3 of M55, sections of the A585 (T) corridor, the local transport network serving Poulton-le-Fylde and locations on corridors such as the A6 serving other areas. Constraints to these potential development scenarios persist even with the delivery of transport intervention on the network, including:

- A new Junction 2 M55.
- Little Singleton Bypass.
- Other changes at M55 junction 1 together with Broughton Bypass (currently being constructed)
- A6 Barton to Garstang Sustainable Transport Strategy (including safety and network efficiency).
- Poulton Mitigation Strategy
- A585 changes as promoted by Highways England

The delivery of the intervention maximises the level of development that can be accommodated.

A planning application has been submitted for Junction 2 M55 and a decision is expected in 2017 (second quarter). Funding is approved in principle and the new junction is expected to be operational in 2021. The Little Singleton Bypass is committed scheme within the current RIS and is expected to be completed in 2022.

What is apparent now is that the transport network serving Wyre is reaching, and in several areas has already reached, a critical point where additional traffic can no longer be accommodated without introducing unacceptably severe impacts or

prompting the need for additional strategic scale infrastructure improvements to support further development.

A comprehensive approach to transport improvements as highlighted should increase network effectiveness, as well as increasing opportunities for travel by alternative modes to the private car. Based on these transport assessments, these improvements must also include new road space.

This document has assessed the scope for indicative development informed by, though not exclusively, congestion, public transport and accidents data. In doing so the study has drawn a conclusion on a reasonable level of development within each locality.

Figures 22 and 23 provide a summary table on a reasonable level of development on the A6 corridor and the Peninsula corridor respectively.

Figure 22 – A6 corridor summary

Locality	**Restriction zone**	**Maximum number of dwellings recommended with current calculations**
Garstang	n_1	See Appendix E for LCC statutory comments including dwelling numbers and triggers.
Bowgreave	n_1	
Nateby	n_1	
Churchtown	n_1	
Catterall	n_1	
Bilsborrow	n_1	
Barton	n_1	
Winmarleigh	n_1	
Inskip	n_2	Up to a maximum of 200 between localities within n_2 once the new junction 2 on the M55 is operational.
St Michael's on Wyre	n_2	Up to a maximum of 200 between localities within n_2 once the new junction 2 on the M55 is operational.
Forton	n_3	450
Scorton	n_3	0
Hollins Lane	n_3	80
Calder Vale	n_3	0

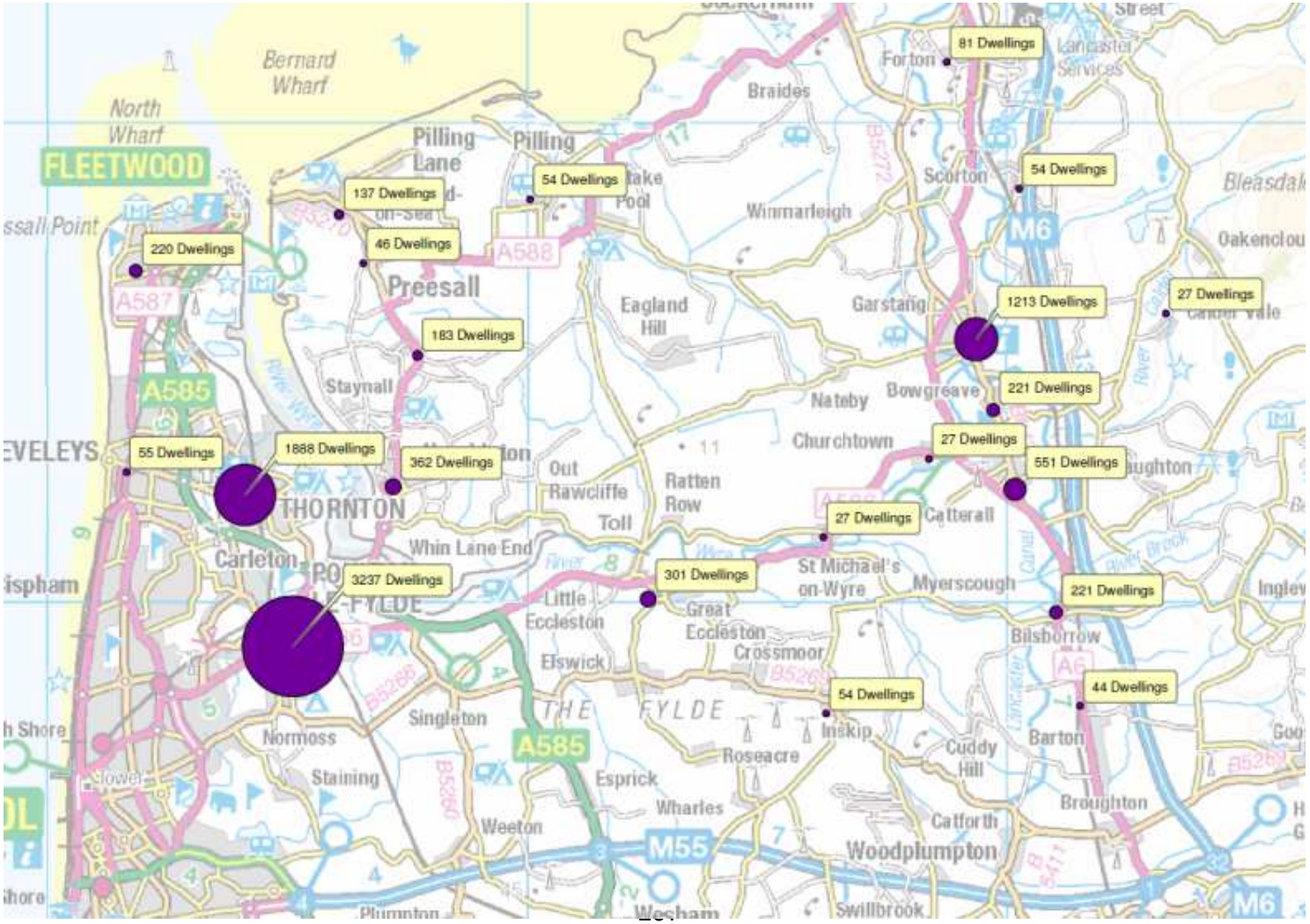
Figure 23 provides a summary on the reasonable quantum of development on the Peninsula corridor (excluding Inskip and St. Michael's on Wyre which have been captured in Figure 22).

Figure 23 – Peninsula corridor summary

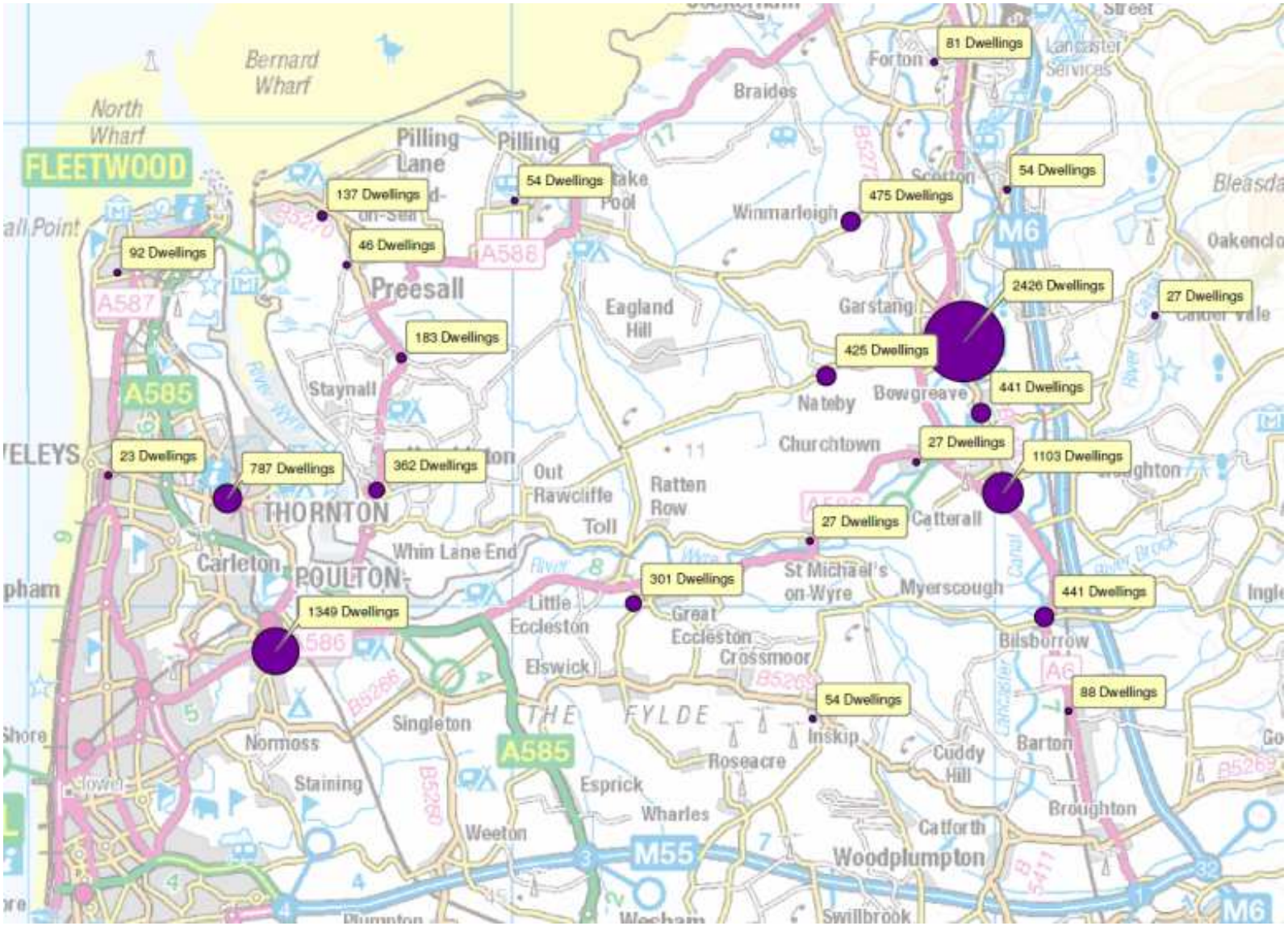
Locality	**Permitted number of dwellings**	**Additional information**
Poulton-le-Fylde	390	
Thornton	835	
Cleveleys	40	
Fleetwood	220	
Great Eccleston	500	
Hambleton, Stalmine, Knott End/ Preesall,	250	Total across all sites in area. See also relationship with Pilling Total here +1/3 Pilling <= 250
Pilling	300	See also relationship with Hambleton, Stalmine, Knott End/ Preesall Total there +1/3 Pilling <= 250

Appendix A – Broad spatial options

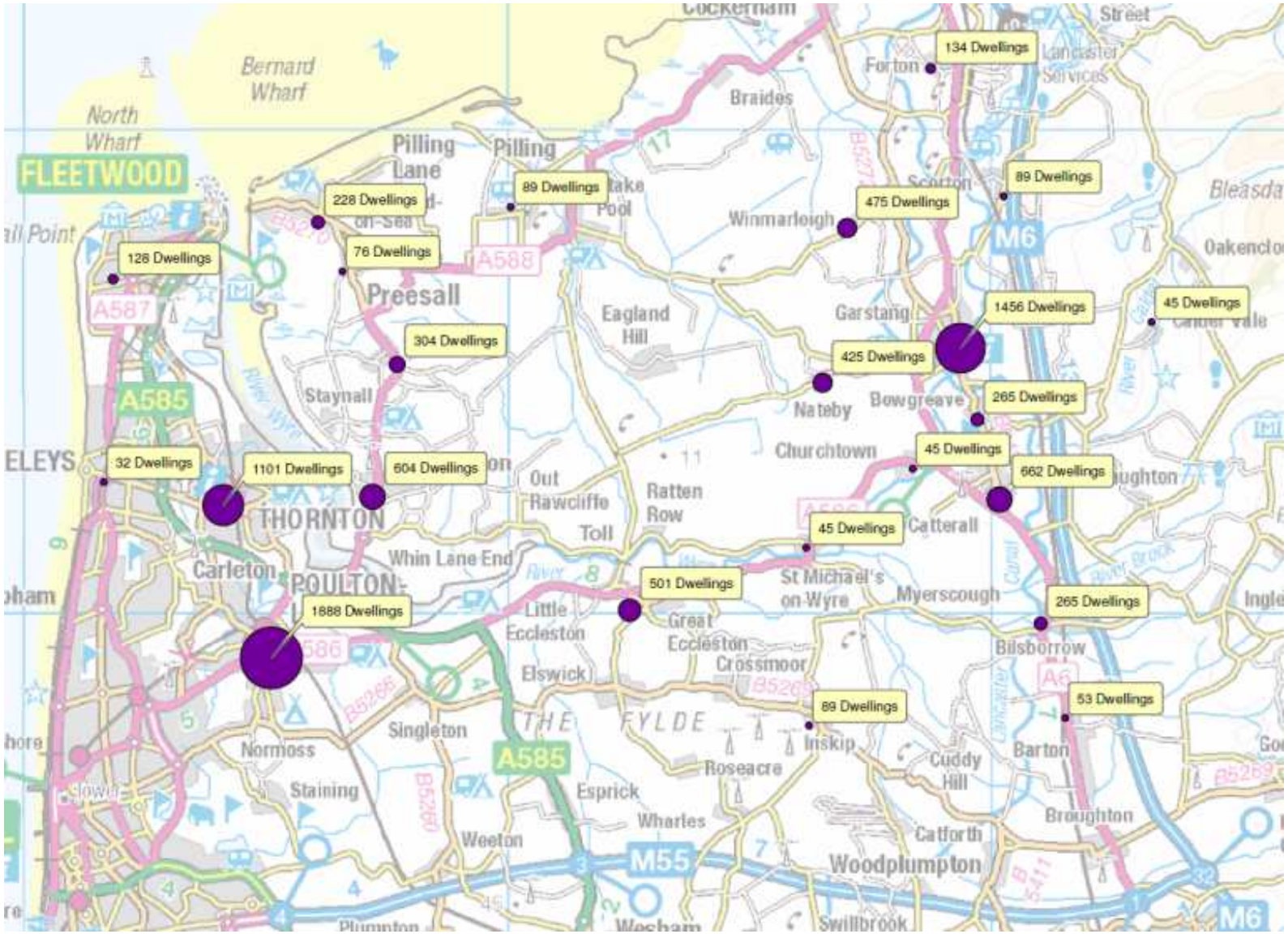
Option one



Option two

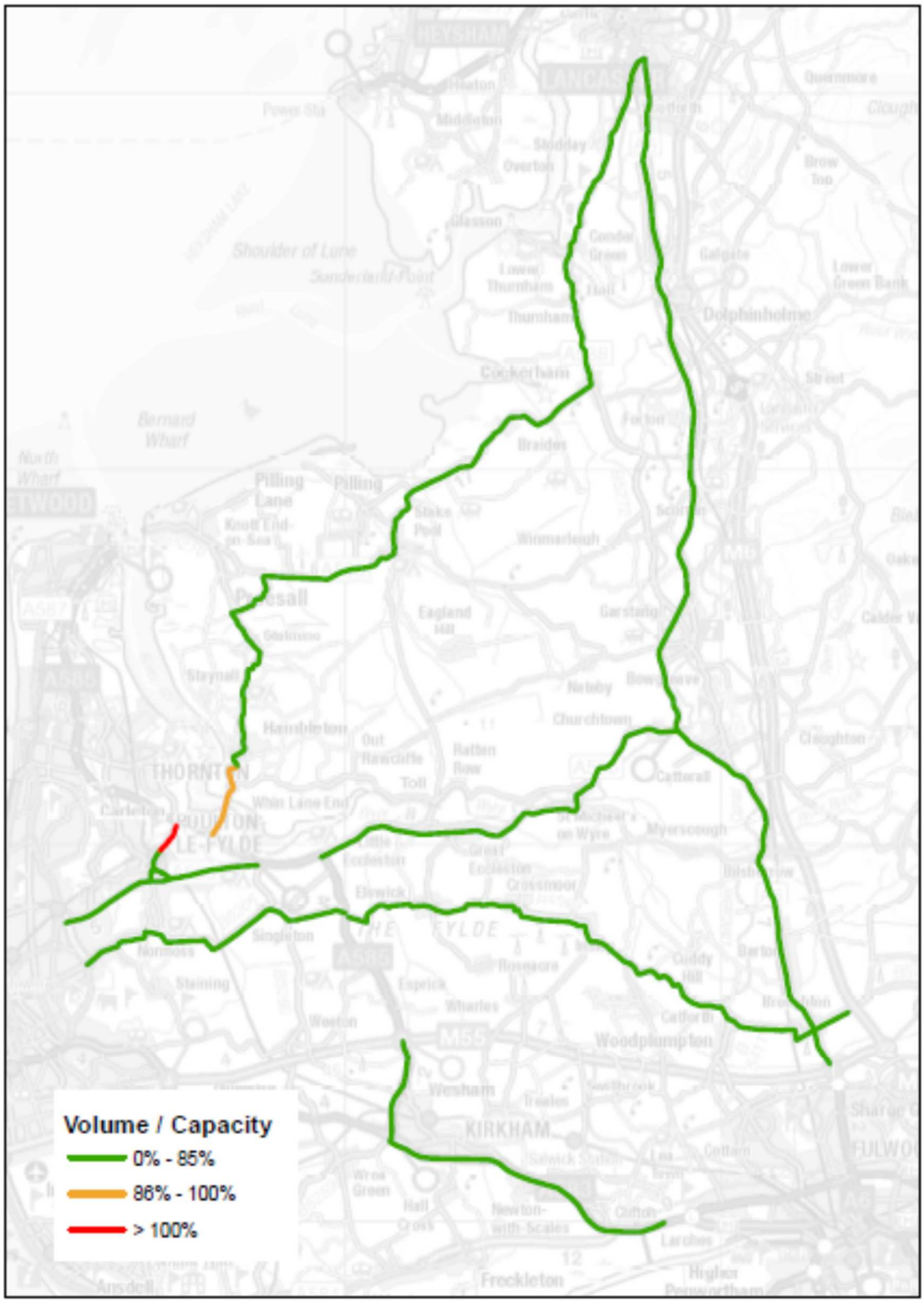

81 Dwellings
54 Dwellings
475 Dwellings
2426 Dwellings
27 Dwellings
425 Dwellings
441 Dwellings
27 Dwellings
1103 Dwellings
27 Dwellings
441 Dwellings
88 Dwellings
54 Dwellings
301 Dwellings
1349 Dwellings
787 Dwellings
362 Dwellings
23 Dwellings
183 Dwellings
46 Dwellings
137 Dwellings
54 Dwellings
92 Dwellings
FLEETWOOD
THORNTON
POULTON-
Preesall
Pilling
Pilling Lane
Bernard Wharf
North Wharf
Braides
Forton
Winmarleigh
Garstang
Eagland Hill
Nateby
Bowgreave
Churchtown
Catterall
Ratten Row
Out Rawcliffe
Toll
Whin Lane End
Carleton
Staynall
Little Eccleston
Great Eccleston
Elswick
Crossmoor
St Michael's on Wyre
Myerscough
Bilsborrow
Inskip
Roseacre
Singleton
Normoss
Staining
Esprick
Wharles
Weeton
Barton
Cuddy Hill
Broughton
Catforth
Woodplumpton
Swillbrook
THE FYLDE
A585
A586
A587
M55
M6
B5269
B5266
B5259

Option three

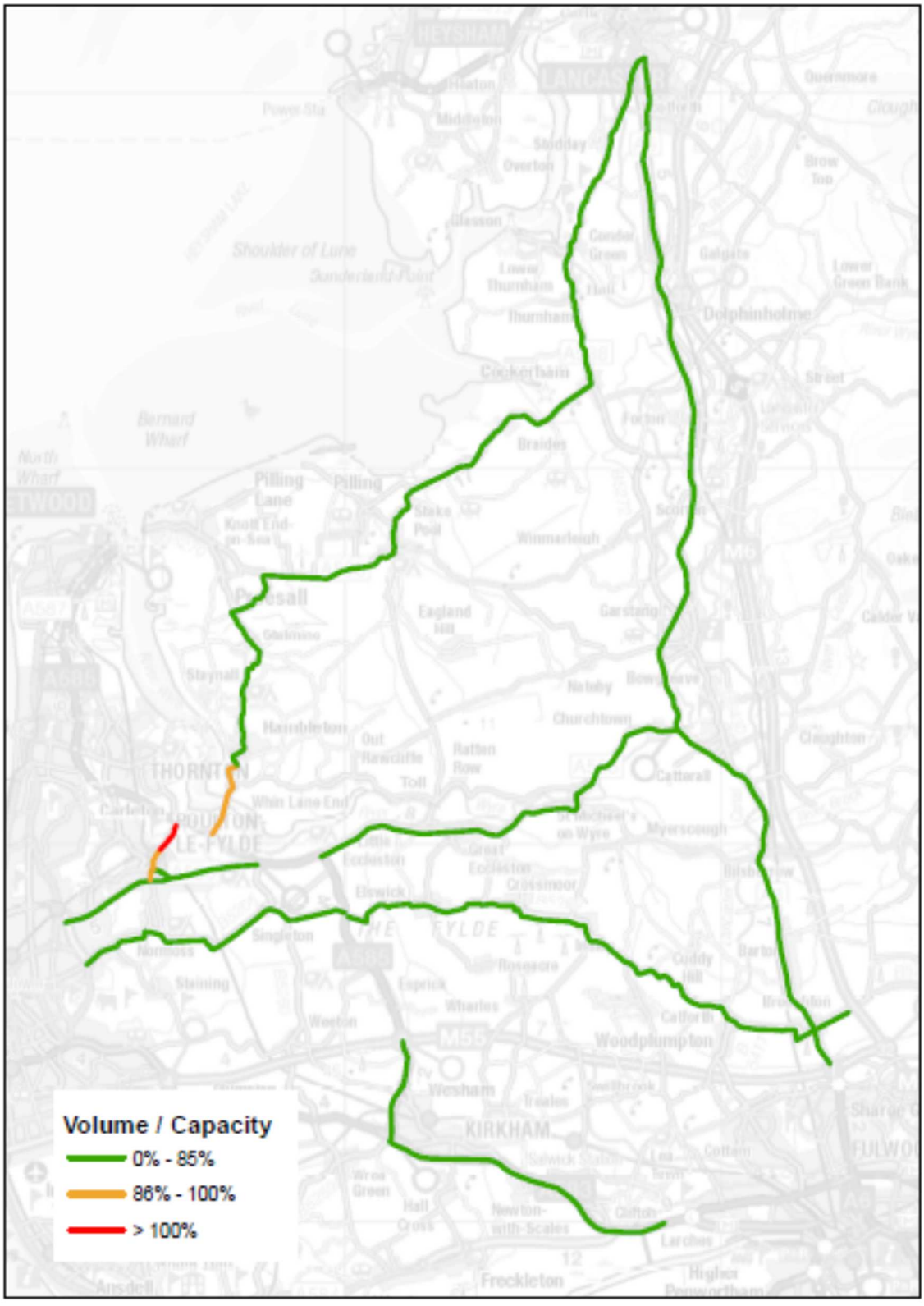


Appendix B – GraHAM toolkit

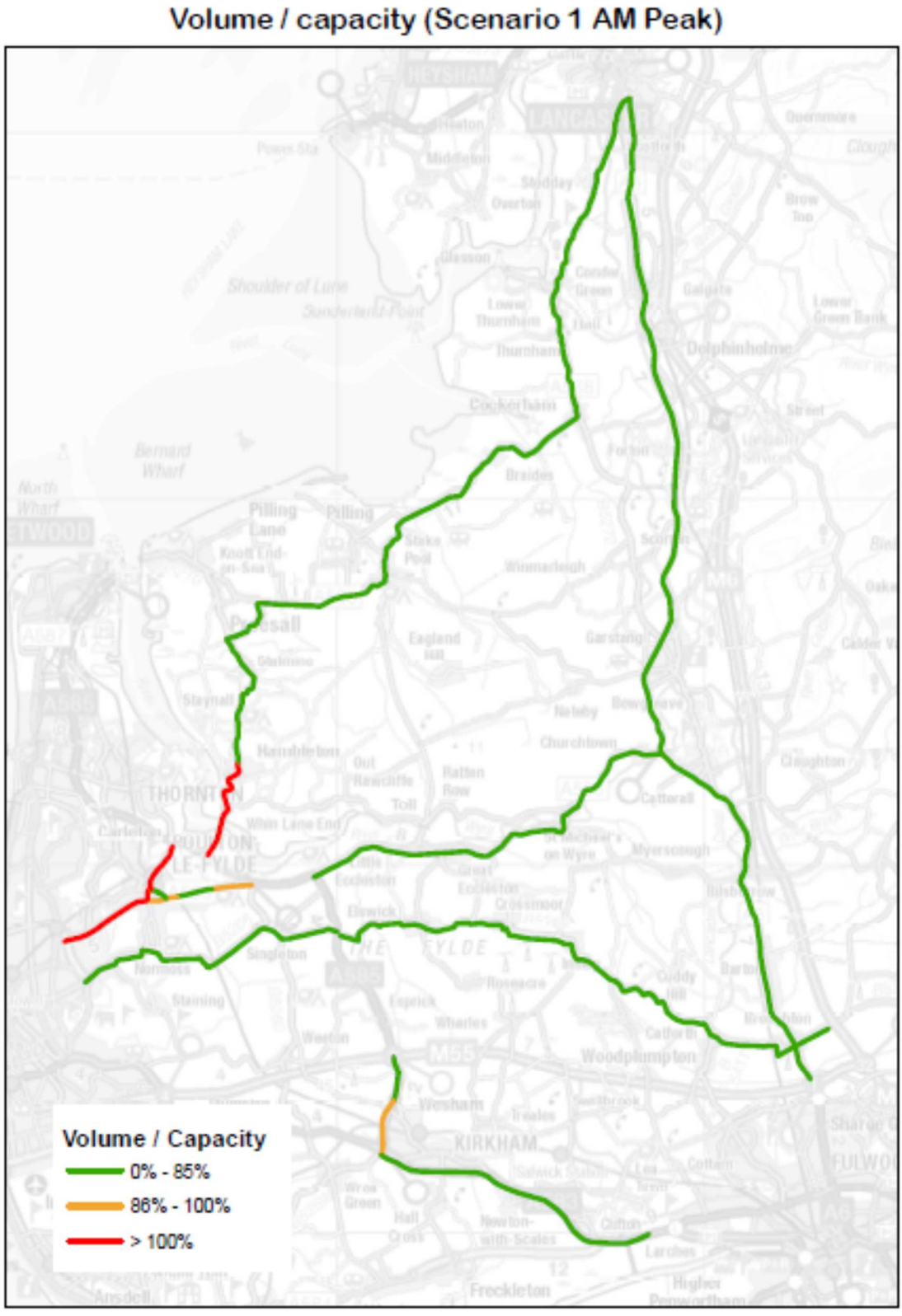
Volume / capacity (No development AM Peak)



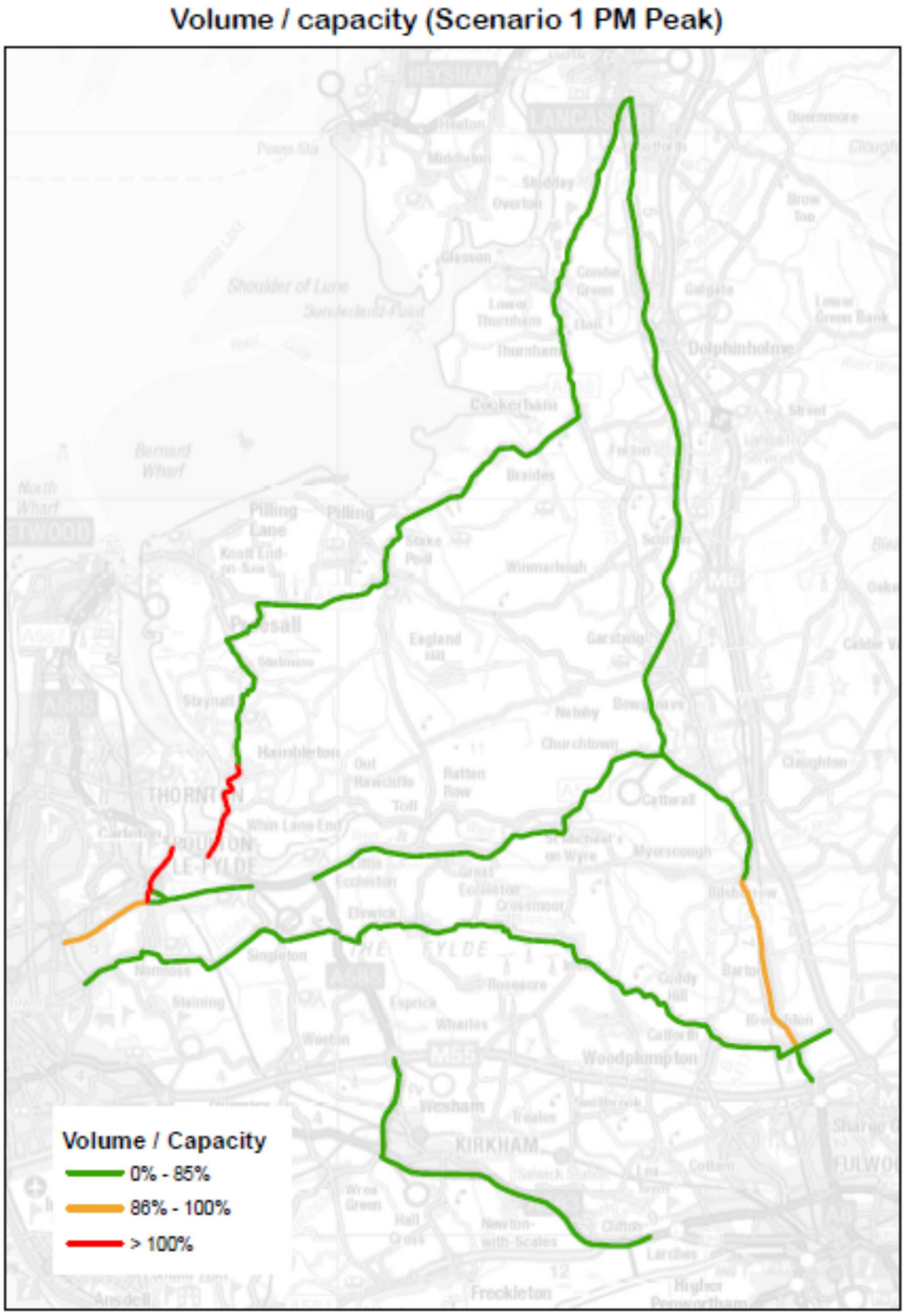
Appendix B – GraHAM toolkit



Appendix B – GraHAM toolkit

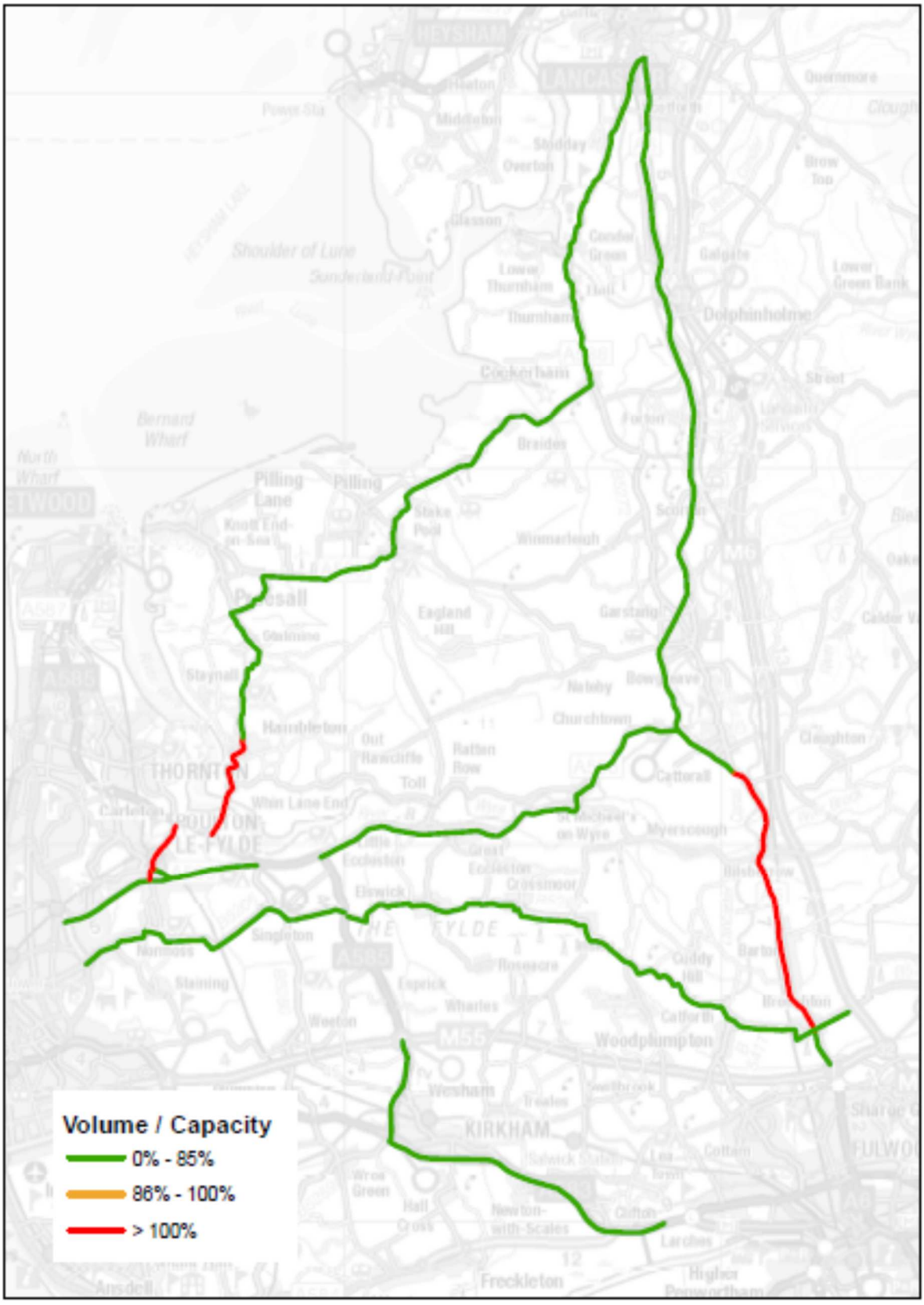


Appendix B – GraHAM toolkit



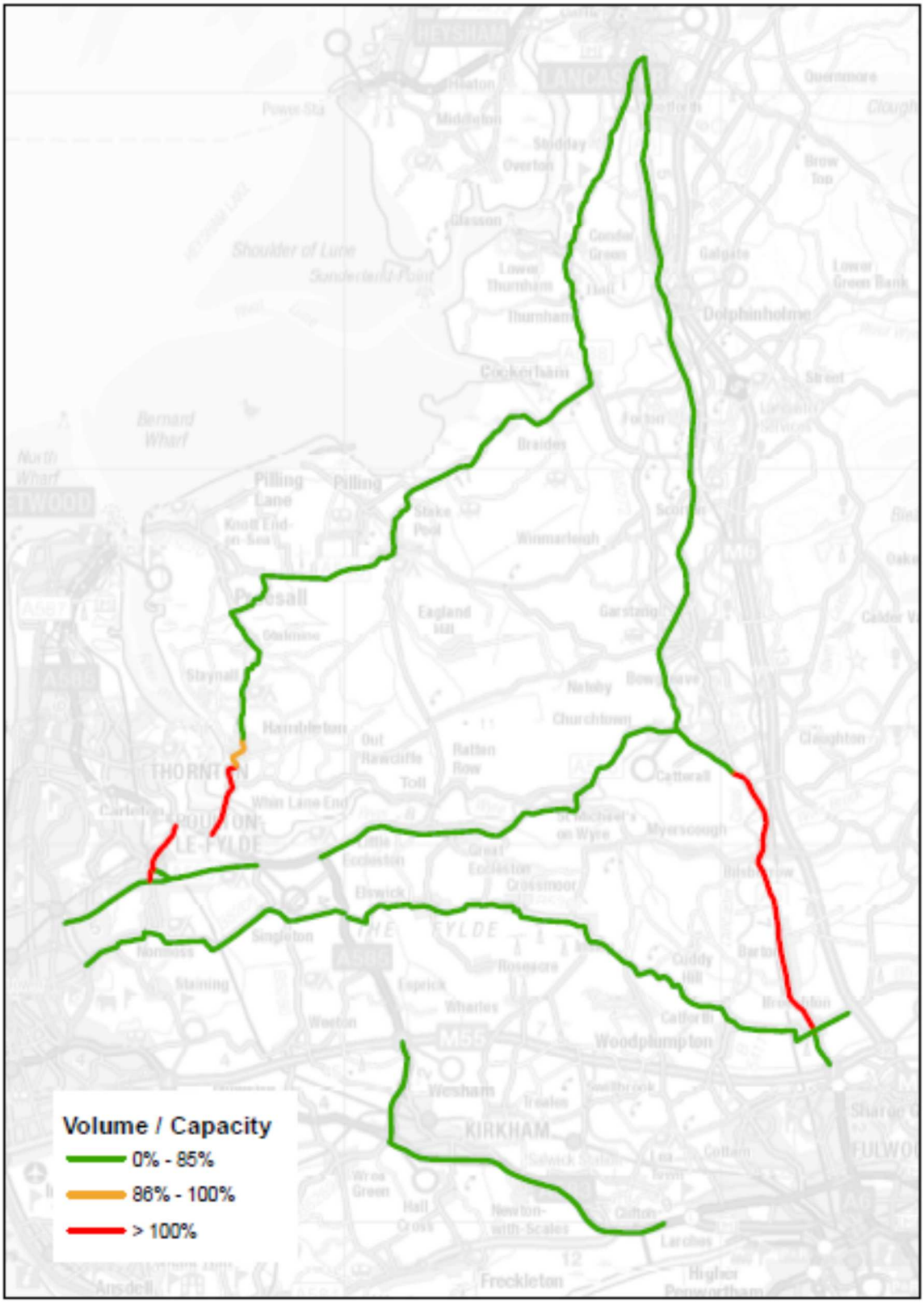
Appendix B – GraHAM toolkit

Volume / capacity (Scenario 2 AM Peak)



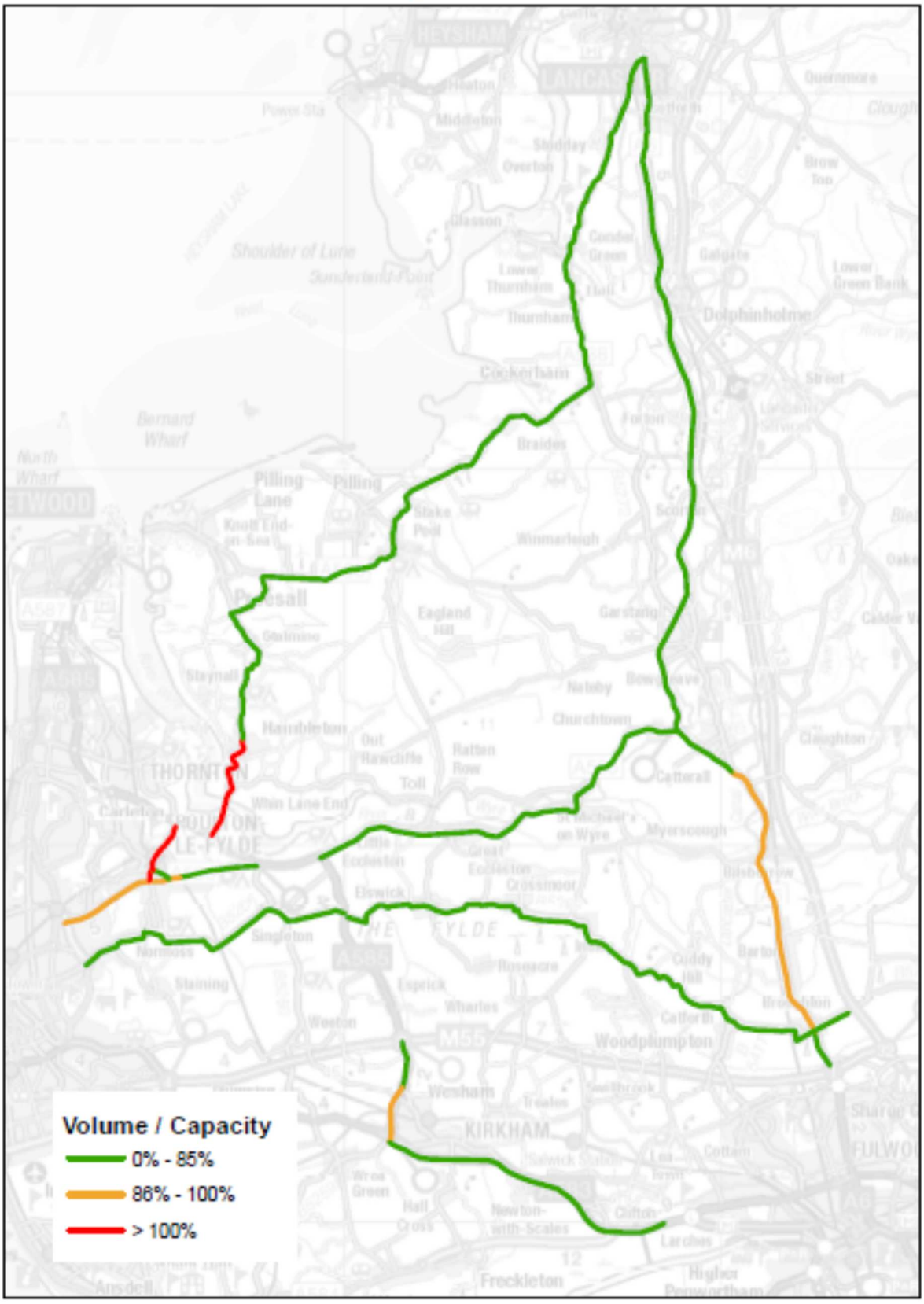
Appendix B – GraHAM toolkit

Volume / capacity (Scenario 2 PM Peak)



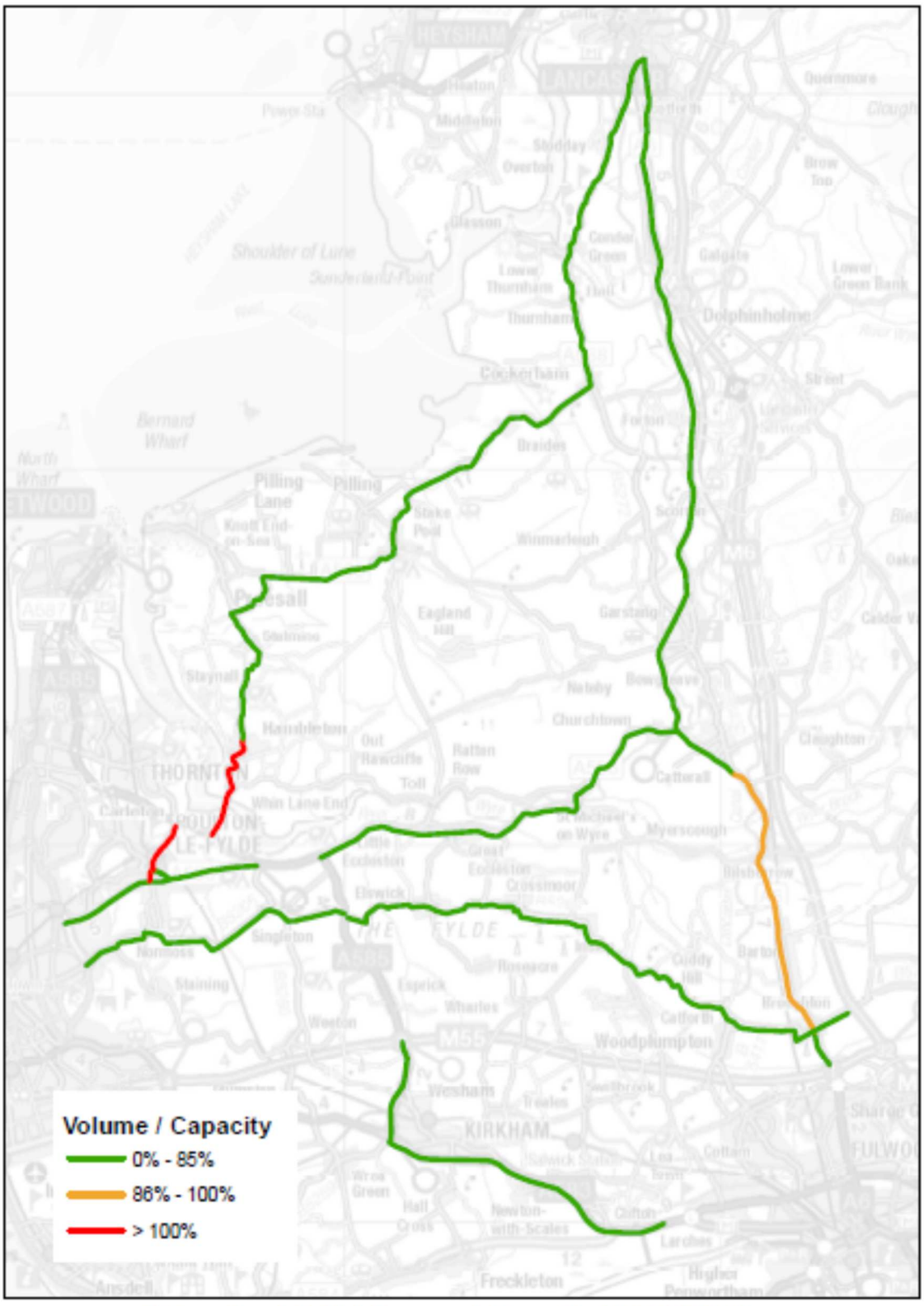
Appendix B – GraHAM toolkit

Volume / capacity (Scenario 3 AM Peak)



Appendix B – GraHAM toolkit

Volume / capacity (Scenario 3 PM Peak)



Appendix B – GraHAM toolkit (no development 2030)

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Appendix B – GraHAM toolkit (option one 2030)

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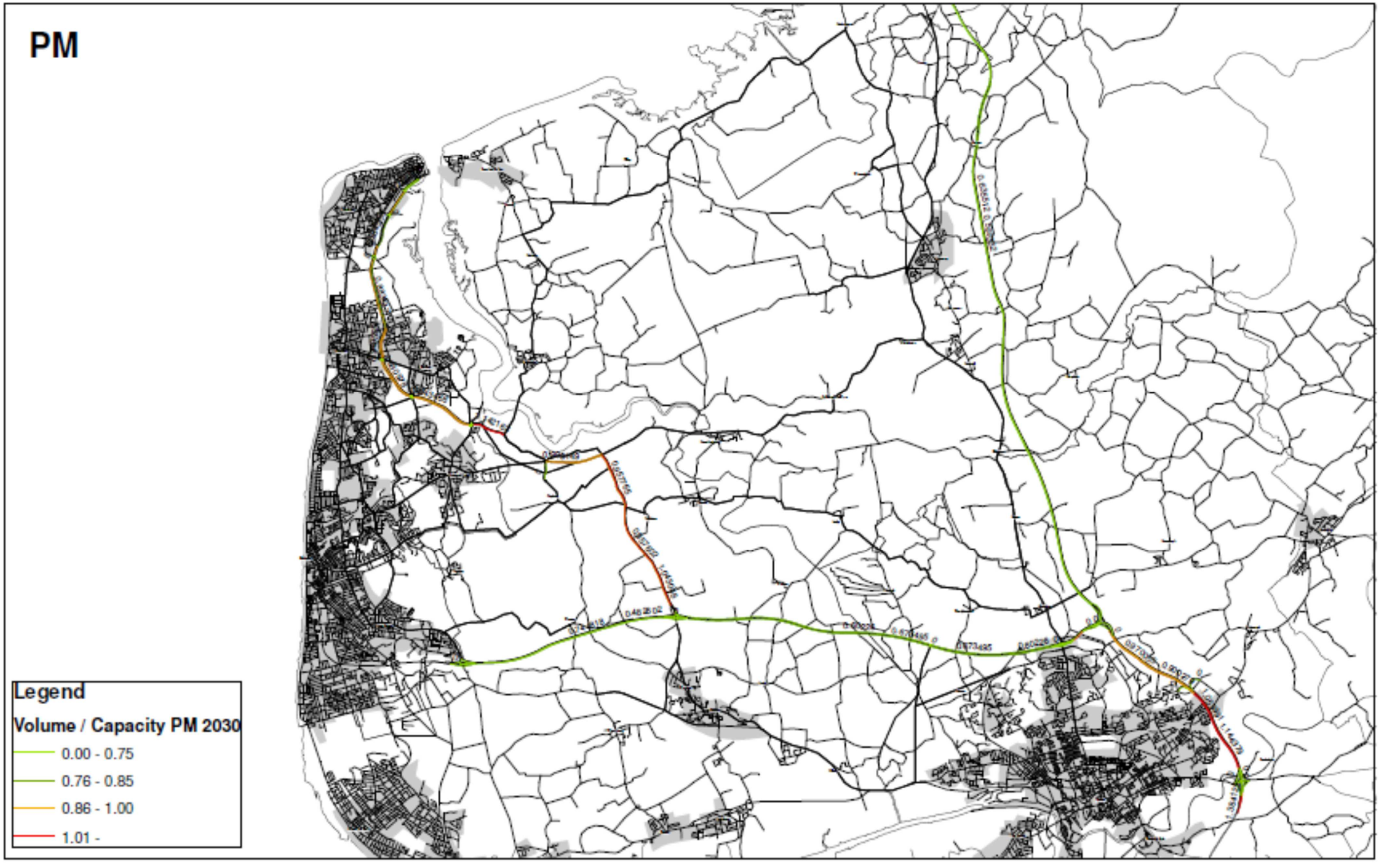

Appendix B – GraHAM toolkit (option two 2030)

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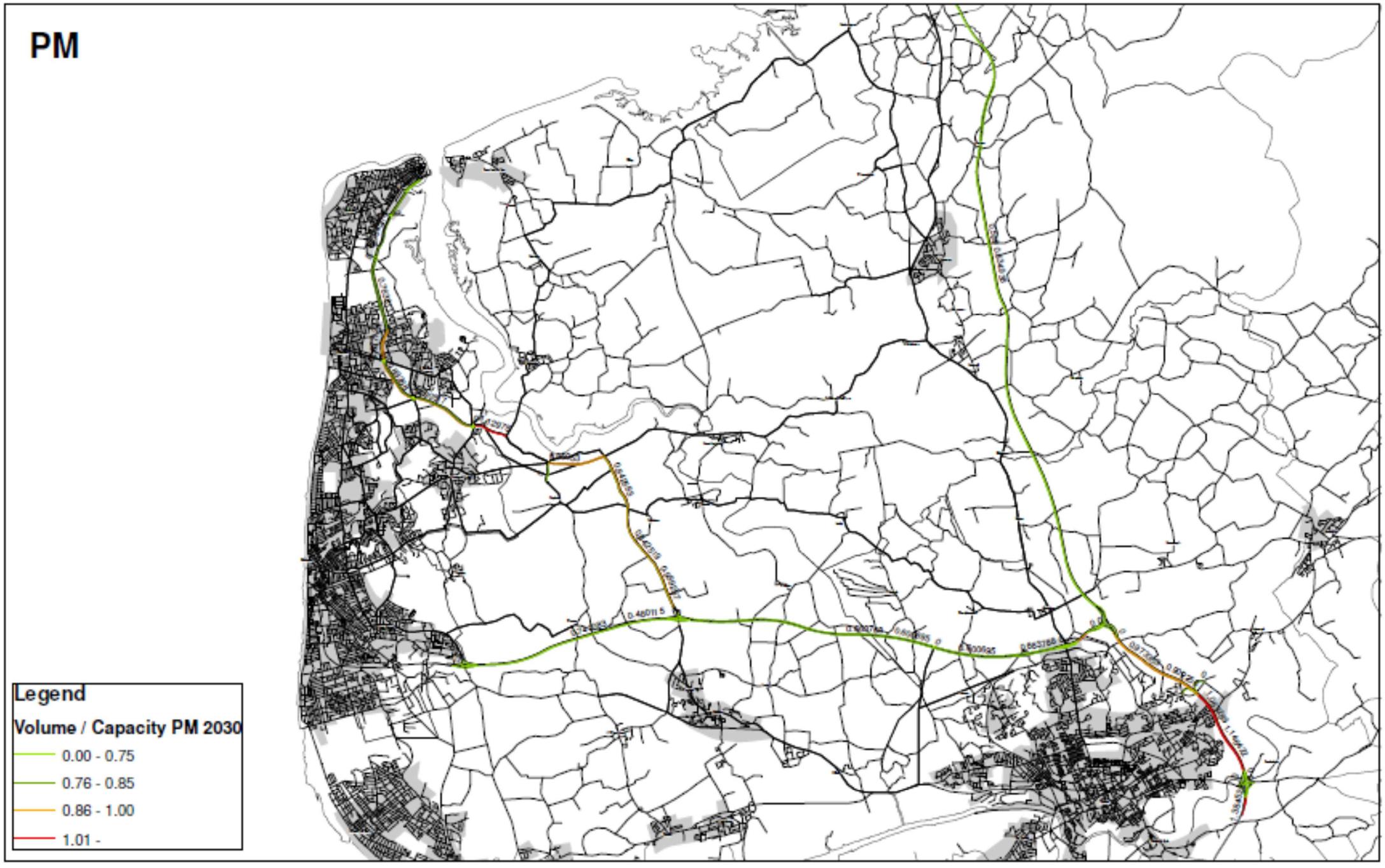

Appendix B – GraHAM toolkit (option three 2030)

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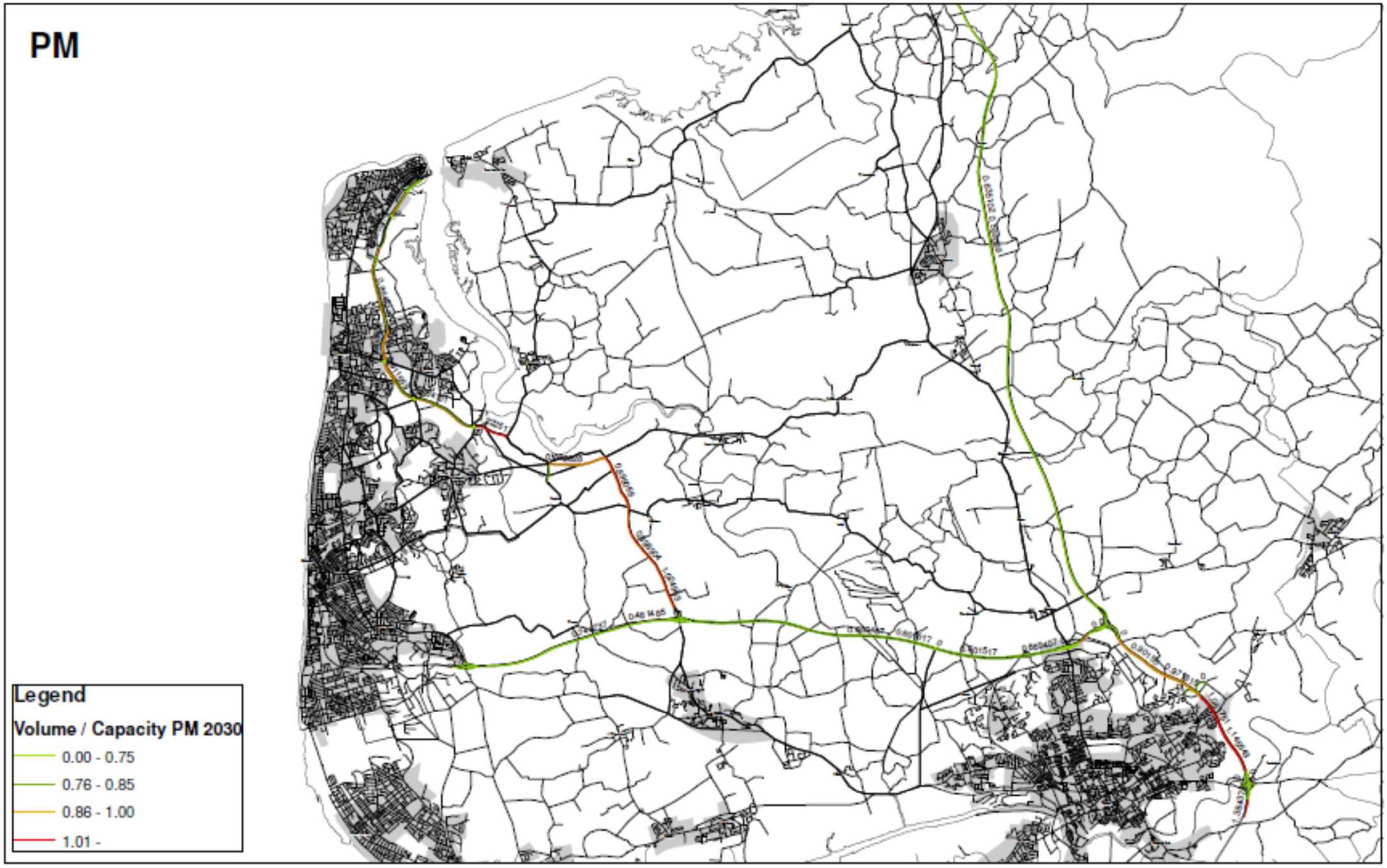
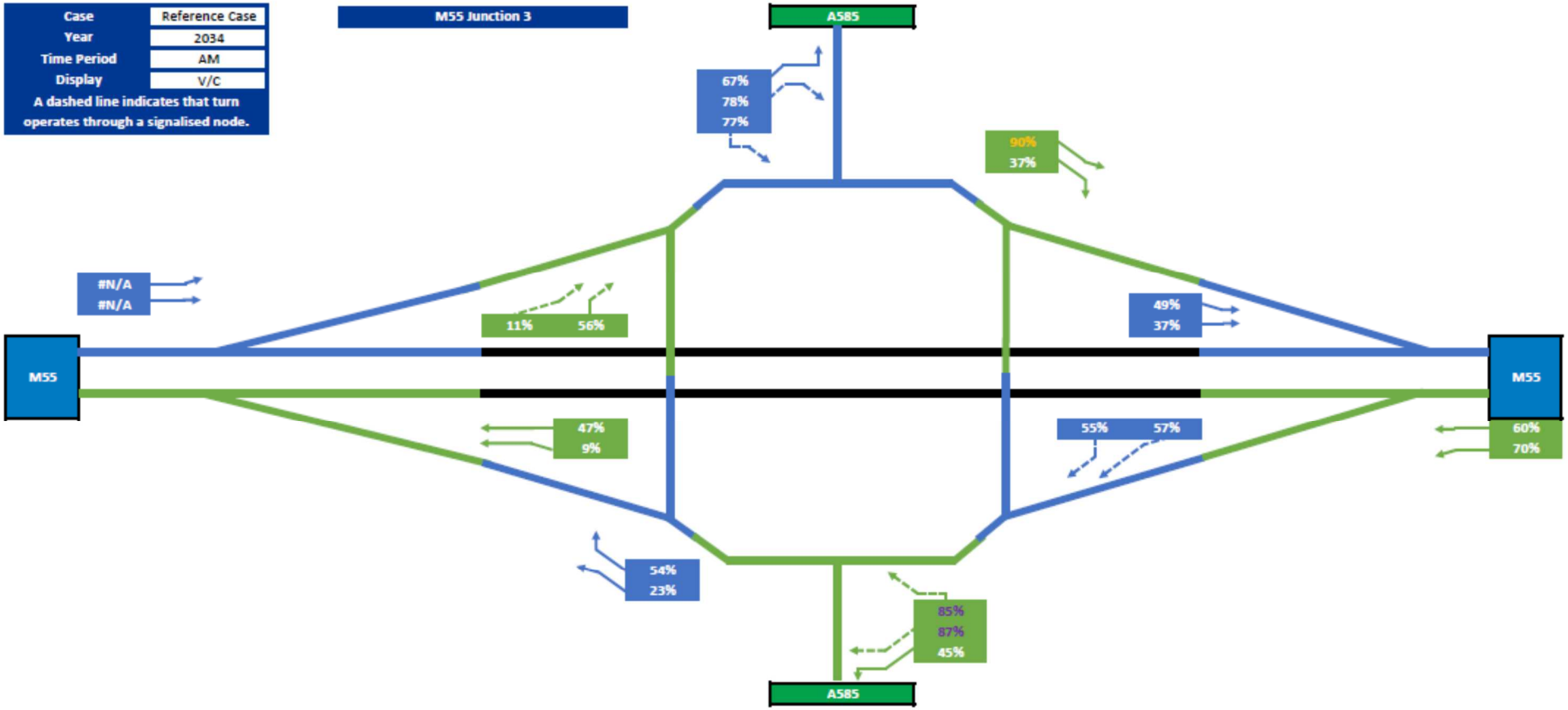


Appendix C – Saturn model



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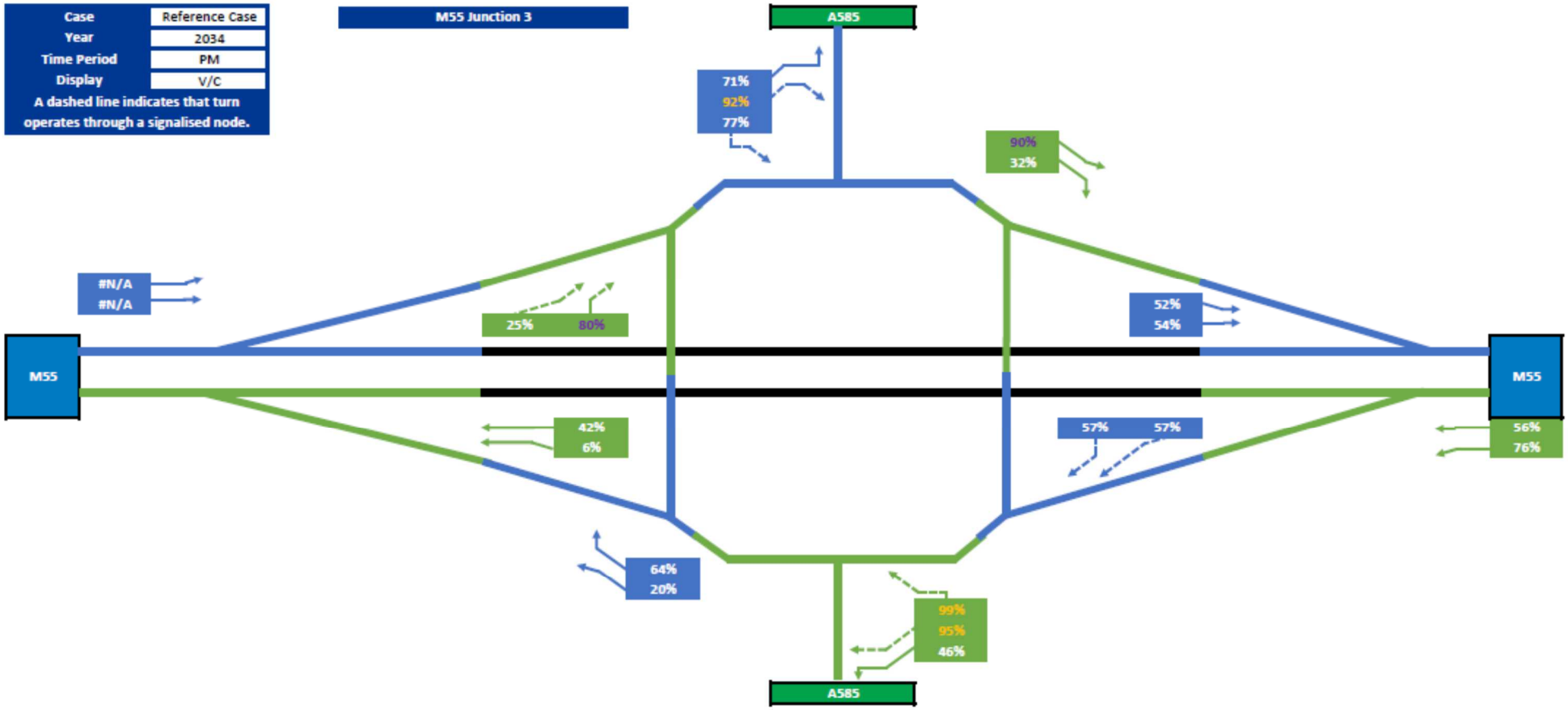

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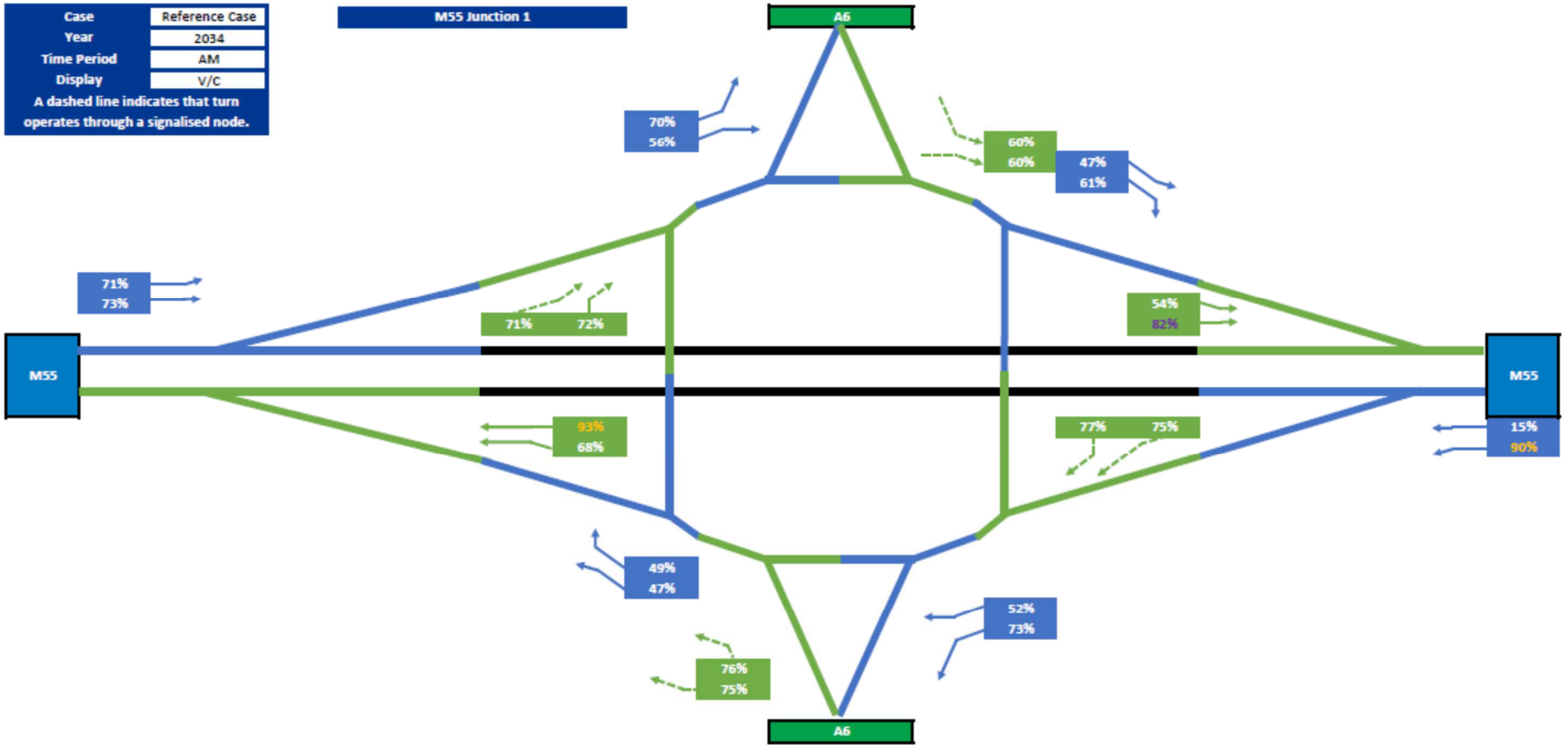

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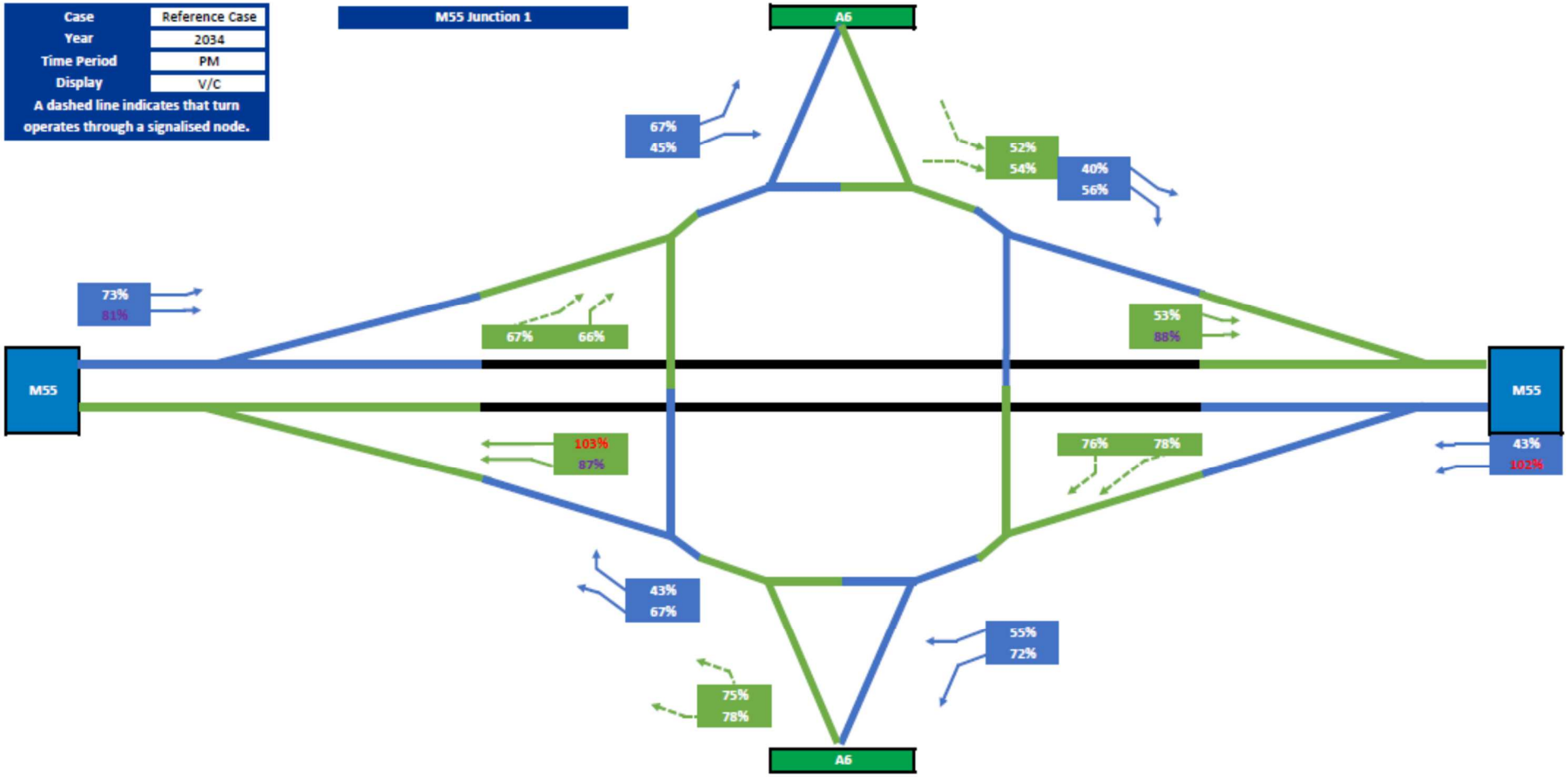

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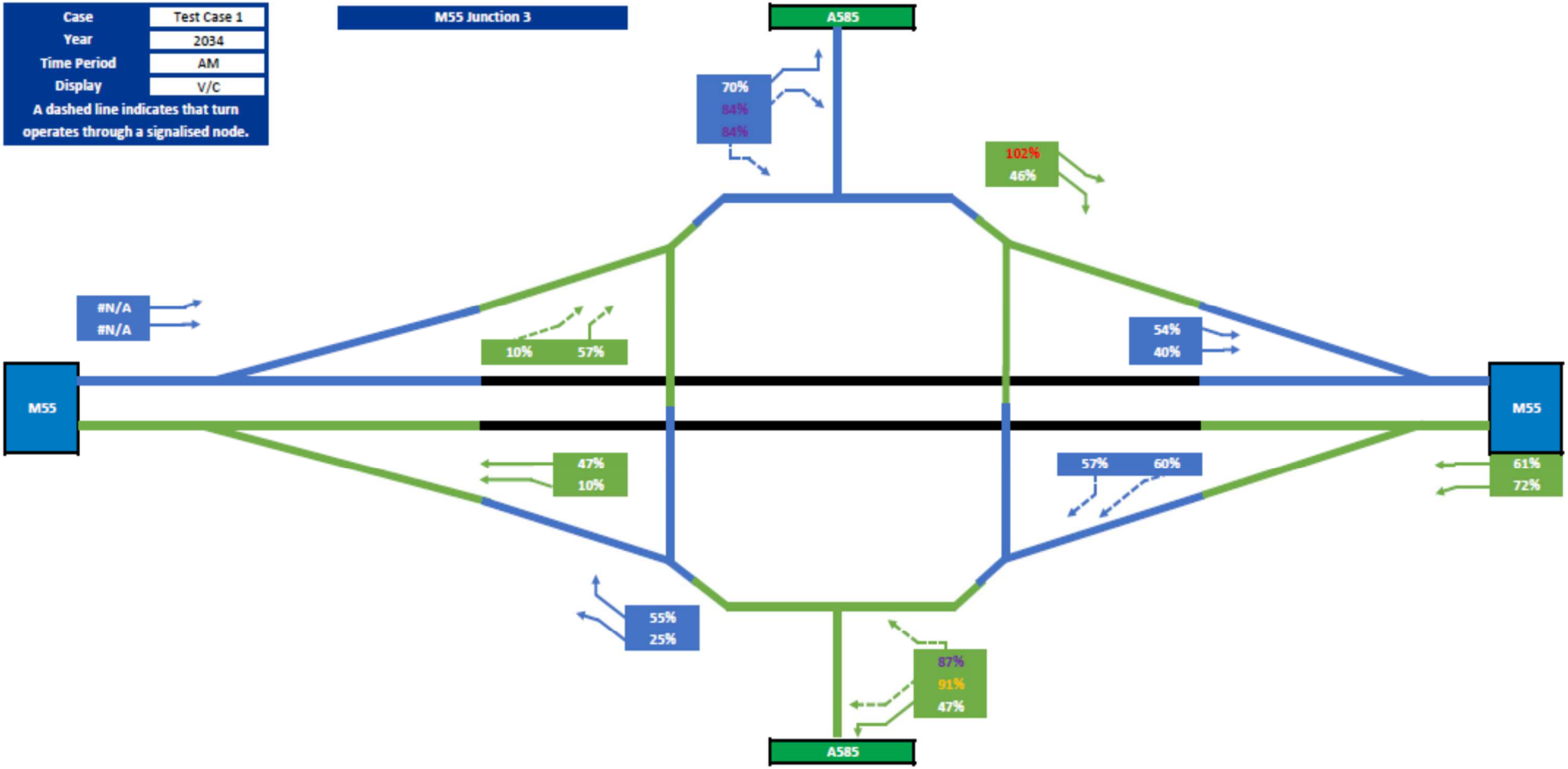

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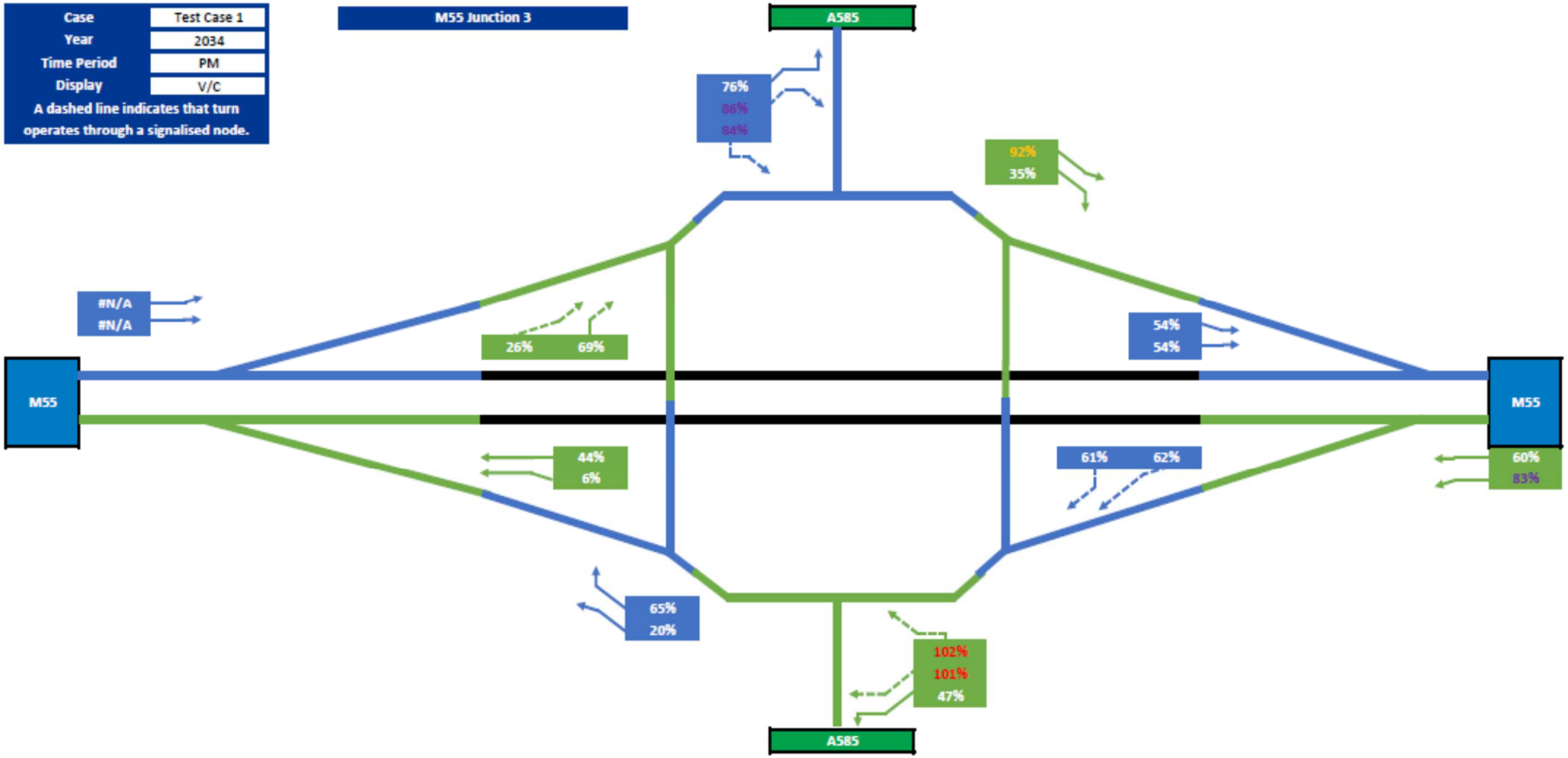

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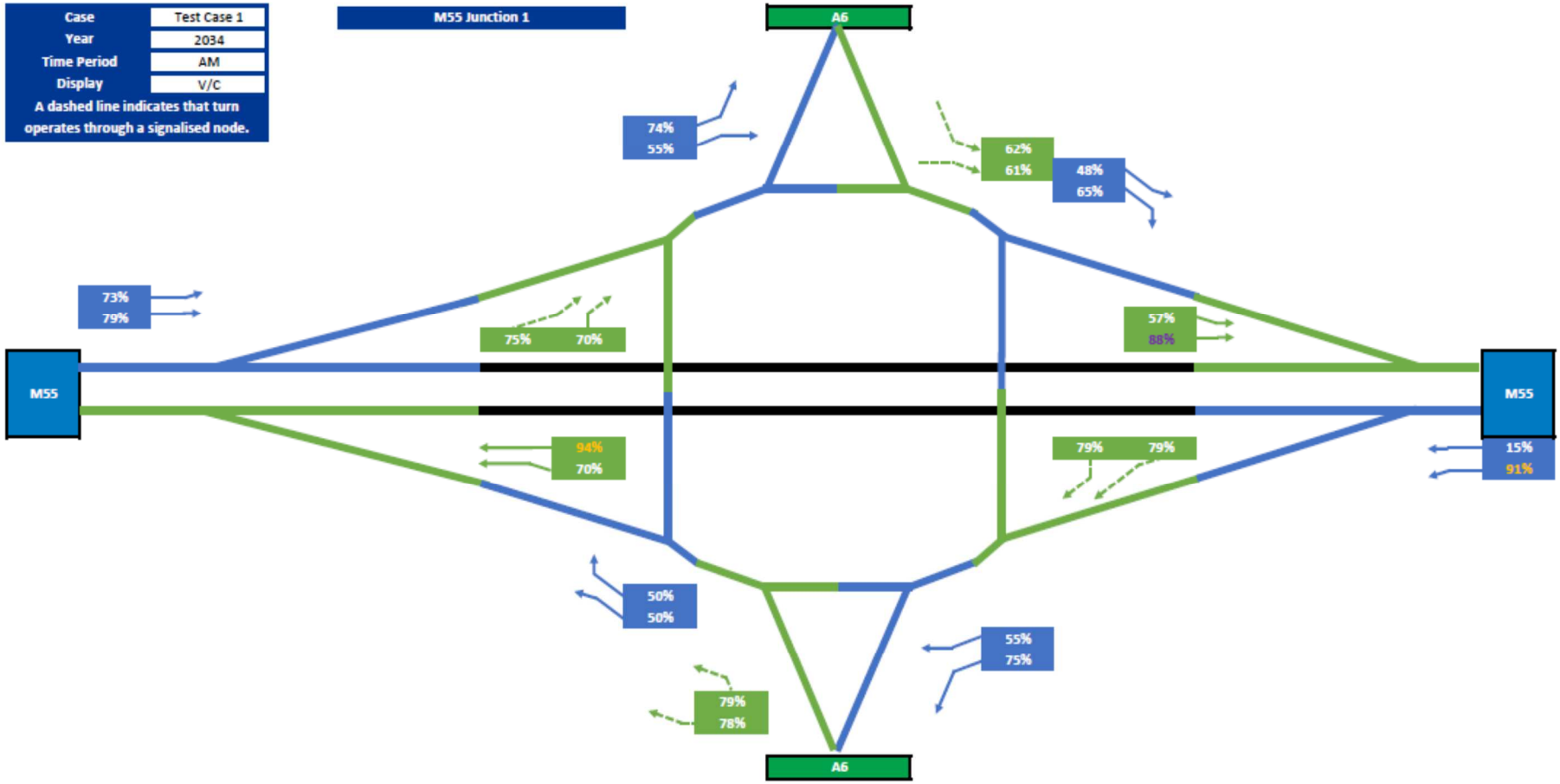

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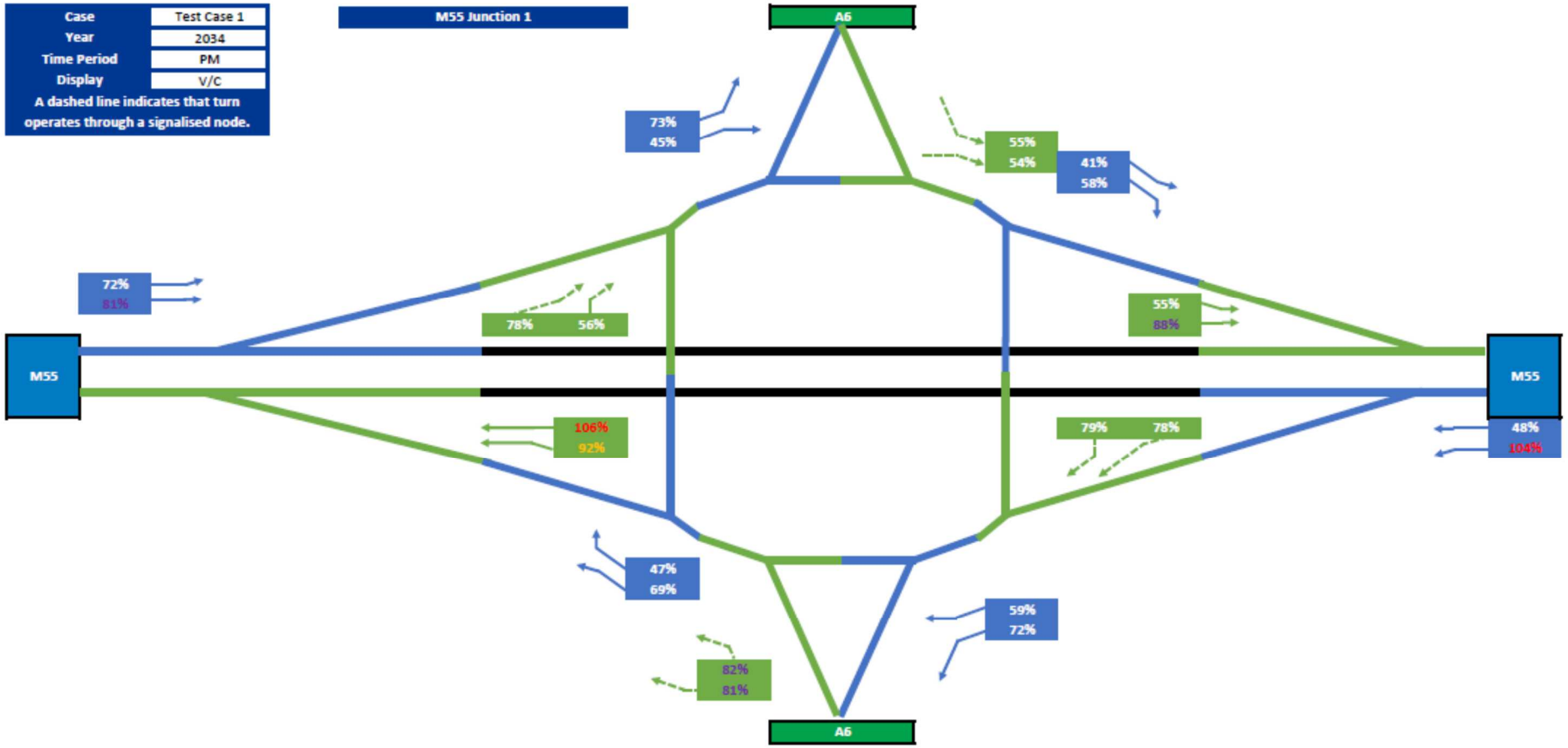

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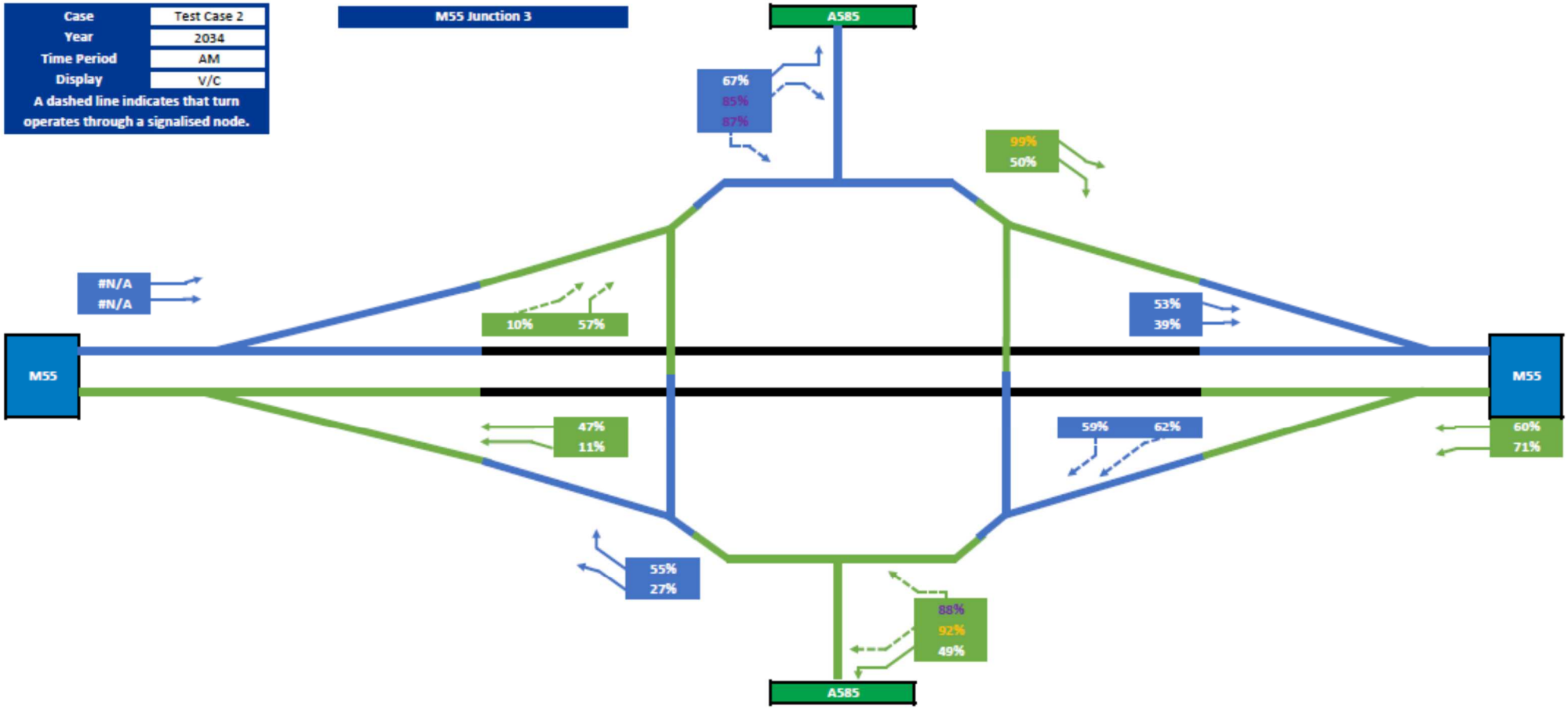

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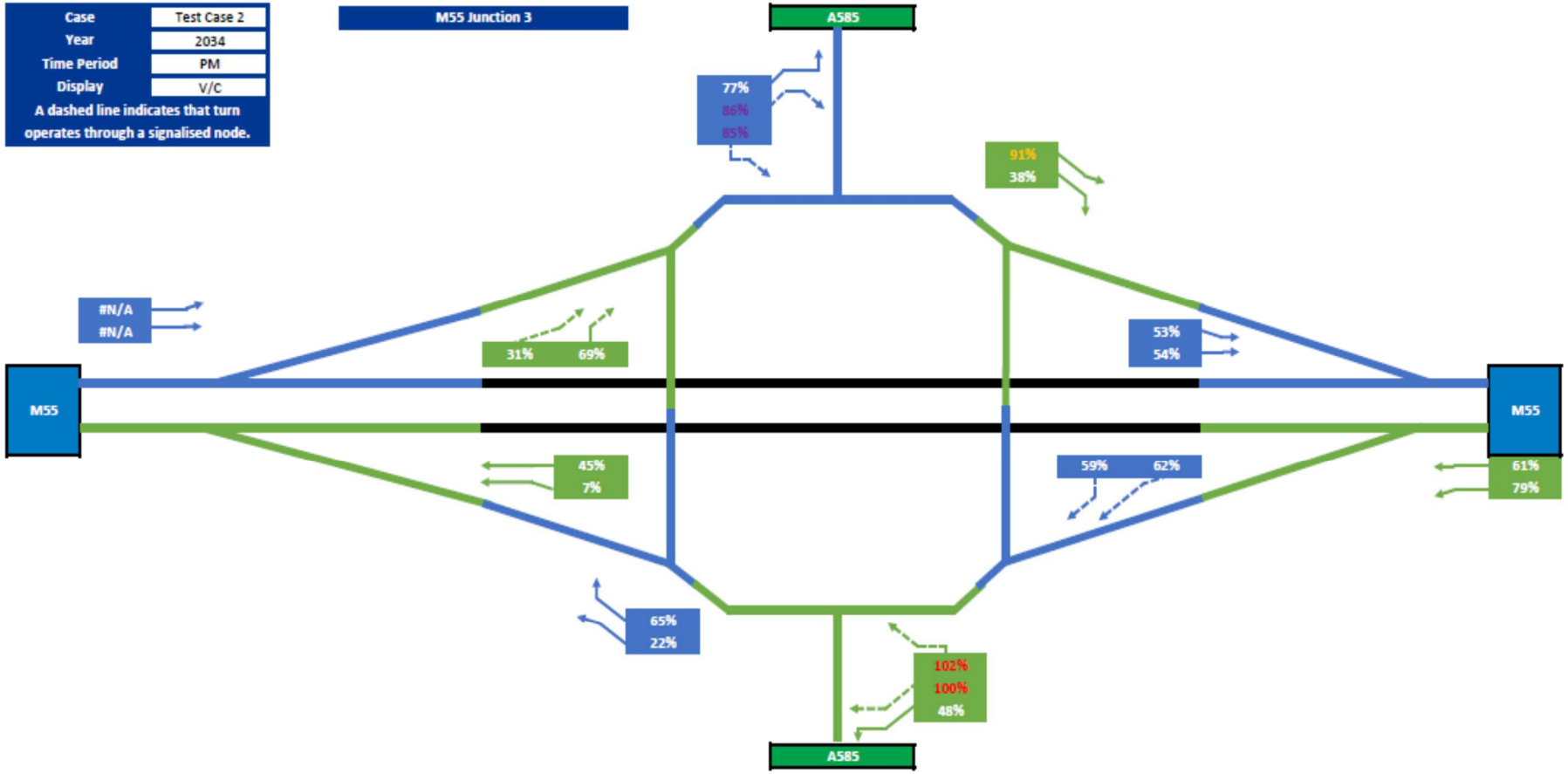

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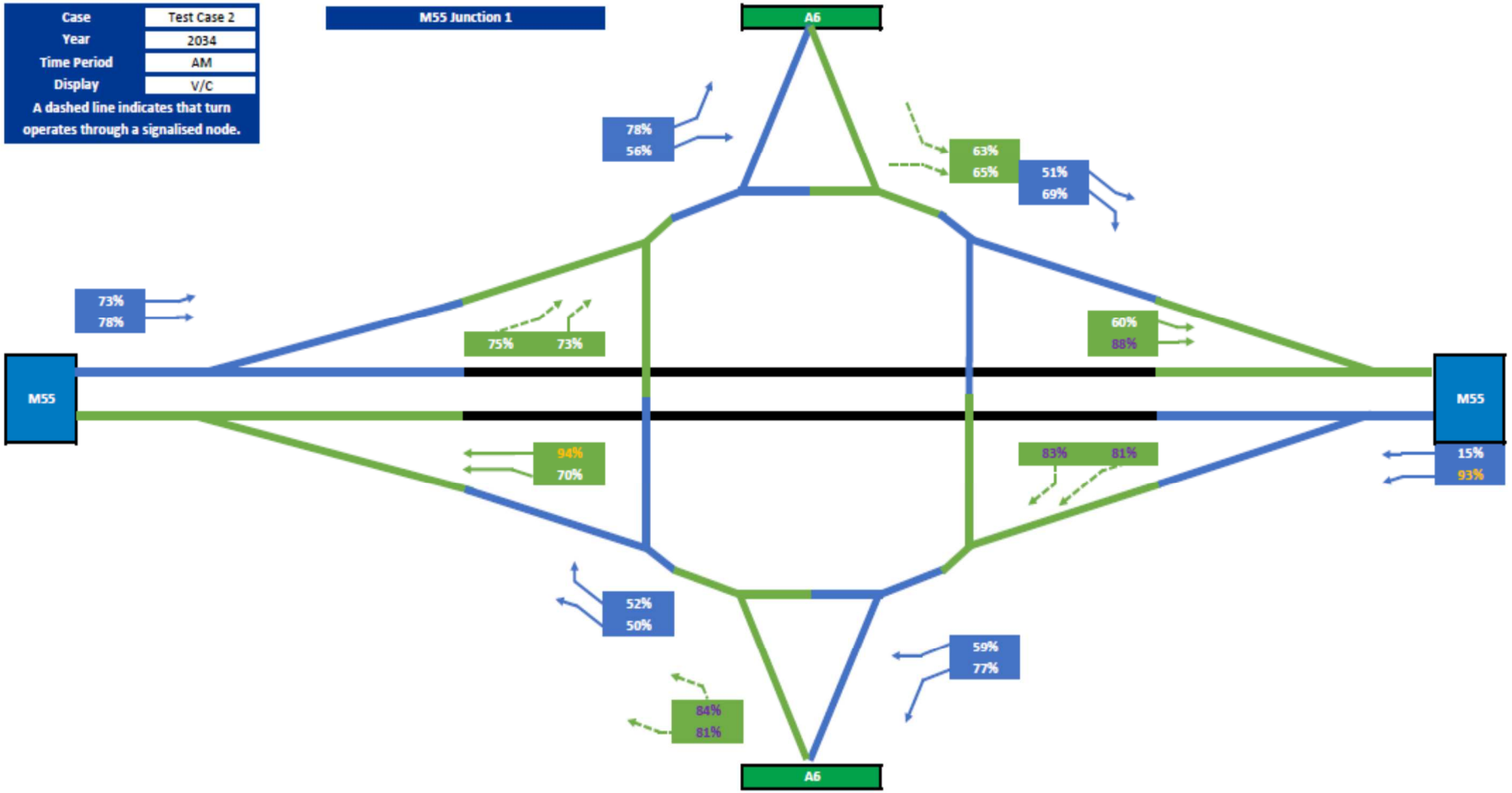

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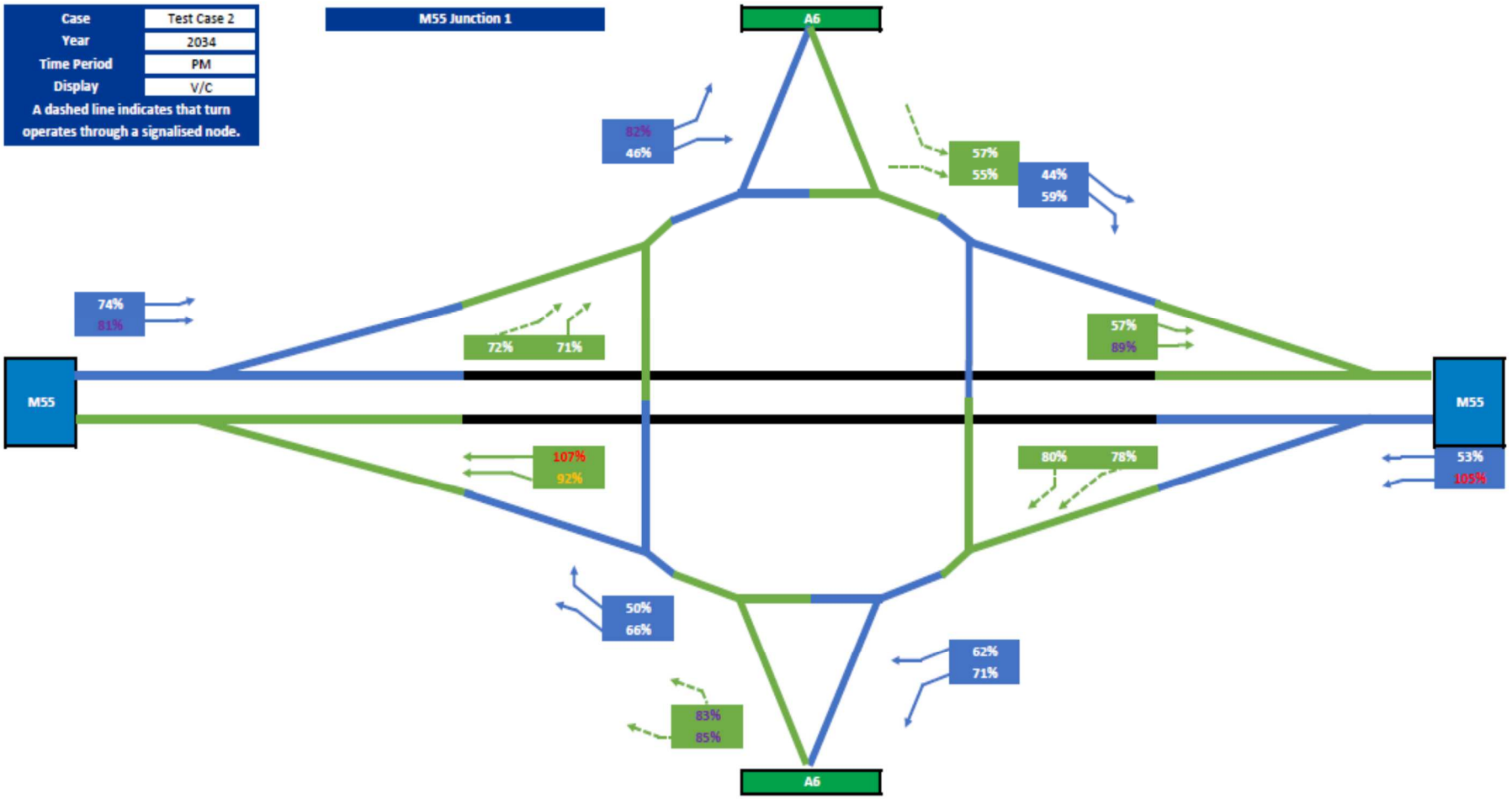

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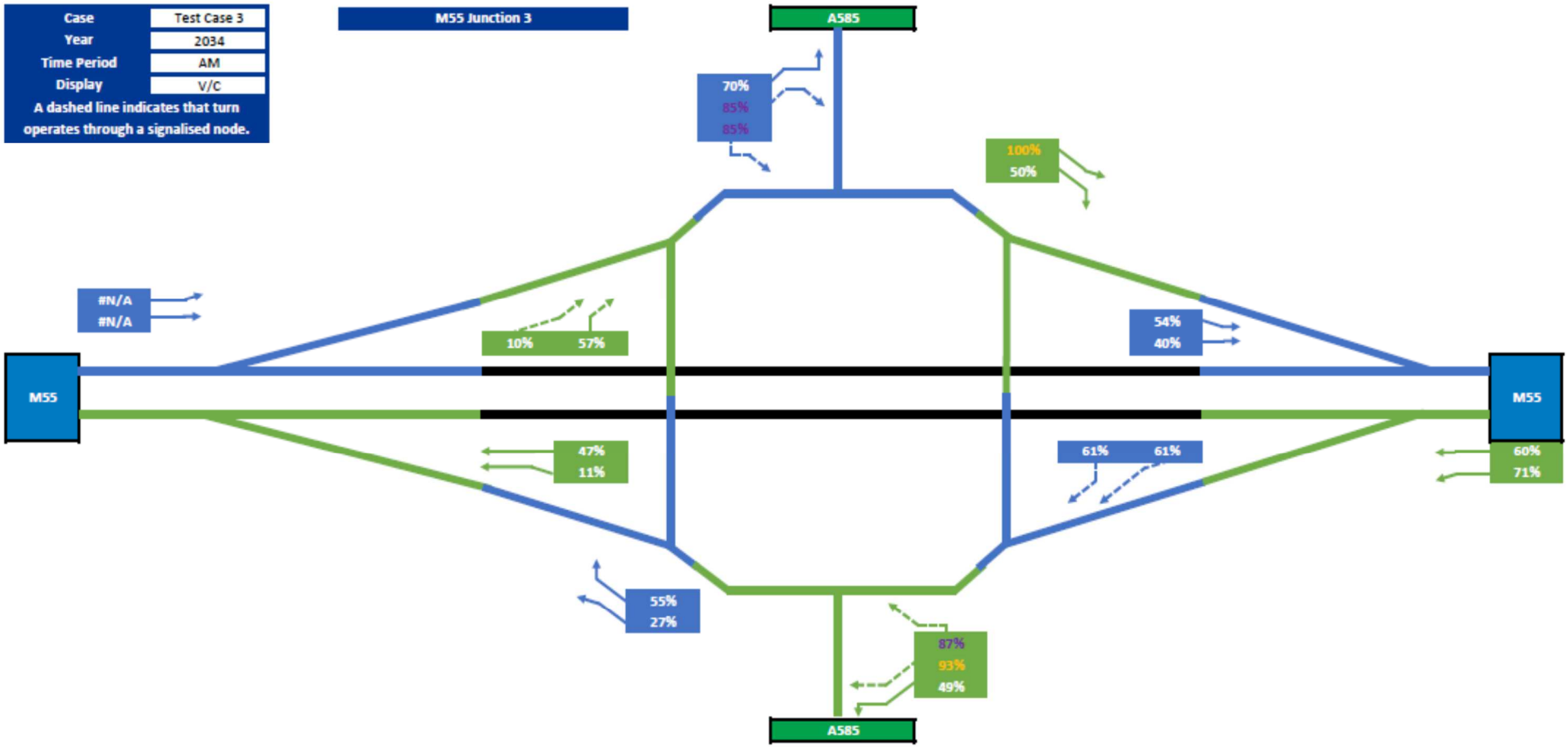

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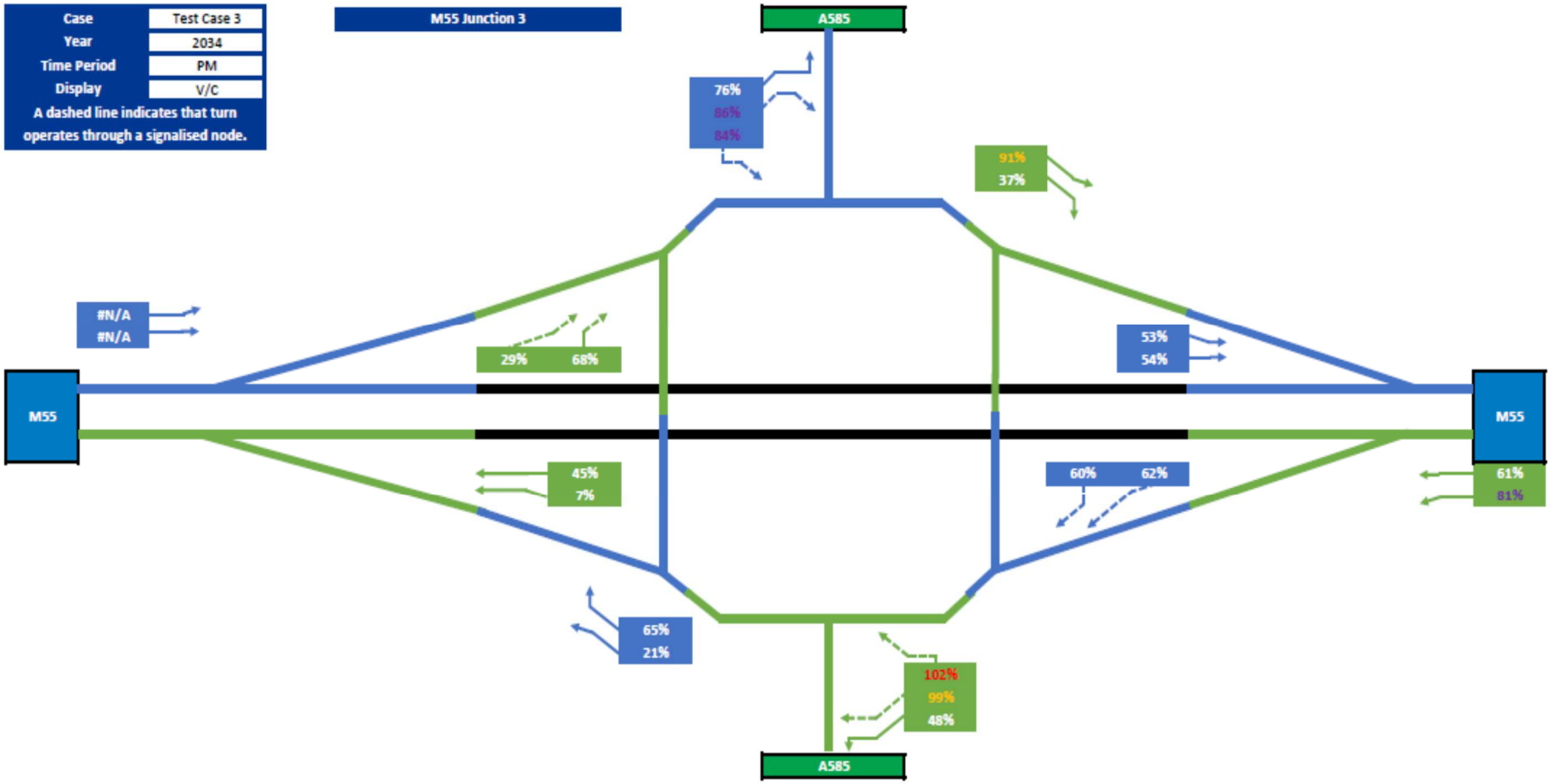

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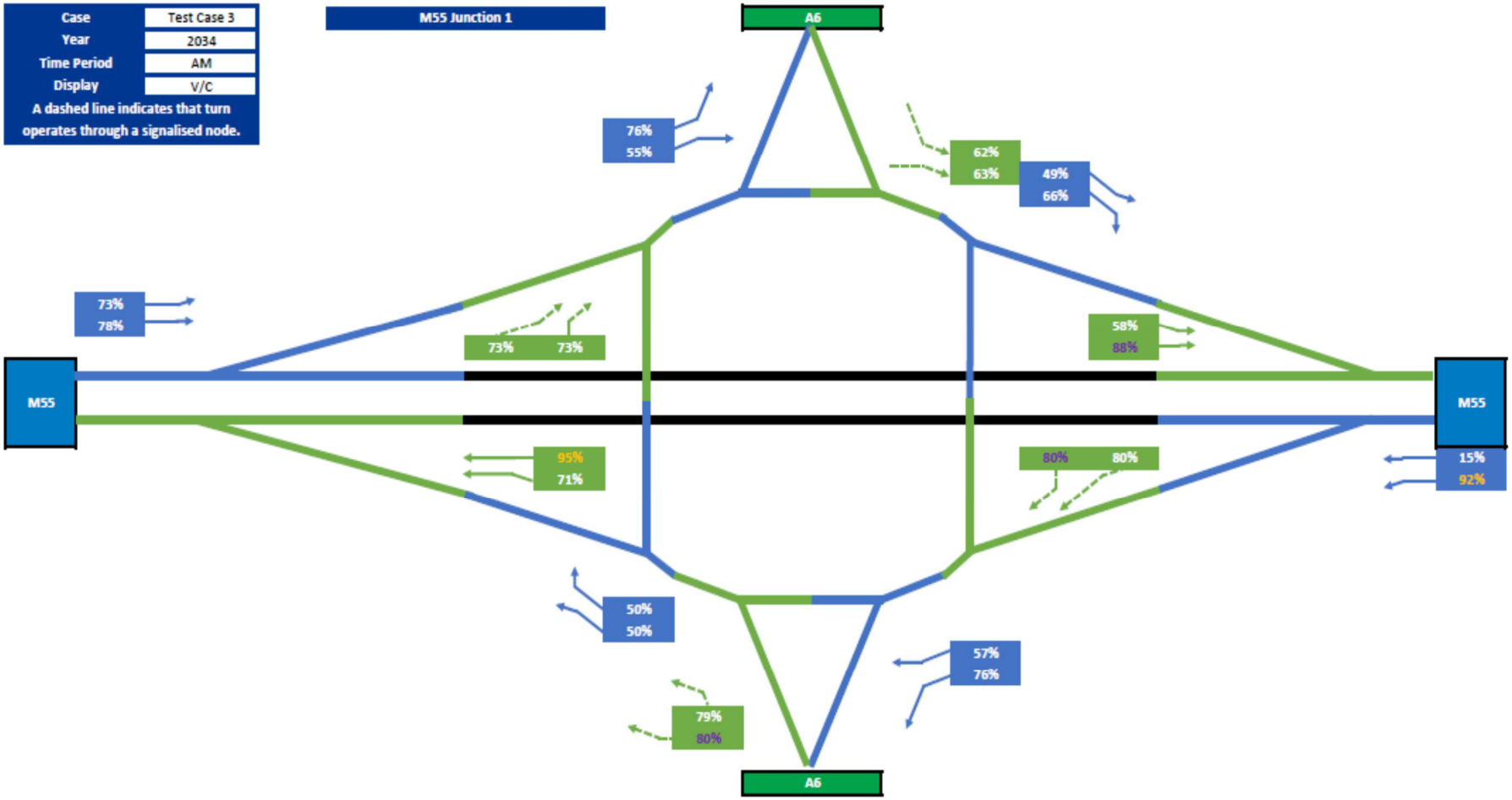

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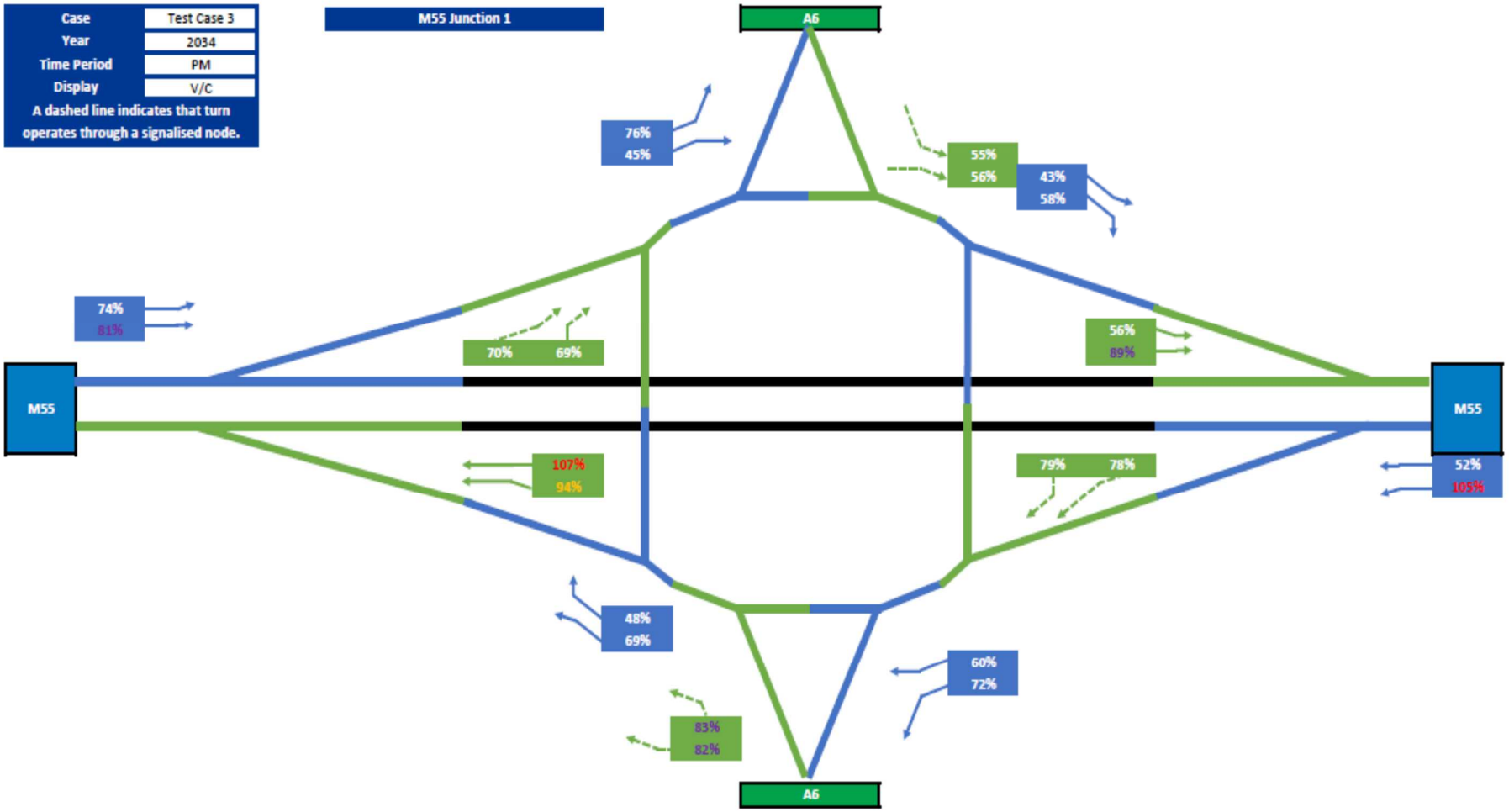

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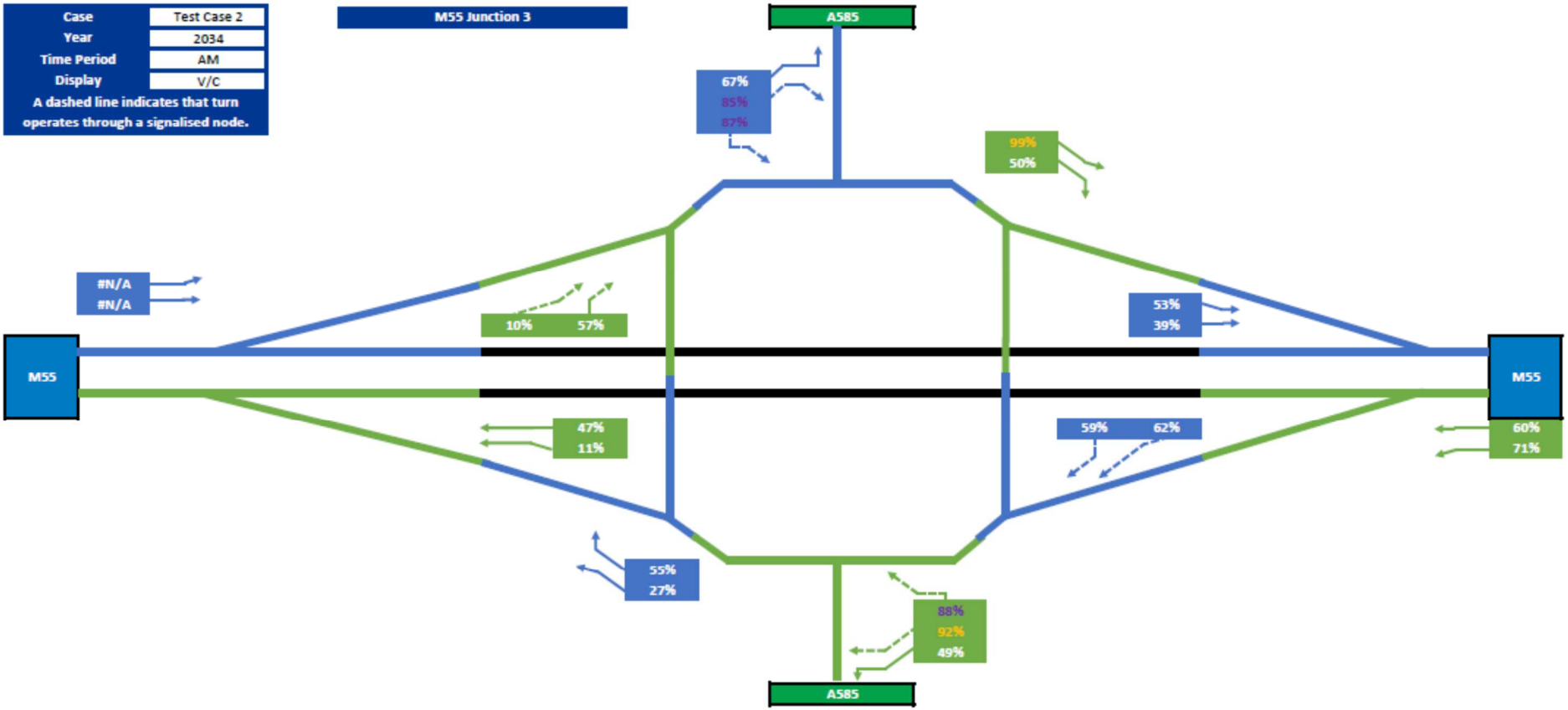
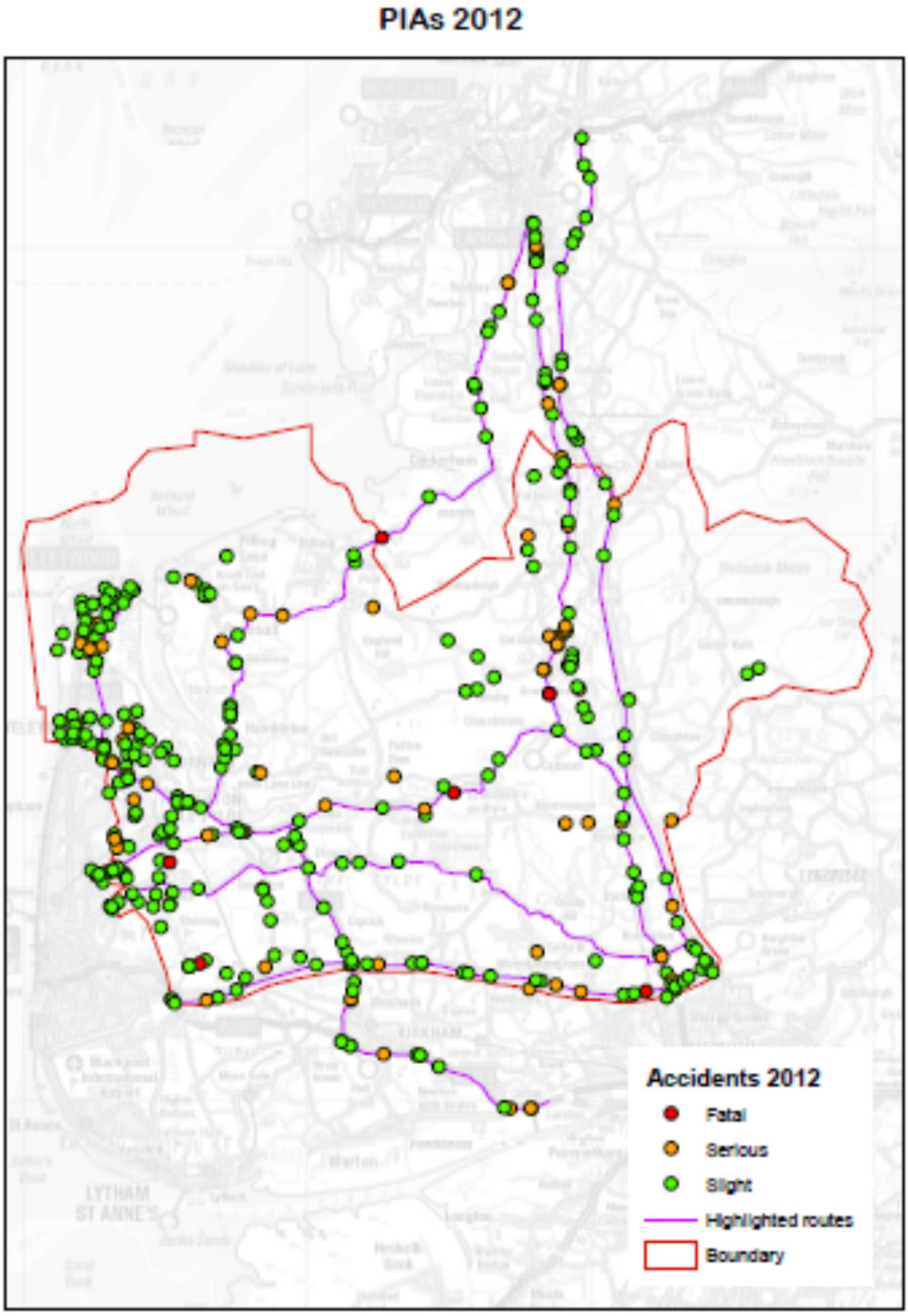
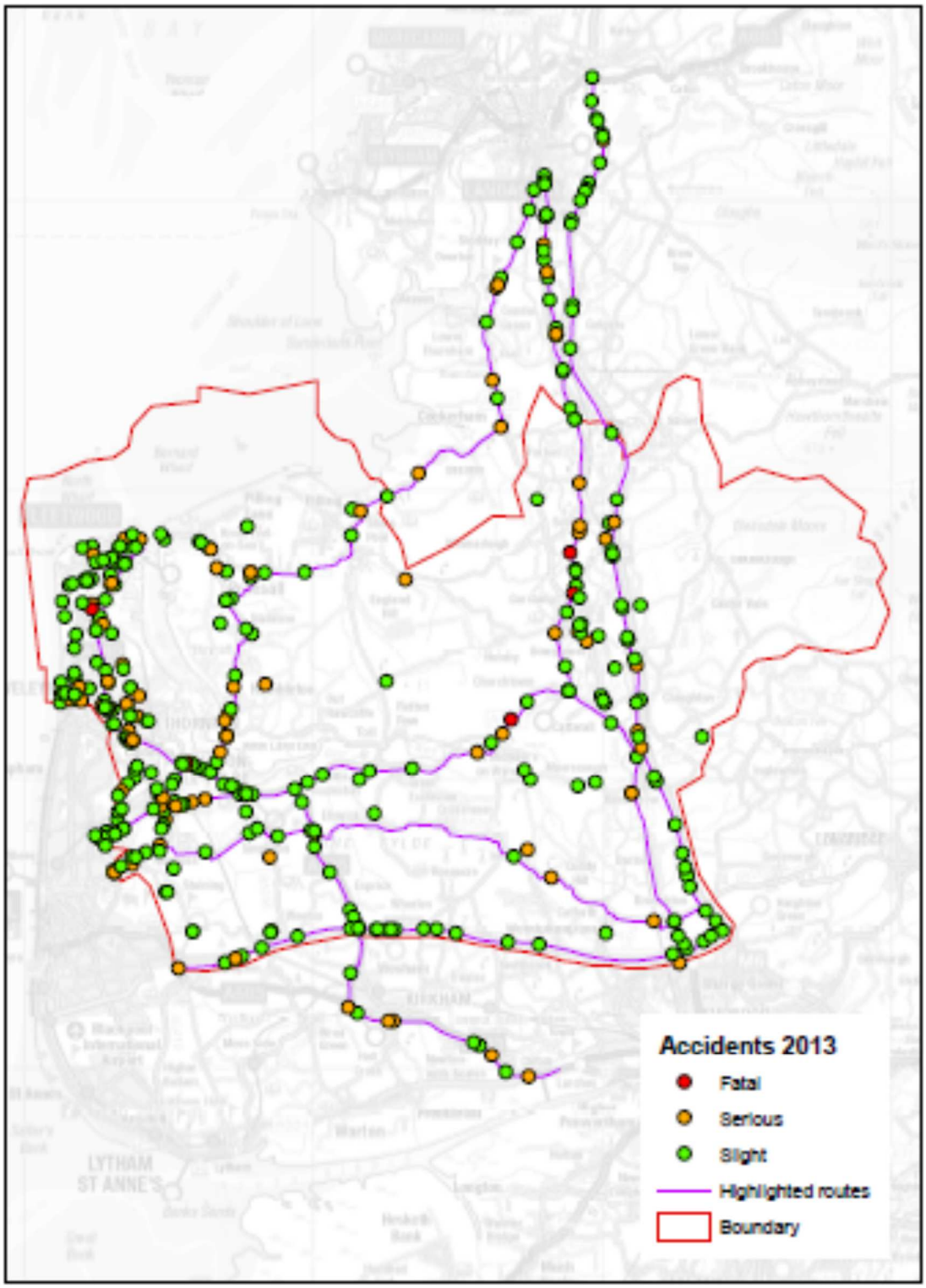


Appendix D – Personal injury accidents (PIA)

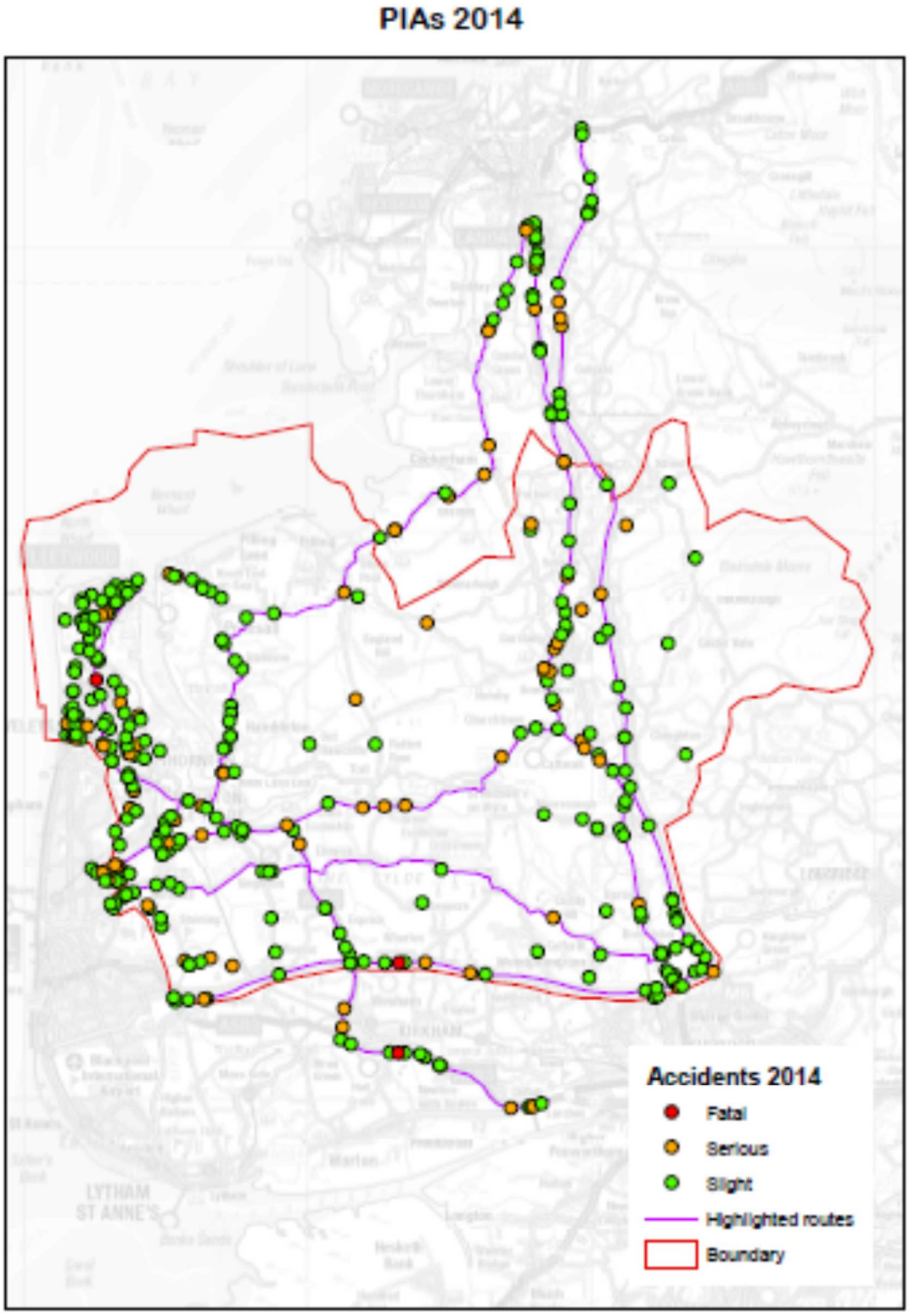


Appendix D – Personal injury accidents (PIAs)

PIAs 2013

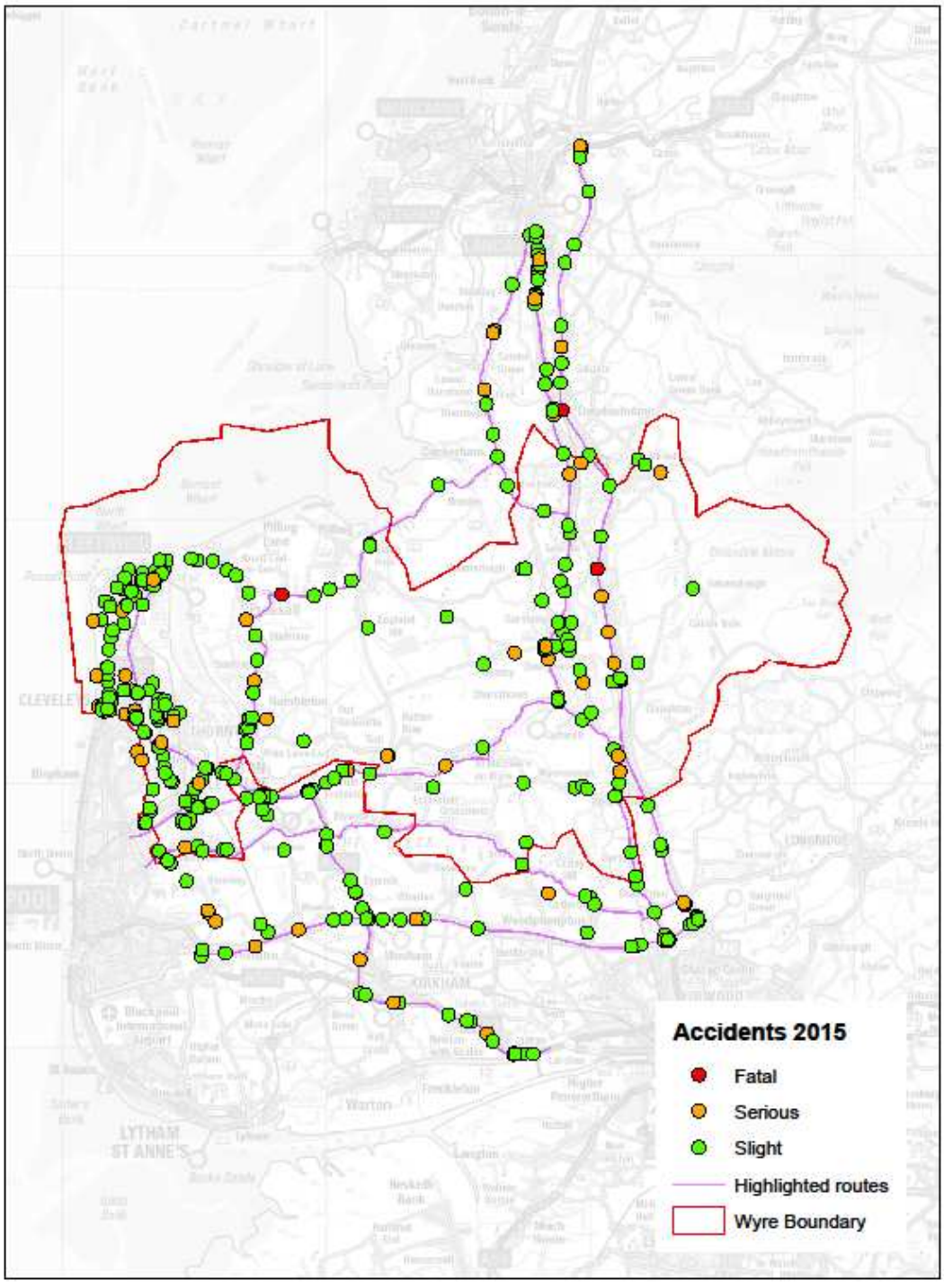


Appendix D – Personal injury accidents (PIAs)



Appendix D – Personal injury accidents (PIAs)

PIAs 2015



Appendix E - Local Highway Authority statutory comments for A6 development (see separate document)

Appendix F -

Poulton mitigation strategy (produced by LCC)

24th Feb 2017 version 1

The following list of mitigation measures has regard to other changes agreed with other developers within Poulton-le-Fylde. When delivered by development linked to development sites and quantum as indicated in the main report will provide sufficient change to mitigate against their impacts, thus maximising the level of development that come forward as part of this local plan (when adopted).

Background traffic levels will be regularly monitored at key locations in Wyre to evaluate the operation of the network and data collected will be used to maximise its reliability.

- **Hardhorn Road with Highcross Road/Beech Drive**

Phase 1 – as per Ashley Helm 1409/08; **IO_32 to deliver**.

Phase 2 – provide right turn storage, road width to be increased to around 8.5m (2@3m+right turn @ 2.5m) land required is within highway boundary; **IO_32 to deliver.**

- **Hardhorn Road/Garstang Road East**

Phase 1 – MOVA – **secured** through a separate development.

Phase 2 – Update Garstang Road East (GRE) pedestrian crossing to a puffin; **IO_32 to deliver.**

Phase 3 – provide early start from Hardhorn Road, provide Z markings, renew and update kerbs at junction including mobility improvement in vicinity of junction such as update and renew kerbing and tactile kerbing; **IO_32 to deliver.**

- **Garstang Road East (GRE)**

Phase 1 – as per Ashley Helm 1409/07, 1409/09 (to be amended) **IO_32 to deliver.**

- **Lower Green/GRE**

Phase 1 – in addition to the GRE, Kerbline changes on Lower Green and Argyle Road, update TRO's, remark (offset) centre line on Lower Green; **IO_32 to deliver.**

- **Traffic management measures, sustainability town centre car park and town centre changes;**

Committed development, IO_32 and DS_5 to deliver:

1. Review and where necessary amend weight restrictions on roads within residential corridors of lower class of road within Poulton.
2. Signing and declutter strategy, funding to amend and remove unnecessary signing.

3. Residents parking near Poulton Town centre.
4. Parking:
    a. DS_5 to deliver a Car Park with access onto Poulton Road/Tithebarn Street (to be managed/maintained by Wyre or by the developer (typically through a management company)).
    b. Town centre parking review both on and off street.
    c. Parking charges/duration of stay.
    d. User types and numbers i.e. disabled.
5. Continuous cycle provision (including from the DS_5 site to the railway station with suitable illumination to be used at all times of day); covered/secure parking in and around the TC/railway station/civic centre etc.
6. Upgrade pedestrian crossing between Holts Lane and Poulton Industrial Estate **delivered by network rail and IO_32.**
7. Blackpool Old Road Queen Street.
8. Chapel Street/Vicarage Road changes.

A585 (Highways England (HE) responsibility):

- **Little Thistleton junction (Fylde)**
    - HE to undertake a feasibility study next financial year, any resulting scheme to improve junction efficiency and operation. Scheme to support rerouteing bypassing Poulton (would require a traffic calming scheme in Little Singleton), its provision would maintain the route as a useable corridor. HE funding would be subject to satisfying a business case and need, based on safety.
- **Norcross Roundabout**
    - Scheme to Improve access onto the A585 and its reliability (scheme previously promotes by HE).
- **Skippool**
    - Scheme to improve access onto the A585 and junction reliability.
- **Shard Bridge (Fylde)**
    - Scheme to improve access onto the A585 and junction reliability.
- **Little Singleton (Fylde)**
    - Scheme to improve access onto the A585 and junction reliability.

Glossary

BC – Borough Council

DA – Desktop Assessment

KSI – Killed or Seriously Injured

LCC – Lancashire County Council

PIAs – Personal Injury Accidents

SRN – Strategic Road Network

TA – Transport assessment