

Wyre Local Plan – A585(T) corridor evidence base

Prepared for

Highways England

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Contents

Section	Page
Introduction.....	1
1.1 Introduction	1
1.2 Purpose of this report	1
1.3 Structure of this report	1
Study context.....	2
2.1 Local Plan context	2
2.2 Wyre and the SRN	2
Study overview	4
3.1 Study introduction	4
3.2 Analysis approach	4
3.3 Analysis outcomes	4
Key evidence messages to the Plan.....	8
4.1 Key messages	8
4.2 Using this evidence to inform the Plan	9

Introduction

1.1 Introduction

The strategic road network [SRN] is the road network for which Highways England has responsibility. The development aspirations in Wyre, as identified in Local Plan [the Plan] documents, will place additional demands on the SRN.

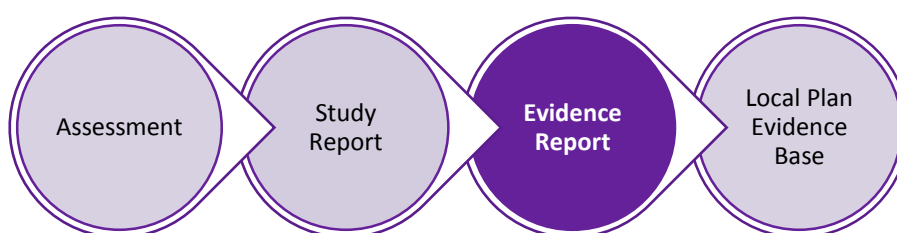
Highways England considers that it is critical to ensure that the implications of developments on infrastructure, and in particular the SRN, is fully understood, to enable any potential improvements to be appropriately planned for. It is therefore essential that forward planning of network operations take these additional pressures into account. On this basis it is considered that this study provides a key piece of evidence to inform the Plan.

1.2 Purpose of this report

This evidence report has been prepared by CH2M on behalf of Highways England with regard to the Plan. This report seeks to provide a planning overview and to provide a direct link between the evidence base and the Plan and seeks to provide a level of evidence base that would inform the spatial strategy that Wyre Council [the Council] adopts as part of the Plan with a view to the impacts at the A585(T) corridor of the SRN.

This evidence report is informed by the *study report*, which specifically seeks to offer the detail of the analysis undertaken. Specifically, the analysis has sought to consider:

- The scale of development that could be brought forward without the need for significant additional infrastructure; and
- The nature and scale of further infrastructure measures that may be required to support the Plan aspirations.



Note that the focus of this evidence base is on the A585(T) element of the SRN. Highways England will need to consider evidence workstreams that are being undertaken in relation to other elements of the SRN when making recommendations in relation to the Plan.

1.3 Structure of this report

Following on from this introductory chapter, this report is structured as follows:

- Chapter 2 provides some context to this report;
- Chapter 3 offers a non-technical summary to the study; and
- Chapter 4 provides some key messages to inform the Plan.

Study context

2.1 Local Plan context

With a view to the timescales involved in needing to have a spatial plan in place (there is a requirement to have the Plan progressed by early 2017), there is an immediate task for the Council to define the spatial pattern of development that the Plan will seek to deliver. The Council is rightly seeking to use evidence to assist in defining this spatial plan and in this particular regard is seeking to ensure that the transport infrastructure can support the aspirations.

Unfortunately, on this element of the SRN there exists some fluidity at this time in relation to the Road Investment Strategy [RIS] announcement of the Windy Harbour to Skippool Major Improvement Scheme [the RIS scheme] in that the exact form of that scheme remains unknown at this time. The assessment of options and associated modelling for the RIS scheme will not be being undertaken until mid/late 2016. This scheme is likely to influence the operation of that stretch of the A585(T) corridor directly, but on a wider scale as well.

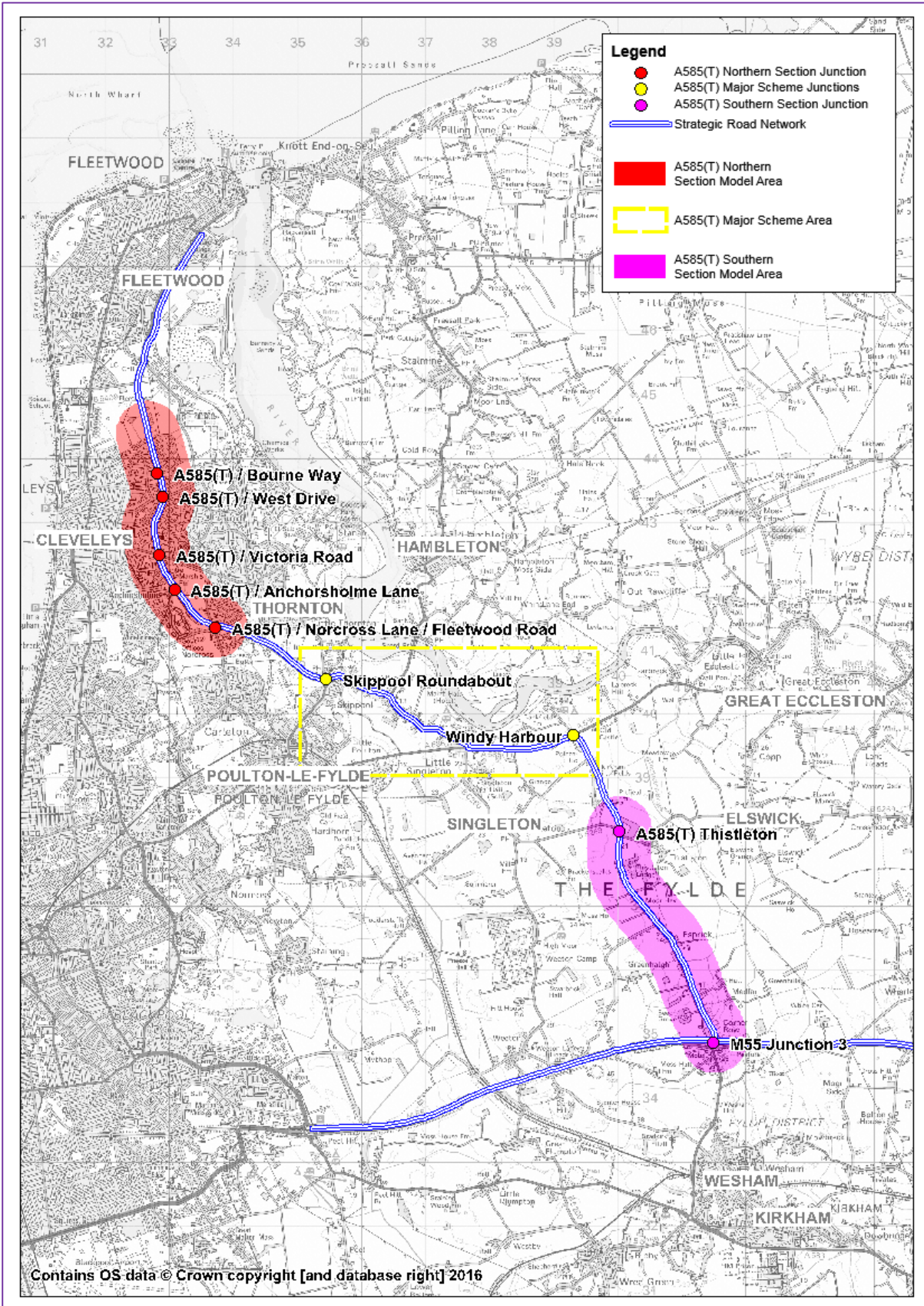
With a view to these “misaligned” timescales of the Plan development and the RIS scheme appraisal, the approach adopted within this evidence base is somewhat high-level and relatively pieced together, but it seeks to offer some early thoughts on the influence that the proposed scale and pattern of development could have on the A585(T) corridor. This will provide a level of evidence base that the Council can then rely on in informing the decisions that they make in relation to the scale and location of proposed development.

2.2 Wyre and the SRN

The evidence base is focused on the A585(T) corridor from its junction with the M55 (at Junction 3) through to its northern extents at Fleetwood. The extent of network considered (and the junctions focused upon) in this evidence base is presented within Figure 2.1.

Note that due to the anticipated diversion of traffic from the existing A585(T) route through Singleton onto a possible proposed Singleton bypass (as part of the A585(T) Windy Harbour to Skippool Improvement Scheme), the junctions within, at the beginning and at the end of this section have not been considered through detailed analysis at this time.

Figure 2.1. Study area and study junctions



Study overview

3.1 Study introduction

A study has been undertaken, as reported in detail within the *study report*, and this has sought to directly consider the likely implications of the development proposed within the Plan on the safe and efficient operation of the A585(T) corridor. For the comprehensive detail of the approach and outcomes of the study, reference should be made to the study report, but to provide some context, this section of the evidence report seeks to offer an overview.

3.2 Analysis approach

With a view to the timescales available, the approach to the analysis undertaken as part of this study has been to use existing models and data sources where available. To provide some context to the analysis a brief summary of the methodology is provided here:

- **Traffic models** – use has been made of a range of models for various elements of the network.
- **Assessment scenarios** – focus has been placed on a current (2014) ‘base’ analysis, coupled with analysis of an end of Plan (2031) ‘future’ analysis both with and without the Plan development.
- **Committed (most likely) schemes** – consideration has been given to a number of schemes that are most likely to be in place during the ‘future’ scenarios that would in some way influence trip patterns on the A585(T) corridor. These include schemes at M55 Junction 3; the A585(T) Windy Harbour to Skippool Major Improvement Scheme; and M55 Junction 2 / West Preston Distributor Road.
- **Base traffic data** – as inherent in the models utilised in the analysis.
- **Background traffic growth** – the level of background traffic growth assumed even without the Plan developments has been derived from TEMPro (through removal of Wyre specific development).
- **Development trip generation, distribution and assignment** – defined by a series of trip rates and distributed and assigned to the network on the basis of the GraHAM tool. Focus has been placed on Housing Scenario 1 (Local Plan Issues and Options) as the worst case scenario in terms of impacts at the A585(T) corridor.

3.3 Analysis outcomes

Through analysis of the likely future demands on the A585(T) corridor, and with a view to the purpose of the study, it has been possible to define both:

- The scale of development that could be brought forward without the need for significant additional infrastructure; and
- The nature and scale of further infrastructure measures that may be required to support the Plan aspirations.

The study report provides the full detail of this analysis, but Table 3.1 below seeks to offer a summary of the findings.

Table 3.1: Study analysis outcomes

Location	Deliverable development without need for significant additional infrastructure		Additional infrastructure measures required to support the Plan aspirations	
	Proportion of Plan	Comment	Additional infrastructure measure	Proportion of Plan (with measure in place)
A585(T) Fleetwood Junctions	100%	With a view to the limited level of development traffic impact at these junctions, they have not been assessed in full and are not considered to require any supporting measures. The full Plan development aspiration is therefore considered to be possible of being accommodated within the existing infrastructure provision.	None required	100%
A585(T) / Bourne Way junction	100%	The analysis undertaken has indicated little influence on levels of queuing with the Plan aspirations in place. It is therefore considered that the full Plan development aspiration is possible of being accommodated within the existing infrastructure provision.	None required	100%
A585(T) West Drive junction	100%	The analysis undertaken has indicated that the influence on queuing is not detrimental to the operation of the network. It is therefore considered that the full Plan development aspiration is possible of being accommodated within the existing infrastructure provision.	None required	100%
A585(T) Victoria Road junction	0%	The addition of the Plan trips is forecast to cause the operation of this junction to deteriorate significantly beyond the forecast position without the Plan. On the basis of considering the operation of the junction within the 'no Plan' scenario it is considered that the junction would require improvement to facilitate any Plan development.	A scheme based on the Fleetwood-Thornton AAP, which involved widening and realignment of all arms and the circulatory. Additionally includes signalisation of the two A585(T) arms. (estimated cost range = £0million - £5 million)	67%
			Significant further improvement (undefined) (estimated cost range = £significant)	100%
A585(T) Anchorsholme Way junction	100%	The analysis undertaken has indicated no detriment to the operation of this junction. It is therefore considered that the full Plan development aspiration is possible of being accommodated within the existing infrastructure provision.	None required	100%

Location	Deliverable development without need for significant additional infrastructure		Additional infrastructure measures required to support the Plan aspirations	
	Proportion of Plan	Comment	Additional infrastructure measure	Proportion of Plan (with measure in place)
A585(T) Norcross junction	0%	The addition of the Plan trips is forecast to cause the operation of this junction to deteriorate significantly beyond the forecast position without the Plan. On the basis of considering the operation of the junction within the 'no Plan' scenario it is considered that the junction would require improvement to facilitate any Plan development.	A scheme based on that recently submitted in support of a planning application, which involved widening and realignment of all arms and the circulatory, and includes signalisation of the two A585(T) arms. (estimated cost range = £0million - £5 million)	77%
			Significant further improvement (undefined) (estimated cost = £significant)	100%
A585(T) Windy Harbour to Skippool RIS scheme	0%	This element of the network has not been assessed in detail but it is considered that the current conditions on the network are prohibitive to significant (if any) level of future development coming forward.	Road Investment Strategy [RIS] scheme involving a possible proposed bypass of the existing A585 at Little Singleton. (estimated cost = £TBC) <u>Scheme caveat</u> Highways England is currently developing the proposals and reviewing options, during which detailed operational analysis and appraisal of this scheme will be undertaken. This operational analysis will give consideration to future likely traffic growth including that which could be expected to arise from future development-related aspirations. This, or the level of growth that the appraisal will be based upon, is not available at the time of undertaking this study. In the absence of this analysis, the provisional outcome of this study is that this element of the network could accommodate the trips associated with the development proposed in the Plan in their entirety. However, this conclusion is caveated heavily here in that: (i) there is no current certainty that the operational analysis and appraisal of the scheme will specifically consider the level of development being proposed in the Plan; (ii) there is no current certainty that the scheme budget will deliver a scheme that provides the level of capacity that could accommodate all future growth forecasts; and (iii) on this basis, there is no certainty that other measures, beyond those that the scheme will deliver, will not be required to support the level of development aspired through the Plan.	100%

Location	Deliverable development without need for significant additional infrastructure		Additional infrastructure measures required to support the Plan aspirations	
	Proportion of Plan	Comment	Additional infrastructure measure	Proportion of Plan (with measure in place)
A585(T) Thistleton junction	0%	With the addition of Wyre Plan trips, the junction mainline flows are predominately unconstrained although the capacity of the right hand filter lanes are at their limit and cause periodic obstructions to mainline flows through the junction. There are however severe queues on the local minor links approaching the junction (Thistleton Road and Mile Road). Given the length of these queues and interaction with both the right hand filter lanes and high mainline flows, the forecast traffic levels pose a serious safety consideration.	Tested roundabout and traffic signal arrangements do not offer sufficient benefit to the local road network links without severe detriment to the A585 through flows. Potential solutions may involve the removal of right hand turn movements at the junction (which will result in local road network traffic to re-route) but this is a discussion which needs to be held with the Local Highway Authority. (estimated cost range = £unknown)	100%
M55 J3	0%* *with 'most likely' highway scheme	The addition of the Plan trips is forecast to cause the operation of this junction to deteriorate, however following the implementation of a 'most likely' signalisation scheme at the junction, the operation of this junction can be maintained with the addition of Plan trips and subsequent signal adjustments as part of the scheme. With the addition of Fylde development trips, a further detriment in the operation of the junction is modelled. Again however, after the traffic signals are optimised for the addition of Fylde development trips, the junction can operate at an acceptable level.	Significant further improvement, yet to be defined but could comprise MOVA signal operation, the widening of the westbound off-slip to three lanes and the addition of two free flow left turn links (from the A585(T) North to M55 East and M55 East to A585 South). (estimated cost range = £0million - £5 million)	100%

Key evidence messages to the Plan

4.1 Key messages

On the basis of the analysis undertaken some key headline messages can be taken and these are summarised below:

The full level of development aspired to within the Plan (focussing on housing scenario 1) cannot be delivered without supporting measures on the A585(T) corridor. The plan is not deliverable without any investment in supporting measures on the A585(T).

The key elements of the network that are identified as being constraints are:

- A585(T) Victoria Road junction;
- A585(T) Norcross junction;
- A585(T) Thistleton junction; and
- M55 Junction 3.

In relation to the A585(T) Windy Harbour to Skippool RIS scheme given the unknown form, the specific influences of the Plan have not been identified in this study and reference should be made to the caveat below* with regard to the outcomes at this element of the network.

Measures could be implemented as follows to deliver the aspirations of the Plan:

- At the A585(T) Victoria Road junction, 67% of the Plan could be delivered through a modest improvement. The whole of the Plan could be delivered with a significant improvement.
- At the A585(T) Norcross junction, 77% of the Plan could be delivered through a modest improvement. The whole of the Plan could be delivered with a significant improvement.
- At the A585(T) Thistleton junction, the whole of the Plan could be delivered with a scheme that restricts right turning movements. This measure requires further investigations.
- At M55 Junction 3, the whole of the Plan could be delivered with a further improvement scheme at this junction. This measure requires further investigations.

** note regarding A585(T) Windy Harbour to Skippool*

The provisional outcome of this study is that this element of the network could accommodate the trips associated with the development proposed in the Plan in their entirety. However, this conclusion is caveated heavily here and throughout the response to the Plan in that:

There is no current certainty that the operational analysis and appraisal of the scheme will specifically consider the level of development being proposed in the Plan. The scheme appraisal will be undertaken in accordance with DfT Transport Analysis Guidance [TAG] and with a view to TAG unit 3.15.5 (The Treatment of Uncertainty in Forecasting), developments which are “one of a number of possible inputs in an initial consultation process, Or, a policy aspiration” are considered to be “Hypothetical: There is considerable uncertainty whether the outcome will ever happen.” On this basis, TAG identifies that such hypothetical development would not form part of the ‘Core Scenario’ but that they could form part of a ‘Sensitivity test’.

There is no current certainty that the scheme budget will deliver a scheme that provides the level of capacity that could accommodate all future growth forecasts and specifically growth associated with the development proposed in the Plan.

On this basis, there is no certainty that other measures, beyond those that the scheme will deliver, will not be required to support the level of development aspired through the Plan.

This important caveat should be recognised and considered in terms of how the Plan progresses and the potential provisions it needs to make on the basis of this current level of unknown. Highways England will continue to work with the Council as the appraisal of the scheme advances.

4.2 Using this evidence to inform the Plan

To aid the Council with the understanding of what level of development (as defined within the local plan) can be progressed before, or with, suitable mitigation measures in place, a development impact assessment tool has been developed for use by the Council.

Based on a cap of development as specified by the Local Plan, the tool allows the user to adjust the scale of residential and employment development throughout the Wyre region, which will affect the scale and distribution of development trip impacts through the A585 corridor.

Based on this bespoke Local Plan development aspiration, the tool will also highlight where the operating capacity of each junction is exceeded (drawing on the outputs of the Paramics modelling presented within this report). A facility is then available to the user to adjust which mitigation schemes are implemented at which junction, in order to increase the operating capacity with the aim of being sufficient to cope with the traffic impacts forecast by the specified Local Plan development aspirations.

It is envisaged that the tool will enable the Council to determine a suitable mix of Wyre Local Plan aspirations which can be delivered within different network improvement scenarios.