Leicestershire County Council

Meeting: **Cabinet**

Date/Time: **Tuesday, 12 December 2017 at 2.00 pm**

Location: **Sparkenhoe Committee Room, County Hall, Glenfield**

Contact: **Ms. J. Bailey (Tel. 0116 305 6225)**

Email: **jenny.bailey@leics.gov.uk**

Membership

Mr. N. J. Rushton CC (Chairman)

Mr. R. Blunt CC
Mr. I. D. Ould CC
Mr. B. L. Pain CC
Mrs. P. Posnett CC
Mr. J. B. Rhodes CC
Mr. R. J. Shepherd CC
Mr. E. F. White CC

APPENDIX PACK

Item		Report by	
6.	Market Harborough Transport Strategy.	Director of Environment and Transport	(Pages 3 - 316)

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Leicestershire's future
The plan for change

DISTRICT OF HARBOROUGH

Leicestershire County Council

Changing roads and transport in Market Harborough

Have your say on our proposed transport strategy

Tell us what you think

Online: **www.leicestershire.gov.uk/harborough-plans**

For general enquiries or comments about this consultation phone **0116 305 0001** or email **MHTransportStrategy@leics.gov.uk**

Public consultation: the consultation runs from 16 January 2017
Submit your views by 24 March 2017

Why change?

As Market Harborough continues to grow to meet future local housing and employment needs, pressures on the local road network increase. The current Local Plan makes it clear that transport measures need to be considered to deal with the impact of development in the town.

In 2015 Leicestershire County Council and Harborough District Council approved work to explore in more detail current and future transport issues, identify possible transport solutions and develop a transport strategy for the town.

The area covered by this work is shown in the plan below. The study was completed in July 2016 and looked at vehicle movements to help understand how the transport network is being used. It also looked at where the greatest levels of congestion occurred on the network; and where these will occur in the future taking into account known future growth.

The work has outlined some initial ideas and proposals, which aim to

- help address current and potential future transport issues in the town
- help the town continue to thrive as it expands in the future.

We are now seeking your feedback on these initial ideas and proposals. We'd like you to tell us which schemes and measures you think should be progressed further to form part of a final approved transport strategy.

Whilst at this stage there is not enough funding to implement these proposals, the feedback that we receive from you through this consultation is an important step in helping us to strengthen our position when trying to secure additional funding. We'd therefore really like to hear your views. Once the consultation has been completed we will review and amend the draft strategy. Once the strategy has been agreed the next step will be to try and secure money from the government and other sources, so that we can develop and deliver priority schemes and measures.

This consultation is about roads and transport. **If you would like to comment on the levels and distribution of housing growth in the district** you can do this during the Local Plan submission consultation in summer 2017. The timetable for the Harborough Local Plan is below, and you can sign up to receive alerts and make representations during the consultation here: https://harborough.jdi-consult.net/ldp/

Harborough District Local Plan timetable

July 2017:	Council approval of pre-submission Local Plan for publication
September - October 2017:	Consultation on Local Plan pre-submission
November 2017:	Submission of Local Plan to Secretary of State for public examination
February 2018:	Examination Hearing
September 2018:	Adoption of Local Plan

More information on the Harborough District Local Plan is available at: www.harborough.gov.uk/local-plan

The challenges Market Harborough faces

Our work to date has identified a number of challenges for people travelling in Market Harborough:

- **The town faces significant growth pressures.** The current Local Plan indicates that in excess of 2,000 new homes are proposed in the town before 2031 (including a total of 1,500 dwellings in a Strategic Development Area (SDA) to the west of the town), in addition to the 825 dwellings built over the last five years.
- **Traffic volume in the town is forecast to increase by 24%** between 2011 and 2031. Much of this is the result of general traffic increases from growth in surrounding areas.
- **Some junctions within the study area perform more poorly than others,** resulting in queues or delays. These junctions are:

- **A6 / B6047 (aka McDonalds Roundabout)**
- **The Square / St Mary's Road / Coventry Road**
- **Northampton Road / Springfield Street**
- **Northampton Road / Welland Park Road**
- **Springfield Street / Kettering Road**
- **St Mary's Road / Kettering Road / Clarence Street**
- **Rockingham Road / Gores Lane**
- **A6 / Harborough Road / Dingley Road / A4304**
- **Sainsbury's store entrance / Springfield Street**

- **Despite 'through' traffic accounting for only about 10%** of overall trips on the network during the peak traffic periods, two of the three 'A' and 'B' classified routes in the town (the B6047 and the A4304) converge on The Square and therefore **much of the traffic in the town is reliant upon using the heart of the town centre,** over 13,000 vehicles per day.
- The low underpass height of the Rockingham Road railway bridge results in HGVs using less suitable routes to access the town.
- Infrastructure for walking, cycling and public transport is generally good. However, there are some gaps, which would benefit from improving.
- Car parking on and off street needs to account for all users including residents, shoppers, visitors, disabled motorists, local businesses and workers.
- Early stakeholder workshops suggested that **the town centre environment needs refreshing.**
- Traffic signing can be inconsistent, cluttered and confusing in places and requires review.

This work aims to deliver:

- Improved performance of local roads in peak periods and more consistent, predictable and reliable journey times.
- Improved access to key services across the town (such as employment, education, health), particularly by public transport, bike and on foot.
- Traffic using the most appropriate routes.
- Local roads better able to cope with unplanned events, such as incidents on the A14.
- More journeys by public transport.
- A more attractive town in which to live, work and visit.

What are we consulting on?

We want to find out what you think about the key transport issues that have been identified, and the possible solutions. If you think we've missed any key transport issues, or have any transport ideas that you think would help improve the town, then we'd also like to hear from you.

We'd like to emphasise we are at a very early stage in the development of possible measures for Market Harborough none of the measures in this document have yet been agreed and we are open to considering other options. The feedback received from this consultation is an important step and will help to put us in a stronger position to secure government funding and from other sources for the development and delivery of any priority schemes and measures identified as part of the strategy.

We want to address the transport issues that are affecting the performance of the transport network, constraining the development of the town and affecting the local economy. Our current work has enabled us to identify some initial ideas for possible transport measures. At this point these have been divided into three categories based on their cost, complexity and potential impact on traffic on the network.

Category 1 measures:

Roads remain broadly unaltered other than improvements to key junctions. Walking and cycling, parking and traffic management improvements will also be introduced on the existing road network.

Category 2 measures:

Builds on Category 1, but these **measures result in changes to the way that traffic would move around the town.** It considers lorry weight restrictions, the reclassification of two roads (Welland Park Road and Coventry Road) and increasing the height of the Rockingham Road rail bridge to enable HGV's to use more appropriate routes.

Category 3 measures:

Builds on Categories 1 and 2, by also considering the introduction of a **relief road to the south-east of the town.**

Information on these measures is provided on the following pages. Further more detailed information is available online at www.leicestershire.gov.uk/harborough-plans

How the consultation will work

The consultation begins on 16 January 2017 and will end at midnight on 24 March 2017.

- To submit your views please fill out the consultation questionnaire and make sure it reaches us by midnight on 24 March at the latest.
- If you are able to, please complete the questionnaire online, as it will save us time and money. It's available online at www.leicestershire.gov.uk/harborough-plans
- Paper copies of the survey are available on request by calling 0116 305 0001. Paper copies can be handed in at the main reception at Harborough District Council and the Market Harborough Library.
- Alternatively you can send comments via email to MHTransportStrategy@leics.gov.uk
- A consultation event will also be held on **Saturday 28 January at the Market Harborough Indoor Market,** providing the opportunity for anyone that wishes to speak to County Council and Harborough District Council officers about the strategy.

Our proposals in detail – Category 1

Proposals:

Category 1 measures consist of improvements to encourage walking and cycling, junction capacity/congestion improvements and parking and traffic management improvements on the existing road network.

Benefits:

These measures would be relatively straight forward to deliver. They provide some localised congestion relief at junctions, improved connectivity for walking and cycling and better traffic and parking management at certain locations across the town. The measures do not significantly change the way traffic is routed through the town.

Package of measures

Junction capacity/congestion improvements.

Extend and enhance the walking and cycling network. Primary routes indicated, other routes linking primary routes are also proposed across the town.

Review locations where recorded vehicle speeds are in excess of the threshold necessary to prompt enforcement actions by the Police.

Extend the public realm to encompass the rail and bus terminals. Make improvements to existing materials and streetscape.

Network Rail led projects - track realignment, platform and train station improvements and level crossing at Little Bowden.

Review parking controls and the need for further controls across the town, with particular regard to permit parking in two areas - around the train station and town centre.

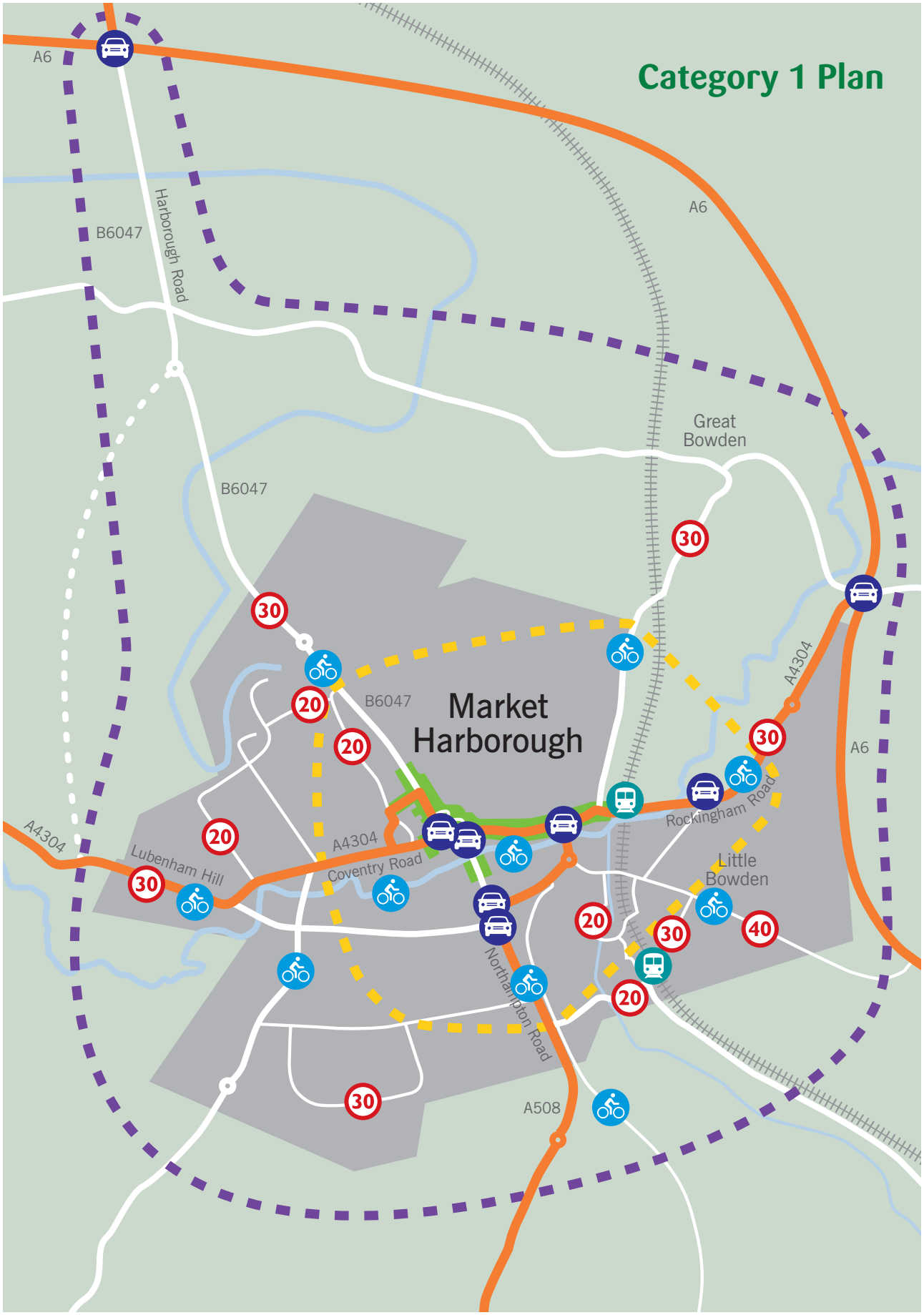
Localised public transport infrastructure improvements across the town.

Improved traffic signing across the town.

Initiatives to encourage people to walk, cycle and use public transport.

Exisiting main 'A' road network.

Indicative route of new road, to be provided as part of planned new development. The new road is not part of the proposals in this document.


Category 1 Plan
A6
B6047
Harborough Road
A6
Great Bowden
B6047
30
30
20
B6047
Market Harborough
20
A4304
30
A6
20
A4304
Rockingham Road
Lubenham Hill
30
Coventry Road
Little Bowden
20
30
40
Northampton Road
20
30
A508

Our proposals in detail – Category 2

Proposals:

Category 2 builds on and includes all of the Category 1 measures and further considers lorry weight restrictions, the reclassification of two roads (upgrading Welland Park Road and downgrading Coventry Road). It also considers increasing the underpass height of the Rockingham Road rail bridge, to enable HGVs to use appropriate routes.

Benefits:

These proposals would change the main traffic routes in the town encouraging traffic, including HGVs to use more appropriate routes relieving other less suitable ones. This could alleviate congestion at certain junctions and help relieve the volume of traffic in the town centre (The Square), providing the basis for more suitable emergency diversion routes following incidents on the A14.

Package of measures

(In addition to Category 1 measures)

1 **Increase the height of the Rockingham Road rail bridge.** This would allow all high sided HGVs from the A6 to access the south side of the town without having to travel unnecessarily through the town centre (The Square).

2 With appropriate engineering and accommodation works on both routes:

2a) Upgrade Welland Park Road between Lubenham Hill and Northampton Road to the A4304.

2b) Downgrade the existing A4304 along Coventry Road between Lubenham Hill to the junction of St Marys Road / Kettering Road.

This would divert the A4304 and help redistribute existing unnecessary traffic away from the town centre.

2c) Reverse the existing one way on Abbey Street (to require all vehicles to travel west bound) to further deter the use of Coventry Road.

3 **Make St Marys Road one way from The Square towards the Kettering Road / Clarence Street junction.**

or

Make St Marys Road one way from The Square to Adam and Eve Street.

In addition signalise the junction of Church Street / Main Street and remove the existing zebra crossing across Main Street.

These would help reduce traffic movements in the Square.

4 Identify unsuitable routes for HGVs and impose suitable HGV weight restrictions.

Resultant main 'A' road network.

Indicative route of new road, to be provided as part of planned new development. The new road is not part of the proposals in this document.

The route will not be classified as an 'A' or 'B' road, however in order to maximise the potential benefits of the new road, it is proposed for it to be used by all traffic except those with a maximum gross weight in excess of 18 tonnes (except for loading).


Category 2 Plan
A6
B6047
Harborough Road
A6
Great Bowden
B6047
4
Market Harborough
B6047
4
Abbey Lane
2c
A4304
3
1
Rockingham Road
A4304
A6
Lubenham Hill
A4304
2b
Coventry Road
Little Bowden
4
2a
Welland Park Road
Northampton Road
4
A508

Our proposals in detail – Category 3

Proposals:

Category 3 builds on and includes all of the Category 1 and 2 measures and further considers the principle of providing a relief road between the A508 and A6 to the south-east of the town.

This would be the most costly and complex measure and could not be delivered in the short term.

Benefits:

The relief road would divert the main A4304 away from the centre of the town, potentially diverting through traffic and HGVs away from the town centre.

However, the relief road is likely to cost in the region of £35 - £45 million and therefore if the scheme forms part of the approved transport strategy further more detailed analysis of the impact, the benefits and the costs would be required.

The route of the relief road shown on the map is only indicative.

Package of measures

(In addition to Category 1 and 2 measures)

1 **Consider providing a relief road to the south east of the town** between the A508 Northampton Road and A6, therefore diverting the primary A4304 route away from Rockingham Road and the town centre.

Resultant main 'A' road network.

Indicative route of new road, to be provided as part of planned new development. The new road is not part of the proposals in this document.

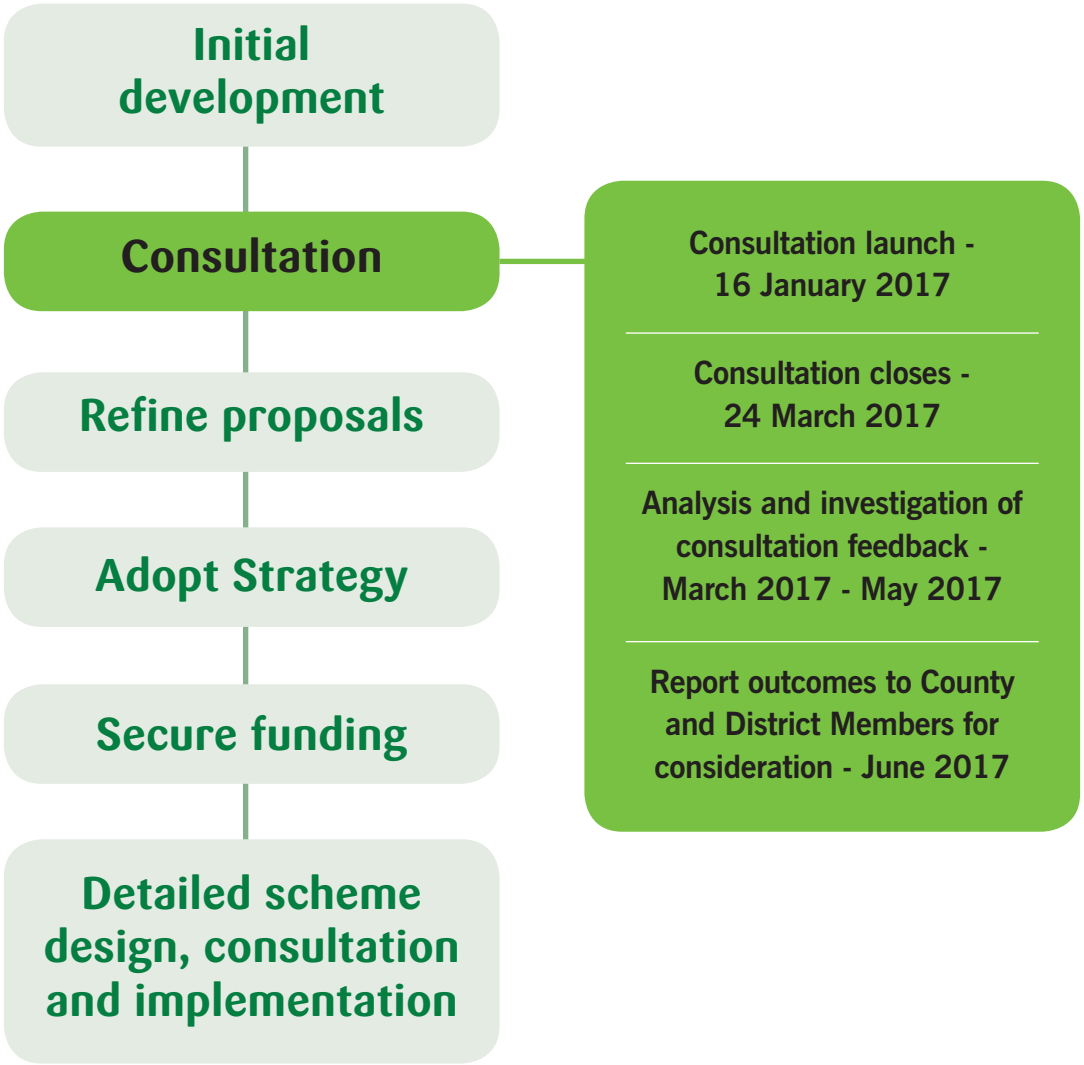
The route will not be classified as an 'A' or 'B' road, however in order to maximise the potential benefits of the new road, it is proposed for it to be used by all traffic except those with a maximum gross weight in excess of 18 tonnes (except for loading).


Category 3 Plan
A6
B6047
Harborough Road
A6
Great
Bowden
B6047
B6047
Market
Harborough
A4304
A4304
A6
A4304
Lubenham Hill
Little
Bowden
Welland Park Road
Northampton Road
A508
1

What happens next ?

Once the consultation is finished, views will be assessed and reported to the County Council's Cabinet and District Council's Executive. If the transport strategy is approved, the next step will be to seek to secure funding from the Government and other sources to develop and introduce transport measures identified in the approved strategy. The feedback we receive from you through this consultation is an important step in helping us refine the transport strategy to put us in a stronger position to develop a business case to secure Government as well as other sources of funding.

Please note that we are at an early stage of planning for these schemes. Any scheme that we would take forward will be subject to further design and consultation at a later stage. So if you are concerned about how any of these schemes would impact your house or the local environment, please note there will be opportunities to express these fully at a later stage of the process. At this point in time, we want to understand which measures will work best to address current and potential future traffic issues in town.



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જો આપ આ માહિતી આપની ભાષામાં સમજવામાં થોડી મદદ ઇચ્છતાં હો તો 0116 305 0001 નંબર પર ફોન કરશો અને અમે આપને મદદ કરવા વ્યવસ્થા કરીશું.

ਜੇਕਰ ਤੁਹਾਨੂੰ ਇਸ ਜਾਣਕਾਰੀ ਨੂੰ ਸਮਝਣ ਵਿਚ ਕੁਝ ਮਦਦ ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ 0116 305 0001 ਨੰਬਰ ਤੇ ਫ਼ੋਨ ਕਰੋ ਅਤੇ ਅਸੀਂ ਤੁਹਾਡੀ ਮਦਦ ਲਈ ਕਿਸੇ ਦਾ ਪ੍ਰਬੰਧ ਕਰ ਦਵਾਂਗੇ।

এই তথ্য নিজের ভাষায় বুঝার জন্য আপনার যদি কোন সাহায্যের প্রয়োজন হয়, তবে 0116 305 0001 এই নম্বরে ফোন করলে আমরা উপযুক্ত ব্যক্তির ব্যবস্থা করবো।

اگر آپ کو یہ معلومات سمجھنے میں کچھ مدد درکار ہے تو براہ مہربانی اس نمبر پر کال کریں 0116 305 0001 اور ہم آپ کی مدد کے لئے کسی کا انتظام کردیں گے۔

假如閣下需要幫助，用你的語言去明白這些資訊，請致電 0116 305 0001，我們會安排有關人員為你提供幫助。

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Public consultation: the consultation runs from 16 January 2017
Submit your views by 24 March 2017

Questionnaire

To provide written feedback please complete the following questionnaire and return by midnight on 24 March.

We want to find out what you think about the key transport issues that have been identified, and the possible solutions. If you think we've missed any key transport issues out, or have any transport ideas that you think would help improve the town, then we'd also like to hear from you.

Thank you for your assistance. Your views are important to us.

Please note: Your responses to the main part of the survey (Q1 to Q10, including your comments) may be released to the general public in full under the Freedom of Information Act 2000. Any responses to the questions in the 'About you' section of the questionnaire will be held securely and will not be subject to release under Freedom of Information legislation, nor passed on to any third party.

Q1 In what role are you responding to this consultation? Please tick one option only

- ☐ Resident of Leicestershire
- ☐ Visitor to Leicestershire
- ☐ Member of Leicestershire County Council staff
- ☐ County, district or parish/town councillor
- ☐ Representative of a public sector organisation
- ☐ Representative of a voluntary sector organisation, charity or community group
- ☐ Representative of a business or private sector organisation
- ☐ Other (please specify below)

Other (please specify)

Q2 If you indicated that you represent an organisation, business or community group, please provide your details.

Name:

Organisation:

This information may be subject to disclosure under the Freedom of Information Act 2000

Our initial ideas

Q3 To what extent do you agree or disagree that we have identified the key transport problems/issues for Market Harborough? Please tick one box only.

Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
☐	☐	☐	☐	☐	☐

Why do you say this?

Q4 Are there any other key transport problems/issues in Market Harborough that we should seek to improve as part of the strategy?

Q5 To what extent do you think the measures included under the following categories will help address the transport problems/issues identified for Market Harborough? Please tick one box per row only.

	A great deal	A fair amount	To some extent	Not very much	Not at all	Don't know
Category 1	☐	☐	☐	☐	☐	☐
Category 2	☐	☐	☐	☐	☐	☐
Category 3	☐	☐	☐	☐	☐	☐

Q6 Do you have any comments/concerns about any of the options?

Q7 Are there any alternative ideas we should consider?

Q8 To what extent do you agree or disagree with the following approaches being taken forward? Please tick one box per row only.

	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree	Don't know
Category 1	☐	☐	☐	☐	☐	☐
Category 2	☐	☐	☐	☐	☐	☐
Category 3	☐	☐	☐	☐	☐	☐

Q9 What is your preferred option or combination of options? Tick up to three

- ☐ Category 1
- ☐ Category 2
- ☐ Category 3
- ☐ No preference
- ☐ None
- ☐ Don't know

Why do you say this?

Q10 Do you have any other comments/suggestions?

About you

Leicestershire County Council is committed to ensuring that its services, policies and practices are free from discrimination and prejudice and that they meet the needs of all sections of the community.

We would therefore be grateful if you would answer the questions below. You are under no obligation to provide the information requested, but it would help us greatly if you did.

Q11 What is your gender identity? Please tick one box only.

- ☐ Male
- ☐ Female
- ☐ Other (e.g. pangender, non-binary etc.)

Q12 Is your gender identity the same as the gender you were assigned at birth? Please tick one box only.

- ☐ Yes
- ☐ No

Q13 What was your age on your last birthday? (Please enter your age in numbers not words)

Q14 What is your full postcode?
This will allow us to see how far from Market Harborough people live and what routes they might regularly take. It will not identify your house.

Q15 Are you a parent or carer of a young person aged 17 or under? Please tick one box only.

- ☐ Yes
- ☐ No

Q16 Are you a carer of a person aged 18 or over? Please tick one box only.

- ☐ Yes
- ☐ No

Q17 Do you have a long-standing illness, disability or infirmity? Please tick one box only.

- ☐ Yes
- ☐ No

Q18 What is your ethnic group? Please tick one box only.

- ☐ White
- ☐ Mixed
- ☐ Asian or Asian British
- ☐ Black or Black British
- ☐ Other ethnic group

Q19 What is your religion? Please tick one box only.

- ☐ No religion
- ☐ Christian (all denominations)
- ☐ Buddhist
- ☐ Hindu
- ☐ Jewish
- ☐ Muslim
- ☐ Sikh
- ☐ Any other religion

Q20 In total, how many cars or vans are owned or available for use by members of your household? Please tick one box only.

- ☐ None
- ☐ One
- ☐ Two
- ☐ Three
- ☐ Four or more
- ☐ Don't know

Q21 Are you an employee of Leicestershire County Council? Please tick one box only.

- ☐ Yes
- ☐ No

Q22 Many people face discrimination because of their sexual orientation and for this reason we have decided to ask this monitoring question. You do not have to answer it, but we would be grateful if you could tick the box next to the category which describes your sexual orientation. Please tick one box only.

- ☐ Bi-sexual
- ☐ Gay
- ☐ Heterosexual / straight
- ☐ Lesbian
- ☐ Other

Thank you for your assistance. Your views are important to us.

The consultation closes on 24 March 2017 and we will report the results back to the county council's Cabinet in July 2017.

Please return your completed survey to:
Market Harborough Transport Strategy,
Leicestershire County Council,
Have Your Say,
FREEPOST NAT 18685,
LE3 8XR.

No stamp is required. Or hand in to the main reception at Harborough District Council or Market Harborough Library.

Data Protection: Personal data supplied on this form will be held on computer and will be used in accordance with the Data Protection Act 1998. The information you provide will be used for statistical analysis, management, planning and the provision of services by the county council and its partners. Leicestershire County Council will not share any information collected from the 'About you' section of this survey with its partners. The information will be held in accordance with the council's records management and retention policy. Information which is not in the 'About you' section of the questionnaire may be subject to disclosure under the Freedom of Information Act 2000.

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Jeżeli potrzebujesz pomocy w zrozumieniu tej informacji w Twoim języku, zadzwoń pod numer 0116 305 0001, a my Ci dopomożemy.

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APPENDIX B- Detailed summary of consultation feedback, officer responses and updated recommendations

6. Summary of consultation feedback and officer responses

6.1 Consultation Overview

Public consultation is one of the key steps in the development of a Transport Strategy, helping the County Council refine proposals and strengthen the future case for funding. Between 16th January and 24th March 2017 the County Council carried out a consultation and engagement exercise to seek feedback on the key transport issues and recommendations initially put forward within the Study.

The public and key stakeholders were invited to submit views via an online questionnaire, which incorporated direct feedback and open ended contributions to support and refine those improvements/solutions included within the Study. Key demographic information was gathered, ensuring the County Council's commitment to ensure that its services, policies and practices are free from discrimination and prejudice.

Consultation contributions were also welcomed via written representation, paper copies of the questionnaire and via a designated email box. A public exhibition was held in January 2017 with more than 600 people attending. Following this, over 150 responses were received to the consultation, predominantly via the online questionnaire.

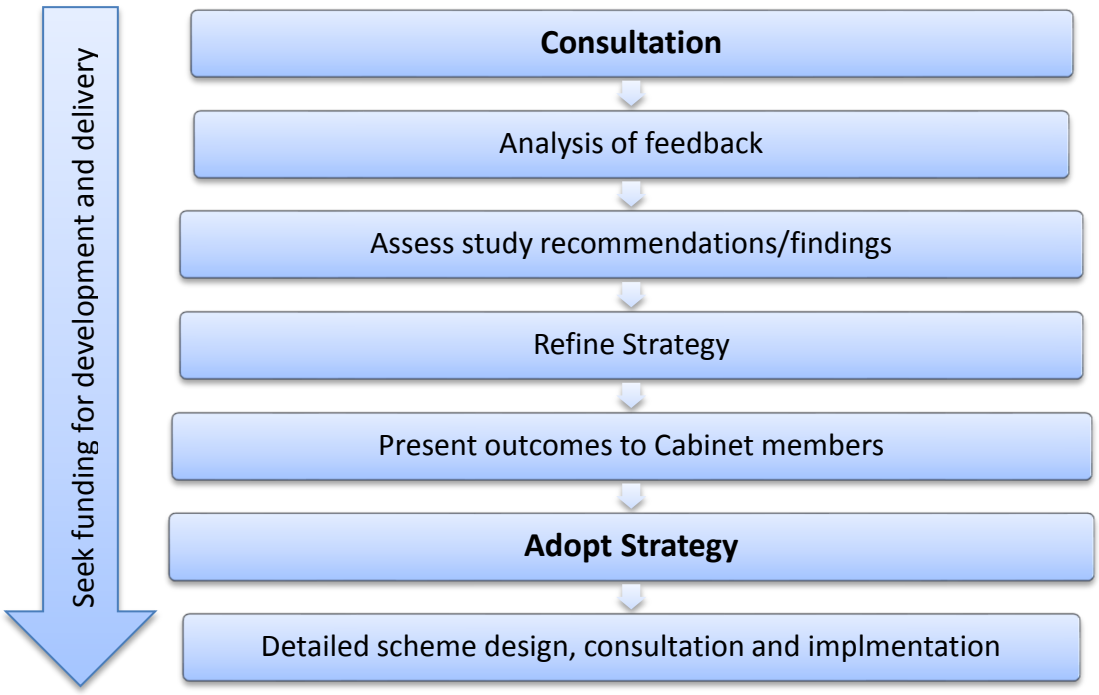
In addition to the responses received from the members of the public, responses were received from the following organisations:

- Market Harborough Civic Society
- Welland Park Academy
- Adam Smile Trust
- Harborough District Council
- Highways England
- Northamptonshire County Council

The following sections outline the main comments and issues raised during the consultation period together with considered officer feedback and analysis.

In line with the process identified below the outcomes of the consultation exercise will be reported to the County Council's Cabinet and approval sought for the adoption of a Transport Strategy. It is important to note that proposals

within the Strategy are still subject to further design and consultation and there will be further opportunity to feed into the development and delivery at a later date.



6.2 General Public and Stakeholder Opinion

Overall 73% of respondents agreed that the main transport issues had been identified, a clear indication of the adequacy of the Study which will be refined as part of the consultation feedback, imperative to development of a sound and resolute Strategy.

Of the remaining 27%, 9% of respondents were neutral neither agreeing nor disagreeing with the proposals. 11% of respondents tended to disagree and 7% strongly disagreed with the proposals. There were instances where respondents disagreed that the Strategy correctly identified the key issues, which upon further analysis, revealed these had actually been considered by the County Council but due to the level of detail within the consultation were not evident.

In cases where respondents strongly disagreed with the Strategy, additional considerations were put forward during the consultation which the County Council have considered and in some cases included within the refined Strategy.

The consultation also invited feedback on a package of proposed transport recommendations, which for presentational purposes were divided into three broad categories based on their cost, complexity and potential impact on traffic;

Category 1: improvements to the existing road network, with roads traffic routing remaining broadly unaltered.

Category 2: improvements that result in changes to the way traffic would move around the town.

Category 3: introduction of a southern relief road.

Category 3 was the preferred solution with 40% in agreement with category 1 and 2 both split 30% each.

Opinion regarding the effectiveness of category 1 measures proposed in isolation, without category 2 or 3 measures, was split 50:50. Overall support for the measures is evident, but public opinion weighted towards the necessity for additional complementary measures such as those in category 2 and 3 is clear.

Opinion with regards to the effectiveness of category 2 solutions proposed in isolation was split 70:30 with the majority concurring with the effectiveness of those measures and recommendations to target the specific transportation issues.

Category 3 measures were supported, with public opinion 80:20 in support of the measures in addition to Category 1 and 2 measures.

Overall the majority of respondents preferred a combination of all three categories as a package rather than just one particular set of measures in insolation.

6.3 Key Feedback

The provision of measures in isolation is clearly a public concern. The County Council recognises this concern and analysis to date has demonstrated the requirement for a holistic approach to improving network ‘efficiency’.

By adequately accounting for ‘efficiency’ and considering the network as a whole and by the implementation of a complimentary package of measures, the investment of funds is better spent. This also aids the understanding of the long term costs of maintenance and management of the network, ensuring long term value.

The consultation invited feedback on the primary transport issues within Market Harborough. This predominately focused on the levels of congestion, the overall perceived inadequacies of the network to accommodate growth, the inappropriateness of traffic (HGVs) in the town centre, the local pinch-

points and the major infrastructure constraints such as the Rockingham Road rail bridge, areas which were central to the draft Study.

It is equally important to understand issues which had been not put forward as recommendations in the Study but were identified as known local issues following the consultation. These could either have been outside the scope of the Study but remain relevant, beyond the geographical analysis area or had been considered more widely but not included as specific detailed recommendations/ solutions at this stage.

A number of additional issues and considerations were identified in the consultation including concerns relating to air quality (AQ), local rat-running, the potential for pedestrianisation of the town centre, the provision of Park-&-Ride on the periphery of Market Harborough, the Kettering Road rail bridge and the reintroduction of the right-turn at the A6/ Kettering Road junction.

Additional solutions to the widely reiterated perception of congestion within the town centre, the identification of solutions for specific problem junctions and the renewal, improvement and extension of the cycling/ walking network were also offered.

6.4 Officer Responses

1. **Issues**(s)

Parking – outside all schools

Officer Response(s)

The road network that serves schools can at peak times be marked by congestion as well as the perception of creating road safety hazards; this is very much a driver behaviour issue and is not unique to Market Harborough. Road safety is an important consideration and is fundamental to the development of the Transport Strategy, however accident data in the town suggests that there is no obvious correlation between school parking and road casualty rates particularly those associated with children.

Within its budgetary constraints, the County Council will continue to manage school parking issues by working in partnership with schools, parents, local resident and Members, and the Police. Where opportunities arise as part of the Strategy, the County Council will look to incorporate any measures that may mitigate parking issues as part of other identified proposals within the vicinity of schools.

2. Issue(s)

Parking – a) Specific on-street sites such as Logan Street /Gardiner St/Knoll Street, East Street, Nelson Street, Connaught Road, Kettering Road, Walcot Road, where parking concerns were raised in addition to those areas highlighted in the detailed Strategy.

b) Not enough provision of off street car parking.

Officer Response(s)

a) The on-street locations suggested in the consultation will be included within the future analysis which will seek to provide adequate levels of parking based on the bespoke demand and needs of the market town.
b) The provision and management of off-street car parking is the responsibility of Harborough District Councils within the framework of their Parking Strategy, 2016; this is a comprehensive and detailed analysis of current and future demand, and offers a number of key recommendations and areas of additional analysis to ensure that future demand is satisfactorily met.

3. Issue(s)

Junctions/ congestion - Lack of apparent synchronisation between junctions; Kettering Road Rail Bridge and adjacent junctions – Gores Lane and Bellfields, St Marys Road /Gt Bowden Road and Northampton Road / Scotland Road.

Officer Response(s)

Efficient junction performance clearly plays a pivotal role in the movement of goods and people, which in-turn aids economic productivity. The performance of a single junction in isolation is limited to the effects of traffic at one particular location. As a consequence, the mitigation required may not account for the junctions downstream or traffic movement through the town centre, both of which affect the performance of the network as a whole.

The analysis of ‘efficiency’ must therefore include detailed analysis of the movement between junctions, the effects of queuing and delays on links and the accessibility for pedestrians/ cyclists.

By adequately accounting for ‘efficiency’ and considering the network as a whole, the investment of funds is better spent. This also aids the understanding of the long-term cost of maintenance and management of the network.

The adequacy of the next stage transport analysis is imperative to the development of a sound and resolute Strategy. The concerns about the traffic impact and additional junction analysis will be taken forward as part of future analysis. Additional testing to identify solutions as part of the proposed localised microsimulation transport modelling analysis will better account for junction synchronisation, the effects of junction interaction and further the overall promotion of network efficiency.

4. Issue(s)

Rat running traffic - Affecting Scotland Road, Western Avenue, Alvinton Way, Fernie Road, Bath St and Ashley Way.

Officer Response(s)

So called ‘rat runs’ are an inevitable characteristic of a congested urban highway network. Critically, the main reason for this congestion is a greater level of demand and higher frequency of junction use. In the case of Market Harborough town centre, this is further compounded by ‘blocking back’, this being the interaction between junctions as a result of queuing and delays. This congestion governs the journey times and routes taken by drivers.

The response by network users to congestion and delay is often the rerouting of traffic, as drivers seek to avoid known congestion hotspots by taking an alternative route on roads often less suitable, encapsulated by residential areas and not intended to be used as a through-traffic route.

The root cause of ‘rat running’ is not itself congestion at junctions, this being the outcome of the deterioration of network performance as a result of a greater level of demand to a certain location or facility, such as schools, places of works and local amenities. The town centre itself is a major attractor of trips due its vibrant and diverse amenities, employers and local population, characteristics which are important to preserve. Greater levels of demand, congestion and consequential ‘rat running’ highlight the degree of attention that is needed to maintain flow and safety.

Category 1 and 2 measures, which seek to greatly slow down the rate of junction deterioration and provide more suitable routes for drivers, will enhance the characteristics of the network thereby seeking to reduce the rate of which drivers seek alternative ‘rat runs’.

5. Issue(s)

Air Quality concerns - Air pollution from cars idling while in queues.

Officer Response(s)

In Leicestershire air quality management is the statutory responsibility of District and Borough Councils. Whilst the County Council has no statutory duty to address air quality, as the Local Highway Authority (LHA) the County Council can help District / Boroughs identify and develop mitigation measures where air pollution is attributable to the local road network.

Based on the current air pollutant data collected around the town, HDC do not class Market Harborough as an Air Quality Management Area (AQMA) and therefore HDC have not identified any specific mitigation action. Nonetheless, the Strategy is likely to have a positive impact on air quality, through the promotion of more sustainable modes of transport and through seeking to mitigate junction delay and stationary vehicle queues.

6. Issue(s)

Issues beyond the scope of the Study- Extra traffic as a result of development beyond Market Harborough, junctions on the A5199, Lubenham bypass and pedestrian/ cycle links to Braybrook village.

Officer Response(s)

Within the context of the draft Study there is a limit to the geographical area analysed. To inform the Study area itself, discussions were held with multi-disciplinary colleagues at both the County Council, Harborough District Council and in the local community with key stakeholder representatives to understand local issues.

The County Council has used the best and most up-to-date analysis tool, the Leicester & Leicestershire Integrated Transport Model (LLITM) along with the integration of planning, socio-demographic and socio-economic data to best inform the baseline situation and future year analysis within the area of analysis.

This assists in the quantification of key inputs, such as growth rates, housing and social needs, to inform real, bespoke and relevant solutions to ensure that a resilient network Strategy can be developed and implemented.

By understanding the *demand*, which can be quantified in levels of trip making and its associated impact on the network, the draft Study has identified areas/ initiatives where some level of investment can be considered to improve the performance of the network, or guard against its rate of deterioration.

In terms of development beyond Market Harborough, the Highway Authority, a statutory consultee in the planning process, are charged with the responsibility to manage and maintain the County’s highway network. All promoters of

development proposals across the district have to consult the Highway Authority and agree a scope of analysis which would include any problematic junction relevant to the specific application which may have been beyond the scope of the Study.

7. Issue(s)

The Study credentials - Doubt over the effectiveness of the Study and the knock-on impacts of increased congestion.

Officer Response(s)

The effectiveness of solutions and the testing of the subsequent knock-on-effects of rerouting traffic away from the town centre, have been tested using the Leicester and Leicestershire Integrated Transport Model (LLITM). This is measured against stringent criteria and parameters set by the Department for Transport (DfT) on behalf of central Government. All measureable criteria have been met in accordance with WebTAG, the appraisal framework set out by the DfT.

As a strategic model LLITM is the best tool to account for interrelated transport issues. Future investigations will involve microsimulation modelling; this is the dynamic modelling of individual vehicle movements within a system of transportation facilities. Microsimulation allows more detailed testing and will account for the adequacies of the proposed improvements, the effects of junction interaction and will allow for a process of refinement of the Strategy to allow the best possible solutions and value for money.

8. Issue(s)

Welland Park Road - The appropriateness of the road to be upgraded in light of the existing geometry, road width, the school and associated vulnerable road users, at grade crossing facilities, school peak time parking and speed management should traffic calming be removed.

Officer Response(s)

The consideration of upgrading Welland Park Road to the A4304 and the respective downgrading of Coventry Road has been explored as a concept and evidence would suggest that Welland Park Road is the more strategically favourable route of the two, particularly in light of the traffic forecast predictions.

The analysis has demonstrated that in terms of traffic volume, the two routes currently carry a similar level of traffic at the peak times with Welland Park Road anticipated to exceed Coventry Road by approximately 30% in traffic volume by 2031.

By way of comparison, Coventry Road is predicted to experience an overall decrease of traffic in the future year scenario of around 300 traffic movements per day, compared to the increase of traffic on Welland Park Road. This demonstrates re-distribution of traffic from Coventry Road onto Welland Park Road.

Traffic re-distribution can occur for a number of reasons and a general rule in transportation is it is rarely a single issue in isolation. Route choice and driver behaviour are closely associated with the desirability of the route. This relates to the length of the link, the journey time and the characteristics of the route such as the number of at-grade crossings, traffic calming, and the number of accesses, all of which effect journey time and can deter drivers from the route.

As part of the Study, a detailed analysis of the road features, such as the number of junctions, accesses, crossings and bus stops between Coventry Road and Welland Park Road was undertaken. The analysis indicated that Welland Park Road is generally a more favourable route than Coventry Road, with less imposing features such as those detailed above.

The proposal generally received positive feedback during the consultation period however from officer discussions with Welland Park Academy and with members of the public at the public exhibition it is recognised that there are understandable concerns about the appropriateness of the route.

Rather than to simply designate the status of a route, it will be essential to introduce a number of complimentary measures required to facilitate such a reclassification. Moreover, this is not to say that Welland Park Road does not suffer from some congestion and delays, and clearly very careful consideration must be given to the requirements of the existing frontagers.

In addition, any proposal of road reclassification would be accompanied by a review of the road’s geometrical features, additional road safety analysis and continued liaison with stakeholders including Welland Park Academy and local residents. Moreover, the viability and benefits of any proposal of reclassification is subject to further detailed analysis.

A more detailed assessment of the complimentary measures required will be undertaken ensuring the important characteristics of road and current functions are not unduly or unfairly impeded by any such proposal to reclassify the road. Future investigations will involve microsimulation modelling of individual vehicle movements to gauge the impact on Welland Park Road and the surrounding road network /junctions.

9. Issue(s)

Rail bridge – Rockingham Road Rail Bridge.

Officer Response(s)

The draft Market Harborough Transport Study included consideration of increasing the clearance (height) of the ‘low’ rail bridge on Rockingham Road, as part of the Network Rail led project of localised rail improvements.

A feasibility report was commissioned to understand the costs and implications of increasing the clearance. The report identified that the mandatory standard headroom at the bridge could be achieved but at considerable cost, difficulty, disruption and risk. The risks pose a significant level of financial uncertainty. The analysis undertaken so far shows that there is very little prospect of the scheme receiving national funding.

It is important to stress that these findings do not hinder the progression of measures that aim to redirect HGVs to more suitable routes. These measures also help to tackle congestion and reduce the volume of traffic through the town centre. The County Council will continue to explore potential solutions to tackling congestion in the town centre.

Should alternative funding sources become available in the future, such as developer contributions from planning development, bridge alteration may be considered again in the future.

10. Issue(s)

Rail bridge – Kettering Road Rail Bridge- Alteration to the clearance at the bridge and as a congestion hotspot.

Officer Response(s)

The County Council has commissioned a feasibility report to understand the costs and considerations of altering the clearance at the bridge, which would involve either the raising of the bridge deck and associated structures, or the lowering of the carriageway (or combination of both).

Such a major intervention requires central government funding which requires an evidence led case, based upon a stringent appraisal. The analysis to date has shown very little prospect of national funding opportunities which such a major intervention will require.

The Kettering Road rail bridge was identified to be a known congestion hotspot. The potential to identify a solution and develop a mitigation solution is being considered by the County Council. Future investigations will involve microsimulation modelling of individual vehicle movements to gauge the

impact of a solution on Kettering Road and the surrounding road network /junctions.

11. Issue(s)

Cycling route – Consideration of the AdamSmile proposal**.**

Officer Response(s)

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

12. Issue(s)

Pedestrian - Provision of dropped-kerb crossings, improved crossing on Leicester Roar (near to the hospital) and more crossings on the High Street.

Officer Response(s)

In addition to the walking /cycling analysis and recommendations put forward to date, further consideration will be given to determine the suitability of additional pedestrian crossings within the town centre as the Strategy develops and is delivered.

13. Issue(s)

Pedestrian - Pedestrianise town centre

Officer Response(s)

A number of suggestions to pedestrianise the town centre were received during the public consultation.

The Transport Strategy aims to enhance the vibrancy of the market town by taking a more balanced approach through the implementation of walking and cycling routes together with proposals to assist motorists making it an attractive place for commuters, employees, residents and tourists alike thereby sustaining the local economy and increasing footfall in the town centre whilst protecting local characteristics of the market town.

Additionally, Category 2 improvements such as the rerouting of traffic away from the town centre will help reduce emissions and quieten the town centre considerably adding to the attractiveness of the town centre.

14. Issue(s)

Junctions/ Congestion - The provision of a park-and-ride on the periphery of the town.

Officer Response(s)

Park-and-ride schemes are traditionally a form of an integrated transport design which allows private transport users to park their vehicles at a car park and travel into the central area using a public transport mode.

Based upon our experience of park-and-ride schemes within the County, it is unlikely that such a purpose built facility would be viable based on the current and forecast population of Market Harborough. The traffic collection data analysis, which is an integral component of the Study, demonstrates the majority of all trips are internal to external- a trend forecast to continue with 1/3 of trips being internal *local* trips. This does not correlate with a traditional form of park-and-ride which would require a daily import of people into the market town.

In the context of Market Harborough, it is felt that the Transport Strategy through its proposed package of measures will sufficiently aid network improvement and management therefore negating the need for a dedicated Park and Ride.

15. Issue(s)

Junctions/ Congestion - Remove traffic signals at junctions and replace with mini roundabouts.

Officer Response(s)

The County Council would not necessarily advocate the wholesale replacement of traffic signals with mini roundabouts due to pedestrian crossing demands, junction visibility issues and potential difficulties for side road traffic. Having said that, in certain locations there may be some merit, particularly where there is a series of traffic lights in close proximity. Again, as part of the Strategy development the County Council will look to develop a detailed microsimulation transport model which will help model/test the impact of removing traffic lights.

16. Issue(s)

Junctions/ Congestion - Rebuild the bridge over the river beyond Tesco's car park to be suitable for motor traffic.

Officer Response(s)

The bridge provides a pedestrian and cycle crossing over the River Welland from Walcot Road to the supermarket car park. Walcot Road is a residential no-through (vehicular) road which leads south to Welland Park Road to the predominately residential area which encapsulates the south of Market Harborough. This large residential area to the south creates a pedestrian and cycle demand to a number of amenities to the north, as well providing crossing into the town centre which is severed by the River Welland.

To modify this bridge to permit motor vehicles, would lead to a number immediate challenges. In the first instance, the supermarket car park is entirely controlled by a third party and is consequently not part of the local highway. A motor link would essentially create a link between Walcot Road to Coventry Road, via third party land (the car park). Third party land is entirely outside the control of the County Council and District Council.

Consideration has also been given to how desirable a vehicular route via Walcot Road would be. Walcot Road is not suitable to carry a greater volume of traffic both in terms of the geometry and the primary residential function further diminishes any realistic prospect of this bridge being opened up to vehicular traffic.

17. Issue(s)

Junctions/ Congestion - More yellow boxes junction markings required at a number of junctions.

Officer Response(s)

As part of the refinement of the analysis so far undertaken, the Authority will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of yellow box or keep clear markings.

18. Issue(s)

Junctions/ Congestion - Provision of traffic signals at the Northampton Road/Scotland Road junction.

Officer Response(s)

The provision of traffic signals at the Northampton Road/Scotland Road junction has not been identified in the Study based on the evidence derived from LLITM which provided an indication of the current and future most congested parts of the network.

The proposed town centre microsimulation modelling should provide further evidence of the necessity for enhancement at this junction; however analysis to date has not demonstrated such a requirement.

As well as considering traffic volume and other matters relating to the engineering deliverability of traffic signals, the appropriateness of any junction intervention would have to be carefully considered, to avoid the increased use of Scotland Road as a through route.

19. Issue(s)

Junctions/ Congestion – Extend proposed relief road from A508 to A4304, suggestion that this should be funded by £5k roof tax through planning process.

Officer Response(s)

The County Council commissioned a high-level economic appraisal report to estimate the Benefit-Cost Ratio (BCR) of the Market Harborough SRR to give an early indication of its viability. The appraisal report also provides further detail of the potential SRR traffic, and in particular, the proportion of through traffic forecast to use it. In light of the amount planned development, developer funding would unlikely fund the entire cost of the scheme even at the suggest £5,000.00 per dwellings.

Having undertaken an economic assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This currently provides poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government. The analysis to date has shown very little prospect of national funding opportunities which such a major intervention will require.

Demand for the route is low and an extension to the length of the road would need to proportionately increase demand relative to the cost. This is therefore a longer term aspiration of the Strategy.

Developer contributions are a key part of funding for the Strategy as a whole and the County Council will therefore continue to work closely with Harborough District Council to secure potential funding where the planning system allows.

20. Issue(s)

Junctions/ Congestion – Exclusion of all private vehicles except buses and taxis in The Square.

Officer Response(s)

The provision of measures to alleviate congestion and unnecessary traffic within the town centre are a priority of the Strategy. Analysis to date has not

revealed a requirement to totally exclude all private vehicles from the town centre.

A number of recommendations will be actively pursued including incentives to encourage a modal shift away from car use, enhancement of the walking and cycling network, parking controls and measures to reduce the through-movement of traffic in the town centre.

21. Issue(s)

Junctions/ Congestion/ Parking Provision – Logan St/ Gardiner St/ Knoll Street and Patrick Street/ Granville Street/ Gladstone Street/ Cross Street one way and Bowden Lane /Doddridge Road/Roman Way/The Broadway/ Connaught Road/ Clarence Street one way.

Officer Response(s)

Any proposal to introduce a one-way system is considered against its necessity, the effects/ consequences of such a system and other local considerations. The introduction of a one-way system in an entirely residential area could present significant disadvantages for residents due to the indirect routes which would then have to be taken. Speeds in one-way streets are often recorded as higher than comparable two-way sections of road which would also be a concern given the primary residential function of these roads. The introduction of further one-way systems which incorporate a number of residential streets in the town is not considered to be a viable solution to the issue of congestion or parking provision at this time. However the proposed microsimulation transport modelling should provide further evidence for the necessity for one way systems; however analysis to date has not demonstrated such a requirement.

22. Issue(s)

St Mary's Road one-way option.

Officer Response(s)

Measures to actively reduce the amount of through-traffic from the town centre have been recommended within the Study. The analysis to date has shown that a system of reclassification and redistribution of traffic, as well as a number of accompanying measures, results in a reduction in traffic travelling through the town centre.

A number of mitigation options have been tested, and consideration of the potential introduction of a partial one-way system on St Mary's Road to help

reduce traffic impacts within The Square, will be tested further as part of the next stage of analysis.

As part of the consultation process, the suggestion to ban the right-turn on Northampton Road onto St Mary's Road to achieve a reduction of traffic travelling through the town centre was put forward. Not without its potential merits, the St Mary's one-way options are conducive and necessary to support road reclassification, which accounts for the greatest level of demand through the town. This is not to discount the potential for such a proposal to ban the right-turn which will be included in the future micro-simulation analysis.

23. Issues(s)

Public Transport– Increase service provision

Officer Response(s)

Localised public transport infrastructure improvements have been recommended as part of the Study. Subject to funding, a strategic investment programme includes the introduction of new bus stops, improved provision of *smart* technology such as real time display information to encourage bus patronage which would in turn strengthen the viability of commercially operated services.

By enhancing viability, this acts as an incentive to commercial operators to increase frequency and extend operating hours. The County Council currently subsidises a number of services and invests in services which may not be commercially attractive but are recognised as socially necessary.

The County Council recognises bus passenger transport as a community priority and will continue to enhance the attractiveness for commercial investment and infrastructure enhancements as part of the Strategy.

24. Issue(s)

HGVs– Banning HGVs from town centre

Officer Response(s)

The movement of HGV traffic has been considered in the Strategy, to avoid where possible HGVs using inappropriate roads within the town.

Market Harborough benefits from a range of distinctive and flourishing independent retailers in addition to a number of recognised high street retailers, which are valued by residents and visitors alike. Due to the loading /servicing requirements of these businesses the County Council are not seeking to ban all HGV movements in the town centre. However due to the

perceived environmental constraints, the Strategy does provide Category 2 improvements which look to redirect unnecessary movements away from the centre where possible, which will benefit all network users. Alongside this, the Strategy is looking to make local junction improvements to ensure the efficient movement of traffic through the centre of Market Harborough, therefore limiting the impact of stationary traffic on the historic and idyllic environment.

HGV traffic is often cited as a cause of damage to highway infrastructure, presenting an unnecessary risk to cyclists and pedestrians, as well as being generally an imposition on the amenity and character of an area. Leicestershire County Council, as Highway Authority, has a well-established practice to maximise the use of A and B roads for HGV traffic, reducing the likelihood of traffic using unsuitable routes or those with established weight restrictions.

25. Issue(s)

Other/ Misc - Remove or reduce height of all speed humps in town.

Officer Response(s)

Whilst it is understood that speed humps will never be universally popular with all road users, they are not the only measure that the County Council introduces to manage vehicle speeds. Their use forms part of the County Councils wider approach to traffic and network management. The County Council recognises that speed humps are an extremely effective means of controlling vehicle speeds and they play an important role in helping to reduce the likelihood and severity of collisions.

In Leicestershire the design of speed humps, the consultation process and their implementation, is based on government guidance and national legislation.

The justification for promoting speed humps at a particular site can be varied. It could be to address an accident problem, create a safer cycling route, or reduce speeds near a new junction or a school etc. Many schemes around the county have been introduced over the years following local concern over excessive speed. Requests for traffic calming were then investigated against the assessment system in place at the time; such assessment systems generally took account of traffic speeds, volume, accidents and the type and number of nearby premises (e.g. schools, shops, residential).

Whilst the reasons for introducing speed humps can be varied, schemes can only be introduced following an extensive consultation exercise. This would normally involve letters to local residents, possibly a public exhibition; and also statutory public notices placed on site and advertised in the local

newspaper. Also, the emergency services and bus companies would have an important say in the appropriateness of a particular scheme. All comments made on a scheme are fully considered before a decision is taken on whether to implement it.

Speed cushions and tables are designed to national standards and guidance, so that they can be traversed by all vehicles conforming to manufacturer's specifications. DfT research has demonstrated that when negotiated at sensible speeds, speed tables and cushions do not cause damage to vehicles.

The County council will continue to carefully consider the use of speed humps through the delivery of traffic and network management measures.

It is important not to lose sight that speed humps make a big difference to road safety and therefore their removal from any existing scheme would require very strong consideration and would involve full consultation. Presently we have no specific plans to remove safety measures like speed humps from roads in Market Harborough.

26. Issue(s)

Other/ Misc - Reopen the right turn from A6 into Kettering Road.

Officer Response(s)

In 2012, due to a history of collisions associated with right turn manoeuvres at this junction the County Council carried out physical works to prevent the uncontrolled right turn manoeuvre from the A6 into Kettering Road.

More recent analysis undertaken by the County Council has identified a degree of increased driver frustration as a result of approximate 4km diversion for right-turners onto Kettering Road and increased *rat-running* as a result of drivers rerouting via Ashley Road and Gores Lane to bypass the junction in its entirety.

Moreover, there is concern that drivers are undertaking U-turns, just after the physical build-out then proceeding on Kettering Road, a manoeuvre that is not only banned by Order but potentially increases the risk to the travelling public. Physical evidence of this practice is evident on the carriageway.

The County Council is taking forward the potential of reintroducing the right-turn separately from the Strategy as part of a developer led scheme. The Authority has compiled up-to-date collision data and is in the process of considering a number of options including the potential of implementing a roundabout or traffic signals.

Any potential enhancement would need to address the risks associated with the right-turn movement as well as the implications which have arisen as a result of the closure of that movement.

6.5 *Updated Transport Study recommendations*

Background

The consultation exercise focused primarily on key stakeholder feedback/workshop sessions, along with wider public consultation. Following the consultation, a number of solutions/considerations have been identified.

The consultation and stakeholder engagement exercise allows for key inputs into the work already undertaken, so that the future Strategy better reflects the needs of the local community and key stakeholders.

This section details the outline recommendations following the consultation and subsequent analysis undertaken by the County Council regarding the feasibility of the Rockingham Road rail bridge alteration and the Southern Relief Road (SRR); the two most costly and complex highway interventions included within the Study.

The updated Study is detailed below and where necessary, changes to the proposals have been made following the consultation process, the details of which have also been documented. This section should be read in conjunction with the preceding chapters of this document.

For ease of understanding, the summary section includes all recommendations which form the updated Strategy.

Emerging Outline Recommendations

The draft Study initially made 16 recommendations, which form the basis of the draft Transport Strategy. These were broadly based around the following proposals, which still remain central to the proposals to be taken forward:

a) encouraging walking, cycling and public transport use;
b) improving key junctions and general traffic flow around the town;
c) possible public realm enhancements; and
d) changes to the way that traffic is routed through and around the town.

Following the analysis of the consultation feedback and subsequent analysis undertaken by the County Council, a total of 18 recommendations are put forward which form the basis of the Transport Strategy for further refinement and development of transport proposals for Market Harborough. In some cases, the previous recommendations have been altered to include the consultation comments rather than being put forward as new recommendations in their own right.

A breakdown of these amendments is detailed below:-

- Capacity / Congestion Improvements; two additional recommendations
- Network Management and traffic routing; one recommendation removed from the Strategy
- Sustainable transport infrastructure / behaviour change initiatives; two additional recommendations
- Traffic Management Improvements; one additional recommendation

Each of these areas is explored in detail below.

Capacity / Congestion Improvements

This section should be read in conjunction with Section 4.6 of the Study document.

The extensive data gathering exercise and sectoral analysis which underpins the Study assists in the quantification of key inputs, such as growth rates, housing and social needs, to inform real, bespoke and relevant solutions to ensure that a resilient network Strategy can be developed and implemented.

By understanding the *demand*, which can be quantified in levels of trip making and its associated impact on the network, the draft Study has identified areas/ initiatives where some level of investment could be considered to improve the performance of the network or guard against its rate of deterioration.

The traffic impact analysis has revealed the following key headline findings for peak time traffic movements: -

- Traffic volume in the town is forecast to increase by 24% between 2011 and 2031;
- Greatest proportion of trips (57%) on the network are those going from within the Study area to outside of the area, vice versa (internal to external and external to internal);
- Presently 1/3 (36%) of trips within the Study area over the peak hours were internal trips (internal to internal);
- Presently ‘through’ traffic (traffic using the roads in the town to get to/from destinations outside of the town) accounts for 10% of trips;
- The B6047 and A4303 presently (The Square- the nucleus of the town) carry in excess of 13,000 vehicles per day;
- The future of internal trips, as a proportion of total trips, drops to 25% of all journeys. However the absolute number of trips remains high (4,000 over the peaks); and

- In the future the frequency of internal/ external trips undertaken increases as a proportion to 68%.

This highlights the need to form measures that can successfully target the different types of trip making in Market Harborough. Promoting measures which encourage alternatives to car use to achieve an overall reduction in the number of car journeys by enhancing walking/ cycling and PT infrastructure are most effective when considering internal trip making.

However, sectoral analysis shows the majority of all trips are internal/ external, a trend which is forecast to continue. The effectiveness of such measures on these trips is limited due to complexity and distance of that type of trip making.

As a consequence, capacity and junction enhancement, in combination with wider sustainable transport principles, is required to ensure the market town can continue to thrive in light of forecast predictions.

The following additional recommendations as a result of the consultation will be taken forward as part of the emerging Transport Strategy: -

1. County Council will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of road markings; and
2. The microsimulation analysis will model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods.

<u>Yellow box markings & Road Markings</u>

The provision of yellow box junction markings is considered in terms of the suitability, the legal criteria and delivery. This is on a case-by-case basis and is not applied uncritically. This is done so not to preclude best engineering judgment and application of standards, which could otherwise create the opposite effect to that which is being sought as a solution. For example, the widespread use of yellow box markings in high concentration within a certain area can devalue their effectiveness as drivers become all-to-well familiar with their presence on the network.

By entering the markings when the drivers exit is blocked by stationary vehicles, whether these are ahead in the road or on a side road, drivers commit an offence. The provision of such markings do not necessarily require a Traffic Regulation Order, however the local Constabulary is always consulted.

The suitability of such markings is measured against a number of criteria and factors which may influence their installation such as the type of junction (whether signal controlled for example), blocking back from a junction ahead and traffic volume.

To inform the Study, a number of traffic surveys and other data sources were collected and analysed. This will allow the County Council to assess the suitability of junctions for this type of intervention but also to what alternatives, and potentially more effective measures, could be considered. Consideration towards road safety, the needs of pedestrians and cyclists will be central to the future analysis. Additional analysis will be taken forward as part of the Strategy.

Removal of traffic signals at junctions and/ or temporary signals

The County Council would not necessarily advocate the wholesale removal of traffic signals or the switching off of signals off peak. This is due to pedestrian safety concerns, junction visibility issues and potential difficulties for side road traffic. Having said that, in certain locations there may be some merit, particularly where there is a series of traffic signals in close proximity. Again, as part of our work identifying potential measures for the town, the County Council are also investing in the development of a detailed transport model which will help the Authority safely model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods. This also provides the evidence base to support future funding bids.

Off peak trip movements can be quite different, in terms of their origin/destination and purpose, compared to the peak times and the need to thoroughly test a range of proposals to enhance network efficiency and junction synchronisation needs to adequately account for this.

Future considerations towards network improvements involve the potential to link traffic signals together on an interconnected network. Timings are then automatically adjusted across the network to meet demand and to provide more green time in favour of the main roads. It does not mean that there will never be any congestion but the system is designed to minimise overall levels of congestion across the network of junctions and make better use of the existing capacity of the road network.

Network Management and Traffic Routing

By far the two most costly and complex interventions identified within the Transport Study relate to network management and traffic routeing alterations; namely the Rockingham Road rail bridge modification and the provision of the Southern Relief Road (SRR).

The County Council has commissioned two further studies to analyse the feasibility of the Rockingham Road rail bridge alteration and the SRR given the complexity, engineering constraints and cost associated with these two major interventions.

Rockingham Road Rail Bridge

The derivation of the initial concept to alter the clearance arose within the Study following liaison with Leicestershire Constabulary and Aone+, who manage the A14 on behalf of Highways England.

High-sided vehicles striking the low bridge on Rockingham Road, or RTCs on the A14 between junctions 2 and 3 currently force vehicles onto the Market Harborough network. Without adequate signing to direct those motorists back onto the strategic road network, it is likely that a proportion of that traffic could use inappropriate/unsuitable routes through the town, including residential areas.

In the absence of emergency diversion routes (EDR) signing, the low bridge on Rockingham Road would be particularly vulnerable due to its location on the A4304, as a high proportion of the diverted traffic would likely be Heavy Goods Vehicles (HGV) and may be reliant on satellite navigation devices that could automatically select Rockingham Road due to its status.

The initial concept then is to alter the clearance at the bridge to the mandatory national standard, 5.03m, to allow all high-sided HGVs from the A6 to access the south side of the town and provide the basis for more suitable diversion routes following incidents on the A14.

The potential consideration to alter the clearance at the ‘low’ rail bridge at Rockingham Road has been identified to form part of the Network Rail led project of localised rail improvements which at the time was considered an appropriate platform to integrate the potential bridge alteration.

The feasibility report provides an understanding of the costs and considerations of altering the clearance at the bridge, which would involve either the raising of the bridge deck and associated structures, or the lowering of the carriageway (or combination of both).

The maximum achievable headroom at the bridge is some way off the national mandatory standard meaning that if any deck replacement works were to be carried out alone, the bridge would still have to be signed as a ‘Low Bridge’.

The consequences of the bridge, following alteration, still being classified as ‘Low’ means it would still not be suitable for high-sided vehicles therefore the prospects and realisation of redirecting all high-sided vehicles from the town centre could not be achieved.

The proposal to redirect the very largest of vehicles would simply not be permissible in accordance with national standards and a scheme to alter the bridge would not be value for money as it would not achieve its desired benefits.

	‘U’ Deck Option*	**‘E’ Deck Option***	**Double ‘U’ Deck Option**
Rockingham Road (current	4.89m	4.44m	5.03m

4m)**			

*Deck alteration options in isolation (without carriageway lowering)
**Minimum mandatory 5.03m in accordance with TD27/05.

The road lowering option would require around 1.4m of reduction to the vertical alignment of Rockingham Road to achieve the minimum 5.03m headroom over a carriageway width of 7.3m.

This would be very difficult to achieve given the quantity of services buried in the road and footways and the close proximity of a T-junction. It is likely that significant strengthening or underpinning of the existing abutments would be required due to the change in road level.

Such a major intervention would likely require central government funding which requires an evidence led case, based upon a stringent appraisal criterion set by the relevant Body/ Organisation. The analysis to date has shown very little prospect for national funding opportunities which such a major intervention would require.

It is important to stress that the findings of the structural analysis for the bridge does not hinder the progression of the wide array of measures as set out in category 2 to redirect HGV movements to more suitable routes assisting to alleviate congestion and reduce the volume of traffic through the town centre. These are detailed below: -

- Upgrade Welland Park Road between Lubenham Hill and Northampton Road to the A4303;
- Downgrade the existing A4303 along Coventry Road to the junction of St Mary's Road/ Kettering Road to help redistribute unnecessary traffic away from the town centre;
- Reverse the existing one way on Abbey Street to further deter use of Coventry Road; and
- Potential Signal control enhancement of Church Square/ High Street junction and network synchronisation
- Intervention on St Marys Road and direction of flow to ease congestion at The Square.

Of all procedures, an operation to increase the rail bridge headroom is perhaps the most outstandingly risk prone, particularly in relation to what may appear to be relatively modest scale works. Throughout the country there are a very considerable number of bridges with substandard headroom and it is by no means through a lack of diligence that, by and large, such a deficiency in most cases remains unaddressed.

Having identified the problem of congestion within the town centre, reiterated by the consultation comments, the County Council will continue to explore a number of potential solutions to this pertinent issue. Moreover, this is not to entirely preclude the option of bridge alteration in the future in line with planning development which could influence such a change.

Furthermore, should there be an opportunity to engage once again during a local Network Rail led programme of works in Harborough, the objective to alter the clearance could be considered.

Further analysis to the proposal of an engineering solution to facilitate the passage of high-sided vehicles under the low bridge on Rockingham Road has demonstrated a number of challenges. As a consequence, this concept will not be pursued in this Strategy. This effects the previously advised proposal to designate routes for the EDR which would use this route, should it have been viable to alter the clearance of the bridge. The County Council has considered alterative EDR routes. This is detailed in recommendation R15.

SRR

The concept of a relief road from the A6 to the south-east of the town is the costliest and complex measure, and could not be delivered in the short term. The realisation of benefits has to then be considered over a longer period of time.

The County Council commissioned a broad-brush economic appraisal to estimate the Benefit-Cost Ratio (BCR) of the Market Harborough SRR to give an early indication of its viability. The appraisal report also provides further detail of the potential SRR traffic, and in particular, the proportion of through traffic forecast to use it. The results of which are detailed below.

In the 2031 forecast there will be a general decrease in the traffic on the town centre roads. This is likely to be due to the traffic reassignment and rerouting as a result of the new link road. Traffic is diverting onto alternative routes in order to use the SRR, rather than using town centre roads.

The tables below detailed the volume of traffic anticipated to use the SRR and the associated traffic distribution.

Scenario	EB Total Flow	EB Through Traffic Flow	EB Through Traffic %	WB Total Flow	WB Through Traffic Flow	WB Through Traffic %	Bi - directional Total Flow	Bi-Directional Through Traffic Flow	Bi-Directional Through
2026 AM	331	99	30%	253	87	34%	585	186	32%
2026 PM	309	101	33%	304	103	34%	614	204	33%
2031 AM	345	94	27%	245	84	34%	590	178	30%
2031 PM	357	133	37%	311	94	30%	668	227	34%

‘Through Traffic’ using the Southern Relief Road

	2026 AM		2026 PM		2031 AM		2031 PM	
	External	**Internal**	**External**	**Internal**	**External**	**Internal**	**External**	**Internal**
External	32%	28%	33%	24%	30%	32%	34%	25%

Internal	36%	3%	39%	3%	35%	3%	38%	3%

SRR Traffic Distribution

Demand for the SRR is forecast to be modest, below the available capacity, with a predicted total of 668 two-way movements anticipated in the 2031 forecast peak period. Having undertaken a TUBA assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This provides a poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government.

Analysis of Monetised Costs and Benefits	
Greenhouse Gases	89
Economic Efficiency: Consumer Users (Commuting)	1,353
Economic Efficiency: Consumer Users (Other)	3,028
Economic Efficiency: Business Users and Providers	2,950
Wider Public Finances (Indirect Taxation Revenues)	-218
Present Value of Benefits (PVB)	7,202
Broad Transport Budget	25,736
Present Value of Costs (PVC)	25,736
Overall Impacts	
Net Present Value (NPV)	**-18,534**
Benefit to Cost Ratio (BCR)	**0.280**

The indication of low value for money, offers a broad health warning with regards to such a major infrastructure project. Although the broad-brush BCR is not a definitive answer and is based on the current known working assumption such as the scheme being fully funded by public resources, it is still evident that the predicted demand associated the relief road does not align with the monetised costs and benefits of the scheme at this time. These are not limited to construction costs but also the long term impact of greenhouses gases, commuter *time saving* benefits and indirect taxation revenues.

The forecast assumptions and predicted demand tested as part of the planned period up to 2031 does not currently align with the relief road providing good value for money and would therefore be considered a longer term aspiration.

Sustainable transport infrastructure / behaviour change initiatives;

This section should be read in conjunction with Section 4.9 of the Study document.

Following the analysis of the consultation submissions, two additional recommendations have been put forward, forming part of the wide array of measures that seek to promote use of sustainable travel modes and initiate key behaviour changes further promoting a shift away from single occupancy car use.

Market Harborough already enjoys an extensive cycle and walking network due to investment in infrastructure made possible over the past 25 years. However, in places the infrastructure has not kept pace with the growth of

local amenities and development. As a consequence, the existing network has, in places, become disjointed and would benefit from some degree of upgrading.

The propensity to engage in sustainable travel modes, such as walking and cycling, is linked to the attractiveness, quality and availability of the supporting infrastructure. Reducing the barrier to such activities which will assist in maintaining Market Harborough as an attractive place to live, support sustainable development and provide a high quality environment that people feel safe to walk and cycle in, and link to public transport services.

Suitability of segregated walk/cycle link between Lubenham and Market Harborough

The tragic circumstances which surrounded the fatal collision involving Adam Mugridge is a catastrophic example of the inherent risk associated with travel. The Adam Mugridge Memorial Fund charity was formed following Adam's loss of life whilst he was cycling to Welland Park Academy from Lubenham in 2006. The charity pursues its purpose to create a walking/ cycle route between Lubenham and Market Harborough. The focus has been on the route which abuts the old rail line, which would create a route away from the carriageway.

The Charity and its trustees have been continually proactive in their thoughtful campaign since its inception, maintaining regular contact with landowners, Northamptonshire and Leicestershire County Councils and are continuing to progress the proposal.

The Adam Mugridge Memorial Fund trustees have offered their support for the Market Harborough Transport proposals which aims to enhance and extend the existing walking/cycling network. Leicestershire County Council recognises the trustees' continual efforts of the Charity.

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

Analysis to determine the suitability of additional pedestrian crossings within the town centre

It is well understood that a pedestrian/ cycle infrastructure is most effective when connected and coherent, and that severance caused by the road network can deter people from safe and sustainable trip making on foot or by cycle.

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another. These types of journeys lend themselves to being undertaken by 'active' or 'sustainable' modes of transport; typically walking, cycling or by

public transport. Journeys undertaken by alternative modes of transport to the car are likely to improve the function and resilience of the network through reduced demand, whilst bringing about incidental social improvements such as reduced instances of obesity.

The analysis to date has identified gaps in the existing infrastructure. In total, 20 routes comprising of a mixture of existing and new infrastructure have been identified for upgrade or construction to assist in delivery of the studies strategic outcomes. In addition to analysis and recommendations put forward to date, further analysis to determine the suitability of additional pedestrian crossings within the town centre will be included within the Strategy.

Traffic Management Improvements;

This section should be read in conjunction with Section 4.12 of the Study document.

Maintaining and analysing levels of off-street parking is essential to ensure there is a sufficient availability of spaces within the town centre for residents, shoppers, visitors and workers. Analysis within the Study has currently identified the total parking allocation, the demand and frequency of use at each parking location.

Both on-street and off-street parking is in general well catered for within the Study area. It remains prudent that a single holistic parking Strategy is developed for the town, which incorporates a range of parking controls, and associated measures, incorporates a range of measures/ controls which satisfactorily accounts for local residents, shoppers, visitors, motorists with mobility issues and employees.

<u>Parking at Logan Street /Gardiner St/Knoll Street, East St, Nelson Street, Connaught Road, Kettering Road, Walcot Road</u>

The Study details the longer term ambitions of the County Council to explore the potential for short stay on-street parking on the highway within the town. It is anticipated that the implementation of such a scheme could assist with the management of parking demand.

The locations above were put forward by local residents during the consultation feedback period and their inclusion does not necessarily mean other areas, which require intervention, will be overlooked. We appreciate that there are a number of issues at each of the locations detailed above and where possible, the Strategy will assist in managing parking demand.

The County Council will continue to explore a holistic parking Strategy which accounts for the demand, quality and use of car parking. Delivering this will depend of the engineering feasibility, delivery and viability of parking, but

nonetheless this does not detract from the vision of a coherent parking Strategy.

The provision and management of off-street car parking is the responsibility of Harborough District Council within the framework of their Parking Strategy, 2016. This is a comprehensive and detailed analysis of current and future demand, and offers a number of key recommendations and areas of additional analysis to ensure that future demand is satisfactorily met.

Updated Strategy Summary

The recommendations shown below have been identified and refined to address the issues identified in the Study work and validated during the consultation.

Each recommendation has been evaluated on the basis of key desire transport outcomes. Taken together the recommendations provide the foundation for an outline Transport Strategy.

Capacity / Congestion Improvements	
R1	With the assistance of microsimulation traffic modelling undertake option appraisals for capacity improvements at the following key junctions: (i) A6 / B6047 (aka McDonalds Roundabout) (ii) The Square / St Mary's Road / Coventry Road (iii) Northampton Road / Springfield Street / Welland Park Road (iv) A4304 St Mary's Road / Kettering Road / Clarence Street (v) A4304 Rockingham Road / Gores Lane (vi) A6 / Harborough Road / Dingley Road / A4304 (vii) Sainsbury's store entrance / Springfield Street
R2	As part of the refinement of the analysis so far undertaken, the Authority will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of yellow box markings.
Recommendations that result in changes to the network and traffic routing	
R3	With the assistance of microsimulation traffic modelling consider the upgrade of Welland Park Road to become the A4304, with a respective downgrading of Coventry Road. Determine the associated engineering, accommodation and complementary works to facilitate this work.
R4	Consider the principle of providing a relief road between the A508 and A6 to the south-east of the town as a long term aspiration.
Sustainable transport infrastructure / behaviour change initiatives	
R5	Extend and enhance the walking and cycling network
R6	Make localised public transport infrastructure improvements

R7	Identify a suite of tailored behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable travel.
R8	The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.
R9	Analysis to determine the suitability of additional pedestrian crossings within the town centre
R10	Enhancement of the supporting infrastructure to encompass the nearby rail and bus terminals thereby increasing the attractiveness of such assets for those on foot or cycle.
Safety Improvements	
R11	Continue to monitor Road Traffic Collisions (RTC) within the Study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.
Traffic Management Improvements and Emergency Diversion Routes	
R12	Devise and implement a new Strategy for traffic signing across the Study area
R13	Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones.
R14	Sites with recorded speeds in excess of the Association of Chief Police Officers enforcement threshold should be reviewed with a view that, where viable and cost effective, measures will be developed to improve compliance with the stipulated speed limit.
R15	Identify opportunities to divert Highways England emergency diversion routes away from the town centre
HGV controls	
R16	Identify undesirable routes for HGVs and impose suitable prohibitions. Whilst the promotion of a town wide environmental weight restriction would be preferable, two key routes are particularly vulnerable to exploitation by inappropriate HGV traffic and should be adopted as a minimum: (i) Ashley Road /Kettering Road between the A4304 and the A6 (ii) Bath Street/Western Avenue between the A508 and Farndon Road
R17	Send updated map to ‘sat-nav’ contacts, advising of HGV controls following on from recommendation R16
Highway Maintenance	
R18	In light of the size and scope of the Study, incorporate / consider maintenance activities in relation to improvement proposals

A two additional consultation points will be included within future analysis, however rather than recommendations in their own right these can be taken forward as inclusions to existing recommendations. These are detailed below:-

- Where possible specific consideration Analysis of Logan street /Gardiner St/Knoll Street, East St, Nelson Street, Connaught Road, Kettering Road, Walcot Road car parking will be included as part of the Traffic Management Improvements; and
- The micro-simulation analysis will model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods.

Recommendation R1

Undertake option appraisals for key junctions and make capacity improvements

Overview

The recommendation is to assess options for increasing the capability and resilience of key strategic junctions around the town to cope with peak hour demand.

Rationale

It is evident from transport modelling that the performance of the network is inplaces already poor, and forecast to deteriorate further in the future. Without appropriate intervention those poorly performing junctions will impede the economic growth of the area and generally be to the detriment of those who live, work and visit the town.

Findings

To date, 9 junctions have been identified for consideration. Of those; 7 were identified via the LLITM modelling;

- The Square / St Mary's Road / Coventry Road
- Northampton Road / Springfield Street
- Northampton Road / Welland Park Road
- St Mary's Road / Kettering Road / Clarence Street
- Rockingham Road / Gores Lane
- A6 / Harborough Road / Dingley Road / A4304
- Sainsbury's store entrance / Springfield Street;

and a further 2 junctions were selected for inclusion by LCC officers with local knowledge of where issues either exist now, or may be likely to arise in the future as a consequence of traffic growth/re-distribution;

- A6 / B6047 (aka McDonalds roundabout)
- *Springfield Street / Kettering Road*.

Sainsbury's car park / Springfield Street, is yet to be considered for potential improvements. With that being the only exception, all of the junctions identified have had a detailed analysis of their capacity and performance undertaken using specialist software (LinSig / Arcady etc) that is more detailed than that of LLITM. *That detailed modelling has confirmed that mitigation is required at all of the junctions tested except for the roundabout junction of Springfield Street and Kettering Road; which is shown to have sufficient reserve capacity. On site observations suggest that the site is susceptible to problems caused by queuing originating from St Mary's Road / Kettering Road / Clarence Street and the Sainsbury's store entrance / Springfield Street junctions

To date, and subsequent to an exercise of solution optioneering, a preferred mitigation scheme has been selected for junctions 1, 2, 3, 4, 5 and 8. Those schemes are summarised the Table below.

Scheme drawings of the proposed mitigation schemes, along with more detailed summaries of the option appraisal process and model outputs are available in **Appendix F.**

The next stage of the Study will be to test/model the impact of the individual junction proposals across the network to see if collectively they work together.

Jn. No.	Location	Existing Reserve Capacity (2015 Flows) AM	Existing Reserve Capacity (2015 Flows) PM	Forecast Reserve Capacity (2031 Flows) AM	Forecast Reserve Capacity (2031 Flows) PM	Preferred Mitigation Option	Mitigation Capacity (2031 Flows) AM	Mitigation Capacity (2031 Flows) PM	Mitigation Scheme Cost
1	The Square / St Mary's Rd / Coventry Rd	-31%	-33%	-28%	-58%	No suitable mitigation identified at this time. Further analysis required. Consideration of one way system: Two potential one way systems have been proposed for consideration. • The first option makes St Mary's Road one way from The Square towards the Kettering Road / Clarence Street junction. Whilst this has highlighted that The Square / St Mary's Road junction would significantly benefit from the scheme, other junctions along Springfield Street may not cope with the additional traffic. • Another option proposes a partial one way on St Mary's from the main junction at the Square towards Adam & Eve Street (which is currently already one way).Traffic would eventually exit on the main street near the junction adjacent to the church at Church Square.The junction of A4304 Main St and Church Square could be signalised with pedestrian facilities. The existing zebra crossing would be removed which could help co-ordinate this junction with the Square.	N/A	N/A	N/A
2&3	Northampton Rd / Springfield St / Welland Park Rd	-4%	-9%	-15%	-17%	***Option no.2*** Additional lanes on both Northampton Road approaches. Additional islands on both Northampton Rd approaches to allow pedestrians to cross both side road whilst running Northampton Road ahead. Signal timings adjusted to link Welland Park Road & Springfield Road better and reduce blocking of internal stop lines	+11%	-5%	£310,000 to £550,000 (excluding Stats & Fees & Land costs)
4	St Mary's Road / Kettering Road / Clarence Street	-6%	-16%	-7%	-18%	***Option no. 2*** Validate MOVA to ensure optimum junction performance. Make Clarence Street One Way (Away from junction) and remove stage 3 from the sequence.	+14%	-3%	Approx £40-60k (Excluding any necessary alterations to Great Bowden Road/Rockingham Road)
5	Gores Lane / Rockingham Rd	-1%	-4%	-1%	-6%	***Option no.1*** Installation of on crossing pedestrian/cyclist detectors that will extend the intergreen period if required. This will allow the intergreen period to be reduced and only extended if necessary.	+7%	+2%	£3k-£5k (£30k-£40k) (If the signals are required to be renewed and converted to LED)
8	A6 / B6047 (Roundabout)	26%	24%	-4%	-3%	***Option no.1*** Provide widening on the B6047 Nth approach. Part of mitigation measure for a development. 0.85 RFC normally the threshold for capacity. With the mitigation measure RFC is only just tipped over 0.85.	0.82	0.89	Approx. £225k (excluding utility diversions)

Summary table of preferred junction enhancement schemes

Recommendation R2

Appraisal of yellow box markings

Overview

This recommendation will assess the suitability of such markings is measured against a number of criteria and factors which may influence their installation such as the type of junction (whether signal controlled for example), blocking back from a junction ahead and traffic flows.

Rationale

Betterment to traffic flow and optimal use of the highway network.

Recommendation R3

Consider upgrade of Welland Park Road to A4304 & a respective downgrading of Coventry Road. Determine associated engineering, accommodation & complimentary works to facilitate the same.

Overview

The recommendation is to designate that section of Welland Park Road between Lubenham Hill and Northampton Road as the A4304 and consequently to downgrade the existing A4304 route along Coventry Road between Lubenahm Hill to the junction of St Marys with Kettering Road; the point at which the 2 potential routes converge.

Rationale

Welland Park Road serves as the only alternative route to Coventry Road/St Marys for east/west movements across the town.

Whilst Coventry Road is promoted as the 'A' classified route, analysis points towards Welland Park Road as being the more strategically favourable of the two.

As per the table below (Change in flow, Coventry Road vs Welland Park Road, 2011-2031), it is evident that whilst the two routes currently carry a similar amount of traffic, that which is carried by Welland Park Road in the future is forecast to exceed Coventry Road by some 30%. Coventry Road is actually predicted to experience a decrease in the absolute number of vehicles of around 300 per day over the combined peak periods; comparable to the increase predicted for Welland Park Road. This suggests that Coventry Road traffic is naturally opting to re-distribute onto Welland Park Road.

Further analysis of the 2 routes between the points at which they diverge at Lubenham Hill, and then meet at Rockingham Road demonstrates that the Welland Park Road route is not only the shortest of the 2, but also has fewer likely conflict points between highway users. More importantly still is that Welland Park Road avoids the pedestrian dense town centre. These attributes have been tabulated in the table (Route attributes comparison, Welland Park Road vs. Coventry Road).

Location	Flow (2011)	Flow (2031)	Diff	Diff (%)
Welland Park	1,699	1,994	+295	+17%
Coventry Road	1,756	1,528	-288	-12%

Change in flow, Coventry Road vs Welland Park Road, 2011-2031

Attribute	Coventry Road	Welland Park Road
Route distance	1,850 metres	1,770 metres
Bus stops	12	1
Junctions with public highway	22	11
Minor private access onto highway(e.g driveways)	105	140
Major private access onto highway(e.g. Supermarket)	5	5
Formal pedestrian crossing points	17	13
Proximity of residential properties tocentre of carriageway	14 metres	20 metres

Route attributes comparison, Welland Park Road vs. Coventry Road

Rather than simply re-designate the status of a route, there would likely be a number of complimentary changes required to both facilitate the intended re-designation, and to deter the use of other, less desirable routes.

In view of the above, and in order to facilitate the designation of Welland Park Road as the A4304, it would be necessary to sufficiently upgrade those junctions to satisfactorily accommodate the increased demand.

Welland Park Road currently features extensive traffic calming by the way of priority chicanes and vertical speed reducing ramps. These features would need to be assessed with a view to reducing the impedance they impose upon the free flow of traffic, whilst continuing to suitably well restrain vehiclespeeds to a safe and appropriate level.

Consideration would need to be afforded to the imposition of traffic regulation orders along Welland Park Road to prohibit the parking of vehicles.

The junction of Welland Park Road and Farndon Road is known to be a site with a history of RTCs. Whilst an accident remedial scheme was implemented in 2015, there may, as a result of the proposed re-classification, be benefit in

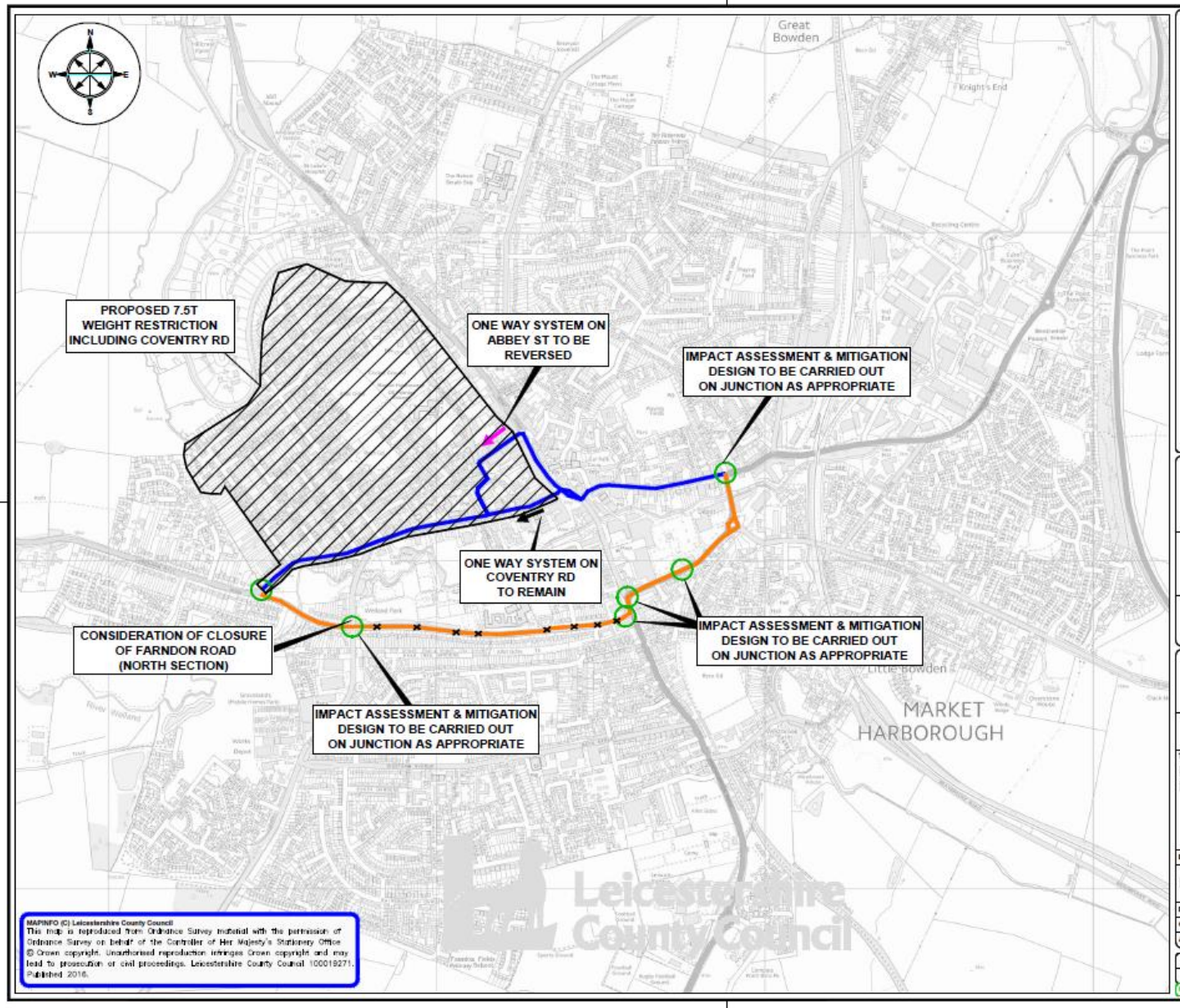
again reviewing the road layout at that location, with particular consideration being afforded to the potential of closing Farndon Road (north). In doing so, the number of movements at the junction would be simplified, and traffic would be discouraged from using Farndon Road to reach Coventry Road; opting instead to use Welland Park Road.

In addition to the potential closure of Farndon Road, further efforts should be made to deter the use of Coventry Road, and ultimately the town centre.

Suggested options for further investigation would be reversing the one-way traffic order on Abbey Street to require vehicles to travel west on Abbey Street rather than east towards the town centre, and the imposition of an environmental 7.5 tonne weight restriction on that section of the CoventryRoad route between Lubenham Hill and High Street.

In order to determine whether formally re-designating the A4304 would be viable and of benefit, it will be necessary to undertake a further phase of testing using traffic modelling software and a more detailed impact assessment of the complimentary works outlined above.

The Figure illustrates the different components concerned with the re-designation of Welland Park Road.


Great Bowden
Knight's End
PROPOSED 7.5T WEIGHT RESTRICTION INCLUDING COVENTRY RD
ONE WAY SYSTEM ON ABBEY ST TO BE REVERSED
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
ONE WAY SYSTEM ON COVENTRY RD TO REMAIN
CONSIDERATION OF CLOSURE OF FARNDON ROAD (NORTH SECTION)
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
Little Bowden
MARKET HARBOROUGH
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EXISTING 'A4304' TO BE DOWNGRADED
NEW ROUTE TO BE DESIGNATED AS 'A4304'
TRAFFIC CALMING FEATURE TO BE REVIEWED
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
RECLASSIFICATION OF A4304 PROPOSAL
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk

Recommendation R4

Consider the principle of providing a relief road between the A508 & A6 to thesouth east of the town as a long term aspiration.

Overview

The recommendation is to determine whether it would be beneficial for the town to provide a south eastern relief road linking the A508 and the A6; diverting the primary route away from the town centre.

Rationale

This report has identified a general trend of decline in the performance/capacity of the network and its ability to accommodate forecastgrowth without engineering interventions.

A number of those issues identified; congestion, access for high-sided vehicles, presence of EDR route etc. could each likely be alleviated by the reduction in demand afforded by a suitable alternative route being provided toorbit the town; reducing through traffic and connecting the main arterial routesinto/out of the town.

The town will already be bypassed to the north, east and west by the A6 and,albeit to a lesser extent, the SDA link road. As such, an additional relief roadto the south of the town; linking the A508 and the A6, would be the most strategic location, and provide the opportunity to divert the primary route (A508 and A4304) from passing through the Study area.

Findings

A high level appreciation of the introduction of a southern relief road (SRR) has been undertaken using the LLITM software. For the purposes of that appraisal an assumed speed limit of 60mph, and a peak in demand between08:00-09:00hrs and 17:00-18:00hrs for the morning and evening peak respectively has been used.

Having undertaken a TUBA assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This provides a poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government.

The indication of low value for money, offers a broad health warning with regards to such a major infrastructure project. Although the broad-brush BCR is not a definitive answer, it is evident that the predicted demand associated the relief road does not align with the monetised costs and benefits of the scheme at this time. These are not limited to construction

costs, but also the long term impact of greenhouses gases, commuter *time saving* benefits and indirect taxation revenues.

The forecast assumptions and predicted demand tested as part of the planed period up to 2031 does not currently align with the relief road providing good value for money. This demonstrates the scheme therefore should become a long term aspiration.

Initial high level estimates suggest that the cost to deliver the SRR is likely to be in the region of £35,000,000 - £45,000,000. It is with good cause therefore that the benefit of such a scheme should be sufficient to warrant the cost.

Recommendation 5

Extend and enhance the walking and cycling network

Overview

The recommendation is to undertake a thorough audit of the walking and cycling network with a view to identifying opportunities to upgrade and extendthe network.

Rationale

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another. These types of journeys lend themselves to being undertaken by 'active' or 'sustainable' modes of transport; typically walking, cycling, or by public transport. Journeys undertaken by alternative modes of transport to thecar are likely to improve the function and resilience of the network through reduced demand, whilst bringing about incidental social improvements suchas reduced instances of obesity.

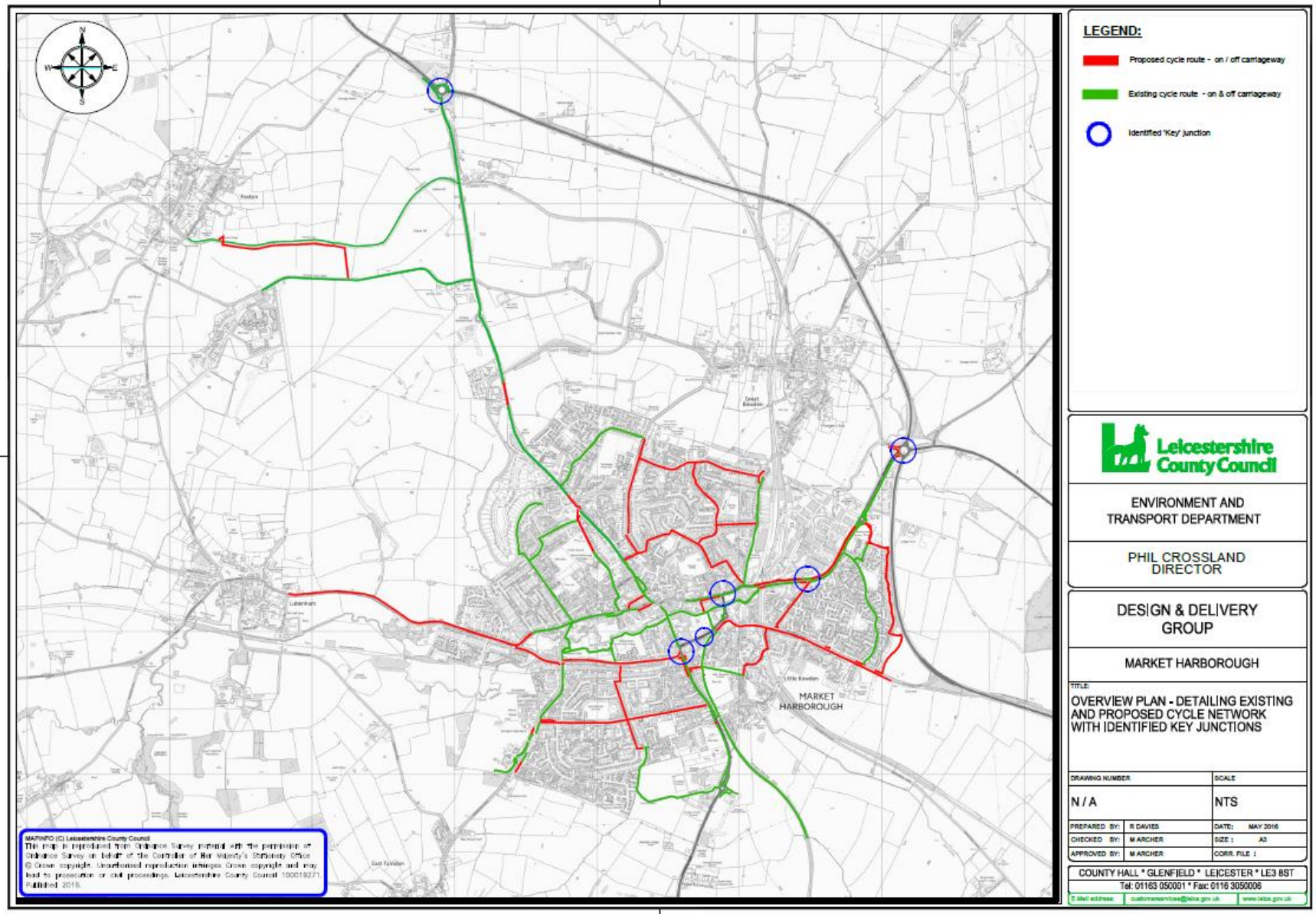
Findings

As previously stated, Market Harborough is not without purpose built facilitiesfor walking and cycling. However, there are missing links and existing infrastructure that would benefit from being enhanced/upgraded.

Analysis of the existing walking and cycling network contrasted with the town's known key amenities, places of work and residence soon demonstrates the scale and potential for further development of the network.

In total, 20 routes comprising of a mixture of existing and new infrastructurehave been identified for upgrade or construction to assist in delivery of the studies strategic outcomes.

The proposed resultant walking/cycling network is shown in the Figure. A detailed explanation of each route is available in Appendix D. It is importantto note that these are the promoted routes only. Other infrastructure for walking and cycling will exist elsewhere beyond those routes.


LEGEND:
Proposed cycle route - on / off carriageway
Existing cycle route - on & off carriageway
Identified 'Key' junction
MARKET HARBOROUGH
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Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
OVERVIEW PLAN - DETAILING EXISTING AND PROPOSED CYCLE NETWORK WITH IDENTIFIED KEY JUNCTIONS
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E Mail address: customerservices@leics.gov.uk
www.leics.gov.uk

Recommendation R6

Make localised public transport infrastructure improvements

Overview

The recommendation is to deliver a package of public transport (bus) infrastructure improvements throughout the Study area.

Rationale

As per Recommendation R5, a good proportion of travel in the town is local;and on that basis would lend itself more readily to modal conversion, away from the car to other modes, such as public transportation; reducing the number of vehicles on the network.

Public transport in the UK was deregulated by the 1985 transport act and as such the majority of services are run on a commercial basis by private companies and as such the County Council does not have any control over these services and the decision on bus service frequency and hours of operation is a commercial one, made by the bus operators themselves. The County Council does subsidise a number of services which may not otherwise be commercially attractive, but are considered to be socially necessary. In Market Harborough the no.33, no.44, and no. 58 services are all subsidised to some extent. However, the effect of public sector austerity and reductions in revenue funding mean that local government's ability to continue to fund such services is being severely curtailed.

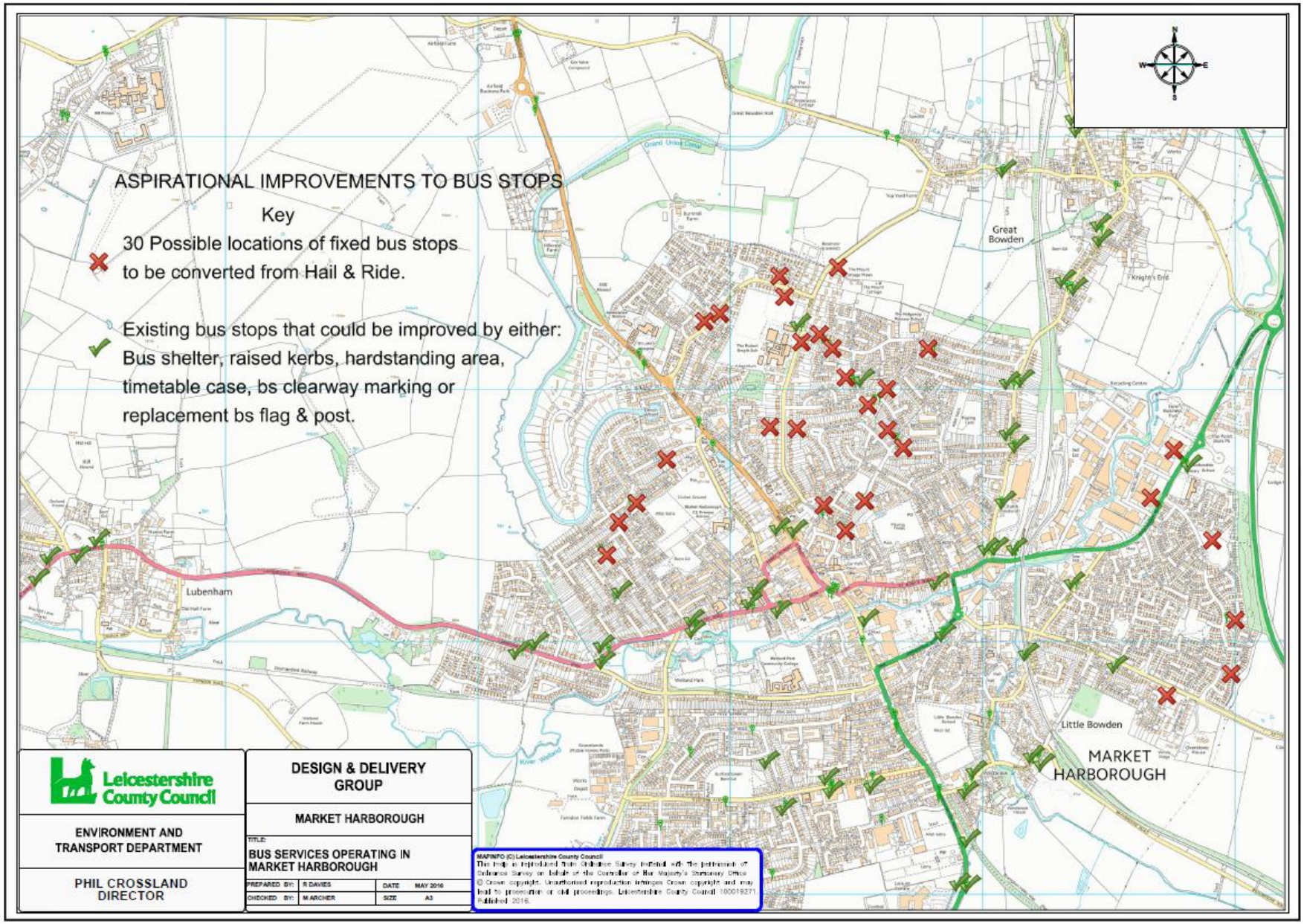
An investment through the introduction of new bus stops, new and improved bus shelters and real time timetable displays is to encourage bus patronage which in turn would strengthen the commercial viability of services allowing operators to look at increasing frequency or extending the hours of the service; which can in turn negate the need for continued financial support from the Council.

Findings

With regard to route locations, frequency and duplication of services, buses in Market Harborough are run by commercial operators and they are responsible for managing their routes and timetables within a commercial market.

A suite of potential bus infrastructure improvements have been identified for the Study area including raised bus stop kerbs to improve accessibility when boarding/alighting; new/upgraded shelters to encourage patronage; and conversion of hail and ride services to fixed service points to improve safety, reliability and punctuality.

The Figure shows the location of possible bus infrastructure improvements andsites of hail & ride conversions. A more detailed summary of the findings is available in Appendix D and E


ASPIRATIONAL IMPROVEMENTS TO BUS STOPS
Key
30 Possible locations of fixed bus stops to be converted from Hail & Ride.
Existing bus stops that could be improved by either: Bus shelter, raised kerbs, hardstanding area, timetable case, bs clearway marking or replacement bs flag & post.
Great Bowden
Lubenham
Little Bowden
MARKET HARBOROUGH
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
BUS SERVICES OPERATING IN MARKET HARBOROUGH
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE: A3
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Recommendation R7

Identify a suite of tailored behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable options.

Overview

The recommendation is to promote and deliver across the Study area a tailored package of initiatives that work towards encouraging and facilitating a modal shift in behaviour towards non-car dependent modes of transport such as walking, cycling and public transport (supporting Recommendations 5, 6, 7 and 8).

Rationale

As per recommendation R6, a significant number of trips undertaken on the network have both an origin and destination within the Study area. These local trips are the most easily influenced towards alternative modes of transport. Experience demonstrates that the most effective method of driving that modal shift is through a coordinated package of infrastructure improvements and a complimentary series of softer measures such as training, journey planning, and education and information provision.

Findings

A tailored package of behaviour change initiatives has been provided in Appendix H of the Market Harborough Transport Study, 2016.

Recommendation R8

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

Overview

The tragic circumstances which surrounded the fatal collision involving Adam Mugridge is a catastrophic example of the inherent risk associated with travel. The Adam Mugridge Memorial Fund charity was formed following Adam's loss of life whilst he was cycling to Welland Park Academy from Lubenham in 2006. The charity pursues its purpose to create a walking/ cycle route between Lubenham and Market Harborough. The focus has been on the route which abuts the old rail line, which would create a route away from the carriageway.

Rationale

Leicestershire County Council recognises the trustees' continual efforts and the clear synergy between the objectives of the Charity and the Strategy.

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

Recommendation R9

Analysis to determine the suitability of additional pedestrian crossings within the town centre.

Overview

The recommendation is to undertake a thorough audit of the walking and cycling network, in line with recommendation 5, and view to identifying opportunities to upgrade and extendthe network.

Rationale

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another

It is well understood that a pedestrian/ cycle infrastructure is most effective when connected and coherent, and that severance caused by the road network does not deter people from safe and sustainable trip making.

Recommendation R10

Enhancement of the walking and cycling environment to encompass the nearby rail and bus terminals. Make general aesthetic upgrades to existing materials and arrangement.

Overview

The recommendation is to upgrade/update the walking and cycling environment; creating purpose made market gateways to the town centre, and to extend the reach of the public realm to encompass the rail and bus terminals.

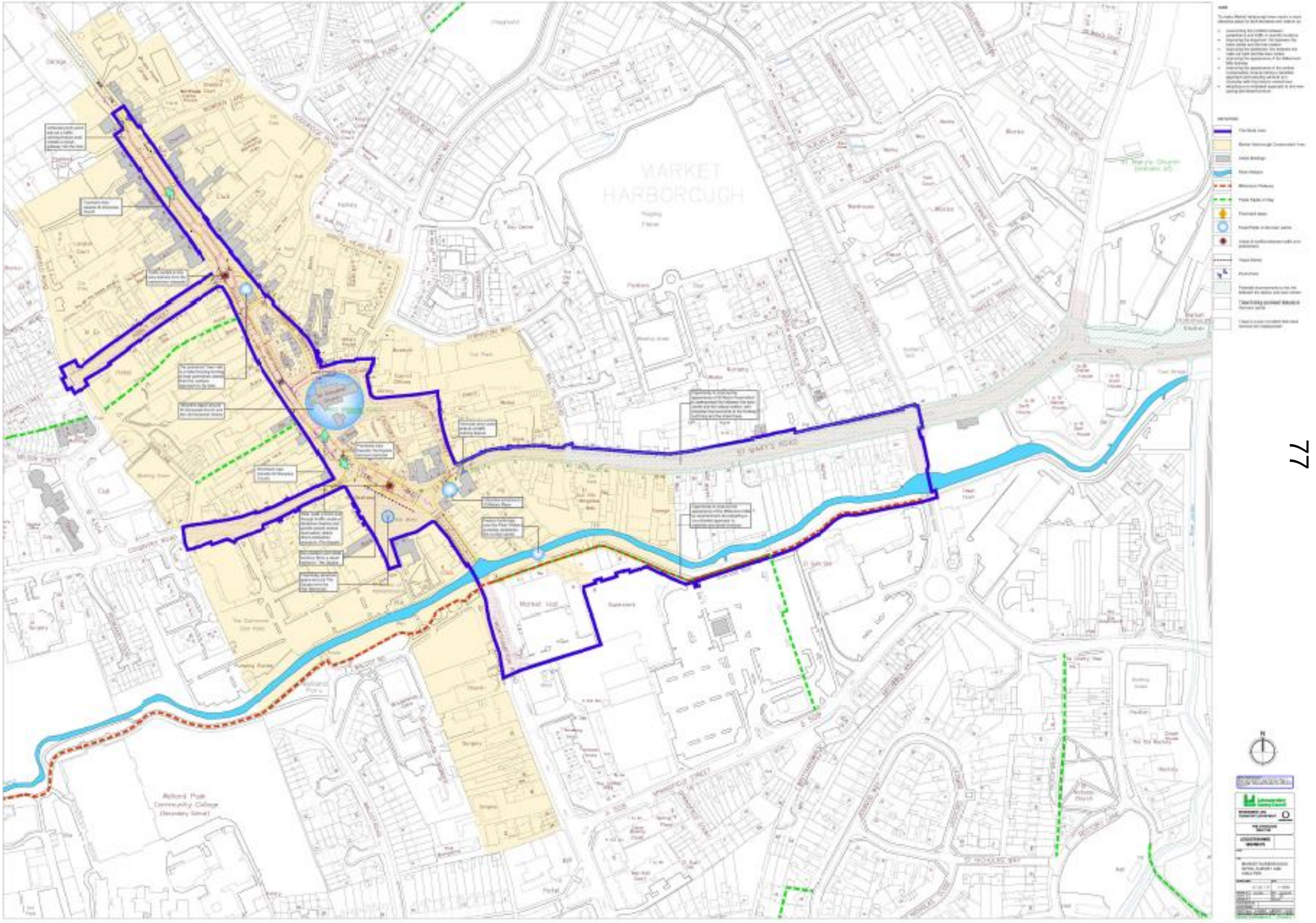
Rationale

Improving the link between the town centre and strategic transport hubs for commuters, residents and visitors would increase the desirability to live, work and visit the town; supporting businesses, tourism, and demand for local housing.

Findings

Initial assessment of the public realm has been undertaken by the County Council's Landscape Architects. A plan showing initial officers comments can be seen in the figure.

The detail of any Public Realm enhancements is likely to be dependent on first having a confirmed Strategy for infrastructure alterations/enhancements as these are likely to have some impact on the opportunities / options that exist for public realm extension.


MARKET HARBOROUGH
ST MARY'S ROAD
Market Hall
Welford Park Community College (Secondary School)

Recommendation R11

Continue to monitor Road Traffic Collisions (RTC) within the Study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.

Overview

The recommendation is to ensure that wherever an RTC resulting in personal injury has occurred within close proximity to a proposed scheme arising from this Strategy, efforts should be made to extend the scope of that scheme to include for mitigation works to reduce the likelihood of further such incidents of an RTC from occurring.

Rationale

Market Harborough consistently records a comparatively low level of road traffic collisions, compared to other similar areas (towns) in the county. Furthermore, the frequency of accidents on the 4 main routes across the town, the A4304 (west), A4304 (east), A508 and B6047, fall below that which might be expected on similar roads nationally. However, by making minor refinements to other nearby works, it may be possible to deliver minor, albeit unrelated highway safety improvements that otherwise would have been unlikely to have attracted financial investment

Recommendation R12

Devise and implement a new Strategy for traffic signing across the Study area

Overview

The recommendation is to establish and implement a new and comprehensive traffic signing Strategy for the town to replace the current provision.

Rationale

Despite the known benefits of a managed and proactive approach, there is no recorded Strategy for signing; either strategic or local, for traffic in the Study area. In the absence of which, the performance of the network cannot be optimised.

Whilst amendments to the signing can be retrospectively made in a piecemeal fashion; there are likely to be a multitude of changes prompted by the delivery of other recommendations made by this report that afford a unique opportunity to 'start again'; ensuring that the new Strategy is reflective of the modern day expectation and function of traffic signing.

Findings

A proposed Strategy for the signing can be found in Appendix G.

Estimated implementation costs of a previous, similar initiative in Hinckley was around £100,000

Recommendation R13

Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones.

Overview

The recommendation is to review all traffic regulation orders pertaining to on-street parking within the Study area with a view to determining the ongoing suitability of existing controls and locations where a need for additional or revised controls may exist now, or is likely to emerge in the future.

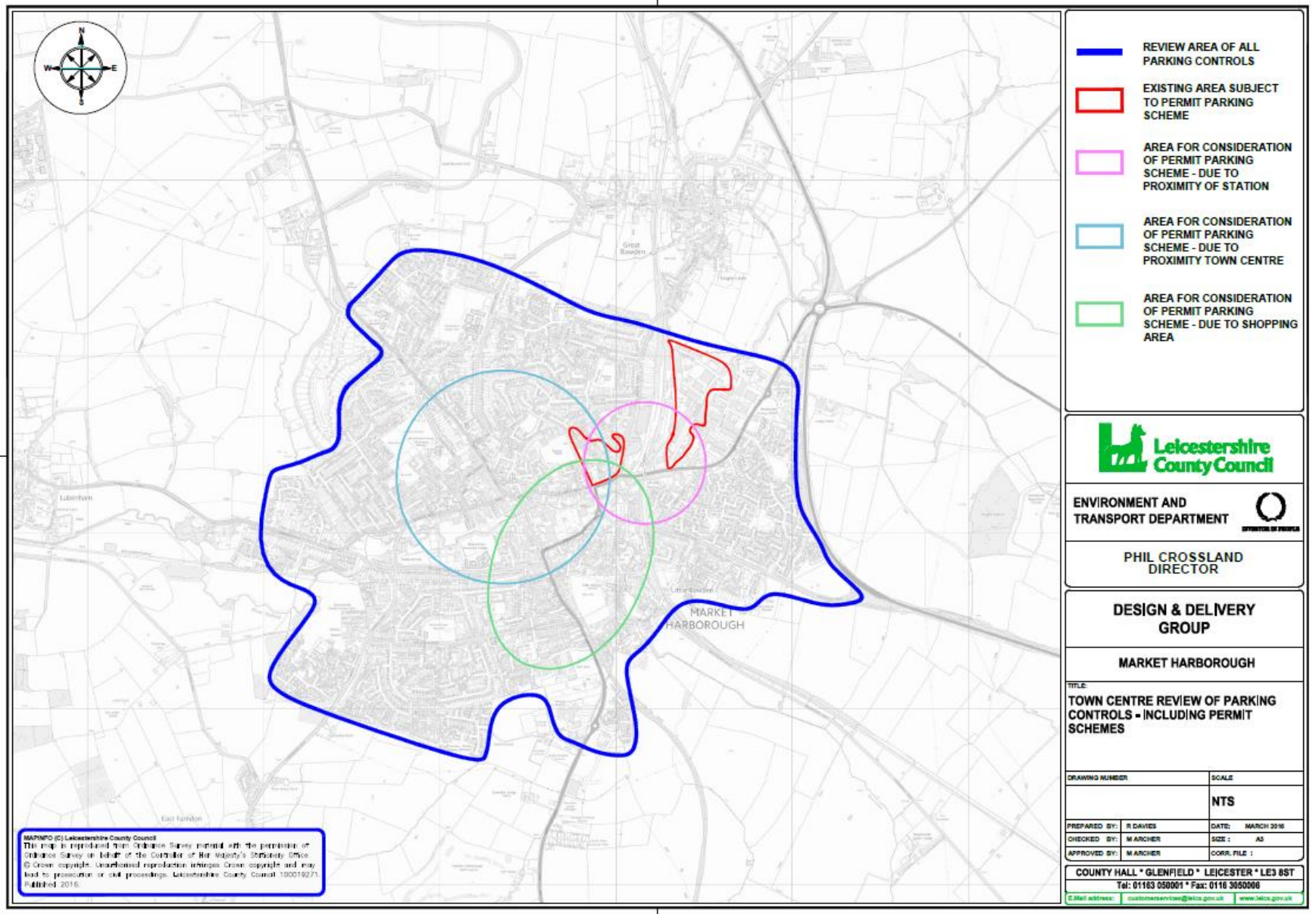
Rationale

As with traffic signing; despite the known benefits of a managed and proactive approach to the effective management of on street parking, there is little in the way of a recorded Strategy in the Study area. In the absence of which, it is not truly possible to know whether the existing provision is fit for purpose.

The forecast trend of an increase in traffic, coupled with an aspiration to improve the town's economic prospects and the quality of life of its residents and visitors requires a strategic approach to parking management that is able to balance the often competing needs of all.

An area based review therefore presents a unique and ideal opportunity to ensure that an appropriate, proportionate and tailored suite of complimentary controls exist; all of which are working towards one common goal.

The Figure shows the extents of where the proposed reviews as well as areas where a permit to park scheme may need to be considered due to their proximity to the town centre, shopping /amenity hubs and/or the local rail station.


N
W
E
S
REVIEW AREA OF ALL PARKING CONTROLS
EXISTING AREA SUBJECT TO PERMIT PARKING SCHEME
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO PROXIMITY OF STATION
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO PROXIMITY TOWN CENTRE
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO SHOPPING AREA
Great Bowden
Lubenham
MARKET HARBOROUGH
East Farndon
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Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
TOWN CENTRE REVIEW OF PARKING CONTROLS - INCLUDING PERMIT SCHEMES
DRAWING NUMBER
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MARCH 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
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E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk

Recommendation R 14

Sites with recorded speeds in excess of the ACPO enforcement threshold should be reviewed.

Overview

The recommendation is to take a proactive look at each of the 13 sites where the average speed; whether that be the mean speed or the 85th percentile speed, has been recorded to be in excess of the threshold necessary to prompt enforcement action by the Police.

Should a viable and cost effective engineering measure exist that is likely to restrain speeds below the prescribed threshold these should be considered for delivery to improve compliance, and thus highway safety. It is important to note that the figures cited portray the worst of the readings taken for each site. It may well become evident on closer inspection that the majority of readings taken do not warrant any further action.

No appraisal of possible options has been undertaken to date.

Recommendation R15

Identify opportunities to divert HE EDR routes away from the town centre

Overview

The recommendation is to reduce the burden imposed upon the town owing to the presence of Highways England's off network diversion routes.

Rationale

Concerns over the detrimental impact on the amenity of the town, highway safety and network performance have been raised citing the general amount of traffic using the town centre. This matter is particularly exacerbated during times when the A14 EDR routes are initiated. It is considered to be advantageous to identify opportunities to re-route this traffic away from the town centre.

Findings

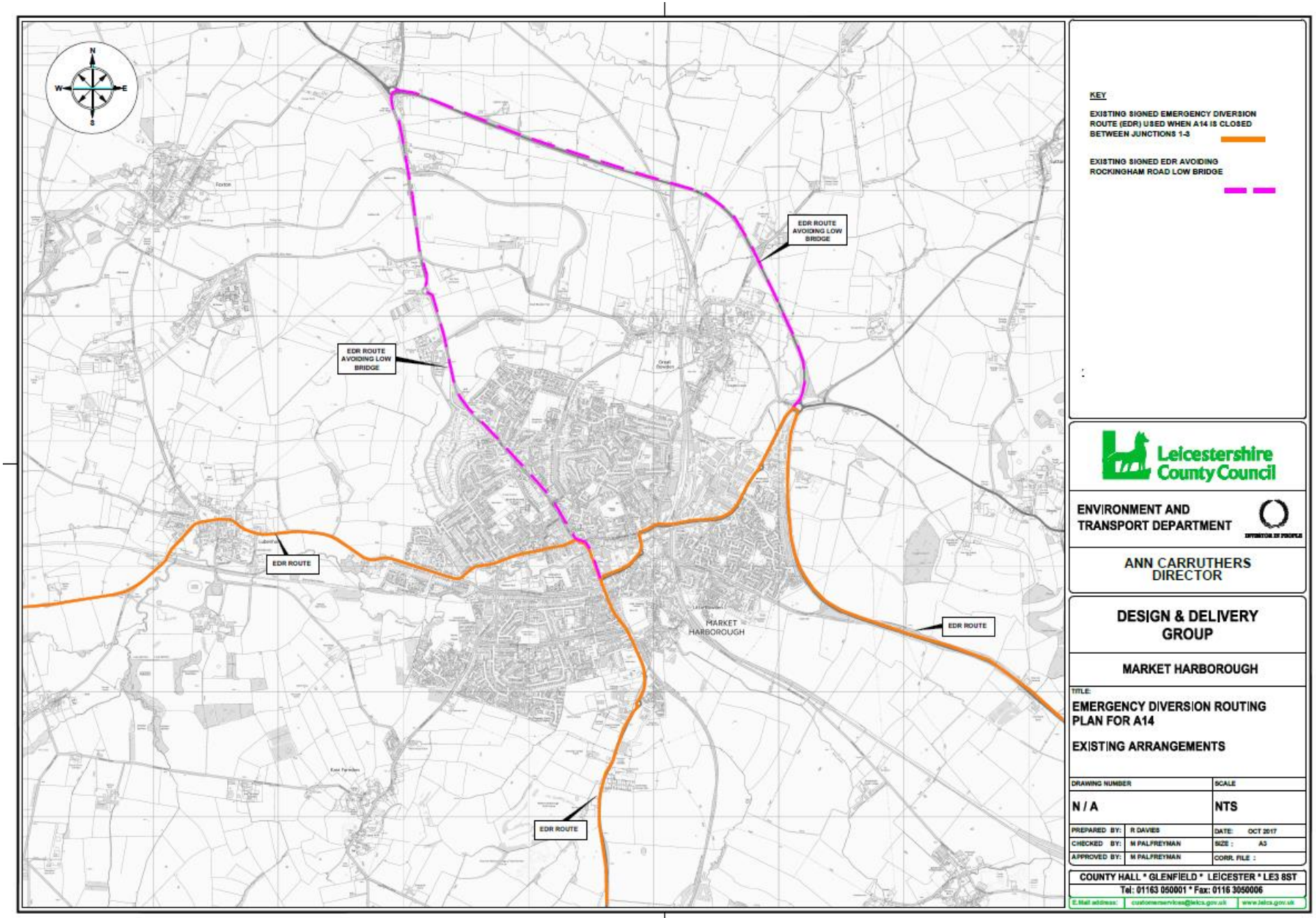
The EDR route currently makes use of Coventry Road via The Square owing to its status as an 'A' classified route. However, as previously identified in the review of classified roads through the Study area (Chapter 4, para 4.2), it is apparent that Welland Park road may well have the potential to be a more suitable alternative to Coventry Road; regardless of its classification.

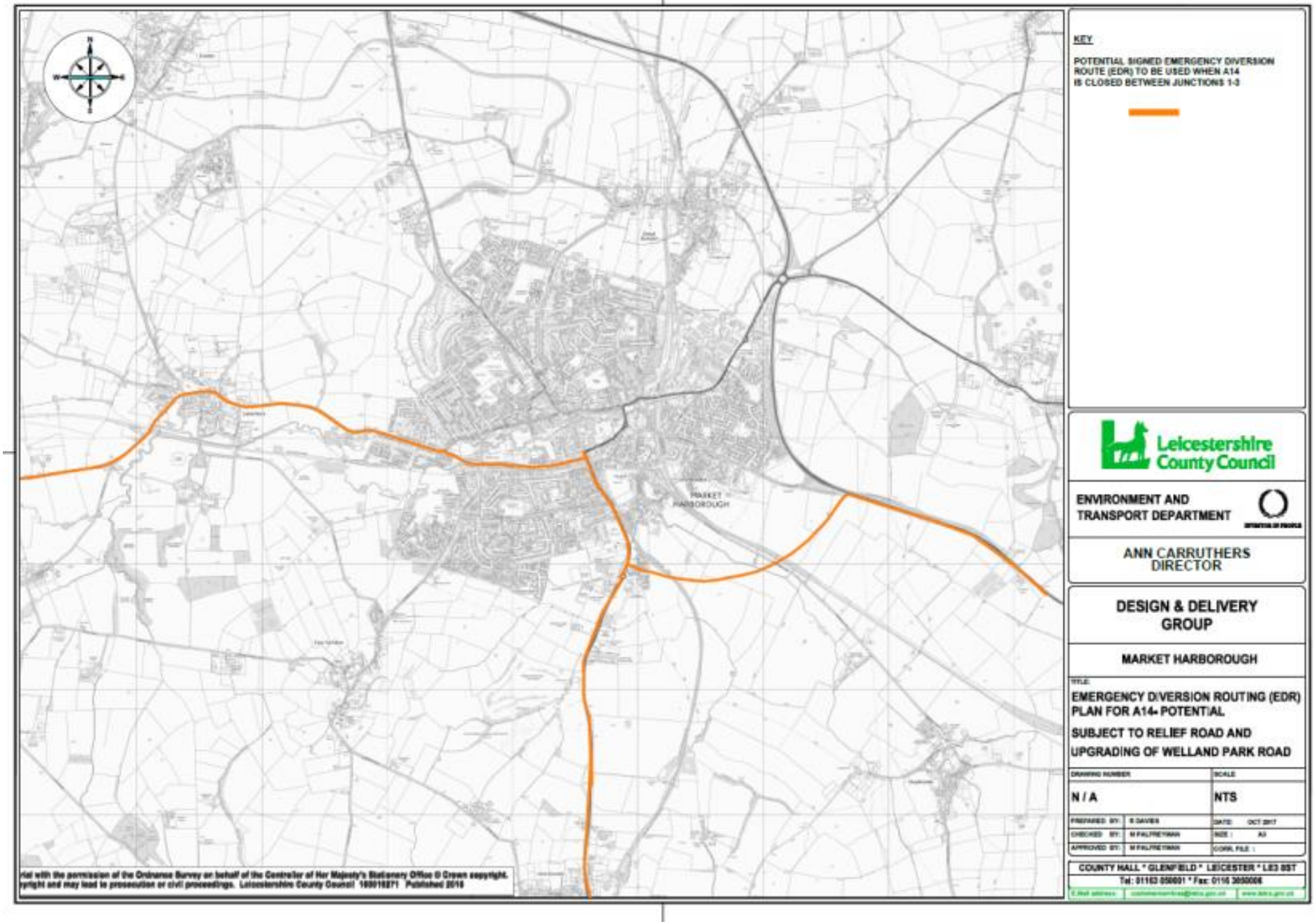
Re-designation of the EDR on to Welland Park Road would facilitate diverting the EDR away from the town centre. The only remaining signed EDR route through the town centre would be those high-sided vehicles currently unable vehicles to pass under the low bridge on Rockingham Road.

Further analysis to the proposal of an engineering solution to facilitate the passage of high-sided vehicles under the low bridge on Rockingham Road has demonstrates a number of challenges. As a consequence, this concept will not be pursued in this Strategy and is a longer term aspiration. This effects the previously advised proposal to designate routes for the EDR which would use this route, should it have been viable to alter the clearance of the bridge. The County Council has considered alterative EDR routes.

It may be possible to utilise the SRR route which would bypass the town centre in its entirety should there be an unplanned closure on the A14 should the SRR be built.

Figure 32 and 33 illustrate the existing and alternatives for EDR routing should the EDR be moved on to Welland Park Road and using the SRR.


N
W
E
S
EDR ROUTE AVOIDING LOW BRIDGE
EDR ROUTE AVOIDING LOW BRIDGE
EDR ROUTE
EDR ROUTE
EDR ROUTE
MARKET HARBOROUGH
KEY
EXISTING SIGNED EMERGENCY DIVERSION ROUTE (EDR) USED WHEN A14 IS CLOSED BETWEEN JUNCTIONS 1-3
EXISTING SIGNED EDR AVOIDING ROCKINGHAM ROAD LOW BRIDGE
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
INVESTOR IN PEOPLE
ANN CARRUTHERS
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
EMERGENCY DIVERSION ROUTING PLAN FOR A14
EXISTING ARRANGEMENTS
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: OCT 2017
CHECKED BY: M PALFREYMAN
SIZE : A3
APPROVED BY: M PALFREYMAN
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk


KEY
POTENTIAL SIGNED EMERGENCY DIVERSION ROUTE (EDR) TO BE USED WHEN A14 IS CLOSED BETWEEN JUNCTIONS 1-3
MARKET HARBOROUGH
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
ANN CARRUTHERS DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
EMERGENCY DIVERSION ROUTING (EDR) PLAN FOR A14+ POTENTIAL
SUBJECT TO RELIEF ROAD AND
UPGRADING OF WELLAND PARK ROAD
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: OCT 2017
CHECKED BY: M PALFREYMAN
SIZE : A3
APPROVED BY: M PALFREYMAN
COMP. FILE :
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Tel: 01163 050001 * Fax: 0116 3050006
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Recommendation R16

Identify undesirable routes for HGVs and impose suitable prohibitions.

Overview

The recommendation is to identify and prohibit the use of undesirable routes that may now, and in the future be vulnerable/attractive to exploitation by HGV drivers seeking an alternative route to the classified road network.

This recommendation should be considered to be a precautionary measure; safeguarding against the potential for inappropriate routing, rather than a reactive response to address a significant current issue

Rationale

Whilst the number of recorded instances/complaints of HGVs using unclassified roads in order to take an alternative route through the Study area is low, there are a number of residential streets that do lend themselves to such exploitation. Existing low underpass heights at bridges on Rockingham Road and Kettering Road restrict the ease of movement. That, combined with a general growth in traffic can each contribute to the use of undesirable routes by HGVs, potentially causing damage to the highway and dissatisfaction amongst local residents.

It is important to note that this recommendation should be read as a standalone initiative; it does not therefore consider the potential for incidental HGV controls arising as a direct result of other recommendations.

Findings

Whilst the promotion of a town wide environmental weight restriction such as that illustrated in the figure would be the default level of provision to be promoted in the Study area, two key routes particularly vulnerable to exploitation by inappropriate HGV traffic have been identified;

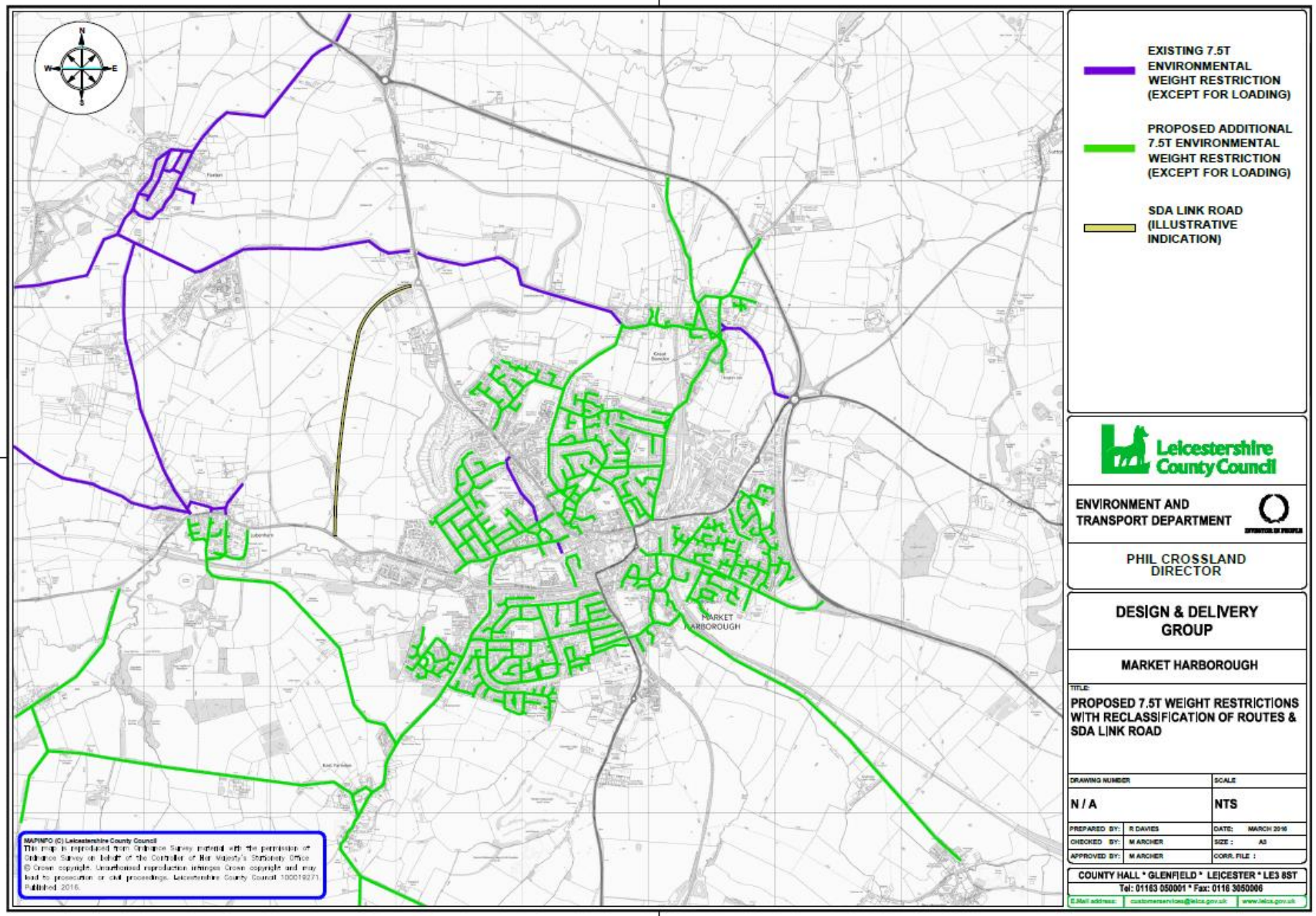
- Ashley Road /Kettering Road between the A4304 and the A6
- Bath Street/Western Avenue between the A508 and Farndon Road.

Should it not be possible to implement an extensive scheme covering the entire town; it is recommended that those 2 routes are promoted as a minimum.

Recommendation R17

Send updated map to 'sat-nav' contacts advising of HGV controls

The recommendation is to provide key satellite navigation and mapping companies (e.g. TOM TOM / Ordnance Survey) with all details pertaining to the changes in route designation, traffic orders, preferred routes etc to ensurethat the records they hold are current and reflect any changes arising as a result of the Strategy.


EXISTING 7.5T ENVIRONMENTAL WEIGHT RESTRICTION (EXCEPT FOR LOADING)
PROPOSED ADDITIONAL 7.5T ENVIRONMENTAL WEIGHT RESTRICTION (EXCEPT FOR LOADING)
SDA LINK ROAD (ILLUSTRATIVE INDICATION)
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
PROPOSED 7.5T WEIGHT RESTRICTIONS WITH RECLASSIFICATION OF ROUTES & SDA LINK ROAD
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MARCH 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk
MARKET HARBOROUGH
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Recommendation R18

In light of the size and scope of the Study, incorporate/ consider maintenance activities in relation to improvement proposals.

Overview

The recommendation is to use the implementation of the schemes arising asa consequence of this report as the vehicle by which long standing maintenance aspirations can be delivered.

Rationale

The ability of the County Council to deliver maintenance, restoration and condition improvements beyond the most safety critical schemes has reducedin recent years owing to financial constraint. This issue is only likely to worsenin the future due to continued public sector austerity.

However, the delivery of those schemes can become economically viable when the benefits of economies of scale etc. afforded by the delivery of areawide schemes are taken into consideration. Any maintenance schemes delivered as a result will inevitably contribute to the objectives of the Transport Strategy as well as reduce the burden on the future maintenance budget.

Preventative maintenance works, to arrest deterioration or avoid problems from occurring at all are particularly beneficial

Scheme costs

The estimated total cost for designing and delivering the draft recommended package of infrastructure and smarter choices measures /outputs is £14.9 million (using highest cost scheme options). This excludes the SRR, which isestimated to cost in the region of £35 - £45 million. A breakdown of scheme/output costs can be found in the table.

The £14.9 million includes allowances for further scheme design and development work, risk and contingency. The schemes are at a feasibility stage and will be subject to change or re-costing as schemes or packages aredeveloped further in the future.

Of the total scheme costs £11.7 million is allocated for the delivery of the infrastructure measures and a further £3.2 million on the complimentary smarter choices elements of the scheme. These costs have been estimatedbased on the costs of the delivery of schemes of a similar scale in Leicestershire; however, the scheme is currently in the early stages of development with further refinement of the measures, design work and stakeholder engagement/consultation required. An accurate estimation of costs will be determined following this additional work

Scheme Cat	Scheme Ref	TRANSPORT MEASURES/ OUTPUTS	Cost	Associated Recommendation
A	***Junction capacity improvements***			
	1	A6/B6047	£650,000	**R1, R2**
	2	The Square / St Mary's Rd / Coventry Rd	£700,000	
	3	Welland Park Rd / Northampton Rd / Springfield St (Option 2)	£820,000	
	4	St Marys Rd / Kettering Rd / Clarence St	£280,000	
	5	Gores Lane / Rockingham Road (Option 2)	£450,000	
	6	A6 / Rockingham Road / Dingley Road	£1,100,000	
	7	Sainsbury's Store entrance/ Springfield Street	£600,000	
			£4,600,000	
B	***Walking & cycling improvements***			
	1	New routes, links, crossings etc	£3,110,000	**R5-11**
	2	Cycle parking	£30,000	
	3	Route signing	£60,000	
			£3,200,000	
C	***Public transport improvements***			
	1	Bus shelters	£32,000	**R10**
	2	Raised bus stop kerbs	£38,000	
	3	'Hail & Ride' conversion	£110,000	
	4	Miscellaneous (timetable cases etc)	£20,000	
			£200,000	
	Modal shift initiatives (over a four year period)			
	1	'Getting to Work & Training'	£1,200,000	**R5-11**
	2	'Information & Behaviour Change'	£1,200,000	
	3	Coordination & management	£800,000	
			£3,200,000	
E	***Infrastructure resulting in changes to network or traffic routing***			
	1	Works required to facilitate the upgrade of Welland Park Road to A4304 and respective downgrade of Coventry Road	£700,000	**R3**
			£700,000	
	3	South East Relief Road between the A508 and the A6	**£35 – 45 million**	**R4**
F	***Traffic Management Improvements***			
	1	HGV weight restrictions and update sat- nav contacts	£75,000	**R16, R17, R5, R13, R12**
	2	Traffic directional signing	£100,000	
	3	Parking controls , including consideration of residents parking	£25,000- £75,000	
	4	Traffic calming (in support of walking / cycling network)	£200,000 - £300,000	
			£400,000- £550,000	
G	***Local improvements***			
	1	Refurbishment of paved areas and street furniture	£100,000- £450,000	**R18**
			£100,000- £450,000	

Total Cost (excluding the SRR): **£11.7 million** (lowest cost scheme options)

£12.9 million (highest cost scheme options)

Table 22 : Breakdown of estimated scheme / output costs

Next Steps

The report makes recommendations for the promotion of a medium to long term (up to 2031) highway orientated transport improvement Strategy for theStudy area, which will serve to:

- *Support economic and population growth in the context of future land allocation and development; ensuring the town is not adversely impacted by traffic growth, and remains a vibrant and prosperous place for people to live, work and visit.*
-
- *Form the necessary foundation on which the long term delivery of future highway/transport improvements in the study area can be based*

Through the development of a microsimulation modelling programme we will be supporting the outcomes of the Strategy in the following ways:

- Development of transport schemes;
- Provide an opportunity to understand current and likely future demand on the transport network at a detailed level and allow us to plan and design transport schemes accordingly;
- With the evidence provided through our modelling system we will ensure that our schemes and advice to developers will support our overall outcomes set out in the Strategy;
- Make decisions based on evidence;
- Understand and challenge need and manage demand;
- Challenge and review service delivery;
- Innovate in performance management; and
- Enhance sustainability

The recommended schemes outlined in this chapter provide the basis of an outline Transport Strategy for Market and incorporates stakeholder feedback. Subject to consideration by LCC and HDB members, and availability of funding, further work would be need to be undertaken to adopt a menu of preferred schemes from those recommended in the Study, to bring these schemes together into a single coherent package of improvements across the Study area.

The preferred package of schemes could then be converted into a final Strategy and delivery programme suitable for obtaining funding.

2015/16	*Study Phase 1 (Issues and Solutions) ***Complete***
2016/17	Study Phase 2 (Solution Coordination, stakeholder feedback) **Complete**
2016/17	Study Phase 3 (Finalise Strategy and Prepare funding bid/s)
2017/18	Scheme consultation / Detailed design
2018/19	Begin Implementation and Delivery

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Market Harborough
Transport Strategy 2017 – 2031

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Appendices

1.1 Executive Summary

1.2 Overview

This report presents the overriding findings of a study jointly funded by Leicestershire County Council and Harborough District Council concerning the transport network in and around the settlement of Market Harborough, Leicestershire; hereafter referred to as *'The Study Area'*.

The report makes recommendations for the promotion of a medium to long term (up to 2031) highway orientated transport improvement strategy for the study area, which will serve to:

- *Support economic and population growth in the context of future land allocation and development; ensuring the town is not adversely impacted by traffic growth, and remains a vibrant and prosperous place for people to live, work and visit.*
- *Form the necessary foundation on which the long term delivery of future highway/transport improvements in the study area can be based.*

The report is structured into five chapters;

Chapter 1 - Executive Summary

Chapter 2 - A detailed overview of the background to the study, its local and national policy context, the objectives of the study and the adopted approach.

Chapter 3 - Consideration of transport models used in the study and their suitability.

Chapter 4 - A summary of the condition and performance of the transport network in Market Harborough in the base (2011) / current (2015) and future (2031) year scenarios

Chapter 5 - Recommendations for an evidence led package of transport measures, based on the issues and findings established and presented in Chapter 4, forming the basis of an initial outline transport strategy for the town centre.

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1.3 Policy context

In March 2015 the County Council's Cabinet approved the 2015/16 LTP3 Implementation Plan; a key action of which was to undertake a transportation study of Market Harborough town centre; building on work carried out for the District Council's 2011 Core Strategy and for the proposed Strategic Development Area to the west of the town.

Although the Core Strategy was only adopted in 2011, in the light of recent published data on future housing needs, it is already considered to be out of date. As such, a new Local Plan will be published by the District Council in 2017.

When complete, it is intended that the transport strategy will assist with the implementation of new Local Plan and ensure the County Council continue to deliver an efficient transport network and develop well-planned infrastructure that is compatible with future housing and employment growth.

In April 2016 the County Council submitted an outline business case to the Leicester and Leicestershire Enterprise Partnership (LLEP) for consideration for a future phase of potential growth funding. This study will also therefore assist in providing the enhanced context and robust justification required to support this future growth funding bid; seeking the necessary levels of funding required to deliver a comprehensive package of transport measures in the town centre.

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1.4 Methodology

In order to understand the existing and likely future transport issues on the network, a large scale exercise of data collection and extraction was undertaken. Much of the data required was extracted from the models/databases that the County Council already maintains or has subscribed access to; the Leicester & Leicestershire Integrated Transport Model (LLITM), TrafficMaster, Accsmap and Geomap for example.

Observed traffic (pedestrian/cycle/vehicular) data collected on site was used to inform the decision making process and to validate outputs from the models.

In parallel to the collection/extraction of numerical data, discussions were held with colleagues at both the County Council, Harborough District Council, and in the local community with key stakeholder representatives to understand local, often more anecdotal issues.

Where issues have been identified that adversely affect the performance of the network, or that constrain the development of the town, recommendations have been made to develop mitigation measures, or improvement schemes (outputs) that will satisfy the strategic transport outcomes of the study.

The study is broadly segmented into 3 core phases;

1.4.1 Phase 1

Phase 1 is the subject of this report, and involves the identification of issues and transport solutions; it consists of the following individual stages outlined below:

- data collection (e.g. traffic surveys, workshops)
- issue identification, inc' initial stakeholder consultations
- solution optioneering
- localised testing of options
- Selection of preferred solution options
- Draft study report/recommendations and outline transport strategy
- Submission of initial LLEP 'pipeline' project bid
- County Council and District Council Member consideration

Phase 1 involves a great deal of concurrent activity to capture and extract the data and information required to understand how, when, where and by whom the network is being used; where developments are due to take place, and which matters are arising as the current and future transportation issues for the study area.

Much of the data required was extracted from the models/databases that the County Council already maintains or has subscribed access to; the Leicester & Leicestershire Integrated Transport Model (LLITM), TrafficMaster, Accsmap and Geomap for example. Observed traffic (pedestrian/cycle/vehicular) data collected on site was used to inform the decision making process and to validate outputs from the models.

In addition an initial key stakeholder workshop was held early on in the study to inform the initial direction of Phase 1 providing a starting point for further investigation and the identification of work stream requirements.
Once a sound understanding of the overall network conditions had been established and understood, potential measures to address/improve the network were identified, assessed and a preferred selection of potential measures put forward for recommendation.

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Phase 1 will therefore provide an evidence based package of potential transport solutions/outputs. In turn these outputs will provide an initial outline transport strategy which will inform Harborough District Council's Local Plan as to the required nature, location and potential implementation of improvements necessary to facilitate development; affording the opportunity to secure funding via S.106 / CIL contributions when the opportunity arises.

1.4.2 Phase 2

Phase 2 consists of the following individual stages:

- Incorporate key stakeholder and wider public feedback
- Test and consider measures in combination across town
- Development of network wide package
- Testing of preferred package
- Refine transport strategy and delivery profile

Phase 2 is firstly concerned with undertaking an engagement and consultation exercise on the outcomes of Phase 1, in order to incorporate consultation feedback. Secondly adopting a menu of preferred schemes from the work undertaken in Phase 1 (those identified in this report), which complement one another, rather than being effective only in isolation, hence providing a single coherent package of improvements across the study area. In doing so refining the initial outline transport strategy and delivery profile.

1.4.3 Phase 3

The third and final phase of the study consists of the following individual stages:

- Obtain figure for Benefit Cost Ratio (BCR)
- Obtain figure for Gross Value Added (GVA)
- Test solutions with inclusion of southern relief road
- Finalise and adopt transport strategy and delivery profile

Phase 3 is concerned with taking the preferred package of schemes and converting it into a final strategy and delivery programme suitable for obtaining funding via the Single Local Growth Fund and implementation.

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1.5 Findings

Summarised below are the key overarching findings arising from the studyinto the condition, suitability, and performance of the highway transport network in the study area.

1.5.1 Traffic volume in the town is forecast to increase by 24% between 2011 (base year for the study) and 2031. Transport modelling work indicates increased queues and travel time on the network as a result.

1.5.2 It is evident from transport modelling and site observations that there are a number of junctions within the study area that currently, and in the future perform more poorly than others. Those junctions are:

- A6 / B6047 (aka McDonalds Roundabout)
- The Square / St Mary's Road / Coventry Road
- Northampton Road / Springfield Street
- Northampton Road / Welland Park Road
- Springfield Street / Kettering Road
- St Mary's Road / Kettering Road / Clarence Street
- Rockingham Road / Gores Lane
- A6 / Harborough Road / Dingley Road / A4304
- Sainsbury's store entrance / Springfield Street

1.5.3 Traffic modelling work suggests that during the peak traffic periods:

a) the greatest proportion of trips on the network are those going from within the study area to outside of the area, or vice versa.
b) around a third of the trips using the study area over the peak hours in 2011 were making internal trips.
c) 'through' traffic (traffic using the roads in the town to get to/from destinations outside the town) accounts for approximately 10% of trips.

1.5.4 Two of the three 'A' and 'B' classified routes (the B6047 and the A4304) within the study area both converge on The Square and therefore much of the traffic in the study area is reliant upon using the very heart of the town centre; in excess of 13,000 vehicles per day.

1.5.5 Feedback from local residents and stakeholders suggests that this results in an unwelcome mix of vehicular traffic in an area which local residents and stakeholders feel ought to be primarily dominated by pedestrians.

1.5.6 The classification of roads in the study area is not wholly representative to the amount of traffic they currently carry and are forecast to carry in the future.

1.5.7 The control and management of HGV and high sided vehicles (typically HGVs) routing through the town is constrained by low underpass height on a number of bridges, often necessitating passage to sites in the south of the town from the north via the town centre.

1.5.8 Whilst a localised scheme to reduce sign clutter in The Square was carried out in the town recently, traffic signing across the area lacks a coherent strategy and is in need of review.

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1.5.9 Infrastructure for walking, cycling and public transport is generally quite good. However, there are clear gaps in the existing elements, which would benefit from improving.

1.5.10 Both on-street and off-street parking is generally well catered for in the study area. However, it is essential that one coherent parking strategy is developed for the town, incorporating a range of measures/parking controls which take account of the parking requirements of local residents, shoppers, visitors, disabled motorists, local business and workers.

1.5.11 All but a small minority of recorded vehicle speeds are generally in line with the posted speed limits and do not cause undue concern for highway safety.

1.5.12 Market Harborough consistently records a comparatively low level of road traffic collisions, compared to other similar areas (towns) in the county. Furthermore the frequency of accidents on the 4 main routes across the town, the A4304 (west), A4304 (east), A508 and B6047, fall below that which might be expected on similar roads nationally.

1.5.13 Feedback from early stakeholder workshops suggests that the town centre's public realm is perceived to be in need of updating

1.5.14 Without addressing the traffic issues within the town through the combinationof highway improvements, walking and cycling improvements, delivered in combination with a series of complimentary softer measures, it is likely that the area will continue to suffer from congestion which will ultimately limit the delivery of housing. In addition, it is likely that the town will become less attractive to developers, reducing housing and economic growth in the area. Failing to address congestion will stifle growth, leave the town centre poorlyconnected and prevent economic growth opportunities from being exploited.

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1.5 Recommendations

Based on the strong evidence base derived from the study a series of recommendations, have been identified and presented in Chapter 5, paragraph 5.2.

The series of recommendations can also be seen geographically in **Figures 27, 28 and 29.**

- **Figure 27** shows a recommended package of localised improvement measures which utilises the existing road network, and traffic routing.

- **Figure 28** shows a second stage of recommendations which would build on the recommendations in Figure 26 but introduce more significant measures resulting in changes to the network and traffic routing.

- Finally **Figure 29** shows a third stage of reconditions, again based on those shown in Figure 26 but with the introduction of a relief road to the south east of the town.

These recommendations have been evaluated on the basis of key desired transport outcomes identified in Chapter 2 and have provided a framework for the identification of an initial £14.9 million package of infrastructure and smarter choice measures /outputs (excluding the relief road).

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1.6 Transport Strategy - next steps

The recommended schemes derived from this study provide the basis of an initial outline transport strategy for Market Harborough. However, the work carried out as part of this study (Phase 1) will need to be developed and worked up in significantly more detail in some areas, to try to obtain the funding necessary for the implementation of the final overall strategy.

The milestones for the development of the strategy and potential implementation are outlined below:

2015/16 Complete	**Study Phase 1 (Issues & Solutions')*
2016 /17	*Study Phase 2 '(Solution Coordination & Stakeholder feedback) '* *Study Phase 3 (Finalise Strategy & Prepare Funding bid)*
2017/18	*Scheme Consultation / Detailed Design*
2018/19	*Implementation and Delivery*
March 2021	*Completion*

**Covered by this report*

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2.1 Introduction

2.2 Purpose of Report

This report presents the overriding findings of a study jointly funded by Leicestershire County Council and Harborough District Council concerning the transport network in and around the settlement of Market Harborough, Leicestershire; hereafter referred to as *'The Study Area'*.

The report makes recommendations for the promotion of a medium to long term (up to 2031) highway orientated transport improvement strategy for the study area, which will serve to:

- *Support economic and population growth in the context of future land allocation and development; ensuring the town is not adversely impacted by traffic growth, and remains a vibrant and prosperous place for people to live, work and visit.*
- *Form the necessary foundation on which the long term delivery of future highway/transport improvements in the study area can be based.*

2.3 Context

2.3.1 General

Market Harborough is a thriving market town; however it faces growth pressures on its transport network, with approximately 3,000 extra dwellings proposed in the town before 2031, including a total of 1,500 dwellings proposed in a Strategic Development Area to the west of the town.

Whilst Market Harborough's transport network has been subject to varying degrees of analysis for the purpose of allocating land for development and scrutinising the likely impact of the same, there has been little in the way of a comprehensive and holistic transport assessment since the 1990's when the 'Bypass Demonstration Project' resulted in the diversion of the A6 to the east of the town.

Similar exercises have been recently undertaken in other county towns; notably that of Hinckley, as a basis for developing programmes of schemes and projects for implementation in future years.

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2.3.2 Policy context

An efficient transport network combined with well-planned infrastructure is widely recognised as a key element in supporting economic growth and the delivery of economic ambitions. The Economic Assessment for Leicester and Leicestershire commissioned by the Leicester and Leicestershire Enterprise Partnership (LLEP) concluded that an efficient transport system has a key role to play in helping local economic prosperity and growth; It enables people to travel to and from work, leisure, services and education.

- Employers can access employees more easily.
- Businesses can transport their goods and services and operate more effectively.
- It can increase the attractiveness of the area to invest in, live in, visit and work.
- Is also an important factor for businesses in choosing where to locate.

2.3.3 Policy context – Leicestershire County Council

Each local transport authority in England is required to produce a Local Transport Plan (LTP) for their area. Local Transport Plans are the key mechanism for delivering integrated transport at a local level, and helping to promote transportation as an enabler of economic growth and social prosperity.

In March 2015 the County Council's Cabinet approved the 2015/16 LTP3 Implementation Plan; a key action of which was to undertake a transportation study of Market Harborough town centre; building on work carried out for the District Council's 2011 Core Strategy and for the proposed Strategic Development Area to the west of the town.

When complete, the study will ensure the County Council continue to deliver an efficient transport network and develop well-planned infrastructure to support economic and population growth ambitions in the Market Harborough area.

2.3.4 Policy context – Harborough District Council

National planning policy requires local planning authorities such as Harborough District Council to support 'sustainable development' and to plan

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positively for it by preparing new local plans. Although the Core Strategy was only adopted in 2011, in the light of recent published data on future housing needs, it is already considered to be out of date. As such, a new Local Plan will be published by the District Council in 2017.

When complete, it is intended that the transport strategy will assist with the implementation of new Local Plan and ensure the County Council continues develop and deliver transport measures that are compatible with future housing and employment growth, supporting the long term sustainability of planned housing, employment and retail growth in the Market Harborough area, including approximately 1,500 dwellings to the north west of the town.

2.4 Aims and objectives

The overriding aim of the study is to develop a holistic transport strategy that is sufficiently robust to:

- *Support economic and population growth in the context of future land allocation and development; ensuring the town is not adversely impacted by traffic growth, and remains a vibrant and prosperous place for people to live, work and visit.*

- *Form the necessary foundation on which the long term delivery of future highway/transport improvements in the study area can be based.*

In order to the develop the strategy the objectives of the study are twofold;

1) Firstly, to develop a strong evidence base bringing together existing known, and future anticipated transport issues across the town, providing the enhanced context and justification required to exploit future funding / delivery opportunities.

2) Secondly, to identify possible solutions and recommend a package of preferred measures/outputs which will deliver specific key outcomes, meeting LTP3 strategic transport goals, as shown in **Fig 1** below.

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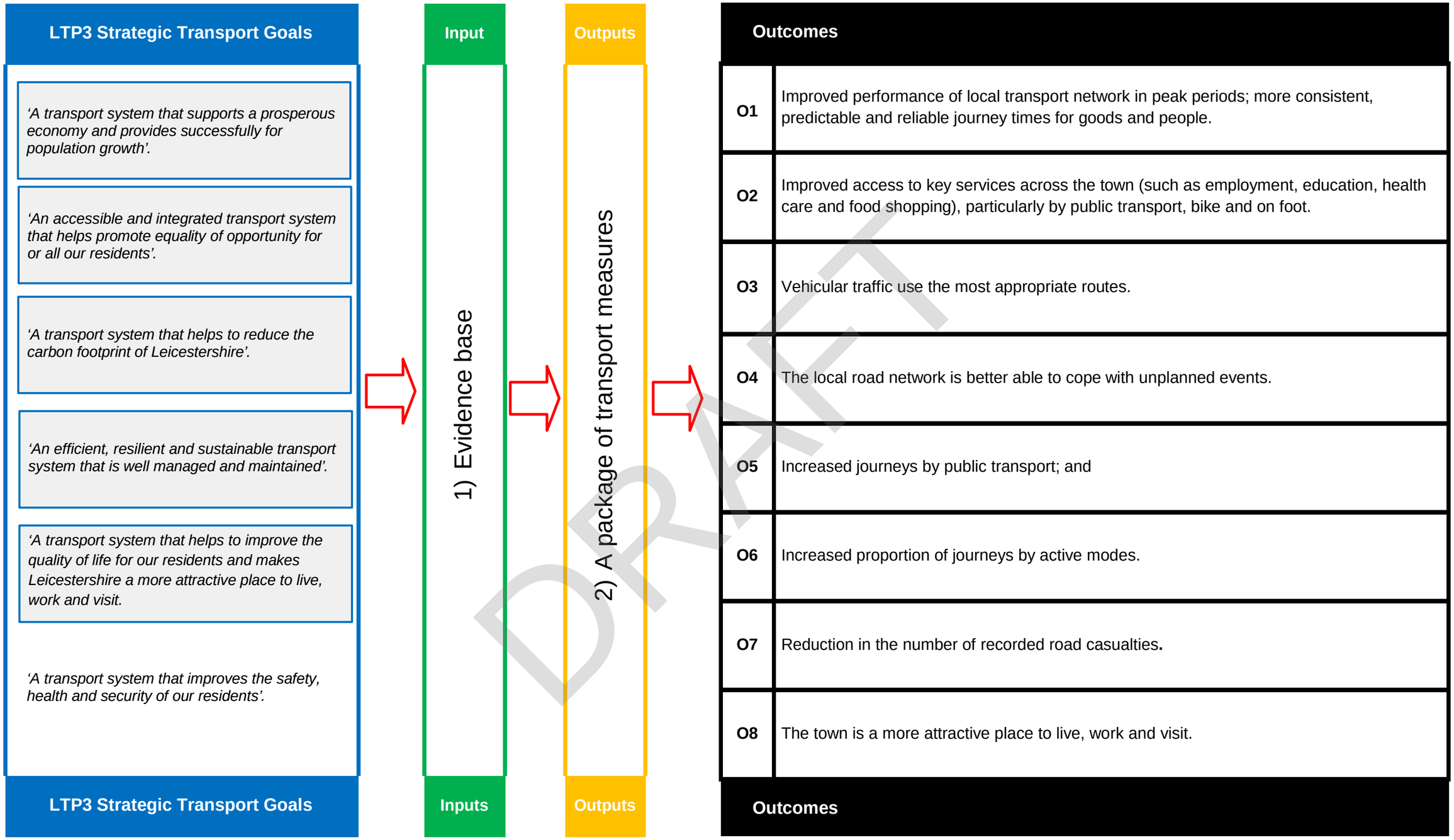

Fig 1: LTP3 strategic transport goals and project outcomes

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It is also imperative that the strategy derived is:

- Supported and shaped by input from key stakeholders
- Deliverable within an agreed timeframe.
- Provides value for money.
- Coordinated with other proposals to minimise levels of disruption on the network.

2.5 Scope and limitations

The study is primarily concerned with investigating the existing road and highway transport network, and its suitability in serving the type and frequency of its users, whether they are vehicular (including private, passenger and commercial vehicles), or active modes of travel (such as cyclists and pedestrians).

The study has a particular emphasis on being strategic and holistic in its nature. As such the study will consider a wide range of themes;

- The Local Road Network (LRN)
- Impact of the Strategic Road Network (SRN) on the LRN,
- Strategic routing and signing (including car parks) on the LRN
- Future land allocation and development
- Current demography of the town
- Current and future travel patterns across the network
- Walking and cycling infrastructure
- Public transport infrastructure
- Congestion on the LRN at major junctions and corridors.
- Accident sites
- On-street parking and loading controls
- The distribution of speed limits
- Vehicle access and movement restrictions
- Public realm and streetscape
- Highway maintenance
- Complementary smarter travel measures
- Other complementary programmed/committed works in the study area.

With regards to future land allocation and development all modelled future year (2031) outputs take due account of any committed major development

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sites to be implemented between now and 2031. However, the outputs do not include further and currently (October 2015) uncommitted developments that may arise in the intervening time.

That said, improvement measures derived from the study do encompass solutions that factor in the geographical location and size/impact of known but currently uncommitted development sites.

Whilst the strategy may serve to be of assistance in the future viability assessment of further development sites, it has not been produced with the express intention of being used to that end.

The geographical extents of the study are shown in **Figure 2.** The study area encompasses four district wards: Great Bowden and Arden, Little Bowden, Welland and Logan.

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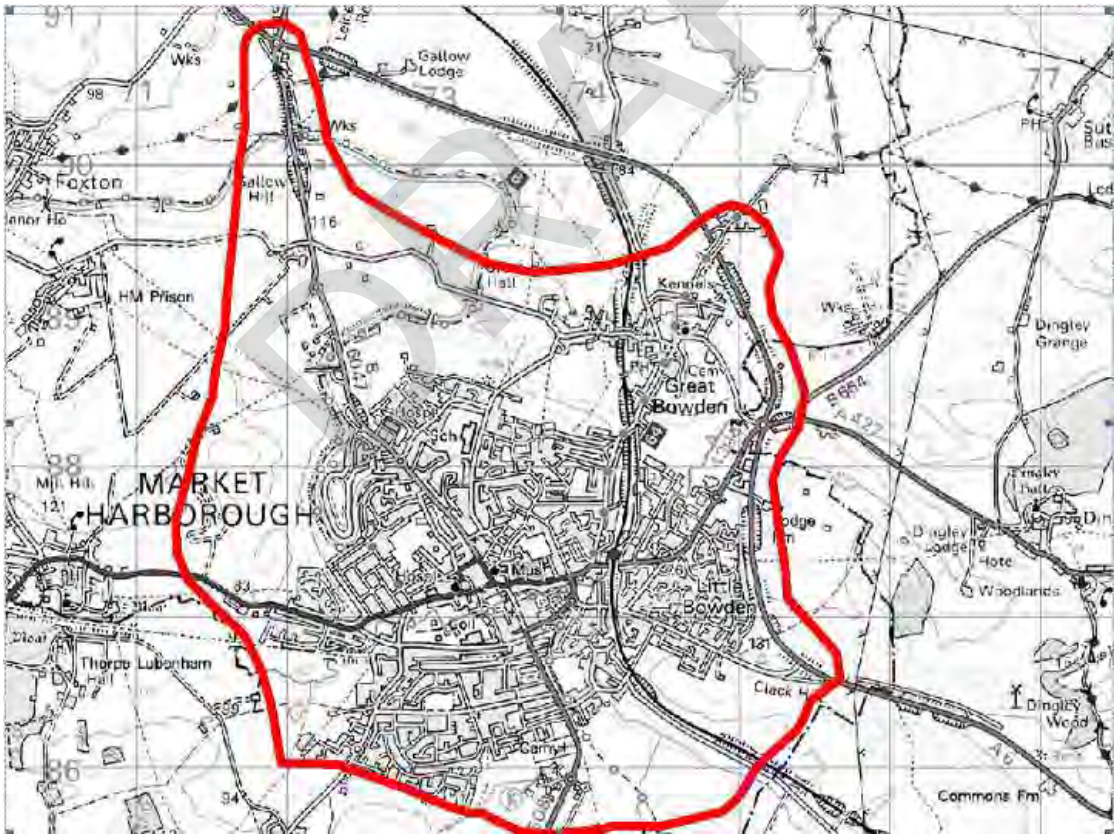

Figure 2- Plan to show geographical scope of study

2.6 Funding for implementation

If taken forward for implementation, a programme of works will be developed to address any issues identified in the study. Depending on the outcome of the study, funding for measures could be sought from a number of sources, including developer S106 contributions and the Government's Single Local Growth Fund (SLGF), which is allocated via a competitive bidding process administered by the Leicester & Leicestershire Enterprise Partnership (LLEP). At this point no funding is available for implementation; however in April 2016 the County Council submitted an outline business case to the LLEP for consideration for a future phase of growth funding. This outline business case can be found in **Appendix A.**

This study will therefore assist in providing the enhanced context and robust justification required to support this future growth funding bid; seeking the necessary levels of funding required to deliver a comprehensive package of transport measures in the town centre.

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2.7 Adopted approach

The approach of the study can be broadly segmented into 3 core phases, as illustrated in the diagram in **Figure 3** below;

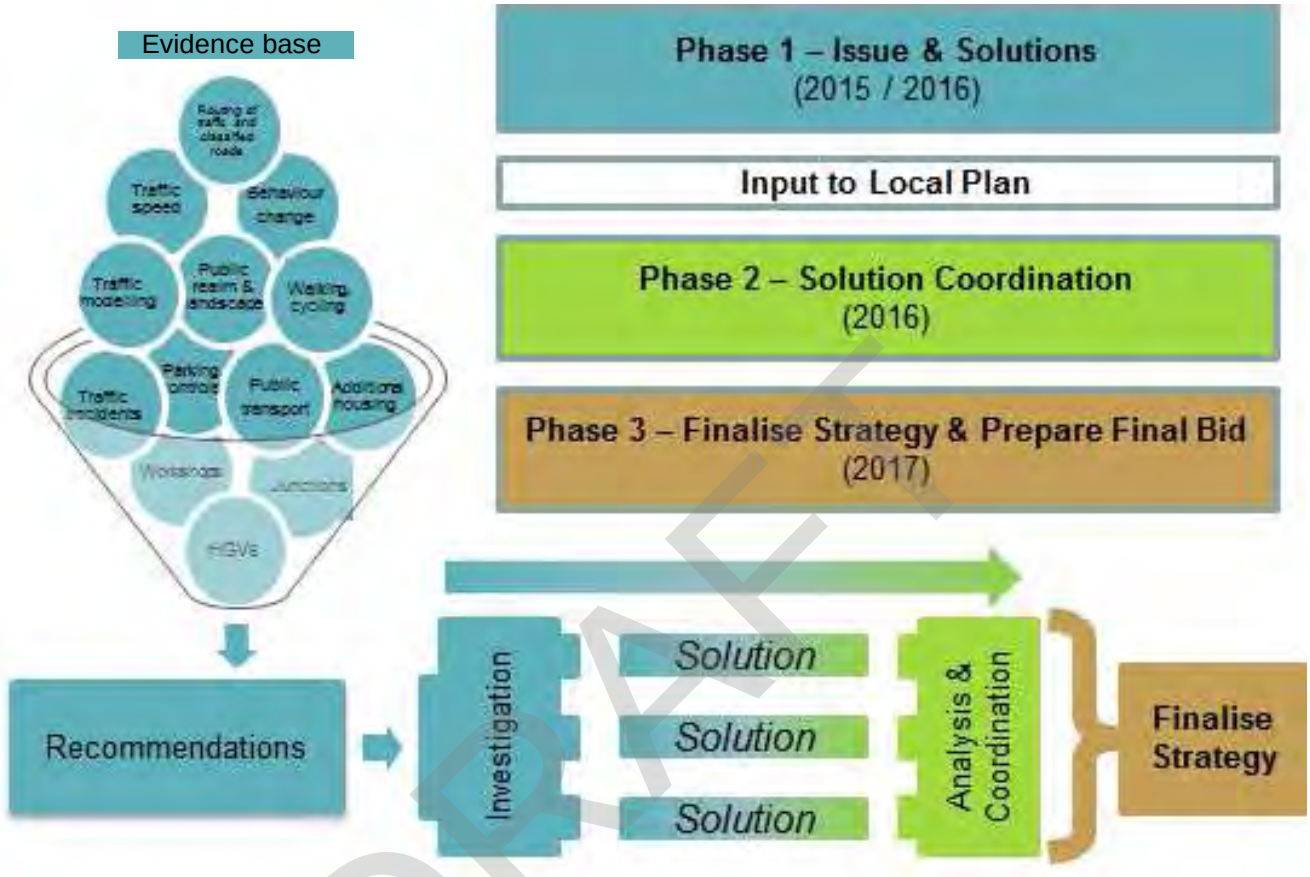

Figure 3- Study phasing

2.7.1 Phase 1 – 'Issues & Solutions'

Phase 1 i the largest of the 3 phases and forms the foundation on which phases 2 and 3 will be undertaken. It broadly consists of the following individual stages outlined below:

- o data collection (e.g. traffic surveys)
- o issue identification, inc' initial stakeholder consultations
- o solution optioneering
- o localised testing of options
- o Selection of preferred solution options
- o Draft study report/recommendations and outline transport strategy
- o County Council and District Council Member consideration

Before any measures can be devised and a strategy developed, it is essential to gain an appreciation of the existing, and the forecast future conditions on the network. Phase 1 therefore involves a great deal of concurrent activity to capture and extract the data and information required to understand how,

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when, where and by whom the network is being used; where developments are due to take place, and which matters are arising as the current and future transportation issues for the study area.

Table 1 below identifies the data and information captured and extracted for Phase 1 of the study.

Source	***Data / information***
Network Data & Intelligence team	*Current traffic data, including vehicle, pedestrian and cycle counts, queue lengths and vehicle speeds*
Geomap	*Speeds, highway extents, TROs etc*
Traffic Management historical ad-hoc requests	*TROs, signs and lining improvements*
Market Harborough Cycling Network Plan	*Cycle network and infrastructure*
Public Transport Team Operations / Strategy	*Bus routing information / maps, operator issues*
Accsmap/STATS19	*Accident data*
Harborough District Council	*Core Strategy and SHLAA plans.*
LTP3 evidence base Research & Insight team	*Demographics, economy and other non-transport related information*
Officer workshops	*Planned /committed/ programmed works, issue identification and scheme aspirations*
LLITM	*Existing and future journey patterns/ times, delay and link volume /capacity data*
Traffic Master	*Existing journey times*
Market Harborough Civic Society	*Issue identification and scheme aspirations*
On- site officer observations	*Traffic and road behaviour and site measurements*

Table 1. Data and information sourced for Phase 1

In addition, key stakeholder workshops were held in July 2015 and attended by: the Chamber of Trade and Commerce; local businesses the Civic Society; Sustrans and a number of other organisations. The workshop informed the initial direction of Phase 1 providing a starting point for further investigation and the identification of work stream requirements. A Further follow up consultation exercise with key stakeholders is planned during phases 2 and 3 of the study to refine and develop solutions derived from Phase 1.

Once fundamental matters are understood, work can begin to devise potential measures to address/improve the network. A holistic approach will be taken

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when devising possible improvement measures to encompass solutions which will benefit walking, cycling, public transport as well as vehicular traffic.

Clear justification will be provided on why measures have been proposed, the evidence on which they are based and the benefits that will flow if they are implemented.

At this stage, whilst measures will be tested to establish whether they are likely to be viable, they will only be tested using very local assumptions, and not necessarily refined to a point that their wider impact and suitability on a network wide basis can been tested.

Phase 1 therefore provides an evidence based package of preferred transport solutions/outputs. In turn these outputs provide an outline transport strategy which (in April 2016) formed the basis of an initial project pipeline bid to the LLEP for a future phase of growth funding, and will inform the Local Plan as to the required nature, location and potential implementation of improvements necessary to facilitate development; affording the opportunity to secure funding via S.106 / CIL contributions when the opportunity arises.

This report focuses on Phase 1.

2.7.2 Phase 2 – 'Solution Coordination'

Phase 2 consists of the following individual stages:

- Incorporate key stakeholder and wider public feedback
- Test and consider measures in combination across town
- Development of network wide package
- Testing of preferred package
- Refine transport strategy and delivery profile

Phase 2 is firstly concerned with undertaking an engagement and consultation exercise on the outcomes of Phase 1, in order to incorporate consultation feedback. Secondly adopting a menu of preferred schemes from the work undertaken in Phase 1 (those identified in this report), which complement one another, rather than being effective only in isolation, hence providing a single coherent package of improvements across the study area. In doing so refining the initial outline transport strategy and delivery profile.

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2.7.3 Phase 3 – 'Finalise Strategy & Prepare Final Bid

The third and final phase of the study consists of the following individual stages:

2.7.3.1 Obtain figure for Benefit Cost Ratio (BCR)
2.7.3.2 Obtain figure for Gross Value Added (GVA)
2.7.3.3 Test solutions with inclusion of southern relief road
2.7.3.4 Finalise and adopt transport strategy and delivery profile

Phase 3 is concerned with taking the preferred package of schemes and converting it into a final strategy and delivery programme suitable for obtaining funding via the Single Local Growth Fund and implementation.

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3.1 Transport modelling

3.2 Overview

Transport models provide arguably the single most valuable tool in the assessment and forecasting of transport related issues and the viability of any likely solutions. The evidence they provide assists the County Council in making informed decisions on how best to allocate resources; securing funding, appraising highways schemes and mitigating the impacts of future development.

The county wide Leicester & Leicestershire Integrated Transport Model (LLITM) has been used in the high level assessment of traffic and travel in the study area, whilst more detailed specialist models such as ARCADY and LINSIG have been utilised in the finer assessment of individual junctions.

3.3 Model suitability

Much of the data required for both the baseline (2011) and future case (2031) scenarios have been extracted from LLITM. Where necessary, observed data has also been collected to validate data extracted from the traffic model. For the purposes of the study and in order to ensure a robust and credible assessment, LLITM has been re-validated over the town's Area of Influence (AoI) using extensive traffic flow data collected in 2015. Additionally a number of network/development changes that had occurred in the intervening time since the model was last validated have been programmed in.

In the consideration of the future year scenario, the following known committed development sites (as shown in **Table 2**) were written into the model's assumptions:

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Committed Development Site	No. of Dwellings
Farndon Road, Market Harborough	323
Lubenham Hill (part of SDA)	119
Land west of Leics Road (part of SDA)	450
Land at Airfield Farm (part of SDA)	924
Land at Lathkill Street	47
Land at Glebe Road	83
Land east of Northampton Road	27
Overstone House, Kettering Road	48
Land at Waterfield Place	24

Table 2 Committed development sites

Other known sites still to be determined by the District Council, such as Overstone Park (600 dwellings) are not reflected in the future year scenario outputs presented in the report, however improvement measures derived from the study do encompass solutions that factor in the geographical location and size/impact of these known development sites.

Subsequent to the above referenced re-validation, the model is considered to be adequately calibrated for use in the undertaking of the study work. A copy of the full Local Model Validation Report (LMVR) is available as a supplement to this report in **Appendix B.**.

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4.1 Current & Future Conditions

4.2 Chapter Overview

This chapter draws on various sources of information and summarises in general terms the overriding condition and performance of the transport network in the base (2011) / current (2015) and future (2031) year scenarios. It is the intention of this chapter to identify broad areas/initiatives where some level of investment could be considered in order to improve the performance of the network, or guard against its deterioration.

4.3 Background Social, Economic and Demographic information

Market Harborough is identified as Harborough districts only sub-regional centre (SRC) with a population of around 25,000.

Market Harborough plays an important role in providing services, employment, leisure and range of travel modes to surrounding district population. It is also a service centre for parts of North Northamptonshire.

Its location means that Market Harborough has strong functional relationships with Northampton, Kettering and Corby

.

4.3.1 Economy / jobs and workers

Most employment land and economic activity is concentrated around the town centre.

There is a low unemployment rate within the district compared with the county and region.

Market Harborough is becoming increasingly attractive to London commuters given frequent and fast train travel to London and house price differential

4.3.2 Deprivation

The district of Harborough is one of the least deprived areas in England and the least deprived district in Leicestershire.

However, central Market Harborough has been identified as a neighbourhood which suffers multiple deprivations and is the seventeenth most deprived areas in Leicestershire. - Key issues include health, education, skills and training, employment, community safety, children and young people, older people and housing.

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4.3.3 Health

Obesity rates amongst adults in Market Harborough (23%) are similar to the district, county and national average (**Table 3**).

Geographical area	% adults obese	
District	Harborough	23%
County	Leicestershire	24.3%
Country	England	24.2%

Table 3, Obesity rates: Source: Leicestershire 2010 JSNA

14% of Year 6 children in the district of Harborough are classed as either overweight or obese (lower than the county average of 28.3%).

People in the district of Harborough are generally healthier than Leicestershire averages and significantly better than national average.

4.4 Land allocation & development

The outcomes and recommendations of this study must be considered in the context of current and future land allocation and development, as broadly set out in the new Harborough Local Plan (estimated 2017).

In Market Harborough approximately 3,000 potential extra dwellings are proposed between 2011 and 2031. This includes a more immediate plan to bring forward a Strategic Development Area (SDA) to the north west of Market Harborough to help meet the requirement for new dwellings, and to provide to new employment, educational and recreational opportunities. Due to the scale of the SDA site a new distributor road is planned to serve the site.Three developers have committed to building in the SDA equating to approximately 1500 dwellings. There are also numerous smaller, albeit still significant developments committed in areas such as sites on Farndon Road and Glebe Road etc.

The commercial / industrial / residential development of land is typically the single most significant factor in the local growth of demand on the highway network, for example how those who live or work in a new development are likely to travel, including the routes they will take, their choice of transport and the impact this will have on the network.

Figure 4 shows the committed areas for development below, it also further depicts areas identified for potential future development.

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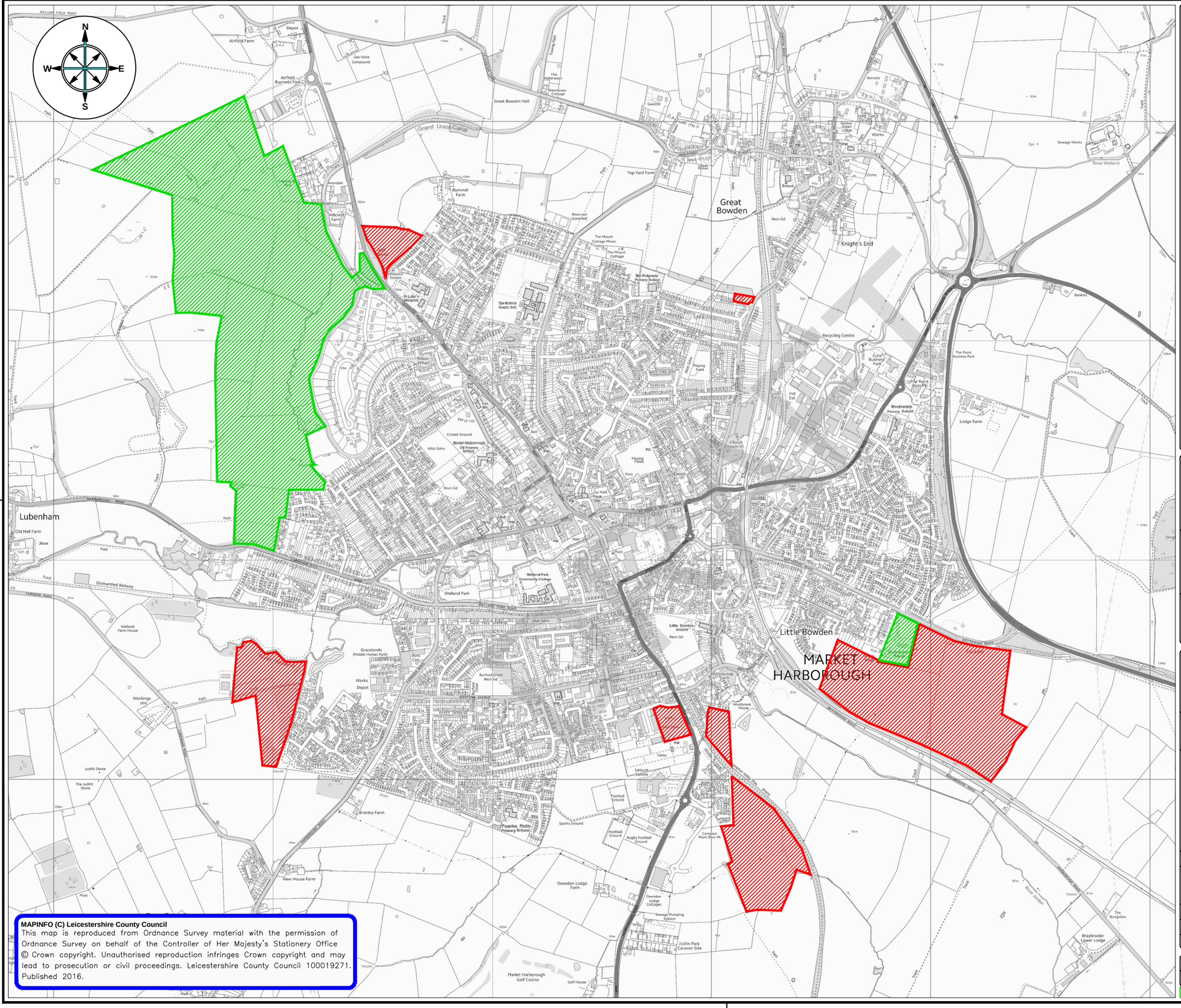
Figure 4: Map showing committed and future development



COMMITTED FUTURE DEVELOPMENT

POTENTIAL FUTURE DEVELOPMENT

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Leicestershire County Council

ENVIRONMENT AND TRANSPORT DEPARTMENT

INVESTOR IN PEOPLE

PHIL CROSSLAND
DIRECTOR

DESIGN & DELIVERY GROUP

MARKET HARBOROUGH

TITLE:
COMMITTED AND FUTURE DEVELOPMENT SITES

DRAWING NUMBER		SCALE
N / A		NTS
PREPARED BY:	R DAVIES	DATE: MARCH 2016
CHECKED BY:	M ARCHER	SIZE : A3
APPROVED BY:	M ARCHER	CORR. FILE :

COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
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4.5 Road network and strategic routing

Market Harborough is well connected with nearby links to the nationally strategic road network (SRN) and being directly served by the A508/A4304 primary route between the A14 and the A6.

Whilst diverting the A6 to the east of the town in the 1990s provided a viable alternative route for what would otherwise have been north/south through traffic, the absence of an orbital route around the town means that the remaining classified roads in the study area continue to converge and rely upon The Square in the very heart of the town centre to distribute much of the towns traffic; in excess of 13,000 vehicles per day[1]. The result is an unwelcome mix of vehicular traffic, including large goods vehicles, in what many in the community consider ought to be a primarily pedestrian dominated area[2].

With the exception of a new distributor road linking the A4304 with the B6047 to the west of the town, there are no firm plans for any additional major infrastructure.

4.6 Traffic Volume

4.6.1 Current traffic volume and distribution on road network

The distribution of traffic, as derived from observed traffic counts (2015) can be seen in **Figure 5**, and serves as an effective tool to quickly identify the most heavily used routes across the town. It is important to note that the plan does not make any reference or representation as to the performance of the network. A densely trafficked route for instance may well perform better than that of a lesser trafficked route. Whilst the most heavily used routes are, unsurprisingly, the 'A' and 'B' roads across the town, the classification of roads in the study area is not wholly representative to the amount of traffic they currently carry. Some unclassified roads such as Farndon Road and Welland Park Road carry almost as much traffic as those classified routes within the study area..

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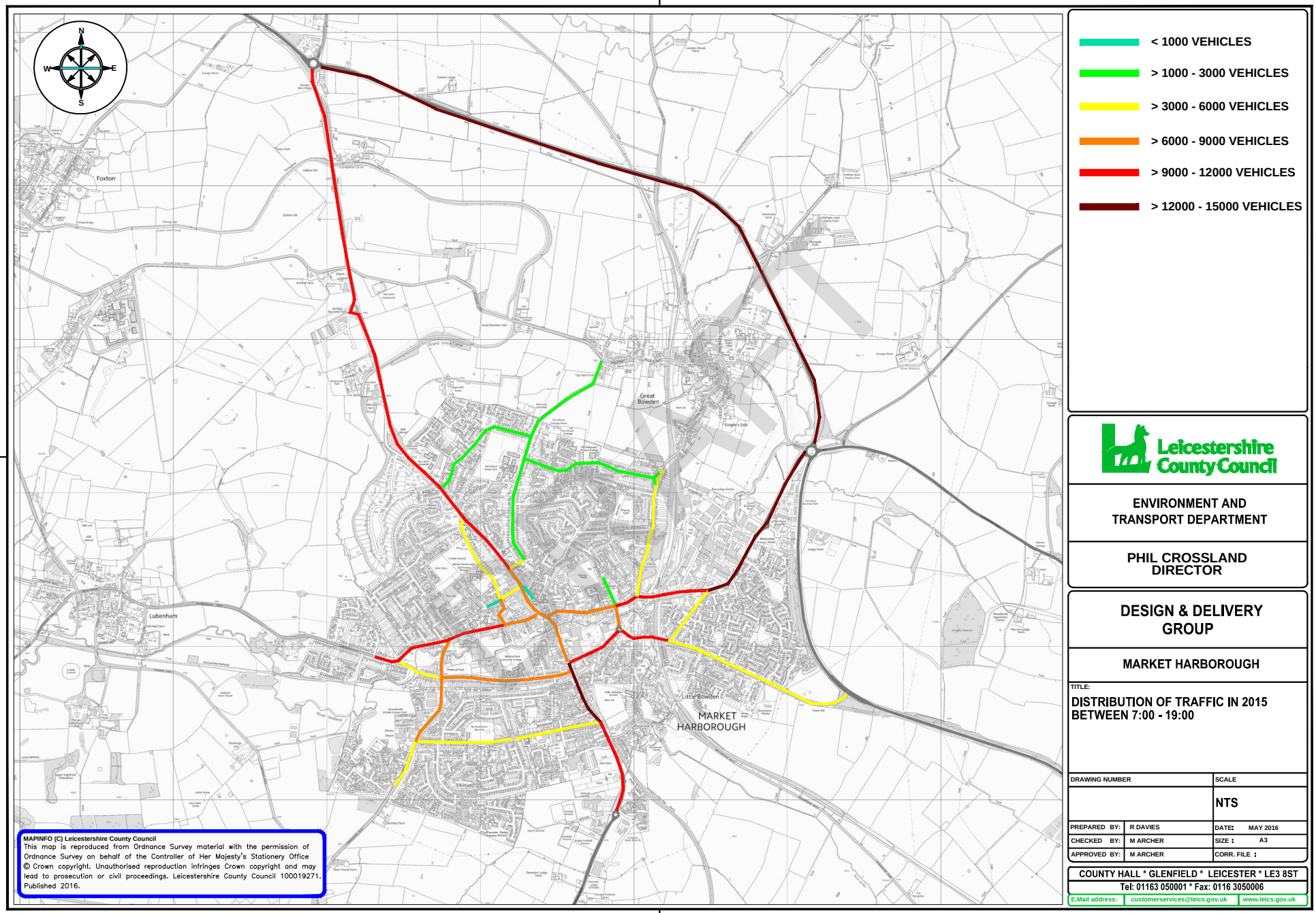
[1] 24 hour ATC 6th – 12th June 2015

3 Community workshop held Thursday 9th July 2015

Figure 5: Map showing distribution of traffic in 2014 between 7am and 7pm



4.6.2 Future traffic volume and distribution on road network

As shown in **Table 4** traffic volume in the town during the combined peak periods (8am - 9am and 17.00- 18.00) is forecast to increase by 24% between the modelled baseline year 2011 and the future forecast year 2031.

Year	Total Traffic Volume (combined peak periods), in PCUs
2011	8,246
2031	10,856

Table 4: Traffic volume (PCUs) over combined peak periods (2011-2031)

Figures 6 & 7 illustrate the changes in traffic volume across the network between 2011 and 2031 for the AM and PM peaks respectively. A red depicts an increase in flow/volume, whilst a green line depicts a decrease in traffic flow/volume.

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Figure 6; Flow change between 2011 – 2031 (AM)

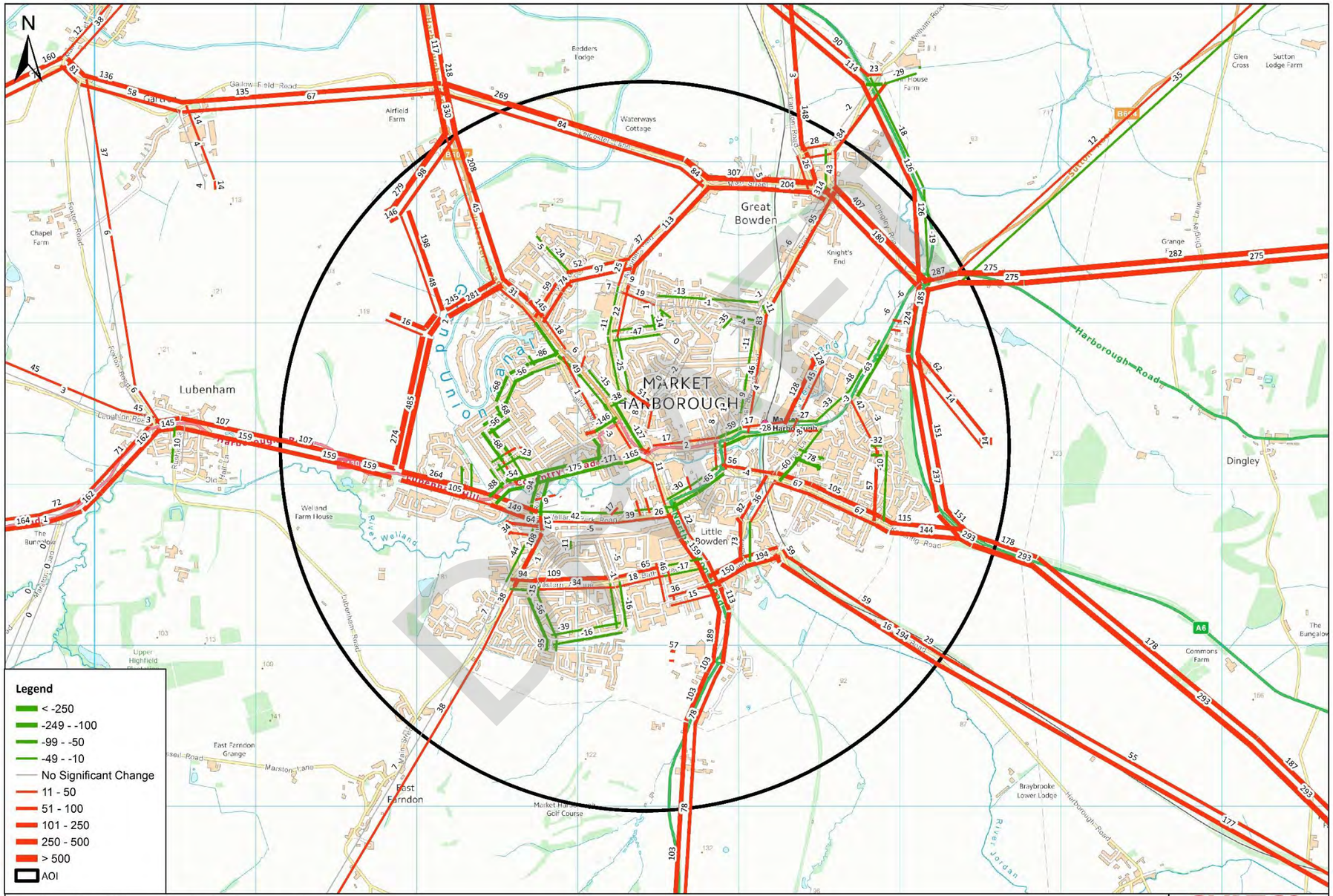
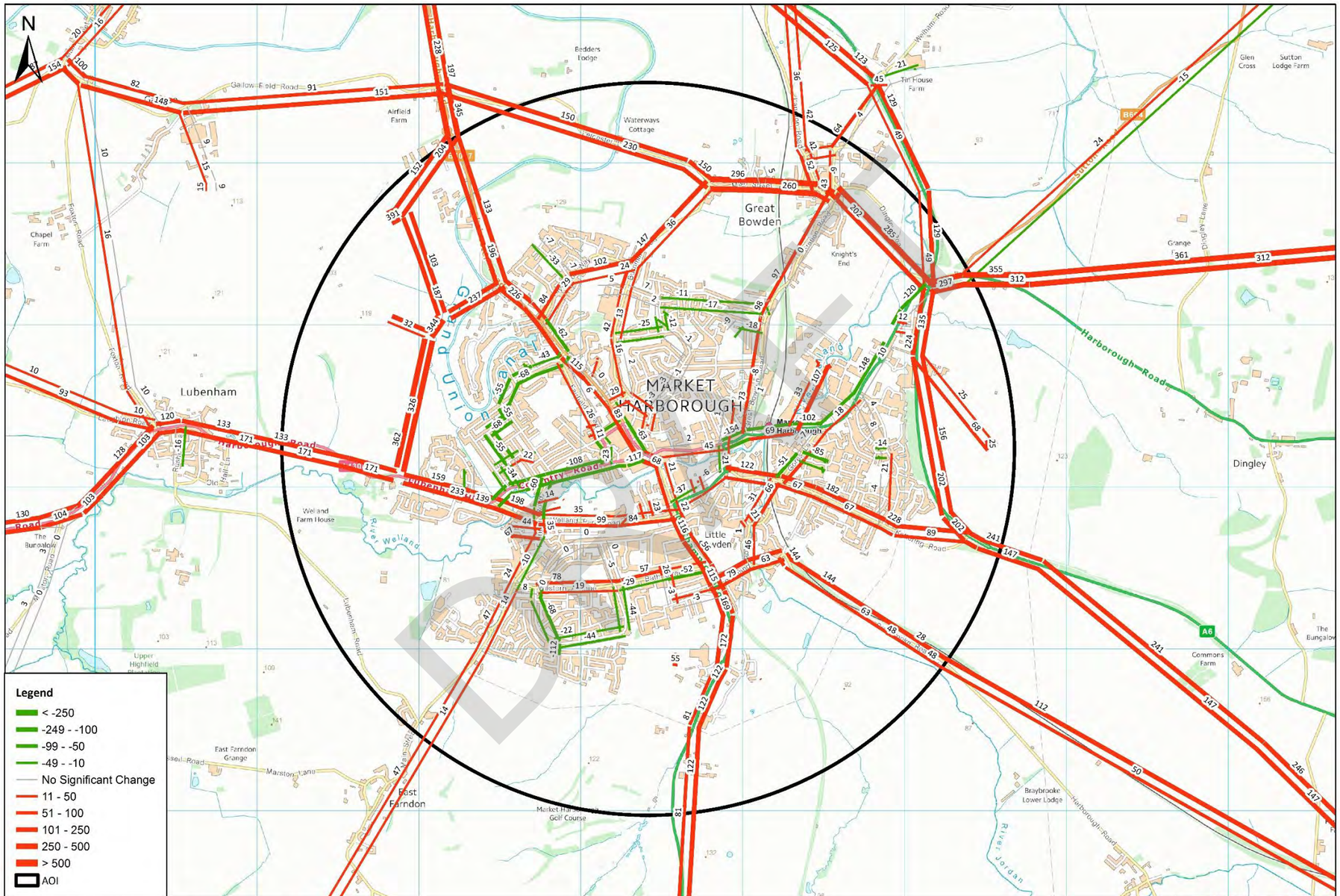


Figure 7 – Flow change between 2011 – 2031 (PM)



Figures 6 and **7** indicate that there is an increase in traffic volume along the following roads within the study area;

- Harborough Road (A4304)
- Farndon Road
- Northampton Road (A508)
- Welland Park Road
- Braybrook Road
- Rockingham Road (A4304)
- A6 (North & South)
- Burnmill Road
- Harborough Road (B6047)

The general increase in flows can be linked to the general growth in traffic volume between the 2011 and 2031 scenarios across the study area. It would appear that that the routes generally around the periphery of the town centre witness an increase in flow for both the morning and evening peak periods, largely due to the redistribution as a result of new development within Market Harborough.

Conversely, a reduction in traffic is forecast to occur on;

- Coventry Road
- Logan Street
- Springfield Street

This can be linked to the general decrease of through traffic using the town centre roads, resulting from redistribution along the new local distributor road modelled on the north west of Market Harborough, in turn this would appear to result in a larger proportion of vehicles using the peripheral routes.

Whilst the proposed distributor road is being delivered primarily to facilitate access to the SDA, traffic modelling suggests that the new road will be well used as a strategic link in the network and will consequently serve to reduce the overall volume of traffic using the town centre; this being in despite of the general trend of traffic volume being forecast to increase over the same period of time.

In order to maximise the potential benefits of the new road, it is proposed for it to be permitted for use by all traffic except the very largest of vehicles; those with a maximum gross weight in excess of 18 tonnes being prohibited except for the purpose of loading.

Closer examination of the change in traffic flow on 9 main route links as identified in **Figure 8** has been undertaken and the results tabulated below in **Table 5** which shows the difference in modelled traffic volume between the base and future year scenarios over the combined AM/PM peak periods.

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Figure 8: Main Route Link Flow Locations.

Ref	Location	Flow (2011)	Flow (2031)	Diff	% Diff
A	Lubenham Hill (A4304)	1,937	2,412	+475	+25%
G	Welland Park Road	1,699	1,994	+295	+17%
B	Farndon Road	1,464	1,819	+355	+24%
D	Rockingham Road (A4304)	1,792	1,693	-99	-6%
C	Northampton Road (A508)	1,552	1,679	+127	+8%
H	Northampton Road	1,467	1,622	+155	+11%
F	Coventry Road (A4304)	1,756	1,528	-288	-12%
E	St Mary's (A4304)	1,086	1,113	+27	+2%
I	Leicester Road (B6047)	1,197	962	-235	-20%

Table 5 Change in flow on main route links 2011-2031

Analysis of **Table 5** above identifies that in 2031, despite being only a C classified road with extensive traffic calming, Welland Park Road is forecast to be carrying one of the highest vehicle flows across the town, and nearly a third (30%) more traffic than that of the A4304 Coventry Road; to which it already serves as a popular, informal alternative.

Welland Park Road does have many beneficial characteristics over Coventry Road in providing this movement; not least by serving to avoid the immediate town centre (The Square). It is unsurprising therefore that its use to that end is forecast to increase by 2031, whilst a further comparable decrease in flow is to be experienced in the use of Coventry Road.

Clearly there are some disparities both currently and also in the future between the recorded status of some roads and their intended/actual use.

As the correct designation of routes has implications beyond merely the aspired routing of traffic; potentially affecting the funding and scheduling of maintenance activities, planning applications, and the management of third party works (utility company street works etc), it is important to periodically review designations and make changes where appropriate.

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Subject to a detailed viability assessment, rather than resist, it may be preferable for engineering improvements to be made to Welland Park Road that would facilitate the demand; including, if appropriate, being re-designated as the A4304 in favour of Coventry Road so that it can more suitably accommodate the existing and forecast future demand of traffic; thus reducing the dependency on the immediate town centre.

4.7 Travel demand on the network

Sectoral analysis of journeys undertaken in the study area makes it possible to identify the distribution of trips with an origin, destination or both within Market Harborough. This information can assist in understanding the type of infrastructure required in the future, and can serve to highlight the future trend of travel. **Figure 9** shows a plan of the core zones used to determine travel demand.

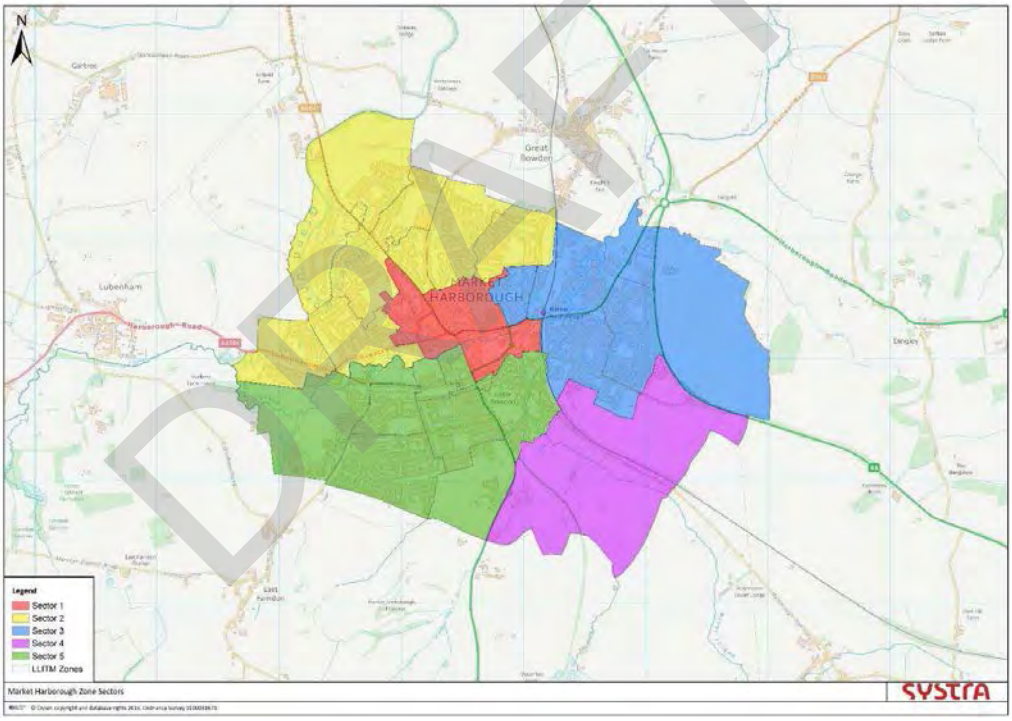

Figure 9: Study area sector plan.

Traffic modelling suggests that 36% of the traffic using the study area over the peak hours in 2011 is making internal trips[3]. That is to say that they have both an origin and destination within the study area.

The greatest proportion of trips on the network are those going from within the study area to outside of the area, or vice versa (internal/external trips); these accounting for 57% of the total.

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Whilst the frequency of future internal trips as a proportion of the total trips being made experiences a drop to a quarter (25%) of all journeys, the absolute number of those internal trips remains to be significant; around 4,000 over the peak hours. Conversely, the frequency of internal/external trips being undertaken increases as a proportion of the total to around 68%.

In view of the above, there would clearly be benefit in encouraging as many ofthose persons as possible to find an alternative to undertaking their journeys by car; reducing the number of vehicles on the network and thus helping to accommodate the forecast growth. Enhancement and extension to thewalking, cycling and public transport infrastructure, coupled with a programmeof behavioural change initiatives is the common practice employed to that end.

It is important also to acknowledge from the sectoral analysis that the majorityof journeys are internal/external; a trend that is forecast to continue. Such journeys are unlikely to be influenced by sustainable/active travel improvements due to their distance and complexity. As such, it is equally as important for improvements to the highway network that will accommodate that demand to be considered, just as it is important to provide for alternative modes.

Table 6 below shows the proportional distribution between the different origins/destinations of trips on the network in both the base and future year scenarios.

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Trip Category	2011 AM		2011 PM	
	Totals (PCUs)	Proportion	Totals (PCUs)	Proportion
Internal to Internal	2,314	35%	2,312	36%
Internal to External	1,774	27%	1,870	29%
External to Internal	2,040	31%	1,701	27%
External to External	422	6%	470	7%

Trip Category	2031 AM		2031 PM	
	Totals (PCUs)	Proportion	Totals (PCUs)	Proportion
Internal to Internal	2,026	25%	2,009	25%
Internal to External	2,517	31%	2,908	37%
External to Internal	3,052	38%	2,379	30%
External to External	485	6%	594	8%

Table 6 Trip origin/destination distribution

4.7.1 Through traffic

Whilst being bordered by the A6 serves to divert much of the potential through traffic, sectoral analysis of journeys undertaken in the study area

indicates around 10% of all trips continue to have neither an origin nor a destination within the study area; a figure that grows broadly in line with the general increase of traffic forecast. **Table 7** shows the proportion of through traffic over the combined peak periods for both the base and future year scenarios.

	Total Traffic	Through Traffic	Through Traffic (%)
2011	8,246	892	11%
2031	10,856	1,079	10%

Table 7 – Through traffic over combined peak periods (PCUs)

However, the distribution of that through traffic does change between the base (2011) and future case (2031) scenarios. The presence of the distributor road in the west of the town results in decrease in the use of internal routes in the town centre; removing traffic journeying between Lubenham Hill and Harborough Road and a larger proportion of vehicles using the strategic network. In the future, those through traffic vehicles are likely to be using the peripheral routes of the study area rather than the town centre.

Figures 10 to **13** illustrate the degree of through traffic for each of the main routes into/out of the town

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Figure 10 : Proportion of through traffic- 2011 (AM)

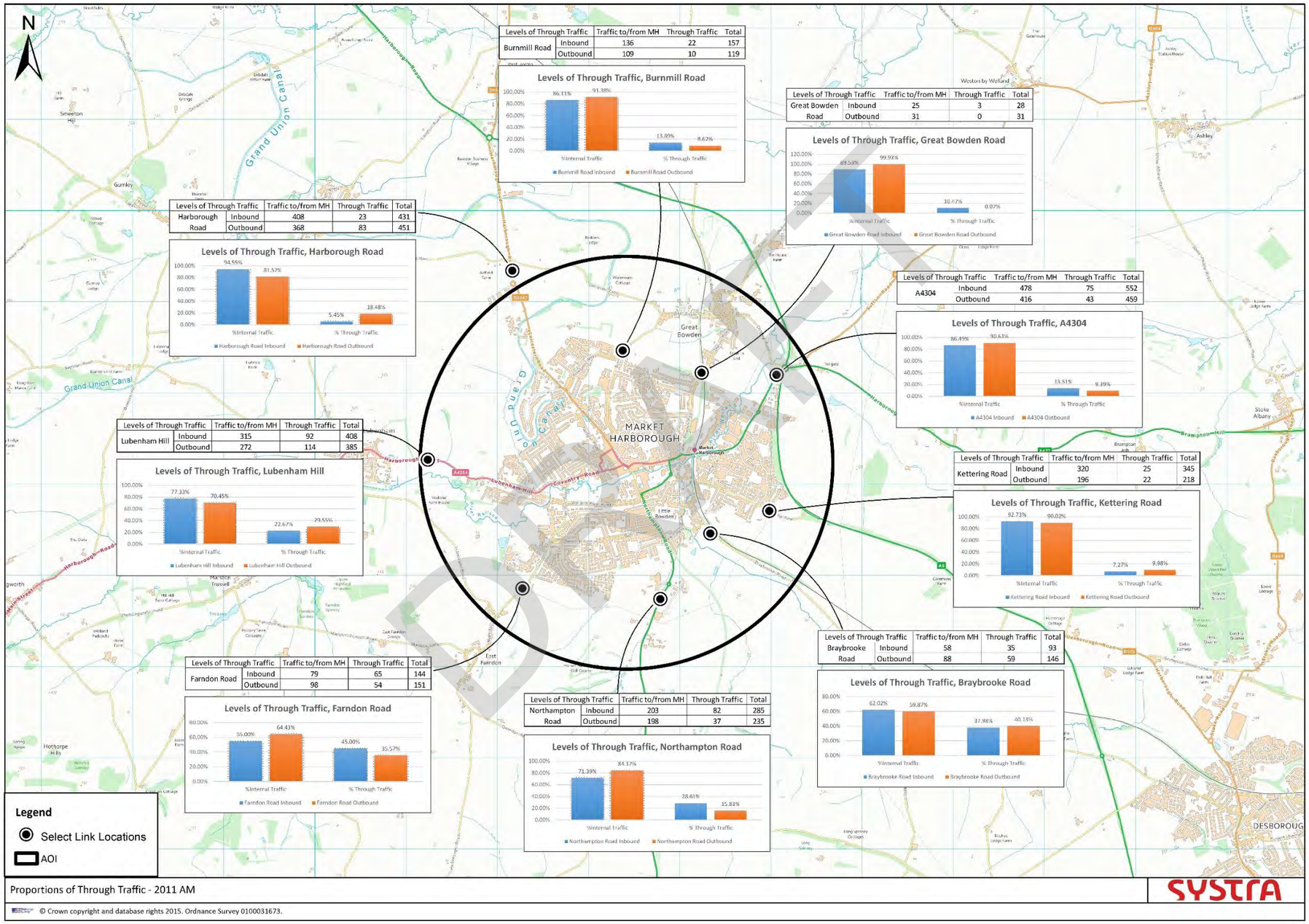


Figure 11 : Proportion of through traffic- 2011 (PM)

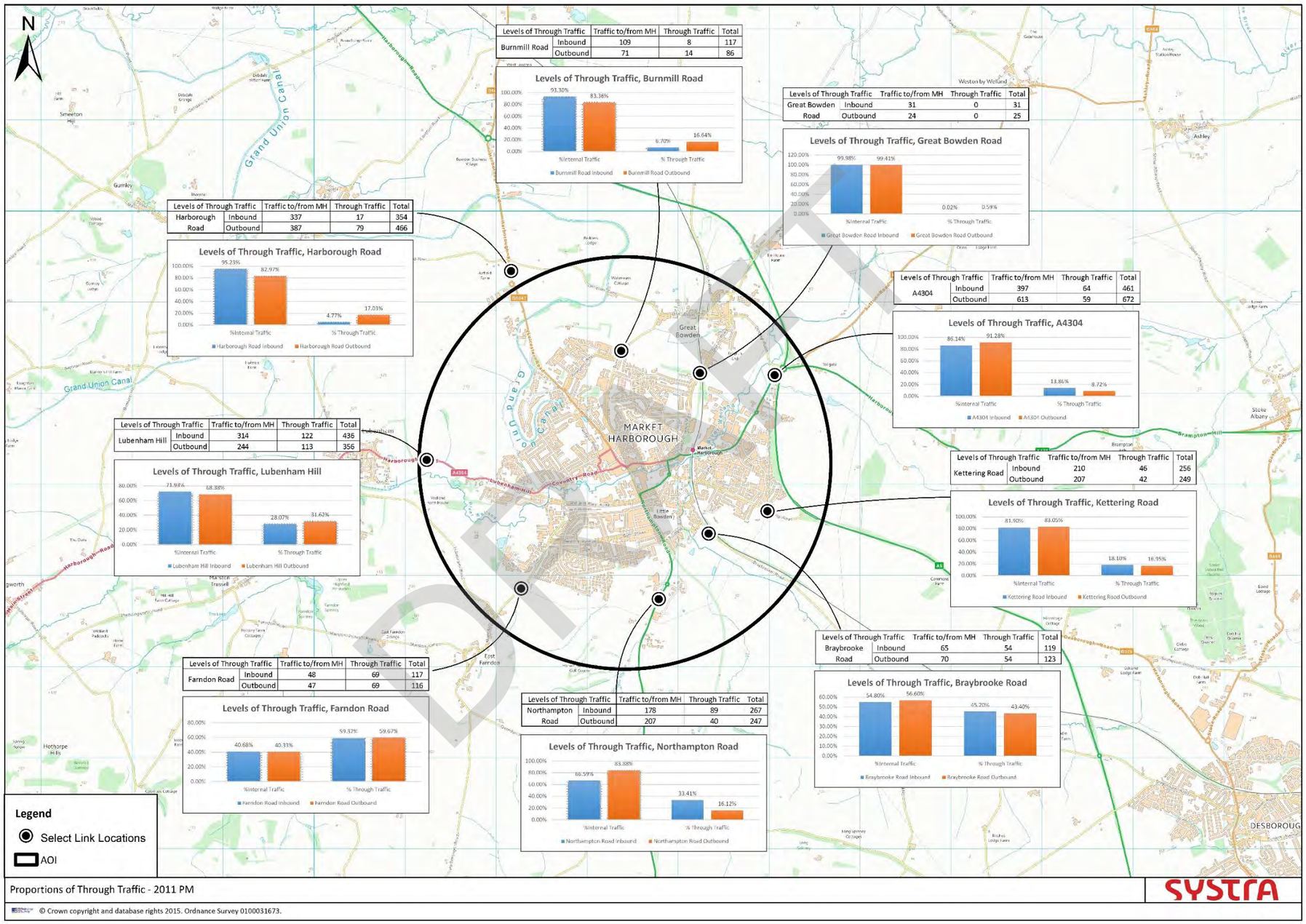


Figure 12: Proportion of through traffic- 2031 (AM)

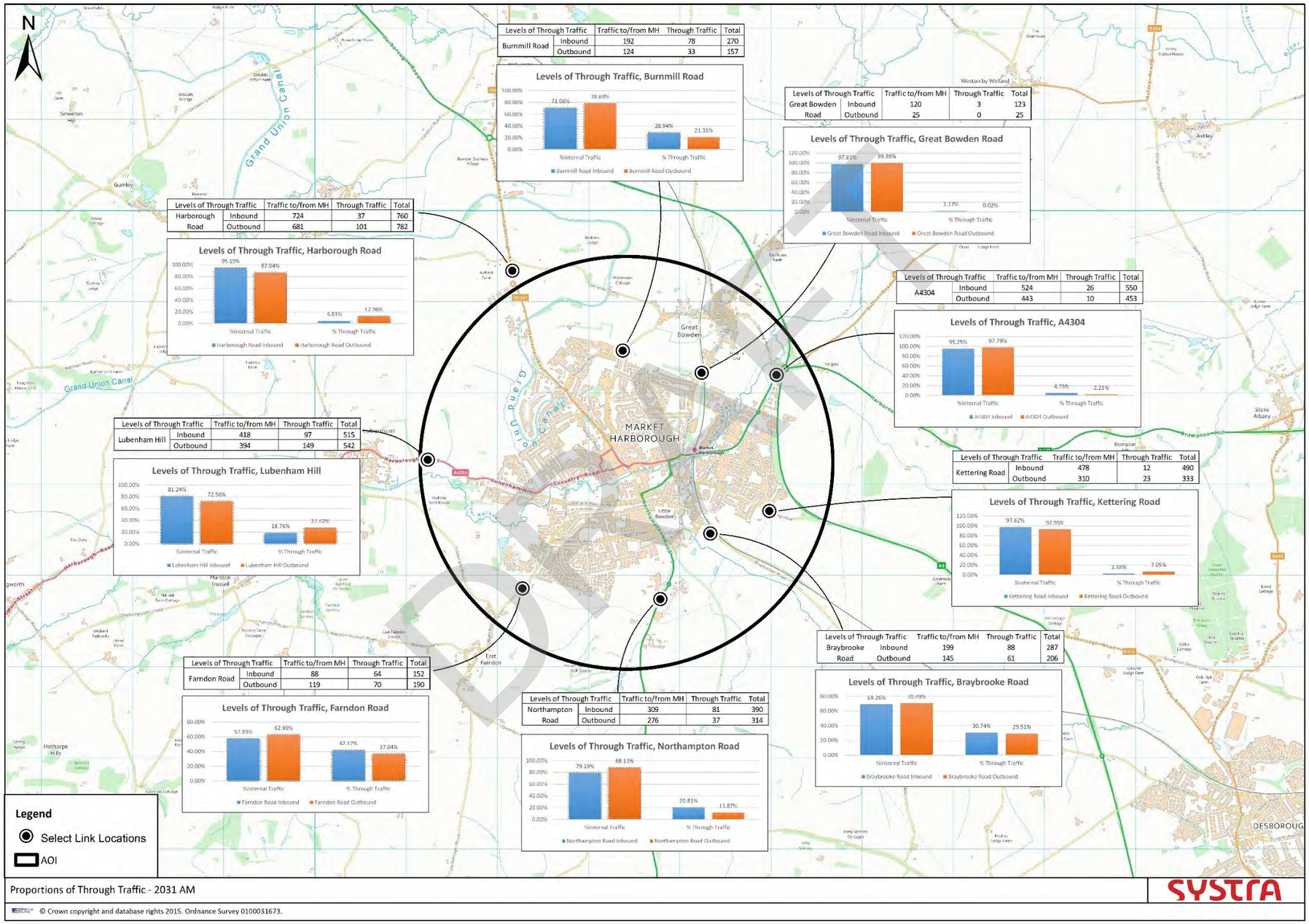
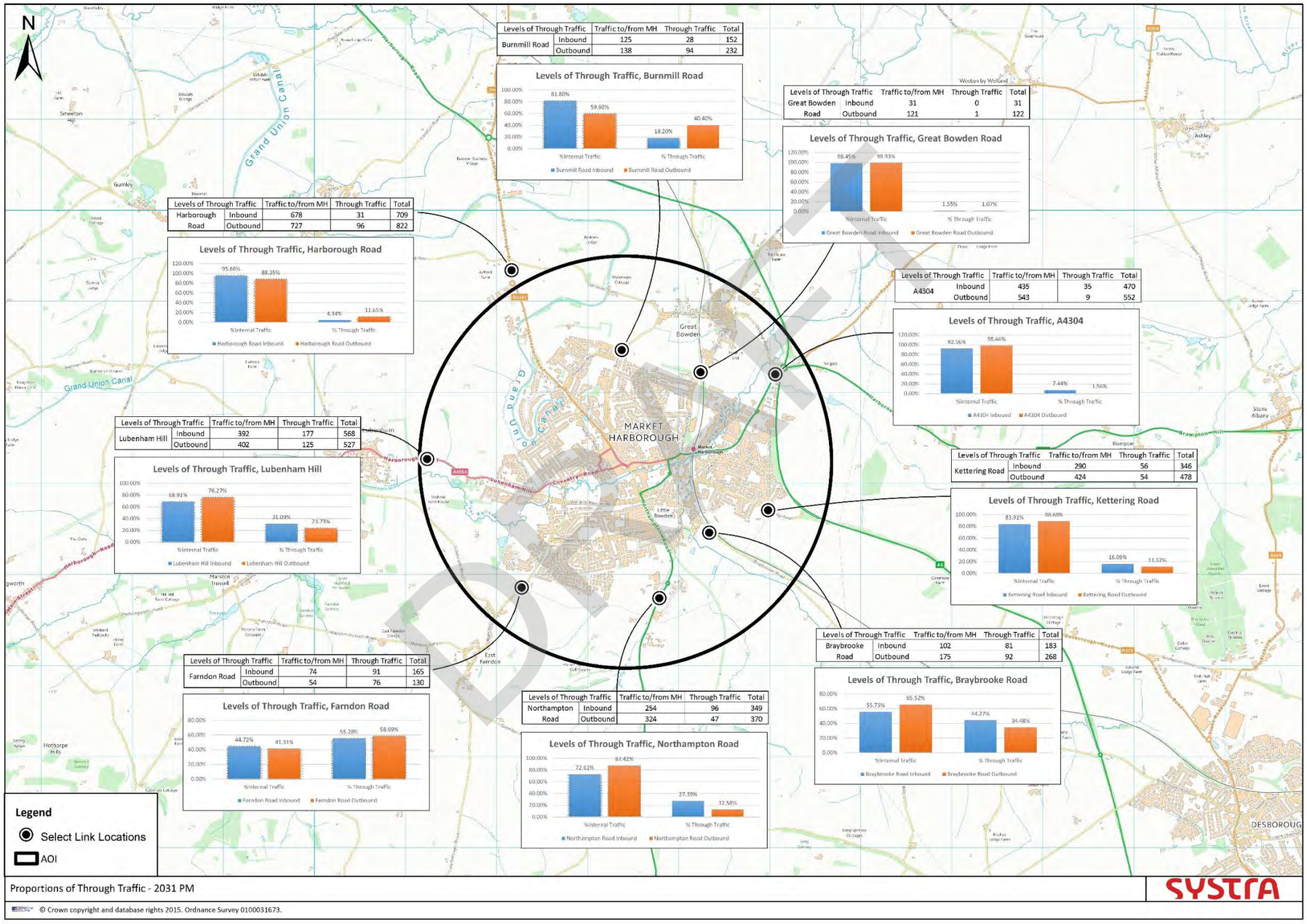


Figure 13: Proportion of through traffic- 2031 (PM)



The following roads are identified to have a high proportion of through traffic in the 2011 peak periods;

- Farndon Road, 50%
- Braybrook Road; 42%
- Lubenham Hill 28%
- Northampton Road; 24%

In 2031, the roads with the greatest proportion of through traffic over the peak periods are;

- Farndon Road 48%
- Braybrook Road; 30%
- Burnmill Road, 26%

Despite the proportion of through traffic using Braybrook Road, Burnmill Road and Farndon Road being comparatively high, the absolute numbers of through traffic on those routes are relatively low.

4.8 Congestion / Network performance

There is a direct link between the performance of a transport network and the economic / social prosperity of an area; easy and reliable access to goods, services, education, and nationally strategic links all being positive influences.

Poorly performing networks often manifest themselves through being congested, unreliable and difficult to negotiate.

Notwithstanding the above, the presence or degree of congestion experienced can be difficult to quantify; often being perceived in very subjective terms, one person's opinion or tolerance will likely vary greatly to another's based on their own personal points of reference.

As such, for the purpose of this study, and in order to quantify and empirically contrast the performance of the network across the study area, congestion will be considered in the context of capacity, delay and journey time.

Network links should, in general terms be free flowing, and any 'congestion' issues are therefore most likely to arise from junctions or other points of potential conflict between different highway users where some form of traffic management measure has been employed to manage their interaction. That management may be formally or informally administered (i.e. traffic signals / zero priority junctions).

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With that in mind, congestion 'hot-spots' will become most evident from the assessment of these highway junctions.

4.8.1 Junction Volume/ Capacity (V/C)

Junction congestion can be measured by determining the ratio of the volume of traffic using a junction, to the capacity of traffic that can theoretically be accommodated by the junction. The figures used in this report have been calculated from LLITM.

Four critical thresholds of V/C percentage are commonly used when analysing data;

- Below 70% V/C — indicates that the link is operating within capacity and therefore remains effective.
- ≥70% V/C — indicates that the link is nearing its effective operational capacity; that some queuing and delay may occur on occasion or at peak times.
- ≥85% V/C — indicates that the link has exceeded its effective operational capacity to the extent that delays and queues are likely to be observed.
- ≥100% V/C — indicates that the link has exceeded its theoretical maximum capacity, and that queuing and delays are likely to be a significant and recurring issue.

Based on the criteria above, LLITM indicates that the junctions shown in **Table 8** are currently exceeding their operational capacity during the morning peak period, to the extent that delays and queues are likely to be observed. Whilst the remaining junctions within the study area may experience some queuing and delay on occasions the model does not show that they are currently exceeding the level of traffic they are theoretically designed to withstand during the morning peak period.

V/C %	AM	PM	Junction
≥100%	✔		A508 Springfield Street / Sainsbury's access
≥85%	✔		A4304 Rockingham / Gores Lane
	✔		A4304 St Marys Road / Clarence Street / A508 Kettering Road
	✔		Welland Park Road / A508 Northampton Road;

Table 8: Junctions in study area currently exceeding operational capacity

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The model further suggests that all junctions in the study area are operating within capacity for the 2011 evening peak period. Is it important to note though that some capacity issues are not picked up through the V/C analysis by LLITM; most common are temporary obstructions, such as on street parking, which disrupts the highway geometry and subsequent flows.

For the future 2031 scenario the following junctions shown in **Table 9** are forecast to be over the 85% threshold during the either the morning and/ evening peak period. Three of four junctions that the model suggests are currently exceeding capacity are forecast to remain over capacity in 2031; the exception is the A4304 Rockingham / Gores Lane junction. An additional three junctions; the A4304 St Marys Road / The Square/ Northampton Road junction, the Springfield Street/ A508 Northampton Road junction, plus the Roundabout of A6/Harborough Road/A4304/Dingley Road are now forecast to be over capacity, with queues and delays more likely to be a frequent issue.

V/C %	AM	PM	Junction
≥100%	✔		A508 Springfield Street / Sainsbury's access
	✔	✔	Roundabout of A6/Harborough Road/A4304/Dingley Road
≥85%	✔		A4304 St Marys Road / Clarence Street / A508 Kettering Road
	✔	✔	Welland Park Road / A508 Northampton Road
	✔	✔	Springfield Street/ A508 Northampton Road
	✔		A4304 St Marys Road / The Square/ Northampton Road

Table 9: Junctions in study area forecast to be over capacity in 2031

Overall the following junctions are thought to be over capacity (exceeding a V/C figure of 85%) either now, or in the future case scenario, to the extent that delays and queues are likely to be observed;

REF	JUNCTION
1	A4304 Rockingham Road /Gores Lane
2	A4304 St Marys Road /Clarence Street/ A508 Kettering Road
3	Welland Park Road/A508 Northampton Road
4	A508 Springfield Street/Sainsbury's access
5	A508 Springfield Street /A508 Northampton Road
6	A4304 St Marys Road / The Square/ Northampton Road
7	Roundabout of A6/Harborough Road/A4304/Dingley Road

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4.8.2 *Junction delay*

Whilst no standard measure exists for delay, it is considered to be reasonableto assume that a perceivable delay to the motorist would be one in excess of 3 minutes.

- The junction of A508 Springfield Street/Sainsbury's access has a delay of in excessof 3 minutes in the morning peak period for both 2011 and 2031 scenarios,
- whilst the junction of the A4304 St Marys Road/Clarence Street/Kettering Road has a delay of between 2 and 3 minutes.
- Additionally, the roundabout of the A6 Harborough Road/A4304/Dingley Road has a delay of between 2 and 3 minutes in the2031 (AM)scenario.
- In both the 2011 and the 2031 evening peak periods scenarios none of thejunctions have a delay in excess of 2 minutes.

Whilst the modelled outputs identify specific junctions, their accuracy should be considered primarily with regard to the identification of trends. It is evident from the plotting of V/C and delay issues that a recurring number of junctions along a particular transport corridor; the A508/A4304 primary route, are suffering the worst.

4.8.3 *Combined Junction Volume/ Capacity (V/C) and Delay*

Those junctions identified to have issues with insufficient capacity or likely delays are shown in **Table 10** have been plotted and can be seen on **Figure 14** below.

Junction REF	(V/C) 2011		(V/C) 2031		Delay 2011		Delay 2031	
	AM	PM	AM	PM	AM	PM	AM	PM
1	≥85%							
2	≥85%		≥85%		2-3mins		2-3mins	
3	≥85%		≥85%	≥85%				
4	≥100%		≥100%		>3mins		>3mins	
5	≥85%		≥85%	≥85%				
6			≥85%					
7			≥100%	≥100%			2-3mins	

Table 10: Junctions in study area with current and future insufficient capacity / likely delays

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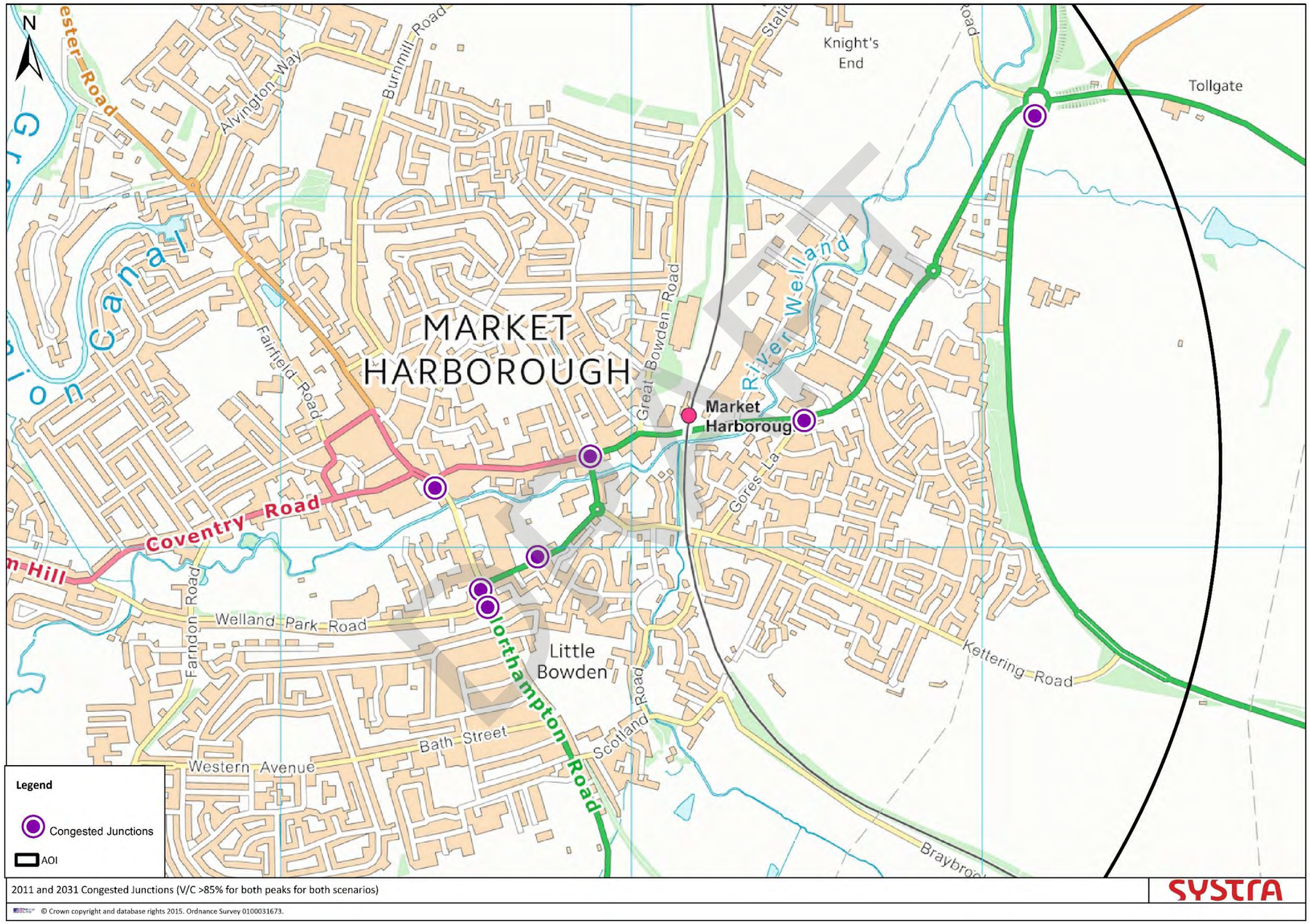
Fig 14: Key junctions with insufficient capacity / likely delays



4.8.4 Journey time analysis

As a barometer of performance across the over network an assessment of journey time on 3 selected routes across the town has been undertaken. The time taken to travel along each of the routes has been modelledand compared between the base (2011) and future year (2031) scenarios. **Figure 15** showsthe 3 pre-determined routes on which journey time analysis has been undertaken.

Figure 15 – Pre-determined routes used in journey time analysis

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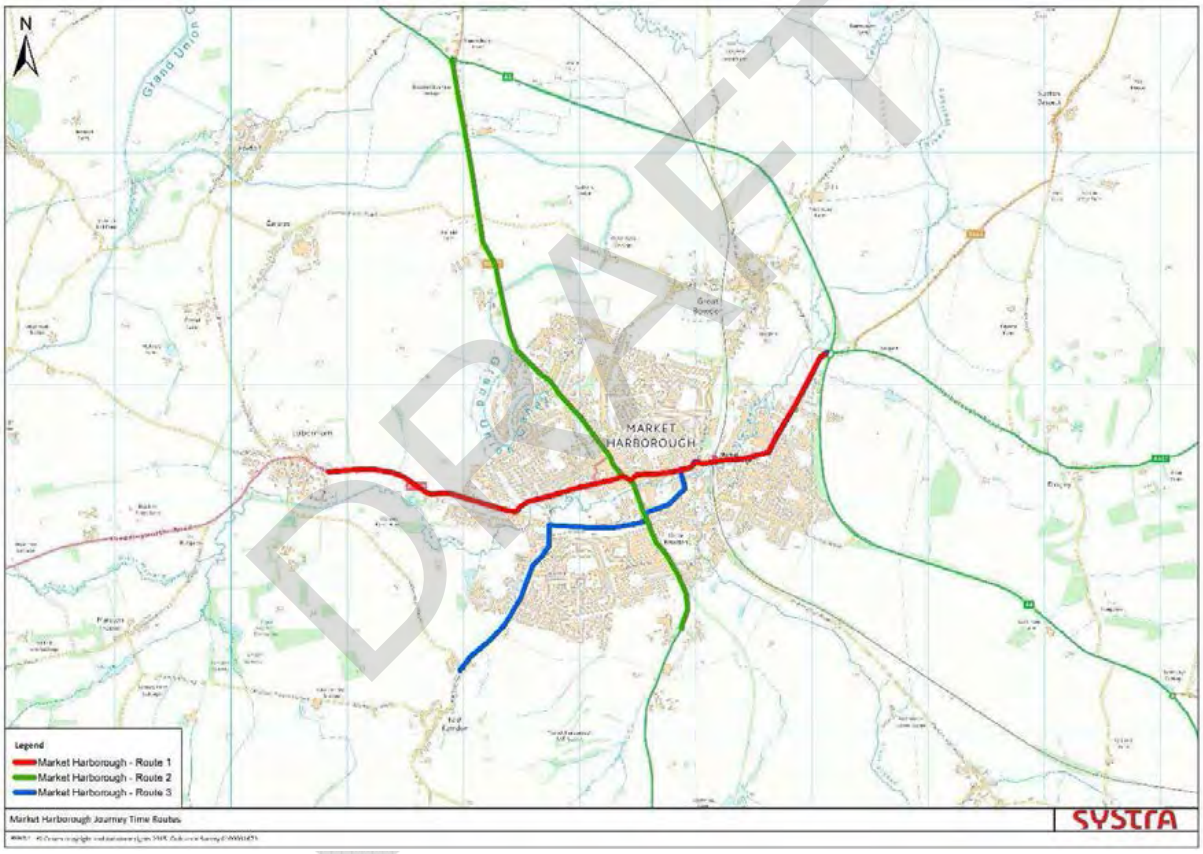

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As shown in **Table 11** .for each route across the study area, journey time is forecast to increase. This is not wholly surprising given the forecast that traffic flows are likely to increase by around 24% and due to the routes taking in each of the key junctions around the study area, which themselves are forecast to experience varying degrees of deterioration in their performance.

Route 2 (Northbound) A508 Northampton Rd to B6047 Leicester Road and Route 2 (Southbound) Leicester Road B6047 to A508 Northampton Rd have the highest change in journey time between the two scenarios for the morning peak. Whilst, Route 3 (Eastbound) Farndon Road to A4304 Rockingham Road and Route 1 (Eastbound) on the A4304 have the highest change in the evening peak period.

	AM			
Route	2011 (seconds)	2031 (seconds)	Change (seconds)	Change (%)
1 (EB)	545	572	+27	+5%
1 (WB)	496	505	+9	+2%
2 (NB)	508	547	+40	+8%
2(SB)	593	632	+39	+7%
3 (EB)	555	549	-6	-1%
3 (WB)	498	502	+3	+1%

	PM			
Route	2011 (seconds)	2031 (seconds)	Change (seconds)	Change (%)
1 (EB)	554	631	+77	+14%
1 (WB)	503	515	+12	+2%
2 (NB)	492	531	+39	+8%
2(SB)	566	611	+45	+8%
3 (EB)	521	606	+84	+16%
3 (WB)	489	499	+11	+2%

Table 11 – Journey times 2011/2031 & AM/PM

Beyond simply looking at the degree of congestion, there are a number of general highway indicators can be used to gauge the performance of the network. These indicators both the direct impact of additional trips owing to development and growth, as well as the indirect re-assignment of non-development trips.

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The four highway indicators considered in this study are as set out below;

Total Travel Distance (PCU Kms)	Total distance travelled over the modelled area
Total TravelTime (PCU Hrs)	Total time travelled over the modelled area.
Over Capacity Queues (PCU Kms)	Time spent queueing at junctions that are over capacity.
Average Speed (Km/Hrs)	Average speed for all traffic in the model area

The figures in **Table 12** show that the time spent queueing at over capacityjunctions, the total distance & time travelled all increase between the baseand future year scenarios; supporting the notion of increased traffic and adecrease in network performance.

Indicator	AM (peak period)			PM (peak period)		
	2011	2031	Difference	2011	2031	Difference
Total Travel Distance (PCU Kms)	30,062	39,685	9,623	29,468	39,474	10,006
Total Travel Time (PCU Hrs)	750	1,004	254	694	971	277
Over Capacity Queues (PCU Kms)	12	45	33	0	22	22
Average Speed (Km/Hrs)	40	39	-1	43	41	-2

Table 12 – Highway Indicators

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4.8.5 Emergency Diversion Routes (EDR)

The A508 and A4304 serve as an emergency diversion route (EDR) for the Strategic Road Network (SRN). When a need arises to temporarily close parts of the A14, vehicles are directed instead via Market Harborough, using A508 and A4304. However, due to the afore mentioned low underpass height at the Rockingham Road bridge, it is necessary for the EDRs to split; high sided vehicles being directed along the B6047 Leicester Road; directly through the heart of the town centre.

Figure 16 shows the EDR routes through the study area

In order to reduce the burden on the town centre, an alternative route for the EDR traffic, and/or an engineering solution to facilitate high sided vehicles under the low bridge on Rockingham Road would be advantageous.

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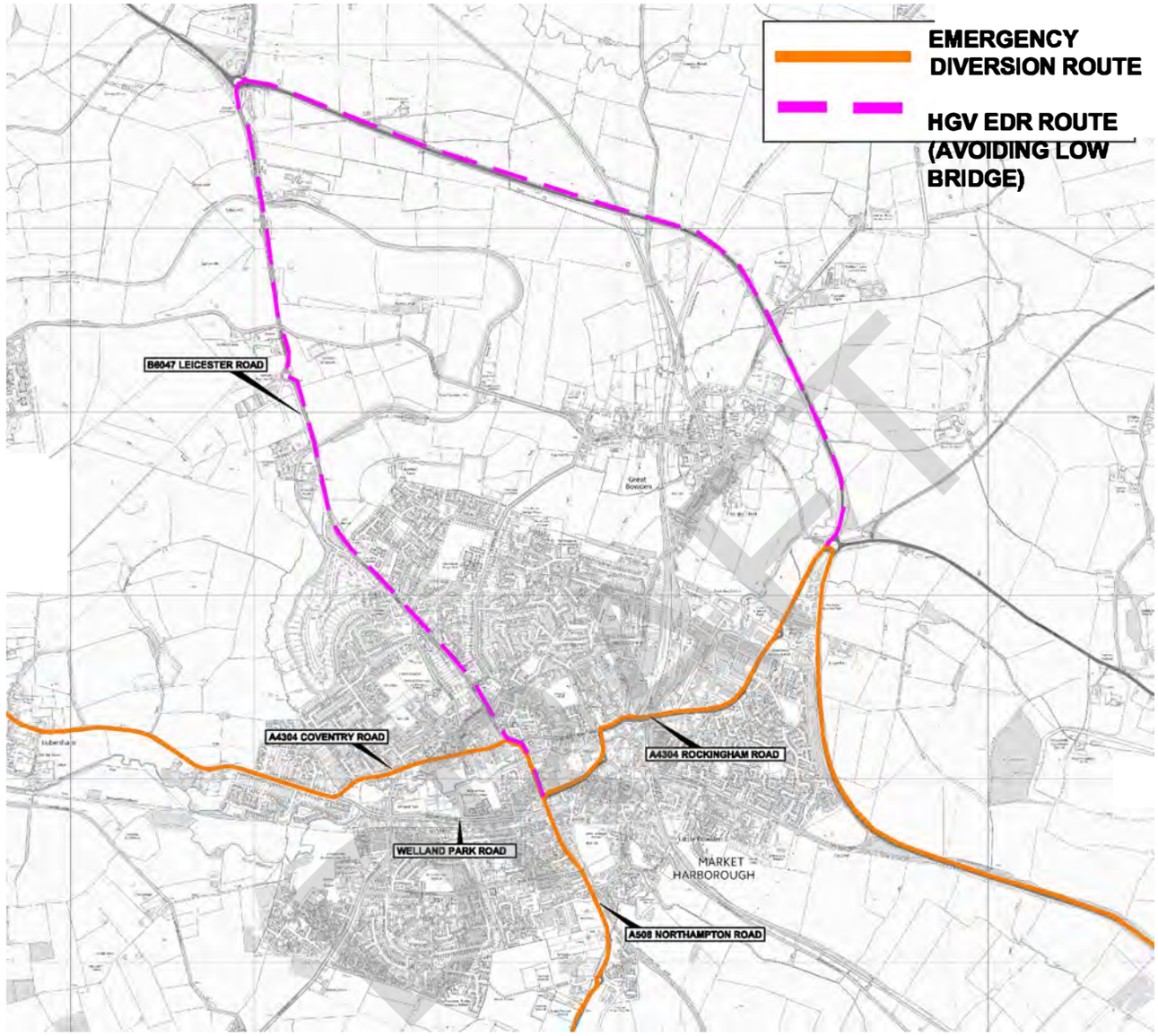
Fig 16 – Roads utilised for EDR routing



4.8.6 Heavy Goods Vehicle (HGV) routing

HGVs (most vehicles with a plated maximum gross weight of 7.5 tonnes or more) provide the essential delivery/collection of goods to/from both commercial and domestic premises throughout the country; a service on which much of industry and commerce is reliant.

However, HGV traffic is often cited as a cause of damage to highway infrastructure, being a danger to pedestrians and cyclists, as well as having a generally undesirable impact on the amenity/character and wellbeing of an area.

The County Council's established practice is that HGVs are encouraged to use strategic A and B classified roads, and where possible other routes are weight restricted to discourage the use of any alternatives. This practice helps to create a balance between maintaining access for HGVs whilst safeguarding an area from their potentially negative impacts.

Low underpass heights at rail bridges over Kettering Road and Rockingham Road restrict passage for some high sided heavy goods vehicles (HGVs), resulting in HGV access to service the south of the town being sought fromthe north via the B6047 Leicester Road.

Whilst the number of recorded instances/complaints of HGVs using unclassified roads in order to take an alternative route through the study area are low, there are a number of residential streets that do lend themselves to such exploitation and it would be desirable if the opportunity arose for those routes to be prohibited for use by HGVs (except for loading) to avoid any continued or increased use by HGVs in the future.

The limited number of routes around the study area, coupled with the need to retain through route access for HGVs owing to the low bridges and EDR requirements currently preclude any attempt to impose significant HGV controls, beyond those already in place (as shown in **Figure 17** in much of the study area, and to do so would only be feasible should an alternative be found to divert the classified routes away from the town centre.

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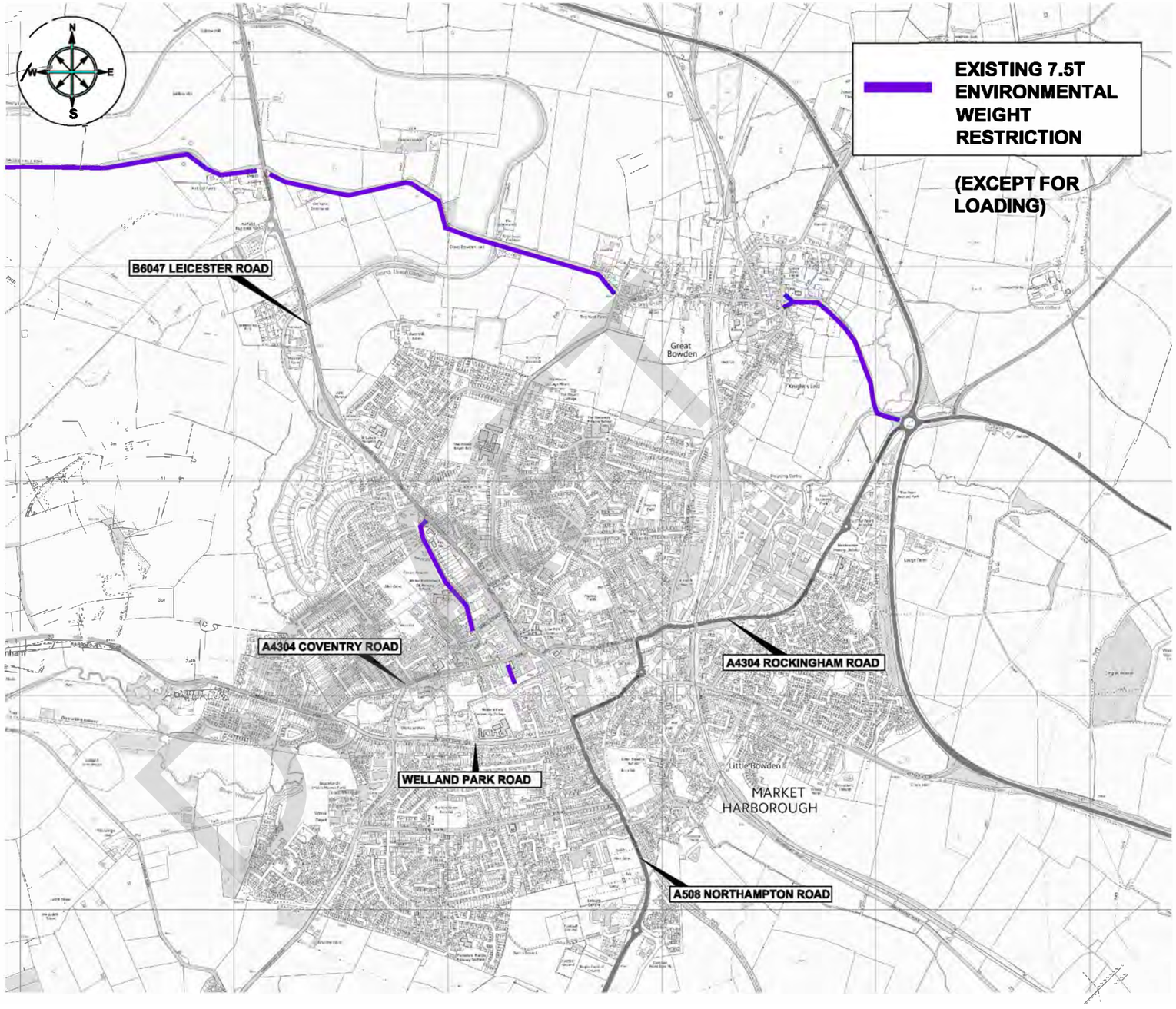
Fig 17 – Existing 7.5t HGV restrictions



4.9 Walking, cycling and public transportation

4.9.1 *Walking and Cycling*

Market Harborough already enjoys an extensive cycle and walking network due to investment in infrastructure made possible over the past 25 years through projects such as the Bypass Demonstration Project, Millennium Mile, Sustrans national cycle network and through local development. The existing network is shown in **Figure 18.**

Although there is decent walking and cycling infrastructure in and around Market Harborough, it would appear that provision has, in places, failed to keep pace as development and amenities have evolved. As such, the provision is now quite disjointed and some existing elements would also benefit from upgrading.

An upgraded walking and cycling network, free of barriers will help to maintain Market Harborough as an attractive place to live, work and visit; encouraging more residents to change to more sustainable travel modes; enable sustainable development and provide a high quality environment that people feel safe to walk and cycle in.

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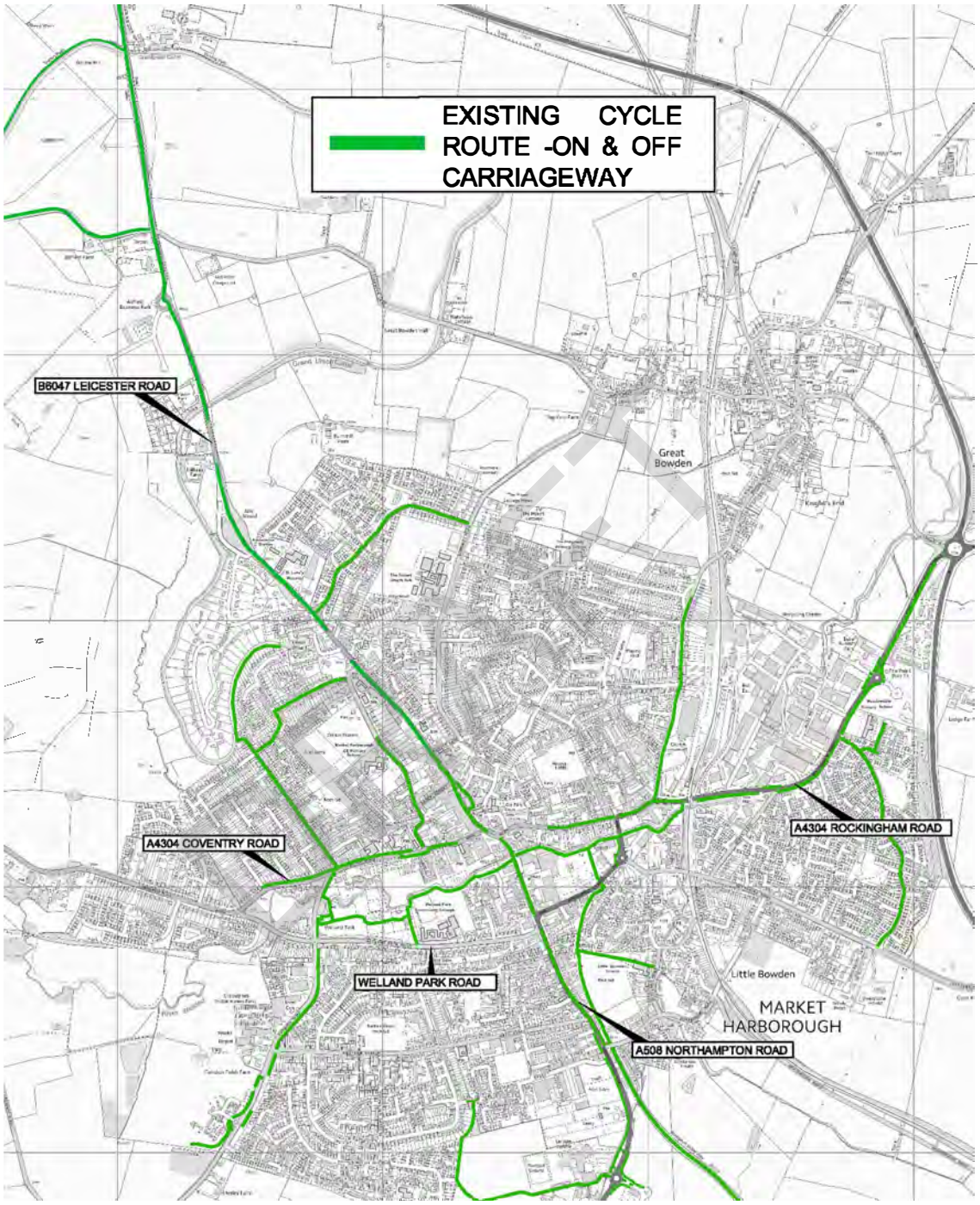
Figure 18: Existing cycle network in study area



4.9.2 *Buses*

Currently, there are 12 bus services operating at 103 bus stops in Market Harborough and the surrounding areas of Great Bowden, Lubenham and Little Bowden.

These are provided through a mix of commercial and supported local bus services. The commercial network provides some local connections within the town and also key links to Leicester, Corby and Northampton. The supported services provide more local connections with the town centre facilities.

The main hubs for public transport in Market Harborough are located in the Square and outside the Market Hall. Good quality infrastructure (bus stops, shelters and accessible kerbs) support bus service operation at key locations across the town. However local requests for better connections and infrastructure at the Rail Station have been received and there may be opportunities to explore this as part of the plans to upgrade Market Harborough Station. These plans are described in the 'Rail' section of this report

The majority of bus stops in the study area are at fixed locations identifiedby a bus stop flag. There are 6 bus routes where buses operate a hail andride service on part of the route. These are mainly on estate roads.

Within the study area, there are 18 bus stops with shelters, 33 have raised kerbs and 35 have facility for timetable information. Details of the current timetable and bus routes are shown in **Figure 19**.

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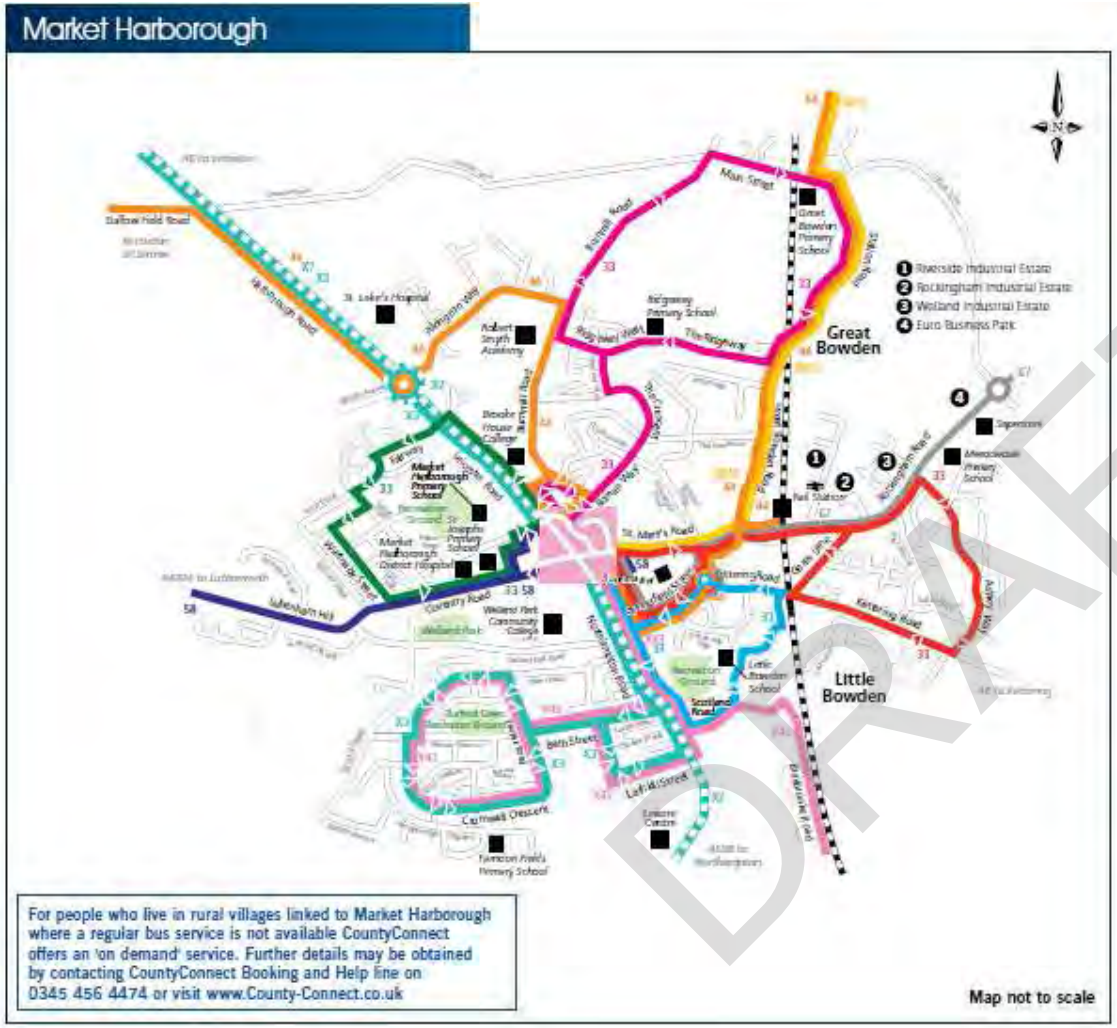

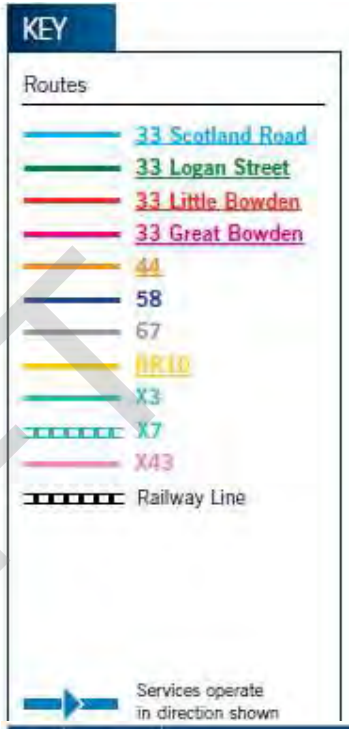

Service	Operator(s)	Route	FREQUENCY Monday - Saturday Daytime	Monday - Saturday Evenings	Sunday and Bank Holidays
33	Centrebus	MARKET HARBOROUGH Town Service: Scotland Road	hourly	no service	no service
33	Centrebus	MARKET HARBOROUGH Town Service: Logan Street	hourly	no service	no service
33	Centrebus	MARKET HARBOROUGH Town Service: Little Bowden	hourly	no service	no service
33	Centrebus	MARKET HARBOROUGH Town Service: Great Bowden	hourly	no service	no service
44	Centrebus	Heckney via the Langtons - MARKET HARBOROUGH - Foxton	2 hourly	no service	no service
58	Hinckley Bus	MARKET HARBOROUGH - Lutterworth - Hinckley ◆	infrequent	no service	no service
67	Centrebus	MARKET HARBOROUGH - Corby - Gretton	infrequent Monday-Friday	no service	no service
RR10	Centrebus	Rural Rider MARKET HARBOROUGH - Oakham	0900 Saturday only	no service	no service
X3 ●	Arriva	MARKET HARBOROUGH - Kibworth - Oadby - Leicester	30 mins	no service	hourly
X7	Stagecoach	Northampton - MARKET HARBOROUGH - Leicester	hourly	infrequent Mkt Harborough - Leicester ■ (hourly Mkt Harborough - Northampton)	hourly ■
X43	Stagecoach	MARKET HARBOROUGH - Kettering - Northampton	hourly	no service	no service
X43	Stagecoach	MARKET HARBOROUGH Town Service: Southern Estates	hourly	no service	no service
CC	Centrebus	CountyConnect MARKET HARBOROUGH - Surrounding areas	infrequent	no service	no service

KEY:
● Extends to/from Southern Estates for early morning/late afternoon journeys ■ Operates via Great Glen
◆ Service operates as B between Lutterworth - Hinckley, please stay on bus for through journey but with limited connections for reverse journey

Fig 19 Bus timetable and routing

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With regard to route locations, frequency and duplication of services, buses in Market Harborough are run by commercial operators and they are responsible for managing their routes and timetables within a commercial market.
As part of this study bus stops on existing routes within the study area have been considered for upgrading in order to improve accessibility and availability of information.

4.9.3 *Rail*

Market Harborough is located on the Midland Mainline. London St Pancras International is 70 minutes south. Northbound trains operate to Leicester Nottingham, Sheffield, Leeds and York.

The train station is located on Rockingham Road around ½ mile from the town centre (The Square); it is used by approximately 1250 passengers per day (2014).

There are two current and notable projects of note being undertaken by Network Rail on the rail network in the Market Harborough area.

Midland Mainline line speed improvement

As part of their enhancement works programme for the Midland Mainline, Network Rail are proposing to re-align the track through Market Harborough rail station, reconstruct the platforms and add new station facilities as part of their line speed improvement programme.
The County Council and Harborough District Council will work with Network Rail to ensure Netwrok Rail proposals:

- increase car parking capacity at the station,
- provide bike storage facilities,
- improve disable access,
- encourage bus services that currently terminate in the Town Centre to terminate at the train station where this is commercially viable
- take account of car parking issues in adjacent residential streets

The works do not include the reconstruction of the rail bridge over Rockingham Road.

Little Bowden Level Crossing

In July 2015, the railway level crossing in Little Bowden (that links Glebe Road to Braybrook Road) was closed by Network Rail. The company stated that this closure was under the Health & Safety at Work Act. The County Council has been seeking assurances from Network Rail that a solution to reinstate this pedestrian route will be provided at the earliest opportunity.

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Initially, Network Rail had proposed signalling changes to make the warning lights at the level crossing more consistent. However, Network Rail has since stated funding is available to provide a bridge at the site, and this is now their objective. This will also take account of future electrification. Network Rail has advised the County Council that preliminary work has begun on a bridge to replace the level crossing and that this proposal will require planning permission. This planning permission will be sought through Harborough District Council. Network Rail has yet to confirm a programme to construct this bridge and re-open this pedestrian route.

The County Council will work with Network Rail, to ensure that any roadworks and road closures associated with the above works on the rail network do not clash with other works on the highway network - or each other, and help to plan appropriate diversion routes to minimise disruption. Furthermore, the County Council, in its capacity as Local Highway Authority, will check proposed designs as they develop to ensure the highway network is restored as close to its original layout as feasible, and to seek enhancements where appropriate and possible.

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4.10 Traffic signing

By ensuring that certain classes/types of vehicles and journeys are undertaken on the most appropriate route; that suitable contingencies are in place for diverting traffic around incidents; and by keeping motorists well informed, directional traffic signing can make a significant contribution to creating a well-managed and resilient transport system that seeks to reduce the carbon footprint of Leicestershire, whilst helping to improve the safety and quality of life for those who live, work and visit the county.

Traffic signing is also used extensively to require and prohibit actions of certain highway users, as well as inform and warn them of potential hazards; contributing positively to reducing congestion and improving highway safety.

However, poor traffic signing is often criticised as being unsightly, costly to maintain, confusing, contradictory, unnecessary, or even an obstruction to pedestrians, cyclists and other vulnerable highway users. Often too easilynow overlooked in an age of satellite navigation, there is clearly still merit in arobust system of traffic signing. That notwithstanding, it is near impossible totruly quantify the positive impact traffic signing can have. Traffic signing in the study area, as with many market towns, has been installed incrementally to meet emerging needs over a number of decades, see photograph in **Figure 20** Whilst a localised effort to reduce and rationalise, or 'de-clutter' a number of the towns traffic signs was undertakenin recent years, there has been little opportunity to give wider consideration toan overriding strategy.

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In order to ensure that the traffic signing in Market Harborough remains fit for purpose in the future, it is thought to be advantageous for a thorough review of all traffic signing to be undertaken and where necessary revisions made to implement a consistent signing strategy throughout the town, taking due consideration of the location, size, content and design of each sign. Where localised highway alterations / improvements are undertaken, the opportunity to review traffic signing should be included in the context of a wider overriding strategy.

Fig 20 - Traffic signs – The Square, Market Harborough

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4.11 Speed limit distribution and recorded vehicle speeds

As with most settlements in the county, much of Market Harborough is covered by a 30mph speed limit; this being reflective of the function of the roads concerned, the mix in different types of highway users, the presence and frequency of likely conflict points, and the density of residential properties.

Figure 21 shows the distribution of speed limits across the study area and in and **Figure 22** the actual mean and 85th percentile speeds recorded are presented. Locations have been highlighted where at least one of those speed readings is at, or in excess of the Association of Chief Police Officers' (ACPO) threshold for enforcement. That is to say, the point at which the Police will more readily take active enforcement action against those driving in excess of the posted speed limited and where manufacturer inaccuracies in a vehicles speedometer would be unlikely to form a credible defence.

The recorded speeds are positive and reflect a general adherence to the limits across the study area. Where the recorded speed is in excess of the ACPO limit it may be beneficial to look in greater detail as to whether any engineering measure would be appropriate to restrain speeds.

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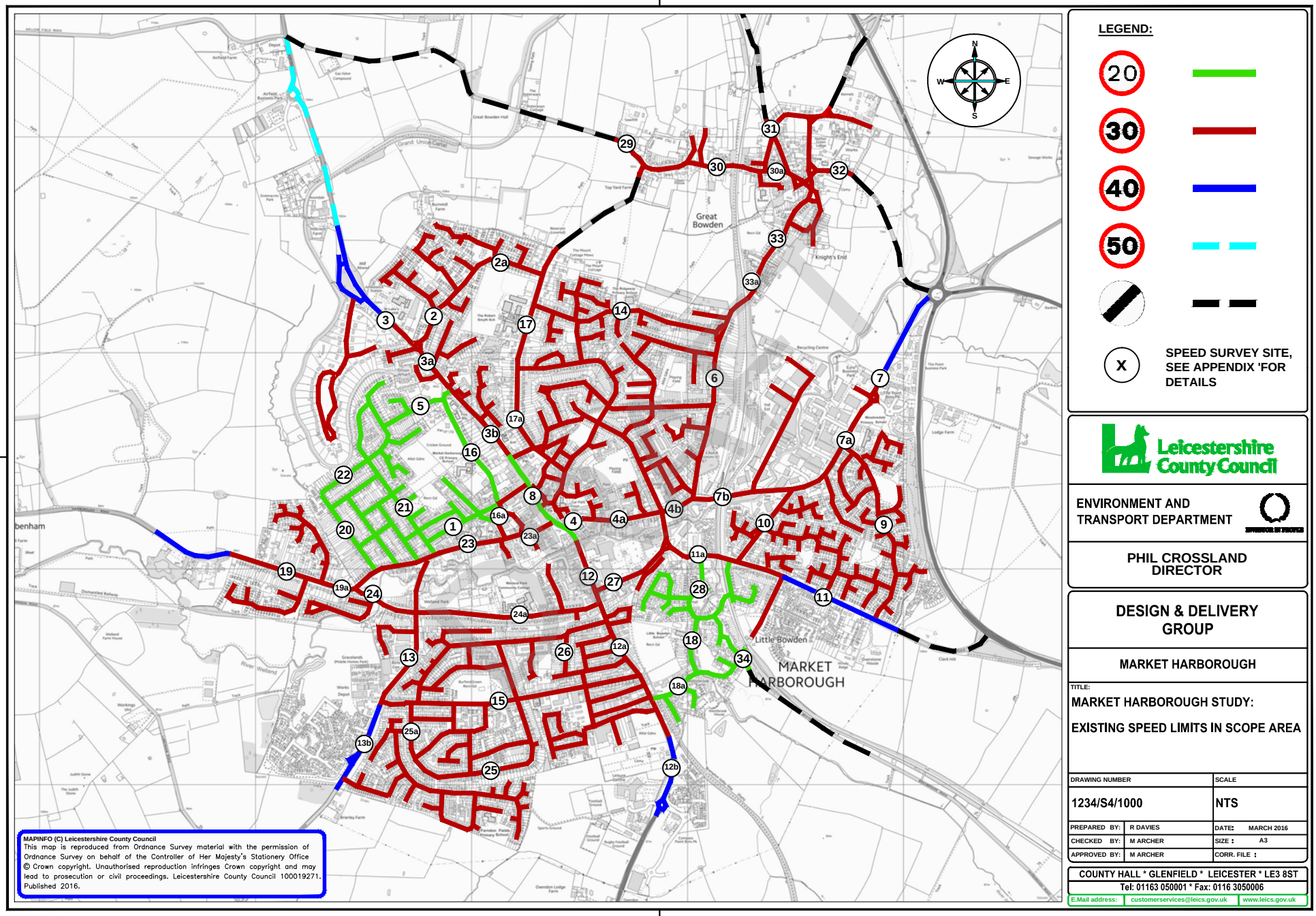
Fig 21 - Distribution of speed limits



Map Ref	Location	Mean speed (mph)		85th %-ile (mph)		Within ACPO limit	Type	Date	Aprrox time
1	Nelson Street	14.7 (E)	15.5 (W)	21 .0 (E)	19.0 (W)		Radar	Jun-15	9:00 - 9:45 1 day
2	Alvington Way	24.12 (N)	26.55 (S)	27.64 (N)	30.26 (S)		ATC	Jun-15	00:00 - 00:00 7 day
2a	Alvington Way	15.0 (E)	15.0 (W)	17.0 (E)	18.0 (W)		Radar	Mar-09	11:00 - 12:00 1 day
3	Leicester Road	36.9 (NW)	34.8 (SE)	42.0 (NW)	39.0 (SE)		Radar	Jun-15	11:50 - 12:30 1 day
3a	Leicester Road	29.43 (W)	24.37 (E)	32.7 (W)	27.29 (E)		ATC	Jun-15	00:00 - 00:00 7 day
3b	Leicester Road	29.6 (N)	28.6 (E)	34.0 (N)	32.0 (S)		Radar	Jun-15	10:30 - 11:05 1 day
4	St Marys Road	15.51 (E)	13.51 (W)	17.66 (E)	15.29 (W)		ATC	Jun-15	00:00 - 00:00 7 day
4a	St Marys Road	23.9 (E)	23.5 (W)	28.0 (E)	26.0 (W)		Radar	Jun-15	10:00 - 10:55 1 day
4b	St Marys Road	19.36 (E)	24.28 (W)	24.69 (E)	27.44 (W)		ATC	Jun-15	00:00 - 00:00 7 day
5	Fairway	23.9 (E)	22.5 (W)	28.0 (E)	26.0 (W)		Radar	Jun-15	11:05 - 11:50 1 day
6	Great Bowden Road	25.4 (N)	25.6 (S)	29.0 (N)	29.0 (S)		Radar	Jun-15	11:00 - 12:05 1 day
7	Rockingham Road	35.41 (N)	33.0 (S)	39.12 (N)	36.16 (S)		ATC	Jun-15	00:00 - 00:00 7 day
7a	Rockingham Road	32.5 (NE)	30.4 (SW)	35.0 (NE)	34.0 (SW)		Radar	Jun-15	12:10 - 12:35 1 day
7b	Rockingham Road	26.3 (E)	26.4 (W)	29.0 (E)	29.0 (W)		Radar	Jul-15	12:35 - 13:00 1 day
8	High Street	16.4 (NW)	14.8 (SE)	19.0 (NW)	18.0 (SE)		Radar	Jun-15	9:00 - 10:00 1 day
9	Ashley Way	22.7 (N)	21.5 (S)	26.0 (N)	26.0 (S)		Radar	Jun-15	08:25 - 09:10 1 day
10	Gores Lane	32.7 (NE)	32.0 (SW)	38.0 (NE)	37.0 (SW)		Radar	Jul-15	07:30 - 08:25 1 day
11	Kettering Road	39.7 (E)	38.9 (W)	47.0 (E)	43.0 (W)		Radar	Jun-15	09:10 - 09:50 1 day
11a	Kettering Road	26.0 (E)	27.0 (W)	29.0 (E)	30.0 (W)		Radar	Mar-09	10:00 - 10:45 1 day
12	Northampton Road	22.05 (N)	25.78 (S)	25.41 (N)	28.75 (S)		ATC	Jun-15	00:00 - 00:00 7 day
12a	Northampton Road	27.3 (N)	27.8 (S)	31.0 (N)	32.0 (S)		Radar	Jun-15	10:30 - 11:10 1 day
12b	Northampton Road	32.18 (N)	29.86 (S)	35.26 (N)	32.98 (S)		ATC	Jun-15	00:00 - 00:00 7 day
13	Farndon Road	30.1 (NE)	29.5 (SW)	35 (NE)	33.0 (SW)		Radar	Jun-15	12:00 - 12:30 1 day
13b	Farndon Road	27.6 (N)	29.7 (S)	32.0 (N)	34.0 (S)		Radar	Jun-15	12:30 - 13:30 1 day
14	Ridgeway West	16.1 (E)	15.3 (W)	20.0 (E)	19.0 (W)		Radar	Jun-15	12:15 - 13:15 1 day
15	Western Avenue	21.2 (E)	21.5 (W)	24.0 (E)	25.0 (W)		Radar	Jun-15	11:15 - 12:00 1 day
16	Fairfield Road	28.1 (N)	24.5 (S)	33.0 (N)	29.0 (S)		Radar	Jun-15	07:45 - 08:25 1 day
16a	Fairfield Road	-	-	20.4 (E)	20.3 (W)		Radar	Nov-09	00:00 - 00:00 3 day
17	Burnmill Road	23.9 (N)	23.2 (S)	28.0 (N)	26.0 (S)		Radar	Jun-15	09:00 - 09:30 1 day
17b	Burnmill Road	29.0 (N)	28.0 (S)	32.0 (N)	31.0 (S)		Radar	Nov-09	13:15 - 14:20 1 day
18	Scotland Road	19.1 (N)	20.7 (S)	22.0 (N)	24.0 (S)		Radar	Jun-15	07:30 - 08:15 1 day
18a	Scotland Road	19.0 (NE)	19 (SW)	22.0 (NE)	22.0 (SW)		Radar	May-09	10:45 - 12:00 1 day
19	Lubenham Hill	30.0 (E)	31.4 (W)	33.0 (E)	36.0 (W)		Radar	Jun-15	09:30 - 10:15 1 day
19a	Lubenham Hill	29.37 (E)	29.37 (W)	31.52 (E)	32.24 (W)		ATC	Jun-15	00:00 - 00:00 7 day
20	Gardiner Street	20.2 (N)	20.1 (S)	26.0 (N)	24.0 (S)		Radar	Jun-15	10:30 - 11:00 1 day
21	Logan Street	18.7 (NW)	19.2 (SE)	21.0 (NW)	22.0 (SE)		Radar	Jun-15	11:30 - 12:30 1 day
22	Knoll Street	19.0 (NE)	17.0 (SW)	19.0 (NE)	20.0 (SW)		Radar	Jun-15	11:00 - 11:30 1 day
23	Coventry Road	22.5 (E)	20.5 (W)	26.0 (E)	25.0 (W)		Radar	Jun-15	09:45 - 10:30 1 day
23a	Coventry Road	N / A	16.62 (W)	N / A	18.93 (W)		ATC	Jun-15	00:00 - 00:00 7 day
24	Welland Park Road	27.87 (E)	27.72 (W)	30.18 (E)	30.49 (W)		ATC	Jun-15	00:00 - 00:00 7 day
24a	Welland Park Road	24.0 (E)	24.0 (W)	26.0 (E)	27.0 (W)		Radar	Oct-10	08:30 - 09:30 1 day
25	Cromwell Crescent	32.0 (E)	31.0 (W)	36.0 (E)	34.0 (W)		Radar	May-08	07:30 - 08:45 1 day
25a	Cromwell Crescent	29.0 (N)	29.0 (S)	33.0 (N)	32.0 (S)		Radar	May-08	08:45 - 09:45 1 day
26	Newcombe Street	-	-	18.0 (N)	17.0 (S)		Radar	Aug-08	00:00 - 00:00 4 day
27	Springfield Street	22.35 (E)	22.28 (W)	25.03 (E)	25.23 (W)		ATC	Jun-15	00:00 - 00:00 7 day
28	Rectory Lane	25.0 (N)	26.0 (S)	28.0 (N)	29.0 (S)		Radar	Mar-15	10:00 - 11:15 1 day
29	Leicester Lane	30.0 (NW)	29.0 (SE)	33.0 (NW)	31.0 (SE)		Radar	Nov-09	07:55 - 09:00 1 day
30	Main Street	27.0 (E)	28.0 (W)	30.0 (E)	30.0 (W)		Radar	Nov-09	11:15 - 12:10 1 day
30a	Main Street	24.0 (W)	24.0 (E)	27.0 (W)	27.0 (E)		Radar	Nov-09	12:15 - 13:15 1 day
31	Langton Road	31.0 (N)	30.0 (S)	34.0 (N)	33.0 (S)		Radar	Mar-08	07:45 - 08:45 1 day
32	Dingley Road	24.0 (E)	25.0 (W)	26.0 (E)	29.0 (E)		Radar	Nov-09	13:30 - 14:30 1 day
33	Station Road	30.0 (NE)	31.0 (SW)	33.0 (NE)	35.0 (SW)		Radar	Nov-09	10:00 - 11:00 1 day
33a	Station Road	29.0 (NE)	29.0 (SW)	32.0 (NE)	33.0 (SW)		Radar	Nov-09	11:00 - 11:50 1 day
34	Braybrooke Road	25.0 (NW)	25.0 (SE)	28.0 (NW)	25.0 (SE)		Radar	May-08	10:00 - 11:15 1 day

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Leicestershire County Council

ENVIRONMENT AND TRANSPORT DEPARTMENT

INVESTOR IN PEOPLE

PHIL CROSSLAND
DIRECTOR

DESIGN & DELIVERY GROUP

LOCATION: MARKET HARBOROUGH

TITLE: SPEED DATA FOR EXISTING SITES

DRAWING NUMBER		SCALE
		NTS
PREPARED BY:	R DAVIES	DATE: MARCH 2016
CHECKED BY:	M ARCHER	SIZE: A4

COUNTY HALL * GLENFIELD * LEICESTER * LE3 8RJ
Tel: 0116 2323232 * 0116 3050001 * Fax * 0116 3050006
Email address: customerservices@leicsgov.uk | Website: www.leics.gov.uk

Figure 22 - Actual recorded speed data

4.12 Parking

4.12.1 *Provision*

There is a mix of parking provision within Market Harborough, which includes County Council provided and managed on-street parking and District Council provided and managed off-street parking.

There are a number of off street car parks in the town centre available for shoppers, visitors and workers. The car parks are divided between long stay and short-stay. The arrangement of off –street car parks can be seen in **Figure 23.**

As shown in **Table 13** below there are 108 on street short-stay (40mins) parking places within close proximity of the core town centre (The Square) to facilitate short shopping trips. Further away from the immediate town centre there are a number (27) of longer-stay (2 hours maximum stay) spaces in St Mary Road. Outside of these locations on-street parking is generally uncontrolled (i.e. there are no restrictions on the period of stay).

Road name	**Control**	**Spaces**
Adam & Eve Street	40 mins	7
Bowden Lane	40 mins	11
Church Square	40 mins	12
Coventry Road	40 mins	4
High Street	40 mins	67
Kings Head Place	40 mins	7
Sub-Total		*108*
Roman Way	2 hours	27
TOTAL		135

Table 13 – On-street parking spaces, Market Harborough Town Centre source: Draft '*Harborough Parking Strategy*'

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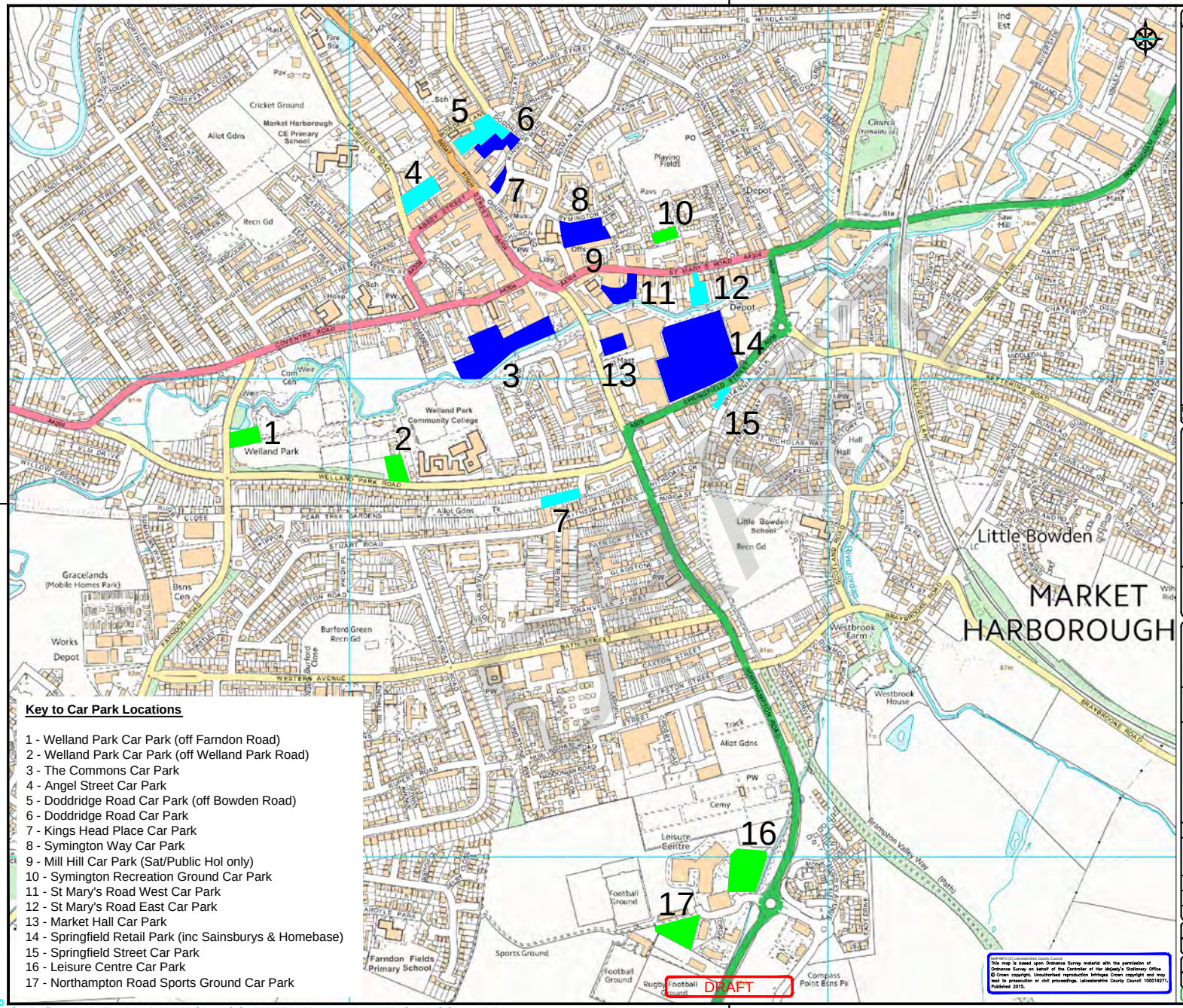
Fig 23 - Map to show car park locations



4.12.2 Usage

The following information regarding the occupancy of on- street parking spaces is sourced from the draft '*Harborough Parking Strategy*'.

Weekday parking demand on-street is very popular for short-stay visits (40 minutes maximum stay, free of charge). In the majority of town centre locations all the spaces are occupied during the peak period of the day. The two hour maximum stay bays are also in significant demand, being fully occupied most of the day.

On Saturdays, town centre on-street parking demand in the town is again popular although occupancy rates are lower than during the week. The parking demand on the uncontrolled sections of road is reduced, indicating that all-day (commuter) parking demand is reduced. On-street parking demand is reduced, primarily due to the availability of the Market Place and a reduced demand in Station Road (abutting Market Place). The on-street parking spaces are well used for short stay visits. The occupancy rate exceeds 85% in the vast majority of instances during the week. On Saturday the occupancy rate is reduced, with a greater number of visitors/shoppers using the car parks for anticipated stays of longer than 40 minutes.

4.12.3 Additional issues / demand

On-street parking throughout the town is mostly free of charge; there are two controlled 'workplace' parking permit zones in place in industrial areas in the vicinity of the train station. These zones were introduced to control parking overflow from the train station car park. They provide a number of day time on –street parking spaces for businesses on Clarence St, Fernie Road and Riverside. Businesses/employees pay a yearly charge, however the zone does permit motorists to park for free, for a maximum of 2hrs.

Longer term the County Council are exploring the potential of charging for short stay on-street parking on the highway in market towns and other larger urban areas . It is anticipated that implementation of such a scheme could assist with the management of parking demand.

There is demand in the Newcombe street / Granville Street area of the town for residents only permit parking, however in general requests for parking provision / parking controls involve more localised issues.

Moving forward it is essential that one coherent parking strategy is developed for the town incorporating a range of measures/parking controls which take into account the parking requirements of local residents, shoppers, visitors, disabled motorists, local business and workers.

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4.13 Accident Investigation

All recorded instances of a Road Traffic Collision (RTC) resulting in personalinjury; hereafter referred to as 'accidents', are bought to the attention of the County Council by Leicestershire Police using the nationally adopted 'STATS19' reporting process.

Collisions not reported to the Police, or where no personal injury arises as a result of the collision are generally not bought to the attention of the County Council. Whilst accounts of such instances may serve as anecdotal evidence, they would not typically be referenced in a quantitative assessment of highway safety.
Poorly performing traffic networks can often manifest themselves as a poor accident record; being indicative of conflicting movements, inappropriate traffic speeds, poor highway design, or general user frustration/confusion.

Accident data is therefore an important indicator of not only potential highway safety problems, but also the overriding performance of a network/link/junction.

4.13.1 Accident trend (comparable & absolute)

The extent of an accident problem, i.e. their frequency and severity, must be considered in relative terms. Analysis shows that 293 accidents were recorded in the Market Harborough study area[4] over the 10 year period 2005-2014. **Table 14** shows how those accidents contribute to the accident totals for;

i. the county of Leicestershire
ii. the 'built up' area of the county (those roads with a speed limit of 40mph or less)
iii. the Harborough District area
iv. the Market Harborough study area

That data is plotted by means of an index in **Figure 24** to illustrate the relative trend in accident frequency between each category.

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[4] Study area excludes the A4304/A6/A427 roundabout which is within the Northamptonshire county boundary.

Category	Accidents (per calendar year)										Total
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
County	2,079	1,908	1,777	1,677	1,589	1,566	1,414	1,396	1,388	1,449	**16,243**
'Built Up Area'	1,046	938	848	867	853	843	710	825	735	759	**8,324**
Harborough District	299	290	248	242	226	215	205	195	190	184	**2,294**
Study Area	29	28	34	37	28	36	17	31	19	34	**293**

Table 14: Accident totals 2005 – 2014

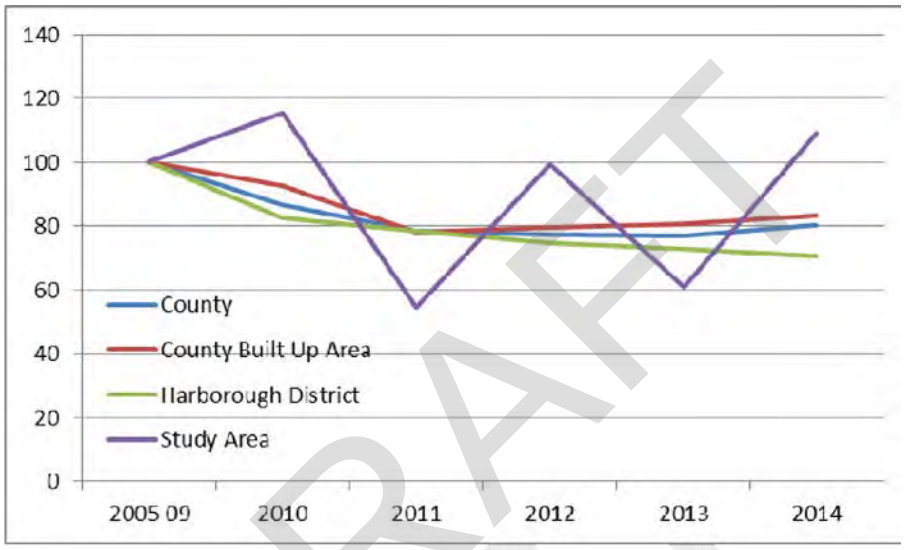

Figure 24; Graph to show relative trend in accident frequency between each category.

As the study area is largely made up of roads subject to a speed limit of 40 mph or less, the 'Built Up Area' category ought to provide the best tool for comparison in understanding how the accident trend in the study area compares with that of other broadly similar roads in the county.

Unfortunately however, and as can be seen in **Figure 24,** the likelihood of drawing any meaningful comparison between the two entities appears to be limited. This is likely attributable to the variation in accident frequency year on year within the study area; something that is regularised when considered in the 'Built Up Area' category which includes a far greater number of roads.

Whilst the trend of accidents in the study area cannot reliably be contrasted against that of all other similar roads in the county (built up area), it is still possible to analyse the general trend of the study area in itself.

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Making use of the data in **Table 9** and using the 5 year average between 2005-2009 as a base figure, it is apparent that the frequency of accidents in 2014 were 20% lower across the County as a whole, 17% lower in the 'built up areas' of the county, 30% lower in Harborough district, and 9% higher in the study area. However, the study area will be more prone to showing an increase due to the sensitivity involved which such comparatively low figures. When the accident rate in the study area is plotted as a trend, these variancesare regularised out; and it is evident that the frequency of accidents in the study area is actually in steady decline (see **Figure 25**).

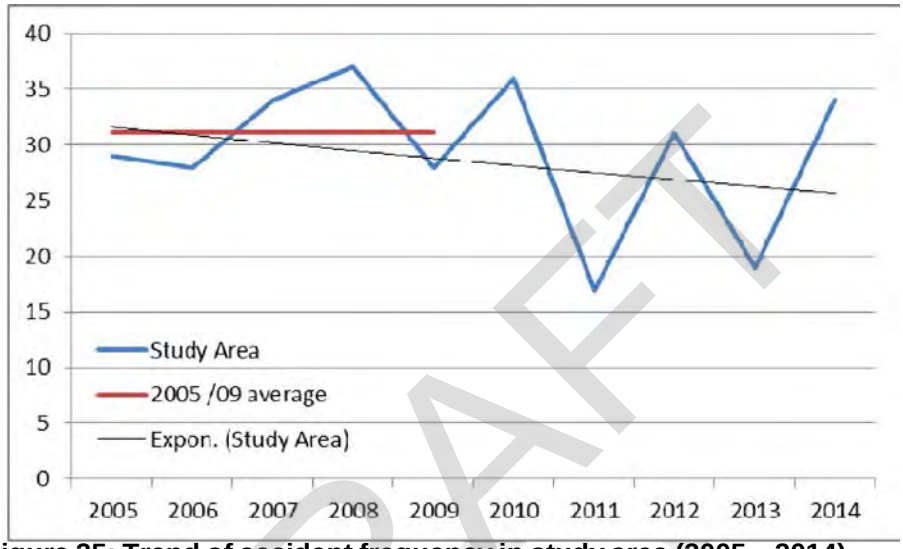

Figure 25: Trend of accident frequency in study area (2005 – 2014)

4.13.2 *Accident frequency (comparable and absolute)*

Due to the restricted geographical area inherent to most local studies, it is expected that the absolute frequency of accidents recorded will be proportionately low when considered in respect of the 'county' and 'built up area' wide totals. Accidents recorded in the Market Harborough study area are no different; being less than 2% and 4% respectively.

A more important indicator is how the absolute frequency of accidents compares to other broadly similar areas in the county; namely that of other market town centres.

In the absence of defined study areas for other market towns, a comparison of absolute accident numbers for settlement boundaries has been used instead; see **Table 15**.

It is apparent that the Market Harborough area records a consistently low rate of accidents when compared to that of other similar areas in absolute terms.

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Settlement	Year						
	2005/09 Average	2010	2011	2012	2013	2014	2005/14 Total
Market Harborough	22.2	31	11	24	10	27	214
Ashby de la Zouch	24.2	17	14	15	14	20	201
Coalville	41.4	34	31	31	23	27	353
Hinckley	70.6	45	53	45	46	63	605
Loughborough	116.2	116	96	84	95	103	1,075
Melton Mowbray	43.2	47	40	45	43	32	423

Table 15: Accidents in built up (40 mph or less) areas of settlements

4.13.3 *Accident distribution*

Of the 293 accidents recorded across the overall study area between 2005-2014, analysis shows that they primarily occur on the main 'A' and 'B' classified roads through the town.

Despite being concentrated to the main routes, accidents are widely distributed, with very few locations that could reasonably be considered as a cluster site, or area of particular concern.

71% of the accidents involving a pedestrian are concentrated within an area of roughly half a mile in radius of the town centre.

4.13.4 *Casualty type and severity*

The 293 accidents recorded in the study area resulted in 366 casualties, of which;

a) 2 were fatalities
b) 36 were classed as 'serious'
c) 328 were classed as 'slight'

Of the 293 accidents;

a) 261 involved a car
b) 47 involved a cyclist
c) 44 involved a motorcyclist
d) 42 involved a pedestrian
e) 6 involved a goods vehicle

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Table 16 shows a breakdown of those casualties by the type of highway user and compares those figures as a proportion of the total with that of the county as a whole, and the 'built up area' of the county. Also tabulated and compared are the proportion of those accidents classed as Killed or Seriously Injured (KSI); that being the number of fatalities and serious casualties combined.

User type	Severity			Study Area Total	Study Area %	County Built Up Area %	Study Area KSI %	County Built Up Area KSI %
	Killed	Serious	Slight					
Pedestrian	1	6	36	43	12	16	18	28
Cyclist	0	5	42	47	13	12	13	14
M'cyclist	0	14	30	44	12	11	37	23
Car	1	11	202	214	58	58	32	32
Bus	0	0	3	3	1	1	0	1
Goods veh	0	0	15	15	4	2	0	2
Other	0	0	0	0	0	1	0	0
Total	2	36	328	366	100	100	100	100

Table 16: Frequency of casualty type and severity 2005 - 2014

Proportionally speaking, the study area has a broadly similar breakdown of casualty type as other built up areas in the county; the only negative difference of note being a higher proportion of motorcycle KSI casualties.

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4.13.5 *Predicted accident frequency*

Making use of Department for Transport (DfT) guidance, it is possible to make high level predictions of the likely accident frequency on any given link; effectively providing a benchmark against which a site can be compared forthe rate of accidents with other similar sites in the country.

Using the above procedure, the 4 main links crossing the study area have been assessed to compare their actual accident rate with that of their predicted accident rate (see **Table 17**).

a)	A4304 (WEST)	between parish boundary on Lubenham Hill to High Street and The Square (including one way sections)
b)	A4304 (EAST)	between The Square and the county boundary on Rockingham Road
c)	A508	between St Mary's Road and the 30/40mph speed limit terminal
d)	B6047	between The Square and the 40/50mph speed limit terminal

Links assessed for predicted vs actual accident frequency

Link	Length (km)	Average Annual Daily Traffic	Annual Accident Frequency	
			Predicted	Actual
A4304 (West)	2.01	9,116	4.7	4.4
A4304 (East)	1.99	13,106	6.7	3.4
A508	1.83	10,634	5.0	2.8
B6047	1.69	10,690	4.6	2.8

Table 17 Predicted vs. Annual Accident Frequency by Link (2005-2014)

It is clear that the frequency of accidents recorded falls below that which might typically be expected nationally given the status of the links and the density of the trafficusing them.

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4.14 Environment (Public Realm)

Whilst the public realm of an area may not share the obvious ties with transportation that are evident with walking, cycling and congestion etc; there are clear and well defined links between a high quality public realm and the economic prosperity of local businesses that depend on patronage by foot. The same can be said for tourism and the general desirability of living or working in an area.

As much of the town centre occupies highway designated land, a transport study such as this affords a unique opportunity to review the public realm and ensure that it remains fit for purpose. Likewise, any incidental changes to the public realm that might arise from other proposals can be more sympathetically accommodated.

The existing public realm is predominately focussed around the St Dionysius Church and the Old Grammar School in the town centre; much of which is covered by the Market Harborough Conservation Area. A number of listed buildings contribute to the attractiveness of this historic market town. Whilst elements of the public realm are criticised as looking 'tired' and 'out of date', it remains in a safe and serviceable condition.

Furthermore;

- The pedestrian link between the town centre and the train station could be improved by a major redesign of the parking bays and tree planting areas and refurbishment of the footways.
- The pedestrian link between the main car park and the town centre could be improved.
- The pedestrian link along the Millennium Mile to the town centre could be improved
- There is an opportunity to improve the appearance of the bus hub in front of the Market Hall.

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4.15 Highway Maintenance

Highway maintenance activities normally revolve around statutory obligations and duties contained in various legislation, and as a result do not normally fall into overarching transport strategies. Though, in light of the size and scope of the study, it will necessary to incorporate/ consider maintenance activities in relation to the other associated proposals.

The road network as a whole in Market Harborough is in a reasonably good condition. Reductions in Central Government funding over the past five years has naturally had in impact on the amount of cyclic maintenance that can be delivered (i.e. resurfacing work), however every effort is being made to maximise the resilience of the network with the available funding. **Appendix C** details identified schemes and aspirations in the study area.

4.16 Flooding

Flooding can place significant stress on our transport network and cause issues for the local population and economy. An efficient drainage system is therefore an important factor in the reliance of the transport network.

4.16.1 *Site Background*

Market Harborough is situated on hills and valleys falling towards the River Welland. The River Welland runs from west to east and effectively bisects the town (north and south). The town centre is located on the northern side of the River Welland. The River Welland is classified as a 'Main River' which means that the Environment Agency has permissive powers to undertake work to reduce flood risk. The town centre is located within Flood Zone 1 of the Environment Agency Main River flood map. The Environment Agency defines Zone 1 as a location *'where flooding from rivers and the sea is very unlikely. There is less than a 0.1 per cent (1 in 1000) chance of river flooding occurring each year'.*

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4.16.2 *Drainage systems and responsibilities*

There is only a single watercourse within Market Harborough town centre and this is the River Welland. The town centre is served by both a combined and dedicated storm public sewer system. This system is maintained by Anglian Water as the relevant water and statutory sewerage authority. The responsibility for lateral connections onto the main sewer varies and can either be the responsibility of the adjacent landowner or water company (Anglian Water). The public sewer network across England and Wales (and particularly in historic towns such as Market Harborough) has evolved rather than been designed.

The County Council is responsible for maintaining highway gullies (drains) and the lateral connections to the public sewer. This is indicated by **Figure 24** below:

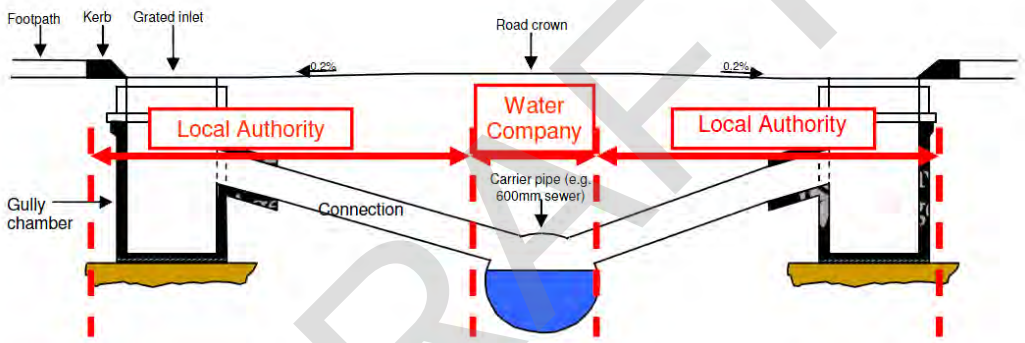

Fig 26 : Highway Drainage Responsibilities

4.16.3 *Drainage schemes*

In 2005 Anglian Water installed an attenuation tank within the Commons Car Park to retain storm water and provide a 1:30 year level of protection to the town centre (broadly around The Square).

More recently in early 2015, Anglian Water installed new surface water drainage from Coventry Road to the River Welland to further increase the drainage capacity from the town centre and reduce the flood risk to businesses and residents on Coventry Road.

The County Council is intending to improve highway drainage at the junction of Welland Park Road and Northampton Road. Improvements will need to be coordinated with any vehicle capacity junction improvements derived from this study.

Further investigation of flooding problems at Nithsdale Avenue and Northampton Road is also proposed.

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4.17 Street lighting

In 2010 the authority made a commitment to invest in LED lighting technology to reduce the financial cost and environmental impact of the running of street lights. The project continues previous work already undertaken to switch off certain street lights between midnight and 5am.

The £25.1m programme of conversion to LED lighting is being part funded by a successful bid to the Department for Transport for £5.1m and will see the conversion to LED of the county's entire stock of 68,000 street lights.

The new technology allows the lighting to be centrally operated meaning the Council can truly tailor individual lanterns to operate at their most effective level; being switched on/off at hours of low demand, and dimmed where amenity issues require.

The programme of LED conversion in Market Harborough is scheduled to commence in Spring 2017.

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4.18 Chapter summary

The following section provides a summary of the key transport issues identified during Phase 1 of the study

Findings

The key transport findings below are based on various sources of information; whilst in some cases they appear to be obvious and well known, the study provides the evidence necessary to support bidding opportunities. They are derived from the study and relate to the current and future condition and performance of the transport network.

Traffic volume in the town is forecast to increase by 24% between 2011 (base year for the study) and 2031. Transport modelling work indicates increased queues and travel time on the network as a result.

It is evident from transport modelling and site observations that there are a number of junctions within the study area that currently, and in the future perform more poorly than others. Those junctions are:

- A6 / B6047 (aka McDonalds Roundabout)
- The Square / St Mary's Road / Coventry Road
- Northampton Road / Springfield Street
- Northampton Road / Welland Park Road
- Springfield Street / Kettering Road
- St Mary's Road / Kettering Road / Clarence Street
- Rockingham Road / Gores Lane
- A6 / Harborough Road / Dingley Road / A4304
- Sainsbury's store entrance / Springfield Street

Traffic modelling work suggests that during the peak traffic periods:

- the greatest proportion of trips on the network are those going from within the study area to outside of the area, or vice versa.

- around a third of the trips using the study area over the peak hours in 2011 were making internal trips.

- 'through' traffic (traffic using the roads in the town to get to/from destinations outside the town) accounts for approximately 10% of trips.

Two of the three 'A' and 'B' classified routes (the B6047 and the A4304) within the study area both converge on The Square and therefore much of the traffic in the study area is reliant upon using the very heart of the town centre; in excess of 13,000 vehicles per day.

Feedback from local residents and stakeholders suggests that this results in an unwelcome mix of vehicular traffic in an area which local residents and stakeholders feel ought to be primarily dominated by pedestrians.

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The classification of roads in the study area is not wholly representative to the amount of traffic they currently carry and are forecast to carry in the future.

The control and management of HGV and high sided vehicles (typically HGVs) routing through the town is constrained by low underpass height on a number of bridges, often necessitating passage to sites in the south of the town from the north via the town centre.

Whilst a localised scheme to reduce sign clutter in The Square was carried out in the town recently, traffic signing across the area lacks a coherent strategy and is in need of review.

Infrastructure for walking, cycling and public transport is generally quite good. However, there are clear gaps in the existing elements, which would benefit from improving.

Both on-street and off-street parking is generally well catered for in the study area. However, it is essential that one coherent parking strategy is developed for the town, incorporating a range of measures/parking controls which take account of the parking requirements of local residents, shoppers, visitors, disabled motorists, local business and workers.

All but a small minority of recorded vehicle speeds are generally in line with the posted speed limits and do not cause undue concern for highway safety.

Market Harborough consistently records a comparatively low level of road traffic collisions, compared to other similar areas (towns) in the county. Furthermore the frequency of accidents on the 4 main routes across the town, the A4304 (west), A4304 (east), A508 and B6047, fall below that which might be expected on similar roads nationally.

Feedback from early stakeholder workshops suggests that the town centre's public realm is perceived to be in need of updating

Without addressing the traffic issues within the town through the combinationof highway improvements, walking and cycling improvements, delivered in combination with a series of complimentary softer measures, it is likely that the area will continue to suffer from congestion which will ultimately limit the delivery of housing. In addition, it is likely that the town will become less attractive to developers, reducing housing and economic growth in the area.

Failing to address congestion will stifle growth, leave the town centre poorly connected and prevent economic growth opportunities from being exploited.

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5.1 Recommendations & Strategy Development

5.2 Chapter Overview

Chapter 5 provides draft recommendations, based on the issues and findings presented in the previous chapter, for an evidence led package of strategic transport measures/ outputs to take forward for the town.

5.3 Recommendations for outline transport strategy

The draft recommendations shown in **Table 18**, have been identified to address theissues highlighted in the previous chapter.

Each recommendation has been evaluated on the basis of key desired transport outcomes identified in Chapter 2. Taken together the recommendations provide the foundation for an initial outline transport strategy.

The table of draft recommendations is also presented geographically in **Figures27, 28 and 29.**

- **Figure 27** shows a recommended package of improvement measures which retain the existing road network, and traffic routing arrangements.
- **Figure 28** shows a second stage of recommendations which would build on the recommendations in Fig x but introduce more significant measures resulting in changes to the network and traffic routing.
- Finally **Figure 29** shows a third stage of recommendations, again based on those shown in Fig x but with the introduction of a southern relief road (SRR).

DRAFT

Figure 27 - Package of recommendations 1

Emerging outline recommendations		
Capacity / Congestion Improvements		
R1	Undertake option appraisals for capacity improvements at the following key junctions: (i) A6 / B6047 (aka McDonalds Roundabout) (ii) The Square / St Mary's Road / Coventry Road (iii) Northampton Road / Springfield Street / Welland Park Road (iv) A4304 St Mary's Road / Kettering Road / Clarence Street (v) A4304 Rockingham Road / Gores Lane (vi) A6 / Harborough Road / Dingley Road / A4304 (vii) Sainsbury's store entrance / Springfield Street	
Recommendations that result in changes to the network and traffic routing		
R2	Consider the upgrade of Welland Park Road to become the A4304, with a respective downgrading of Coventry Road. Determine the associated engineering, accommodation & complementary works to facilitate this work	See Recommendations Plan 2
R3	Identify opportunities to divert Highways England emergency diversion routes away from the town centre	See Recommendations Plan 2
R4	Determine the viability of increasing underpass height on Rockingham Road Rail Bridge	See Recommendations Plan 2
R5	Consider the principle of providing a relief road between the A508 & A6 to the south-east of the town	See Recommendations Plan 2
Sustainable transport infrastructure / behaviour change initiatives		
R6	Extend and enhance the walking and cycling network	Existing cycle route / Proposed cycle route
R7	Make local bus / public transport infrastructure improvements	Across study area
R8	Identify a suite of 'tailored' behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable travel	Across study area
Safety Improvements		
R9	Continue to monitor Road Traffic Collisions (RTC) within the study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.	Across study area
Traffic Management Improvements		
R10	Devise and implement a new strategy for traffic signing across the study area	Across study area
R11	Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones	Across study area
R12	Sites with recorded speeds in excess of the Association of Chief Police Officers enforcement threshold should be reviewed	Across study area
HGV controls		
R13	Identify undesirable routes for HGVs and impose suitable prohibitions. Whilst the promotion of a town wide environmental weight restriction would be preferable, two key routes are particularly vulnerable to exploitation by inappropriate HGV traffic and should be adopted as a minimum: (i) Ashley Road /Kettering Road between the A4304 and the A6	
R14	Send updated map to 'sat-nav' contacts, advising of HGV controls	Across study area
Public Realm / Highway Maintenance		
R15	Extend the public realm to encompass the nearby rail and bus terminals. Make general aesthetic upgrades to existing materials and arrangement	Across study area
R16	In light of the size and scope of the study, incorporate / consider maintenance activities in relation to improvement proposals	Across study area

KEY

Study Area

SDA Link Road

Foxton

Lubenham

East Farndon

Great Bowden

Little Bowden

MARKET HARBOROUGH

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Leicestershire County Council

ENVIRONMENT AND TRANSPORT DEPARTMENT

INVESTOR IN PEOPLE

PHIL CROSSLAND
DIRECTOR

DESIGN & DELIVERY GROUP

MARKET HARBOROUGH

TITLE:

TRANSPORT STRATEGY: PACKAGE OF RECOMMENDATIONS 1

(WITH NO CHANGE TO EXISTING ROAD NETWORK)

DRAWING NUMBER		SCALE	
N / A		NTS	
PREPARED BY:	R DAVIES	DATE:	MARCH 2016
CHECKED BY:	M ARCHER	SIZE :	A3
APPROVED BY:	M PALFREYMAN	CORR. FILE :	

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E.Mail address: customerservices@leics.gov.uk www.leics.gov.uk

Figure 28 - Package of recommendations 2

Ref	Recommendation Description	Key / Legend
R2	Consider upgrade of Welland Park Road to A304 & a respective downgrading of Coventry Road. Determine associated engineering, accommodation & complimentary works to facilitate the same.	Downgrade / Upgrade
R13	Identify undesirable routes for HGV traffic and impose suitable prohibitions	
R3	Identify opportunities to divert HE EDR routes away from town centre	
R4	Determine viability of increasing underpass height on Rockingham Road rail bridge	

Study Area

SDA Link Road

Foxton

Lubenham

Great Bowden

Little Bowden

MARKET HARBOROUGH

East Farndon

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Leicestershire County Council

ENVIRONMENT AND TRANSPORT DEPARTMENT

INVESTOR IN PEOPLE

PHIL CROSSLAND
DIRECTOR

DESIGN & DELIVERY GROUP

MARKET HARBOROUGH

TITLE:

TRANSPORT STRATEGY: PACKAGE OF RECOMMENDATIONS 2

(RESULTING IN AMENDMENTS TO ROAD NETWORK ROUTING)

DRAWING NUMBER	SCALE
N / A	NTS

PREPARED BY:	R DAVIES	DATE:	MAY 2016
CHECKED BY:	M ARCHER	SIZE :	A3
APPROVED BY:	M PALFREYMAN	CORR. FILE :	

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Figure 29 - Package of recommendations 3

Ref	Recommendation Description	Key / Legend
R2	Consider upgrade of Welland Park Road to A304 & a respective downgrading of Coventry Road. Determine associated engineering, accommodation & complimentary works to facilitate the same.	Downgrade / Upgrade
R13	Identify undesirable routes for HGV traffic and impose suitable prohibitions	
R3	Identify opportunities to divert HE EDR routes away from town centre	
R4	Determine viability of increasing underpass height on Rockingham Road rail bridge	
R5	Consider the benefit of providing a relief road between the A508 & A6 to the south east of the town	Bypass / Rockingham Rd downgraded

Study Area

SDA Link Road

Foxton

Lubenham

East Farndon

Great Bowden

Little Bowden

MARKET HARBOROUGH

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ENVIRONMENT AND TRANSPORT DEPARTMENT

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MARKET HARBOROUGH

TITLE:

TRANSPORT STRATEGY: PACKAGE OF RECOMMENDATIONS 3

(RESULTING IN AMENDMENTS TO ROAD NETWORK)

DRAWING NUMBER		SCALE
N / A		NTS
PREPARED BY:	R DAVIES	DATE: MAY 2016
CHECKED BY:	M ARCHER	SIZE : A3
APPROVED BY:	M PALFREYMAN	CORR. FILE :

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Ref	Recommendation Description	Associated Outcomes
Capacity / Congestion Improvements		
R1	Undertake option appraisals for capacity improvements at the following key junctions: (i) A6 / B6047 (aka McDonalds Roundabout) (ii) The Square / St Mary's Road / Coventry Road (iii) Northampton Road / Springfield Street / Welland Park Road (iv) A4304 St Mary's Road / Kettering Road / Clarence Street (v) A4304 Rockingham Road / Gores Lane (vi) A6 / Harborough Road / Dingley Road / A4304 (vii) Sainsbury's store entrance / Springfield Street	O1, O4
Recommendations that result in changes to the network and traffic routing		
R2	Consider the upgrade of Welland Park Road to become the A4304, with a respective downgrading of Coventry Road. Determine the associated engineering, accommodation & complementary works to facilitate this work	O1, O3, O4
R3	Identify opportunities to divert Highways England emergency diversion routes away from the town centre	O1, O3, O4
R4	Determine the viability of increasing underpass height on Rockingham Road Rail Bridge	O1, O3, O4
R5	Consider the principle of providing a relief road between the A508 & A6 to the south-east of the town	O1, O3, O4, O7, O8
Sustainable transport infrastructure / behaviour change initiatives		
R6	Extend and enhance the walking and cycling network	O1, O2, O4, O6
R7	Make localised public transport infrastructure improvements	O1, O2, O4, O5
R8	Identify a suite of tailored behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable travel.	O2, O5, O6
Safety Improvements		
R9	Continue to monitor Road Traffic Collisions (RTC) within the study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.	O1, O2, O6, O7, O8
Traffic Management Improvements		
R10	Devise and implement a new strategy for traffic signing across the study area	O1, O3, O4
R11	Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones	O8
R12	Sites with recorded speeds in excess of the Association of Chief Police Officers enforcement threshold should be reviewed	O1, O2, O6, O7
HGV controls		
R13	Identify undesirable routes for HGVs and impose suitable prohibitions. Whilst the promotion of a town wide environmental weight restriction would be preferable, two key routes are particularly vulnerable to exploitation by inappropriate HGV traffic and should be adopted as a minimum: (i) Ashley Road /Kettering Road between the A4304 and the A6 (ii) Bath Street/Western Avenue between the A508 and Farndon Road	O1, O3, O4
R14	Send updated map to 'sat-nav' contacts, advising of HGV controls	O1, O3, O4
Public Realm / Highway Maintenance		
R15	Extend the public realm to encompass the nearby rail and bus terminals. Make general aesthetic upgrades to existing materials and arrangement	O8
R16	In light of the size and scope of the study, incorporate / consider maintenance activities in relation to improvement proposals	O1,O4, O8

Table 18: Draft recommendations for outline transport strategy

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5.4 Recommendation profiles

Each of the draft recommendations could be promoted as a standalone scheme ontheir individual merits; and it is on that basis that they have initially been summarised in the below recommendation profiles.

That notwithstanding, the aspiration is to have a single coherent strategy, rather than a series of individual initiatives. It is inevitable that certain elements of the recommendations which are viable in isolation would come into conflict with one another when considered holistically.

As such, a further process of consolidating those individual recommendations into one overarching strategy must be undertaken (modelling and testing measures together) as part of the next phase the study

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Recommendation R1

Undertake option appraisals for key junctions and make capacity improvements

Overview

The recommendation is to assess options for increasing the capability and resilience of key strategic junctions around the town to cope with peak hour demand.

Rationale

It is evident from transport modelling that the performance of the network is in places already poor, and forecast to deteriorate further in the future. Without appropriate intervention those poorly performing junctions will impede the economic growth of the area and generally be to the detriment of those who live, work and visit the town.

Findings

To date, 9 junctions have been identified for consideration. Of those; 7 were identified via the LLITM modelling;

1. The Square / St Mary's Road / Coventry Road
2. Northampton Road / Springfield Street
3. Northampton Road / Welland Park Road
4. St Mary's Road / Kettering Road / Clarence Street
5. Rockingham Road / Gores Lane
6. A6 / Harborough Road / Dingley Road / A4304
7. Sainsbury's store entrance / Springfield Street

and a further 2 junctions were selected for inclusion by LCC officers with local knowledge of where issues either exist now, or may be likely to arise in the future as a consequence of traffic growth/re-distribution;

8. A6 / B6047 (aka McDonalds roundabout)
9. *Springfield Street / Kettering Road*.

These 9 junctions are shown geographically in **Figure 30.**

Sainsbury's car park / Springfield Street, is yet to be considered for potential improvements. With that being the only exception, all of the junctions identified have had a detailed analysis of their capacity and performance undertaken using specialist software (LinSig / Arcady etc) that is more detailed than that of LLITM. *That detailed modelling has confirmed that mitigation is required at all of the junctions tested except for the roundaboutjunction of Springfield Street and Kettering Road; which is shown to have sufficient reserve capacity. On site observations suggest that the site is susceptible to problems caused by queuing originating from St Mary's Road / Kettering Road / Clarence Street and the Sainsbury's store entrance / Springfield Street junctions

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To date, and subsequent to an exercise of solution optioneering, a preferred mitigation scheme has been selected for junctions 1, 2, 3, 4, 5 and 8. Those schemes are summarised in **Table 19** below.

Scheme drawings of the proposed mitigation schemes, along with more detailed summaries of the option appraisal process and model outputs are available in **Appendix F.**

The next stage of the study will be to test/model the impact of the individual junction proposals across the network to see if collectively they work together.

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Jn. No.	Location	Existing Reserve Capacity (2015 Flows)		Existing Reserve Capacity (2015 Flows)		Forecast Reserve Capacity (2031 Flows)		Forecast Reserve Capacity (2031 Flows)		Preferred Mitigation Option	Mitigation Capacity (2031 Flows)		Mitigation Scheme Cost
		AM		PM		AM		PM			AM	PM	
1	The Square / St Mary's Rd / Coventry Rd	-31%		-33%		-28%		-58%		No suitable mitigation identified at this time. Further analysis required. Consideration of one way system: Two potential one way systems have been proposed for consideration. • The first option makes St Mary's Road one way from The Square towards the Kettering Road / Clarence Street junction. Whilst this has highlighted that The Square / St Mary's Road junction would significantly benefit from the scheme, other junctions along Springfield Street may not cope with the additional traffic. • Another option proposes a partial one way on St Mary's from the main junction at the Square towards Adam & Eve Street (which is currently already one way).Traffic would eventually exit on the main street near the junction adjacent to the church at Church Square.The junction of A4304 Main St and Church Square could be signalised with pedestrian facilities. The existing zebra crossing would be removed which could help co-ordinate this junction with the Square.	N/A	N/A	N/A
2&3	Northampton Rd / Springfield St / Welland Park Rd	-4%		-9%		-15%		-17%		***Option no.2*** Additional lanes on both Northampton Road approaches. Additional islands on both Northampton Rd approaches to allow pedestrians to cross both side road whilst running Northampton Road ahead. Signal timings adjusted to link Welland Park Road & Springfield Road better and reduce blocking of internal stop lines	+11%	-5%	£310,000 to £550,000 (excluding Stats & Fees & Land costs)
4	St Mary's Road / Kettering Road / Clarence Street	-6%		-16%		-7%		-18%		***Option no. 2*** Validate MOVA to ensure optimum junction performance. Make Clarence Street One Way (Away from junction) and remove stage 3 from the sequence.	+14%	-3%	Approx £40-60k (Excluding any necessary alterations to Great Bowden Road/Rockingham Road)
5	Gores Lane / Rockingham Rd	-1%		-4%		-1%		-6%		***Option no.1*** Installation of on crossing pedestrian/cyclist detectors that will extend the intergreen period if required. This will allow the intergreen period to be reduced and only extended if necessary.	+7%	+2%	£3k-£5k (£30k-£40k) (If the signals are required to be renewed and converted to LED)
8	A6 / B6047 (Roundabout)	26%		24%		-4%		-3%		***Option no.1*** Provide widening on the B6047 Nth approach. Part of mitigation measure for a development. 0.85 RFC normally the threshold for capacity. With the mitigation measure RFC is only just tipped over 0.85.	0.82	0.89	Approx. £225k (excluding utility diversions)

Table 19- Summary table of preferred junction enhancement schemes

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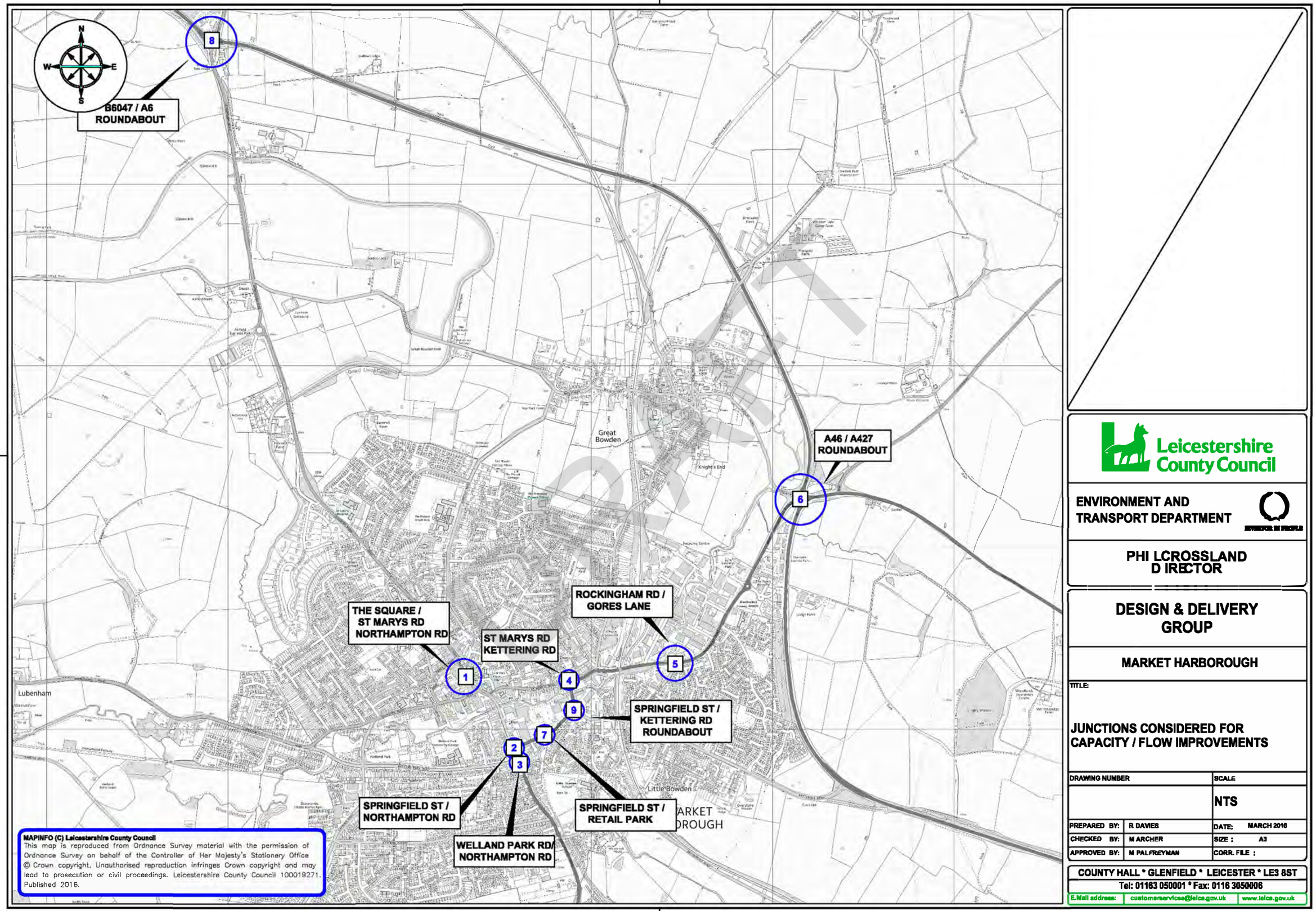
Figure 30 - Key junctions considered for mitigation



Leicestershire County Council

ENVIRONMENT AND TRANSPORT DEPARTMENT

PHI LCROSSLAND
D IRECTOR

DESIGN & DELIVERY GROUP

MARKET HARBOROUGH

TITLE:

JUNCTIONS CONSIDERED FOR CAPACITY / FLOW IMPROVEMENTS

DRAWING NUMBER		SCALE
		NTS
PREPARED BY:	R DAVIES	DATE: MARCH 2016
CHECKED BY:	M ARCHER	SIZE : A3
APPROVED BY:	M PALFREYMAN	CORR. FILE :

COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
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Recommendation R2

Consider upgrade of Welland Park Road to A4304 & a respective downgrading of Coventry Road. Determine associated engineering,accommodation & complimentary works to facilitate the same.

Overview

The recommendation is to designate that section of Welland Park Road between Lubenham Hill and Northampton Road as the A4304 and consequently to downgrade the existing A4304 route along Coventry Road between Lubenahm Hill to the junction of St Marys with Kettering Road; the point at which the 2 potential routes converge.

Rationale

Welland Park Road serves as the only alternative route to Coventry Road/St Marys for east/west movements across the town.

Whilst Coventry Road is promoted as the 'A' classified route, analysis points towards Welland Park Road as being the more strategically favourable of the two.

As per **Table 20** of this report, it is evident that whilst the two routes currently carry a similar amount of traffic, that which is carried by Welland Park Road in the future is forecast to exceed Coventry Road by some 30%. Coventry Road is actually predicted to experience a decrease in the absolute number of vehicles of around 300 per day over the combined peak periods; comparable to the increase predicted for Welland Park Road. This suggests that Coventry Road traffic is naturally opting to re-distribute onto Welland Park Road.

Further analysis of the 2 routes between the points at which they diverge at Lubenham Hill, and then meet at Rockingham Road demonstrates that the Welland Park Road route is not only the shortest of the 2, but also has fewer likely conflict points between highway users. More importantly still is that Welland Park Road avoids the pedestrian dense town centre. These attributeshave been tabulated in **Table 21**

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Location	Flow (2011)	Flow (2031)	Diff	Diff (%)
Welland Park Road	1,699	1,994	+295	+17%
Coventry Road (A4304)	1,756	1,528	-288	-12%

Table 20: Change in flow, Coventry Road vs Welland Park Road, 2011-2031

Attribute	Coventry Road	Welland Park Road
Route distance	1,850 metres	1,770 metres
Bus stops	12	1
Junctions with public highway	22	11
Minor private access onto highway (e.g driveways)	105	140
Major private access onto highway (e.g. Supermarket)	5	5
Formal pedestrian crossing points	17	13
Proximity of residential properties to centre of carriageway	14 metres	20 metres

Table 21: Route attributes comparison, Welland Park Road vs. Coventry Road

Rather than simply re-designate the status of a route, there would likely be a number of complimentary changes required to both facilitate the intended re-designation, and to deter the use of other, less desirable routes.

A number of junctions along the Welland Park Road route have been identified as suffering from congestion/delay. It would not be advantageous to exacerbate those issues by promoting more traffic through those junctions.

In view of the above, and in order to facilitate the designation of Welland Park Road as the A4304, it would be necessary to sufficiently upgrade those junctions to satisfactorily accommodate the increased demand.

Welland Park Road currently features extensive traffic calming by the way of priority chicanes and vertical speed reducing ramps. These features would

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need to be assessed with a view to reducing the impedance they impose upon the free flow of traffic, whilst continuing to suitably well restrain vehicle speeds to a safe and appropriate level.

Consideration would need to be afforded to the imposition of traffic regulation orders along Welland Park Road to prohibit the parking of vehicles.

The junction of Welland Park Road and Farndon Road is known to be a site with a history of RTCs. Whilst an accident remedial scheme was implemented in 2015, there may, as a result of the proposed re-classification, be benefit in again reviewing the road layout at that location, with particular consideration being afforded to the potential of closing Farndon Road (north). In doing so, the number of movements at the junction would be simplified, and traffic would be discouraged from using Farndon Road to reach Coventry Road; opting instead to use Welland Park Road.

In addition to the potential closure of Farndon Road, further efforts should be made to deter the use of Coventry Road, and ultimately the town centre. Suggested options for further investigation would be reversing the one way traffic order on Abbey Street to require vehicles to travel west on Abbey Street rather than east towards the town centre, and the imposition of an environmental 7.5 tonne weight restriction on that section of the CoventryRoad route between Lubenham Hill and High Street.

In order to determine whether formally re-designating the A4304 would be viable and of benefit, it will be necessary to undertake a further phase of testing using traffic modelling software and a more detailed impact assessment of the complimentary works outlined above.

Figure 31 illustrates the different components concerned with the re-designation of Welland Park Road.

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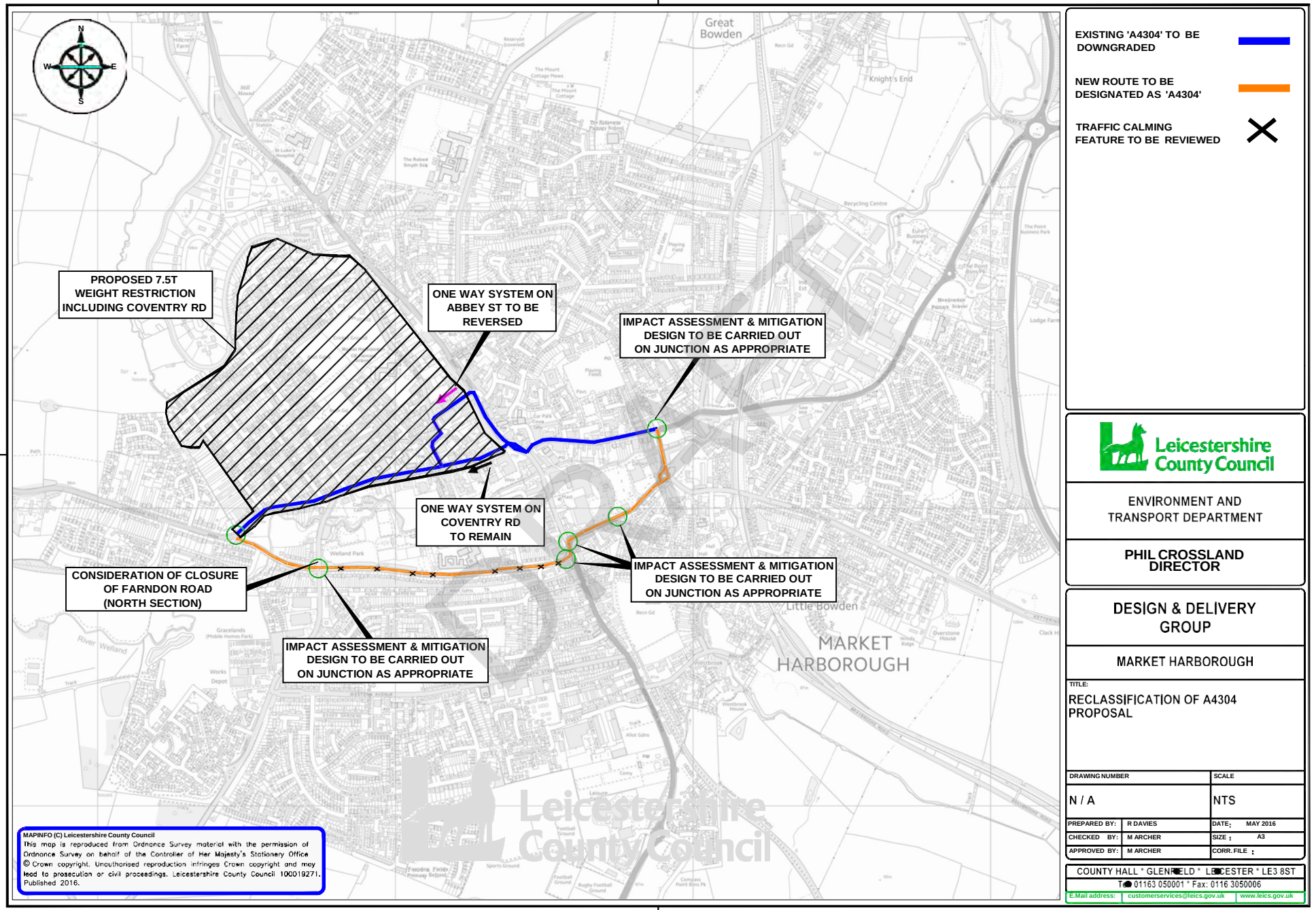
Figure 31 - Plan to show implications of re-routing A4304



Recommendation R3

Identify opportunities to divert HE EDR routes away from the town centre

Overview

The recommendation is to reduce the burden imposed upon the town owing to the presence of Highways England's off network diversion routes.

Rationale

Concerns over the detrimental impact on the amenity of the town, highway safety and network performance have been raised citing the general amount of traffic using the town centre. This matter is particularly exacerbated during times when the A14 EDR routes are initiated. It is considered to be advantageous to identify opportunities to re-route this traffic away from the town centre.

Findings

The EDR route currently makes use of Coventry Road via The Square owing to its status as an 'A' classified route. However, as previously identified in the review of classified roads through the study area (Chapter 4, para 4.2), it is apparent that Welland Park road may well have the potential to be a more suitable alternative to Coventry Road; regardless of its classification.

Re-designation of the EDR on to Welland Park Road would facilitate diverting the EDR away from the town centre. The only remaining signed EDR route through the town centre would be those high sided vehicles currently unable vehicles to pass under the low bridge on Rockingham Road.

Recommendation R4 considers the proposal of an engineering solution to facilitate the passage of high sided vehicles under the low bridge on Rockingham Road. Should this be deemed viable, it would be possible to designate routes for the EDR that are not dependent on using the town centre.

Figure 32 and 33 illustrate the alternatives for EDR routing should the EDR be moved on to Welland Park Road and an engineering solution be found for facilitating the passage of high sided vehicles under the low bridge on Rockingham Road.

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Figure 32 - Possible alternative EDR using Welland Park Road

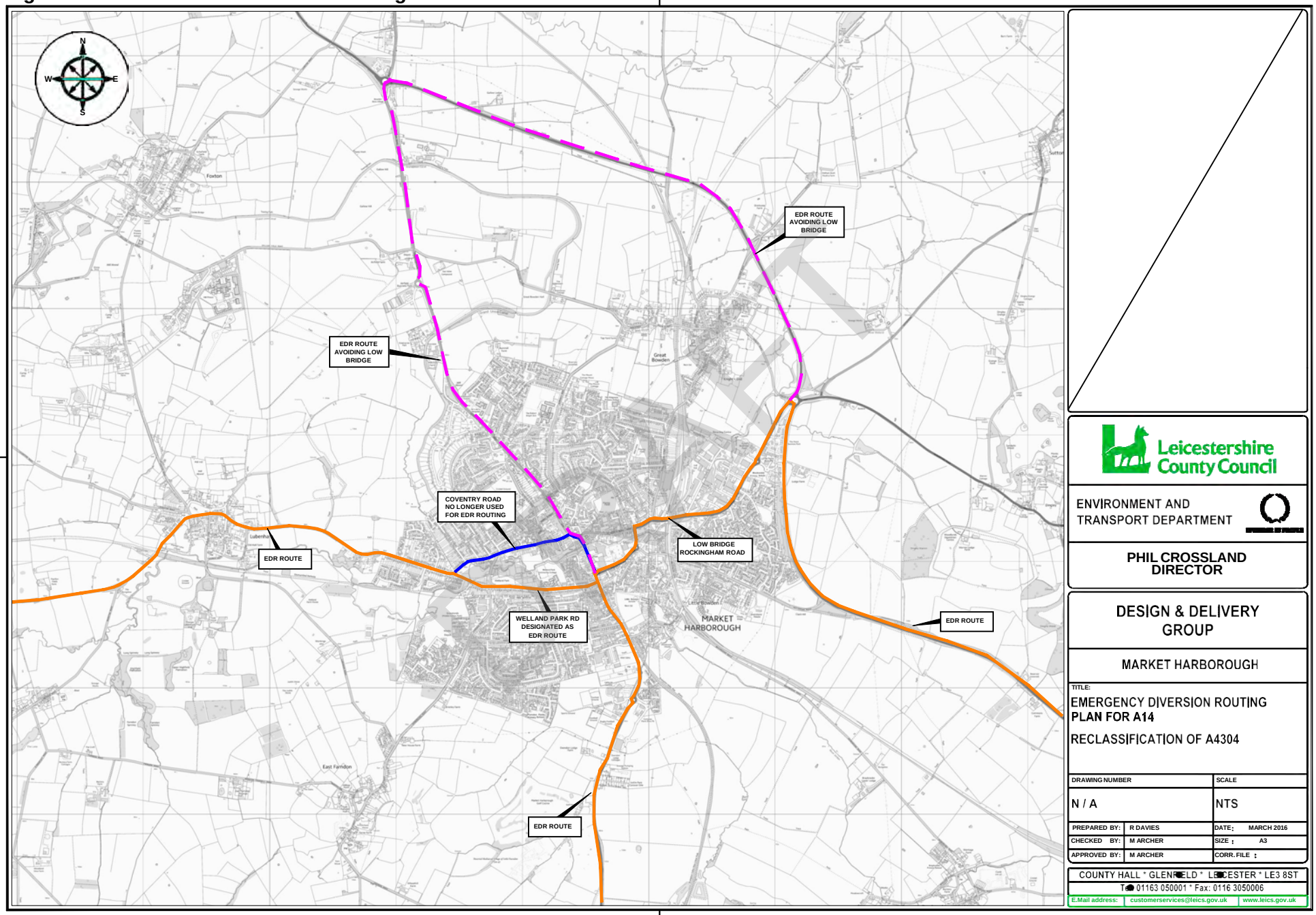
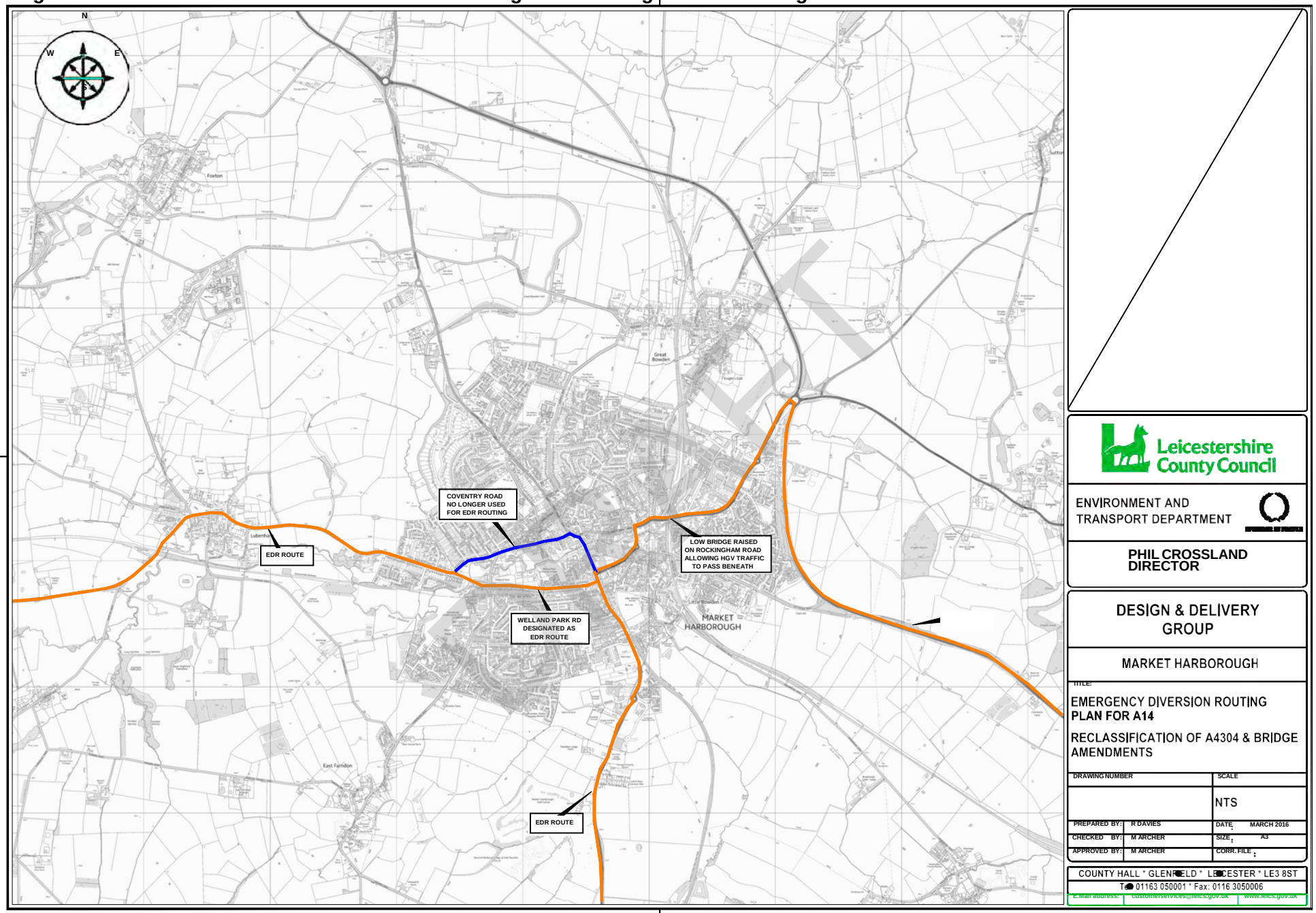


Figure 33 - Possible alternative EDR route with changes to Rockingham Road Bridge



Recommendation R4

Determine the viability of increasing underpass height on Rockingham RoadRail Bridge.

Overview

The recommendation is to determine whether a viable engineering solution can be found to facilitate the passage of high sided vehicles beneath the Rockingham Road Bridge.

Rationale

The low underpass height of the Rockingham Road Rail Bridge does present a point of impasse for some high sided vehicles, and an obstruction/point of conflict for others of varying height; including private cars; the latter owing to the need for high vehicles to straddle both lanes and pass beneath the arch bridge at its highest point.

The principle issue the low bridge causes is the inability for high sided vehicles to access/exit the south of the town from/to the A6 without using the B6047 main road through the centre of the town. This is the case for day to day access to businesses, and is particularly pertinent when exacerbated by the additional HGVs using the Emergency Diversion Routes when the A14 is closed.

Should the underpass height be increased, it would be possible for all high sided vehicles to access the south of the town from the A6/A14 via the A508/A4304 primary route.

An additional benefit of increasing the underpass height would be the opportunity it affords to place an environmental weight restriction on the town centre, as well as reducing the likelihood of bridge strikes; of which there are currently around 3-4 per year; resulting in costly road/rail closures and the potential for serious injury. The resultant network changes made possible by increasing the underpass height can be seen in **Figure 34.**

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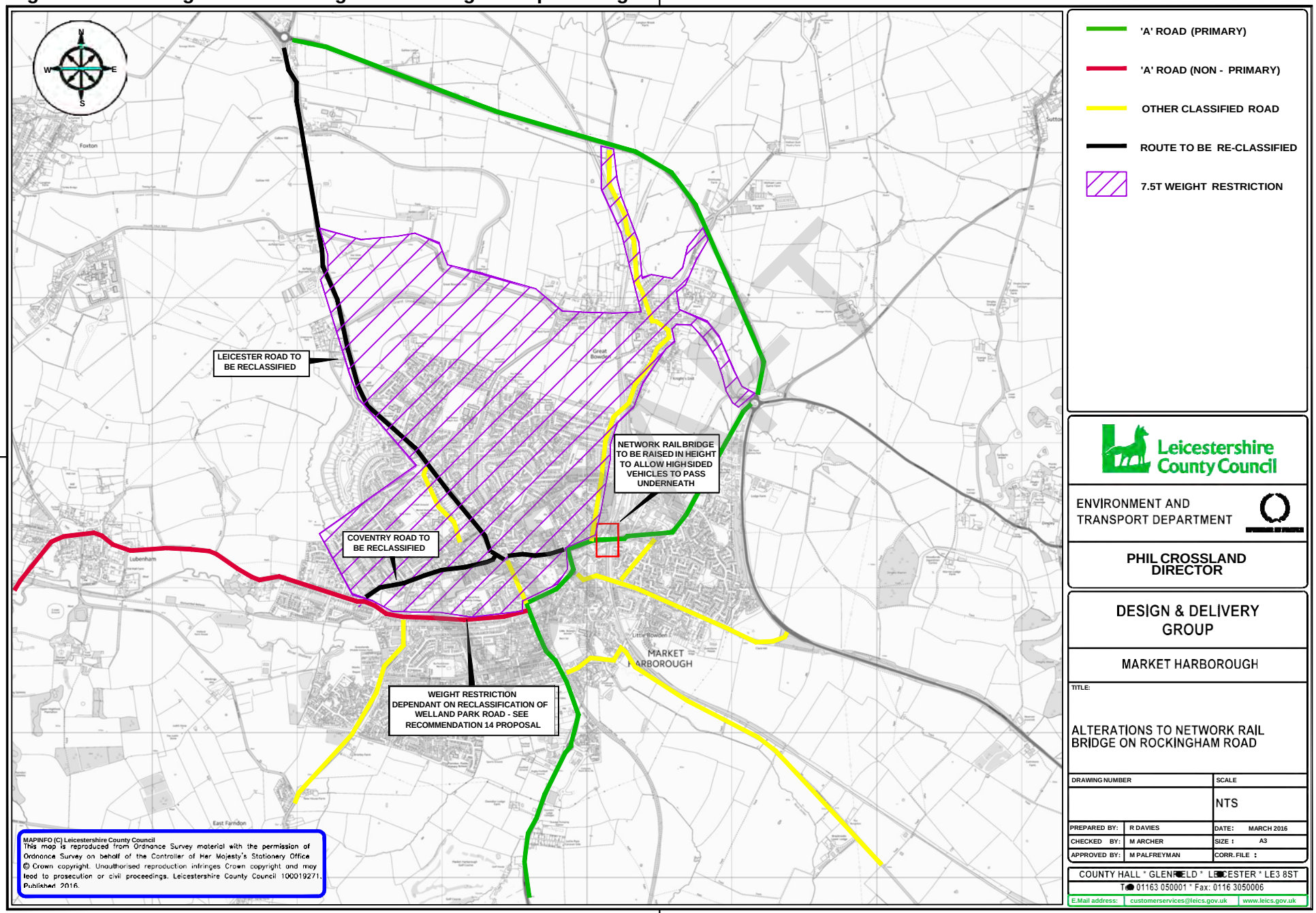
Figure 34 - Rockingham Road bridge - increasing underpass height



Findings

Discussions with Network Rail; the owners of the bridge, has suggested that whilst it may be feasible to increase the underpass height, there may, due to the engineering complexities, need to be a compromise between where the additional height is found; namely a combination of road lowering and a raised bridge deck.

It is the intention to commission a full survey and option appraisal exercise to both determine the true extent of what can be achieved and establish the estimated costs of the same to inform the decision on whether the concept should be progressed. Current, albeit crude estimates have suggested that such alterations to the bridge could cost up to £2,000,000.

In the progression of this recommendation it is necessary to first obtain fee proposals from appropriate structural consultants to undertake the option appraisal before settling with a preferred consultant who will be commissioned to undertake the review and report their findings. Upon receipt of completed appraisal review whether to further develop the proposal

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Recommendation R5

Consider the principle of providing a relief road between the A508 & A6 to thesouth east of the town.

Overview

The recommendation is to determine whether it would be beneficial for the town to provide a south eastern relief road linking the A508 and the A6; diverting the primary route away from the town centre.

Rationale

This report has identified a general trend of decline in the performance/capacity of the network and its ability to accommodate forecast growth without engineering interventions.

A number of those issues identified; congestion, access for high sided vehicles, presence of EDR route etc. could each likely be alleviated by the reduction in demand afforded by a suitable alternative route being provided to orbit the town; reducing through traffic and connecting the main arterial routes into/out of the town.

The town will already be bypassed to the north, east and west by the A6 and, albeit to a lesser extent, the SDA link road. As such, an additional relief road to the south of the town; linking the A508 and the A6, would be the most strategic location, and provide the opportunity to divert the primary route (A508 and A4304) from passing through the study area.

Findings

A high level appreciation of the introduction of a southern relief road (SRR) has been undertaken using the LLITM software. For the purposes of that appraisal an assumed speed limit of 60mph, and a peak in demand between 08:00-09:00hrs and 17:00-18:00hrs for the morning and evening peak respectively has been used.

An indicative route of the SRR can be seen in **Figure 35**. It is important to note the presence of a potential future development site enveloped between the A6 and Kettering Road that would need to be skirted by the SRR to ensure that the viability of the site was not compromised as a result. Likewise,the development site should be configured in such a way that it does not negatively prejudice the potential delivery of an SRR.

In addition to the site allocated for development, a number of special engineering difficulties exist on the proposed route of the SRR; namely the need to cross rail line and the River Jordan. The land on which the SRR

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would be constructed can also be prone to flooding which too would require special consideration.

Initial high level estimates suggest that the cost to deliver the SRR is likely to be in the region of £35,000,000 - £45,000,000. It is with good cause therefore that the benefit of such a scheme should be sufficient to warrant the cost.

Modelling suggests that the SRR will draw in traffic from the existing nearby classified road network including the;

- A6 (North)
- A6 (South)
- Sutton Road (B664)
- Harborough Road (A427)
- Harborough Road (A508)

The vast majority of that traffic using the SRR is through traffic; having neither an origin nor destination in the study area. In the absence of the SRR that traffic would likely have travelled, at least to some extent, through the town.

Standard modelled network indicators such as V/C ratio, average speed and the time spent queueing at over capacity junctions all suggest that the presence of a SRR is modelled to have a generally positive impact, especially during the morning peak period. However, those benefits are less prevalent during the evening peak period, and on occasion actually deteriorate; likely due to delays arising on the A6 and at either end of the SRR prompting some traffic to re-distribute back on to the local road network.

The principle of a SRR would appear to have some merit. However, further and more detailed analysis of the impact; beneficial or otherwise, and how that compares with the financial outlay is necessary.

A full copy of the SRR viability appraisal; undertaken by consultants Systra is available in **Appendix I.**.

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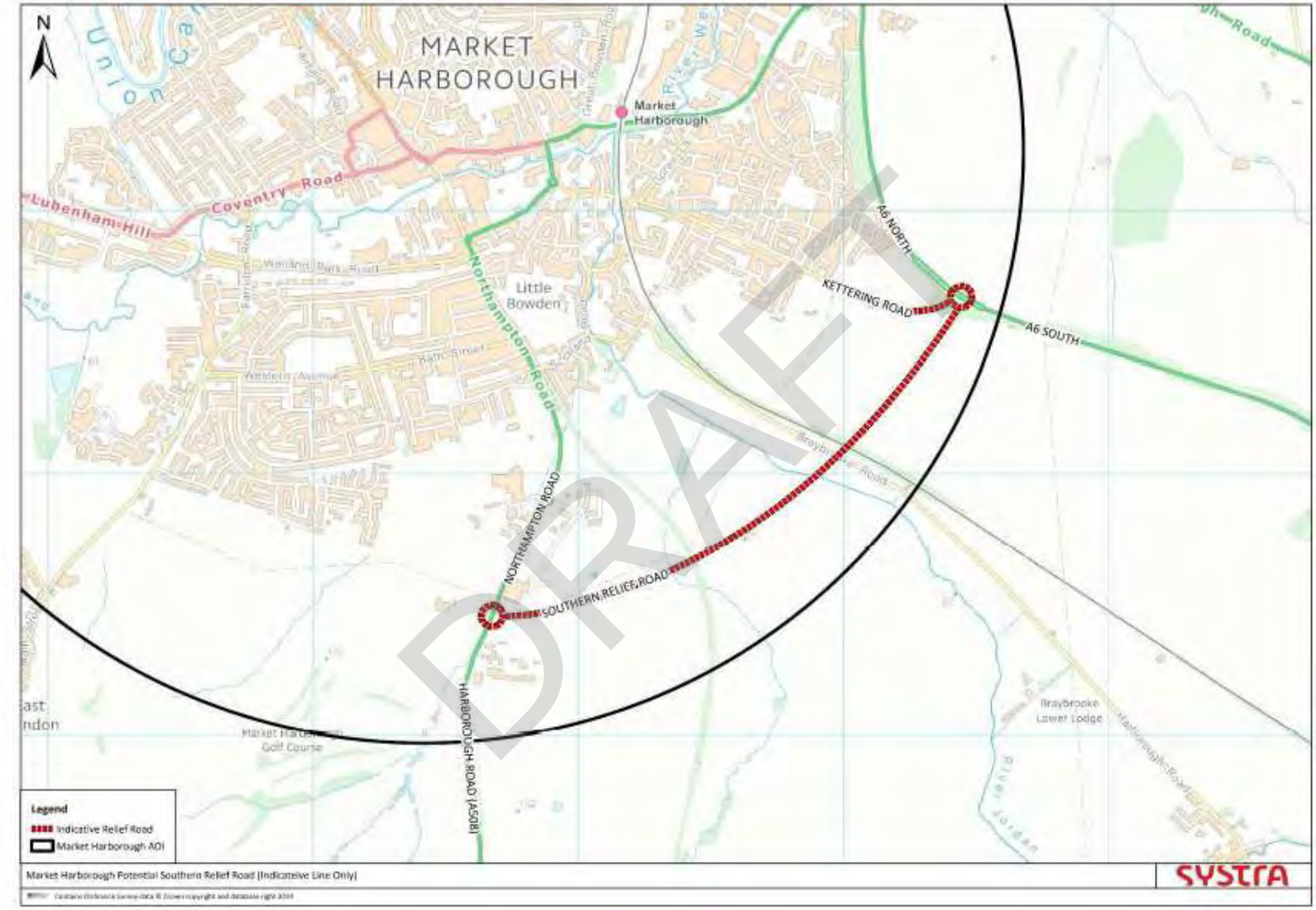
Figure 35: Indicative route of a SRR



Recommendation R6

Extend and enhance the walking and cycling network

Overview

The recommendation is to undertake a thorough audit of the walking and cycling network with a view to identifying opportunities to upgrade and extend the network.

Rationale

A significant proportion of trips occurring over the study area have both an origin and a destination in a relatively short geographical distance of one another. These types of journeys lend themselves to being undertaken by 'active' or 'sustainable' modes of transport; typically walking, cycling, or by public transport. Journeys undertaken by alternative modes of transport to the car are likely to improve the function and resilience of the network through reduced demand, whilst bringing about incidental social improvements such as reduced instances of obesity.

Findings

As previously stated, Market Harborough is not without purpose built facilities for walking and cycling. However, there are missing links and existing infrastructure that would benefit from being enhanced/upgraded.

Analysis of the existing walking and cycling network contrasted with the town's known key amenities, places of work and residence soon demonstrates the scale and potential for further development of the network.

In total, 20 routes comprising of a mixture of existing and new infrastructure have been identified for upgrade or construction to assist in delivery of the studies strategic outcomes.

The proposed resultant walking/cycling network is shown in **Figure 36**. A detailed explanation of each route is available in **Appendix D**. It is important to note that these are the promoted routes only. Other infrastructure for walking and cycling will exist elsewhere beyond those routes.

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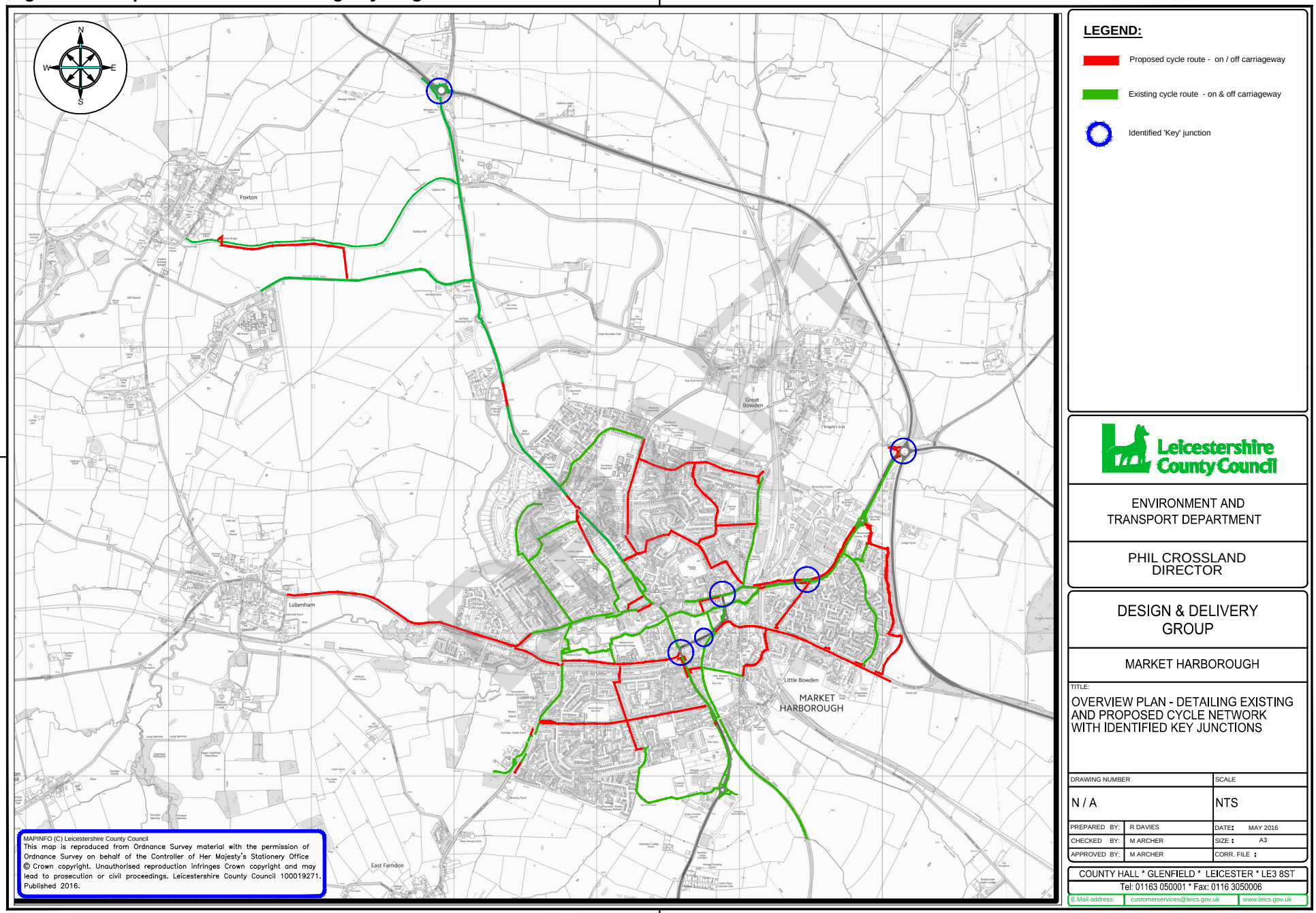
Figure 36: Proposed resultant walking / cycling network



Recommendation R7

Make localised public transport infrastructure improvements

Overview

The recommendation is to deliver a package of public transport (bus) infrastructure improvements throughout the study area.

Rationale

As per Recommendation R6, a good proportion of travel in the town is local; and on that basis would lend itself more readily to modal conversion, away from the car to other modes, such as public transportation; reducing the number of vehicles on the network.

Public transport in the UK was deregulated by the 1985 transport act and as such the majority of services are run on a commercial basis by private companies and as such the County Council does not have any control over these services and the decision on bus service frequency and hours of operation is a commercial one, made by the bus operators themselves. The County Council does subsidise a number of services which may not otherwise be commercially attractive, but are considered to be socially necessary. In Market Harborough the no.33, no.44, and no. 58 services are all subsidised to some extent. However, the effect of public sector austerity and reductions in revenue funding mean that local government's ability to continue to fund such services is being severely curtailed.

An investment through the introduction of new bus stops, new and improved bus shelters and real time timetable displays is to encourage bus patronage which in turn would strengthen the commercial viability of services allowing operators to look at increasing frequency or extending the hours of the service; which can in turn negate the need for continued financial support from the Council.

Findings

With regard to route locations, frequency and duplication of services, buses in

for managing their routes and timetables within a commercial market.

A suite of potential bus infrastructure improvements have been identified for the study area including raised bus stop kerbs to improve accessibility when boarding/alighting; new/upgraded shelters to encourage patronage; and conversion of hail and ride services to fixed service points to improve safety, reliability and punctuality.

Fig 37 shows the location of possible bus infrastructure improvements and sites of hail & ride conversions.

A more detailed summary of the findings is available in **Appendix D and E**

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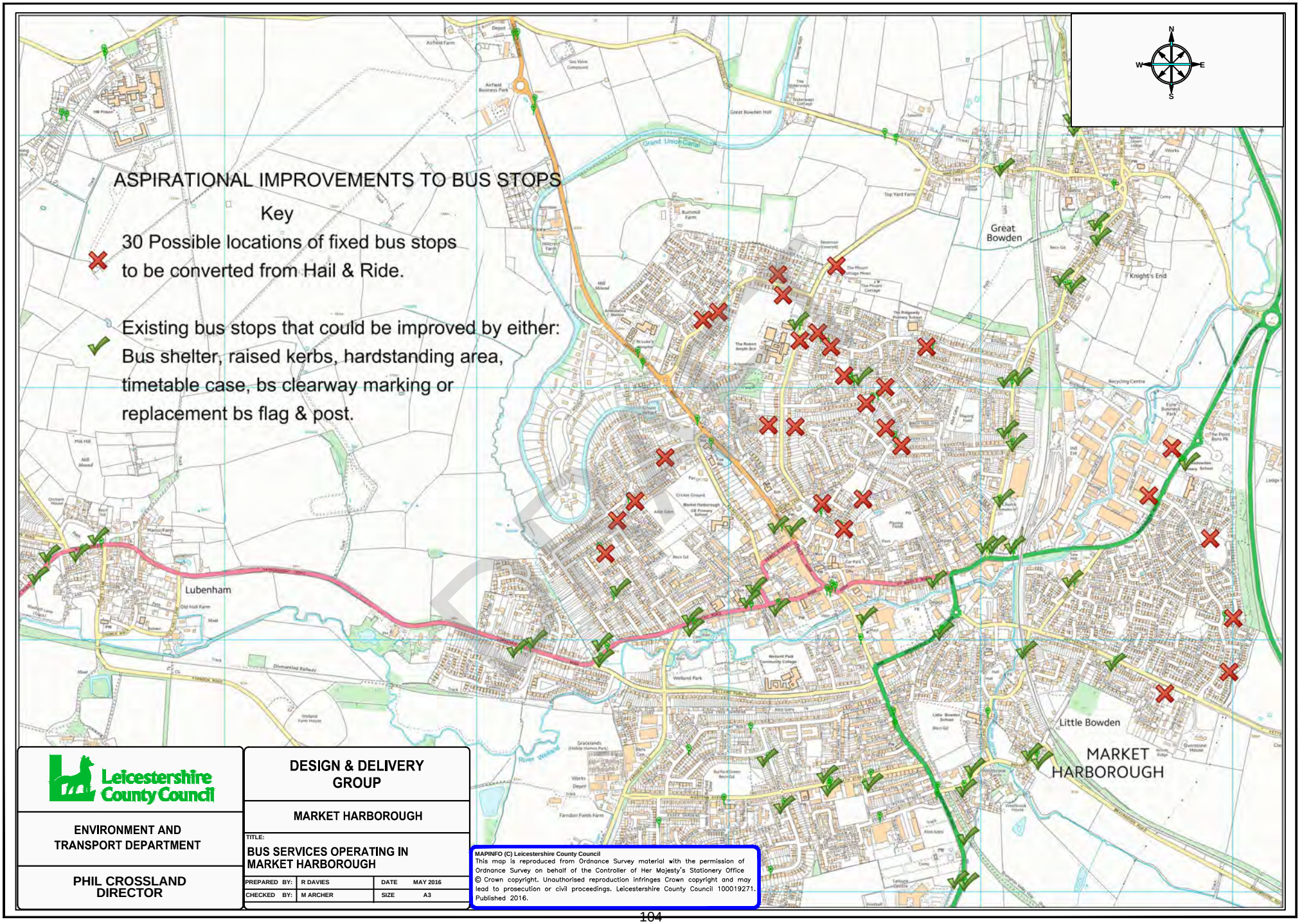
Figure 37: Location of possible bus infrastructure improvements



Recommendation R8

Identify a suite of tailored behaviour change initiatives to encourage modalshift in travel choice towards active and sustainable options.

Overview

The recommendation is to promote and deliver across the study area a tailored package of initiatives that work towards encouraging and facilitating a modal shift in behaviour towards non-car dependent modes of transport such as walking, cycling and public transport (supporting Recommendations 6 and 7).

Rationale

As per recommendation R6, a significant number of trips undertaken onthe network have both an origin and destination within the study area. Theselocal trips are the most easily influenced towards alternative modes of transport. Experience demonstrates that the most effective method of drivingthat modal shift is through a coordinated package of infrastructure improvements and a complimentary series of softer measures such as training, journey planning, education and information provision.

Findings

A tailored package of behaviour change initiatives has been provided in **Appendix H.**

Recommendation R9

Continue to monitor Road Traffic Collisions (RTC) within the study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.

Overview

The recommendation is to ensure that wherever an RTC resulting in personal injury has occurred within close proximity to a proposed scheme arising from this strategy, efforts should be made to extend the scope of that scheme to include for mitigation works to reduce the likelihood of further such incidents of an RTC from occurring.

Rationale

Market Harborough consistently records a comparatively low level of road traffic collisions, compared to other similar areas (towns) in the county. Furthermore the frequency of accidents on the 4 main routes across the town, the A4304 (west), A4304 (east), A508 and B6047, fall below that which might be expected on similar roads nationally. However, by making minor refinements to other nearby works, it may be possible to deliver minor, albeit unrelated highway safety improvements that otherwise would have been unlikely to have attracted financial investment.

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Recommendation R10

Devise and implement a new strategy for traffic signing across the study area

Overview

The recommendation is to establish and implement a new and comprehensive traffic signing strategy for the town to replace the current provision.

Rationale

Despite the known benefits of a managed and proactive approach, there is no recorded strategy for signing; either strategic or local, for traffic in the study area. In the absence of which, the performance of the network cannot be optimised.

Whilst amendments to the signing can be retrospectively made in a piecemeal fashion; there are likely to be a multitude of changes prompted by the delivery of other recommendations made by this report that afford a unique opportunity to 'start again'; ensuring that the new strategy is reflective of the modern day expectation and function of traffic signing.

Findings

A proposed strategy for the signing can be found in **Appendix G**.

Estimated implementation costs of a previous, similar initiative in Hinckley was around £100,000

Recommendation R 11

Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones.

Overview

The recommendation is to review all traffic regulation orders pertaining to on-street parking within the study area with a view to determining the ongoing suitability of existing controls and locations where a need for additional or revised controls may exist now, or is likely to emerge in the future.

Rationale

As with traffic signing; despite the known benefits of a managed and proactive approach to the effective management of on street parking, there is little in the way of a recorded strategy in the study area. In the absence of which, it is not truly possible to know whether the existing provision is fit for purpose.

The forecast trend of an increase in traffic, coupled with an aspiration to improve the town's economic prospects and the quality of life of its residents and visitors requires a strategic approach to parking management that is able to balance the often competing needs of all.

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An area based review therefore presents a unique and ideal opportunity to ensure that an appropriate, proportionate and tailored suite of complimentary controls exist; all of which are working towards one common goal.

Figure 38 shows the extents of where the proposed review as well as areas where a permit to park scheme may need to be considered due to their proximity to the town centre, shopping/amenity hubs or the local rail station.

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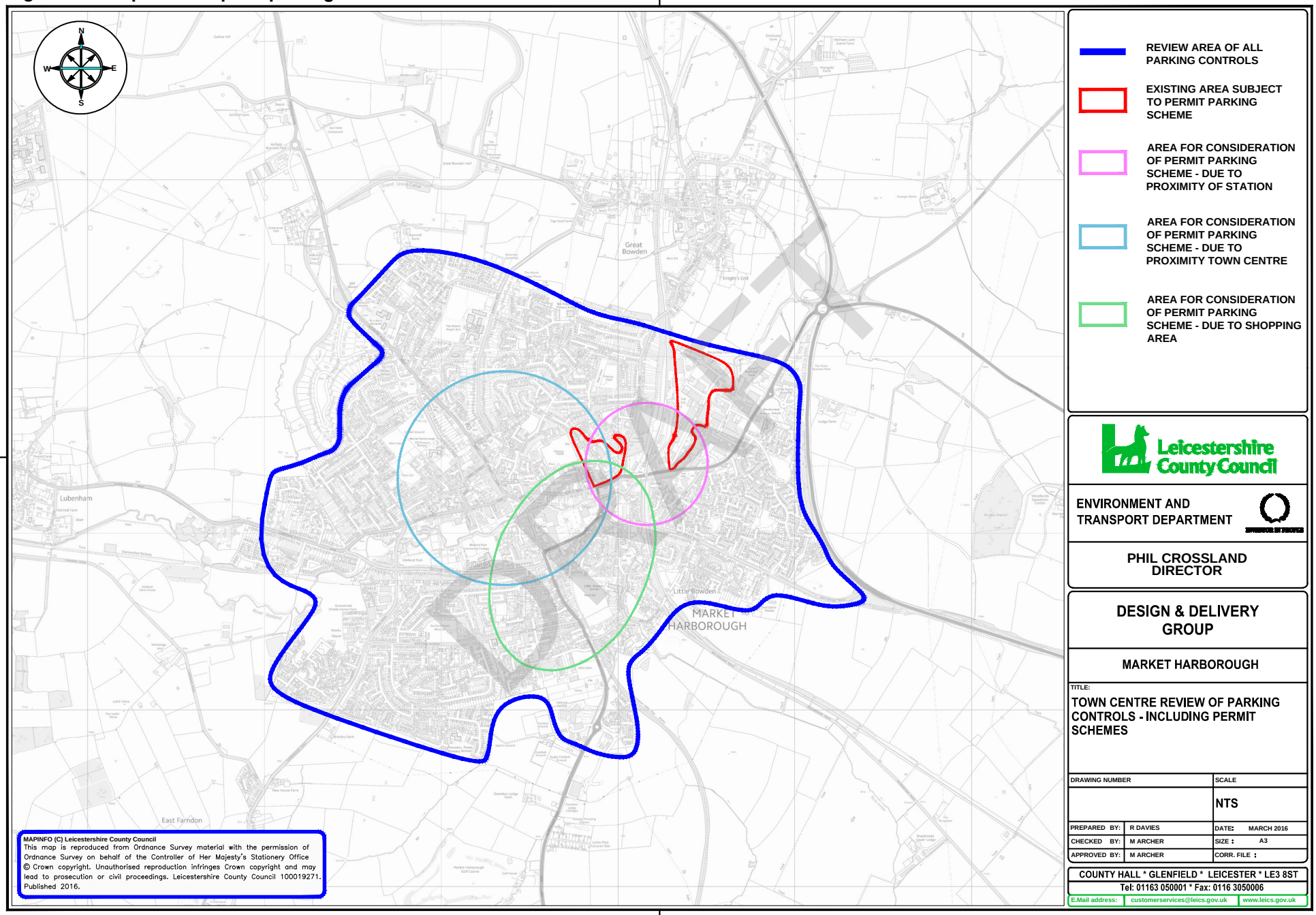
Figure 38: Proposed scope of parking review



Recommendation R12

Sites with recorded speeds in excess of the ACPO enforcement threshold should be reviewed.

Overview

The recommendation is to take a proactive look at each of the 13 sites where the average speed; whether that be the mean speed or the 85th percentile speed, has been recorded to be in excess of the threshold necessary to prompt enforcement action by the Police.

Should a viable and cost effective engineering measure exist that is likely to restrain speeds below the prescribed threshold these should be considered for delivery to improve compliance, and thus highway safety. It is important to note that the figures cited portray the worst of the readings taken for each site. It may well become evident on closer inspection that the majority of readings taken do not warrant any further action.

No appraisal of possible options has been undertaken to date

Recommendation R13

Identify undesirable routes for HGVs and impose suitable prohibitions.

Overview

The recommendation is to identify and prohibit the use of undesirable routes that may now, and in the future be vulnerable/attractive to exploitation by HGV drivers seeking an alternative route to the classified road network.

This recommendation should be considered to be a precautionary measure; safeguarding against the potential for inappropriate routing, rather than a reactive response to address a significant current issue.

Rationale

Whilst the number of recorded instances/complaints of HGVs using unclassified roads in order to take an alternative route through the study area is low, there are a number of residential streets that do lend themselves to such exploitation. Existing low underpass heights at bridges on Rockingham Road and Kettering Road restrict the ease of movement. That, combined with a general growth in traffic can each contribute to the use of undesirable routes by HGVs, potentially causing damage to the highway and dissatisfaction amongst local residents.

It is important to note that this recommendation should be read as a standalone initiative; it does not therefore consider the potential for incidental HGV controls arising as a direct result of other recommendations.

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Findings

Whilst the promotion of a town wide environmental weight restriction such as that illustrated in **Figure 39** would be the default level of provision to be promoted in the study area, two key routes particularly vulnerable to exploitation by inappropriate HGV traffic have been identified;

1. Ashley Road /Kettering Road between the A4304 and the A6

2. Bath Street/Western Avenue between the A508 and Farndon Road.

Should it not be possible to implement an extensive scheme covering the entire town; it is recommended that those 2 routes are promoted as a minimum.

8

Recommendation R14

Send updated map to 'sat-nav' contacts advising of HGV controls

The recommendation is to provide key satellite navigation and mapping companies (e.g. TOM TOM / Ordnance Survey) with all details pertaining to the changes in route designation, traffic orders, preferred routes etc to ensure that the records they hold are current and reflect any changes arising as a result of the strategy.

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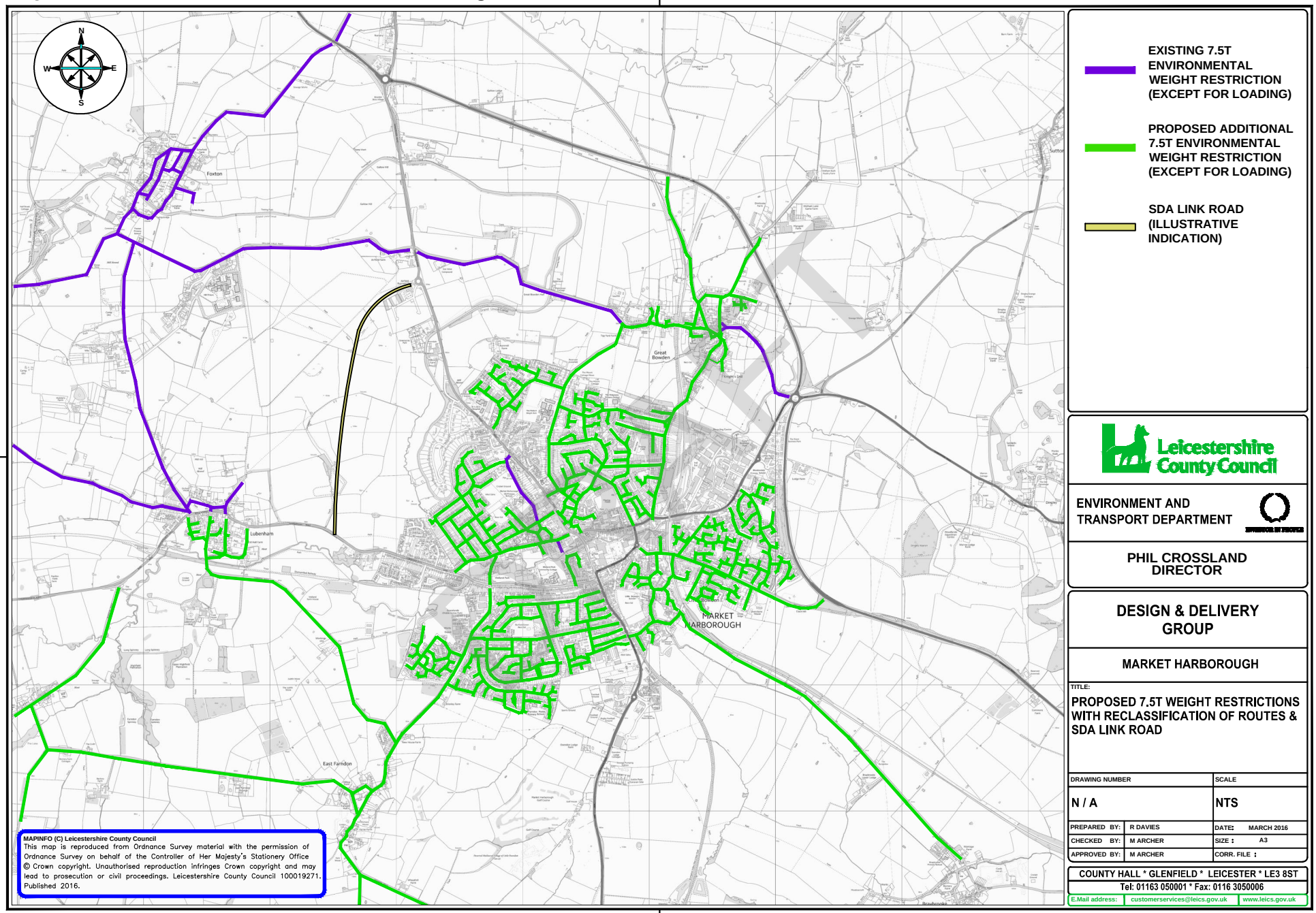
Figure 39: Possible town wide 7.5t environmental weight restriction



Recommendation R15

Extend the public realm to encompass the nearby rail and bus terminals.Make general aesthetic upgrades to existing materials and arrangement.

Overview

The recommendation is to upgrade/update the existing public realm; creatingpurpose made market gateways to the town centre, and to extend the reachof the public realm to encompass the rail and bus terminals.

Rationale

Improving the link between the town centre and strategic transport hubs for commuters, residents and visitors would increase the desirability to live, workand visit the town; supporting businesses, tourism, and demand for local housing.

Findings

Initial assessment of the public realm has been undertaken by the County Council's Landscape Architects. A plan showing initial officers comments canbe seen in **Figure 40.**

The detail of any Public Realm enhancements is likely to be dependent onfirst having a confirmed strategy for infrastructure alterations/enhancementsas these are likely to have some impact on the opportunities / options thatexist for public realm extension.

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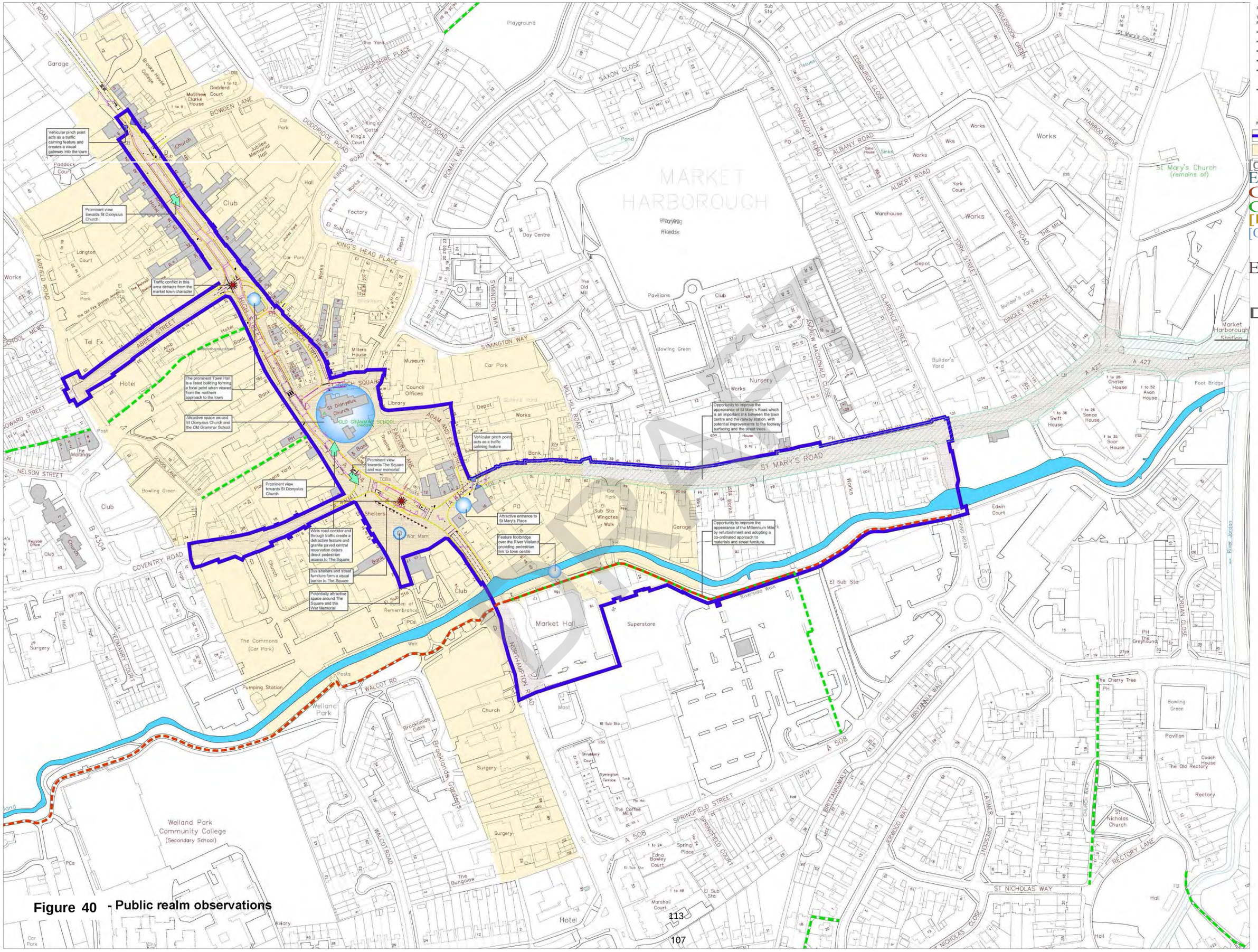

Figure 40 - Public realm observations

Recommendation R16

In light of the size and scope of the study, incorporate/ consider maintenance activities in relation to improvement proposals.

Overview

The recommendation is to use the implementation of the schemes arising as a consequence of this report as the vehicle by which long standing maintenance aspirations can be delivered.

Rationale

The ability of the County Council to deliver maintenance, restoration and condition improvements beyond the most safety critical schemes has reduced in recent years owing to financial constraint. This issue is only likely to worsen in the future due to continued public sector austerity.

However, the delivery of those schemes can become economically viable when the benefits of economies of scale etc afforded by the delivery of area wide schemes is taken into consideration. Any maintenance schemes delivered as a result will inevitably contribute to the objectives of the transport strategy, as well as reduce the burden on the future maintenance budget. Preventative maintenance works, to arrest deterioration or avoid problems from occurring at all are particularly beneficial

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5.5 Scheme costs

The estimated total cost for designing and delivering the draft recommended package of infrastructure and smarter choices measures /outputs is £14.9 million (using highest cost scheme options). This excludes the SRR, which is estimated to cost in the region of £35 - £45 million. A breakdown of scheme/output costs can be found in **Table 22**.

The £14.9 million includes allowances for further scheme design and development work, risk and contingency. The schemes are at a feasibility stage and will be subject to change or recosting as schemes or packages are developed further in the future.

Of the total scheme costs £11.7 million is allocated for the delivery of the infrastructure measures and a further £3.2 million on the complimentary smarter choices elements of the scheme. These costs have been estimated based on the costs of the delivery of schemes of a similar scale in Leicestershire; however, the scheme is currently in the early stages of development with further refinement of the measures, design work and stakeholder engagement/consultation required. An accurate estimation of costs will be determined following this additional work

Currently there is approximately £2.0 million secured from a number of S106 developer contributions, including £1.4 million from the SDA site. It is hoped that further funding towards the softer measures can be secured from the Department for Transport's (DfT) Access Fund later in 2016.

The costings provided in **Table 22** formed the basis for the County Council's recent (in April 2016) outline business case to the LLEP, for consideration for funding from the Government's Single Local Growth Fund (SLGF).

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Scheme Cat	Scheme Ref	TRANSPORT MEASURES/ OUTPUTS	Cost	Associated Recommendation
A	***Junction capacity improvements***			
	1	A6/B6047	£650,000	**R3, R9**
	2	The Square / St Mary's Rd / Coventry Rd	£700,000	
	3	Welland Park Rd / Northampton Rd / Springfield St (Option 2)	£820,000	
	4	St Marys Rd / Kettering Rd / Clarence St	£280,000	
	5	Gores Lane / Rockingham Road (Option 2)	£450,000	
	6	A6 / Rockingham Road / Dingley Road	£1,100,000	
	7		£600,000	
			£4,600,000	
B	***Walking & cycling improvements***			
	1	New routes, links, crossings etc	£3,110,000	**R3**
	2	Cycle parking	£30,000	
	3	Route signing	£60,000	
			£3,200,000	
C	***Public transport improvements***			
	1	Bus shelters	£32,000	**R4**
	2	Raised bus stop kerbs	£38,000	
	3	'Hail & Ride' conversion	£110,000	
	4	Miscellaneous (timetable cases etc)	£20,000	
			£200,000	
D	***Modal shift initiatives (over a four year period)***			
	1	'Getting to Work & Training'	£1,200,000	**R3, R4, R5**
	2	'Information & Behaviour Change'	£1,200,000	
	3	Coordination & management	£800,000	
			£3,200,000	
E	***Infrastructure resulting in changes to network or traffic routing***			
	1	Works required to facilitate the upgrade of Welland Park Road to A4304 and respective downgrade of Coventry Road	£700,000	**R13, R14, R15**
	2	Increasing underpass height on Rockingham Road rail bridge	£2,000,000	
			£2,700,000	
	3	South East Relief Road between the A508 and the A6	**£35 – 45 million**	**R16**
F	***Traffic Management Improvements***			
	1	HGV weight restrictions and update sat- nav contacts	£75,000	**R1, R2, R6, R7, R8**
	2	Traffic directional signing	£100,000	
	3	Parking controls , including consideration of residents parking	£25,000- £75,000	
	4	Traffic calming (in support of walking / cycling network)	£200,000 - £300,000	
			£400,000- £550,000	
G	***Public Realm improvements***			
	1	Refurbishment of paved areas and street furniture	£100,000- £450,000	**R13**
			£100,000- £450,000	

Total Cost (excluding the SRR):	**£13.7 million** (lowest cost scheme options) **£14.9 million** (highest cost scheme options)

Table 22 : Breakdown of estimated scheme / output costs

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5.6 Strategy development and project milestones

The draft recommended schemes outlined in this chapter provide the basis of an initial outline transport strategy for Market Harborough. However, the work carried out as part of this study (Phase 1) will need to incorporate further stakeholder feedback. Subject to consideration by LCC and HDB members, and availability of funding, further work would be need to be undertaken to adopt a menu of preferred schemes from those recommended in the study, to bring these schemes together into a single coherent package of improvements across the study area. The preferred package of schemes could then be converted into a final strategy and delivery programme suitable for obtaining funding via the Single Local Growth Fund.

The proposed milestones (subject to consultation and availability of funding) for the development of the strategy and potential implementation are outlined below:

2015/16	*Study Phase 1 (Issues and Solutions) ***Complete***
2016/17	Study Phase 2 (Solution Coordination, stakeholder feedback)
2016/17	Study Phase 3 (Finalise Strategy and Prepare funding bid)
2017/18	Scheme consultation / Detailed design
2018/19	Begin Implementation and Delivery

**Covered by this report*

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Based on the costings provided in section 5.4, it is anticipated that the draft recommended package of infrastructure and smarter choices measures could be designed and delivered in line with the delivery profile set out in **Table 23**.

Funding Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total:
	2017/18 (£m)	**2018/19 (£m)**	**2019/20 (£m)**	**2020/21 (£m)**	**2021/22 (£m)**	**(£m)**
LLEP (unconfirmed)	£0.2	£4.3	£3.0	£3.0		£10.5
Private sector match (confirmed)			£0.3	£0.3		£0.6
Private sector match (unconfirmed)					£1.4	£1.4
Public sector (confirmed)						
Public sector (unconfirmed)						
Other funding (confirmed)						
Other funding (unconfirmed)		£0.8	£0.8	£0.8		£2.4
Total:	£0.2	£5.4	£ 4.1	£3.8	£1.4	**£14.9**

Table 23: Design and delivery profile

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5.7 Overall risks

As with any major transport project, there are a number of potential risks to the delivery of the project such as:

- Some third party land is required in order to develop a number of schemes, this may require a Compulsory Purchase Order (CPO) process to acquire the land causing potential delay;
- Diversion of statutory undertaker apparatus; and
- Potential cost overruns.

These risks will be mitigated through the development of a risk management strategy, in accordance with the County Council's Project Management standards and informed through the delivery team's experience in the delivery of previous major schemes. Measures to reduce risk include:

- Early Contractor Involvement (ECI) process with the principal contractor to ensure a robust cost estimate as the programme is developed;
- Initial discussions with landowners have taken place with regard to land acquisition;
- Comprehensive consultation and communication with key stakeholders impacted by the works;
- Early engagement with statutory undertakers; and
- Use of the Midlands Highways Alliance Medium Schemes Framework to procure construction contract.

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6. Summary of consultation feedback and officer responses

6.1 Consultation Overview

Public consultation is one of the key steps in the development of a Trasnport Strategy, helping the County Council refine proposals and strengthen the future case for funding. Between 16th January and 24th March 2017 the County Council carried out a consultation and engagement exercise to seek feedback on the key transport issues and recommendations initially put forward within the Study.

The public and key stakeholders were invited to submit views via an online questionnaire, which incorporated direct feedback and open ended contributions to support and refine those improvements/solutions included within the Study. Key demographic information was gathered, ensuring the County Council's commitment to ensure that its services, policies and practices are free from discrimination and prejudice.

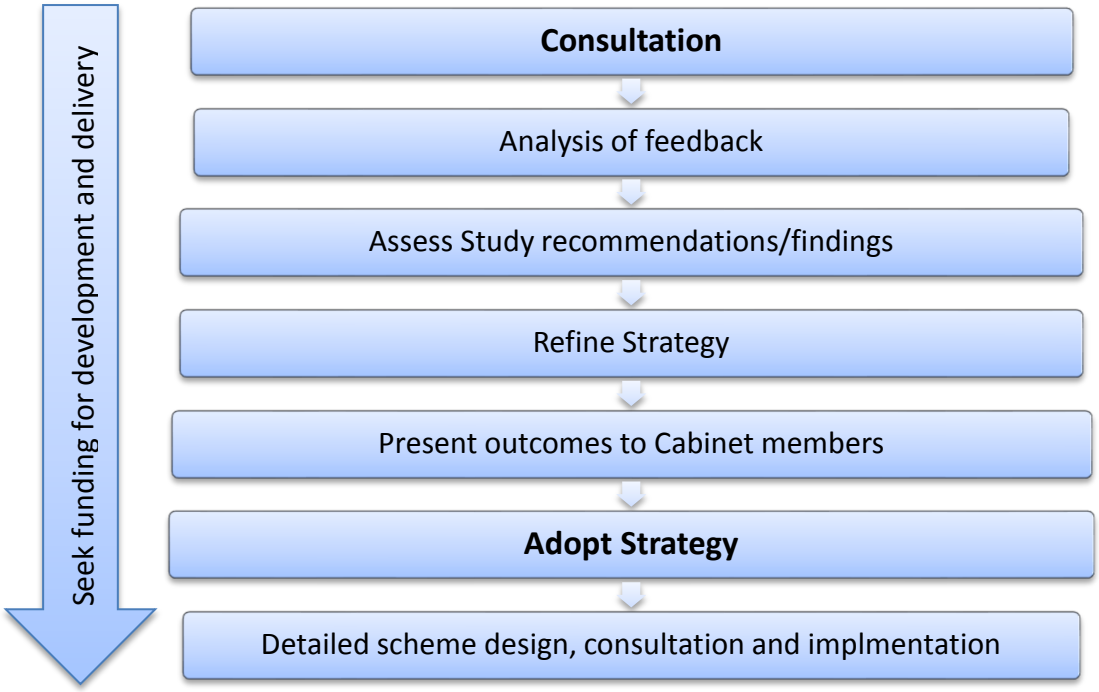
Consultation contributions were also welcomed via written representation, paper copies of the questionnaire and via a designated email box. A public exhibition was held in January 2017 with more than 600 people attending. Following this, over 150 responses were received to the consultation, predominantly via the online questionnaire.

In addition to the responses received from the members of the public, responses were received from the following organisations:

- Market Harborough Civic Society
- Welland Park Academy
- Adam Smile Trust
- Harborough District Council
- Highways England
- Northamptonshire County Council

The following sections outline the main comments and issues raised during the consultation period together with considered officer feedback and analysis.

In line with the process identified below the outcomes of the consultation exercise will be reported to the County Council's Cabinet and approval sought for the adoption of a Trasnport Strategy. It is important to note that proposals within the Strategyare still subject to further design and consultation and there will be further opportunity to feed into the development and delivery at a later date.



6.2 General Public and Stakeholder Opinion

Overall 73% of respondents agreed that the main transport issues had been identified, a clear indication of the adequacy of the Study which will be refined as part of the consultation feedback, imperative to development of a sound and resolute Strategy.

Of the remaining 27%, 9% of respondents were neutral neither agreeing nor disagreeing with the proposals. 11% of respondents tended to disagree and 7% strongly disagreed with the proposals. There were instances where respondents disagreed that the Strategy correctly identified the key issues, which upon further analysis, revealed these had actually been considered by the County Council but due to the level of detail within the consultation were not evident.

In cases where respondents strongly disagreed with the Strategy, additional considerations were put forward during the consultation which the County Council have considered and in some cases included within the refined Strategy.

The consultation also invited feedback on a package of proposed transport recommendations, which for presentational purposes where divided into three broad categories based on their cost, complexity and potential impact on traffic;

Category 1: improvements to the existing road network, with roads traffic routing remaining broadly unaltered.

Category 2: improvements that result in changes to the way traffic would move around the town.

Category 3: introduction of a southern relief road.

Category 3 was the preferred solution with 40% in agreement with category 1 and 2 both split 30% each.

Opinion regarding the effectiveness of category 1 measures proposed in isolation, without category 2 or 3 measures, was split 50:50. Overall support for the measures is evident, but public opinion weighted towards the necessity for additional complementary measures such as those in category 2 and 3 is clear.

Opinion with regards to the effectiveness of category 2 solutions proposed in isolation was split 70:30 with the majority concurring with the effectiveness of those measures and recommendations to target the specific transportation issues.

Category 3 measures were supported, with public opinion 80:20 in support of the measures.

Overall the majority of respondents preferred a combination of all three categories as a package rather than just one particular set of measures in insolation.

6.3 Key Feedback

The provision of measures in isolation is clearly a public concern. The County Council recognises this concern and analysis to date has demonstrated the requirement for a holistic approach to bettering network ‘efficiency’.

By adequately accounting for ‘efficiency’ and considering the network as a whole and by the implementation of a complimentary package of measures, the investment of funds is better spent. This also aids the understanding of the long term costs of maintenance and management of the network, ensuring long term value.

The consultation invited feedback on the primary transport issues within Market Harborough. This predominately focused on the levels of congestion, the overall perceived inadequacies of the network to accommodate growth, the inappropriateness of traffic (HGVs) in the town centre, the local pinch-points and the major infrastructure constraints such as the Rockingham Road rail bridge, areas which were central to the draft Study.

It is equally important to understand issues which had been not put forward as recommendations in the Study but were identified as known local issues following the consultation. These could either have been outside the scope of the Study but remain relevant, beyond the geographical analysis area or had been considered more widely but not included as specific detailed recommendations/ solutions at this stage.

A number of additional issues and considerations were identified in the consultation including concerns relating to air quality (AQ), local rat-running, the potential for pedestrianisation of the town centre, the provision of Park-&-Ride on the periphery of Market Harborough, the Kettering Road rail bridge and the reintroduction of the right-turn at the A6/ Kettering Road junction.

Additional solutions to the widely reiterated perception of congestion within the town centre, the identification of solutions for specific problem junctions and the renewal, improvement and extension of the cycling/ walking network were also offered.

6.4 Officer Responses

1. **Issues**(s)

Parking – outside all schools

Officer Response(s)

The road network that serves schools can at peak times be marked by congestion as well as the perception of creating road safety hazards; this is very much a driver behaviour issue and is not unique to Market Harborough. Road safety is an important consideration and is fundamental to the development of the Trasnport Strategy, however accident data in the town suggests that there is no obvious correlation between school parking and road casualty rates particularly those associated with children.

Within its budgetary constraints, the County Council will continue to manage school parking issues by working in partnership with schools, parents, local resident and Members, and the Police. Where opportunities arise as part of the Strategythe County Council will look to incorporate any measures that may mitigate parking issues as part other identified proposals within the vicinity of schools.

2. Issue(s)

Parking – a) Specific on-street sites such as Logan street /Garndiner St/Knoll Street, East St, Nelson St, Connaught Road, Kettering Road, Walcot Road, where parking concerns were raised in addition to those areas highlighted in the detailed Strategy.

b) Not enough provision of off street car parking.

Officer Response(s)

a) The on-street locations suggested in the consultation will be included within the future analysis which will seek to provide adequate levels of parking based on the bespoke demand and needs of the market town.
b) The provision and management of off-street car parking is the responsibility of Harborough District Councils within the framework of their Parking Strategy, 2016; this is a comprehensive and detailed analysis of current and future demand, and offers a number of key recommendations and areas of additional analysis to ensure that future demand is satisfactorily met.

3. Issue(s)

Junctions/ congestion - Lack of apparent synchronisation between junctions; Kettering Road Rail Bridge and adjacent junctions – Gores Lane and Bellfields, St Marys Road /Gt Bowden Road and Northampton Road / Scotland Road.

Officer Response(s)

Efficient junction performance clearly plays a pivotal role in the movement of goods and people, which in-turn aids economic productivity. The performance of a single junction in isolation is limited to the effects of traffic at one particular location. As a consequence, the mitigation required may not account for the junctions downstream or traffic movement through the town centre, both of which affect the performance of the network as a whole.

The analysis of ‘efficiency’ must therefore include detailed analysis of the movement between junctions, the effects of queuing and delays on links and the accessibility for pedestrians/ cyclists.

By adequately accounting for ‘efficiency’ and considering the network as a whole, the investment of funds is better spent. This also aids the understanding of the long-term cost of maintenance and management of the network.

The adequacy of the next stage transport analysis is imperative to the development of a sound and resolute Strategy. The concerns about the traffic impact and additional junction analysis will be taken forward as part of future analysis. Additional testing to identify solutions as part of the proposed localised microsimulation transport modelling analysis will better account for junction synchronisation, the effects of junction interaction and further the overall promotion of network efficiency.

4. Issue(s)

Rat running traffic - Affecting Scotland Road, Western Avenue, Alvinton Way, Fernie Road, Bath St and Ashley Way.

Officer Response(s)

So called ‘rat runs’ are an inevitable characteristic of a congested urban highway network. Critically, the main reason for this congestion is a greater level of demand and higher frequency of junction use. In the case of Market Harborough town centre, this is further compounded by ‘blocking back’, this being the interaction between junctions as a result of queuing and delays. This congestion governs the journey times and routes taken by drivers.

The response by network users to congestion and delay is often the rerouting of traffic, as drivers seek to avoid known congestion hotspots by taking an alternative route on roads often less suitable, encapsulated by residential areas and not intended to be used as a through-traffic route.

The root cause of ‘rat running’ is not itself congestion at junctions, this being the outcome of the deterioration of network performance as a result of a greater level of demand to a certain location or facility, such as schools, places of works and local amenities. The town centre itself is a major attractor of trips due its vibrant and diverse amenities, employers and local population, characteristics which are important to preserve. Greater levels of demand, congestion and consequential ‘rat running’ highlight the degree of attention that is needed to maintain flow and safety.

Category 1 and 2 measures, which seek to greatly slow down the rate of junction deterioration and provide more suitable routes for drivers, will enhance the characteristics of the network thereby seeking to reduce the rate of which drivers seek alternative ‘rat runs’.

5. Issue(s)

Air Quality concerns - Air pollution from cars idling while in queues.

Officer Response(s)

In Leicestershire air quality management is the statutory responsibility of Harborough District Council (HDC). Whilst the County Council has no statutory duty to address air quality, as the Local Highway Authority (LHA) the County Council can help District / Boroughs identify and develop mitigation measures where air pollution is attributable to the local road network.

Based on the current air pollutant data collected around the town, HDC do not class Market Harborough as an Air Quality Management Area (AQMA) and therefore HDC have not identified any specific mitigation action. Nonetheless, the Strategy is likely to have a positive impact on air quality, through the promotion of more sustainable modes of transport and through seeking to mitigate junction delay and stationary vehicle queues.

6. Issue(s)

Issues beyond the scope of the Study- Extra traffic as a result of development beyond Market Harborough, junctions on the A5199, Lubenham bypass and pedestrian/ cycle links to Braybrook village.

Officer Response(s)

Within the context of the draft Study there is a limit to the geographical area analysed. To inform the Study area itself, discussions were held with multi-disciplinary colleagues at both the County Council, Harborough District Council and in the local community with key stakeholder representatives to understand local issues.

The County Council has used the best and most up-to-date analysis tool, the Leicester & Leicestershire Integrated Transport Model (LLITM) along with the integration of planning, socio-demographic and socio-economic data to best inform the baseline situation and future year analysis within the area of analysis.

This assists in the quantification of key inputs, such as growth rates, housing and social needs, to inform real, bespoke and relevant solutions to ensure that a resilient network Strategy can be developed and implemented.

By understanding the *demand*, which can be quantified in levels of trip making and its associated impact on the network, the draft Study has identified areas/ initiatives where some level of investment can be considered to improve the performance of the network, or guard against its rate of deterioration.

In terms of development beyond Market Harborough, the Highway Authority, a statutory consultee in the planning process, are charged with the responsibility to manage and maintain the County’s highway network. All promoters of

development proposals across the district have to consult the Highway Authority and agree a scope of analysis which would include any problematic junction relevant to the specific application which may have been beyond the scope of the Study.

7. Issue(s)

The Study credentials - Doubt over the effectiveness of the Study and the knock-on impacts of increased congestion.

Officer Response(s)

The effectiveness of solutions and the testing of the subsequent knock-on-effects of rerouting traffic away from the town centre, have been tested using the Leicester and Leicestershire Integrated Transport Model (LLITM). This is measured against stringent criteria and parameters set by the Department for Transport (DfT) on behalf of central Government. All measureable criteria have been met in accordance with WebTAG, the appraisal framework set out by the DfT.

As a strategic model LLITM is the best tool to account for interrelated transport issues. Future investigations will involve microsimulation modelling; this is the dynamic modelling of individual vehicle movements within a system of transportation facilities. Microsimulation allows more detailed testing and will account for the adequacies of the proposed improvements, the effects of junction interaction and will allow for a process of refinement of the Strategy to allow the best possible solutions and value for money.

8. Issue(s)

Welland Park Road - The appropriateness of the road to be upgraded in light of the existing geometry, road width, the school and associated vulnerable road users, at grade crossing facilities, school peak time parking and speed management should traffic calming be removed.

Officer Response(s)

The consideration of upgrading Welland Park Road to the A4304 and the respective downgrading of Coventry Road has been explored as a concept and evidence would suggest that Welland Park Road is the more strategically favourable route of the two, particularly in light of the traffic forecast predictions.

The analysis has demonstrated that in terms of traffic volume, the two routes currently carry a similar level of traffic at the peak times with Welland Park Road anticipated to exceed Coventry Road by approximately 30% in traffic volume by 2031.

By way of comparison, Coventry Road is predicted to experience an overall decrease of traffic in the future year scenario of around 300 traffic movements per day, compared to the increase of traffic on Welland Park Road. This demonstrates re-distribution of traffic from Coventry Road onto Welland Park Road.

Traffic re-distribution can occur for a number of reasons and a general rule in transportation is it is rarely a single issue in isolation. Route choice and driver behaviour are closely associated with the desirability of the route. This relates to the length of the link, the journey time and the characteristics of the route such as the number of at-grade crossings, traffic calming, and the number of accesses, all of which effect journey time and can deter drivers from the route.

As part of the Study, a detailed analysis of the road features, such as the number of junctions, accesses, crossings and bus stops between Coventry Road and Welland Park Road was undertaken. The analysis indicated that Welland Park Road is generally a more favourable route than Coventry Road, with less imposing features such as those detailed above.

The proposal generally received positive feedback during the consultation period however from officer discussions with Welland Park Academy and with members of the public at the public exhibition it is recognised that there are understandable concerns about the appropriateness of the route.

Rather than to simply designate the status of a route, it will be essential to introduce a number of complimentary measures required to facilitate such a reclassification. Moreover, this is not to say that Welland Park Road does not suffer from some congestion and delays, and clearly very careful consideration must be given to the requirements of the existing frontagers.

In addition, any proposal of road reclassification would be accompanied by a review of the road’s geometrical features, additional road safety analysis and continued liaison with stakeholders including Welland Park Academy and local residents. Moreover, the viability and benefits of any proposal of reclassification is subject to further detailed analysis.

A more detailed assessment of the complimentary measures required will be undertaken ensuring the important characteristics of road and current functions are not unduly or unfairly impeded by any such proposal to reclassify the road. Future investigations will involve microsimulation modelling of individual vehicle movements to gauge the impact on Welland Park Road and the surrounding road network /junctions.

9. Issue(s)

Rail bridge – Rockingham Road Rail Bridge.

Officer Response(s)

The draft Market Harborough Trasnport Study included consideration of increasing the clearance (height) of the ‘low’ rail bridge on Rockingham Road, as part of the Network Rail led project of localised rail improvements.

A feasibility report was commissioned to understand the costs and implications of increasing the clearance. The report identified that the mandatory standard headroom at the bridge could be achieved but at considerable cost, difficulty, disruption and risk. The risks pose a significant level of financial uncertainty. The analysis undertaken so far shows that there is very little prospect of the scheme receiving national funding.

It is important to stress that these findings do not hinder the progression of measures that aim to redirect HGVs to more suitable routes. These measures also help to tackle congestion and reduce the volume of traffic through the town centre. The County Council will continue to explore potential solutions to tackling congestion in the town centre.

Should alternative funding sources become available in the future, such as developer contributions from planning development, bridge alteration may be considered again in the future.

10. Issue(s)

Rail bridge – Kettering Road Rail Bridge- Alteration to the clearance at the bridge and as a congestion hotspot.

Officer Response(s)

The County Council has commissioned a feasibility report to understand the costs and considerations of altering the clearance at the bridge, which would involve either the raising of the bridge deck and associated structures, or the lowering of the carriageway (or combination of both).

Such a major intervention requires central government funding which requires an evidence led case, based upon a stringent appraisal. The analysis to date has shown very little prospect of national funding opportunities which such a major intervention will require.

The Kettering Road rail bridge was identified to be a known congestion hotspot. The potential to identify a solution and develop a mitigation solution is being considered by the County Council. Future investigations will involve microsimulation modelling of individual vehicle movements to gauge the

impact of a solution on Kettering Road and the surrounding road network /junctions.

11. Issue(s)

Cycling route – Consideration of the AdamSmile proposal**.**

Officer Response(s)

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

12. Issue(s)

Pedestrian - Provision of dropped-kerb crossings, improved crossing on Leicester Roar (near to the hospital) and more crossings on the High Street.

Officer Response(s)

In addition to the walking /cycling analysis and recommendations put forward to date, further consideration will be given to determine the suitability of additional pedestrian crossings within the town centre as the Strategy develops and is delivered.

13. Issue(s)

Pedestrian - Pedestrianise town centre

Officer Response(s)

A number of suggestions to pedestrianise the town centre were received during the public consultation.

Whilst the Study recommends pedestrian improvements and highlights the issue of two classified ‘A’ and ‘B’ roads converging in the town centre there are a number of possible negative impacts that pedestrianising could bring to Market Harborough if adopted: -

- Removal of all traffic from the town centre could impose extra traffic on the rest of the town where pedestrian activity is high;
- Bus services would need likely rerouting and passengers may suffer disruption/ inconvenience;
- Access difficulties for delivery vehicles loading and unloading goods at shops and businesses in the immediate town centre.
- Rateable values of shops could go up thereby putting more financial pressure on retailers.

The Trasnport Strategy aims to enhance the vibrancy of the market town by taking a more balanced approach through the implementation of walking and cycling routes together with proposals to assist motorists making it an attractive place for commuters, employees, residents and tourists alike thereby sustaining the local economy and increasing footfall in the town centre whilst protecting local characteristics of the market town.

Additionally, Category 2 improvements such as the rerouting of traffic away from the town centre will help reduce emissions and quieten the town centre considerably adding to the attractiveness of the town centre.

14. Issue(s)

Junctions/ Congestion - The provision of a park-and-ride on the periphery of the town.

Officer Response(s)

Park-and-ride schemes are traditionally a form of an integrated transport design which allows private transport users to park their vehicles at a car park and travel into the central area using a public transport mode.

Based upon our experience of park-and-ride schemes within the County, it is unlikely that such a purpose built facility would be viable based on the current and forecast population of Market Harborough. The traffic collection data analysis, which is an integral component of the Study, demonstrates the majority of all trips are internal to external- a trend forecast to continue with 1/3 of trips being internal *local* trips. This does not correlate with a traditional form of park-and-ride which would require a daily import of people into the market town.

In the context of Market Harborough, it is felt that the Trasnport Strategy through its proposed package of measures will sufficiently aid network improvement and management therefore negating the need for a dedicated Park and Ride.

The Market Harborough Trasnport Strategy combined package of measures are:

- Junction capacity/congestion improvements
- Extend and enhance the walking and cycling network. This includes primary routes as well as other routes linking primary routes across the town.
- Review of Speed Limit categories (20,30 and 40 mph)
- Extension of the public realm to encompass the rail and bus terminals making improvements to existing materials and streetscape.

- Network Rail led projects that include track realignment, platform and train station improvements and a level crossing at Little Bowden.
- Review of parking controls and the need for further controls across the town, with particular regard to permit parking in two areas – around the train station and town centre.
- Localised public transport infrastructure improvements across the town.
- Improved traffic signing across the town.
- Initiatives to encourage people to walk, cycle and use public transport.

15. Issue(s)

Junctions/ Congestion - Remove traffic signals at junctions and replace with mini roundabouts.

Officer Response(s)

The County Council would not necessarily advocate the wholesale replacement of traffic signals with mini roundabouts due to pedestrian crossing demands, junction visibility issues and potential difficulties for side road traffic. Having said that, in certain locations there may be some merit, particularly where there is a series of traffic lights in close proximity. Again, as part of the Strategy development the County Council will look to develop a detailed microsimulation transport model which will help model/test the impact of removing traffic lights.

16. Issue(s)

Junctions/ Congestion - Rebuild the bridge over the river beyond Tesco's car park to be suitable for motor traffic.

Officer Response(s)

The bridge provides a pedestrian and cycle crossing over the River Welland from Walcot Road to the supermarket car park. Walcot Road is a residential no-through (vehicular) road which leads south to Welland Park Road to the predominately residential area which encapsulates the south of Market Harborough. This large residential area to the south creates a pedestrian and cycle demand to a number of amenities to the north, as well providing crossing into the town centre which is severed by the River Welland.

To modify this bridge to permit motor vehicles, would lead to a number immediate challenges. In the first instance, the supermarket car park is entirely controlled by a third party and is consequently not part of the local highway. A motor link would essentially create a link between Walcot Road to Coventry Road, via third party land (the car park). Third party land is entirely outside the control of the County Council and District Council.

Consideration has also been given to how desirable a vehicular route via Walcot Road would be. Walcot Road is not suitable to carry a greater volume of traffic both in terms of the geometry and the primary residential function further diminishes any realistic prospect of this bridge being opened up to vehicular traffic.

17. Issue(s)

Junctions/ Congestion - More yellow boxes junction markings required at a number of junctions.

Officer Response(s)

As part of the refinement of the analysis so far undertaken, the Authority will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of yellow box or keep clear markings.

18. Issue(s)

Junctions/ Congestion - Provision of traffic signals at the Northampton Road/Scotland Road junction.

Officer Response(s)

The provision of traffic signals at the Northampton Road/Scotland Road junction has not been identified in the Study based on the evidence derived from LLITM which provided an indication of the current and future most congested parts of the network.

The proposed town centre microsimulation modelling should provide further evidence of the necessity for enhancement at this junction; however analysis to date has not demonstrated such a requirement.

As well as considering traffic volume and other matters relating to the engineering deliverability of traffic signals, the appropriateness of any junction intervention would have to be carefully considered, to avoid the increased use of Scotland Road as a through route.

19. Issue(s)

Junctions/ Congestion – Extend proposed relief road from A508 to A4304, suggestion that this should be funded by £5k roof tax through planning process.

Officer Response(s)

The County Council commissioned a high-level economic appraisal report to estimate the Benefit-Cost Ratio (BCR) of the Market Harborough SRR to give

an early indication of its viability. The appraisal report also provides further detail of the potential SRR traffic, and in particular, the proportion of through traffic forecast to use it.

Having undertaken an economic assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This currently provides poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government. The analysis to date has shown very little prospect of national funding opportunities which such a major intervention will require.

Demand for the route is low and an extension to the length of the road would need to proportionately increase demand relative to the cost. This is therefore a longer term aspiration of the Strategy.

Developer contributions are a key part of funding for the Strategy as a whole and the County Council will therefore continue to work closely with Harborough District Council to secure potential funding where the planning system allows.

20. Issue(s)

Junctions/ Congestion – Exclusion of all private vehicles except buses and taxis in The Square.

Officer Response(s)

The provision of measures to alleviate congestion and unnecessary traffic within the town centre are a priority of the Strategy. Analysis to date has not revealed a requirement to totally exclude all private vehicles from the town centre.

A number of recommendations will be actively pursued including incentives to encourage a modal shift away from car use, enhancement of the walking and cycling network, parking controls and measures to reduce the through-movement of traffic in the town centre.

21. Issue(s)

Junctions/ Congestion/ Parking Provision – Logan Street/ Gardiner Street/ Knoll Street and Patrick Street/ Granville Street/ Gladstone Street/ Cross Street one way and Bowden Lane /Doddridge Road/Roman Way/The Broadway/ Connaught Road/ Clarence Street one way.

Officer Response(s)

Any proposal to introduce a one-way system is considered against its necessity, the effects/ consequences of such a system and other local considerations. The introduction of a one-way system in an entirely residential area could present significant disadvantages for residents due to the indirect routes which would then have to be taken. Speeds in one-way streets are often recorded as higher than comparable two-way sections of road which would also be a concern given the primary residential function of these roads. The introduction of further one-way systems which incorporate a number of residential streets in the town is not considered to be a viable solution to the issue of congestion or parking provision at this time. However the proposed microsimulation transport modelling should provide further evidence for the necessity for one way systems; however analysis to date has not demonstrated such a requirement.

22. Issue(s)

St Mary's Road one-way option.

Officer Response(s)

Measures to actively reduce the amount of through-traffic from the town centre have been recommended within the Study. The analysis to date has shown that a system of reclassification and redistribution of traffic, as well as a number of accompanying measures, results in a reduction in traffic travelling through the town centre.

A number of mitigation options have been tested, and consideration of the potential introduction of a partial one-way system on St Mary's Road to help reduce traffic impacts within The Square, will be tested further as part of the next stage of analysis.

As part of the consultation process, the suggestion to ban the right-turn on Northampton Road onto St Mary's Road to achieve a reduction of traffic travelling through the town centre was put forward. Not without its potential merits, the St Mary's one-way options are conducive and necessary to support road reclassification, which accounts for the greatest level of demand through the town. This is not to discount the potential for such a proposal to ban the right-turn which will be included in the future micro-simulation analysis.

23. Issues(s)

Public Transport– Increase service provision

Officer Response(s)

Localised public transport infrastructure improvements have been recommended as part of the Study. Subject to funding, a strategic investment programme includes the introduction of new bus stops, improved provision of *smart* technology such as real time display information to encourage bus patronage which would in turn strengthen the viability of commercially operated services.

By enhancing viability, this acts as an incentive to commercial operators to increase frequency and extend operating hours. The County Council currently subsidises a number of services and invests in services which may not be commercially attractive but are recognised as socially necessary.

The County Council recognises bus passenger transport as a community priority and will continue to enhance the attractiveness for commercial investment and infrastructure enhancements as part of the Strategy.

24. Issue(s)

HGVs– Banning HGVs from town centre

Officer Response(s)

The movement of HGV traffic has been considered in the Strategy, to avoid where possible the threat of HGVs using inappropriate roads within the town.

Market Harborough benefits from a range of distinctive and flourishing independent retailers in addition to a number of recognised high street retailers, which are valued by residents and visitors alike. Due to the loading /servicing requirements of these businesses the County Council are not seeking to ban all HGV movements in the town centre. However due to the perceived environmental constraints, the Strategy does provide Category 2 improvements which look to redirect unnecessary movements away from the centre where possible, which will benefit all network users. Alongside this, the Strategy is looking to make local junction improvements to ensure the efficient movement of traffic through the centre of Market Harborough, therefore limiting the threat of stationary traffic blighting the historic and idyllic environment.

HGV traffic is often cited as a cause of damage to highway infrastructure, presenting an unnecessary risk to cyclists and pedestrians, as well as being generally an imposition on the amenity and character of an area. Leicestershire County Council, as Highway Authority, has a well-established practice to maximise the use of A and B roads for HGV traffic, reducing the likelihood of traffic using unsuitable routes or those with established weight restrictions.

25. Issue(s)

Other/ Misc - Remove or reduce height of all speed humps in town.

Officer Response(s)

Whilst it is understood that speed humps will never be universally popular with all road users, they are not the only measure that the County Council introduces to manage vehicle speeds. Their use forms part of the County Councils wider approach to traffic and network management. The County Council recognises that speed bumps are an extremely effective means of controlling vehicle speeds and they play an important role in helping to reduce the likelihood and severity of collisions.

In Leicestershire the design of speed bumps, the consultation process and their implementation, is based on government guidance and national legislation.

The justification for promoting speed bumps at a particular site can be varied. It could be to address an accident problem, create a safer cycling route, or reduce speeds near a new junction or a school etc. Many schemes around the county have been introduced over the years following local concern over excessive speed. Requests for traffic calming were then investigated against the assessment system in place at the time; such assessment systems generally took account of traffic speeds, volume, accidents and the type and number of nearby premises (e.g. schools, shops, residential).

Whilst the reasons for introducing speed bumps can be varied, schemes can only be introduced following an extensive consultation exercise. This would normally involve letters to local residents, possibly a public exhibition; and also statutory public notices placed on site and advertised in the local newspaper. Also, the emergency services and bus companies would have an important say in the appropriateness of a particular scheme. All comments made on a scheme are fully considered before a decision is taken on whether to implement it.

Speed cushions and tables are designed to national standards and guidance, so that they can be traversed by all vehicles conforming to manufacturer’s specifications. DfT research has demonstrated that when negotiated at sensible speeds, speed tables and cushions do not cause damage to vehicles.

The County council will continue to carefully consider the use of speed bumps through the delivery of traffic and network management measures.

It is important not to lose sight that speed bumps make a big difference to road safety and therefore their removal from any existing scheme would require very strong consideration and would involve full consultation.

Presently we have no specific plans to remove safety measures like speed bumps from roads in Market Harborough.

26. Issue(s)

Other/ Misc - Reopen the right turn from A6 into Kettering Road.

Officer Response(s)

In 2012, due to a history of collisions associated with right turn manoeuvres at this junction the County Council carried out physical works to prevent the uncontrolled right turn manoeuvre from the A6 into Kettering Road.

More recent analysis undertaken by the County Council has identified a degree of increased driver frustration as a result of approximate 4km diversion for right-turners onto Kettering Road and increased *rat-running* as a result of drivers rerouting via Ashley Road and Gores Lane to bypass the junction in its entirety.

Moreover, there is concern that drivers are undertaking U-turns, just after the physical build-out then proceeding on Kettering Road, a manoeuvre that is not only banned by Order but potentially increases the risk to the travelling public. Physical evidence of this practice is evident on the carriageway.

The County Council is taking forward the potential of reintroducing the right-turn separately from the Strategy as part of a developer led scheme. The Authority has compiled up-to-date collision data and is in the process of considering a number of options including the potential of implementing a roundabout or traffic signals.

Any potential enhancement would need to address the risks associated with the right-turn movement as well as the implications which have arisen as a result of the closure of that movement.

6.5 *Updated Trasnport Study recommendations*

Background

The consultation exercise focused primarily on key stakeholder feedback/workshop sessions, along with wider public consultation. Following the consultation, a number of solutions/considerations have been identified.

The consultation and stakeholder engagement exercise allows for key inputs into the work already undertaken, so that the future Strategy better reflects the needs of the local community and key stakeholders.

This section details the outline recommendations following the consultation and subsequent analysis undertaken by the County Council regarding the feasibility of the Rockingham Road rail bridge alteration and the Southern Relief Road (SRR); the two most costly and complex highway interventions included within the Study.

The updated Study is detailed below and where necessary, changes to the proposals have been made following the consultation process, the details of which have also been documented. This section should be read in conjunction with the preceding chapters of this document.

For ease of understanding, the summary section includes all recommendations which form the updated Strategy.

Emerging Outline Recommendations

The draft Study initially made 16 recommendations, which form the basis of the draft Trasnport Strategy. These were broadly based around the following proposals, which still remain central to the proposals to be taken forward:

a) encouraging walking, cycling and public transport use;
b) improving key junctions and general traffic flow around the town;
c) possible public realm enhancements; and
d) changes to the way that traffic is routed through and around the town.

Following the analysis of the consultation feedback and subsequent analysis undertaken by the County Council, a total of 18 recommendations are put forward which form the basis of the Trasnport Strategy for further refinement and development of transport proposals for Market Harborough.

A breakdown of these amendments is detailed below:-

- Capacity / Congestion Improvements; two additional recommendations
- Network Management and traffic routing; one recommendation removed from the Strategy
- Sustainable transport infrastructure / behaviour change initiatives; two additional recommendations
- Traffic Management Improvements; one additional recommendation

Each of these areas is explored in detail below.

Capacity / Congestion Improvements

This section should be read in conjunction with Section 4.6 of the Study document.

The extensive data gathering exercise and sectoral analysis which underpins the Study assists in the quantification of key inputs, such as growth rates, housing and social needs, to inform real, bespoke and relevant solutions to ensure that a resilient network Strategy can be developed and implemented.

By understanding the *demand*, which can be quantified in levels of trip making and its associated impact on the network, the draft Study has identified areas/ initiatives where some level of investment could be considered to improve the performance of the network or guard against its rate of deterioration.

The traffic impact analysis has revealed the following key headline findings for peak time traffic movements: -

- Traffic volume in the town is forecast to increase by 24% between 2011 and 2031;
- Greatest proportion of trips (57%) on the network are those going from within the Study area to outside of the area, vice versa (internal to external and external to internal);
- Presently 1/3 (36%) of trips within the Study area over the peak hours were internal trips (internal to internal);
- Presently ‘through’ traffic (traffic using the roads in the town to get to/from destinations outside of the town) accounts for 10% of trips;
- The B6047 and A4303 presently (The Square- the nucleus of the town) carry in excess of 13,000 vehicles per day;
- The future of internal trips, as a proportion of total trips, drops to 25% of all journeys. However the absolute number of trips remains high (4,000 over the peaks); and
- In the future the frequency of internal/ external trips undertaken increases as a proportion to 68%.

This highlights the need to form measures that can successfully target the different types of trip making in Market Harborough. Promoting measures which encourage alternatives to car use to achieve an overall reduction in the

number of car journeys by enhancing walking/ cycling and PT infrastructure are most effective when considering internal trip making.

However, sectoral analysis shows the majority of all trips are internal/ external, a trend which is forecast to continue. The effectiveness of such measures on these trips is limited due to complexity and distance of that type of trip making.

As a consequence, capacity and junction enhancement, in combination with wider sustainable transport principles, is required to ensure the market town can continue to thrive in light of forecast predictions.

The following additional recommendations as a result of the consultation will be taken forward as part of the emerging Trasnport Strategy: -

1. County Council will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of road markings; and
2. The microsimulation analysis will model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods.

Yellow box markings & Road Markings

The provision of yellow box junction markings is considered in terms of the suitability, the legal criteria and delivery. This is on a case-by-case basis and is not applied uncritically. This is done so not to preclude best engineering judgment and application of standards, which could otherwise create the opposite effect to that which is being sought as a solution. For example, the widespread use of yellow box markings in high concentration within a certain area can devalue their effectiveness as drivers become all-to-well familiar with their presence on the network.

By entering the markings when the drivers exit is blocked by stationary vehicles, whether these are ahead in the road or on a side road, drivers commit an offence. The provision of such markings do not necessarily require a Traffic Regulation Order, however the local Constabulary is always consulted.

The suitability of such markings is measured against a number of criteria and factors which may influence their installation such as the type of junction (whether signal controlled for example), blocking back from a junction ahead and traffic volume.

To inform the Study, a number of traffic surveys and other data sources were collected and analysed. This will allow the County Council to assess the suitability of junctions for this type of intervention but also to what alternatives, and potentially more effective measures, could be considered. Consideration towards road safety, the needs of pedestrians and cyclists will be central to

the future analysis. Additional analysis will be taken forward as part of the Strategy.

Removal of traffic signals at junctions and/ or temporary signals

The County Council would not necessarily advocate the wholesale removal of traffic signals or the switching off of signals off peak. This is due to pedestrian safety concerns, junction visibility issues and potential difficulties for side road traffic. Having said that, in certain locations there may be some merit, particularly where there is a series of traffic signals in close proximity. Again, as part of our work identifying potential measures for the town, the County Council are also investing in the development of a detailed transport model which will help the Authority safely model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods. This also provides the evidence base to support future funding bids.

Off peak trip movements can be quite different, in terms of their origin/destination and purpose, compared to the peak times and the need to thoroughly test a range of proposals to enhance network efficiency and junction synchronisation needs to adequately account for this.

Future considerations towards network improvements involve the potential to link traffic signals together on an interconnected network. Timings are then automatically adjusted across the network to meet demand and to provide more green time in favour of the main roads. It does not mean that there will never be any congestion but the system is designed to minimise overall levels of congestion across the network of junctions and make better use of the existing capacity of the road network.

Network Management and Traffic Routing

By far the two most costly and complex interventions identified within the Trasnport Study relate to network management and traffic routeing alterations; namely the Rockingham Road rail bridge modification and the provision of the Southern Relief Road (SRR).

The County Council has commissioned two further studies to analyse the feasibility of the Rockingham Road rail bridge alteration and the SRR given the complexity, engineering constraints and cost associated with these two major interventions.

Rockingham Road Rail Bridge

The derivation of the initial concept to alter the clearance arose within the Study following liaison with Leicestershire Constabulary and Aone+, who manage the A14 on behalf of Highways England.

High-sided vehicles striking the low bridge on Rockingham Road, or RTCs on the A14 between junctions 2 and 3 currently force vehicles onto the Market Harborough network. Without adequate signing to direct those motorists back

onto the strategic road network, it is likely that a proportion of that traffic could use inappropriate/unsuitable routes through the town, including residential areas.

In the absence of emergency diversion routes (EDR) signing, the low bridge on Rockingham Road would be particularly vulnerable due to its location on the A4304, as a high proportion of the diverted traffic would likely be Heavy Goods Vehicles (HGV) and may be reliant on satellite navigation devices that could automatically select Rockingham Road due to its status.

The initial concept then is to alter the clearance at the bridge to the mandatory national standard, 5.03m, to allow all high-sided HGVs from the A6 to access the south side of the town and provide the basis for more suitable diversion routes following incidents on the A14.

The potential consideration to alter the clearance at the 'low' rail bridge at Rockingham Road has been identified to form part of the Network Rail led project of localised rail improvements which at the time was considered an appropriate platform to integrate the potential bridge alteration.

The feasibility report provides an understanding of the costs and considerations of altering the clearance at the bridge, which would involve either the raising of the bridge deck and associated structures, or the lowering of the carriageway (or combination of both).

The maximum achievable headroom at the bridge is some way off the national mandatory standard meaning that if any deck replacement works were to be carried out alone, the bridge would still have to be signed as a 'Low Bridge'.

The consequences of the bridge, following alteration, still being classified as 'Low' means it would still not be suitable for high-sided vehicles therefore the prospects and realisation of redirecting all high-sided vehicles from the town centre could not be achieved.

The proposal to redirect the very largest of vehicles would simply not be permissible in accordance with national standards and a scheme to alter the bridge would not be value for money as it would not achieve its desired benefits.

	'U' Deck Option*	**'E' Deck Option***	**Double 'U' Deck Option**
Rockingham Road (current 4m)**	4.89m	4.44m	5.03m

*Deck alteration options in isolation (without carriageway lowering)
**Minimum mandatory 5.03m in accordance with TD27/05.

The road lowering option would require around 1.4m of reduction to the vertical alignment of Rockingham Road to achieve the minimum 5.03m headroom over a carriageway width of 7.3m.

This would be very difficult to achieve given the quantity of services buried in the road and footways and the close proximity of a T-junction. It is likely that significant strengthening or underpinning of the existing abutments would be required due to the change in road level.

Such a major intervention would likely require central government funding which requires an evidence led case, based upon a stringent appraisal criterion set by the relevant Body/ Organisation. The analysis to date has shown very little prospect for national funding opportunities which such a major intervention would require.

It is important to stress that the findings of the structural analysis for the bridge does not hinder the progression of the wide array of measures as set out in category 2 to redirect HGV movements to more suitable routes assisting to alleviate congestion and reduce the volume of traffic through the town centre. These are detailed below: -

- Upgrade Welland Park Road between Lubenham Hill and Northampton Road to the A4303;
- Downgrade the existing A4303 along Coventry Road to the junction of St Mary's Road/ Kettering Road to help redistribute unnecessary traffic away from the town centre;
- Reverse the existing one way on Abbey Street to further deter use of Coventry Road; and
- Potential Signal control enhancement of Church Square/ High Street junction and network synchronisation
- Intervention on St Marys Road and direction of flow to ease congestion at The Square.

Of all procedures, an operation to increase the rail bridge headroom is perhaps the most outstandingly risk prone, particularly in relation to what may appear to be relatively modest scale works. Throughout the country there are a very considerable number of bridges with substandard headroom and it is by no means through a lack of diligence that, by and large, such a deficiency in most cases remains unaddressed.

Having identified the problem of congestion within the town centre, reiterated by the consultation comments, the County Council will continue to explore a number of potential solutions to this pertinent issue. Moreover, this is not to entirely preclude the option of bridge alteration in the future in line with planning development which could influence such a change.

Furthermore, should there be an opportunity to engage once again during a local Network Rail led programme of works in Harborough, the objective to alter the clearance could be considered.

Further analysis to the proposal of an engineering solution to facilitate the passage of high-sided vehicles under the low bridge on Rockingham Road has demonstrated a number of challenges. As a consequence, this concept will not be pursued in this Strategy. This effects the previously advised proposal to designate routes for the EDR which would use this route, should it have been viable to alter the clearance of the bridge. The County Council has considered alterative EDR routes. This is detailed in recommendation R15.

SRR

The concept of a relief road from the A6 to the south-east of the town is the costliest and complex measure, and could not be delivered in the short term. The realisation of benefits has to then be considered over a longer period of time.

The County Council commissioned a broad-brush economic appraisal to estimate the Benefit-Cost Ratio (BCR) of the Market Harborough SRR to give an early indication of its viability. The appraisal report also provides further detail of the potential SRR traffic, and in particular, the proportion of through traffic forecast to use it. The results of which are detailed below.

In the 2031 forecast there will be a general decrease in the traffic on the town centre roads. This is likely to be due to the traffic reassignment and rerouting as a result of the new link road. Traffic is diverting onto alternative routes in order to use the SRR, rather than using town centre roads.

The tables below detailed the volume of traffic anticipated to use the SRR and the associated traffic distribution.

Scenario	EB Total Flow	EB Through Traffic Flow	EB Through Traffic %	WB Total Flow	WB Through Traffic Flow	WB Through Traffic %	Bi - directional Total Flow	Bi-Directional Through Traffic Flow	Bi-Directional Through
2026 AM	331	99	30%	253	87	34%	585	186	32%
2026 PM	309	101	33%	304	103	34%	614	204	33%
2031 AM	345	94	27%	245	84	34%	590	178	30%
2031 PM	357	133	37%	311	94	30%	668	227	34%

‘Through Traffic’ using the Southern Relief Road

	2026 AM		2026 PM		2031 AM		2031 PM	
	External	**Internal**	**External**	**Internal**	**External**	**Internal**	**External**	**Internal**
External	32%	28%	33%	24%	30%	32%	34%	25%
Internal	36%	3%	39%	3%	35%	3%	38%	3%

SRR Traffic Distribution

Demand for the SRR is forecast to be modest, below the available capacity, with a predicted total of 668 two-way movements anticipated in the 2031 forecast peak period. Having undertaken a TUBA assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This provides a poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government.

Analysis of Monetised Costs and Benefits	
Greenhouse Gases	89
Economic Efficiency: Consumer Users (Commuting)	1,353
Economic Efficiency: Consumer Users (Other)	3,028
Economic Efficiency: Business Users and Providers	2,950
Wider Public Finances (Indirect Taxation Revenues)	-218
Present Value of Benefits (PVB)	7,202
Broad Transport Budget	25,736
Present Value of Costs (PVC)	25,736
Overall Impacts	
Net Present Value (NPV)	**-18,534**
Benefit to Cost Ratio (BCR)	**0.280**

The indication of low value for money, offers a broad health warning with regards to such a major infrastructure project. Although the broad-brush BCR is not a definitive answer and is based on the current known working assumption such as the scheme being fully funded by public resources, it is still evident that the predicted demand associated the relief road does not align with the monetised costs and benefits of the scheme at this time. These are not limited to construction costs but also the long term impact of greenhouses gases, commuter *time saving* benefits and indirect taxation revenues.

The forecast assumptions and predicted demand tested as part of the planned period up to 2031 does not currently align with the relief road providing good value for money and would therefore be considered a longer term aspiration.

Sustainable transport infrastructure / behaviour change initiatives;

This section should be read in conjunction with Section 4.9 of the Study document.

Following the analysis of the consultation submissions, two additional recommendations have been put forward, forming part of the wide array of measures that seek to promote use of sustainable travel modes and initiate key behaviour changes further promoting a shift away from single occupancy car use.

Market Harborough already enjoys an extensive cycle and walking network due to investment in infrastructure made possible over the past 25 years. However, in places the infrastructure has not kept pace with the growth of local amenities and development. As a consequence, the existing network has, in places, become disjointed and would benefit from some degree of upgrading.

The propensity to engage in sustainable travel modes, such as walking and cycling, is linked to the attractiveness, quality and availability of the supporting infrastructure. Reducing the barrier to such activities which will assist in maintaining Market Harborough as an attractive place to live, support sustainable development and provide a high quality environment that people feel safe to walk and cycle in, and link to public transport services.

Suitability of segregated walk/cycle link between Lubenham and Market Harborough

The tragic circumstances which surrounded the fatal collision involving Adam Mugridge is a catastrophic example of the inherent risk associated with travel. The Adam Mugridge Memorial Fund charity was formed following Adam's loss of life whilst he was cycling to Welland Park Academy from Lubenham in 2006. The charity pursues its purpose to create a walking/ cycle route between Lubenham and Market Harborough. The focus has been on the route which abuts the old rail line, which would create a route away from the carriageway.

The Charity and its trustees have been continually proactive in their thoughtful campaign since its inception, maintaining regular contact with landowners, Northamptonshire and Leicestershire County Councils and are continuing to progress the proposal.

The Adam Mugridge Memorial Fund trustees have offered their support for the Market Harborough Transport proposals which aims to enhance and extend the existing walking/cycling network. Leicestershire County Council recognises the trustees' continual efforts of the Charity.

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

Analysis to determine the suitability of additional pedestrian crossings within the town centre

It is well understood that a pedestrian/ cycle infrastructure is most effective when connected and coherent, and that severance caused by the road network can deter people from safe and sustainable trip making on foot or by cycle.

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another. These types of journeys lend themselves to being undertaken by 'active' or 'sustainable' modes of transport; typically walking, cycling or by public transport. Journeys undertaken by alternative modes of transport to the car are likely to improve the function and resilience of the network through reduced demand, whilst bringing about incidental social improvements such as reduced instances of obesity.

The analysis to date has identified gaps in the existing infrastructure. In total, 20 routes comprising of a mixture of existing and new infrastructure have been identified for upgrade or construction to assist in delivery of the studies strategic outcomes. In addition to analysis and recommendations put forward to date, further analysis to determine the suitability of additional pedestrian crossings within the town centre will be included within the Strategy.

Traffic Management Improvements;

This section should be read in conjunction with Section 4.12 of the Study document.

Maintaining and analysing levels of off-street parking is essential to ensure there is a sufficient availability of spaces within the town centre for residents, shoppers, visitors and workers. Analysis within the Study has currently identified the total parking allocation, the demand and frequency of use at each parking location.

Both on-street and off-street parking is in general well catered for within the Study area. It remains prudent that a single holistic parking Strategy is developed for the town, which incorporates a range of parking controls, and associated measures, incorporates a range of measures/ controls which satisfactorily accounts for local residents, shoppers, visitors, motorists with mobility issues and employees.

<u>Parking at Logan Street /Gardiner Street/Knoll Street, East Street, Nelson Street, Connaught Road, Kettering Road, Walcot Road</u>

The Study details the longer term ambitions of the County Council to explore the potential for short stay on-street parking on the highway within the town. It is anticipated that the implementation of such a scheme could assist with the management of parking demand.

The locations above were put forward by local residents during the consultation feedback period and their inclusion does not necessarily mean other areas, which require intervention, will be overlooked. We appreciate that there are a number of issues at each of the locations detailed above and where possible, the Strategy will assist in managing parking demand.

The County Council will continue to explore a holistic parking Strategy which accounts for the demand, quality and use of car parking. Delivering this will depend of the engineering feasibility, delivery and viability of parking, but nonetheless this does not detract from the vision of a coherent parking Strategy.

The provision and management of off-street car parking is the responsibility of Harborough District Council within the framework of their Parking Strategy, 2016. This is a comprehensive and detailed analysis of current and future

demand, and offers a number of key recommendations and areas of additional analysis to ensure that future demand is satisfactorily met.

Updated Strategy Summary

The recommendations shown below have been identified and refined to address the issues identified in the Study work and validated during the consultation.

Each recommendation has been evaluated on the basis of key desire transport outcomes. Taken together the recommendations provide the foundation for an outline Trasnport Strategy.

Capacity / Congestion Improvements	
R1	With the assistance of microsimulation traffic modelling undertake option appraisals for capacity improvements at the following key junctions: (i) A6 / B6047 (aka McDonalds Roundabout) (ii) The Square / St Mary's Road / Coventry Road (iii) Northampton Road / Springfield Street / Welland Park Road (iv) A4304 St Mary's Road / Kettering Road / Clarence Street (v) A4304 Rockingham Road / Gores Lane (vi) A6 / Harborough Road / Dingley Road / A4304 (vii) Sainsbury's store entrance / Springfield Street
R2	As part of the refinement of the analysis so far undertaken, the Authority will analyse the extent of the problem of blocking at local junctions which could be mitigated by the provision of yellow box markings.
Recommendations that result in changes to the network and traffic routing	
R3	With the assistance of microsimulation traffic modelling consider the upgrade of Welland Park Road to become the A4304, with a respective downgrading of Coventry Road. Determine the associated engineering, accommodation and complementary works to facilitate this work.
R4	Consider the principle of providing a relief road between the A508 and A6 to the south-east of the town as a long term aspiration.
Sustainable transport infrastructure / behaviour change initiatives	
R5	Extend and enhance the walking and cycling network
R6	Make localised public transport infrastructure improvements
R7	Identify a suite of tailored behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable travel.
R8	The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

R9	Analysis to determine the suitability of additional pedestrian crossings within the town centre
R10	Enhancement of the supporting infrastructure to encompass the nearby rail and bus terminals thereby increasing the attractiveness of such assets for those on foot or cycle.
Safety Improvements	
R11	Continue to monitor Road Traffic Collisions (RTC) within the Study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.
Traffic Management Improvements and Emergency Diversion Routes	
R12	Devise and implement a new Strategy for traffic signing across the Study area
R13	Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones.
R14	Sites with recorded speeds in excess of the Association of Chief Police Officers enforcement threshold should be reviewed
R15	Identify opportunities to divert Highways England emergency diversion routes away from the town centre
HGV controls	
R16	Identify undesirable routes for HGVs and impose suitable prohibitions. Whilst the promotion of a town wide environmental weight restriction would be preferable, two key routes are particularly vulnerable to exploitation by inappropriate HGV traffic and should be adopted as a minimum: (i) Ashley Road /Kettering Road between the A4304 and the A6 (ii) Bath Street/Western Avenue between the A508 and Farndon Road
R17	Send updated map to 'sat-nav' contacts, advising of HGV controls following on from recommendation R16
Highway Maintenance	
R18	In light of the size and scope of the Study, incorporate / consider maintenance activities in relation to improvement proposals

A two additional consultation points will be included within future analysis, however rather than recommendations in their own right these can be taken forward as inclusions to existing recommendations. These are detailed below:-

- Where possible specific consideration Analysis of Logan Street /Gardiner Street/Knoll Street, East Street, Nelson Street, Connaught Road, Kettering Road, Walcot Road car parking will be included as part of the Traffic Management Improvements; and
- The micro-simulation analysis will model/test the impact of removing traffic signals or turning off certain sets of signals during off peak periods.

Recommendation R1

Undertake option appraisals for key junctions and make capacity improvements

Overview

The recommendation is to assess options for increasing the capability and resilience of key strategic junctions around the town to cope with peak hour demand.

Rationale

It is evident from transport modelling that the performance of the network is inplaces already poor, and forecast to deteriorate further in the future. Without appropriate intervention those poorly performing junctions will impede the economic growth of the area and generally be to the detriment of those who live, work and visit the town.

Findings

To date, 9 junctions have been identified for consideration. Of those; 7 were identified via the LLITM modelling;

- The Square / St Mary's Road / Coventry Road
- Northampton Road / Springfield Street
- Northampton Road / Welland Park Road
- St Mary's Road / Kettering Road / Clarence Street
- Rockingham Road / Gores Lane
- A6 / Harborough Road / Dingley Road / A4304
- Sainsbury's store entrance / Springfield Street;

and a further 2 junctions were selected for inclusion by LCC officers with local knowledge of where issues either exist now, or may be likely to arise in the future as a consequence of traffic growth/re-distribution;

- A6 / B6047 (aka McDonalds roundabout)
- *Springfield Street / Kettering Road*.

Sainsbury's car park / Springfield Street, is yet to be considered for potential improvements. With that being the only exception, all of the junctions identified have had a detailed analysis of their capacity and performance undertaken using specialist software (LinSig / Arcady etc) that is more detailed than that of LLITM. *That detailed modelling has confirmed that

mitigation is required at all of the junctions tested except for the roundabout junction of Springfield Street and Kettering Road; which is shown to have sufficient reserve capacity. On site observations suggest that the site is susceptible to problems caused by queuing originating from St Mary's Road / Kettering Road / Clarence Street and the Sainsbury's store entrance / Springfield Street junctions

To date, and subsequent to an exercise of solution optioneering, a preferred mitigation scheme has been selected for junctions 1, 2, 3, 4, 5 and 8. Those schemes are summarised the Table below.

Scheme drawings of the proposed mitigation schemes, along with more detailed summaries of the option appraisal process and model outputs are available in **Appendix F.**

The next stage of the Study will be to test/model the impact of the individual junction proposals across the network to see if collectively they work together.

Jn. No.	Location	Existing Reserve Capacity (2015 Flows) AM	Existing Reserve Capacity (2015 Flows) PM	Forecast Reserve Capacity (2031 Flows) AM	Forecast Reserve Capacity (2031 Flows) PM	Preferred Mitigation Option	Mitigation Capacity (2031 Flows) AM	Mitigation Capacity (2031 Flows) PM	Mitigation Scheme Cost
1	The Square / St Mary's Rd / Coventry Rd	-31%	-33%	-28%	-58%	No suitable mitigation identified at this time. Further analysis required. Consideration of one way system: Two potential one way systems have been proposed for consideration. • The first option makes St Mary's Road one way from The Square towards the Kettering Road / Clarence Street junction. Whilst this has highlighted that The Square / St Mary's Road junction would significantly benefit from the scheme, other junctions along Springfield Street may not cope with the additional traffic. • Another option proposes a partial one way on St Mary's from the main junction at the Square towards Adam & Eve Street (which is currently already one way).Traffic would eventually exit on the main street near the junction adjacent to the church at Church Square.The junction of A4304 Main St and Church Square could be signalised with pedestrian facilities. The existing zebra crossing would be removed which could help co-ordinate this junction with the Square.	N/A	N/A	N/A
2&3	Northampton Rd / Springfield St / Welland Park Rd	-4%	-9%	-15%	-17%	***Option no.2*** Additional lanes on both Northampton Road approaches. Additional islands on both Northampton Rd approaches to allow pedestrians to cross both side road whilst running Northampton Road ahead. Signal timings adjusted to link Welland Park Road & Springfield Road better and reduce blocking of internal stop lines	+11%	-5%	£310,000 to £550,000 (excluding Stats & Fees & Land costs)
4	St Mary's Road / Kettering Road / Clarence Street	-6%	-16%	-7%	-18%	***Option no. 2*** Validate MOVA to ensure optimum junction performance. Make Clarence Street One Way (Away from junction) and remove stage 3 from the sequence.	+14%	-3%	Approx £40-60k (Excluding any necessary alterations to Great Bowden Road/Rockingham Road)
5	Gores Lane / Rockingham Rd	-1%	-4%	-1%	-6%	***Option no.1*** Installation of on crossing pedestrian/cyclist detectors that will extend the intergreen period if required. This will allow the intergreen period to be reduced and only extended if necessary.	+7%	+2%	£3k-£5k (£30k-£40k) (If the signals are required to be renewed and converted to LED)
8	A6 / B6047 (Roundabout)	26%	24%	-4%	-3%	***Option no.1*** Provide widening on the B6047 Nth approach. Part of mitigation measure for a development. 0.85 RFC normally the threshold for capacity. With the mitigation measure RFC is only just tipped over 0.85.	0.82	0.89	Approx. £225k (excluding utility diversions)

Summary table of preferred junction enhancement schemes

Recommendation R2

Appraisal of yellow box markings

Overview

This recommendation will assess the suitability of such markings is measured against a number of criteria and factors which may influence their installation such as the type of junction (whether signal controlled for example), blocking back from a junction ahead and traffic flows.

Rationale

Betterment to traffic flow and optimal use of the highway network.

Recommendation R3

Consider upgrade of Welland Park Road to A4304 & a respective downgrading of Coventry Road. Determine associated engineering, accommodation & complimentary works to facilitate the same.

Overview

The recommendation is to designate that section of Welland Park Road between Lubenham Hill and Northampton Road as the A4304 and consequently to downgrade the existing A4304 route along Coventry Road between Lubenahm Hill to the junction of St Marys with Kettering Road; the point at which the 2 potential routes converge.

Rationale

Welland Park Road serves as the only alternative route to Coventry Road/St Marys for east/west movements across the town.

Whilst Coventry Road is promoted as the 'A' classified route, analysis points towards Welland Park Road as being the more strategically favourable of the two.

As per the table below (Change in flow, Coventry Road vs Welland Park Road, 2011-2031), it is evident that whilst the two routes currently carry a similar amount of traffic, that which is carried by Welland Park Road in the future is forecast to exceed Coventry Road by some 30%. Coventry Road is actually predicted to experience a decrease in the absolute number of vehicles of around 300 per day over the combined peak periods; comparable to the increase predicted for Welland Park Road. This suggests that Coventry Road traffic is naturally opting to re-distribute onto Welland Park Road.

Further analysis of the 2 routes between the points at which they diverge at Lubenham Hill, and then meet at Rockingham Road demonstrates that the Welland Park Road route is not only the shortest of the 2, but also has fewer likely conflict points between highway users. More importantly still is that Welland Park Road avoids the pedestrian dense town centre. These attributes have been tabulated in the table (Route attributes comparison, Welland Park Road vs. Coventry Road).

Location	Flow (2011)	Flow (2031)	Diff	Diff (%)
Welland Park	1,699	1,994	+295	+17%
Coventry Road	1,756	1,528	-288	-12%

Change in flow, Coventry Road vs Welland Park Road, 2011-2031

Attribute	Coventry Road	Welland Park Road
Route distance	1,850 metres	1,770 metres
Bus stops	12	1
Junctions with public highway	22	11
Minor private access onto highway(e.g driveways)	105	140
Major private access onto highway(e.g. Supermarket)	5	5
Formal pedestrian crossing points	17	13
Proximity of residential properties tocentre of carriageway	14 metres	20 metres

Route attributes comparison, Welland Park Road vs. Coventry Road

Rather than simply re-designate the status of a route, there would likely be a number of complimentary changes required to both facilitate the intended re-designation, and to deter the use of other, less desirable routes.

In view of the above, and in order to facilitate the designation of Welland Park Road as the A4304, it would be necessary to sufficiently upgrade those junctions to satisfactorily accommodate the increased demand.

Welland Park Road currently features extensive traffic calming by the way of priority chicanes and vertical speed reducing ramps. These features would need to be assessed with a view to reducing the impedance they impose upon the free flow of traffic, whilst continuing to suitably well restrain vehiclespeeds to a safe and appropriate level.

Consideration would need to be afforded to the imposition of traffic regulation orders along Welland Park Road to prohibit the parking of vehicles.

The junction of Welland Park Road and Farndon Road is known to be a site with a history of RTCs. Whilst an accident remedial scheme was implemented in 2015, there may, as a result of the proposed re-classification, be benefit in

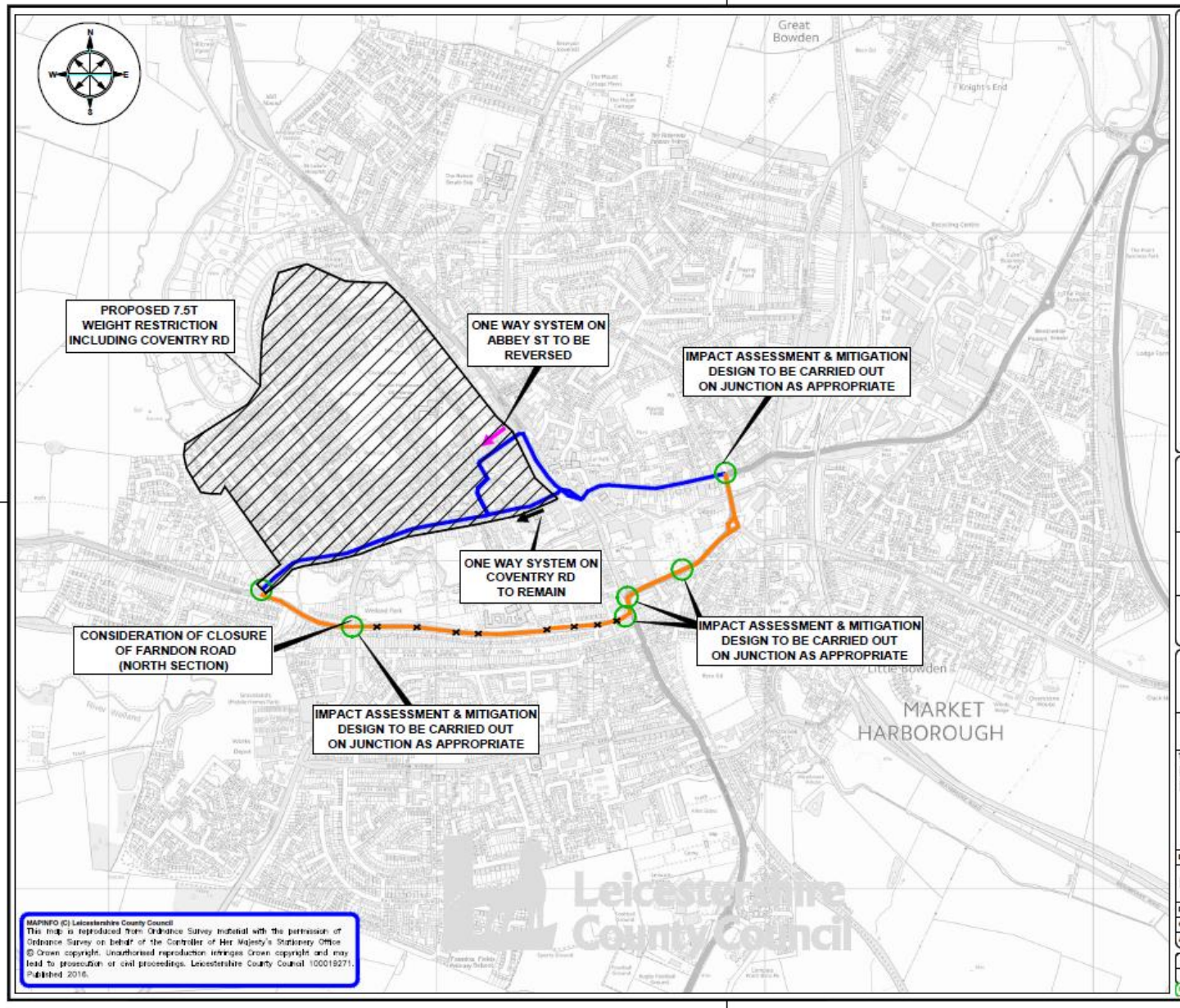
again reviewing the road layout at that location, with particular consideration being afforded to the potential of closing Farndon Road (north). In doing so, the number of movements at the junction would be simplified, and traffic would be discouraged from using Farndon Road to reach Coventry Road; opting instead to use Welland Park Road.

In addition to the potential closure of Farndon Road, further efforts should be made to deter the use of Coventry Road, and ultimately the town centre.

Suggested options for further investigation would be reversing the one-way traffic order on Abbey Street to require vehicles to travel west on Abbey Street rather than east towards the town centre, and the imposition of an environmental 7.5 tonne weight restriction on that section of the CoventryRoad route between Lubenham Hill and High Street.

In order to determine whether formally re-designating the A4304 would be viable and of benefit, it will be necessary to undertake a further phase of testing using traffic modelling software and a more detailed impact assessment of the complimentary works outlined above.

The Figure illustrates the different components concerned with the re-designation of Welland Park Road.


Great Bowden
PROPOSED 7.5T WEIGHT RESTRICTION INCLUDING COVENTRY RD
ONE WAY SYSTEM ON ABBEY ST TO BE REVERSED
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
ONE WAY SYSTEM ON COVENTRY RD TO REMAIN
CONSIDERATION OF CLOSURE OF FARNDON ROAD (NORTH SECTION)
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
IMPACT ASSESSMENT & MITIGATION DESIGN TO BE CARRIED OUT ON JUNCTION AS APPROPRIATE
Little Bowden
MARKET HARBOROUGH
MAPINFO (C) Leicestershire County Council
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EXISTING 'A4304' TO BE DOWNGRADED
NEW ROUTE TO BE DESIGNATED AS 'A4304'
TRAFFIC CALMING FEATURE TO BE REVIEWED
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
RECLASSIFICATION OF A4304 PROPOSAL
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
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Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk

Recommendation R4

Consider the principle of providing a relief road between the A508 & A6 to thesouth east of the town as a long term aspiration.

Overview

The recommendation is to determine whether it would be beneficial for the town to provide a south eastern relief road linking the A508 and the A6; diverting the primary route away from the town centre.

Rationale

This report has identified a general trend of decline in the performance/capacity of the network and its ability to accommodate forecastgrowth without engineering interventions.

A number of those issues identified; congestion, access for high-sided vehicles, presence of EDR route etc. could each likely be alleviated by the reduction in demand afforded by a suitable alternative route being provided toorbit the town; reducing through traffic and connecting the main arterial routesinto/out of the town.

The town will already be bypassed to the north, east and west by the A6 and,albeit to a lesser extent, the SDA link road. As such, an additional relief roadto the south of the town; linking the A508 and the A6, would be the most strategic location, and provide the opportunity to divert the primary route (A508 and A4304) from passing through the Study area.

Findings

A high level appreciation of the introduction of a southern relief road (SRR) has been undertaken using the LLITM software. For the purposes of that appraisal an assumed speed limit of 60mph, and a peak in demand between08:00-09:00hrs and 17:00-18:00hrs for the morning and evening peak respectively has been used.

Having undertaken a TUBA assessment of the Market Harborough SRR, the scenario produces a BCR of 0.28. This provides a poor value for money as defined within WebTAG, the economic appraisal guidelines as set by Central Government.

The indication of low value for money, offers a broad health warning with regards to such a major infrastructure project. Although the broad-brush BCR is not a definitive answer, it is evident that the predicted demand associated the relief road does not align with the monetised costs and benefits of the scheme at this time. These are not limited to construction

costs, but also the long term impact of greenhouses gases, commuter *time saving* benefits and indirect taxation revenues.

The forecast assumptions and predicted demand tested as part of the planed period up to 2031 does not currently align with the relief road providing good value for money. This demonstrates the scheme therefore should become a long term aspiration.

Initial high level estimates suggest that the cost to deliver the SRR is likely to be in the region of £35,000,000 - £45,000,000. It is with good cause therefore that the benefit of such a scheme should be sufficient to warrant the cost.

Recommendation 5

Extend and enhance the walking and cycling network

Overview

The recommendation is to undertake a thorough audit of the walking and cycling network with a view to identifying opportunities to upgrade and extendthe network.

Rationale

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another. These types of journeys lend themselves to being undertaken by 'active' or 'sustainable' modes of transport; typically walking, cycling, or by public transport. Journeys undertaken by alternative modes of transport to thecar are likely to improve the function and resilience of the network through reduced demand, whilst bringing about incidental social improvements suchas reduced instances of obesity.

Findings

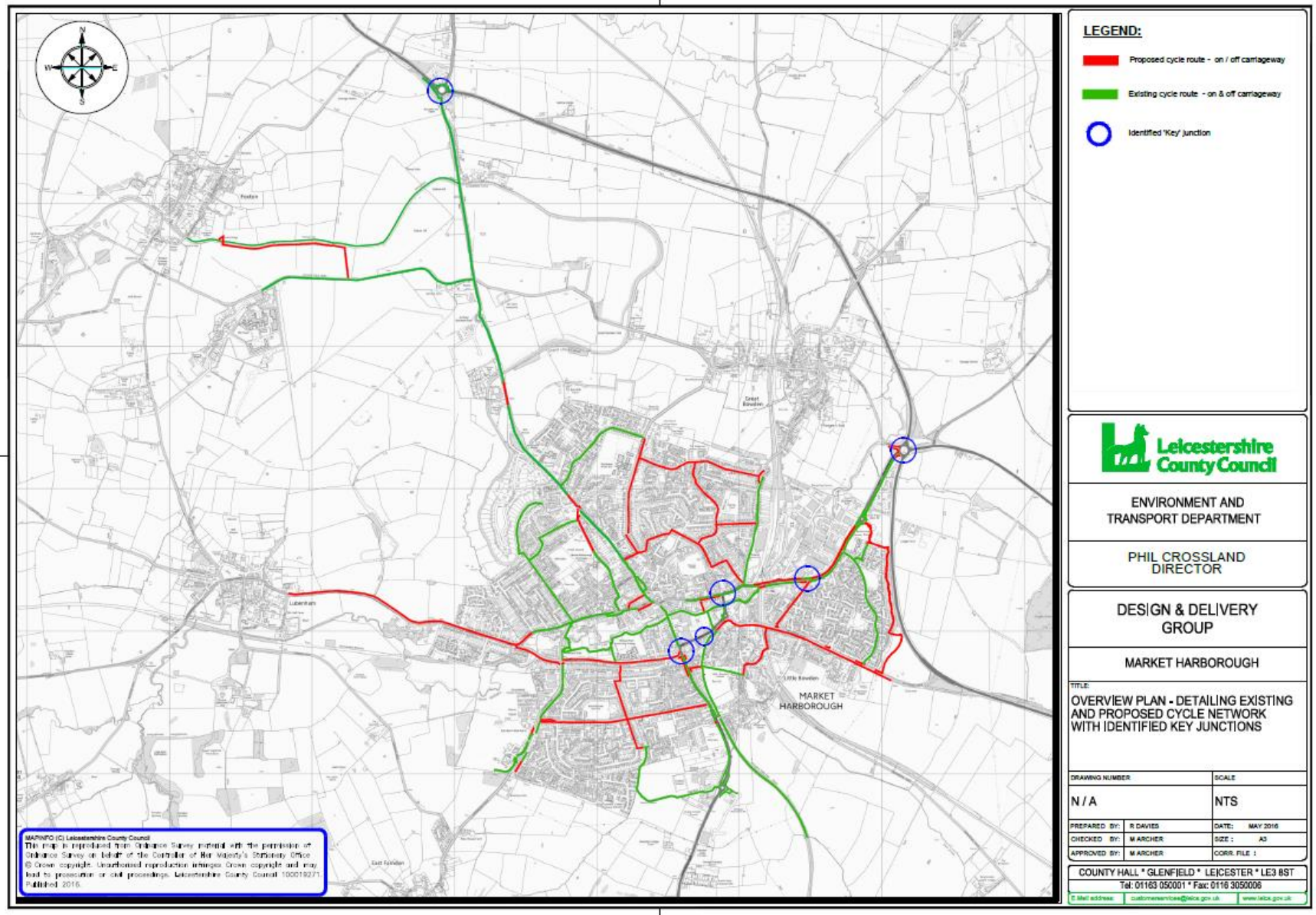
As previously stated, Market Harborough is not without purpose built facilitiesfor walking and cycling. However, there are missing links and existing infrastructure that would benefit from being enhanced/upgraded.

Analysis of the existing walking and cycling network contrasted with the town's known key amenities, places of work and residence soon demonstrates the scale and potential for further development of the network.

In total, 20 routes comprising of a mixture of existing and new infrastructurehave been identified for upgrade or construction to assist in delivery of the studies strategic outcomes.

The proposed resultant walking/cycling network is shown in the Figure. A detailed explanation of each route is available in Appendix D. It is importantto note that these are the promoted routes only. Other infrastructure for walking and cycling will exist elsewhere beyond those routes.

DRAFT


LEGEND:
Proposed cycle route - on / off carriageway
Existing cycle route - on & off carriageway
Identified 'Key' junction
MARKET HARBOROUGH
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Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
OVERVIEW PLAN - DETAILING EXISTING AND PROPOSED CYCLE NETWORK WITH IDENTIFIED KEY JUNCTIONS
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
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Recommendation R6

Make localised public transport infrastructure improvements

Overview

The recommendation is to deliver a package of public transport (bus) infrastructure improvements throughout the Study area.

Rationale

As per Recommendation R5, a good proportion of travel in the town is local;and on that basis would lend itself more readily to modal conversion, away from the car to other modes, such as public transportation; reducing the number of vehicles on the network.

Public transport in the UK was deregulated by the 1985 transport act and as such the majority of services are run on a commercial basis by private companies and as such the County Council does not have any control over these services and the decision on bus service frequency and hours of operation is a commercial one, made by the bus operators themselves. The County Council does subsidise a number of services which may not otherwise be commercially attractive, but are considered to be socially necessary. In Market Harborough the no.33, no.44, and no. 58 services are all subsidised to some extent. However, the effect of public sector austerity and reductions in revenue funding mean that local government's ability to continue to fund such services is being severely curtailed.

An investment through the introduction of new bus stops, new and improved bus shelters and real time timetable displays is to encourage bus patronage which in turn would strengthen the commercial viability of services allowing operators to look at increasing frequency or extending the hours of the service; which can in turn negate the need for continued financial support from the Council.

Findings

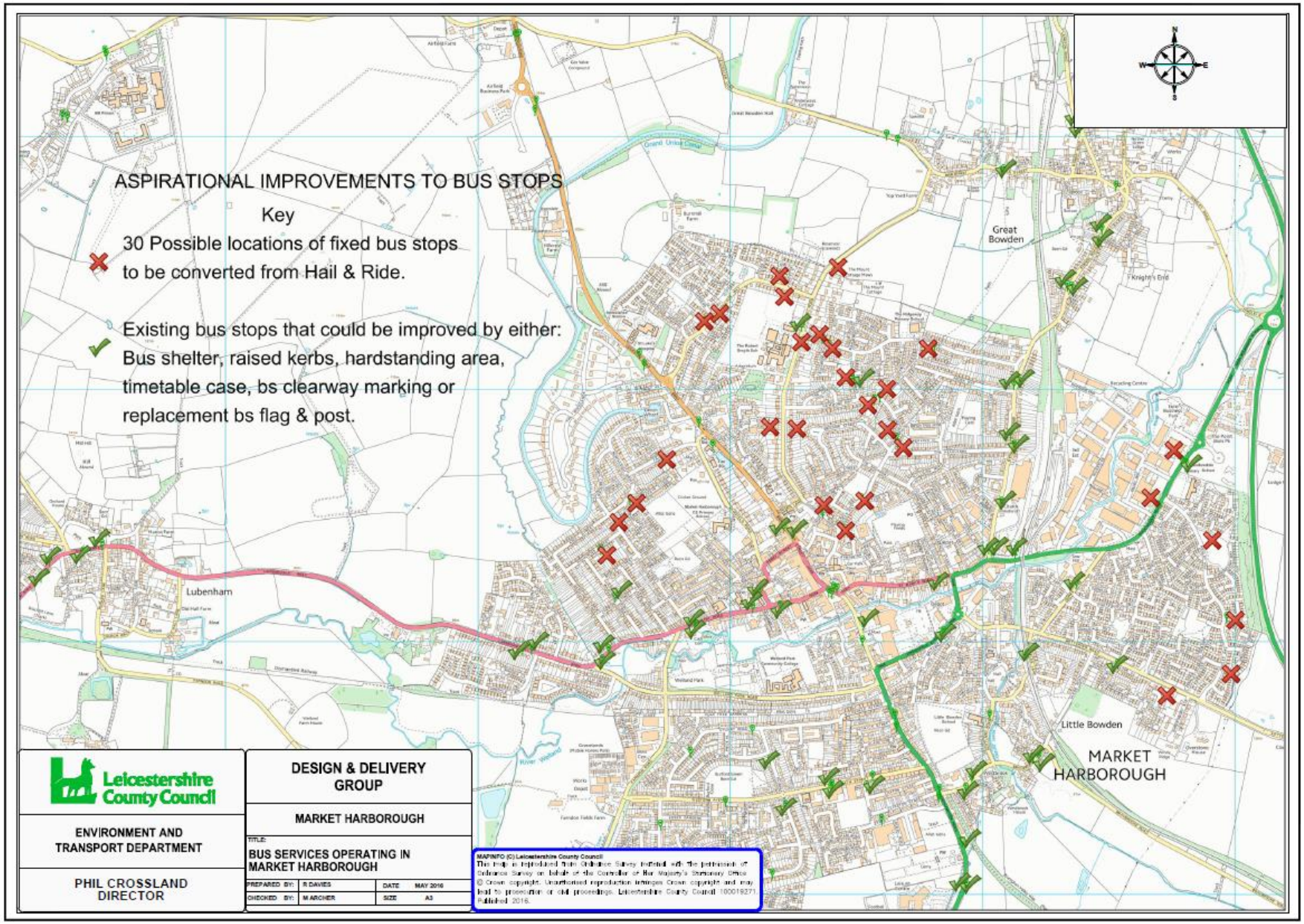
With regard to route locations, frequency and duplication of services, buses in Market Harborough are run by commercial operators and they are responsible for managing their routes and timetables within a commercial market.

A suite of potential bus infrastructure improvements have been identified for the Study area including raised bus stop kerbs to improve accessibility when boarding/alighting; new/upgraded shelters to encourage patronage; and conversion of hail and ride services to fixed service points to improve safety, reliability and punctuality.

DRAFT

The Figure shows the location of possible bus infrastructure improvements andsites of hail & ride conversions. A more detailed summary of the findings is available in Appendix D and E

DRAFT


ASPIRATIONAL IMPROVEMENTS TO BUS STOPS
Key
30 Possible locations of fixed bus stops to be converted from Hail & Ride.
Existing bus stops that could be improved by either: Bus shelter, raised kerbs, hardstanding area, timetable case, bs clearway marking or replacement bs flag & post.
Great Bowden
Lubenham
Little Bowden
MARKET HARBOROUGH
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
BUS SERVICES OPERATING IN MARKET HARBOROUGH
PREPARED BY: R DAVIES
DATE: MAY 2016
CHECKED BY: M ARCHER
SIZE: A3

Recommendation R7

Identify a suite of tailored behaviour change initiatives to encourage modal shift in travel choice towards active and sustainable options.

Overview

The recommendation is to promote and deliver across the Study area a tailored package of initiatives that work towards encouraging and facilitating a modal shift in behaviour towards non-car dependent modes of transport such as walking, cycling and public transport (supporting Recommendations 5, 6, 7 and 8).

Rationale

As per recommendation R6, a significant number of trips undertaken on the network have both an origin and destination within the Study area. These local trips are the most easily influenced towards alternative modes of transport. Experience demonstrates that the most effective method of driving that modal shift is through a coordinated package of infrastructure improvements and a complimentary series of softer measures such as training, journey planning, and education and information provision.

Findings

A tailored package of behaviour change initiatives has been provided in Appendix H.

DRAFT

Recommendation R8

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

Overview

The tragic circumstances which surrounded the fatal collision involving Adam Mugridge is a catastrophic example of the inherent risk associated with travel. The Adam Mugridge Memorial Fund charity was formed following Adam's loss of life whilst he was cycling to Welland Park Academy from Lubenham in 2006. The charity pursues its purpose to create a walking/ cycle route between Lubenham and Market Harborough. The focus has been on the route which abuts the old rail line, which would create a route away from the carriageway.

Rationale

Leicestershire County Council recognises the trustees' continual efforts and the clear synergy between the objectives of the Charity and the Strategy.

The Strategy will investigate walk/ cycle routes connecting Market Harborough and Lubenham, in combination with measures to improve the existing walking and cycling infrastructure.

DRAFT

Recommendation R9

Analysis to determine the suitability of additional pedestrian crossings within the town centre.

Overview

The recommendation is to undertake a thorough audit of the walking and cycling network, in line with recommendation 5, and view to identifying opportunities to upgrade and extendthe network.

Rationale

A significant proportion of trips occurring over the Study area have both an origin and a destination in a relatively short geographical distance of one another

It is well understood that a pedestrian/ cycle infrastructure is most effective when connected and coherent, and that severance caused by the road network does not deter people from safe and sustainable trip making.

DRAFT

Recommendation R10

Enhancement of the walking and cycling environment to encompass the nearby rail and bus terminals. Make general aesthetic upgrades to existing materials and arrangement.

Overview

The recommendation is to upgrade/update the walking and cycling environment; creating purpose made market gateways to the town centre, and to extend the reach of the public realm to encompass the rail and bus terminals.

Rationale

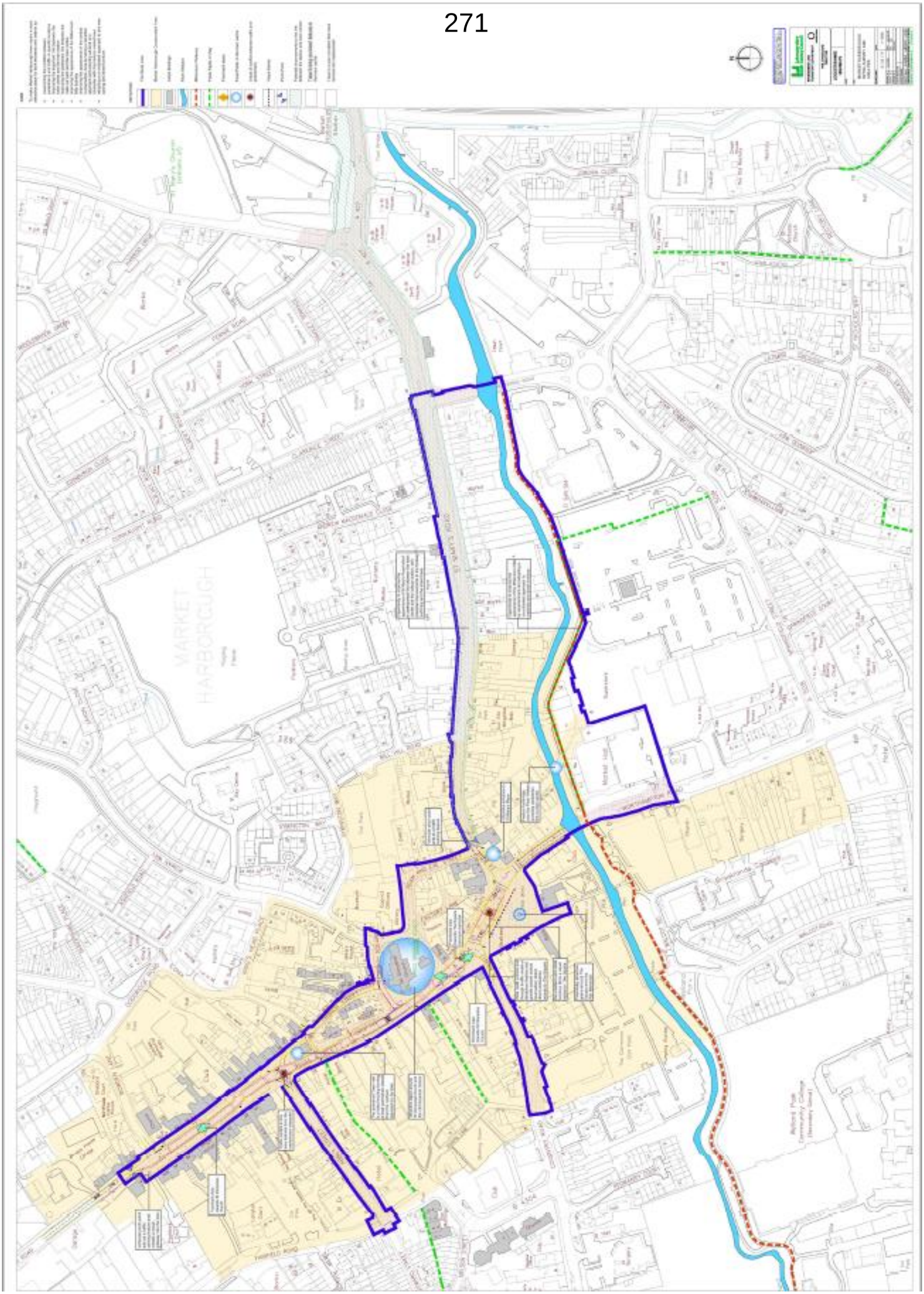
Improving the link between the town centre and strategic transport hubs for commuters, residents and visitors would increase the desirability to live, work and visit the town; supporting businesses, tourism, and demand for local housing.

Findings

Initial assessment of the public realm has been undertaken by the County Council's Landscape Architects. A plan showing initial officers comments can be seen in the figure.

The detail of any Public Realm enhancements is likely to be dependent on first having a confirmed Strategy for infrastructure alterations/enhancements as these are likely to have some impact on the opportunities / options that exist for public realm extension.

DRAFT


MARKET
HADDENHAM

Recommendation R11

Continue to monitor Road Traffic Collisions (RTC) within the Study area. If an RTC occurs within, or adjacent to, a proposed improvement scheme proportionate efforts should be made where appropriate to include complementary measures that could reduce further RTCs.

Overview

The recommendation is to ensure that wherever an RTC resulting in personal injury has occurred within close proximity to a proposed scheme arising from this Strategy, efforts should be made to extend the scope of that scheme to include for mitigation works to reduce the likelihood of further such incidents of an RTC from occurring.

Rationale

Market Harborough consistently records a comparatively low level of road traffic collisions, compared to other similar areas (towns) in the county. Furthermore, the frequency of accidents on the 4 main routes across the town, the A4304 (west), A4304 (east), A508 and B6047, fall below that which might be expected on similar roads nationally. However, by making minor refinements to other nearby works, it may be possible to deliver minor, albeit unrelated highway safety improvements that otherwise would have been unlikely to have attracted financial investment

DRAFT

Recommendation R12

Devise and implement a new Strategy for traffic signing across the Study area

Overview

The recommendation is to establish and implement a new and comprehensivetraffic signing Strategy for the town to replace the current provision.

Rationale

Despite the known benefits of a managed and proactive approach, there is norecorded Strategy for signing; either strategic or local, for traffic in the Study area. In the absence of which, the performance of the network cannot be optimised.

Whilst amendments to the signing can be retrospectively made in a piecemealfashion; there are likely to be a multitude of changes prompted by the deliveryof other recommendations made by this report that afford a unique opportunityto 'start again'; ensuring that the new Strategy is reflective of the modern day expectation and function of traffic signing.

Findings

A proposed Strategy for the signing can be found in Appendix G.

Estimated implementation costs of a previous, similar initiative in Hinckley was around £100,000

DRAFT

Recommendation R13

Review parking controls in the vicinity of the town centre and train station, with particular regard to the need/benefit of further permit parking zones.

Overview

The recommendation is to review all traffic regulation orders pertaining to on-street parking within the Study area with a view to determining the ongoing suitability of existing controls and locations where a need for additional or revised controls may exist now, or is likely to emerge in the future.

Rationale

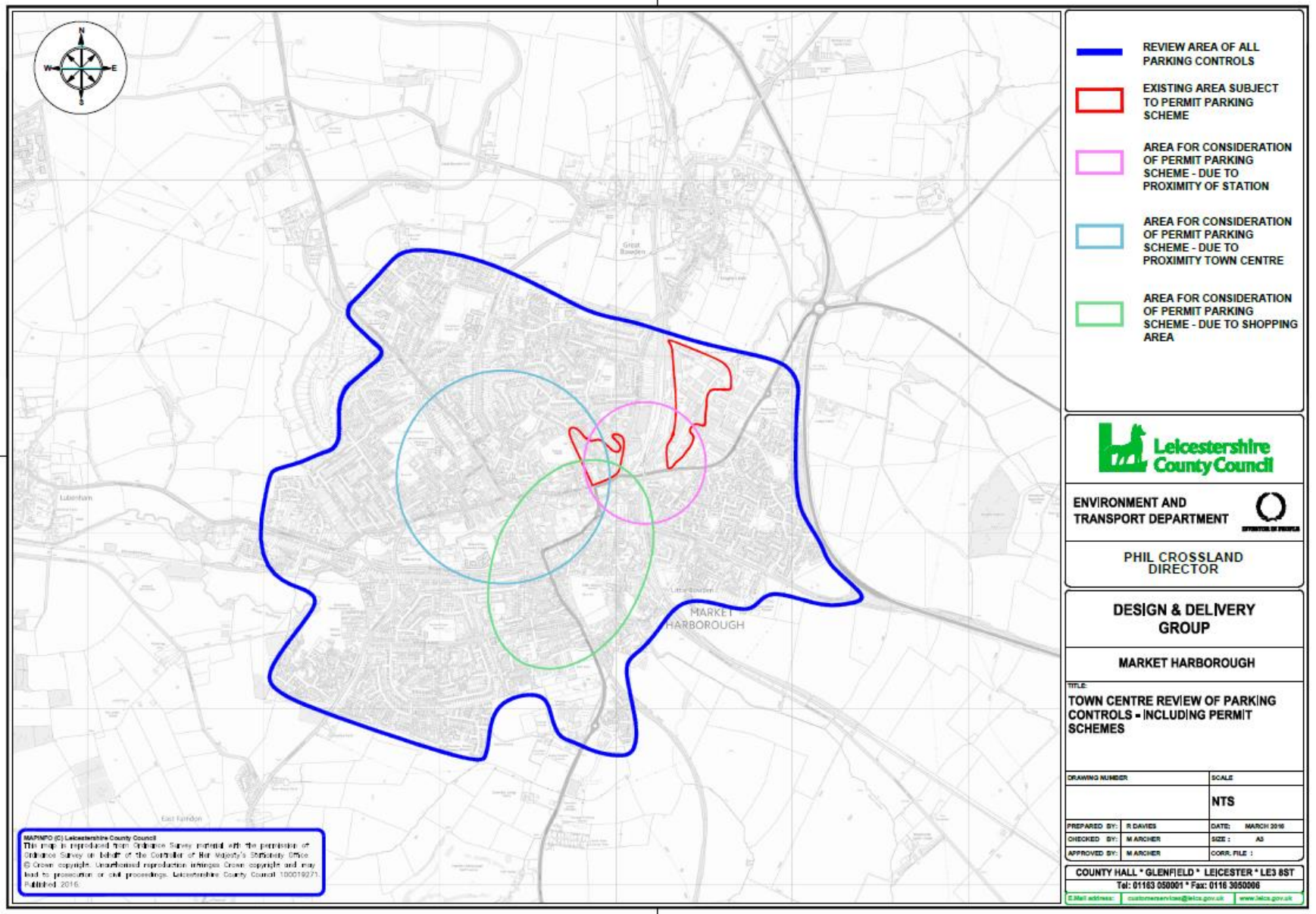
As with traffic signing; despite the known benefits of a managed and proactive approach to the effective management of on street parking, there is little in the way of a recorded Strategy in the Study area. In the absence of which, it is not truly possible to know whether the existing provision is fit for purpose.

The forecast trend of an increase in traffic, coupled with an aspiration to improve the town's economic prospects and the quality of life of its residents and visitors requires a strategic approach to parking management that is able to balance the often competing needs of all.

An area based review therefore presents a unique and ideal opportunity to ensure that an appropriate, proportionate and tailored suite of complimentary controls exist; all of which are working towards one common goal.

The Figure shows the extents of where the proposed reviews as well as areas where a permit to park scheme may need to be considered due to their proximity to the town centre, shopping /amenity hubs and/or the local rail station.

DRAFT


N
W
E
S
REVIEW AREA OF ALL PARKING CONTROLS
EXISTING AREA SUBJECT TO PERMIT PARKING SCHEME
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO PROXIMITY OF STATION
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO PROXIMITY TOWN CENTRE
AREA FOR CONSIDERATION OF PERMIT PARKING SCHEME - DUE TO SHOPPING AREA
Great Bowden
Lubenham
MARKET HARBOROUGH
East Farndon
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Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
TOWN CENTRE REVIEW OF PARKING CONTROLS - INCLUDING PERMIT SCHEMES
DRAWING NUMBER
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MARCH 2016
CHECKED BY: M ARCHER
SIZE : A3
APPROVED BY: M ARCHER
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk

Recommendation R 14

Sites with recorded speeds in excess of the ACPO enforcement threshold should be reviewed.

Overview

The recommendation is to take a proactive look at each of the 13 sites where the average speed; whether that be the mean speed or the 85th percentile speed, has been recorded to be in excess of the threshold necessary to prompt enforcement action by the Police.

Should a viable and cost effective engineering measure exist that is likely to restrain speeds below the prescribed threshold these should be considered for delivery to improve compliance, and thus highway safety. It is important to note that the figures cited portray the worst of the readings taken for each site. It may well become evident on closer inspection that the majority of readings taken do not warrant any further action.

No appraisal of possible options has been undertaken to date.

DRAFT

Recommendation R15

Identify opportunities to divert HE EDR routes away from the town centre

Overview

The recommendation is to reduce the burden imposed upon the town owing to the presence of Highways England's off network diversion routes.

Rationale

Concerns over the detrimental impact on the amenity of the town, highway safety and network performance have been raised citing the general amount of traffic using the town centre. This matter is particularly exacerbated during times when the A14 EDR routes are initiated. It is considered to be advantageous to identify opportunities to re-route this traffic away from the town centre.

Findings

The EDR route currently makes use of Coventry Road via The Square owing to its status as an 'A' classified route. However, as previously identified in the review of classified roads through the Study area (Chapter 4, para 4.2), it is apparent that Welland Park road may well have the potential to be a more suitable alternative to Coventry Road; regardless of its classification.

Re-designation of the EDR on to Welland Park Road would facilitate diverting the EDR away from the town centre. The only remaining signed EDR route through the town centre would be those high-sided vehicles currently unable vehicles to pass under the low bridge on Rockingham Road.

Further analysis to the proposal of an engineering solution to facilitate the passage of high-sided vehicles under the low bridge on Rockingham Road has demonstrates a number of challenges. As a consequence, this concept will not be pursued in this Strategy and is a longer term aspiration. This effects the previously advised proposal to designate routes for the EDR which would use this route, should it have been viable to alter the clearance of the bridge. The County Council has considered alterative EDR routes.

It may be possible to utilise the SRR route which would bypass the town centre in its entirety should there be an unplanned closure on the A14.

Figure 32 and 33 illustrate the existing and alternatives for EDR routing should the EDR be moved on to Welland Park Road and using the SRR.

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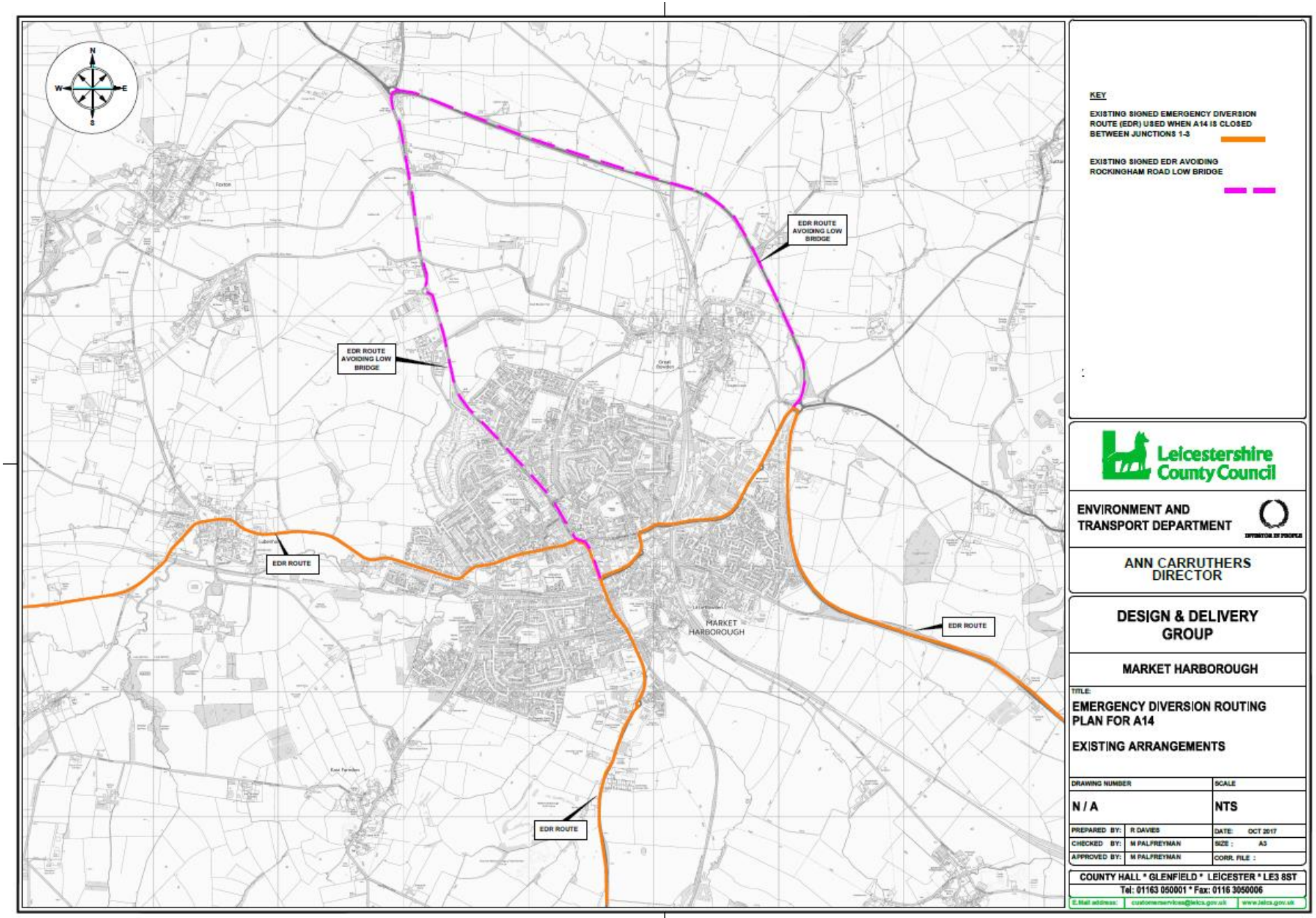
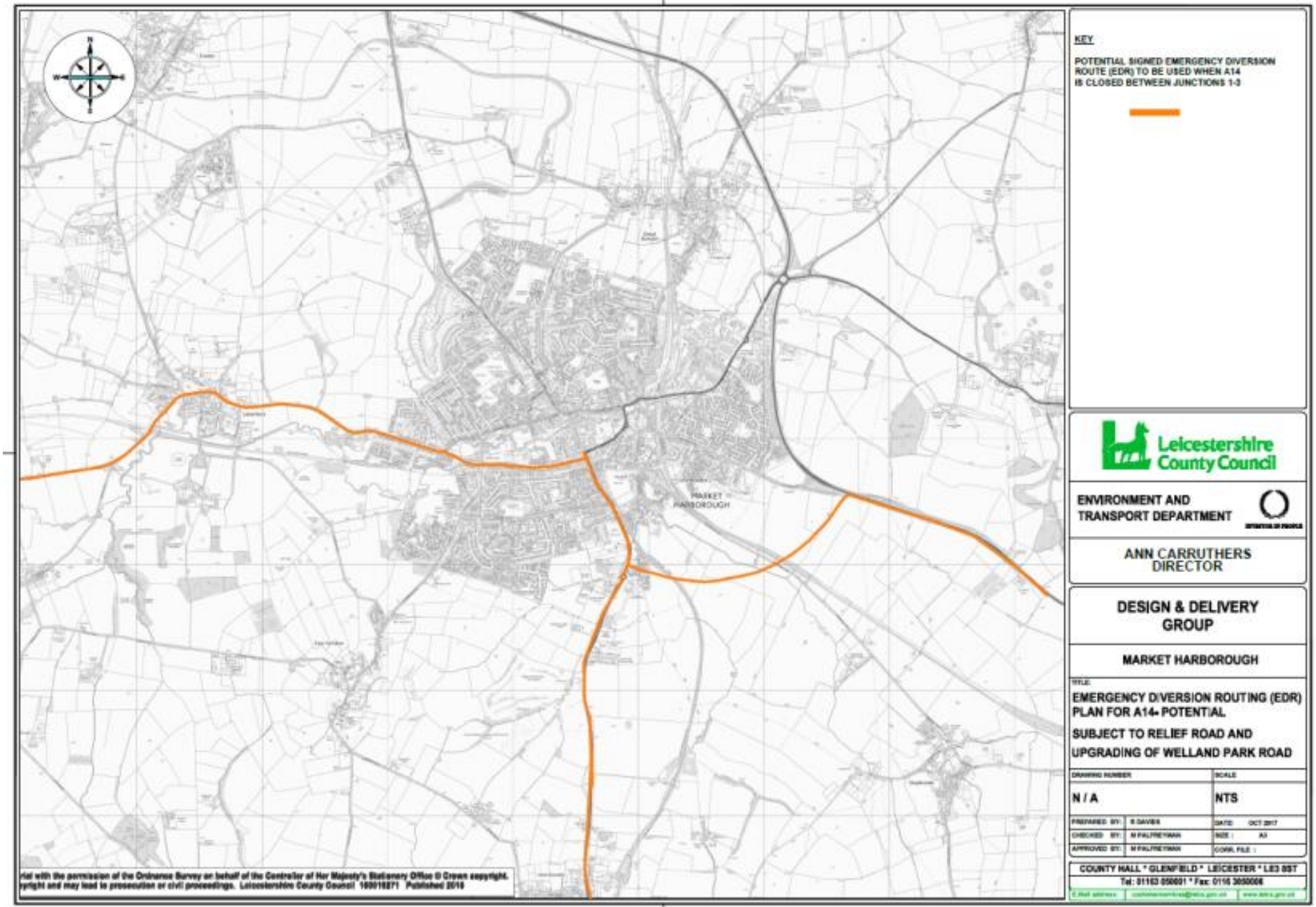

N
W
E
S
EDR ROUTE AVOIDING LOW BRIDGE
EDR ROUTE AVOIDING LOW BRIDGE
EDR ROUTE
EDR ROUTE
EDR ROUTE
MARKET HARBOROUGH
KEY
EXISTING SIGNED EMERGENCY DIVERSION ROUTE (EDR) USED WHEN A14 IS CLOSED BETWEEN JUNCTIONS 1-3
EXISTING SIGNED EDR AVOIDING ROCKINGHAM ROAD LOW BRIDGE
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
INVESTOR IN PEOPLE
ANN CARRUTHERS
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
EMERGENCY DIVERSION ROUTING PLAN FOR A14
EXISTING ARRANGEMENTS
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: OCT 2017
CHECKED BY: M PALFREYMAN
SIZE : A3
APPROVED BY: M PALFREYMAN
CORR. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8ST
Tel: 01163 050001 * Fax: 0116 3050006
E.Mail address: customerservices@leics.gov.uk
www.leics.gov.uk


KEY
POTENTIAL SIGNED EMERGENCY DIVERSION ROUTE (EDR) TO BE USED WHEN A14 IS CLOSED BETWEEN JUNCTIONS 1-3
MARKET HARBOROUGH
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
ANN CARRUTHERS DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
EMERGENCY DIVERSION ROUTING (EDR) PLAN FOR A14 POTENTIAL
SUBJECT TO RELIEF ROAD AND
UPGRADING OF WELLAND PARK ROAD
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: OCT 2017
CHECKED BY: M PALFREYMAN
SIZE : A3
APPROVED BY: M PALFREYMAN
COMP. FILE :
COUNTY HALL * GLENFIELD * LEICESTER * LE3 8RT
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Recommendation R16

Identify undesirable routes for HGVs and impose suitable prohibitions.

Overview

The recommendation is to identify and prohibit the use of undesirable routes that may now, and in the future be vulnerable/attractive to exploitation by HGV drivers seeking an alternative route to the classified road network.

This recommendation should be considered to be a precautionary measure; safeguarding against the potential for inappropriate routing, rather than a reactive response to address a significant current issue

Rationale

Whilst the number of recorded instances/complaints of HGVs using unclassified roads in order to take an alternative route through the Study area is low, there are a number of residential streets that do lend themselves to such exploitation. Existing low underpass heights at bridges on Rockingham Road and Kettering Road restrict the ease of movement. That, combined with a general growth in traffic can each contribute to the use of undesirable routes by HGVs, potentially causing damage to the highway and dissatisfaction amongst local residents.

It is important to note that this recommendation should be read as a standalone initiative; it does not therefore consider the potential for incidental HGV controls arising as a direct result of other recommendations.

Findings

Whilst the promotion of a town wide environmental weight restriction such as that illustrated in the figure would be the default level of provision to be promoted in the Study area, two key routes particularly vulnerable to exploitation by inappropriate HGV traffic have been identified;

- Ashley Road /Kettering Road between the A4304 and the A6
- Bath Street/Western Avenue between the A508 and Farndon Road.

Should it not be possible to implement an extensive scheme covering the entire town; it is recommended that those 2 routes are promoted as a minimum.

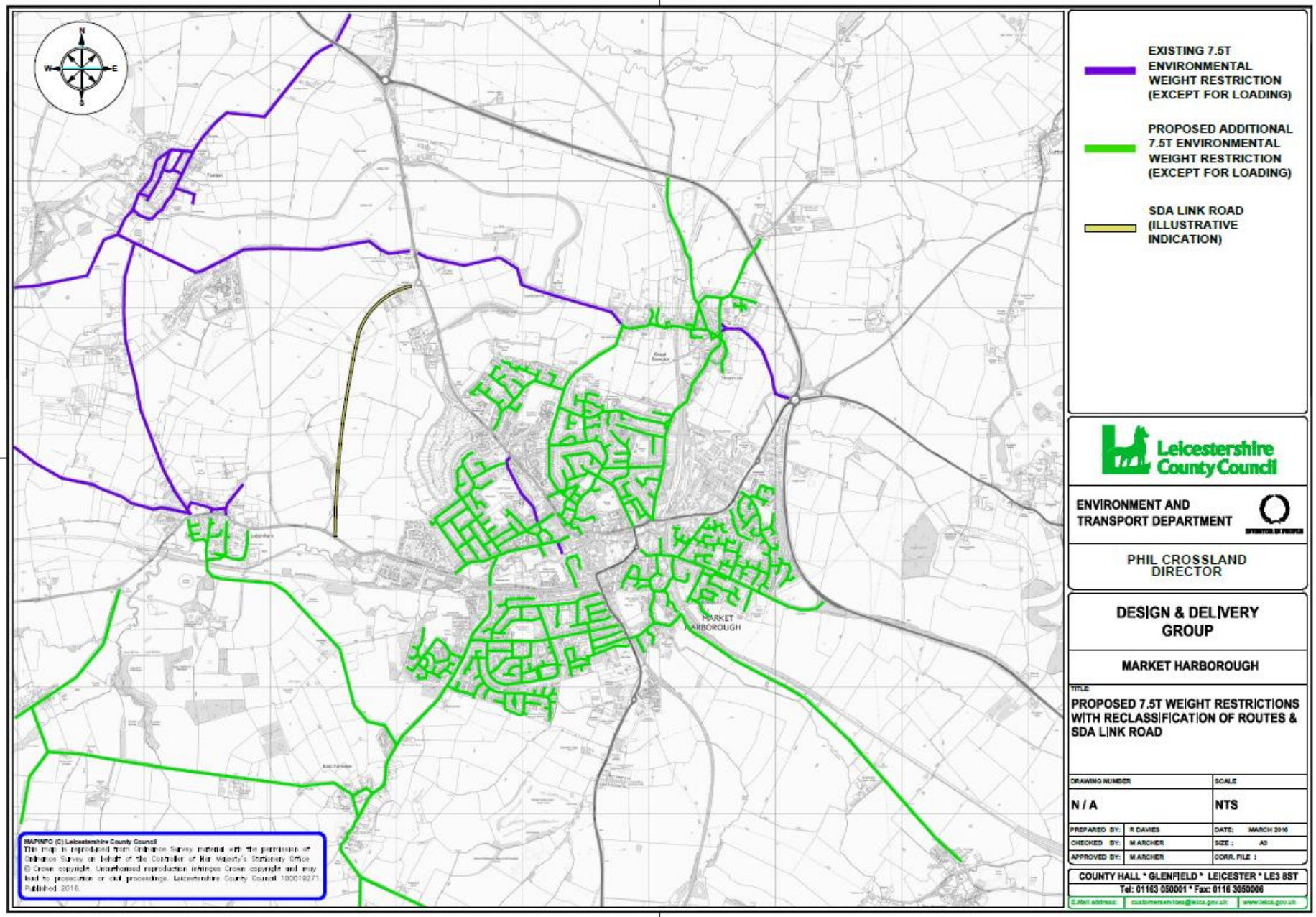
DRAFT

Recommendation R17

Send updated map to 'sat-nav' contacts advising of HGV controls

The recommendation is to provide key satellite navigation and mapping companies (e.g. TOM TOM / Ordnance Survey) with all details pertaining to the changes in route designation, traffic orders, preferred routes etc to ensurethat the records they hold are current and reflect any changes arising as a result of the Strategy.

DRAFT


EXISTING 7.5T ENVIRONMENTAL WEIGHT RESTRICTION (EXCEPT FOR LOADING)
PROPOSED ADDITIONAL 7.5T ENVIRONMENTAL WEIGHT RESTRICTION (EXCEPT FOR LOADING)
SDA LINK ROAD (ILLUSTRATIVE INDICATION)
Leicestershire County Council
ENVIRONMENT AND TRANSPORT DEPARTMENT
PHIL CROSSLAND
DIRECTOR
DESIGN & DELIVERY GROUP
MARKET HARBOROUGH
TITLE:
PROPOSED 7.5T WEIGHT RESTRICTIONS WITH RECLASSIFICATION OF ROUTES & SDA LINK ROAD
DRAWING NUMBER
N / A
SCALE
NTS
PREPARED BY: R DAVIES
DATE: MARCH 2016
CHECKED BY: M ARCHER
SIZE : A3
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Recommendation R18

In light of the size and scope of the Study, incorporate/ consider maintenance activities in relation to improvement proposals.

Overview

The recommendation is to use the implementation of the schemes arising asa consequence of this report as the vehicle by which long standing maintenance aspirations can be delivered.

Rationale

The ability of the County Council to deliver maintenance, restoration and condition improvements beyond the most safety critical schemes has reducedin recent years owing to financial constraint. This issue is only likely to worsenin the future due to continued public sector austerity.

However, the delivery of those schemes can become economically viable when the benefits of economies of scale etc. afforded by the delivery of areawide schemes are taken into consideration. Any maintenance schemes delivered as a result will inevitably contribute to the objectives of the Trasnport Strategy as well as reduce the burden on the future maintenance budget.

Preventative maintenance works, to arrest deterioration or avoid problems from occurring at all are particularly beneficial

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Scheme costs

The estimated total cost for designing and delivering the draft recommended package of infrastructure and smarter choices measures /outputs is £14.9 million (using highest cost scheme options). This excludes the SRR, which isestimated to cost in the region of £35 - £45 million. A breakdown of scheme/output costs can be found in the table.

The £14.9 million includes allowances for further scheme design and development work, risk and contingency. The schemes are at a feasibility stage and will be subject to change or re-costing as schemes or packages aredeveloped further in the future.

Of the total scheme costs £11.7 million is allocated for the delivery of the infrastructure measures and a further £3.2 million on the complimentary smarter choices elements of the scheme. These costs have been estimatedbased on the costs of the delivery of schemes of a similar scale in Leicestershire; however, the scheme is currently in the early stages of development with further refinement of the measures, design work and stakeholder engagement/consultation required. An accurate estimation of costs will be determined following this additional work

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Scheme Cat	Scheme Ref	TRANSPORT MEASURES/ OUTPUTS	Cost	Associated Recommendation
A	***Junction capacity improvements***			
	1	A6/B6047	£650,000	**R1, R2**
	2	The Square / St Mary's Rd / Coventry Rd	£700,000	
	3	Welland Park Rd / Northampton Rd / Springfield St (Option 2)	£820,000	
	4	St Marys Rd / Kettering Rd / Clarence St	£280,000	
	5	Gores Lane / Rockingham Road (Option 2)	£450,000	
	6	A6 / Rockingham Road / Dingley Road	£1,100,000	
	7	Sainsbury's Store entrance/ Springfield Street	£600,000	
			£4,600,000	
B	***Walking & cycling improvements***			
	1	New routes, links, crossings etc	£3,110,000	**R5-11**
	2	Cycle parking	£30,000	
	3	Route signing	£60,000	
			£3,200,000	
C	***Public transport improvements***			
	1	Bus shelters	£32,000	**R10**
	2	Raised bus stop kerbs	£38,000	
	3	'Hail & Ride' conversion	£110,000	
	4	Miscellaneous (timetable cases etc)	£20,000	
			£200,000	
	Modal shift initiatives (over a four year period)			
	1	'Getting to Work & Training'	£1,200,000	**R5-11**
	2	'Information & Behaviour Change'	£1,200,000	
	3	Coordination & management	£800,000	
			£3,200,000	
E	***Infrastructure resulting in changes to network or traffic routing***			
	1	Works required to facilitate the upgrade of Welland Park Road to A4304 and respective downgrade of Coventry Road	£700,000	**R3**
			£700,000	
	3	South East Relief Road between the A508 and the A6	**£35 – 45 million**	**R4**
F	***Traffic Management Improvements***			
	1	HGV weight restrictions and update sat- nav contacts	£75,000	**R16, R17, R5, R13, R12**
	2	Traffic directional signing	£100,000	
	3	Parking controls , including consideration of residents parking	£25,000- £75,000	
	4	Traffic calming (in support of walking / cycling network)	£200,000 - £300,000	
			£400,000- £550,000	
G	***Local improvements***			
	1	Refurbishment of paved areas and street furniture	£100,000- £450,000	**R18**
			£100,000- £450,000	

Total Cost (excluding the SRR): **£11.7 million** (lowest cost scheme options)

£12.9 million (highest cost scheme options)

Table 22 : Breakdown of estimated scheme / output costs

Next Steps

The report makes recommendations for the promotion of a medium to long term (up to 2031) highway orientated transport improvement Strategy for theStudy area, which will serve to:

- *Support economic and population growth in the context of future land allocation and development; ensuring the town is not adversely impacted by traffic growth, and remains a vibrant and prosperous place for people to live, work and visit.*
-
- *Form the necessary foundation on which the long term delivery of future highway/transport improvements in the Study area can be based*

Through the development of a microsimulation modelling programme we will be supporting the outcomes of the Strategy in the following ways:

- Development of transport schemes;
- Provide an opportunity to understand current and likely future demand on the transport network at a detailed level and allow us to plan and design transport schemes accordingly;
- With the evidence provided through our modelling system we will ensure that our schemes and advice to developers will support our overall outcomes set out in the Strategy;
- Make decisions based on evidence;
- Understand and challenge need and manage demand;
- Challenge and review service delivery;
- Innovate in performance management; and
- Enhance sustainability

The recommended schemes outlined in this chapter provide the basis of an outline Trasnport Strategy for Market and incorporates stakeholder feedback. Subject to consideration by LCC and HDB members, and availability of funding, further work would be need to be undertaken to adopt a menu of preferred schemes from those recommended in the Study, to bring these schemes together into a single coherent package of improvements across the Study area.

The preferred package of schemes could then be converted into a final Strategy and delivery programme suitable for obtaining funding.

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2015/16	*Study Phase 1 (Issues and Solutions) ***Complete***
2016/17	Study Phase 2 (Solution Coordination, stakeholder feedback) **Complete**
2016/17	Study Phase 3 (Finalise Strategy and Prepare funding bid/s)
2017/18	Scheme consultation / Detailed design
2018/19	Begin Implementation and Delivery

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APPENDIX D

Leicestershire's future
The plan for change

DISTRICT OF HARBOROUGH

Leicestershire County Council

Market Harborough Transport Strategy 2017 - 2031

"A vibrant and prosperous place for people to live, work and visit."

More detail on the Market Harborough Transport Strategy can be found online at: **www.leicestershire.gov.uk/harborough-plans**

"Delivering an efficient transport network and developing a well-planned infrastructure."

Contents

Foreword

Market Harborough is a traditional market town, rich in heritage, character and history and is one of the largest urban settlements in Leicestershire making its economic success important not only locally but also for the county and wider region.

As part of the proposals for growth in the town, it has been important to understand the relationship between that growth and the transport system that will support it. Leicestershire County Council, in partnership with Harborough District Council, commissioned a project to develop a transport strategy for the town.

The strategy is aligned to Harborough District Council's proposals for the towns future growth and is focused on easing existing problems and helping the town cope with increased traffic as it continues to grow.

The strategy presents a range of proposals to improve access in and around the town and support people travelling as part of their daily lives.

The proposals aim to do this through influencing travel behaviour, prioritising walking, cycling and public transport infrastructure whilst also providing for car and freight traffic, while reducing their negative impacts such as congestion.

Moving forward the strategy will ensure that we have a strong base of evidence, bringing together existing known and future anticipated transport issues, providing the enhanced context and justification required to make the case for government and other sources of funding.

Cllr Blake Pain
Cabinet Member for Highways, Strategic Transport & Waste

Introduction

This document presents the transport strategy for Market Harborough for the period 2017 to 2036. The strategy has been developed by Leicestershire County Council and Harborough District Council and demonstrates a collective vision for improved accessibility and a sustainable transport network to support the growth of Market Harborough.

This document provides information on what has informed the strategy, what it aims to achieve, how it is defined, what the proposals are and how the strategy will be delivered.

The purpose of the strategy

As Market Harborough continues to grow to meet future local housing and employment needs, pressures on the local road network increase. Harborough District Council's current local plan makes it clear that transport measures need to be considered to deal with the impact of development in the town.

Currently government funding for transport measures remains heavily focused on the delivery of housing and economic growth, with funding allocated through competitive bidding processes which must demonstrate how investments will support growth.

This transport strategy therefore sets out a package of transport recommendations that subject to further development and refinement will:

- assist with the implementation of Harborough District Council's new local plan, and support the planned future growth of the town.
- ensure that the county council continues to deliver an efficient transport network and develop well planned measures to support economic and population growth ambitions in the town.
- provide an evidence base together with the supporting study work to enable the county council to be in a strong position to secure government and private funding for the development and delivery of identified transport measures.

Transport study

Market Harborough has not had a significant transport study completed since the 1990s, when the A6 bypass was completed and the bypass demonstration project was implemented in the town centre.

In 2015 Leicestershire County Council and Harborough District Council approved study work to understand in more detail current and future transport issues, identify possible transport solutions and develop a transport strategy for the town.

The area covered by this study work is shown in the plan below. The initial part of the study was completed in July 2016 and looked at vehicle movements to help understand how the transport network is being used. It also looked at where the greatest levels of congestion occurred on the network and where these will occur in the future taking into account known future growth.

Based on the evidence and data collected from this work, a series of ideas and proposals were put forward as part of a draft transport strategy for consultation. Consultation is an important step in the development of the strategy and will help to put us in a stronger position to secure government and other sources of funding for the development and delivery of measures identified as part of the strategy.

Between January and March 2017 a consultation and engagement exercise was carried out including a public exhibition at the Market Harborough Indoor Market attended by more than 600 people.

Feedback was received on the issues and the solutions and this helped refine the measures and schemes which now form part of a final transport strategy.

The challenges and opportunities Market Harborough faces

A wide range of data, evidence and consultation feedback has been collated and reviewed as part of the study work. A number of existing and potential future transport challenges and opportunities have been identified through the study work and consultation:

Market Harborough faces significant growth pressures with around 2,700 new dwellings proposed before 2031 (including a total of 1,500 dwellings in a Strategic Development Area (SDA) to the west of the town), in addition to 918 dwellings built over the last six years.

Car parking on and off street needs to account for all users including residents, shoppers, visitors, disabled motorists, local businesses and workers.

In places the town centre environment is tired and would benefit from enhancement to encourage more people to walk and cycle.

Existing and historical infrastructure, such as the three rail bridges present barriers to movement across the town.

Infrastructure for walking and cycling is generally good. However, there are some gaps, which would benefit from improving.

Traffic signing can be inconsistent, cluttered and confusing in places and requires review.

HGVs using inappropriate roads in the town causes concern for residents.

Similar to other parts of the county, Market Harborough generates significant movements of pupils and their parents, putting pressure on the network at school times.

There are a limited number of routes within the town centre which could serve as alternative routes to the existing classified A and B routes.

Public Transport infrastructure needs upgrading to encourage greater bus use and improve the commercial viability of bus services.

The town has relatively low unemployment levels, and residents are generally healthier and live longer when compared to the rest of the county.

Two of the three 'A' and 'B' classified routes in the town (the B6047 and the A4304) converge on The Square and therefore, much of the traffic in the town is reliant upon using the heart of the town centre.

'Through' traffic (with no origin or destination in the town) accounts for around 10% of trips across the town.

Although traffic speeds during peak periods are better than in any other market town in the county, peak period queues and delays do occur on the A4304 and A508 corridors, on the approaches to and through the town centre.

Traffic volume in the town is forecast to increase by 24% between 2011 and 2031. Much of this is the result of general traffic increases from growth in surrounding areas.

There is local concern with regards to the proliferation speed humps.

Car travel remains dominant with 44% of 5km commuter journeys currently made by car within the town.

Market Harborough is well connected to the main trunk road network (A14), however it is therefore sometimes susceptible to heavy traffic on occasions when the A14 is closed due to incidents.

Although the town is not an Air Quality Management Area, air quality remains a concern for those who live and work in the town.

The vast majority of traffic is travelling to, from or entirely within the town rather than straight through.

Congestion in the town primarily results from local traffic travelling to, from and wholly within the town.

Rat running traffic on certain routes in the town causes concern for residents.

What does the strategy aim to deliver?

The transport strategy aims to enhance the vibrancy of the market town by taking a balanced approach, implementing walking and cycling routes and proposals to assist motorists. This approach will make it an attractive place for commuters, employees, residents and tourists alike. Protecting the local characteristics of the market town, while increasing footfall and sustaining the local economy. As a result the strategy seeks to achieve the following key aims:

- Improved performance of local roads in peak periods and more consistent, predictable and reliable journey times.
- Improved access to key services across the town (such as employment, education, health), particularly by bike and on foot.
- Traffic using the most appropriate routes.
- Local roads better able to cope with unplanned events, such as incidents on the A14.
- More journeys by public transport (through improved bus stop infrastructure).
- A more attractive town in which to live, work and visit.

The proposals

The following pages outline the package of transport recommendations which form the basis of the strategy. These recommendations have been identified to address the issues identified in the study work and refined in response to consultation feedback.

Proposal:

Improvements to the existing network, with no major changes to the way traffic moves around the town other than key junctions. Walking and cycling, parking and traffic management improvements will also be introduced on the existing road network.

The analysis undertaken so far shows that there is very little prospect that the scheme would justify government funding.

It is therefore proposed to include it in the transport strategy as a potential long term aspiration. **(See plan 1 on page 11).**

Benefit:

These measures would be relatively straight forward to deliver. They provide some localised congestion relief at junctions, improved connectivity for walking and cycling and better traffic and parking management at certain locations across the town. These measures do not significantly change the way traffic is routed through the town with roads remaining broadly unaltered.

Proposal:

Improvements that result in changes to the way that traffic would move around the town. It considers lorry weight restrictions to enable HGV's to use more appropriate routes, the reclassification of two roads (Welland Park Road and Coventry Road) and the introduction of a relief road to the south-east of the town. **(See plan 2 on page 13).**

Benefit:

These measures would be the most costly and complex and could not be delivered without further development and refinement.

These proposals would change the main traffic routes in the town encouraging traffic, including HGVs to use more appropriate routes relieving other less suitable ones. This could alleviate congestion at certain junctions and help relieve the volume of traffic in the town centre (The Square).

The relief road would divert the main A4304 away from the centre of the town, potentially diverting through traffic and HGVs away from the town. The analysis undertaken so far shows that at present there is very little prospect that the scheme would justify government funding.

It is therefore proposed to include it in the Transport Strategy as a potential long term aspiration.

Information on these measures is provided on the following pages. Further more detailed information is available online at www.leicestershire.gov.uk/harborough-plans

Our proposals in detail

Package of measures

Improvements to existing network, with no major changes to the way traffic moves around the town

Traffic management

Junction capacity/congestion improvements.

Review locations where recorded vehicle speeds are in excess of the threshold necessary to prompt enforcement actions by the Police.

Review of traffic signing, and road markings across the town.

Walking and cycling

Extend and enhance the walking and cycling network. Primary routes indicated, other routes linking primary routes are also proposed across the town.

Consider improvements to existing materials and streetscape to enhance town centre for pedestrians and cyclists. Also review the suitability of additional pedestrian crossings within the town centre.

Support the above infrastructure with initiatives to encourage people to walk, cycle and use public transport.

Parking

Review parking controls across the town, with particular regard to the train station, the town centre and the following streets; Logan Street/ Gardiner Street/ Knoll Street. East Street, Nelson Street, Connaught Road, Kettering Road and Walcott Road.

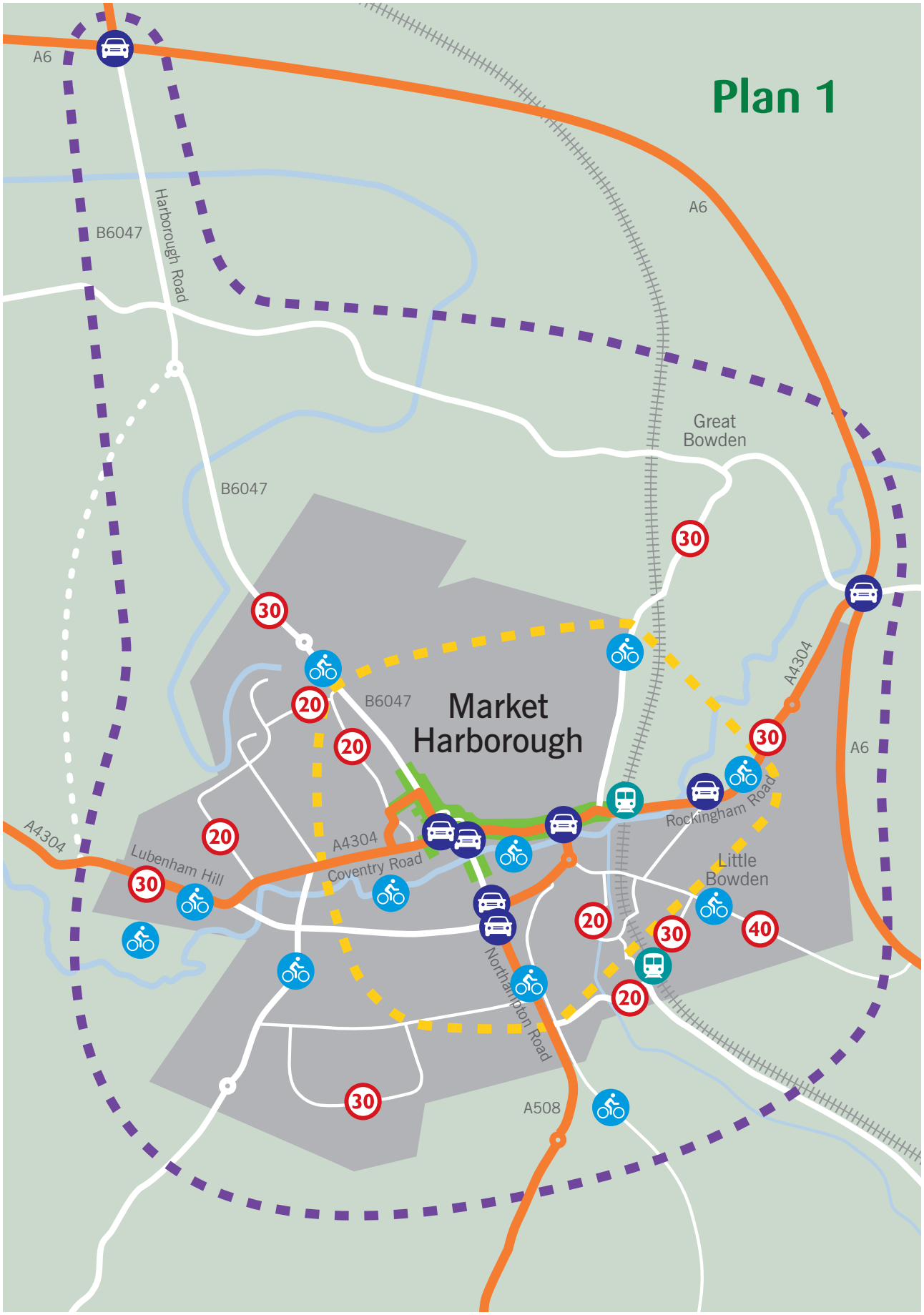
Public transport

Localised public transport infrastructure improvements across the town.

Exisiting main 'A' road network.

Indicative route of new road, to be provided as part of planned new development. The new road is not part of the proposals in this document.

Network Rail led projects: track realignment, platform and train station improvements and a level crossing at Little Bowden.


Plan 1
A6
B6047
Harborough Road
A6
Great Bowden
B6047
30
30
20
B6047
Market Harborough
20
A4304
A6
20
A4304
Rockingham Road
Lubenham Hill
30
Coventry Road
Little Bowden
20
30
40
Northampton Road
20
30
A508

Our proposals in detail - continued

Package of measures

Improvements which result in changes to the way traffic moves around the town

1 Suggestion to provide a relief road to the south east of the town between the A508 Northampton Road and A6, therefore diverting the primary A4304 route away from Rockingham Road and the town centre.

2 Upgrade Welland Park Road between Lubenham Hill and Northampton Road to the A4304 to help redistribute unnecessary traffic away from the town centre.

This would involve downgrading the existing A4304 along Coventry Road between Lubenham Hill to the junction of St Marys Road / Kettering Road and appropriate engineering and accommodation works on both routes.

It may also involve reversing the existing one way on Abbey Street (to require all vehicles to travel west bound) to further deter the use of Coventry Road.

3 Make St Marys Road one way from The Square towards the Kettering Road / Clarence Street junction.

or

Make St Marys Road one way from The Square to Adam and Eve Street.

In addition signalise the junction of Church Street / High Street and remove the existing zebra crossing across High Street. These would help reduce traffic movements in The Square.

Analyse the impact of restricting certain other traffic movements, potentially removing traffic signals or turning off certain sets of signals during off peak periods.

4 Identify unsuitable routes for HGVs and impose suitable HGV weight restrictions.

Existing main 'A' road network.

Indicative route of new road, to be provided as part of planned new development. The road is not part of the proposals in this document.

The route will not be classified as an 'A' or 'B' road, however in order to maximise the potential benefits of the new road, it is proposed for it to be used by all traffic except those with a max gross weight in excess of 18 tonnes (except for loading).


Plan 2
A6
B6047
Harborough Road
A6
Great Bowden
B6047
4
Market Harborough
B6047
4
A4304
3
A4304
A6
Lubenham Hill
A4304
Little Bowden
4
2
Welland Park Road
Northampton Road
4
A508
1

Next steps

The adopted transport strategy will provide a basis for a transport plan for the town. The next step will be to seek to secure funding from central government and other sources to develop and introduce identified measures identified in the strategy. Development work will include the further refinement and testing of measures and through the use of micro simulation traffic models to better understand the impact of the measures across the town.

Please note that we are still at an early stage of planning for these schemes. Any scheme that we would take forward will be subject to further design and consultation at a later stage. So if you are concerned about how any of these schemes would impact your house or the local environment, please note there will be opportunities to express these fully at a later stage of the process.

You can view the latest information in a number of ways

Visit us online www.leicestershire.gov.uk/harborough-plans

Our web pages will be kept up-to-date with the latest information and developments.

Follow us @leicscountyhall for general updates from the council, including the developments on the budget.

Alternatively, you can telephone 0116 305 0001 to ask for information in printed or alternative formats.

જો આપ આ માહિતી આપની ભાષામાં સમજવામાં થોડી મદદ ઇચ્છતાં હો તો 0116 305 0001 નંબર પર ફોન કરશો અને અમે આપને મદદ કરવા વ્યવસ્થા કરીશું.

ਜੇਕਰ ਤੁਹਾਨੂੰ ਇਸ ਜਾਣਕਾਰੀ ਨੂੰ ਸਮਝਣ ਵਿਚ ਕੁਝ ਮਦਦ ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ 0116 305 0001 ਨੰਬਰ ਤੇ ਫ਼ੋਨ ਕਰੋ ਅਤੇ ਅਸੀਂ ਤੁਹਾਡੀ ਮਦਦ ਲਈ ਕਿਸੇ ਦਾ ਪ੍ਰਬੰਧ ਕਰ ਦਵਾਂਗੇ।

এই তথ্য নিজের ভাষায় বুঝার জন্য আপনার যদি কোন সাহায্যের প্রয়োজন হয়, তবে 0116 305 0001 এই নম্বরে ফোন করলে আমরা উপযুক্ত ব্যক্তির ব্যবস্থা করবো।

اگر آپ کو یہ معلومات سمجھنے میں کچھ مدد درکار ہے تو براہ مہربانی اس نمبر پر کال کریں 0116 305 0001 اور ہم آپ کی مدد کے لئے کسی کا انتظام کردیں گے۔

假如閣下需要幫助，用你的語言去明白這些資訊，請致電 0116 305 0001，我們會安排有關人員為你提供幫助。

Jeżeli potrzebujesz pomocy w zrozumieniu tej informacji w Twoim języku, zadzwoń pod numer 0116 305 0001, a my Ci dopomożemy.

This information is also available in Easy Read format

Call **0116 305 0001**
or email **tsap@leics.gov.uk**

Appendix E

Equalities and Human Rights Impact Assessment

MARKET HARBOROUGH TRANSPORT STUDY
Draft Transport Strategy

Department of Environment and Transport

December 2017

Equality & Human Rights Impact Assessment (EHRIA)

***Please note: The term 'policy' will be used throughout this assessment as shorthand for policy, practice, procedure, function or service.*

Key Details	
Name of policy being assessed:	MARKET HARBOROUGH TRANSPORT STUDY- DRAFT TRANSPORT STRATEGY
Department and section:	Environment and Transport - Highways
Name of lead officer/ job title and others completing this assessment:	Mark Palfreyman Network Management Specialist, Strategy & Policy Department of Environment and Transport
Contact telephone numbers:	0116 305 0001
Name of officer/s responsible for implementing this policy:	n/a.
Date EHRIA assessment started:	1st August 2016
Date EHRIA assessment completed:	15th Nov 2017

Section 1: Defining the policy

Section 1: Defining the policy
You should begin this assessment by defining and outlining the scope of this policy. You should consider the impact or likely impact of the policy in relation to all areas of equality, diversity and human rights, as outlined in Leicestershire County Council's Equality Strategy.

1	What is new or changed in this policy? *What has changed and why?* This EHRIA relates to the emerging recommendations arising from a transport study jointly funded by the County Council and Harborough District Council. The study considers the current and future condition and performance of the transport network in Market Harborough, taking into account planned and known future growth. The study will ensure that the County Council continues to deliver an efficient transport network and develop well planned infrastructure to support economic and population growth ambitions in the town..
2	Does this relate to any other policy within your department, the Council or with other partner organisations? Reference should be made to the previous Equalities Impact Assessments prepared for delivery of LTP2 Schemes below £500,000 (March 2009) and greater than £500,000 (March 2009). The policies which this Project relates to are those set out in the Local Transport Plan 3, which has an EIA in http://www.leics.gov.uk/equality_impact_assessment.pdf (March 2011). It also uses the design services of Engineering Design and their EIA can be found at http://www.leics.gov.uk/engineering_design_group_eia.doc Current national guidance document for cycling is the Department for Transport's Local Transport Note 2/08 Cycle Infrastructure Design.
3	Who are the people/ groups (target groups) affected and what is the intended change or outcome for them? **No specific group is adversely affected or is targeted for change.** The recommended transport schemes to emerge from the study provide improvements that will assist the local economy and build sustainable, safe and healthy communities through reducing congestion on our roads and encouraging walking, cycling and the use of public transport.
4	Will this policy meet the Equality Act 2010 requirements to have due regard to the need to meet any of the following aspects?

		Yes	**No**	**How?**
	Eliminate unlawful discrimination, harassment and victimisation	Yes		Society works because people build relationships with others can only do this by being able to move around. In modern society the need to travel is greater than it has ever. Society needs an effective sustainable transport network which allows everyone to conveniently access employment, education, shops, leisure, healthcare, culture and other essential facilities. Market forces do not provide a universal service; many people lack convenient access, especially those without a car, those living in deprived neighbourhoods, those living in rural areas, and those with caring responsibilities or personal mobility difficulties. Local provision of services encourages community building, but transport isolation and poor connectivity penalises people without a car. People need to be able to access good local services without needing to travel.
	Advance equality of opportunity between different groups	Yes		
	Foster good relations between different groups	Yes		

Section 2: Equality and Human Rights Impact Assessment (EHRIA) Screening

Section 2 A: Research and Consultation			
5.	Have the target groups been consulted about the following?	**Yes**	**No***
	a) their current needs and aspirations and what is important to them;	Yes	
	b) any potential impact of this change on them (positive and negative, intended and unintended);		No
	c) potential barriers they may face		No
6.	If the target groups have not been consulted directly, have representatives been consulted or research explored (e.g. Equality Mapping)?	n/a	
7.	Have other stakeholder groups/ secondary groups (e.g. carers of service users) been explored in terms of potential unintended impacts?		No
8.	*If you answered 'no' to the question above, please use the space below to outline what consultation you are planning to undertake, or why you do not consider it to be necessary.		
	The proposals are being designed taking account of current national guidance. The next stage of the study is to seek agreement to undertake an engagement and consultation exercise on the outcomes of the first phase of study, in order to develop a preferred transport strategy for the town. Key stakeholders, user groups and the wider public will be consulted on the outcomes of the study; any issues raised in response will be considered as part of finalising the transport strategy and the recommended package of schemes. Moving forward, any impacts arising from construction activities will be temporary, with systems will be in place to provide mitigation where reasonable and proportionate.		

Section 2 B: Monitoring Impact			
9.	Are there systems set up to:	**Yes**	**No**

	a) monitor impact (positive and negative, intended and unintended) for different groups;		No
	b) enable open feedback and suggestions from different communities	Yes	

Section 2
C: Potential Impact

10. Use the table below to specify if any individuals or community groups who identify with any of the 'protected characteristics' may potentially be affected by this policy and describe any positive and negative impacts, including any barriers.

	Yes	No	Comments
Age	Yes		Improving access to key services by public transport, walking and cycling, and promoting social inclusion will benefit younger and older age groups. Older and young people may not have the same range of travel choices or be able to change behaviour. Improving facilities for pedestrians, cyclists and public transport users may benefit some age groups. A focus on packages of measures and value for money may mean isolated improvements needed for different age groups don't happen. Fear of crime or harassment and safety concerns on public transport, cycle-ways and footpaths can be barriers to different age groups. Access to hospitals in the County by public transport can be difficult.
Disability	Yes		Corporate communications and marketing is to take account of the needs of all members of the community. Scheme consultation is to take account of the needs of all members of the community. Ensure we have feedback from network users and the data to make better informed decisions. When developing measures to
Gender Reassignment		No	
Marriage and Civil Partnership		No	
Pregnancy and Maternity			
Race		No	

	Religion or Belief		No	promote and encourage increased walking, cycling and public transport usage consider whether it might be appropriate to provide complementary measures to address people's fears/ perceptions of danger such as improved street lighting. Consultation may identify further issues to be addressed.
	Sex		No	
	Sexual Orientation		No	
	Other groups e.g. rural isolation, deprivation, health inequality, carers, asylum seeker and refugee communities, looked after children, deprived or disadvantaged communities	Yes		Society works because people build relationships with other people, and they can only do this by being able to move around. In modern society, where there are more opportunities and specialities than ever before, the need to travel is greater than it has ever been. Society needs an effective sustainable transport network which allows everyone to conveniently access employment, education, shops, leisure, healthcare, culture and other essential facilities. Being unable to access transport affects earning ability, reduces access to life opportunities such as healthcare, education and training, and can lead in extreme cases to social isolation and mental illnesses such as anxiety and depression. Market forces do not provide a universal service; many people lack convenient access, especially those without a car, those living in deprived neighbourhoods, those living in rural areas, and those with caring responsibilities or personal mobility difficulties. Public policy has to make up for this market failure. Direct intervention can be a lifeline for isolated communities. Transport isolation and poor connectivity penalises people without a car. People need to be
	Community Cohesion	Yes		

				able to access good local services and ensuring transport provision protects vulnerable groups and reduces the barriers which inhibit people from using transport, such as fears about personal safety promotes this. Transport crime, the danger and unpleasantness of cycling on busy roads, and the perceived dangers of walking alone at night deter people from travelling. The project will aim to address many of these issues.

11. Are the human rights of individuals <u>potentially</u> affected by this proposal? Could there be an impact on human rights for any of the protected characteristics?

	Yes	**No**	Comments
Part 1: The Convention- Rights and Freedoms			
Article 2: Right to life	Yes		Where schemes within this project improved road safety, which reduces the potential for fatal road injury accidents there is a positive contribution from this project to the right to life
Article 3: Right not to be tortured or treated in an inhuman or degrading way		No	This project does not contribute to the obligation to refrain from, intervene in, not exposing persons to or investigating in subjecting people to torture or to inhuman or degrading treatment or punishment.
Article 4: Right not to be subjected to slavery/ forced labour		No	This project does not contribute to the obligation to intervene to stop slavery, servitude or forced or compulsory labour as soon as they become aware of it.
Article 5: Right to liberty and security	Yes		Transport isolation and poor connectivity penalises people without a car. People need to be able to access good local transport network to have the freedom to travel by a mode of their choosing. The project will assist vulnerable groups and reduces the barriers which inhibit people from using transport, such as fears about personal security.

	Article 6: Right to a fair trial	Yes		Where any civil offence is introduced as part of a scheme which makes up this project, the Council's EIA on parking enforcement will be adhered to
	Article 7: No punishment without law		No	This project does not contribute to the implementation or changes of laws.
	Article 8: Right to respect for private and family life		No	This project does not contribute or interfere with a person's right to respect for their private and family life, their home and their correspondence.
	Article 9: Right to freedom of thought, conscience and religion		No	This project does not contribute or interfere with a person's right to manifest their religion or belief.
	Article 10: Right to freedom of expression	Yes		During consultation on various schemes which make up the project, there will be a right to freedom of expression. However, where such expression makes discriminatory comments, only those comments expressed which are relevant to the scheme are taken into consideration.
	Article 11: Right to freedom of assembly and association		No	This project does not contribute or interfere with someone's freedom of peaceful assembly and association
	Article 12: Right to marry		No	This project does not contribute or interfere with someone's right to marry or found a family.
	Article 14: Right not to be discriminated against		No	This project does not contribute to discrimination on any ground or treat some people more favourably than others
	Part 2: The First Protocol			
	Article 1: Protection of property/ peaceful enjoyment	Yes		Where possible, the Project will try to ensure that policies or decisions do not interfere with peaceful enjoyment of possessions, restrict the use of possessions or take away possessions. However where compulsory purchase of land may be unavoidable, then the interference will be lawful and necessary in the public interest.
	Article 2: Right to education		No	This project does not contribute to securing the right to education nor

				interfere with it.
	Article 3: Right to free elections		No	This project does not contribute or interfere with the voting rights of individuals, nor does it interfere with the right to vote or to use their vote if they wish to do so.

Section 2
D: Decision

12.	Is there evidence or any other reason to suggest that:	**Yes**	**No**	**Unknown**
	a) this policy could have a different affect or adverse impact on any section of the community;		No – taking account of the proposals being developed with reference to current national guidance, and the proposed mitigation identified above.	
	b) any section of the community may face barriers in benefiting from the proposal		No	

13.	Based on the answers to the questions above, what is the likely impact of this policy			
	No Impact ☐	Positive Impact ☒ X	Neutral Impact ☐	Negative Impact or Impact Unknown ☐

Note: If the decision is 'Negative Impact' or 'Impact Not Known' an EHRIA Report is required.

14.	Is an EHRIA report required?	Yes ☐	No ☒ X

Section 3: Equality and Human Rights Impact Assessment (EHRIA) Report

As there are no adverse equality, diversity or human rights impacts identified in the EHRIA Screening exercise above, it is concluded that an EHRIA report is not required.

Section 4: Sign off and scrutiny

Section 4
A: Sign Off and Scrutiny

Confirm, as appropriate, which elements of the EHRIA have been completed and are required for sign off and scrutiny.

Equality and Human Rights Assessment Screening [X]

Equality and Human Rights Assessment Report [ ]

1st Authorised Signature (EHRIA Lead Officer):
Mark Palfreyman,
Network Management Specialist,
Strategy & Policy
Department of Environment and Transport

Date:21/11/17

2nd Authorised Signature (DEG Chair):

Date:

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