



Rutland County Council

Catmose, Oakham, Rutland, LE15 6HP.

Telephone 01572 722577 Facsimile 01572 758307 DX28340

Oakham

Meeting: CABINET

Date and Time: Tuesday, 10 October 2017 at 9.30 am

Venue: COUNCIL CHAMBER, CATMOSE

Corporate support Officer to contact: Sue Bingham 01572 758165
email: corporatesupport@rutland.gov.uk

Recording of Council Meetings: Any member of the public may film, audio-record, take photographs and use social media to report the proceedings of any meeting that is open to the public. A protocol on this facility is available at www.rutland.gov.uk/my-council/have-your-say/

A G E N D A

APOLOGIES FOR ABSENCE

- 1) **ANNOUNCEMENTS FROM THE CHAIRMAN AND/OR HEAD OF THE PAID SERVICE**
- 2) **DECLARATIONS OF INTEREST**

In accordance with the Regulations, Members are required to declare any personal or prejudicial interests they may have and the nature of those interests in respect of items on this Agenda and/or indicate if Section 106 of the Local Government Finance Act 1992 applies to them.

- 3) **RECORD OF DECISIONS**

To confirm the Record of Decisions made at the meeting of the Cabinet held on 19 September 2017.

- 4) **ITEMS RAISED BY SCRUTINY**

To receive items raised by members of scrutiny which have been submitted to the Leader (copied to Chief Executive and Corporate Support Officer) by 4.30 pm on Friday 6 October 2017.

REPORT OF THE DIRECTOR FOR PLACES

5) OAKHAM TOWN CENTRE

(KEY DECISION)

Report No. 142/2017
(Pages 3 - 54)

6) ANY ITEMS OF URGENT BUSINESS

To receive items of urgent business which have previously been notified to the person presiding.

---oOo---

MEMBERS OF THE CABINET: Mr T Mathias Chairman

Mr R Clifton
Mr R Foster
Mr O Hemsley
Mr A Walters
Mr D Wilby

SCRUTINY COMMISSION:

Note: Scrutiny Members may attend Cabinet meetings but may only speak at the prior invitation of the person presiding at the meeting.

**ALL CHIEF OFFICERS
PUBLIC NOTICEBOARD AT CATMOSE
CORPORATE SUPPORT TEAM**

CABINET

10 October 2017

OAKHAM TOWN CENTRE

Report of the Director for Places (Environment, Planning & Transport)

Strategic Aim:	Sustainable Growth	
Key Decision: Yes	Forward Plan Reference: FP/140617	
Cabinet Member(s) Responsible:	Mr T Mathias, Leader, Portfolio Holder for Finance and Places (Highways, Transport and Market Towns)	
Contact Officer(s):	Dave Brown, Director for Places (Environment, Planning & Transport)	01572 758461 dbrown@rutland.gov.uk
	Neil Tomlinson, Senior Highways Manager	01572 758342 ntomlinson@rutland.gov.uk
Ward Councillors	Oakham North East - Mr J Dale and Mr A Walters Oakham North West - Mr R Gale and Mr A Mann Oakham South East - Mr B Callaghan and Mr T Mathias Oakham South West - Mr O Bird and Mr R Clifton	

DECISION RECOMMENDATIONS

That Cabinet:

1. Approves the vision for Oakham Town Centre as the unique, attractive and vibrant heart of the county.
2. Approves the selection of Option A (one-way), as the preferred design to be taken forward for detailed design.

1 PURPOSE OF THE REPORT

- 1.1 To consider a vision for the regeneration of Oakham Town Centre that will ensure a vibrant future for the Town and to determine which option is taken forward for detailed design.

2 VISION

- 2.1 As the heart of one of England's most beautiful and historic counties we want Oakham to have a unique, attractive and vibrant town centre – a historic town for the future. Improving the public realm is the key to attracting more visitors and developing a thriving daytime and evening economy with a range of national retailers, local shops, markets, pubs and restaurants. We will invest in creating a high quality, distinctive and inspiring public realm we can be proud of. We will put

people above traffic whilst respecting the heritage of the town centre and ensuring there is the right amount of parking in the right places.

- 2.2 We are not unique in developing a vision for change. Traditional high streets continue to face a number of challenges which have led to declining footfall. More retail activity is taking place online and out of town.
- 2.3 Towns around the country are reinventing themselves starting with a change to the built environment. Examples include Hucknall, Poynton, Preston and Brighton (see Appendix 1).
- 2.4 The town centre has remained unchanged since the opening of the Oakham Bypass in 2007. At that time its main purpose was to accommodate large volumes of through traffic. Today it is primarily a retail, leisure and social space.
- 2.5 There has been and continues to be considerable support from the public to improve the town centre and frustration about the lack of action. An overwhelming majority of consultation responses wanted something done. Comments included:
 - “Oakham town centre is dying. Something drastic is needed.”
 - “Brilliant idea, should of happened years ago.”
 - “At last! A more pedestrian oriented town centre.”
- 2.6 During the 10 years while the plan for the Town Centre has been debated, the situation has continued to deteriorate. The town centre has narrow unattractive pavements, infrequent crossing points and vehicles dominate. The street furniture is sparse, unattractive and in need of maintenance (see examples in Appendix 2). Previously these plans may only been considered to be aspirations, however capital funding is now available to make improvements.
- 2.7 Creating a town centre atmosphere which is vibrant and attractive to both residents and visitors can be achieved through:
 - reducing the dominance of traffic;
 - making more space for people to walk, shop and relax;
 - providing easier pedestrians crossings;
 - improving the market place;
 - high quality paving and street furniture in keeping with conservation area status; and
 - maintaining adequate parking and access.

3 BACKGROUND

- 3.1 The Council’s Corporate Plan includes a target of implementing the Oakham Town Centre Improvement Scheme by September 2018.
- 3.2 According to Office for National Statistics (ONS) estimates the population of Oakham and Barleythorpe was around 12,000 in 2015. This is forecast to increase by 25% to around 15,000 by 2036. Population growth is also likely to be accompanied by demographic change. Despite a growing population, given the challenges described above, action is required to prevent the centre of Oakham experience a gradual decline with lower footfall, fewer retail premises and a trend

away from inward investment.

- 3.3 The number of visitors to Rutland generally is also forecast to increase. The town centre could have an important tourism role, with Oakham Castle located within the historic core and Rutland Water located within easy reach. In addition to encouraging local residents to remain in Rutland to do their shopping, the scheme will help to draw in some of the 1.75 million people that visit Rutland each year, few of whom currently incorporate Oakham into their itinerary.
- 3.4 To deliver the vision for the town centre 2 options are currently under consideration as follows:
- **Option A** – One-way with traffic flowing west to east, incorporating chevron parking, loading bays, high quality surfaces and wider pavements. The direction of the one-way flow was chosen to avoid traffic queuing along the High Street when the level crossing is closed.
 - **Option B** – Two-way traffic flow with an enhanced pedestrian environment and high quality surfaces.

4 STAKEHOLDER ENGAGEMENT STRATEGY

- 4.1 A stakeholder engagement strategy was developed by a Project Board and approved by Cabinet on 17th Jan 2017 (report no 19/2017). Stage 1 of the strategy involved working group meetings to consider 3 design concepts. The responses were assessed by the Project Board and the Council's design partners (AECOM) using the Place Standard Assessment Tool.
- 4.2 2 options were developed as outline designs. Stage 2 of the stakeholder engagement was a public consultation exercise on these options. The consultation ran from 11th June until 14th July 2017 and involved public exhibitions in the Market Place, leaflets and a website. In addition 300 businesses were invited to an evening event to discuss the proposals.
- 4.3 Feedback was collated using an online consultation form and leaflets, which could be returned via freepost or ballot boxes on the display vehicle and at the Council Offices. Consultees were asked which option they preferred and had the opportunity to provide further comments.
- 4.4 The consultation was publicised via local media (local radio and newspapers), the Council's Twitter account, website, display vehicle, email notifications, displays in the Council reception area and stakeholder engagement sessions.
- 4.5 The 3rd and final phase of the engagement strategy will involve consultation on matters of detailed design, construction methods and timing. The stakeholder engagement strategy sets out which groups will be consulted. These include:
- Ward Members;
 - Oakham Town Council;
 - Oakham Town Partnership;
 - Property owners;
 - Market traders;
 - Retailers and other town centre businesses;

- Town centre residents;
- Oakham in Bloom; and
- Rutland Access Group

5 CONSULTATION RESPONSES

5.1 952 responses were received to the Council's consultation and a summary can be found in Appendix 3. The results were as follows:

- Option A - One-way – 53%
- Option B - Two-way – 44%
- Neither Option – 3%

5.2 Only 29 responses did not choose an option with the overwhelming majority in favour of an improvement scheme.

5.3 Qualitative analysis was undertaken of the comments made. The main issues were:

- the impact of any changes to traffic flows;
- parking provision
- delays due to the level crossing; and
- retail choice

5.4 These issues are covered in detail in the sections below with the exception of retail choice. The comments related mainly to a misconception that the Council can control this directly through the planning process. One of the objectives of the project is to improve retail choice by increasing footfall and the amount of time shoppers spend in the town centre.

PETITION

5.5 A petition entitled 'Say NO to a One-Way system on Oakham High Street' was set up by an owner of a business in the town centre. This petition received around 743 responses. Of these 293 were made online. Some names appeared on both the online and paper petitions and some responses were anonymous. Some signatories also responded to the Council's consultation in addition to signing the petition.

5.6 One of the responses to a petition listed in the Council's guidance is to hold a consultation, which in this case has already taken place. The consultation was a fair and open exercise which set out the full details about both of the available options.

5.7 The consultation process provided information in a range of formats, and allowed people the opportunity to respond via post or online. Additional support was available for those who were unable to respond by either of these means. In addition a number of consultation events were run to enable residents and visitors to ask questions about the project.

5.8 In comparison to the Council's consultation, the weight given to the petition needs to take account of the following:

- Signatories were unable to access clear information on both available options and make a decision on the basis of this information;
- There would have been no opportunity to seek clarification regarding any questions about the proposals; and
- The petition, by nature, was inherently biased and did not enable those who support a one way system to express a view.

OTHER RESPONSES

- 5.9 Eleven letters were received, ten offering objections to Option A. All objectors to Option A had also completed a consultation form and all but one had signed the petition.
- 5.10 Oakham Town Partnership (OTP) responded with a letter supporting a one-way system, albeit different to Option A and with caveats. These included material type, direction of one-way (their opinion differs to that of AECOM), analysis of effects on alternative routes and that parking issues would be dealt with at the detailed design stage.
- 5.11 The Oakham Neighbourhood Plan group commissioned a survey delivered to 5500 properties in March 2017, as well as the facility for online responses. They received 1592 (29%) responses. The responses to the two most relevant questions are summarised in Appendix 4. In relation to the town centre scheme the points of notes were:
- 47% of respondents (710) agreed that Oakham needed a one-way system to reduce traffic congestion (23% responded as neutral and 29% were opposed).
 - A further question asking if residents thought a one-way system would reduce congestion at level crossings drew a 44% 'Yes' v 38% 'No' response (18% no opinion)
 - 52% of respondents (767) agreed that Oakham needed more long term pay and display parking.
 - 42% of respondents (647) were extremely concerned about traffic delays due to the level crossing closure times (see Section 8).

6 IMPACT OF A ONE-WAY SYSTEM

- 6.1 A number of consultation responses raised concerns around the effects of diverting westbound traffic from the High Street onto Station Road and South Street, and the effects it would have on traffic volumes and queuing at the junctions of New Street/High Street and Station Road/Melton Road.
- 6.2 Traffic surveys and modelling were carried out during the concept design stage. This work concluded that a one way system was feasible. However, following the consultation exercise further traffic surveys, modelling and analysis was carried out to explore in more detail how the one-way system would change traffic flows on adjacent roads.
- 6.3 The traffic survey was undertaken by the Council's design consultants (AECOM) from 24th to 30th July, with cameras set up and the results analysed with revised

flows and predictions using traffic modelling software. This determined the level of additional congestion at specific locations, and whether any delays are acceptable in terms of junction capacity. It also identified potential solutions for any of the areas where issues were identified. The impact of school holidays and road works were taken into account as described in 6.7 and 6.8 below.

- 6.4 The study analysed the network with and without westbound closure to determine the effect of a one-way system. It assesses what alternative routes will be taken by westbound traffic and the proportions on each route and the effect of the traffic increases on these alternative routes.
- 6.5 A survey was also carried out to assess the amount of through traffic currently using the High Street.

ANALYSIS OF RESULTS

- 6.6 The redistribution of traffic is shown in Appendix 5 and the results of the analysis are summarised in Appendix 6 (One-Way Traffic Analysis).
- 6.7 Manual traffic counts were undertaken on Friday 28th July, with automatic traffic counter (ATC) counts undertaken between 24th to 30th July. This period was chosen, as there were no road-works on any of the associated areas of the network that would have a significant impact on traffic flow.
- 6.8 To take account of school holidays comparisons were made with ATC counts undertaken in May 2017, making an allowance for the effects of road works at that time. The following factors were calculated to convert school holiday to school term time traffic flows:

- AM Peak 1.47
- PM Peak 1.20

- 6.9 The table below details the calculated peak traffic flow variations due to the implementation of a one-way eastbound option.

Road, Direction and Time	Current Flow (vehicles per minute)	Proposed Flow (vehicles per minute)	Current ratio of flow to capacity (RFC)	Proposed ratio of flow to capacity (RFC)
Station Road, Westbound AM Peak	4.7	5.6	22%	27%
Station Road, Westbound PM Peak	4.1	4.9	20%	23%
South Street, Westbound AM Peak	3.3	4.2	16%	20%
South Street, Westbound PM Peak	3.0	4.4	14%	21%
New Street, Northbound AM Peak	1.8	2.7	9%	13%
New Street, Northbound PM Peak	4.0	5.3	19%	26%

CONCLUSION OF TRAFFIC ANALYSIS

- 6.10 Traffic will be redistributed as shown in Appendix 5. The increase in flow will be

modest in terms of the increased numbers of vehicles per minute. However, the percentage increase will be between 19% and 54%. Flows will remain well within the capacity of the roads and junctions.

6.11 A comparison of the factored existing flows with the one-way option shows that:

- Westbound flows on High Street are in the order of 7.5 vehicles per minute. Redistribution of these trips to other routes does not all occur on the local roads (Station Road and South Street). Some drivers will choose to use the bypass.
- The roads which accommodate the redistributed traffic are currently operating well below capacity even at peak times. The increase in traffic flow is low in absolute terms even though it may appear significant in percentage terms. The additional flow is not forecast to cause any major issues.

6.12 Further analysis was undertaken of the pinch points, constraints and restrictions along the alternative routes, and measures to mitigate these will be addressed during the detailed design stage and allowed for within the budget. The following mitigation measures may be required:

- Removal of parking bays adjacent to the old Odd House public house;
- Restricting parking to off-peak hours on Station Road between Burley Road and Church Street;
- Upgrading of pedestrian crossings on Station Road and Melton Road;
- An additional crossing on Station Rd.
- Carriageway widening between Station Approach and Northgate;
- Review of Parking arrangements on New Street; and
- Modification of the junction arrangements at New St/High St, Mill St/South St, South St/Uppingham Rd and Station Rd/Burley Rd.

THROUGH TRAFFIC ANALYSIS

6.13 Analysis was undertaken of the video surveys taken in May 2017. These surveys were carried out when there were no significant restrictions on the networks. Data was reviewed from 6 camera locations along the High Street. The assessment identifies the proportion of through trips, on-street parking and vehicles turning down side streets along High Street.

6.14 The study provided the following information:

Time Period	Through Movements	Turning down side street	On Street Parking
08:00-09:00	17%	60%	23%
09:00-10:00	7%	73%	20%
11:00-12:00	13%	73%	13%
14:00-15:00	30%	60%	10%
17:00-18:00	37%	57%	7%
Average	21%	64%	15%

- 6.15 The conclusion is that at some times of the day around a third of the traffic on the High Street is using it as a through route. This is consistent with the traffic analysis prediction that some of the redistributed traffic from a one-way system will use the bypass. The report is in Appendix 7.

7 PARKING

- 7.1 Many responses related to the provision of additional town centre parking and some opposition to the provision of chevron/echelon parking.
- 7.2 Guidance and road safety advice concurs that any authority considering a non-parallel parking solution ought to be following the advice in the Traffic Signs Manual. This states that bays should be angled so that drivers are required to reverse into them. This is safer than reversing out, when visibility might be restricted by adjacent parked vehicles. This will be self-enforcing as it will be extremely difficult for vehicles to manoeuvre into these parking bays in a forward direction. The Council's civil enforcement powers will be restricted to parking out of bay and overstaying.
- 7.3 Work is underway on a parking sufficiency report to ascertain the current use of parking assets, how best they can be utilised, the need for additional parking and what scope there is to meet this need. It is recognised that this work is intrinsically linked to the town centre project but not to the choice of which option should be taken forward to the detailed design stage.
- 7.4 Currently, no single car park is more than a 5 minute walk from the centre of the town. Proposals to offer free parking for a limited period of time after scheme implementation have been suggested by OTP. Time-limited free parking during the construction of the works can be accommodated within the overall scheme costs.

8 LEVEL CROSSING

- 8.1 The presence of the level crossing has a significant impact on traffic flow in the town. The direction of the one-way flow was chosen to avoid traffic queuing along the High Street when the level crossing is closed.
- 8.2 During the consultation process there were numerous anecdotal accounts of the level crossings being closed for extended periods of time.
- 8.3 Manual traffic count surveys were undertaken at the Melton Road level crossing in 2010, factored using automatic traffic count data in 2012, and combined with video survey data undertaken in May 2016. This has been used to calculate average traffic flows, closure times and vehicle waiting times.
- 8.4 The 7-day average closure time for the level crossing was 10 minutes in the hour, peaking at 18 minutes in the hour between 07:00-08:00hrs on a Tuesday and Thursday. The weekday average between 06:00-18:00hrs was just under 13 minutes.
- 8.5 The average waiting time for vehicles at the crossing was calculated as 2mins 30seconds, with an average 95 vehicles queuing per hour.
- 8.6 The maximum timetabled number of closures per hour, both freight and passenger

is 10 trains per hour. Video monitoring data showed this to be nearer to 5 trains per hour between 07-08:00 and 4 trains per hour between 15-16:00hr.

- 8.7 Although the perception of delay does not appear to match the reality, it is recognised that the level crossing causes frustration leading to some poor driver behaviour. Enforcement action is regularly taken against drivers who pass the barrier warning lights at red. U-turns are also a common occurrence which can cause a road safety issue.
- 8.8 Since the 1990's Network Rail has declared a long term desire to increase the number of freight trains using this line. However, this will require significant investment in signalling to increase capacity. Currently there is no indication when this project will proceed; however, the direction of flow of Option A has been chosen to ensure traffic does not backup through the town centre.

9 ALTERNATIVE OPTIONS

- 9.1 The Council could choose to do nothing to improve Oakham Town Centre. Given the challenges faced by high streets in general and Oakham in particular, it is likely that the town centre will suffer a spiral of decline with a reducing footfall leading to reduced inward investment. Significant maintenance work will still be required as the footways and carriageway have reached the end of their useful life. This is likely to cost in the region of £400k using similar materials to the existing surfaces (asphalt and concrete paving).
- 9.2 Option B (two-way) will improve the quality of the public realm, however the scope for significant improvements is limited by the need to retain a wide carriageway. There will also be limited scope to improve pedestrian crossing facilities around the Mill Street/Burley Road/High Street junction. In addition this option received less support than Option A.

10 FINANCIAL IMPLICATIONS

- 10.1 Approval to fund construction will not be sought until the detailed design is complete and a target cost has been established. Funding of up to £378k for the current design works was approved as part of the 2017/18 highway capital programme (Cabinet report 6/2017).
- 10.2 The scheme is likely to cost in the region of £3M to construct, plus design and survey costs of up to £0.5M, and will be subject to full Council approval. This cost is derived from 2 independent estimates compiled by AECOM and Eurovia based on their experience of similar public realm schemes.
- 10.3 There are a number of potential capital funding sources, as listed below. As there will be no use of revenue there will be no impact on council tax.
- The National Productivity Investment Fund;
 - Highway capital maintenance grants;
 - Integrated transport capital grants;
 - Capital receipts;
 - Section 106; and
 - Community Infrastructure Levy

- 10.4 If approved, the scheme will be constructed under a target cost contract using the Midland Highways Alliance Medium Schemes Framework. Once the detailed design is complete the target cost will be agreed with the contractor based on labour, materials and equipment costs. The Council will pay the actual cost of the works and an agreed percentage for overheads and profit. A pain/gain sharing mechanism will be used to distribute any under or overspend between the Council and the contractor. This mechanism incentivises the contractor to construct the works as efficient as possible by gradually decreasing the Council's share as the cost increases.
- 10.5 To allow sufficient time for detailed design, accurate target costing and further presentations to stakeholders and the public, the final design will be presented to Cabinet in February 2018. If Cabinet are minded to recommend the design and budget for approval to full Council, this will be in March 2018, as outlined in the original Stakeholder Engagement Strategy, (Cabinet report 19/2017). The Growth, Infrastructure and Resources Scrutiny Panel may also wish to discuss this project.

11 LEGAL AND GOVERNANCE CONSIDERATIONS

- 11.1 In order to undertake works to the existing carriageway and footway, the Council will need to put in place Temporary Traffic Regulation Orders pursuant to the Road Traffic Regulation Act 1984 following the appropriate legal procedure. In addition, in order to permanently alter the use of the highway by restricting the direction of travel to one direction, the Council will need to make a permanent Traffic Regulation Order pursuant to the Road Traffic Regulation Act 1984, which must first be approved by the Council's Cabinet. As part of this process, the Council will need to consult a range of consultees including the Police, Fire and Ambulance services. There will also be a period where the intention to make the Traffic Regulation Order is published and members of the public may submit objections to the Council. The Council will need to ensure that the authority given by Cabinet to enact the Traffic Regulation Order is sufficiently robust to give power to the Director for Places (Environment, Planning and Transport) to respond to and, if required, rebut any objections. The statutory time periods required to put in place Temporary and Permanent Traffic Regulation Orders will be considered as part of the schedule for the works.
- 11.2 A report requesting approval of the final design, target cost, funding sources and programme will be brought to Cabinet for consideration in February 2018.
- 11.3 Council approval will be required as the budget will exceed £1M. If approved by Cabinet it will be brought to full Council for consideration in March 2018

12 EQUALITY IMPACT ASSESSMENT

- 12.1 Equality impact screening has been carried out which has identified that the scheme will potential affect accessibility for the disabled. Rutland Access Group (RAG) has been identified as a stakeholder and an equality impact assessment will be incorporated into the design and assessment process. RAG has indicated that it favours Option A.

13 COMMUNITY SAFETY IMPLICATIONS

- 13.1 Safety audits will be incorporated into the detailed design process. A significant

number of pedestrian accidents have been recorded in Oakham Town Centre since our records began (1994). The improvement to pedestrian facilities included in this project will have a positive impact on road safety.

14 HEALTH AND WELLBEING IMPLICATIONS

- 14.1 The scheme aims to improve the town centre environment, reduce traffic flows, improve air quality and encourage visitors to stay longer.
- 14.2 Mental health and wellbeing can be improved by increasing the opportunity for congregation and socialisation.

15 CONCLUSION AND SUMMARY OF REASONS FOR THE RECOMMENDATIONS

- 15.1 Option A (one-way) provides the greatest opportunity to deliver the vision for the town centre by improving the pedestrian environment while balancing the desire to maintain the number of parking spaces on the High Street. This option will also improve the environment and reduce the dominance of vehicles by removing a significant amount of traffic.
- 15.2 Option A was the most popular option from the consultation exercise. However, it is acknowledged that a significant number of signatories signed a petition against this proposal. The weight given to the petition must take account of the limitations set out in section 5.8. Considering all responses, including the Neighbourhood Plan consultation, on balance Option A is considered to be the most popular option.
- 15.3 It is recognised that the consultation exercise identified concerns about:
- the impact of the redistributed traffic on adjacent roads; and
 - a reduction in passing trade as a result of lower traffic flows.
- 15.3.1 To deliver the vision for the town centre the traffic on the High Street will need to be reduced. This will cause an increase in traffic on adjacent roads. The traffic analysis shows that these roads have the capacity to accommodate the increased flows with mitigation measures that will form part of the detailed design.
- 15.3.2 It is not possible to model the impact of reducing the volume of traffic on trade. However, evidence shows that well planned public realm improvement schemes can significantly boost footfall and trade (see 16.4 The Pedestrian Pound – the business case for better streets and places). This report states “there is consistent evidence that customers like pedestrian environments and dislike traffic. Retailers have been shown to over-estimate the importance of the car for customer travel.”
- 15.4 It is recommended that Option A is taken forward to the detailed design stage for the following reasons:
- It is the option which most closely aligns with the vision and objectives set out in section 2;
 - It was the favoured option from the consultation exercise; and
 - The areas of concern raised during the consultation exercise can be addressed through the detailed design.

16 BACKGROUND PAPERS

- 16.1 ONP Big Survey Results
https://docs.wixstatic.com/ugd/746b8c_2b26690238f2459991b76fb73909323a.pdf
- 16.2 Retail Capacity Assessment <https://www.rutland.gov.uk/my-services/planning-and-building-control/planning/planning-policy/local-plan-evidence-base/economy-and-employment/>
- 16.3 Local Plan Review <https://www.rutland.gov.uk/my-services/planning-and-building-control/planning/planning-policy/local-plan-review/>
- 16.4 https://www.livingstreets.org.uk/media/1391/pedestrianpound_fullreport_web.pdf

17 APPENDICES

- 17.1 Appendix 1 – Example schemes
- 17.2 Appendix 2 – Examples showing the current state of the high street
- 17.3 Appendix 3 – Consultation Summary
- 17.4 Appendix 4 – Oakham Neighbourhood Plan Consultation Extract
- 17.5 Appendix 5 – Traffic Redistribution
- 17.6 Appendix 6 - One-Way Traffic Analysis
- 17.7 Appendix 7 - Through Traffic Analysis

A Large Print or Braille Version of this Report is available upon request – Contact 01572 722577.

Appendix 1 – Example Schemes

Hucknall

Their aim: “turn Hucknall town centre back into what it always was – a hub and focus for the people of the town and to give more reasons for people to visit at different times of the day and to stay for longer. In this way the town centre will be animated and businesses will have more potential customers.”



The result:



Appendix 1 – Example Schemes

Poynton

Their problem: “With 16 void shops and declining investment, there were concerns that a new supermarket development to the east would finally kill off the high street”



The result: “Now there is an attractive, open streetscape in which free-flowing traffic interacts sociably with pedestrians. Not only have delays dropped markedly, but since the scheme was unveiled, trading activity in local shops has doubled.”



Appendix 1 – Example Schemes

Preston

Their Aim: “Make Preston a much more attractive place to invest and do business. It will be more visually appealing and will open up the main gateways into the city centre.”



The result:



Appendix 1 – Example Schemes

Brighton

The problem: “New Road had become a run-down back alley. Underperforming despite a proud heritage and numerous cultural institutions, it had developed into a hub of anti-social behaviour and was failing to attract small businesses or visitors.”



The result: “Local citizens have been quick to embrace the change, generating a new urban culture in what has become one of the most popular places to spend time in the city. The design of New Road has transformed the area, which is now contributing to the city’s thriving economy.”



Appendix 2 – Current High Street Condition

Examples of the current condition of street furniture and paving:

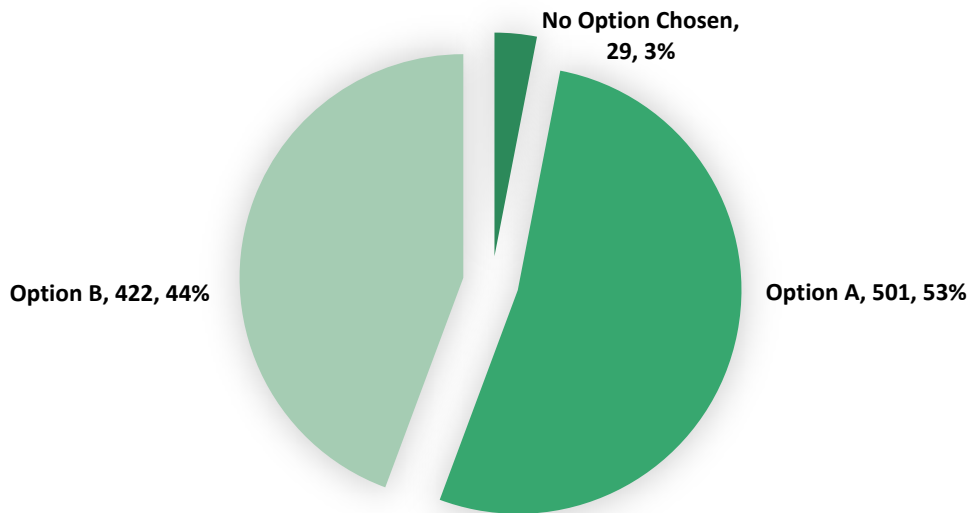


Appendix 2 – Current High Street Condition

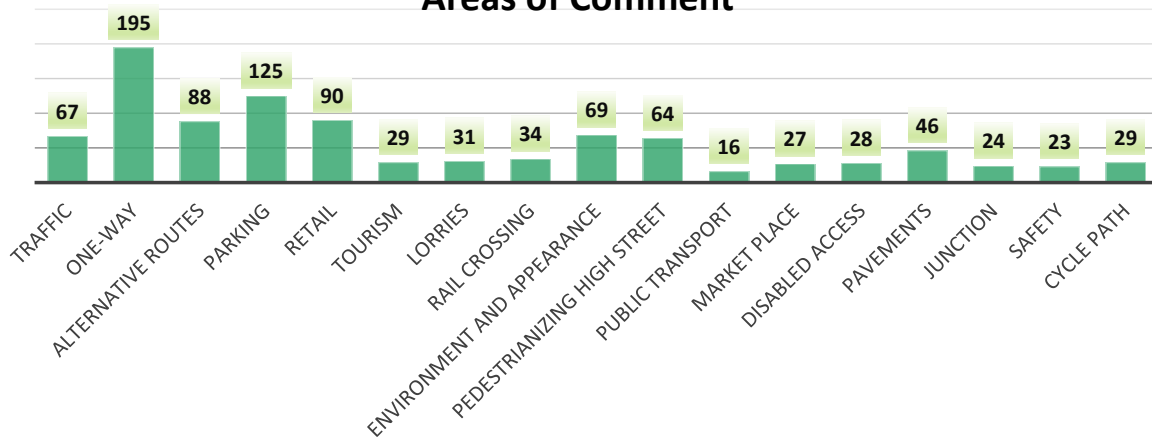


Appendix 3 - Consultation Summary

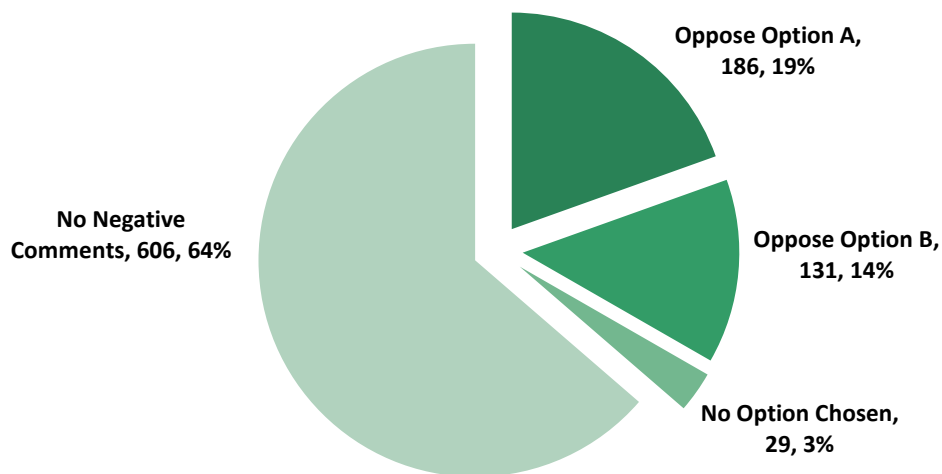
Survey Results - Responses in Favour of Each Option



Areas of Comment



Negative Comments



This page is intentionally left blank

Appendix 4 – Oakham Neighbourhood Plan Consultation Extract

Q25 – Please read through the following statements and let us know how much you agree or disagree with each one:

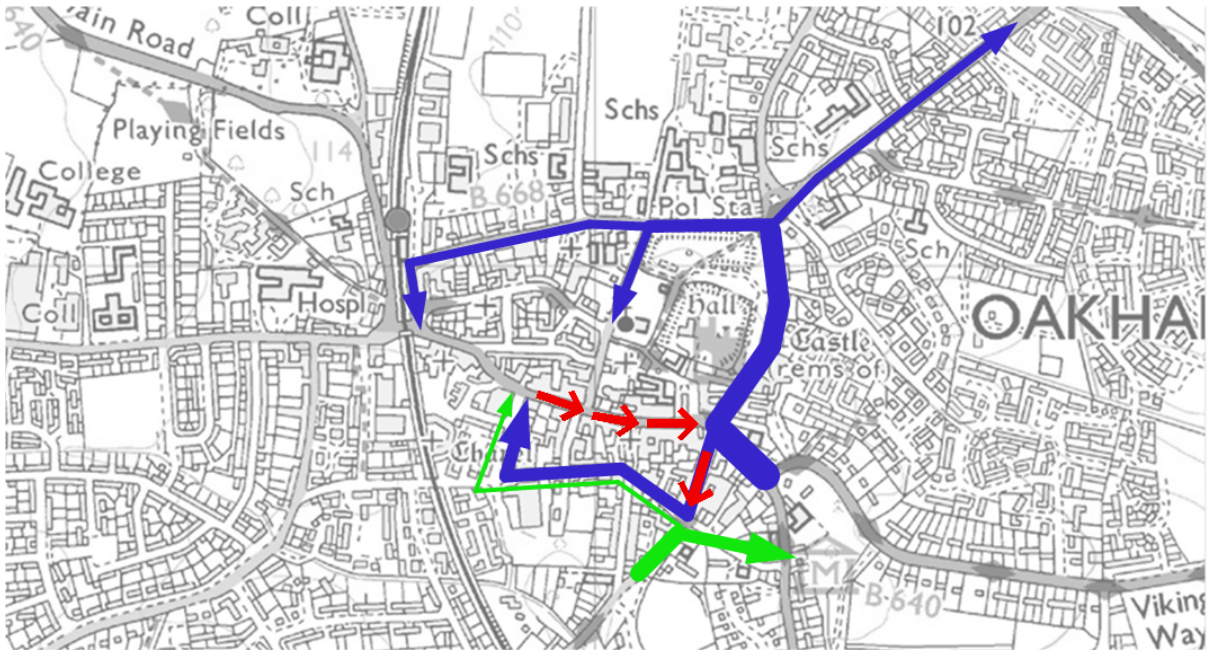
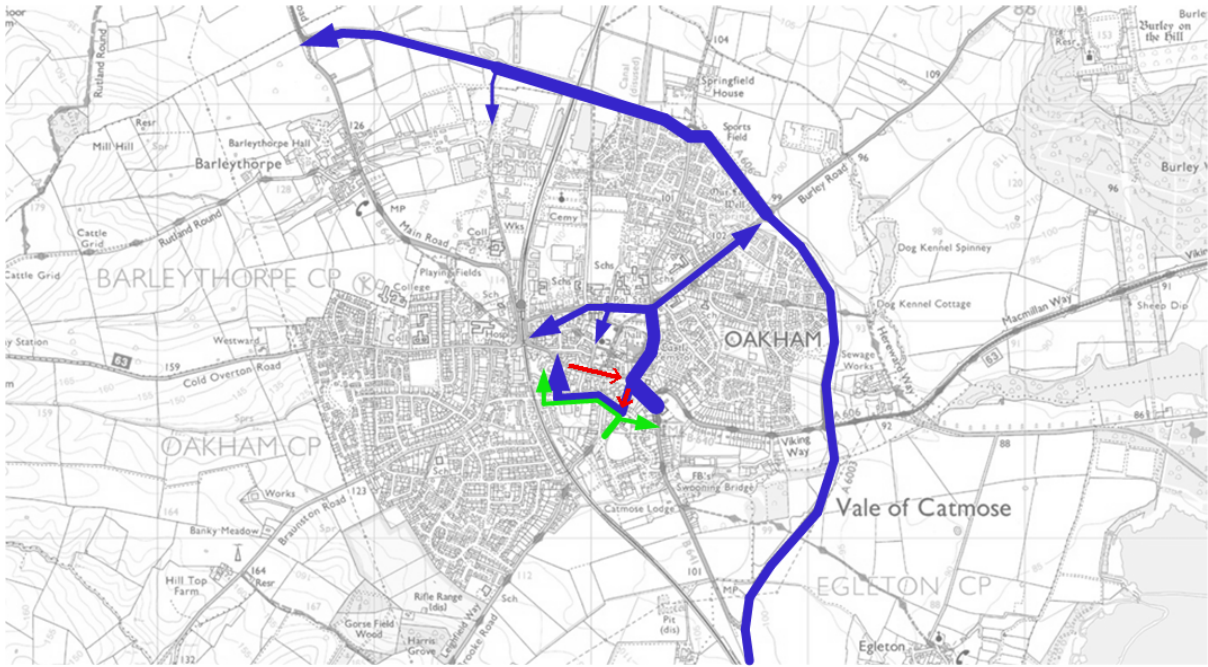
	Agree	Neutral	Disagree
A park and ride scheme is needed on the outskirts of Oakham for visitors and those working in town	574 (39%)	427 (29%)	476 (32%)
Oakham needs a multi-storey car park	290 (20%)	211 (14%)	963 (66%)
Oakham Town Centre needs a one-way system to reduce traffic congestion and potentially enable additional parking	710 (47%)	348 (23%)	441 (29%)
Oakham needs additional long term pay and display car parking	767 (52%)	446 (30%)	252 (17%)

Q39 - Do you think any of the following would help to improve Oakham Town Centre as a place to visit?




	Yes	No	No Opinion
Clearer and improved signage	460 (34%)	510 (37%)	401 (29%)
More and improved public seating	975 (67%)	258 (18%)	225 (15%)
Greener street scene (Trees/flowers)	1027 (71%)	243 (17%)	184 (13%)
Wider and improved pavements along High Street	861 (59%)	443 (30%)	151 (10%)
Improved crossing points along High Street	584 (41%)	609 (43%)	220 (16%)
Reduced vehicle presence along High Street	886 (61%)	413 (29%)	150 (10%)
Restricted vehicle delivery periods	929 (64%)	321 (22%)	201 (14%)
Pedestrian priority along High Street	676 (48%)	545 (38%)	198 (14%)
Pedestrianisation of High Street	484 (34%)	754 (53%)	182 (13%)
More secure places to park motorbikes/scooters	314 (23%)	335 (24%)	740 (53%)
Wider pavements to improve mobility vehicles/wheelchair access	633 (45%)	369 (26%)	418 (29%)
Cultural events/festivals	905 (66%)	148 (11%)	319 (23%)

This page is intentionally left blank

Appendix 5 – Traffic Redistribution



Line thickness represents relative volume of redistributed traffic.

-  Traffic redistribution caused by High Street one-way eastbound
-  Traffic redistribution caused by Mill Street one-way southbound
-  One-way road

This page is intentionally left blank

Oakham – 2017 Baseline Traffic Flows and Comparison with Westbound Closure Flows.

Client name Rutland County Council	Discipline Development Planning	Date August 2017	Project number 60494381
Prepared by Jon Gorstige	Approved by Peter Firth	Checked by Andrew Sherwood	

Revision History

Revision	Revision date	Details	Authorised	Name	Position
----------	---------------	---------	------------	------	----------

Introduction:

This technical note has been prepared to report on the July 2017 traffic surveys undertaken in Oakham town centre to establish baseline traffic flows along High Street and other town centre roads and junctions. The purpose of the surveys was to establish a ‘Do-Nothing’ baseline position. A similar data collection exercise was undertaken in April 2017 while roadworks were present on High Street which required a westbound closure, and hence provided a good indication of traffic patterns likely to result from a westbound closure as proposed as the ‘Do Something’ scenario developed as part of the proposed Oakham Public Realm works.

A Technical Note was prepared in May 2017 which reported on the April 2017 surveys and assessed a number of junctions using the recorded turning flows resulting from the westbound closure. This previous note identified the AM and PM peak hours. In order to obtain as direct a comparison as possible the same peak hours have been used in this new assessment.

This note then goes on to compare forecast traffic flows with and without the diversion in place, and identifies and quantifies where increases (and decreases) in traffic flows are likely to occur with a permanent westbound closure of the High Street. Identification of any particular pinch points along the alternative routes is then considered and whether any mitigation measures might be suitable

July 2017 Traffic Surveys

On Friday 28th July 2017 manual classified turning counts were undertaken at the following junctions. The dates for the traffic surveys were agreed with Rutland County Council officers and no roadworks or temporary traffic management measures were present during the surveys.

- Melton Road / Station Road / Northgate Priority Junctions
- Church Street / Northgate T-Junction
- Burley Road / Station Road T-Junction
- Uppingham Road / Catmos Street / South Street
- Brook Road / South Street / Mill Street
- South Street / New Street Roundabout

A suitable base count from May 2016 was already available at:

- High Street / Burley Road / Mill Street Roundabout

The resulting baseline flows are presented in **Figure 1** at the end of this report

In addition to these manual classified turning counts, Automatic Traffic Counts (ATCs) were recorded for 1 week at the following locations (between Monday 24th July 2017 and Sunday 30th July 2017).

- High Street East End (same location as 2016 surveys just west of Roundabout)

- South Street just west of Brooke Road traffic signals
- New Street just north of South Street roundabout
- Church Street south of Station Road
- Station Road east of Church Street

Factoring to Typical Term Time Flows

Time constraints meant that the July 2017 traffic counts couldn't be undertaken during school term time and therefore it was recognised that a suitable factor should be applied to the July counts to bring them up to typical weekday school term time levels. In order to do this ATC data at the Eastern end of the High Street was used to calculate appropriate factors for the AM and PM hours.

ATC data was available from the May 2017 traffic surveys to provide the typical school term time baseline and July 2017 to provide the school holiday flows.

The comparison showed a fairly significant difference as would be expected, particularly during the AM peak hour. The corresponding AM and PM peak hour flows are shown below together with the resulting factors to be applied to the July 2017 AM and PM peak flows to factor them up to term time levels.

School Term Time

Friday 27 th May 2017	AM Peak Hour	724 veh/hr two-way
Friday 27 th May 2017	PM Peak Hour	889 veh/hr two-way

School Holiday Time

Friday 28 th July 2017	AM Peak Hour	494 veh/hr two-way
Friday 28 th July 2017	PM Peak Hour	688 veh/hr two-way

Factor (B to A) to convert school holiday to School term time

AM Peak	1.466
PM Peak	1.196

These AM and PM factors were applied to the corresponding July 2017 AM and PM peak hour flows and the resulting turning flows are shown in **Figure 2**. It should be noted that the factors were not applied to the High Street / Burley Road / Mill Street Roundabout turning flows as these counts were recorded in May 2017 during a normal school term time weekday.

Comparison of Do-Nothing with Do Something Flows

The April 2017 traffic surveys were fully reported in the Technical Note prepared by AECOM in May 2017 (See Appendix A). The resulting turning counts are repeated in **Figure 3** of this report for ease of reference.

By assessing the difference in turning flows (and link flows) during the AM and PM peak hours between the factored July 2017 baseline flows and the April 2017 turning flows (with the westbound closure) a comparison can be made.

Figure 4 shows the net difference in traffic flows between the counts.

From an assessment of **Figure 4** the following trends and patterns have been identified resulting from the westbound closure of High Street.

- Whilst the full reduction of around 462 vehicles per hour in westbound traffic on High Street occurs during the AM peak hour (and around 425 in the PM peak hour) there is not a corresponding increase in traffic flows on the obvious alternative east to west routes (i.e. South Street to the South and Station Road to the North).

- The increases on these routes are much smaller. For example traffic flows on South Street turning right onto New Street increase by 58 in the AM peak and 81 in the PM peak.
- Traffic increases in the right turn into Station Road from Burley Road North increase by 47 in the AM peak and 57 in the PM peak.
- There is a significant reduction of westbound traffic on Catmos Street of around 130-200veh./hr which supports the above findings. These vehicles are likely to re-route to the north around the bypass
- Other noticeable trends in both peak hours are
 - An increase in the left turn from Catmos Street to Mill Street of around 45 vehicle (as the straight on is not possible anymore)
 - An increase of around 80 vehicles southbound on Mill Street, south of the High Street roundabout
 - An increase in the right turn from Mill Street to New Street of around 90 vehicles in the PM peak (at the traffic signals)

There are a number of points to note when comparing the flows however, and these are summarised below.

- During the April 2017 counts roadworks were also present on Station Road, just north of Northgate, resulting in much lower flows on Station Road than usual. This means no meaningful comparison can be made on this part of the network.
- The comparison is between two separate traffic counts, undertaken on different days in different months and with a large overall factor being applied to one of the count days. Small variations in other traffic flows (i.e. not associated with the westbound closure) are therefore present.

Consideration of Alternative Routes and Identification of Pinch Points

Station Road Route (East to West)

- **Burley Road / Station Road Junction** --
 - Increased Right turn flows into Station Road are forecast from Burley Road
 - Junction Modelling shows the junction will continue to operate within capacity
 - No improvements are needed
 - Land is available for widening and improvements if ever required
 - Station Road is a signed route to the Railway Station, coach parking, hospital and parking.
- **Station Road (between Burley Road and Church Street)**
 - On-street parking occurs along the north side
 - The road width is approximately 7.3m and 2-way movements past the parked cars is possible by cars (but not by HGVs).
- **Pedestrian Crossing / School Access Routes**
 - Pedestrian guard railing and zig-zag markings to protect pedestrian / vehicle inter-visibility are present.
 - Good streetlighting is provided

- **Station Road (between Church Street to Station Approach)**
 - On-street parking provision on one side only (mainly north side) but the road width still allows two-way movement when cars are parked.
 - Ambulance Station
 - Residential Frontage
 - Some residents parking / short stay parking
- **Station Road (between Station Approach and Melton Road)**
 - There is a bus stop outside the railway station but this is off the carriageway and does not block through traffic
 - There is a taxi rank on-street which reduces carriageway width but the road width is sufficient to allow two-way working
 - This section is a signed through route from Melton Road
 - Pedestrian crossing provision at the Station Road junction with Melton Road / High Street is poor and consideration of improvements (based on increased traffic flow) is recommended.

South Street Route

- **Uppingham Road Junction**
 - Traffic Signals
 - Signed Route to long stay car parking
- **Uppingham Road to Mill Street**
 - No on-street parking permitted
 - Fire Station and car parks off this section of the road
- **South Street / Mill Street / Brooke Road Junction**
 - Traffic signals – no significant impacts identified
- **Mill Street to New street**
 - Mainly double yellow lines along this length
 - Some resident's on-street parking but this is accommodated within pavement build outs and allows free flow two lane operation.
 - Some residential frontages
 - Some traffic calming features to reduce speeds
 - Zebra crossing
 - Off carriageway taxi rank and bus stop which do not restrict through movements
 - Narrow pedestrian footways in places
- **South Street / New Street Roundabout**
 - Mini-roundabout layout with low flows on west side which allows easy right turn into New Street
 - Access to Tesco's supermarket to the south

- **New Street**

- Residents permit parking on the east side restricts the carriageway width
- If the parking bay markings are narrowed two-way operation may be possible
- One way system (North) north of John Street
- Recommend more accurate surveys of roads and footways to confirm possibility of two-way operation past the residents parking. Chapter 8 of the Traffic sign Manual recommends a minimum width of 5.5m for two-way working. Consideration of priority signs to allow northbound traffic priority over southbound traffic.

Traffic effects on alternative Routes

The comparison of the April 2017 traffic counts with the factored up July 2017 traffic counts has allowed a high level assessment in the changes in traffic flows on alternative routes to be made resulting from a westbound closure of High Street.

The following differences in traffic flows have been identified by assessing the two sets of traffic flows and focusing on the alternative routes and associated turning movements

Table 1. Traffic Effects on Alternative Westbound Routes

Link	2017 Factored Base 'Do Nothing' Flow	Increase due to Westbound Closure 'Do Something'	Percentage Increase due to Westbound Closure 'Do Something'
Station Road Westbound AM			
Peak	281	57	20.3%
Station Road Westbound PM			
Peak	244	47	19.3%
South Street Westbound AM			
Peak	196	58	29.6%
South Street Westbound PM			
Peak	181	81	44.8%
New Street AM Peak Northbound	107	58	54.2%
New Street PM Peak Northbound	238	81	34.0%

Source: April 2017 & July 2017 Traffic Counts

In addition to the above increases due to the westbound closure of High Street it is likely that further additional increases could occur on South Street (westbound) and New Street (Northbound) due to the proposed one way system on Mill Street. This additional increase has been estimated to be around 30 veh./hr (based on 30% of the 100 veh./hr currently travelling north on Mill Streets re-routing along South Street. The remaining 70% are likely to reroute via South Street East and Catmos Street or Brooke Road and Welland Road to the west.

The resulting two-way flows on South Street and New Street would be around 400 veh./hr two-way during both the AM and PM peak hours.

It has been noted in the previous section that the residents parking on New Street can restrict the carriageway width and only allow one way movement of traffic at a time. Given the forecast two-way flow along this short section (45m) would be in the order of 400-500 veh./hr it is considered that this would not cause any significant problems. Chapter 8 of the Traffic Signs Manual advises that give and take shuttle flows of up to 400 veh./hr can operate satisfactorily and up to 840 veh./hr can operate if a priority system is introduced.

Other capacity assessments of the junctions along these alternative routes were covered in the previous May 2017 Technical Note (see Appendix A) and earlier Technical Notes (including one on the capacity of the New Street / High Street traffic signals). No capacity issues were identified and these assessments are still considered to be valid.

Similarly the forecast length of queues resulting from the level crossing provided in this May 2017 Note are still valid

Traffic Growth

A long term DfT traffic counter is located on the A606 Bypass and provides annual traffic flows at this location. A summary of the recorded AADT traffic flows for the period 2008 to 2016 is shown in **Table 2**. The counts indicate that there has been no traffic growth since 2008.

Table 2. Annual Long Term Traffic Flows on Oakham Bypass (A606)

YEAR	Total 2-way AADT Flow	HGVs	% HGV	Year on Year % Traffic Growth
2008	9675	821	8.49%	-
2009	9588	754	7.86%	-0.90%
2010	9114	515	5.65%	-4.94%
2011	9077	487	5.37%	-0.41%
2012	9037	471	5.21%	-0.44%
2013	9054	463	5.11%	0.19%
2014	9081	451	4.97%	0.30%
2015	9164	473	5.16%	0.91%
2016	9321	478	5.13%	1.71%

Source: DfT website

Summary and Conclusions

This report has summarised the July 2017 traffic surveys which provide a 'Do-Nothing' baseline for comparing 'Do Something' options against.

The surveys were undertaken in the school holidays and appropriate factors have been applied to produce estimates of typical school term time traffic flows.

A comparison of the factored 'Do Nothing' flows with the proposed 'Do Something' Public Realm option which includes a westbound closure of High Street has then been undertaken.

The comparison shows that:-

- Although the westbound flows on High Street are in the order of 450veh./hr, the transfer of all these trips to other routes does not all occur on the local roads (to the north and south of High Street - Station Road and South Street)
- It is apparent that drivers choose alternative routes that avoid the town centre all together.
- The maximum increases in traffic flows forecast westbound along Station Road are in the order of 50-60 veh./hr which represents an increase of around 20% in both AM and PM peak hours.
- The maximum increases in traffic flows (resulting from the westbound closure of High Street) along South Street and turning right into New Street are in the order of 60-80veh./hr, representing increases of around 30% and 45% for the AM and PM peak respectively on South Street. In addition to these increases an additional 30 veh./hr may also re-route to South Street westbound due to the proposed one way proposal for Mill Street.
- There is a significant reduction of westbound traffic on Catmos Street of around 130-200veh./hr which supports the above findings. These vehicles are likely to re-route to the north around the bypass.

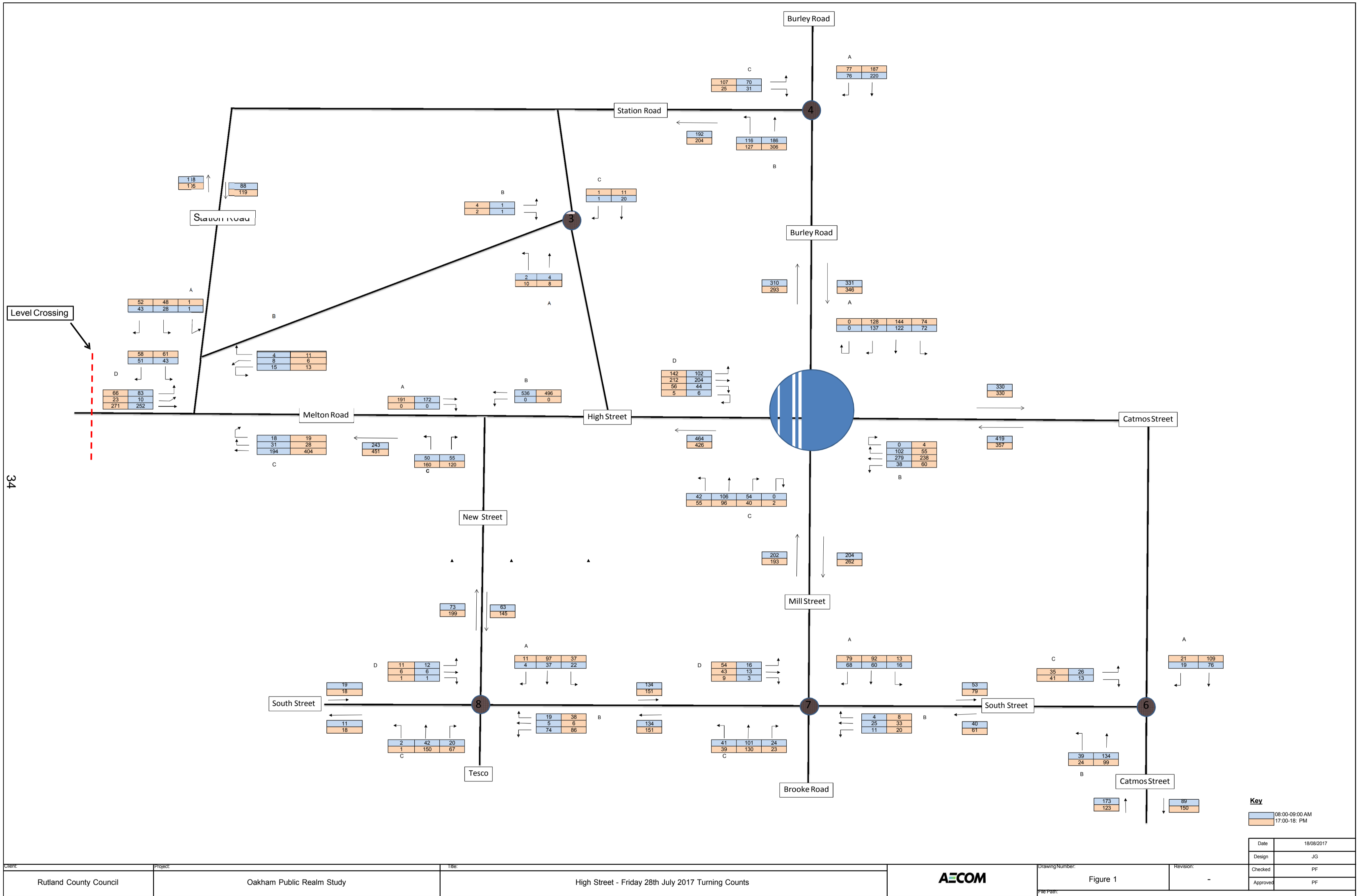
A review of the alternative local routes has been undertaken and no significant constraints have been identified, particularly when considered against the modest increases in traffic flows predicted along these routes.

Junction modelling was undertaken as part of a previous review (April 2017) and no capacity problems were identified. These assessments are still considered valid.

In conclusion the comparison of 'Do Nothing' traffic flows and 'Do Something' traffic flows which include a westbound closure of High Street have shown that only modest increases of between 60-80 veh/hr are forecast to reroute to each of the local alternative routes of Station Road and South Street. An additional 30 veh./hr could also reroute along South street due to the proposed one-way system on Mill Street.

No significant constraints have been identified along the alternative routes.

Figures



34

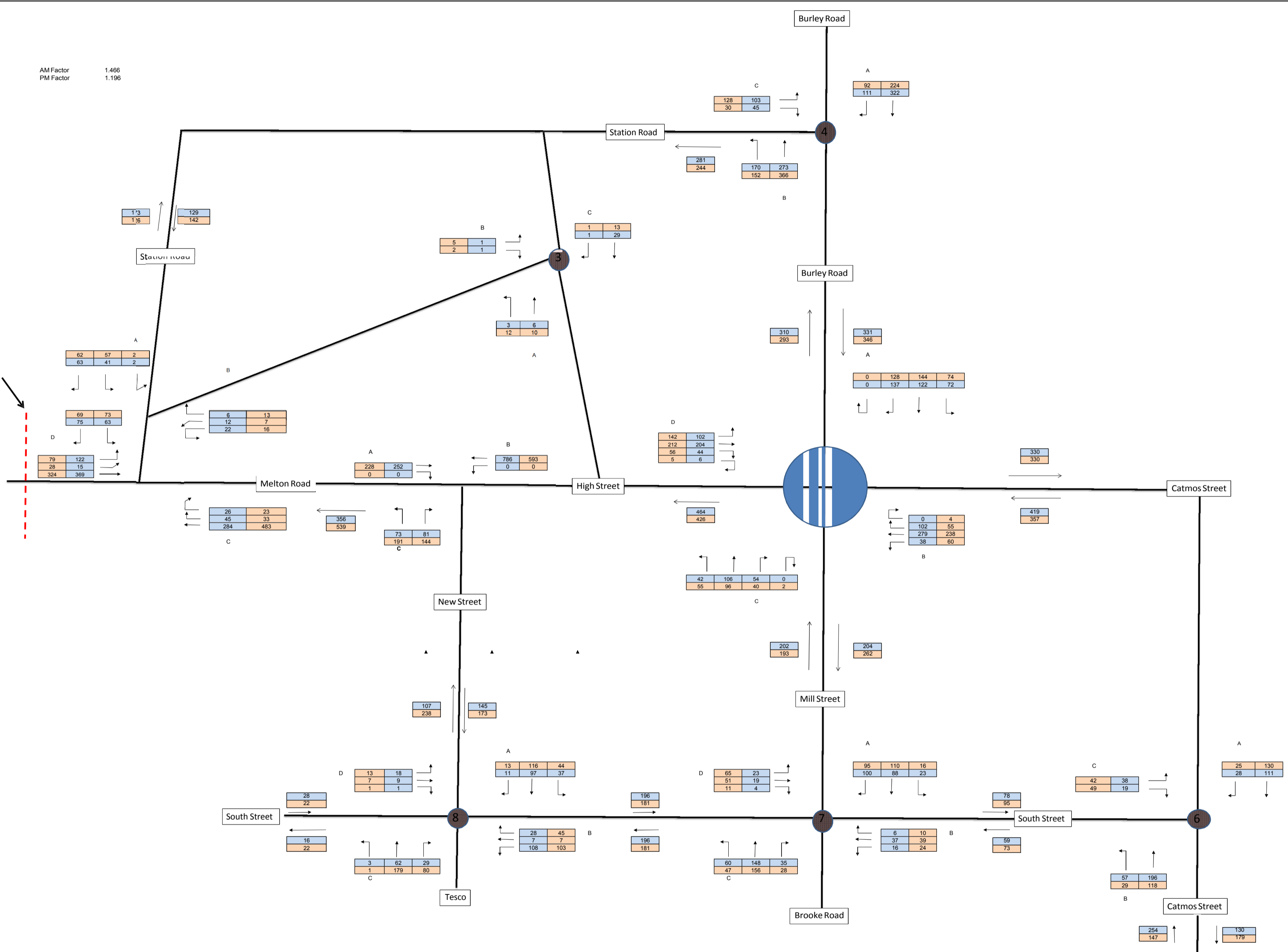
Key
 08:00-09:00 AM
 17:00-18:00 PM

Client: Rutland County Council	Project: Oakham Public Realm Study	Title: High Street - Friday 28th July 2017 Turning Counts	AECOM	Drawing Number: Figure 1	Revision: -
			Date: 18/08/2017	Checked: PF	Approved: PF
			Design: JG		

AM Factor 1.466
PM Factor 1.196

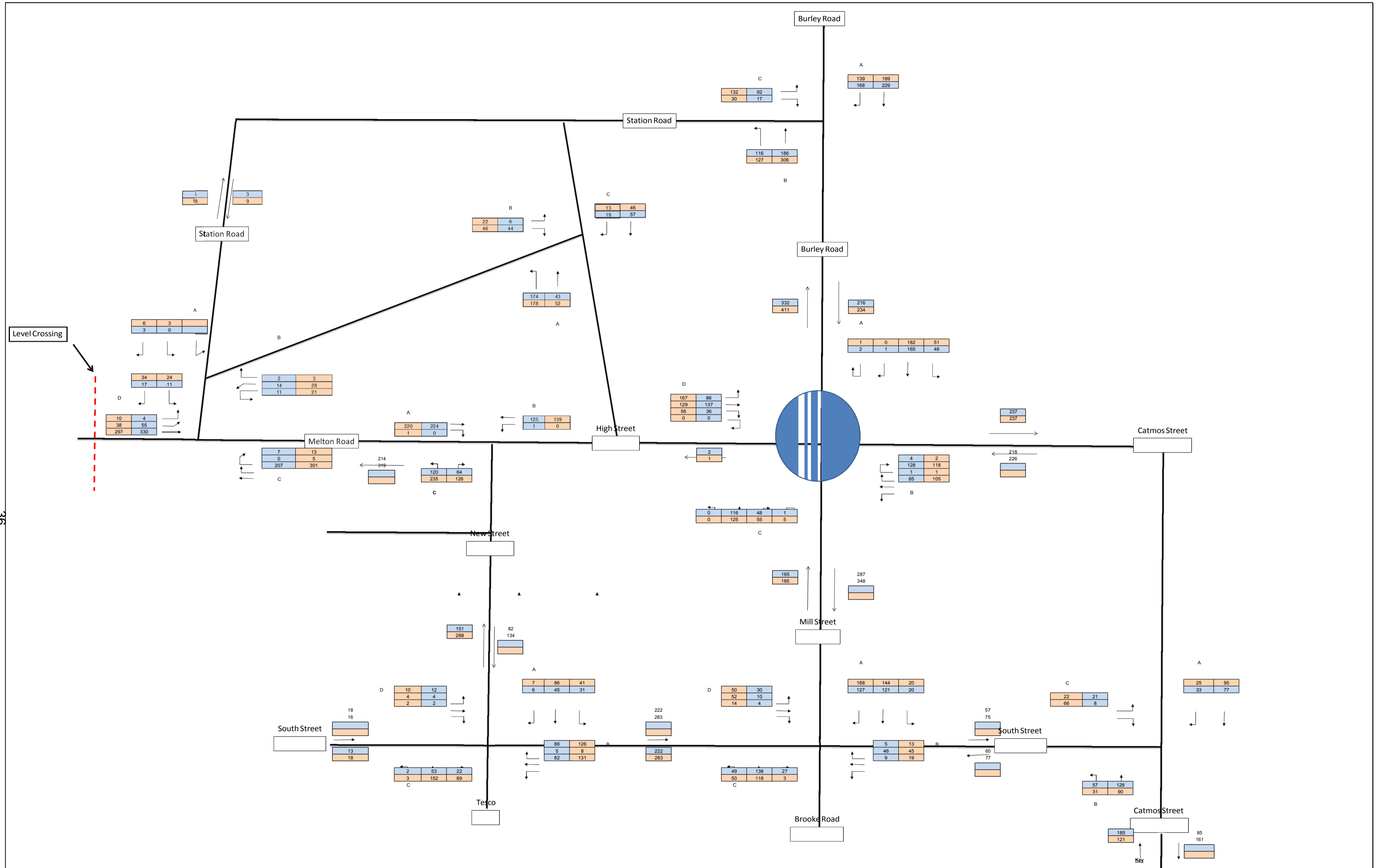
35

Level Crossing



Key
 08:00-09:00 AM
 17:00-18:00

Date	18/08/2017
Design	JG
Checked	PF
Approved	PF



08:00-09:00 AM
17:00-18:00 PM

Date 28/04/2017

Client: Rutland County Council

Project: Oakham Public Realm Study

Title: High Street One-Way Eastbound - Friday 7th April 2017 Turning Counts

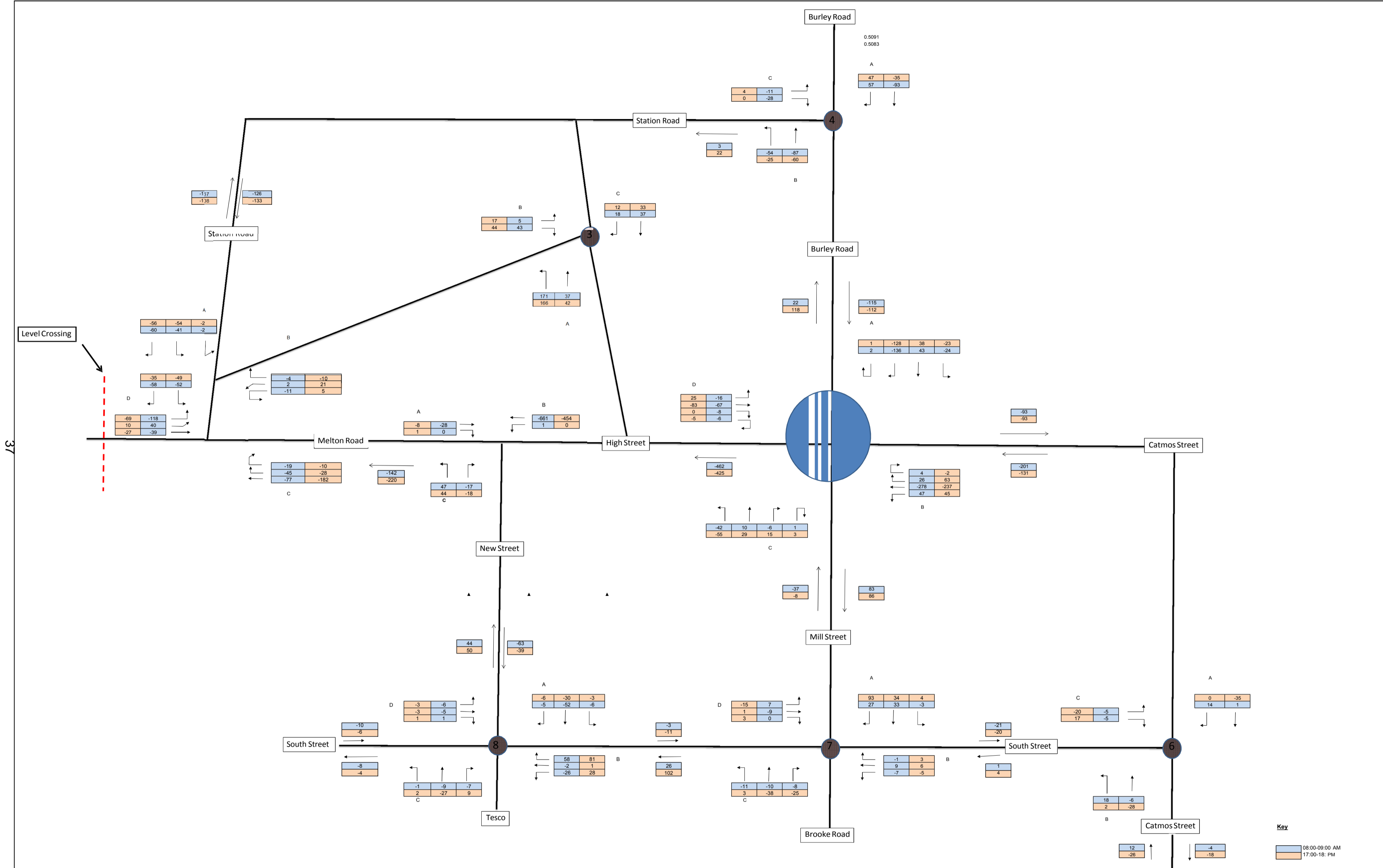
Drawing Number: Figure 3

Revision:

Design	LO
Checked	PF
Approved	PF



File Path:



Key
 08:00-09:00 AM
 17:00-18:00 PM

Date	18/08/2017
Design	JG
Checked	PF
Approved	PF

Appendix A – May 2017 Technical Note

Oakham – Junction Impact Assessments Associated With Proposed High Street EB Only One-Way Routing.

Client name Rutland County Council	Discipline Development Planning	Date April 2017	Project number 60494381
Prepared by Luke Oddy	Approved by Peter Firth	Checked by Peter Firth	

Revision History

Revision	Revision date	Details	Authorised	Name	Position
----------	---------------	---------	------------	------	----------

Introduction:

This note has been prepared to assess the capacity of key junctions within Oakham that would be affected by the Public Realm proposals to make the High Street one-way only in an eastbound direction between New Street and the Mill Street / Burley Road roundabout, as shown in **Figure 1** below.

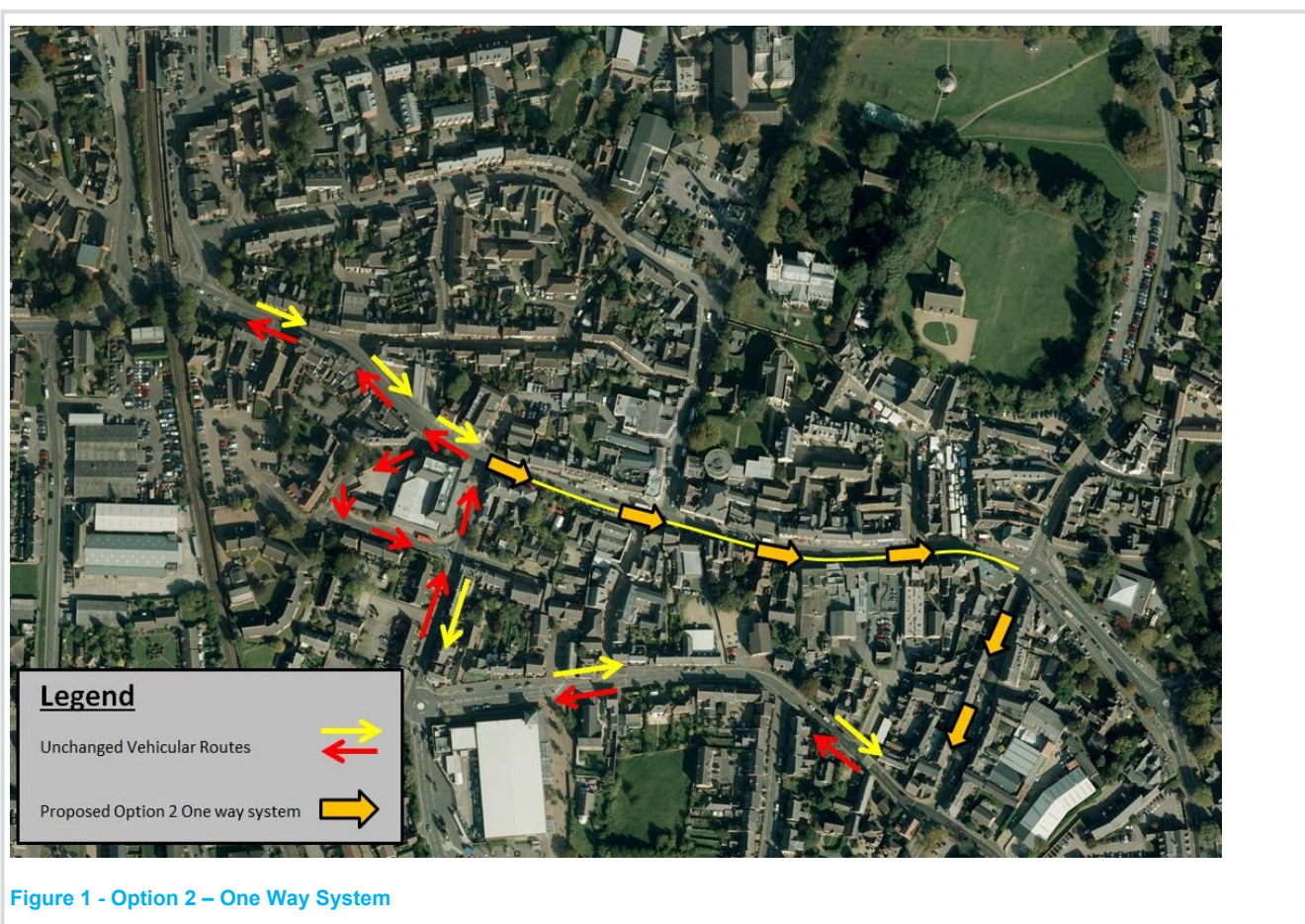


Figure 1 - Option 2 – One Way System

Utility works undertaken in Oakham Town Centre between Wednesday 5th April 2017 and Friday 7th April 2017, allowed for a temporary one-way system eastbound along the High Street, which mimicked the proposals.

As such, to coincide with the utility works, manual classified turning counts were undertaken between 07:00 and 19:00 over the three-day period.

Based on the above, the network peak hours were calculated to be between 08:00-09:00 and 17:00-18:00, which are included within traffic flow diagrams provided at **Appendix A**, with the overall network peak hour determined to be within the Friday PM peak.

As such, the following Technical Note assesses the capacity of the following junctions, based on traffic flows undertaken on Friday 7th April 2017 between 17:00-18:00:

- Catmos Street / High Street / Mill Street / Brooke Street Roundabout;
- Mill Street / South Street Signalised Junction;
- New Street / High Street Signalised Junction;
- Burley Road / Station Road T-Junction; and
- Melton Road / Station Road T-Junction.

The following sections provide a detailed analysis of the modelling results.

High St / New St Signalised Junction Capacity Assessment

Capacity Assessment of Existing Junction:

The junction has been fully assessed using a LINSIG model with peak hour traffic flows obtained from a turning count undertaken on Friday 7th April 2017.

The LINSIG model was developed using signal timing data taken from the May 2016 video surveys, associated with the AECOM 'Oakham Public Realm Study' – July 2016. The cycle time for the signals were set at 50 seconds for the AM Peak and 80 seconds for the PM Peak both of which include an all red phase when the pedestrian crossing is called.

No changes have been made to the PM Peak cycle time, which remains 80 seconds. However, cycle time optimisation has been used to ensure the most efficient use of green time.

To ensure a robust assessment, it has been assumed that the pedestrian crossing is called every cycle.

Tables 1 following summarises the PM Peak hour assessment. This output is expressed in terms of Degree of Saturation (DoS) and Mean Maximum Queue Length (MMQ). The MMQ is expressed in Passenger Car Units (PCUs).

In LinSig 3 a Degree of Saturation (DoS %) value of 90% or less typically demonstrates that a junction arm or turning movement is operating with spare capacity and is therefore unlikely to experience excessive queuing.

Table 1. Friday PM Peak LINSIG Results Summary

Arm	Movement	MMQ	DoS
1/1	High Street EB (Ahead)	4	36.0
2/1	New Street (Left Only)	4	36.8
2/2	New Street (Right Only)	2	23.7
3/1	High Street WB (Ahead)	2	23.2

Cycle Time: 80 seconds / PRC: 144.4%

As can be seen, the junction is predicted to operate with additional capacity during the Friday PM peak, with all arms of the junction predicted to operate with DoS's well below 90%.

The largest queues are predicted along the High Street for EB movements and New Street (Left only) turning movements, however the maximum predicted queue is 4 PCU's, which is considered minimal.

In summary, the results show that the junction is predicted to operate well within capacity with the proposed one-way system eastbound along the High Street.

Mill Street / South Street Junction Assessment

The Mill Street / South Street junction is a four arm signalised junction, located to the south of the High Street / Mill Street roundabout and provides single lane approach and pedestrian crossing at each arm of the junction.

This junction has also been assessed using LINSIG V3 software, using the Friday 7th April 2017 PM peak turning counts.

The junction has a pedestrian crossing located on each arm; therefore, the junction has been modelled during two PM peak scenarios, one with a pedestrian stage called during every cycle, and one without. The assumed signal stages at the junction are shown in **Figure 2** below.

The 'With Pedestrians' scenario runs stages 1-3, whereas the 'Without Pedestrians' scenario runs only stages 1 - 2.

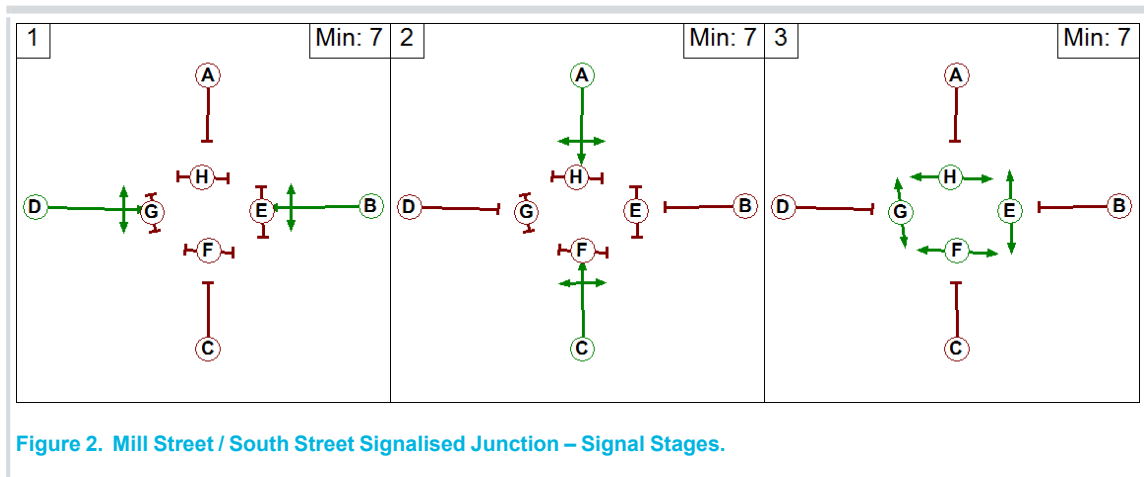


Figure 2. Mill Street / South Street Signalised Junction – Signal Stages.

Table 2 and **3** summarise the Friday PM 'With Pedestrians' and 'Without Pedestrians' scenarios respectively. This output is expressed in terms of Degree of Saturation (DoS) and Mean Maximum Queue Length (MMQ). The MMQ is expressed in Passenger Car Units (PCUs). The PRC 'Practical Reserve Capacity' is also shown, which represents the available capacity of the junction.

Table 2: Mill Street / South Street - Friday PM Peak – With Pedestrians

Arm	MMQ	DoS
1/1 Mill Street	6	43.4
2/1 South Street (E Arm)	2	32.4
3/1 Brooke Road	2	16.0
4/1 South Street (W Arm)	3	41.1

Cycle Time: 90 seconds / PRC: 107.3%

Table 3: Mill Street / South Street - Friday PM Peak – Without Pedestrians

Arm	MMQ	DoS
1/1 Mill Street	4	34.3
2/1 South Street (E Arm)	2	25.7
3/1 Brooke Road	2	12.9
4/1 South Street (W Arm)	3	33.7

Cycle Time: 90 seconds / PRC: 162.3%

The results above show that the current layout of the junction is predicted to operate well-within capacity during Friday PM peak, in both the 'With Pedestrians' and 'Without Pedestrians' scenarios.

During the 'With Pedestrians' scenario, the highest predicted DoS is along the Mill Street Arm at 43.4%, with an associated queue of 6 PCU's. The predicted PRC of the junction is 162.3%, which represents the junction operating with a significant amount of additional capacity.

During the 'Without Pedestrians' scenario, the highest predicted DoS is also along the Mill Street Arm at 34.3% and maximum predicted queue of 4 PCU's.

The overall PRC of the junction is predicted to increase by 55% from the 'With Pedestrians' scenario, from 107.3% to 162.3%, this represents the junction operating with greater capacity without pedestrians.

It is assumed that in practice junction is likely to operate between the levels detailed above, as at points, there is likely to be no pedestrian demand and at others, there is likely to be significant pedestrian demand.

In summary, the results show that the junction is predicted to operate well within capacity with the proposed one-way system eastbound along the High Street.

Burley Road (B668) / Station Road Junction

The Burley Road / Station Road junction is an un-signalised T-junction, located to the north of the High Street / Mill Street roundabout. Station Road forms the minor arm of the junction, providing a single lane approach, with the B668 Burley Road forming the major arm of the junction, also providing a single lane in either direction.

The modelling software package PICADY 5 has been used to assess the operation of the junction.

The PICADY software uses Ratio to Flow Capacity (RFC) to measure the capacity of the junction. RFC values of 0.85 or less are considered to indicate the junction is operating sufficiently, values of 0.85 – 1.0 are considered to that some queueing and delay is starting to occur, and values above 1.0 are considered to represent a condition whereby further extended delay and queueing is predicted to occur.

The following table provides a detailed analysis of the Friday PM Peak scenario:

Table 4: Burley Road / Station Road Junction - Friday PM Peak

Arm		RFC	Queue
B-C	Station Road (Left Turn)	0.079	0
B-A	Station Road (Right Turn)	0.425	1
C-AB	Burley Road N arm (Right Turn)	0.381	1

During the Friday PM Peak scenario detailed above, the additional traffic re-routing at the junction is not predicted to cause the junction to operate over capacity or result in significant queueing.

The maximum predicted queue is along Station Road (Right Turn) and Burley Road – N (Right Turn) Arms, with a predicted queue of 1 vehicle.

Melton Road (B640) / Station Road Junction

The following assessment considers the operation of the Melton Road / Station Road junction, which is a priority T-junction, located to the east of the level crossing.

Melton Road forms the major arm of the junction, providing two lanes westbound at the junction and a single lane eastbound, with a zebra crossing provided on the eastern arm. It has been modelled for the purposes of the following assessment, with a demand of 1 pedestrian per minute at the zebra crossing, which represents a particularly robust approach.

Station Road provides a single lane approach with a short right turn flare (Approx. 3 PCU capacity) and forms the minor arm of the junction.

The modelling software package PICADY 5 has again been used to assess the operation of the junction.

The following table provides a detailed analysis of the Friday PM Peak scenario:

Table 5: Melton Road / Station Road Junction - Friday PM Peak

Arm		RFC	Queue
B-C	Station Road (Left Turn)	0.051	0
B-A	Station Road (Right Turn)	0.097	0
C-A	Melton Road (Ahead)	0.158	0
C-B	Melton Road (Right)	0.173	0

In summary, during the Friday PM Peak scenario detailed above, the additional traffic re-routing at the junction is not predicted result in any queueing, therefore continue operating well within capacity.

In addition to the above, a previous assessment scenario was undertaken at the junction, which was based a manual re-assignment, using peak hour traffic flows, obtained from a turning count undertaken at the High St / Mill St / Burley Road roundabout on Thursday 26th May 2016.

The level of traffic travelling through the Melton Road / Station Road junction was also determined using June 2010 turning proportions to which a Temprow NTM growth factor was applied to represent a 2016 Base.

Additional traffic travelling towards the junction from Station Road, which represented re-routed traffic from the High Street, was summed with the right-turning manoeuvre at Station Road. This resulted in a predicted 128 vehicle movements that previously routed along the High Street westbound, to route westbound along Station Road. These movements were then subtracted from the Westbound movements along Melton Road / High Street at the Melton Road / Station Road Junction within the assessment.

The above methodology resulted in the traffic flows shown in **Figure 3**. This scenario is considered to represent a significant over assumption of traffic flows in comparison to those witnessed in the Friday 7th April 2017 PM peak turning counts. As such, the following assessment considers a sensitivity test at the junction.

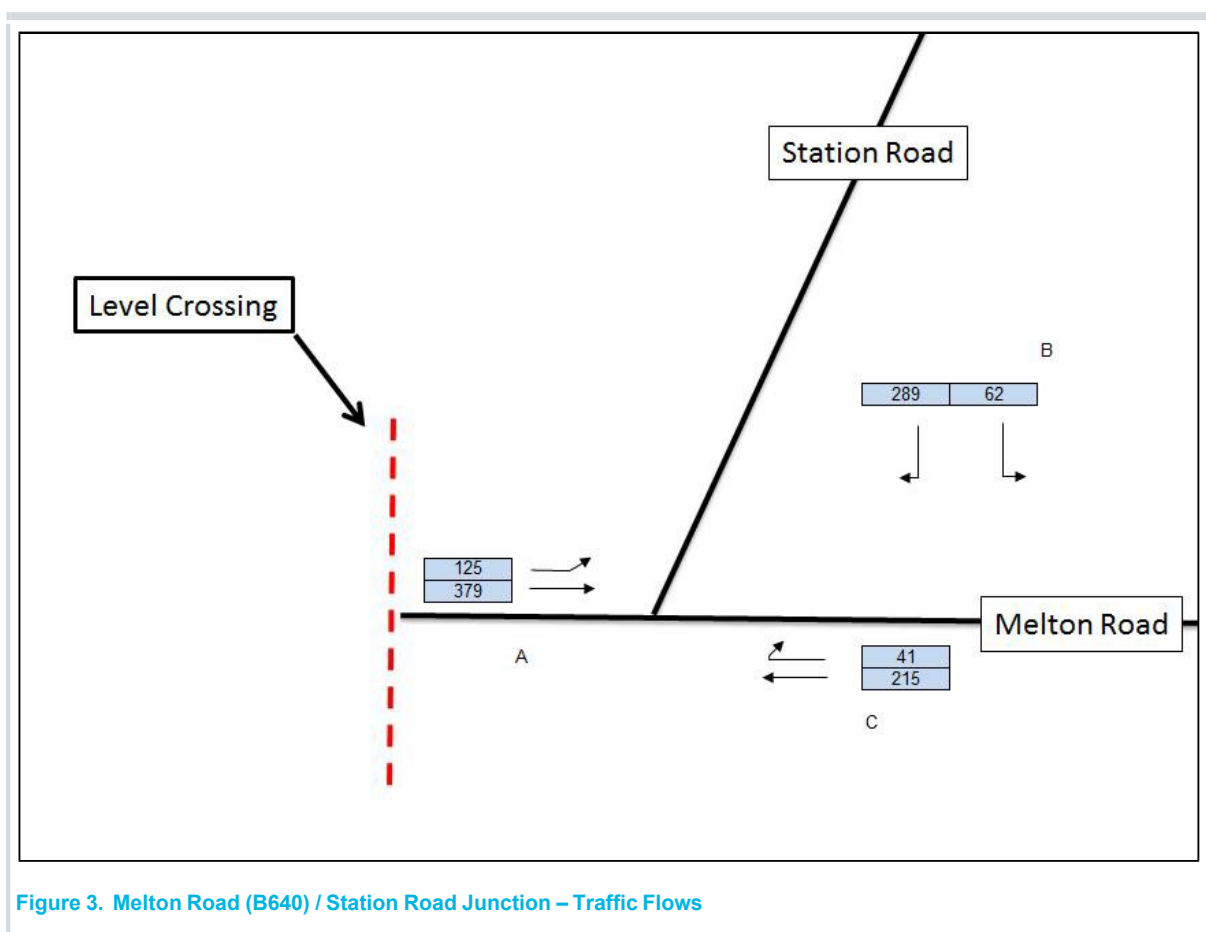


Figure 3. Melton Road (B640) / Station Road Junction – Traffic Flows

Based on traffic flows shown in **Figure 3**, the modelling software package PICADY 5 has been used to assess the operation of the junction, with the following table providing a detailed analysis of the sensitivity test scenario:

Table 6: Melton Road / Station Road Junction - Weekday PM Peak

Arm		RFC	Queue
B-C	Station Road (Left Turn)	0.286	0
B-A	Station Road (Right Turn)	0.813	4
C-A	Melton Road (Ahead)	0.134	0
C-B	Melton Road (Right)	0.182	0

The maximum predicted queue is along Station Road arm, with a predicted queue of 4 vehicles, associated with the right turning manoeuvre.

In summary, during the Friday PM Peak scenario detailed above, which represents a significant over estimation of traffic travelling along Station Road, the junction is predicted to continue operating under capacity.

Maximum Predicted Queue Length

This section of the report focusses on the predicted queue lengths along the High Street, New Street and Station Road, associated with the level crossing closure.

In order to calculate the predicted queue lengths associated with the level crossing closure, the average delay of 10 minutes per hour has been taken, which is detailed further in the AECOM 'Technical Note – Cost Benefit Analysis of the Barleythorpe Road Roundabout' – Jan 2017.

In order to calculate the predicted level of queueing, the total number of vehicles approaching the junction from Melton Road, Station Road and Northgate have been determined based on the Friday 7th April 2017 PM peak turning counts.

The level of hourly traffic was then divided by 60 to determine a predicted level of traffic arriving at the junction per minute, then multiplied by 10 to determine the total number of vehicles likely to be delayed due to the level crossing closure within the hour.

This figure was then multiplied by 5.75m, which represents a typical PCU (Passenger Car Unit) length, which gave a total queue length likely to be experienced due to the level crossing closure within the peak hour.

As such, based on the above methodology, the level of queueing along Station Road, Northgate and Melton Road towards the level crossing has been calculated and shown in **Figure 4**.

It should be noted that the predicted queue length along Melton has been reduced by 50m, which represents the length of the additional westbound lane provided at the approach to the level crossing.

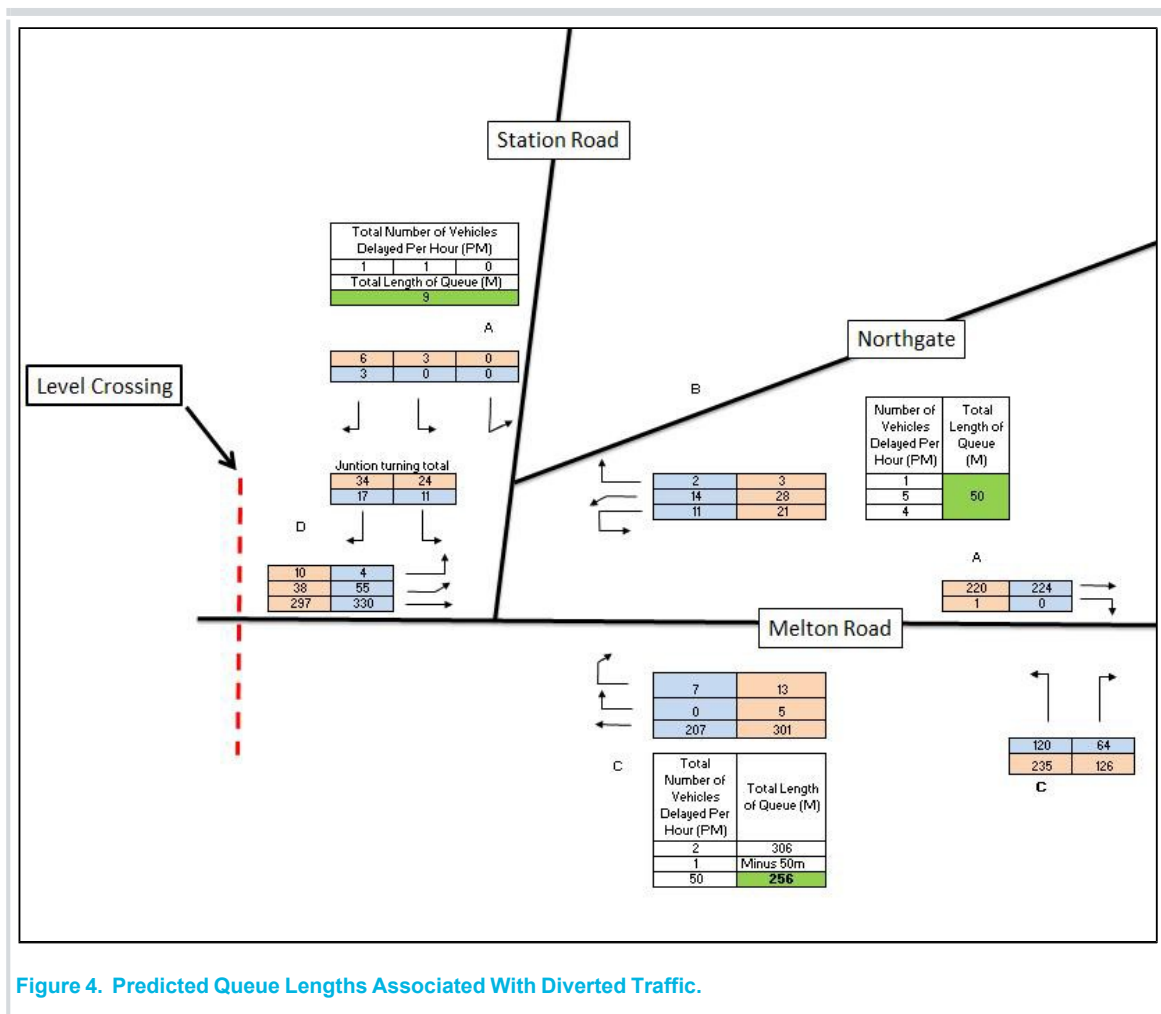


Figure 4 then shows the maximum predicted queue length associated with re-routed traffic along Station Road, Northgate and Melton Road associated with the Friday PM Peak turning counts.

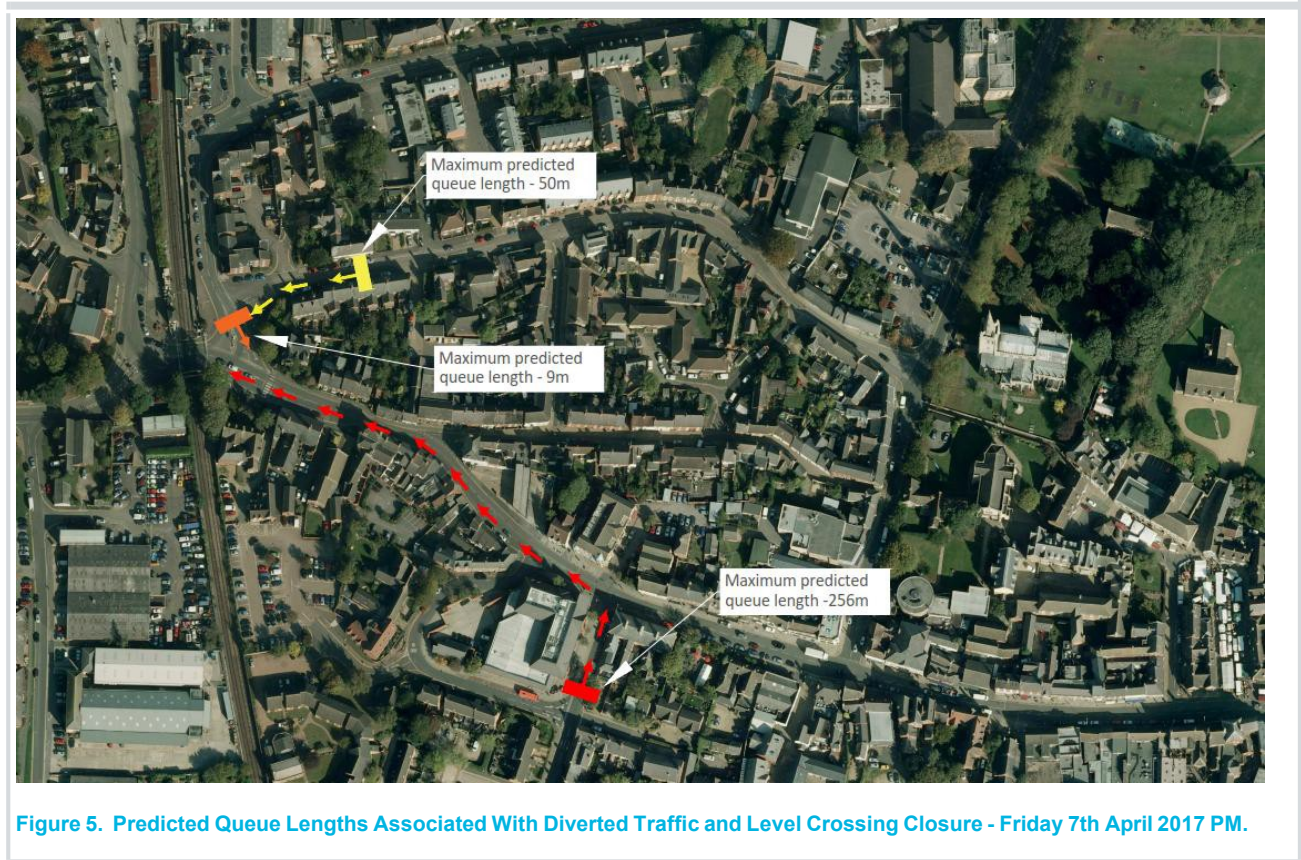


Figure 5. Predicted Queue Lengths Associated With Diverted Traffic and Level Crossing Closure - Friday 7th April 2017 PM.

As such, the maximum predicted queue length along Melton Road/ New Street is shown to travel as far back as the New Street / John Street junction at a length of 256m. The longest predicted queue along Northgate is 50m, whereas the longest predicted queue along Station Road is 9m.

It should be noted that the above assessment has been based on longest queue length calculated from the Friday 7th April 2017 PM turning counts and as such represents a maximum predicted queue length associated with temporary one-way system in place on that day.

In addition to the above, a further sensitivity test scenario has also been undertaken, based on the aforementioned manual re-assignment using peak hour traffic flows, obtained from a turning count undertaken at the High St / Mill St / Burley Road roundabout on Thursday 26th May 2016.

The maximum witnessed westbound queue was then taken from the 'Oakham Town Centre Public Realm Study', produced by AECOM in July 2016, which was calculated to cover a length of approximately 420m along the High Street during a Friday PM peak between 17:00-18:00 and represented the worst level of queueing witnessed within that study.

As such, based on a worst case scenario of a 420m queue length, this level of queue was proportioned between westbound movements (left turn) onto the High Street from New Street and the westbound movements from Station Road (right turn), based on the total level of hourly traffic, as shown in **Figure 5**.

This resulted in a maximum predicted queue length of 158m along Station Road (38% of total westbound traffic) and a maximum predicted queue length of 262m (62% of total westbound traffic) along the High Street and New Street.

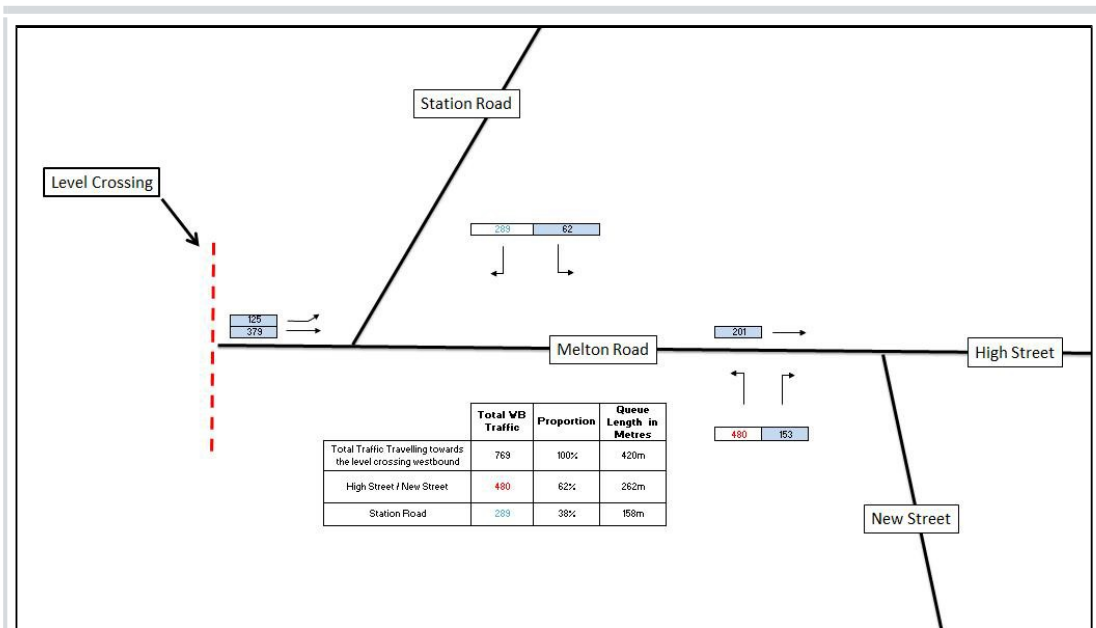


Figure 6. Predicted Queue Lengths With Associated Diverted Traffic – Sensitivity Test Scenario

Figure 7 following then shows the maximum predicted queue length along the High Street and Station Road, based on the sensitivity test scenario.

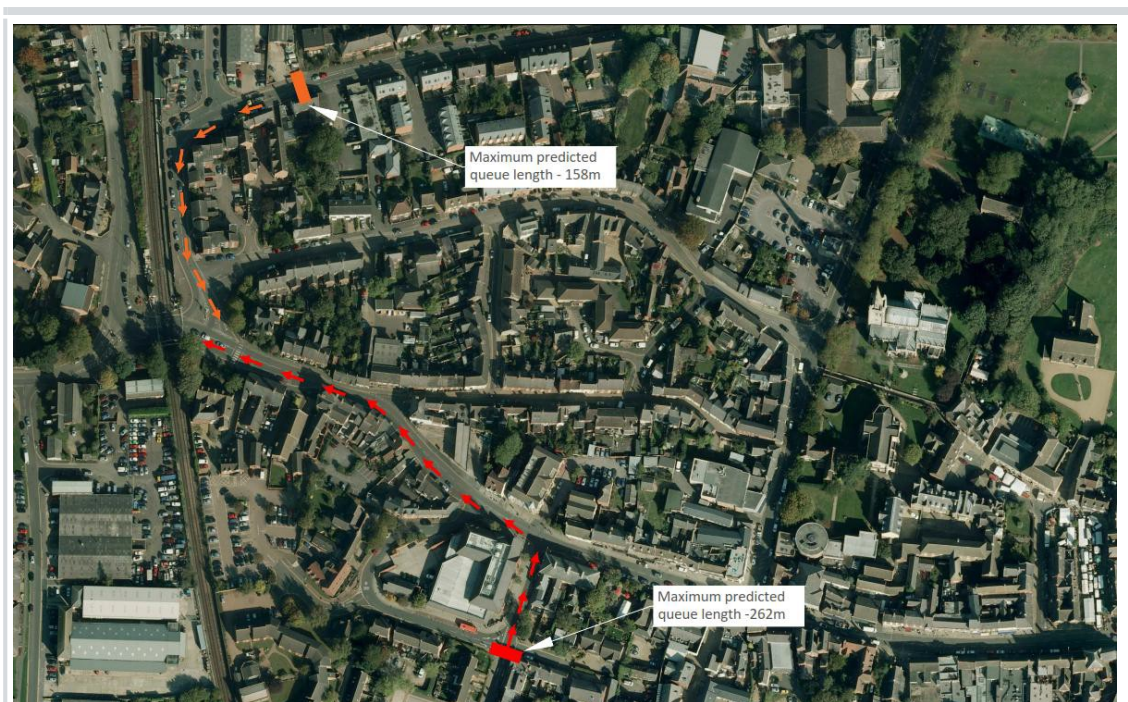


Figure 7. Predicted Queue Lengths Associated With Diverted Traffic and Level Crossing Closure.

As shown in Figure 7, the maximum predicted queue length along the High Street / New Street associated with the level crossing closure was predicted to again reach as far back as the New Street / John Street junction.

However, the longest predicted queue length associated with the level crossing closure along Station Road, was predicted to travel as far back as the Railway Inn Pub to the east of the Station Approach / Station Road junction at a distance of 158m.

It should be noted that the above assessment has been based on longest queue length witnessed during the May 2016 video surveys of Oakham Town Centre and therefore can be considered to represent a worst-case scenario.

Summary and Conclusion

This Technical Note provides a high level assessment of the traffic impacts associated with the proposed introduction of a one-way system (eastbound only) along Oakham High Street between its junction with New Street and the High Street / Mill Street Roundabout.

The proposals would allow widening of the pedestrian footways at specific locations; decreased vehicle flows along the High Street associated with an eastbound only movement and as such would create a safer and more welcoming pedestrian environment.

Utility works undertaken in Oakham Town Centre between Wednesday 5th April 2017 and Friday 7th April 2017, allowed for a temporary one-way system eastbound along the High Street, which mimicked the proposals.

As such, to coincide with the utility works, manual classified turning counts were undertaken between 07:00 and 19:00 over the three-day period.

The network peak hours were calculated to be between 08:00-09:00 and 17:00-18:00, with the overall network peak hour determined to be within the Friday PM peak.

As such, this Technical Note has been based on traffic flows undertaken on Friday 7th April 2017 between 17:00-18:00:

The junctions assessed within this report are:

- B640 High Street / New Street Junction;
- Mill Street / South Street / Brooke Road Junction.
- B668 Burley Road / Station Road Junction; and
- B640 Melton Road / Station Road Junction.

The High St / New St signalised junction has been assessed during a Friday PM peak using LinSig V3 software. Results indicate that the maximum level of queueing is along the High Street (EB Movements) and New Street (Left) arm, with a total predicted queue of 4 PCU's. This is not considered to represent a significant level of queueing and as such the junction is predicted to continue operating well within capacity.

The Mill Street / South Street signalised junction has also been assessed using LinSig V3 software. The maximum predicted queue is during the 'With Pedestrians' PM Peak scenario, along the Mill Street Arm, with a maximum predicted queue of 6 PCU's, which is not considered to represent the junction operating over capacity with the addition of re-routed traffic.

The B668 Burley Road / Station Road and B640 Melton Road / Station Road junctions are both priority junctions, which have been assessed using PICADY 5 software.

The longest predicted queue at the B668 Burley Road / Station Road junction is along the Station Road (Right Turn) and Burley Road N (Right Turn) arms, with a total predicted queue of 1 vehicle at each arm. This level of queue is considered minimal and represents the junction continuing to operate well-within capacity with the addition of re-routed traffic.

Based on the Friday 7th April 2017 turning counts, the B640 Melton Road / Station Road junction is predicted to operate with no queueing, therefore operate well-within capacity with the addition of re-routed traffic.

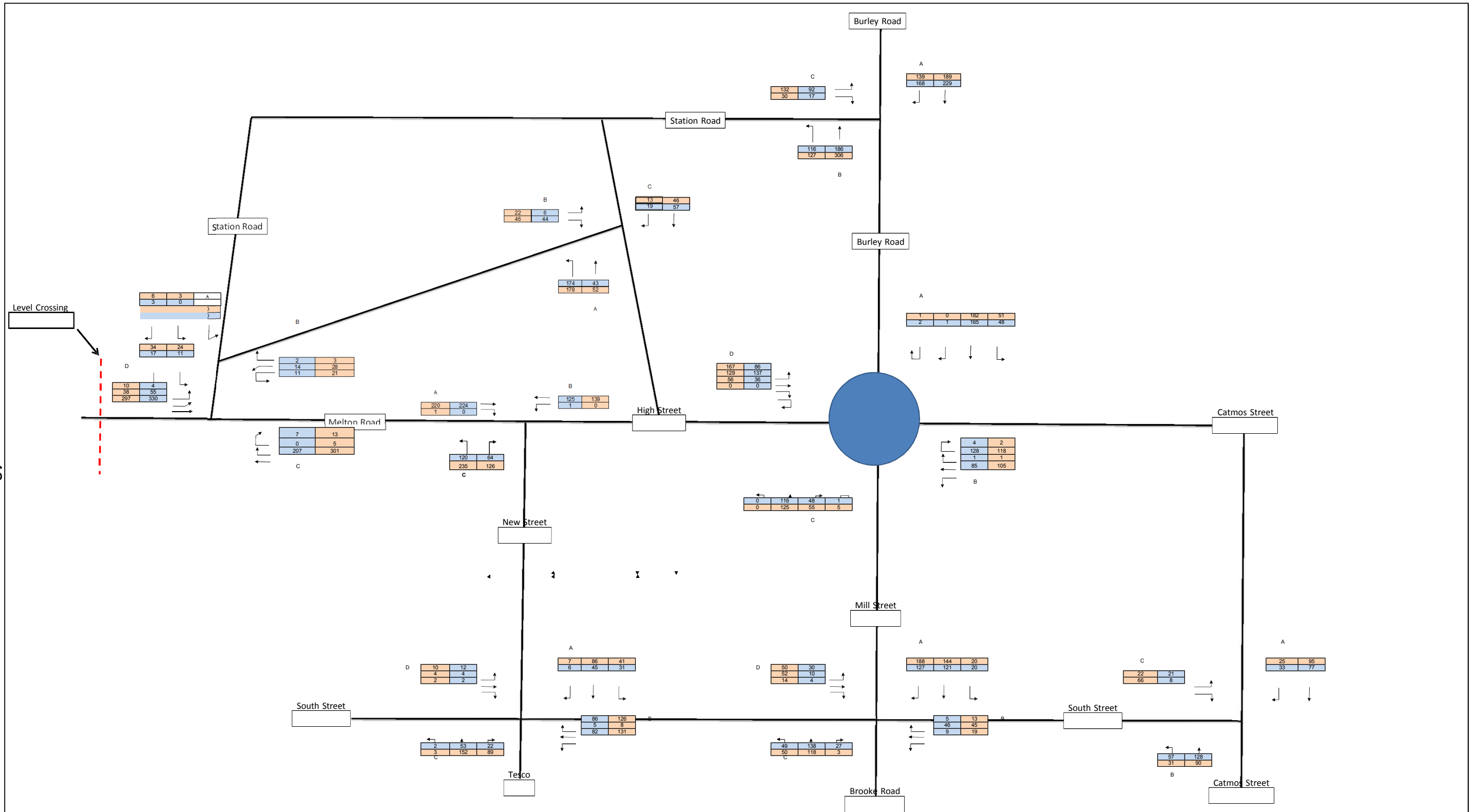
Notwithstanding the above, the sensitivity test scenario, based on a manual re-assignment using peak hour traffic flows, obtained from a turning count undertaken at the High St / Mill St / Burley Road roundabout on Thursday 26th May 2016 resulted in a maximum predicted queue of 4 vehicles at the Station Road (Right Turn) arm, which is also considered minimal.

In summary, it is considered that all junctions assessed will continue to operate with additional capacity with the addition of re-routed traffic associated with an eastbound only one-way system along the High Street.

In addition to the above assessments, a maximum predicted queue length has calculated, based on the maximum queue length witnessed from the May 2016 video surveys, associated with the 'Oakham Town Centre Public Realm Study' produced by AECOM in July 2016. The queue length associated with the level crossing closure is predicted to cover a distance of 158m along Station Road and 262m along the High Street / New Street towards the level crossing.

However, this represents a worst-case scenario, with queues along Station Road also predicted to be approximately 9m when based on the Friday 7th April 2017 turning count assessment.

Appendix A – Traffic Flow Diagram



Key

08:00-09:00 AM	Date	28/04/2017
17:00-18:00 PM	Design	LO
	Checked	PF
	Approved	PF

This page is intentionally left blank

Oakham High Street – Video Analysis of Westbound Traffic Movements

Client name Rutland County Council	Discipline Development Planning	Date August 2017	Project number 60494381
Prepared by Karen Macklin	Approved by Peter Firth	Checked by Jon Gorstige	

Revision History

Revision	Revision date	Details	Authorised	Name	Position
----------	---------------	---------	------------	------	----------

Introduction:

This technical note has been prepared to report on an analysis of the May 2017 video traffic surveys undertaken in Oakham Town Centre to establish the movements of westbound traffic in more detail. The assessment identifies the proportion of through trips, on-street parking and vehicles turning down side streets along High Street.

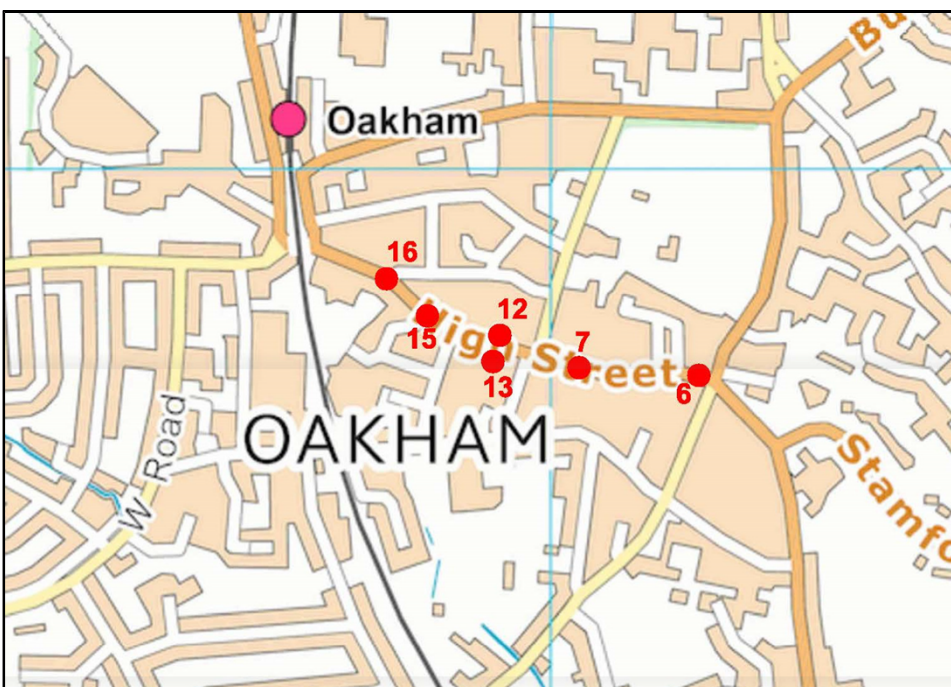
May 2017 Video Traffic Surveys

On Thursday 28th May 2017 video traffic surveys were undertaken along the B640 High Street, between its junctions with B641 to the east and Cold Overton Road to the west. The dates for the surveys were agreed with Rutland County Council officers and no roadworks or temporary traffic management measures were present during the surveys.

The surveys were undertaken by an independent survey company between the hours of 08:00-18:00, a total of 14 cameras were strategically located along the survey corridor to capture the full length of the corridor for both directions of travel.

It was agreed with Rutland County Council officers in July 2017 to assess westbound traffic movements in more detail. A desktop study was undertaken utilising the data observed from cameras 6, 7, 12, 13, 15 and 16, locations shown within **Figure 1**.

Figure 1 – Oakham B640 High Street Camera Survey Locations



Camera Locations

- Camera 6 – B640 High Street within vicinity of its junction with Mill Street;
- Camera 7 – B640 High Street to the west of its junction with Market Street;
- Cameras 12 & 13 – B640 High Street to the west of its junction with Church Street;
- Camera 15 – B640 High Street within vicinity of its junction with Westgate Street; and
- Camera 16 – B640 High Street within vicinity of its junction with Deans Street.

Methodology

In order to identify the level of through trips, on street parking occurring and utilisation of side streets along the High Street throughout the day, sample video analysis was undertaken in the following time periods.

- 08:00 – 09:00;
- 09:00 – 10:00;
- 11:00 – 12:00;
- 14:00 – 15:00; and
- 17:00 – 18:00.

30 vehicles were identified for each of the above time periods, 10 of which were observed during the beginning of the hour, 10 vehicles towards the middle of the hour and 10 vehicles towards the end of the hour period.

A total of 150 vehicles throughout the study period were identified along the survey corridor via each of the camera locations within the above list to identify whether they utilised an on street parking space, turned off on to a side street or drove straight through.

Each vehicle was identified at each camera with their time recorded to enable identification through each of the cameras located along the High Street and enabled identification whether they parked, turned off or was straight through traffic and at which location these movements may have occurred.

Results

The desktop survey results identified an overall total of 22 vehicles that parked on street, 97 turning down a side street and 31 through movements throughout the time period, which equates to an overall percentage of 14.7% parking, 64.7% turning down a side street and 20.7% through movements of the total 150 vehicles observed throughout the survey period as shown within **Tables 1** and **2**.

Table 1. Oakham B640 High Street Westbound Vehicle Movements

Time Period	Through Down Movements Side Street	Turning	On Street Parking	Total
08:00-09:00	5	18	7	30
09:00-10:00	2	22	6	30
11:00-12:00	4	22	4	30
14:00-15:00	9	18	3	30
17:00-18:00	11	17	2	30
Total	31	97	22	150

Source: Consultants video analysis

Table 2. Oakham B640 High Street Westbound vehicle Movement Proportions

Time Period	Through Down Movements Side Street	Turning	On Street Parking	Total
08:00-09:00	16.7%	60.0%	23.3%	100.0%
09:00-10:00	6.7%	73.3%	20.0%	100.0%
11:00-12:00	13.3%	73.3%	13.3%	100.0%
14:00-15:00	30.0%	60.0%	10.0%	100.0%
17:00-18:00	36.7%	56.7%	6.7%	100.0%
Total	20.7%	64.7%	14.7%	100.0%

Source: Consultants video analysis

Summary and Conclusions

This report has summarised an analysis of the May 2017 video traffic surveys which provides a summary of the westbound vehicular movements along High Street. It has identified proportions of through trips, on street parking and vehicles turning into the side streets off High Street westbound.

30 random vehicles throughout 5 different hourly time periods (an overall total of 150 vehicles) were identified throughout the survey corridor via each of the camera locations to identify whether they utilised on street parking space, turned off on to a side street or were straight through traffic.

The desktop survey results identified an overall total of 22 vehicles that parked on street, 97 turning down a side street and 31 through movements throughout the time period. This equates to an overall percentage of 14.7% parking, 64.7% turning down a side street and 20.7% through movements of the total 150 vehicles observed throughout the survey period.

The conclusion is that over the study period the majority of the observed traffic travelling westbound is not through traffic along High Street.

This page is intentionally left blank