CABINET

DATE	29th October 2018
REPORT OF	Councillor Matthew Patrick Portfolio Holder for Environment, Transport and Energy
RESPONSIBLE OFFICER	Angela Blake, Director of Economy and Growth
SUBJECT	Tollbar junction improvements
STATUS	Open
FORWARD PLAN REF NO.	GENERAL EXCEPTION Not included on the Forward Plan therefore, to be considered under the General Exception provisions of the Constitution.

CONTRIBUTION TO THE COUNCIL PLAN/ STRATEGIC AIMS

The proposed improvements to the junction at Toll Bar will make a significant contribution to the Council's strategic objective of a 'Stronger Economy'. It will do so by increasing the capacity of the highway network to accommodate both current levels of traffic demand and forecast growth.

Improving the highway network is essential if the Council's aspirations for future economic/housing growth, detailed in the Local Plan which received unanimous cross-party support are to be realised. The proposed junction improvement at Toll Bar is prioritised in the Local Transport Plan Highway Strategy, adopted by Council in December 2016.

The programme will also make a significant contribution to the Council's 'Stronger Community' objective with provision for both pedestrians and cyclists at Toll Bar, including a significant number of pupils at Tollbar Academy. Improving road safety and encouraging cycling/walking as sustainable travel modes represent important Stronger Community outcomes for the Council.

EXECUTIVE SUMMARY

The proposed construction of a signalised crossroads junction and replacement of the existing roundabout at Toll Bar has been considered previously on a number of occasions by both Cabinet and Full Council. In response to the resolution of Full Council (22nd March 2018), this report presents an assessment of additional options for retention of the existing roundabout alongside construction of a footbridge or underpass; and seeks to provide further re-assurance regarding the safety of pedestrians using the crossings if the signalised junction is implemented.

The Council's highway agent ENGIE has undertaken further design and cost planning on four footbridge/underpass options, augmented by additional technical input and a Road Safety Audit commissioned from external consultants. The options were:

- construction of a footbridge or underpass on the northern arm of the roundabout with no other improvements to the roundabout (Option 1)

- upgrading the A16 north and south junction arms to three lane entry alongside construction of a footbridge or underpass on the northern arm (Option 2)

- significant enlargement of the roundabout and adoption of three lane entry on all junction arms, part-time peak-hour signalisation, construction of footbridge or underpass and part-time, signalised pedestrian crossings on the three remaining junction arms (Option 3)

- a fourth option incorporating all of the improvements proposed in Option 3 but with full time signalisation of the roundabout and pedestrian crossings. (Option 4).

All four options were appraised in relation to their contribution to the Council's outcomes for the scheme – improvement of pedestrian/cycle safety and increased junction capacity; cost; requirement for third party land-take; and deliverability within the timeframe available for expenditure of the Local Growth Fund (LGF) grant.

The independent Road Safety Audit (RSA) concludes that introduction of a footbridge or underpass in isolation would only improve safety for pedestrians/cyclists on the northern arm of the junction. It suggests that pedestrians/cyclists would be discouraged from using a footbridge/ underpass by the increased walking distances involved and may cross the A16 north at gaps in pedestrian guard railings required for driveways/ bus stops. The RSA also suggests that pedestrians may still choose to cross the other arms of the junction unsafely. Users may also have personal security concerns in relation to an underpass. A footbridge or underpass in isolation would not address congestion issues nor make any contribution to the accommodation of future growth.

The assessment concludes that, to achieve the Council's road safety objectives for the scheme, a footbridge/underpass would need to be augmented by additional signal-controlled pedestrian crossing facilities on the other arms of the junction. Options 1 and 2 do not meet this requirement. In addition:

Option 3 would meet the Council's highways capacity objectives but, as the pedestrian crossing signals would operate only at peak hours alongside the traffic signals – would not meet the Council's road safety objectives in full; and

Option 4– involving significant expansion of the roundabout and signalised pedestrian crossings on the other junction arms to complement a footbridge or underpass - would achieve the Council's road safety and highways capacity objectives, providing sufficient additional capacity to accommodate current and forecast traffic flows.
Both options 3 and 4 would require significant third party land-take, involving use of compulsory purchase powers. Both are estimated to cost in excess of £20m, considerably in excess of the funding currently available for the scheme

(£2.2m). The likely requirement for CPO would extend delivery timeframes well beyond the availability of the LGF grant – which must be spent in full by March 2021.

This is due in part to the significant compensatory payments the Council would be required to pay to residents displaced by the scheme.

In conclusion, none of the additional footbridge/underpass options considered can meet all of the road safety and capacity improvement objectives for the scheme and be delivered within the available timeframe and budget. This report recommends that Cabinet endorses the decisions of February 2017 and January 2018 to implement a signalised crossroads junction at Toll Bar.

RECOMMENDATIONS

It is recommended that:

1. Cabinet endorses the Cabinet decisions of 15th February 2017 and 31st January 2018 to proceed with the implementation of a signalised crossroads junction with appropriate pedestrian/cycle safety measures.

2. Cabinet authorises the Director for Economy and Growth to immediately commence a procurement exercise for the works arising out of Recommendation 1 above and make an appropriate award in consultation with the Portfolio Holder for Environment, Transport and Energy.

3. That the Chief Legal and Monitoring Officer be authorised to execute all relevant papers.

4. The Director for Economy and Growth is authorised to instruct the Council's Regeneration Partner ENGIE to put appropriate measures in place to minimise the impact of the works on the highway network and the affected academy and communities and to make regular reports on progress to Cabinet and Economy Scrutiny Panel.

5. Cognisant of the need to carry out a stage 2 Road Safety Audit upon final design, Cabinet authorises the Director for Economy and Growth, in consultation with the Portfolio Holder for Environment, Transport and Energy to verify and approve the final design of the scheme and agree any design modifications required, upon receipt of professional highway design advice.

6. That the Director for Economy and Growth, in consultation with the Portfolio Holder for Environment, Transport and Energy be authorised to take any other decision on any ancillary matter arising from the above recommendations.

REASONS FOR DECISION

The proposed junction improvement at Toll Bar will ensure adequate and reasonable provision for pedestrians, permitting them to cross a main arterial road safely. Further it will improve the capacity of North East Lincolnshire's strategic highway network to accommodate current traffic levels and forecast traffic growth. Increasing the capacity of the strategic highway network is

essential if the Council's future economic growth and housing aspirations are to be realised; failure to increase the capacity of the Toll Bar junction could result in development on a number of strategic sites being stalled.

To deliver a scheme incorporating a footbridge or underpass which can meet the Council's road safety and highways capacity objectives would require significant expansion of the existing roundabout and incorporation of signal-controlled pedestrian crossing facilities. This would also require significant third party land-take, requiring CPO powers; closure of vehicular access for a number of additional private dwellings; and cannot be delivered within the available timeframe or budget.

1. BACKGROUND

1.1 The proposed construction of a signalised crossroads junction and replacement of the existing roundabout at Toll Bar has been considered previously by Cabinet, Full Council and the relevant Scrutiny Committees. Cabinet originally approved the scheme in January 2017. Following call in by the then Regeneration, Environment and Housing Scrutiny Panel which referred the decision back to Cabinet, the proposals were then ratified by Cabinet in February 2017.

1.2 The Council and ENGIE undertook further engagement with key stakeholders and the public throughout 2017. Full Council then resolved to establish a Working Group to reconsider options for the improvement of the junction, involving Council and Parish Council members and the Chair of the governors of Tollbar Multi Academy Trust.

1.3 The Working Group met in January 2018 over the course of two consecutive days and considered and reviewed six options for improvement of the Toll Bar junction being:

- do nothing
- retain existing roundabout and provide a new pedestrian crossing on the northbound A16
- signalise the existing roundabout
- upgrade/enlarge roundabout with full-time traffic signals
- upgrade/enlarge roundabout with part-time traffic signals
- fully signalised crossroads junction.

1.4 The assessment of the options considered costs, benefits, deliverability and affordability. Taking into account the representations made to the Working Group, a report to Cabinet on 31 January 2018 concluded that no substantive evidence had been presented to support the adoption of an alternative scheme to that previously approved by Cabinet. Cabinet therefore endorsed the decision of 15 February 2017 to approve proposals for a signalised junction.

1.5 On 22nd March 2018, Full Council resolved that *"Cabinet be requested to halt all progress on procurement of a traffic light controlled junction at Toll Bar roundabout until the following are fully considered:*

1. Until Members are assured that the risk of being killed or seriously injured related to the 2000-plus children crossing at the newly proposed junction on the northern leg be considered reasonable, which can be demonstrated by accurate computer modelling to underpin such an assurance.

2. The viability and incorporation of an underpass or overpass to eliminate the risk of a killed or seriously injured child; with any such assessment open to full scrutiny.

3. A revised scheme for the Toll Bar junction, which may enable retention of the roundabout with improvements, incorporating an underpass or overpass, thereby meeting the objectives of the grant funding available from the LEP is considered.

1.6 This report considers those matters set out in the Full Council resolution, namely the road safety aspects of the proposed signalised crossroads and the scope to incorporate a footbridge or underpass within the proposals. It also examines air quality matters which have been raised as a further concern by local stakeholders.

Road safety aspects of the proposed signalised crossroads junction

1.7 In relation to Item 1 of the Council motion, Government guidance set out in the Design Manual for Roads and Bridges requires that the Council commissions an independent Road Safety Audit (RSA) at two key stages of the design process for major highway projects. This is the mechanism through which the road safety aspects of the scheme will be rigorously assessed and any required amendments to the design will be identified and implemented, and will provide the basis for the re-assurance sought by Full Council.

1.8 Guidance from the Chartered Institution of Highways and Transportation defines the scope of an RSA as

"a formal, systematic, independent assessment of the potential road safety problems associated with a new road scheme or road improvement scheme. The assessment should involve equal emphasis being placed on all road users. This means Road Safety Auditors should consider pedestrians, cyclists, motor cyclists, people with disabilities, children, equestrians, and older road users as well as drivers and passengers of motor vehicles."

1.9 ENGIE have commissioned independent consultants to undertake a Stage 1 RSA Road Safety Audit of the signalised crossroads option that was previously approved by Cabinet. A number of amendments to the signalised crossroads scheme have already been included in response to the outcome of the stage 1 RSA. These revisions include additions to pedestrian guard railing in pedestrian crossing areas, access improvements into the junction and for nearby residential streets, improvements to bus stop arrangements, and amendments to footway radii.

1.10 A Stage 2 RSA will be commissioned when the scheme has reached the final/detailed design stage. This will follow further engagement and consultation with key stakeholders on the scheme ultimately approved by Cabinet.

Footbridge/underpass options

1.11 Items 2 and 3 of the Council resolution are considered together in the remainder of this section of the report. ENGIE has undertaken further design and cost planning on four additional options for the junction improvement scheme incorporating a footbridge or underpass alongside a roundabout arrangement. This work has been augmented by additional technical input and preliminary road safety audits commissioned from an external consultant. The following options have been assessed:

- construction of a footbridge or underpass on the northern arm of the roundabout with no other improvements to the roundabout, requiring some additional third party land assembly (Option 1)

- upgrading the A16 north and south junction arms to three lane entry alongside the introduction of a footbridge or underpass on the northern arm requiring some additional third party land assembly (Option 2)

- significant enlargement of the roundabout and adoption of three lane entry on all junction arms, part-time peak-hour signalisation of the roundabout and pedestrian crossings and construction of footbridge or underpass requiring significant additional third party land assembly (Option 3);

- a fourth option incorporating all of the improvements proposed in Option 3 but with full time signalisation of the roundabout and pedestrian crossings, requiring significant additional third party land assembly (Option 4).

1.12 Independent advice was commissioned from civil engineering consultants on the design, construction, cost and maintenance issues associated with the installation of a footbridge or underpass. Either a footbridge or an underpass could be incorporated within each of the options highlighted above.

1.13 The footbridge would require ramping of approximately 120 metres in length in each direction to achieve sufficient clearance from the carriageway surface and meet accepted design standards for users with limited mobility. Access steps could also be provided.

1.14 The consultant's report indicates that the same gradient (a maximum of 1 in 20) should be applied to an underpass. Because the clearance underground from the carriageway surface is reduced to approximately 3m, the ramping distance required for the underpass is approximately 60m in each direction. Access steps could also be provided.

1.15 In examining provision of a footbridge or underpass as part of the design solution for the junction, the needs and requirements of cyclists and users with limited mobility must be given full consideration . The Equality Act 2010 compels public bodies to consider all individuals when carrying out their day-to-day work, in shaping policy, in delivering services and in relation to their own employees. In this case, the following design standards were applied:

- DMRB. BD29/17: 'Design Criteria for Footbridges', including gradients, widths, surfaces, lighting etc; and
- TD27/05: highway design aspects including clearance heights.

1.16 All four options were appraised in relation to their contribution to the Council's outcomes for the scheme – improvement of pedestrian/cycle safety and increased junction capacity; cost; requirement for third party land-take; and deliverability within the timeframe available for expenditure of the Local Growth Fund (LGF) grant. Other previously identified scheme options, including the option previously approved by Cabinet, were not considered as part of this assessment.

Road safety

1.17 In relation to Options 1 and 2, the Road Safety Audit (RSA) concludes that introduction of a footbridge or underpass in isolation would only improve safety for pedestrians /cyclists using the northern arm of the junction. It would still be possible for pedestrians/cyclists to cross the roundabout 'at grade' (with no crossing provision) on the other junction arms; this would be very difficult to prevent in design terms as a result of the need to maintain access for driveways and bus stops.

1.18 The RSA indicates that pedestrians/cyclists could be discouraged from using a footbridge/ underpass as a result of the increased walking distances involved and may still choose to cross the other arms of the junction unsafely. It also suggests that pedestrians may still cross the A16 north at gaps in pedestrian guard railings required for driveway accesses and bus stops. Users may also have personal safety concerns in relation to the underpass.

1.19 The Design Manual for Roads and Bridges states that informal, at-grade crossings for single carriageway roads, like the A16 at Toll Bar, are not appropriate for roads with individual vehicle movements (Annual Average Daily Traffic flow (AADT)) of more than 12,000. The AADT for the A16 in this location is 23,499 – almost double the threshold identified in Government guidance.

1.20 The AADT for Station Road (west) is estimated at 13,131, while the AADT for Station Road (east) is estimated at 11,133. This reflects that informal, at-grade crossings with no control over traffic or pedestrians are not appropriate for the western entry to the junction, and that planned growth in New Waltham over the Local Plan period will see the same threshold breached for the eastern entry.

1.21 As a result, the report concludes that incorporation of signal-controlled pedestrian crossing facilities on the other arms of the junction, in conjunction with a footbridge/underpass on the northern arm and closures to a number of bus stops and private dwelling driveways, would be required to achieve the road safety objectives of the scheme. Options 1 and 2 do not meet this requirement.

1.22 The RSA suggests that Option 3– involving expansion of the roundabout circulatory and adoption of peak hour only traffic signals and pedestrian crossings on three of the four arms, alongside a footbridge/underpass on the northern arm – would only partially achieve the Council's road safety objectives for Toll Bar. The signalised pedestrian crossings would only operate at peak hours when the traffic signals were in operation. At other times, pedestrian crossings on three of the four arms would remain uncontrolled.

1.23 Option 4 - adoption of full time traffic signals and signal-controlled pedestrian crossings on three of the four junction arms alongside a footbridge/underpass on the northern arm – would achieve the Council's road safety objectives for the scheme. However, it also notes that enlarging the roundabout is likely to result in increased traffic circulatory speeds with a consequent risk of circulatory accidents.

Highways capacity

1.24 Option 1 (construction of a footbridge/underpass with no other improvements) would not improve junction capacity to meet current/future traffic demand.

1.25 Option 2 (footbridge/underpass with three lane entry on the A16 junction arms) would provide sufficient junction capacity to meet current demand, and demand associated with existing consented developments, but would be insufficient to accommodate all forecast traffic growth from those sites allocated in the Local Plan that have yet to secure planning permission . However, the retention of uncontrolled pedestrian crossing on three of the four junction arms is considered likely to result in traffic congestion and increase the risk of minor shunt/side-swipe accidents.

1.26 Options 3 and 4 both deliver significant enlargement of the roundabout to create an increased circulatory; three lane entries to all junction arms and either peak hour or full-time traffic signals. Both options would create sufficient capacity to accommodate current demand and forecast traffic flows for the Local Plan period and beyond.

Requirement for third party land assembly

1.27 Option 1 would require land-take from two residential properties and the Tollbar Academy. It is likely that, if implemented, this would require use of the Council's compulsory purchase powers. Use of the CPO process would significantly extend the timeframe for delivery by up to three years and as a result the forecast completion date for Option 1 is January 2023. Further, any disposal of land from Toll Bar Academy would require the consent of the Secretary of State.

1.28 Option 2 would require land-take from five properties and Tollbar Academy. Compulsory purchase would be required and the construction period would be longer than for Option 1, resulting in a forecast completion date of January 2024.

1.29 Options 3 and 4 would require large scale third party land assembly, involving significant land-take from thirty eight adjoining properties and the Tollbar Academy and requiring use of CPO. A completion date of January 2024 is forecast. The likely requirement for use of CPO powers to deliver a scheme with a footbridge or underpass would extend delivery timeframes for all of the options considered well beyond the availability of the LGF grant, which must be claimed by March 2021.

Costs

1.30 The estimated costs of each option are set out below; the costs include highways and utilities diversion works; land assembly costs; the cost of the footbridge or underpass structure; professional fees and contingency:

- Option 1 (underpass) - £3,087,561
- Option 1 (footbridge) - £2,023,837
- Option 2 (underpass) - £ 6,928,646
- Option 2 (footbridge) - £5,398,488
- Options 3 & 4 (underpass) -£ 20,558,828
- Options 3 & 4 (footbridge) - £ 20,165,792.

1.31 Land acquisition and utilities diversion costs form a significant element of the total cost of each option and account for more than 50% of the costs of Options 3 and 4.

Conclusion

1.32 The options assessment makes the following conclusions:

- only Option 4 meets the Council's road safety objectives for the junction in full, by providing full-time signalised pedestrian crossings on three junction arms to complement a footbridge/underpass on the northern arm;

- the Design Manual for Roads and Bridges states that retaining informal at-grade crossings is not appropriate for a single carriageway junction carrying the volume of traffic experienced at Toll Bar

- Options 3 and 4 meet the Council's highways capacity objectives for the junction in full; Option 2 would provide sufficient highways capacity to accommodate existing consented developments only

- only the footbridge sub-option for Option 1 can be delivered within the available budget/funding for the scheme

- as a result of the likely requirement for compulsory purchase applying to all four options, none of the options can be delivered within the

timeframe that the Local Growth Fund grant from Greater Lincolnshire LEP is available (to March 2021).

1.33 None of the additional footbridge/underpass options considered can meet both the road safety and capacity improvement objectives for the scheme and be delivered within the available timeframe or budget. The report therefore recommends that Cabinet endorses its decisions of February 2017 and January 2018 to proceed to implement a signalised crossroads junction at Toll Bar.

2 RISKS AND OPPORTUNITIES

2.1 There are a number of risks to the Council should it determine to pursue an alternative scheme at Toll Bar as an alternative to the previously adopted signalised crossroads junction. The technical costs, benefits and risks of each of the footbridge/underpass options assessed are considered in the previous section of the report.

2.2 Failure to achieve a significant improvement in pedestrian/cycle safety and address traffic congestion could leave the Council at risk of failing to exercise its statutory duties in respect of the Road Traffic Act 1988 and the Traffic Management Act 2004, which are considered in section 3 of the report.

2.3 Should Cabinet approve a footbridge or underpass option that does not meet both the road safety and highways capacity objectives for improvement of the Toll Bar junction, the Council could place itself at risk in terms of the Construction (Design and Management) Regulations 2015. Under the CDM regulations, failure to implement a scheme in accordance with the advice of the Principal Designer, based on adopted highways guidance and standards, could leave the Council exposed to future legal challenge.

2.4 Failure to improve existing highway network capacity and reduce congestion could also leave the recently adopted Local Plan open to challenge in future, should planning applications be refused on grounds of highways capacity. A number of sites – including the Toll Bar housing site recently granted planning consent on appeal – will benefit from improved capacity at the Toll Bar junction.

3 OTHER OPTIONS CONSIDERED

3.1 The Council could have chosen to do nothing in respect of the proposed Toll Bar junction improvement scheme. This option has not been pursued because:

- not implementing road safety measures at Toll Bar would place the Council at risk of failing to exercise its statutory duties under the Road Traffic Act 1988

- not improving the capacity of the existing highway network would, if current levels of traffic growth are sustained, lead to unacceptable

congestion and place the Council at risk of failing to exercise its statutory duties under the Traffic Management Act 2004.

- failure to deliver the proposed improvement scheme will jeopardise the availability of the Local Growth Fund grant for the project and potentially create reputational risks for the Council in respect of future bids for funding.

4. REPUTATION AND COMMUNICATIONS CONSIDERATIONS (PART ONE)

4.1 Implementation of the previously approved signalised crossroads scheme for the Toll Bar junction is likely to generate further reputational and communications risks for the Council. There has been public opposition to the proposals to remove the roundabout junction although this is largely based on the erroneous perception that no improvement is required on either road safety or capacity grounds.

4.2 These risks can be mitigated to some extent by ongoing engagement and communication with ward members, Parish Councils and local residents to further set out the road safety and highways capacity reasons for the proposed replacement of the existing junction; and to provide further specific re-assurance on the safety of pedestrians and cyclists using the revised junction through the Road Safety Audit process.

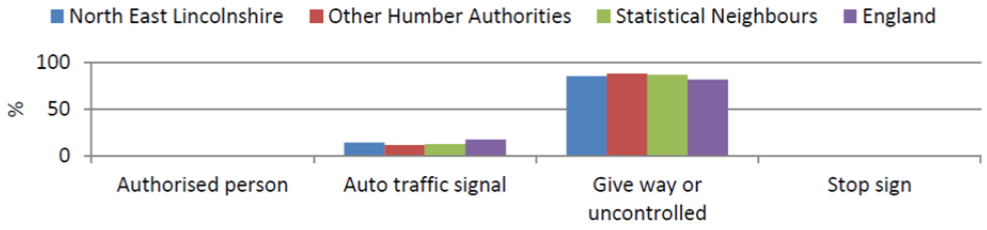
4.3 There will be some reputational risks to the Council during the construction period, arising from temporary congestion and potential impacts on local communities. This risk will be mitigated by ENGIE during the procurement process for appointment of a contractor by ensuring that the tender assessment process takes full account of proposed delivery timeframes and traffic management arrangements to reduce any local impacts. The Council/Engie communications teams will provide regular, updated information on progress of the works and on alternative routes to avoid congestion whilst they are underway.

5. REPUTATION AND COMMUNICATIONS CONSIDERATIONS (PART TWO) (*OPPOSITION TO SCHEME*)

5.1 As mentioned elsewhere in this report, it is recognised that the proposed scheme has been met with a degree of opposition. The opposition to the scheme appears to be based around perceived exacerbation of congestion and diminishing air quality concerns with pedestrian safety issues not fully explored.

5.2 In “A Public Health Review of North East Lincolnshire Road Traffic Casualties 2011-2015” the following analysis of crashes based upon junction type appears.

Figure 3 - Percentage of *junction crashes* by junction control type for North East Lincolnshire, other Humber authorities combined, statistical neighbours combined and England, 2011-2015



Source: MAST Road Safety Database (2016)

On both a national basis and consistent regional basis the evidence reflects that uncontrolled junctions (as is the case at the moment at Toll Bar) are accountable for significantly more accidents than junctions with controls in place.

5.3 Accident data for the Tollbar junction has been provided from Humberside Police Collision Records. This data is up to date as at 13th September 2018. The appendices to this report sets out such data. The data sets reflect a particular vulnerability of children between the age of 5 to 15 and a prevalence of collisions around school times.

5.4 Therefore, whilst there is a perceived risk that has been identified by the Council (an Annual Average Daily Traffic Flow of 23,499 coming into conflict with 700+ schoolchildren using the junction each school day with no formal crossing provision), that risk is further cemented by statistical data indicating that uncontrolled junctions account for the most accidents by junction type and further that there is an on-going issue with casualties at this particular junction.

5.5 In relation to air quality concerns, there is ongoing monitoring of air quality at the junction. Diffusion tubes are replaced monthly in accordance with Department for Environment Food & Rural Affairs (DEFRA) guidance. These are then sent to an external United Kingdom Accreditation Service accredited laboratory who analyse the diffusion tubes in line with their Standard Operating Procedure ANU/SOP/1015 as required by DEFRA guidance. The last five years of average data reflect:

Year	NO2 m3
2013	32.2
2014	30.2
2015	27.2
2016	27.7
2017	30.2

The upper level in the guidance published by DEFRA is 40m3.
Current data is set out overleaf. Local authorities are required to report mean average and bias factored data to DEFRA. At the moment the full data set for 2018 is yet to be determined:

	2017		2018
	Jan	62.8	38
	Feb	34.3	31.2
	Mar	41.1	35.3
	Apr	40	27.4
	May	31.7	22.5
	Jun	34.3	25
	Jul	31.8	32.2
	Aug	31.8	
	Sep	36.8	
	Oct	38.5	
	Nov	49.4	
	Dec	38.2	
Annual Mean		39.2	Yet to be determined
Bias Factor		0.77	Applied to full years data
Bias Adjusted		30.2	Yet to be determined

5.6 Published guidance from DEFRA touches upon air quality and traffic control measures. It states:

"Urban Traffic Management Control (UTMC) computerised systems are being used throughout the UK to improve the flow of traffic in towns and cities. They are designed to link communications between various components of traffic management, such as traffic signal control, air quality monitoring, car park management and bus priority. Where these systems are optimised, congestion has improved, and lower pollutant emissions are likely.

Average traffic delay is reduced by 20% on the implementation of a SCOOT (Split Cycle and Offset Optimisation Technique) system reducing idling emissions. Other systems are often used by local authorities to control traffic light signals in more isolated junctions e.g. MOVA (Microprocessor Optimised Vehicle Actuation) and on average showed a 13% decrease in delay. Research is currently underway into the role of these systems in reducing pollutant and carbon emissions. Advice on UTMC can be found at the Urban Traffic Management and Control website."

5.7 The design of the proposed signalised junction incorporates an urban traffic management control system (MOVA) which will address congestion and see a resultant improvement in air quality. MOVA benefits from two modes of operation (congested and uncongested) which are dependent upon prevailing traffic conditions. Within the uncongested mode of operation, the MOVA software will actively optimise green-splits in order to disperse queuing traffic which may have developed during the previous

red signal and assess flows on all approach arms to calculate if an appropriate extension may be applied to the following green signal.

5.8 Within the congested mode of operation, which would be experienced during peak hours, the MOVA software will enter a capacity maximising mode, which aims to assess the degree to which the various approach arms are overloaded and how efficiently the green-splits are being utilised in order to determine signal timings to maximise the throughput of traffic.. The traffic light system at Toll Bar will be integrated with the SCOOT system operated across the wider network.

5.9 In summary, adjusted NO_2 levels at the Toll Bar junction are currently well below the $40m^3$ threshold identified in DEFRA guidance. The adoption of an intelligent traffic light system within the proposed signalised junction is forecast to reduce traffic delays at the junction through the operation of MOVA and SCOOT software. Consequently it is anticipated that this will result in reduced nitrogen dioxide emissions at the junction.

6. FINANCIAL CONSIDERATIONS

6.1 Greater Lincolnshire LEP has advised that LGF funding for the Toll Bar junction is at risk should the scheme fail to proceed; should any revised proposals fail to deliver value for money; or if the project is not implemented before March 2021. There would be a significant reputational risk for the Council should it be required to return some or all of the LGF funding to Greater Lincolnshire LEP.

6.2 Only one of the various footbridge/underpass options considered in the report (Option 1, footbridge only) falls within the available budget for the project. The scale of additional resource required to implement any of the other options cannot be accommodated within the Council's Local Transport Plan programme without impacting on a large number of existing, approved LTP schemes.

6.3 The LEP has made no provision to increase the amount of LGF grant available to the scheme; additional LGF would only become available in the event of underspend from other projects and would only be awarded in such circumstances on the basis of strict value for money criteria.

6.4 The Council has a number of competing demands for investment through the capital programme. Any business case for further investment would need to be considered on its merits and on the basis of strict value for money criteria. The significant increase in scheme costs required to deliver Options 2, 3 and 4 are likely to have a significant impact on the value for money of the project.

7. CONSULTATION WITH SCRUTINY

7.1 Scrutiny has been consulted on:

- the Highways Strategy – adopted by Full Council in December 2016;

- all key stages leading to the adoption of the Local Plan 22nd March 2018.

Both the above strategies recognised and accepted Tollbar as being a congestion hot-spot.

7.2 As a result of call-in Scrutiny has specifically considered the Tollbar scheme and previous decisions of Cabinet on:

- 29th November 2016 (Recommendation of signalised junction); and
- 6th March 2018 (Timeframe for proposed works and implementation).

7.3 Recommendation 4 (above) also countenances further engagement with the Economy Scrutiny Panel by way of regular reports on progress of implementation.

8. FINANCIAL IMPLICATIONS

8.1 There are no significant financial implications arising from the recommendations detailed within this report. LGF Funding for the project has already been secured and an allocation included within the Council's capital programme.

8.2 However a decision not to proceed with the recommended solution would put the existing LGF allocation at risk and limit the Council's future options from a financial perspective.

8.3 In terms of the other options detailed within the report, only Option 1 (footbridge) falls within the existing budget envelope. However both option 1 (and option 2) do not meet the Council's road safety and economic growth objectives and therefore do not represent value for money. Whilst Options 3 and 4 do meet the Council's road safety objectives (only partially in the case of Option 3) , they both require the Council to undertake significant external borrowing and are financially prohibitive.

8.4 Any further delays to the project could impact upon the area's economic and housing ambitions which are central to the Council's future financial sustainability.

9. LEGAL IMPLICATIONS

9.1 It has to be recognised that there is opposition to the scheme to replace the roundabout with a signalised junction. From this opposition the proposal for a footbridge/underpass solution came forward. It is right that the opposition be considered as part of the decision making process but it is not a paramount or overriding factor. It is a factor that should be taken into account, as should all other factors, including Government design and technical guidance, traffic modelling and road safety audits and assessments, risk and mitigation of risk.

9.2 Largely these factors have been captured in the above report. The recommendations sought are supported by a clear evidence base in terms of achieving pedestrian safety, congestion relief and capacity building in order to support future growth, investment and economic regeneration. The design process is consistent with nationally recognised guidelines and best practice. For Cabinet to depart from a design based upon such a firm foundation would expose the Council to unnecessary risk and liability.

9.3 No crossing provision exists at this junction for the safe crossing of a main arterial road by pedestrians, predominantly schoolchildren. There are no controls of the movement of traffic nor control of pedestrians. It is the Chief Legal and Monitoring Officer's advice that having recognised this risk, the Council is duty bound to ensure that adequate provision is made and suitable controls put in place.

9.4 It is of note that the comments above in respect of land take and the exercise of compulsory acquisition powers are at variance with the previous statements of Cabinet that such powers will not be exercised in order to facilitate works at this junction. All previous option appraisals have been on the basis of deliverability within the current available footprint without undue impact on surrounding properties and homeowners.

9.5 This matter has taken a course through all tiers of the democratic process and has been the subject of robust, sustained and transparent scrutiny and examination. Cabinet have afforded all stakeholders a voice in the process. There can be no doubt that the governance and decision making process to date has been appropriate, consistent and robust.

9.6 It would be worth re-stating that the decision of what and when to implement is the decision of Cabinet and Cabinet alone. The scrutiny function and ultimate referral to Full Council can only result in recommendations to Cabinet. It is a matter for Cabinet as to how much (if any) weight is afforded to those recommendations and if they are permitted to shape or influence the decision making process of Cabinet. Despite various referrals to Scrutiny, despite various referrals to Full Council, no evidence has been presented nor any alternative scheme has been brought forward which would address the lack of safe crossing provision for children, address congestion, be able to be accommodated on the current footprint, prepare for future growth, and be deliverable within available budgets and timeframes as the scheme consistently supported by Cabinet.

9.7 The role of non-Cabinet members in relation to executive decisions is the scrutiny role. That role has been fully discharged.

9.8 As a level of assurance the Chief Legal and Monitoring Officer has sought independent advice from an eminent Queen's Counsel with a nationally accepted expertise in Local Government matters. His advice supports the Chief Legal and Monitoring Officer's consistent advice to Cabinet. Assurance has been given;

9.8.1 That the governance in terms of Cabinet decisions and Scrutiny oversight has been robust;
9.8.2 That any further attempts to involve Full Council do not require or authorise further delaying implementation of Cabinet's decisions;
9.8.3 That there are no gaps or flaws in the governance undertaken on this matter;
9.8.4 That the highway and design advice received by the Cabinet is reasonable;
9.8.5 That all advice given to Cabinet by professional officers is reasonable;
9.8.6 That if Cabinet departs from its consistent and evidence based decision making then the duties of statutory officers may become engaged; and
9.8.7 That (as mentioned (9.7)) the Scrutiny function has been discharged;

9.9 If a decision other than to implement the scheme previously agreed were made then Cabinet will be exposing the Council to risk of legal challenge by way of judicial review. This would result in High Court litigation and the prospects of successfully resisting such a claim are minimal given the appropriate evidence based decision making that Cabinet has endorsed and supported throughout. Such a claim would result in significant cost and is likely to result in an injunction compelling the Council to implement in any event. Further, Cabinet should have in mind that the identification of the subject junction as being in need of works to increase capacity was captured in the Highway Strategy adopted by Full Council in December 2016. The Toll Bar junction is also referenced in the recently adopted Local Plan which gained unanimous support across all political parties at Full Council on 22nd March 2018.

9.10 Clearly there is a resultant safety risk for pedestrians and other users of the highway flowing from recognition at strategic level of problem areas in terms of traffic congestion.

9.11 The Constitution of the Council sets out clear principles of decision making being:

- proportionality (i.e. the action must be proportionate to the desired outcome);
- due consultation and the taking of professional advice from officers;
- a presumption in favour of openness;
- clarity of aims and desired outcomes;
- an explanation of the options considered before a decision was reached;
- an appropriate assessment of any known or emerging risks; and
- the reasons why decisions were made are given.

9.12 To date Cabinet has properly conducted itself within these principles, taking decisions within the professional advice offered and having regard to the stated aims of the Council in terms of regeneration and growth. All

decisions have been supported by a clear evidence base and by appropriate reasons and justifications.

9.13 Resources expended around the Tollbar matter in terms of assurance, scrutiny, governance, additional member, director and officer time is becoming disproportionate in terms of public resources and finances. This is a further risk to the Council in general in that regard.

10. HUMAN RESOURCES IMPLICATIONS

10.1 There are no direct HR implications arising from the contents of this report.

11. WARD IMPLICATIONS

11.1 The programme will have direct implications for the Humberston and New Waltham and Waltham wards. The A16 forms a key access route to the Borough from the south and therefore the junction improvement works will have an indirect impact on other wards.

12. BACKGROUND PAPERS

Cabinet Decision Notice 21 January 2015
Cabinet Decision Notice 18 February 2015
Cabinet Decision Notice 5 August 2016.
Cabinet Decision Notice 26 October 2016
Cabinet Decision Notice 18th January 2017
Cabinet Decision Notice 15th February 2017
Cabinet Decision Notice 31 January 2018.

https://www.nelincs.gov.uk/meetings/category/cabinet/

13. CONTACT OFFICER(S)

Director of Economy and Growth	**Partnership Director**
Angela Blake	Marcus Asquith
Economy and Growth, NELC	ENGIE
01472 324741	01472 326676

Councillor Matthew Patrick
Portfolio Holder for Environment Transport and Energy

Toll Bar Roundabout

Accident Date BETWEEN '14-Sep-2013' AND '13-Sep-2018'

ACCIDENT SEVERITY UPTO 2018

	2013	2014	2015	2016	2017	2018	Total
Fatal	0	0	0	0	0	0	0
Serious	0	0	0	0	0	0	0
Slight	1	3	3	2	7	4	20
Damage	0	0	0	0	0	0	0
Total	1	3	3	2	7	4	20

ACCIDENTS BY MONTH AND YEAR UPTO 2018

	2013	2014	2015	2016	2017	2018	Total
January	0	0	0	0	2	0	2
February	0	0	0	0	0	0	0
March	0	0	0	1	1	1	3
April	0	0	1	0	0	1	2
May	0	1	0	0	1	0	2
June	0	1	0	1	1	0	3
July	0	0	1	0	0	0	1
August	0	0	0	0	0	2	2
September	0	0	0	0	0	0	0
October	0	0	0	0	2	0	2
November	0	1	1	0	0	0	2
December	1	0	0	0	0	0	1
Total	1	3	3	2	7	4	20
%	5%	15%	15%	10%	35%	20%	100%

ACCIDENTS BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	0	1	0	0	0	0	0	1
01:00 - 01:59	0	0	0	0	0	0	1	1
02:00 - 02:59	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	0	0	0	0
07:00 - 07:59	0	0	0	0	0	0	0	0
08:00 - 08:59	0	0	2	0	0	1	0	3
09:00 - 09:59	0	0	1	0	0	1	0	2
10:00 - 10:59	0	0	0	0	0	0	1	1
11:00 - 11:59	0	0	1	0	1	0	0	2
12:00 - 12:59	0	0	0	0	0	1	0	1
13:00 - 13:59	0	0	0	0	0	0	0	0
14:00 - 14:59	0	0	0	0	0	0	0	0
15:00 - 15:59	0	0	0	0	0	2	0	2
16:00 - 16:59	0	1	0	0	0	0	0	1
17:00 - 17:59	0	0	0	1	1	1	0	3
18:00 - 18:59	0	0	0	0	2	1	0	3
19:00 - 19:59	0	0	0	0	0	0	0	0
20:00 - 20:59	0	0	0	0	0	0	0	0
21:00 - 21:59	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0
23:00 - 23:59	0	0	0	0	0	0	0	0
Total	0	2	4	1	4	7	2	20
%	0%	10%	20%	5%	20%	35%	10%	100%

Toll Bar Roundabout

Accident Date BETWEEN '14-Sep-2013' AND '13-Sep-2018'

JUNCTION DETAIL

	Number	%
NOT AT JUNCTION	9	45
ROUNDABOUT AND MINI	10	50
T OR STAGGERED	1	5
TOTAL	**20**	

JUNCTION CONTROLS

	Number	%
GIVE WAY SIGN	11	55
NOT AT JUNCTION	9	45
TOTAL	**20**	

SPEED LIMIT

	Number	%
20 MPH	1	5
30 MPH	17	85
40 MPH	2	10
TOTAL	**20**	

ROAD CLASS

	Number	%
A	5	25
B	15	75
TOTAL	**20**	

NUMBER OF ACCIDENTS INVOLVING PEDESTRIANS

Number	%
4	20

NUMBER OF ACCIDENTS INVOLVING SKIDDING

Number	%
1	5

WEATHER

	Number	%
FINE	20	100
TOTAL	**20**	

ROAD SURFACE

	Number	%
DRY	19	95
WET	1	5
TOTAL	**20**	

LIGHT CONDITIONS

	Number	%
Light	17	85
Dark	3	15
TOTAL	**20**	

CASUALTY SEVERITY UPTO 2018

	2013	2014	2015	2016	2017	2018	Total
Fatal	0	0	0	0	0	0	0
Serious	0	0	0	0	0	0	0
Slight	3	4	3	2	9	4	25
Total	3	4	3	2	9	4	25
%	12%	16%	12%	8%	36%	16%	100%

CASUALTIES BY MONTH AND YEAR UPTO 2018

	2013	2014	2015	2016	2017	2018	Total
January	0	0	0	0	2	0	2
February	0	0	0	0	0	0	0
March	0	0	0	1	1	1	3
April	0	0	1	0	0	1	2
May	0	2	0	0	1	0	3
June	0	1	0	1	2	0	4
July	0	0	1	0	0	0	1
August	0	0	0	0	0	2	2
September	0	0	0	0	0	0	0
October	0	0	0	0	3	0	3
November	0	1	1	0	0	0	2
December	3	0	0	0	0	0	3
Total	3	4	3	2	9	4	25
%	12%	16%	12%	8%	36%	16%	100%

CASUALTIES BY DAY AND TIME

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
Midnight - 00:59	0	1	0	0	0	0	0	1
01:00 - 01:59	0	0	0	0	0	0	1	1
02:00 - 02:59	0	0	0	0	0	0	0	0
03:00 - 03:59	0	0	0	0	0	0	0	0
04:00 - 04:59	0	0	0	0	0	0	0	0
05:00 - 05:59	0	0	0	0	0	0	0	0
06:00 - 06:59	0	0	0	0	0	0	0	0
07:00 - 07:59	0	0	0	0	0	0	0	0
08:00 - 08:59	0	0	3	0	0	1	0	4
09:00 - 09:59	0	0	1	0	0	1	0	2
10:00 - 10:59	0	0	0	0	0	0	3	3
11:00 - 11:59	0	0	1	0	1	0	0	2
12:00 - 12:59	0	0	0	0	0	1	0	1
13:00 - 13:59	0	0	0	0	0	0	0	0
14:00 - 14:59	0	0	0	0	0	0	0	0
15:00 - 15:59	0	0	0	0	0	2	0	2
16:00 - 16:59	0	1	0	0	0	0	0	1
17:00 - 17:59	0	0	0	1	2	2	0	5
18:00 - 18:59	0	0	0	0	2	1	0	3
19:00 - 19:59	0	0	0	0	0	0	0	0
20:00 - 20:59	0	0	0	0	0	0	0	0
21:00 - 21:59	0	0	0	0	0	0	0	0
22:00 - 22:59	0	0	0	0	0	0	0	0
23:00 - 23:59	0	0	0	0	0	0	0	0
Total	0	2	5	1	5	8	4	25
%	0%	8%	20%	4%	20%	32%	16%	100%

Toll Bar Roundabout

Accident Date BETWEEN '14-Sep-2013' AND '13-Sep-2018'

CASUALTIES BY TYPE AND AGE GROUPING

	Unknown Age	0 to 4	5 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Total	%
Pedestrian	0	0	4	0	0	0	1	**5**	20
Pedal Cyclist	0	0	5	0	1	1	0	**7**	28
PTW Rider	0	0	0	0	0	1	0	**1**	4
Car Driver	0	0	0	0	3	4	2	**9**	36
Car Passenger	0	0	0	0	0	1	0	**1**	4
Goods Driver	0	0	0	0	0	1	0	**1**	4
Hack/PRI Passenger	0	0	0	0	0	0	1	**1**	4
TOTAL	**0**	**0**	**9**	**0**	**4**	**8**	**4**	**25**	
%	0	0	36	0	16	32	16		

Number of Casualties with unknown age: 0

VEHICLES INVOLVED BY TYPE AND AGE OF DRIVER

	1 to 15	16 to 19	20 to 29	30 to 59	60 Plus	Unknown	Total	%
Pedal Cycle	5	0	1	1	0	0	**7**	18
PTW	0	0	0	1	0	1	**2**	5
Car	0	0	7	12	2	2	**23**	61
Hackney/Private	0	0	0	1	0	0	**1**	3
Other/Unknown	0	0	0	2	1	2	**5**	13
TOTAL	**5**	**0**	**8**	**17**	**3**	**5**	**38**	
%	13	0	21	45	8	13		

VEHICLE MANOEUVRES

	Number	%
GOING AHEAD OTHER	25	66
STARTING	2	5
OVERTAKING MOVING VEHICLE ON ITS OFFSIDE	1	3
PARKED	1	3
STOPPING	1	3
TURNING RIGHT	2	5
WAITING TO GO AHEAD BUT HELD UP	6	16
TOTAL	**38**	

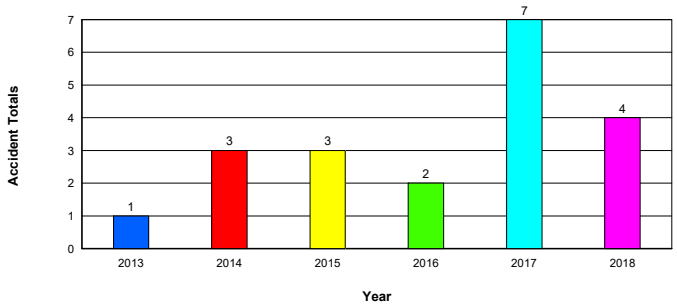
BREATH TEST

	Number	%
NOT APPLICABLE	7	18
NEGATIVE	12	32
NOT REQUESTED	3	8
DRIVER NOT CONTACTED	16	42
TOTAL	**38**	

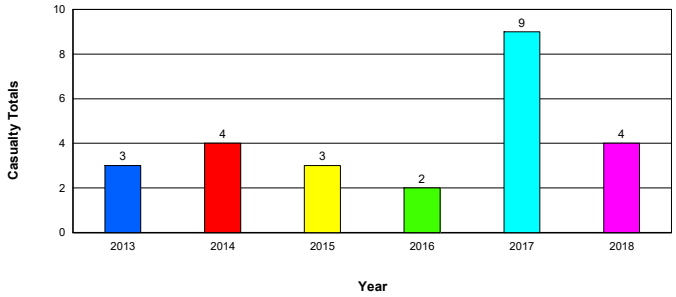
Toll Bar Roundabout

Accident Date BETWEEN '14-Sep-2013' AND '13-Sep-2018'

Accident Totals/Year

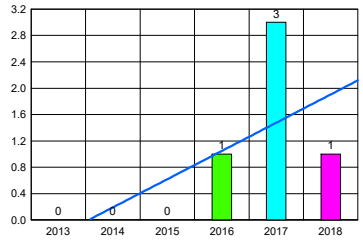


Casualty Totals/Year

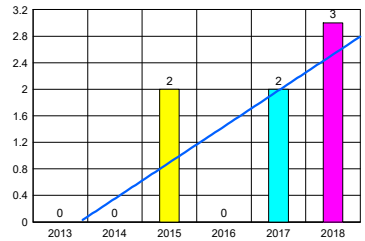


Casualty Data

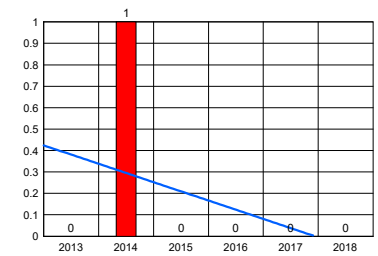
Pedestrians



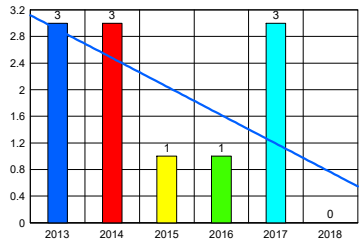
Pedal Cyclists



Motor Cyclists



Car Occupants



Acc	2013	2014	2015	2016	2017	2018	Total
Fatal	0	0	0	0	0	0	0
Serious	0	0	0	0	0	0	0
Slight	1	3	3	2	7	4	20
Damage	0	0	0	0	0	0	0
Total	1	3	3	2	7	4	20

Cas	2013	2014	2015	2016	2017	2018	Total
Fatal	0	0	0	0	0	0	0
Serious	0	0	0	0	0	0	0
Slight	3	4	3	2	9	4	25
Total	3	4	3	2	9	4	25

		PEDESTRIANS	PEDAL CYCLIST	PTW USER	HACKNEY PRI/HIRE	CAR DRIVER	CAR PASS	GOODS OCCUPANT	PSV	OTHER VEH OCCUPANT	TOTAL
0 to 4	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	0	0	0	0	0	0	0	0	0	**0**
	TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5 to 15	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	4	5	0	0	0	0	0	0	0	**9**
	TOTAL	**4**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
16 to 19	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	0	0	0	0	0	0	0	0	0	**0**
	TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20 to 29	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	0	1	0	0	3	0	0	0	0	**4**
	TOTAL	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**4**
30 to 59	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	0	1	1	0	4	1	1	0	0	**8**
	TOTAL	**0**	**1**	**1**	**0**	**4**	**1**	**1**	**0**	**0**	**8**
60+	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	1	0	0	1	2	0	0	0	0	**4**
	TOTAL	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**4**
All Ages	Fatal	0	0	0	0	0	0	0	0	0	**0**
	Serious	0	0	0	0	0	0	0	0	0	**0**
	Slight	5	7	1	1	9	1	1	0	0	**25**
	TOTAL	**5**	**7**	**1**	**1**	**9**	**1**	**1**	**0**	**0**	**25**

Number of Casualties with unknown age: 0