

Report to	Norwich highways agency committee 21 March 2013	Item
Report of	Director of environment, transport and development, and head of city development services	6
Subject	Transport for Norwich: St Stephens Street and Chapel Field North	

Purpose

To consider the results of the consultation linked to the wider Transport for Norwich proposals to remove general traffic from St Stephens Street and to make Chapel Field North two-way taking account of the further discussions between the objectors and officers and consideration of alternative proposals.

Recommendation

- (1) To note the results of the scheme specific consultation taking account of the previous widespread Transport for Norwich consultation (adopted in 2010) included in the report to this committee on 24 January 2013.
- (2) To note that further consideration has been given to the objections raised by the Chapelfield Action Group, that the disputed data has been verified and that the alternative proposals have been fully assessed.
- (3) To approve the plans to remove general traffic from St Stephens Street and Surrey Street between All Saints Green and St Stephens Street and to make Chapel Field North two-way for buses, taxis, cycles, deliveries and access with associated enabling works.
- (4) To ask the head of city development services to carry out the necessary statutory processes to confirm the following traffic regulation orders:

The Traffic Management Order

- Allow two way traffic movements on Cleveland Road, Bethel Street and Chapel Field North
- Prohibit traffic from using Little Bethel Street while maintaining access for cycles and allowing them to ride in both directions.
- Restrict access to Theatre Street and Rampant Horse Street while retaining access to premises and car parking, and for buses, cycles, and taxis.
- Create an eastbound bus lane in Rampant Horse Street outside Debenhams for use by buses, cycles, taxis and emergency vehicles
- Allow only buses, cycles, taxis and commercial vehicles accessing business premises into St Stephens Street
- Allow only buses, cycles, and taxis in Surrey Street between St Stephens Street and All Saints Green while retaining access to premises and car parking

- require all traffic (except cycles and emergency vehicles) using Westlegate to turn right into Red Lion Street
- Provide a cycle lane in Westlegate

The Controlled Parking Zone Order

- Add new permit parking spaces on Cleveland Road and Bethel Street
- Remove all existing parking and bus stops on Chapel Field North
- Convert the existing loading bay in Surrey Street to an off-peak loading bay for goods vehicles only.
- Replace existing disabled parking spaces on St Stephens Street and Surrey Street with alternative provision on Surrey Street (replacing some double yellow lines and short stay parking spaces) and Theatre Street (replacing a coach parking bay)
- Provide additional 'Pay and Display' short stay parking spaces on Bethel Street and Cleveland Road
- Adjustments to existing waiting and loading restrictions to take account of these changes

The Speed Restriction Order

- Introduce a 20mph speed limit on Cleveland Road and Chapel Field North
- Extend the current 20mph speed limits on St Giles Street and Bethel Street to cover the entire length of both streets

- (5) To ask the head of city development services to carry out the necessary statutory processes to change the previously advertised changes to taxi ranks and demand responsive transport stop on St Stephens Street as shown on plan number PL/TR/3329/735
- (6) To note that the reconstruction of the footpath on the northern side of Chapel Field North is to be included within the scope of the project.
- (7) To agree not to implement the suggestions of the police architectural liaison officer to further increase street lighting in Chapel Field Gardens (beyond the level already proposed) and to remove the hedge adjacent to Chapel Field North.

Corporate and service priorities

The report helps to meet the corporate priority 'A prosperous city and a safe and clean city' and to implement the Local Transport Plan.

Financial implications

The total cost of the scheme is estimated to be £1.45M and being funded through the Department for Transport's Better Bus Area Fund, the Local Transport Plan budget, the Greater Norwich Development Partnership (GNDP), developer section 106 contributions and the City Council.

Ward: Mancroft

Cabinet member: Norfolk County Council: Councillor Plant – Planning and transportation;
Norwich City Council: Councillor Bremner – Environment and development

Contact officers

Jon Barnard – NATS manager 07909 895214
Jon.barnard@norfolk.gov.uk

Joanne Deverick – Transportation & network manager 01603 212461
Joanne.deverick@norwich.gov.uk

Background documents

Consultation responses

A full set of all other background documents is available online at

<http://www.norwich.gov.uk/transportfornorwich>

Report

Background

1. At the meeting in January 2013 members considered the results of the consultation on the proposal to remove general traffic from St Stephens Street and to make Chapel Field North two-way. At that meeting local residents questioned the validity of some of the data in that report and asked that the alternative proposals that they had suggested be given more detailed consideration. Members agreed to defer a decision on the implementation of the proposals so that this work could be undertaken, and so that views from the police and public health bodies could be sought. A copy of the January report has been appended for ease of reference, and can be found at the end of the agenda.

Chapelfield Action Group concerns about January 2013 NHAC report

2. The Chapelfield Action Group (CAG) submitted a report to the city council detailing its concerns about the information provided in the January 2013 NHAC report. A copy of this is attached as appendix 1, and an officer response has been provided against each statement made. Officers have also met with CAG on two occasions since the January meeting. The latter meeting included the city council portfolio holder. The main areas of concern for CAG were
 - the accuracy of the bus passenger data,
 - the accuracy of the traffic flow data
 - the use of the County Council traffic modelling data as the basis for the noise and vibration report and the air quality report and the perceived lack of independence of those reports
 - the interpretation of the November 2012 survey results
3. In response to the concerns about bus passenger loadings, the passenger time savings from the scheme has been fully reviewed and updated to take account of the latest information that is available from bus operators. Rather than basing the benefits on predicted growth in passengers it has been decided to look only at the benefits for current passengers. Therefore the assumed passenger loadings on the buses have been reduced from 82% for all services to 75% for morning inbound and evening outbound services and 32.5% for all other services using Chapel Field North. These patronage levels have been verified by the bus operators for the services that currently use Chapel Field North or would do so if it became two way. Using this methodology savings of 41.4 hours in a morning peak hour and 27.6 hours in an evening peak hour are predicted. While this is lower than the 55 hours previously quoted, these are still significant benefits and as no passenger growth has been included, this should therefore be considered as a conservative estimate. A full assessment is available in appendix 2
4. The apparent inaccuracy of the traffic flow data is mainly explained by confusion arising from the use of two data sets; 24 hour counts and 12 hour (7am to 7pm) counts. The 12 hour data is a subset of the 24 hour counts. The noise and vibration report and air quality report are based on the 12 hour counts, which is standard practice. However to ensure that the full picture was shown it was decided to use 24

hour counts when demonstrating overall traffic flows. It was also decided to round these numbers to the nearest 50 which is why some vehicles appear to have been lost in the calculations.

5. Because the noise and vibration and air quality reports are both based on the county council's traffic data they are perceived as not being independent. Building a traffic model for an urban area is a complex task which takes considerable time and resource and it is not feasible for a third party to produce their own data. The county council model is used as the base for evaluating all developments by both public bodies and private organisations within the city that are likely to impact on traffic movement.
6. There will always be an element of subjectivity when interpreting how the results of a consultation should be read, and officers believe that their analysis in the January report was a fair and balanced one.

Alternative proposals

7. The committee tasked officers with carrying out a fuller investigation of the alternative proposals suggested by the residents. However it became clear during discussions with the residents that they also wanted to know what alternative proposals were considered in the development of the Norwich Area Transportation Strategy implementation plan (NATS IP) for this area of the city. The residents also said that their two alternatives should be considered as starting points and that officers should use their professional judgement to develop them.

Residents' suggestions

8. The design team, comprising of traffic engineers, a traffic modeller, a representative of the travel and transport team (for the bus perspective), a transport planner, a landscape architect and a street lighting expert has considered the alternatives and refined them. Their report is attached as appendix 3.
9. The design team concluded that the only option available that would deliver anywhere near the same benefits as the current proposals in terms of bus journey times savings and removing through traffic from the city centre would be to create a new link road from Grapes Hill Roundabout through Chapelfield Gardens to Chapel Field East. This would have a significant detrimental affect on Chapelfield Gardens and is therefore not considered viable.

Development of the NATS IP

10. Following the adoption of the latest NATS strategy in 2006, officers of both councils considered how the adopted policies could be implemented. Through a series of officer workshops a package of measures for Norwich was developed. Chapel Field Road was identified as an area that impacted significantly on bus journey times and reliability. Consideration was given to making one lane of each side of the dual carriageway into a bus lane. However this would reduce the capacity of the ring road for general traffic which is contrary to NATS policy on maintaining the capacity of the ring road. Widening Chapel Field Road to provide for a bus lane in each direction as well as retaining two lanes for general traffic would result in either the loss of a large section of the City Wall, or the demolition of properties, some of which are listed.

Neither option was considered viable, so it was decided that the best way forward would be to make Chapel Field North two-way for buses so that they could avoid the congestion on the ring road. This also provides a more direct route to the city centre for buses from Dereham Road and Earlham Road / Unthank Road.

The need for a scheme to improve bus reliability for services from the west of the city

11. Residents have asked why a scheme for Chapel Field North is still required, if the measures already implemented or approved for Dereham Road have offered benefits to bus reliability and journey times for passengers on that corridor.
12. Modal shift away from the private car is a key element of NATS. Unless significant improvements can be made to public transport, people will not be persuaded to change from using their cars. Existing journey time data for buses using Chapel Field Road show that there is significant variability between scheduled journey times and actual journey times. The graphs attached as appendix 4 demonstrate this. The data is based on the actual average journey times recorded for all bus journeys along Chapel Field Road throughout the whole of 2012. Within these figures there is significant seasonal variation and at times the differences between scheduled and actual journey times will be considerably higher or lower.
13. The scheduled journey time set by bus operators is based on the traffic conditions that can be reasonably expected at different times of day. It is not practical for the bus operators to provide timetables that reflect the varied journey times as this will result in a significant number of occasions when published data would be wrong, as services are not running to schedule. From a passenger perspective this does not build confidence about reliability, the most important factor for bus users. This would reduce the attractiveness of the bus and discourage modal shift. It also means that bus operators could be called before the Traffic Commissioner and penalised for failing to meet the performance window of services up to 1 minute early, or 5 minutes late.
14. It should also be remembered that as well as improving the reliability of the bus services, it will also reduce journey times by 2 minutes per service.

Consideration by the city council's Scrutiny Committee

15. At its meeting on 21 February the city council's scrutiny committee reviewed the consultation process that had been undertaken on this scheme, at the request of a number of local residents. Scrutiny committee agreed that it was content with the consultation process that had been undertaken. A copy of that report is attached as appendix 5 for information.

Footpath on the northern side of Chapel Field North

16. At the previous meeting officers agreed to investigate whether it was possible to include the reconstruction of the footway on the northern side of Chapel Field North into this scheme. Funding has now been identified for this and as a result the full width of the highway on Chapel Field North will be improved. This means that it may be possible to widen the northern footpath in places and eliminate any awkward level differences for people walking or pushing wheelchairs or buggies along the footpath.

It is intended that further consultation on these proposals would take place with the residents of Chapel Field North at the detailed design stage.

Enhancement of conservation area

17. The scheme area is entirely within the City Centre conservation area. There are many listed buildings lining the streets where the traffic management will be changed and the street design altered, especially in Chapel Field North, Bethel Street and Little Bethel Street. Chapelfield Gardens is on English Heritage's list of registered historic parks and gardens. Scheme promoters have a duty to take the protected status of these heritage assets into account when developing projects that will affect these assets. The scheme has been designed to enhance the character and appearance of the conservation area, the setting of listed buildings and the historic character of the Gardens. Features of the scheme that particularly contribute to this are:

- the reduction in traffic levels overall in the city centre,
- the removal of traffic entirely and planting of trees in Little Bethel Street,
- the new ornamental entrances to Chapelfield Gardens and the completion of the path circuit focusing attention on the dramatic vista towards the RC Cathedral,
- the opportunity it creates for a future scheme to remove highway paraphernalia at the junction of Westlegate and St Stephens Street.

18. It has been suggested that the listed buildings on Chapel Field North might be damaged by the increase in buses and heavy goods vehicles resulting from the scheme. The noise and vibration report concludes that there is no reason to believe this will happen.

Norfolk constabulary comments

19. Norfolk constabulary has confirmed that it supports the proposals to remove general traffic from St Stephens Street and to make Chapel Field North two way and will assist with enforcement. Discussions with Norfolk Constabulary suggest that the crime levels within Chapelfield Gardens are lower than in many other areas of the city centre and this is supported by looking at the online maps of reported crime on the Police website.

20. The constabulary's architectural liaison officer has seen the plans for Chapel Field North and Chapelfield Gardens. He has made 3 suggestions relating to the planned increase in use of the footpath in the Gardens that is being widened

- Additional CCTV should be provided in the gardens
- The level of street lighting should be increased
- The hedge on the north side of the gardens should be removed to offer more surveillance of the park

21. The question of increased CCTV coverage is currently being investigated, an update will be provided at the meeting.

22. The scheme proposes to introduce lighting along the north avenue in the Gardens above existing levels but not to the standard suggested by the architectural liaison officer. The optimal lighting for crime reduction, which is bright and uniform, would not be compatible with the need to protect the historic character of the Gardens, especially because it would exceed the level of lighting elsewhere in the Gardens and because the lighting design needs to fit around the constraint of the existing mature trees. The hedge, which has been in existence for over 100 years, forms an attractive protective boundary to the Gardens separating it from the highway and offers some wildlife habitat. The extra surveillance arising from the removal of the hedge would be significantly outweighed by the damage to the character and appearance of the Gardens.
23. Pedestrians are not forced to use the path through the Gardens; the footpath on the northern side of Chapel Field North will remain and is to be improved. It is therefore recommended that neither the additional increase in street lighting nor hedge removal is progressed.

Public Health comments

24. Discussions about the proposals have taken place with public health colleagues at Norfolk County Council. At the time of writing the report no formal response has been forthcoming. Any response will be reported orally to the meeting.

Freight Consolidation centre

25. In January a member asked if the Freight Consolidation Centre could be used as a mechanism for removing some of the HGV movements from Chapel Field North. This option has been explored but there is little scope for this to deliver any tangible benefits as part of this scheme. Most retailers with branches across the UK already have their own delivery networks using national carriers that would be hard to change. Additionally the delivery vehicles also take away returned stock and recycling meaning the vehicles are fully utilised.

Benefits for coaches

26. VisitNorwich contacted officers following the January meeting expressing their disappointment that the benefits for coaches of the proposals to make Chapel Field North two-way were not highlighted in the report.
27. Currently there are coach parking bays on Theatre Street that can only be accessed from Little Bethel Street. Most coaches are too large to safely negotiate Little Bethel Street and therefore the bays are underused, despite their prime location in the heart of the city and immediately adjacent to the Tourist Information Office. VisitNorwich believe that there is potential to expand the tourism market in Norwich which will bring more people and more economic activity to the City. The potential for this will increase with the dualling of the final single carriageway section of the A11 between Norwich and London, the works for which have already started..

Responses received since January meeting

28. Since the January meeting 11 additional representations have been made from people across Norfolk objecting to the proposals on the basis that they will have a

negative impact on Chapel Field North and Chapelfield Gardens. The issues raised have been discussed previously in appendix 2 of the January report under references CFN and GARD.

29. There have also been 2 further objections to the loss of disabled parking spaces is St Stephens Street and Surrey Street. The need for this is discussed fully in the January report paragraphs 39 to 42

Conclusions

30. Officers have fully explored the concerns of the local residents about the proposals to make Chapel Field North two-way. Whilst there continue to be concerns from some quarters, the benefits that the scheme will deliver for those who live, work or visit the City remain significant and therefore it is recommended that the proposals are implemented.

Chapelfield Action Group

Analysis of reports and consultation documents for the St.
Stephen's and Chapelfield North Traffic Proposals

Introduction

This report has been compiled following the NAHC meeting of 24th January 2013 when committee members asked for confirmation of the claims that some of the data presented in support of the St. Stephen's and Chapelfield North project.

During the course of the analysis of the various documents presented to the committee and those made public as part of the consultation process, it became clear that there were more than a few errors contained in the documents, in particular there was more than one example of data being used for the consultation process being different from that used in reports which supported the views of the officers. While these examples are quite possibly oversights, nonetheless it makes the process itself unsafe. Therefore a more detailed analysis of the whole project is required to ensure that the proposals and the assumptions underpinning them are in fact valid. Furthermore, information made available to the public as part of the consultation was not always clearly presented and this must have led to some residents being unaware of the direct impact on their environment.

Contents

1. NAHC Report September 2012

1. Appendix 4 - Calculation errors
2. Appendix 4 - Formula error
3. Appendix 4 - Time savings
4. Congestion
5. Department of Transport Statistics
6. Comment

2. Forecast Traffic Flow Diagram

1. Introduction
2. Disagreement with April 2012 Study
3. Cleveland Road
4. Bethel Street
5. Grapes Hill Roundabout
6. Convent Road Roundabout
7. Queen's Road
8. Chapelfield East
9. Chapelfield Road
10. Convent Road
11. Vauxhall Road
12. Comment

3. Chapel Field North Environmental Assessment for Noise and Vibration

1. Traffic Flow / Study figures
2. Narrative
3. Base figures

Appendix 1 – Chapelfield Action Group report, with officer responses

4. Figures and commentary

5. Comment

4. Mott Macdonald Report – Air Quality Assessment

1. Independence of report

2. Evidence

3. Location of Receptors

4. Receptor 7

5. DEFRA statement

6. Report predictions

a) Chapelfield North

b) Cleveland Road

c) Convent Road

d) Data Set

7. Comment

5. Consultation Survey

1. General

2. Paragraph 11

3. Paragraph 12

4. Paragraph 15

5. Question 1

6. Bethel Street / Chapelfield East

7. Comment

6. Freedom of Information

7. Conclusions

1. NAHC Report 2011 presented to the NAHC in September 2012.

1. Appendix 4 – Table showing passenger time savings

Total Inbound AM peak time saving from scheme per hr ($P=ExKxL$)
line shows:-

426:24 426:24 0 1066 0 0 0 1948:48

The correct total is 1918:48

Officer response

These errors are due to rounding in the excel spreadsheet, which become extrapolated during the calculations. The passenger time savings have been fully reviewed and revised following further discussions with bus operators.

2. Appendix 4 Table showing passenger time savings

Total Passenger time saved per peak hour ($T=(P+R/2)+(Q+S/2)$)
3319:35

This figure can only be obtained from the formula $T=(P+Q+R+S)/2$

If the formula as described is used then the final total will be somewhat different:-

$T=(P+R/2)+(Q+S/2) = 4960:15$ or

if the correct value of Q (see item 1 above) is used 4930:15

The reason for the halving of the total is not explained and there appears to be no basis for it.

Appendix 1 – Chapelfield Action Group report, with officer responses

Officer response

The passenger time savings have been fully reviewed and revised following further discussions with bus operators. Overall time savings are for a single hour in the morning and evening peak and this is based on the number of buses operating during this period, the average occupancy value for the bus and the time saving experienced per passenger.

3. Appendix 4 Table showing passenger time savings

The calculation for the bus passenger savings make no reference to the timings for existing services. The overall savings would of course be greater if the aggregation of individual savings can ever be accepted as a sensible measurement. However, there are no supporting documents for the bus utilisation figures which have been quoted. An independent study carried out for three days in November and a further 3 days in January showed significantly different bus usage levels with photographic evidence to support the study.

Officer response

The time savings used in the calculation of passenger time saved relate only to where there are changes in routing of existing services. Where an existing service is unchanged in terms of routing, no benefits are assumed.

The approach of aggregating the individual time savings per passenger is consistent with the guidance issued in WebTAG guidance 3.5.3 issued by the Department for Transport. The total passenger time saving per morning and evening peak hour is a conservative estimate as this does not include likely additional benefits for new bus passengers attracted to the service arising from reduced journey times and improved journey time reliability.

The bus utilisation (occupancy) values presented in the report are based on direct feedback from bus operators and reflect actual operational information. It is acknowledged that these will vary throughout the day, from day to day and from month to month, but overall these values represent a typical value to use for the purposes of calculating passenger time savings during the morning and evening peak hours.

4. Congestion

The report states in paragraph 5 under the heading 'Design' :-

“Almost all the buses that travel along Dereham Road, Earlham Road and Unthank Road converge at the Grapes Hill roundabout and access the city centre via Chapelfield Road and St Stephens Street. This route is frequently congested and results in delays to bus services...”

However, a number of studies including the report into congestion written by Professors Duranton & Turner of Toronto University and published in Property & Environment Research Center and the American Economic Review have clearly concluded that increasing road space does not reduce congestion. As both Grapes Hill and Chapelfield North will

Appendix 1 – Chapelfield Action Group report, with officer responses

have the effect of increasing road space for cars by moving buses into special lanes or access routes, then by definition the road space for cars will be increased on Chapelfield Road and Grapes Hill leading to an increase in traffic.

Officer response

It is true that there are a number of studies that indicate that the 'predict and provide' approach to road building actually increases demand and does not resolve congestion issues. This scheme as a whole, however, does not provide additional road space for the private motorist, but re-allocates significant amounts of existing road space away from the private motorist, whilst maintaining the capacity of the main road network. There is consequently a reduction in the road space allocated to private traffic as a result of this scheme

5. Department of Transport Statistics

The DoT has produced an analysis of traffic - Quarterly Bus Statistics Qtr 2 2012 – which shows that figures for 'on-time' buses (buses which arrive between 1 minute before and 6 minutes after the scheduled time) produced for Norfolk have moved from 72% in 2004/5 to 87% in 2011/12. On the basis that the figures collected by the DoT represent the reality then even if there is a saving of 2 minutes per bus journey this will still be within the boundary of 'on-time' and will not therefore be a true saving for the passenger.

Officer response

The aim of this scheme is to increase the reliability of the bus service and to reduce journey times, as currently, there is significant variation in journey times consequent on traffic congestion. The improvements in reliability are at least in part due to the implementation of schemes such as this across the bus network, and in particular in Norwich, with the implementation of the NATS Strategy.

6. Comment

That a report presented to the committee responsible for approving a major transport plan which forms part of a long-term strategy for the city contains simple arithmetic errors, badly constructed formulae and unexplained calculations is simply unacceptable. It also runs contrary to respected surveys and DoT statistics. The improvement in bus 'on-time' statistics suggests that some of the changes implemented over the period 2004 to 2012 have borne fruit and this serves to reinforce the view that the plans need to be re-examined to take account of the different conditions now. As the improvements have been claimed to have resulted from council action it cannot be sensible to simply carry on with the old plans in the face of changed circumstances.

2. Forecast Traffic Flows Diagram=

1. The Traffic Flow Analysis Diagram

This forms one of the evidential bases of the proposals, and serves to underpin the committee's decision but is questionable in a number of respects.

N.B. The flow analysis is done as a 24 hour annual average and therefore the flow shows the daily movement along roads and as a consequence, on the whole, traffic entering the city would normally also exit from the same point.

Officer response

This is a misconception. Even on a local level, traffic entering the area exits at a different point. The same applies to the centre as a whole. The location and direction of one-way streets significantly influences where people enter and leave the City Centre

2. Traffic Flow

The figures do not agree with the Traffic Analysis of Proposals – April 2012. No mention is made of the fact that the Forecast Traffic diagram contains figures which are at odds with those presented by Traffic Analysis Team. (See also Section 5).

Officer response

The April set of figures are for a 12 hour day, whilst the later figures provided at the consultation are for a 24 hour period. In addition, the model was refined following the April report to ensure the figures more accurately reflected the likely impact of the scheme.

3. Cleveland Road

The current usage figure for Cleveland Road is shown as 8850 and the traffic which exits from Little Bethel Street is shown as 4850. The circulatory system – Cleveland, St Giles, Exchange, Bethel – has only two exit points, Little Bethel Street and Exchange Street. Therefore the traffic flow diagram indicates that currently 4000 vehicles enter Cleveland Street and exit at Exchange Street. However, forecast figures show that there will be a reduction in traffic entering Cleveland Road to 5800 but the traffic leaving Cleveland Road – the alternative to Little Bethel Street – will be just 5100. As Exchange Street will still be open to traffic this means that there will be 700 vehicles leaving via Exchange Street. But there will be 5100 leaving from the Cleveland Road exit which is an increase of 250 vehicles over the current level of 4850. As a result there is an unexplained reduction in both traffic entering Cleveland Road and an unexplained – or identified – reduction in the vehicles exiting via Exchange Street. It seems unlikely that the reduction of traffic entering Cleveland Road will represent an absolute reduction in traffic levels, which is the only possible outcome if the other figures are correct. In any event the traffic levels

Appendix 1 – Chapelfield Action Group report, with officer responses

using Grapes Hill roundabout is expected to increase by over 1000 vehicles each day.

Under a Freedom of Information request the latest 12 hour flow of traffic in Exchange Street shows that 2832 vehicles exited the road however, this data was collected in 2006, which raises the issue of where the data presented on the traffic flow diagram actually came from.

Officer response

There are actually additional traffic movements in and out of the area via Upper St Giles and Willow Lane, but in any case the strategic model re-allocates all journeys and some of these will be to routes beyond the study area. The reduction on Cleveland Road is because some of the previous traffic is now accessing Chapel Field North directly, and some has been removed from the system locally, as this becomes a less attractive through route to cross the City.

4. Bethel Street

The Traffic Flow diagram does not indicate that there will be an increase in traffic along the lower part of Bethel Street to 5100 vehicles. This omission misled residents who did not take the time to study in detail the diagram

Officer response

This 5100 figure includes all traffic exiting from the Cow Hill / Upper St Giles area. It is likely that this traffic will increase, as the ease of exit will improve. The model does not differentiate between traffic on Bethel Street or St Giles Street so the assumption that traffic on the lower part of Bethel Street will increase as suggested, is not a valid one. This section of Bethel Street currently has all the traffic from the Cow Hill area exiting to Chapel Field North along it, and this movement will cease with the closure of Little Bethel Street

5. Grapes Hill Roundabout

The Traffic Flow diagram shows that the current level of vehicles entering the roundabout is 51850 but the number leaving is 51900. This leaves 50 vehicles which disappear on entry to the roundabout.

Officer response

Figures on the diagram have been rounded to the nearest 50 for ease of reading and understanding. This is less than a 0.001% discrepancy (50 vehicles in 51900) which is insignificant, particularly by comparison with daily variations in traffic flows

6. Convent Road Roundabout

The forecast shows that currently 21350 vehicles enter the roundabout but 21400 leave. The position is reversed for the forecast figures when 22800 will enter and 22750 will leave. This means that between now and the date of full implementation 50 cars a day will disappear on the roundabout and will presumably reappear after implementation.

Officer response

This is also due to the rounding of the figures as previously mentioned

7. Queen's Road / Chapelfield

The diagram shows 16400 vehicles travel along Chapelfield, leaving 11000 to continue into Queen's Road after St Stephen's. This means that 5400 vehicles turn into Newmarket Road or St. Stephen's. However, the forecast figures show 17850 on Chapelfield which reduces to 12900 after St. Stephen's, at this point however only buses will be allowed to turn into St Stephen's forecasted as 550. If all of these buses are from the Chapelfield direction this will mean that at least 4400 will turn into Newmarket Road. The figure could be higher if the number of cars leaving the car park and travelling along Queen's Road toward Bracondale is greater than 1.

When the flow is reversed the forecast shows 14850 travelling along Queen's Road with 550 joining from St Stephen's making a total possible vehicles at this point of 15400 but there are only 17850 shown along Chapelfield indicating that the number of vehicles turning from Newmarket Road into Chapelfield is 2450 even though the flow forecast show that at least 4400 will turn into Newmarket Road.

Officer response

This is a misinterpretation of the data. Some vehicles travelling along Chapel Field Road will exit into St Stephens Road, and some traffic from there will exit into Queens Road. The model uses actual travel data to re-assign trips. Figures cannot be added in the way suggested to reach such conclusions.

8. Chapelfield East

The diagram shows that, at present, 7100 vehicles exit the roundabout via Chapelfield North of these 3350 come via Little Bethel Street. There is a figure for vehicles travelling along Theatre Street towards Grapes Hill of 4300 this means that at present there are 550 vehicles entering Chapelfield East. The forecast figures show that there will be 2600 vehicles travelling on Chapelfield North toward Theatre Street but only 1350 actually enter Theatre Street. This means that 1250 vehicles are forecast to enter Chapelfield East. As the car parking spaces will not have been increased where will these additional cars go? Furthermore, the diagram does not show the residents of Chapelfield East will have a doubling of traffic. Again, as with Bethel Street, residents would not have been aware of the implications for them of the proposals unless they had studied the documents in great detail.

Officer response

Appendix 1 – Chapelfield Action Group report, with officer responses

The figure of 3350 is calculated by subtracting the number of vehicles using Little Bethel Street, from those proceeding along Theatre Street. Consequently it includes traffic accessing Chapel Field East from that direction, and the conclusion here is flawed. There are no changes proposed in Chapel Field East and consequently no change in traffic levels there is anticipated.

9. Chapelfield Road

The various reports identifying a reduction in traffic volumes in Chapelfield North state that this reduction will also reduce noise and pollution (see also Section 5) however, at no point is it made clear that the traffic lights at Chapelfield North which currently allow two lanes of traffic to exit to the roundabout will be reduced to one lane which could have the effect of eliminating the advantage of fewer vehicles by increasing waiting time at the lights.

Officer response

Traffic levels exiting Chapel Field North will be 37% of the current levels with 50% of the current lane capacity. In addition, the lights will be optimized over their current operation to minimise queuing.

10. Convent Road

There will be an 11% increase in traffic but a 50% reduction in road space. This will mean that vehicles intending to use Unthank Road will be forced to wait in the queue accessing the lights on the roundabout. With an anticipated 10300 vehicles a day accessing Convent Road it is likely that the volume of vehicles will exceed the capacity of the road, leading to a tailback onto the Grapes Hill roundabout..

Officer response

Two lanes are retained at the Earlham Road/Unthank Road end of this link. Rather than the capacity of the road it is capacity at junction stop lines as determined by the need to give way to other traffic or traffic lights that determine how much traffic can be accommodated on an urban road network. It is therefore not correct to say that the capacity of the road would be exceeded.

11. Vauxhall Road

The diagram shows an increase in traffic entering Vauxhall Street of 50 vehicles per day but a decrease of 50 vehicles per day exiting the road. The figures would suggest that the Vauxhall Road access point is at the end of a “rat-run” for some 1500 vehicles per day. But if this is the case with the traffic along Unthank Road increasing by 100 why would the assumption be that the number using the “rat-run” will decrease especially as the additional 50 vehicles entering the road would likely be for residents.

Officer response

Appendix 1 – Chapelfield Action Group report, with officer responses

This is partly to do with rounding, and partially to do with trip allocation. In any case, the impact here is marginal, and certainly not at a level that would be noticeable.

14. Comment

The latest data available for Exchange Street established through a Freedom of Information request was collected in 2006 which raise the question of where the information presented as representing the current traffic flows was actually obtained. If the data is six years old then can any of the figures be representative of the present situation? In any event the traffic flow analysis has been carried out using different data to other reports, does not show all of the roads affected by the proposals and contains unexplained data discrepancies which should have been corrected before the diagram was issued. As it formed part of the consultation documentation, the errors and omissions contained in the diagram are unacceptable.

Officer response

The published report states that traffic flow figures were obtained from counts undertaken in February and March 2012 (and additional counts were undertaken in July 2012). Exchange Street was not included in the 2012 survey and therefore the residents were supplied with the most recent count for that street which was from 2006. As the distribution and make-up the traffic may have changed in the intervening years it was not considered appropriate to include the Exchange Street figures in the general consultation material

3. Chapel Field North Environmental Assessment for Noise and Vibration Report

1. Traffic Flow / Study Figures

This report only uses data collected in the April 2012 traffic survey and differs markedly from the traffic flow diagram presented as part of the consultation documentation.

Officer response

The data in the April 2012 study covers a 12 hour period and is consistent with the data published during the consultation, which was a refinement of that work, extending the data to cover 24 hour flows. The noise and vibration report was commissioned prior to the completion of this further work in response to concerns raised by residents in advance of the consultation commencing. In addition, the 24 hour data did not include the detailed breakdown of vehicle types.

2. Narrative

Appendix 1 – Chapelfield Action Group report, with officer responses

The narrative of the report borrows heavily from the traffic survey and using those figures concludes that there will be no significant effects from the re-routing of traffic along Chapelfield North

Officer response

The traffic data is the only source available to enable a report of this type to be produced.

3. Base Figures

The survey suggested a figure of 3900 vehicles per day using Chapelfield North and used the percentage of Heavy Goods Vehicles to imply a minor issue but does not accept that the increase in heavy vehicle traffic is very significant.

Officer response

The report clearly acknowledges that whilst overall levels of traffic will reduce, both the number and proportion of larger vehicles will increase.

4. Figures and Commentary

The figure used in the consultation reports and traffic flow diagram is 5200 vehicles a day with an increase of 269% in the number of buses, 95% increase in HGVs less than 7.5 Tonnes and 116% increase in HGVs over 7.5 tonnes. Despite these figures being available in the original survey report the Noise Analysis makes the following statement.

“The proposed level of HGVs is the same as the average level of HGVs over the last ten years”

Officer response

This information on the level of HGV movement is based upon the graph contained in the April 2012 traffic modelling report (Graph 1). This clearly shows that the number of HGVs was historically low in 2012 (when the counts were done) and that the anticipated levels of HGV movement would be consistent with those over the previous 10 years with 109 vehicles of less than 7.5 tonnes, and 26 larger vehicles using Chapel Field North over the 12 hour period

The report also acknowledges that there will be an increase in bus movements along Chapel Field North from one every four minutes to one every minute

5. Comment

This report is an example of the shoddy use of statistics, in this case the writer was presented with data which did not accord with the data given to the public and therefore came to conclusions which fitted that data rather than the data presented in the consultation documents. The fact is that heavy vehicle use will increase along Chapelfield North and this will increase the pollution, noise and vibration. It may be that these increases will be within national limits however almost all of the buildings along Chapelfield North are listed buildings and were not built with the

Appendix 1 – Chapelfield Action Group report, with officer responses

benefit of modern materials. As a point of principle it is not acceptable that in a consultation process the reports which supposedly underpin the proposals should have used different data to that supplied to the public.

Officer response

All the data supplied to the Consultants was provided to the public.

4. Mott Macdonald Report – Air Quality Assessment

1. Independence of Report

This report was commissioned by Norfolk County Council to obtain an independent view of the pollution effects of the proposed traffic flow changes. The report was dated January 2013, which was after the conclusion of the consultation and yet was referenced by officers in reports to the committee. Unfortunately, the report cannot be defined as independent as all of the data used to support the report conclusions were supplied by Norfolk County Council. Furthermore, as the data are not defined in the report, it is not clear whether the data set used was the same as the traffic flow diagram or the Noise and Vibration reports or a completely separate set of data.

Officer response

The model used to produce the traffic data is the only one that exists for the City. All consultants will use data from this model (whether they are working on behalf of the councils or for a private sector developer). The complexity and necessary validation of the model means that creating more than one model is not justified. The data set that the report uses is a combination of both the 12 and 24 hour one. The 24 hour count contains just vehicle numbers with no breakdown of vehicle type, while the 12 hour count is fully classified by vehicle type. The consultants applied the percentage of each vehicle type from the 12 hour count to the 24 hour count to produce the data set that they then used for the assessment.

Meteorological data was provided by the Norwich Weather Centre. Pollution monitoring data was provided by Norwich City Council.

2. Evidence.

The report describes the location of receptors and produces a table of “predicted” level of pollution but does not contain any figures related to the actual readings made recently. The figures produced in the tables which form part of the report ‘findings’ show estimated pollution levels for the receptor locations as comparisons between the situation with the new traffic flows and without the new traffic flows. This suggests that the comparison is between two predicted levels and not between the actual situation at present and the anticipated situation after the implementation of the proposals.

Appendix 1 – Chapelfield Action Group report, with officer responses

Officer response

The mechanism for assessing air quality involves the production of a model that is validated by actual data from existing monitoring sites. The validated model is then used to provide the prediction at selected locations.

3. Receptor Location

The Receptor 7 – also referenced as Receptor G - in the report, placed at Grapes Hill Upper, does not represent an equivalent of any of the areas under discussion. This receptor is on the south carriageway and is therefore measuring data from vehicles which are not under power, indeed are mostly coasting to effect a stop at the traffic lights.

Officer response

A number of locations within the vicinity of Chapel Field North were used to ensure that the model that was created would provide an accurate prediction of changes in local air quality. This particular site has been subject to long term monitoring, and was particularly valuable in validating the predictive model.

4. Receptor 7

The note in the report, “Receptor 7 represents a raised ground floor property adjacent to the A147”. However, the only property of this description lies at the southern end of Grapes Hill and is immediately adjacent to the roundabout, placing a receptor 100 metres away on the other side of the road does appear to be likely to give the result desired rather than be an accurate and representative result.

Officer response

The modelling work undertaken provides a ‘contour map’ of pollutant levels across a study area. This enables the situation in particular locations to be calculated

5. DEFRA Statements

The report contains the definition “*Fine particulates (PM_{2.5} – PM_{0.1}) are derived mainly from gas-to-particle reactions in combustion exhausts or between ammonia and sulphate and nitrate, and are predominantly of direct anthropogenic origin.*”

It further states “A 2005 report commissioned by Department for Environment Food and Rural Affairs (DEFRA) noted that,, for fine particulates the road transport sector was the most important (39%) factor”.

The issues surrounding particulate emissions is especially important in the Chapelfield North case as the number of large vehicles will increase substantially but the report does not reference the increase.

Officer response

Appendix 1 – Chapelfield Action Group report, with officer responses

The report references the traffic data provided by Norfolk County Council. Appendix B shows that the modelling work used figures that recognised the increase in larger vehicles despite a fall in overall traffic levels. That explains why a marginal increase in pollutants is predicted.

6. Report Predictions

There are number of questionable predictions shown in the data and these are listed below.

a) There is a predicted fall in emissions on Chapelfield North even though, according to the other traffic survey there is a 269% increase in bus traffic, 95% increase in HGV less than 7.5 tonnes and 116% increase in HGV over 7.5 tonnes.

b) At the junction between Chapelfield North and Cleveland Road there is a predicted 0.1 increase in pollutant concentration with the new road layout. But there is no evidence of earlier measurements and the report predicts that there will be a negligible increase in pollutants even though there will be 10900 vehicles, an increase of 23%, passing that point, and of that number 5100 will, at some point be stationary at the traffic lights.

c) The data described for the receptor placed at the Convent Road roundabout suggests a slight increase in Nitrous Oxide and either a small or no change in particulates. As the proposed changes to Convent Road include reducing the road space by 50% while increasing the traffic by 11% this must mean an increase in traffic waiting to enter Earlham Road and this traffic will prevent the vehicles wishing to access Unthank Road from doing so. The effect must be greater levels of stationary traffic and cannot therefore mean that the pollution levels will stay static.

d) As can be seen from the examples above either the data selected for the calculations does not represent any of the data sets used in other reports or the results were as expected.

Officer response

The consultants' have used a recognised 'industry standard' method with one of the most up to date models available currently. The results of the model are highly likely to be representative of the impact of the scheme and the only way of predicting the impact of a scheme.

7. Comment

The data used for this study was supplied by the county council and does not appear in the report. A receptor located in a wholly different environment to the area it is described as representing does not leave the thoughtful reader with any confidence in the report. The report uses 'negligible' and 'insignificant' to describe results which in reality ignore facts which could not lead to the use of such powerful not to say pejorative terms. The report appears to be using the terms to describe any level which

Appendix 1 – Chapelfield Action Group report, with officer responses

falls below the legal limit. However, it does not recognise that the EU legislation states :

“Apart from fighting the greenhouse gases that cause climate change, a key objective of environmental legislation is to improve the quality of our air, the pollution of which has repercussions in particular on people's health and, in the form of phenomena such as acidification and eutrophication, on the environment. European policies are targeting the various types - and sources - of pollutant. Also, in 2005 the Commission proposed a thematic strategy for reducing the number of deaths linked to air pollution by 40% (of 2000 levels) by 2020.”

This makes it clear that just adhering to the letter of the law by insuring levels below the legal limit is not what was intended by the legislation.

Officer response

The modelling has demonstrated that the impacts on air pollution in Chapel Field North are negligible and will be at levels predicted to be well below those which would be of any concern. In addition, the scheme overall is expected to improve air quality in locations where there are very large numbers of people, e.g. in Rampant Horse Street, St Stephens Street and Red Lion Street. In terms of overall exposure of the public to pollutants the overall impact of the scheme will be beneficial.

5. Consultation Survey

1. General

The report produced for the committee summarises views expressed and attaches comment to the survey results. Some of the comments in the report do not wholly represent the views actually expressed and some extrapolate views from statements which cannot be supported by the evidence.

Officer response

Very many comments were received. The report aims to provide a précis of these in a manner which ensures that the breadth and content of those comments are understood.

2. Paragraph 11

This paragraph states:

“The high number of visits to the website suggests there was a good level of awareness and interest among the public in the scheme, and as people tend to be more motivated to respond if they object to proposals

Appendix 1 – Chapelfield Action Group report, with officer responses

then the inference is that the majority of people who looked at the consultation either supported the proposals or were indifferent to them”.

It actually suggests nothing of the kind, high levels of visits could indicate multiple visits by a few people or visits by accident or indeed any number of other reasons none of which would allow the inference made.

Officer response

The interpretation of this data is subjective.

Comment

3. Paragraph 12

This paragraph states:

“Looking only at the survey responses, the tables attached as appendix 1 show the level of support for the aims of the scheme and each of the measures. Overall it can be seen that around two thirds of respondents either support or do not oppose the proposals while a third object to them. The exception to this is the proposal to make Chapel Field North two-way, where half of the respondents oppose the idea.”

When the actual questions and responses are considered more closely the outcome is nowhere near as definitive as implied in paragraph 12. Moreover the manner in which the questions were posed allowed the conjoining of issues such that it was not possible to object to one aspect but to approve of the other.

Examples of this can be seen in questions 2,3 and 4. Other questions have been posed which are certain to give one answer. The strong support or neutral response for these questions then allows analysis to use those ‘scores’ to bias the overall results. Examples of this are questions 5,7 and 9.

Officer response

The analysis of the survey results is always open to interpretation. The councils believe the results have been interpreted in a fair and equitable manner. There was an opportunity to object to specific elements of the proposals as part of the consultation and the report made it clear that the number of people who supported the Chapel Field North element was lower than the other elements.

4. Paragraph 15

This paragraph states:-

“The response from stakeholders was very positive and individual responses are summarised in appendix 3. Support for the scheme was given by a number of city centre businesses and organisations.....”

Appendix 1 – Chapelfield Action Group report, with officer responses

What the report did not say was that the “stakeholders” responses showed very strong levels of support for the ends not the means. There is little doubt that should an alternative routing system be implemented business leaders would be equally positive in their support. It is unacceptable to assume that ‘Stakeholders’ have a greater need or should have greater weight placed upon their views than other local tax payers. Careful reading of the stakeholder responses shows that in a number cases the support is really for the aims of reducing congestion rather than the actual plan being proposed. An example is the Aviva response of “Support the proposals that aim to reduce congestion, improve public transport service and pedestrian/road safety in the city centre. They will help staff travel to and from work”. But, Aviva have already implemented travel plans which have reduced the number of cars entering the city. As a result Aviva can be seen to be already well disposed toward any plan to further reduce congestion. Their response to the plans can be assumed to be specific support for the aims but not necessarily the means of achieving those aims.

Officer response

This is the only viable option that will deliver the benefits that NATS seeks.

5. Question 1

Addresses the aims of the proposals and is presented in a manner which makes “strong support” the default response. It cannot be used to suggest support for the proposals but it can claim strong support for the aims outlined in the NATS process. As this proposal was not actually defined in the NATS report it is disingenuous in the extreme to claim that support for these aims means support for this proposal.

6. Bethel Street / Chapelfield East

Overall the survey was such that without considerable study of the documents available, bearing in mind that some of the reports use different data sets to that being used in the consultation, certain questions did not accurately describe the impact on the local community. Examples of this are:

Bethel Street will see two way traffic at significant volumes but not shown on the Forecast Traffic Flow Diagram.

Chapelfield East will see a doubling of traffic, again not shown on the Forecast Traffic Flow Diagram.

Officer response

This is a complex scheme and officers have made all data available to anyone who requested. The belief that the traffic on Little Bethel Street will see significant increases in traffic is misguided. Many vehicles use Little Bethel Street and Chapel Field North as a convenient cut through the city to the east. The only traffic using Bethel Street now will

Appendix 1 – Chapelfield Action Group report, with officer responses

be local access traffic that will enter / exit from Cleveland Road. As stated previously, traffic levels in Chapel Field East will remain the same as they are currently.

7. Comment

The documentation contained reports which supported the officer's views but used different data to that presented to the public. The diagrams and data were incomplete and therefore understated the impact on many residents. The conclusions which resulted from the questionnaire and which were presented to the committee were not reasonable given the actual responses and, in the case of the "stakeholders", misrepresented approval of the ends as approval of the means.

Officer response

Officers believe that the report contained a fair and reasonable interpretation of the data.

6. FREEDOM OF INFORMATION

A freedom of Information request resulted in the following issues.

1. Bus Capacity

Although only one operator responded the bus loading claimed is 75% for all buses entering and leaving the city during peak times and 25% during off-peak hours. The claim in the report, presented to the committee, was that loading in the future will be 82%, therefore the increase if it possible to increase from this level will be just 7%. This raises again the cost of improving services, see 4 below, which will have such a small impact and payoff.

Officer response

The bus loading figures have been revised to 75% and 32.5%, as discussed in paragraph 3 of this report. These figures are for services using Chapel Field North only. The figures quoted in response to Freedom of Information request are for the average loading as percentage of seating capacity for all buses entering and leaving Norwich City centre, not just those that use Chapel Field North.

2. Exchange Street

The data available for Exchange Street is from 2006, there is no evidence to support the data presented in the Traffic Flow Diagram having a later date.

Officer response

This evidence is in the traffic modelling report.

3. Alternative Routes

There are no alternative routes which have been considered following the traffic plan determined as part of the larger strategy. This despite

Appendix 1 – Chapelfield Action Group report, with officer responses

officer claims that implementation of earlier parts of the strategy have led to improvements in bus reliability and 'on-time' statistics. This inability to react to new conditions will undoubtedly compromise the city transport system.

Officer response

Implementation of earlier parts of the strategy has led to improvements for buses. However congestion on Chapel Field Road remains a problem for bus reliability and journey times and therefore a solution to this is still needed. The work undertaken recently shows that there is no viable alternative solution to help buses from the west access the city centre.

4. Reliability

The figures for bus reliability show that 81% of buses arrive or depart on time and only 14.6% of buses arrive or leave late this means that the 2 minute saving in bus journey time is only available for that small proportion of the travelling public. It is important to recall that these Freedom of Information figures differ from the DoT figure of 87%.

Officer response

Information asked for as part of the Freedom of Information request asked for 'The average number buses entering and leaving Norwich City centre which are early, the number on time and the number late'. The information provided related to bus services entering and leaving Norwich city centre as a whole. The DoT performance figure (87%) represents a wider range of services across Norfolk and not just in Norwich, hence the difference.

7. CONCLUSIONS

With the inaccurate calculations, different data sets, distorted findings purporting to be independent The studies and a badly constructed survey which confuses ends with means, the committee has no choice but to reject the proposals in order to avoid any future questions of personal liability. The use of different data sets for commissioned reports and public analysis is either incompetence or worse. It cannot be a complete surprise that reports created by officers tend toward support for the view contained in a letter from Mr Massey, (Director Regeneration) written in 2011, in which he proclaims that the council is determined to implement the changes to Chapelfield North. Information obtained through Freedom of Information requests which differs from that contained in the reports presented in the consultation and the reports presented to the committee suggests that the whole process has not been conducted with the level of care that should be in evidence in a project of this magnitude and importance.

The committee cannot, once the data presented above is known, ignore the consequences of accepting officer reports which in themselves are inaccurate or misleading and which present different data under the banner

Appendix 1 – Chapelfield Action Group report, with officer responses

of 'consultation' to that supplied to the committee as supporting evidence for the proposals.

Officer response

The officers refute the belief that the reports supplied are inaccurate or misleading and the work undertaken recently supports this. They believe that the consultation was carried out and interpreted in a fair and reasonable manner and are confident that the data in front of the committee is sound.

Appendix 2 – Revised bus journey time savings, PM peak

Bus services on Chapel Field North / Theatre Street

Assumed time saving per inbound journey (AM Peak) 120 seconds, AM peak 1 hour long, Average peak loading inbound 75%, outbound 32.5%

Inbound

Services	AN 999	F21/21A/22	F23/23A	F24/24A	F25/25A	F28	F29	K5	Total
Current number inbound buses (A)	0	0	0	0	0	0	0	0	0
Proposed number inbound buses (B)	2	4	4	4	4	4	1	2	25
Extra inbound buses from scheme (C=B-A)	2	4	4	4	4	4	1	2	25
Seating capacity (D)	32	65	65	65	65	65	65	43	
Average Peak loading (E)	75%	75%	75%	75%	75%	75%	75%	75%	
Average people on a peak bus (F=DxE)	24	48.75	48.75	48.75	48.75	48.75	48.75	32.25	
Inbound AM peak time saving (secs) from scheme (G)	120	120	120	120	120	120	120	120	
Total Inbound AM peak time saving (secs) from scheme (H=GxFxCx2)	5760	23400	23400	23400	23400	23400	5850	7740	136350
Total Inbound AM peak time saving (mins)	96	390	390	390	390	390	97.5	129	2272.5
Total Inbound AM peak time saving (hrs)	1.6	6.5	6.5	6.5	6.5	6.5	1.625	2.15	37.875

Outbound

Services	AN 999	F21/21A/22	F23/23A	F24/24A	F25/25A	F28	F29	K5	Total
Current number outbound buses (A)	0	4	4	4	0	4	1	2	19
Proposed number outbound buses (B)	2	4	4	4	4	4	1	2	25
Extra outbound buses from scheme (C=B-A)	2	0	0	0	4	0	0	0	6
Seating capacity (D)	32	65	65	65	65	65	65	43	
Average Peak loading (E)	33%	33%	33%	33%	33%	33%	33%	33%	
Average people on a peak bus (F=DxE)	10.4	21.125	21.125	21.125	21.125	21.125	21.125	13.975	
Outbound AM peak time saving (secs) from scheme (G)	120	120	120	120	120	120	120	120	
Total Outbound AM peak time saving (secs) from scheme (H=GxFxCx2)	2496	0	0	0	10140	0	0	0	12636
Total Inbound AM peak time saving (mins)	41.6	0	0	0	169	0	0	0	210.6
Total Inbound AM peak time saving (hrs)	0.693333	0	0	0	2.816667	0	0	0	3.51

Appendix 2 – Revised bus journey time savings, PM peak

Bus services on Chapel Field North / Theatre Street

Assumed time saving per inbound journey (AM Peak) 120 seconds, AM peak 1 hour long, Average peak loading inbound 32.5%, outbound 75%

Inbound

Services	AN 999	F21/21A/22	F23/23A	F24/24A	F25/25A	F28	F29	K5	Total
Current number inbound buses (A)	0	0	0	0	0	0	0	0	0
Proposed number inbound buses (B)	2	4	4	4	4	4	1	2	25
Extra inbound buses from scheme (C=B-A)	2	4	4	4	4	4	1	2	25
Seating capacity (D)	32	65	65	65	65	65	65	43	
Average Peak loading (E)	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	
Average people on a peak bus (F=DxE)	10.4	21.125	21.125	21.125	21.125	21.125	21.125	13.975	
Inbound AM peak time saving (secs) from scheme (G)	135	135	135	135	135	135	135	135	
Total Inbound AM peak time saving (secs) from scheme (H=GxFxCx2)	2808.00	11407.50	11407.50	11407.50	11407.50	11407.50	2851.88	3773.25	66470.63
Total Inbound AM peak time saving (mins)	46.80	190.13	190.13	190.13	190.13	190.13	47.53	62.89	1107.84
Total Inbound AM peak time saving (hrs)	0.78	3.17	3.17	3.17	3.17	3.17	0.79	1.05	18.46

Outbound

Services	AN 999	F21/21A/22	F23/23A	F24/24A	F25/25A	F28	F29	K5	Total
Current number outbound buses (A)	0	4	4	4	0	4	1	2	19
Proposed number outbound buses (B)	2	4	4	4	4	4	1	2	25
Extra outbound buses from scheme (C=B-A)	2	0	0	0	4	0	0	0	6
Seating capacity (D)	32	65	65	65	65	65	65	43	
Average Peak loading (E)	75%	75%	75%	75%	75%	75%	75%	75%	
Average people on a peak bus (F=DxE)	24	48.75	48.75	48.75	48.75	48.75	48.75	32.25	
Outbound AM peak time saving (secs) from scheme (G)	135	135	135	135	135	135	135	135	
Total Outbound AM peak time saving (secs) from scheme (H=GxFxCx2)	6480	0	0	0	26325	0	0	0	32805
Total Inbound AM peak time saving (mins)	108.00	0.00	0.00	0.00	438.75	0.00	0.00	0.00	546.75
Total Inbound AM peak time saving (hrs)	1.80	0.00	0.00	0.00	7.31	0.00	0.00	0.00	9.11

Chapel Field North – An Appraisal of Alternative Schemes by the Design Team

Two suggested variants to the Council's current proposal were received during the consultation, the relative merits of which are discussed below. These have been developed into three variants of alternative 1 (1A, 1B & 1C) and two variants of alternative 2 (2A & 2B). Plans and sketch layouts of the alternatives are appended to this report.

The full impacts are discussed below..

Alternative 1

This suggested alternative is for Chapel Field North to be one-way eastbound i.e. reversal of the existing flow. Theatre Street / Rampant Horse Street would be two-way for all traffic as existing. Westlegate direction would be reversed to an easterly direction, with two-way traffic introduced on Rose Lane, Farmers Avenue and Golden Ball Street.

Chapel Field East would remain two-way but with a new exit for light vehicles onto Chapel Field Road (Ring Road) by altering the existing junction which is currently signal controlled and provides access and egress between the Ring Road and the underground car park of Chapelfield Shopping Centre. Cleveland Road and Bethel Street would become two-way with Little Bethel Street being closed to vehicles.

In this scenario, Chapel Field North would be available for inbound buses only. Outbound buses would need to use St Stephens to access the Ring Road, or via the bus station as existing.

Comment

Provision of a vehicular link between Chapel Field East and the Ring Road would require a new junction layout near the existing Chapelfield car park entrance. Two junction forms have been considered; a roundabout on the Ring Road (alternative 1A & 1B) and a modified signal layout (alternative 1C).

In order to achieve the required geometry on the dual-carriageway Ring Road, the roundabout would need to have a diameter of at least 55 metres. The roundabout footprint would require removal of up to 90 metres of the above ground city wall remains although it may be possible to retain a section within the centre of the roundabout. The roundabout would impact either the residential properties to the south side of the Ring Road or the structure of the Chapelfield Shopping Centre, depending on the precise placement. The roundabout could have either an exit for light vehicles onto the Ring Road only from Chapel Field East (alternative 1A), or an exit for light vehicles and entry from the roundabout onto Chapel Field East (alternative 1B).

With roundabout alternative 1A, traffic going to Chapelfield car park would enter via Chapel Field North and Chapel Field East. With roundabout alternative 1B, traffic would access the car park via the roundabout on the Ring Road. For both roundabout options, traffic leaving the car park would turn right into Chapel Field East and use the roundabout to access the Ring Road. A benefit of 1B is that traffic accessing the car park could be kept off Chapel Field North and could approach on the Ring Road from either the Grapes Hill or St Stephens Roundabout directions. In this case, the queuing of car park traffic from Grapes Hill that currently occurs may reduce, although the approach from St

Appendix 3a – Appraisal of alternative options

Stephens Roundabout may experience queuing in peak times. It should be noted that it may not be possible to have a roundabout on the Ring Road that is free-flowing, and traffic signals may need to be used to improve performance.

A modified signal junction (alternative 1C) would require a relatively minimal physical change to the existing Chapelfield car park junction in order to provide the exit from Chapel Field East onto the Ring Road. However, this layout would require an additional phase in the traffic signals to enable this manoeuvre to take place. The new phase would reduce the green time available for the other movements, thus reducing the capacity on the Ring Road. Delays on the Ring Road are likely to be greater with the signalled layout than with a roundabout solution.

There is a longer term proposal to pedestrianise Westlegate but this could not be implemented, otherwise Westlegate would no longer be available for the eastbound traffic. There would be a need to alter at either end of Westlegate in order to facilitate the change in direction; the same would apply to the traffic changes on Rose Lane, Farmers Avenue and Golden Ball Street, with associated costs.

Alternative 2

The proposal suggested is for Chapel Field North to remain one-way westbound as existing, so would be available for outbound buses. Cleveland Road would be one-way northbound as existing. Little Bethel Street would remain open to southbound traffic but with a right turn only into Chapel Field North. A bus gate would be introduced on Rampant Horse Street, similar to that proposed in the Council's proposal.

In this scenario, entry onto Chapel Field East is proposed from the Ring Road, to be used for all traffic including inbound buses and delivery vehicles with Chapel Field East becoming one-way northbound. The access to and from Chapelfield car park would remain unchanged.

Comment

A new entry from the Ring Road into Chapel Field East cannot be provided within the current highway footprint. Two layouts have been considered for the changes that would be required.

The first (alternative 2A) would require the widening of the car park junction to allow for the required turning movements of the largest vehicle that would need to use the new road. The traffic, including buses, turning left from the Ring Road into Chapel Field East would use the short left turn lane currently used for the car park traffic, this lane would need to be widened to cater for the larger vehicles. Car park traffic would then make use of the central lane of the eastbound Ring Road carriageway. Eastbound traffic on the Ring Road would then be confined to the offside lane, which would be widened into the existing central reserve. By reducing the through lanes from two to one, there would be a subsequent loss of capacity for the through traffic. The junction widening would require at least 18 metres of the above ground city wall to be removed.

A modified layout (alternative 2B) has been considered that would provide a new link road through Chapelfield Gardens from Grapes Hill Roundabout to Chapel Field East. The new link road, with a nominal width of 4.5 metres would run parallel to the Ring Road but on the gardens side of the city wall. The above ground city wall would not be affected

Appendix 3a – Appraisal of alternative options

although the new road would cross the line of the city wall, over the mounded section to the southern side of the gardens. The new road would join Chapel Field East at a give-way junction. If the link road was kept to the southern side of the park, the section at its eastern end would affect the existing day nursery building and associated car park. In order to avoid the building and car park, the link road would need to be moved further into the park.

Conclusions

Likely traffic impacts for each of the five options have been considered and the likely affects of each on traffic are shown on the impact schedule.

Of the five alternative layouts considered, each will have impacts on the highway network and the built environment, to various degrees.

Alternatives 1A, 1B & 1C

These schemes would enable inbound buses to avoid the Ring Road and to use Chapel Field North in an eastbound direction as per the Council scheme. Layout 1A however, would also require traffic to the car park to be diverted along Chapel Field North. Outbound buses would have to use St Stephens Street or the bus station to access the Ring Road.

The schemes would retain access for general through traffic on Rampant Horse Street at its eastern end. All three of these alternatives require Westlegate to remain available albeit in an easterly direction so would be incompatible with the longer term desire to pedestrianise it. Changing the direction of Westlegate and introducing two-way traffic on Rose Lane, Farmers Avenue and Golden Ball Street would require changes to the junctions along these roads.

The roundabout options 1A & 1B would have a major impact on the built environment, impacting on existing buildings. These options would also require the demolition of a substantial section of the city wall, which is a Scheduled Ancient Monument. It is extremely unlikely that an application to remove sections of wall would be successful, even if it was; the process is likely to be protracted.

Alternatives 1A, 1B & 1C would have an impact on the capacity of the Ring Road, particularly on the section between Grapes Hill and St Stephens's roundabouts; alternative 1C is likely to have a greater impact by the addition of a new signal phase.

Alternatives 2A & 2B

These schemes provide an outbound route for buses on Chapel Field North as the existing layout but with a bus gate at the eastern end of Rampant Horse Street as per the Council proposal. General through traffic would not be permitted along Theatre Street and Rampant Horse Street so buses should be able to use these roads with little delay. The inbound route for buses, delivery vehicles and access to Theatre Royal, Chapelfield East and Assembly House car parks and Brigg Street would be via the Ring Road in the easterly direction and onto Chapel Field East. Both Cleveland Road and Westlegate would remain unchanged.

Appendix 3a – Appraisal of alternative options

The implementation of the scheme for layout 2A would result in additional delays and a reduction in capacity on the eastbound Ring Road between Grapes Hill and St Stephen's roundabouts, due to the reduction in through traffic lanes. In addition, the buses would need to use the existing section of the Ring Road between Grapes Hill Roundabout and the start of the former car park lane before they could get into their dedicated lane to turn left into Chapel Field East. Layout 2A also requires a section of City wall to be demolished

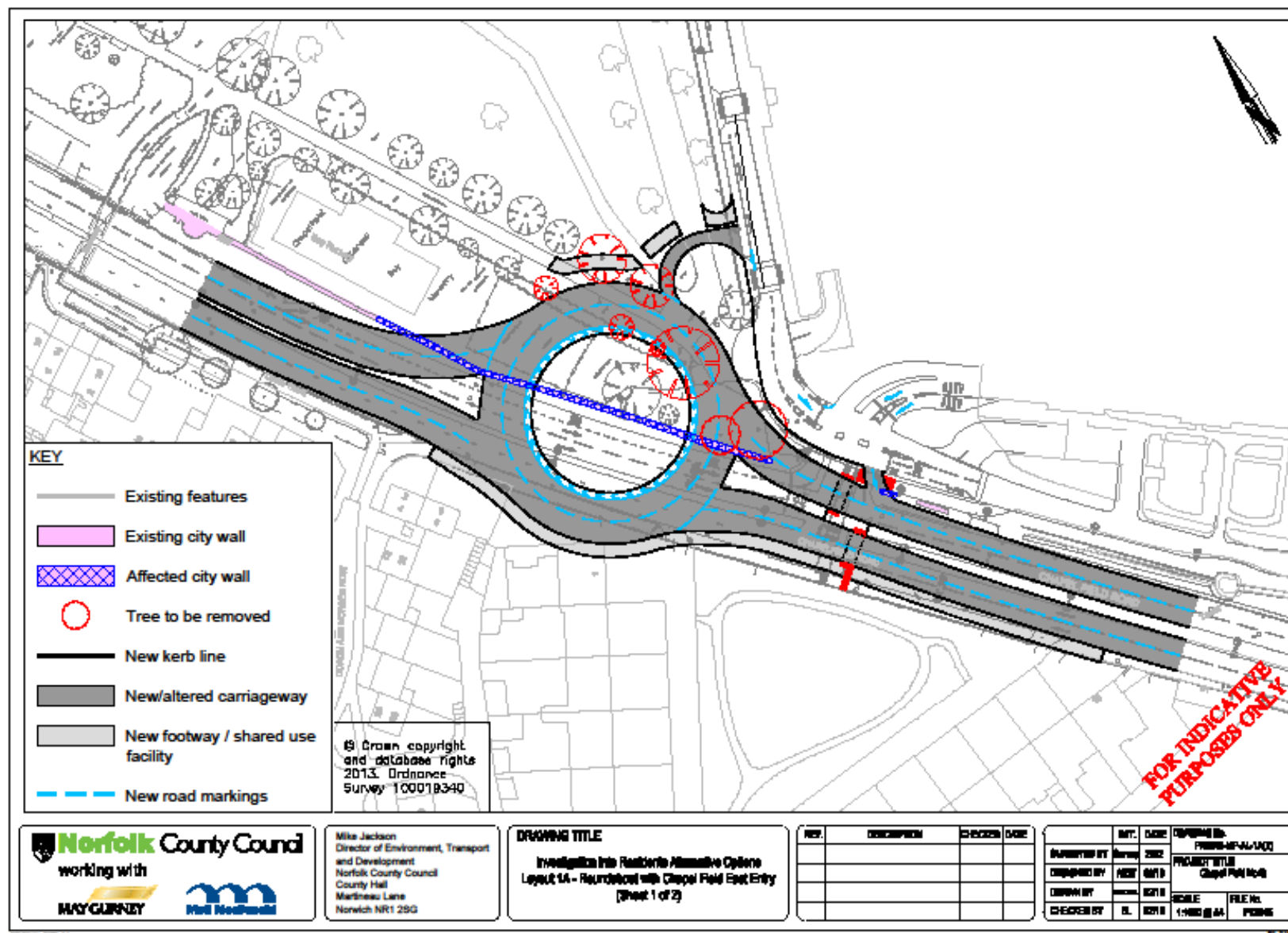
Alternative 2B would address the issues of 2A. The new link road from Grapes Hill Roundabout to Chapel Field East would enable progression of the inbound buses without the delay that they currently experience on the Ring Road. The Ring Road itself would not be compromised by the reduction in lanes. In addition, the above ground section of City wall would not be affected.

Alternative 2B has a number of serious impacts on the surroundings. Firstly, the new road will require land from Chapelfield Gardens. Unless the road is moved further into the gardens, the existing nursery building and car park would need to be removed. Unless moved further into the gardens, the road would run along the mounded area that follows the line of the City wall. Lastly, the ramp to the subway under the Ring Road would need to be altered.

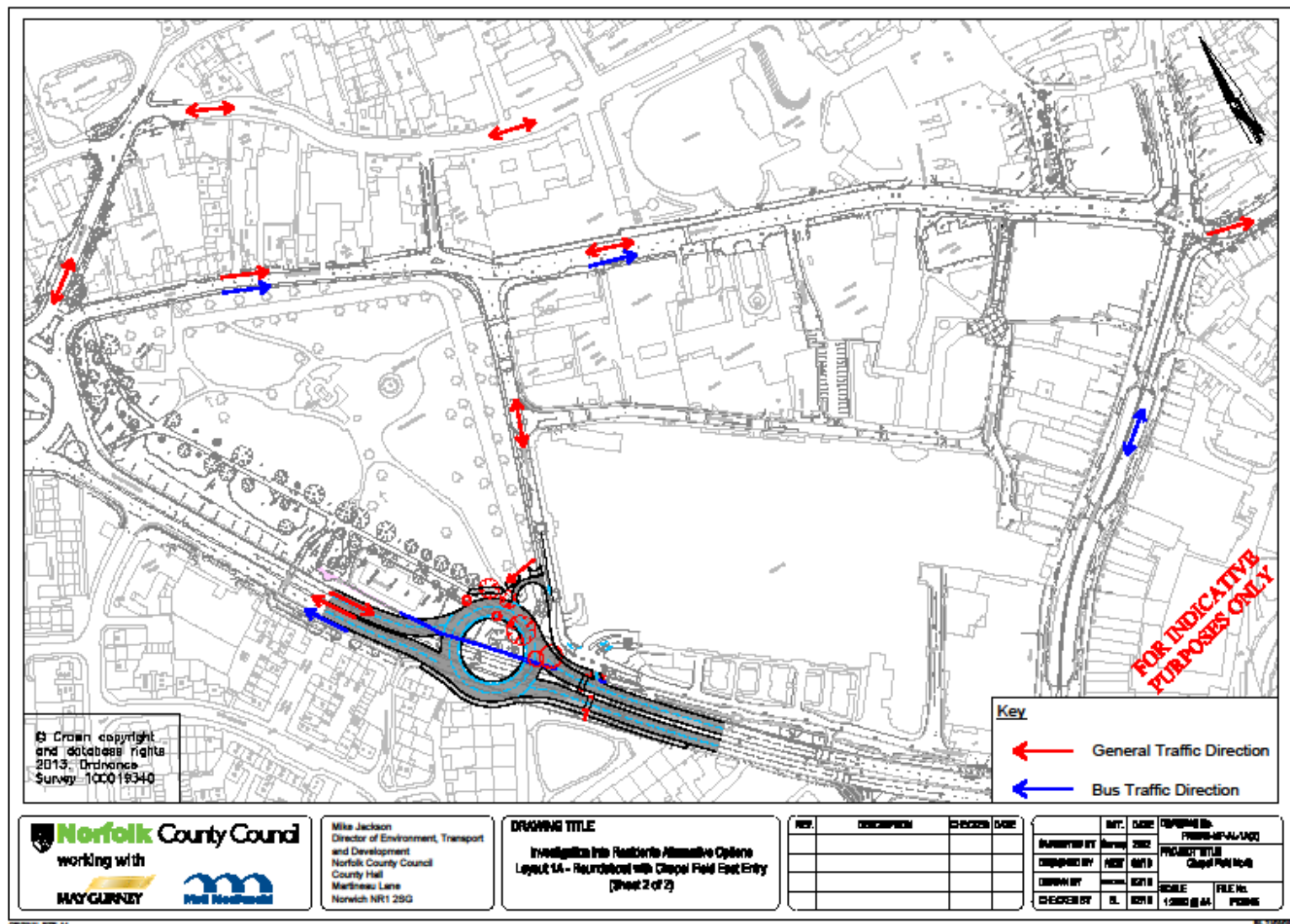
The only scheme that provides similar benefits for both inbound and outbound buses that the Council's scheme provides is alternative 2B. The other options considered either do not provide sufficient benefits for buses or cause detrimental affects to the rest of the highway network. The new link road in 2B would effectively replace the eastbound route on Chapel Field North that is proposed in the Council scheme. However, the impact on the built and natural environment would be severe, when compared to the Council proposals. In addition, the financial cost of 2B would be of a much greater magnitude.

For the above reasons, it is recommended that the Council's current scheme is taken forward in preference to the alternatives examined.

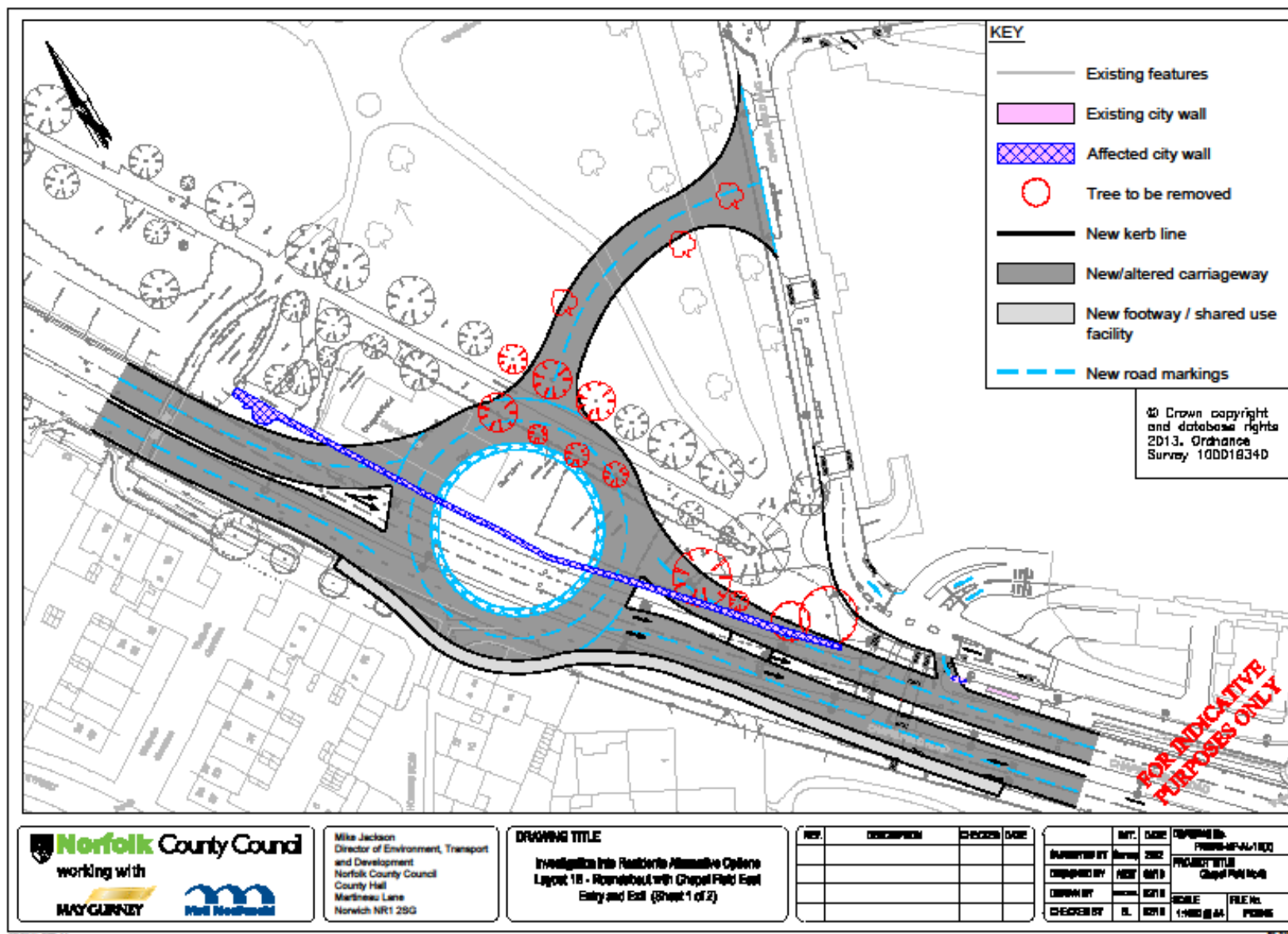
Appendix 3b – Plans of alternative proposals – Option 1a



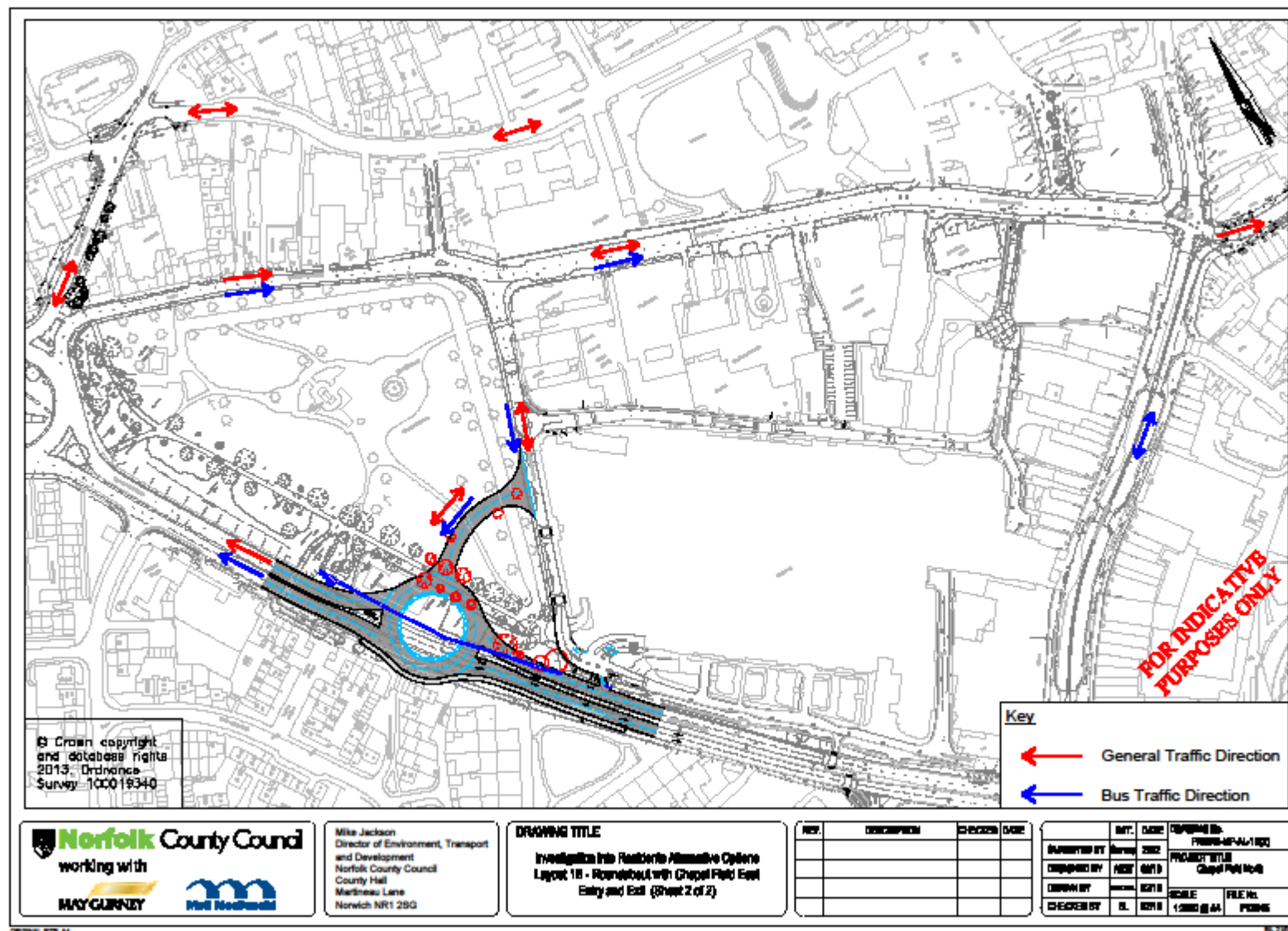
Appendix 3b – Plans of alternative proposals – Option 1a



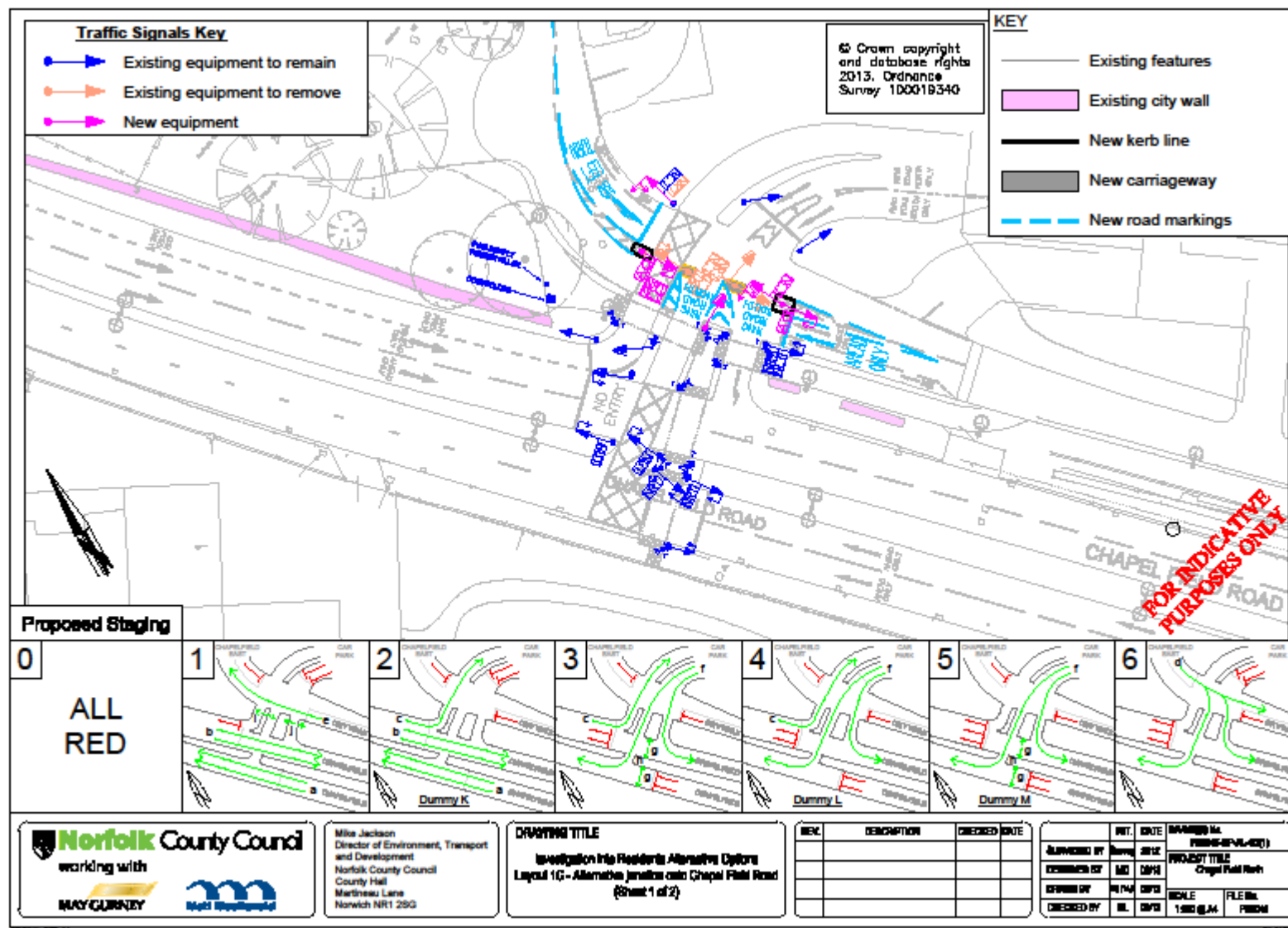
Appendix 3b – Plans of alternative proposals – Option 1b



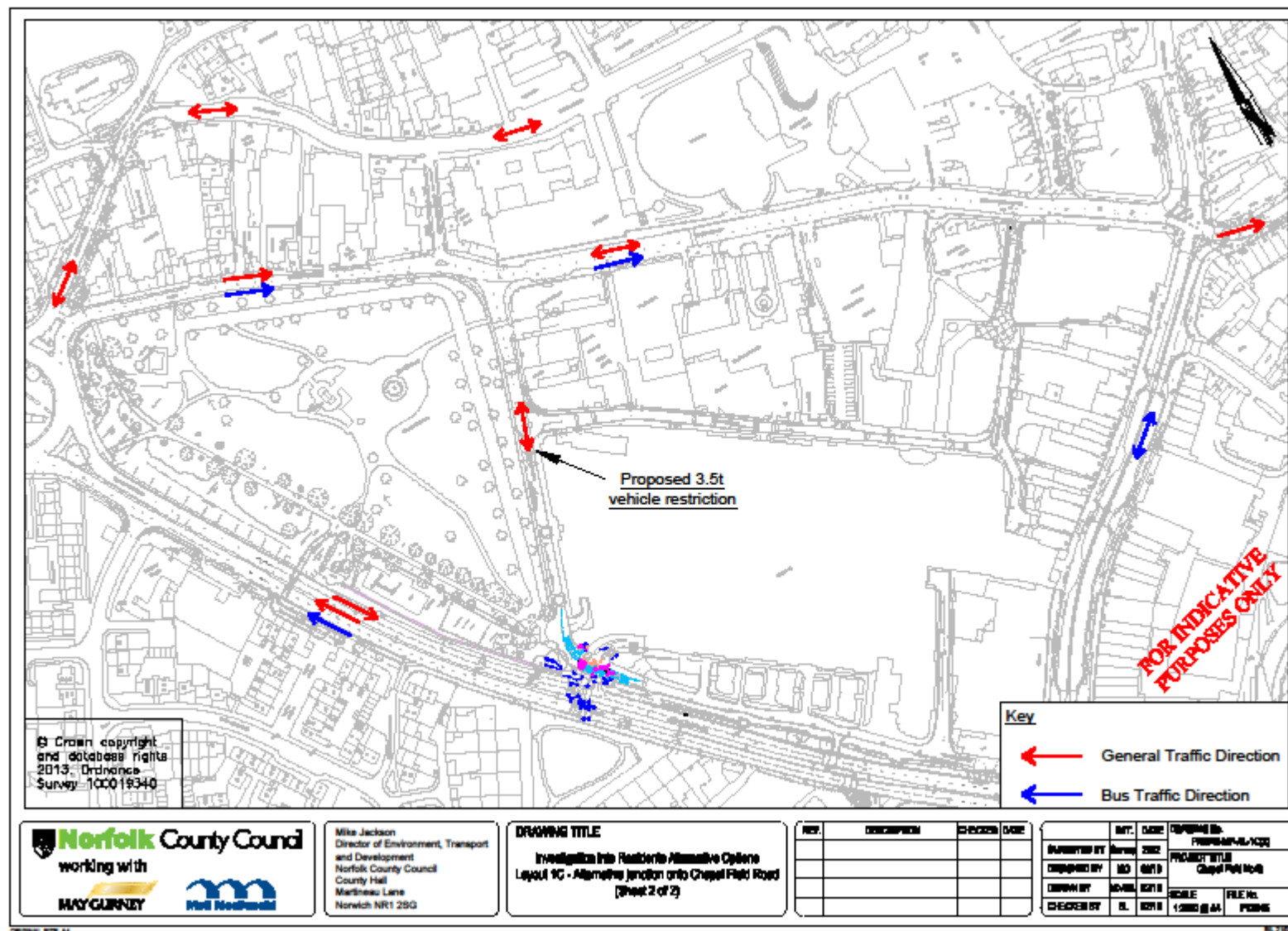
Appendix 3b – Plans of alternative proposals – Option 1b



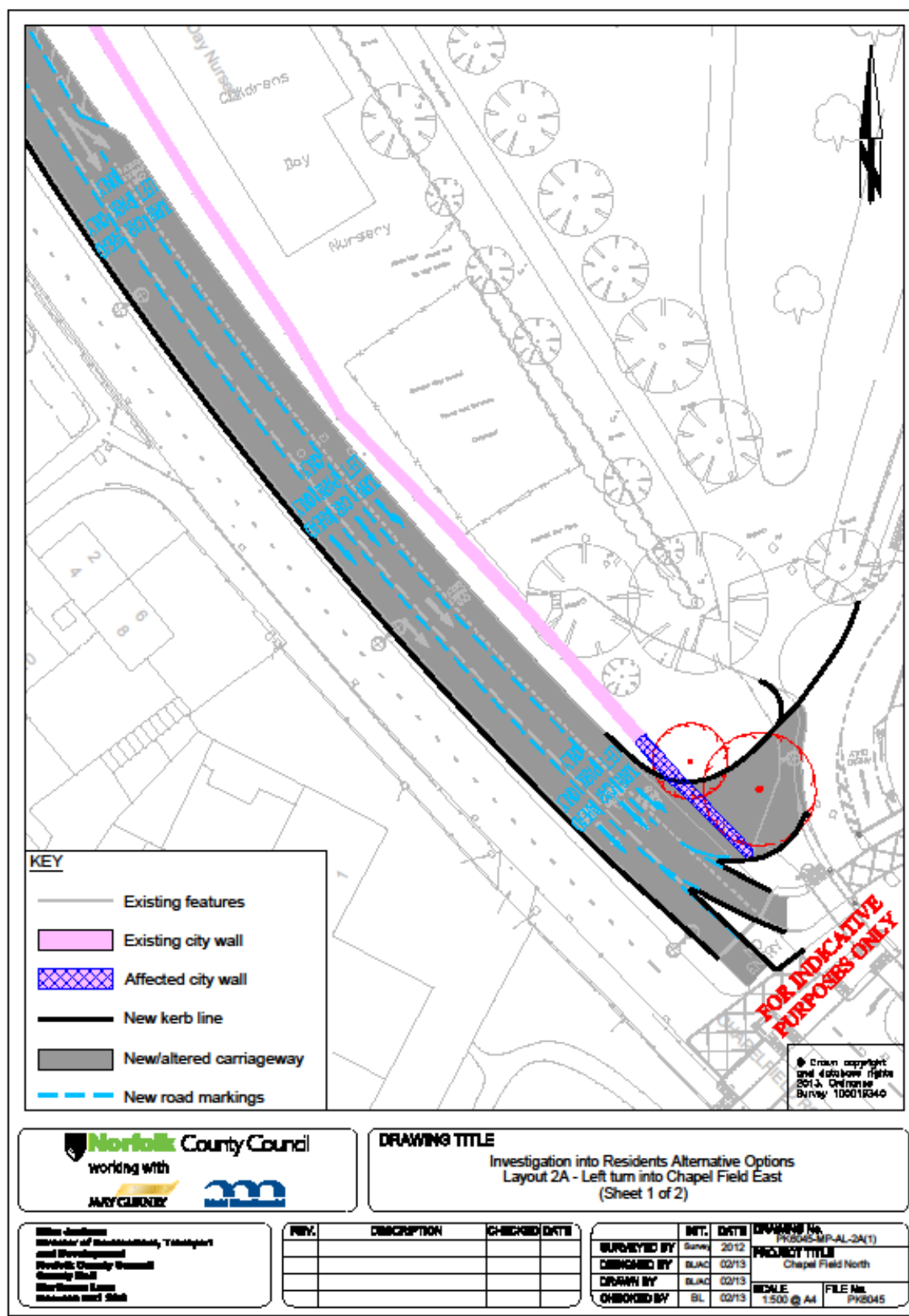
Appendix 3b – Plans of alternative proposals – Option 1c



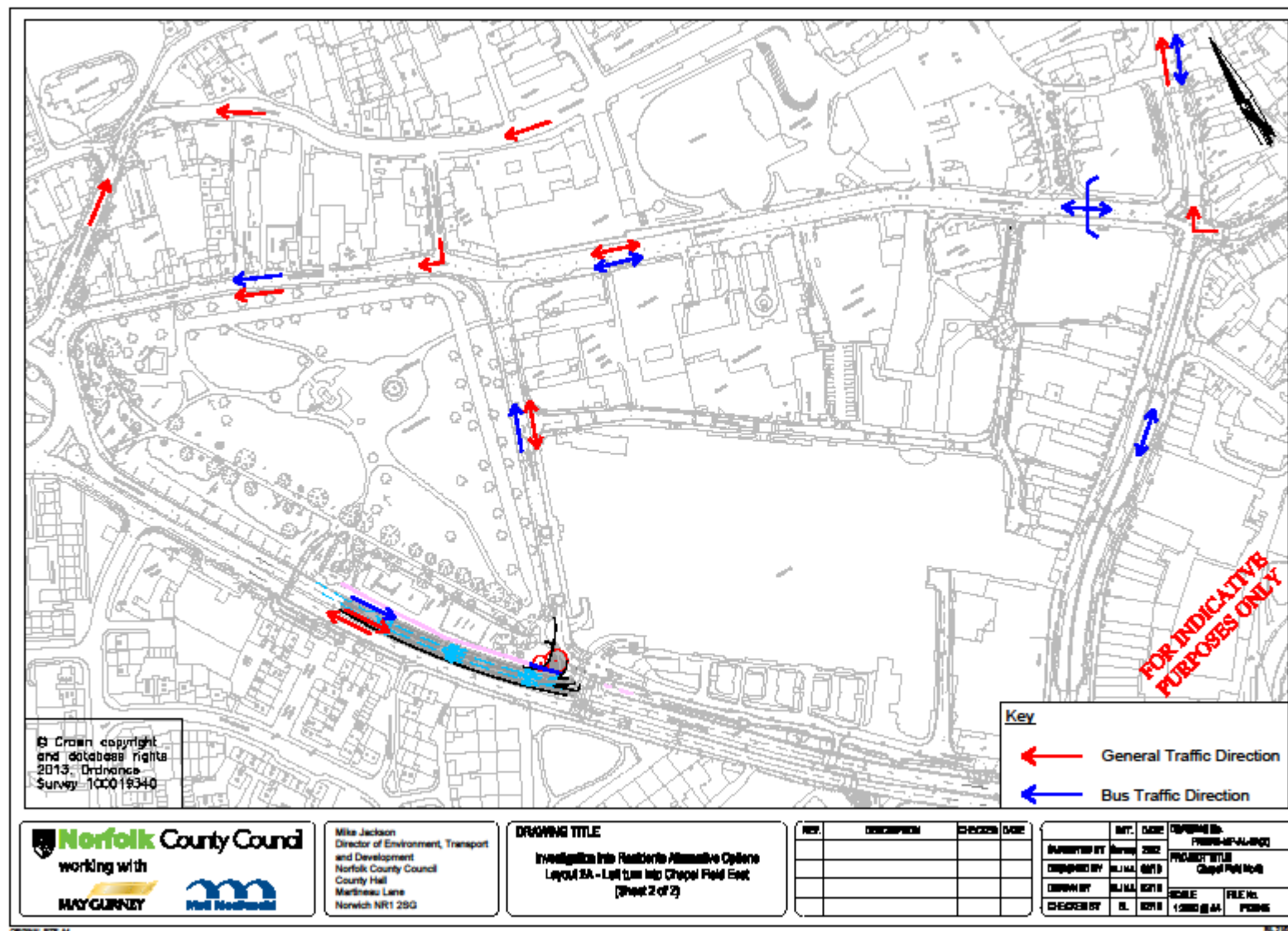
Appendix 3b – Plans of alternative proposals – Option 1c



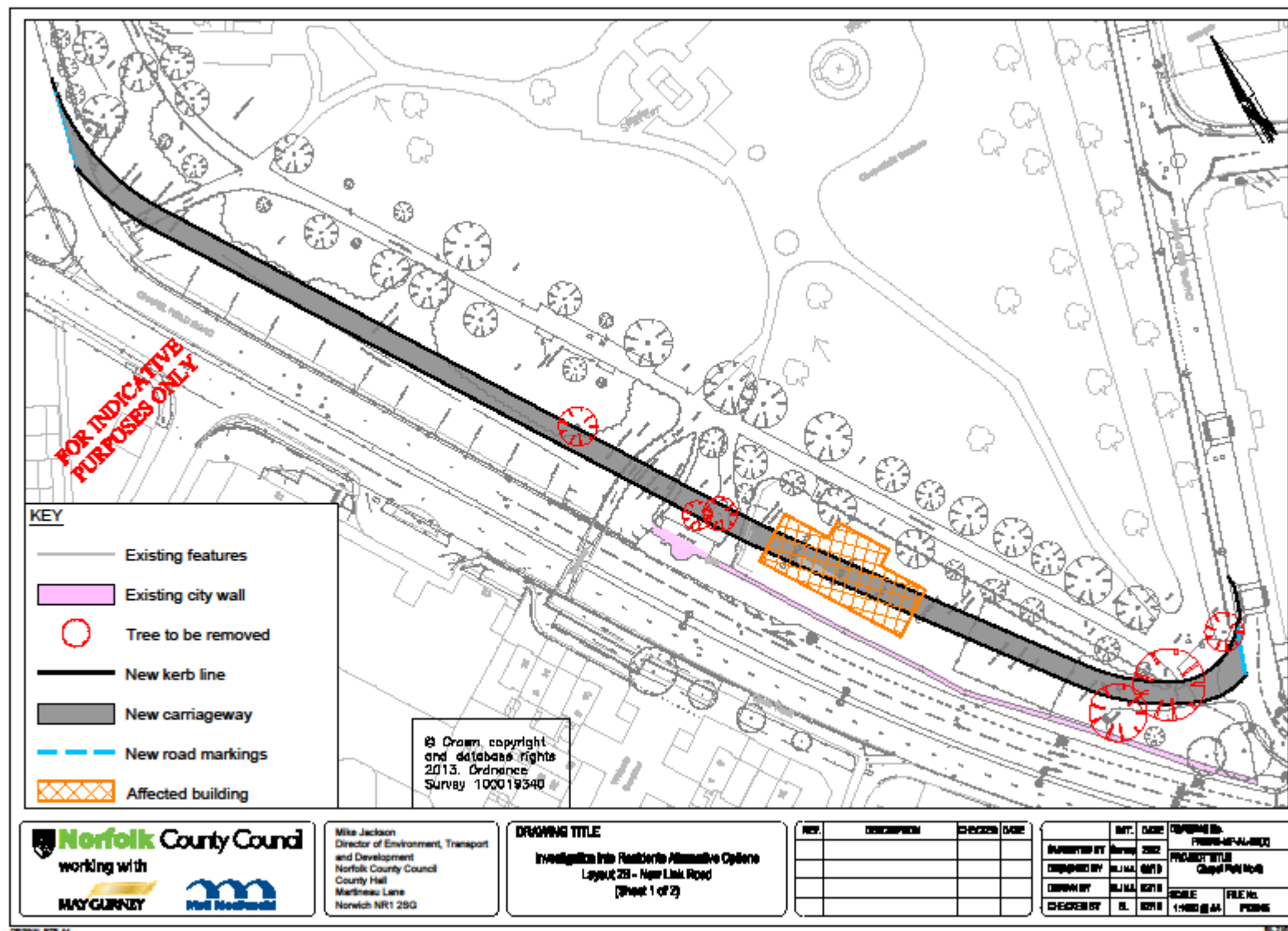
Appendix 3b – Plans of alternative proposals – Option 2b



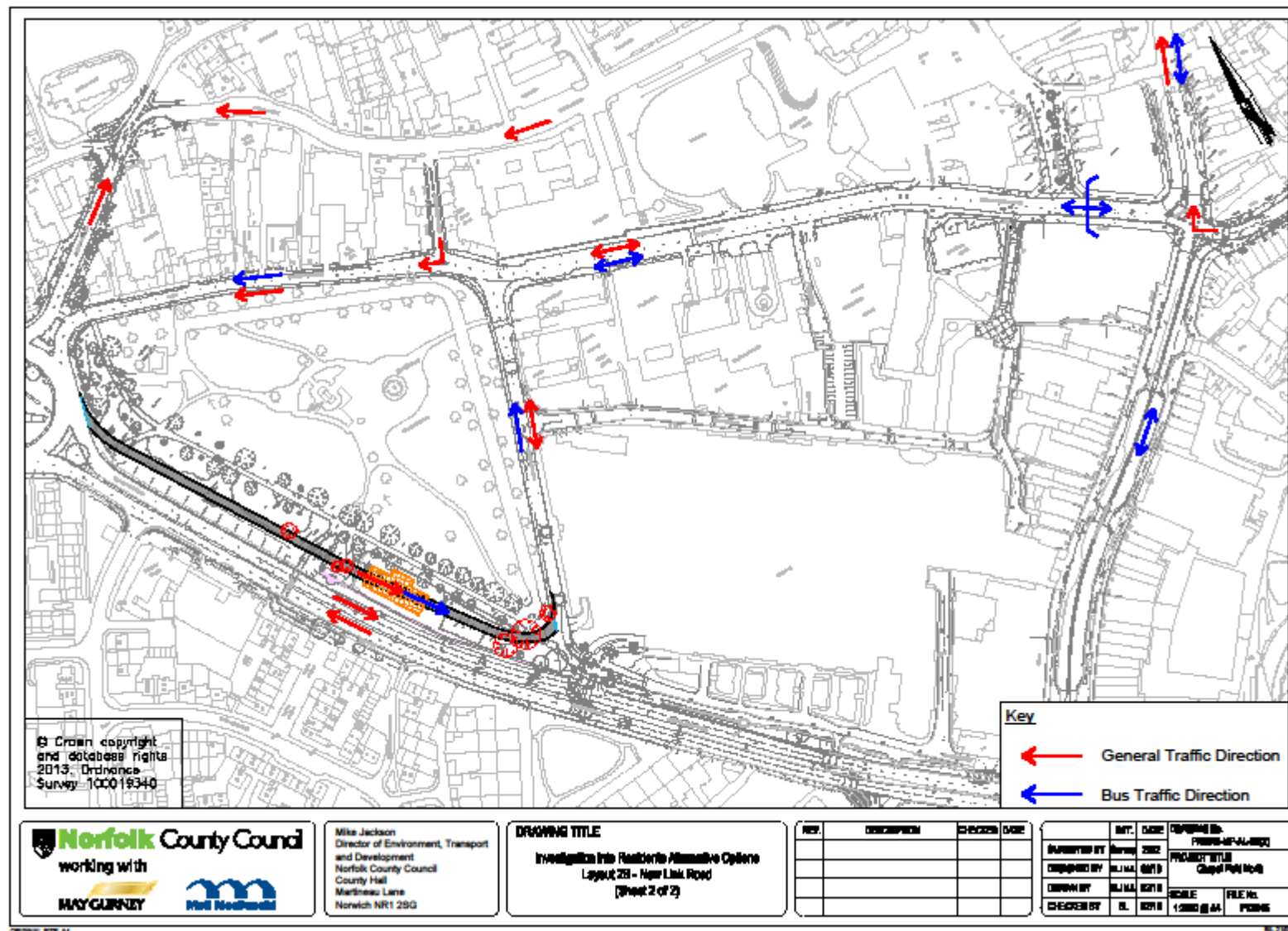
Appendix 3b – Plans of alternative proposals – Option 2b



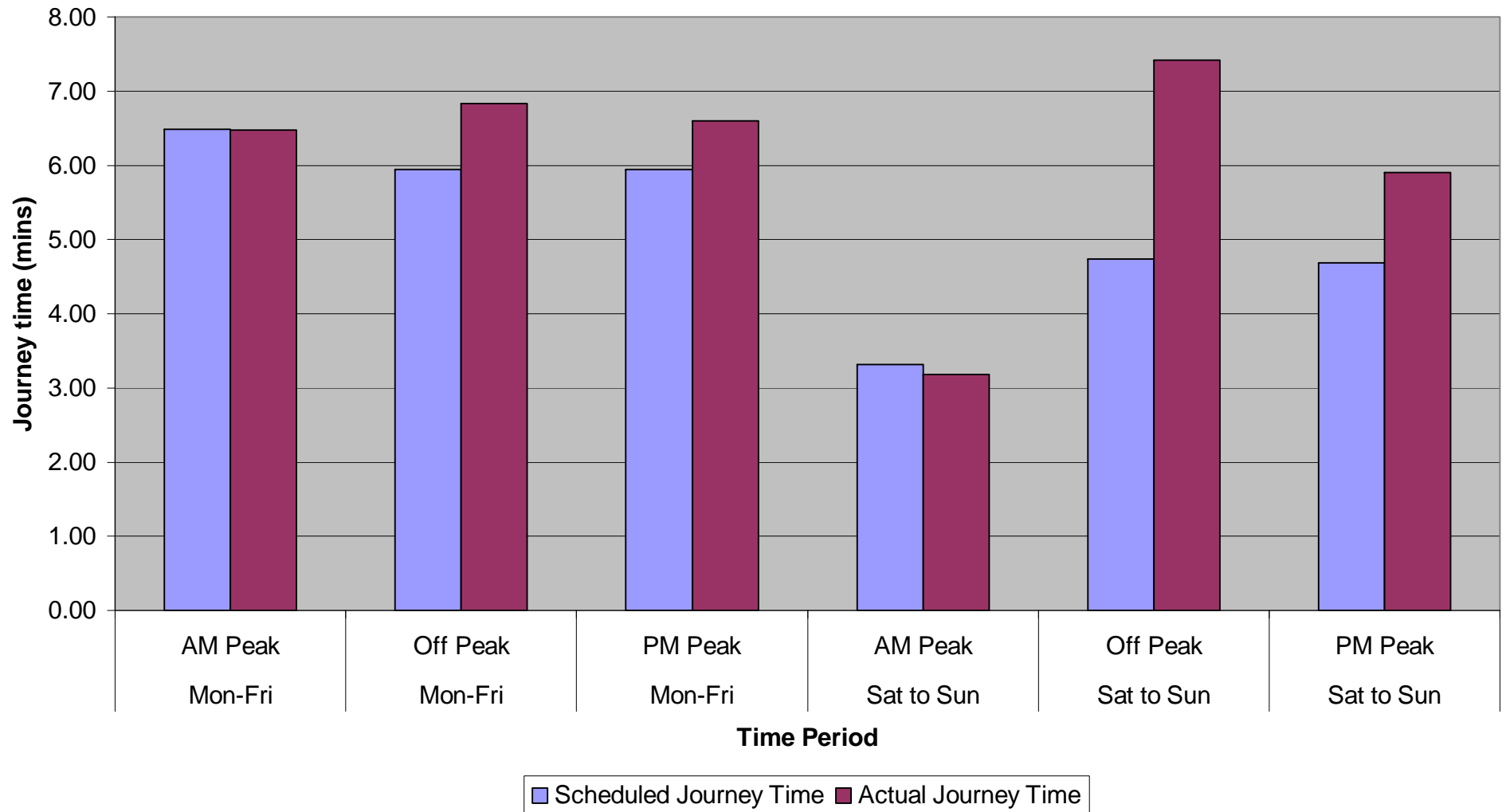
Appendix 3b – Plans of alternative proposals – Option 2b



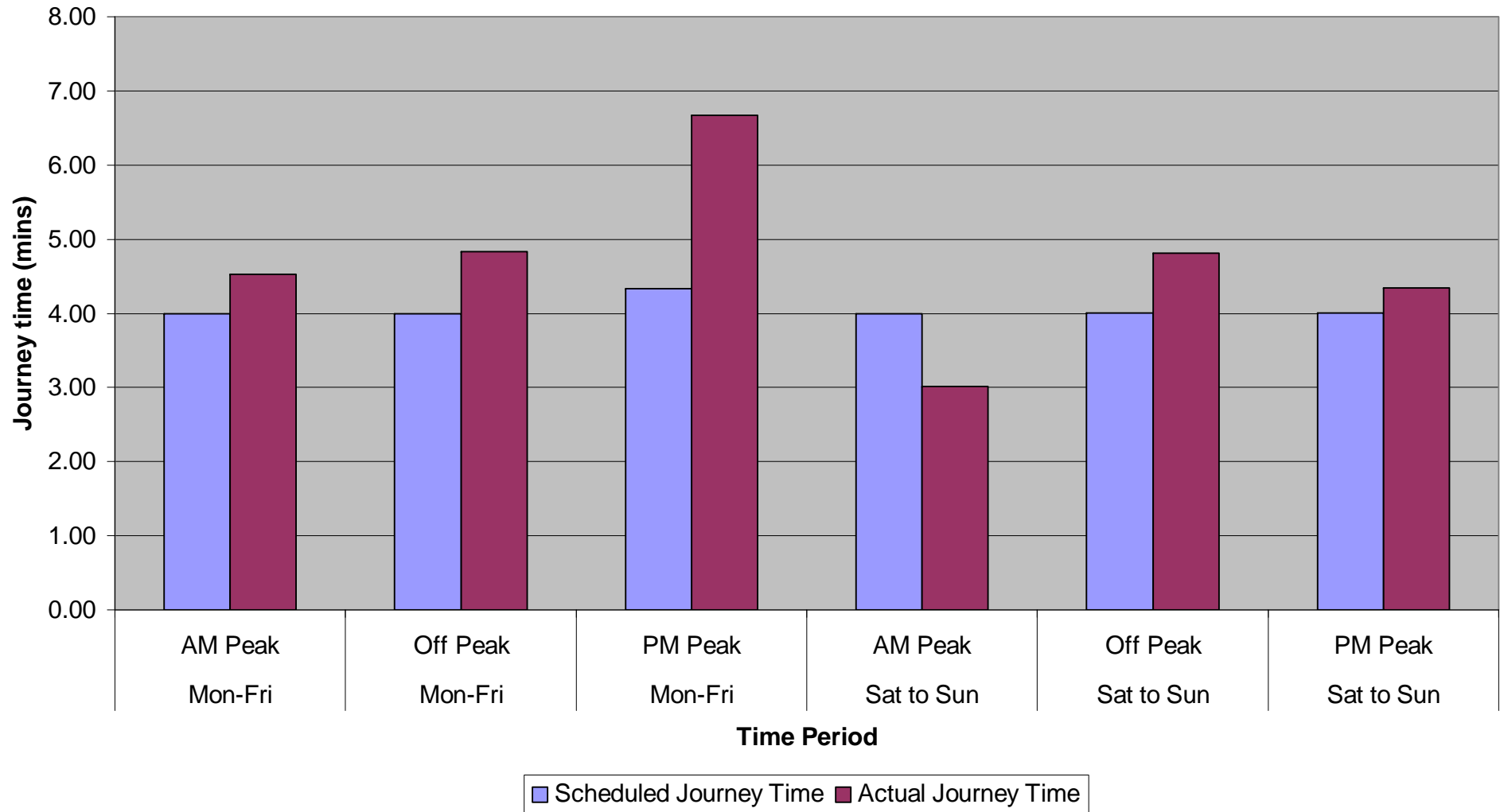
Appendix 3b – Plans of alternative proposals – Option 2b



Average Bus journey times - Chapel Field Road (eastbound) 2012



Average Bus journey times (westbound) - Chapel Field Road 2012



Report to	Scrutiny committee 21 February 2013	Item
Report of	Head of city development services	5
Subject	Process and procedure - St Stephens and Chapelfield highways scheme	

Purpose

To review the recent consultation on the proposed traffic changes in the city centre

Recommendation

To note the steps taken to engage with the local community on the recent consultation to change traffic circulation in the St Stephens Street and Chapel Field North area

Corporate and service priorities

The report helps to meet the corporate priority a safe and clean city, a prosperous city and a city of character and culture and the service plan priority of delivering the Norwich Area Transport Strategy.

Financial implications

None direct

Ward/s: Mancroft

Cabinet member: Councillor Bremner – Environment and development

Contact officers

Andy Watt, head of city development services	01603 212461
----------------------------------------------	--------------

Bruce Bentley, principal transport planner	01603 212445
--------------------------------------------	--------------

Jon Barnard, NATS manager, Norfolk County Council	07909 895214
---------------------------------------------------	--------------

Background documents

None

Report

Background

1. Residents of the Chapel Field North area have raised concerns with the Chair of this committee about the recent consultation on the proposals to change the traffic circulation in the St Stephens Street and Chapel Field North area. Their concerns are;
 - a) The consultation period was inadequate
 - b) Residents were not aware that the changes to traffic circulation in that area were planned
 - c) The supporting evidence for the proposals was inadequate
 - d) Confusion relating to membership of the Norwich Highways Agency Committee (NHAC) and the role of non – voting members.
2. They have also submitted a petition following that consultation objecting to the proposals and asking for a new consultation to be undertaken. The petition was signed by over 1500 people
3. The purpose of this report is to review the consultation and decision making process.

Addressing the residents' concerns

Formal consultations undertaken

4. Transportation policy across Norwich is set out in the Norwich Area Transportation Strategy (NATS) and the principles of the strategy were subject to a twelve week consultation in 2003. This established the idea of the Northern Distributor Road and the need to encourage people to walk, cycle and use public transport. While specific proposals for the city centre were not included, the idea of removing through traffic from the city centre was agreed as a principle.
5. In the autumn of 2009 there was a major consultation on the NATS implementation plan. This did include the details of the proposed changes to traffic movement in the city centre, including the proposals for St Stephens Street and Chapel Field North. This again was a twelve week consultation and a leaflet explaining all the proposals in the implementation plan was sent by Royal Mail to every household in the Norwich policy area. There was also a series of mobile exhibitions held throughout the Norwich policy area, with all venues widely publicised, with 2 days held outside The Forum. 11,000 responses were received to that consultation, with over 1,000 visitors to the exhibitions, and 73% of respondents supported the city centre measures. The NATS implementation plan was formally adopted in April 2010 by the county council.
6. Having established the principle of changes to traffic movement in the city centre through the NATS implementation plan consultation, it leaves specific schemes to be taken forward in accordance in accordance with relevant legislation. Statute (Road Traffic Regulation Act 1984) requires that there be a 21 day consultation on any Traffic Regulation Orders (TRO) that are needed to make changes to the use of the highway. The minimum requirement for consultation is that the proposed TRO must

Appendix 5 - Scrutiny Committee report and minutes

be advertised in a local paper and information given by one other means, such as putting notice up in the street.

7. The consultation that was undertaken for the scheme in question lasted for longer than the statutory requirement at 28 days, commencing 5 November 2012. Officers wrote to 894 households and 695 businesses in the areas directly affected by the proposals informing them that the consultation was underway and directing them to the city council website for full information on the scheme. 2000 flyers were distributed to bus operators for them to make available to their passengers alerting them to the consultation, and the electronic message screens in city centre bus stops also alerted passengers to the consultation. Two meetings were held with members of the public living close to the Chapelfield proposals. Whilst the formal consultation period lasted 28 days, representations were received and accepted after the 'closing date' and these were both considered and reported in the January NHAC report.

Informal consultations

8. When the details of the Chapel Field North scheme were being developed in the spring of 2011, the project manager met with representatives of a range of interest groups and businesses, including the Chapelfield Society, to discuss the proposals.
9. The proposals received coverage in the local media, both at the time of the formal consultation and when the two reports to NHAC were considered; first in May 2011 and then September 2012.

Supporting evidence

10. The evidence and data supplied with the consultation is extensive and includes traffic modelling data, including bus and HGV numbers, casualty statistics, a noise and vibration report, an equality impact assessment and an environmental impact screening opinion. Following concerns raised by residents an air quality report was commissioned and made available to the residents before NHAC considered the scheme in January. In the report to NHAC reference is made to this information in discussion to fully address concerns raised by consultees.
11. Residents have questioned why no traffic data is provided for Bethel Street and Exchange Street. This is because the county council's strategic traffic model is designed primarily to model traffic on the main road network. Reconfiguring the traffic model to analyse detailed traffic flows would be expensive and time consuming, and cannot be justified given that the changes in flows on Bethel Street are not significant.
12. No formal environmental impact assessment (EIA) has been completed for the proposals. The guidance for EIAs says that schemes should not be broken down into different elements but they should be treated as one entity. The screening opinion concluded that a full EIA was not needed for the scheme, although there has been environmental assessment of specific issues that might affect Chapelfield Gardens and Chapel Field North

Democratic process

Appendix 5 - Scrutiny Committee report and minutes

13. Norfolk County Council is the highway authority for Norwich and the city council has an agency agreement to undertake the majority of highway powers in the city on its behalf. As highway authority the county council is responsible for determining the transport strategy for the city. Highways and transportation functions of the county council are exercised in the city by a joint committee with the city council, i.e. NHAC. This committee is made up of two county council members and two city council members. One of the county members chairs the committee and the vice-chair is one of the city members. In addition, the committee is advised and assisted by three non-voting members from each of the two councils.
14. Across the rest of Norfolk the responsibility for determining whether a traffic scheme should be implemented rests ultimately with the relevant cabinet member. Such a system was considered not to be appropriate for the city when NHAC was set up in 1996.

Conclusions

15. This report demonstrates the comprehensive efforts made to engage with the residents and businesses in shaping both the transport strategy as a whole and the delivery of the St Stephens Street and Chapel Field North schemes. The consultation process in relation to the latter exceeds what is required by statute and background evidence for the proposals has been made freely available to the public.
16. The scheme has been debated in a public arena at the Norwich Highways Agency Committee on the 24 January where members asked for the scheme to be deferred to 21 March to allow officers more time to consider the alternative proposals put forward by local residents and to check some of the technical data that the residents were querying. This deferral demonstrates the commitment of NHAC to ensure that the proposals are fully considered and that the residents concerns are heard.

Extract from the minutes of the committee relating to this item

4. PROCESS AND PROCEDURE- ST STEPHENS AND CHAPELFIELD HIGHWAYS SCHEME

(John Barnard, City Agency (NATS) Manager, from Norfolk County Council attended the meeting for this item.)

Members were reminded that in accordance with scrutiny procedure rule, this item had been placed on the agenda by the chair so that the committee could deal with questions that had been raised by the public in relation to the council's process and procedures for the recent consultation on proposed traffic changes in the city centre. The chair reminded the committee that the purpose of the item was to review the process involved in the consultation and not to comment on the proposals.

The deputy chief executive presented the report. Members were also given a timeline showing the consultation process and the tasks carried out. He reminded the committee that Norfolk County Council were responsible for highways but had delegated certain functions within this to Norwich City Council. Reports on vibrations were commissioned following resident's concerns and were available during the consultation period. A further report on air quality was also commissioned following further concerns raised. These

Appendix 5 - Scrutiny Committee report and minutes

were considered at the Norwich Highways Agency committee (NHAC) meeting held on the 24 January 2013 and as is standard practice, all objections were also reported to the committee. It was a public meeting with minutes published on the Norwich City Council website. The portfolio holder had also agreed to meet with residents who had concerns about the scheme to ensure that as many views were captured as possible.

In response to a question from a member, the principal planner (transport) explained that there were an additional seven days added onto the statutory consultation period for a number of reasons. There was an exhibition held in the Forum which was transferred to City Hall. At the end of the consultation, time was built in for a report to NHAC to be produced. The decision was to be made at the NHAC meeting and the meeting was publicised in the usual ways and also as part of the exhibition.

A member questioned the need for an Environmental Impact Assessment (EIA) and the reasons for not making the Bethel Street data available. The principal planner (transport) explained that the traffic model used grouped Bethel Street and St Giles Street into one data stream and it was not feasible to separate the two. He explained that EIAs were necessary for large scale projects only but that after residents had suggested an EIA was needed, a screening opinion had been undertaken. This concluded that there was no requirement to conduct an EIA.

All residents and businesses in the area were contacted in writing to inform them of the consultation and this included the emergency services. There were also articles in the newspaper and radio items about the consultation. The committee were reminded that the affected area is mainly a commercial area.

A member raised a question regarding the process for receiving alternative proposals to the scheme. The deputy chief executive explained that the decision had been deferred by NHAC. This was to fully evaluate the alternative proposals that have been submitted by residents. The members voted with ten for and three abstentions on the resolution below:

RESOLVED having considered the information in this report and presented at the meeting, the committee is content with the process that has been followed.