

Fakenham Network Improvement Strategy April 2020



Norfolk County Council

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Executive Summary

The Fakenham Network Improvement Strategy (FNIS) in collaboration with stakeholders has identified potential measures to help address existing transport network constraints and transport improvements to facilitate the growth identified in the emerging Local Plan, which recently completed a first round of consultation at the end of June 2019. The emerging Local Plan runs to 2036 and the proposals in this strategy will help sustainably deliver the growth identified by North Norfolk District Council during this period.

Various activities were undertaken to gather evidence/information to compile the FNIS: Internal meeting with officers across a range of departments, external stakeholder workshop and scoping of potential study work to identify priorities. This feedback generated a list of seven objectives the FNIS would need to address:

- Review the location of bus stops along Oak Street
- Propose improvements to relieve congestion at the Creake Rd/A148/A1065/Wells Rd roundabout
- Study the effect on pedestrians of the relocation of traffic island near Pensthorpe Road/George Edward Road junction
- Propose alternative layout to the Thorpland Rd/Greenway Ln/Holt Rd junction
- Map cycle networks and key pedestrian routes between major origins and destinations. Identify any major issues, e.g. lack of crossing points or direct routes
- Signage assessment
- Review of parking bays opposite HSBC

Consultants were then commissioned to produce reports on the above issues, including traffic surveys for tasks 2,3 and 4.

This work produced some key findings:

- Data shows that there is potential for at least 42% of usual residents to use active travel modes to get to work, versus the current 24%.
- The data indicates that implementing the lane marking changes on the A148 could considerably improve the performance of the Creake Rd/A148/A1065/Wells Rd roundabout.
- The market is located within a 25-minute walk to almost all of Fakenham
- It is recommended that greater clarity of signage is provided for vehicles approaching Fakenham from the east (A148) and (A1067).

Based on the feedback from stakeholders and findings from the study work the action plan recommends areas where consideration should be given in the form of short, medium- and long-term actions and will help with the objective of drawing people into Fakenham Town Centre. NCC has funding committed to the delivery of short term schemes that can be delivered within the next two years. Given the nature of funding using NCC led proposals would allow for schemes to be delivered within the time allocation. In the medium and longer term it will be critical for NCC to work collaboratively with local partners to deliver on other opportunities.

Time period	Creake Rd/A148/A1065/Wells Rd Roundabout Assessment	Relocation of traffic island near Pensthorpe Road/George Edward Road junction	Propose alternative layout to the Thorpland Rd/Greenway Ln/Holt Rd junction	Cycling and Walking Corridors	Signage Strategy
Short term	Norfolk County Council and partners to develop scheme to alter lane markings as suggested and pursue funding through the County Councils capital programme.	NCC to consider the relocation of the existing bus stop to a more suitable location, possibly west of the junction with George Edwards Road or further to the east.	Norfolk County Council and partners to identify potential funding opportunities for feasibility work to develop mini roundabout scheme further.	Norfolk County Council and partners to develop splitter island crossing A1065 connecting cycle corridor one to the Wensum Walk and pursue funding through various opportunities including new development.	Highways Authority to provide costings and timeline of potential sign changes.
Medium term	Norfolk County Council to monitor the traffic movements at the roundabout post any lane marking changes and assess if changes have made anticipated improvement.	Norfolk County Council and partners to develop scheme to relocate traffic island and pursue funding through various opportunities including new development.	Norfolk County Council and partners to develop scheme to develop mini-roundabout scheme and pursue funding through various opportunities including new development.	Norfolk County Council and partners to identify potential funding opportunities for feasibility work to progress section improvements set out in WSP Cycle Corridors study for cycle corridor option one.	Norfolk County Council and partners to develop scheme to provide signage changes and pursue funding through various opportunities including new development.
Long term	Additional land would be required to deliver a segregated left turn on the A148 arm, this will be a longer-term aspiration linked to the delivery of growth to the north of the town.			The cycle corridor option one section improvements are developed into schemes that can then be used as projects when seeking contributions from new development or external funding opportunities.	

Chapter 1 Introduction

Norfolk has a population of around 891,000 people. The majority live in Norwich and the 21 market towns both in land and along the coast. Market towns act as a service centre to their surrounding rural populations within the rural county. Norfolk's Market Towns are also employment centres, commuter towns, retirement centres and/ or shopping destinations many retain a historic core and are generally supported by seasonal tourism.

A number of market towns still hold regular markets however some have suffered in recent years due to online shopping and the decline of agriculture or other significant industries (e.g. fishing and textiles). The environment the town provides for people to live, work, shop and move about in, the very basis of modern human activity, is fundamental to how a town functions for those who use it.

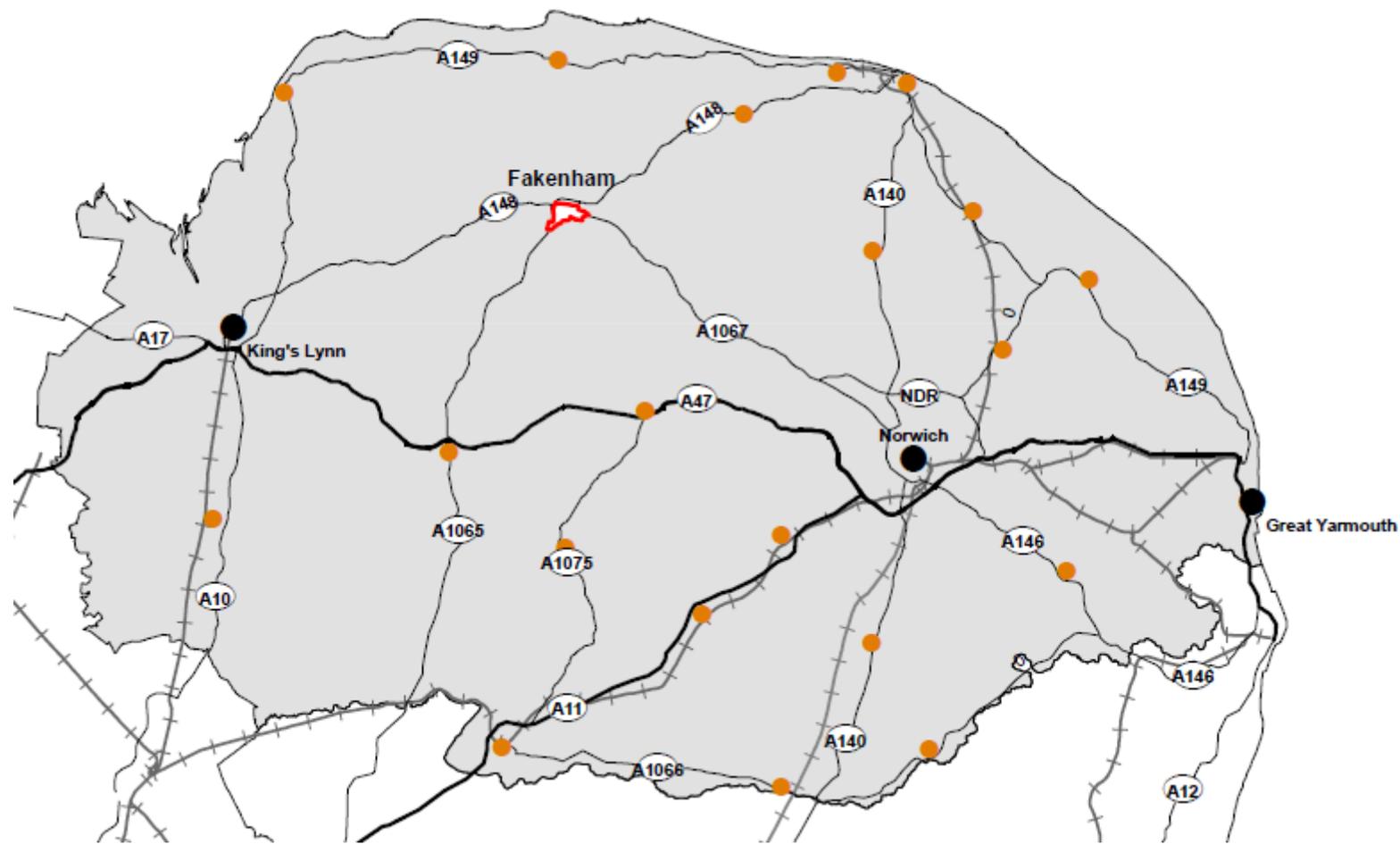
Norfolk County Council is undertaking a series of transport network improvement strategies in the market towns to examine current and future issues within the town and understand the role that transport infrastructure can have in ensuring that towns continue to thrive. These network improvement strategies will look at short medium and long term interventions and provide evidence to inform longer term planning policy making.

Fakenham

Fakenham is situated adjacent on the A148 approximately halfway between King's Lynn (23 miles to the south west) and Cromer (23 miles to the north east). Fakenham is also located circa 25 miles north of Norwich (via the A1067). It has the seventh highest market town numbers of people in employment and fourth highest workday population. In total Fakenham has a population of over 7,700 people with around 4,700 of working age and has seen and has seen over 350 homes completed since 2001. There is also a planning permission currently being determined for an additional 950 homes to the north of the town.

Of the 7,700 people living in Fakenham 71% travel to work by Car and 4% cycle. In addition to housing and employment Fakenham has the potential for a vibrant high street with a historic core meaning the transport network not only needs to connect people in and out of the town for work but also needs to move people within the town so they can easily access services and amenities. Norfolk County Council's Norfolk Market Town report 2018 identifies Fakenham as having the seventh largest market town centre and vacant units have consistently decreased in the last five years from 11 to 7 and are in line with the Norfolk vacancy rate average. Feedback from the external workshop highlighted the importance of any transport improvements drawing people to the town centre.

Map of Fakenham and location in Norfolk



Chapter 2: Strategy and Policy Context

The following policies and strategies have been identified as setting the context and baseline for this Network Improvement Strategy

National Policy

The new National Planning Policy Framework (NPPF) July 2018 sets out the purpose of the planning system is to contribute to the achievement of sustainable development, meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Section 9 of the NPPF directly refers to promoting sustainable transport and Para 102. Sets out the various transport issues that should be considered as a part of plan making and development proposals, so that:

- The impact of development on transport networks being addressed
- Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised
- Opportunities to promote walking, cycling and public transport use are identified and pursued
- the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account

There is also a chapter dedicated to ensuring town centre vitality stating that “Planning policies and decisions should support the role that town centres play at the heart of local communities, by taking a positive approach to their growth, management and adaptation”. A range of considerations are set out in paragraph 85 with some being of particular relevance to this strategy:

- promote their long-term vitality and viability
- centres can grow and diversify in a way that can respond to rapid changes
- town centres are accessible and well connected

National policy recognises the importance of towns acting as service centres particularly in rural areas serving both the local and tourist population.

Norfolk and Suffolk Economic Strategy

The Norfolk and Suffolk Economic Strategy identifies the following sectors as being key to the Norfolk economy: energy, life sciences and biotech, ICT, tech and digital creative, advanced agriculture, food and drink, financial services and insurance, visitor economy- tourism, heritage and culture, transport, freight and logistics, construction and development and advanced manufacturing and engineering.

Local Transport Plan 3

Norfolk's 3rd Local Transport Plan, Connecting Norfolk, sets out the strategy and policy framework for transport up to 2026. This will be used as a guide for transport investment in Norfolk as well as considered by other agencies when determining planning or delivery decisions. The strategy is accompanied by an implementation plan, setting out the measures to be delivered over the short term. Connecting Norfolk is driven by the views of local people and stakeholders and addresses the challenges we face in Norfolk. Our transport vision is:

"A transport system that allows residents and visitors a range of low carbon options to meet their transport needs and attracts and retains business investment in the county".

Six strategic aims underpin the vision, they are: maintaining and managing the highway network; delivering sustainable growth; enhancing strategic connections; reducing emissions; improving road safety; and improving accessibility.

North Norfolk Local Plan Policy

North Norfolk District Council currently has an adopted Core Strategy identifying where, when, how much and how new development will take place in North Norfolk up to 2021. The District Council is now in the process of preparing a new Local Plan, which will plan positively for the development and infrastructure that communities need, setting out the strategic priorities for North Norfolk to 2036. The first round of consultation on the new Local Plan was completed at the end of June 2019.

The adopted Core Strategy sets out a strategic vision for North Norfolk which includes the following:

- North Norfolk's seven towns will be the focus for development and emphasis on residential development that maximises the provision of affordable housing and facilitates both the creation of new business activity and the expansion of established businesses.
- Important open spaces will be protected and new opportunities for leisure and recreation will have been provided, for example by enhancing links between settlements and the surrounding countryside.
- Improve the commercial health of town centres and enhance their vitality and viability consistent with their role and character.
- Improve access to key services by public transport and facilitate increased walking and cycling.

The following policies have the most relevance to the Fakenham Network Improvement Strategy:

- Policy SS 6 Access and Infrastructure - New development should create convenient and attractive links within development and to the surrounding area, assist with creation of a network of accessible greenspace and provide links to public transport and walking and cycling networks.

- Policy EC 5 Location of retail and commercial leisure development - proposed development would be accessible by a choice of means of transport, including public transport, walking, cycling and the car.
- Policy CT 5 The transport impact of new development - Development will be designed to reduce the need to travel and to maximise the use of sustainable forms of transport appropriate to its particular location.
- Policy SS 5 Economy - The role of town centres as a focus for a broad range of shopping, commercial, cultural and other uses will be supported.

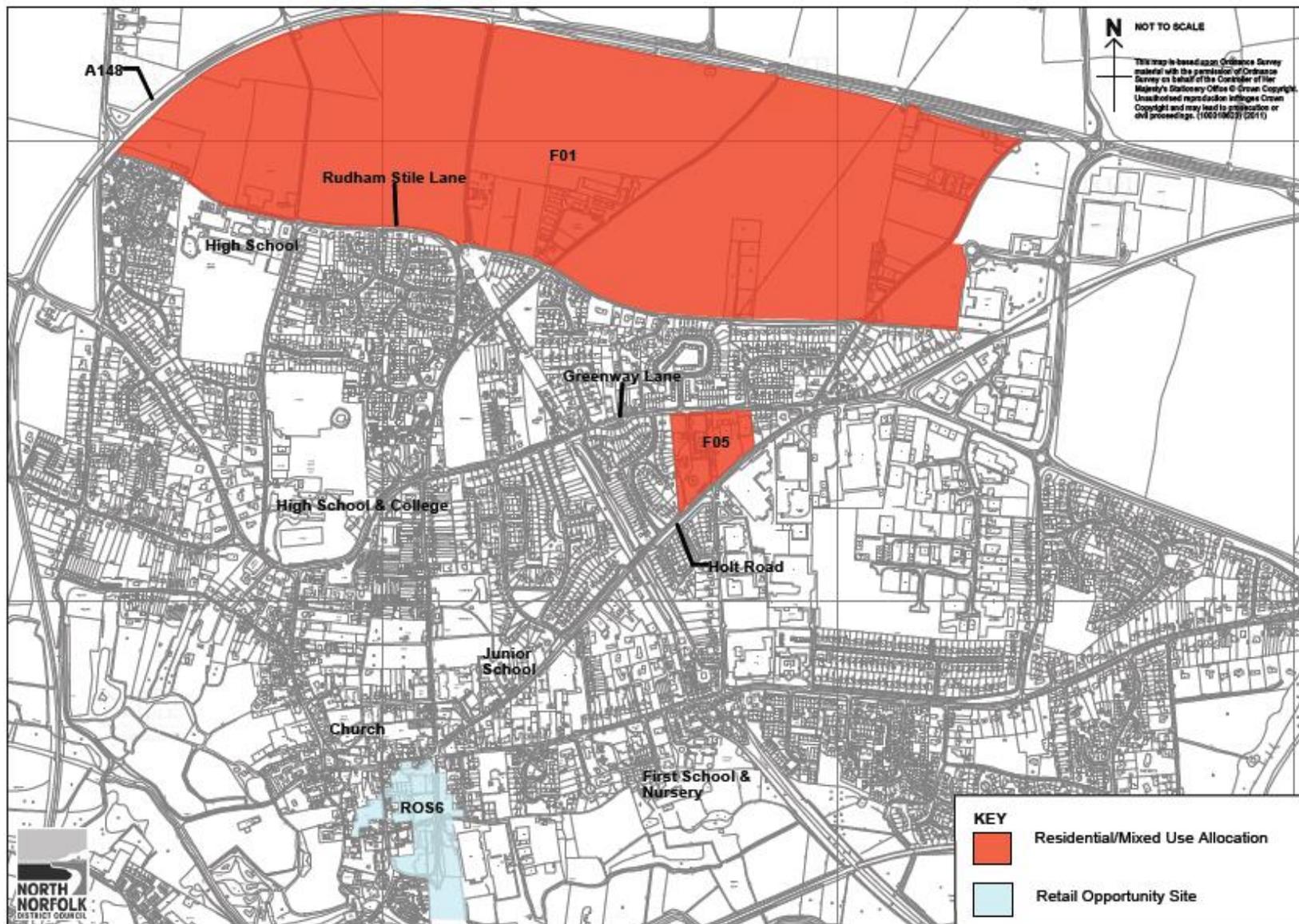
The adopted Core Strategy allocates 800-900 houses and 59 hectares of employment land in Fakenham.

Work complete, underway or planned

In addition to the Plans and Strategies, other work has been undertaken or is ongoing.

- North Norfolk Market Town Initiative - each market town (Fakenham, Holt, North Walsham and Stalham) were given a ring-fenced budget of up to £100,000 for the financial year 2018/19 to spend on locally owned and managed projects. Three projects were successful in Fakenham <https://www.north-norfolk.gov.uk/news/2018/market-towns-initiative-nine-projects-to-improve-four-north-norfolk-market-towns-approved/>
- North Norfolk District Council have successfully submitted a bid to the Business Rates Pool securing funding to assist in the delivery of a roundabout, which will accelerate the proposed housing development for 900 homes.
- A potential improvement has been identified to enhance any new roundabout, which will come forward as part of the development to the north of the town. As part of the enhanced roundabout scheme was suggested improvements to the Wells/Walsingham Road. The scheme involved closing the B1105 Barsham Road/Wells Road and instead traffic would be diverted along a minor road, which would be appropriately improved/widened, from the crossroads of the B1105/dry road/Walsingham road. This minor road, also called Wells Road, joins the bypass east of the existing junction with Water Moor Lane at the point that the housing developers would be building a new roundabout as part of the large development to the north of Fakenham. To achieve these benefits this new roundabout would need to be made bigger than currently proposed.

Figure 6.1: North Norfolk Core Strategy Fakenham allocations



Chapter 3: Fakenham Background

Fakenham is situated adjacent on the A148 approximately halfway between King's Lynn (23 miles to the south west) and Cromer (23 miles to the north east).

Fakenham is also located circa 25 miles north of Norwich (via the A1067). The town has links to the North Norfolk coasts via the A148 and is 38 minutes from King's Lynn which then links to the Midlands.

The town layout can be divided approximately into three areas. The historic town centre has a historic core with narrow streets which limits the potential for high volume transport movements and the ability to segregate different transport modes, the industrial, commercial and further retail areas are to the east of the town and the remaining residential areas which include various schools are located centrally and to the north.

The 2011 census showed Fakenham has a population of over 7,700 people with the majority (46.7%) falling into the 25-64 age category. The town also has a similar percentage of residents aged 65 and over (43.8%). The 2011 census showed that over 2,800 households have access to at least one car or van, but this does mean over 18% of the population will be using other modes of transport for travel.

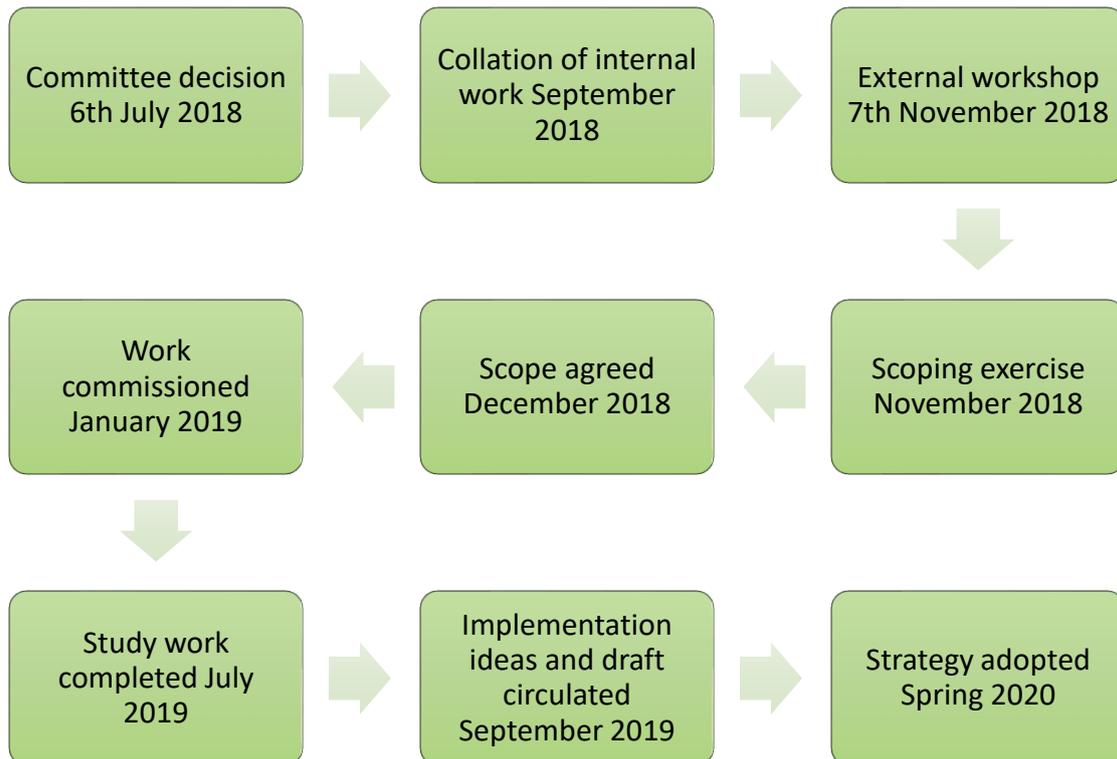
The 2011 census showed majority of residents (73%) chose to travel to work by car, as a passenger or driver, however, the next largest proportion of people chose to travel by active modes, with walking and cycling accounting for 24%. Whilst there is reliance on private cars for travel to work the large number of residents that choose to walk, and cycle supports the need to improve the existing cycle and walking routes to encourage a future increase in the modal share.

According to the 2011 Census, 39% of usual residents in Fakenham travel less than 2km to work (<25 minutes walking distance) and 42% travel less than 5km (<15 minutes cycling distance). This shows that there is potential for at least 42% of usual residents to use active travel modes to get to work, versus the current 24%.

The primary traffic routes through the town are Norwich Road, Pensthorpe Road, Holt Road and Wells Road. The A148 acts as a major barrier between the centre of Fakenham and surrounding villages with limited crossing points. Using congestion mapping the key areas for congestion in the AM peak are Bridge Street/Swan Street, Queens Road/Greenway Lane, Pensthorpe Road/George Edwards Road and the approaches to the Creake Road/ A148/ A1065/ Wells Road roundabout. The PM peak shows similar patterns of congestion but with congestion also along Lancaster Avenue and The Drift.

Chapter 4: Programme of activity

The purpose of the network improvement strategies is to identify issues built on a strong evidence base and help to bring forward solutions that support the delivery of future housing and jobs growth. To develop the understanding of the transport issues in Fakenham, Norfolk County Council held stakeholder workshops, carried out site visits and liaised with Highways colleagues to gather a range of views/feedback on which to base the strategy. The programme of activity and timeline of events is set out below.



Chapter 4 summarises the scope items, what work is already underway and suggestions for potential further study work. These potential further study work options are based on the feedback received from the external workshop and the view from officers as to what would best benefit the town.

A key message from the external workshop session was the objective of any transport improvements increasing visitors to the town centre, issues raised were around a lack of signage to the town, ensuring visitors are directed on the most efficient routes to car park and attractors and the difficulties of cycling/walking into the town where there is a need to cross the bypass.

Chapter 5: Transport in Fakenham today

As set out in Chapter 3, Norfolk County Council's Environment, Development and Transport Committee agreed to the second tranche of market town studies in July 2018. Members agreed in 2017 that the reports would: understand current transport problems and issues; understand the future situation (principally growth proposals and their impacts on transport); and develop an implementation plan. Committee agreed the scope of issues that would be looked at in the studies. This chapter provides a summary of each item set out in the scope and what the relevant issues and concerns are in Fakenham. This also includes areas where there isn't a transport issue or where further work is not proposed. It sets out the scope item ranging from casualties, parking, congestion, cycling and public transport. For each of these what work is already underway and the potential further work options.

Casualties

Norfolk County Council Highways team provided information on cyclist, motor traffic and pedestrian collisions where these resulted in an injury. (The police only compile records of injury collisions since there is a requirement that these are reported in law. No record is maintained for collisions where no injury resulted, e.g. minor bumps.) The number of the collisions across the three modes of transport are typical for a market town and the maps below identify both slight and serious injuries.

Figure 5.1 Collisions involving cyclists in the central and east area

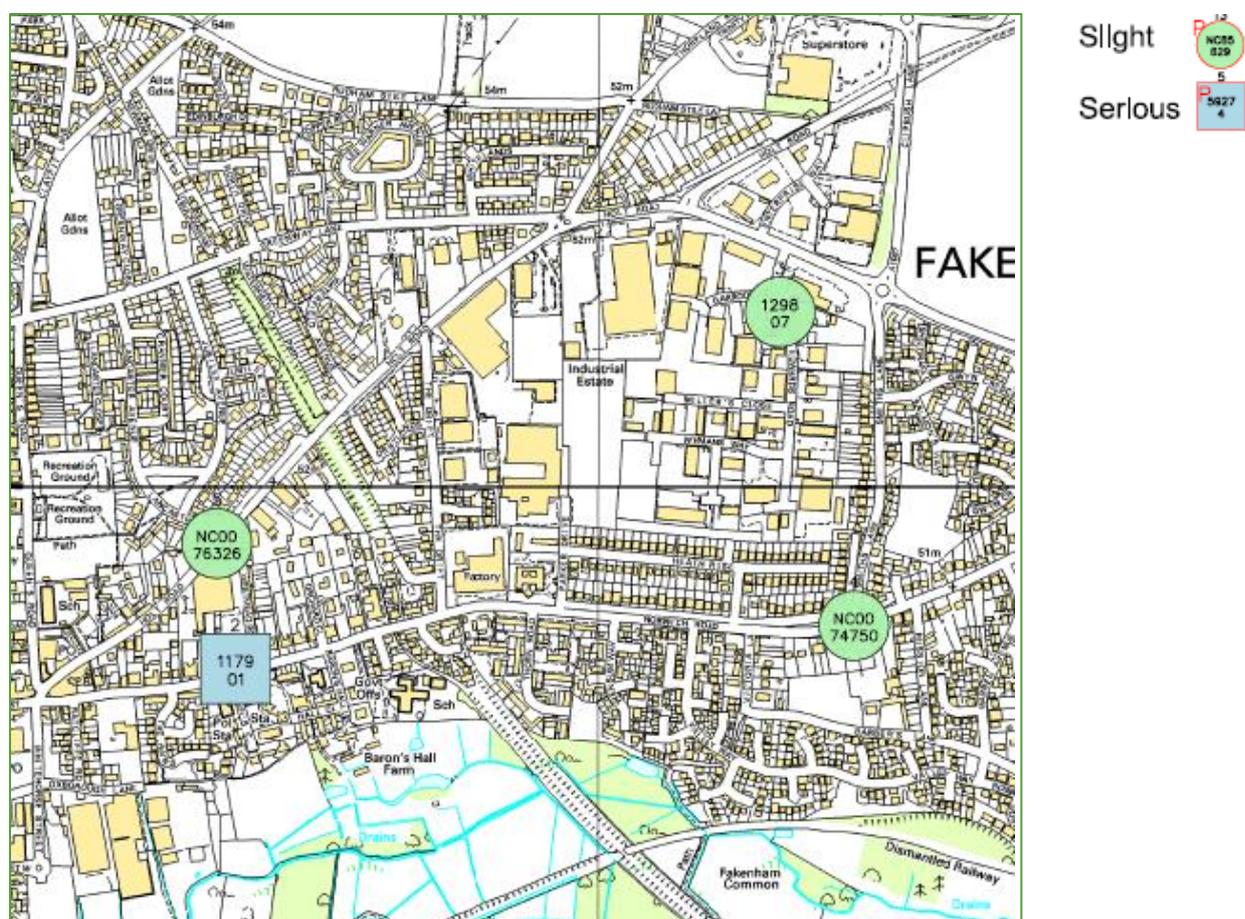
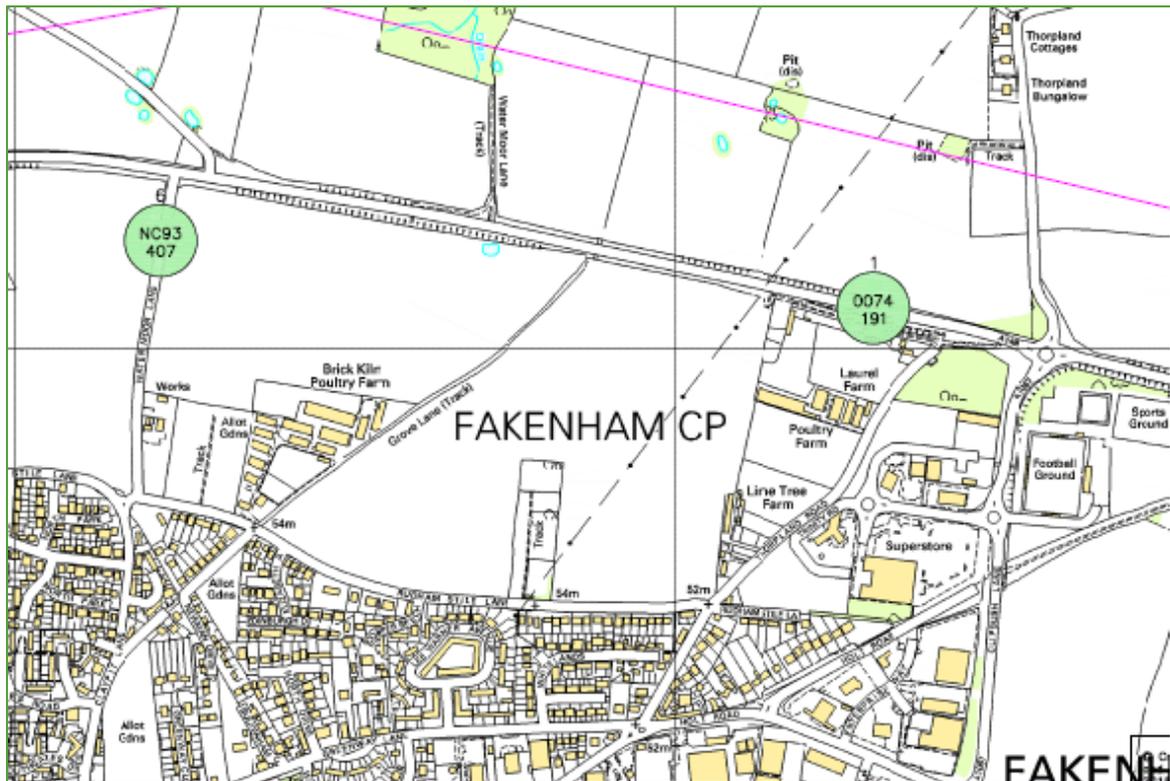


Figure 5.2: Collisions involving cyclists in the north area



Cyclists maps – there has been 5 collisions over a five-year period (01/07/2013-30/06/2018) resulting in slight injury and one collision that resulted in a serious injury. There doesn't appear to be a high concentration of collisions in a particular area, but two incidents occurred in routes off the town centre and two in or close to the industrial estate where you would expect higher amounts of traffic and people.

Given the amount of collisions and their location no further work is proposed for cyclist collisions but cycle corridor improvements are suggested later in this chapter. In addition to the collision data the strategy is aware that perception of danger can also deter people from cycling.

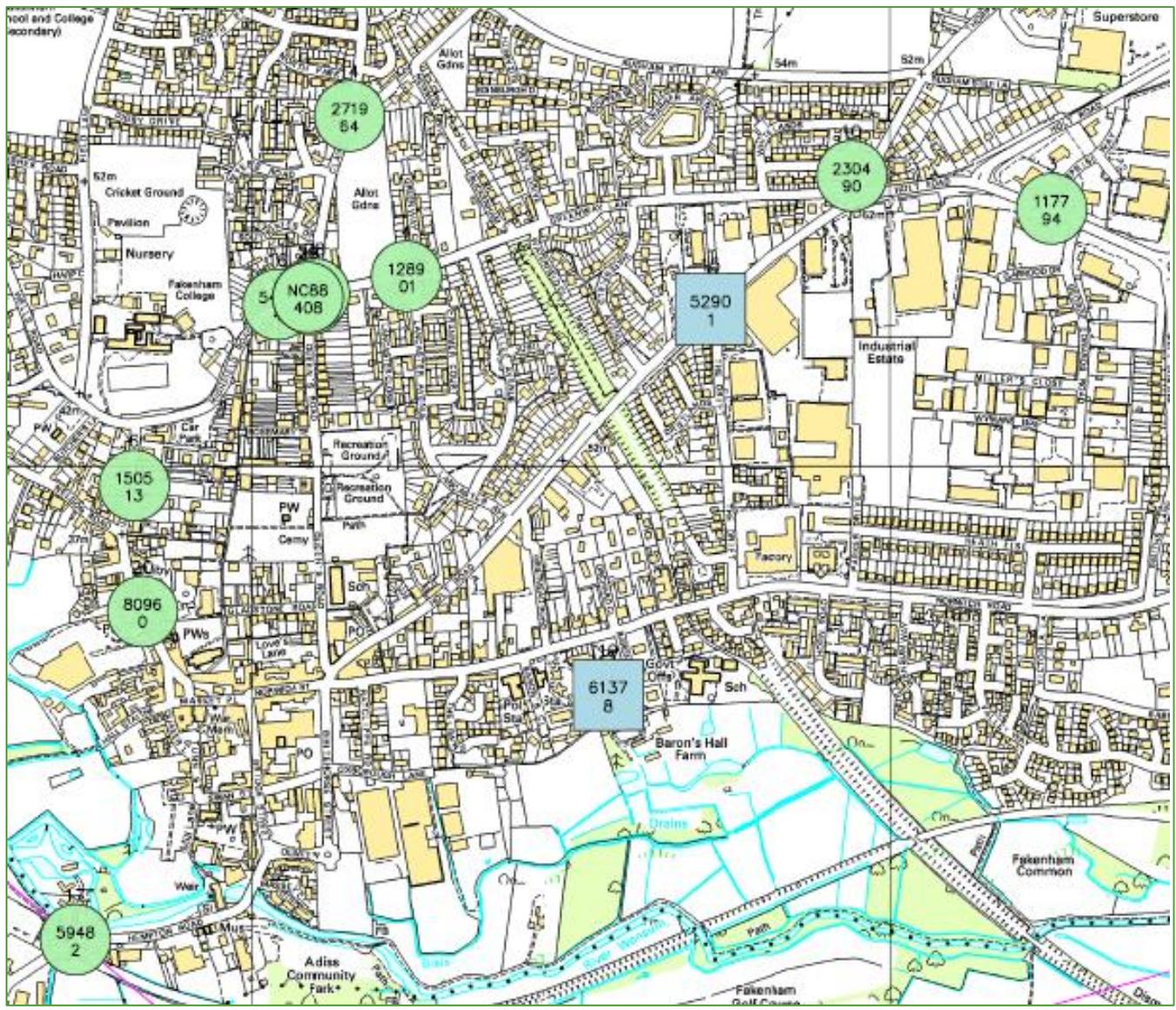
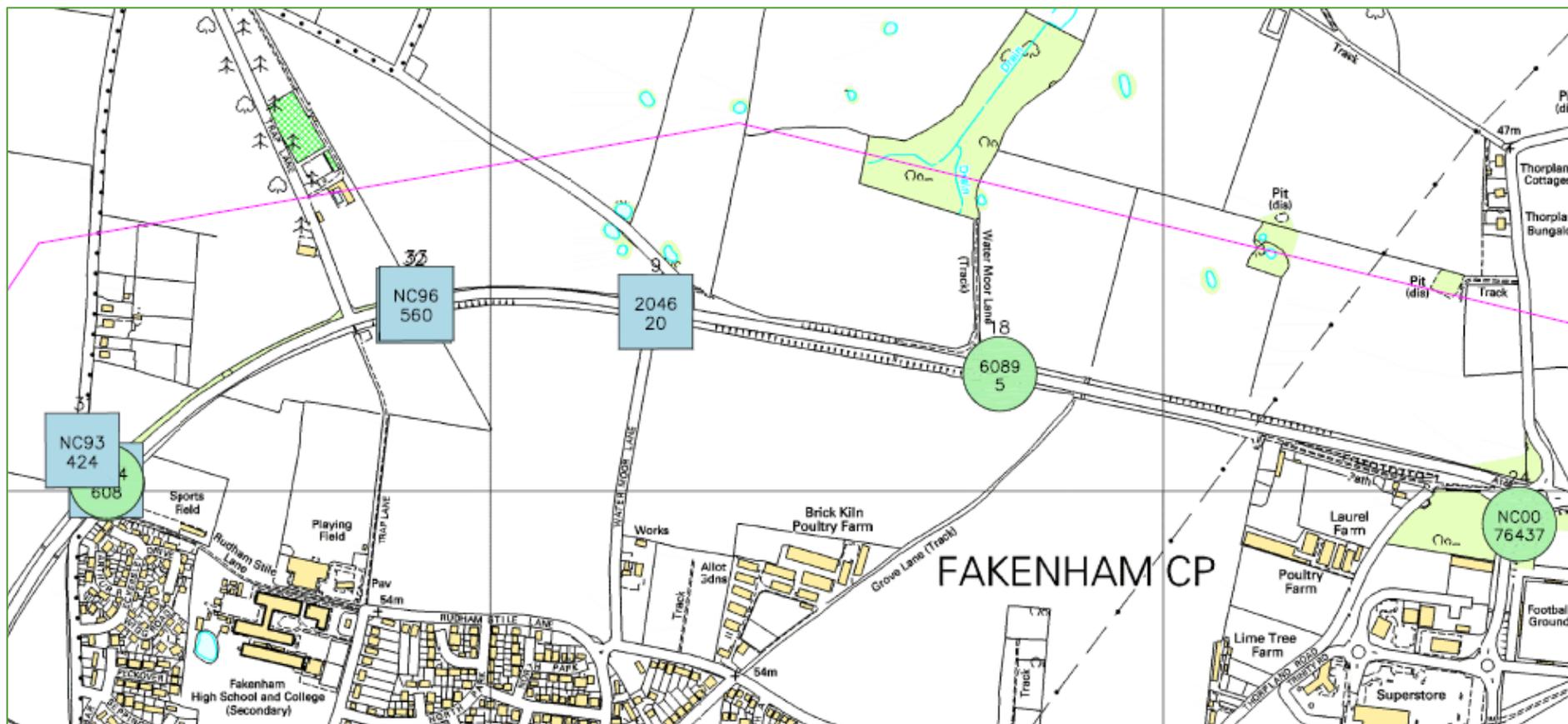


Figure 5.3: Collisions involving motor vehicles in the central and east area

Slight 
 Serious 

Figure 5.4: Collisions involving motor vehicles in the north area



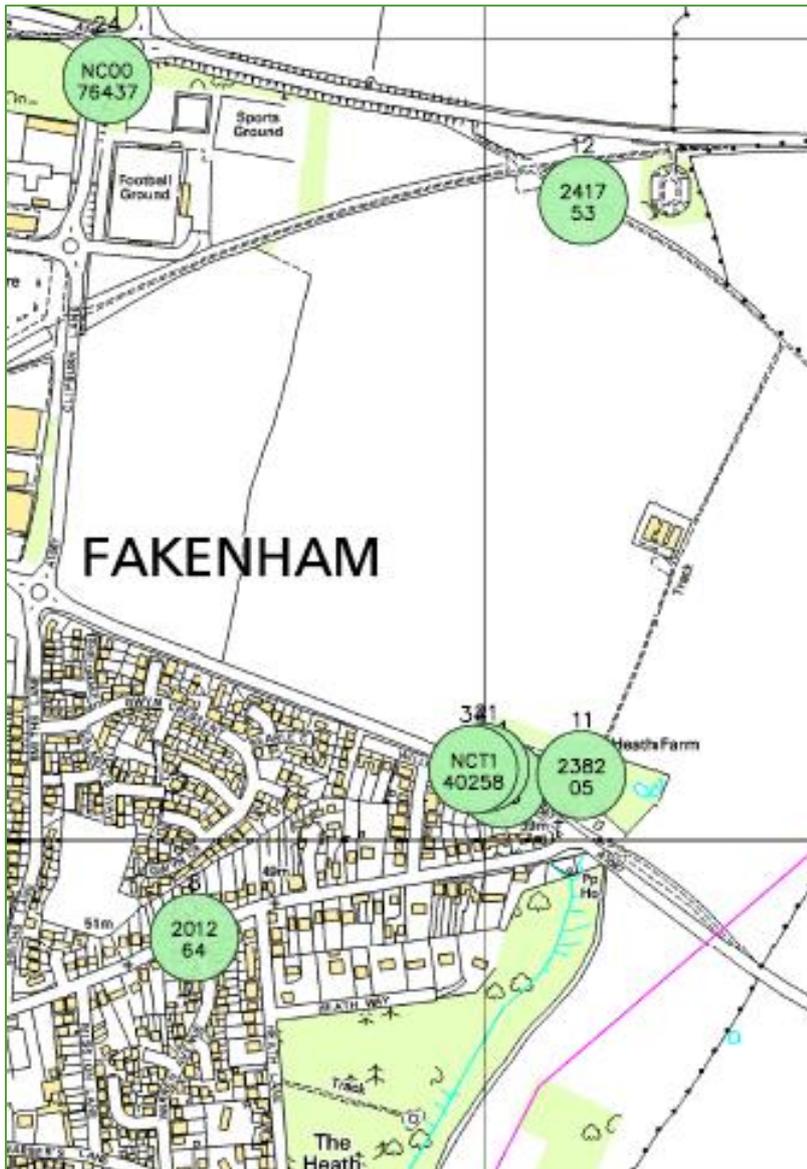
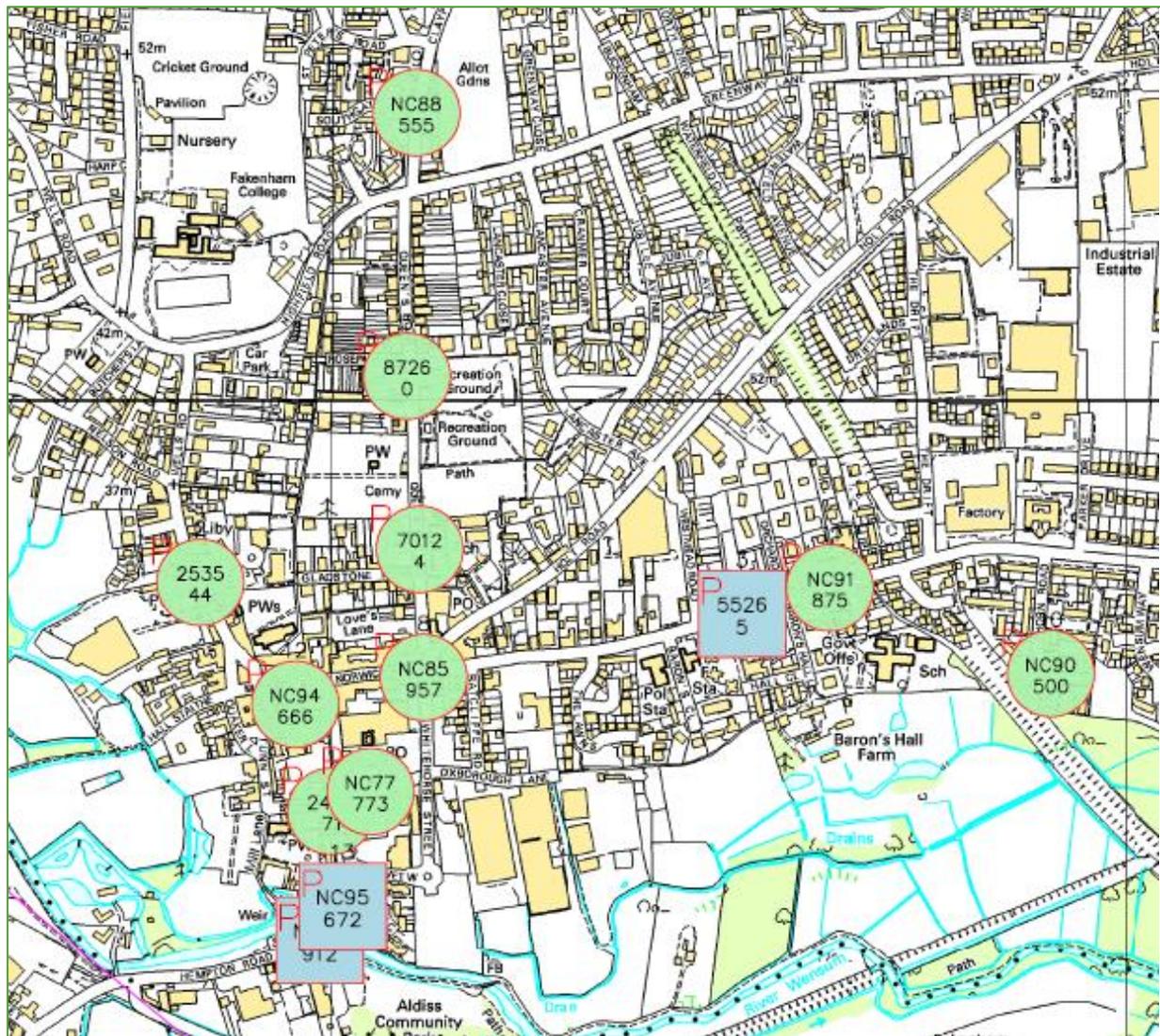


Figure 5.5: Collisions involving motor vehicles in the north area

Motor traffic maps – as expected there are more collisions involving motor vehicles but again, as explained above, this amount is typical of a market town for this period of time. There is a concentration of collisions leading to slight injury along Wells Road, Highfield Road and Claypit Lane and there is a grouping of collisions at the Norwich Road/A1067 junction close to a residential area. As expected the majority of collisions resulting in a serious injury are along the A148 bypass but there have also been collisions on the Holt Road/The Drift junction close to the industrial estate and at Barron’s Hall Lane.

Figure 5.6: Collisions involving pedestrians



Pedestrian map – there have been more collisions involving pedestrians than cyclists, but their locations follow a similar pattern, reflecting the areas where there is more pedestrian and cyclist activity. There is a concentration of collisions resulting in slight injury around the town centre and along Norwich Road where you would expect the greatest number of people to be. The three collisions that resulted in serious injury occurred at Hempton road/Mill Ct/Bridge St/Olivet Way roundabout and along Norwich Road.

In summary, the casualty data for Fakenham is typical for a market town and the analysis has not identified any areas within the town where interventions should be considered to address casualty problems. The county council will continue to monitor the issue.

Parking

The town centre is served by a number of car parks within a short walking distance. There are four public car parks in Fakenham – Bridge Street, Queens Road, Highfield Road and The Limes / Mill Court. There is also private parking and parking associated with large supermarkets. All public car parks are pay and display and are suitable for both short and long-term parking. Due to the sufficient amount of spaces, the number of car park spaces was not prioritised as an issue for this strategy to explore further at this time.

The key issues with these car parks is ensuring they are signed and routed most effectively and visitors are directed to key attractions in the town.

Further work has been undertaken as part of this strategy to consider proposals for new directional signage throughout Fakenham, to better disperse the flow of vehicles to key destinations and main car parks. The proposals will also aim to improve legibility for visitors unfamiliar with the town layout. The signage proposals will include exit routing from the main car parks out of the town centre, which is currently lacking. The study recommendations are set out in Chapter 7.

Action: Commission signage audit, findings of this work are set out in Chapter 7.

Congestion

The AM and PM peak traffic speed maps below show key areas of congestion in the morning along Pensthorpe Road/George Edwards Road, Queens Road/Greenway Lane, Market Place/Bridge Street and at the Creake Road/ A148/ A1065/ Wells Road roundabout. In the peak PM congestion eases around Bridge Street, Queens Road but worsens at the Creake Road/ A148/ A1065/ Wells Road roundabout.

Congestion around the town centre was not identified as a particular issue but concerns were raised about the position of a traffic island on the Pensthorpe Road/George Edwards Road, with its current location meaning lorries are struggling to turn in and out of the industrial estate which can hold up traffic. The congestion at the Creake Road/ A148/ A1065/ Wells Road roundabout was also identified with traffic approaching from the bypass then slowing to enter the roundabout.

Whilst the congestion maps didn't show any particular problems along Oak Street, feedback was given to explore potential locations for the bus interchange to ensure it is currently in the best placed location.

Action: Commission study assessing the current and forecasted operation issues at the roundabout, a study on the potential relocation of the traffic island near Pensthorpe Road/George Edward Road junction and a study assessing the current location of the main bus stop.

Figure 5.7: Fakenham Traffic Speeds AM peak

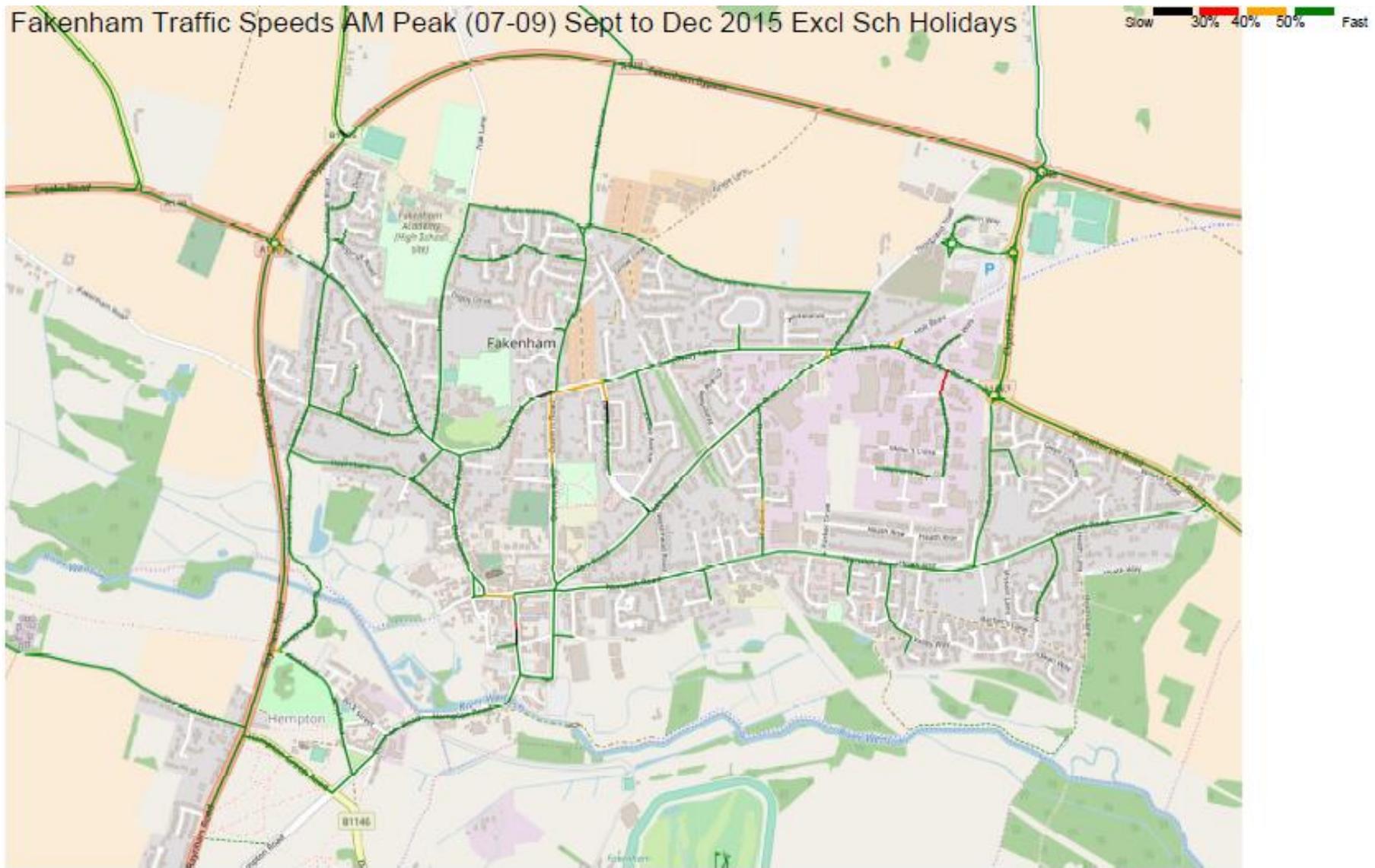
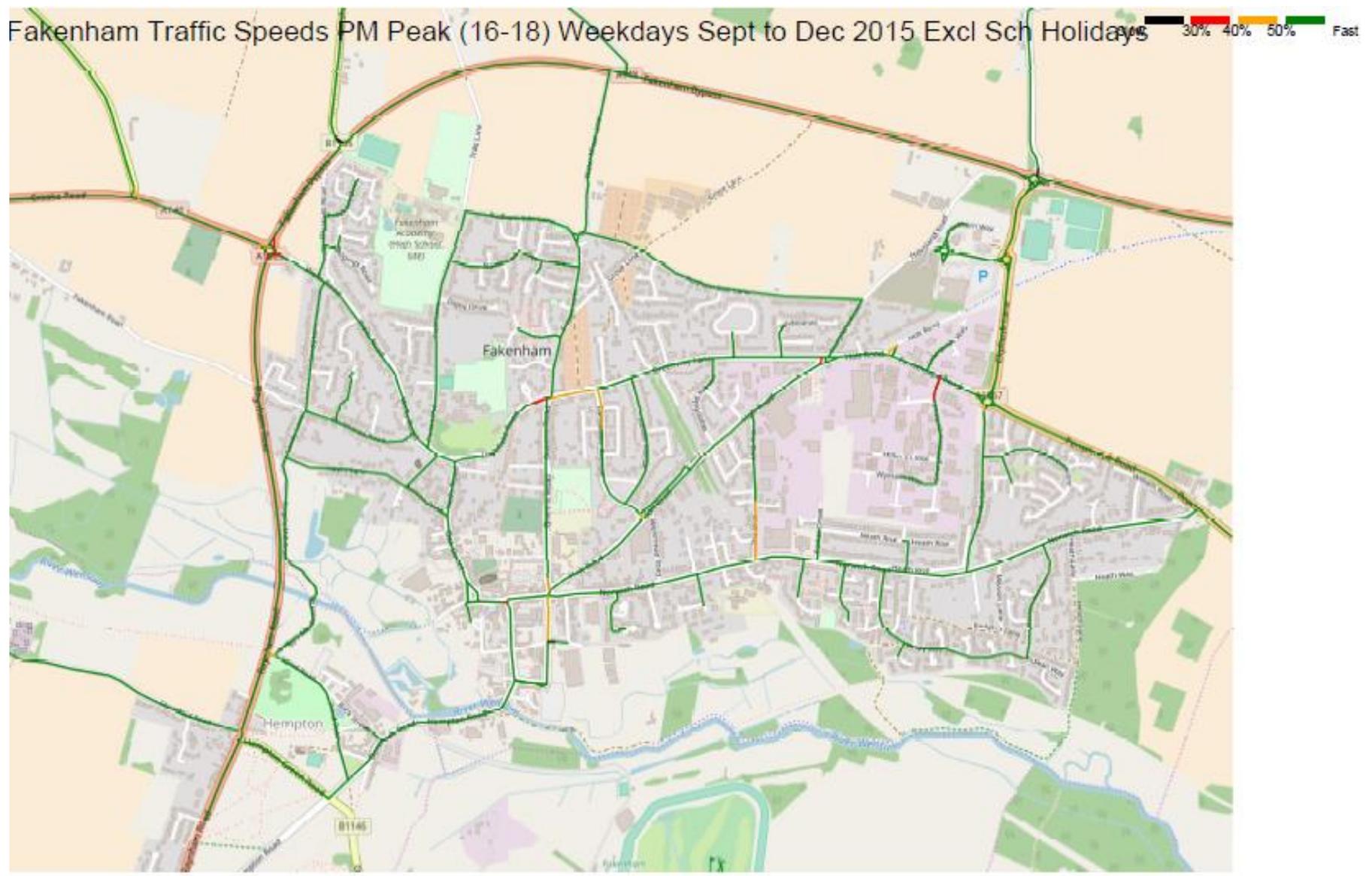


Figure 5.8: Fakenham Traffic Speeds PM peak



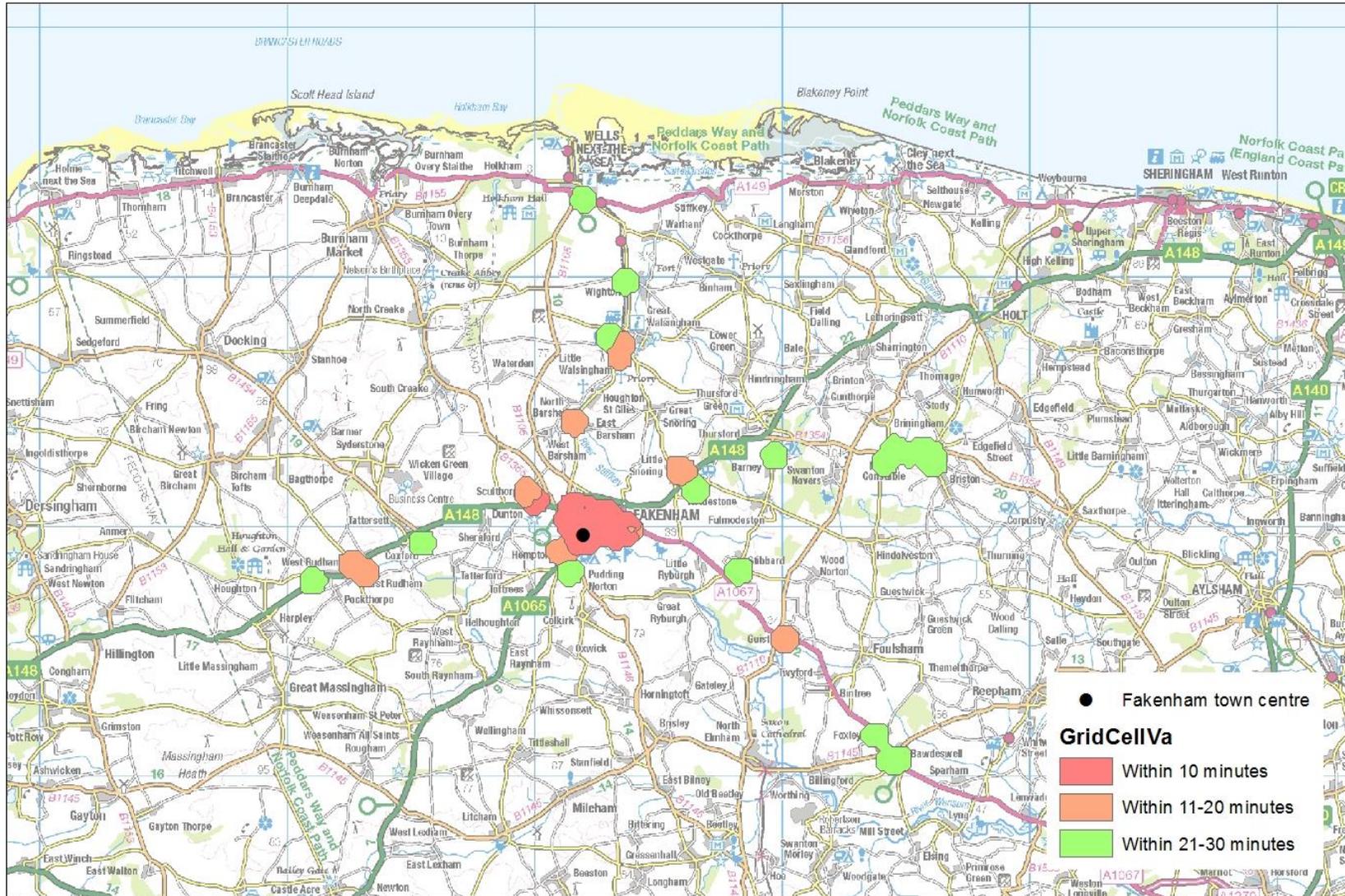
Access

The County Council used software analysing what areas can access the town via bus within 30 minutes. The maps below show accessibility levels to the town centre. Bus accessibility as expected is concentrated along key routes such as the A148, A1065, A1067 and B1105 linking Fakenham to Wells and the surrounding villages. Whilst villages along key routes are accessible there are large areas where it is not possible to travel to Fakenham by bus within 30 minutes or for journeys to be made from Fakenham to for example neighbouring market towns.

This may not be an issue with many people driving to work but people may be discouraged to use buses to travel to work when the journey cannot be completed within 30 minutes.

Given the rural nature of Norfolk the levels of accessibility were not seen as an issue for this strategy, but further work will be carried out assessing the current position of the main bus stop in Fakenham.

Figure 5.9: Public Transport Accessibility to Fakenham Town Centre



Cycling and Walking

National Cycle Route (NCN) route 1 currently enters Fakenham on road and unmarked from the west via Croxton Road, then goes to and off-road path near the River Wensum, passes nearby the town historic core, before transitioning to an off-road path at the end of Tunn Street and exiting the town to the west via Hempton Road. Pedestrian permeability is high in Fakenham. Nearly all roads have adjacent footways and a number of pedestrian only links are located through the town. Additionally, Norfolk County Council is looking to develop two cycle routes that will connect Fakenham with the surrounding areas. These two routes are expected to end where the Wensum Walk meets the A1065, at the southwest of Fakenham, and where Trap Lane meets the A148, at the north of the town.

The existing walking and cycling infrastructure within Fakenham is of a good standard, with walking being an important mode of transport at the local level, with 19% of Fakenham residents walking to work. Data has shown that all of Fakenham is accessible within a 10-minute cycle. This highlights that Fakenham market is located to be within a 25-minute cycle of all of Fakenham' urban area and emphasises the need to improve the existing connections to encourage an increase in active travel.

According to the 2011 Census 39% of usual residents in Fakenham travel less than 2km to work (<25 minutes walking distance) and 42% travel less than 5km (<15 minutes cycling distance). This shows that there is potential for at least 42% of usual residents to use active travel modes to get to work, versus the current 24%.

There is potential for significant increases in cycling and walking trips, which highlights the need to improve existing pedestrian and cycle routes in Fakenham to encourage greater uptake by residents.

Action: Commission a cycle corridor study, which identifies key locations people want to travel to within the town. Generate three routes and identify what improvements need to be made to make these routes suitable for cyclists. Findings from this study can be found in Chapter 7.

Intelligent Transport Systems

The Norfolk and Suffolk Integrated Transport Strategy (ITS) has developed a long-term vision considering economic and technological changes including digital connectivity, autonomous vehicles and new forms of public and shared transport. Fakenham is recognised as a strategic growth location in the Norfolk and Suffolk Economic Strategy (NSES) and the ITS sets out what transport could look like by 2030, 2040 and beyond:

2030:

- Digitally connected transport networks underway and digital connectivity improved across the region allowing people to access opportunities from home including reliable home and remote working
- Key pinch points addressed, network capacity improved and better operational regimes will boost network capacity and make journeys more reliable and resilient
- Agile transport solutions in our Priority Places and better access to information will lead to 'peak' travel spread and allow people to make informed and personal travel choices with more certainty

2040:

- Connected and autonomous cars, trucks and buses will be the norm, improving safety and contributing to the smooth running of the network
- Traditional bus service provision will have reduced but will be supplemented by on demand, responsive services that offer efficiencies
- The move away from fossil fuels will be largely complete supported by alternative generation and storage solutions with communities benefitting from associated air quality improvements

Beyond:

- Digital access to services (including health and social care) and opportunities (including education and training) will help people be more productive on the move
- Direct rail access between key centres with faster journey times and higher capacity, and local lines will have benefitted from more reliable rolling stock and improved customer experience
- New service models will reduce costs and provide new services for hard to reach communities and on-account, seamless, barrier-less payment technologies will facilitate Mobility as a Service (MaaS)

Whilst some of these transport improvements may seem way into the future we are already seeing cars with built in navigation and abilities to park so we need to be aware of the technological advancements ahead and ensuring any improvements suggested in this strategy will not only have an impact on the ability to move around Fakenham today but are also helping future proof the town for the changes set out above.

Place Making

The quality of the public realm is an important element of a town's identity and selling points, with national policy stating that competitive town centres need to provide customer choice, a diverse retail offer and reflect the individuality of town centres. North Norfolk District Council has a market town initiative, which allocated each of their market towns a ring-fenced budget of up to £100,000 for the financial year 2018/19 to spend on locally owned and managed projects. Funding was successfully allocated to Fakenham in December 2018 to the following projects:

- Fakenham Town Council - for a regenerative project that would provide a facelift for rundown shop fronts and signage in the town centre.
- Fakenham Town Council - to design and print a heritage guide with a map and information about the town to be used by residents and visitors.
- Active Fakenham - to coordinate, resource and market a large number of events in the town centre.

The District Council announced in December 2018 that a second round of funding was available with Fakenham having a remaining £39,583.33 of the £100,000 allocated for the area.

This work sufficiently covers place making and as this strategy is focused on transport it is not suggested that it does further work on place making but ensures that any transport improvements such as changes to signage or cycling improvements will promote the town centre and improve access.

Chapter 6: The future

The adopted North Norfolk Core Strategy, which runs to 2021 identified that the majority of new commercial and residential development will be directed to the "Principal Settlements" of Cromer, Fakenham, Holt and North Walsham. Fakenham was allocated 860-980 new dwellings:

Site	Number of dwellings
Land North of Rudham Stile Lane	800-900
Land Between Holt Road & Greenway Lane	60-80
Total	860-980

North Norfolk District Council are in the process of producing a new Local Plan for the area and have recently completed (June 2019) the first round of consultation. The emerging Local Plan identifies Fakenham as one of its large growth towns where the majority of new commercial, residential and other types of development will take place. The emerging Local Plan has a proposed a further 680 dwellings in Fakenham to 2036, the following sites are allocated for residential development in the emerging Local Plan subject to compliance with the site specific and general policies of the Plan:

Site	Number of dwellings
Land North of Rudham Stile Lane	560
Land South of Barons Close	35-55
Land at Junction of A148 and B1146	65
Total	660-680

Fakenham has over 9 hectares of existing employment areas that are undeveloped and no further employment allocations are made in the emerging Local Plan. Fakenham is identified as a large town centre and policies are proposed to support, maintain and enhance these areas.

Any further work undertaken by the FNIS will consider the growth proposed in the emerging Local Plan and any consideration of strategic transport issues associated with longer term growth will provide transport evidence that can be used to inform the emerging Local Plan.

Chapter 7: Our findings

This summary of transport issues in Fakenham, as set out in Chapter 5, was circulated to both the internal and external consultees for comment, asking given the resource and budget constraints what would be their top priorities for any transport improvements in Fakenham. The feedback from this consultation generated a list of five key objectives the Fakenham Network Improvement Strategy would need to address:

- **Review the location of the bus stops** along Oak Street
- Assess **congestion** issues at the **Creake Rd/A148/A1065/Wells Rd (Shell garage) roundabout**
- Look at the **potential relocation** of the **traffic island** at Pensthorpe Road/George Edward Road junction
- **Review the road layout at Thorpland Rd/Greenway Ln/Holt Rd junction**
- **Map cycle networks and key pedestrian routes**
- Carry out a **signage assessment** so visitors are aware of facilities/attractions in the town
- **Review the layout of parking bay** opposite HSBC

Of these seven objectives study work has been externally commissioned for all seven:

- Fakenham Town Centre – Bus stopping arrangements report
- Creake Roundabout Assessment
- Pensthorpe Road/George Edward Road Traffic Island relocation assessment
- Thorpland Road Junction Assessment
- Walking and Cycling Study
- Signage Assessment
- Market Place Parking Assessment

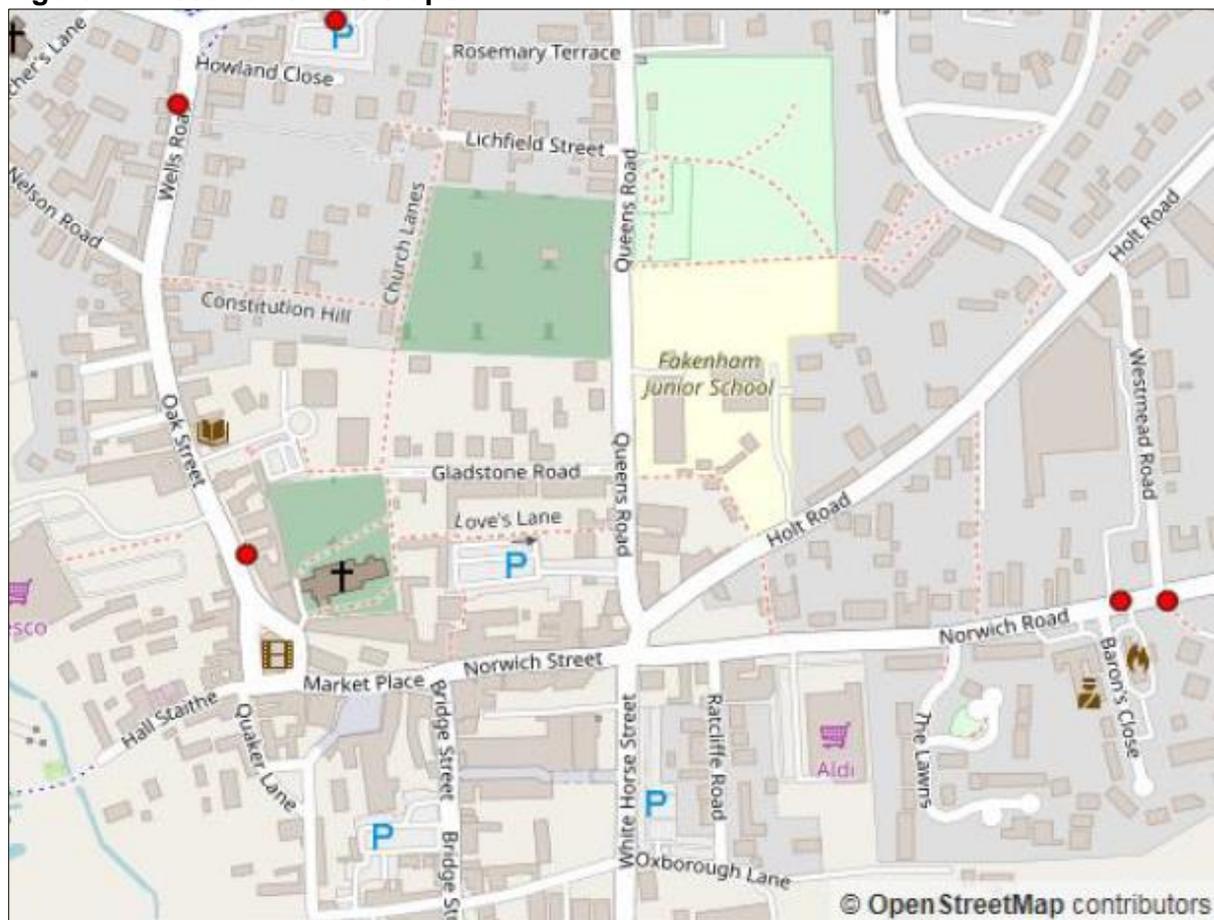
This work was commissioned in January 2019, with traffic surveys undertaken for the second, third and fourth tasks in late January.

Review the location of bus stops along Oak Street

Currently, the existing public bus services are all focussed on Oak Street and this is an interchange where passengers need to get off of one bus and catch another. This location is within 400m walking distance of Whitehorse Street, which is on the other side of the main retail activity in the Town Centre, and as such the existing bus interchange in Oak Street is considered to provide a good level of accessibility to a range of main Town Centre destinations, given that 400m is the standard measurement of accessibility used by the Department for Transport.

The location of the Oak Street interchange and the next nearest existing bus stops elsewhere in the town, as given by traveline, is shown in Figure 7.1.

Figure 7.1 Location of bus stops



The scope of this item is to investigate and review the reported occurrence of up to four buses stopping in Oak Street at one time, and to explore potential alternatives to the current arrangements.

Current Situation

Of the routes which operate in and around Fakenham, service X29 is the most frequent and extensive, operating hourly throughout the day across a span of broadly 12 hours. Although the timetable for service X29 shows layover at Oak Street, it was observed during the site that some drivers preferred to layover at Toll Bar.

Although service 9 has layover time between journeys every hour, it is noted that Sanders has a depot in the town (on Claypit Lane, which is within a short drive of the Town Centre), and therefore vehicles may not always take layover in Oak Street.

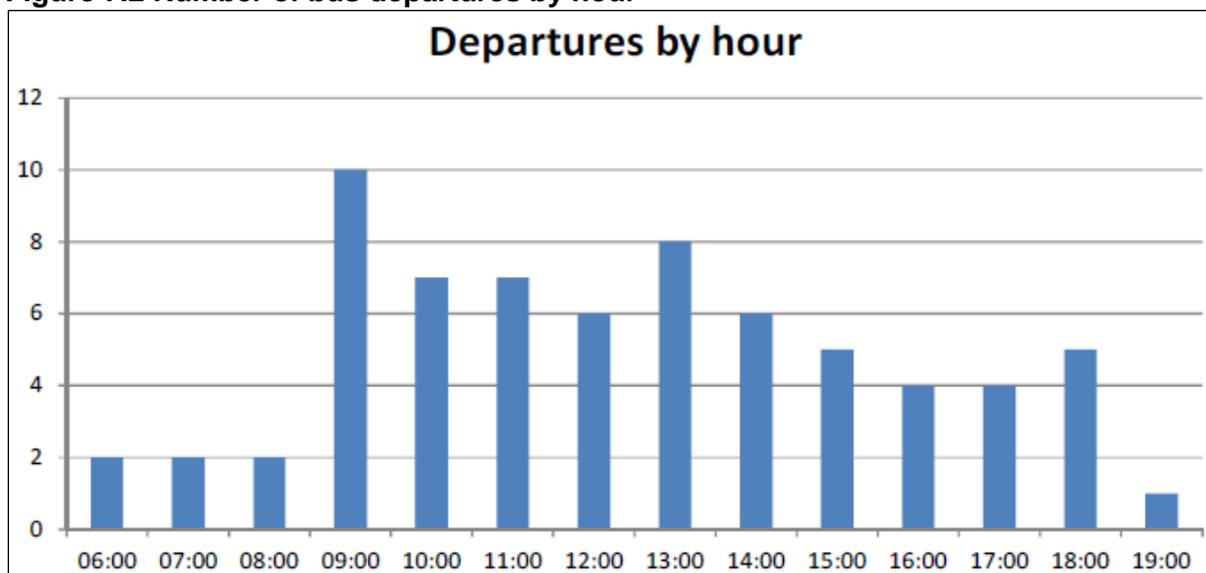
Although the site visit was made on a Thursday, which is Market Day, it is understood that this does not affect the planned routes or stopping points of any bus services, as the same pattern is followed on all days of operation. Market Place is however closed to other traffic from early morning until late afternoon on Market Days and may therefore influence the volume of general traffic in Oak Street.

While online and printed timetable information indicates a single bus stop, the layout of Oak Street is that there are 3 bus shelters provided; 2 are provided to serve the double-length bus stop road marking (closest to Market Place) and a further shelter is sited adjacent to the single length bus stop road marking, next to the pelican crossing which provides access to the Tesco store. This stop, adjacent to the crossing is short and not favoured by bus operators or drivers as it also has a crossing immediately next to the bus stop. If a bus is parked at this stop pedestrian visibility for both pedestrians and car users is greatly reduced.

The bus shelter closest to Market Place contains a Norfolk County Council bus service information panel, covering all operators. The second shelter for the double-length bus stop road marking contains no information (or a case to include any such information). The bus stop pole next to the shelter for the single-length bus stop road marking is marked as "Stand C" and the shelter has a (damaged) timetable display case, with no information displayed.

As the sole stop(s) in the Town Centre, Oak Street has been analysed for scheduled bus departures, for services which operate Mondays to Fridays during term-time. In total, Oak Street has 69 departures between 06:15 and 19:22 hours, although as would reasonably be anticipated, these are not spread equally across each hour of operation as shown in Figure 7.2.

Figure 7.2 Number of bus departures by hour



Within the 10 occasions of when 2 buses are expected to depart at the same time, there are 2 times of the day (09:00 and 14:05) when 3 buses are scheduled to leave simultaneously. If the 14:00 departure on service 36 were running late, there would then be potential for 4 buses to be in Oak Street together, however this was not observed on the day of the site visit. Indeed, part of the purpose of scheduled layover between arriving and departing journeys is to allow for variations in traffic conditions, and this time of the afternoon (between lunchtime and schools closing) is not typically a peak time for congestion, which is the principal cause of late-running buses.

In terms of impact of buses on the flow of other traffic in Oak Street, and even with the small current encroachment into the highway of temporary scaffolding of the building opposite the rear bus stop marking, other traffic was observed to be able to navigate in both directions, with minimal impact from the manoeuvring of buses. The presence of the pelican crossing and the narrower lane widths of Oak Street and Wells Road to the north of the pelican crossing undoubtedly already reduce traffic speeds, and potentially have a greater impact on driving habits and traffic flow than the location of the bus stops.

In addition to the closure of Market Place on Thursdays, which is likely to reduce the volume of traffic in Oak Street, the signed highway routes around the town together with the location of car parks mean that through traffic is normally drawn to other routes. Due to the nature of Hall Staithe and Quaker Lane, which are the other streets which lead to/from Old Post Office Street, and the land uses in and around the cinema, traffic volumes and vehicle sizes in Oak Street were observed to be limited and therefore in the event of an obstruction, the impact is likely to be both small and very localised.

Although problems with multiple buses being in Oak Street at the same time may of course arise on other occasions, the site visit did not reveal any specific instances of vehicle conflict which could not be considered to be normal events on a highway. Nevertheless, taking buses off highway for boarding and alighting of passengers and for vehicle layover could be beneficial to both other highway users and bus passengers and therefore other potential options are considered in the next section.

Potential Alternative Arrangements

In terms of alternative bus-stopping options for the Town Centre, consideration has been given to whether new stops could be introduced on any other road to optimise accessibility. To establish a suitable location for a single Town Centre bus stop, a length of at least 14 metres of uninterrupted pavement is needed in a road which has sufficient width for other traffic to pass a stationary bus. From an inspection of Market Place, Bridge Street, Norwich Street, Whitehorse Street, and Queens Road, there is no location which is considered feasible to accommodate a parked bus safely and/or without causing an obstruction to other road users. Therefore, relocating the existing stops or dispersing stops to multiple locations across the Town Centre are not deemed to be practical options in Fakenham.

Having reviewed the 4 Town Centre car parks, none of the options for re-purposing part of a site have been shown to be ideal and clearly beneficial to all the main parties: bus passengers, the operators of the bus routes and the residual use of the car parks. While it may be possible in design terms to devise safe and functional layouts, from this initial exercise the overall merits of doing so do not appear to warrant further assessment, although if any one option were to be progressed, Queens Road car park with a wider traffic lane would appear to be the least unattractive option in terms of benefits to bus passengers weighed against the impact on the bus routes and the car park.

Conclusion

As a small, historic market town in England, Fakenham exhibits a number of the common features of similar locations, some of which relate unfavourably to bus stops, namely:

- Road layout constrained by width and one-way streets; and
- Lack of highway capacity, particularly at peak times.

The operation of the Oak Street interchange was observed to be in line with the planned use indicated by the scheduled bus timetables i.e. a maximum of 3 buses were observed, correctly waiting within the bus stop road markings. 4 buses are not scheduled to be at the stops simultaneously and there is only one time during the day (between 14:00 and 14:05) when this could reasonably happen in the event of a minor delay to 1 bus departure.

It is noted that while some minor improvements could be made to the provision of information at the 3 bus shelters, no passengers were observed to miss their intended bus due to the lack of information or the layout and operation of the bus stops.

During the site visit, no disturbance to the safe and efficient flow of other traffic was observed and therefore, the case for complete revision of the existing bus stop arrangements has not been evidenced from this review of the bus schedules and their operation.

In the event that justification for revised bus stopping arrangements is established, no single or multiple reasonable alternative on-street locations have been identified in the Town Centre for the existing bus stops.

Options for an off-street location are limited in the Town Centre with the re-purposing of Queens Road car park likely to be the only option which could provide enough space for a safe and functional design, catering for the needs of bus passengers, the requirements of the bus routes and the residual provision of some car parking within the same site. There would however be some negative impacts of such an option, including the prevalence of buses on Queens Road (which is where Fakenham Junior School is located).

Creake Rd/A148/A1065/Wells Rd Roundabout Assessment

NCC have commissioned WSP to study the identified congestion issues during peak hours of travel at the Creake Road/ A148/ A1065/ Wells Road roundabout located to the north-west of Fakenham. The congestion issues are expected to aggravate in the future, due to new development proposed in the area. WSP has been appointed to identify improvement alternatives to address the identified congestion issues and test the alternatives with future growth.

Existing Traffic Conditions

WSP commissioned Automatic Traffic Counts (ATCs), Manual Classified Turning Counts (MCCs) and Queue Length traffic surveys to understand existing conditions at the Creake Road/ A148/ A1065/ Wells Road roundabout. ATCs were undertaken for a week-long period commencing Tuesday 29 January 2019 via ATC units positioned on each arm of the roundabout. MCCs were collected on Tuesday 29 January 2019 via high mast video. All possible traffic movements were recorded in 15-minute intervals, between the times of 07:00-10:00 and 16:00-19:00.

Queue lengths were recorded on the same day and time as the turning counts, comprising of the maximum number of vehicles queuing recorded at five-minute intervals. Queue lengths were measured by the number of vehicles in the queue in Passenger Car Units (PCUs).

Maximum observed queue lengths per period at the roundabout are shown in Table 7.1 and Figure 7.3.

Table 7.1 Maximum Queue Length comparison (metres)

Period	A1065	A148	Creake Road	Wells Road
AM	90	97	81	43
PM	90	112	63	58

This shows that during both the AM and PM period, the greatest observed absolute maximum queues occur on the A148 approach to the roundabout, with the other three approaches experiencing lower consistent queues. Absolute maximum queues are slightly greater during the AM period than the PM, except for Creake Road. This indicates that the operational performance of the roundabout could be constrained by congestion, with queues present on all roundabout entries during the AM and PM period, especially on the A148 roundabout entry.

Traffic surveys have to be undertaken during neutral periods (for example avoiding school holidays or peak season months) and the figures shown in this section of the report are taken from the survey WSP undertook in January. Examples have been provided from the District Council where at peak periods and in the holiday season all four arms of this roundabout suffer from significant queueing.

Seasonal Variation

It's been known that traffic patterns in Fakenham suffer from seasonal variation and the effects of this variation have an impact on the Creake roundabout. The figures below show how the average speed comparison at the main three approaches to the junction during February, July and November 2018.

These figures show the following:

- The average speed distribution during the day in the month of February and November had a similar profile;
- The average speed distribution during the day in the month of July reflects the summer traffic patterns;
- The average speed seems to be lower during July in comparison to the other two months;
- In July, the peaks of traffic (or drops in average speed) seem to be at different times as during the other two months; and
- In July, the speed drops seem to be more marked than in February and November, this is especially remarkable on the A1605 approach.

Figure 7.4 Average speed seasonal variation on the A148 approach

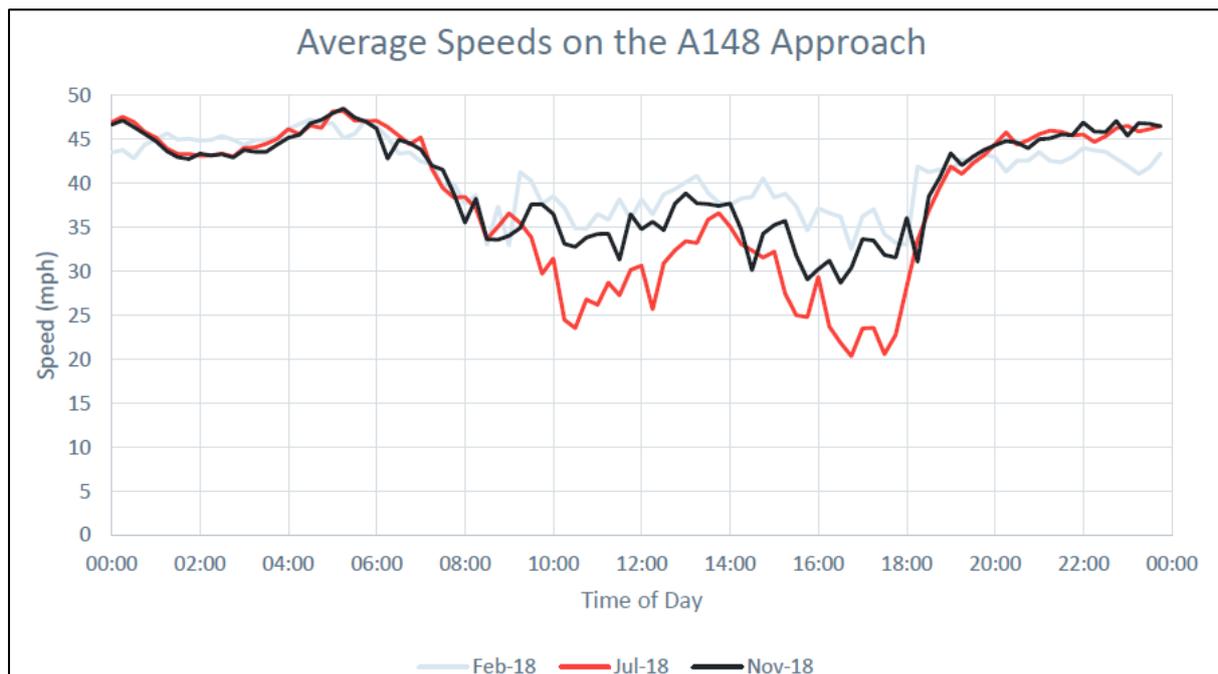


Figure 7.5 Average speed seasonal variation on the A148 Creake Road approach

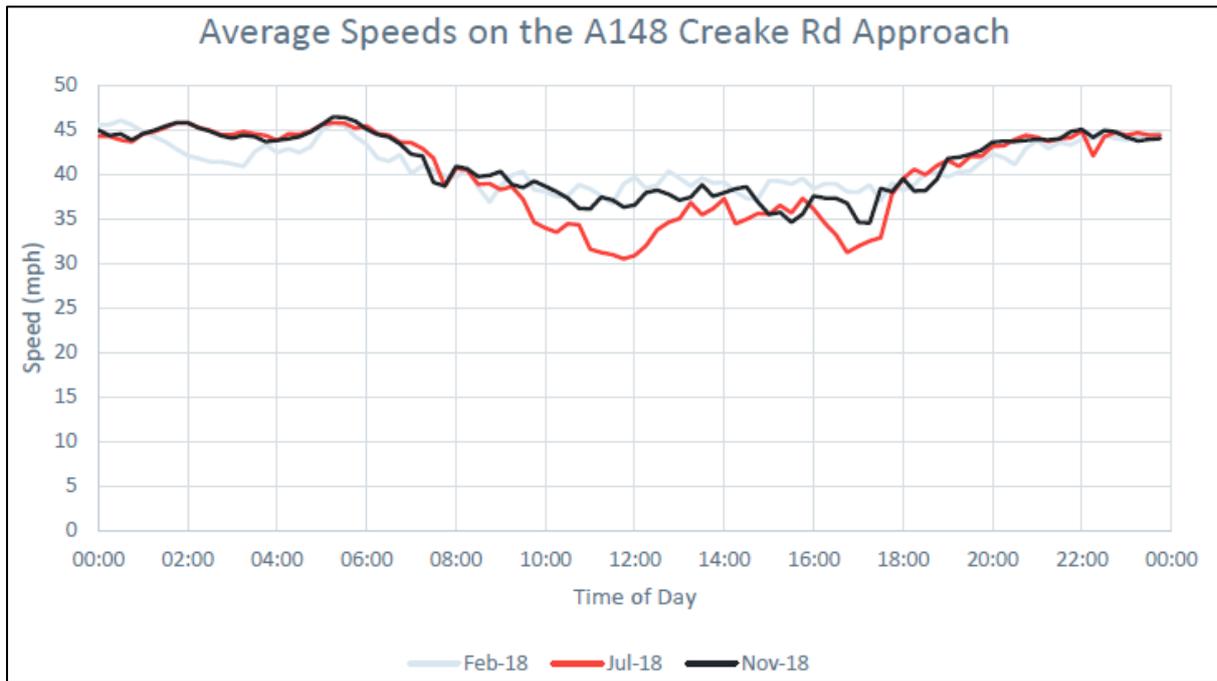
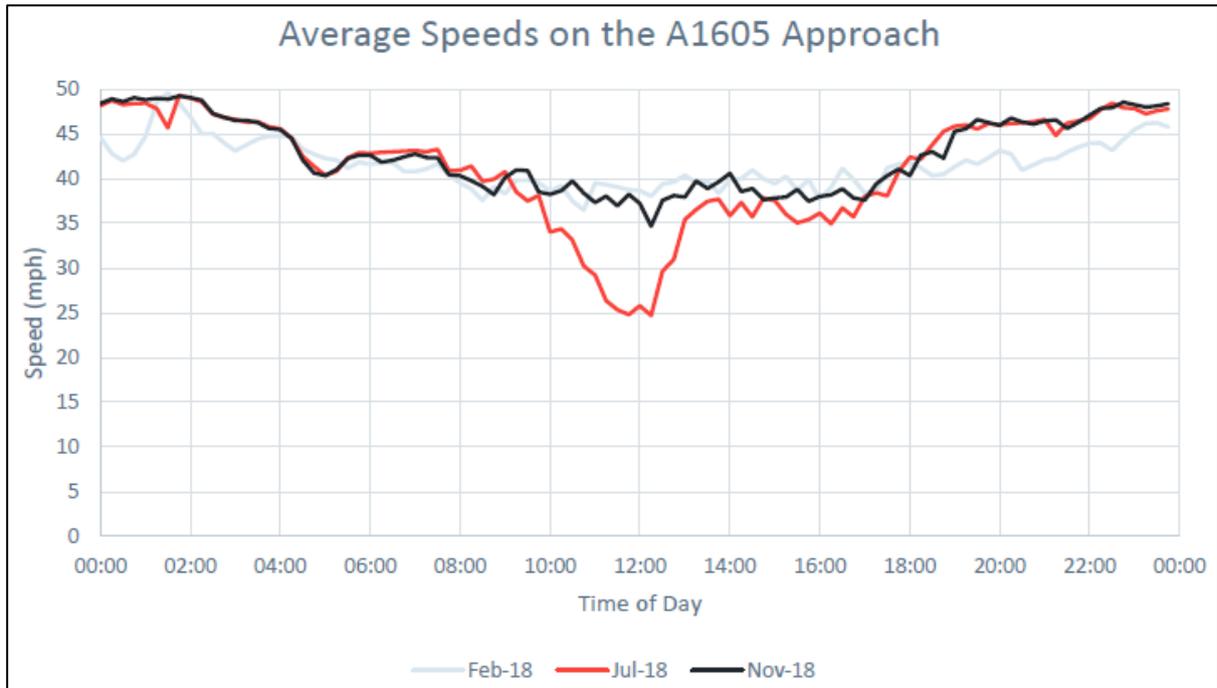


Figure 7.6 Average speed seasonal variation on the A1605 approach



Future growth

When carrying out this piece of work, North Norfolk District Council were in the first stages of preparing a new Local Plan and therefore the end of the Local Plan could not be used to assess the future growth. For this reason, an industry standard forecast period of 15 years has been assumed by WSP to assess the performance of the Creake Road/ A148/ A1065/ Wells Road roundabout in a 2034 forecast scenario.

The first North Norfolk Local Plan consultation set out a plan period running to 2036, the two years gap between the forecast scenario and the expected end of the Local Plan shouldn't make a big difference (0.68%).

To assess the future performance of the junction, the increase in Mean Maximum Queues (MMQ) and delays were analysed.

Table 7.2 Mean Maximum Queue lengths comparison in the AM period (metres)

Approach	Base model 2019	Do nothing 2034	Increase	Percentage Increase
A1065	18.5	25.0	6.5	35%
A148	33.1	134.8	101.7	307%
Creake Road	22.6	33.2	10.6	47%
Wells Road	14.1	21.6	7.5	54%

Table 7.3 Mean Maximum Queue lengths comparison in the PM period (metres)

Approach	Base model 2019	Do nothing 2034	Increase	Percentage Increase
A1065	11.1	16.5	5.4	49%
A148	27.4	104.3	76.9	281%
Creake Road	19.1	29.0	9.9	51%
Wells Road	15.3	21.7	6.4	43%

Both tables show that queues are predicted to increase in all approaches to the junction at both peak periods. This indicates that congestion at the existing roundabout is expected to intensify in the future if the existing layout is retained. The largest increment in MMQ is forecasted to occur at the A148 approach to the roundabout with an increase between 76.9-101.7 metres expected, which is likely to affect the operation of the roundabout in 2034. The average delays at the junction is also a good indicator of the overall performance of the junction.

The data also shows that a minimal increase in delays is expected between the present year and future year scenario for the A1065, Creake Road and Wells Road roundabout entries, with an increase in delays in the region of 6%-15% forecasted. However, consistent with the queueing data above, the A148 is predicted to experience the greatest increase in delays between 51-56 seconds (300%-311%), suggesting that this approach is likely to have negative impacts on the roundabout in 2034.

Figure 7.4-7.6 showed the change of traffic patterns that this junction suffers during the summer period. Therefore, this assessment is only valid for the neutral months which usually represent three quarters of the year.

Potential junction Improvements

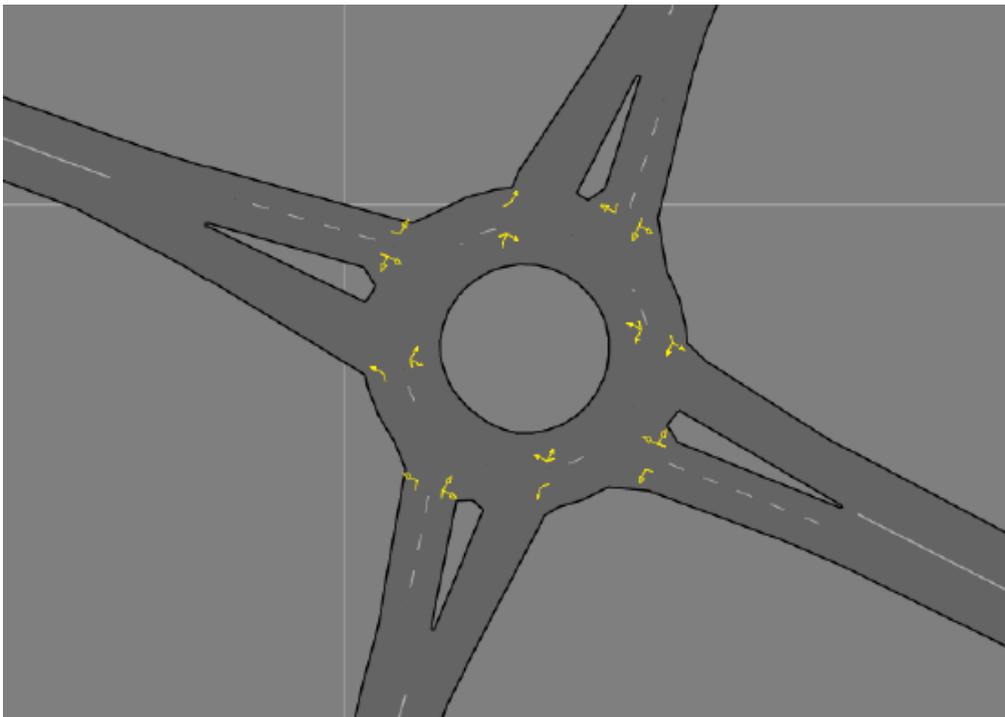
The model predicts that by 2034 an increase in queues and delays are expected on all roundabout approaches, suggesting that some interventions will be required to mitigate congestion issues at the roundabout. WSP have developed three improvements to increase the capacity of the roundabout. These three improvements are independent and not mutually exclusive. Therefore, these can be combined to fully improve the junction. Operation of the combination of the three improvements has also been modelled and assessed:

- Option 1: Changing the lane allocation on the A148 (short term)
- Option 2: Widening the western exit on the A148 Creake Road (medium term)
- Option 3: Segregated left turn lane from the A148 Creake Road to the A148 (long term)

Option 1: Changing the lane allocation on the A148 (short term)

This improvement consists of altering the road lane markings on the A148 so that the left-hand lane permits a left/straight ahead movements and the right-hand lane permits a right turn only to improve the throughput of the roundabout, as shown in Figure 7.7.

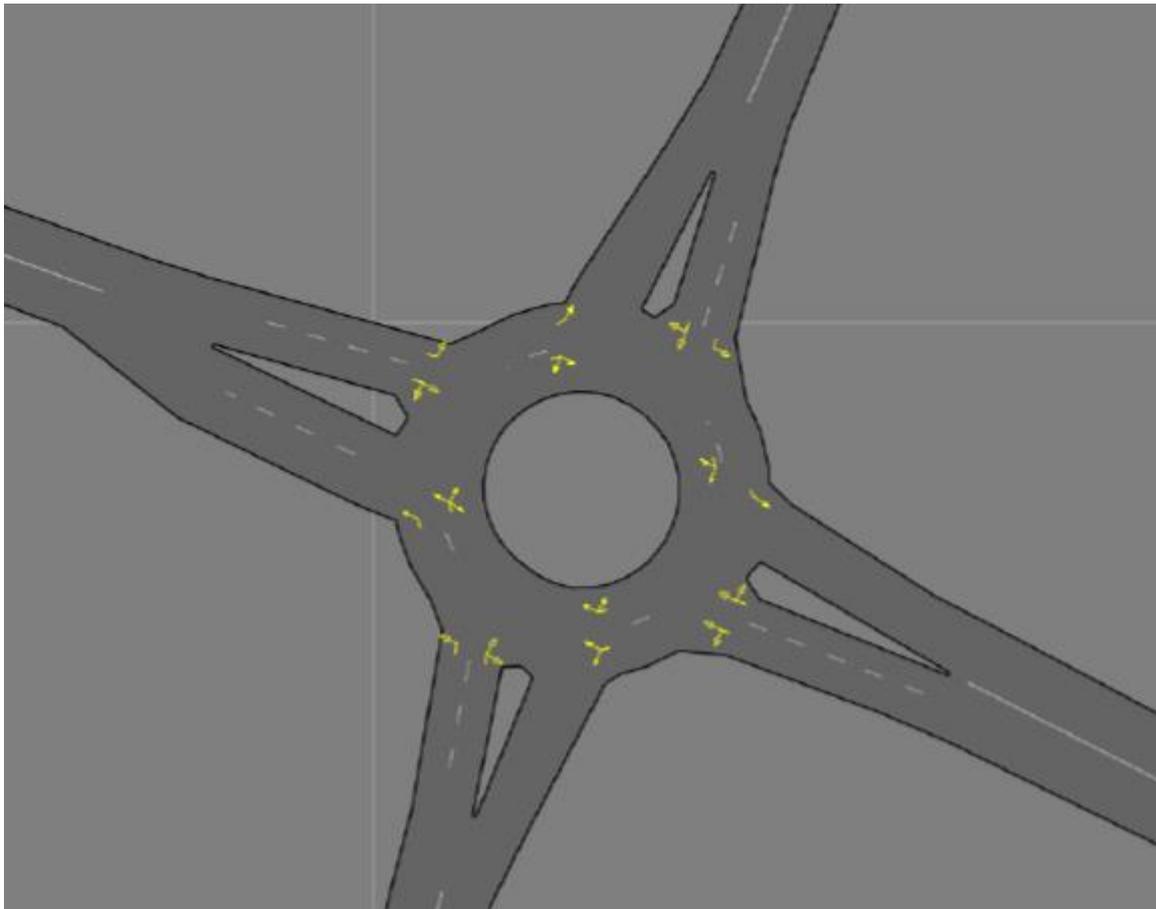
Figure 7.7 Altered lane markings



Option 2: Widening the western exit on the A148 Creake Road (medium term)

This improvement considers widening the western exit (Creake Road) to two lanes, this is expected to increase the capacity of the exit and to improve the performance of the roundabout. By introducing this improvement, it also allows a change to the lane marking of the Wells Road approach to have two lanes for the ahead movement, as shown in Figure 7.8.

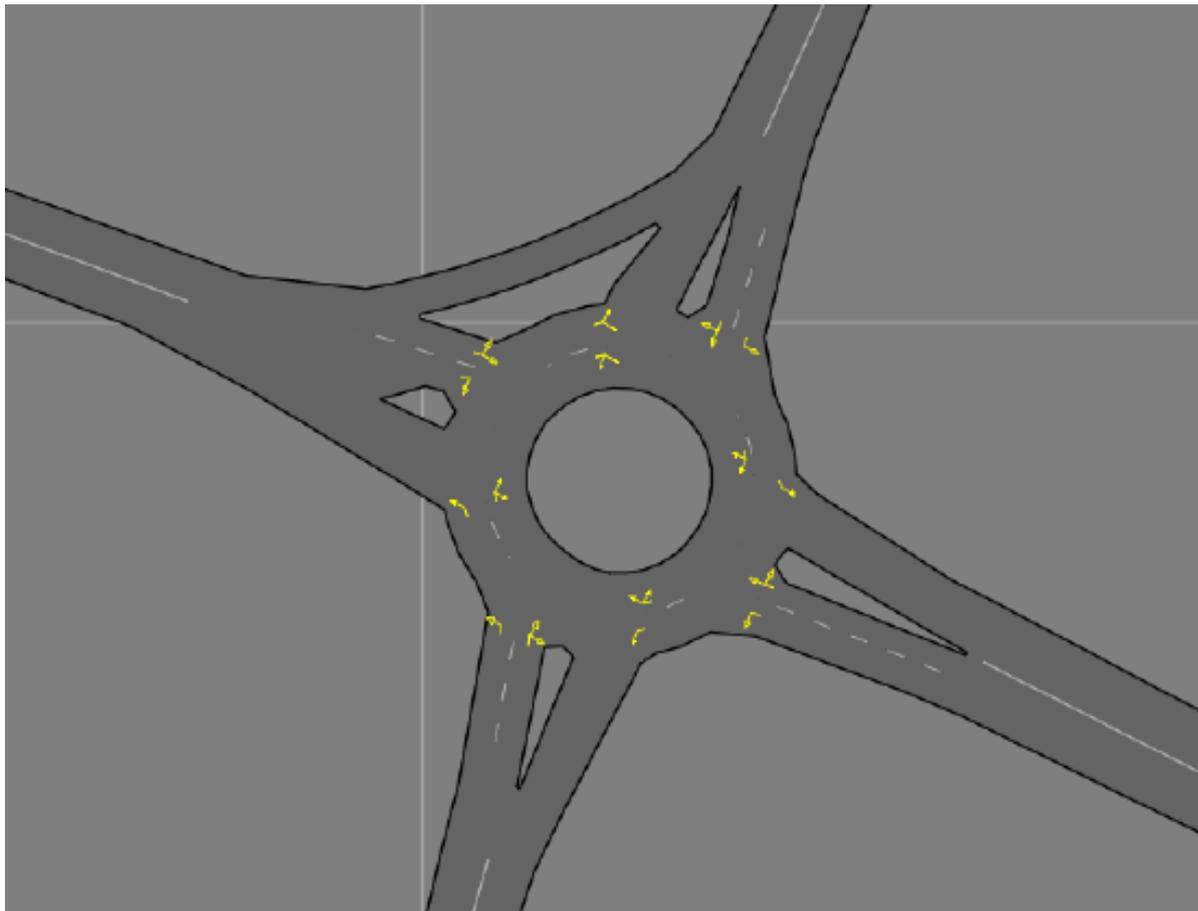
Figure 7.8 Lane widening



Option 3: Segregated left turn lane from the A148 Creake Road to the A148 (long term)

This option considers the addition of a segregated left turn lane from Creake Road to remove delays from one of the largest turning movements and to remove this traffic from the roundabout. It also allows a change to the lane marking on the Creake Road to have one lane for the ahead movement, and the other lane for the right turners. This improvement option is shown in Figure 7.9.

Figure 7.9 Segregated left turn lane layout



Option Assessment

Suggested Improvement	Benefit	High Level Estimate Cost
Option 1: Changes to lane markings	Modelling predicts a decrease in queues in the region of 71%-78% and a reduction in delays between 51s-58s by 2034 at A148 approach arm.	£6,000 to £8,000
Option 2: Widening lanes	Queues expected to reduce on the A1065 and Wells Road. Reduction in delays is minimal with this improvement, with delays on the A1065 reducing in both periods between 1s-2s.	£65,000 to £100,000
Option 3: Segregated left turn from A148 Creake Road to the A148	Modelling predicts a decrease in queues and delays on the Creake Road arm, with queue lengths dropping by 53%-56%.	£65,000 to £100,000

It is forecasted that the collective improvements will result in a reduction in delays on all approaches except for Wells Road in both periods. The A148 is expected to experience the greatest reduction in delays between 52s-58s.

Even though these options have not been tested for the traffic conditions during summer, it can be expected that they will also be beneficial during the summer traffic flow conditions, as they are aimed to increase the capacity of the roundabout, especially at the A148 approach.

High Level Cost

Benchmarking work was carried out to provide a high-level estimate of costs for each improvement. Therefore, these costs are comparative from other example scheme/s and should not be used for budgetary purposes. These estimates will vary depending on impacts on utility diversion, detailed design fee, geotechnical investigations, purchase costs, and other constraints which may become apparent during the next stage of design (for example, drainage and foundations / ground conditions).

Option 1 - £6,000 to £8,000

Option 2 - £65,000 to £100,000

Option 3 - £65,000 to £100,000

Summary

The modelling results indicate that the existing layout in 2034 is expected to result in increased queues and delays for all approaches to the roundabout. The A148 roundabout entry has been identified as the most congested arm, experiencing the greatest increment in queues (76.9-101.7 metres) and the highest increase in delays (51-56 seconds) from 2019 to 2034.

The Option 1 improvement to change the lane markings on the A148 is expected to improve the capacity of the roundabout considerably, with the greatest benefits achieved for the A148 approach. Here queues are forecasted to decrease 104.7 metres in the AM and 76.7 metres in the PM, and delays by 51s-58s in 2034. This option could be implemented quite easily and can be a short-term improvement.

Option 2 - Widening the western exit (Creake Road) is expected to improve the roundabout efficiency, with models showing the greatest reductions in queues on the A1065 and Wells Road. In the future 2034 scenario on the A1065 approach, its forecasted that delays will reduce between 1s-2s.

The proposed improvement to incorporate a segregated left turn lane on Creake Road (option 3) is likely to improve the capacity of the roundabout, with a significant reduction in queues of 18.5 metres in the AM and 15.3 metres in the PM, and shorter delays (2s) forecasted for Creake Road in 2034. However additional land is required to deliver this improvement, so it will be a longer-term aspiration for the county council.

Study the effect on pedestrians of the relocation of traffic island near Pensthorpe Road/George Edward Road junction

The current location of the pedestrian crossing immediately to the east of the Pensthorpe Road/George Edward Road junction prevents HGVs exiting the industrial estate without overrunning the kerbs. For this reason, NCC has commissioned WSP to study the feasibility of relocating the pedestrian crossing further to the east to improve road safety.

Two drawings accompanied the report (Appendix 1):

- A general arrangement drawing, 70050981-WSP-HWD-100-P01, highlighting the proposal to re-locate the existing refuge island east of the junction.
- A vehicle tracking drawing, 70050981-WSP-HWD-101-P01, illustrating the vehicle swept paths into and out of George Edwards Road and their impact on the current highway layout.

The General Arrangement drawing shows the proposed location of the pedestrian crossing. As it can be seen on the vehicle tracking drawing, the proposal to move the pedestrian crossing eastwards alleviates the existing issues of vehicles overrunning the surrounding footways (especially turning out of George Edwards Road), however, it introduces potential risks as a result of the crossing being located closer to the existing bus stop on the southern footway. The potential risks identified are as follows:

- Due to the reduced distance between the existing bus stop and the proposed re-located refuge island on Pensthorpe Road, there is an increased risk that a motorist wishing to overtake a bus which is stopped at this location, will not have enough space to do so without swerving to negotiate the gap at the island;
- A vehicle wishing to overtake a stopped bus may seek to clear the refuge island on the opposing side, with an increased risk of head on collisions; and
- There is an increased risk that a motorist will not see a pedestrian using the crossing and have insufficient distance to stop safely to avoid a collision, especially in the scenario when a pedestrian leaving the bus attempts to use the crossing point whilst the bus is waiting.

Summary

As a result of this, the following measures should be considered during the next stages of the scheme to improve the layout:

- Consider the relocation of the existing bus stop to a more suitable location, possibly west of the junction with George Edwards Road or further to the east;
- Further investigate the potential of introducing a bus lay by in and around the existing location of the bus stop. However, looking at the available verge area along with the highway boundary, this would be difficult as a minimum width of 5.0m would be required (3.0m lay by, 2.0m footway) and the existing distance from front of kerb to back of highway is approximately 4.8m; and

- Formally creating a bus 'cage' area in the location of the existing bus stop using road markings and improving the footway so that when a bus is waiting at the stop, vehicles are forced to wait behind it until it pulls off.

Propose alternative layout to the Thorpland Rd/Greenway Ln/Holt Rd junction

NCC have commissioned WSP to identify improvement alternatives to the existing layout of the Thorpland Road/Greenway Lane/Holt Road priority junction, as the existing layout causes confusion to drivers which has safety implications and test the alternatives with future growth to account for new development proposed in the area.

Existing Traffic Conditions

Traffic surveys were commissioned by WSP to understand existing demand and transport conditions at the junction. These comprised of Automatic Traffic Counts (ATCs), Manual Classified Turning Counts (MCCs) and queue length surveys. ATCs were collected for a week-long period commencing Tuesday 29 January 2019. MCCs were undertaken on a neutral weekday on Tuesday 29 January 2019 via high mast video. All possible traffic movements were recorded during the typical AM and PM peak periods (07:00-10:00 and 16:00-19:00 respectively).

Concurrent to the collection of traffic movements at the junction, queue length surveys were undertaken. These comprised of the maximum number of vehicles queuing and were reported by lane on approach to the junction for each five-minute period. Queue lengths were measured by the number of vehicles in the queue in Passenger Car Units (PCUs).

The observed queue data demonstrated that queues are minimal on all approaches to the existing junction, suggesting that congestion is not a problem for this junction. Even though queues are minimal, the existing junction has limited visibility on some approaches and the complexity of the existing layout makes drivers hesitate when approaching the junction, which may have safety implications. Additionally, the junction has limited facilities for cyclists and pedestrians.

Future Growth

When carrying out this piece of work, North Norfolk District Council were in the first stages of preparing a new Local Plan and therefore the end of the Local Plan could not be used to assess the future growth. For this reason, an industry standard forecast period of 15 years has been assumed by WSP to assess the performance of the Creake Road/ A148/ A1065/ Wells Road roundabout in a 2034 forecast scenario.

The first North Norfolk Local Plan consultation set out a plan period running to 2036, the two years gap between the forecast scenario and the expected end of the Local Plan shouldn't make a big difference (0.68%).

The data indicates that both the AM and PM period, traffic levels are forecasted to increase by approximately 20% between 2019 and 2034. To assess the future performance of the junction, the increase in Mean Maximum Queues (MMQ) and delays were analysed.

Queues at the existing junction are forecasted to slightly increase in the future year scenario for all approaches to the junction except Holt Road East in the PM period.

Even though queues are expected to generally increase in 2034 the model outputs show that queues will remain relatively minimal, with the greatest increase in MMQ of around one vehicle occurring on the Holt Road South access for both periods in 2034.

Consistent with the queuing data above, a slight increase in delays in the region of 0s-2s is expected between the present year and future year scenario. Evidently the existing junction appears to operate within capacity with minimal delays forecasted in both 2019 and 2034. This indicates that there shouldn't be a need of improving the junction just in terms of traffic operation, however, there could be other reasons why this junction should be improved i.e. lack of visibility, absence of Non-Motorised Users (NMUs) crossings, road safety, etc.

Option Development

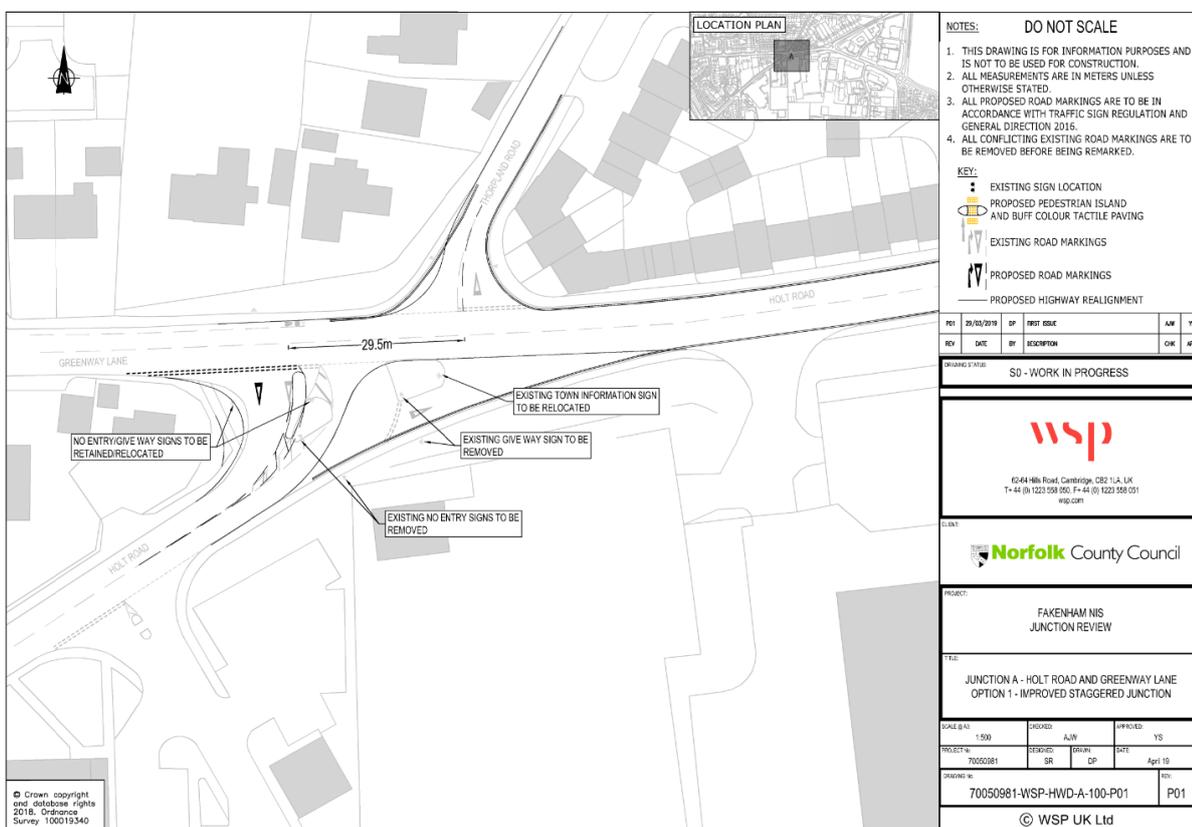
WSP Highways developed three possible improvements to the junction, which aimed to simplify the junction to reduce the confusion that drivers have, improve safety and facilities for NMUs:

- Option 1 – Improved staggered junction
- Option 2 – Improved staggered junction with left turn lane
- Option 3 – Double mini roundabout

Drawings for all the options can be found in Appendix 2.

Option 1 Improved staggered junction

Figure 7.10 Option 1 - Improved staggered junction



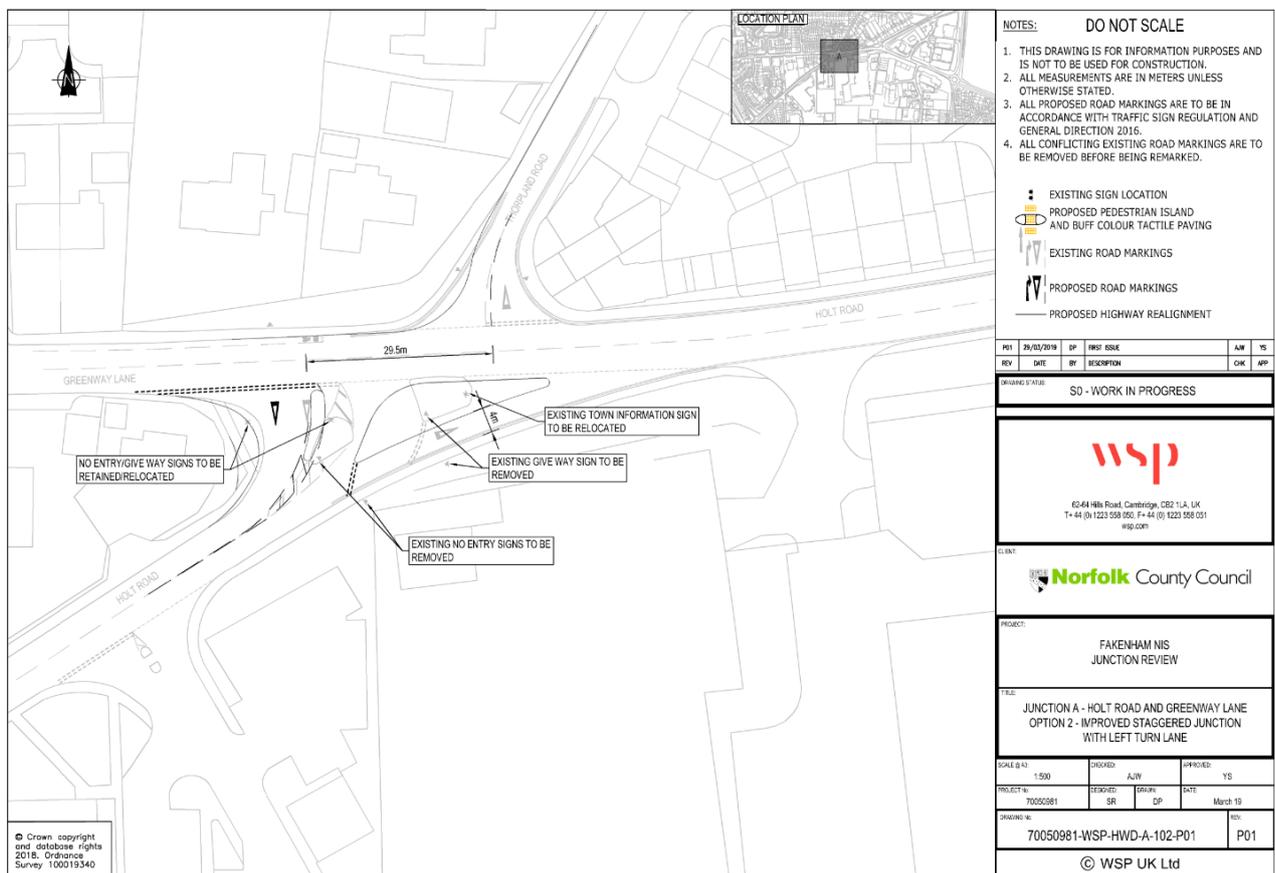
This improvement considers removing the segregated left turn southbound lane, realigning kerbs and introducing a new splitter island on the Holt Road south approach to the junction, as shown in Appendix 2. This junction improvement should bring more opportunities for improving NMUs facilities. The main benefits of this option are:

- Reduces Southbound vehicle speeds due to tighter corner radii;
- Simplifies junction layout significantly; and
- Layout may reduce likelihood of collisions due to simplicity.

On the other hand, this design will increase overall vehicle flows through the junction, as the segregated right turn lane will be removed.

Option 2 - Improved staggered junction with left turn lane

Figure 7.11 Option 2 - Improved staggered junction with left turn lane



This option has a similar layout to the existing junction and operationally should perform the same way as the existing layout. For this reason, this option has not been modelled. However, this improvement should bring some benefits for Non-Motorised Users to cross the junction as the junctions will be slightly smaller, as shown in Appendix 2.

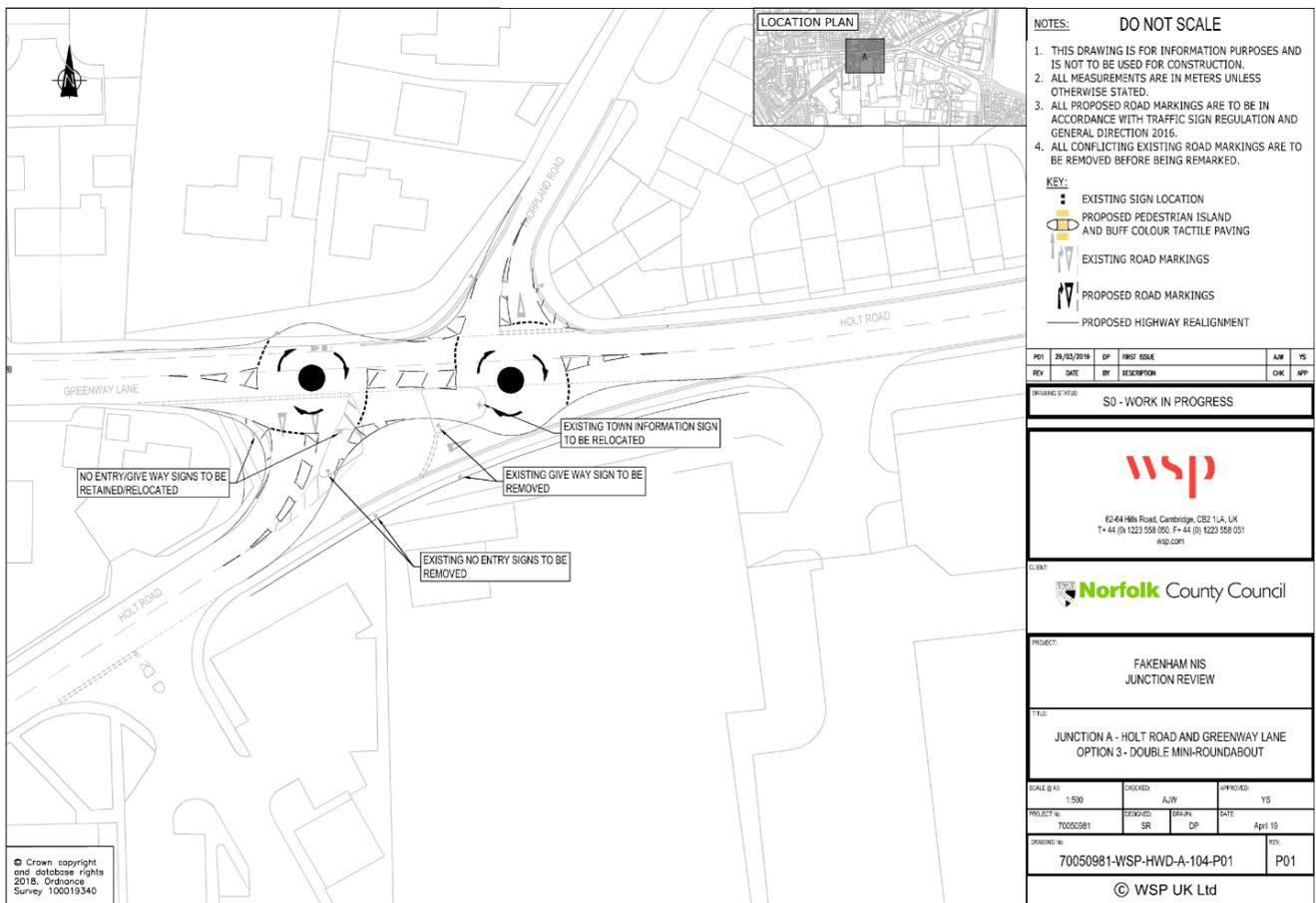
The main benefits of this option are:

- Tightens' up the junction and the existing corner radii;
- Narrower left turn lane will naturally slow down vehicles travelling Southbound; and
- Southbound left turn lane will encourage better vehicle flows.

On the other hand, this design has similar layout to the existing junction and therefore it may not prevent the same confusion that drivers currently face when manoeuvring in/around the junction. Additionally, due to the directness of the left turn lane, vehicles may fail to give way to southbound vehicles resulting in potential collisions.

Option 3 – Double mini roundabout

Figure 7.12 Option 3 – Double mini roundabout



This improvement is the most intrusive option and consists of a complete junction redesign to include double mini roundabouts, as shown in Appendix 2. The double mini roundabout design will act as a traffic calming measure. This should provide a safer environment for NMUs.

The main benefits of this option are:

- Will help to reduce 85th percentile speeds of vehicles in all directions;

- May allow better vehicle flow in all directions;
- Design will allow wider footway areas; and
- Pedestrian crossing points could be introduced for example on Holt Road approach.

On the other hand, this design may be more expensive to construct than the other two options and the layout could confuse less experienced drivers.

Option Assessment

Option 2 retains many of the characteristics of the existing layout and, therefore, it has been considered that there is no need of testing this scheme. For that reason, WSP Transport Planning have tested the other two improvements.

The modelling shows the removal of the segregated left turn lane is expected to marginally increase queues (1-3 vehicles) and delays (1s-5s) on most approaches to the junction in 2034. Despite this, queues and delays should remain minimal at the junction in 2034, indicating that the junction will continue to operate within capacity.

It is predicted that with the proposed double mini roundabout design, queue lengths and delays are forecasted to slightly increase on most approaches to the junction. Queues are expected to grow between 1-5 vehicles and delays by 2s-8s in both periods in 2034. Therefore, the junction should continue to operate within capacity with this proposed improvement.

In summary, the three options should still operate within capacity and therefore the decision of which option should be put forward will not be possible to be based just on the junction operation. Other metrics like road safety, suitability for NMUs, cost, etc. should also inform the decision.

Summary

The existing layout of the Thorpland Road/Greenway Lane/Holt Road priority junction causes confusion to drivers. However, the casualty data in section 5 shows that there has only been one recorded collision at that junction in the last five years and the modelling results indicate that congestion shouldn't be a problem with the existing layout in 2034.

Three options were designed to reduce confusion at the junction and generate benefits for Non-Motorised Users.

Option 1 – The removal of the segregated left turn lane is expected to create opportunities for NMUs and reduce the possibility of disorientation. In addition to the proposed safer design, the queues and delays remain reasonable at the junction with increases in queues and delays anticipated to be minimal.

Option 2 - keeps most of the characteristics of the existing layout and therefore it may not solve the confusion that it currently causes. However, this option should be the best of the three options in terms of traffic operation.

Option 3 - the double mini roundabouts, is likely to reduce the speed, resulting in a safer environment for NMUs. As well as a safer design, this improvement is

expected to closely mirror existing conditions at the junction, with queues and delays expected to slightly increase, but it will still operate within capacity.

In summary, all proposed improvements are expected to have minimal impact on the operation of the junction and show potential benefits to NMUs in comparison to the existing layout. Whilst option 3 has been identified as being more intrusive and costlier, in the longer term it offers the greatest benefits in terms of all-round junction operation and encouraging reduced traffic speeds and the opportunities for enhanced crossings.

Map cycle networks and key pedestrian routes between major origins and destinations. Identify any major issues, e.g. lack of crossing points or direct routes

WSP have been commissioned to produce a high-level review of existing cycling and walking information for Fakenham and use the knowledge gained from this to identify three key walking and cycling corridors for the town and identify a selected preferred corridor. Based on the review and information gained from on-site observations, three walking and cycling corridors will be developed with the aim of enhancing the walking and cycling experience within Fakenham which may cause a modal shift. These corridors can provide high quality walking and cycling provision to areas of Fakenham where this has not historically been the case and will aim to better connect existing walking and cycle infrastructure to create a local network.

The corridor options described in this document have been developed in line with the Norfolk Cycling and Walking Action Plan, a plan prepared by Norfolk County Council to improve the county-wide walking and cycling networks and to encourage people to use them. Each option outlined in this document can contribute towards achieving the vision of the Action Plan and its various goals such as doubling the levels of cycling in the county by 2025.

Existing Walking and Cycling network

Pedestrian permeability is high in Fakenham. Nearly all roads have adjacent footways and a number of pedestrian only links are located through the town. National Cycle Route (NCN) route 1 currently enters Fakenham on road and unmarked from the west via Croxton Road, then goes to and off-road path near the River Wensum, passes nearby the town historic core, before transitioning to an off-road path at the end of Tunn Street and exiting the town to the west via Hempton road. The NCN route 11 is shown indicatively in orange in Figure 7.13 and the off-road sections of route 1 are depicted with a white line between the orange line.

The existing walking and cycling infrastructure within Fakenham is of a good standard, with walking being an important mode of transport at the local level, with 19% of Fakenham residents walking to work. However, additional infrastructure is likely to help achieve the ambitions of the County Councils Action Plan.

Figure 7.14 shows the walking accessibility at five-minute intervals up to 25 minutes from Fakenham Market, at an average walking speed of 3mph. The map shows that the market is accessible within a 25-minute walk from almost all of Fakenham; this also illustrates the potential for encouraging walking as a prominent mode of travel for short trips within the town.

Figure 7.15 shows the cycling accessibility from Fakenham market in five-minute intervals, up to 25 minutes at an average cycling speed of 12mph. The map shows that all of Fakenham is accessible within a 10-minute cycle. This highlights that Fakenham market is located to be within a 25-minute cycle of all of Fakenham' urban area and emphasises the need to improve the existing connections to encourage an increase in active travel.

Figure 7.13 Fakenham location plan

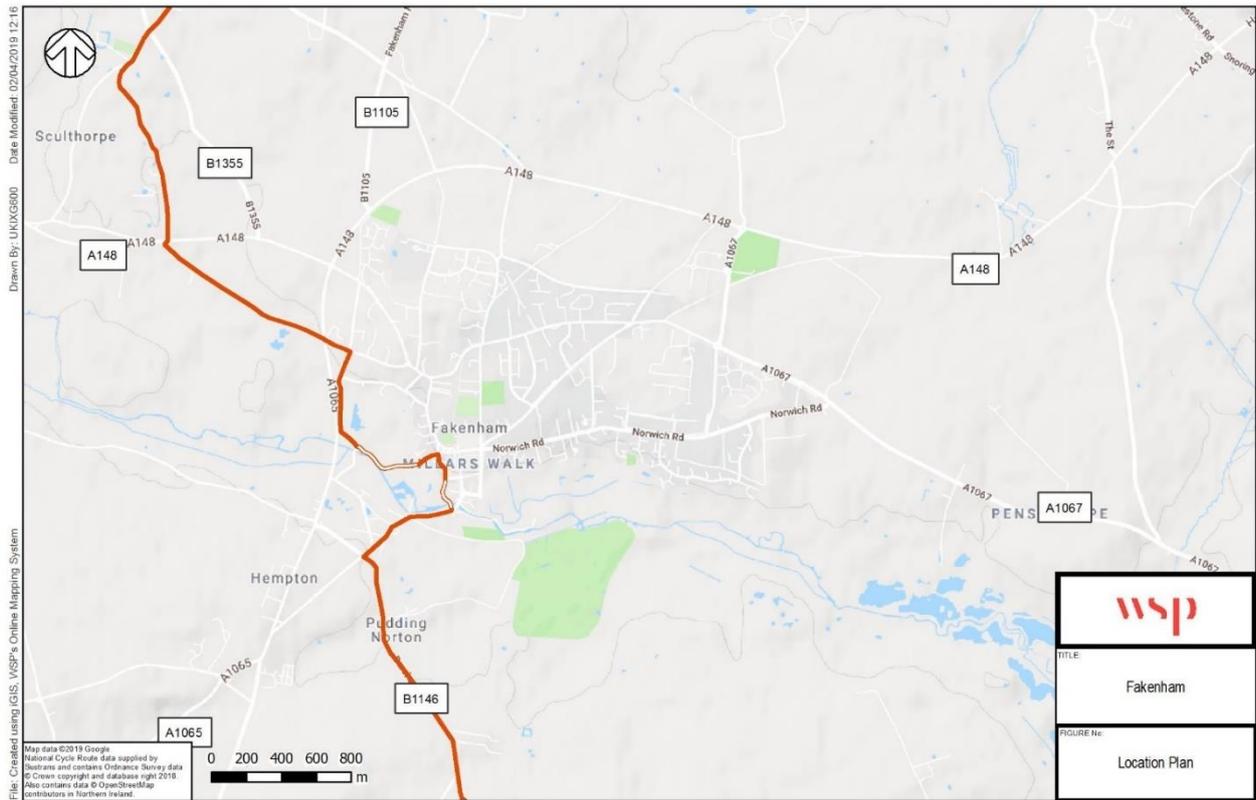


Figure 7.14 walking distance from Fakenham market

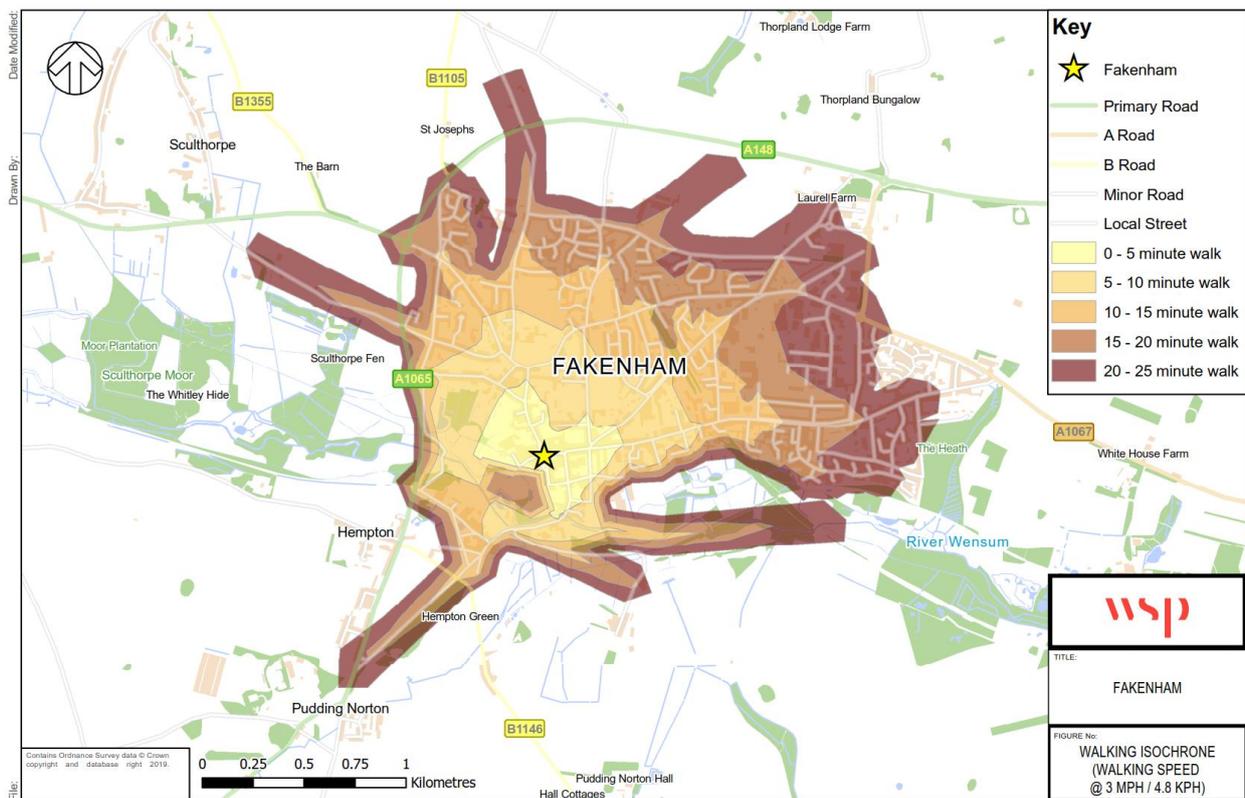
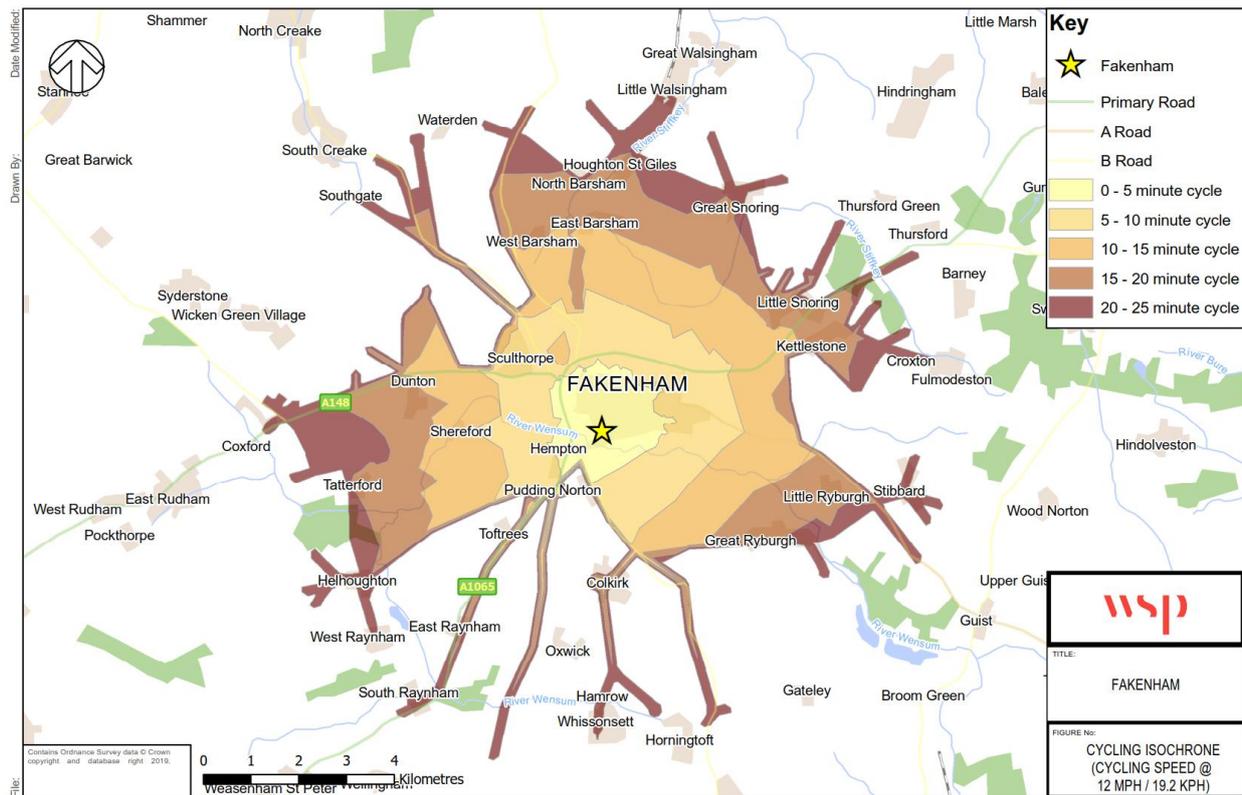


Figure 7.15 Cycling distance from Fakenham market



Additionally, Norfolk County Council is looking to develop two cycle routes that will connect Fakenham with the surrounding areas. These two routes are expected to end where the Wensum Walk meets the A1065, at the southwest of Fakenham, and where Trap Lane meets the A148, at the north of the town.

Existing travel patterns

The method of travel of residents in employment (excluding those who work from home) was obtained from the 2011 Census for Fakenham. The usual residents' mode share shows that the majority of residents (73%) chose to travel to work by car, as a passenger or driver, however, the next largest proportion of people chose to travel by active modes, with walking and cycling accounting for 24%. The large number of residents that choose to walk and cycle supports the need to improve the existing cycle and walking routes to encourage a future increase in the modal share.

According to the 2011 Census (Table QS702EW), 39% of usual residents in Fakenham travel less than 2km to work (<25 minutes walking distance) and 42% travel less than 5km (<15 minutes cycling distance). This shows that there is potential for at least 42% of usual residents to use active travel modes to get to work, versus the current 24%.

Walking and Cycling corridor options

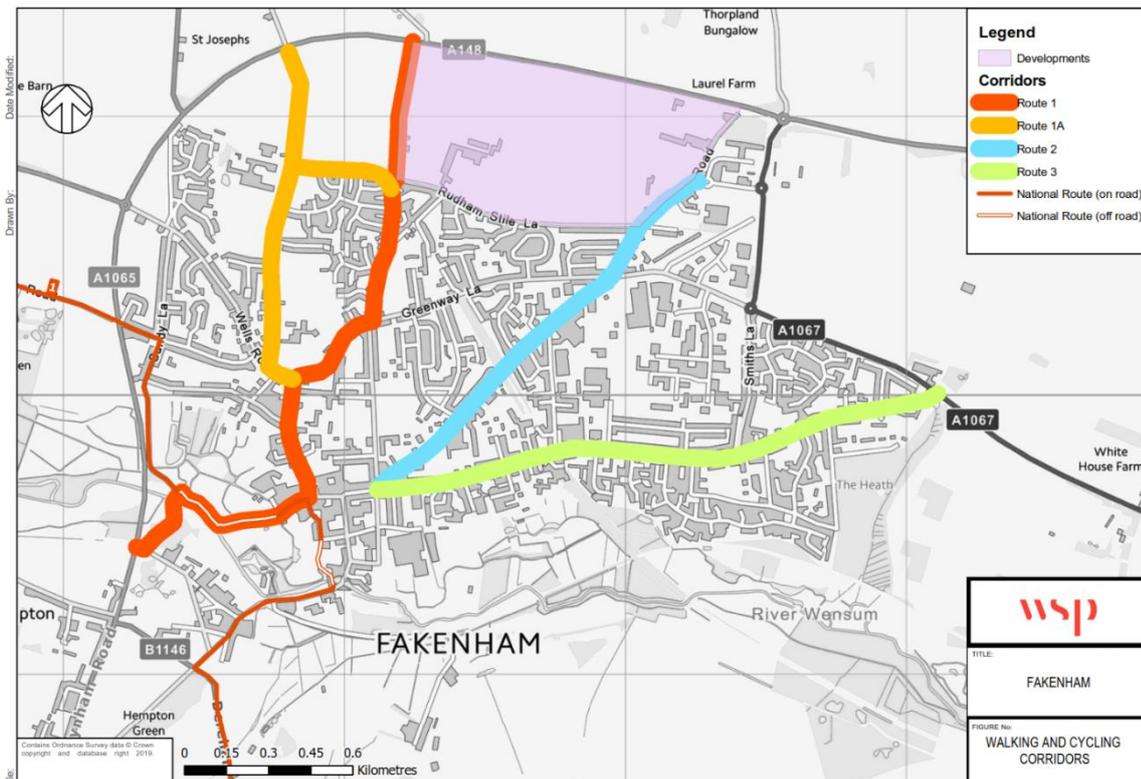
A series of cycle corridor options have been developed for Fakenham (See Figure 7.16) which consider the existing conditions and potential development of the town. These corridors have been planned at a high level with the aim of bringing about a mode shift towards cycling by connecting places of residence with schools, employment centres and places of leisure. The routes can be seen visually in Appendix 3. Simultaneously these options have been chosen to join up existing cycle infrastructure within the town to help create a more comprehensive network. Where the proposed cycle corridors utilise existing infrastructure, various improvements may be proposed.

Corridor improvement plans will be developed in accordance with best practice design guidance wherever practicable and with the aim of facilitating the vision and objectives of the Norfolk cycling and Walking Action Plan. The most relevant aspirations of the Plan are:

- More people walk and cycle to get to places of work and education, and for leisure;
- Walking and cycling are normal activities for most people, most of the time, and routes are direct, convenient and pleasant; and
- Barriers to walking and cycling, such as concerns about safety and security, will have been addressed to ensure that residents and visitors are not put off from active travel.

All proposals will require further assessment and detailed investigation to ensure feasibility of implementation.

Figure 7.16: Proposed walking and cycling corridor options



Corridor 1 and 1a– Oak Street/Wells Road/Rudham Stile Lane

The extent of Route 1 is illustrated in Appendix 3. It follows the main south-north route through Fakenham connecting the south of Fakenham, the town centre, Fakenham College and the future development at the north.

The southern end of the route meets with the Wensum Walk which is a leisure path at the southwest of Fakenham and the National Cycle Network Route 1. The northern end terminates at edge of the Fakenham built up area, where land has been allocated for a new development of 950 dwellings.

Existing Benefits

Corridor 1 provides a variety of existing benefits including its location on a direct commuter route for future residents and connections to the Fakenham 6th Form College, it also connects with the town centre and the main shopping area. This ensures that it will be in frequent use and will encourage increased usage. The corridor also connects the National Cycle Network Route 1 with the proposed two new leisure routes at the north and southwest with the town centre. The route contains cycle lanes at Highfield Road and Wells Road, several 20 mph zones and off-road cycle way, to ensure cyclist safety.

A number of crossing points exist on Corridor 1 that allow users to safely cross the road, these include:

- Two zebra crossings at Oak Street;
- Zebra crossing next to the Wells Road mini-roundabout;
- Zebra crossing at Highfield Road; and
- Puffin crossing at the Highfield Road/Greenway Lane/Claypit Lane/Queen's Road signalised junction.

The route has direct access to key destinations in the town, such as Tesco and the Town Centre, which makes the town more accessible to all users. The traffic speed limit is 20mph around the town centre which ensures a higher level of safety for users and may help to facilitate a modal shift. The low speed limit means that the journey time difference between cars and active modes will be lower and thus walking and cycling will be more attractive options. Finally, Corridor 1 includes part of the National Cycle Network Route 1, which allows cyclists to access East Anglia with ease; the route links key areas including Norwich and King's Lynn and connects to NCR 13 to access Thetford.

Opportunities

Corridor 1 provides a number of opportunities, most importantly being able to improve accessibility to schools by active travel modes; such as Fakenham High School and College. There is the option to include provision of crossings on key pedestrian and cycle desire lines that would allow for safer journeys in Fakenham to key destinations.

A contraflow cycle lane can be easily implemented at the southern section of Field Lane to improve the connection from the College to the town centre. There are areas

of planned future development at Rudham Stile Lane, so there is potential to develop connectivity to ensure that new businesses and residents can walk and cycle into the town with ease.

Constraints

All bus routes travel along Oak Street to connect neighbouring rural areas and Fakenham, therefore carriageway space is needed to allow the buses to stop and collect / drop-off passengers, this limits the space available for pedestrians and cyclists. The off-road cycle track part of the NCN 1 is currently unbound which is not suitable for frequent use. The track should be surfaced to formalise the cycle track and make it suitable for more frequent use. The vegetation alongside this route is not been maintained appropriately and signs are not visible.

The connections of this corridor with the cycle routes at Wensum Walk, in the southwest, and Trap Lane, in the north of the town, are at level with two 60mph A-roads, the A1065 and the A148. This is considered unsafe and a splitter island and the adequate signage should be provided to improve the connectivity of Fakenham with the adjacent areas.

Corridor 2 – Holt Road and Thorpland Road

The extent of Route 2 is illustrated in Appendix 3. It follows a direct northeast-southwest route through Fakenham routing along Thorpland Road and Holt Road connecting the east of the Rudham Stile Lane development with the industrial state and the town centre.

Existing Benefits

Corridor 2 contains a number of existing benefits along the route, including the connections to the allocated development site that will include 950 dwellings, schools, etc with all the main workplaces in Fakenham. The connections would allow for more residents to travel by active modes and would strengthen accessibility to the schools in Fakenham.

A number of crossing points exist on Corridor 2 that allow users to safely cross Holt Road, these include:

- Zebra crossing northeast of the junction with Lancaster Avenue; and
- Zebra crossing that connects the footway to Queen's Road and the one to Norwich Road.

Corridor 2 is a less trafficked route than Corridor 3 (Norwich Road) and footways are provided on both sides for most of the route, allowing for safer journeys for users; Holt Road includes provision of footways away from the road for most of the route. This is supported by the traffic speed limit of 20mph around the town centre and two zebra crossings, which ensures that cyclists and pedestrians are safer when travelling.

Improved connections to the Town Centre could encourage more residents to travel by active modes, as Corridor 2 could be quicker to walk / cycle than to travel in a personal vehicle.

Opportunities

The traffic speed limit of 20mph opens the possibility of designing on-road cycle lanes alongside Holt Road. There is also the option to include provision of crossings on key pedestrian and cycle desire lines, like the Thorpland Road/Holt Road junction or the Holt Road/The Drift junction, that would allow for safer journeys in Fakenham. These will improve the accessibility of the industrial state by active modes

There are areas of planned future development at Rudham Stile Lane, so there is potential to develop connectivity to ensure that new businesses and residents can walk and cycle into the town with ease and this corridor is the most direct route from the eastern side of the development.

Constraints

Corridor 2 includes some disbenefits, due to the width constraints in many parts of the route. There is also the likelihood that the route will be discontinuous due to spatial constraints like the bridge over the Great Eastern Way.

The Corridor travels through residential areas and as such, on-street parking is expected along the route, which reduces the space for pedestrians and cyclists on the paths, this could create a conflict as there is not each spaced for the shared-use nature of the route. Corridor 2 encompasses frontage access along the route, alongside priority junctions that need to be negotiated, which could reduce the accessibility of the route and safety for users.

Finally, there are a number of 'pinch points' along the route that, such as the Thorpland Road/Holt Road junction, Thorpland Road, the southern part of Holt Road and the bridge at Holt Road over the Great Eastern Way, which limits the improvements that can be made to the route for pedestrians and cyclists.

Corridor 3 – Norwich Road

The extent of Route 3 is illustrated in Appendix 3. It is generally an east-west route connecting the town centre to the eastern residential extents of Fakenham. It follows the main east-west route through Fakenham along Norwich Road from its junction with the A1067 to the east to its junction with Whitehorse Street to the west, where it joins the town centre.

Existing Benefits

Corridor 3 provides a variety of existing benefits including its location on a direct commuter route for existing residents, this ensures that it will be in frequent use and will encourage increased usage.

A number of crossing points exist on Corridor 3 that allow users to safely cross Holt Road, these include:

- Zebra crossing adjacent to the junction with Whitehorse Street; and
- Zebra crossing that connects the footway to Holt Road with ALDI.

Improved connections to the Town Centre could encourage more residents to travel by active modes, as Corridor 3 could be quicker to walk / cycle than to travel in a personal vehicle. Finally, the traffic speed limit is 20mph around the town centre which ensures a higher level of safety for users and may help to facilitate a modal shift. The low speed limit means that the journey time difference between cars and active modes will be lower and thus walking and cycling will be more attractive options.

Opportunities

Corridor 3 includes a number of opportunities for Fakenham, most importantly that it improves accessibility for commuters by active travel modes, this would encourage those travelling to work to do so by bike or on foot.

The creation of shared footways could encourage sustainable travel, as this would allow less confident cyclists to cycle off the road and could improve journey times if the routes are more direct to key destinations.

Constraints

Corridor 3 is a heavily trafficked route along Norwich Road, so there is limited space to increase on-road cycle provision, and the speed limit in some sections of Norwich Road is 30mph and 40mph. Two primary bus routes also travel along the corridor to connect Holt and North Creake with Fakenham, where buses stop along the whole route, therefore carriageway space is needed to allow the buses to stop and collect / drop-off passengers, this limits the space available for pedestrians and cyclists.

The Corridor travels through residential areas and as such, on-street parking is expected along the route, which reduces the space for pedestrians and cyclists on the paths, this could create a conflict as there is not enough spaced for the shared-use nature of the route. Norwich Road is fully utilised in the eastern part, with frontage access throughout the route, this could produce a conflict between users, so the route has been carefully planned to ensure that accessibility is maintained for all users.

Corridor Comparison and Ranking

Table 7.4 Walking and cycling corridor comparison

	Benefits	Limitations
Corridor 1	<ul style="list-style-type: none"> ■ Will benefit local plan allocations in the north of Fakenham ■ High level of school benefit ■ Avoids all busy main roads ■ Serves west of Fakenham well, creating a direct north-south corridor at the west of the town ■ Connects the leisure routes coming in/out of Fakenham ■ Avoids main vehicular routes to town centre parking ■ Minimal impact upon vehicular traffic ■ Quiet route through the town centre ■ 	<ul style="list-style-type: none"> ■ Resurfacing/ Widening of footways & crossing points required; ■ Some pinch points on cycle paths ■ Interaction with vehicular routes to town centre ■ Gradients on Highfield Road and Field Lane
Corridor 2	<ul style="list-style-type: none"> ■ Will benefit local plan allocations in the north of Fakenham ■ A Direct Route ■ Avoids all busy main roads ■ Connects residential areas with the industrial state and the town centre ■ Potentially part funded by developer of the north of Rudham Stile Lane development 	<ul style="list-style-type: none"> ■ Difficulty crossing Thorpland Road to Holt Road ■ The local plan allocations may significantly change traffic flows on Thorpland Road ■ Gradients on Holt Road ■ Does not connect with Fakenham College.
Corridor 3	<ul style="list-style-type: none"> ■ Connects residential areas with the industrial state and the town centre ■ Connects with the leisure route called the Great Eastern Walk ■ A Direct Route ■ There is space to build off-road cycle paths, which may encourage reluctant cyclists 	<ul style="list-style-type: none"> ■ Does not connect with Fakenham College ■ Does not connect with the northern development ■ Goes over a main and busy road

Table 7.5 RAG rating of corridors

	Corridor 1	Corridor 2	Corridor 3
Existing town served	Yellow	Yellow	Yellow
Strategic sites / LP allocations served	Yellow	Yellow	Red
Pedestrian/ Cycle provision / priority	Green	Green	Green
Leisure route potential	Green	Red	Red
Flexibility of route	Green	Green	Yellow
School connectivity	Green	Red	Red
Employment / retail / leisure connectivity	Yellow	Green	Green
Impact on vehicular traffic	Yellow	Red	Green
Overall Rank	1st	2nd	3rd

The assessment has concluded that walking and cycling corridor 1 should be taken forward for further assessment and detailed costing. Route 1 connects a large area of the town and it will serve for multiple purposes (commuting, schools and leisure). Whereas, routes 2 and 3 are expected to be only used for commuting purposes.

Signage assessment

WSP have been commissioned to produce a high-level review of existing directional signage located in the town, to understand how visitors are directed to Fakenham's attractions and routed to, and from, the main public car parks.

The main attractions within Fakenham and surroundings are:

- Town centre and tourist information centre;
- Fakenham Racecourse;
- Langham Glass;
- Fakenham Museum of Gas and Local History;
- Sculthorpe Moor Nature Reserve;
- Pensthorpe Nature Park;
- Fakenham Superbowl;
- The Wensum Lodge;
- Fakenham Sports and Fitness Centre;
- Thursford Collection (7 miles away from Fakenham);
- Holkham Hall (11 miles away from Fakenham);
- Wells & Walsingham Light Railway (10.6 miles away from Fakenham)

The main local town destinations signed from Fakenham are:

- Kings Lynn
- Cromer
- Swaffham
- Norwich

The six main public car parks, which form the focus of the parking aspect of this report, are outlined below:

- Highfield Road;
- Queen's Road;
- Bridge Street;
- The Limes;
- Millers Walk East; and
- Millers Walk West.

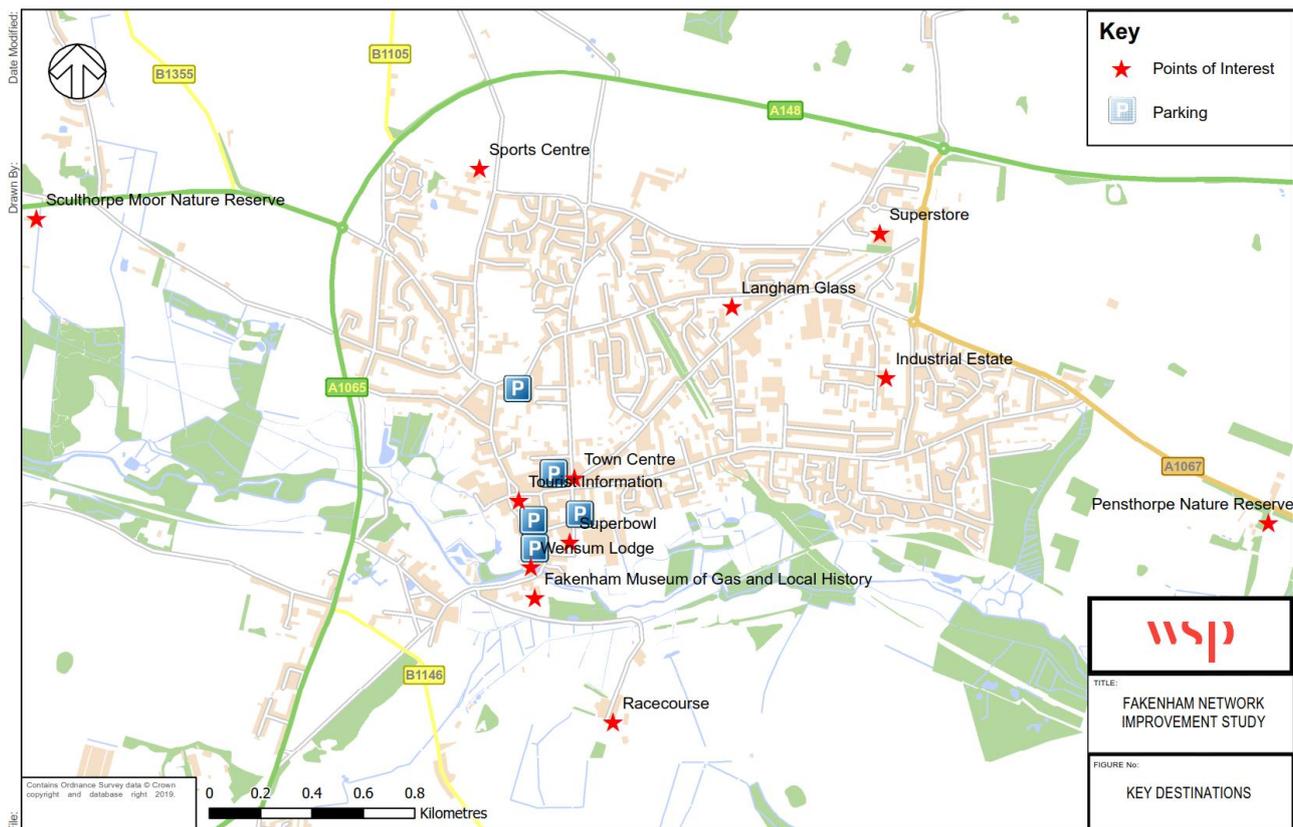
Other car parks, in and around Fakenham, are either in private ownership (i.e. Aldi) or are situated outside of the town centre. Small pockets of on-street parking are available throughout the town; however, these have been excluded from the study.

The key destinations and main attractions, which form the focus of this signage assessment are shown below in Figure 7.16.

All work contained in this report should be viewed in conjunction with these drawings in Appendix 4:

- Existing signage drawing 70050981-WSP-SIG-001-P01; and
- Proposed signage drawing 70050981-WSP-SIG-002-P01.

Figure 7.16 Map showing car parks and key attractors



Existing Signage

Existing signage is generally good for vehicles approaching Fakenham from the south (A1065 and Dereham Road) and the west (A148 Creake Road) but is more sporadic and limited for vehicles arriving from the east of the town, notably along the A148 and A1067. Limitations to existing signage have been identified and are listed below:

- Existing signage is cluttered and can be unclear to read;
- The existing signage does not encourage visitors and tourists to the town centre and to Fakenham’s attractions; and
- Signage does not adequately direct motorists to the town centre, notably on the Bypass (A148).

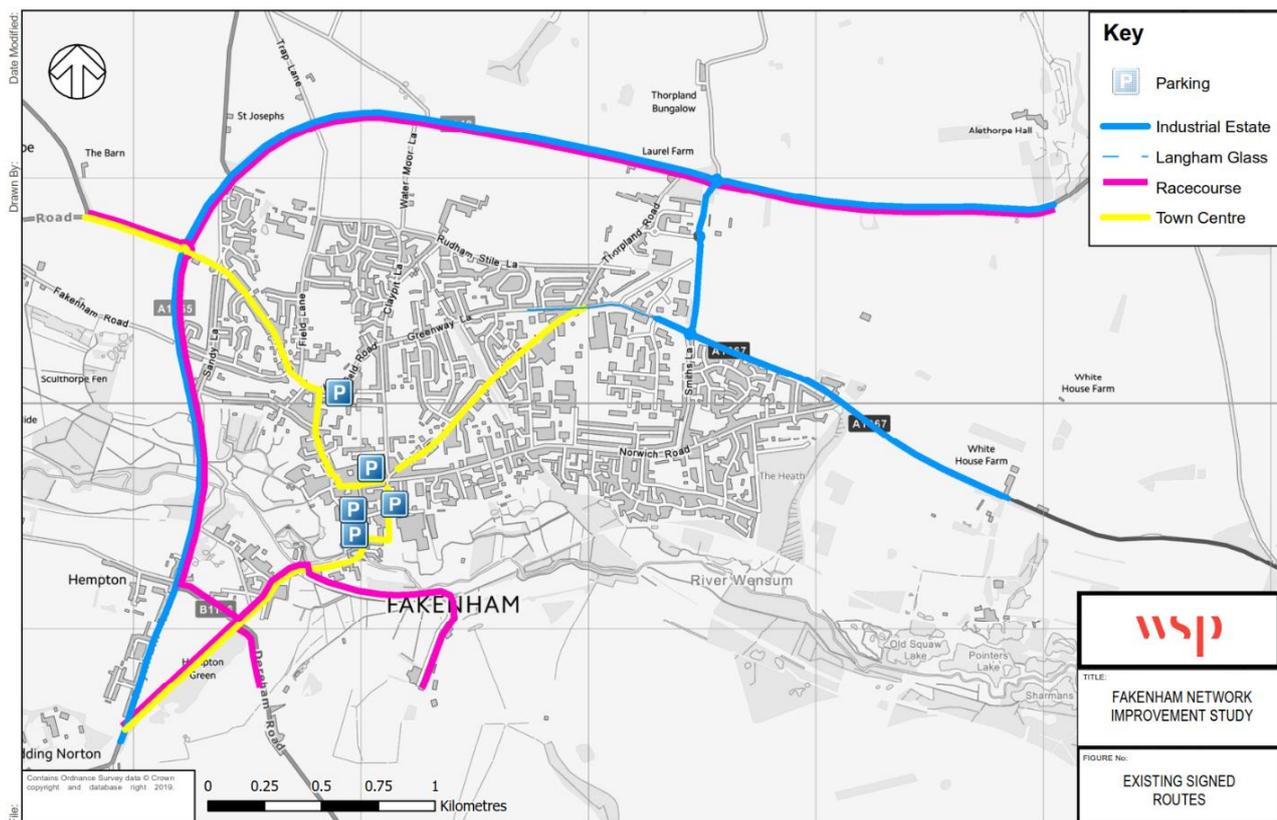
Vehicles approaching the town centre from the north-west, requiring parking, are directed to the main car parks by existing signage at Wells Road. For vehicles taking this route approaching Market Place, no signage currently directs vehicles towards the town centre car parks.

Parking signage could be insufficient for vehicles approaching the town centre via Holt Road or Norwich Road, with no signs currently directing motorists to parking at the Norwich Road/ Holt Road double mini roundabout.

Existing signage indicating exit routing from the main car parks out of the town centre is lacking. There is currently no signage directing vehicles out of the Highfield Road, Queen’s Road and Millers Walk East and West car parks, and as such, vehicles are required to make their own routing decisions, which may cause drivers use unwanted secondary roads when leaving the town.

On exiting The Limes and Bridge Street car parks there is no immediately obvious signage, however, vehicles following the natural route southbound are properly directed at the Bridge Street/ Mill Court/ Olivet Way roundabout

Figure 7.17 Existing signed routes



Proposed Signage into Fakenham (Inbound)

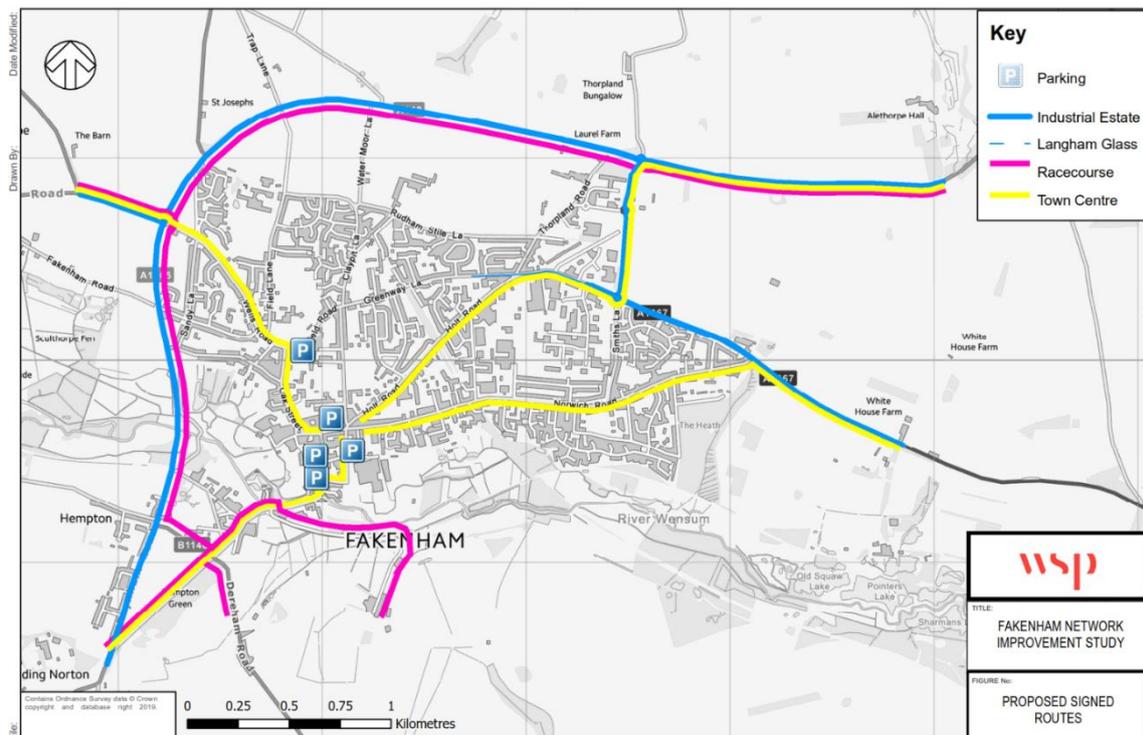
To better disperse the flow of vehicles routing to the town’s key attractions and six town centre car parks, the routes outlined in Figure 7.18 are proposed. The routing proposals are indicative at this stage and would require further study and detailed traffic assessment including key junction capacity modelling.

To encourage drivers to follow the above-mentioned routes, the following improvements to existing signage should be considered, which could improve the dispersion of traffic from the key locations shown in Figure 17.6. These suggested improvements are:

- The addition of tourist information on existing signage;
- Decluttering existing signs to improve clarity and replace information where necessary; and

- Proposing new signage at key junctions relating to Fakenham's attractions, notably on the Bypass (A148).

Figure 7.18 Proposed inbound routes



It is recommended that greater clarity is provided for vehicles approaching Fakenham from the east (A148) and (A1067). Vehicles approaching from the south-east along the A1067, could be directed to the town centre via Norwich Road. Vehicles entering the town from the east at the A148, could be routed to the town centre southbound via the A1067 and culminating at Holt Road.

It is suggested that for vehicles directed to the parking in the town centre via the existing signage on Wells Road, greater clarity for parking is required at Market Place. As well as proposing parking signage at Market Place, it is recommended that vehicles could be directed to town centre parking at the Norwich Road/ Holt Road double mini roundabout.

Proposed Signage Leaving Fakenham (Outbound)

It is desirable that exit routing from the six town centre car parks directs vehicles along the primary town roads in a direct manner. Vehicles should not be excessively routed through the historic town centre.

It is recommended that parking signs should be placed at locations that will direct vehicles exiting the town's car parks along the routes listed below:

- Vehicles exiting the Millers Walk East and West car parks should be directed southbound to the A1065;
- Motorists departing from the Queen's Road car park should be directed southbound, deciding on direction of travel at the Norwich Road/ Holt Road

double mini roundabout, either to the north-east (Holt Road), eastbound (Norwich Road) or southbound (Whitehorse Street); and

- For vehicles leaving the Highfield Road car park, access to the surrounding local highway network could be provided by routing south-west and continuing via Wells Road.

Summary

Existing signage is good for vehicles approaching Fakenham on the A1065 northbound and from the West (A148 Creak Road) but is more sporadic and limited for vehicles arriving from the East (A148 and A1067). Exit-routing from the Highfield Road, Queen's Road and Millers Walk East and West car parks is currently lacking, and as such, vehicles are required to make their own routing decisions.

To better direct vehicles to the town's key attractions and car parks, a series of new signage for the town have been proposed, which aim to disperse vehicles within Fakenham in such a way as to avoid the risk of any traffic bottlenecks. The proposed signage includes the addition of tourist information to existing signs, decluttering existing signs and the addition of new signs to direct visitors to key attractions and parking.

For vehicles exiting the main car parks, it is recommended that parking signage should be placed at key locations to provide clarity to drivers departing from the town centre.

This report has undertaken a high-level review of the key attraction signage and parking signage in Fakenham, and subsequently proposed indicative routes and signage to better disperse the flow of vehicles throughout the town. The routes and signage outlined within this study are indicative at this stage, and further study would be required to assess the feasibility of the proposals, including detailed traffic assessments, junction capacity modelling and costings.

Reconfiguration of HSBC parking bay

WSP were commissioned to undertake a high-level review of the existing on street parking on Market Place, Fakenham in front of the HSBC Bank and to consider a limited number of options for increasing the number of available spaces.

Existing Layout

The existing highway layout consists of parallel on street parking bays in front of the HSBC bank, with room for three vehicles to park. There is a footway area adjacent to the existing parking bays, catered to pedestrian movement. Street furniture includes three existing trees, a lighting column and parking sign/post, all in front of the HSBC bank.

There is vehicle access to the east and west of the parking bays by means of dropped kerbs, which lead to local shops next to and behind the HSBC bank. It is understood that this area may also be used to set up temporary stalls during market days. On the southern side of Market Place there is a similar arrangement of on street parking in front of the Barclays bank. There are also two existing parking bays for disabled drivers on the carriageway opposite, outside Boots, where the effective carriageway width is slightly narrowed.

During a site visit, which was carried out on a Tuesday in January at mid-day, we noticed a very low vehicle flow throughout this section of the town centre. Similarly, the pedestrian footfall appeared to be minimal. Vehicle speeds were observed to be low with a good driver behaviour along Market Place.

The review is focused on the existing parallel parking bays on northern side of Market Place, opposite the existing War Memorial (The Square). Currently there is enough room for three vehicles to park, with the parking area being approximately 2m wide and 15m long. Market Place is approximately 6m wide adjacent to the parking bays, allowing two vehicles to pass each other comfortably.

Design Assumptions

- Existing trees adjacent to the parking bays to be retained, if possible
- Existing lighting column and parking sign may be re-located to suit the proposed layout
- The northern kerb line to be retained to maintain adequate carriageway width
- The proposed herringbone parking to 'fit' within extents of the existing footway/parking area between the HSBC bank and northern kerb line
- The existing vehicle accesses to the east and west of the parking bays to be retained
- The existing disabled parking on the southern side (in front of Boots) to be retained
- Provide access for a vehicle to park and wait in the vicinity of the existing ATM machine outside the HSBC bank, maintaining enough shared space for the vehicle to manoeuvre out onto Market Place
- The existing disabled parking bays on the southern side (outside Boots) to be retained

- The proposals to include the provision of one additional disabled parking bay in the vicinity of the HSBC bank
- The existing carriageway drains away from the parking bays towards road gullies along the Southern footway and longitudinally, the cross fall of Market Place is towards the junction with Oak Street
- Our proposals have been designed to have minimal affect to existing drainage

Options Considered – See Appendix 5 for drawings

Option 1 - 45° angled parking

Benefits	Disadvantages
Provision of two additional car parking spaces in front of the bank	Proposed layout will require the removal of the existing tree east of the bank
Existing carriageway width is unaffected	A vehicle parked in bay number 5 may cause obstruction to pedestrians/visitors to the bank due to the location of the bank's entrance
Vehicle access adjacent to the Betfred building is maintained and arrangement allows enough room for vehicles to turn and exit onto Market Place in forward gear (refer to vehicle tracking inset)	

Option 1a - 45° angled parking

Benefits	Disadvantages
Provision of three additional car parking spaces in front of the bank	Proposed layout will require the removal of all existing trees
Existing carriageway width is unaffected	Vehicle access adjacent to the Betfred building is reduced significantly and arrangement does not allow enough room for vehicles to turn and exit onto Market Place in forward gear (refer to vehicle tracking inset)
	Visibility between drivers exiting out of bay number 1 and vehicles approaching from western direction is impaired due to the location of the proposed bay in conjunction with the adjacent Betfred building

Option 2 - 30° angled parking

Benefits	Disadvantages
Provision of one additional car parking space	Proposed arrangement does not provide enough additional parking spaces to warrant a change in existing layout

Maintains a larger amount of footway area due to arrangement of parking bays	Due to the relaxed angle of the parking bays the visibility between vehicles reversing out of the parking bays and oncoming vehicles from the West are diminished
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Option 3 - 60° angled parking

Benefits	Disadvantages
Provision of two additional car parking spaces in front of the bank.	A vehicle parked in bay number 5 may cause obstruction to pedestrians/visitors to the bank due to the location of the bank's entrance
Two existing trees are retained in front of the bank	Existing tree outside the bank's entrance has to be removed
Includes the addition of two motorcycle bays	Positioning of bay number 4 and 5 limits the footway width in front of the bank to a minimum of 1.5m
The existing vehicle access adjacent to the Betfred building is maintained at the same width	Referring to the vehicle tracking study it is observed that vehicles exiting the parking bays will come into close encounter with vehicles travelling west on Market Place, increasing the risk of collisions

Option 3a - 60° angled parking

Benefits	Disadvantages
Provision of three additional car parking spaces in front of the bank	A vehicle parked in bay number 5 may cause obstruction to pedestrians/visitors to the bank due to the location of the bank's entrance
The addition of one extended motorcycle bay	All existing trees have to be removed
The existing vehicle access/egress adjacent to the Betfred building is maintained at the same width	Positioning of bay number 5 and 6 limits the footway width in front of the bank to a minimum of 1.5m
	The proposed layout does not allow enough room for a bank vehicle to park and/or turn in the vicinity of the ATM machine
	Vehicles exiting the parking bays will come into close encounter with vehicles travelling west on Market Place, increasing the risk of collisions

Option 4 – Perpendicular to the bank frontage

Option 4 and 4a are a refinement of Options 1,2 and 3 respectively, with the parking arrangement designed at a 75° angle.

Benefits	Disadvantages
Provision of two additional car parking spaces in front of the bank	All existing trees in front of the bank have to be removed
The bank's main entrance is unobstructed by the proposed layout	The effective footway area in front of the bank is reduced significantly
	The proposed layout does not allow enough room for a bank vehicle to park and/or turn in the vicinity of the ATM machine
	The proposed disabled parking bay is located to the west of the parking arrangement and further away from the bank's main entrance

Option 4a – Perpendicular to the bank frontage

Benefits	Disadvantages
Provision of three additional car parking spaces in front of the bank	All existing trees in front of the bank have to be removed
The bank's main entrance is unobstructed by the proposed layout	The effective footway area in front of the bank is reduced significantly
	The proposed layout does not allow enough room for a bank vehicle to park and/or turn in the vicinity of the ATM machine

Summary

Currently, there are five existing car parks within 400m walking distance of the Market Place, and as such the existing car parks are considered to provide a good level of accessibility to a range of main Town Centre destinations, given that 400m is the standard measurement of accessibility used by the Department for Transport.

The above design proposals provide at a maximum three additional car parking facilities but there are a number of clear issues which need to be addressed.

- Removal of existing trees
- Obstruction to pedestrians/visitor routes
- Vehicles not being able to turn and exit
- Impaired visibility
- Increased risk of collisions

It has been concluded not to pursue this individual scheme but that additional on street parking is considered as part of future parking arrangements for the town as a whole.

Chapter 8: Action Plan

Based on the feedback from stakeholders and findings from the study work the action plan recommends areas where consideration should be given in the form of short, medium and long term actions. NCC has funding committed to the delivery of short term schemes that can be delivered within the next two years. Given the nature of funding using NCC led proposals would allow for schemes to be delivered within the time allocation. In the medium and longer term it will be critical for NCC to work collaboratively with local partners to deliver on other opportunities.

Creake Rd/A148/A1065/Wells Rd Roundabout Assessment

Short Term

The data indicates that implementing the short-term solution of lane marking changes on the A148 could considerably improve the performance of the roundabout. The models predict a decrease in queues in the region of 74%-78%.

Action: Norfolk County Council and partners to develop scheme to alter lane markings as suggested and pursue funding through the County Councils capital programme.

Medium Term

Action: Norfolk County Council to monitor the traffic movements at the roundabout post any lane marking changes and assess if changes have made anticipated improvement.

Long Term

The option to add a segregated left turn lane from the A148 Creake Road to the A148 is likely to significantly improve the capacity of the roundabout, bringing about a reduction in queues and delays on this arm. Additional land would be required to deliver this improvement and will be a longer-term aspiration linked to the delivery of growth to the north of the town.

Study the effect on pedestrians of the relocation of traffic island near Pensthorpe Road/George Edward Road junction

Short Term

The proposal to move the pedestrian crossing eastwards alleviates the existing issues of vehicles overrunning the surrounding footways (especially turning out of George Edwards Road), however there are safety risks as a result of the crossing being located closer to the existing bus stop on the southern footway.

Action: NCC to consider the relocation of the existing bus stop to a more suitable location, possibly west of the junction with George Edwards Road or further to the east.

Medium Term

Norfolk County Council and partners to develop scheme to relocate traffic island and pursue funding through various opportunities including new development.

Propose alternative layout to the Thorpland Rd/Greenway Ln/Holt Rd junction

Short Term

In the longer term Option 3 offers the greatest benefits in terms of all-round junction operation and encouraging reduced traffic speeds and the opportunities for enhanced crossings.

Action: Norfolk County Council and partners to identify potential funding opportunities for feasibility work to develop mini roundabout scheme further.

Medium Term

Norfolk County Council and partners to develop scheme to develop mini-roundabout scheme and pursue funding through various opportunities including new development.

Cycling and Walking Corridors

Short Term

According to the 2011 Census 42% of usual residents travel less than 5km (<15 minutes cycling distance) to work. This shows that there is potential for at least 42% of usual residents to use active travel modes to get to work, versus the current 24%.

Three corridor options were developed with the aim of connecting places of residence with schools, employment centres and places of leisure, and corridor one was assessed as being the best option to develop further. Corridor option one was ranked as the best option but to maximise its potential a splitter island needs to be provided crossing the A1065 and linking to the Wensum Walk.

Action: Norfolk County Council and partners to develop splitter island crossing A1065 connecting cycle corridor one to the Wensum Walk and pursue funding through various opportunities including new development.

Medium Term

The cycle corridor option one is divided into section improvements and these are developed into schemes that can then be used as projects when seeking contributions from new development or external funding opportunities.

Long Term

The impact of growth will need to be understood beyond the current emerging Local Plan period beyond 2036. Accessibility planning could be undertaken regarding access to schools, health facilities and employment opportunities.

Signage Strategy

Short Term

Limitations to existing signage have been identified and are listed below:

- Existing signage is cluttered and can be unclear to read;
- The existing signage does not encourage visitors and tourists to the town centre and to Fakenham's attractions; and
- Signage does not adequately direct motorists to the town centre, notably on the Bypass (A148).

To encourage drivers to follow the proposed routes set out in the strategy suggested improvements include:

- The addition of tourist information on existing signage;
- Decluttering existing signs to improve clarity and replace information where necessary; and
- Proposing new signage at key junctions relating to Fakenham's attractions, notably on the Bypass (A148).

Action: Highways Authority to provide costings and timeline of potential sign changes.

Medium Term

Delivering the signage and cycle/walking corridor improvements suggested by this strategy will create a better distribution of traffic throughout the town and there is potential to improve road operating conditions for all users within the town, enhancing conditions for pedestrians and cyclists in the process. This improved environment could improve safety and therefore encourage more people to walk or cycle into the town.

