Norwich City Council

SCRUTINY COMMITTEE

ITEM 7

REPORT for meeting to be held on 17 October 2019

Mitigating Climate Change

Summary:

At its last meeting on 19 September, the scrutiny committee requested a report covering three questions on mitigating climate change.

1) What the council was currently doing around climate mitigation
2) What powers the council had to mitigate climate change
3) What powers could the council ask central government for to make a difference locally.

The committee also asked for a copy of the report to the transforming cities fund joint committee on the transforming cities funding submission to be attached. This can be found at appendix A.

Finally, the committee made a number of draft recommendations at the last meeting which members are asked to ratify at this meeting:

RESOLVED to:

(1) Ask cabinet to consider recommending the extension of the monitoring zone from Castle Meadow to include St Stephens Street and initially make this a minimum Euro 5 standard compliant.

(2) Ask cabinet to consider extending the preferential rate enjoyed by the council to members of staff who may wish to purchase an electric vehicle.

(3) Work with county to consider whether it could incorporate standard clauses into section 106 agreements to fund school travel plan work.

(4) Ask the county council as the highways agency to

consider developing bespoke responses to traffic issues in each area depending on local need.

(5) Ask cabinet to consider ways of reducing background levels of air pollution across the network area; including ensuring that pollution is not displaced to areas outside of the city centre and increasing monitoring in areas not identified as 'hotspots' once appropriate resources have been secured; and

(6) Ask cabinet to explore options on how to reduce single occupancy vehicles travelling into the city.

Conclusions: The authority continues to deliver effective mitigation against the production of CO_2 emissions via a wide range of programmes and projects.

Recommendation: That scrutiny committee members consider the report and make recommendations.

Contact Officer:

Richard Willson
Phone: 01603 212312
Email: richardwillson@norwich.gov.uk

Mitigating Climate Change

Question 1) What the council was currently doing around climate mitigation?

1.1 Since the publication of Norwich City Council's first Environmental Strategy in 2008 we have endeavored to deliver a vibrant sustainable city which "meets the needs of the present without compromising the ability of future generations to meet their own needs"

1.2 Norwich is a city steeped in beautiful history; however, it is not our intention to make the city a museum piece. We need to ensure that Norwich continues to be a living, breathing city that continues to develop in character in order to support the needs of residents, visitors and organisations alike.

1.3 Our first environmental strategy was launched in 2008 and since then the council has gone from strength to strength in terms of its environmental achievements. During this period our authority also received a number of national and international environmental awards in recognition of its environmental achievements.

- Carbon Trust Award for cutting CO_2 emissions
- UN Liveable Communities Gold & Silver Award
- Green Apple Award UK Green Champion
- Transformation in waste and environment – sliver
- ESTA Energy Manager of the year
- Edie Carbon Reduction Award
- The National Energy Efficiency Award
- The Regional Energy Efficiency Award

1.4 Norwich City Council has also been named as the top local authority in Norfolk and one of the best in the country on a number of issues related to climate change in a 2019 Friends of the Earth survey. In the wide-ranging survey the city council was ranked joint-15th nationally (out of 350 local authorities surveyed) and first in Norfolk, with a performance score of 80 per cent.

1.5 The survey assessed councils in different categories including renewable energy, public transport, lift-sharing, energy efficiency at home, waste recycling, and tree cover to determine which local authorities were performing highest in this vital area.

1.6 Since 2008 the council has had a reduced its own emissions via the Carbon Management Programme (CMP). Actions include but are not limited to:

- Low emission fleet (Electric, Hybrid and small petrol)
- Investment programme to lower emissions via retrofitting
- Building rationalisation

- Building insulation and cladding
- Use of 100% renewable electricity
- Use of renewables (solar, ground source heating) where possible

1.7 This programme has delivered nearly 60% reduction in carbon emissions during a time where many councils either don't report or don't have programmes to mitigate their emissions. Norwich is the sole council in Norfolk presently monitoring their emissions and publishing a plan to mitigate.

1.8 Meanwhile, between 2005 and 2017 Norwich City Council has continued to deliver numerous projects that have contributed to lowering the cities per capita carbon emissions. These are now 45% lower. Norwich has 3.8 tonnes of CO_2 per person against the UK Average 5.65 t CO_2.

1.9 Over this period the council has delivered a wide range of actions and projects with a variety of partners and suppliers that have sown innovation and leadership. The council regularly reviews progress to ensure targets are achieved and delivery maintained. (Including scrutiny). Actions include but are not limited to:

- Travel Infrastructure
- Food waste collect, Recycling and waste reduction
- The Norwich Standard Housing programme
- Passivhaus developments
- Setting up a renewable energy company
- Regular solar auctions and domestic energy improvement schemes
- Pro-environmental behaviour messages and events
- Renewable energy provision in planning policy

1.10 The council has endeavoured to ensure capacity is maintained to ensure delivery even though we are experiencing unprecedented budget cuts due to reduced central government funding

1.11 The new Environmental Strategy 2019 – 2025 will go to CEEEP our new Climate Emergency and Environment Executive Panel on the 30th October 2019. This will allow members a forum to debate the document.

1.12 A new carbon management programme is being developed whilst we continue to retrofit our estate with new and innovative energy efficiency measures. For example the recent £280,000 LED retrofitting of St Andrews car park.

1.13 Looking forwards if we are wishing to deliver more with less our focus will need to lean more on wide range of external partnerships who can co-own our 2040 city vision targets of carbon neutrality and the shift in behaviour change needed to deliver it.

1.14 Finally new funding from central government will be needed as this will play a central role in shifting the city away from the fossil fuel use of the past.

Question2) What powers the council has around climate mitigation

2.1 The *Climate Change Act 2008* requires the Secretary of State to publish a report setting out an indicative annual range for the net UK carbon account for each year within a carbon budget; and a report setting out the Government's proposals and policies for meeting the carbon budgets for the current and future budgetary periods

2.2 The Secretary of State for Energy and Climate Change published an Emission Reduction Plan which was subsequently renamed the "Clean Growth Strategy". In the executive summary to the Strategy, the Government highlighted the different sectors it focused on:

2.3 "We have achieved significant results in the power and waste sectors and now need to replicate this success across the economy, particularly in the transport, business and industrial sectors. We also need to reduce the emissions created by heating our homes and businesses, which account for almost a third of UK emissions". Clean Growth Strategy 2017

2.4 Local authorities do not have a statutory duty to reduce emissions in line with the Climate Change Act or with the recommendations of the Committee on Climate Change who set the UK's carbon budget.

2.5 However Norwich City Council has been measuring its emissions and has had a plan since 2008 to reduce them. We also produce plans, create policy and purchase goods and services that have associated emissions which with proper planning can be reduced.

2.6 Councils can play a significant role in realising the benefits and opportunities of taking climate action in their areas. We are ideally placed to bring agendas together to ensure 'win-win' outcomes for the local communities we serve. In this sense, climate action is not a 'new' or 'different' agenda for Norwich City Council.

2.7 For example: co-ordinating action to retrofit homes can help address fuel poverty, create local jobs, cut carbon and make homes more resilient to the effects of severe weather.

2.8 Councils also have an important leadership role in creating low carbon and climate-resilient communities. The Paris agreement 2016 will need local, national and international action to fully deliver its objectives. Locally councils offer a vision and direction that needs to be delivered within the constraints of difficult budget decisions. Councils are the local planning authority and represent local concerns and perspectives.

2.9 Finally the council provides a number of services to residents and visitors. We will continue to work to minimise their environmental impact as well as working across a number of sectors to facilitate and encourage coordinated

action on sustainability.

Question 3) What powers could the council ask central government for to make a difference locally?

3.1 Local councils can be at the heart of tackling climate change, but to translate words into tangible carbon-reduction actions there is a huge question of resources. If we are serious about tackling waste, sustainable housing development, air quality, sustainable travel – to name just a few of the issues that contribute to carbon emissions, we will need a real step-up in the resources available to local councils.

3.2 Norwich is part of a network of cities responsible for 80% of the UK's CO_2 emissions however there is a disconnect between what local councils can realistically deliver when resources are being withdrawn by austerity.

3.3 Norwich will need to cut the energy use of all its buildings by at least 80%, generate over half the electricity needs from renewable sources and also transform how we travel and/or work.

3.4 The call on central government is a difficult question to answer as there are many sources of carbon that need to be mitigated. However some suggestions could include the following:

- Call on Government to create the right conditions for cities, businesses and citizens to act.
- Ask Government to create a Create a Sustainable Energy Investment Fund which cities and local authorities can use to stimulate investment by the private sector and communities, ensuring that good projects can be delivered more quickly.
- Ask Government to rapidly review the impacts which achieving net-zero will have across society and put in place effective measures to ensure that we have a fair transition to a net-zero country
- Call on Government to put this in place a comprehensive national building refurbishment programme for homes; eliminating fuel poverty, improving comfort and reducing costs.
- Call on the Government to put in place an effective financial regime to enable the UK to fully exploit the solar resource we have in cities, utilising the "unused" roof space.
- Call on Government to change the tax system to favour low and zero carbon solutions, and avoiding perverse disincentives such as the increase in business rates if you install solar panels.
- Call on Government to rebalance transport priorities to shift funding away from roads and towards public transport, walking and cycling.
- Encourage the introduction of area wide road user charging in urban areas.
- Review building regulations to require all new homes to be at least code 6.

3.5 However due to the broadness of the subject area scrutiny may wish to research what numerous 3rd sector groups and environmental think tanks are publishing in regards to what actions are needed by central government to deliver carbon neutrality by 2050 or sooner.

Report to: Transforming Cities Fund Joint Committee

Appendix A

Report title:	**Transforming Cities Funding Submission**
Date of meeting:	**16 October 2019**
Responsible Cabinet Member:	**Martin Wilby (Cabinet Member for Highways, Infrastructure and Transport)**
Responsible Director:	**Tom McCabe (Executive Director, Community and Environmental Services)**
Is this a key decision	**Yes**

Executive Summary

The Department for Transport (DfT) has shortlisted Norwich as a city that is eligible to apply for capital funding from the Transforming Cities Fund (TCF). The County Council's successful application is based on a vision to "Invest in clean and shared transport, creating a healthy environment, increasing social mobility and boosting productivity through enhanced access to employment and learning." The TCF provides the opportunity to deliver a sustainable high-quality integrated transport network for the Greater Norwich area.

We have already successfully secured £6.1m of funding from an earlier tranche of TCF funding, and this paper outlines our application for the remaining TCF allocation. It should be noted that we have also been successful in being shortlisted for funding from the Future Mobility Zones Fund, which is only open to cities seeking funding through the TCF.

To give clear direction to our application, the guiding principles and overall objectives relating to the delivery of transport in Greater Norwich were agreed at the County Council Environment, Development and Transport Committee in January 2019.

As part of the co-development process, a draft Strategic Outline Business Case (SOBC) was submitted to DfT in June 2019. The initial feedback from DfT was positive and they liked the ambition of the programme and they identified a number of areas that we need to address in the final submission. Since then we have worked with the DfT and stakeholders to shape the contents of our formal SOBC submission. The deadline for submitting our final SOBC is 28 November.

Recommendations

a) **Consider the programme outlined in this report**

b) **Recommend to the County Council Cabinet on 4 November that the programme outlined in this report is submitted to government on 28 November as the Norfolk TCF application**

1. Background and Purpose

1.1 The Department for Transport (DfT) has shortlisted Norwich as a city that is eligible to apply for capital funding from the Transforming Cities Fund (TCF).

The County Council's successful application is based on a vision to "Invest in clean and shared transport, creating a healthy environment, increasing social mobility and boosting productivity through enhanced access to employment and learning".

1.2 Congestion across Greater Norwich contributes to poor air quality and the city centre is designated as an Air Quality Management Area. Buses have insufficient priority on main corridors and congestion means that the bus network is not operating at optimal efficiency.

Objectives of the TCF

1.3 Aligned to the Government's Industrial Strategy, the objectives of the TCF are to improve productivity through investment in improved public and sustainable transport and improved connections between urban centres and suburbs.

1.4 The TCF is intended to encourage an increase in journeys made by low carbon, sustainable modes of transport, with a significant focus on public transport, cycling and walking. Additionally, the TCF aims to support wider cross-cutting priorities such as:

- Improving access to employment and delivering growth
- Encouraging the use of new mobility systems and technology
- Tackling air pollution and reducing carbon emissions
- Delivering more homes
- Delivering apprenticeships and improving skills

Transport for Norwich Strategy Review

1.5 The Transport for Norwich (TfN) Strategy is currently under review.

1.6 From the outcomes of public consultation earlier in 2018, as well as a review of existing background evidence, problems and issues, three Guiding Principles and three Delivery Themes were identified and agreed at a meeting of the Environment, Development and Transport Committee in January 2019. These define what the strategy is trying to do and provides a direction to the ongoing development of the strategy, its policies and implementation plan.

1.7 The Guiding Principles and Delivery Themes are outlined below.

<u>Guiding Principles</u>

Strengthening Norwich as the regional capital

- Enhancing the health and vitality of the city.

Access for all

- A transport system that gets people where they need to go.

Keeping people on the move

- Reducing congestion and making journeys more reliable.

<u>Delivery Themes</u>

Balancing the needs of the city and its users

- Identify priority areas for different users to inform network improvements.
- Take account of the competing travel needs of residents, businesses and

others.

Collaborating to provide cost-effective and efficient transport

- Build strong partnerships with transport service providers.
- Develop opportunities for private sector investment.
- Share responsibility for positive change.

Embracing new technology

- Encourage and trial new means of travel.
- Inform people's travel choices
- Optimise and evolve our existing network.

2. Proposals-Key deliverables

2.1 A number of key deliverables were outlined in our original application and these remain valid as we have developed our programme. A summary of these is outlined below:

- Improvements along three principal transport corridors; Airport to Broadland Business Park; Wymondham to Sprowston; and Easton to Rackheath
- Quicker journeys by cleaner vehicles serving the Norwich Research Park, University of East Anglia and the hospital, making use of a route crossing the River Yare
- More frequent bus services that are better co-ordinated between operators, with more evening services
- Improvements to public transport ticketing
- Improvements to walking and cycling networks to support the delivery of enhanced public transport
- Improvements to public transport, walking, cycling and general highway capacity in the Longwater area
- More direct and quicker public transport routes to and from the Broadland Growth Triangle, the UK's largest urban extension
- Provision of much needed additional bus stop capacity in the city centre, better connecting the train and bus stations and providing extra inner ring road junction capacity
- Delivering fully accessible transport hubs that provide a range of facilities and multi-modal transport options

Mobility hubs

2.2 In developing our TCF programme, we have included consideration for the provision of mobility hubs across Greater Norwich. We have defined these as key places within the city where citizens can access shared mobility services – buses, trains, club cars and hire bikes. Key features of these are:

- Easy for people to reach these places on foot and by bicycle
- Close to public facilities (shops, schools, libraries), density of employment and are at the centre of neighbourhoods, suburbs and settlements
- Well designed so people feel comfortable, secure and informed
- Buses are able to pull up alongside the kerb in the right place and at the right angle so all passengers can board and alight easily
- Regular bus services are provided, as well as interchange between

services

The specific features available at each hub location will vary according to the space available and links to other shared transport services.

Definition of corridors

2.3 For the purposes of developing our funding programme and providing flexibility in terms of evaluation of schemes, we have split the three corridors into their six (6) constituent elements either side of the city centre, as summarised in **Table 1** below. The City Centre was kept as a separate entity.

Table 1: Summary of corridors assessed

Corridor in Expression of Interest	Corridor in Funding Submission
Wymondham - Sprowston	Wymondham – City Centre
	Sprowston – City Centre
Airport – Broadland Business Park	Airport – City Centre
	Broadland Business Park – City Centre
Easton - Rackheath	Easton – City Centre
	Rackheath – City Centre
City Centre	City Centre

Workstreams undertaken

2.4 A number of workstreams have been undertaken to develop our proposed programme for submission and these are summarised in **Table 2**.

Table 2. Workstreams undertaken

Workstream	Outcome
Engagement with DfT and stakeholders	There has been regular written and verbal engagement with DfT, which has provided helpful advice on how our programme should be developed, appraised and presented. There has been engagement with stakeholders through the Transforming Cities Stakeholder Group, as well as through 1:1 discussions.

Development of 5 cases that make up SOBC	Draft versions of the 5 case documents that make up the business case were presented to DfT in June 2019. Final versions of these need to be submitted in November 2019.
Outline feasibility of schemes by engineers, including review of scheme costs, risks and dates of construction	A significant amount of outline feasibility design of a wide range of potential infrastructure schemes has been undertaken. This has considered scheme costs, benefits, risks, construction dates and deliverability. This has formed a key element of identifying appropriate schemes and prioritising corridors for investment.
Strategic and localised traffic modelling of emerging schemes	Traffic modelling provides an invaluable tool for indicating that potential impact of schemes on the wider transport network and is an important element of informing the economic appraisal of individual schemes and the wider programme. Advice from DfT has been an important element of this.
Equality Impact Assessment	An Equality Impact Assessment ensures that policies, projects or schemes do not discriminate against any disadvantaged or vulnerable people. This assessment has engaged with local equality groups to identify the impacts of our programme.
Carbon / Air Quality Assessment	Addressing carbon emissions and improving local air quality are key objectives of the TCF. The impact of our programme on carbon and air quality has been considered and schemes selected which maximise the contribution to these aspects.
Review of Park and Ride	Park and Ride is a key element of our existing transport network and transport strategy. A review of Park and Ride has started as part of the TfN Strategy and emerging findings of this have been considered in our programme.
Collation of metrics for the corridors (population, number of businesses, education, deprivation, car ownership, etc)	Identifying the different metrics that make up the transport corridors in Greater Norwich is important in terms of identifying how and where our programme will make the greatest positive impact.

Corridor metrics

2.5 The following metrics for each corridor have been used to assist in the assessment of each corridor:

Demographics
Population (including future growth
Number living within 400m of proposed mobility hubs along the corridor
No. of households where 25% have no car

Number of residents less than 16 years of age
Number of residents aged 65 and over
Number of residents in most deprived quartile
Number of residents whose day-to-day activities are limited
No. of buses along corridor

Transport
No. of buses along corridor
Bus patronage along corridor
Park & Ride (average monthly car park occupancy
No. of cars along corridor
No. of people walking
No. of people cycling

Businesses and education
No. of students at educational sites
No. of businesses

2.6 By ranking each corridor against each of these separate metrics (with '1' representing the corridor with the highest value, through to '6' for the corridor with the lowest value), the corridors perform as set out in **Table 3** below:

Table 3: Ranking of corridors against common metrics

Corridor	**Average ranking score**
Wymondham – City Centre	1.7
Easton – City Centre	2.9
Airport – City Centre	3.1
Sprowston – City Centre	3.9
Rackheath – City Centre	4.3
Broadland Business Park – City Centre	5.0

2.7 In addition to ranking against common metrics, each corridor has been assessed in terms of deliverability, impacts on carbon and air quality, benefits to public transport, walking and cycling and impacts on employment.

Schemes identified for each corridor

2.8 The information in **Appendix A** details all proposals in the high funding scenario. Discussions with DfT has identified a likely constraint on funding, hence the requirement for low, medium and high funding scenarios being presented.

3. Impact of the proposal

3.1 The SOBC is being submitted at a programme level and is not based around a single individual scheme. Different case documents are required to be submitted to DfT, which makes up the contents of the business case. A summary of the contents of each of these is outlined in **Table 4**.

Table 4: Case documents required for an SOBC submission.

Type of case	Required evidence
Strategic case	Outlines how the programme meets the core policy objectives of the fund for the low, medium and high funding scenarios
Economic case	An appraisal of the economic impacts of the programme, such as user benefits, but also including the wider impacts e.g. increasing access to employment through greater connectivity
Commercial case	A description of the level of market engagement and procurement strategy for the programme.
Financial case	Evidence on the financial sustainability, project costs and affordability. This should include a funding profile, broken down by the total scheme cost, Fund contribution, total public-sector contribution and/or private sector contribution
Management case	Overarching deliver plan and implementation strategy with clear timetable for delivery.

4.0 Evidence and Reasons for Decision

4.1 The programme outlined in this report has been developed in conjunction with both private and public sector partners, as well as with input from the DfT. The programme maximises the potential for the bid to be successful and is therefore recommended to the Joint Committee.

5.0 Alternative Options

5.1 Alternative options include to not submit a bid, or to submit higher or lower programme options. As the bid has been developed with input from the DfT, neither of these alternative options are recommended.

6.0 Financial Implications

6.1 There is a requirement to submit funding programmes based on low, medium and high funding scenarios. We have been advised by DfT that the greatest emphasis regarding assessment will be placed on the low and medium scenarios. Indications from the DfT are that they are likely to allocate funding in the low or medium category.

6.2 At this current stage of preparing our programme, we are proposing the funding programme outlined in **Table 5** below. This builds on feedback from the DfT regarding our initial proposals in draft SOBC.

Table 5: Summary of programme by corridor

	Funding Scenario		
Corridor	**Low (£000)**	**Medium (£000)**	**High (£000)**
Airport	4,910	4,910	13,681
Broadland Business Park		2,199	21,822
Easton	9,642	9,642	13,426
Rackheath	3,086	3,086	6,042
Sprowston			13,090
Wymondham	11,801	25,215	25,215
City Centre	24,574	24,574	30,487
All corridors	20,739	20,739	38,461
Total	**74,751**	**90,364**	**162,213**

6.3 A summary of the programme is outlined in **Table 6** below.

Table 6: Overall summary of programme

Funding Source	**Low (£000)**	**Medium (£000)**	**High (£000)**
DfT	54,890	70,499	130,924
Local contribution	19,862	19,866	31,300
Total	**74,751**	**90,364**	**162,223**

7. Resource Implications

7.1 **Staff:** A review of resourcing required to deliver the TCF programme is underway and includes consideration of design, construction and programme management. Appropriate use will be made of existing staff and framework contracts.

7.2 **Property:** None

7.3 **IT:** None

8. Other Implications

8.1 **Legal Implications:** None

8.2 **Human Rights implications: N/A**

8.3 **Equality Impact Assessment (EqIA):** An Equality Impact Assessment has been carried out for our programme. Should our funding application be successful, assessments will also be carried out as part of the development of individual schemes.

8.4 **Health and Safety implications:** N/A

8.5 **Sustainability implications:** The objectives of the business case are specifically targeted at improving the impact transport has on carbon emissions, air quality and public health.

8.6 **Any other implications:** None

9. Risk Implications/Assessment

9.1 A risk register is maintained as part of the technical design and construction delivery processes.

10. Recommendation

10.1

a) Consider the programme outlined in this report

b) Recommend to the County Council Cabinet on 4 November that the programme outlined in this report is submitted to government on 28 November as the Norfolk TCF application

11. Background Papers

11.1 Report to:

County Council Cabinet – June 2019
County Council Cabinet – May 2019
Environment, Development and Transport Committee – Jan 2019

Officer Contact

If you have any questions about matters contained in this paper, please get in touch with:

Officer name : **Jeremy Wiggin** **Tel No. :** **01603 223117**

Email address : **jeremy.wiggin@norfolk.gov.uk**

If you need this report in large print, audio, braille, alternative format or in a different language please contact 0344 800 8020 or 0344 800 8011 (textphone) and we will do our best to help.

Appendix A.
Corridor Scheme Summaries

All Corridors

Scheme name	Summary description and scheme benefits
Traffic signal priority for all buses	The existing traffic control system provides the capability for buses to request priority through traffic junctions. However, there is more that can be done to develop this system to maximise benefits to public transport and keep traffic moving in the most efficient way. • Develop the traffic control system to enable all buses to benefit from priority measures being available, improving the reliability of the public transport network
Pedalway wayfinding	Feedback is that the current wayfinding provision for cycling makes navigating the cycleways difficult and confusing. • Complete an audit of existing and required cycle signage and deliver a coherent wayfinding programme that encourages increased levels of cycling for commuting and leisure activities, linking together mobility hubs and promoting the cultural assets across Greater Norwich.
LED street lighting and readiness for Smart City Technology	The current approach to street lighting is based around reducing energy consumption through initiatives that include the implementation of new technologies such as Light Emitting Diode (LED) lanterns and the Central Management Systems (CMS). In addition, there is the opportunity to trial the use of traffic counting cameras and other sensors for highway network analysis, which could be used to control street lighting level, inform road users of live traffic conditions and help plan maintenance and development of the highway network. • Seek to roll out across Greater Norwich new LED street lighting and associated technologies that will enable Smart City Technology to be deployed.

Scheme name	Summary description and scheme benefits
Norfolk Car Club Expansion across all corridors	As well as general public use, small and medium sized enterprises are regular users of the Norfolk Car Club, increasing economic activity, productivity and jobs and using Club vans is popular among business members as it enables them to reduce transport costs by not owning vehicles, allowing the savings to be reinvested into staff recruitment and business growth. • Expand the provision of car club vehicles across Greater Norwich and the City Centre
Provision of high quality disruption information for all transport users	Norfolk currently utilises systems that enables the locations of buses to be compared against scheduled timetables, so that information can be presented to bus users on when buses are predicted to arrive at bus stops. This is a complex process involving different parties, back-office systems and standards of data. More needs to be done to develop and improve these systems. • Work across all relevant parties and data providers to improve the quality and quantity of travel information presented to users, particularly during times of network disruption. This will improve the confidence that network users have in the information provided, encouraging greater use of more sustainable transport modes.
Initiatives to support car sharing	Surveys have shown that, on average, 85% of private vehicles on the roads in Greater Norwich have one person in them. At peak times, this can increase to more than 95%. These low levels of vehicle occupancy limit the number of people that the road network can carry, causes congestion, delay and worsening air quality, and impacts the ability of the network to meet future travel demands of businesses and individuals. • Support initiatives aimed at encouraging motorists to share vehicles, such as marking out of shared parking bays in car parks and development of appropriate IT. This would be supported by a comprehensive behaviour change programme.

City Centre

Scheme name	Summary description and scheme benefits
St Stephens Street / Red Lion Street / Castle Meadow	General traffic was removed from St Stephens Street in 2014 but the streetscape and public transport infrastructure remains the same as when it carried more traffic. Buses are often unable to align with the kerb resulting in delays to traffic and difficult boarding / alighting buses. • Change kerblines to provide more capacity for buses to pick up and drop off passengers, help buses to align better with the kerb so people with restricted mobility can access buses without difficulty and reduce air pollution that results from buses waiting to access stops or pass other buses. • Better pedestrian crossings and a more attractive pedestrian and cycle environment will ease movement, reduce stress and encourage investment.
Foundry bridge junction and train station mobility hub	This is a vital gateway to the city and existing facilities for all users could be improved. • Explore the opportunity to improve the efficiency of the Foundry Bridge junction and provide bus priority and cycling safety by examining options of making Thorpe Road between Riverside Road and Lower Clarence Road past Norwich rail station bus, cycle and pedestrian access only. Impacts from displaced traffic will need to be carefully assessed and mitigated. • Introduce mobility hub facilities in the catchment to further improve interchange between different transport modes.
Thorpe Road contraflow (Clarence Road – Carrow Road)	Inbound buses and cyclists are currently diverted, along with general traffic, away from the direct route along Thorpe Road towards the city centre. • Allow contraflow movement for buses and cyclists to encourage greater use of more sustainable modes by saving time and improving safety when accessing the city centre. This will complement the proposed works on Thorpe Road at Norwich rail station to improve facilities for buses, pedestrians and cyclists. • Review bus stops and pedestrian crossings in the area to ensure access is maintained.

Scheme name	Summary description and scheme benefits
Grapes Hill Roundabout	Grapes Hill roundabout is a critical point on the highway network that carries large volumes of general traffic and buses. Significant numbers of pedestrians and cyclists need to cross near the roundabout to access routes to and from the city centre. • Improve the flow of traffic through a review of signalling arrangements while maintaining, but also seeking to improve, pedestrian and cycle crossing facilities.
St Stephens Street roundabout	The roundabout and its associated subway system provides an unattractive arrival experience for pedestrians and can be dangerous for cyclists to negotiate. It is especially heavily used by students moving to and from City College. • Provide an improved environment for pedestrians and cyclists and an enhanced gateway to the city.
Chapel Field North / East	All the buses to the west of the city exit the city centre via Chapel Field North and queuing traffic significantly delays buses, which operate some of the busiest public transport routes in the region. • Identify options to prioritise Chapel Field North outbound for public transport, with general traffic using Chapel Field East. • Maintain access to the Theatre Royal for picking up / dropping off and to Chantry car park, including the possibility of time-restricted arrangements that could enable general evening use of Chapel Field North. • Impacts on Chapel Field car park entry / exit will need to be fully explored.
City centre west-east through-traffic restriction	A considerable amount of through traffic drives from west to east through the city centre between Grapes Hill and Barn Road to Foundry Bridge via St Andrew's Street, Exchange Street, Agricultural Hall Plain and Prince of Wales Road. • Examine options to manage traffic differently on St Andrew's Street to restrict through traffic thereby enabling pavements to be widened, cycle and pedestrian facilities made safer and improving environmental conditions and public transport routes on streets currently used by through traffic. • Maintain access to properties and car parks.

Scheme name	Summary description and scheme benefits
Wayfinding	Feedback is that pedestrian and cycling wayfinding systems are currently confusing and opportunities for strengthening the cultural and artistic interventions in the street to enliven the pedestrian experience have been missed. • Create a coherent environment and stimulate economic growth by promoting the cultural assets of the city centre that can be enjoyed by exploring Norwich on foot and by bicycle through culture-led wayfinding interventions in the city centre and at key mobility hubs.
Magdalen Street / Anglia Square mobility hub	Magdalen Street is a key historic pedestrian thoroughfare in the north of the city centre that is used by all the public transport services travelling to and from the north of Norwich and forms part of the blue pedalway. • Improve pedestrian crossings, widen pavements, reduce street clutter, and increase bus stop capacity at Anglia Square to create a more attractive and safer environment for all. Introduce mobility hub facilities.
Tombland	Tombland is an historic public space that accommodates multiple competing transport requirements but its design is not fit for purpose. • Implement the pedestrian, cycling and public realm improvements approved at the Transforming Cities Joint Committee in August 2019.
Pink pedalway: Palace Street	Palace Street offers a poor level of service to cyclists using the pink pedalway between the city centre and the north east of the city. • Extend the two way off-carriageway cycle track from Tombland to St Martin at Palace Plain.

Scheme name	Summary description and scheme benefits
King Street	King Street is a well-connected historic street in the city centre that is experiencing significant development along its length, houses the National Writers Centre and Wensum Lodge, provides a vital pedestrian and cycle link from the city centre to the East Norwich Regeneration Area on the edge of the city centre and forms part of national cycle route 1. • Improve street surfaces and pedestrian priority to encourage activity and investment to flow towards development sites and cultural institutions on King Street and in East Norwich.
City Centre low / zero emission zone	The City Council formally declared the whole of the city centre as an air quality management area (AQMA) in November 2012 and further action is needed to improve air quality. • Make the minimum emission specifications more rigorous in the heart of the city centre, supported by other projects in the programme that aim to improve air quality

Wymondham to City Centre

Scheme name	Summary description and scheme benefits
Wymondham train station mobility hub	More than 1 million people travelled between Norwich and Cambridge by rail in 2018, which is the highest ever amount. However, no bus services call at the station to enable convenient onward travel. This means that people travelling to the Norwich Research Park (NRP) must travel into Norwich and then travel back out. Explore options for travelling directly to the NRP from Wymondham. • Provide step-free access to the Cambridge-bound platform. • Provide facilities for buses and coaches to adequately serve Wymondham station forecourt. Introduce mobility hub facilities.
Thickthorn Park & Ride mobility hub expansion	Thickthorn is the most popular Park & Ride site and there is the potential for additional bus services to run to the University of East Anglia (UES) / NRP, as well as the city centre, to meet growing demand. • Expand Thickthorn Park & Ride site
Norfolk and Norwich University Hospital (NNUH) mobility hub	The current arrangement for bus manoeuvres and access to bus stops around the outpatient entrances is congested, with conflict between many different types of vehicles and hospital users. • Provide a new bus interchange within the hospital site and additional bus stops to better serve the wider hospital site.
Cross Valley Link	The lack of a direct connection between UEA and NRP that is usable by buses requires lengthy routing via Earlham Road to serve the NNUH, NRP and UEA. • Provide a new transport link across the Yare Valley from the western end of Chancellors Drive to cater for the increasing movements of people across the wider UEA, NNUH and NRP site, providing segregated routing for buses, pedestrians and cyclists.

UEA – City centre via South Park Avenue and Unthank Road including Unthank Road mobility hub	Buses are delayed by localised pinch points caused by narrow carriageway widths and on-street parking. • Address localised pinch points to ease bus flow. • Introduce mobility hub facilities.
Newmarket Road (Eaton Road - Christchurch Road) including Newmarket Road mobility hub	Newmarket Road forms part of the blue pedalway between Wymondham, Hethersett, Eaton and the city centre. There is currently no signalised crossing facilities at Eaton Road for cyclists or pedestrians that are using the shared path on the south side. The stepped cycle track, which offers space and protection for inbound cyclists, is missing from the section between Christchurch Road and the outer ring road. • Extend stepped cycle track from Christchurch Road to the outer ring road and provide a controlled crossing over Eaton Road • Review measures through the Eaton Road, outer ring road and Christchurch Road junctions that will improve bus and general traffic flow
St Stephens to City College	There are thousands of pedestrian movements to and from City College but the pavements on St Stephen's Road are too narrow to comfortably accommodate the demand. • Provide a substantially wider footway to support existing and future growth in further education provision at the college.
Mobility Hubs at Wymondham Market Cross and Hethersett (in addition to those mentioned above)	• Introduce mobility hub facilities and catchment works.

Easton to City Centre

Scheme Name	Summary description and scheme benefits
Dereham Road / Longwater Lane	Delays are experienced by bus passengers on the section of Dereham Road between Longwater Lane and the Wendene roundabout and cyclists are forced to share the carriageway with heavy, fast moving traffic. • Introduce bus lanes and an off-carriageway cycle path.
Dereham Road / Richmond Road (including link to Bowthorpe)	The crossing of Dereham Road between the Bowthorpe cycle path and Richmond Road is a popular place to cross for school children moving between Bowthorpe and Ormiston Victory Academy and residents of Costessey accessing outbound bus stops on Dereham Road and jobs at the Barnard Road industrial estate. It also provides a connection for people living in Costessey who wish to cycle into the city along the Green pedalway • Upgrade the crossing so it is capable of being used conveniently by people on foot and cycle.
Dereham Road / Breckland Road and Costessey / Bowthorpe mobility hub	A cluster of bus stops to the east of the Wendene roundabout have the potential to become a central location where residents of Costessey and Bowthorpe can access express bus services. However, buses are currently delayed on the approach to the roundabout and it is unclear where passengers should go to access the various bus services. This is compounded by the unattractive pedestrian subway beneath Dereham Road. • Allow buses to access a bus gate bypass of Wendene roundabout on the old alignment of Dereham Road combined with the consolidation of bus stops and better access by replacing the subway with a signal controlled pedestrian and cycle crossing. Introduce mobility hub facilities.

Scheme Name	Summary description and scheme benefits
Purple pedalway (Earlham Green Lane – Marriott's Way)	The Purple pedalway in this part of the city connects Hellesdon, Marriott's Way, Costessey, Bowthorpe and the NRP where significant housing and jobs growth is planned. It is also an important green infrastructure link between the Wensum and Yare valleys. The section in the vicinity of Dereham Road is the weakest part of the route, presenting cyclists with difficulties accessing Marriott's Way at the bottom of Oval Road, contending with fast moving traffic on Norwich Road and the lack of a crossing over Dereham Road. • Upgrade the quality and safety of the purple pedalway between Marriott's Way and Bowthorpe Three Score to further encourage sustainable travel in this area.
Marriott's Way to Hellesdon Road	Marriott's Way provides a popular and convenient traffic-free walking and cycling connection between the city centre, Drayton and beyond. It follows the track bed of the former railway apart from the section between Hellesdon Road and Gunton Lane where the route awkwardly deviates with a difficult crossing at the bottom of Marl Pit Lane. • Realign Marriott's Way with a surfaced and ramped path on a more direct route along the track bed of the railway enabled by the installation of a new cycle and pedestrian crossing close to Hellesdon Bridge.
Dereham Road outbound approach to Larkman Lane including Larkman mobility hub	Delays are experienced by bus passengers on the outbound approach to the Larkman Lane junction and the facilities for shared mobility including bus stops and access to them needs to be improved at this important community focus. • Introduce an outbound bus lane on the approach to Larkman Lane and introduce mobility hub facilities.
Dereham Road approach to Bowthorpe Road	Delays are experienced by bus passengers on the inbound approach to Bowthorpe Road. • Provision of an inbound bus lane on the approach to Bowthorpe Road.

Scheme Name	Summary description and scheme benefits
Dereham Road / Old Palace Road / Heigham Road	Delays are experienced by bus passengers on the inbound approach to Old Palace Road. Cyclists riding outbound on the section of Dereham Road between Heigham Road and Bowthorpe Road lack protected space. • Options are being considered for bus and cycle lane provision.
Longwater junction	There is considerable current and planned housing development in Easton and Costessey around Longwater. These areas are beyond the current limit of the Norwich cycle network that largely because the Longwater junction presents a barrier to cycling beyond Bowthorpe. • Extend the Green pedalway from Bowthorpe to Easton via a new pedestrian / cycle bridge over the A47 that avoids the Longwater junction to connect communities with schools, services and jobs in the city.
Mobility Hubs at Easton, Queens Hills, Dereham Road (near Hotblack Road) and Dereham Road (near Duoro Place) (in addition to those mentioned above)	• Introduce mobility hub facilities and catchment works.

Airport to City Centre

Scheme name	Summary description and scheme benefits
Yellow pedalway extension to Horsham St Faith	Horsham St Faith and The Nest community sports facility are within cycling distance of the city but cut off by the lack of any cycling infrastructure that would enable cyclists to avoid riding with heavy traffic on Holt Road between the airport and the Broadland Northway. • Provide an off-carriageway cycle path on the east side of Holt Road to better connect these locations.
Norwich Airport access – industrial estate link	The lack of a public route between the airport terminal and airport industrial estate that is useable by pedestrians, cyclists and bus passengers means that fewer people can access the airport industrial estate and International Aviation Academy without a car and the yellow and purple pedalways cannot provide a safe route to the airport and Horsham St Faith from the city centre. • Provide a new public transport, pedestrian and cycling connection between Amsterdam Way and the airport industrial estate and identify further priority for buses to serve the industrial estate.
Cromer Road and Aylsham Road (Fifers Lane – Glenmore Gardens)	Cromer Road and Aylsham Road provide a key public transport corridor from North Norfolk, Hellesdon and the Airport P&R site but bus passengers are currently delayed by congested conditions along Cromer Road and Aylsham Road. • Provide significant lengths of inbound bus lanes on Cromer Road and Aylsham Road.
Boundary junction	Bus passengers are delayed on Cromer Road and Reepham Road approaching the Boundary junction and conditions for cycling on Reepham Road are not favourable. • Seek to prioritise bus movements on Cromer Road and Reepham Road approaches to the Boundary junction, assisting cyclists and pedestrian crossing movements.

Scheme name	Summary description and scheme benefits
Vera Road – Rye Avenue crossing	Access into the city from Hellesdon for cyclists is difficult because there are no crossings over the Boundary Road section of the outer ring road for cyclists. • Provide new signalised crossing of the outer ring road for cyclists and pedestrians between Rye Avenue and Vera Road.
St Augustine's Gate	Buses and long vehicles approaching the St Augustine's Gate junction from Aylsham Road are unable to position themselves within the traffic lanes due to the existing highway geometry. • Modify the approach to this junction to reduce conflict between road users.
Airport P&R mobility hub	• Consider the potential for a new P&R site accessed off the Broadland Northway junction on A140. This could provide additional capacity and would benefit from other public transport measures along the corridor.
Mobility hubs at Vulcan Road and Mile Cross (in addition to those mentioned above)	• Introduce mobility hub facilities and catchment works.

Sprowston to City Centre

Scheme name	Summary description and scheme benefits
Wroxham Road	Wroxham Road is a key access for longer distance buses from North Norfolk, villages to the north of Norwich and the Sprowston Park and Ride. Delays are experienced by bus services and there is little cycling infrastructure provided. • Extend existing bus lane on Wroxham Road and convert to 24hrs to improve reliability of buses • Improve path on west side and allow cycling between Allen's Avenue and Blue Boar Lane with new crossings on Wroxham Road and Chartwell Road.
Sprowston Road (south of the outer ring road)	As with Wroxham Road, bus delays and unreliability are experienced by passengers and there is little cycling infrastructure. • Provide new inbound and outbound bus lanes and seek to provide an outbound segregated cycle track.
Sprowston Road (Magdalen Road - Denmark Road)	The section of Sprowston Road between Magdalen Road and Denmark Road is very narrow, causing delays for buses and general traffic, difficulties for cyclists and obstructed footways for pedestrians. • Options considered for addressing this could include parking removal or the introduction of a one-way system.
North East Norwich new Park & Ride supersite	• An option could be considered for a new potential replacement Park & Ride site accessed from the Broadland Northway serving the Sprowston Road corridor.

Mobility hubs at Wroxham Road shops, Sprowston Road near Templemere and Sprowston Road near Denmark Opening	• Introduce mobility hub facilities and catchment works.

Rackheath to City Centre

Scheme name	Summary description and scheme benefits
Pink pedalway: Salhouse Road	Traffic conditions on Salhouse Road between the end of the pink pedalway at Harrison's Wood and the Broadland Northway make it hard for people to cycle between the city, new housing development on Salhouse Road and Rackheath. • Extend the Pink pedalway with an off-carriageway cycling and walking path between Harrison's Wood and the Broadland Northway.
Plumstead Road / Woodside Road	The current double mini roundabout at this location is difficult to navigate, particularly for public transport. • Consider options to amend the junction layout to make it easier to navigate for buses and other road users.
Heartsease Fiveways roundabout	The current roundabout is key pinchpoint on Plumstead Road and delays buses and general traffic and is difficult for cycles and pedestrians to navigate. • Consider options to improve the junction to provide improved facilities for all users.
Kett's Hill roundabout	Buses are delayed on the Kett's Hill approach to the roundabout and there is a poor accident record for cyclists. • Introduce a bus lane on Kett's Hill approach facilitated by the removal of parked cars and alterations to the roundabout to improve safety for cyclists.
Mobility hubs at Plumstead Road shops, Salhouse Road (near Atlantic Avenue) and Rackheath	• Introduce mobility hub facilities and catchment works.

Broadland Business Park to City Centre

Scheme name	Summary description and scheme benefits
Broadland Way	Traffic-free cycling and pedestrian access between Rackheath and Broadland Business Park in the growth triangle as part of a planned longer route to Wroxham would encourage cycling to work. • Provide traffic-free pedestrian and cycle path between Middle Road and Broad Lane.
Yarmouth Road / Pound Lane	Traffic congestion causes delays to bus passengers. • Provide eastbound bus lane on approach and seek to reduce delays and improve capacity through the junction.
Yarmouth Road / Thunder Lane	The signalised junction at Thunder Lane causes delays to buses on Yarmouth Road. • Identify options to provide priority to the main traffic flow on Yarmouth Road.
Thorpe Road / Harvey Lane – bus priority	Delays are experienced by bus passengers on the approach to Harvey Lane. • Introduce a bus lane on the outbound approach to Harvey Lane.
Removal of parking at pinch points	On-street parking at various locations along Yarmouth Road creates pinch points that delays general traffic, particularly buses, and creates difficult cycle conditions. • Seek to relocate some existing on street parking to off-road parking on Yarmouth Road.

Scheme name	Summary description and scheme benefits
Purple Pedalway: Lion Wood	The purple pedalway connects Thorpe Road to Plumstead Road via Lion Wood. The path through the ancient woodland is heavily rutted and flash floodwater collects in the valley and surges down to Wellesley Avenue South and Thorpe Road. • Provide a more appropriate surfaced path so cyclists and people with mobility problems can access the woodland and move between neighbouring areas. • Install sustainable urban drainage features to capture and infiltrate floodwater to mitigate flooding.
Rackheath – East-West highway link across railway	New highway access is required to serve housing development in the growth triangle. • Build a highway bridge over the rail line as part of the growth triangle link road.
Postwick Park and Ride mobility hub	• Expansion of existing P&R site
Mobility hubs along Thorpe Road at Harvey Lane, near Primrose Crescent and Broadland Business Park	• Introduction of mobility hub facilities and catchment works.