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Environment and Regeneration Overview and Scrutiny Committee

Agenda

Date:	**Monday, 17th September, 2018**
Time:	**2.00 pm**
Venue:	**The Capesthorne Room - Town Hall, Macclesfield SK10 1EA**

The agenda is divided into 2 parts. Part 1 is taken in the presence of the public and press. Part 2 items will be considered in the absence of the public and press for the reasons indicated on the agenda and at the foot of each report.

It should be noted that Part 1 items of Cheshire East Council decision making and Overview and Scrutiny meetings are audio recorded and the recordings will be uploaded to the Council's website

PART 1 – MATTERS TO BE CONSIDERED WITH THE PUBLIC AND PRESS PRESENT

1. **Apologies for Absence**

2. **Minutes of the Previous Meeting** (Pages 3 - 8)

   To give consideration to the minutes of the meeting held on 18 June 2018

3. **Declarations of Interest**

   To provide an opportunity for Members and Officers to declare any disclosable pecuniary and non-pecuniary interests in any item on the agenda.

4. **Whipping Declarations**

   To provide an opportunity for Members to declare the existence of a party whip in relation to any item on the agenda.

5. **Public Speaking/Open Session**

Contact: Katie Small
Tel: 01270 686465
E-Mail: katie.small@cheshireeast.gov.uk

A total period of 15 minutes is allocated for members of the public to make a statement(s) on any matter that falls within the remit of the Committee.

Individual members of the public may speak for up to 5 minutes, but the Chairman will decide how the period of time allocated for public speaking will be apportioned, where there are a number of speakers.

Note: In order for officers to undertake any background research, it would be helpful if members of the public contacted the Scrutiny officer listed at the foot of the agenda, at least one working day before the meeting to provide brief details of the matter to be covered.

6. **Cheshire East Air Quality Action Plan 2018 Review** (Pages 9 - 54)

   To give consideration to the draft Cheshire East Air Quality Action Plan

7. **Air Quality Strategy** (Pages 55 - 78)

   To give consideration to the draft Air Quality Strategy

8. **Cheshire East Low Emission Strategy** (Pages 79 - 134)

   To give consideration to the draft Cheshire East Low Emission Strategy

9. **Local Transport Plan - Consultation Feedback** (Pages 135 - 192)

   To give consideration to the results of the consultation

10. **Cemeteries Strategy Consultation** (Pages 193 - 290)

    To give consideration to the consultation

11. **Forward Plan** (Pages 291 - 302)

    To give consideration to the areas of the forward plan which fall within the remit of the Committee.

12. **Work programme** (Pages 303 - 310)

    To give consideration to the work programme

CHESHIRE EAST COUNCIL

Minutes of a meeting of the **Environment and Regeneration Overview and Scrutiny Committee**
held on Monday, 18th June, 2018 at Committee Suite 1,2 & 3, Westfields, Middlewich Road, Sandbach CW11 1HZ

PRESENT

Councillor H Davenport (Chairman)
Councillor T Dean (Vice-Chairman)

Councillors C Browne, C Green, P Groves, S Hogben, O Hunter, N Mannion, M Parsons, S Pochin, B Roberts and G M Walton

CABINET MEMBER IN ATTENDANCE

Councillor D Stockton

OFFICERS IN ATTENDANCE

Mr R Barnett – Performance Strategy & Reporting Manager
Mr R Kemp – Corporate Manager Waste and Environment Service
Mr D Malcolm – Head of Planning (Regulation)
Mrs F Seddon – Business Manager - Place Directorate
Mr P Traynor – Strategic Commissioning Manager – Highways

1 **APOLOGIES FOR ABSENCE**

None.

2 **MINUTES OF THE PREVIOUS MEETING**

Consideration was given to the minutes of the meeting held on 20 March 2018.

RESOLVED

That the minutes of the meeting held on 20 March 2018 be approved as a correct record and signed by the Chairman subject to the replacement of the word ‘contract’ with the word ‘contact’ in the last sentence of Minute No.35.

3 **DECLARATIONS OF INTEREST**

There were no declarations of interest.

4 **WHIPPING DECLARATIONS**

There were no whipping declarations.

5 **PUBLIC SPEAKING/OPEN SESSION**

Sue Helliwell attended the meeting to speak in respect of minute 7. She felt that the Council should be charging developers for bins supplied to residents occupying properties in recently built housing developments.

6 **WELL MANAGED HIGHWAY INFRASTRUCTURE CODE OF PRACTICE**

Paul Traynor, the Strategic Commissioning Manager – Highways, gave a presentation to Members on Compliance with the Well Managed Highway Infrastructure Code of Practice. Highlighted within the presentation was information on Legislation Guidance and Local Documents, Maintaining the Highway, Industry Guidance, A Risk Based Approach, Policies and Codes, Claims, Consultation process and Timetable.

Members queried if the use of the word 'you' referred to employees of the Council not just Members. In addition it was considered useful to know the number of claims rather than just the amount claims had cost the Council.

Further queries were raised in respect of the consultation and why couldn't it have been included as part of the Local Transport Plan Process, what would the inspection regime entail, would older roads have the same level of investment under the new system, when was the Cheshire Highways Improvement Programme for 2018-19 going to be updated on the website and what in the new system would improve the state of the currents roads when compared to the current system.

RESOLVED

(1) That the presentation be noted.

(2) That a copy of the presentation be circulated to Members of the Committee.

(3). That a special meeting of the Committee take place in October to consider the final proposals regarding changes to the Council's highways policies and codes of practice.

7 **CHARGING FOR WASTE BINS**

Ralf Kemp, the Corporate Manager for the Waste and Environment Service attended the meeting and presented to the Committee the results of the survey regarding the Council's proposal to implement a bin supply charge for new and replacement bins.

The Portfolio Holder for Environment who was in attendance stated that residents in the North of the Borough were less likely to agree to the charges than those residents living in the South.

Councillor N Mannion felt that the Portfolio Holder for Environment should defer making a decision on whether or not to charge for new and replacement bins until the 'Fly-tipping' Task and Finish Group had finished their work. This recommendation was voted on but was lost.

Members made the following observations:-

(i) Increases in 'fly tipping' could occur if charges were issued;
(ii) If bins were stolen within a specific timeframe then a charge should not be made;
(iii) Residents should not be charged at all;
(iv) Developers should provide bins where new housing developments are taking place and should form part of a planning condition when granted planning permission;
(v) Residents may seek to source there own bins at a lower cost;
(vi) There should be a special approach where there were areas with specific issues;
(vii) Useful to receive a breakdown of the reasons for bins being replaced;

RESOLVED

(1) That the findings of the consultation be noted.

(2) That the Portfolio Holder for Environment give consideration to the following recommendations put forward by the Committee:-

(i) That developers be expected to pay for the provision of wheelie bins in new housing developments;

(ii) That developers/landlords inform the Council once the properties on new developments have started to become occupied;

(iii) Stolen bins will be replaced at no charge in urban areas or Wards where there are historic waste issues;

(iv) That residents are not charged for replacement bins.

8 **PERFORMANCE SCORECARD 2017/18**

Consideration was given to the Performance Scorecard 2017/18.

Members made comments in respect of the Council's performance relating to the following indicators:-

(i) PPS003-Average Planning applications per case officer;
(ii) PPS007-Planning Appeals allowed;
(iii) PPS011 (FS3)-The % of Food Safety E rated premises that receive intervention activity;
(iv) PIH001% Variance of Capital Expenditure from Approved Capital Expenditure (Cumulative performance)

(v) PIH005-Insurance Claims-Target a reduction in insurance claims against Highways;
(vi) PCO002-Average speed to answer (telephone) (Cumulative performance)

RESOLVED

That the Scorecard be reviewed and noted for information.

9 **FORWARD PLAN**

Consideration was given to the areas of the forward plan which fell within the remit of the Committee.

RESOLVED

That the forward plan be received.

10 **WORK PROGRAMME**

Consideration was given to the work programme.

It was agreed that the Well Managed Highway Infrastructure Code of Practice be considered at a special meeting of the Committee in October.

It was agreed that an update on the bus routes review should be added to the work programme for the November meeting as this had been omitted from the work programme previously.

It was agreed that there would be a progress report on the parking strategy and that a visit to the Middlewich Waste Transfer Hub be arranged.

Councillor S Pochin requested that the Committee undertake a review of the licensing of vehicles, licences issued and the sub contractors used. Councillor S Pochin was advised that in the first instance the Chairman of the Licensing Committee should be contacted in order to ensure that there was not a duplication of work between Committees, however the Committee were advised it could be included on the work programme as a possible future item to be considered.

RESOLVED

That the work programme be amended as outlined above.

The meeting commenced at 2.00 pm and concluded at 4.35 pm

Councillor H Davenport (Chairman)

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Working for a brighter future together

Environment and Regeneration Overview and Scrutiny

Date of Meeting: 17 September 2018

Report Title: Cheshire East Air Quality Action Plan 2018 Review

Portfolio Holder: Councillor Ainsley Arnold – Portfolio Holder for Housing, Planning and Regeneration

Senior Officer: Frank Jordan – Executive Director Place and Acting Deputy Chief Executive

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1. Report Summary

1.1. To update the Committee on the review of the Council's Draft Air Quality Action Plan 2018, the purpose of the report is to ensure Members are aware of the revised Action Plan and to provide comments as appropriate.

2. Recommendation/s

2.1. To note the report and to provide feedback for the Portfolio Holder to consider.

3. Reasons for Recommendation/s

3.1. To ensure Members are kept up to date with the Council's Air Quality Action Plan.

4. Other Options Considered

4.1. Not applicable.

5. Background

5.1 This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Cheshire East between 2018 and 2023.

5.2 This action plan replaces the previous action plan which ran from 2011 to 2017. Projects delivered through the previous action plan include upgrading the traffic lights at the pedestrian crossing on West Road, Congleton; the completion of a comprehensive traffic review and resigning in and around Nantwich; completion of the Crewe to Nantwich Cycleway (Connect2); completion of the Crewe Green Link Road; an additional entrance at Crewe Station to alleviate traffic flow; and the installation of traffic lights at Redhouse Lane, Disley.

5.3 Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society notably, children and older people and those with heart and lung conditions. There is also often a strong correlation with equality issues, because areas with poor air quality are also often the less affluent areas.

5.4 The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion (Source: Defra. Abatement cost guidance for valuing changes in air quality, May 2013). The Council is committed to reducing the exposure of people in the Borough to poor air quality in order to improve health. Therefore actions have been developed under eight broad topic areas;

- Environmental permits;
- Policy guidance and development control;
- Promoting low emission transport;
- Promoting travel alternatives;
- Public information, Awareness and Education;
- Transport planning and infrastructure;
- Traffic management; and
- Vehicle fleet efficiency

5.5 Within Cheshire East the pollutants of concern are nitrogen dioxide and particulate matter which are linked to transport. Therefore, our priorities are to tackle vehicular emissions by applying actions around;

- development and planning;
- traffic management;
- alternative travel;
- active travel;
- low emission transportation;

- transportation;
- public awareness; and
- use of NOx-busting paint and green planting

5.6 In this AQAP we outline how we plan to effectively tackle air quality issues within our local authority control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence. We will therefore continue to work with regional and central government on policies and issues beyond Cheshire East's direct influence.

6. Implications of the Recommendations

6.1. Legal Implications

6.1.1. Section 84 of the Environment Act 1995, requires the Council to develop an Air Quality Action Plan detailing remedial measures to tackle the problem within all Air Quality Management Areas.

6.2. Finance Implications

6.2.1. The Action Plan sets out proposed measures to improve air quality which will have a financial cost. Whilst some of the smaller measures may be funded from within existing Regulatory Services and Health budgets, larger projects will need to be financially supported by services such as Highways and any other relevant service.

6.3. Policy Implications

6.3.1. No direct Policy implications arising from this report.

6.4. Equality Implications

6.4.1. No direct equality implications arising from this report.

6.5. Human Resources Implications

6.5.1. No direct human resources implications arising from this report.

6.6. Risk Management Implications

6.6.1. No direct risk management implications arising from this report. The development, approval and implementation of a Cheshire East Air Quality Action Plan meet with statutory requirements under the Environment Act 1995.

6.7. **Rural Communities Implications**

6.7.1. There are no direct implications for rural communities.

6.8. **Implications for Children & Young People**

6.8.1. There are no direct implications for children and young people.

6.9. **Public Health Implications**

6.9.1. The implementation of the Action Plan aims to improve public health.

7. Ward Members Affected

7.1. Borough wide

8. Access to Information

8.1. The background papers relating to this report are in Appendix 1.

9. Contact Information

9.1. Any questions relating to this report should be directed to the following officer:

Name: Nick Kelly

Job Title: Environmental Protection Team Leader

Email: nick.kelly@cheshireeast.gov.uk

Cheshire East Borough Council
Air Quality Action Plan

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management
July (2018)

Local Authority Officer	Sarah Allwood Dr. Adobi Okam Martin Brown
Department	Environmental Protection
Address	Municipal Buildings, Earle Street, Crewe
Telephone	0300 1235015
E-mail	airquality@cheshireeast.gov.uk
Report Reference number	AQAP July 2018 version 1.0
Date	July 2018

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Cheshire East Borough Council between 2018 and 2023.

This action plan replaces the previous action plan which ran from 2011 to 2017. Projects delivered through the past action plan include: upgrading the lights at the pedestrian crossing on West Road, comprehensive traffic reviews and resigning has been completed in and around Nantwich, completion of the Crewe to Nantwich Cycleway (Connect2), completion of the Crewe Green Link Road, additional entrance at Crewe Station to alleviate traffic flow and lights have been installed at Redhouse Lane, Disley.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3]. Cheshire East Borough Council is committed to reducing the exposure of people in Cheshire East Borough to poor air quality in order to improve health.

We have developed actions that can be considered under eight broad topics:

- Environmental permits
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Public information, Awareness and Education
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Our priorities are to tackle vehicular emissions by applying AQMA targeted measures as well as taking a holistic/integrated approach across Cheshire East. These measures include:

- development and planning
- traffic management
- alternative travel
- active travel
- low emission transportation
- transportation
- public awareness
- use of NOx-busting paint and green planting

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond Cheshire East's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Air Quality Team of Cheshire East Borough Council with the support and agreement of the Air Quality Steering Group.

This AQAP has been approved by the Air Quality Steering Group. The Air Quality Steering group consists of high level Council members such as the Portfolio Holder for Housing, Planning and Regeneration, the Director of Environment and Planning, Head of Highways, Transport Planning and Public Health.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Air Quality Steering Group. Progress each year will be reported in the Annual Status Reports (ASRs) produced by Cheshire East Borough Council, as part of our statutory Local Air Quality Management duties.

Cheshire East Borough Council

If you have any comments on this AQAP please send them to The Air Quality Team at:

Address: Municipal Buildings, Earle Street, Crewe, Cheshire CW1 2BJ

Telephone: 0300 123 5015

Email: airquality@cheshireeast.gov.uk

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1 Introduction

Cheshire East Borough Council is comprised mostly of rural areas and some urban towns. These urban towns suffer from poor air quality as a result of traffic related emissions, thereby resulting in areas where concentrations of pollutants such as Nitrogen dioxide (NO_2) exceed the national Air Quality Objective standards.

The national Air Quality Objective is a health based guideline set out in Part IV of the Environment Act 1995 to protect the air that people are exposed to. Table 1.1 shows the summary of the objective for NO_2 and Particulate Matter (PM).

Table 1.1 - Relevant Air Quality Objective summary

Pollutant	Concentration	Measured as
Nitrogen dioxide (NO_2)	40 µg/m^3	Annual average
	No more than 18 exceedances of 200 µg/m^3 per year	1-hour average
Particulate Matter (PM_{10})	40 µg/m^3	Annual average
	No more than 35 exceedances of 50 µg/m^3 per year	24-hour average
Particulate Matter ($PM_{2.5}$)	Work towards reducing emissions/concentrations	Annual average

Despite active air quality management and progress being made within the Borough, Cheshire East still experiences NO_2 objective breaches in some areas. In addition to the existing 12 Air Quality Management Areas (AQMAs), 5 additional AQMAs were declared in 2017. As such a review and update of the 2011 Air Quality Action Plan (AQAP) is required.

Actions will therefore, be developed in recognition of the legal requirement on the local authority to work towards the Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part, and to meet the requirements of the Local Air Quality Management (LAQM) statutory process. Under the Act, the council is mandated to designate an AQMA where the concentrations of the pollutant measured is in breach of the Air Quality Objective in Table 1.1.

The council will deliver the action plan in this report over the period 2018–2023. The AQAP will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported annually within Cheshire East Council's Air Quality Annual Status Report (ASR).

This report will consist of actions aiming to reduce concentrations of air pollutants and exposure to air pollution across the borough, in order to improve health and quality of life, environmental health and support sustainable economic growth. The actions will particularly focus on vehicular emissions from road transport as this is the dominant source of air pollution in the borough.

2 Summary of Current Air Quality in Cheshire East

Cheshire East has 17 AQMAs all of which are as a result of breach in the NO_2 Air Quality Objective. The main NO_2 contributor in Cheshire East is traffic/vehicular emissions. The AQMAs are in the areas of town where there is a high volume of traffic, around very busy junctions and congested areas.

Across the borough NO_2 concentration measurements were conducted using both continuous and passive monitoring systems, i.e. diffusion tubes. Figure 2.1 shows the Cheshire East AQMAs and monitoring sites. These sites are reviewed regularly to make sure that the monitoring is still relevant to sensitive receptor exposure.

Please refer to the current ASR from Cheshire East for air quality information.

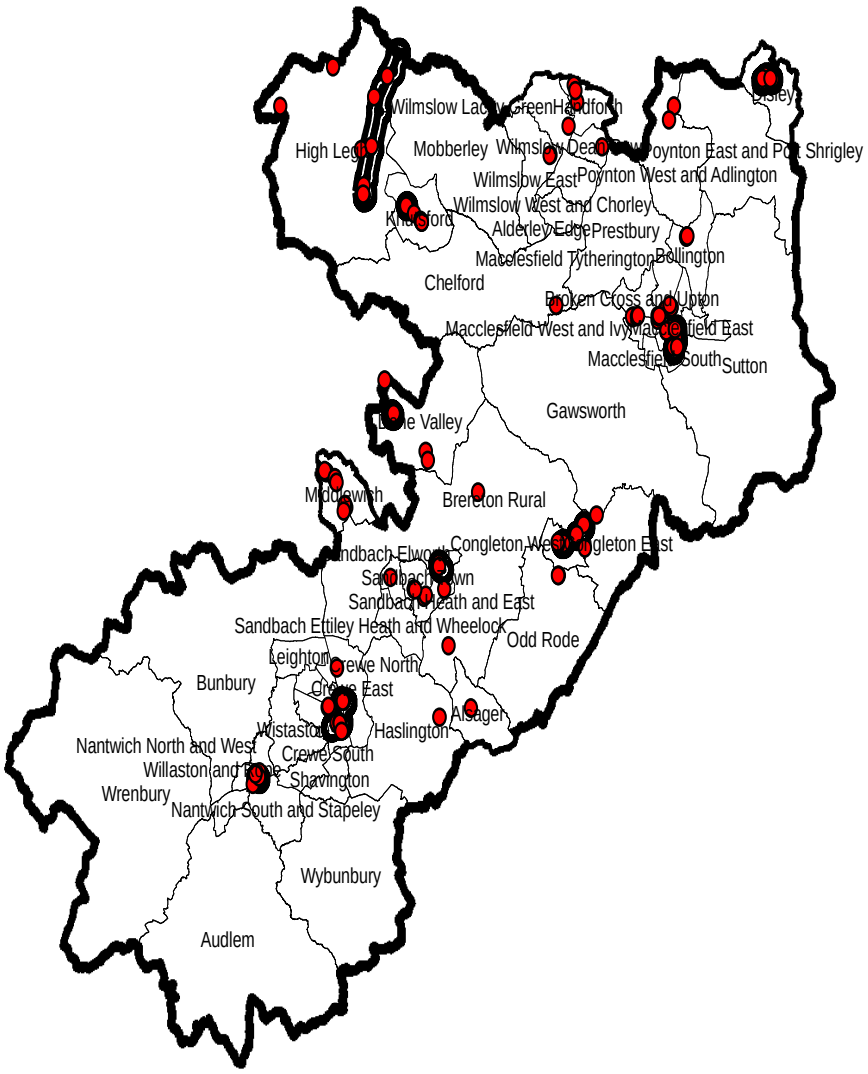


Figure 2.1 - Map of Cheshire East Borough showing the active NO_2 diffusion tubes

3 Cheshire East Borough Council's Air Quality Priorities

3.1 Public Health Context

The Public Health Outcomes Framework (PHOF) is a Department of Health data tool for England. It is intended to focus on Public Health action on increasing life expectancy and reducing differences in life expectancy between communities[4]. The Public Health Outcome Framework includes an indicator for air quality. As such, Cheshire East Public Health and Air Quality teams are working together to prioritise measures on air quality within the Borough to help reduce the effect of air pollution on public health. The main source of NO_2 and PM in the council is road traffic, thus measures that will reduce emissions and also have a complementary effect on health are encouraged. For example, encouraging active travel (walking and cycling) will result in a decrease in traffic congestion, a reduction of emissions and, ergo, improve health. The Cheshire East Air Quality and Public Heath teams are also working together in communicating air quality effects on health to the wider public, as well as trying to develop a Cheshire East based health impact assessment.

3.2 Planning and Policy Context

There are a number of policies, strategies and plans at national and local levels which contribute towards improvements in air quality. However, described below are some of the local strategies used in Cheshire East:

- **Cheshire East Air Quality Strategy (AQS): -** this is an overarching document providing an overview of the roles and responsibilities of services which can influence air pollution. It promotes consistency across the range of policies that influence/affect air quality in the borough. It makes sure that air quality is considered in all relevant decisions to ensure there is an improvement across the borough. The Air Quality Strategy is critical to the implementation of specific actions through the AQAP.

[4] LAQM PG16 https://laqm.defra.gov.uk/documents/LAQM-PG16-April-16-v1.pdf

- **Cheshire East Low Emission Strategy (LES): -** the LES is a policy involving a plan of actions that is designed to lower the emissions from transport and encourage developers to have sustainable planning systems/developments to improve air quality. The LES is intended to fit with both National and Local Plan policies with respect to supporting sustainable development. This will help better manage the contribution of developments within the borough rather than looking at each application on a case by case basis. Encouraging developers to understand the importance of protecting local air quality and their role in mitigating any impact from development.

  Cheshire East Local Transport Plan (LTP): - this is a framework for strategic and local highway transport planning in the borough. It ensures that air quality is considered within all aspects of transportation and the local transport strategy. These aspects include sustainable transport and management of travel demands by cars, focusing on areas such as traffic management and transport infrastructure in all modes of transportation. Some examples include the Cheshire East Cycling strategy which in turn promotes and improves active travel and lifestyle, sustainable modes of travel to school strategy, electric vehicle infrastructure and travel planning. The Transport and Highway team are part of the Air Quality Steering Group and work along side the Air Quality Team.

3.3 Source Apportionment

In Cheshire East, like many other boroughs in the United Kingdom and cities all over the world, the dominant source of air quality degradation is vehicular emissions so any increase in these emissions will exacerbate the situation.

Only NO_2 concentrations are currently measured in Cheshire East, whilst other pollutants such as PM are not currently measured. However, PM resulting from vehicular emissions can be estimated using the Department of Food and Rural Affairs (DEFRA) quantification tool. The NO_2 measurement made within the borough is used to determine where there are NO_2 objective breaches.

Therefore, the AQAP measures presented in this report are designed to predominately target the traffic (vehicular) emissions.

3.3.1 Vehicular Emission Contributions

To quantify emissions from vehicles, DEFRA has published a tool called the Emission Factors Toolkit (EFT). The EFT_2016 version 7.0 was used for the analysis in this report. The EFT is able to estimate proportions of nitrogen oxides (NO_X), PM_{10} and $PM_{2.5}$ emissions from vehicular sources, using the fleet type, Average Annual Daily Traffic (AADT), road type (that is urban, rural and motorway), speed and year of AADT collection for Cheshire East. The AADT data was obtained from the Department for Transport (DFT) traffic count website. Figure 3.1 shows the estimated proportions from the calculation for the years 2013 to 2016 for each vehicular fleet to road traffic for NO_X, $PM_{2.5}$ and PM_{10}.

Others=contribution from motorcycle and other energy/fuel types used by vehicles

Figure 3.1 - Estimate of vehicular emission contribution for Cheshire East 2013-2016

Figure 3.1 shows the trend in the fleet percentage contribution. Cars make up about 80% of the fleet on Cheshire East's roads based on AADT (Appendix) and of that percentage, diesel cars account for most of the vehicular NO_x emission's contribution (ranging from 40% – 48% in Figure 3.1). In fact, for all the three pollutants and for all the years calculated, diesel cars show to be the highest contributors (Figure 3.1).

LGVs and HGVs (Artic + Rigid) make up 13% and 5% of Cheshire East's road fleet respectively. HGVs, although small in road fleet percentage (5% Appendix), contribute 16 – 25% NOx and 17% PM of the emissions over the years measured (Figure 3.1). The data in this report agrees with others which suggest that the main source of NO_x is from road transport[5]. The largest source of this NO_2 in the UK is from LGVs (vans + cars) which have significantly grown in number over the past 10 years[6], especially diesel vehicles which contribute most of the NO_2 emissions[5].

For the $PM_{2.5}$ and PM_{10}, the petrol car contribution in comparison to the NO_X emission petrol cars is higher (Figure 3.1). This shows that in addition to the direct exhaust tail emissions, other non-exhaust sources such as brakes, tyres and re-suspension from the road surface are contributing factors. However, diesel cars when compared to petrol cars still show higher emissions of PM $_{(2.5 \text{ and } 10)}$.

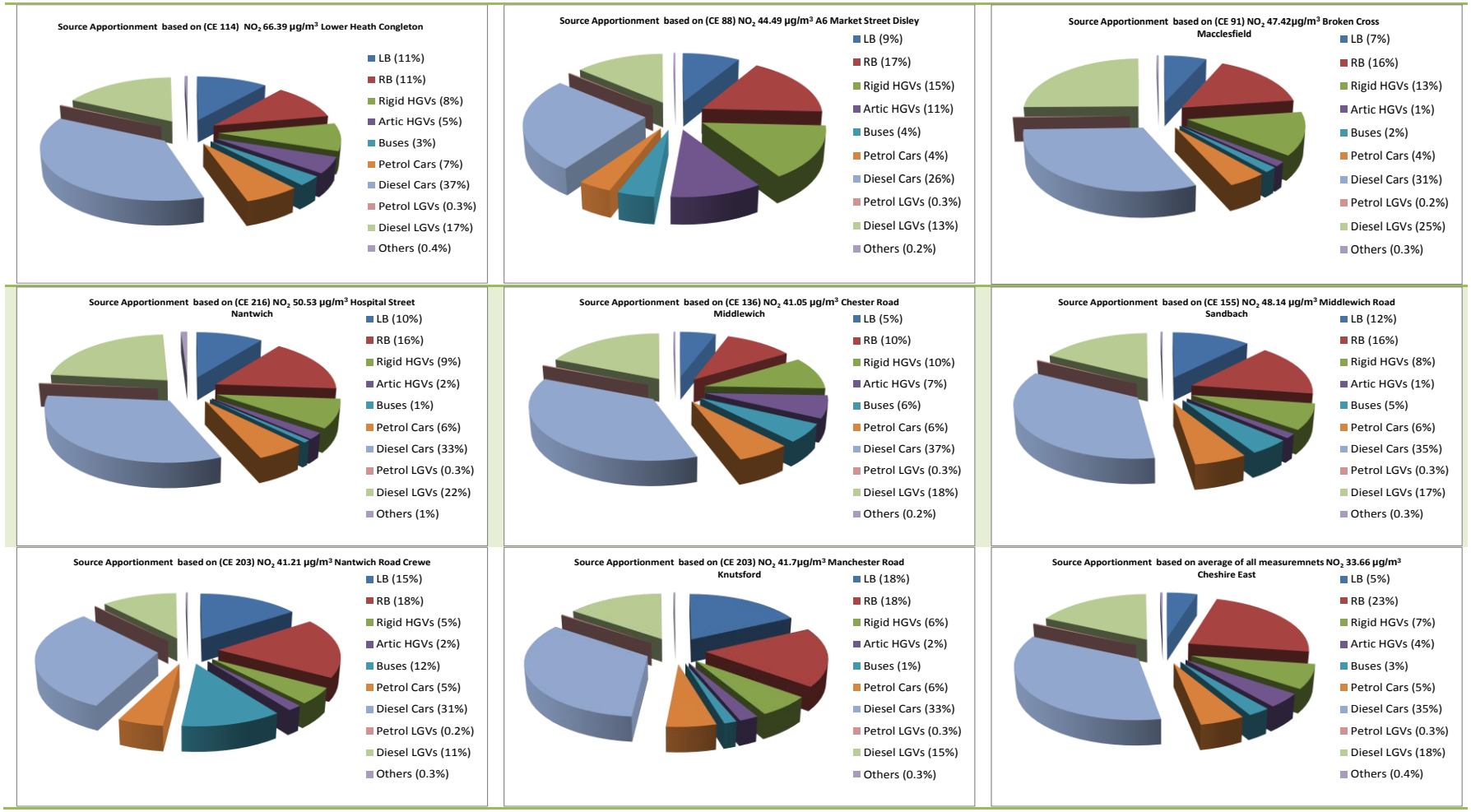
3.3.2 Air Quality Management Area source apportionment

In order to understand sources that influence air quality and identify the key priorities for the action plan, a source apportionment exercise was carried out by Cheshire East Council. The source apportionment was calculated for NO_2, using the method described in the Technical Guidance LAQM.TG16 Chapter 7. Figure 3.2 shows the source apportionment for the AQMAs and Cheshire East overall. One AQMA was selected from each town to represent the town it is located in.

This identified that within the AQMA, the percentage source contributions were as follows (Figure 3.2):

[5] Department of Environment, Food and Rural Affairs (2004) The Air Quality Expert Group Nitrogen Dioxide in the United Kingdom summary. https://uk-air.defra.gov.uk/assets/documents/reports/aqeg/nd-_summary.pdf

[6] Department of Environment, Food and Rural Affairs (2015) Draft plans to improve air quality in the UK Tackling nitrogen dioxide in our Towns and cities. UK overview document https://consult.defra.gov.uk/airquality/draft-aq-plans/supporting_documents/Draft%20plans%20to%20improve%20air%20quality%20in%20the%20UK%20%20Overview%20document%20September%202015%20final%20version%20folder.pdf



Others=contribution from motorcycle and other energy/fuel types used by vehicles. LB=Local Background, RB=Regional Background

Figure 3.2 - Source apportionment for some of the AQMAs and Cheshire East overall based on 2016 NO_2 data

Local background (LB) shows the percentage contribution of other NO_2 local sources such as boilers, Combine Heat and Power (CHP), Non-Road Mobile Machinery (NRMM), agricultural, aviation, industrial and other sources in the AQMAs and borough wide (Figure 3.2). The regional background (RB) shows the influence of the sources from outside the borough. Vehicular emissions contribute greater than 60 % of NO_2 emissions in the AQMAs and borough wide source apportionment (Figure 3.2). Figure 3.2 shows that cars contribute between 30 - 44 %, LGVs 11 - 25 %, and HGVs 7 - 26 % of NO_2 emissions in the source apportionment. HGV NO_2 emission's contribution across the AQMAs and the borough is greater than 10 % with Disley showing the highest contribution of 26 % in comparison to the other AQMAs listed (Figure 3.2).

Therefore, the influence of LGV (cars and vans) emissions is significant across the AQMAs and the borough as a whole. Thus, measures to reduce the influence of car emissions should be implemented in the AQMAs to improve air quality. In addition, the large percentage of cars gives rise to congestion causing pinch-points leading to increases of traffic emissions, hence influencing air quality.

3.4 Required Reduction in Emissions

The key priority areas are where the measured NO_2 concentration is above the NO_2 annual mean objective (40 µg/m^3). The AQAP aims at reducing the NO_2 concentrations in these areas as best possible with an overall goal of achieving compliance with the UK National Air Quality Objective. Table 3.1 shows the individual AQMAs and the road NO_x reduction expressed as a percentage needed to attain the objective concentration respectively. This was calculated in line with Technical Guidance LAQM.TG16 Chapter 7. Cheshire East will continue to work to achieve these reductions following the measures outlined in this document.

Table 3.1 -Required Reduction Emission to achieve NO_2 national objective in the AQMAs

Tube ID	Location	City/Town	2016 NO_2 Measured ($\mu g/m^3$)	NOx equivalent of NO_2 ($\mu g/m^3$)	NOx-required concentration ($\mu g/m^3$)	Road NOx reduction ($\mu g/m^3$)	reduction expressed as (%)
CE1	Park Lane	Macclesfield	42.82	64.88	58.05	6.83	10.53
CE10	Cross Street	Macclesfield	49.74	83.69	59.21	24.48	29.25
CE11	London Road	Macclesfield	38.52	54.54	58.05		
CE16	The Crescent	Disley	58.66	108.59	59.63	48.96	45.09
CE39	Old Post Office/Iron Gates Farm, Monks Heath	Chelford	39.18	59.53	61.49		
CE47	Manchester Road	Knutsford	41.7	56.58	52.54	4.04	7.14
CE48	Holly Tree Cottage	Mere	50.2	80.14	54.71	25.43	31.73
CE51	RTA, Chester Road	Mere	48.72	79.42	57.69	21.73	27.36
CE54	Almond Tree Cottage	Tabley	40.94	41.18	39.03	2.15	5.22
CE55	Old Hall Lane	Over Tabley	52.98	70.64	39.03	31.61	44.75
CE57	Cobblestones	Over Tabley	45.09	64.13	51.85	12.28	19.15
CE61	Mere Corner Cottage	Mere	41.84	59.01	54.61	4.4	7.46
CE84	Tollbar Cottage	Mere	45.81	65.92	51.85	14.07	21.34
CE86	Hibel Road	Macclesfield	43.33	62.86	54.84	8.02	12.76
CE88	By RTA, Market Street, Disley	Disley	44.49	70.64	59.63	11.01	15.59
CE91	Broken Cross	Macclesfield	47.42	79.54	61.03	18.51	23.27
CE93	Henshall Road	Bollington	40.9	62.46	60.29	2.17	3.47
CE94	Chelford Road	Knutsford	52.66	82.85	51.18	31.67	38.23
CE104	West Road	Congleton	64.5	124.4	58.6	65.8	52.89
CE114	Lower Heath	Congleton	66.39	123.8	53.15	70.65	57.07
CE116	Rood Hill	Congleton	42.89	65.24	58.24	7	10.73
CE117	Rood Hill takeaway	Congleton	46.01	73.03	58.24	14.79	20.25
CE127	Rose Cottage, Peel Lane	Astbury	40.39	64.57	63.63	0.94	1.46
CE136	Chester Road	Middlewich	41.05	72.72	70.13	2.59	3.56
CE152	Brickhouse Barns, Holmes Chapel Road	Sandbach	47.62	64.37	46.01	18.36	28.52
CE155	Middlewich Road	Sandbach	48.14	76.06	55.92	20.14	26.48
CE203	NW Traffic lights on Mill Street crossroads	Crewe	41.21	57.7	54.82	2.88	4.99
CE216	Hospital street	Nantwich	50.53	84.43	57.94	26.49	31.38
CE221	Hospital Street	Nantwich	46.97	75.17	57.94	17.23	22.92

3.5 Key Priorities

From the source apportionment (Figure 3.2), it was concluded that the major contributors in all the AQMAs are LGVs (Vans and cars) but the influence of HGVs will not be discounted, especially in areas like Disley. Therefore, AQMA specific targeted measures will be implemented to reduce the influence of these vehicle types. However, a holistic or integrated approach will also be incorporated across the borough to manage air quality. This integrated approach will be applied in the priority areas of:

- development and planning
- traffic management
- alternative travel
- active travel
- low emission transportation
- transportation
- public awareness
- use of NOx-busting paint and green planting

4 Development and Implementation of Cheshire East Borough Council AQAP

4.1 Consultation and Stakeholder Engagement

In updating this AQAP, we have worked with other local authorities, agencies, Highways, Public Health, Parish Councils, businesses and the local community to improve local air quality. In addition, we have undertaken an air quality consultation engagement with the public in the different towns containing AQMAs. Local knowledge of the problems in the towns is fundamental to the development of local actions. Therefore, the aim of the public consultation was to, with the aid of the local communities, identify air quality related problems in the town and provide an opportunity for an open forum to discuss these issues and the generation of new ideas. These consultations will also allow the local public the opportunity to give feedback on the proposed air quality measures and help them understand the rationale behind them.

The response to our public consultation engagement is given in Appendix A.

4.2 Steering Group

The Air Quality Steering Group was set up in 2016 to encourage greater involvement of Public Health local directors and other relevant departments. This group is made up of senior officers from Public Health, Planning, Highways and Environmental Health. The group meets quarterly and is tasked with the strategic overview of the Council's approach to improving air quality and the direction of services to achieve positive results. The AQAP proposed measures were discussed within the group, giving the attendees the opportunity to make inputs, generate new ideas, critically appraise the measures proposed and making sure that these measures are realistic and can be implemented. They were also kept abreast of the public consultations, the outcomes, whilst some of the group members also attended the public consultations.

5 AQAP Measures

To manage and achieve improved Air Quality standards across Cheshire East, this section discusses the measures applied.

5.1 Air Quality Monitoring and Management Measures

These measures are implemented borough wide in order to monitor, manage and improve air quality. Part IV of the Environment Act 1995 requires that all local authorities in England, Northern Ireland, Scotland and Wales should conduct local Air Quality reviews. Section 82(1) of the Act requires that these reviews should include assessment of the current air quality in the area. Therefore continuous and general actions taken by Cheshire East Council to improve air quality and protect the public include the following:

- The use of diffusion tubes and real-time monitors for air quality monitoring, in order to produce higher quality data on which to monitor effectiveness of initiatives and base decisions. Also to increase confidence in monitoring data and quality of monitoring to provide support for modelling work.
- The annual review of air quality monitoring sites so as to ensure that they are suitable and relevant to monitoring in regards to sensitive sites.
- Review and assess air quality within the borough, in accordance with the government guidance and policies, making sure that statutory requirements are met.
- Revision of the Local Emission Inventory for source apportionment. For better understanding of pollutant contribution and improvement of local modelling.
- Regulation and enforcement of legislative requirements for industrial processes in line with the Environmental permitting programme.
- Work with partner agencies such as Highways, DFT, Public Health, Environment Agency, etc. In order to coordinate activities and disseminate information that promote and improve air quality in Cheshire East

NB: Please see future ASRs for regular annual updates on implementation of these measures

5.2. General Action Plan Measures

Table 5.1 deals with the general measures that will be implemented throughout the borough in relation to improving Air Quality

Table 5.1 - Air Quality Action Plan Measures general action borough wide

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN1	Policy Guidance and Development	Land-use and planning, Demolition and construction. Transportation and service delivery.	Review the air quality Strategy Implement Low Emission Strategy When considering planning applications will have regard to relevant guidance for construction, Land-Use and Development Control Integration of air quality into all relevant council policies and documents, e.g. LDF, LTP, core strategy Use the existing development control processes to improve air quality	Cheshire East Council Planning Air Quality Team Highways	Emission assessment from each site/development should be carried out at the planning application stage as a standalone and its effect to existing developments/site. Ongoing.	Published AQS and LES. Suitable mitigation measures.	LES completed 2018	Review the Air Quality Strategy-2018 LES requires formal adoption and implement - 2018
GN2	Environmental Permits	Industrial installations and processes	Continue to enforce environmental permits in accordance with legislation and relevant guidance.	Environmental Protection Team	Ongoing	Inspection programme where inspection reports are produced and emission reports submitted.		Inspection programme completed annually
GN3	Public Information, Awareness and Education	Website	Regularly review the website to raises awareness on air quality, health effects and provide information on individual actions to improve air quality	Air Quality Team Public Health	Ongoing	Functional website with up to date information		Ongoing

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
		Air Quality Education packs for delivery in schools	Produce resources on air quality for students and school children to provide better awareness Provide school children with air quality information leaflets to give their parents Encourage walking buses to schools	Air Quality Team	2018/2019 plan and design educational resources for the campaign	Air quality educational campaign	Discussion with SHIFT project to start campaign with schools in AQMAs	Ongoing
GN4	Promoting alternative travel	Travel planning	Support and encourage establishments and individuals to produce, implement and make available travel plans that give low emission travel choice and options. Working with schools to produce and implement their travel plan Link to previous schools measure	Air Quality Team Highways	Ongoing	Require Travel planning/residential travel information pack conditions on planning applications	Ongoing	Ongoing
		Council Travel	Support a staff travel plan, car share scheme and lift share Encourage work from home policy Promote and encourage the use of technological tools such as telephone and video facilities for meetings and conferences. Accessibility of council services via the internet	Cheshire East Council		Reduce need to travel and more online services	Ongoing	Ongoing
		Active Travel	Encourage and promote cycling and walking where possible Active travel/cycling strategy	Air Quality Team Public Health	Ongoing	Additional cycling and walking schemes around the borough	A number of schemes have been implemented across the borough	Ongoing

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN5	Traffic Management	Anti-idling enforcement	Educate and where possible enforce requirement to switch off idling engines	Air Quality Team Wardens		Launch Anti-idling campaigns		Ongoing
		Emission based parking or permit Schemes	Promote a consistent and structured approach to parking supply, management and tariffs Incentivise parking for low emission vehicle	Air Quality Team Parking Transport	Review of car parking charges	Incentivised parking scheme implemented Consistent car parking management		Ongoing
		Access and congestion management Traffic reduction	To work with partners to manage the highway network, manage delay and improve traffic flow	DFT	Various highway improvement schemes ongoing (SMART motorway, Crewe Green Roundabout) and in the planning stage (Congleton link road and Middlewich bypass)	SMART Motorway completed Highway improvement schemes implemented		Ongoing SMART Motorway April 2019 Crewe Green Roundabout Nov 2018
GN6	Promoting low emission transport	Taxi licence condition	Encourage taxis licensed by the council comply with vehicle emission limits	Licensing	Ongoing	Number of Taxi's Licenced. Number of LEV Taxis in the fleet All Taxis licenced by council should meet at least the minimum emission standard		Ongoing
		EV charging and Low Emission vehicle	Continue to promote and increase the installation of EV charging points across the borough Promote Low emission vehicles	Air Quality Team Planning Transport	Ongoing	Increased installation of EV charging points		EV charging point conditions are required through planning. ongoing

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN7	Transport planning and infrastructure	Public transport improvement	Support improvement of public transport facilities, service level and reliability Investigate feasibility of bus shelters at bus stops in AQMAs	Transport Highways	Ongoing	Public transport improved Bus shelters installed		Ongoing
		Cycle scheme and network	Support improvement of the cycle network and cycling safety where possible	Transport	Ongoing	Cycling network improved Active travel promoted		Ongoing
GN8	Vehicle fleet emission efficiency	Driving training and ECO driving aids	To promote an eco-driving campaign for Cheshire East work force and other groups Promote driver training to operators to reduce emission	Cheshire East	Ongoing	Driver training completed Eco-driving campaign promoted		Ongoing
		Fleet efficiency and recognition schemes	Support procurement of greener fleet (low carbon, hybrid-electric) Support scheme that promotes reduced emissions from HGV's	Cheshire East	Ongoing	Greener fleet		Ongoing
		Testing Vehicle Emissions	To work with partners to undertake vehicle emission testing schemes	VOSA Police Air Quality Team	Ongoing	Vehicle emission testing completed		Ongoing
GN9	Others	NO_X-busting paint Green planting Roadside panels	Application of NO_X paint on surfaces across the city especially in AQMAs Support and promote green planting Support investigation of spaces for green planting	Air Quality Team Cheshire East Council	Ongoing	More green infrastructure across the borough		Ongoing

5.3. Site specific measures

Table 5.2 deals with the site specific measures that will be implemented in the AQMAs in the borough in relation to improving Air Quality

Table 5.2 - Air Quality Action Plan Measures for specific AQMA

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
CONGLETON AREA- WEST ROAD CONGLETON, ROOD HILL AND LOWER HEATH										
CONG1	Traffic Management	Strategic highway improvements	Provide a Congleton Bypass	Highways	During 2018		Bypass completed 2020		Planning stage	The effect of this bypass will relieve WR and LH 2020
CONG2	Traffic Management	Strategic highway improvements	Review the need for traffic signalling and giving more priority to Buxton Road	Highways			Traffic signalling reviewed			Ongoing
CONG3	Traffic Management	Other	Review the need for the pedestrian crossing and the puffin traffic light within close proximity	Highways			Crossings around Lower Heath area reviewed			Ongoing
CONG4	Traffic Management	Other	Review west bound bus stop by Tesco Express	Highways			Bus stop reviewed			Ongoing
NANTWICH AREA: HOSPITAL STREET										
NANT1	Other	Other	Review the need for vehicle weight restriction 1-whole town 2-Hospital Street	Highways Transport			Weight restriction reviewed			Ongoing

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
NANT2	Traffic Management	Other	Ensure Peter Destapleigh Way made more attractive to through traffic through effective traffic management	Highways			Increased use by through traffic			Ongoing
NANT3	Traffic Management	Anti-idling enforcement	Install switch off when idling signs at station crossing points Use of wardens to control idling	Air Quality Team Wardens			Launch anti-idling campaign			Ongoing
NANT4	Traffic Management	Other	Review the need for 'keep clear' signage on Hospital Street at junction with Crewe Road roundabout	Highways			Signage review completed			Ongoing
NANT5	Traffic management	Other	Review the timings on Wellington Road railway crossing Countdown clocks to trains passing	Cheshire East			Crossing timings reviewed			Ongoing
SANDBACH AREA: JUNCTION 17, MIDDLEWICH ROAD										
SAND1	Traffic Management	Review junction	Review flows and priorities at Ashfield Way	Highways			Priorities reviewed			Ongoing
SAND2	Freight and Delivery management	Strategic routing strategy for HGV's	Vehicle weight restriction on Middlewich Road	Highways			Weight restriction reviewed			Ongoing
A6 DISLEY										
DIS1	Traffic Management	Other	Ensure the A6 Corridor is managed as part of the SEMMMS scheme	Cheshire East			Mitigation implemented as part of the schemes			Planning conditions to require enhanced mitigation

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
DIS2	Transport planning and infrastructure	Public transport improvements-interchanges stations and services	Support the improvement of rail facilities	Cheshire East			Rail facilities improved			Ongoing
DIS3	Traffic Management	Speed limit review	Speed limit reduction on A6	Highways			Reducing the speed link to 30mph			Ongoing
DIS4	Promoting low emission transport	Low Emission Zone (LEZ) or Clean Air Zone (CAZ)	Investigate the feasibility of implementing LEZ or CAZ	Air Quality Team Transport Highways Cheshire East			Feasibility of LEZ/CAZ investigated and implemented if possible			Ongoing
DIS5	Traffic Management	Road Users Charging (RUC) and/or weight restriction	Investigate the feasibility of implementing RUC and/or weight restriction	Air Quality Team Transport Highways Cheshire East			Feasibility of RUC investigated and implemented if possible			Ongoing
DIS6	Traffic Management	Strategic highway improvements	Review the possibility of a Bypass round Disley	Highways			Review completed and Bypass implemented if possible			Ongoing
DIS7	Traffic Management	Others	Review Redhouse Lane lights	Highways			Review completed and changes implemented			Lights turn red even when no car waiting to exit
CREWE AREA: NANTWICH ROAD, EARLE STREET, WISTASON ROAD										
CRE1	Transport planning and infrastructure	Other	Review requirement of the pelican crossings along Nantwich Road	Highways			Crossings reviewed			Ongoing Use of smart or zebra crossings

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
CRE2	Traffic Management	Others	Traffic flow review study from Manchester Bridge to Muni buildings roundabout, between Vernon Way and Macon Way junctions.	Highways			Traffic flow study completed			Ongoing
CRE3	Traffic Management	Others	Review Traffic light signalling in AQMAs	Highways			Signalling review completed			Ongoing
KNUTSFORD AREA: MANCHESTER ROAD										
KNU1	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Review A50 roundabout/junction	Highways			Junction reviewed			Ongoing
KNU2	Other	Other	Review pedestrian crossings on roundabout	Highways			Crossings reviewed			Ongoing
KNU3	Other	Other	Review A556 Bypass Impact	Cheshire East			Impact on NOx reviewed			Ongoing
MACCLEFIELD AREA: BROKEN CROSS, PARK LANE, HIBEL ROAD, CROSS STREET/LONDON ROAD										
MACC1	Traffic Management	Others	Explore the potential of redesigning the A523/Byrons Lane junction by introducing a roundabout on London Road	Highways			Junctions reviewed and any improvements implemented			Introduction of roundabout may smoothen the traffic flow
MACC2	Traffic Management	Others	Parking restriction on Broken Cross during peak period	Parking			Parking restrictions considered and implemented if possible			Ongoing

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
MACC3	Traffic Management	Others	Review Road Parking and Parking time on Park Lane	Parking			Review completed and any actions implemented			Ongoing
MACC4	Traffic Management	Strategic highway improvement	Review the A523/A527 Roundabout on Hibel Road.	Highways			Review completed and any actions implemented			Ongoing
MIDDLEWICH AREA: CHESTER ROAD										
MIDD1	Freight and Delivery management	Strategic routing strategy for HGV's	Vehicle weight restriction in AQMAs	Highways Transport Parking			Weight restriction reviewed and implemented if possible			Weight restriction of HGV's on this road will force the HGV's to go on the motorway. Obtain money from bypass.
MIDD2	Traffic Management	Strategic highway improvements	Provide a Middlewich Bypass	Highways	During 2018		Bypass completed 2021		Planning stage	Winter 2021

Appendix A: Response to Consultation

There was a wide range of views and comments and Table A.1 shows the summary of responses to the consultation.

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
Air Quality Steering Group	Internal Consultation	Approved
Environment Agency	Statutory Consultation	No comments to make
Highways England	Statutory Consultation	No response
Public Health England	Statutory Consultation	No response
Cheshire West and Chester Council	Statutory Consultation	No comments to make
Shropshire Council	Statutory Consultation	No response
Warrington Borough Council	Statutory Consultation	No response
Trafford Council	Statutory Consultation	No response
Manchester City Council	Statutory Consultation	No response
Stockport Metropolitan Borough Council	Statutory Consultation	No comments to make
High Peak Borough Council	Statutory Consultation	No response
Staffordshire Moorlands District Council	Statutory Consultation	No response
Newcastle-under-Lyme Borough Council	Statutory Consultation	Not knowing the individual areas and the issues they face, it would be helpful to an outsider to understand from a non-technical summary why the areas are covered by an AQMA, the extent of the AQMA and the reasons for declaration together with trends in emissions, source apportionment and key challenges and issues identified likely to have an impact on AQ during the life of the updated AQAP. (e.g. HS2, A500 widening, growth plans identified in the Local Plan, Northern Powerhouse related schemes). Newcastle has taken the opportunity to include in its AQAP document, PHOF Outcomes data and health profiles for the AQMA's within its area from data held and produced by the Director of Public Health. This we feel helps to draw attention to the contributory health impacts of poor AQ and would help in securing funding for future projects.
Crewe and Nantwich Public	Public Consultation	It was suggested that greener fuels such as compressed natural gas for buses and lorries to improve diesel

Workshop		emissions. General agreement with the plan to plant more foliage where possible It was suggested that development of more and improvement of cycle infrastructures should be provided. Also emphasis on active travel/cycling strategy was stressed. It was suggested that instead of installing only switch off when idling signs at the Nantwich station crossing points, countdown clocks to train passing should be considered; might not be possible but would be more effective Respondent agreed with the review for “keep clear” signage on Hospital Street at junction with Crewe Road roundabout. However respondent noted that it is not legally enforceable because Cheshire East Council policy is not to enforce yellow box junction. It was suggested that Bentley should provide incentives to support air quality. It was suggested that schools should have no driving boundaries in order to reduce cars around schools and reduce traffic build due to school run. It was suggested that free buses between Crewe railway station and the retail park/town centre, circular bus route and possibly link with town centre-hospital bus service should be provided. In order to reduce vehicles into the town centre and incentives for people to use public transportation. Respondent agreed with the review requirement for pelican crossings along Nantwich Road Crewe and suggested that the crossings be made smart or zebra crossing. It was suggested that Mill Street/Edleston Road be made one way with cycle lane counter flow.
Congleton Public Workshop	Public Consultation	Respondent suggested that funding and promotion of walking buses for schools to reduce the amount of cars that take children to school. Respondent agreed with plan to support planting trees/green spaces. Respondent also suggested water features.
Macclesfield, Bollington and Knutsford Public Workshop	Public Consultation	Park and ride schemes were suggested. Having appropriate public transport provision for schemes of more than 100 homes or development of strategic sites. Identifying major developments and possibly re-routing bus routes or providing new bus services before a development is completed, not leaving it until the properties are occupied. Using planning mitigation measures to apply landscaping, barriers and road design throughout the borough.

		Integrate transport assessment and air quality assessment in a document for major development sites borough wide Encourage technological improvements to reduce emissions. Change the vehicle fleet, low carbon, hybrid-electric vehicles. Anti-idling devices. Respondent was in agreement with the plan on Emissions based parking Respondent suggested monitoring around schools especially before and after school club and agreed with the plan on education of school children on idling in order for them to educate their wards.
Disley Public Workshop	Public Consultation	It was suggested that PM monitoring should be considered. Review the possibility for a bypass linked into the proposed A6-M60 in order to divert traffic away from town VOSA checks at garages to make sure cars are compliant Respondent suggested that Redhouse Lane junction traffic light should be reviewed because it turns red even when no car waiting to exit It was suggested that alternative walking routes be provided so that people can avoid the A6. It was also suggested that bus shelters be provided to shield people waiting for bus from fumes. Respondent suggested that there should be travel time assigned to HGVs. Agreed with plan for tress/shrubs to be planted. It was suggested that grants for air filters for homes should be provided Respondent feared that additional 4000 houses to High Lane would undoubtedly add to the volume of traffic along the A6. As such a bypass should be considered before embarking on this project
Middlewich and Sandbach Public Workshop	Public Consultation	It was suggested to remove the left filter light on turning left into Ashfield Way and put a give way sign to improve traffic flow. Alternative routes to school so that the kids are not exposed to air pollutants on the busy road.

		It was suggested that roadside panels be installed as barriers to reduce spread of vehicular emission. Respondent suggested that funding from Middlewich bypass should be used for Lewin street weight restriction and enforcement. Reduce cost of public transport as incentives for people to use public transport. Installation of green infrastructure for example green walls along Ashfields Install real-time analysers to measure hourly concentrations Respondent agreed with the plan of vehicle weight restriction in Middlewich Road Sandbach but thought it would be ignored when the M6 is closed. However thought it will be more advantageous to use such measure on Congleton Road to stop HGVs from entering town. Review of smoke control areas

Appendix B: Reasons for not Pursing Action Plan Measures

Table B.1 – Action plan not pursued and the Reasons for that Decision

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
AR7	Awareness	Consider the introduction of a large scale pro-active public information system such as text messaging service	The goal is to give real-time update. Therefore in the future with improved technological resources this action could be reconsidered.
TR4	Others	Review current concessionary travel criteria to ensure it offers value for money and supports broader policy objectives. Additional discretionary elements to consider will include introduction of companion bus passes and/or taxi vouchers.	**Completed**. Concessionary travel is for only older people and for bus only (English National Buss Pass). It is a national scheme. They travel free after 9.30 am till last bus. No concessionary ticket for younger companions
TR11	Others	To map Congestion hotspots against AQMA / areas of concern and ensure congestion reduction measures are targeted in those areas	**Completed**. AQMAs and their hotspots are mapped and can be found on the website and the ASR. We have the AQMA's and buffer area layer in our GIS.
TRF1/TRF2	Freight and Delivery Management	Work with freight operators to establish appropriate freight routes, delivery routines and driver practices to reduce to reduce emissions Develop a database of freight distribution within borough	This is one of the proposed strategies in the LTP Refresh and will be adopted when the LTP Refresh plan is completed.
TRF3	Vehicle Fleet Efficiency	Examine feasibility for introduction of an eco-star scheme for freight operators	**Completed**. 2016 DEFRA Grant application with Cheshire West and Chester was unsuccessful. It was not supported by DEFRA.
AREA SPECIFIC ACTIONS WR-West Road, RH-Rood Hill, LH-Lower Heath, NANT-Nantwich, SAND-Sandbach, DIS-Disley, CRE-Crewe, KNU-Knutsford, EAR-Earle Street			
CR1 –CR7	Others Traffic Management	Various actions within the categories named in the action category column	Cranage AQMA has been revoked. It is no longer an AQMA because the sensitive receptors (two dwelling buildings) in the area of exceedances have been demolished. Only the general actions will now be applied to Cranage.
WR4/RH3/LH2	Others	Additional modelling of traffic flows	**Completed**. Undertaken as part of Congleton Link Road study. No further modelling will be done until Link Road is completed.
WR5/RH5	Traffic Management	Parking Enforcement	**Completed**. Parking is not a problem in this area. There are double yellow lines on the road and where necessary parking enforcement is ongoing.
WR7	Others	Timing changes to pedestrian crossing	**Completed**. Lights have been upgraded.

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
WR8/RH7/LH8	Promoting Low Emission Transporting	Examine the feasibility of introducing a LEZ for Congleton	Congleton bypass is set to overcome the NO_2 exceedances. However, the LEZ option could be investigate post Congleton bypass if Air Quality problem persists.
RH4/LH3	Traffic management	Investigate further signal changes on traffic lights	**Completed.** MOVA system has been installed. Monitoring the NO_2 in the area to measure effect of change due to the newly installed light is ongoing
RH6	Traffic Management	Junction improvement	This measure will not be taken forward due to the Congleton bypass. The bypass has to be completed before the junction improvement can be reviewed.
NANT1/NANT7/NANT12	Traffic Management	Comprehensive traffic, tourist re-signing and reclassification of roads in and around Nantwich Review of the configuration of junctions in the Town to ensure traffic is diverted away from the AQMA Review options to improve traffic flow on the bypass (A500) to reduce congestion in the town centre and the AQMA	**Completed**. Comprehensive traffic reviews and resigning have been completed.
NANT2	Transport planning and infrastructure	Improved rail facilities	**Completed** Station refurbishment has been undertaken.
NANT3	Traffic Management	Ensure parking restrictions are enforced in and around the area	**Completed**. Parking is not a problem in this area. However parking enforcement remains ongoing. This measure is also considered under the general actions
NANT4	Freight and Delivery Management	Contact stores in the area and request they route delivery vehicles away from the AQMA	**Completed**. Small interest in coordinated approach was identified in the survey undertaken. In addition limited data analysis hindered progress. However measure could be reconsidered with data and interest improvement.
NANT6	Traffic management	Review the need for 20mph speed limit: -Whole Town -Hospital Street	**Completed**. This action will not be pursued because the drivers on that road already drive on low speed due to the road characteristics. Therefore there will be no need for further reduction to 20 mph.
NANT8	Traffic Management	Review the impact of making A534 Hospital Street one way	**Completed**. Discussions with Highway planners have concluded that such a scheme would not be practical or deliverable in the town.
NANT9	Traffic Management	Review the need for carriageway alterations in Hospital Street/ Pratchett's Row to make route less appealing	**Completed**. Discussed with Highways. Cheshire East Council policy is against any traffic scheme which would interfere with flow because of road safety issues. Therefore this action will not be pursued.
NANT10	Traffic Management	Review the need to introduce a traffic management system using traffic lights	**Completed**. This measure will not be carried forward as there are too few traffic lights for the lights to communicate with each other.

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
NANT11	Traffic Management	Contact satellite navigation companies to ensure that they have updated their maps to include the reclassification of the roads in Nantwich	**Completed**. Confirmation of changes has been received from satellite navigation companies. However, this measure will no longer be continued because journey planners/real-time travel info can be found on google.
NANT13	Others	Install automatic analyser in the AQMA (Hospital Street) to improve knowledge	**Completed**. NO_2 concentration in the area is not breaching 60 µg/m^3 as such; it is likely that there is no hourly breach. In addition, there is no ideal location to place the RTA. Therefore resources will be focused on measures that can reduce the NO_2 concentration in that area.
NANT15	Transport planning and infrastructure	Complete the Crewe to Nantwich Cycleway (Connect2)	Cycleway has been **Completed**.
NANT16	Traffic Management	Review the introduction of well designed Speed bumps on Hospital Street	**Completed**. Action has been discounted. This is because current administration does not favour this action. There is a corporate policy which actively encourages the removal of such schemes.
NANT18	Traffic Management	Provide a "Build out" at Crewe Road / Hospital Street junction to prevent HGV's and Speeding Cars using Hospital Street	**Completed**. This measure will not be taken forward. This is because, following discussion with Highways, there is a safety implication associated with this measure.
NANT19	Others	Investigate the proportion of locally generated traffic using Hospital Street as against the volume of traffic generated from outside	This measure is discounted; because based on local knowledge, as long as the bypass is clear then Hospital street is not used by out of town vehicles. Out of town traffic uses bypass due to new signalling. Also investigation will require resources to separate local vehicles from vehicles from outside the area.
NANT20	Traffic Management	Review the location of the current Pedestrian crossing on Pratchett's Row and examine need for one on Hospital Street	**Completed**. Reviewed by Highways in 2012. Unlikely to be removed for safety reasons.
NANT22	Traffic Management	Investigate traffic priority on Hospital Street / Pratchett's Row junction to give priority to Hospital Street traffic	**Completed**. This measure was incorporated into the review of traffic flow on hospital street.
SAND1/SAND2	Others	Additional air quality monitoring Air Quality modelling	**Completed** and the result has confirmed the need to extend the AQMA in Sandbach.
SAND3	Traffic Management	Installation of Ramp Access Controls at Junction 17	This measure has been **Completed**. Ramp management systems is in place and used during peak period. Also major improvement at M6 J17 is **Completed**.
SAND5	Traffic Management	Investigate the feasibility of traffic signalisation on part of the network	Signalisation project and review **Completed**.

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
MERE1-MERE6	Traffic Management Others	A556 Bypass scheme AQ assessment for network improvements Regular review of AQ monitoring within AQMA and surrounding area Junction and signal improvements along the route Review monitoring data to refine the AQMA boundary	The measures proposed for MERE have been **Completed**. The regular review and monitoring of data to see impact of measure can be found in the ASR. However, the general actions will be applied in Mere.
DIS6	Traffic Management	Redhouse Lane development-signalled junction (s106)	**Completed**. Lights have been installed.
DIS8	Traffic Management	Shared Space Scheme at Fountain square	**Completed**. This scheme will not be pursued. It slows traffic so much because pedestrians will share the road with vehicles. This very slow traffic will reduce efficiency of the vehicle and leads to increase in vehicular emissions. Especially for the Diesel vehicles and HGV's.
DIS9	Vehicle Fleet Efficiency	Reduce emissions from HGV's	**Completed**. 2016 DEFRA Grant application with Cheshire West and Chester was unsuccessful. It was not supported by DEFRA.
DIS12	Others	Setup an A6 Air Quality Working group	**Completed.** Air Quality working group has been setup. Therefore Air Quality will continue to work with the group.
CRE1	Traffic Management	Crewe Green Link Road	This Link Road is **Completed**.
CRE3	Others	Relocate Crewe Station Entrance	This measure is **Completed**.
CRE4	Traffic Management	Box Junction enforcement/re-hatching	**Completed**. Enforcement remains ongoing.
CRE5	Others	Station parking review	**Completed**. Further parking was introduced and Crewe station entrance was relocated.
CRE6	Others	Relocate Bus Stop	**Completed**. This measure has been discounted because the Bus stop is at a safe place where there is sufficient space for vehicles to manoeuvre around stationary buses at the stop.
KNU5	Traffic Management	UTC, Congestion management, traffic reduction	**Completed.** Project was linked to development proposal within town. It was overseen by Cheshire East highways.
EAR3	Others	Investigate green planting around Retail Park	**Completed**. This measure will not be taken because planting spaces are not available. However, it will be considered as a general measure across the town.

Appendix C: Additional Information

Table C.1 Annual Average daily traffic count fleet percentage (2013 -2016)

AADT Year	Motorcycles (%)	Cars (%)	Buses Coaches (%)	LEV (%)	HGV (%)
2016	0.56	80.42	0.53	13.49	5
2015	0.57	80.30	0.56	13.48	5
2014	0.61	80.99	0.55	12.86	5
2013	0.63	81.44	0.56	12.34	5

Glossary of Terms

Abbreviation	Description
AADT	Average Annual Daily Traffic
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
CAZ	Clean Air Zone
Defra	Department for Environment, Food and Rural Affairs
DFT	Department for Transport
EFT	Emissions Factor Toolkit, DEFRA vehicle emission tool calculator
EU	European Union
EV	Electric-engine Vehicle
HGV	Heavy Goods Vehicles
LAQM	Local Air Quality Management
LES	Low Emission Strategy
LGV	Low Goods Vehicles
LTP	Local Transport Plan
LEZ	Low Emission Zone
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides

PHOF	The Public Health Outcomes Framework
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less

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Working for a brighter future together

Environment and Regeneration Overview and Scrutiny

Date of Meeting: 17 September 2018

Report Title: Cheshire East Air Quality Strategy 2018 Update

Portfolio Holder: Councillor Ainsley Arnold – Portfolio Holder for Housing, Planning and Regeneration

Senior Officer: Frank Jordan – Executive Director Place and Acting Deputy Chief Executive

1. Report Summary

1.1. To update the Committee on the review of the Council's Draft Air Quality Strategy (August 2018) and to provide comments as appropriate.

2. Recommendation

2.1. To note the report and to provide feedback to Cabinet.

3. Reasons for Recommendation

3.1. To ensure Members are kept up to date with the Council's Air Quality Strategy.

4. Other Options Considered

4.1. Not applicable.

5. Background

5.1. Local authorities have a duty under the Environment Act 1995 to review and assess local air quality within their area, against a set of health-based objectives for a number of specific air pollutants. If any areas are found where pollutants exceed the objectives, local authorities are required to declare an Air Quality Management Area (AQMA) and to prepare an Air Quality Action Plan (AQAP) setting out measures they intend to introduce in order to reduce concentrations of air pollutants, in pursuit of achieving the objectives. This strategy sets out how air quality will be considered in all

relevant decision making processes across the Council to ensure that any impacts to air quality are taken in to account and actions in the AQAP are implemented where possible.

5.2. In addition to these formal obligations, local authorities are encouraged by Department for Environment Food & Rural Affairs (Defra) to draft and implement local Air Quality Strategies. The aims of the Air Quality Strategy are to support the achievement of the air quality objectives and to ensure air quality is considered within a wide range of local government and regional planning frameworks. This is important, as whilst working towards achievement of the air quality objectives will help reduce the risk of the most serious health effects related to pollution, there are advantages to be gained from the continual improvement of local air quality conditions. By establishing a strategic framework for the inclusion of air quality considerations within Council policies and procedures, a local authority is then well placed to maintain good air quality and secure future improvements.

5.3. Delivering improvements to local air quality requires input from a wide range of professions. Therefore the Strategy identifies commitments intended to promote communication and co-operation within the Council, between external organisations and the community. These commitments are grouped under a number of relevant policy sectors including air quality, spatial planning, transport, climate change and energy management, health and education.

5.4. Although future improvements in local air quality are predicted as a result of technological advances in vehicle engines and improved fuels, there is currently some doubt as to their efficacy, and there remains a need to reduce the increasing reliance on private motor vehicle use and to provide access to improved public transport services or other sustainable means of travel. Traffic accounts for the main source of pollutant emissions across the borough, which is primarily responsible for all the AQMAs. As such, links with the Local Transport Plan are fundamental to both the improvement of local air quality and maintenance of air quality, across the borough.

5.5. Six indicators are proposed within the Strategy including the monitoring of air pollutants, assessing new developments for their impact on air quality and improving public awareness of air quality. Using these metrics, the effectiveness of the Strategy can be evaluated throughout the lifetime of the document.

6. Implications of the Recommendations

6.1. Legal Implications

6.1.1. No direct legal implications arising from this report.

6.2. Finance Implications

6.2.1. This report has been prepared by Regulatory Service & Health and the costs have been covered by the existing service budget.

6.3. Policy Implications

6.3.1. No direct Policy implications arising from this report.

6.4. Equality Implications

6.4.1. No direct equality implications arising from this report.

6.5. Human Resources Implications

6.5.1. No direct human resources implications arising from this report.

6.6. Risk Management Implications

6.6.1. No direct risk management implications arising from this report. The development of a Cheshire East Air Quality Strategy addresses recommendations made by Defra to ensure a council wide, strategic approach to air quality.

6.7. Rural Communities Implications

6.7.1. There are no direct implications for rural communities.

6.8. Implications for Children & Young People

6.8.1. There are no direct implications for children and young people.

6.9. Public Health Implications

6.9.1. There are no direct implications for public health.

7. Ward Members Affected

7.1. Borough wide.

8. Access to Information

8.1. The background papers relating to this report are in Appendix 1.

9. Contact Information

9.1. Any questions relating to this report should be directed to the following officer:

Name: Nick Kelly

Job Title: Environmental Protection Team Leader

Email: nick.kelly@cheshireeast.gov.uk

Local Air Quality Strategy for Cheshire East Council

August 2018

Document Control

	Name	Signed	Date
Report Prepared	Nick Kelly		August 2018
Report Checked	Sarah Allwood		August 2018
Final report	Sean Hannaby		August 2018

Executive Summary

Local authorities have a duty under the Environment Act 1995 to review and assess local air quality within their areas, against a set of health-based objectives for a number of specific air pollutants. If any areas are found where pollutants exceed the objectives, local authorities are required to declare an Air Quality Management Area (AQMA) and to prepare an Air Quality Action Plan (AQAP) setting out measures they intend to introduce in order to reduce concentrations of air pollutants, in pursuit of achieving the objectives.

Since the publication of the initial National Air Quality Strategy in 1997, Cheshire East Borough Council has fulfilled its obligations to identify any areas where there is a potential to exceed the relevant objectives. To date all of the AQMAs which have been declared are in discrete locations across Cheshire East, all of which are predominantly associated with road traffic emissions.

In addition to these formal obligations for Local Air Quality Management, local authorities are encouraged by Defra (Department for Environment, Food and Rural Affairs) to draft and implement local Air Quality Strategies. The aims of the Air Quality Strategy are to support the achievement of the air quality objectives and to ensure air quality is considered within a wide range of local government and regional planning frameworks. This is important, as whilst working towards achievement of the air quality objectives will help reduce the risk of the most serious health effects related to pollution, there are advantages to be gained from the continual improvement of local air quality conditions. By establishing a strategic framework for the inclusion of air quality considerations within Council policies and procedures, a local authority is then well placed to maintain good air quality and secure future improvements.

Delivering improvements to local air quality requires input from a wide range of professions. Therefore this Strategy identifies commitments intended to promote communication and co-operation within Cheshire East Council, between external organisations and the community. These commitments are grouped under a number of relevant policy sectors including air quality, spatial planning, transport, climate change and energy management, health and education.

Although future improvements in local air quality are predicted as a result of technological advances in vehicle engines and improved fuels, there is currently some doubt as to their efficacy, and there remains a need to reduce the increasing reliance on private motor vehicle use and to provide access to improved public transport services or other sustainable means of travel. Traffic accounts for the main source of pollutant emissions across Cheshire East, which is primarily responsible for all the AQMAs . As such, links with the Local Transport Plan are fundamental to both the improvement of local air quality and maintenance of air quality, across the borough.

Six indicators have been proposed which involve the monitoring of air pollutants and tracking progress of both concentrations across Cheshire East, as well as the number of wards within Cheshire East which have AQMAs. In addition, assessing new developments for their impact on air quality, as well as improving the public awareness of air quality are included in the indicator set. Using these metrics, the effectiveness of the Strategy can be evaluated throughout the lifetime of the document.

Table of Contents

1 Introduction

1.1 An Air Quality Strategy (AQS) is designed to be a high level document, which is aimed at informing policy and direction across a wide range of council services, to assist in ensuring air quality is considered in all relevant decisions to ensure air quality is improved where possible.

1.2 Local Air Quality Management (LAQM) - Local authorities have a duty under the Environment Act 1995 to review and assess local air quality within their areas against a set of health-based objectives for a number of specific air pollutants. These objectives are based on epidemiological and other evidence relating to their impacts on human health and are included in Appendix 1. An overview of the health effects of the pollutants for which air quality objectives have been included in regulations is set out in Appendix 2. When areas are found where pollutants are either exceeding or close to the objectives, in locations where there is relevant public exposure, local authorities are required to declare an Air Quality Management Area (AQMA) and to prepare an Air Quality Action Plan (AQAP). The purpose of the AQAP is to set out measures the local authority intends to take to reduce concentrations of pollutants in pursuit of the objectives. In addition, local authorities should promote opportunities to reduce pollutants in areas which are not exceeding the objective to ensure air quality is reduced as much as possible across the borough.

1.3 Cheshire East Council (CEC) has fulfilled its obligations to identify any areas where the objectives are exceed or there is a likelihood of exceeding the objectives and the current status of air quality in Cheshire East is summarised in Section 3. The AQMAs declared are all in discrete locations across Cheshire East, which are associated with road traffic emissions. This presents significant challenges in terms of implementing solutions at each of these different locations, rather than implementing a unified plan across one large AQMA. Many of the AQMAs in Cheshire East are single streets, often characterised by either congested traffic conditions or the volume of traffic.

1.4 In addition to the statutory obligations according to LAQM, local authorities are also encouraged by DEFRA to implement local Air Quality Strategies setting out how the Council intends to address air quality across all services and in all relevant decisions. Therefore, it is important this document is aligned with the review of a number of important plans and strategies, such as the Local Transport Plan (LTP), Local Development Strategy (LPS) and the Local Development Framework (LDF).

1.5 The timescale of this Strategy is aligned with the LTP, which is a 15 year strategy and is critical to the implementation of specific actions through the AQAP. The AQAP will be reviewed periodically and a prioritised implementation programme will be incorporated into the LTP.

1.6 Specific consideration has to given to local issues. For example, Cheshire East has an older age profile than the UK as a whole and this is set to continue to increase. Older members of the population are likely to be more susceptible to the health effects of air pollution, and as

such the importance of improving air quality both within the AQMAs and more generally should remain high on the local political agenda.

1.7 Coupled with a more susceptible population, Cheshire East also has higher than average car ownership and an equally high proportion of families with more than one vehicle. This results in the car being the predominant means of commuting, with only a small proportion of residents using public transport to commute to work. However, some of this could be due to the predominantly rural nature of the borough, which means public transport may not be an option for a significant proportion of the residents.

2 Policies

2.1 Policies and programmes for action at all levels of government, can impact on local efforts to improve air quality at specific localised hot spots or reduce concentrations more generally across an area. Some of the relevant policies are discussed below. Figure 2 shows some of the inputs to the Strategy (red boxes), policy areas which should be influenced by the Strategy (blue boxes) and the main outcomes following implementation of the Strategy.

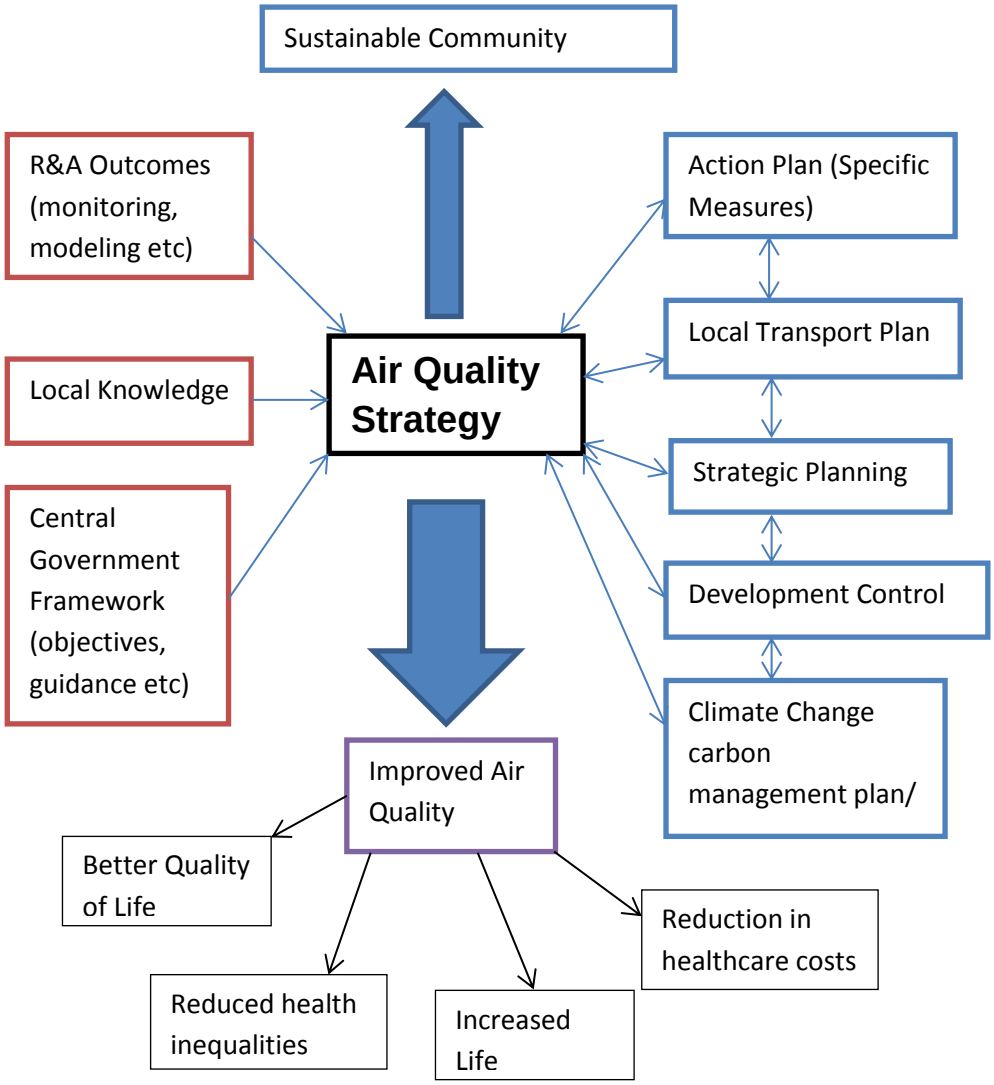

Figure 2: Inputs and outcomes of the Air Quality Strategy

2.2 Central Government Framework – this consists of objectives, legislations, guidance National Planning Framework and policies measures that will improve air quality. These central polices help the local authorities to manage and be responsible for the air quality in their respective areas.

2.3 **Local Develoment Framework (LDF) –** comprising a folder of documents for delivering the spatial planning strategy for the local authority. LDFs will include a Local Development Scheme (LDS), which is a statutory project management plan, setting out the timescales for the preparation and delivery of the LDF which sets out a timetable for Local Development Documents (LDDs). These can either be development plan documents or supplementary planning documents, which reflect national and regional policy, taking into account local needs and variations.

2.4 **The Cheshire East Local Plan (LP)** was adopted on 27 July 2017. It sets out the overall visions and planning strategy for development in the borough and contains planning policies to ensure that new development addresses the economic, environmental and social needs of the area. Some of the strategic priorities of the LP include; "Protecting and enhancing environmental quality of the built and natural environment" and "Reducing the need to travel, managing car use and promoting more sustainable modes of transport and improving the road network". These strategic priorities, aim at reducing the borough,s impact on climate change, promoting renewable energy, addressing local causes of pollution such as air pollution. The LP also addresses sustainable development, planning, transport and travel, travel plans and transport assessment (REF LP).

2.5 **Local Transport Plan (LTP)** - Road traffic is the main cause of air quality in Cheshire East. Transport. Transport accounts for 37 % of the total carbon dioxide (ref ltp) (a greenhouse gas that contributes to climate change) in Cheshire East. Therefore, the LTP provides one of the principal mechanisms for delivering an improvement to air quality across Cheshire East. It is a strategic plan for the development of transport within Cheshire East over the period 2011-2026, outlining how transport will contribute to and support the longer-term aspirations of the borough (REF LTP). Some of the LTP aim include; to minimise congestion and improve the overall efficiency of the highway network, improve accessibility to key services and reduce the need to travel, improve maintenance of the highway and transport network, support active and healthy lifestyles (REF LTP), all of which play a vital role in improving the air quality of Cheshire East.

3 Aims and Objectives of the Air Quality Strategy

3.1 The aim of the AQS is to provide a strategic framework to deliver local air quality improvements within Cheshire East. It can support the achievement of the air quality objectives and raise air quality as an issue for consideration within a wide range of local government and regional frameworks.

3.2 It is important to reduce, where possible, public exposure to certain pollutants as far as possible, even where levels are below the air quality objectives, for example, for fine particulate matter, where there are currently no known safe levels for exposure. By establishing a strategy framework which drives air quality considerations to the heart of Council policies, procedures and decisions. This will ensure Cheshire East is well placed to maintain good air quality and secure future improvements across the borough.

3.3 The objectives of developing and implementing an AQS are to:

- Ensure Cheshire East maintains the best possible air quality conditions across the borough.
- Improve air quality within existing AQMAs, and prevent further deterioration even in those areas where air quality is currently below the objective.
- Promote greater consistency across a range of policy areas for the achievement of improved local air quality, including Spatial Planning, Development Control, Transport Planning, Economic Development, Housing, Environmental Protection and Public Health. This will ensure air quality is addressed in a multi-disciplinary way across the different departments of the Council.
- Provide a link to wider initiatives across the Council, which could have an impact on air quality.
- Raise and maintain the profile of air quality and ensure it remains high on political agendas.
- Highlight, and educate stakeholders about, the link between air quality and the risks to human health as well as to the wider local environment and biodiversity;
- Raise the profile of air quality amongst the local communities across Cheshire East.
- Encourage greater co-operation and collaboration with neighbouring local authorities, local business, industry and residents.
- Provide the first point of contact and source of information relating to local air quality.

4 Air Quality across Cheshire East

4.1 The national Air Quality Strategy provides the policy framework for air quality management and assessment in the UK. It sets out air quality objectives for key air pollutants, which are designed to protect human health and the environment. It also sets out how the different sectors, industry, transport and local government, can contribute to achieving the air quality objectives. Local authorities play an essential role in this context. The national AQS also sets out the Local Air Quality Management function, which requires all local authorities to review and assessment air quality annually. The purpose being to identify those areas in the borough, which are either exceeding or likely to exceed the objectives. If any areas of concern are identified the Council must declare an AQMA and prepare an AQAP, which identifies appropriate measures that will be introduced to reduce the level of pollutants as much as possible.

4.2 Air quality across Cheshire East is generally good, although there are a number of AQMAs across the borough, which have all been declared for levels of nitrogen dioxide which relates to traffic levels and congestion. Details of the various AQMAs can be found on the Council's website which www.cheshireeast.gov.uk .

4.3 As all of the air quality problems relate to traffic volumes and congestion it is vital that the AQS is integrated within the LTP as this will assist many of the action plan measures being implemented.

5 Strategy Commitments

5.1 In order to fulfil the objectives of this Strategy and ensure that air quality improvements are achieved, both in locations which currently exceed the objectives, and more generally across the local authority area, Cheshire East Council has identified the following commitments. These commitments reflect the need to achieve the national air quality objectives, whilst working to improve general air quality conditions throughout the local authority area.

Overall

5.2 Cheshire East Council will engage in all practicable opportunities to improve air quality through the transport and spatial planning processes and through wider policy initiatives, such as climate change and health improvement programmes.

5.3 Cheshire East Council will work with the Government and its agencies to contribute, at a local level, to the delivery of both this strategy and the national Air Quality Strategy. This will primarily be through the Local Air Quality Management regime as set out in this strategy. Through this commitment, the Council will work towards achieving the national air quality objectives and will:

- Strive to ensure that areas currently below the air quality objectives continue to do so and where possible will seek to further improve air quality in these areas;
- Continue to monitor local air quality across the borough

  Produce Annual Status Report published on the air quality website

  make air quality monitoring data available on the air quality website

  review monitoring site to make sure the are relevant to exposure
- Continue to support effective cross-departmental collaboration through the Council's Air Quality Steering Group. The terms of reference for this group are to discuss the wider issues of LAQM, review the AQAP and ensure that air quality is effectively considered within all relevant policy areas. Through more effective cross-departmental collaboration, Cheshire East will strive to ensure that Council actions do not have a detrimental effect on air quality;
- Participate in local and regional networks in order to pursue improved air quality and the consistent implementation of Local Air Quality Management both locally and nationally.
- To regularly review the AQAP to ensure the measures will achieve relevant improvements in air quality;
- Reduce pollutant emissions (including greenhouse gases) from Cheshire East Council's own estates and vehicle fleets.

Spatial Planning and Air Quality

- Ensure that air quality is considered as a material planning consideration within the Development Control process. To assist with this process the Council implement relevant Best Practice Guides and Supplementary Planning Documentation to assist developers in understanding what is expected to ensure air quality is appropriately considered.
- Require a suitable Environmental Impact Assessment is undertaken to accurately assess the impact proposed developments will have on local air quality and guidance on when this will be appropriate will be set out in the supplementary Planning Document and Best Practice Guidance;
- Where deteriorations in air quality are predicted due to any developments suitable mitigation measure will be applied;
- Ensure air quality is properly considered within all relevant planning policy processes;
- Where appropriate developers should contribute to meeting the aims of the various actions set out in the Air Quality Action Plan in a manner proportionate with residual emissions. Examples of this could be through a formula based on proxy criteria such as the size of the development or car parking spaces.

Transport and Air Quality

- Road transportation is the primary source of air pollutant as such appropriate measures must be applied to significantly reduce emissions due to road traffic.
- Ensure that systems are put in place to make sure that vehicles comply with emission standards.
- Ensure that vehicle idling is tackled and managed via antiidling campaigns
- Ensure this strategy is incorporated in to the Local Transport Plan and there is a consistent approach, which reduces the need to travel and reliance on use of private vehicles and more specifically reduce the use of vehicle for short journeys.
- Work with the relevant highways authorities to improve air quality within AQMAs, whilst ensuring air quality does not deteriorate in other areas across the trunk road network.
- When the opportunity arises work with freight operators and organisations to establish appropriate freight routes, delivery routines and driver practices to minimise congestion and pollution.
- Ensure there is a regular exchange of information between transport planners and air quality professionals, relating to air quality information, traffic information and any proposed new roads.

- Support work to reduce emissions from the Council's vehicle fleet including any contractors.
- Promote opportunities for active travel (i.e. walking and cycling).

Climate Change and Energy Management

- Work to support climate change initiatives ongoing in Cheshire East.
- Prioritise climate change initiatives and actions, which are mutually beneficial to air quality
- Support the promotion of energy efficiency measures across the borough including the Council's estate.

Health and Education

- Increase public understanding of air quality and its health effect.
- Working with Public Health to inveatigate links between poor air quality (i.e. in AQMAs) and health as such developing Cheshire East Health Impact Assessment.
- Keep the public informed of work relating to Local Air Quality Management, primarily through the Council's website and any other suitable media
- Encourage the local community to become involved in improving air quality and take actions to reduce their contributions to local air quality and carbon dioxide emissions.
- Using interactive packages to work with schools to raise awareness.

Commercial and Domestic Sources

- Work closely with the Environment Agency where any 'Part A1' installation is likely to detrimentally affect air quality.
- Ensure all 'Part A2' installations, which are regulated by the Council are compliant with the conditions of their Permit.
- Provide advice on the control of air polluting emissions ensure that all relevant legislation is enforced for the control of emissions from industrial sources.

Monitoring the Effectiveness of this Strategy

- Robustly monitor the progress of the Council's actions in implementing this Strategy;
- Review the AQS as and when required.

6 Monitoring the Success of the Strategy

6.1 The effectiveness of this Strategy will be monitored periodically to ensure the aims and objectives are being progressed. Indicators can be used to monitor the effectiveness of a strategy, and these should be clear and transparent.

6.2 Actions to improve air quality need to be implemented by a range of internal and external stakeholders. Communication and collaboration is the key to ensuring measures arising from this Strategy are implemented. To assist with this input from the stakeholders identified in this report will be required to ensure implementation of this Strategy remains an active and on-going process. Specific actions will be implemented through the Air Quality Action Plan, which in itself will be aligned with the LTP Delivery Plans. Any actions implemented will undergo further scrutiny in terms of cost effectiveness analysis and evaluation of their impact on other policy areas, which is required as part of the action planning process.

6.3 There are a number of possible indicators to use in monitoring the effectiveness of the Strategy, which will provide direct evidence for improving air quality, both within and outside of AQMAs. In addition, other policy actions, such as assessing the impacts of new developments (roads, residential, commercial, industrial etc.) and increasing public awareness have been included.

Air Quality Monitoring

6.4 Cheshire East has a network of nitrogen dioxide monitoring sites, which will be used to directly report on trends in air pollution concentrations. This measure will provide a long term indication of overall air quality across Cheshire East and will help to identify areas which maybe exceeding the objectives

Future AQMAs declared

6.5 An indicator of the number of AQMAs is also included in the strategy. This will keep track not only of improvements in areas where issues have been identified, but will also track any deteriorations in areas where air quality is currently acceptable.

Assessing New developments

6.6 In order to ensure that new developments do not cause significant worsening of air quality, there is an indicator to ensure all relevant new developments (roads, residential, commercial, industrial etc.) have an air quality impact assessment submitted as part of the planning application stage.

Raising public awareness

6.7 Public awareness is important to ensuring individuals and businesses have the relevant information to be able to make informed decisions regarding the impact of their actions on air

quality. As such, air quality will be promoted to schools, resident groups, Town/Parish Council through awareness days and attending meetings to ensure the right information is made available.

Table 5.1. Indicators for inclusion in the Strategy.

	Description	**Monitoring Frequency**	**Target**
1	Monitoring air quality	Annually within R&A process	Achievement of the UK air quality objectives
2	Number of AQMAs	Annually	Reduction of AQMAs
3	Assessment of Road Schemes	Annually	Undertake air quality assessments for 100% of relevant road schemes
4	Assessment of planning applications	Annually	100% of relevant planning applications accompanied by Environmental Impact Assessments covering air quality
5	Assessment of industrial processes	Annually	100% of Applications for Permits in accordance with the Pollution Prevention & Control Act 1999 and Environmental Permitting (England and Wales) Regulations 2010 are assessed for Air Quality implications
6	Promotion of Air Quality Issues to schools and other relevant groups	Annually	Attend five school education / residents group/ Town or Parish Council meetings

7 Conclusions

7.1 The continual development of this Strategy for Cheshire East signifies recognition that improving local air quality is the responsibility of a wide range of stakeholders and professions. Although Environmental Protection professionals are tasked with the monitoring and assessment of air quality, the actions and measures necessary to improve air quality remains with a wider range of professionals and stakeholders. These actions will be coordinated and prioritised by Environmental Protection professionals who are also tasked with reporting on the effects of the implemented measures to the Government.

7.2 Although future improvements in local air quality are predicted as a result of technological advances in vehicle engines and improved fuels, there is currently some doubt as to their efficacy. Therefore, there is still a need to reduce the increasing reliance on private motor vehicle use and to provide access to improved public transport services or other sustainable means of travel. Traffic accounts for the main source of pollutant emissions across Cheshire East and is responsible for all the AQMAs declared. As such, the links with the Council's LTP is fundamental to improving air quality across the borough.

7.3 Through the implementation of this strategy, emissions of pollutants across borough should reduce, resulting in improvements in air quality, which will give rise to a number of benefits including improvements in the health of the population, improvements to the environment and reduced healthcare costs.

8 Glossary

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
CEC	Cheshire East Council
CO_2	Carbon dioxide
LDF	Local Development Framework
LTP	Local Transport Plan
NO_2	Nitrogen dioxide
NOx	Nitrogen oxides
PM_{10}	Particulate Matter of less than 10 µm in diameter

Appendix 1 Air Quality Objectives

A1.1 The table below presents the air quality objectives relevant for Local Air Quality Management.

Table A1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	5.00 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu g/m^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu g/m^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu g/m^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Appendix 2 Health Effects of Air Pollutants

A2.1 The table below summarises the main health and some environmental impacts of high concentrations of the national Air Quality Strategy pollutants.

Specific pollutant	**Potential effect on health and the environment**
Particulate Matter (PM_{10} and $PM_{2.5}$)	Both short-term and long-term exposure to ambient levels of PM are consistently associated with respiratory and cardiovascular illness and mortality as well as other ill-health effects. The associations are believed to be causal. It is not currently possible to discern a threshold concentration below which there are no effects on the whole population's health. PM_{10} refers to the mass in micrograms per cubic metre of particles with a diameter equal to or less than 10 micrometres, that are likely to be inhaled into the thoracic region of the respiratory tract. Recent reviews by the World Health Organisation (WHO) and Committee on the Medical Effects of Air Pollutants (COMEAP) have suggested exposure to a fine particles ($PM_{2.5}$), which typically make up around two thirds of PM_{10} emissions and concentrations) give a stronger association with the observed ill-health effects, but also warn that there is evidence that the coarse fraction between (PM_{10}-$PM_{2.5}$) also has some effects on health.
Nitrogen oxides (NO_x including NO_2)	Nitrogen dioxide (NO_2) is associated with adverse effects on human health. At high levels, NO_2 causes inflammation of the airways. Long-term exposure may affect lung function and respiratory symptoms. NO_2 also enhances the response to allergens in sensitive individuals. High levels of NO_X can have an adverse effect on vegetation, including leaf or needle damage and reduced growth. Deposition of pollutants derived from NO_X emissions contribute to acidification and/or eutrophication of sensitive habitats leading to loss of biodiversity, often at locations far removed from the original emissions. NO_X also contributes to the formation of secondary particles and ground level ozone, both of which are associated with ill-health effects.
Sulphur dioxide (SO_2)	Causes constriction of the airways of the lung. This effect is particularly likely to occur in people suffering from asthma and chronic lung disease. Precursor to secondary PM and therefore contributes to the ill-health effects caused by PM_{10} and $PM_{2.5}$. Potential damage to ecosystems at high levels, including degradation of chlorophyll, reduced photosynthesis, raised respiration rates and changes in protein metabolism. Deposition of pollution derived from SO_2 emissions contribute to acidification of soils and waters and subsequent loss of biodiversity, often at locations far removed from the original emission.
Benzene	Benzene is a recognised human carcinogen which attacks the genetic material and, as such, no absolutely safe level can be specified in ambient air. Studies in workers exposed to high levels have shown an excessive risk of leukaemia.
1,3-butadiene	1,3-butadiene is also a recognised genotoxic human carcinogen, as such, no absolutely safe level can be specified in ambient air. The health effect of most concern is the induction of cancer of the lymphoid system and blood–forming tissues, lymphoma and leukaemia.
Lead (Pb)	Exposure to high levels in air may result in toxic biochemical effects which have adverse effects on the kidneys, gastrointestinal tract, the joints and reproductive systems, and acute or, chronic damage to the nervous system. Affects intellectual development in young children.

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Working for a brighter future together

Environment and Regeneration Overview and Scrutiny

Date of Meeting: 17 September 2018

Report Title: Cheshire East Low Emission Strategy

Portfolio Holder: Councillor Ainsley Arnold - Portfolio Holder for Housing, Planning and Regeneration

Senior Officer: Frank Jordan – Executive Director Place and Acting Deputy Chief Executive

1. Report Summary

1.1. To make the Committee aware of the Council's Draft Low Emission Strategy 2018 and to provide comments as appropriate.

2. Recommendation

2.1. To note the report and to provide feedback to the Portfolio Holder.

3. Reasons for Recommendation

3.1. To ensure Members are kept up to date with the Council's Low Emission Strategy.

4. Other Options Considered

4.1. Not applicable.

5. Background

5.1 Cheshire East Council commissioned Amec Foster Wheeler Environment & Infrastructure UK Limited (Amec Foster Wheeler) to develop a Low Emission Strategy (LES) for the Borough. A Low Emission Strategy is a package of policies & measures focused on reducing emissions from road vehicles across the Borough, supporting more sustainable modes of transport and mitigating the transport impacts of development with the aim of improving the health of residents. This will help with the implementation

of the Air Quality Action Plan as it is another tool to assist with improving air quality.

5.2 Air quality across Cheshire East is generally good, although there are seventeen Air Quality Management Areas (AQMAs) in the Borough, which have been declared as a result of exceedances of the annual mean nitrogen dioxide (NO_2) Air Quality Objective (AQO) of 40µgm^3. It should also be noted that the final report was compiled using the corrected air quality data. There are also areas under investigation for potential exceedance of the short term hourly AQO of 200µgm^3 (not to be exceeded more than 18 times per year). The annual mean AQO is exceeded at several locations in the Borough, so an overarching strategy for reducing emissions will help to improve air quality concentrations and move towards compliance with the relevant objectives.

5.3 If emissions from vehicles do not improve, projected increases in vehicle numbers resulting from planned developments and housing growth will result in larger exceedances of the annual mean AQO for NO_2 in some areas. Defra vehicle emission factors have predicted yearly decreases based on the logic that older, more polluting vehicles would fall out of circulation and newer cleaner vehicles will repopulate the UK vehicle fleet. This assumption relies on the progressively tighter Euro emission standards all registered UK vehicles must meet.

5.4 The Council aims to develop a LES with a broad consensus amongst stakeholders to ensure their support and help deliver a strategy that is workable. The LES is based upon the Avoid; Shift; Improve (ASI) approach for the reduction of emissions and by association NO_2 concentrations;

- Avoid: reduce vehicle kilometres driven;
- Shift: change mode from cars to public transport, cycling and walking; and
- Improve: improve the vehicle technology to reduce emissions.

5.5 The LES considers the air quality management issues in the borough and the policy and legislative context. Existing guidance, policies and initiatives that have been implemented to improve air quality have been considered so that the LES can build upon these and also the earlier case studies for Crewe and Congleton. These case studies considered the maximum potential impact on air quality of policies that influenced the engine class composition of the traffic fleet, fuel choices and incentivised the widespread use of Low Emission Vehicles (LEVs). It was found that provision of infrastructure to support the widespread uptake of LEVs would have the

greatest benefit, followed by restrictions in the use of diesel cars and then imposition of development emission standards.

5.6 The recommendations for policies to be implemented are divided into three sections, policies which can be applied at the planning stage of new developments (and may also be appropriate for existing areas); policies that relate to the movement of freight; and policies that will help to reduce emissions during the construction of new developments.

6. Implications of the Recommendations

6.1. Legal Implications

6.1.1. No direct legal implications arising from this report.

6.2. Finance Implications

6.2.1. The project was financed by grant funding from DEFRA and as such there are no financial implications for the Council.

6.3. Policy Implications

6.3.1. No direct Policy implications arising from this report.

6.4. Equality Implications

6.4.1. No direct equality implications arising from this report.

6.5. Human Resources Implications

6.5.1. No direct human resources implications arising from this report.

6.6. Risk Management Implications

6.6.1. No direct risk management implications arising from this report.

6.7. Rural Communities Implications

6.7.1. There are no direct implications for rural communities.

6.8. Implications for Children & Young People

6.8.1. There are no direct implications for children and young people.

6.9. Public Health Implications

6.9.1. Air pollution damages lives with harmful effects on human health, the economy and the environment. It is the largest environmental risk to the public's health, contributing to cardiovascular disease, lung cancer and

other respiratory diseases. It increases the chances of hospital admissions, visits to Emergency Departments and respiratory and cardiovascular symptoms, which interfere with everyday life. In the most severe cases it increases the risk of death, especially for people who are already vulnerable. Poor air quality affects everyone. It can have long term impacts on all and immediate effects on vulnerable people, with a disproportionate impact on the young and old, the sick and the poor.

6.9.2. There is now an extensive body of evidence that long-term exposure to everyday air pollutants over several years contributes to the development of cardiovascular disease (CVD), lung cancer, and respiratory disease. PM is inhaled into the lungs and ultrafine PM0.1 is thought to pass into the blood causing many adverse outcomes including systemic inflammation. Air pollution is strongly associated with all-cause mortality statistics. The all-cause mortality statistic captured in PHOF indicator 3.01 ranks air pollution in the top 5-7 causes of mortality in polluted areas, ahead of many other PHOF preventable mortality indicators like road deaths, excess winter deaths or communicable diseases. New evidence also points to other damaging effects. There is also emerging evidence of links between long term PM2.5 exposure and the health of the central nervous system, the progression of Alzheimer's and Parkinson's diseases, developmental outcomes in children, and such reproductive health outcomes as low birth weight, as well as other chronic conditions such as diabetes.

6.9.3. The health effects of air pollution are distributed unequally across the population, with the heaviest burden borne by those with greatest vulnerability and/or exposure. The elderly, children and those with cardiovascular and/or respiratory disease are at greater risk from the health effects of air pollution. Those who spend more time in highly polluted locations will be affected more. Since air pollution levels are typically as high within vehicles as just outside, this is likely to include not only those who live and work near busy roads, but also those who drive for a living.

6.9.4. Deprived communities are more likely to be situated near polluted busy roads, and are more likely to experience adverse health impacts. Analysis of environmental quality and social deprivation carried out for the Environment Agency (2003) looked at the social distribution of the wards with the highest pollutant concentrations, and concluded that

more than half of the most exposed 5% of the population (2.5 million people) were resident in the 20% most deprived wards.

6.9.5. Action to improve air quality and reduce emissions in Cheshire East is therefore to be welcomed for the opportunity to improve Public Health.

7. Ward Members Affected

7.1. Borough wide.

8. Access to Information

8.1. The background papers relating to this report are in Appendix 1.

9. Contact Information

9.1. Any questions relating to this report should be directed to the following officer:

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Cheshire East Council

Low Emission Strategy

March 2018

Amec Foster Wheeler Environment
& Infrastructure UK Limited

Report for

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Management systems

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Document revisions

No.	Details	Date
1	Draft	07/10/2015
2	Draft	25/02/2016
3	Draft	06/06/2016
4	Draft	21/06/2017
5	Final	20/03/2018

Executive summary

Cheshire East Council (CEC) has commissioned Amec Foster Wheeler Environment & Infrastructure UK Limited (Amec Foster Wheeler) to develop a Low Emissions Strategy (LES) for the borough. This report summarises the work undertaken during the feasibility and case study stages of the project and presents the final LES for Cheshire East.

Cheshire East is the third largest unitary authority in the North West with a population of approximately 375,000 and covering an area of 1,116km^2. The area is predominately rural in nature with several market towns. The area is relatively affluent and car ownership is high, with 40% of households having two cars or more, against a UK average of 29%. Air quality across Cheshire East is generally good, although there are a number of Air Quality Management Areas (AQMAs) in the Borough, which have been declared as a result of exceedances of the annual mean nitrogen dioxide (NO_2) Air Quality Objective (AQO) of 40µgm^{-3}. There are also areas under investigation for potential exceedance of the short term hourly AQO of 200µgm^{-3} (not to be exceeded more than 18 times per year). The annual mean AQO is exceeded at several locations in the Borough, so an overarching strategy for reducing emissions will help to achieve compliance.

Furthermore, the population of the Borough is forecast to increase by around 58,100 by 2030. The Council's Local Plan identifies sites for housing, employment, commercial and mixed use. This development in the Borough is likely to put future compliance at risk, therefore, integration of a LES into the development planning process will be an effective mechanism to achieve results.

If emissions from vehicles do not improve, projected increases in vehicle numbers resulting from the planned developments and housing growth in Cheshire East will result in larger exceedances of the annual mean AQO for NO_2. Even without the expected growth in traffic, modelling indicates that it is unlikely that the AQO will be achieved across Cheshire East until beyond 2020.

Defra vehicle emission factors have predicted yearly decreases based on the logic that older, more polluting vehicles would fall out of circulation and newer cleaner vehicles will repopulate the UK vehicle fleet. This assumption relies on the progressively tighter Euro emission standards all registered UK vehicles must meet. However, a disparity between predicted emissions and emissions in reality has been found, particularly for diesel cars. Real-world emissions data collected under driving conditions have found that modern diesel cars have not performed as well as expected. There is still uncertainty regarding whether Defra emission factors published in 2014, to address the disparity, reflect the on-road performance of modern vehicles.

CEC aims to develop a LES with a broad consensus amongst stakeholders to ensure their support and help deliver a strategy that is workable. The LES will be based upon the Avoid; Shift; Improve (ASI) approach for the reduction of emissions and therefore NO_2 concentrations:

- Avoid: reduce vehicle kilometres driven;
- Shift: change mode from cars to public transport, cycling and walking; and
- Improve: improve the vehicle technology to reduce emissions.

This report considers the air quality management issues in the borough, the policy and legislative context of the LES. Existing guidance, policies and initiatives that have been implemented to improve air quality are considered so that the CEC LES can build upon these. This LES also builds upon the earlier case studies for Crewe and Congleton. These case studies considered the maximum potential impact on air quality of policies that influenced the engine class composition of the traffic fleet, fuel choices and incentivised the widespread use of Low Emission Vehicles (LEVs). It was found that provision of infrastructure to support the widespread uptake of LEVs would have the greatest benefit, followed by restrictions in the use of diesel cars and then imposition of development emission standards.

The recommendations for policies to be implemented by CEC are divided into three sections: policies which can be applied at the planning stage of new developments (and may also be appropriate for existing areas); policies that relate to the movement of freight; and policies that will help to reduce emissions during the construction of new developments. The policies are summarised in the table below.

Section	Number	Policy Area	Policy
Planning Policies	1	Transport	To minimise demand for travel by private motor vehicles and encourage transport by low emission modes and improve health and wellbeing, development proposals should incorporate high quality facilities for pedestrians, cyclists and public transport.
	2	Parking	CEC parking standards will be strictly enforced. This means that parking spaces in Principal towns and Key Service Centres will be restricted. This will help to reduce the traffic impacts of new developments as far as possible. CEC will also consider the feasibility of tightening parking standards in areas where there are air quality issues. The parking strategy and infrastructure of new developments will be used to incentivise the uptake of LEVs.
	3	LEV Infrastructure	CEC will seek to work with private hire and other commercial operators and public charging networks to deliver a reliable, well located charging network. CEC will investigate the feasibility of incentivised LEV use through various mechanisms.
	4	Traffic	All local roads in new development areas should have a speed limit of 20mph in order to reduce emissions from motorised vehicle traffic and encourage walking and cycling by improving safety and making streets more pleasant and liveable.
	5	Clean Air Zone	CEC will investigate the feasibility of declaring Clean Air Zones (CAZ), and seek to ensure vehicles entering the CAZ are Euro VI or better, diesel vans or light commercial vehicles that are Euro VI or better and petrol vans or light commercial vehicles that are Euro IV or better. CEC will consider using CAZ's to implement local measures to improve air quality.
	6	Energy	To reduce emissions from buildings, the boilers, CHP and biomass systems proposed in individual developments should meet the tightest emissions standards detailed in Institute of Air Quality Management (IAQM) guidance.
	7	Master planning	Developments should not create building configuration that inhibits effective pollution dispersion and should provide green space and infrastructure to help reduce pollutant concentrations and encourage walking and cycling.
	8	Exposure	Development proposals shall not increase the area of exceedance of the AQO for NO_2. Where new developments are introduced into area where the AQO is exceeded, developments shall be designed to mitigate against exposure to poor air quality.
	9	Development Management	CEC will develop an SPD to regulate emissions and mitigate impacts of developments based on their size and the type of development. It will provide advice on how to classify the development; assess and quantify the impact on local air quality; and determine the level of mitigation required.
	10	Assessment	In accordance with the EPUK/IAQM guidance, developers will be required to produce an air quality assessment which should be submitted with the planning application to demonstrate that the appropriate standards have been adhered to.
	11	Damage Cost Calculations	Where significant impacts from the operational phase of a proposed development are predicted in the air quality assessment, CEC may request contributions (via a section 106 agreement or through Community Infrastructure Levy (CIL)) from developers to support projects to improve air quality and mitigate the impacts. Contributions / spend will be calculated through the Damage Cost approach, with the procedure detailed in a Supplementary Planning Document.
Freight Policies	1	Freight Quality Partnership (FQP)	To help in the development of servicing and delivery plans which highlight the benefits of transporting freight by rail, CEC will investigate the feasibility of a Freight Quality Partnership (FQP). This will include a Zero Emissions Network (ZEN) to help local businesses reduce the emissions associated with their activities.
	2	Freight Consolidation	To minimise the impact of emissions from vehicles delivering and collecting freight, for major developments, CEC will encourage the establishment of freight consolidation centres that will facilitate the use of zero emission vehicles.

Section	Number	Policy Area	Policy
	3	Fleet Operator Recognition Scheme (FORS)	Through the FQP, CEC will investigate the feasibility of incentivising operators of freight vehicles operating in the area to attain the Gold FORS accreditation where that they have made proven efforts to reduce emissions.
	4	Freight, Delivery and Servicing	To minimise emissions during the demolition and construction phase, development proposals should be planned so that emissions are reduced as far as possible.
Construction Policies	1	Control of Dust	Developers and contractors should follow the guidance set out in the IAQM guidance when drafting their construction plans and measures to minimise air pollution recommended in this document should be implemented.
	2	Non-Road Mobile Machinery	Wherever possible, renewable, mains or battery powered plant items should be used on construction sites. NRMM of net power between 37kW and 560kW used on any site will be required to meet Stage II of the 2012/46/EU Non-Road Mobile Machinery Directive as a minimum.
	3	Assessment	An assessment of the impact on air quality of the development during the construction phase shall be carried out in order to inform detailed mitigation methods in line with the IAQM 2014 guidance.
	4	Monitoring	All demolition and construction sites should be monitored for the generation of air pollution. PM_{10} monitoring should be carried out at medium and high risk sites.

Abbreviations

Abbreviation	Definition
μgm^{-3}	Micrograms per cubic metre
ASI	Avoid-Shift-Improve approach
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
CAZ	Clean Air Zone
CHP	Combined Heat and Power
Defra	Department for the Environment, Food and Rural Affairs
EA	Environment Agency
EC	European Commission
EU	European Union
EV	Electric Vehicles
FCC	Freight Consolidation Centres
FORS	Fleet Operator Recognition Scheme
FQP	Freight Quality Partnership
GLA	Greater London Authority
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
IGCB	Interdepartmental Group on Costs and Benefits
LAQM	Local Air Quality Management
LDV	Light Duty Vehicle
LES	Low Emission Strategy
LEV	Low Emission Vehicle
LEZ	Low Emission Zone
LV	Limit value
MRF	Materials Recycling Facilities
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance

NRMM	Non-Road Mobile Machinery
OLEV	Office for Low Emission Vehicles
PM_{10}	Particulate Matter with an equivalent aerodynamic diameter of ten micrometers (10 µm) or less
$PM_{2.5}$	Particulate Matter with an equivalent aerodynamic diameter of two and a half micrometers (2.5 µm) or less
SPD/SPG	Supplementary Planning Documents/Guidance
TfL	Transport for London
ULEV	Ultra Low Emission Vehicle
ULEZ	Ultra-low Emission Zone
USA	Updating and Screening Assessment
ZEN	Zero Emission Network

Contents

1. Introduction

Cheshire East Council (CEC) has commissioned Amec Foster Wheeler Environment & Infrastructure UK Limited (Amec Foster Wheeler) to develop a Low Emissions Strategy (LES) for the borough. This report summarises the work undertaken during the feasibility and case study stages of the project and presents the final LES for Cheshire East.

Cheshire East is the third largest unitary authority in the North West with a population of approximately 375,000 and covering an area of 1,116km^2. The area is predominately rural in nature with several market towns. The area is relatively affluent and car ownership is high, with 40% of households having two cars or more, against a UK average of 29%. The quality of the air in Cheshire East is generally good, but the Local Air Quality Management (LAQM) process has identified several locations where the health base annual mean Air Quality Objective (AQO) for nitrogen dioxide (NO_2) is exceeded. As a result, several separate Air Quality Management Areas (AQMAs) have been declared and Air Quality Action Plans (AQAPs) produced with the aim of reducing NO_2 concentrations in these AQMAs. There are also areas of the Borough where there is a possibility that the short term (hourly) objective for NO_2.

Following the Cheshire East Local Plan Strategy examination, the Inspector provided the recommendation that over 36,000 new homes should be constructed in the Borough by 2030. In addition to this, it was recommended that 31,000 jobs should be created in the longer term. These policies are forecast to see the Borough's population grow by over 58,100 people.

In view of the existing air quality issues in the borough and the significant level of growth forecast, CEC wish to produce an overarching LES to ensure that current emissions are reduced as far as possible and emissions associated with new development are minimised. This is necessary to ensure that the exposure to NO_2 concentrations above AQOs for both present and future occupants of Cheshire East if not avoidable is limited to the shortest time possible and residents are exposed to as low concentrations of Particulate Matter (PM) from construction dust as possible. This LES provides a package of measures selected on the basis of the earlier research and studies undertaken, and current best practice in emissions management.

2. Background

2.1 Air quality in Cheshire East

The current situation with regards to air quality in the Borough is detailed fully in the LAQM reports produced by CEC and the Cheshire East Low Emission Strategy Feasibility Study Phase 1 produced on behalf of CEC[1]. Modelling indicated that even without the expected growth in traffic, it is unlikely that the AQO objective will be achieved across the Borough without further intervention.

In summary, air quality across Cheshire East is generally good, although the LAQM process has identified locations where the annual mean NO_2 AQO of 40µgm^{-3} is not achieved. As a result, 17 AQMAs have been declared. The locations which have been declared as AQMAs are listed below:

- West Road, Congleton: a section of the road between the Wagon and Horses gyratory and the fire station roundabout;
- A34/A54 Congleton: a stretch of the A34 through Congleton incorporating Clayton Bypass, Rood Lane and Rood Hill towards the town centre roundabout;
- Lower Heath, Congleton: a short stretch of the A34 at Lower Heath;
- A5022/A534 Sandbach: a number of properties around the junction of the A534 and the A5022 in Sandbach;
- Nantwich Road, Crewe: a stretch of the A534 through Crewe;
- Wistaston Road, Crewe: a section of the street through Crewe;
- Earle Street, Crewe: a section of the street through Crewe;
- Hospital Street, Nantwich: a stretch of the A534 through Nantwich;
- A556 Chester Road, Mere: an area along the length of the A556 Chester Road between the roundabout with the A56 Lymm Road and Junction 19 of the M6 to the south:
- A6 Market Street, Disley: an area along the A6, Disley from the crossroads with Buxton Old Road in the west to the junction with Redhouse Lane in the east;
- A523 London Road, Macclesfield: an area from the Mill Lane/ Silk Road junction in the north to approximately 65m south of the London Road Terrace junction in the south; and
- A50 Manchester Road, Knutsford: five properties along the A50 at the Windsor Way junction.
- Chester Road, Middlewich: An area of Chester Road in Middlewich;
- Middlewich Road, Sandbach: A small stretch of Middlewich Road through Sandbach;
- Broken Cross, Macclesfield: An area around the Broken Cross / Chelford Road roundabout;
- Hibel Road, Macclesfield: Stretch of Hibel Road close to the Silk Road roundabout; and
- Park Lane, Macclesfield: A stretch of Park Lane, Macclesfield.

All AQMAs have been declared as a result of breaches of the annual mean AQO for NO_2. All of the AQMAs result from pollutant emissions from road traffic, linked to local areas of congestion or high traffic volumes. The AQMAs declared in Cheshire East are shown in Figure 2-1.

[1] AMEC Environment & Infrastructure UK Limited (2014) Cheshire East Low Emission Strategy Feasibility Study Phase 1: Inception

For the purpose of this report, the reductions in Road-NOx to achieve compliance with the AQO were updated with 2016 monitoring concentrations[2] and calculated at each sites were the AQO were exceeded. Results are presented in Table 2.1.

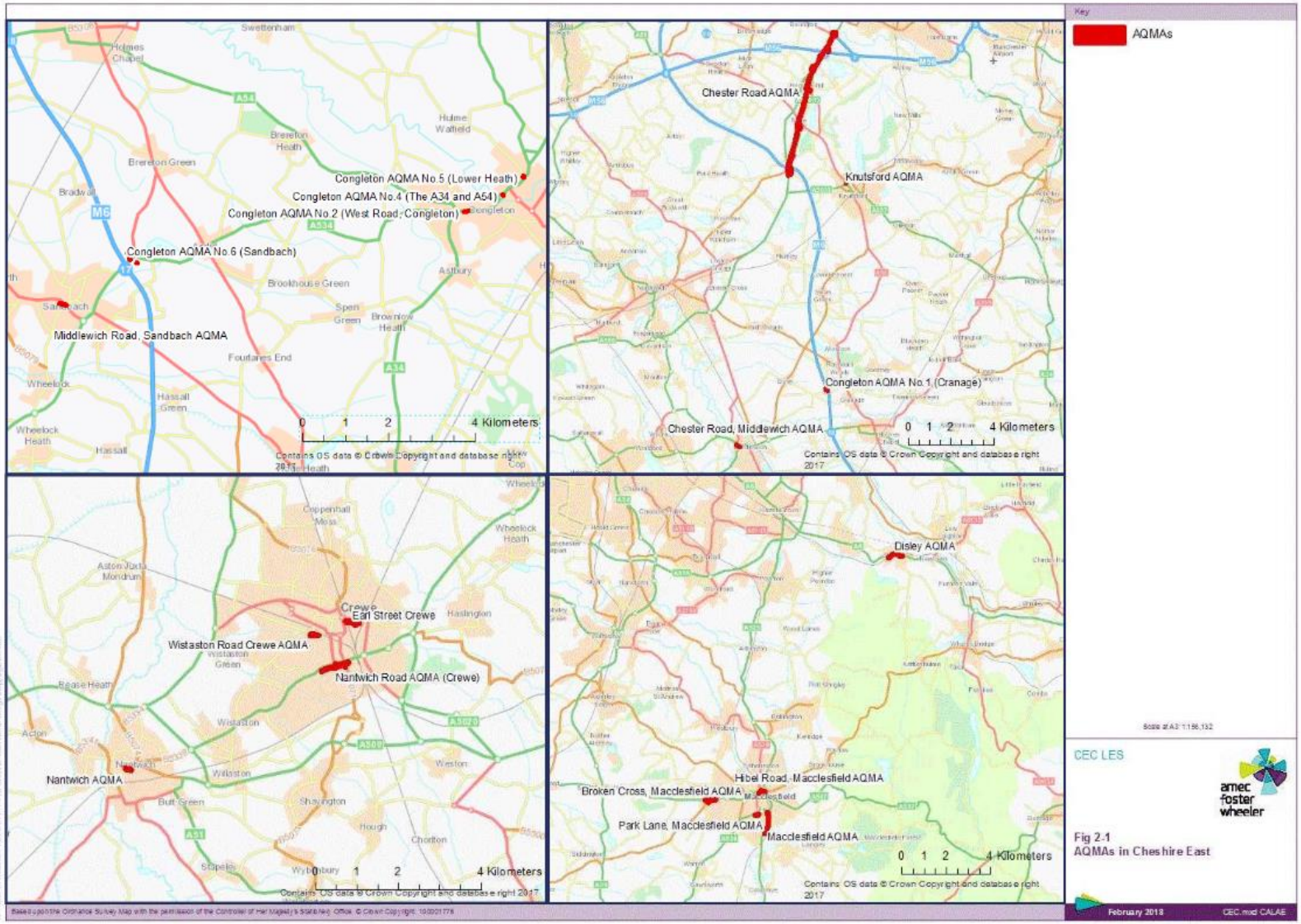
Table 2.1 Road NOx reductions required to achieve AQO

ID	Type	In AQMA	AQMA	2016 monitored NO_2 (μgm^{-3})	2016 Background NOx[3] (μgm^{-3})	Road NOx (μgm^{-3})	Required Road NOx reduction (μgm^{-3})	Required Road NOx reduction (%)
CE1	Roadside	Y	Park Lane, Macclesfield AQMA	42.82	16.58	64.87	6.83	10.53%
CE10	Roadside	Y	Macclesfield AQMA	49.74	15.80	83.68	24.48	29.25%
CE16	Roadside	Y	Disley AQMA	58.66	15.45	108.58	48.96	45.09%
CE47	Roadside	N	N/a	41.70	20.32	56.57	4.04	7.14%
CE48	Roadside	Y	Chester Road AQMA	50.20	18.75	80.13	25.43	31.74%
CE51	Roadside	Y	Chester Road AQMA	48.72	16.69	79.40	21.73	27.37%
CE54	Roadside	Y	Chester Road AQMA	40.94	30.17	41.16	2.16	5.25%
CE55	Roadside	Y	Chester Road AQMA	52.98	30.17	70.62	31.62	44.77%
CE57	Roadside	Y	Chester Road AQMA	45.09	20.72	64.12	12.29	19.17%
CE61	Roadside	Y	Chester Road AQMA	41.84	18.80	58.99	4.39	7.44%
CE84	Roadside	Y	Chester Road AQMA	45.81	20.72	65.91	14.08	21.36%
CE86	Roadside	Y	hibel Road, Macclesfield AQMA	43.33	18.86	62.85	8.02	12.76%
CE88	Kerbside	Y	Disley AQMA	44.49	15.45	70.62	11.00	15.58%
CE91	Roadside	Y	Broken Cross, Macclesfield AQMA	47.42	14.46	79.53	18.51	23.27%
CE93	Kerbside	N	N/a	40.90	15.02	62.44	2.17	3.48%
CE94	Roadside	N	N/a	52.66	21.37	82.84	31.68	38.24%
CE104	Roadside	Y	Congleton AQMA No.2 (West Road, Congleton)	64.50	16.19	124.40	65.81	52.90%
CE114	Roadside	N	N/a	66.39	20.20	123.78	70.65	57.08%

[2] Cheshire East Borough Council, 2017 Air quality annual status Report. http://www.cheshireeast.gov.uk/pdf/environment/2017-air-quality-annual-status-report.pdf
[3] Defra Background Maps 2015. https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2015

ID	Type	In AQMA	AQMA	2016 monitored NO_2 (μgm^{-3})	2016 Background NOx^3 (μgm^{-3})	Road NOx (μgm^{-3})	Required Road NOx reduction (μgm^{-3})	Required Road NOx reduction (%)
CE116	Roadside	Y	Congleton AQMA No.4 (A34 and A54)	42.89	16.40	65.24	7.01	10.74%
CE117	Roadside	N	N/a	46.01	16.40	73.03	14.80	20.27%
CE127	Roadside	N	N/a	40.39	12.70	64.57	0.94	1.46%
CE136	Roadside	N	N/a	41.05	15.59	61.93	2.53	4.09%
CE152	Roadside	Y	Congleton AQMA No.6	47.62	25.16	64.36	18.37	28.54%
CE155	Roadside	Y	Congleton AQMA No.6	48.14	18.03	76.05	20.15	26.50%
CE203	Kerbside	Y	Nantwich Road AQMA (Crewe)	41.21	18.88	57.70	2.89	5.01%
CE216	Roadside	Y	Nantwich AQMA	50.53	16.57	84.41	26.49	31.38%
CE221	Roadside	Y	Nantwich AQMA	46.97	16.57	75.15	17.23	22.93%

Figure 2-1 AQMAs in Cheshire East



2.2 Health Impacts of Pollution

The air quality experienced by individuals can have a direct effect on their health, and the effect will depend on their existing health level. As discussed in the Low Emission Strategy Feasibility Study[1], Particulate Matter less than 2.5µm in aerodynamic diameter ($PM_{2.5}$) is the traffic-derived pollutant with strongest documented links to human health impacts[4]. The impact of $PM_{2.5}$ on mortality is a function of $PM_{2.5}$ concentration, population age structure and underlying age-specific mortality rates.

Acounting for the different demographic characteristics between England and Cheshire East, the estimated mortality burden due to exposure to anthropogenic $PM_{2.5}$ in Cheshire East is slightly lower than the average for England as a whole. As reported in the Public Health England document "*Estimating Local Mortality Burdens associated with particulate Air Pollution*"[5], the mean concentration of anthropogenic $PM_{2.5}$ is 8.7 μgm^{-3} versus the English average of 9.9 μgm^{-3} and the proportion of mortality attributable to $PM_{2.5}$ is estimated to be 4.9% compared with a national average of 5.6%.

This translates into a mortality rate of 67.1 per 100,000 population (75 attributable deaths per year) for Cheshire East compared with 69.7 per 100,000 for the national average. It also translates to an average loss of life expectancy of about 10 years per death brought forward for Cheshire East versus the national average of about 10.6 years. The health effects of NO_2 exposure are less well-established, however NO_2 concentrations are generally considered as an indicator of levels of traffic pollution in any particular area.

The impact on health of the changes in pollutant concentrations can be considered by using Relative Risk (RR) (the percentage change in risk for 10 $\mu g\ m^{-3}$ concentration) for a particular pollutant. The Attributable Fraction (AF), the proportion of local deaths attributable to long-term exposure to air pollution[5] can then be calculated.

The $PM_{2.5}$ (RR) is 1.06 (10 $\mu g\ m^{-3}$ $PM_{2.5}$ leads to a 6% change in risk)[5]. A RR factor for NO_2 has recently been produced[6] which takes into account the recommended World Health Organization (WHO) number and the potential overlap with effects of $PM_{2.5}$ of up to around 30%. The RR for NO_2 is 1.039. Although the RR for NO_2 is lower than the RR for $PM_{2.5}$, the dispersion modelling carried out during the case study phase indicated that the health benefits of the traffic measures considered would be predominantly related to reductions in NO_X emissions, as they are likely to be more significant than reductions in $PM_{2.5}$ emissions achieved.

2.3 Local plan

The Local Plan (adopted in July 2017[7]), is the Statutory Development Plan for Cheshire East and is the basis for determining planning applications. The Local Plan Strategy document sets out the overall vision and planning strategy for development in the Borough and contains planning policies to ensure that new development addresses the economic, environmental and social needs of the area.

As part of the Cheshire East Local Plan Strategy examination, the Inspector provided further interim views, which included the recommendation that over 36,000 new homes should be constructed in the Borough by 2030, an increase on the initially projected 27,000. In addition to this, it was recommended that around 31,000 jobs should be created by 2030, an increase on the 20,000 jobs initially projected in the plan. These policies are forecast to see the Borough's population grow by around 58,100 people. Following two rounds of examination hearing sessions in 2014 and 2015, the Council published its Proposed Changes Version to the Local Plan Strategy and consultation closed on 19th April 2016. A Proposed Main Modifications to the Local Plan Strategy was then published and consultation closed on 20 March 2017. The Local Plan Strategy was adopted on 27 July 2017. Table 2.2 details the locations of the new homes that are proposed as part of the Local Plan. These sites are overwhelmingly planned for the outskirts of the existing towns but include new settlements

[4] WHO (2013) Review of Evidence on Health Aspects of Air Pollution – REVIHAAP Project
[5] Public Health England (2014) Estimating Local Mortality Burdens associated with particulate Air Pollution
[6] King's College London (2015) Understanding the Health Impacts of Air Pollution in London.
[7] Cheshire East Local Plan (2017)
http://www.cheshireeast.gov.uk/planning/spatial_planning/cheshire_east_local_plan/cheshire_east_local_plan.aspx

Table 2.2 Proposed developments detailed in the local plan

Area	Existing Dwellings[1]	Total New Dwellings	Increase	Related AQMAs
Crewe	23,660	7,700	33%	Nantwich Road, Wistaston Road and Earle Street
Macclesfield	20,590	4,250	21%	A523 London Road, Broken Cross, Chester Road, Hibel Road and Park Lane
Alsager	5,360	2,000	37%	N/A
Congleton	11,990	4,150	35%	West Road, A34/A54 and Lower Heath
Handforth	4,540	2,200	48%	N/A
Knutsford	6,150	950	15%	A50 Manchester Road
Middlewich	5,890	1,950	33%	Chester Road, Middlewich
Nantwich	8,450	2,050	24%	Hospital Street
Poynton	6,950	650	9%	N/A
Sandbach	8,020	2,750	34%	A5022/A534 and Middlewich Road
Wilmslow	10,530	900	9%	N/A
Local Service Centres		3,500		N/A
Other Settlements and Rural Areas		2,950		N/A
Total	166,340	36,000	22%	N/A

[1] Cheshire East Council Ward Profiles, 2011
http://www.cheshireeast.gov.uk/council_and_democracy/council_information/research_and_consultation/ward_profiles.aspx

3. Policy context and legislation

3.1 International

EU Directive

The legislative framework for air quality consists of legally enforceable EU Limit Values (LVs) that are transposed into UK legislation as Air Quality Standards (AQS) that must be at least as challenging as the EU Limit Values. Action in the UK is then driven by the UK's Air Quality Strategy[8].

The EU LVs are set by the European directive on air quality and cleaner air for Europe (2008/50/EC)[9] and the European directive relating to arsenic, cadmium, mercury, nickel, and polycyclic aromatic hydrocarbons in ambient air (2004/107/EC)[10] as the principal instruments governing outdoor ambient air quality policy in the EU. The Limit Values are legally binding levels for concentrations of pollutants for outdoor air quality.

Air quality in the UK currently meets the EU limit values for all the required pollutants except NO_2. In February of 2014 the European Commission (EC) announced that it was taking legal action against Britain, and other Member States, for non-compliance with the European air quality limit values for NO_2. A "letter of formal notice" of the EC's intention to take legal action was sent to the Government. The legal action would result in annual fines and although the level of any fine has not been specified, it is thought to be several hundreds of million pounds a year. In addition, in April 2015, a ruling by the UK's Supreme Court requires the government to take immediate action to reduce NO_2 concentrations as soon as possible[11].

3.2 National

Air Quality Regulations

The two European directives, as well as the European Council's decision on exchange of information were transposed into UK Law via the Air Quality Standards Regulations 2010[12], which came into force in the UK on 11 June 2010, replacing the Air Quality Standards Regulations 2007[13]. Air Quality Standards are concentrations recorded over a given time period, which are considered to be acceptable in terms of what is scientifically known about the effects of each pollutant on health and on the environment.

Air Quality Strategy

The Air Quality Strategy sets the AQOs, which give target dates and some interim target dates to help the UK move towards achievement of the EU Limit Values. The AQOs are a statement of policy intentions or policy targets and as such, there is no legal requirement to meet these objectives except in as far as they mirror any equivalent legally binding Limit Values in EU legislation. The most recent UK Air Quality Strategy for England, Scotland, Wales and Northern Ireland was published in July 2007.

NO_2, PM_{10} and $PM_{2.5}$ are the pollutants of greatest health concern associated with road traffic, the main source of pollution in the area. National level measurement and modelling assessments carried out by Defra

[8] Defra in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland.
[9] Official Journal of the European Union, (2008) Directive 2008/50/EC of the European Parliament and of The Council of 21 May 2008 on ambient air quality and cleaner air in Europe.
[10] Official Journal of the European Union, (2004) Directive 2004/107/EC of the European Parliament and of The Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.
[11] The Supreme Court (2015) Press Summary - R (on the application of ClientEarth) (Appellant) v Secretary of State for the Environment, Food and Rural Affairs (Respondent) [2015] UKSC 28 On appeal from [2012] EWCA Civ 897 - https://www.supremecourt.uk/cases/docs/uksc-2012-0179-press-summary.pdf
[12] The Stationery Office Limited (2010) Statutory Instrument 2010 No. 1001 Environmental Protection – The Air Quality Standards Regulation 2010.
[13] The Stationery Office Limited (2007) Statutory Instrument 2010 No. 64 Environmental Protection – The Air Quality Standards Regulation 2007.

have shown that policy measures already in place ensure that concentrations of other pollutants comply with the relevant objectives even at busy roadside locations.

The NO_X (NO and NO_2) emitted from vehicle exhausts and other combustion sources undergoes photochemical oxidation in the atmosphere, with NO_2 being formed by oxidation of NO to NO_2 and, conversely, NO_2 undergoing photolysis (in the presence of sunlight) to create NO and ozone (O_3).

Table 3.1 sets out the AQOs that are relevant to this assessment, and the dates by which they are to be achieved. For NO_2, it is the annual mean objective that is the more stringent AQO; it is generally considered that the 1-hour mean NO_2 AQO will not be exceeded if the annual mean objective is not exceeded. For PM_{10}, the 24-hour mean objective is more stringent than the annual mean.

Table 3.1 Summary of relevant air quality standards and objectives

Pollutant	Objective (UK)	Averaging Period	Date to be Achieved by and Maintained thereafter (UK)
Nitrogen dioxide - NO_2	200 μgm^{-3} not to be exceeded more than 18 times a year	1-hour mean	31 Dec 2005
	40 μgm^{-3}	Annual mean	31 Dec 2005
Particles - PM_{10}	50 μgm^{-3} not to be exceeded more than 35 times a year	24-hour mean	31 Dec 2004
	40 μgm^{-3}	Annual mean	31 Dec 2004
Particles - $PM_{2.5}$	25 μgm^{-3}	Annual mean	2020
	Target of 15% reduction in concentration at urban background locations	3 year mean	Between 2010 and 2020

LAQM

Since Part IV of the Environment Act 1995[14] came into force, local authorities have been required to periodically review concentrations of the UK Air Quality Strategy pollutants within their areas and to identify areas where the AQOs may not be achieved by their relevant target dates. This process of LAQM is an integral part of delivering the Government's AQOs detailed in the Strategy. Local authorities investigate the levels of pollution in their area by a combination of ambient monitoring and dispersion modelling as part of the Review and Assessment process. Ambient monitoring measures concentrations of the main pollutants directly at a limited number of locations and can use passive or automatic (continuous) monitoring equipment. However, as monitors cannot give a complete picture of an entire borough, dispersion modelling is often used to predict pollutant concentrations across a wider area, to investigate future scenarios and to estimate the contribution of different sources to the total pollution, known as source apportionment. In this way, air quality models can be used to assess whether or not the national air quality objectives are likely to be breached in their target year.

Under LAQM, where air quality objectives are not (or are unlikely to be) met, Air Quality Management Areas (AQMAs) must be designated officially by means of an 'order'. The extent of the AQMA may be limited to the area of exceedance or encompass a larger area such as an entire town centre or even entire towns.

Following the declaration of an AQMA, the local authority must undertake an assessment of air quality in the AQMA within 12 months and develop and implement an Air Quality Action Plan (AQAP) to improve air quality in that area. AQMAs are what drive various legal provisions in relation to air quality, specifically within the planning system. The local authority may update the action plan from time to time. The Latest guidance on

[14] HMSO (1995) Environment Act 1995.

the LAQM process is given in Defra's 2016 LAQM Technical Guidance (LAQM TG(16))[15] and LAQM Policy Guidance (LAQM PG(16))[16].

While councils have a statutory duty to carry out LAQM, it is important to note that councils are not obliged to achieve the AQOs as they do not have sufficient control over all of the sources that could potentially give rise to the breach. Large industrial sources are regulated by the Environment Agency, major roads are controlled by the Highways Agency and, in London, by Transport for London. Much of the pollution is regional in nature, arising from other areas in the UK or even outside the UK.

When the UK Review and Assessment process was devised, it was thought that national and European measures would achieve compliance with the EU LVs across the UK, with the exception of limited number of hot spots which local authorities would identify and address. However, this is not what has happened and councils are now faced with widespread exceedances.

December 2015 Nitrogen Dioxide action plan

In December 2015, Defra published plans to improve air quality in the UK focused on "*Tackling nitrogen dioxide in our towns and cities*"[17]. The document sets out the UK's approach to meeting the NO_2 limit values set out in the Ambient Air Quality Directive in the shortest time possible. This plan was produced following the Supreme Court order of 2015 that the government must submit new air quality plans to the European Commission no later than 31 December 2015[18].

The UK is divided into 43 zones and agglomerations for air quality monitoring and reporting purposes. Compliance assessments are submitted to the Commission on an annual basis which demonstrate progress towards the limit values. The plans are in the form of an overarching national plan and individual local plans for each of the 38 zones currently exceeding the annual mean limit value for NO_2. Cheshire East is part of North West & Merseyside UK zone.

The Defra Pollution Climate Mapping (PCM) model has been used to project future NO_2 concentrations, which provide expected UK compliance dates for each of the UK zones. Compliance is predicted to be achieved by 2030 with no new measures, and by 2025 with the implementation of the measures detailed in the plans.

The overview document includes the following measures to reduce NO_2 concentrations:

- Clean Air Zones (CAZs - for Birmingham, Leeds, Nottingham, Derby and Southampton);
- London Ultra-Low Emission Zone;
- An improved LAQM system;
- Incentivising ultra low emission vehicles through various Office of Low Emission Vehicle (OLEV) schemes such as the Plug-in Car Grant;
- Government Procurement including the Government Buying Standards (GBS) which set down minimum mandatory and best practice standards requirement for cars, vans, buses and trucks;
- Improvements to the road network;
  - Highways England road investment strategy;
  - Specific road improvements;
- Reducing emissions from buildings; and
- Reducing emissions from other sources;

[15] Defra (2016) Local Air Quality Management Technical Guidance LAQM.TG (16).
[16] Defra (2016) Local air Quality Management Policy Guidance PG (16)
[17] Defra (2015). Improving air quality in the UK. Tackling nitrogen dioxide in our towns and cities UK Overview Document
[18] The Supreme Court (2015) Press Summary - R (on the application of ClientEarth) (Appellant) v Secretary of State for the Environment, Food and Rural Affairs (Respondent) [2015] UKSC 28 On appeal from [2012] EWCA Civ 897 - https://www.supremecourt.uk/cases/docs/uksc-2012-0179-press-summary.pdf

- Ports and shipping;
- Aviation;
- Rail;
- Freight;
- Industry;
- Non-Road Mobile Machinery.

CAZs are areas where only the cleanest vehicles are encouraged (through the use of vehicle emission standards). Vehicle standards will be set based on emissions level for a vehicle type. This is to ensure that only the cleanest vehicles, including hybrid and vehicles using alternative fuels where appropriate, are encouraged to enter the area. Four classes of access control are defined according to the types of vehicles which must meet the standards specified. Local authorities will be free to decide whether all or a combination of the type of vehicles in these classes should be subject to control:

- A – Buses, coaches and taxis only;
- B – Buses, coaches, taxis and heavy goods vehicles (HGVs);
- C – Buses, coaches, taxis, HGVs and light goods vehicles (LGVs); and
- D – Buses, coaches, taxis, HGVs, LGVs and cars.

Any cities with Clean Air Zones other than Class A are likely to use cameras to ensure that those vehicle owners that are required to pay a charge do so. The government will legislate to require the implementation of CAZs in five cities (Birmingham, Leeds, Nottingham, Southampton and Derby) and CAZs will be implemented by other local authorities which decide emissions based access controls are the most effective solution for them to meet the limit values for NO_2. The proposed emission standards are the same as those proposed for the Central London Ultra Low Emission Zone (ULEZ)[19], and are as follows:

- Bus/coach – 0.4 g/kWh (Equivalent to Euro VI for NO_X emissions);
- HGV – 0.4 g/kWh (Equivalent to Euro VI for NO_X emissions);
- Van (1305-3500kg) – 0.125 g/km (Equivalent to Euro VI for 1760-3500kg Diesel Light Commercial Vehicle); and
- Car/light commercial (up to 1305kg) – 0.08 g/km (Equivalent to Euro 4 petrol car and Euro 6 diesel car).

The possibility of establishing CAZs without charging is discussed where behaviour change can be encouraged through other means. This would remove the need for complex enforcement systems and infrastructure, enabling the CAZ to be rapidly implemented and raise public awareness of air quality issues. It is suggested that, in some cases, initial operation of a CAZ on a voluntary basis could reduce the need for a charging CAZ.

National Planning Policy Framework and National Planning Practice Guidance

The National Planning Policy Framework (NPPF)[20] sets out government's planning policies for England and how these are expected to be applied. With regards to air quality, the NPPF states:

> "*Planning policies should sustain compliance with and contribute towards EU limits values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan*."

[19] https://tfl.gov.uk/modes/driving/ultra-low-emission-zone
[20] Department for Communities and Local Government (2012) National Planning Policy Framework

The government has also produced Planning Practice Guidance (PPG)[21] which provides guiding principles on how planning can take account of the impact of new development on air quality. With regards to the development of Local Plans, it is stated that:

> "*It is important to take into account air quality management areas and other areas where there could be specific requirements or limitations on new development because of air quality*." and
>
> "*the Local Plan may need to consider:*
>
> - *the potential cumulative impact of a number of smaller developments on air quality as well as the effect of more substantial developments;*
> - *the impact of point sources of air pollution (pollution that originates from one place); and,*
> - *ways in which new development would be appropriate in locations where air quality is or likely to be a concern and not give rise to unacceptable risks from pollution. This could be through, for example, identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable*."

It is stated that air quality is relevant to planning applications when the development would:

- "*Significantly affect traffic in the immediate vicinity of the proposed development site or further afield. This could be by generating or increasing traffic congestion; significantly changing traffic volumes, vehicle speed or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; adds to turnover in a large car park; or result in construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more.*
- *Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; or extraction systems (including chimneys) which require approval under pollution control legislation or biomass boilers or biomass-fuelled CHP plant; centralised boilers or CHP plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area;*
- *Expose people to existing sources of air pollutants. This could be by building new homes, workplaces or other development in places with poor air quality.*
- *Give rise to potentially unacceptable impact (such as dust) during construction for nearby sensitive locations.*
- *Affect biodiversity. In particular, is it likely to result in deposition or concentration of pollutants that significantly affect a European-designated wildlife site, and is not directly connected with or necessary to the management of the site, or does it otherwise affect biodiversity, particularly designated wildlife sites*."

Office of Low Emission Vehicles (OLEV) Investing in Ultra Low Emission Vehicles in the UK, 2015 to 2020

In April 2014, OLEV published the Government's proposed package of support for ULEVs in the period 2015-20 . This document included the government's plans on Shaping the Required Infrastructure. The key elements are detailed in Table 3.2.

[21] Department for Communities and Local Government (2014) National Planning Practice Guidance – Air Quality.

Table 3.2 OLEV Plans for Shaping ULEV Infrastructure

Type of Infrastructure	Plan
Charging Infrastructure	There will be a rapid chargepoint at every motorway service station by the end of 2014 and we will have a network of over 500 rapid chargers across the country by March 2015 – the best network in Europe. We need to go further to ensure that worries about charging are never a barrier to ULEV adoption. We will provide a £32m fund for charging infrastructure in the period 2015-2020. Among other things, this will ensure that ULEV drivers can easily find a rapid chargepoint to help undertake any journey they choose.
Gas refuelling Infrastructure	We are allocating £4m to ensure the UK has an initial network of gas refuelling stations to support freight and logistics operators in their efforts to reduce the environmental impact of their businesses.
Hydrogen Infrastructure	We are positioning the UK to be a lead market for the introduction of hydrogen fuel cell vehicles and will announce soon, and no later than autumn, 2014 the actions that both Government and industry stakeholders will be taking to achieve this.

3.3 Local policies

Cheshire East Local Plan

The Local Plan includes policies to ensure that the required development will protect and enhance Cheshire East's built and natural environment and will make sustainable use of resources. These policies recognise the contribution that an attractive environment can make to a successful economy and the well-being of local communities. With particular reference to air quality, it is stated that development should avoid and, if necessary, mitigate against environmental impacts. The relevant policies in the Local Plan Strategy Submission Version[22] are as follows:

Policy Sustainable Environment 12 - Pollution, Land Contamination and Land Instability

- the Council will seek to ensure all development is located and designed so as not to result in a harmful or cumulative impact upon air quality, surface water and groundwater, noise, smell, dust, vibration, soil contamination, light pollution or any other pollution which would unacceptably affect the natural and built environment, or detrimentally affect amenity or cause harm. Developers will be expected to minimise, and mitigate the effects of possible pollution arising from the development itself, or as a result of the development (including additional traffic) during both the construction and the life of the development. Where adequate mitigation cannot be provided, development will not normally be permitted.
- development for new housing or other environmentally sensitive development will not normally be permitted where existing air pollution, soil contamination, noise, smell, dust, vibration, light or other pollution levels are unacceptable and there is no reasonable prospect that these can be mitigated against.
- development should support improvements to air quality, not contradict the Air Quality Strategy or Air Quality Action Plan and seek to promote sustainable transport policies.

Policy Connectivity 1 - Sustainable Travel and Transport

To deliver the Council objectives of delivering a safe, sustainable, high quality, integrated transport system that encourages a modal shift away from car travel to public transport, cycling and walking; supportive of the needs of residents and businesses and preparing for carbon free modes of transport, the Council will expect development to:

[22] Cheshire East Council (2016) Local Plan Strategy Proposed Changes Submission Version

- Reduce the need to travel by:
  - Guiding development to sustainable and accessible locations or locations that can be made sustainable and accessible;
  - Ensuring development gives priority to walking, cycling and public transport within its design;
  - Encouraging more flexible working patterns and home working;
  - Supporting improvements to communication technology for business, education, shopping and leisure purposes;
  - Supporting measures that reduce the level of trips made by single occupancy vehicles; and
- Improve pedestrian facilities so that walking is attractive for shorter journeys including:
  - Supporting the priority of pedestrians at the top of the road user hierarchy and making sure that in settlements, town centres and residential areas, the public realm environment reflects this priority;
  - Supporting safe and secure access for mobility and visually impaired persons including mobility scooter users and parents with pushchairs;
  - Creating safe and secure footways and paths linking with public transport and other services;
  - Ensuring new developments are convenient, safe and pleasant to access on foot; and
  - Supporting work to improve canal towpaths and Public Rights of Way where they can provide key linkages from developments to local facilities.
  - Supporting measures that introduce safe routes to schools.
  - Ensuring a selective and ongoing review of speed limits, as appropriate.
- Improve cyclist facilities so that cycling is attractive for shorter journeys including:
  - Creating safe and pleasant links for cyclists travelling around the Borough;
  - Providing secure cycle parking facilities at new developments, at public transport hubs, town centres and at community facilities;
  - Improving route signing;
  - Working with community groups to develop local cycling initiatives and seek external funding to assist with the development of the local network; and
  - Supporting the priority for cyclists over single occupancy vehicles by making sure that in settlements, town centres and residential areas, the public realm environment reflects this priority whenever possible.
- Improve public transport integration, facilities, service levels, access for all users and reliability including:
  - Rail infrastructure - current schemes comprise:

    Improvements to Crewe Railway Station, promoting its role as a national rail hub and providing associated connectivity for buses;

    Supporting the aspiration for re-opening the Sandbach to Northwich railway line to passengers including the opening of a station at Middlewich;

    Supporting proposals for rail infrastructure and the provision of rail facilities as appropriate; and

    Engaging in proposals for improving rail connectivity through High Speed Rail;
  - Bus Infrastructure - current schemes comprise:

Improvements to Crewe Bus Station.

- Improving public transport service levels, which may involve developers temporarily subsidising new bus services or the extension of an existing service to provide additional journeys, or supporting community transport initiatives to enable sustainable access to new development;
- Engaging in proposals for improving rail connectivity through the Northern Hub capacity improvement scheme;
- Considering options to enhance Bus Priority at junctions and the provision of dedicated bus lanes; and
- Considering opportunities to improve cross border connectivity with neighbouring areas.

- Improve and develop appropriate road, rail and water freight transport routes and associated intermodal freight transport facilities in order to assist in the sustainable and efficient movement of goods.

Policy Connectivity 2 - Enabling Business Growth through Transport Infrastructure

The Council will support new developments that are (or can be made) well connected and accessible by:

- *Minimising the future need to travel by locating new development in locations where there is a good range of housing, jobs, shops and services already accessible by public transport, cycling and walking.*
- *Enabling development by supporting transport infrastructure, regeneration and / or behaviour change initiatives that will mitigate the potential impact of development proposals including:*
  - *Supporting schemes outlined within the current Infrastructure Delivery Plan / Local Transport Plan.*
  - *Where new or improved infrastructure is provided, supporting measures to improve the walking, cycling and sustainable travel environment on routes relieved of traffic;*
  - *Supporting improvements to communication technology for business, education, shopping and leisure purposes;*
  - *Supporting the improvement of rail infrastructure - especially facilities at railway stations;*
  - *Supporting the improvement of national motorway network facilities, where appropriate and supported by the Highways Agency*
  - *Providing recharging points for hybrid or electric vehicles in major developments in order to reduce carbon emissions; and*
  - *Adhering to the current adopted Cheshire East Council Parking Standards for Cars and Bicycles (Parking Standards).*
- *The Council will support the economic benefits of High Speed 2 whilst ensuring that environmental and community impacts are minimised.*
- *The Council will work with neighbouring transport authorities and support proposals which mitigate the wider impacts of development and improve connectivity, particularly by public transport, so that the opportunities provided by economic growth can be accessible to a wider population.*
- *Proposals for the safeguarding of disused transport corridors will be supported. Recreational and appropriate uses for disused transport corridors may be allowed provided they do not preclude eventual re-use for transport purposes or impact on public safety.*

Car Parking Standards

The CEC parking objectives set out to be consistent with and contribute to the overall aims of the National and Regional transport strategies which seek to:

- Achieve a reduction in overall traffic;
- To increase use of more sustainable and healthy forms of travel; and
- To achieve a more effective and efficient transport system, whilst taking into account:
  - The economic vitality of town centres;
  - The parking needs of people with disabilities; and
  - The parking needs of local residents, shops and businesses.

CEC has adopted the following car parking standards for development:

- Principal Towns and Key Service Centres;
  - 1 bedroom - 1 space per dwelling;
  - 2 bedrooms - 2 spaces per dwelling;
  - 3+ bedrooms - 2 spaces per dwelling.
- Remainder of Borough;
  - for 1 bedroom - 1 space per dwelling;
  - 2/3 bedrooms - 2 spaces per dwelling;
  - 4/5+ bedrooms - 3 spaces per dwelling.

4. Policies to improve air quality

4.1 Planning and air quality

Full consideration of the emissions generated by new developments is vital to ensure that the future air quality in the area is as good as possible. Policies to reduce emissions should be developed in accordance with the Avoid-Shift-Improve (ASI) approach. Policies are considered hierarchically, with the first tier reducing emissions by avoiding, or reducing, the polluting activity, the second tier reducing emissions by shifting to lower emission modes, such as walking and cycling or public transport, and the third tier reducing emissions by improving technology.

Effective land-use planning plays a vital role in reducing the impact of new developments on air quality. At this design stage, demand for travel by road can be minimised through sustainable transport links between the home, workplace, educational, retail and leisure facilities[23], thereby reducing trip distances and avoiding emissions. Spatial planning should also be used to encourage the uptake of Low Emission Vehicles (LEVs) where journeys still need to be undertaken. Finally, enforcement of emission standards and development of new infrastructure can help to ensure that emissions from journeys that are not avoided, or shifted to different modes, emit as little pollution as possible.

The Department for Communities & Local Government Planning Practice Guidance[24] states that:

“Whether or not air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to generate air quality impact in an area where air quality is known to be poor. They could also arise where the development is likely to adversely impact upon the implementation of air quality strategies and action plans and/or, in particular, lead to a breach of EU legislation (including that applicable to wildlife)”.

As detailed in the Institute of Air Quality Management (IAQM) guidance on “*Land-Use Planning & Development Control: Planning For Air Quality*”[23], in arriving at a decision about a specific proposed development, the local planning authority should pay particular attention to:

- compliance with national air quality objectives and EU Limit Values;
- whether the development will materially affect any air quality action plan or strategy;
- the overall degradation (or improvement) in local air quality; or
- whether the development will introduce new public exposure into an area of existing poor air quality.

Development principles

The role of the planning system in minimising impacts, or even improving air quality has been recognised and over recent years several national, regional and local guidance documents have been produced which include recommendations on suitable design principles to minimise emissions. Examples have been produced by the following organisations:

- Institute of Air Quality Management (IAQM);
- Low Carbon Vehicle Partnership;
- Greater London Authority;
- West Yorkshire Low Emissions Group; and
- Sussex Air Quality Partnership.

[23] IAQM/EPUK (2017) Land-Use Planning & Development Control: Planning For Air Quality
[24] Department for Communities & Local Government (2014) Planning Practice Guidance. When could air quality be relevant to a planning decision? Paragraph: 005 Reference ID: 32-005-20140306

Whilst several of these documents cover regional areas, distant from Cheshire, they have been included here as they have been produced in order to tackle similar air quality problems. The key aspects of the guidance produced by each are detailed below.

Institute of air quality management

In relation to land-use planning, the IAQM/EPUK guidance[23] strongly encourages the following actions:

- Full integration of the inputs of the planning, transport, housing, education and environment departments to ensure that environmental considerations, including those related to air quality, are considered at the earliest stages of the strategic planning processes;
- Ensuring public services are joined up and easier to access via public transport or other sustainable choices such as cycling and walking; and
- Giving careful consideration to the location of developments.

For the development design phase, the guidance recommends:

- New developments should not contravene the Council's Air Quality Action Plan, or render any of the measures unworkable;
- Wherever possible, new developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion;
- Delivering sustainable development should be the key theme of any application;
- New development should be designed to minimise public exposure to pollution sources, e.g. by locating habitable rooms away from busy roads, or directing combustion generated pollutants through well sited vents or chimney stacks.

For the operational phase, the guidance recommends:

- The provision of at least 1 Electric Vehicle (EV) "rapid charge" point per 10 residential dwellings and/or 1000m^2 of commercial floorspace. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made;
- Where development generates significant additional traffic, provision of a detailed travel plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety;
- All gas-fired boilers to meet a minimum standard of <40 mgNO_X/kWh;
- All gas-fired CHP plant to meet a minimum standard of:
  - Spark ignition engine: 250 mgNO_x /Nm^3;
  - Compression ignition engine : 400 mgNO_x /Nm^3;
  - Gas turbine: 50 mgNO_x /Nm^3.
- A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of:
  - Solid biomass boiler: 275 mgNO_x /Nm^3 and 25 mgPM/Nm^3.

Typical measures that may be considered to offset emissions include:

- Support for and promotion of car clubs;
- Contributions to low emission vehicle refuelling infrastructure;
- Provision of incentives for the uptake of low emission vehicles;

- Financial support to low emission public transport options; and
- Improvements to cycling and walking infrastructure.

The Institute of Air Quality Management (IAQM)[25] has also developed guidance regarding the assessment of the impacts of construction on air quality and the determination of their significance.

Local communities may be concerned that development activities (particularly construction works) would result in regular and persistent dust emissions, which may affect local amenity and quality of life. The level of concern, and potential for annoyance, is directly related to the existing baseline dust levels, the number and proximity of residential areas to the Site, and the exact nature of the activities on-site. The degree of actual annoyance would also depend on factors, such as, the rate of dust deposition, and the application of mitigation measures on site.

Detailed assessment involves a three-stage process; construction sites are classified according to the risk of effects (based upon the scale and nature of the works, plus the proximity of sensitive receptors), appropriate site-specific mitigation measures are identified and the significance of effects is then determined.

The significance of the dust effects is generally undertaken after applying the site-specific mitigation. This would take account of the risk of effects, and other factors that might affect the risk of dust effects arising, even after any site-specific mitigation has been implemented.

Low carbon vehicle partnership

The Low Carbon Vehicle Partnership (LCVP) *Local measures to encourage the uptake of low emission vehicles Good Practice Guide*[26] includes a range of local authority measures to encourage the uptake of Low Emission Vehicles (LEVs) that relate directly to planning. These are detailed in Table 4.1.

Table 4.1 Planning measures to promote LEVs

Measure	Details
Planning conditions in development frameworks	Specify a minimum requirement for provision of LEV spaces (and associated infrastructure) in new developments
(U)LEV specifications in building codes	Specify the need for (U)LEV vehicle readiness in new and renovated buildings
Permitted development rights for charging infrastructure	Electric vehicle charge point installation designated as a permitted development right
Infrastructure installation in rental properties	Makes a term in a lease, contract, security instrument, or similar void to be unenforceable if it prohibits or unreasonably restricts the installation of electric vehicle charging in a lessee's designated parking space
Developer contributions	Planning obligations (section 106/section 75), community infrastructure levy, highway contributions
Local Development Orders securing land for infrastructure	Using Local Development Orders to secure land for infrastructure

This document also highlights the importance of parking in encouraging LEV uptake by influencing driver behaviour and choices. Dedicated parking can be used as an incentive by offering drivers the possibility of saving time and money. These measures are detailed in Table 4.2.

[25] Institute of Air Quality Management (IAQM) (2014) – Guidance on the Assessment of Dust from Demolition and Construction.
[26] LCVP (2015) Local measures to encourage the uptake of low emission vehicles Good Practice Guide

Table 4.2 Parking measures to promote LEVs

Measure	Details
Discounted on- and off-street parking for LEVs	LEVs permitted to use public parking facilities free or at a reduced cost
Dedicated LEV parking (not including recharging)	LEV-only car parking spaces that do not include charge points
Discounted residential parking permits for LEVs	Cost of parking permit reduced or waived for LEV owners
Reduced waiting time for parking permits for LEVs	Priority for parking permit applications given to LEV cars
Reduced parking spaces for high emission vehicles	Parking for conventional vehicles reduced
Workplace parking levy	Local authorities can charge businesses for every employee who parks in the area
Dedicated parking for LEV car club vehicles	Allocating parking for sole use by LEV car clubs

Greater London Authority

The Mayor of London's Local Plan[27] and *Sustainable Design and Construction Supplementary Planning Guidance*[28] states that:

- Developments must ensure that 1 in 5 spaces provide an electrical charging point to encourage the uptake of electric vehicles;
- Developments should be designed to encourage and facilitate walking and cycling and the use of public transport and not exceed local car parking standards;
- Developments should be at least 'air quality neutral' when considered against emission benchmarks for building operation and transport;
- Developers of schemes which do not meet the 'air quality neutral' benchmark for buildings or transport (considered separately) after appropriate onsite mitigation measures have been incorporated will be required to off-set any excess in emissions. The developer should investigate options for providing NO_x and PM abatement measures offsite in the vicinity of the development. This will involve working with the relevant planning authority or nearby property owners to identify suitable mitigation measures. Measures could include:
  - green planting/walls and screens, with special consideration given to planting that absorbs or supresses pollutants;
  - upgrade or abatement work to combustion plant;
  - retro-fitting abatement technology for vehicles and flues; and
  - exposure reduction.

The GLA *Supplementary Planning Guidance on The Control of Dust and Emissions during Construction and Demolition*[29] provides more detailed guidance on the implementation of all relevant policies in the London Plan and the Mayor's Air Quality Strategy to neighbourhoods, boroughs, developers, architects, consultants and any other parties involved in any aspect of the demolition and construction process. It sets out the methodology for assessing the air quality impacts of construction and demolition; and identifies good practice for mitigating and managing air quality impacts that is relevant and achievable, with the overarching aim of protecting public health and the environment.

[27] Greater London Authority (2015) The London Plan The Spatial Development Strategy for London Consolidated with Alterations since 2011
[28] Greater London Authority (2014) Sustainable Design and Construction Supplementary Planning Guidance, London Plan 2011 Implementation Framework
[29] GLA (2014) The Control of Dust and Emissions during Construction and Demolition: Supplementary Planning Guidance

It is stated that all demolition and construction sites should be monitored for the generation of air pollution. It is essential to monitor for dust generation, including PM_{10}. This can range from visual monitoring at low risk sites to automatic monitoring with alert trigger levels at high risk sites. The need for monitoring depends on existing air quality and the risk of air pollution from the development.

This document also includes a policy to reduce emissions from non-road mobile machinery (NRMM). To address this significant contribution of NRMM to London's poor air quality, the GLA is controlling emissions from this equipment with the application of emissions standards for London from September 2015. The policy seeks progressive reduction in emissions and includes higher standards for the Central Activity Zone (CAZ) and Canary Wharf, where there is likely to be concentrated construction activity. The policy is as follows:

From 1 September 2015 NRMM of net power between 37kW and 560kW used:

- in London will be required to meet the standards set out below. This will apply to both variable and constant speed engines for both NO_X and PM. These standards will be based upon engine emissions standards set in EU Directive 97/68/EC and its subsequent amendments.
- NRMM used on the site of any major development within Greater London will be required to meet Stage IIIA of the Directive as a minimum; and
- NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IIIB of the Directive as a minimum.

From 1 September 2020 the following will apply:

- NRMM used on any site within Greater London will be required to meet Stage IIIB of the Directive as a minimum.
- NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IV of the Directive as a minimum.

As detailed in the LLAQM Borough Air Quality Action Matrix[30], replacing an average size piece of NRMM equipment (37 ≤ kW < 75) meeting Stage II emission standards operating for the whole year by same size equipment meeting Stage IIIB emission standards would reduce NO_X and PM_{10} emissions by 53% and 94% respectively. The requirements set out above may be met using the following techniques;

- reorganisation of NRMM fleet;
- replacing equipment (with new or second hand equipment which meets the policy);
- retrofit abatement technologies; and
- re-engining.

West Yorkshire Low Emissions Group

The West Yorkshire Low Emissions Group has produced Air Quality & Emissions Technical Planning Guidance[31] as part of the West Yorkshire Low Emissions Strategy. Development proposals are classified as minor, medium or major depending on pre-defined criteria. Measures to reduce emissions are specified according to the development classification. Measures required are as follows:

- To prepare for increased demand [for electric vehicles] in future years, appropriate cable provision should be included in the scheme design and development, in agreement with the local authority and include the default mitigation listed below
- Minor impact proposal
  - Residential: 1 charging point per unit (dwelling with dedicated parking) or 1 charging point per 10 spaces (unallocated parking).

[30] https://www.london.gov.uk/sites/default/files/air_quality_action_matrix.pdf
[31] West Yorkshire Low Emissions Group. Air Quality & Emissions Technical Planning Guidance.

- Commercial/Retail: 10% of parking spaces which may be phased with 5% initial provision and the remainder at an agreed trigger level.
- Industrial: 10% of parking spaces which may be phased with 5% initial provision and the remainder at an agreed trigger level.

- Medium impact proposal
  - As for minor impact proposal, plus:
  - Detailed travel plan
  - Travel Plan including agreed mechanisms for discouraging high emission vehicle use and encouraging modal shift (i.e. public transport, cycling and walking) as well as the uptake of low emission fuels and technologies.
  - Improved pedestrian links to public transport stops.
  - Provision of new bus stops infrastructure including shelters, raised kerbing, information displays.
  - Provision of subsidised or free ticketing (Corporate and residential Metrocards, Student Metrocards).
  - Site layout to include improved pedestrian pathways to encourage walking.
  - Improved convenient and segregated cycle paths to link to local cycle network. Commercial Specific:
  - All commercial vehicles should comply with current or the most recent European Emission Standards from scheme opening, to be progressively maintained for the lifetime of the development.
  - Fleet operations should provide a strategy for reducing emissions, including the uptake of low emission fuels and technologies such as ultra-low emission service vehicles.
- Major impact proposal
  - Additional mitigation to be determined by damage cost calculation. Default mitigation options provided in the following categories:
  - Support measures to reduce the need to travel.
  - Support measures to reduce polluting motorised vehicle use.
  - Measures to support improved public transport.
  - Further measures to promote walking and cycling.

Sussex air quality partnership

The Sussex Air Quality Partnership "*Air quality and emissions mitigation guidance for Sussex*"[32] includes a method for calculating the amount (value) of mitigation that is expected to be spent on measures to mitigate anticipated impacts. The list of suggested mitigation measures that amount could be spent on is as follows:

- EV recharging infrastructure within the development (wall mounted or free standing in-garage or off-street points);
- Car club provision or support to local car club/eV car club;
- Designation of parking spaces for low emission vehicles;
- Differential parking charges depending on vehicle emissions;

[32] Sussex Air Quality Partnership (2013) Air quality and emissions mitigation guidance for Sussex.

- All commercial vehicles should comply with either current or previous European Emission Standard;
- Fleet operations should provide a strategy for considering reduced emissions, low emission fuels and technologies;
- Use of ultra low emission service vehicles;
- Support local walking and cycling initiatives;
- On-street EV recharging;
- Contribution to low emission vehicle refuelling infrastructure;
- Low emission bus service provision or waste collection services;
- Bike/e-bike hire schemes;
- Contribution to renewable fuel and energy generation projects; and
- Incentives for the take-up of low emission technologies and fuels.

Supplementary planning documents

Supplementary Planning Documents/Guidance (SPDs or SPGs) can be produced to provide additional information in relation to specific policy areas within the Local Development Framework and detail the guidance formally adopted by local authorities. Air quality SPDs and SPGs help by providing transparent and consistent advice to both Development Control departments and developers[23]. They are generally used to set out the requirements of air quality assessments, detail the standards to which developments should adhere, provide a methodology for calculating the cost of infrastructure necessitated by the development, emissions offsetting or additional mitigation measures (to be secured by planning conditions or Section 106 agreements as appropriate) and provide details on what forms of offsetting or mitigation are considered to be acceptable.

It is important that obligations are proportional to the nature and scale of development proposed and the level of concern about air quality. There have been three main approaches used for the calculation of the monetary value of, or need for, offsetting or mitigation since SPDs/SPGs began to be used in relation to air quality. The three main approaches are detailed below.

Fixed cost per unit

In some cases, standard contribution costs have been applied per unit of proposed development. This has the advantage of helping to generate funding for air quality improvement projects, but does not reward developers that have designed their development to reduce emissions. For example, the Mid Devon Supplementary Planning Document on Air Quality and Development (2008) states that new development that:

"*would lead to an increase in traffic that will have a worsening effect on air quality will be required to provide for mitigation through contribution to implement the Air Quality Action Plan as follows*

- *Market housing £2800-5509 per dwelling*
- *Affordable housing £0 per dwelling*
- *Employment £1000-2030 per 100 m^2 GFA*
- *Retail - food £55500-108449 per 100 m^2 GFA*
- *Retail – non food £9000-17616 per 100 m^2 GFA*"

Damage Cost Calculation

The damage cost method was developed so that only developments that increase pollutant concentrations incur costs. The environmental damage costs associated with the proposal are calculated and used to determine the value of mitigation that needs to be spent on measures to mitigate the impacts. This method uses the HM Treasury and Defra Interdepartmental Group on Costs and Benefits (IGCB) damage costs, the cost to society of a change in emissions of different pollutants[33], and calculation of the additional emissions generated by the proposal using the latest emissions factors from Defra, the Emission Factor Toolkit[34] or calculations based on manufacturers details provided with combustion plant. This approach is applied in *the Sussex Air Quality Partnership Air quality and emissions mitigation guidance for Sussex* (2013)[32] and the *West Yorkshire Low Emissions Group Air Quality & Emissions Technical Planning Guidance*[31]. The road transport emission increase is given as:

Road Transport Emission Increase = ∑[Estimated additional trip rate for 5 years (compared to current use) x Emission rate per 10 km per vehicle type x damage cost]

The damage costs provided by Defra in 2015[33] are shown in Table 4.3.

Table 4.3 Air quality damage costs per tonne, 2015 prices

Pollutant	Source	Central	Sensitivity - Low	Sensitivity - High
Oxides of nitrogen (NO_X)	Transport Average	£25,252	£10,101	£40,404
	Industry	£13,131	£5,253	£21,010
	Domestic	£14,646	£5,859	£23,434
Particulate Matter (PM)	Transport Average	£58,125	£45,510	£66,052
	Industry	£30,225	£23,665	£34,347
	Domestic	£33,713	£26,396	£38,311
Sulphur oxides (SO_X)		£1,956	£1,581	£2,224
Ammonia (NH_3)		£2,363	£1,843	£2,685

This approach provides transparency in the calculation of costs and ensures that development designs which reduce emissions are rewarded by incurring lower costs. The method is also flexible in that the calculated costs will change as the emission factors and damage costs are updated by Defra.

The full approach for calculating damage costs, as detailed in EPUK/IAQM guidance[23] is as follows:

- Identify the additional trip rates (as trips/annum) generated by the proposed development (this information will normally be provided in the Transport Assessment);
- Assume an average distance travelled of 10km/trip;
- Calculate the additional emissions of NO_X and PM_{10} (kg/annum), based on emissions factors in the Emissions Factor Toolkit, and an assumption of an average speed of 50 km/h;
- Multiply the calculated emissions by 5, to assume emissions over a 5 year time frame;
- Use the HM Treasury and Defra IGCB damage cost approach to provide a valuation of the excess emissions, using the currently applicable values for each pollutant; and
- Sum the NO_X and PM_{10} costs.

[33] Defra (2015) Air quality: economic analysis – September 2015 Update - https://www.gov.uk/air-quality-economic-analysis#damage-costs-approach
[34] http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft

Examples of damage costs calculations carried out for developments in Cheshire East, and the agreed measures proportionate to the calculated damage costs are provided in Table 4.4.

Table 4.4 Damage Cost Examples

Example 1 – Mixed-Use Development	
Development	Around 300 homes, new sports, leisure and business facilities
Trip Rate (AADT)	2,250 (4% HGV)
Annual NO_X Emissions (kg/annum)	1.46
Annual PM_{10} Emissions (kg/annum)	0.28
Damage Cost - 1 year (£)	53,146
Damage Cost – 5 years (£)	265,731
Agreed measures	Public Transport Contribution Travel Plan Co-ordinator Promotion of Sustainable Transport Car Sharing Scheme Residential Cycling Voucher Cycling infrastructure Electric Charging Points Notice Boards

Example 2 – Small Residential Development	
Development	86 dwellings including the provision of informal areas of landscaping, off road vehicular parking
Trip Rate (AADT)	240 (0% HGV)
Annual NO_X Emissions (kg/annum)	0.40
Annual PM_{10} Emissions (kg/annum)	0.05
Damage Cost - 1 year (£)	13,176
Damage Cost – 5 years (£)	65,879
Agreed measures	Framework Travel Plan (FTP) prepared to promote sustainable travel to and from the development. The planned measures are: - Appoint a Travel Plan Co-ordinator (TPC); - Encourage and Promote Sustainable Travel; - Resident Travel Information Packs; - Resident Travel Survey; and - Secure Cycle Parking.

Air quality neutral approach

The London Plan and the Mayor of London's Air quality Strategy set out that developments are to be at least 'air quality neutral'. To enable the implementation of this policy emission benchmarks have been produced for building operation and transport across London based on the latest technology (including its effectiveness and viability). Developments that do not exceed these benchmarks will be considered to avoid any increase in NO_X and PM emissions across London as a whole and therefore be 'air quality neutral'. The benchmarks are to be considered minimum benchmarks that will be kept under review and will be updated in line with

technological and commercial advances. The application of this policy is detailed in the Air Quality Neutral Planning Support Update[35].

Developers of schemes which do not meet the 'air quality neutral' benchmark for buildings or transport (considered separately) after appropriate onsite mitigation measures have been incorporated are required to off-set any excess in emissions. The developer should investigate options for providing NO_x and PM abatement measures offsite in the vicinity of the development. This will involve working with the relevant planning authority or nearby property owners to identify suitable mitigation measures.

As this approach assesses developments against benchmarks, rather than current emissions, it has the benefit of not penalising development on green or brownfield sites. It does however rely on trip rates, trip distances and emission factors that have been developed specifically for London.

4.2 Other guidance and initiatives

Emission standards

In 1992 the European Union introduced new emission standards (Euro standards) for vehicles. These have progressively tightened limits for the main atmospheric pollutants. Euro VI has been the standard for heavy diesel vehicles since the end of 2013 and should reduce NO_x to 5% of the 1992 limits. For cars, Euro 6 came into force in September 2014 and is estimated to reduce the emissions of NO_x from diesel cars from 180mg/km to 80mg/km. Development-specific Low Emission Zones (LEZs) provide an opportunity to influence the composition of the traffic fleet in Cheshire East. For example, the Greenwich Peninsula LEZ set minimum euro-standards for the majority of vehicles entering the development site[36].

It has been widely recognised that government policies to encourage the purchase of diesel vehicles in order to reduce greenhouse gas emissions have been successful in increasing the number of diesel vehicles on the road, but this has made compliance with the Air Quality Objectives for NO_2 more difficult as diesel vehicles emit more NO_2 than petrol vehicles[37]. Recent research has also identified a disparity between predicted emissions and emissions in reality, particularly for diesel cars[38]. Real-world emissions data collected under driving conditions have found that modern diesel cars have not performed as well as expected[39]. There is still uncertainty regarding whether Defra emission factors published in 2014, to address the disparity, reflect the on-road performance of modern vehicles[40].

It is stated in the recently published Defra plans to improve air quality in the UK[41] that the new Euro VI standard for heavy duty diesel vehicles is delivering significant NO_X emissions reductions and that, once introduced, the light duty diesel vehicle emission standards based on the proposed 'real driving emissions' test procedure will deliver further significant benefits. The UK intends to support the introduction of a robust test procedure as soon as possible.

The restriction of diesel vehicle use therefore has the potential to result in significant benefits to air quality. The LEZ approach could also be applied to restrict the use of diesel cars. For example, several London boroughs implement parking surcharges for diesel vehicles according to the 'polluter pays' principle. The Mayor of Paris has announced plans to ban diesel cars from the city by 2020.

In the 2015 NO_2 Action Plan[17], Defra also details the intention to provide a framework for local authorities to implement Clean Air Zones (CAZs) when they decide that emissions based access controls are the most effective solution for them to meet the objectives for NO_2. The CAZ framework will set a standard for vehicles to achieve to ensure a consistent approach by local authorities. Those not meeting the standard will be

[35] Air Quality Consultants and Environ (2014) Air Quality Neutral Planning Support Update: GLA 80371
[36] Defra (2010) Low Emissions Strategies using the planning system to reduce transport emissions Good Practice Guidance
[37] House of Commons Environmental Audit Committee (2014) Action on Air Quality Sixth Report of Session 2014–15
38 Carslaw, D., Beevers, S., Westmoreland, E. and Williams, M. (2011) Trends in NOx and NO2 emissions and ambient measurements in the UK. (https://uk-air.defra.gov.uk/assets/documents/reports/cat05/1108251149_110718_AQ0724_Final_report.pdf)
[39] Carslaw, D. and Rhys-Tyler, G. (2013) Remote sensing of NO2 exhaust emissions from road vehicles. (https://uk-air.defra.gov.uk/assets/documents/reports/cat05/1307161149_130715_DefraRemoteSensingReport_Final.pdf)
[40] Marner, B. (2016) Emissions of Nitrogen Oxides from Modern Diesel Vehicles. (http://www.aqconsultants.co.uk/getattachment/Resources/Download-Reports/Emissions-of-Nitrogen-Oxides-from-Modern-Diesel-Vehicles-210116.pdf.aspx)
[41] Defra (2015) Draft plans to improve air quality in the UK Tackling nitrogen dioxide in our towns and cities UK overview document

subject to a charge or other restriction appropriate to the type of vehicle. Vehicle standards will be set based on emissions level for a vehicle type. This is to ensure that only the cleanest vehicles, including hybrid and vehicles using alternative fuels where appropriate, are encouraged to enter the area. The proposed emission standards, which take into account the higher emissions from diesel cars and light vehicles at each emission class, are as follows:

- Bus/coach – 0.4 g/kWh (Equivalent to Euro VI for NO_X emissions);
- HGV – 0.4 g/kWh (Equivalent to Euro VI for NO_X emissions);
- Van (1305-3500kg) – 0.125 g/km (Equivalent to Euro 6 for 1760-3500kg Diesel Light Commercial Vehicle); and
- Car/light commercial (up to 1305kg) – 0.08 g/km (Equivalent to Euro 4 petrol car and Euro 6 diesel car.

Speed control measures

Several local authorities around the UK including Edinburgh, Brighton, Southwark, Lambeth and Islington have reduced speed limits on the roads that they control in efforts to improve safety. This policy also has numerous other benefits, such as reducing noise, sharing road space more equitably between modes of transport, and making streets more pleasant. It has been suggested that reducing the speed limit in urban areas from 30 mph to 20 mph can also reduce emissions. The theory relating speed limits to emissions is that removing the acceleration which occurs between 20-30mph by limiting the speed limit to 20 mph and encouraging “smoother” driving will reduce fuel consumption, and therefore emission and consequently have a positive impact on air quality.

A study undertaken by Imperial College London on behalf of the City of London determined that NO_X emissions were lower from diesel vehicles travelling at 20 mph than those travelling at 30mph[42]. NO_x emissions from petrol vehicles are actually higher when travelling at 20mph. The results therefore highlight the importance of fuel type, engine and driving style in determining whether lower speed limits will have air quality benefits. However, the higher contribution of diesel vehicles to overall emissions of NO_X suggests that speed control measures could significantly reduce overall NO_X emissions. The policy also encourages walking and cycling by improving safety and making streets more pleasant and liveable, generating further emission savings.

Reducing emissions from buildings

As stated section 4.1, the IAQM/EPUK guidance[23] recommends the following emission standards for combustion plant at new buildings:

- All gas-fired boilers to meet a minimum standard of <40 $mgNO_X/kWh$;
- all gas-fired CHP Plant to meet a minimum standard of:
  - spark ignition engine: 250 $mgNO_x/Nm^3$;
  - compression ignition engine : 400 $mgNO_x/Nm^3$;
  - gas turbine: 50 $mgNO_x/Nm^3$.
- A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of:
  - Solid biomass boiler: 275 $mgNO_x/Nm^3$ and 25 $mgPM/Nm^3$.

The importance of maintaining combustion plant and equipment such as boilers to ensure that they are operating at their optimum efficiency to minimise harmful emissions has also been highlighted. Routine inspection and maintenance can ensure that efficiency is maintained. Where buildings are managed (for

[42] Transport and Environmental Analysis Group, Centre for Transport Studies, Imperial College London (2013) An evaluation of the estimated impacts on vehicle emissions of a 20mph speed restriction in central London

example through maintenance covenants, or the rental sector) building log books can also be reviewed to establish temperature set points for each room/floor to avoid unnecessary emissions.

Measures related to freight

Freight quality partnerships

Freight Quality Partnerships (FQPs) have been established across the country (e.g. Wiltshire and Swindon[43], Exeter[44] and Central London[45]) in order to develop an understanding of freight transport issues and problems, and then, to promote constructive solutions. FQPs are a partnership between the freight industry, local government, local businesses, the local community, environmental groups and others with an interest in freight.

Typical projects by FQPs include:

- Construction logistics plans;
- Delivery and servicing plans;
- Local mapping, signage and routing;
- Night-time deliveries; and
- Communications strategies.

FQPs offer the possibility of agreement of emission standards for construction and delivery/servicing vehicles to ensure that HDVs operating in an area emit less pollution.

Freight consolidation

Freight Consolidation Centres (FCCs) have been used at numerous locations across the country[46] to reduce the overall number of courier vehicles, reducing congestion and providing environmental benefits. The potential of switching high delivery/collection concentrations to zero emissions modes of transport has also been identified. High profile examples of Freight Consolidation Centres include the Meadowhall Centre in Sheffield, where over 50% of retailers use the scheme, and the Broadmead FCC in Bristol, with results indicating that participating retailers have benefitted from a 75% reduction in vehicle movements[47].

Transport for London (TfL) also provides recent examples of freight consolidation coupled with low emission delivery including the Gnewt Cargo scheme for Regent Street[48], waste consolidation at the Olympic Park (which reduced off-site vehicle movements by over 80%)[49] the Heathrow Consolidation Centre (which has brought about a 66% reduction in the number of vehicle movements to airport terminals)[50], and the consolidation centre for the London Boroughs of Camden, Enfield, Islington and Waltham Forest (which has brought about a 45% reduction in the total distance travelled by delivery vehicles)[51].

With regard to construction, the London Construction Consolidation Centre (LCCC) in Silvertown has been operating since September 2005. The pilot scheme showed significant transport and construction efficiency benefits, such as increased delivery reliability (98%), a reduction in vehicle trips to site and local emissions (of 75% each) and the potential to reduce site waste[52]. The LCCC has more than doubled in size in 2014

[43] Wiltshire and Swindon Freight Quality Partnership (FQP) http://www.wiltshire.gov.uk/parkingtransportandstreets/roadshighwaysstreetcare/transportfreight/freightqualityprtnershipwiltshire.htm
[44] Devon County Council Freight Quality Partnerships http://www.devon.gov.uk/index/transportroads/traffic/traffic_management/freight_quality_partnerships.htm
[45] Central London Freight Quality Partnership http://www.centrallondonfqp.org/
[46] TTR and TRL for the DfT (2010) Freight Consolidation Centre Study
[47] WSP for BCSC (2015) Freight Consolidation and Remote Storage
[48] TfL Freight. Going the Extra Mile http://content.tfl.gov.uk/going-the-extra-mile.pdf
[49] TfL Freight. Waste Consolidation: An Olympic tale of victory http://content.tfl.gov.uk/veolia-waste-case-study.pdf
[50] TfL Freight. Expansion of Consolidation at Heathrow http://content.tfl.gov.uk/heathrow-case-study.pdf
[51] TfL Freight. The London Boroughs Consolidation Centre – a freight consolidation success story http://content.tfl.gov.uk/lbbc-case-study.pdf
[52] TfL Freight. Building on the benefits of consolidation centres http://content.tfl.gov.uk/building-on-the-benefits-of-consolidation-centres.pdf

and is currently servicing 15 major construction projects in London[53]. Similarly, the One Hyde Park construction consolidation centre reduced construction vehicle movements by 66%[54]. Widespread adoption of such schemes can be promoted through:

- Construction clients requiring the consideration and/or use of consolidation through their contracts;
- Developers and contractors choosing to use consolidation for good practice and economic/productivity considerations;
- Encouraging construction consolidation through the planning process by using site construction plans, Construction Statements and transport assessments for construction and operational phases to minimise trips, contract deviation and waste; and
- Contract award criteria that encourage freight companies to actively demonstrate logistics best practice.

Fleet Operator Recognition Scheme (FORS)

The Fleet Operator Recognition Scheme (FORS) is an accreditation scheme that aims to improve fleet activity[55]. FORS applies to construction and other fleets. One of the aspects that fleet operators are audited upon is emissions. FORS is graduated into three levels enabling operators to demonstrate to customers and other companies the continuous improvement that they make to their fleets. Gold is the highest FORS award. To progress an operator must meet all the requirements of lower Bronze and Silver awards. To achieve the Gold Standard, operators must fulfil the following requirements related to their emissions:

- Performance measurement - make meaningful improvements against the FORS Silver and Bronze baseline data in the following performance indicators:
  - Total fuel usage and by distances travelled;
  - Transport related CO_2 output and by distance travelled;
  - Total incident and collision data and costs involving personal injury, vehicle or property damage; and
  - Total transport related fines and charges.
- Fuels and emissions champions - appoint individuals who are responsible for both the economic and environmental sustainability of the business

FORS estimate an 11% saving in fuel and emissions for scheme members and the City of London found between the financial years 2008/9 and 2009/10, there was a 16% reduction in emissions of CO_2, a 32% reduction in emissions of NO_X, and a 45% reduction in emissions of PM_{10} as a result of FORS[56].

Zero emission last mile

Light Goods Vehicles (LGVs) are responsible for a significant proportion of emissions. Delivery of goods and services by zero emission modes of transport has been identified as an important measure that can be used to reduce these emissions. This is the concept of zero emissions 'last mile' deliveries[57]. Such schemes have been used in other areas of the country. Diesel lorries are used to transport goods from suburban depots to micro-consolidation centres and onward delivery is made by electric vans and Cargocycles. For example, Outspoken Delivery operate in Cambridge, Glasgow and Norwich[58]. Gnewt Cargo evaluated the existing Office Depot deliveries to the City of London using diesel vans against a system of Cargocycles and electric

[53] Freight in the City (2015) London Construction Consolidation Centre doubles in size as contractors realise benefits - http://freightinthecity.com/2015/04/london-construction-consolidation-centre-doubles-in-size-as-building-works-boom-in-the-capital/
[54] TfL Freight. Consolidating Luxury Construction http://content.tfl.gov.uk/one-hyde-park-case-study.pdf
[55] FORS (2015) http://www.fors-online.org.uk/cms/what-is-fors/
[56] LLAQM Air Quality Action Matrix https://www.london.gov.uk/sites/default/files/air_quality_action_matrix.pdf
[57] CityAir (2015) http://www.cleanerairforlondon.org.uk/sites/default/files/business/CA4B%20Appendix%20VIV%20-%20Zero%20Emission%20Last%20Mile.pdf
[58] Outspoken Delivery http://www.outspokendelivery.co.uk/

vans for the final stage of delivery. The trial showed zero local air pollutant emissions were generated and the amount of space taken up by delivery vehicles dropped by 50%. This is now considered best practice in the City of London. London Bike Hub currently operates a cycle delivery service on behalf of Better Bankside with the support of Transport for London, providing businesses within the Bankside a zero emission delivery service[59].

Zero emission network

The Zero Emissions Network (ZEN) is a joint initiative between the London boroughs of Islington, Hackney and Tower Hamlets that helps businesses operate cheaper, cleaner and greener[60]. The scheme is designed to improve air quality and business efficiency within the 'ZEN' area. The ZEN project gives businesses exclusive access to offers to enable them to save money and reduce emissions. Offers include:

- Free business membership to city car clubs;
- Free trials of electric cars and vans;
- Free cycle workshops;
- Discounted 'Zero Emissions' taxi fares; and
- Free cycle training for all staff.

Minimising emissions from supply chain

The impact of the supply chain on carbon emissions is well documented, but the resulting emissions of NO_X and PM_{10} are often not considered in procurement policy decisions[61]. Key areas for consideration to reduce the emission profile of business include:

- Implementing a Sustainable Supply Chain Policy: Embedding air quality and sustainability into the supply chain, as well as reducing carbon emissions;
- Reducing Journeys & Emissions: Through consolidation and centralisation of deliveries, as well as adopting sustainable transport methods; and
- Energy, Waste and Water: Broker energy from 'green' sources, avoid using combustion technologies, centralise recycling and explore Materials Recycling Facilities (MRF).

Green Infrastructure

Green infrastructure can reduce exposure to pollution in two main ways[62]:

- Trees and vegetation can reduce air pollution directly by trapping and removing fine particulate matter or by direct absorption of gaseous pollutants; and
- Green corridors across towns can reduce pedestrian exposure to pollution by providing attractive routes away from major roads.

When considering green infrastructure to include in development proposals, it is important that beneficial impacts are maximised through the choice of appropriate species. With regard to trees, species that don't emit the most Volatile Organic Compounds (VOCs) that lead to ozone production[63], but do have large leaf surface areas have the best effect on air quality. Studies have shown that Scots pine (*Pinus sylvestris*), common alder (*Alnus glutinosa*), larch (*Larix spp*.), Norway maple (*Acer platanoides*), field maple (*Acer campestre*), ash (*Fraxinus excelsior*) and silver birch (*Betula pendula*) remove the most pollutants without contributing to the formation of new pollutants, whilst oaks, poplars and willows can have a detrimental effect

[59] London Bike Hub (2015) http://www.londonbikehub.com/betterbankside/
[60] Cleaner Air for London (2015) http://www.cleanerairforlondon.org.uk/zen
[61] CityAir (2015) http://www.cleanerairforlondon.org.uk/sites/default/files/business/CA4B%20Air%20Quality%20-%20Supply%20Chain.pdf
[62] Houses of Parliament (2013). Urban Green Infrastructure. Post Note No. 448. - http://www.parliament.uk/business/publications/research/briefing-papers/POST-PN-448/urban-green-infrastructure
[63] Treeconomics London (2015) Valuing London's Urban Forest Results of the London i-Tree Eco Project

on air quality through VOC formation[64]. Evergreen species also have provide year-round benefits[65]. The London i-tree Eco Project[63] estimated that trees remove 698 tonnes of NO_2 and 299 tonnes of PM_{10} per year in Greater London. Studies into shrubs have shown that plants with high hair density (e.g. Silverbush, *Convolvulus cneorum*) are most efficient at trapping particulate matter, but other species with larger plants (e.g. Ivy, *Hedera helix*) may trap more pollution per plant[66]. One study predicted that the use of green walls in street canyons can achieve reductions in street level NO_2 and PM_{10} concentrations of as much as 40% and 60% respectively, and also highlighted the importance of not restricting dispersion of pollutants through poorly considered tree planting[67].

[64] Centre for Ecology and Hydrology. University of Lancaster. Trees and Sustainable Urban Air Quality
[65] Woodland Trust (2012). Urban Air Quality
[66] Imperial College London, Shackleton. K., Bell. N., Smith, H., & Davies, L. The role of shrubs and perennials in the capture and mitigation of particulate air
[67] Pugh, T., Mackenzie, A, Whyatt, J and Hewitt, C. (2012). Effectiveness of Green Infrastructure for Improvement of Air Quality in Urban Street Canyons. Environ. Sci. Technol., 2012, 46 (14), pp 7692–7699

5. Case studies

5.1 Introduction

In 2015 case studies[68] were prepared to assess the potential impact of measures that could be applied to new development to reduce their impact. Case studies were prepared for two of the towns where the highest volume of new development were proposed, Crewe and Congleton, in order to determine the impact of possible development policies. To help inform the Low Emission Strategy, dispersion modelling was undertaken to quantify the maximum potential pollutant concentration reductions and consequent health benefits of the measures.

The case studies considered were:

- Provision of infrastructure to support the uptake of Electric Vehicles (EVs);
- Imposition of fuel type requirements; and
- Euro emission standard LEZs for developments.

The maximum potential impact of these scenarios, which would occur with full implementation of these policies in new developments, has been modelled in order to show the maximum potential benefits that the scenarios could provide. For this reason, it has been assumed that there will be 100% usage in the modelled scenarios

5.2 Modelling methodology

In order to test the maximum impact of the policies discussed above, future traffic data for Crewe and Congleton, including the developments proposed in the Local Plan, was obtained. The volume of traffic predicted to be generated by the Local Plan developments was determined. Emissions from this additional traffic was then added to the future baseline traffic flows under four different emission scenarios:

- Standard emissions scenario: using the standard vehicle type, fuel and emission class assumptions incorporated in the Defra Emissions Factor Toolkit;
- EVs scenario: assuming that all car journeys generated by the Local Plan developments are in battery powered EVs;
- Euro 6 scenario: assuming that all car journeys generated by the Local Plan developments are in cars (petrol and diesel) with Euro 6 engines; and
- Petrol scenario: assuming that all car journeys generated by the Local Plan developments are in petrol fuelled cars.

Annual average concentrations in air of NO_X and PM_{10} and $PM_{2.5}$ were calculated using the ADMS-Roads version 3.2.4.0 atmospheric dispersion model[69]. Emissions were calculated using the latest emissions factors from Defra, the Emission Factor Toolkit v6.0.2[70], which is used to predict emissions which are imported into ADMS-Roads. Results from EVs, Euro 6 and Petrol scenarios were compared to the results of Defra Standards scenario to evaluate the maximum effect of changes in policies. The results of the assessment were also compared with the AQOs to assess whether the proposed development will be located in an area where the AQOs may be exceeded.

[68] Amec Foster Wheeler (2015) Cheshire East Low Emission Strategy Case Study Report
[69] www.cerc.co.uk/environmental-software/ADMS-Roads-model.html
[70] http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft

5.3 Case study results

Provision of electric vehicle infrastructure

When all car movements generated by the Local Plan developments are assumed to be EVs, NO_2 concentrations in the centre of Crewe and Congleton were predicted to be up to 7-10% lower than when applying the Defra standard fleet assumptions. Concentrations were predicted to be up to 2 µg m^{-3} lower than in the future baseline scenario in Crewe and up to 7 µg m^{-3} lower than the future baseline scenario in Congleton. PM_{10} and $PM_{2.5}$ concentrations in Crewe and Congleton were predicted to be between 0.2% and 0.9% lower than when applying the Defra standard fleet assumptions.

Enforcement of Euro 6 emission standards

When all car movements generated by the Local Plan developments are assumed to be in Euro 6 standard vehicles, NO_2 concentrations in the centre of Crewe and Congleton were predicted to be up to 3-4% lower than when applying the standard fleet assumptions. Concentrations were predicted to be up to 0.9 µg m^{-3} lower than in the future baseline scenario in Crewe and up to 2.6 µg m^{-3} lower than in the future baseline scenario in Congleton. PM_{10} and $PM_{2.5}$ concentrations in Crewe and Congleton were predicted to only be between 0.1% and 0.5% lower than when applying the Defra standard fleet assumptions.

Specification of fuel type (petrol)

When all car movements generated by the Local Plan developments are assumed to be only in petrol fuelled vehicles, NO_2 concentrations in the centre of Crewe and Congleton were predicted to be up to 6-8% lower than when applying the standard fleet assumptions. Concentrations were predicted to be up to 1.8 µg m^{-3} lower than in the future baseline scenario in Crewe and up to 5.2 µg m^{-3} lower than in the baseline scenario in Congleton. PM_{10} and $PM_{2.5}$ concentrations in Crewe and Congleton were predicted to only be between 0.2% and 0.7% lower than when applying the standard fleet assumptions.

5.4 Health benefits

Calculations based on these modelling results indicated that the total number of deaths per year in Crewe and Congleton attributable to particulate pollution would fall only marginally as a result of the three measures (EVs, Euro 6 or Petrol) modelled.

The health benefits of the changes in NO_2 concentration were more significant due to the larger predicted changes in concentration. The calculations detailed in the Case Study Report[68] indicated that the total number of deaths per year in Crewe attributable to NO_2 pollution would fall from 38.8 to 35.6 as a result of the most effective measure modelled, the EVs scenario. The number of deaths per year in Congleton attributable to NO_2 pollution would fall from 20.2 to 16.8. This corresponds to a total saving of around 32.4 life years in Crewe and 35.5 life years in Congleton.

5.5 Economic benefits

The economic benefit of these emission scenarios, which theoretically could be implemented with little cost to CEC as they would be incorporated into individual development plans, were calculated using the Defra Interdepartmental Group on Costs and Benefits (IGCB) damage cost approach[33]. This produces estimates of the costs to society of the likely impacts of changes in emissions. The IGCB Air quality damage cost for NO_X is £25,252 per tonne and is £58,125 per tonne for PM for transport, as shown in Table 4.3.

The most beneficial scenario, the EV scenario, is predicted to save 1.47 tonnes of NO_X emissions and 0.01 tonnes of PM emissions across the modelled area in Crewe per year and 1.28 tonnes of NO_X emissions and 0.01 tonnes of PM emissions across the modelled area in Congleton per year. This equates to an economic benefit of up to £37,982 per year in Crewe and up to £33,029 per year in Congleton in damage costs that would not be incurred.

6. Recommended policies

Based on the preceding sections, the following policies are recommended for implementation as the Low Emission Strategy for CEC. These are divided into three sections: policies which can be applied at the planning stage of new developments (and may also be appropriate for existing areas); policies that relate to the movement of freight; and policies that will help to reduce emissions during the construction of new developments. Based on the case study results, it is recommended that measures which incentivise the uptake of LEVs and encourage modal shift away from reliance on the private car should be prioritised and that the same measures should apply to all developments, rather than applying differential measures. This approach avoids the accumulation of multiple insignificant negative impacts that may then result in a combined significant impact.

Table 6.1 Recommended planning policies

No.	Policy Area	Recommended Policy	Rationale
1	**Transport**	To minimise demand for travel by private motor vehicles and encourage transport by low emission modes, development proposals should: - be located so as they are accessible to local services and facilities by a range of transport modes; - include appropriate provision for access to public transport and other alternative means of transport to the car, which may involve supporting increased bus frequencies/routes; - seek to maximise use of sustainable (low carbon) modes of transport and improve health and wellbeing by incorporating high quality facilities for pedestrians, cyclists and public transport; - seek to reduce reliance on individual-owned cars by supporting the use of car clubs (particularly those using LEVs); and - include travel plans to promote the benefits of walking and cycling and associated measures, and encourage a reduction in the proportion of single occupancy car trips.	The CEC Local Plan Strategy[71] and Local Transport Plan[72], contain a number of policies that relate to the reduction of the need to travel, the reduction of emissions and the encouragement of walking and cycling. These policies should be supported by the LES. Developments should seek to maximise use of sustainable (low carbon) modes of transport and improve health and wellbeing by incorporating high quality facilities for pedestrians, cyclists and public transport.
2	**Parking**	CEC parking standards will be strictly enforced. This means that parking spaces in Principal towns and Key Service Centres will be restricted. This will help to reduce the traffic impacts of new developments as far as possible. CEC will also consider the feasibility of tightening parking standards in areas where there are air quality issues. To encourage the uptake of electric vehicles in the CEC area, 1 Electric Vehicle (EV) "rapid charge" point will be provided per 10 residential dwellings and/or 1000m^2 of commercial floorspace. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be provided. Development proposal should also consider: - Discounted on- and off-street parking for LEVs; - Dedicated LEV parking (not including recharging);	CEC has adopted a range of parking standards for the Borough. The standards applied to particular areas depend on the access to public transport facilities. These parking standards should be strictly adhered to in order to reduce the traffic impacts of new developments as far as possible. IAQM/EPUK 2017 guidance[23] states that development proposals should support the transition to LEVs by including the provision of at least 1 Electric Vehicle (EV) "rapid charge" point per 10 residential dwellings and/or 1000m^2 of commercial floorspace, and where on-site parking is provided for residential dwellings, EV charging points should be provided for each parking space.

[71] Cheshire East Local Plan (2014) http://www.cheshireeast.gov.uk/planning/spatial_planning/cheshire_east_local_plan/local_plan_strategy.aspx
[72] Cheshire East Local Transport Plan (2014) http://www.cheshireeast.gov.uk/public_transport/local_transport_plan/local_transport_plan.aspx

No.	Policy Area	Recommended Policy	Rationale
		- Discounted residential parking permits for LEVs; - Reduced waiting time for parking permits for LEVs; - Reduced parking spaces for high emission vehicles; and - Dedicated parking for LEV car club vehicles.	
3	**Low Emission Vehicle (LEV) Infrastructure**	CEC will work with private hire and other commercial operators such as car clubs to understand their needs for rapid and other charging infrastructure and ensure that their requirements are included in development proposals. To encourage the uptake of LEVs CEC will work with public charging networks to help deliver a reliable, well located network of charging points. Other options will be considered to encourage the uptake of LEVs, including: - Discounted parking for LEVs; - Discounted residential parking permits for LEVs; - Reduced fees for taxi and private hire licenses for using LEVs; - Business support for enterprises seeking to use LEVs; - Educational and promotional activities surrounding LEVs; - Dedicated parking for LEV car club vehicles; - Workplace parking levy; - Dedicated LEV taxi ranks; - Rebates/incentives for LEV taxi purchase; - Discounted parking fees at park and ride sites; and - Planning conditions in development frameworks.	Case studies in the CEC area have demonstrated noticeable reductions in NO_2, PM_{10} and $PM_{2.5}$ through the introduction of LEV infrastructure. To have a wider impact, it is recommended policies are implemented to support the uptake of LEVs. As the local planning authority, CEC will play an active role in discussions to ensure that the area has the necessary LEV infrastructure.
4	**Traffic**	In order to reduce emissions from motorised vehicle traffic and encourage walking and cycling by improving safety and making streets more pleasant and liveable, all local roads in new development areas should have a speed limit of 20mph.	Many local authorities are reducing speed limits in built-up areas from 30mph to 20mph. The potential for this measure to reduce emissions by reducing acceleration has been identified, as have numerous other benefits, such as improving safety, reducing noise, sharing road space more equitably between modes, and making streets more pleasant.
5	**Clean Air Zone (CAZ)**	CEC will investigate the feasibility of designating CAZ's covering major towns. Potential benefits of non-charging CAZ's and charging CAZ's will be explored and implemented as appropriate. CEC will investigate the feasibility of designating major new developments as Class C CAZs to encourage the use of the cleanest buses, coaches, taxis, HGVs and LGVs. Incoming companies and organisations operating in the area will only be permitted to receive deliveries and send freight using HGVs that are Euro VI or better, diesel or light commercial vehicles that are Euro 6 or better and petrol vans or light commercial vehicles that are Euro 4 or better. Bus companies operating routes into these new areas will be required to use buses that are Euro VI or better, and taxis operating from the area should be Euro 6 or better (diesel) or Euro 4 or better (petrol).	The December 2015 Defra action plan to improve air quality and meet the EU NO_2 limit values set out in the Ambient Air Quality Directive introduces the concept of CAZs to encourage the cleanest vehicles. Four classes of access control are defined according to the types of vehicles which must meet the standards specified. In view of the infrastructure requirements for a CAZ covering all vehicle types and the minimal benefits identified in the case study of emission standards for cars, it is considered that Class C (Buses, coaches, taxis, HGVs and LGVs) CAZs are established on major developments through agreement with the relevant stakeholders.
6	**Energy**	To make the CEC area an exemplar of low emission development, boilers, CHP and biomass systems	IAQM/EPUK guidance[23] recommends emission standards to reduce emissions from buildings in

No.	Policy Area	Recommended Policy	Rationale

		proposed in individual developments should meet the tightest emissions standards detailed in IAQM/EPUK guidance[23];
		- All gas-fired boilers to meet a minimum standard of <40 mgNO_X/kWh.
		- All gas-fired CHP plant to meet a minimum standard of:
		  - Spark ignition engine: 250 mgNOx /Nm^3;
		  - Compression ignition engine : 400 mgNOx /Nm^3;
		  - Gas turbine: 50 mgNOx /Nm^3.
		- A presumption should be to use natural gas-fired installations. Where biomass is proposed it should meet the minimum emissions standard of 275 mgNOx /Nm^3 and 25 mgPM/Nm^3
		Development building design should be optimised to ensure adequate dispersion of emissions from discharging stacks and vents.
			proposed developments.
			The importance of maintaining combustion plant and equipment such as boilers to ensure that they are operating at their optimum efficiency to minimise harmful emissions has been highlighted by the IAQM. Routine inspection and maintenance can ensure that efficiency is maintained.

7	**Master-planning**	Developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion. In particular, bus and taxi facilities should be designed to avoid the build-up of pollution. New developments should also provide adequate, appropriate, and well located green space and infrastructure to help reduce pollutant concentrations and deliver public spaces that encourage walking and cycling. Where possible, evergreen tree species should be planted for the year-round benefits that they provide and species such as oaks, poplars and willows that produce VOCs should be avoided. Care should be taken to avoid reducing dispersion of pollutants through tree planting. Green walls should be used where possible to reduce pollution, and would be particularly beneficial in the most polluted areas.	IAQM/EPUK guidance[23] states that "wherever possible, new developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion". Research has been carried out into the species that provide the largest air quality benefits, and the use of these species should be prioritised.
8	**Exposure**	Development proposals should not increase the area of exceedance of EU established health-based standards and objectives for NO_2 and PM_{10}. Where new developments are introduced into area where the standards and objectives are exceeded, developments should be designed to minimise and mitigate against increased exposure to poor air quality. This can be achieved through internal arrangement and good design to create distance between the source and receptors. As a last resort, and where the requirement for the housing is considered essential the incorporation of a ventilation strategy to ensure that polluted air is not drawn into the development. Any air intakes located away from the main source of air pollution to minimise increased exposure to poor air quality.	As there are existing exceedances of EU established health-based standards and objectives for NO_2, care should be taken to ensure that developments should not increase the area of exceedance. It is recognised that some development will occur in areas where the standards are exceeded. Developments should be designed to reduce exposure to pollutant concentrations above the objectives to protect the health of future residents and receptors.
9	**Development Management**	CEC will develop an SPD to regulate emissions and mitigate impacts of developments based on their size and the type of development. It will provide advice on how to classify the development; assess and quantify the impact on local air quality; and determine the level of mitigation required.	Over recent years, a great deal of research and consideration has gone into the development of the design principles and policies to improve Air Quality. SPDs are a useful tool for Development Control departments and developers. Various air quality SPDs have been produced by local authorities which provide good models (e.g. West Yorkshire, Mid Devon District).

No.	Policy Area	Recommended Policy	Rationale
10	**Assessment**	In accordance with the IAQM/EPUK guidance[23], developers will be required to produce an air quality assessment which should be submitted with the planning application to demonstrate that air quality has been considered and the appropriate standards have been adhered to. The air quality assessment should include the following: - Relevant details of the proposed development; - The policy context for the assessment; - Description of the relevant air quality standards and objectives; - The basis for determining significance of effects arising from the impacts (typically using IAQM/EPUK criteria); - Details of the assessment methods. Typically air quality dispersion modelling is carried out to predict the impact of the development and the pollutant concentrations to which introduced receptors would be exposed; - Model verification (when modelling of road traffic emissions is undertaken); - Identification of sensitive locations; - Description of baseline conditions using existing air quality monitoring and/or modelling data; - Assessment of impacts; - Cumulative impacts and effects; - Mitigation measures, to reduce exposure or the impact of the development, where significant effects are identified; and - Summary of the assessment results.	Assessment is required to demonstrate that the relevant policies have been incorporated into the development design and ensure that appropriate mitigation is included to reduce exposure where necessary.
11	**Damage Cost Calculations**	Where significant impacts from the operational phase of a proposed development are predicted in the air quality assessment, CEC may request contributions (via a section 106 agreement or through Community Infrastructure Levy (CIL)) from developers to support projects to improve air quality and mitigate the impacts. Alternatively the developer may seek to apportion funding (as calculated through the Damage Costs Calculations) to deliver on-site mitigations. Contributions will be calculated through the Damage Cost approach, with the procedure detailed in an SPD.	It is recommended that the value and scale of mitigation requirements for developments is calculated using the Damage Cost approach. The damage cost approach provides a transparent, simple method for calculating costs using the Defra damage costs, the cost to society of a change in emissions of different pollutants, and calculation of the additional emissions generated by the proposal. This method applied in isolation does risk penalising developments on empty sites, even when they have been well designed, as all emissions will be additional and incur costs. Development on empty sites that has been designed in order to minimise emissions should be encouraged. Therefore, subject to agreement with CEC, the cost of measures incorporated into the development design can be used to offset damage costs.

Table 6.2 Recommended Freight Policies

No.	Policy Area	Recommended Policy	Rationale
1	**Freight Quality Partnership**	To help in the development of servicing and delivery plans which highlight the benefits of transporting freight by rail, CEC will investigate the feasibility of creating a Freight Quality Partnership (FQP) that will be compulsory for any organisation operating HDVs in the area. This will include a Zero Emissions Network (ZEN) to help local businesses reduce the emissions associated with their activities. This will incentivise zero emission modes of transport and delivery and involve micro-consolidation of freight. Advice on minimising emissions from the supply chain to reduce the emission profile of local businesses by embedding air quality and sustainability into their supply chains would also be provided.	FQPs have been established across the country to promote solutions to freight issues and problems. This will enable innovative solutions to pollution issues generated by freight movement to be considered, including those that make smart use of data. The CEC Local Transport Plan[73] highlights the potential to capitalise on the growth in rail freight and the rail connectivity of Crewe and Middlewich. The Zero Emission Network idea is already in operation in several local authorities. It provides a means to encourage businesses to reduce their emissions.
2	**Freight Consolidation**	To minimise the impact of emissions from vehicles delivering and collecting freight, for major developments, CEC will encourage the establishment of Freight Consolidation Centres (FCC) that will facilitate undertaking the final stage of delivery by zero emission vehicles.	FCCs have been used at numerous locations across the country to reduce the overall number of courier vehicles, reducing congestion and providing environmental benefits.
3	**Fleet Operator Recognition Scheme (FORS)**	Through the FQP, CEC will investigate the feasibility of incentivising operators of freight vehicles operating in the area to attain the Gold FORS accreditation so that they have made proven efforts to reduce emissions.	The FORS is an accreditation scheme that aims to improve fleet activity and includes consideration of emissions.

Table 6.3 Recommended Construction Policies

No.	Policy Area	Recommended Policy	Rationale
1	**Freight, Delivery and Servicing**	To minimise emissions during the demolition and construction phase, development proposals should: - Make maximum use of rail and water transport during the construction period, including removal of excavated material, and for servicing and deliveries; - Co-ordinate and phase construction projects to enable the transport impacts to be effectively managed; - Manage servicing and deliveries in line with best practice to minimise the impact on the surrounding road network; - Support the provision and operation of measures to reduce freight trips and promote cleaner vehicles (e.g. consolidation centres); and - Ensure that the operators of all freight vehicles operating in the area have attained the Gold FORS accreditation so that they have made proven efforts to reduce emissions.	Vehicles transporting materials and equipment during the construction of major developments can significantly increase localised emissions. Construction should be planned so that emissions are reduced as far as possible.

[73] Cheshire East Local Transport Plan (2014)
http://www.cheshireeast.gov.uk/public_transport/local_transport_plan/local_transport_plan.aspx

2	**Control of Dust**	Developers and contractors should follow the guidance set out in the *IAQM guidance on the assessment of dust from demolition and construction*[25] when drafting their construction plans and measures to minimise air pollution during the demolition and construction process recommended in this document should be implemented.	*The IAQM guidance on the assessment of dust from demolition and construction*[25] seeks to reduce emissions of dust, PM_{10} and $PM_{2.5}$ from construction and demolition activities from new developments. It sets out the methodology for assessing the air quality impacts of construction and demolition and identifies good practice for mitigating and managing air quality impacts that is relevant and achievable, with the over-arching aim of protecting public health and the environment. This document should be followed for developments in the CEC area.
3	**Non-Road Mobile Machinery**	Wherever possible, renewable, mains or battery powered plant items should be used on construction sites. NRMM of net power between 37kW and 560kW used on any site will be required to meet Stage II of the Directive 97/68/EC as a minimum. This will apply to both variable and constant speed engines for both NO_X and PM. From 2020 NRMM used on any site will be required to meet Stage IIIA of the Directive as a minimum.	NRMM used in demolition and construction is a significant source of pollution. Diesel or petrol powered plant items emit higher levels of PM and NO_X than electric equivalents. Therefore, wherever possible, renewable, mains or battery powered plant items should be used.
4	**Assessment**	An assessment of the impact on air quality of the development during the construction phase should be carried out in order to inform detailed mitigation methods for controlling dust and pollution emissions in line with the *IAQM 2014 guidance*[25] *on the assessment of dust from demolition and construction*	The IAQM 2017 guidance[25] sets out the methodology for assessing the air quality impacts of construction and demolition and identifies good practice for mitigating and managing air quality impact. Assessment is required to demonstrate that potential impacts have been considered and suitable measures have been incorporated into the Construction Environmental Management Plan (CEMP).
5	**Monitoring**	All demolition and construction sites should be monitored for the generation of air pollution. PM_{10} monitoring should be carried out at medium and high risk sites.	The IAQM 2017 guidance[25] sets out the monitoring requirements for new developments. Monitoring best practice should be applied. This means that PM_{10} monitoring should be carried out at medium and high risk sites.

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Cheshire East Council

Environment & Regeneration Overview and Scrutiny Committee

Date of Meeting: **17 September 2018**

Report of: Frank Jordan, Executive Director of Place

Subject/Title: Local Transport Plan – Consultation Feedback

Portfolio Holder: Cllr Don Stockton – Environment

1. Report Summary

1.1 This report outlines outcomes and progress following the consultation for the updated Local Transport Plan (LTP) for Cheshire East. The updated LTP will provide a policy framework for transport across the Borough and guide investment in the local transport network. From the 1st May to 25th June 2018 the updated LTP went through a public consultation, as agreed at Cabinet in March 2018. This report outlines the key outcomes from the consultation.

1.2 The LTP profiles transport and infrastructure needs within the Borough also proposes actions necessary at the local level in respect of sub-regional, regional and national infrastructure programme where these relate to the Borough. Key examples of this include: HS2; Highways England and Network Rail investment programmes; and Transport for the North and Midlands Connect investment programmes.

1.3 The LTP strategy and associated Local Area Profiles were published for a period of public consultation, which commenced on 1st May 2018. The consultation sought the views of residents and stakeholders on the strategic framework for local transport, to inform further development of both the strategy and associated delivery plans.

1.4 The approach to community engagement was informed by the Council's best practice guidance from the Corporate Research and Consultation Team.

1.5 The consultation overlapped with a consultation being held jointly with Stockport Borough Council on an update of the South East Manchester Multi-modal Strategy (SEMMMS), from the 21st May to the 16th July. The outcomes of the consultation will inform production of a fully updated LTP for Cheshire East, which will be considered at Cabinet and then Council in January 2019.

1.6 The consultation was publicised through the Cheshire East Council website, direct emailing, information brochures, press releases and questionnaires. The questionnaires could be filled out online and also hard copies were available at libraries in key service centres and information points (14 locations). Brochures were also available and posters displayed at these locations. Town and Parish Councils were emailed at the beginning of the consultation and ahead of their local drop-in event. The consultation was also publicised through social media such as Facebook and Twitter through the Cheshire East Council and Travel Cheshire accounts. The tweets from both Twitter accounts had a total of 60,718 impressions. Two all member briefings have also been undertaken.

1.7 Twelve drop-in sessions were also held throughout Cheshire East, a total of 195 people attended. Paper copies of the questionnaire and brochure were made available at these events. Staff were also in attendance to answer questions on the strategy. Additional posters were distributed at local shops, information points and bus stops on the day of the drop-in events. Appendix 1 details further the consultation materials distributed and contacts emailed.

1.8 A total of 261 responses were received by close of the consultation. A further 37 responses were sent in via e-mail and 16 other responses were received (including letters, a petition and enquiry forms).

1.9 The demographic analysis shows the representation of who responded to the consultation. Officers reached out to equality champions within the Council to seek forums and groups to contact and engage with during the consultation. Bus users were well engaged in the consultation, as half of respondents said their main mode of travel through Cheshire East was bus. Despite engagement with the Youth Support Service, responses from those aged 16-24 were limited, accounting for 2% of responses. However, the LTP has drawn on the consultation and feedback from the SMOTS strategy. Over 65s accounted for 45% of responses.

1.10 The new LTP4 strategy has developed a comprehensive set of actions to address the strategic transport challenges for Cheshire East, namely:

- Supporting growth and economic strength through connectivity
- Ensuring accessibility to services
- Protecting and improving our environment
- Promoting health, wellbeing and physical activity
- Maintaining and managing our network assets
- Improving organisational efficiency and effectiveness

The majority of the respondents agreed with all the challenges listed above (78% of more agreed with each challenge).

1.11 Key themes from consultation feedback include:

- Buses – reliability/efficiency, lack of services and cuts

- Poor punctuality of rail services
- Pollution and air quality
- Congestion and traffic problems
- Car Parking for access to services
- Integration of SEMMMS and LTP
- Integrated modes of Travel
- Road Maintenance
- Importance of sustainable travel

1.12 The Consultation Summary Report is provided (as Appendix 1) which details the responses to the consultation further. In addition, a high level summary of the key responses to themes raised during the consultation is provided at Appendix 2. It is expected that these will be fully developed during finalisation of the LTP for Cabinet.

2. Recommendations

2.1 The Overview and Scrutiny committee is recommended to:

2.1.1 Note the outcomes of the consultation to be updated in the LTP Strategy for Cheshire East.

2.1.2 Agree any comments that the Committee wishes to make known to Cabinet when this matter is considered.

3. Reasons for Recommendation

3.1. Following the LTP consultation, the response to the consultation should be taken into account in a revision of the LTP Strategy.

3.2. It is therefore important to test the fairness of the Council's approach by way of consultation on any changes which would have the effect of withdrawing existing benefits or advantages available to its residents. Such consultation should involve those directly affected by such changes together with the relevant representative groups. The responses to the consultation need to be conscientiously taken into account when Cabinet makes any future decisions on the Local Transport Plan.

4. Other Options Considered

4.1. There is no statutory duty to consult on proposals to change the way in which a local authority carries out its duties but there is an expectation enshrined in case law that any local authority making decisions affecting the public will do so fairly and in a way that cannot be said to be an abuse of power.

5. Background

5.1. The current LTP3, as published in 2011, was intended to be a framework for strategic transport planning in Cheshire East. The plan was prepared at a

time when Government foresaw limited investment in local transport infrastructure, especially major projects, leading to the Cheshire East LTP3 being outdated. There is a need to update the LTP to reflect the Council's accelerated investment in transport infrastructure across Cheshire East, in the context of a new Local Plan spatial strategy to ensure that the Council maintains a document that is robust and relevant to local priorities.

5.2. The Council has set out a clear vision and strategy for jobs-led economic growth in the new Local Plan. Successful delivery of this growth will require a comprehensive and integrated approach to improvements in local transport provision across the Borough, through development of both transport infrastructure and transport services. The LTP brings together strategies for all modes of transport to ensure there is a coherent approach to meeting the Council's wider objectives for the economy, environment and society throughout Cheshire East.

5.3. Local transport provision needs to be considered in the context of a number of recent and emerging changes that have potential impacts on Cheshire East, including;

- Cheshire East Council's refreshed corporate objectives and adoption of the principles of 'Quality of Place' as a key driver of strategy.
- Further progress on the new Local Plan which defines a forward-looking spatial strategy for the Borough and has subject to a favourable Planning Inspectors report.
- Development of a number of specific local transport strategies, including the new Cheshire East Cycling Strategy and Sustainable Modes of Travel to School Strategy.
- Development of new infrastructure programmes by Highways England and Network Rail.
- Emerging evidence and strategy at the sub national level under the auspices of both Transport for the North and Midlands Connect.
- On-going work at the regional level to develop the Strategic Economic Plan and support this through LEP-wide strategies for rail and strategic road investment in both infrastructure and services.
- Progress on neighbouring authorities spatial and economic strategies, notably the new Greater Manchester Spatial Framework, with implications for the north of the Borough and the need for an update to the South East Manchester Multi Modal Study.
- New legislation in the Buses Act 2017, which conveys new powers to Local Transport Authorities for Enhanced Quality Partnerships.
- Adoption of Neighbourhood Plans within Cheshire East, which help to define local expectations and concerns regarding transport provision, including local parking issues.
- The Council's Medium Term Financial Strategy requires the Council to increase revenue and increase value for money.
- Long term plan led programmes such as HS2 and the Constellation Partnership growth strategy.
- Government's new Clean Air Zones Framework.

- Impacts and opportunities relating to innovative technology through the wider adoption of smart solutions.
- The requirements for active lifestyles, accessibility and wellbeing of an ageing population.
- A need to support businesses in Cheshire East to promote sustainable transport and manage travel demands by car, thus reducing the pressures on parking.

5.4. All of these considerations raise potential implications and opportunities for local transport within Cheshire East. In order to ensure that the Council has a clear, evidence-based position on these matters there is a need for them to be considered as part of the refreshed Local Transport Plan.

5.5. There has been active engagement with Town and Parish Councils representing the key local service centres throughout the Borough. This has informed preparation of a set of Local Area Profiles which detail specific transport challenges and opportunities for each locality. These profiles have been produced through close cooperation with relevant Neighbourhood Planning groups to draw on relevant evidence and knowledge in Town/Parish Councils, Cheshire East Ward Councillors and residents/stakeholders in local communities. This approach to each of the local services centres is consistent in the proposed High Level Parking Strategy, and town parking studies will be prepared for all 11 local centres during the early years of the LTP strategy. It is considered that the 2018/19 priorities for completion of parking studies, based upon evidence of manifest parking pressures, include Sandbach and Wilmslow.

5.6. The Local Transport Plan will be a statutory document maintained by Cheshire East Council in its role as the Local Transport Authority. The 8-week consultation period included:

- Borough-wide circulation of consultation materials through libraries, customer contact centres and other key venues
- Web-based consultation questionnaires to enable feedback on the draft document
- Staffed drop-in sessions for face-to-face discussion in each of the 12 main towns and local service centres.
- Media releases, including social media, to publicise the consultation.

6. Wards Affected and Local Ward Members

6.1. All Wards in Cheshire East

7. Implications of Recommendation

7.1. Policy Implications

7.1.1. An updated Local Transport Plan will ensure that the Council maintains a current statement of Local Transport Strategy in accordance with its responsibilities as the Local Transport Authority.

7.1.2. Development of the LTP4 has been undertaken to ensure there is a consistent policy-fit with all relevant adopted and emerging local policies including: Education Travel Policy; 'Sustainable Modes of Travel to School' strategy; and car parking strategy.

7.1.3. A public consultation has been undertaken in order to understand public and stakeholder opinions on the LTP. Feedback will inform updates to the LTP strategy before going to Cabinet.

7.2. **Legal Implications**

7.2.1. As the statutory Local Transport Authority the Council is required to maintain an up-to-date Local Transport Plan that provides a strategic framework for planning and delivery of improvements in local transport provision.

7.2.2. Development of the new Local Transport Plan will need to be in accordance with statutory and legal requirements for Community Engagement, Equalities Impact Assessment and Strategic Environmental Appraisal.

7.2.3. Members must be fully aware of, and have themselves rigorously considered, the equalities implications of the decisions they are taking. This will ensure that there is proper appreciation of any potential impact of any decision on the Council's statutory obligations under the Public Sector Equality Duty. As a minimum, this requires decision makers to read and carefully consider the content of any Equality Impact Assessments produced by officers.

7.2.4. There is no statutory duty to consult on proposals to change the way in which a local authority carries out its duties but there is an expectation enshrined in case law that any local authority making decisions affecting the public will do so fairly and in a way that cannot be said to be an abuse of power.

7.2.5. It is therefore important to test the fairness of the Council's approach by way of consultation on any changes which would have the effect of withdrawing existing benefits or advantages available to its residents. Such consultation should involve those directly affected by such changes together with the relevant representative groups. The responses to the consultation will need to be conscientiously taken into account when Cabinet makes any future decisions on the Local Transport Plan.

7.3. **Financial Implications**

7.3.1. There are no direct financial implications of the Committees consideration of this report.

7.3.2. Upon completion and adoption by the Council, the LTP4 will provide a policy framework to inform the annual capital programme for transport. The LTP4 will be implemented utilising applicable funding from a range of sources including: LTP Integrated Transport Block funding; Community Infrastructure Levy; Section 106 & 278; the Council's capital and revenue programmes, one-off funding programmes and external funding.

7.4. **Equality Implications**

7.4.1. An Equalities Impact Assessment has been completed for the LTP to ensure that the needs and impacts on all residents are understood, especially individuals or groups with identified protected characteristics. This will be an evolving document until adoption of the LTP4. The document will be updated following the consultation to incorporate comments from all residents.

7.4.2. The Equalities Impact Assessment notes that the LTP4 has been designed to support delivery of the Council's outcomes stated in the 2016 Corporate Plan, which aim to achieve the best outcomes for all local residents.

7.4.3. The LTP4 strategy provides a strategic framework for a range of schemes and investment for the future. As such future work will be conducted to implement schemes and investment programmes. Further Equality Impact Assessments will be undertaken for specific schemes and investment programmes as they come forward.

7.5. **Rural Community Implications**

7.5.1. 57% of the Cheshire East highway network is classed as rural serving over half of our population. The quality and availability of the rural transport network is vital to the local economy, not just in rural areas. Rural transport provision needs to take account of the needs of rural residents and visitors, enabling rural areas to be well-connected to services and opportunities. The extent of rural connectivity has a direct impact on the Borough's overall 'Quality of Place'.

7.5.2. The LTP includes detailed consideration of transport issues in rural areas throughout the Borough. In principal, the policy objectives and issues highlighted in the Plan apply throughout the Borough, including all of our rural areas. However, it is also recognised that there can be specific challenges that are of heightened importance in rural areas. Consideration of these is aided by the place-based approach to the planning process. This has put greater emphasis on how our key towns act as service centres which must be accessible to residents of rural issues. As part of the place-based approach, we have prepared a specific Local Area Profile within the plan focussing on the challenges and opportunities arising in our Rural Areas. This section of the LTP will also be updated with feedback from the consultation.

7.6. **Human Resources Implications**

7.6.1. None

7.7. **Health and Wellbeing Implications**

7.7.1. The LTP4 considers the impact of transport on issues affecting public health, most notably Air Quality and the contribution that Active Travel – walking and cycling – can make to health & wellbeing. The Plan is coordinated with the Council's wider strategic approaches to addressing public health outcomes. Officers from the Public Health service are engaged in production of the strategy. The LTP4 also proposes actions to improve accessibility to services (particularly health services) in the context of an ageing and rural population.

7.8. **Implications for Children and Young People**

7.8.1. Specific transport issues relating to children and young people are incorporated into the LTP4. Strategy development has taken full account of the Council's current work on a new draft Compulsory School Age Education Travel Policy and the emerging Sustainable Modes of Travel to Schools (SMOTS) strategy.

7.9. **Overview and Scrutiny Committee Implications**

7.9.1. The Local Transport Plan update is relevant to the work programme of the Environment and Regeneration Overview and Scrutiny Committee. It is proposed that the Scrutiny Committee is requested to consider a report on the final LTP Strategy for adoption by the Council in early 2019.

7.10. **Other Implications (Please Specify)**

7.10.1. None

8. Risk Management

8.1. A Project Board has been established chaired by the Director of Infrastructure and Highways to ensure appropriate project governance and strategic direction.

8.2. Officer steering groups from both the Place and the People Directorates have been convened to inform the production of the new LTP. This approach ensures that relationships with policies in other service areas are fully understood.

9. Access to Information

9.1. The background papers relating to this report can be inspected by contacting the report writer.

Documents are held on file at:
\\ourcheshire.cccusers.com\East\LTPEast\LTP Rewrite 2017\Briefing Notes

10. Contact Information

Contact details for this report are as follows:

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List of Appendices

Appendix 1 – Consultation Report
Appendix 2 – Consultation Summary

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Cheshire East Council

Local Transport Plan

Summary of results

Production date: September 2018

Report produced by:

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Introduction

Background and Methodology

From 1st May 2018 to 25 June 2018 Cheshire East Council consulted on its new Local Transport Plan (LTP). The LTP considers all forms of transport over the next 5 years (2018-2023). It is a framework for how transport will support wider policies to improve our economy, protect our environment and make attractive places to live, work and play. Respondents were asked to read the draft plan and information booklet before answering the questionnaire.

At the same time the draft South East Manchester Multi-Model (SEMMM) Strategy was also consulted upon in conjunction with Stockport Metropolitan Borough Council. Although the results of this consultation will be analysed and reported separately, views and comments from both the consultations will be looked at holistically.

The LTP consultation was advertised through the Cheshire East Council website, through a press release and through Social Media. A total of 122 engagements were achieved through Facebook and 349 engagements were achieved on Twitter (full social media engagement statistics can be seen in appendix three). It was predominantly online, however, paper copies were made available at all Cheshire East Libraries and key contact centres. Various 'drop in' events were also held throughout Cheshire East – paper copies of the survey were also made available at these events.

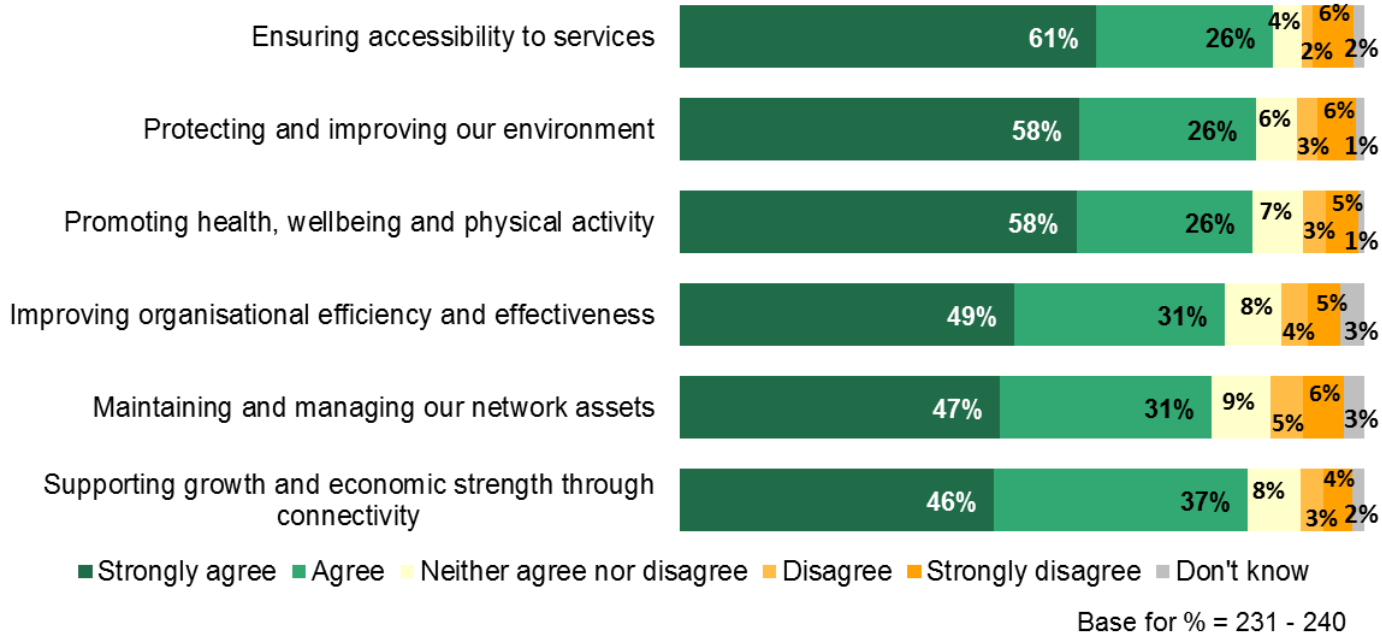
In total, 261 replied to the online/ paper questionnaire, this report is a summary of the findings from this questionnaire. A further 37 responses were sent in via e-mail and 16 other responses were received (including letters, a petition and enquiry forms) these have been sent and reviewed by the relevant decision makers so comments made can directly feed into the revised LTP document. A summary of the key points made from these responses can be seen in appendix two.

Part One: Analysis of Results – Cheshire East Overall

Challenges

The LTP document sets out a number of key challenges the Council faces that it needs to achieve in order to fulfil the vision for transport and deliver the six key outcomes. Within the questionnaire respondents were asked how strongly they agreed or disagreed with these challenges. The majority of respondents agreed with all the challenges listed (76% or more agreed) as can be seen in Figure 1.

Figure 1: Agreement / disagreement with the challenges identified in the Local Transport Plan



Respondents were asked whether they thought there were any other transport challenges facing Cheshire East at a Borough-wide level. A total of 156 respondents left a comment. Comments received have been grouped and coded into main themes. Respondents were most likely to provide a comment concerning ‘bus services’ (63 total references), the ‘road network’ (58 total references) or ‘general public transport’ (53 total references). The biggest challenge mentioned was ‘preventing congestion/ increased traffic congestion (Inc. issues with HGV's / Lorries)’ referenced 27 times which is placed under the overarching ‘roads’ theme. Table 1 on the next page shows the full breakdown of themed comments.

Table 1: Any other transport challenges facing Cheshire East at a Borough-wide level	
Theme	**References**
Active and Smarter Travel	**25**
General lack of investment, interest & focus in active & sustainable transport infrastructure	10
Continuous & safe cycling routes & cycle parking needed / increase cycling	11
Continuous, safe & maintained walking routes needed	4
Bus Services	**63**
Require more bus services / better bus services (Inc. to hospitals)	17
Concerned about the continued reduction / cuts to bus services	13
Need Frequent, reliable & efficient buses that are well maintained / journey times are getting	11
Require a Sunday / bank holiday / evening bus service	12
Require more bus services in rural areas	7
Local bus service & connections required/ need links that complement other public services	3
Rail Services	**23**
Re-open Middlewich railway line	6
General - Require more rail services / HGV's to rail	5
Ensure Macclesfield rail is connected to HS2	4
Accessible rail for elderly / disabled	4
Viable, efficient, frequent and affordable rail service required	2
Rail connections to Manchester / Manchester airport	2
General Public Transport	**53**
Viable public transport required for those who are vulnerable	10
Public transport required for commuters & access to education	9
Accessible & affordable public transport needed for all	8
Integrating connections & fares by all modes of transport	7
General need for public transport / very little public transport	7
Connecting rural areas to the rest of the borough / local connections required to local towns	6
Connections to Manchester / Manchester airport & between East and West needed	6
Road Network	**58**
Preventing congestion/ increased traffic congestion (Inc. issues with HGV's / lorries)	27
Traffic pollution/ air quality	12
Maintenance of roads Inc. Potholes & Co-ordination of roadworks	8
Adequate & affordable car parking near schools / hospitals / town centres & rail services	7
Bypass required	2
General - road safety /traffic calming initiatives / restraint initiatives	2
Planning and Development	**12**
Increased population / traffic due to more housing developments	6
Lack of planning enforcement / too much housing development / building work	3
Providing road/ rail infrastructure alongside new housing developments Inc. parking	3
LTP document, funding and collaborative working	**19**
Use plain English / proposals lacking commitment & unclear / make objectives a reality	8
Work with other authorities in their developments	7
Challenges hard to implement/ restrained as not enough funding	4
Other	**5**

Table 2: Comments given on the challenges listed	
Theme	**References**
Active and Smarter Travel	**12**
Continuous & safe cycling routes needed	7
General lack of investment, interest & focus in active & sustainable transport infrastructure	3
Safe / traffic free walking provision required	2
Bus Services	**26**
Require more bus services / better bus services (Inc. to hospitals)	12
Need Frequent, affordable, reliable & efficient buses / journey times are getting longer	7
Reduction / cuts to bus services - please re-instate	5
Require more bus services in rural areas	2
Rail Services	**6**
Re-open Middlewich railway line	3
General - Require more rail services / improved rail service / connections	3
General Public Transport	**38**
Viable public transport required for those who are vulnerable	8
Local connections required to local towns (Inc. rural areas / local visitor attractions)	7
Public transport required to enable people to get to and from work	6
General need for public transport / very little public transport	5
Integrating connections & fares by all modes of transport	4
Connections between East and West / surrounding areas outside of Cheshire East	4
Affordable public transport for all	4
Road Network	**45**
Preventing congestion/ increased traffic congestion (Inc. issues with HGV's / lorries)	12
Maintenance of roads (Inc. potholes & co-ordination of roadworks)	11
Traffic pollution/ air quality	9
Ongoing investment required for road infrastructure / poor highway links / network management/ delays in improvements	7
Bypass required / build more overpasses & underpasses	4
General - road safety /traffic calming initiatives / restraint initiatives	2
Planning and Development	**15**
Providing road and rail infrastructure alongside new housing developments	5
Lack of planning enforcement / poor co-ordination in planning / take an holistic view	4
Increased population / traffic due to more housing developments	4
Lack of joined up thinking between other areas (e.g. planning, highways, air quality)	2
LTP document, funding and collaborative working	**34**
Challenges hard to implement/ restrained as not enough funding / cost to residents	18
Making objectives/ plans a reality/ proof will be in the delivery	7
Proposals lacking commitment, don't address the issues adequately / no solutions included in the plan / use plain English	4
Work with other authorities in their developments / work with key stakeholders	3
Better communication for those who are not online / right across the population	2
Other	**10**

Respondents were also asked if they had any comments on the challenges listed. A total of 119 left a comment. Comments given have been grouped and coded into themes. The full breakdown of themed comments can be seen in Table 2 on the previous page. For this question respondents were most likely to provide a comment concerning the 'road network' (45 total references), 'general public transport' (38 total references) or on the 'LTP document, funding and collaborative working' (34 total references). The theme with the most references was 'challenges hard to implement/ restrained as not enough funding/ cost to residents' referenced 18 times. Respondents wondered how the challenges could be achieved without sufficient funding or investment and were concerned what the potential cost would be to residents.

Key Connections

The LTP also identified a number of 'key connections' which will ensure the Borough reaches its full potential, connecting people, businesses, customers and freight. Respondents were asked how strongly they agreed or disagreed that the key connections address the challenges highlighted. Respondents seemed to be a bit more unsure with some of these than they were the challenges as more stated 'neither agree or disagree' or 'don't know' particularly for 'Connecting to Global Gateways' indicating that respondents may have needed a clearer explanation of what this entails.

Figure 2: Agreement / disagreement with the key connections identified in the Local Transport Plan

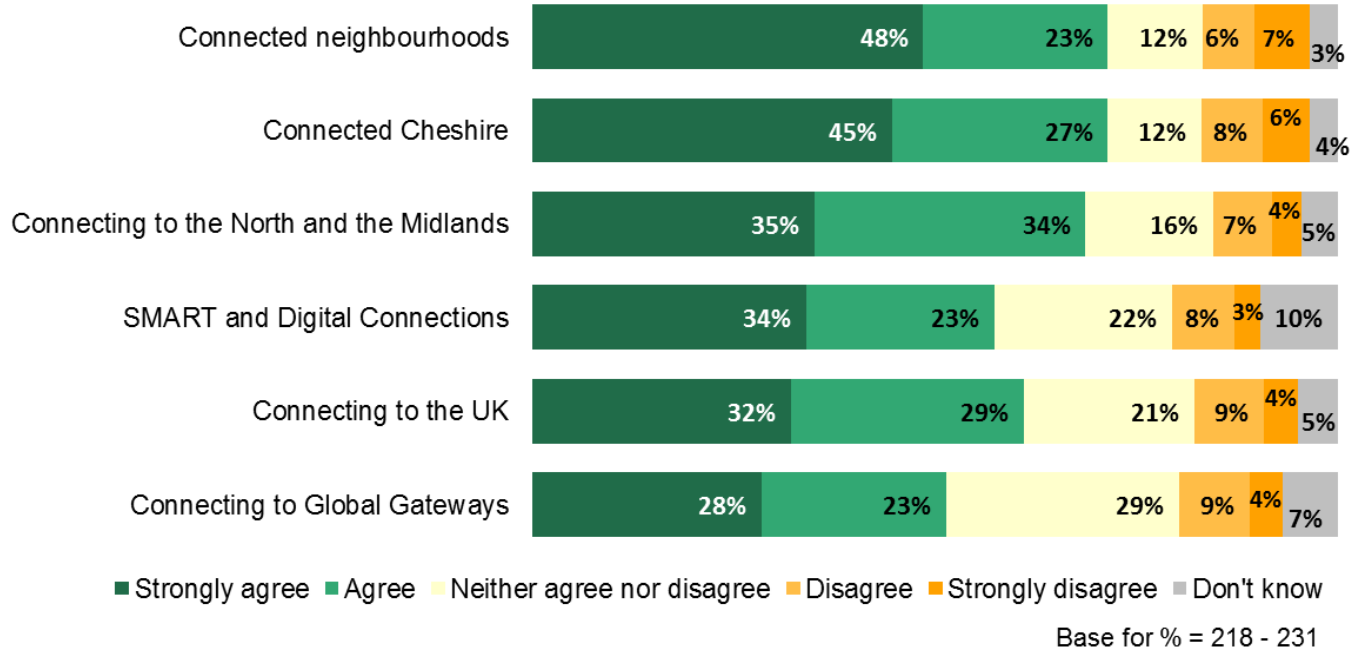


Table 3: Comments about the key connections identified	
Theme	**References**
Active and Smarter Travel	**18**
Continuous, safe & maintained cycling routes & cycle parking needed / increase cycling	7
Continuous & safe walking routes needed / increase walking	6
Consider electric charging points / electric vehicles in Council fleet / electric buses / general lack of investment sustainable transport infrastructure	5
Bus Services	**38**
Require more bus services / better bus services (Inc. to hospitals)	14
Reduction / cuts to bus services - please re-instate	12
Need Frequent, reliable & efficient buses / journey times are getting longer	6
Require a Sunday / bank holiday / evening bus service	3
Local bus service & connections required/ need links that complement other public services	3
Rail Services	**26**
General - require more & better rail services & connections / underfunded/ HGV's to rail	11
HS2 waste of money / just benefits the South / ensure Macc rail is connected to HS2	7
Re-open Middlewich railway line	5
Viable, efficient, accessible & frequent rail service required	3
General Public Transport	**59**
Local connections required to local town (Inc. rural areas/ local visitor attractions)	15
General need for public transport / very little public transport /affordable public transport	8
Integrating connections & fares by all modes of transport	7
Connections to surrounding areas of Cheshire East e.g. Warrington, to Cheshire West	7
Better connections to Manchester / Manchester airport	7
Public transport required to enable people to get to and from work & for young people to	6
Viable public transport required for those who are vulnerable	4
Tram network / metro link	3
SMART interactive transport information showing transport times/ cost/ connections	2
Road Network	**32**
Preventing congestion/ increased traffic congestion (Inc. issues with HGV's / lorries)	14
Ongoing investment required for road infrastructure / poor highway links / road maintenance	7
Traffic pollution/ air quality	6
Bypass required / link road / divert traffic away from town centres	5
Planning and Development	**4**
Providing road and rail infrastructure alongside new housing developments	2
Lack of joined up thinking between other areas (e.g. planning, highways, air quality)	2
LTP document, funding and collaborative working	**31**
Proposals lacking commitment & unclear / make objectives a reality / use plain English	10
Challenges hard to implement/ restrained as not enough funding	7
Work with other authorities in their developments / work with key stakeholders	5
Suggestion for specific wording change within LTP document	3
LTP doesn't address the key connections adequately / no solutions included in the plan	3
Better broadband speeds / mobile reception especially in rural areas	3
Other	**7**

Respondents were asked whether they had any comments about the key connections identified in the LTP. A total of 118 respondents left a comment. Comments given have been grouped and coded into themes. The themed challenges can be seen in Table 3 on the previous page. Respondents were most likely to provide a comment concerning ‘general public transport’ (59 total references) ‘bus services’ (38 total references) or ‘roads’ (32 total references). The theme with the most references was ‘local connections required to local town (Inc. rural areas/ local visitor attractions)’ referenced 15 times closely followed by ‘General - Require more bus services / better bus services’ (14 references) and ‘Preventing congestion/ increased traffic congestion (Inc. issues with HGV's / Lorries)’ (14 references).

Finally respondents were asked if they had any other comments to make on the LTP document. A total of 185 respondents left a comment. Comments given have been grouped and coded into themes which can be seen in Table 4 on the next page. Respondents were most likely to provide a comment concerning the ‘LTP document, funding and collaborative working’ (91 total references) ‘bus services’ (91 total references) or ‘road network’ (72 total references).

Table 4: Final Comments	
Theme	**References**
Active and Smarter Travel	**40**
Continuous, safe & maintained cycling routes needed / increase & enable cycling	20
General - invest in sustainable transport infrastructure Inc. electric buses	13
Safe walking routes needed / increase walking	7
Bus Services	**91**
Reduction / cuts to bus services - Please re-instate	29
General - Require more bus services / better, more maintained bus services (Inc. to hospitals, little bus, rural areas)	22
Need Frequent, reliable, affordable & efficient buses / straight through buses	22
Require a Sunday / bank holiday / evening bus service	18
Rail Services	**21**
Viable, efficient, accessible, frequent & affordable rail service required	7
General - Require more rail services / more investment in rail / connections to Manchester	7
Re-open Middlewich railway line	5
HS2 waste of money / just benefits the South / Ensure Macc. rail is connected to HS2	2
General Public Transport	**53**
General need for affordable public transport /investment in / improve public transport	18
Integrating connections & fares by all modes of transport	12
Viable public transport required for those who are vulnerable	10
Local connections required to local town (Inc. from rural areas)/ to local visitor attractions	6
Better connections to Manchester, Manchester airport / surrounding areas of Cheshire East	5
Public transport required to enable people to get to and from work	2
Road Network	**72**
Preventing congestion/ increased traffic congestion (Inc. issues with HGV's / lorries ignoring	24
Maintenance of roads Inc. Potholes / co-ordination of roadworks	12
Traffic pollution/ air quality	11
Adequate & affordable car parking near town centres & rail services / enforce parking laws	9
Bypass required / link road / divert traffic away from town centres	7
General - road safety /traffic calming initiatives / restraint initiatives	5
Ongoing investment for roads / road infrastructure	4
Planning and Development	**12**
Providing road, cycle and rail infrastructure alongside new housing developments	7
Increased population / traffic due to more housing developments / protect farm land	5
LTP document, funding and collaborative working	**91**
Lacking in detail/ no specifics/ token gesture/ tick box exercise/ not informed by local plans	20
No solutions included in the plan/ solutions now need to be in place	15
Making objectives/ plans a reality/ proof will be in the delivery / get it right	14
Should have influence over neighbouring authority developments / work with other authorities	11
Lack of funding / need investment	9
Suggestion for specific wording change within LTP document / use plain English	9
Consultation should have been advertised more/ didn't see until late / listen to views from key	7
Detailed consultation with each local area necessary / local area plans needed	6
Other	**5**

Cheshire East Overall - Summary and conclusions

The majority of respondents agreed with all the challenges listed within the LTP document however when asked whether they thought there were any other transport challenges facing Cheshire East at a Borough-wide level or whether they had any comments on the challenges listed a few issues/ concerns were identified. The biggest 'any other challenge' mentioned was 'preventing congestion/ increased traffic congestion (Inc. issues with HGV's / lorries)' and when asked about the challenges listed the biggest concern was that they would be hard to implement/ restrained as not enough funding / cost to residents'. Concerns about 'bus services' and the 'road network' were also referenced highly.

Responses to the listed key connections were again generally positive with not may disagreeing with them. However, respondents seemed to be a bit more unsure with some of these than they were the challenges as more stated 'neither agree or disagree' or 'don't know' particularly for 'Connecting to Global Gateways' indicating that respondents may have needed a clearer explanation of what this entails. The biggest comment here was concerning local connections, 'local connections required to a local town (Inc. rural areas/ local visitor attractions)'.

Within the final comments respondents were keen to re-iterate the points they had made previously especially in relation to 'bus services and 'preventing congestion'. Respondents also drew more attention to the draft LTP document itself feeling that it was 'lacking in detail/ no specifics/ token gesture/ tick box exercise/ not informed by local plans; (20 references) and that there were 'no solutions included in the plan/ solutions now need to be in place' (15 references).

Part Two: Analysis of results – By Local Area

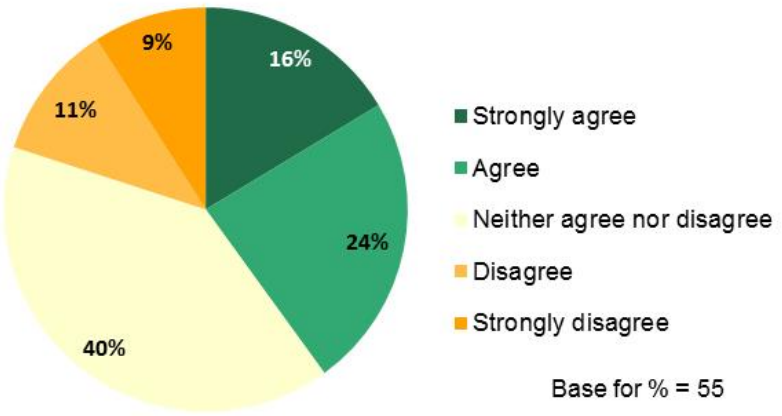
As part of the draft LTP document Local Area Profiles were set up for key service centres within Cheshire East. For this part of the report we take each identified area in turn discussing the unique & key challenges. The following results are a summary of the findings, more detailed area specific reports have been sent to the relevant department so views can feed directly into the LTP daughter documents.

Respondents were asked how strongly they agreed or disagreed that the LTP document identifies the unique challenges for each area and what they felt were the key transport challenges in their local area.

Alsager

Out of the 55 respondents who indicated a view, 40% agreed that the LTP document identifies the unique challenges in Alsager and 20% disagreed, see figure 3.

Figure 3. Agreement/ disagreement that the LTP identifies the unique challenges in Alsager (exc. don't know)



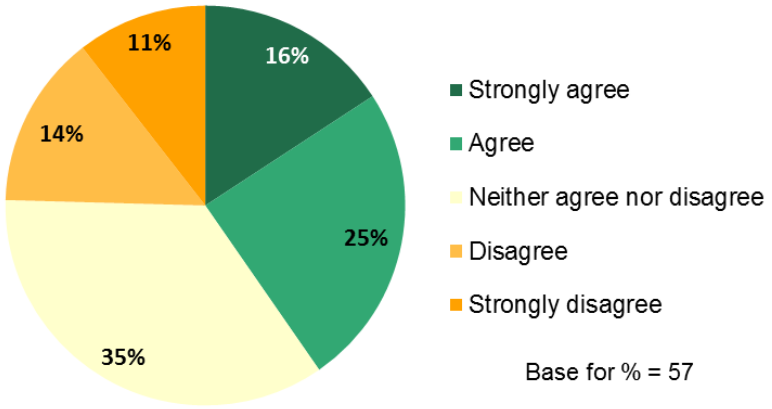
24 respondents specifically identified Alsager when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Alsager was bus transport (27 out of 71references), these comments included issues with current provision and the impact of bus cuts especially the loss of the 316/ 318 - respondents would like this service reinstated through Hassall Green/ in and out of Alsager.

Table 5. What do you feel are the key transport challenges in your local area? - Alsager	
Theme	**Count**
Bus transport	**27**
Issues with current service (frequency)	7
Additional service requirements (evening and weekend)	5
Impact of bus cuts	10
Named service	5
Road network	**13**
Traffic and congestion	4
Network Management	4
Named roads	1
Road safety	4
Active and smarter travel	**12**
Cycling	8
Walking	1
Public transport information and ticketing	**7**
Integration	2
Information	4
Ticketing	1
Rail transport	**6**
Current service	5
Additional service requirements	1
Other	**6**
Total number of references	**71**

Congleton

Out of the 57 respondents who indicated a view, 41% agreed that the LTP document identifies the unique challenges in Congleton and 25% disagreed, see figure 4.

Figure 4. Agreement/ disagreement that the LTP identifies the unique challenges in Congleton (exc. don't know)



37 respondents specifically identified Congleton when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Congleton was the road network (54 references) in regards to road safety and traffic and congestion. Specific concerns were raised about the safety of pedestrians on narrow footpaths, problems caused by parked cars and general traffic and congestion levels in and around the town.

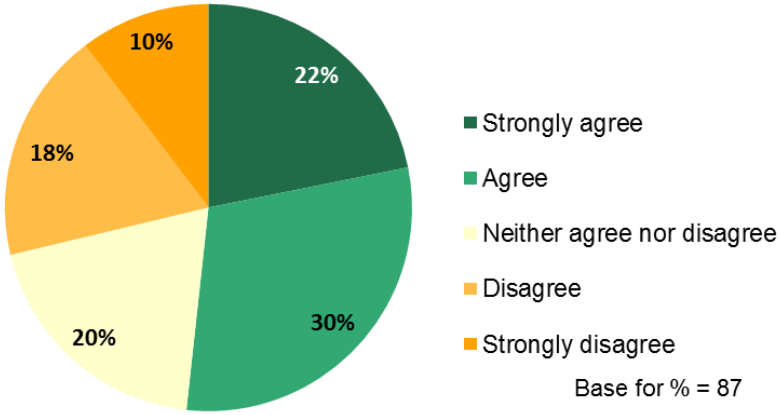
Table 6. What do you feel are the key transport challenges in your local area? - Congleton	
Theme	**Count**
Bus transport	**19**
Issues with current service (reliability/frequency)	1
Additional service requirements (evening and weekend)	10
Impact of bus cuts	2
Named service	6
Road network	**54**
Traffic and congestion	19
Named roads	13
Network management	2
Road safety	20
Active and smarter travel	**34**
Cycling	18
Walking	13
Public transport information and ticketing	**12**
Integration	7
Information	4
Ticketing	1

Rail transport	**18**
Current service	7
Additional service	11
Other	**26**
Total number of references	**163**

Crewe

Out of the 87 respondents who indicated a view, just over one half agreed that the LTP identifies the unique challenges in Crewe (52%), 28 % disagreed, as seen in Figure 5.

Figure 5. Agreement/ disagreement that the LTP identifies the unique challenges in Crewe (exc. don't know)



56 respondents specifically identified Crewe when providing an open comment within the LTP questionnaire**.** The most frequently commented on theme in Crewe was bus transport, these comments included the need for weekend and evening services in and around Crewe as well the importance of a good, regular and reliable links to Leighton Hospital in line with appointments and visiting hours.

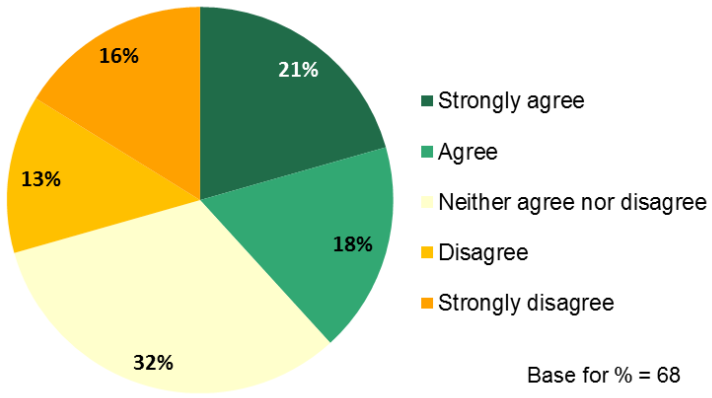
Table 7. What do you feel are the key transport challenges in your local area? - Crewe	
Theme	**Count**
Bus transport	**87**
Issues with current service (reliability/frequency)	15
Additional service requirements (evening and weekend)	43
Impact of bus cuts	23
Named service	6
Road network	**54**

Traffic and congestion	16
Named roads	9
Network management	11
Road safety	18
Active and smarter travel	**27**
Cycling	6
Walking	20
Public transport information and ticketing	**15**
Integration	12
Information	1
Ticketing	2
Rail transport	**22**
Current service	1
Additional service	13
HS2	8
Other	**21**
Total number of references	**226**

Handforth

Out of the 68 respondents who indicated a view, 39% agreed that the LTP document identifies the unique challenges in Handforth and 29% disagreed, see Figure 6.

Figure 6. Agreement/ disagreement that the LTP identifies the unique challenges in Handforth (exc. don't know)



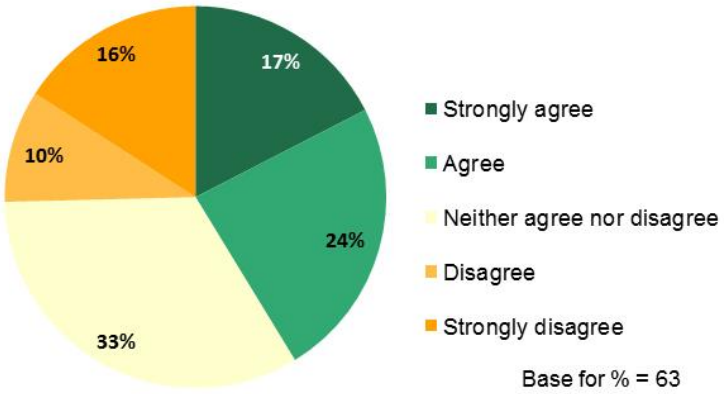
83 respondents specifically identified Handforth when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Handforth was bus transport which included problems with the current service in terms of frequency and reliability and the need for an expanded service to destinations such as Stockport and greater service on evenings, weekends and bank holidays.

Table 8. What do you feel are the key transport challenges in your local area? - Handforth	
Theme	**Count**
Bus transport	**128**
Issues with current service (reliability/frequency)	32
Additional service requirements (evening and weekend)	65
Impact of bus cuts	12
Named service	19
Road network	**8**
Traffic and congestion	5
Named roads	2
Network management	1
Active and smarter travel	**7**
Cycling	4
Walking	3
Public transport information and ticketing	**6**
Rail transport	**29**
Current service	19
Additional service	9
HS2	1
Other	**3**
Total number of references	**181**

Knutsford

Out of the 63 respondents who indicated a view, 41% agreed that the LTP document identifies the unique challenges in Knutsford and 26% disagreed, see Figure 7.

Figure 7. Agreement/ disagreement that the LTP identifies the unique challenges in Knutsford (exc. don't know)



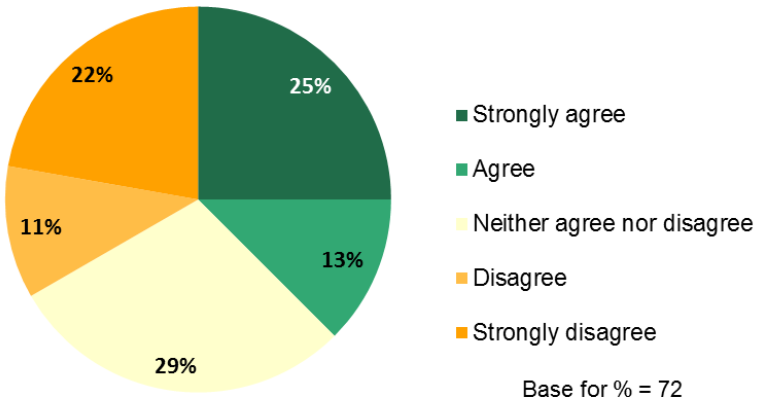
36 respondents specifically identified Knutsford when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Knutsford was the road network (28 references), these comments included issues with increasing traffic and congestion through the town and the suggestion of a relief road to help ease the problem.

Table 9. What do you feel are the key transport challenges in your local area? - Knutsford	
Theme	**Count**
Bus transport	**16**
Issues with current service (reliability/frequency)	11
Additional service requirements (evening and weekend)	4
Impact of bus cuts	1
Road network	**28**
Traffic and congestion	12
Named roads	3
Network management	9
Road safety	4
Active and smarter travel	**14**
Cycling	8
Walking	5
Public transport information and ticketing	**5**
Rail transport	**15**
Current service	8
Additional service	6
HS2	1
Other	**4**
Total number of references	**82**

Macclesfield

Views in Macclesfield seemed evenly split with 38% of the 72 respondents who indicated a view, agreeing that the LTP identified the unique challenges in Macclesfield and 33% disagreeing, see Figure 8 below.

Figure 8. Agreement/ disagreement that the LTP identifies the unique challenges in Macclesfield (exc. don't know)



97 respondents specifically identified Macclesfield when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Macclesfield was the road network, these comments included issues with traffic and congestion, specifically on the A523 and the issues this caused residents.

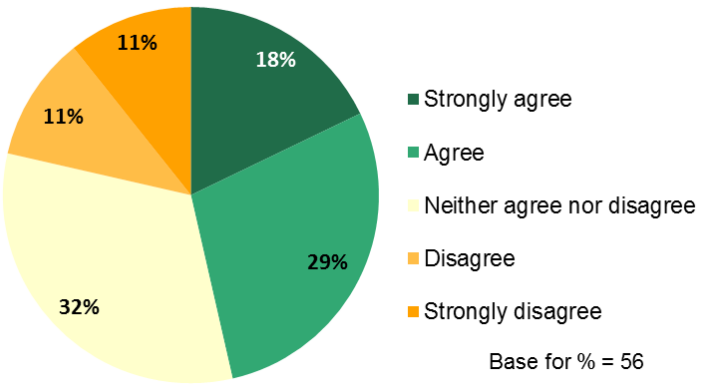
Table 10. What do you feel are the key transport challenges in your local area? - Macclesfield	
Theme	**Count**
Bus transport	**77**
Issues with current service (reliability/frequency)	22
Additional service requirements (evening and weekend)	45
Impact of bus cuts	5
Named service	5
Road network	**115**
Traffic and congestion	42
Named roads	47
Network management	14
Road safety	12
Active and smarter travel	**19**
Cycling	8
Integration with other models and land use	1
Walking	9

Public transport information and ticketing	**10**
Integration	4
Information	4
Ticketing	1
Rail transport	**5**
Current service	7
Additional service	1
HS2	8
Other (Air quality and developments in area)	**40**
Total number of references	**266**

Middlewich

Out of the 56 respondents who indicated a view, 47% agreed that the LTP document identifies the unique challenges in Middlewich and 22% disagreed, see Figure 9.

Figure 9. Agreement/ disagreement that the LTP identifies the unique challenges in Middlewich (exc. don't know)



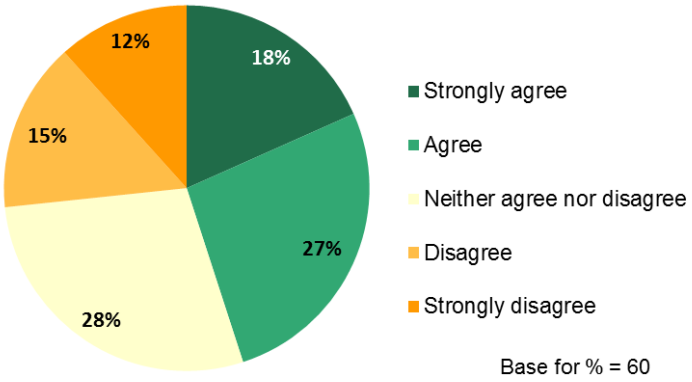
58 respondents specifically identified Middlewich when providing an open comment within the LTP questionnaire (this is high than base respondent rate due to the prevalence of 'Middlewich Road'). The most frequently commented on theme in Middlewich was the road network (73 references), these comments included issues with traffic congestion and the need for a bypass.

Table 11. What do you feel are the key transport challenges in your local area? - Middlewich	
Theme	**Count**
Bus transport	**6**
Issues with current service (frequency)	5
Additional service requirements (evening and weekend)	1
Road network	**73**
Traffic and congestion	33
Network Management	21
Named roads	16
Road safety	3
Rail transport	**29**
Current service	1
Additional service requirements	24
HS2	4
Other	**10**
Total number of references	**118**

Nantwich

Out of the 60 respondents who indicated a view, 45% agreed that the LTP document identifies the unique challenges in Nantwich and 27% disagreed, see Figure 10.

Figure 10. Agreement/ disagreement that the LTP identifies the unique challenges in Nantwich (exc. don't know)



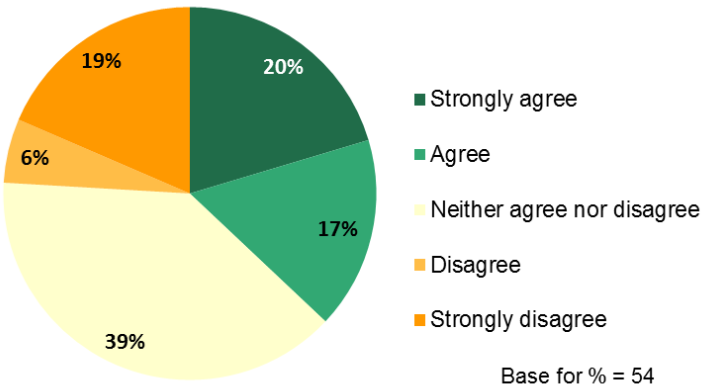
35 respondents specifically identified Nantwich when providing an open comment within the LTP questionnaire. The most frequently commented on theme in Nantwich was the bus service (44 references), these comments included issues with the current provision and the need to expand this to meet future needs.

Table 12. What do you feel are the key transport challenges in your local area? - Nantwich	
Theme	**Count**
Bus transport	**44**
Issues with current service (frequency)	6
Additional service requirements (evening and weekend)	19
Impact of bus cuts	10
Named service	9
Road network	**11**
Traffic and congestion	3
Named roads	6
Road safety	2
Active and smarter travel	**8**
Cycling	6
Walking	1
Electronic vehicles	1
Public transport information and ticketing	**5**
Integration	4
Information	1
Rail transport	**1**
Other	**3**
Total number of references	**72**

Poynton & Disley

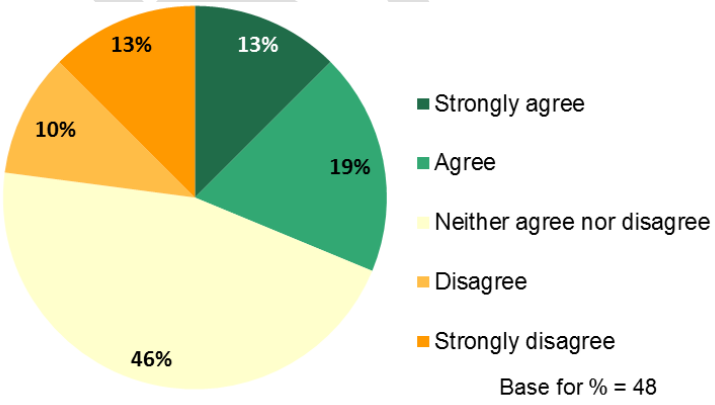
Out of the 54 respondents who indicated a view, 37% agreed that the LTP document identifies the unique challenges in Poynton and 25% disagreed, see Figure 11.

Figure 11. Agreement/ disagreement that the LTP identifies the unique challenges in Poynton (exc. don't know)



Out of the 48 respondents who indicated a view, 32% agreed that the LTP document identifies the unique challenges in Disley and 23% disagreed, see Figure 12.

Figure 12. Agreement/ disagreement that the LTP identifies the unique challenges in Disley (exc. don't know)



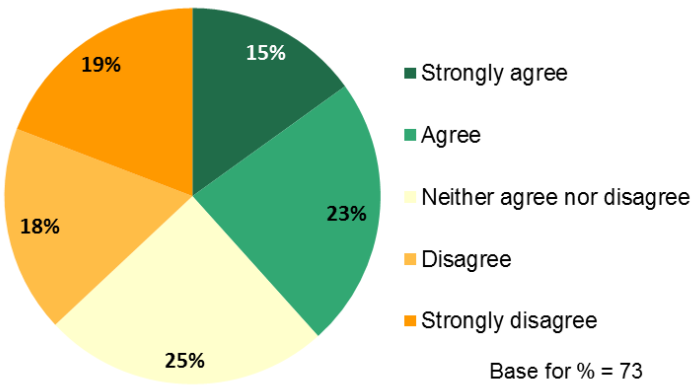
39 respondents specifically identified Poynton and Disley when providing an open comment within the LTP questionnaire. 32 comments relate to the Poynton area, 7 comments to the Disley area. The most frequently commented on theme in Poynton and Disley was the road network (53 references). The A6MARR and the Poynton Relief Road both received a number of references in this area in relation to traffic and congestion, which was a concern for respondents generally in their local area.

Table 13. What do you feel are the key transport challenges in your local area? - Poynton and Disley	
Theme	**Count**
Bus transport	**28**
Issues with current service (reliability/frequency)	5
Additional service requirements (evening and weekend)	16
Impact of bus cuts	3
Named service	4
Road network	**53**
Traffic and congestion	22
Named roads	15
Network management	10
Road safety	6
Active and smarter travel	**10**
Cycling	5
Walking	4
Public transport information and ticketing	**5**
Integration	3
Ticketing	2
Rail transport	**14**
Current service	1
Additional service	13
Other	**22**
Total number of references	**132**

Sandbach

Views in Sandbach seemed evenly split with 38% of the 73 respondents who indicated a view, agreeing that the LTP identified the unique challenges and 37% disagreeing see Figure 13 below.

Figure 13. Agreement/ disagreement that the LTP identifies the unique challenges in Sandbach (exc. don't know)



56 respondents specifically identified Sandbach when providing an open comment within the LTP questionnaire. Comments on the 'road network' gained the most references (55 overall) with the

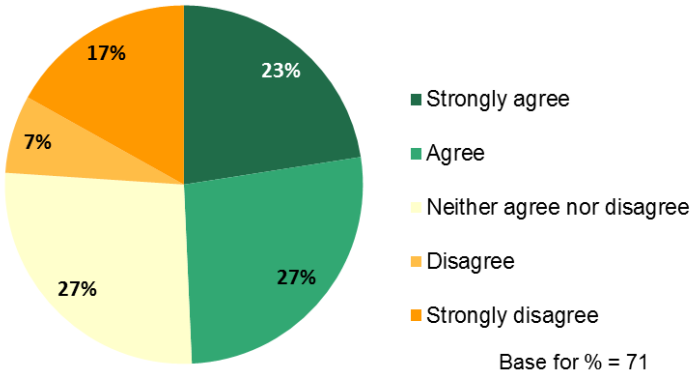
main concerns underneath this theme being of 'road safety' (19 references) and traffic and congestion (17 references), see Table 14.

Table 14. What do you feel are the key transport challenges in your local area? - Sandbach	
Theme	**Count**
Bus Services	**17**
Issues with current service (reliability/frequency)	2
Additional service requirements (evening and weekend)	9
Impact of bus cuts	5
Named service	1
Road network	**55**
Traffic and congestion	17
Named roads	16
Network management	3
Road safety	19
Active and smarter travel	**12**
Cycling	7
Integration with other models and land use	4
Walking	1
Public transport information and ticketing	**4**
Rail Services	**18**
Current service	5
Additional service	13
Other	**15**
Total number of references	**121**

Wilmslow

Out of the 71 respondents who indicated a view, one half (50%) agreed that the LTP identified the unique challenges in Wilmslow, 24% disagreed, see Figure 14.

Figure 14. Agreement/ disagreement that the LTP identifies the unique challenges in Wilmslow (exc. don't know)



49 respondents specifically identified Wilmslow when providing an open comment within the LTP questionnaire.

The most frequently commented on theme was 'bus service', these comments included issues with the current service (23 references) and the need to expand this to meet future needs (17 references – additional service requirements). See Table 15.

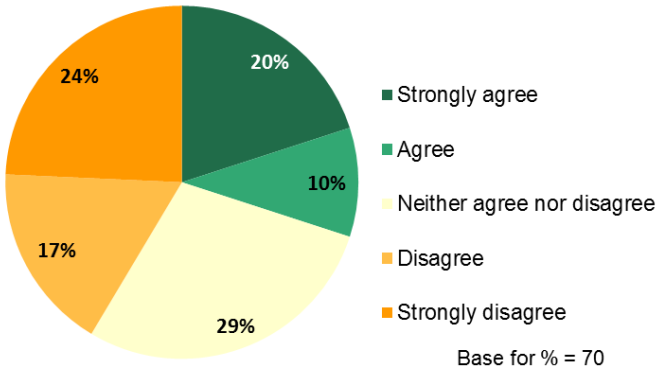
Table 15. What do you feel are the key transport challenges in your local area? - Wilmslow	
Theme	**References**
Bus Services	**53**
Issues with current service (reliability/frequency)	23
Additional service requirements (evening and weekend)	17
Impact of bus cuts	7
Named service	6
Road network	**35**
Traffic and congestion	10
Named roads	9
Network management	10
Road safety	6
Active and smarter travel	**15**
Cycling	10
Integration with other models and land use	4
Walking	1

Public transport information and ticketing	**10**
Integration	7
Information	1
Ticketing	2
Rail Services	**5**
Current service	3
Additional service	1
HS2	1
Other	**3**
Total number of references	**121**

Rural Areas

Out of the 70 respondents who indicated a view, 30% agreed that the LTP document identifies the unique challenges in rural areas and 41% disagreed, see Figure 15.

Figure 15. Agreement/ disagreement that the LTP identifies the unique challenges in Rural Areas (exc. don't know)



60 respondents specifically identified rural areas when providing an open comment within the LTP questionnaire.

The most frequently commented on theme was 'bus transport' mentioned 45 times, followed closed by 'road network' mentioned 42 times. Respondents felt that bus services were vital for rural areas which were often disconnected from Key Service Centres. Concerns about road safety were also highlighted, with more consideration recommended for the unique challenges posed by rural roads.

Table 16. What do you feel are the key transport challenges in your local area? - Rural Areas	
Theme	**Count**
Bus transport	**45**
Issues with current service (reliability/frequency)	13
Additional service requirements (evening and weekend)	16
Impact of bus cuts	16
Named service	0
Road network	**42**
Traffic and congestion	11
Named roads	3
Network management	14
Road safety	14
Active and smarter travel	**13**
Cycling	6
Walking	4
Equine	3
Public transport information and ticketing	**8**
Integration	7
Information	1
Ticketing	0
Rail transport	**5**
Current service	1
Additional service	3
HS2	1
Other	**10**
Total number of references	**123**

Next steps

Appendix One: Demographic Tables

Please indicate which area you live, work and/or travel through as appropriate – Multiple choice	I live here		I work here		I travel through here regularly	
	Count	%	Count	%	Count	%
Alsager	7	9	9	9	9	9
Congleton	14	15	15	15	15	15
Crewe	40	32	32	32	32	32
Handforth	30	18	18	18	18	18
Knutsford	14	18	18	18	18	18
Macclesfield	22	27	27	27	27	27
Middlewich	12	18	18	18	18	18
Nantwich	12	18	18	18	18	18
Poynton	7	15	15	15	15	15
Sandbach	31	18	18	18	18	18
Wilmslow	14	24	24	24	24	24
Other	23	13	13	13	13	13
Total number of respondents						**233**

How do you normally travel in or through Cheshire East? - Multiple choice		
Row Labels	**Count**	**%**
In a car/van as the driver	135	58
In a car/van as a passenger	54	23
In an Heavy Goods Vehicle	1	<1%
On a bus	117	50
On a motorcycle	6	3
On foot	94	40
On a bicycle	41	17
On a horse	2	1
I don't travel in or through Cheshire East	1	<1%
Other	43	18
Total number of respondents		**234**

Why do you travel in or through Cheshire East? - Multiple choice		
Row Labels	**Count**	**%**
Live in Cheshire East	215	91
Work/Study	81	34
Visit local town centre/shops	186	79
Use health and Social Care facilities	129	55
Use local leisure facilities	106	45
Don't live in the local area but travel into or through Cheshire East to get to work	3	1
Don't live in the local area but travel into or through Cheshire East on business	2	1
Something else	27	11
Total number of respondents		**236**

What is your gender identity?		
Row Labels	**Count**	**%**
Female (including trans female)	101	44%
Male (including trans man)	116	51%
Prefer not to say	12	5%
Grand Total	**229**	**100%**

What age group do you belong to?		
Row Labels	**Count**	**%**
16-24	5	2%
25-34	17	7%
35-44	18	8%
45-54	33	14%
55-64	49	21%
65-74	69	30%
75-84	28	12%
85 and over	6	3%
Prefer not to say	8	3%
Grand Total	**233**	**100%**

What is your ethnic origin?		
Row Labels	**Count**	**%**
White British / English / Welsh / Scottish / Northern Irish / Irish	200	91%
Any other White background	5	2%
Asian / Asian British	1	<1%
Mixed: White and Black Caribbean / African / Asian	1	<1%
Prefer not to say	12	5%
Grand Total	**219**	**100%**

Which of the following best describes your religious belief / faith?		
Row Labels	**Count**	**%**
Christian	123	56%
Buddhist	2	1%
Muslim	1	<1%
Other religious belief / faith	8	<1%
None	48	22%
Prefer not to say	38	17%
Grand Total	**220**	**100%**

Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months?		
Row Labels	**Count**	**%**
No	156	71%
Prefer not to say	15	7%
Yes	49	22%
Grand Total	**220**	**100%**

Appendix Two: Letters/ e-mails etc. received

Responding as	Format	Brief Summary of Content / key points mentioned
A local resident	E-mail	Maintain roads especially near gutters/ curbs to encourage an increase in cycling
A local Resident	E-mail	Difficulty attending hospital appointments (Macclesfield/ Wythenshawe). Improved transport connections to Manchester.
A local Resident	E-mail	Problems with the A6 corridor for Disley village need to find a solution before opening of A6MARR – increase in homes being built & HGVs passing through. Consider large railway/ bus car park at newton station land plot.
A local Resident	E-mail	Traffic congestion & pollution issues - London road, Macclesfield. No safe cycle /walking route to schools.
A local Resident	E-mail	Live in Prestbury – want to be apart of the community, be able to access local facilities safely & timely (walk or cycle), live at a pinch point of A523 London Road (near to well Lane) – traffic congestion & pollution. No meaningful solutions proposed.
A local Resident	E-mail	Concerns over increase in traffic on the A523 London Road. Dependent on the car to access any local facilities as walking/ cycling unsafe. No meaningful solutions proposed.
A local Resident	E-mail	Traffic Congestion concerns in Holmes Chapel – doesn't appear on any maps – no solution provided. Southerly relief road talked about for some time but opportunity may be lost if more houses built.
A local Resident	E-mail	Lack of buses to & from Leighton hospital – journey time longer as have to change buses. Reconsider cutting of the number 78 bus
A local Resident	E-mail	Live in Prestbury off the A523 London Road – none of the six outcomes satisfactory here and nothing in LTP to change anything. Only option of travel is car - unsafe to walk, not enough buses, need to remove through traffic form A523 – too much traffic congestion & pollution.
A local Resident	E-mail	Traffic volumes at unacceptable levels on A523, very unsafe. Concern that A6 Marr bypass will greatly increase vehicle numbers. Suggest a roundabout be installed at the Prestbury lane and Lin comb hey and ash tree close junctions. Improve sight lines towards Well Lane Junction and beyond to Bonis Hall Lane along with road widening where possible. Also footpath provision along Prestbury Lane to allow access to the village facilities and train station.
A local Resident	E-mail	None of the issues raised in the LTP appear to address issues on A523 London Road. Unsafe to walk on – no maintenance of footpath. No public transport so have to drive just to access local shops. Suggested junction improvement at Well Lane will makes things worse.
A local Resident	E-mail	Residents living close to the A523/Prestbury Lane junction. No safe pedestrian access to the village. Speed and amount of traffic a problem. No buses.

A local Resident	E-mail	Concerns over A523. Unable to walk to Prestbury village – no buses. No footpath along Prestbury lane. Pollution high.
Handforth Parish Councillor	E-mail	Concerns about electronic response form. Representative from Cheshire East responded.
Crewe Town Council	E-mail	Welcome overall direction of the Strategy & specific proposals for Crewe. Air Quality should be a top priority as well as enhancement of sustainable modes of transport & protection of existing green spaces. Availability of good and frequent bus services particularly important - particular gaps in services to Leighton Hospital and in the Queens Park area. Risk based approach to road maintenance should take into account bus routes. A more balanced approach to rail freight is required.
A local Resident	E-mail with attachment	Road situation on the A523 between Bonis Hall Lane & start of Silk Road because of work on the SEMMMS route. More traffic, volume weight & noise increased takes longer to get out. No solution to residents proposed. No buses, pavements narrow & unsafe to cycle on road. The offline solution would be a safer option for everyone. (Attached pictures of narrow/ overgrown pavements).
A local Resident	E-mail with attachment	A523 from northern roundabout of the Silk Road to north of Well Lane, Butley Town, Prestbury, Macclesfield. Concerns over an increase in traffic & pollution - new homes being built, when MARR & Poynton Relief Road opens, HGVs. Turning in and out of Well Lane, Ashtree Close, Lincombe Hey is a problem. Pavements overgrown, lack of public transport. Safe crossing needed.
A local Resident	E-mail with attachment	A523 London Road - traffic only appears to be managed up to Bonis Hall Lane. Cut off from village, no safe route to school for children or school buses. Unsafe to turn out / into roads from this part of A523.
A523 London Road, Lincome Hey, Ashtree close,and Butley Town community	E-mail with attachment	LTP generally recognises issues of access, safety, environment and severance on communities brought about by heavy traffic on A523 but not specific effect of traffic on our community - difficult to cross the road safely; there will be an increase in traffic. Proposals proffered are woefully inadequate – comprehensive review required. (Attached a map of Roads - existing, under construction or proposed)
The Tatton Group	E-mail with attachment	LTP should deliver infrastructure necessary to support the Local Plan and promote economic growth. The top priority should be to promote, invest and deliver infrastructure. Ensure interconnectivity with neighbouring economic centres e.g. Manchester/Airport. Local/unique challenges are overshadowed by the borough-wide challenges which the profiles are structured around which constrains the profiles. Lists suggestions of challenges/ schemes for Knutsford and surroundings.

Butley Town and London road Community community	E-mail with attachment	A523 London Road - Communities negatively impacted by Road Traffic. Children unable to Cycle/ Walk to School. Improve air quality – unsafe. Advise that the Well Lane Junction Improvements were removed from the plan – unnecessary & not needed. Would benefit from an "Off Line solution". (Attached letter response from David Rutley & Caroline Simpson)
Congleton Town Council	E-mail with attachment	Little mention of how the objectives are going to be achieved – not many plans for Congleton. Would like to get involved in later 'daughter' document. Areas need improving to achieve sustainable transport e.g. footpaths, cycle ways, reductions in bus services, accessible bus stops, safe routes to school. Lack of employment sites n Congleton, parking issues at the train station, link road may bring more traffic for certain areas, access to hospital. Congestion issues on certain junctions. Welcome differing parking strategy for each town.
David Wilson Homes North West	E-mail with attachment	It is a critical component of CEC's plans to underpin economic growth and meet housing needs whilst protecting the environment. In particular, the response provides thoughts relating to emerging proposals for delivery of HS2. Supports the approach for planning what transport is needed for arrival of HS2 and suggests that the 5 year lifespan of the LTP is important for identifying and delivering improvements.
North West Transport Roundtable	E-mail with attachment	CEC support a strong road building agenda, however this is a short-term solution due to environmental consequences and should be a last intervention considered to address to transport problems. Lack of discussion of mobility as a service e.g. car share. Supports the priority of maintaining and improving assets, and suggests that sustainable communities and reducing the need to travel should be a priority over emphasis on key connections.
Congleton Sustainability Group	E-mail with attachment	Agree with the overall objectives, but specific measures are needed to deliver the objectives which will be identified in the daughter documents. Supportive of sustainable travel, but specific measures are needed for delivery. Suggests a borough-wide travel survey would identify how people travel around the borough and can identify issues. Makes specific comments on challenges within Congleton.
A local Resident	E-mail with attachment	We wish to be part of the community - not cut off - because of a poor road structure & LTP. It is becoming harder and longer to leave our home in a timely and safe way. None of the issues raised in the LTP consultation appear to have been met in regard to A523 London Road. These include pinch points, freight traffic; infrastructure improvements; the greatest increase in traffic; severance and pollution.
Cheshire East Countryside Access	E-mail with attachment	Strategy mostly focuses on walking/cycling for commuting rather than recreational uses. There is disproportionate emphasis upon

Forum		cycling, rather than walking, equestrians and other road users. It is important to 'fill the gaps' in the network. Road safety is also important.
Manchester Airport Group	E-mail with attachment	The airport is an important transport interchange including bus, coach, tram and rail; the airport will also be served by HS2. Operations at the airport rely on strong connectivity by transport and infrastructure. Public transport connectivity to Cheshire East's towns and businesses could be improved, resulting in high car dependency. Discusses a number of issues and possible solutions for transport that impact the airport and surrounding areas.
Holmes Chapel Parish Council	E-mail with attachment	The LTP contains many aspirations, but has few deliverables and sources of funding. There is limited value to Holmes Chapel as it is not recognised as an individual locality.
Natural England	E-mail with attachment	The plan should align with the Government's 25 Year Environment Plan and the Clean Growth Strategy, maximising the potential for the natural assets of Cheshire East to play a central role in helping to deliver connectivity and growth. Supports the recognition of the importance of GI and natural environment.
Highways England	E-mail with attachment	The document sets out an approach that places additional infrastructure and capacity improvements as the last resort in transport interventions. This could have implications for HE and the SRN, where existing and future issues at the interfaces between the SRN/LHN could create further trips and/or create operational and safety issues. The strategy makes reference to the SRN/MRN, particularly in section 11. The MRN is likely to come forward in the next year, and proposals should be considered on a local level.
Skills & Growth Company	E-mail with attachment	Recognition that the LTP encompasses a holistic approach to supporting economic growth. Welcome a focus on some critical issues to support the future economic wellbeing of the Borough, such as connectivity to Manchester, HS2, businesses and access to employment and training for young people.
Peak District National Park Authority	E-mail with attachment	The authority is generally supportive of the approach taken in the LTP and general and detailed comments are given in relation to the strategy. Existing and potential benefits of the park to CEC are not fully reflected within the document.
Alsager Town Council	E-mail with attachment	Alsager Town Council welcomes the LTP and is generally positive on the content and aspirations. Various suggestions and challenges by mode are suggested in the response.
Sandbach Town Council	E-mail with attachment	The response questions the evidence that underpins the LTP. Additional issues in Sandbach are outlined along with detailed comments on the overarching strategy and the Sandbach area profile.
A local Resident	E-mail with attachment	Increases in traffic flow on the A523 - misrepresented. Does not take into account other initiatives that are under way or planned to

		be delivered. If all these factors are taken into account then the impact of the % increase in traffic by 2032 will be unsustainable. The Prestbury Lane junction has the highest accident rate, no safe crossing points for pedestrians, narrow footpaths, no access to Prestbury Village amenities. The recommendation is that to look at a safety scheme - construction of a section of road from the Butley Ash to a roundabout at Prestbury Lane - houses along London Road provided by an access road on the line of the existing section of A523. [Attached suggested plan].
Sandbach Town Cycling Plan Working Group	E-mail with attachment	Sandbach Town Cycling Plan Working Group has submitted the Sandbach Town Cycling Plan for consideration for the LTP. The report includes five priority schemes for Sandbach.
Macclesfield Civic Society	E-mail with attachment	Bus Strategy - Draft lacks detailed bus strategy - almost no evening & Sunday service some buses reduced to 2 hourly frequencies. Major Road Network – Macclesfield is poorly served having no dual carriageway access to the town from any direction. Congestion likely to increase. LTP should improve connectivity between Macc to Greater Manchester & to South East Cheshire. Rail - only viable public transport option to Stockport & Manchester. Station suffers from insufficient parking. Air Quality –no practical measures proposed in the LTP to address road pollution issues. Town Centre parking - Proposal to redevelop the Churchill Street car park looks unlikely to precede - lack of alternative parking to replace that lost.

Responding as	Format	Brief Summary of Content / key points mentioned
A local Resident	Written Letter	Traffic congestion a major problem in Knutsford - no mention of a plan to construct a relief road. Pollution a major concern - high volume of HGV's.
A local Resident	Written Letter	Question council's commitment to support safe cycling as a means of public transport and opportunity for healthy exercise. Encourage cycling to schools. Many cycling lanes at the edge of roads have vehicles parked across them.
A local Resident	Scrap Paper	Wilmslow – Need buses to Manchester, Handforth, Macclesfield, Wilmslow, Handforth Dean, Stockport and better timing of buses.
A local Resident	Enquiry Form	Isolation of people - stairs at Handforth - can't access the shops. Lack of coordination of buses (378 to Stockport) timing of buses a long wait. No buses on Sundays and bank holidays – can't access Macc hospital, churches.
A local Resident	Enquiry Form	Disley - Poynton Cycle route
A local Resident	Enquiry Form	Bus service (391/392) unreliable, driving is poor and erratic, seats are too small, not enough, uncomfortable. Takes too long to get to

		Macclesfield.
A local Resident	Enquiry Form	Rail bridge at Poynton station is in a poor state of repair, Road and footpath is breaking up. Adverse camber on road is dangerous for cyclists.
A local Resident	Enquiry Form	Comments on the Disley and Poynton local area profile. Middlewood station - relocate to high lane, frequency of trains. Middlewood road - lacks crossing, flooding maintenance issues, speeding issues.
A local Resident	Scrap Paper	Buses to (()) to get to Altrincham, no reply from D&G around Little Bus
A local Resident	Enquiry Form	Would like a copy of the consultation materials in large print
A local Resident	Enquiry Form	Sandbach - Car parking payments at Sandbach station, no cash payment option.
A local Resident	Enquiry Form	Arriva 6E minibus used in early morning from Underwood lane to Crewe, overcrowding problems to be raised with arriva
A local Resident	Enquiry Form	Rough wood lane (Hassall Green) closed for 6 months, 1 1/2 mile walk to get to nearest bus stop, what can be done to provide temporary service?
A local Resident	Petition	The undersigned require better bus service in Handforth and service on Sundays and bank holidays (approx. 40 signatories)
A local Resident	Scrap Paper	Bunbury PC - should provide bus service. Little co-ordination. A51 not mentioned. Local maintenance issues. TFN take on road issues. Open more rail stations. Real time information. Pedestrian crossings over A51. Community transport for elderly fizzled out as unreliable.
Crewe & District bus Users Group	Report	Proposal submitted - concerning bus services and the advantages of a split in the number 8 bus in particular & for the little bus.
Active Cheshire	Comment in the questionnaire	Support LTP & focus on infrastructure that supports use of sustainable travel. Strong Evidence base for sustainable travel investment – use to support the local transport plan ambitions. Encourage the use of the term 'active design'. Encourage developing street designs that separate pedestrian, cycling, and motorised vehicle networks. Happy to meet to discuss the LTP further and how our Active Design pillar within the Blueprint to tackle physical inactivity can support transport development in the borough. (www.activecheshire.org/services/blueprint/)
Sandbach High School & Sixth Form College	Comment in the questionnaire	Headteacher of SHSSFC - unable, on the grounds of safety of our students, to support the recommendations from Sandbach Town Council for the proposed cycle routes in to Sandbach & especially in to our school. Existing routes over congested, along several stretches, footpaths are narrow. The proposed more rural routes would take our students along roads that are ill-equipped for traffic and especially young students cycling on their own. The routes are not direct, where cycle ways exist they are narrow and much of the route is poorly lit and remote, giving cyclists little protection.

Appendix Three: Social Media engagement statistics

		Facebook			Twitter		
Date	**Text**	**Reach**	**Engagements**	**Engagement rate**	**Reach**	**Engagements**	**Engagement rate**
08/05/2018	Looking to have your say about our Local Transport Plan? There's still time to attend today's consultation drop-in, which will be taking place until 7pm tonight at Crewe Municipal. Find out more here: [link]	5,910	38	4%	1,849	19	1%
10/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place today from 2pm-7pm at Nantwich Civic Hall, Market Street. Find out more here: [link]	1234	0	0.64%	2,680	37	1.40%
15/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place in Alsager today from 2pm-7pm at Wesley Place Methodist Church, Lawton Street, ST7 2RU: [link]	1,196	4	1%	1,398	20	1.40%
17/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place at #Macclesfield Town Hall (SK10 1EA) from 2pm-7pm today: [link]	3,802	19	3%	1,500	20	1.30%
21/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place at Wilmslow Library, South Drive, SK9 1NW, from 2pm-7pm today: [link]	1,277	1	0.60%	1,839	23	1.25%
24/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place at Poynton Civic Hall, Park Lane, SK12 1RB, from 2pm-7pm today: [link]	770	3	0.40%	2,100	25	1.20%
28/05/2018	Come and have your say on our proposed transport schemes for Disley at our upcoming consultation events on Wednesday 30th May. These proposals are part of a new SEMMM (South East Manchester Multi-Modal) strategy, and you can view all upcoming consultation dates here: [link]	2,006	6	4%	1,575	19	1.20%
29/05/2018	Come and have your say on our proposed transport schemes forHandforth at our upcoming consultation event on Thursday 31st May. These proposals are part of a new SEMMM (South East Manchester Multi-Modal) strategy, and you can view all upcoming consultation dates here: [link]	1,164	5	1%	1,219	12	1%

29/05/2018	If you'd like to have your say about our Local Transport Plan, a consultation drop-in event is taking place in #Middlewich at The Victoria Hall, Civic Way, CW10 9AS, until 7pm today: [link]	855	0	1%	1,435	41	3%
29/05/2018	A consultation event is being held in #Disley tomorrow where you can have your say on proposed transport schemes for Cheshire East - including a #Disley bypass. It's part of the SEMMM (South East Manchester Multi Modal) strategy & Local Transport Plan consultation: [link]	1,452	4	2%	1,080	4	0.40%
30/05/2018	An A6 bypass for Disley is proposed in our draft SEMMM (South East Manchester Multi Modal) strategy. Come and tell us what you think about this and our other SEMMM proposals at Disley Community Centre from 2-7pm today: [link]	825	0	2%	970	29	3%
30/05/2018	A consultation event is being held in #Handforth tomorrow where you can have your say on proposed transport schemes for Cheshire East - including a Bus Rapid Transit scheme for the village. It's part of the SEMMM (South East Manchester Multi Modal) strategy & Local Transport Plan consultation: [link]	413	1	0.50%	790	6	0.80%
05/06/2018	Want to have your say on transport improvements in #CheshireEast? Come and tell us this Thursday at #Knutsford Library from 2-7pm. Find out more here: [link]	1,266	5	0.86%	1,925	26	1.40%
08/06/2018	Don't forget that you can have your say on local transport improvements today at #Congleton Town Hall, from 2-7pm. Find out more or view the full schedule here: [link]	1,193	1	0.67%	1,128	11	1%
14/06/2018	Tomorrow we'll be at #Sandbach Town Hall 2-7pm to listen to what transport improvements you want to see in Cheshire East. If you can't make it, you can respond to our Local Transport Plan consultation online: [link] The last date for responding is 25 June.	3,370	35	3%	1,619	11	0.70%
18/06/2018	If you'd like to have your say on identifying solutions to traffic & travel problems experienced by residents in the north of the borough, a consultation event is taking place at #Macclesfield Town Hall today from 2-7pm: [link]	1,328	0	0.90%	1,476	15	1%
03/07/2018	If you want to have your say on the proposed refresh of transport plans for the north of Cheshire East, there are just two weeks left before the consultation closes: [link]	1,742	0	1%	1,499	31	2.10%

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Key Consultation Feedback
Consultation Comments

Concerns over buses - A lack of local buses, and poor reliability/efficiency of existing buses in the B
Services do not meet the needs of the young and elderly. Accessibility for all on bus services was al
Poor punctuality of Rail Services and improved frequency needed, such as re-opening of Middlewic
the mid-Cheshire line.

Improve integration between modes of travel

Lack of focus by the Council on sutainable transport infrastrucutre, cycle routes should be safe and j
Congestion and traffic problems

The importance of pollution and air quality
Road Maintenance including footpaths

Car parking is needed for access to services (schools, hospitals, town centres)

Transport Infrastructure should be provided alongside new devevlopments (cycle, walking, bus, tra

Need for improved coordination/management of roadworks

Extension of the Metrolink into the north of Cheshire East

Ensure SEMMMS and LTP are integrated

Confusion over the hierarchy of priorities - should be maintaining infrastructure anyway

Strategy Changes/updates

*We will work to develop and revise the bus chapter of the LTP strategy before going to Cabinet and

*Strengthen the text around Sandbach to Northwich Line - it's an ambition of the Council.
*The LEP are commissionig a study on the Mid-Cheshire Line and we will continue to progress with t alongside partners.
*The Council will continue to work with the DfT and franchises to ensure good services for Cheshire
*Ensure LTP reflects what is in SEMMMS on integration.
*Refer to park and ride in the text in reference to integration of modes.

*The strategy has a section on sustainable transport, including walking and cycling.
*Evidence car ownership and housing growth in text
*Important to address key pinch points, especially in towns and villages
*Reinforce personal choice - residents can help by choosing different modes of travel
*Insert graphic of timeline of major scheme delivery
*Refer to draft Air Quality Strategy which is being developed
*Refer to well managed highway infrastructure (code of practice)
*Risk based approach to asset management
*Parking reviews to be undertaken in each key service centre and principal towns over the next few will address parking
*SMOTS has recently been adopted
*ensure infrastructure is funded by developers and is delivered in advance of the devleopment bei
*May be potential for forward funding by CEC for this purpose
*explain how roadworks and permits are coordinted
* Expand on info for permits scheme
*No foreseeable plans for metrolink extension into Cheshire East
*Bus Rapid Transit scheme (SEMMMS) is the focus linking the north of the borough into Greater Mar
*Schemes from the SEMMMS strategy will be included within the LTP strategy (e.g. BRT, Disley Bypa improvements)
*Reword this explanation of the hierarchy of priorities
*CEC are looking to maximise new infrastructure where maintenance is not good enough
*Give examples

Community (Land)	Stakeholder LTP	Communication Methodology
Specialists	Macclesfield Canal Society	Email
Specialists	Campaign to Protect Rural England	Email
Specialists	NHS-North West Ambulance Service	Email
Specialists	St Johns Ambulance	Letter
Specialists	Cheshire Police Force	Email
Specialists	Wilmslow Trust	Email
Specialists	Cycling UK	Email
Specialists	Sustrans	Email
Specialists	Living Streets	Email
Specialists	Campaign for Better	Email
Specialists	Cheshire Wildlife Trust	Email
Statutory (Section 42)	Canals and Rivers Trust	Email
Statutory (Section 42)	The Environment Agency	Email
Statutory (Section 42)	Natural England	Email
Statutory (Section 42)	Network Rail	Email
Statutory (Section 42)	The Health and Safety Executive	Letter
Statutory (Section 42)	The Homes and Communities Agency	Email
Statutory (Section 42)	The Joint Nature Conservation Committee	Email
Statutory (Section 42)	Highways England	Email
Statutory (Section 42)	Passenger Transport Consortium	Email
Statutory (Section 42)	Transport Focus	Letter
Statutory (Section 42)	The Disabled Persons Transport Advisory	Email
Individual Resident	Local Resident	Email
Resident Group	Butley Town Village Residents Group	Email
Specialist Interest Group	NW Transport Activists Roundtable	Email
Specialist Interest Group	Friends of the Peak District and CPRE South Yorkshire	Email
Specialists	Age UK	Email
Specialists	CEC adult amd social care services	Email
Specialists	CEC children's services	Email
Specialists	Skills and Growth Company	Email
Specialist Interest Group	CILT	Letter
Specialist Interest Group	South Cheshire College	Email
Specialist Interest Group	Diocese of Shrewsbury	Email
Specialist Interest Group	Diocese of Chester	Email
Specialist Interest Group	CEASH (Secondary Heads)	Email
Specialist Interest Group	ECAPH (Primary Heads)	Email

Cycling Group	Sandbach Cycling Group	Email
Cycling Group	Sandbach Cycling Group	Email
Cycling Group	Crewe & Nantwich Cycling group	Email
Cycling Group	Congleton Cycling group	Email
Cycling Group	Macclesfield Cycling group	Email
Cycling Group	Macclesfield Cycling group	Email
Cycling Group	Wilmslow cycling group	Email
Cycling Group	Knutsford cycling group	Email
Cycling Group	Middlewich cycling group	Email
Cycling Group	Audlem cycling group	Email
Specialist Interest Group	Active Cheshire	Email
Specialist Interest Group	Countryside Access Forum	Email
Specialist Interest Group	Parent Carer Forum	Email
Specialist Interest Group	CEC Youth Council	Email
Specialist Interest Group	CEC Youth Council	Email
Specialist Interest Group	Children's Centres	Email
Specialist Interest Group	Disability Info Bureau	Email
Local Transport Authority	TfGM	Email
Local Transport Authority	Cheshire West & Chester	Email
City council	Manchester City Council	Email
Borough Council	Stockport Metropolitan Borough Council	Email
Borough Council	Trafford Boroguh Council	Email
Borough Council	High Peak Borough Council	Email
District Council	Staffordshire Moorlands District Council	Email
Local Transport Authority	Staffordshire County Council	Email
Borough Council	Newcastle-Under-Lyme Borough Council	Email
Local Transport Authority	Shropshire Council	Email
Local Transport Authority	stoke on trent city council	Email
Borough Council	Warrington Borough Council	Email
Local Transport Authority	Derbyshire County Council	Email
Specialists	CEC Communities team?	Email
Specialists	Leighton Hospital	Email
Specialists	Macclesfield Hospital	Letter
Specialists	Cheshire Fire and Rescue Service Headquarters	Email
Specialists	TfN	Email
Specialists	Manchester Airport	Email
Specialists	Manchester Airport	Email
Specialists	Disability Informaiton Bureau	Email
Neighbouring Local Authorities	Cheshire & Warrington LEP	Email
MP	MP Congleton	letter
MP	MP Crewe and Nantwich	letter
MP	MP Eddisbury	letter
MP	MP David Rutley	letter

MP	MP Tatton	letter
Specialists	Cheshire CIL	Email
Specialists	Mid Cheshire Hospitals	Email
Specialists	Mid Cheshire Hospitals	Email
Specialists	Cheshire and warrington carers trust	Email
Specialists	Peak district national park authority	Email
Specialists	Local access forum	Email
specialists	Transport Service Solutions	Email
bus operator	D&G Buses	Email
bus operator	Arriva North West	Email
bus users	Crewe Bus Users Group	Email
bus operator	Mikro coaches	Email
bus operator	Tomlinson travel	Email
bus operator	Hollinshead coaches	Email
bus operator	Selwyns coaches	Email
Specialists	NHS	Email
Bus Group	Crewe & Nantwich BUG	Email
Bus Group	Crewe & Nantwich BUG	Email
Town and Parish Councils	All Town and Parish Councils	Email

Resources
Posters
16 A3 posters circulated to info points and libraries
7 A3 to Cranage, Hulme Walfield and Somerford Booths, Newbold Astbury cum Moredon, Somerford Parish Councils
100 A4 to Crewe & District BUG
7 A4 to Cranage, Hulme Walfield and Somerford Booths, Newbold Astbury cum Moredon, Somerford Parish Councils
4 A4 to Holmes Chapel Parish Council
5 A4 to High Legh Parish Council
Total: 139 posters distributed

Questionnaires & Pre-paid Envelopes
300 (50 at each info point)
140 to Crewe & District BUG
20 to High Legh Parish Council
30 to Handforth Parish Council
30 additional copies provided to Handforth library
30 additional copies provided to Crewe library
50 - Middlewich Resident
Copies available at drop in events (approx. 15 per event) - 180
Total: 1180 questionnaires distributed

Brochures
300 (50 at each info point)
140 to Crewe & District BUG
20 to High Legh Parish Council
30 to Handforth Parish Council
30 additional copies provided to Handforth library
30 additional copies provided to Crewe library
50 - Middlewich Resident
Copies available at drop in events (approx. 15 per event) - 180
Total: 1180 brochures distributed

Cemeteries Strategy Consultation 17th September 2018 Agenda Item …

Ralph Kemp Corporate Manager Commissioning –
Waste and Environmental Services

Summary of Strategy

- The research for this strategy suggests that coffin burial accounts for approximately 16 to 20 per cent of funerals in Cheshire East, with Cheshire East Council's cemeteries accommodating 8.4 per cent of all coffin burials in Cheshire East.

- Ashes following cremation accounted for approximately 59 per cent of total burials in the council's cemeteries in 2017.Currently, Town & Parish Councils and Parish Churchyards account for approximately 8% of all burials in Cheshire East.

- Even accounting for projected increases in the number of deaths, there is sufficient capacity within the council's cemeteries overall to meet demand for new graves for over 30 years.
- The drive-time catchment analysis suggests that Cheshire East Council might wish to consider Crewe Meadow Brook and Macclesfield as its two principal cemeteries and continue to operate and maintain their other cemeteries.
- The Strategy suggests where appropriate, the transfer of existing facilities or working to set up a trust for future cemetery provision where there is a desire to provide more local provision over and above CE's principal cemeteries.

CE Managed Cemetery's

Cemetery	Cemetery	Opened	Acres
Alderley Edge	Chelford Road, Alderley Edge SK9 7TQ	1906	4.00
Congleton	Howey Lane, Congleton CW12 4AE	2004	3.18
Crewe Coppenhall	Reid Street, Coppenhall CW1 3DZ	1863	9.44
Crewe Badger Av	Badger Avenue, Crewe CW1 3JG	1872	28.65
Crewe Meadow Brook	Minshull New Road, Crewe CW1 3PP	2017	13.20
Knutsford	Tabley Hill Lane, Tabley WA16 0EW	1902	5.00
Macclesfield	Prestbury Road, Macclesfield SK10 3BU	1866	68.00
Nantwich	Whitehouse Lane, Nantwich CW5 6HP	1875	6.30
Sandbach	The Hill, Sandbach CW11 1JJ	1935	5.62
Weston	Cemetery Road, Weston, Crewe CW2 5LQ	1902	1.80
Wilmslow	Manchester Road, Wilmslow SK9 2LE	1907	4.50

Burials by type

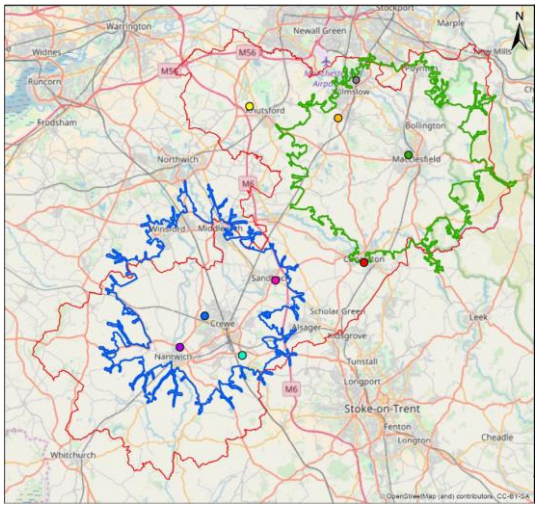
Cemetery	2016		2017	
	Coffins	Ashes	Coffins	Ashes
Alderley Edge	23	24	17	31
Congleton	17	25	11	28
Crewe Coppenhall	2	4	1	4
Crewe Badger Av	61	143	54	146
Crewe Meadow Br	23	19	47	31
Knutsford	27	10	28	14
Macclesfield	63	98	76	138
Nantwich	44	46	34	53
Sandbach	31	27	46	23
Weston	4	5	7	11
Wilmslow	36	19	29	30

Capacity Remaining

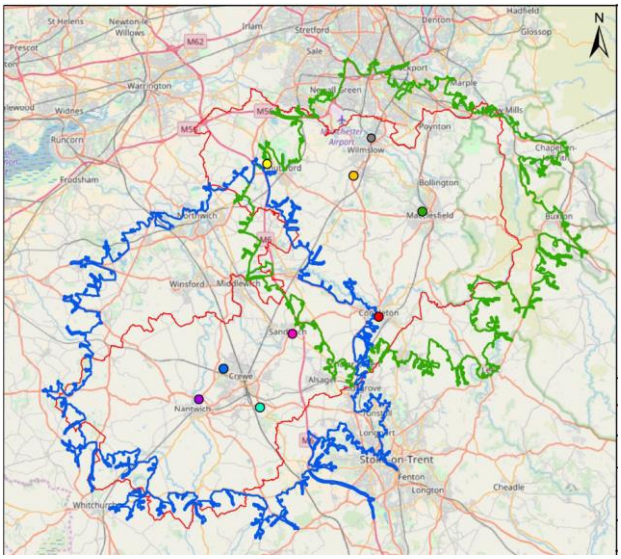
Cemetery	Available graves	Demand in 2017	Capacity in years
Alderley Edge	1,322	11	120
Congleton	792	14	59
Crewe Coppenhall	0	0	
Crewe Badger Avenue	0	0	
Crewe Meadow Brook	6,705	62	108
Knutsford	426	15	29
Macclesfield	2,718	33	84
Nantwich	918	28	33
Sandbach	235	26	9
Weston	474	4	135
Wilmslow	283	16	18
Totals	**13,873**	**206**	**67**

30-minute drive-time catchments for Crewe Meadow Brook and Macclesfield

The computer software accounts for varying travel speeds depending upon the roads within the search area and for this report has also accounted for the generally lower speeds achieved by funeral vehicles. The use of drive-time catchment mapping, using travel speeds of 60% of normal traffic, has been accepted at numerous Planning Appeals as being a valid approach to defining crematoria catchments.



45-minute drive-time catchments for Crewe Meadow Brook and Macclesfield:



Public Consultation Questions

Have you read…

…the full draft Cemeteries Strategy?

…the brief summary of the draft Cemeteries Strategy?

How strongly do you agree or disagree that the Cemetery Regulations are…

…Clear?

…Comprehensive?

…Suitable?

How strongly do you agree or disagree that the draft Cemeteries Strategy is…

…Clear?

…Comprehensive?

…Suitable?

How do you rate the following aspects of the draft Cemeteries Strategy?

Cemeteries strategy for the short term
Cemeteries strategy for the medium term
Cemeteries strategy for the long term
The Cemeteries Strategy overall

Cheshire East Council
Cemeteries Strategy

20th June 2018
Draft for Consultation

Produced on behalf of Cheshire East Council by Harrison Design Development, in association with Peter Mitchell.
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1.0 Executive Summary

1.1 In Cheshire East, demand for burial provision is currently met by Cheshire East Council's eleven cemeteries, together with town and parish council cemeteries and churchyards.

1.2 The research for this strategy suggests that coffin burial accounts for approximately 16 to 20 per cent of funerals in Cheshire East, with Cheshire East Council's cemeteries accommodating 8.4 per cent of all coffin burials in Cheshire East. (Figure 13 illustrates the calculations that provide these percentage figures)

1.3 Ashes following cremation accounted for approximately 59 per cent of total burials in the council's cemeteries in 2017.

1.4 Even accounting for projected increases in the number of deaths, there is sufficient capacity within the council's cemeteries overall to meet demand for new graves for over 30 years.

1.5. However, individual cemeteries will run out of space for new graves sooner than this. Unless supplemented in some way, this overall capacity will require at least some people to bury their dead further away from their home location than they would currently.

1.6 Approximately 90% of the population of Cheshire East currently live within a 30-minute drive-time at funeral speeds of one of the council's cemeteries.

1.7 However, approximately 72% of the population of Cheshire East currently live within a 30-minute drive-time at funeral speeds of either or both, of the two largest cemeteries with the most remaining space for burial, Crewe Meadow Brook and Macclesfield cemeteries.

1.8 The drive-time catchment analysis suggests that Cheshire East Council might wish to consider Crewe Meadow Brook and Macclesfield as its two principal cemeteries, given their convenient location and existing facilities.

2.0 Introduction

2.1 Cheshire East Council commissioned this cemeteries strategy to describe the quantity and location of current provision and to review the options and mechanisms for ensuring appropriate provision for future burials. This required a detailed assessment of both current and future demand and capacity for burial within the Council's cemeteries and a survey of demand and capacity at burial sites provided by others, including Town and Parish Councils and churches.

2.2 The strategy is informed by an awareness of the demographic and legal context for the provision and management of burial facilities.

2.3 The data used in this strategy originates from a number of sources. Data on demand and capacity within the Council's cemeteries is largely derived from the cemetery records stored within the 'BACAS' Burial and Cremation Administration System. This refers to computer software developed by Clear Skies Software and used by many cemeteries and crematoria to maintain records and to administer funerals. Demographic data originates from the ONS, the Office for National Statistics. Information regarding churchyards is supplied by the Venerable Ian Bishop, Archdeacon of Macclesfield, Minsters and churchwardens. Information regarding town and parish councils is supplied by town and parish clerks. Drive-time mapping and data is supplied by Vectos Limited.

2.4 The strategy identifies the steps that are required to enable the provision of sustainable cemeteries and encourages liaison with the other providers to ensure continued provision for burial that meets local need across the whole of Cheshire East.

3.0 The Council's cemeteries: demand and capacity

3.1 Figure 1 lists Cheshire East Council's 11 cemeteries:

Cemetery	Address	Opened	Acres
Alderley Edge	Chelford Road, Alderley Edge SK9 7TQ	1906	4.00
Congleton	Howey Lane, Congleton CW12 4AE	2004	3.18
Crewe Coppenhall	Reid Street, Coppenhall CW1 3DZ	1863	9.44
Crewe Badger Avenue	Badger Avenue, Crewe CW1 3JG	1872	28.65
Crewe Meadow Brook	Minshull New Road, Crewe CW1 3PP	2017	13.20
Knutsford	Tabley Hill Lane, Tabley WA16 0EW	1902	5.00
Macclesfield	Prestbury Road, Macclesfield SK10 3BU	1866	68.00
Nantwich	Whitehouse Lane, Nantwich CW5 6HP	1875	6.30
Sandbach	The Hill, Sandbach CW11 1JJ	1935	5.62
Weston	Cemetery Road, Weston, Crewe CW2 5LQ	1902	1.80
Wilmslow	Manchester Road, Wilmslow SK9 2LE	1907	4.50

Figure 1: Cheshire East Council cemeteries

Source: Cheshire East Council

3.2 Demand

3.2.1 Numbers of deaths and types of burial vary by location and from year to year, as illustrated below in Figure 2 for total burials during 2016 and 2017.

Cemetery	Total Burials		
	2016	2017	Variation
Alderley Edge	47	48	1
Congleton	42	39	-3
Crewe Coppenhall	6	5	-1
Crewe Badger Avenue	204	200	-4
Crewe Meadow Brook	42	78	36
Knutsford	37	42	5
Macclesfield	161	214	53
Nantwich	90	87	-3
Sandbach	58	69	11
Weston	9	18	9
Wilmslow	55	59	4
Totals	**751**	**859**	**108**

Figure 2: Total burials in 2016 and 2017

Source: Cheshire East Council Cemetery Records

3.2.2 On average, every working day there are between 3 and 4 burials of all types across the Council's 11 cemeteries.

3.2.3 There are various types of burials, the most obvious distinction being that between the burial of coffins and the burial of ashes following cremation. Figure 3 below illustrates this distinction for 2016 and 2017:

Cemetery	2016		2017	
	Coffins	Ashes	Coffins	Ashes
Alderley Edge	23	24	17	31
Congleton	17	25	11	28
Coppenhall	2	4	1	4
Crewe	61	143	54	146
Knutsford	27	10	28	14
Macclesfield	63	98	76	138
Meadow Brook	23	19	47	31
Nantwich	44	46	34	53
Sandbach	31	27	46	23
Weston	4	5	7	11
Wilmslow	36	19	29	30
Totals	**331**	**420**	**350**	**509**
Proportions	**44%**	**56%**	**41%**	**59%**

Figure 3: Burials by type in 2016 and 2017
Source: Cheshire East Council Cemetery Records

3.2.4 Figure 3 reveals that there is greater demand for the burial of ashes than of coffins.

3.2.5 It is important to note that each coffin or ashes burial does not necessarily require a new grave or new ashes plot.

3.2.6 Family graves are common in cemeteries and churchyards. In the Council's cemeteries new graves can be excavated to accommodate up to 3 coffin burials. In addition, both ashes plots and coffin graves can accommodate a number of ashes burials.

3.2.7 The relative proportions of demand for new and reopened graves often reflect the age of the cemetery:

- Demand for new graves predominates in a new cemetery and it normally takes 10 years or more before the first of these graves containing a single burial is reopened to receive a second family member.
- Where a cemetery has been established for many years, space for new graves gradually diminishes and reopened graves predominate.
- Once there is no space at all remaining for new graves, reopened graves account for all burials. As further years pass, the number of burials declines as family graves become filled and new cemeteries or extensions are developed, if demand for burial is to be accommodated.

3.2.8 Figure 4 below illustrates for 2017 the distinction between the demand for burial in new graves and burial in existing graves, which are reopened to accommodate a further coffin burial.

Cemetery	New	Reopen	New	Reopen
Alderley Edge	8	9	47%	53%
Congleton	11	0	100%	0%
Crewe Coppenhall	1	0	100%	0%
Crewe Badger Avenue	25	29	46%	54%
Crewe Meadow Brook	44	3	94%	6%
Knutsford	18	10	64%	36%
Macclesfield	33	43	43%	57%
Nantwich	24	10	71%	29%
Sandbach	30	16	65%	35%
Weston	5	2	71%	29%
Wilmslow	14	15	48%	52%
Totals	**213**	**137**	**61%**	**39%**

Figure 4: New and reopened graves in 2017
Source: Cheshire East Council Cemetery Records

3.2.9 Figure 4 illustrates:

- Both Congleton and Crewe Meadow Brook are new cemeteries and new graves predominate.
- Whilst Nantwich is an old cemetery, it has a new extension, which accounts for the higher proportion of new graves.
- Crewe Coppenhall is an old cemetery and has very few burials. However, a very small number of new graves have been accommodated, for example where a tree has had to be removed.
- The other cemeteries have proportions of demand than may be observed at typical operational cemeteries all over the country.

3.3 Capacity

3.3.1 The facilities offered for the burial of ashes vary across the 11 cemeteries and include burial plots and above-ground vaults. The various options all occupy a certain amount of space and, due to the level of demand, the Council will continue to provide space in the cemeteries to accommodate them.

3.3.2 However, coffin burial uses up much more land than any of the various options for ashes and deliverability is also influenced to a much greater degree by ground conditions within each site. This is due to legal and practical requirements relating to the depths at which coffins are buried.

3.3.3 Thus, whilst space for ashes is highly relevant, the key factor in determining cemetery capacity is the space available for new graves for coffin burial.

3.3.4 Cemetery capacity is not as fixed and definitive as might be assumed:

- The size, topography, existing features and design of each cemetery influence how many grave spaces are originally envisaged.
- Ground conditions influence the depths to which graves may be excavated and thus the number of burials that may be accommodated. Ground conditions vary between cemeteries and can also vary to a surprising degree within each cemetery.
- Trees planted when the cemetery is first developed may mature to a significant size and reduce the area available for graves.
- In recent years, there has been a general trend for larger coffin sizes and an increase in the use of caskets, both of which may require larger grave space sizes and thus less graves than originally envisaged.
- It is possible to create ‘new’ space for graves by using land previously designated for other purposes, such as paths and landscape.

3.3.5 The data in Figure 5 below originate from an analysis of the BACAS databases, grave plans and site visits. Account has been taken of the new graves available in the as-yet unused areas of the recently developed Congleton and Crewe Meadow Brook cemeteries; potential new graves that could be created at the perimeters of sections in Sandbach and Weston cemeteries and the proposed extensions at Alderley Edge and Weston.

Cemetery	Available	Created	Extension	Total
Alderley Edge	322		1,000	1,322
Congleton	792			792
Crewe Coppenhall	0			0
Crewe Badger Avenue	0			0
Crewe Meadow Brook	6,705			6,705
Knutsford	426			426
Macclesfield	2,718			2,718
Nantwich	918			918
Sandbach	115	120		235
Weston	0	26	448	474
Wilmslow	283			283
Totals	**12,279**	**146**	**448**	**13,873**

Figure 5: Summary of grave capacity
Source: Cheshire East Council Cemetery Records

3.3.6 Figure 5 above shows that it is estimated that 13,873 graves are available for use for coffin burial across nine of the eleven Cheshire East cemeteries.

3.3.7 These estimates take account of the availability of graves originally planned when cemeteries were first designed, but which, however, may now no longer be deliverable, for example due to the growth of trees or the development of crematoria.

3.3.8 In some areas within the cemeteries, it is not feasible to excavate all of the graves originally envisaged without having to remove well established trees and shrubs

that currently enhance the cemeteries. The photographs below at Figures 6 and 7 illustrate such areas.

Figure 6 :Attractive tree lined avenue adds significantly to character, Sandbach Cemetery

Figure 7: Trees planted to enhance cemetery character, Sandbach Cemetery

3.3.9 The combined effect of the trees currently growing in the Council's cemeteries could potentially result in the loss of more than 500 graves that were originally planned on the cemetery maps. Accurately quantifying this impact upon grave availability in cemeteries, particularly the largest at Macclesfield and Crewe, would require extensive site investigations.

3.3.10 It is likely that the development during the 20th century of Crewe and Macclesfield crematoria within the cemeteries, together with their associated extensive Gardens of Remembrance, had the effect of significantly reducing the number of graves originally planned for those cemeteries when they were designed in the nineteenth century before crematoria were introduced.

- Crewe Badger Avenue Cemetery was originally opened in 1872. The crematorium was opened in 1958 on the site of the original cemetery chapels.
- Macclesfield Cemetery was originally opened in 1866. The crematorium was opened in 1960, following the conversion and extension of the original Nonconformist Cemetery Chapel.

3.3.11 Conversely, as space for new graves becomes limited, steps can be taken to create new grave space by using areas not originally designated for the purpose[1]. However, there should be careful consideration of aesthetic, environmental and heritage factors, as well as the need to facilitate access to graves, when considering utilising areas not original allocated for burial.

3.3.12 The photograph below at Figure 8 illustrates an example of where a limited number of new graves could be excavated in parallel with existing graves, within the grass verges at the edges of existing 'full' areas of Sandbach Cemetery with consideration and ensuring that existing graves would not be driven over.

[1] See legal context section

Figure 8: Plots C and D Sandbach Cemetery

3.3.13 Cheshire East Council has already used this technique to create new graves and space for potential further new graves within Crewe Badger Avenue, Nantwich and Weston cemeteries:

- Prior to the opening of Crewe Meadow Brook Cemetery, a few paths at Crewe Badger Avenue Cemetery were removed to create new space for graves.
- Prior to the opening of the new extension, paths within the original cemetery at Nantwich Cemetery were allocated for new graves, some of which have been used.
- Additional graves and ashes plots have been created either side of the access path at Weston Cemetery. A boundary hedge has also been recently removed to create further space for graves, as illustrated in the photograph below at Figure 9.

Figure 9: Space for new graves in Weston Cemetery

4.0 Other burial provision: demand and capacity

4.1 Provision at the local level

4.1.1 As discussed in the section considering the demographic context, the population of Cheshire East is concentrated around urban areas, but is also dispersed at lower densities across more rural areas. Many of these communities are geographically distant from our eleven cemeteries and they rely on local burial provision. Where there are parish churchyards still open for burials, these may pre-date the establishment of the council's cemeteries.

4.2 Town and Parish Councils

4.2.1 There are 11 Town Councils and 97 Parish Councils within Cheshire East. An email survey of burial provision resulted in a response rate of more than 62 per cent and gathered information regarding burial provision by those councils. Figure 10 below summarises data on annual demand for new graves for coffin burial:

Burial Authority	Burials per year	Capacity in years
Middlewich Cemetery Joint Management Board	30	100
Audlem Burial Board	25	70
Nether Alderley Parish Council	*1	84
Swettenham Parish Council	2	84
Total burials per year	58	

Figure 10: Other providers – demand and capacity
Source: Responses to email survey for this strategy

4.2.2 The figure of *1 new grave at Nether Alderley is an approximate estimate, based upon the size of the population. It can be challenging to precisely quantify demand, as this varies seasonally and from year to year. This is particularly the case where the population and numbers of deaths are relatively small.

4.2.3 These data suggest that approximately 58 coffin burials take place in new graves in these cemeteries each year, which represents 1.5 per cent of all deaths and 15.4 per cent of all coffin burials in new graves in Cheshire East.

4.2.4 In common with larger local authorities, town and parish councils generally charge higher cemetery fees to non-residents. They may also have a policy of not accepting non-resident burials, unless specific links with the community can be evidenced, as a means to prolong the capacity of their cemeteries to meet local need.

4.2.5 Swettenham Parish Council's cemetery rules specify that rights of burial will be granted subject to one of the following conditions being met:

- Resident within the parish of Swettenham at date of death
- Former residents who have left the parish due to retirement, marriage, residential care, but have a strong family link with the parish community.
- Former residents who were listed in the Register of Electors for the parish within the period of 5 years prior to death
- Residents from adjoining parishes who have maintained a strong connection with the parish by way of community involvement.

4.2.6 Nether Alderley Parish Council manages its cemetery through a Burial Board with Regulations that include:

Persons entitled to be buried in the Burial Ground:

- "Parishioners": Persons who are resident within the civil parish of Nether Alderley or who are on the current electoral roll of St. Mary's Church, Alderley.
- "Non-Parishioners": Anyone who lives outside the civil parish of Nether Alderley but within the ecclesiastical parish of St. Mary, Alderley.
- "Non-Parishioners": Anyone who lives outside the civil parish of Nether Alderley but who has lived within the civil parish of Nether Alderley for a period of no less than 10 years at any stage.

- "Non-Parishioners": Anyone who has been on the electoral roll of St. Mary's Church, Alderley, for a period of no less than 10 years at any stage.
- "Non-Parishioners": Anyone who has lived within the ecclesiastical parish area of Great Warford for a period of no less than 10 years at any stage.

4.2.7 Therefore, burial space might be available in parish council cemeteries, but only to local residents.

4.3. Parish Churches

4.3.1 Cheshire East lies within the Diocese of Chester, which includes more than 190 churches, but which extends well beyond the local authority's boundaries. Using data supplied by the Archdeacon of Macclesfield, an email survey was undertaken of approximately 75 per cent of the 61 churches within Cheshire East recorded as having churchyards in use for burial. This survey identified 35 Church of England churchyards where burials still take place, although some only offer space for the burial of ashes.

4.3.2 Churchyards often serve small local communities and may be hundreds of years old. These factors combine to make it difficult to establish precise figures for average demand for new graves and the number of grave spaces remaining.

4.3.3 Figure 11 below provides the results of the survey:

Deanery	Parish	Church	Coffin burials per year	Capacity in years	Ashes burials per year	Capacity in years
Bowdon	Ashley	St Elizabeth's			4	20
Congleton	Alsager	Christ Church	30	1		
Congleton	Astbury	St Mary's	15	10		
Congleton	Brereton	St Oswald's	2	20		
Congleton	Church Hulme	St Luke's	5	30		
Congleton	Eaton	Christ Church	1	50		
Congleton	Goostrey	St Luke's	5	5		10

Deanery	Parish	Church	Coffin burials per year	Capacity in years	Ashes burials per year	Capacity in years
Congleton	Hulme Walfield	St Michael	1	50		
Congleton	Mossley	Holy Trinity		0	2	5
Congleton	Smallwood	St John the Baptist	2	4		
Congleton	St John	St John	2	5	2	15
Congleton	St Peter	St Peter		0	8	4
Congleton	Warmingham	St Leonards	3	50	2	50
Knutsford	Chelford	St John the Evangelist	3	10		
Knutsford	Lower Peover	St Oswald	5	50		
Knutsford	Marthall	All Saints		50		
Knutsford	Over Peover	St Lawrence	5	50		
Knutsford	Over Tabley	St Paul's		100	1	50
Macclesfield	Bosley	St Mary the Virgin	1	20	1	10
Macclesfield	Gawsworth	St James the Great	2	30	7	
Macclesfield	Henbury	St Thomas	1	10		
Macclesfield	Marton	St James & St Paul	1	50		
Macclesfield	Pott Shrigley	St Christopher's	1	40	2	35
Macclesfield	Sutton St James	St James	3	10		
Macclesfield	Wildboarclough	St Saviour	1	30		
Macclesfield	Wincle	St Michael	2	8		
Malpas	Marbury	St Michael and All Angels	2	15	2	20
Nantwich	Acton	St Mary	6	75	6	400
Nantwich	Baddiley	St Michael	1	50		
Nantwich	Burleydam	St Mary & St Michael	1	50		
Nantwich	Crewe Green	St Michael & All Angels		100		
Nantwich	Haslington	St Matthew's Haslington		100		
Nantwich	Leighton-cum-Minshull Vernon	St Peters	6	100	3	
Nantwich	Wistaston	St Mary the Virgin	12	20	15	20
Nantwich	Wrenbury	St Chad	9		5	
Total burials			**128**		**60**	

Figure 11: Demand and capacity in Churchyards

Source: Responses to email survey for this strategy

4.3.4 The data in Figure 11 are estimates and simplify a complex situation. Some churchyards listed have no space for coffin burials and only bury ashes. Others have only a few years' capacity remaining for coffin burial, whilst others seem to have low demand and enough space to last "about 100 years".

4.3.5 The survey suggests that approximately 120 coffin burials take place in new graves in these churchyards in Cheshire East each year, which represents 3 per cent of all deaths and 31.9 per cent of all coffin burials in new graves in Cheshire East. There are likely to be some additional burials occurring in the 15 other open churchyards.

4.3.6 The churchyard with the highest level of demand is Christ Church, Alsager. However, there is no scope for an extension of the churchyard. If this demand is to be met elsewhere, it will affect capacity at other sites.

4.3.7 Whilst some churches do not have a burial ground at all, some churchyards are full for coffin burial and others are both full and formally closed by Order in Council, as listed below in Figure 12:

Deanery	Parish	No Burial Ground	Full	Closed
Congleton Deanery	Alsager St Mary Magdalene	1		
Knutsford Deanery	Alderley Edge	1		
Knutsford Deanery	High Legh	1		
Macclesfield Deanery	All Saints	1		
Macclesfield Deanery	Macclesfield St John	1		
Macclesfield Deanery	Prestbury	1		
Macclesfield Deanery	St Barnabas	1		
Middlewich Deanery	Moulton	1		
Middlewich Deanery	Northwich (Castle) Holy Trinity	1		
Middlewich Deanery	Northwich (Winnington) St Luke	1		
Middlewich Deanery	Sandiway	1		
Nantwich Deanery	Crewe All Saints and St Paul	1		
Nantwich Deanery	Crewe Christ Church	1		
Nantwich Deanery	Crewe St Barnabas	1		
Nantwich Deanery	Crewe St Peter	1		
Nantwich Deanery	Doddington	1		

Deanery	Parish	No Burial Ground	Full	Closed
Nantwich Deanery	Shavington	1		
Nantwich Deanery	Weston	1		
Congleton Deanery	Elworth		1	
Congleton Deanery	Holy Trinity Mossley		1	
Congleton Deanery	Sandbach		1	
Congleton Deanery	St Stephen		1	
Congleton Deanery	Swettenham		1	
Knutsford Deanery	Alderley		1	
Knutsford Deanery	Wilmslow		1	
Macclesfield Deanery	Hurdsfield		1	
Macclesfield Deanery	St Peter		1	
Nantwich Deanery	Coppenhall		1	
Nantwich Deanery	Crewe St Andrew with St John the Baptist		1	
Knutsford Deanery	Knutsford St Cross			1
Knutsford Deanery	Knutsford St John the Baptist			1
Macclesfield Deanery	Macclesfield St Paul			1
Macclesfield Deanery	St Michael & All Angels			1
Middlewich Deanery	Middlewich			1
Nantwich Deanery	Audlem			1
Nantwich Deanery	Wybunbury			1

Figure 12: Churches without churchyards or full or closed churchyards

Source: Archdeacon of Macclesfield

4.4 Summary of burial provision by Town and Parish Councils and Parish Churches

4.4.1 Currently, surveys indicate that town and parish councils and parish churchyards account for approximately 178 coffin burials in new graves per year.

4.4.2 In 2016, there were 3,961 deaths of residents in Cheshire East. Using the typical ratio of 60 per cent of burials taking place in new graves and 40 per cent in reopened family graves, Figure 13 below provides estimates to summarise the demand for coffin burials and the proportion of deaths they represent in Cheshire East:

Provider	New	Reopen	Total	% of Deaths
Churchyards	120	80	200	5.0%
Town and Parish Councils	58	42	100	2.5%
Combined	**178**	**122**	**300**	**7.5%**
Cheshire East	198	133	331	8.4%
Totals	**376**	**255**	**631**	**15.9%**

Figure 13: Estimated demand for burial in Cheshire East in 2016
Source: Responses to email survey for this strategy and Cheshire East Council Cemetery Records

4.4.3 Figure 13 suggests that town and parish council cemeteries and churchyards combined undertake only slightly less burials than Cheshire East Council. This underlines the important role these cemeteries and churchyards fulfil in meeting local needs for burial.

5.0 Demographic context

5.1 Factors influencing demand for burial space

5.1.1 Demand for burial space is influenced by a series of interlinked demographic factors:

- Population
- Age structure
- Mortality rates and numbers of deaths
- Ethnicity
- Religious belief

5.1.2 The Office for National Statistics (ONS) publishes demographic data at both national and local authority level, with the most definitive data contained within the Census 2011. Some of these data are periodically supplemented by estimates, the latest available on population being the mid-2016 estimates. The ONS also produce projections into the future and the latest available at local authority level are the 2014-based Subnational Population Projections.

5.2 Population

5.21 Figure 14 below compares the estimated population change in Cheshire East and England as a whole between the definitive Census 2011 and the ONS 2016 mid-year estimates:

	Census 2011	Mid-2016	2011-2016	
Cheshire East	370,127	376,700	6,573	1.8%
England	53,012,456	55,268,100	2,255,644	4.3%

Figure 14: Estimated population change 2011 to 2016
Source: Census 2011 table KS101EW and ONS table SAPE19DT8 population estimates

5.2.3 These figures indicate that the population of Cheshire East has increased during this period, but at less than half the rate as England as a whole.

5.2.4 As with other local authority areas, the population density is variable across Cheshire East with higher densities around urban centres. These include Congleton, Crewe, Knutsford, Macclesfield, Sandbach and Wilmslow.

5.2.5 At the time of the Census 2011, the population density in Cheshire East was only 3.2 persons per hectare, compared with 5.2 across the six unitary authorities in the North West and 4.1 in England as a whole.

5.2.6 These average figures conceal great geographical variation. Based upon ONS mid-2016 population (experimental) estimates, ward population densities in Cheshire East range from 0.4 persons per hectare in Wrenbury, to 73.5 in Crewe South.

5.2.7 Figure 15 below compares the ONS 2014-based subnational population projections for Cheshire East and England as a whole. It is important to note how the ONS produces these projections:

5.2.8 "The projected local authority population for each year is initially calculated by ageing on the population for the previous year, applying assumed local fertility and mortality rates to calculate the number of projected births and deaths, and then adjusting for migration into and out of each local authority. Assumed levels of fertility, mortality and migration for each local authority are **derived from observed values during the previous 5 or 6 years**. The projections are then constrained to the 2014-based national population projections for England."[2]

	2014	2039	2014-2039	
Cheshire East	374,200	406,200	32,000	8.6%
England	54,316,600	63,281,500	8,964,900	16.5%

Figure 15: Estimated population change 2014 to 2039
Source: ONS Table 2 2014-based Subnational Population Projections

[2] ONS Statistical Bulletin 'Subnational population projections for England: 2014-based projections' released 25th May 2016

5.2.9 These ONS 2014 trend-based projections suggest that the population of Cheshire East will increase through to at least 2039, but at approximately half the rate as England as a whole.

5.3 Age structure

5.3.1 Figure 16 below compares the age structure of Cheshire East and England as a whole at the Census 2011:

Age band	Cheshire East	England	Variation
0 to 4	5.5%	6.3%	-0.8%
5 to 7	3.3%	3.4%	-0.2%
8 to 9	2.1%	2.2%	-0.1%
10 to 14	5.8%	5.8%	0.0%
15	1.2%	1.2%	0.0%
16 to 17	2.5%	2.5%	0.0%
18 to 19	2.3%	2.6%	-0.3%
20 to 24	5.0%	6.8%	-1.8%
25 to 29	5.1%	6.9%	-1.7%
30 to 44	19.5%	20.6%	-1.2%
45 to 59	21.4%	19.4%	2.0%
60 to 64	7.1%	6.0%	1.2%
65 to 74	10.3%	8.6%	1.7%
75 to 84	6.4%	5.5%	0.9%
85 to 89	1.7%	1.5%	0.3%
90 and over	0.9%	0.8%	0.1%

Figure 16: Age structure comparison 2011
Source: Census 2011 Table KS102EW

5.32 Figure 17 below compares age structure using the ONS mid-2016 estimates:

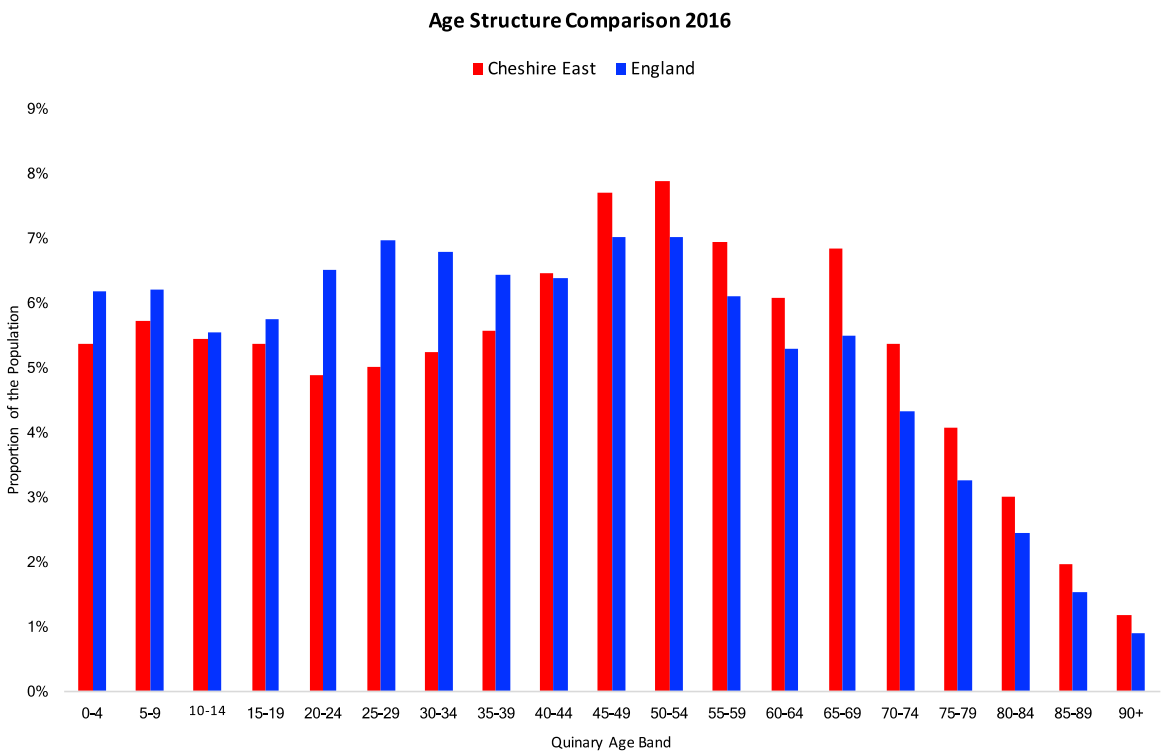

Figure 17: Age structure comparison 2016
Source: Census 2011 Table KS102EW

5.33 Figure 17 clearly indicates that Cheshire East has a generally older age structure than England as a whole.

5.34 As with other local authority areas, urban areas in Cheshire East tend to have the highest proportion of younger people and rural areas the highest proportion of older people.

5.35 Based upon ONS mid-2016 population (experimental) estimates, the proportion of people aged 65 years and over ranges by Ward from only 9 per cent in Leighton (Crewe) to 32.2 per cent in both Poynton East and Pott Shrigley. The greatest concentrations of older people are generally in the northern half of the Cheshire East area.

5.3.6 Figure 18 below uses data from the ONS 2014-based population projections to illustrate projected changes in the age structure of Cheshire East between 2018 and 2039:

Cheshire East				
Age band	**2018**	**2039**	**Change**	**Change**
0-4	19,900	19,800	(100)	-0.5%
5-9	21,700	21,000	(700)	-3.2%
10-14	21,600	22,100	500	2.3%
15-19	19,200	21,200	2,000	10.4%
20-24	17,400	17,700	300	1.7%
25-29	19,900	19,700	(200)	-1.0%
30-34	19,800	20,000	200	1.0%
35-39	21,400	19,800	(1,600)	-7.5%
40-44	22,100	22,600	500	2.3%
45-49	27,900	24,900	(3,000)	-10.8%
50-54	29,700	24,000	(5,700)	-19.2%
55-59	28,000	23,600	(4,400)	-15.7%
60-64	23,400	22,400	(1,000)	-4.3%
65-69	23,300	26,200	2,900	12.4%
70-74	23,400	27,600	4,200	17.9%
75-79	16,100	25,100	9,000	55.9%
80-84	12,200	19,100	6,900	56.6%
85-89	7,700	14,500	6,800	88.3%
90+	4,800	14,800	10,000	208.3%
All ages	**379,700**	**406,200**	**26,500**	**7.0%**

Figure 18: Projected change in age structure 2018 to 2039
Source: ONS Table 2 2014-based Subnational Population Projections

5.3.7 These ONS trend-based projections suggest a further ageing of the population during this period, with significant increases in the proportions of people aged 70 years and over.

5.3.8 Figure 19 below compares these changes in the age structure of Cheshire East, indicated by the ONS 2014-based projections for the period 2018 to 2039, with those for England as a whole:

Projected Change 2018 to 2039		
Age band	**Cheshire East**	**England**
0-4	-0.5%	4.1%
5-9	-3.2%	0.6%
10-14	2.3%	10.1%
15-19	10.4%	19.6%
20-24	1.7%	7.7%
25-29	-1.0%	4.5%
30-34	1.0%	3.2%
35-39	-7.5%	-3.4%
40-44	2.3%	12.3%
45-49	-10.8%	4.5%
50-54	-19.2%	-3.0%
55-59	-15.7%	1.8%
60-64	-4.3%	7.0%
65-69	12.4%	21.6%
70-74	17.9%	26.5%
75-79	55.9%	60.9%
80-84	56.6%	58.9%
85-89	88.3%	80.5%
90+	208.3%	177.4%
All ages	**7.0%**	**12.9%**

Figure 19: ONS 2014-based projected age structure comparison 2018 to 2039
Source: ONS Table 2 2014-based Subnational Population Projections

5.3.9 Figure 20 below provides a further comparison of these ONS 2014-based projections for changes in population and age structure between 2018 and 2039:

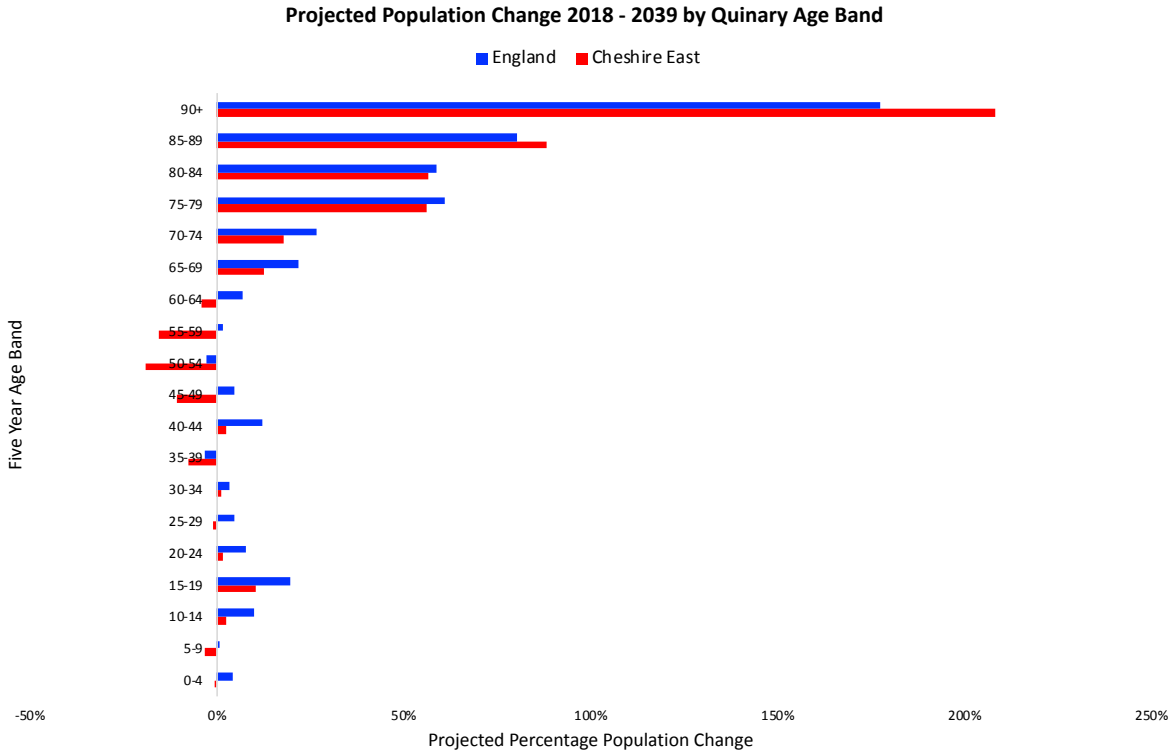

Figure 20: Projection population change 2018 to 2039
Source: ONS Table 2 2014-based Subnational Population Projections

5.3.10 The ONS 2014-based projections clearly indicate significant ageing of the population of Cheshire East during the period 2018 to 2039.

5.4 Mortality rates and numbers of deaths

5.4.1 Death rates and numbers of deaths fluctuate over time, as illustrated for the whole of England and Wales in Figure 21 below:

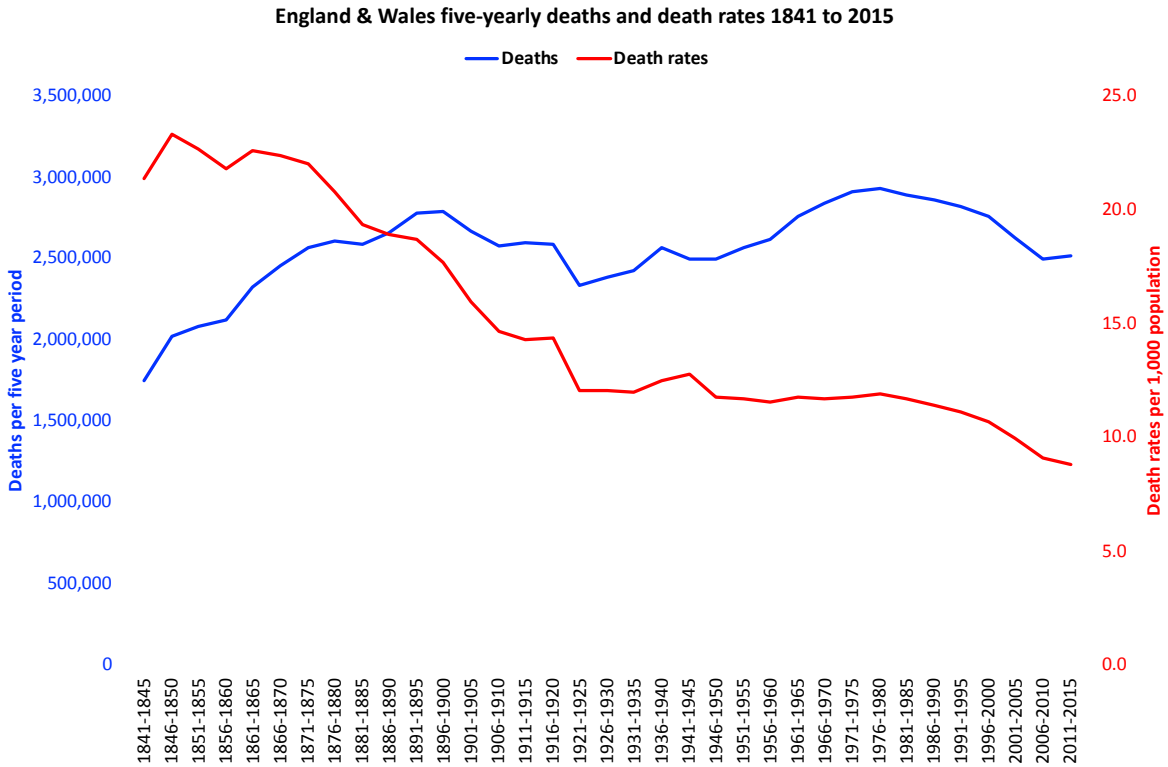

Figure 21: Five-yearly deaths and death rates in England and Wales 1841 to 2015
Source: ONS Table 10 Deaths Registered in England and Wales 2012

5.4.2 It can be seen that the crude death rate (the number of deaths per 1,000 of the population) has declined significantly since the mid 19th century and that numbers of deaths have declined since a peak in the late 1970s. The context for these changes includes increasing population numbers, better healthcare and general improvements in living standards.

5.4.3 The benefits in terms of longevity are particularly experienced by the 'baby-boomers', the post-war generation born between 1945 and 1955. Since 1955, with the exception of 1976, the annual number of births in the UK has exceeded the annual number of deaths. This is referred to as 'Natural Change' and this has played a major part in the increase in the UK population, combined with net migration.

5.4.4 Figure 22 below compares the proportions of deaths in 2016 in Cheshire East and England by five-year age band.

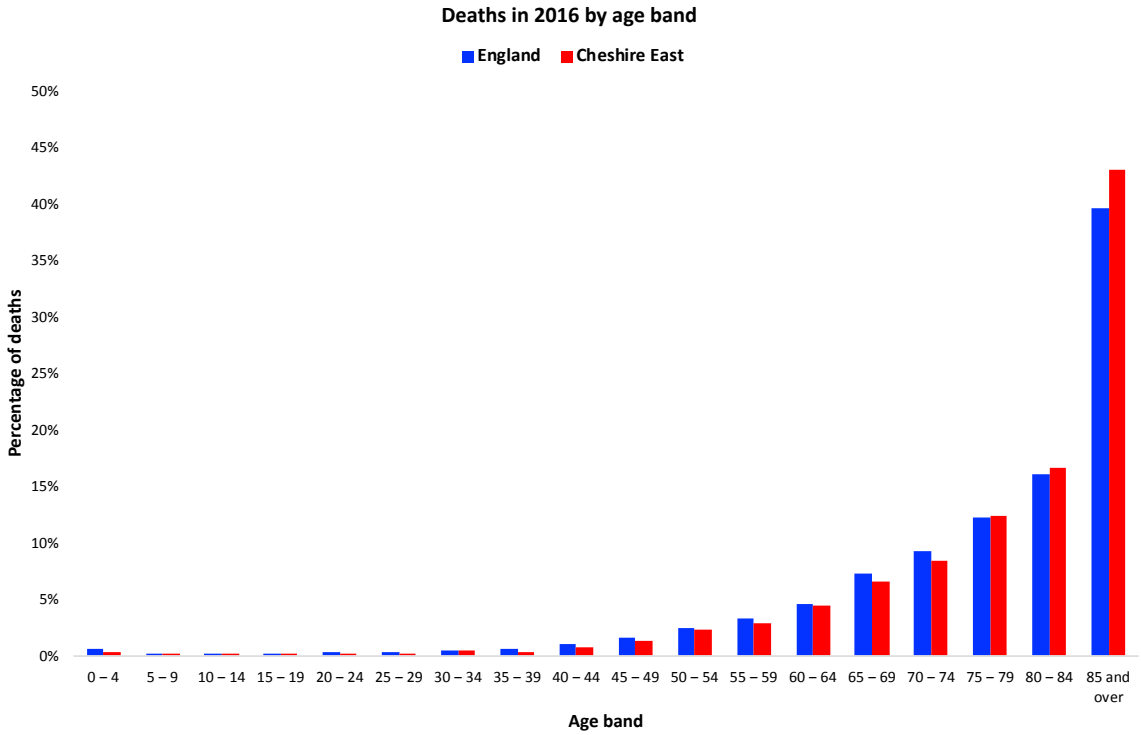

Figure 22: Deaths in England and Cheshire East in 2016 by quinary age band
Source: ONS Table 2 2014-based Subnational Population Projections

5.4.5 By comparison with England as a whole, Cheshire East has a higher proportion of deaths in the 80 years and over age groups, reflecting the older age structure of the population. It is reasonable to assume that, as the population ages further there will be more deaths than at present. Figure 23 below compares the projected change in the numbers of deaths in Cheshire East and England as a whole:

	Actual deaths in 2016	Projected deaths in 2039	Change
Cheshire East	3,961	5,000	26.2%
England	490,791	584,600	19.1%

Figure 23: Projected increase in deaths
Source: ONS Table 5 2014-based Subnational Population Projections

5.4.6 Figure 24 below illustrates the seasonal variation in deaths, as observed in Cheshire East over the 3-year period 2012 to 2014:

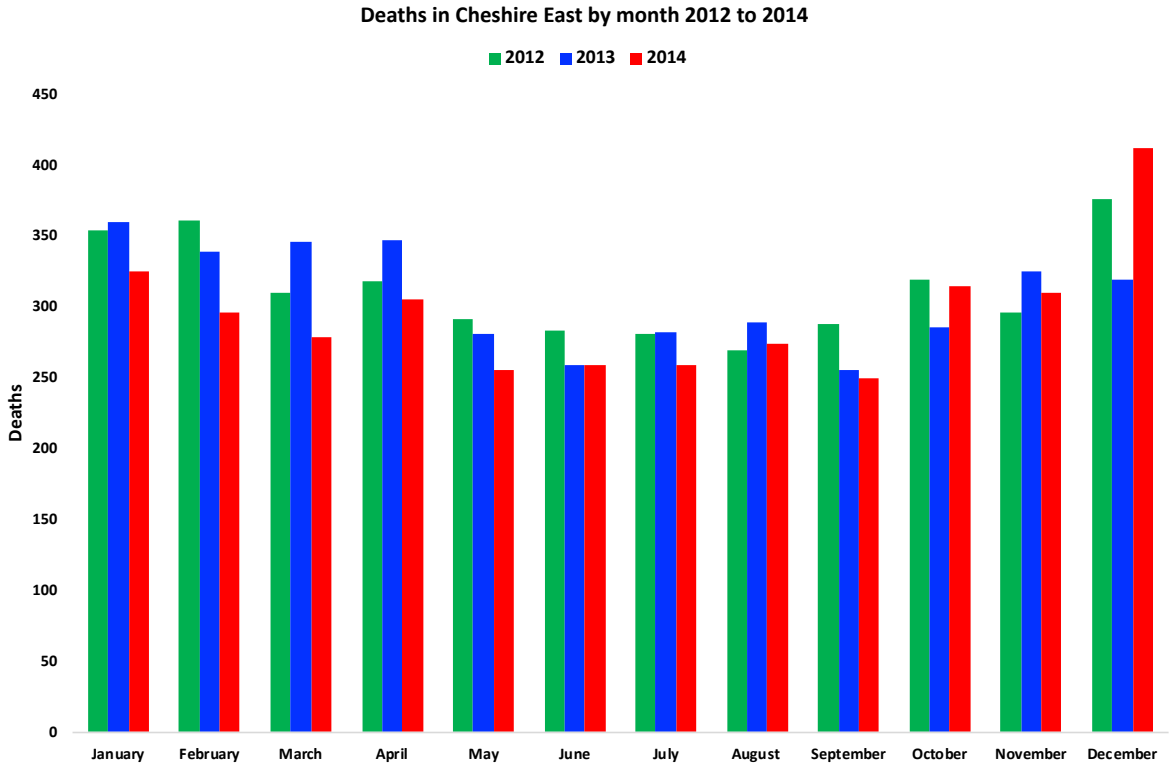

Figure 24: Deaths in Cheshire East by month 2012 to 2014
Source: ONS Daily deaths by local authority, England and Wales, 2010-2014 occurrences

5.4.7 This seasonal variation in deaths will be reflected in numbers of burials in the Council's cemeteries, placing the greatest demand upon resources during the winter months.

5.5 Ethnicity

5.5.1 Ethnic origin is often associated religious belief and with preferences for burial or cremation. For example, in general terms, people of Pakistani or Bangladeshi origin are likely to be Muslim and so require burial, whereas people of Indian origin are more likely to be Hindu and so require cremation.

5.5.2 Using data from the Census 2011, Figure 25 below compares ethnicity in Cheshire East and England as a whole. It is important to note the exclusion of the majority white British group.

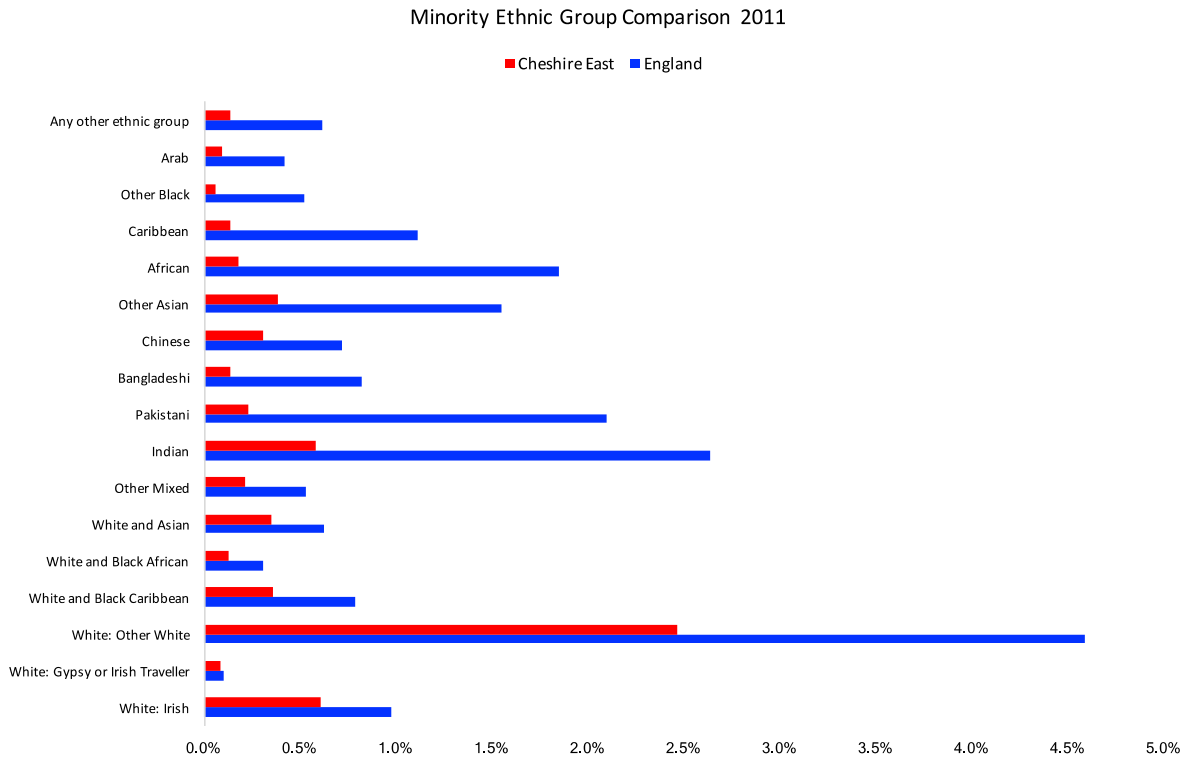

Figure 25: Minority ethnic group comparison 2011
Source: Census 2011 Table KS201EW

5.5.3 It is clear that the population of Cheshire East is far less ethnically diverse than England as a whole.

5.5.4 This suggests that preferences for burial and specific types of burial are likely to be less pronounced in Cheshire East than in England as a whole.

5.6 Religious belief

5.6.1 Religious belief can play a significant role in people's choice between burial and cremation. Actual practice is subject to the degree of commitment to the religious belief concerned, cultural influences and the impact of mixed marriage.

5.6.2 Using data from the Census 2011, Figure 26 below compares minority religious belief in Cheshire East and England as a whole. It is important to note the exclusion of the majority Christian group.

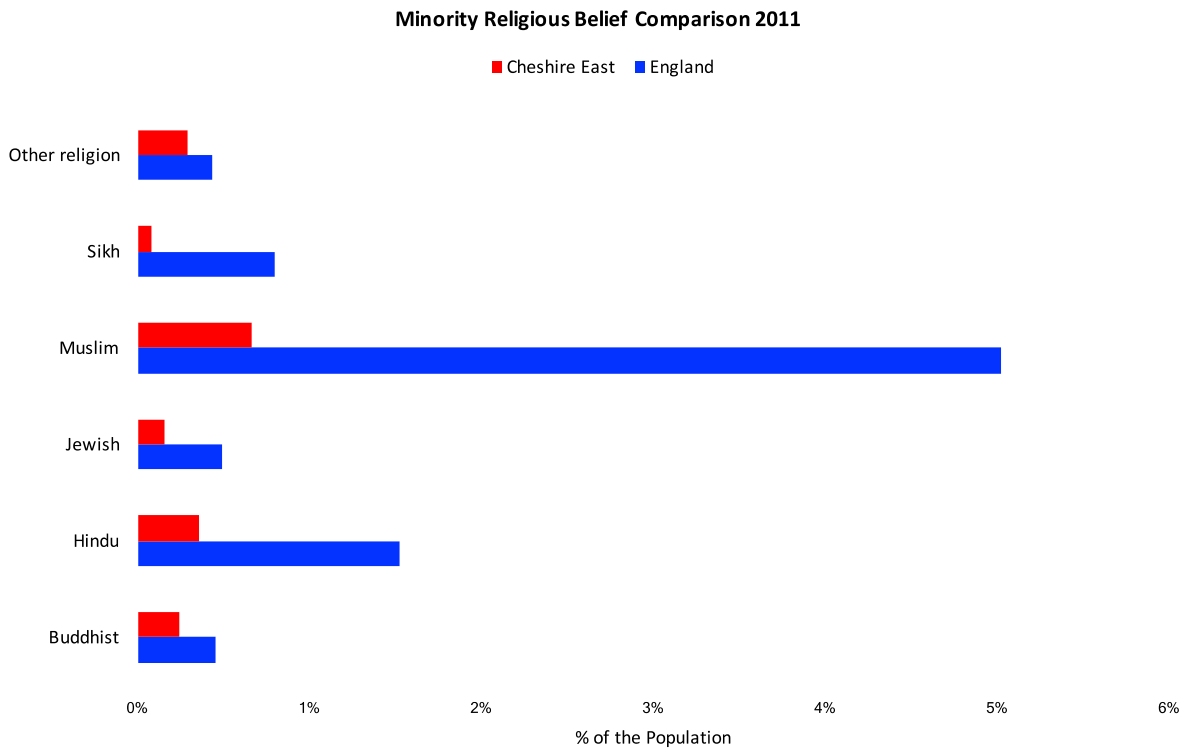

Figure 26: Minority religious belief comparison 2011
Source: Census 2011 Table KS209EW

5.6.3 It can be seen that religious belief amongst population of Cheshire East is less diverse than that of England as a whole.

5.6.4 Like ethnicity, this suggests that preferences for burial and specific types of burial based upon religious belief are likely to be less pronounced in Cheshire East than in England as a whole.

5.7 Summary of the Demographic Context

5.7.1 The population of Cheshire East increased by an estimated 1.8% between 2011 and 2016. ONS trend-based projections suggest an increase of 8.6% between 2014 and 2039. Whilst this is approximately half the comparable rates of increase for England as a whole, it suggests that numbers of deaths may be expected to increase, with a consequent impact upon the provision of burial space.

5.7.2 Cheshire East has an older age structure than England as a whole, with generally higher proportions of older people living in more rural areas. The ONS projections suggest a further significant growth in the proportion of people in Cheshire East aged 70 years or more through at least until 2039. The projected growth in the proportion of people in Cheshire East aged 80 years or more is greater than that for England as a whole.

5.7.3 The statistical link between age and mortality suggests that, although many people are living longer than previous generations, numbers of deaths may be expected to rise significantly during the next 20 years, with a consequent impact upon the demand and provision of burial space.

5.7.4 In spite of medical advances, improvements in healthcare and increased longevity, the number of deaths remains highest during the winter months.

5.7.5 The population of Cheshire East is much less diverse than England as a whole in terms of ethnicity and religious belief. The result is that preferences for burial generally and specific types of burial based upon these two factors may be less evident in Cheshire East than in other areas.

6.0 Legal Context

6.1 Provision and maintenance of cemeteries

6.1.2 Cheshire East Council is a burial authority by virtue of the Local Government Act 1972, as amended. The Council provides and manages its cemeteries within the framework of the Local Authorities' Cemeteries Order 1977 (LACO), as amended.

6.1.3 The provision of cemeteries is not a statutory duty. However, LACO places various statutory duties upon local authorities in relation to cemeteries that they already provide, include the duty to "keep the cemetery in good order and repair, together with all buildings, walls and fences thereon and other buildings provided for use therewith"[3].

6.2 Maintenance of closed churchyards

6.2.1 The Local Government Act 1972 also places duties upon local authorities, in certain circumstances, in relation to Church of England churchyards. Where a churchyard has been formally closed under the Burial Act 1853 by Her Majesty by Order in Privy Council, the duty to maintain the churchyard automatically falls upon the Parochial Church Council. However, the Parochial Church Council may serve a written request upon a relevant local authority, normally the Parish Council, to take over the maintenance of the churchyard. Within 3 months of the service of the original request, the parish council may in turn pass the responsibility to maintain the churchyard to the next relevant level of local government, including district councils and unitary authorities.

6.2.2 The level of maintenance required in a closed churchyard is specified in the Local Government Act 1972 s.215(1):

[3] Local Authorities' Cemeteries Order 1977 article 4(1)

6.2.3 "… the parochial church council shall maintain it by keeping it in decent order and its walls and fences in good repair."

6.2.4 Where, under s.215(2), the PCC serve a request on the relevant local authority to take over the maintenance of the churchyard there is a duty imposed:

6.2.5 "… the maintenance of the churchyard shall be taken over by the authority on whom the request is served …"

6.2.6 The local authority becomes responsible in lieu of the parochial church council for the maintenance of the closed churchyard and thus the local authority is under a statutory duty to maintain the closed churchyard to the same standard as that required by s.215(1) of the PCC, i.e.

6.2.7 "in decent order and its walls and fences in good repair".

6.2.8 The Ministry of Justice confirm this in its document 'Churchyard Closures: Frequently Asked Questions':

6.2.9 What level of maintenance by a local authority is required?

6.2.10 The churchyard should be kept in decent order and its walls and fences in good repair, in the same way that the parochial church council is required to maintain it.

6.2.11 The following is a helpful extract from 'Legal Opinions Concerning the Church of England', published by Church House Publishing, London.[4]

[4] The opinion is copyright The Central Board of Finance of the Church of England 1997 and The Archbishops' Council 1999.

6.2.12 “The justification for the provision of section 18 of the Burial Act 1855 and the way in which it has led to the transfer of the responsibility for closed churchyards to local authorities was not intended to confer any privilege upon the Church of England, but was a recognition of the fact that until the Burial Acts of 1852 and 1853 churchyards or additional churchyards were the only burial places available, apart from commercial cemeteries and a few denominational burial grounds belonging to trustees.

More important, churchyards were (as they still are) the common burial places of the parishioners of any denomination and none. As the churchyard was available for the whole community, and in the first half of the 19th century had sometimes been provided, or extended, by means of a compulsory church rate, it was considered reasonable that when it was closed in the interest of the community, the expense of keeping it in decent order should be reimbursed to the churchwardens from what was then the poor rate.

6.2.13 On that basis, it was for the local authority, which succeeded to the functions of the overseers, to reimburse the PCC, which succeeded the churchwardens in this regard.”

6.3 Optimisation of burial space

6.3.1 Cemeteries do not simply contain graves, but also have roads, paths, buildings and landscaping. Grave spaces are usually laid out in a grid pattern to make the most efficient use of the remaining space, but since Victorian times wide grass borders are often left adjacent to roads to enhance the aesthetics of the cemetery, as exemplified at Sandbach Cemetery. In modern times, the combination of narrow cemetery roads and a lack of care by some drivers can lead to vehicles passing over these verges.

6.3.2 LACO empowers local authorities to lay out cemeteries in any manner they see fit and it is quite usual to see changes in to the original layout over time as cemeteries are progressively extended to meet continued demand for burial.

6.3.3 Where space for new graves becomes exhausted, it is not uncommon for areas originally designated for other purposes, such as landscaping and paths, to be used to provide space for more new graves. Whilst this may appear to be a logical response to the need for burial space, it can have negative consequences including visual impact, access and the potential future re-use of graves.

6.3.4 The allocation of sections to specific religious affiliations, including Church of England, Roman Catholic, non-conformist and Muslim can sometimes lead to a situation, where relatively low levels of demand leave one group with significant capacity when space is limited on other sections. In these circumstances, it may be appropriate to re-allocate some of the remaining space amongst the groups with limited capacity.

6.4 Purchased (private or family grave)

6.4.1 When a person purchases the exclusive rights in a grave, it enables them to decide who may be buried in the grave and this is normally family members. No-one may be buried in the grave and no memorial may be erected upon the grave without the registered owner's written consent. It does not, however, grant them ownership of the land itself and the local authority retains ownership of all the land in its cemeteries.

6.4.2 From their first establishment in the mid-nineteenth century, whilst it was lawful to grant exclusive rights for any period, it became standard practice to grant exclusive rights in perpetuity, i.e. forever.

6.4.3 From 1974, the Local Authorities' Cemeteries Order 1974 limited the periods for which rights may be granted to a maximum of 100 years. This does not apply

retrospectively, and any rights granted prior to 1974 in perpetuity are still legally valid.

6.4.4 Apart from in London, local authorities have no powers to extinguish exclusive rights of burial during the period for which they were granted, whether in perpetuity or for a specified period. This procedure is correctly termed 'reclamation' when, as in London, it involves the use of legal powers to extinguish exclusive rights of burial that are otherwise still operative.

6.4.5 As a consequence of the lack of these statutory powers outside of London, there are many thousands of graves in cemeteries throughout England and Wales in which sufficient space remains for further burials to be undertaken without any disturbance of original burials, but this space cannot be used except with consent of the original owner of the exclusive rights or their successor.

6.4.6 The only exception is where the exclusive rights were purchased 75 years or more ago, but never actually utilised. This occurs when a person buys the exclusive rights in a grave as a means of reserving it for future use, but then does not use the grave.

6.4.7 There may be many such reserved graves where exclusive rights have been purchased before 1943 and the graves have never been used. Using powers contained within LACO, the Local Authority may extinguish these old, unused rights so that the space in such empty graves may be released for use today. This requires the local authority to serve 6 months' notice of its intention to extinguish the rights. The original owner (or their successor) may object and retain the ownership of the rights.

6.4.8 Where the exclusive rights have been granted for a specified time, LACO empowers the local authority to extend this period at any time, provided that the maximum permitted period of 100 years is not exceeded.

6.4.9 The majority of cemeteries granted rights in perpetuity up until 1974. However, some authorities had already started granting rights for fixed periods as early as the 1960s.

6.4.10 Where the rights have been granted for 100 years, from say 1960, cemeteries will not have to face the process of renewing rights at their expiry until 2060. After such a long period of time, the original owner of the rights will themselves have died and it is quite likely that it will not be feasible to contact any living relatives with an interest in renewing burial rights in an old grave.

6.4.11 Crewe Corporation stopped granting exclusive rights in perpetuity in December 1960, with the last Deed of Grant being number 3062 issued on 7th December 1960. Deed number 3063, issued on 4th January 1961, was the first granting the rights for 40 years. The Deed had an indorsement stamped on the rear stating that the purchaser had the option of renewing the rights, in whole or in part, during the last 5 years of the rights period.

6.4.12 At its meeting on 16th October 2008, Crewe and Nantwich Borough Council resolved to extend the period of rights to 100 years and to apply this extension retrospectively to all exclusive rights granted since Deed number 3063 in 1961.

6.4.13 Some local authorities are reducing the periods for which they now grant rights down to 75 years, 50 years or even as low as 25 years, but at the same time they offer a choice of period and various options to periodically extend the period such as Kettering where the rights were increased to 99 years.

6.4.14 It is important to note that perpetuity rights never expire. Where rights granted for a specified period expire and are not renewed, the original purchaser or their successors no longer have any rights in the grave and the rights revert to the local authority. LACO empowers the local authority to remove any memorial on an expired grave.

6.4.15 Where there is sufficient depth remaining above the original burials in a grave in which the rights have expired, the local authority may undertake new burials above them and sell the exclusive rights in this remaining space to a new purchaser.

6.4.16 This offers some scope for optimising space in old cemeteries in the long term. However, a high proportion of graves will have been used for their full quota of burials and will have no depth remaining above old burials. Under current legislation, it would be illegal to disturb the original burials to make space for new burials.

6.5 Unpurchased (public or shared grave)

6.5.1 A public grave is one where no-one has purchased the exclusive right of burial. The local authority may use the grave at any time for the burial of unrelated people, whose relatives cannot afford, or do not wish, to purchase any exclusive rights. It was standard practice in many cemeteries to excavate public graves to a greater depth than private graves to accommodate as many burials as possible. Such graves in large city cemeteries may contain 20 or even more burials and cover significant areas of land.

6.5.2 Demand for burial in public graves declined during the later 20th century in inverse proportion to rising levels of disposable income. They are now mainly used for burials undertaken by local authorities and health authorities under the Public Health (Control of Disease) Act 1984, where no-one else takes responsibility for the disposal of a body.

6.5.3 Space remaining above burials in old public graves can provide valuable space to help meet current demand for burials. Provided that the requirements in LACO for minimum depths of burials can be met, there are no legal or ethical reasons why a local authority may not sell the exclusive rights in the depth remaining in old public graves.

6.6 Re-use of graves

6.6.1 Across the UK, there is a growing awareness of the unsustainable way in which cemeteries are managed. As cemeteries fill up, the solution is to create new cemeteries, leaving the old ones to decline through lack of income.

6.6.2 This is an inevitable consequence of the system created by the Victorians to meet a burial space crisis, caused by a rapid increase and urbanisation of the population and epidemics of cholera, which led to demand overwhelming supply in urban parish churchyards.

6.6.3 In seeking to rectify the situation at that time, the Victorians invented a solution that has created huge negative implications in the present. The Victorians not only enabled the formal closure of churchyards and the creation of new cemeteries, but also introduced the concept of granting burial rights in perpetuity and introduced legislation that prohibits the disturbance of human remains.

6.6.4 Whilst parish churchyards have met local burial needs for centuries by the re-use of graves, this is not an option in cemeteries where exclusive rights of burial and prohibitions on disturbance exist. Land becomes locked up and unavailable for further burials.

6.6.5 Legislation applies to London local authorities[5], which goes a little way towards enabling the re-use of graves. New legislation in Scotland is addressing this matter there. However, there appear to be no signs of new legislation forthcoming, that would enable local authorities in England to extinguish exclusive rights and re-use old graves.

6.6.6 The term ‘re-use’ refers to the disturbance of old burials in order to make space for new burials. It requires specific legal permission, without which it is illegal.

[5] The Greater London Council (Various Powers) Act 1976 and the London Local Authorities Act 2007

6.6.7 It is possible to obtain faculty permission from the Chancellor of the diocese to enable the re-use of old public graves in consecrated areas. This has already been successfully implemented at the City of London Cemetery and by the London Borough of Enfield at Edmonton Cemetery. The issue of a faculty cannot be guaranteed, but the likelihood is increased by adequate preparation for the faculty application process.

6.6.8 This option is not practicable for individual or small groups of graves and requires a reasonable number of public graves located within a defined area and which have not received a burial for 75 years or more.

6.6.9 In practice, the grave is reopened to sufficient depth for two new burials. If remains of the uppermost original burial are uncovered during excavation they are removed and reburied in a communal grave nearby. The remaining original burials are left undisturbed.

6.6.10 Since the faculties were issued to the two London local authorities mentioned above, s.25 of the Burial Act 1857 has been amended and a faculty could now authorise the exhumation of old burials and their replacement at a lower depth within the same grave.

6.6.11 It is important to note that the faculty jurisdiction of the Church of England does not override statute law and separate statutory powers are required to enable exclusive rights of burial to be extinguished. Such powers do not currently exist for local authorities outside of London.

6.6.12 Currently, re-use of old graves in Cheshire East could only occur under faculty relating solely to old public graves on consecrated land.

6.7 Burial Records

6.7.1 Since the 16th century, it has been a requirement for vicars to maintain a register of baptisms and marriages, and also burials in parish churchyards. The Parochial Registers Act 1812 required the Burial Register to be kept separately and prescribed its basic form and required all burials to be consecutively numbered. The Act also required a copy to be made of the entries in the Register to be sent annually to the Registrar of the Diocese.

6.7.2 When cemeteries first developed in the 19th Century, they followed this established pattern of keeping records of all burials. The Burial Act 1853 required the Register to be in the same format as a church Burial Register and, again, a copy of the entries to be sent annually to the Registrar of the Diocese. The Burial Act 1857 emphasized the importance of the Burial Register by making it a felony to wilfully damage, destroy or make a false entry in it.

6.7.3 The Local Authorities' Cemeteries Order 1977 (LACO), as amended by the Local Authorities' Cemeteries (Amendment) Order 1986, is the legislation currently applicable to the registration of burials and the recording of the sale of exclusive rights.

6.7.4 LACO was the first legislation to prescribe in some detail the content of the records. The 1986 amendment enables the keeping of the statutory cemetery records on computer.

7.0 Key issues and areas for development

7.1 Demand for burial across Cheshire East

7.1.2 In 2016, cremation accounted for an average of 79 per cent of funerals in England and Wales. There thus remains a significant 21 per cent of the population, who chose burial for their dead. This proportion is expected to remain at around current levels in the foreseeable future.

7.1.3 ONS 2014-based projections for Cheshire East indicate both a growth and ageing of the population, together with an increase of 26.2 per cent in the numbers of deaths by 2039. This suggests that demand for burial in Cheshire East will grow over the next twenty years.

7.1.4 However, in Cheshire East, only 8.4 per cent of deaths in 2016 resulted in a coffin burial in one of the Council's cemeteries. Evidence gathered for this cemeteries strategy suggests that at least a further 7.6 per cent of deaths resulted in a coffin burial in cemeteries provided by town and parish councils and in parish churchyards.

7.1.5 Whilst the Council operates a total of 11 cemeteries, these account for only 52.3 per cent of coffin burials within Cheshire East. This indicates a preference for local burial provision and a high level of its availability.

7.1.6 Cheshire East has a relatively low population density, with higher densities of population concentrated around urban areas. Demand for burial follows a similar distribution, as illustrated overleaf in Figure 27, a map of Cheshire East showing deaths by ward in 2016

Number	NAME
1	Alderley Edge Ward
2	Alsager Ward
3	Bollington Ward
4	Broken Cross and Upton Ward
5	Congleton East Ward
6	Congleton West Ward
7	Crewe Central Ward
8	Crewe East Ward
9	Crewe North Ward
10	Crewe South Ward
11	Crewe St. Barnabas Ward
12	Crewe West Ward
13	Disley Ward
14	Handforth Ward
15	Knutsford Ward
16	Leighton Ward
17	Macclesfield Central Ward
18	Macclesfield East Ward
19	Macclesfield Hurdsfield Ward
20	Macclesfield South Ward
21	Macclesfield Tytherington Ward
22	Macclesfield West and Ivy Ward
23	Middlewich Ward
24	Nantwich North and West Ward
25	Nantwich South and Stapeley Ward
26	Poynton West and Adlington Ward
27	Sandbach Elworth Ward
28	Sandbach Ettiley Heath and Wheelock Ward
29	Sandbach Heath and East Ward
30	Sandbach Town Ward
31	Shavington Ward
32	Willaston and Rope Ward
33	Wilmslow Dean Row Ward
34	Wilmslow East Ward
35	Wilmslow Lacey Green Ward
36	Wilmslow West and Chorley Ward
37	Wistaston Ward

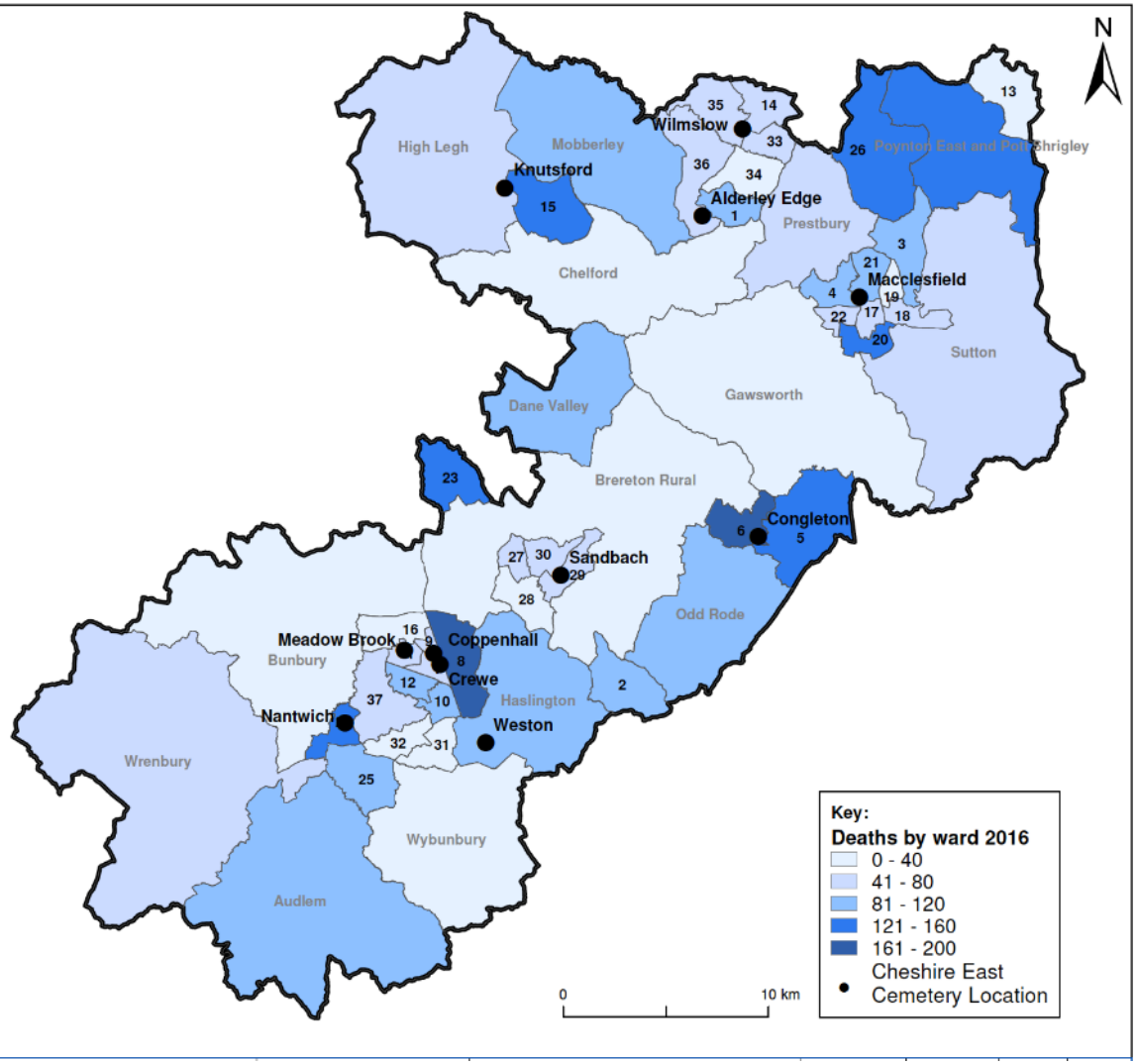

Figure 27: Deaths by ward in Cheshire East in 2016

7.2 Capacity for burial across Cheshire East

7.2.1 The local needs for burial provision in Cheshire East are in general currently being met through a combination of providers.

7.2.2 The analysis of Cheshire East Council's cemeteries, combined with surveys of town and parish councils and parish churches, suggests that whilst there generally appears to be sufficient provision for new graves, supply in some areas is limited.

7.2.3 In terms of its own cemeteries, Cheshire East Council could use a combination of optimisation of existing space for new graves, and the extension of cemeteries where space is lacking in order to maintain the availability of new grave spaces.

7.2.4 The optimisation of existing space within the cemeteries would require careful consideration of its impact upon access to graves, both new and existing.

7.2.5 It is important to have a clear understanding of the potential capacity within each cemetery. This would be best achieved by confirming the existence of empty and available graves within each section of each cemetery, including Crewe Coppenhall and Crewe Badger Avenue where no capacity is currently thought to exist. The checking of the cemetery grave plans and records against the situation on the ground would provide the most accurate information. 'Available' in this context means that they have not been formally reserved by individuals for future use.

7.2.6 The impact of trees, shrubs and other features upon new grave space deliverability could then be assessed, along with the costs and benefits of selective removal of these features.

7.2.7 The potential to deliver new grave space within the existing cemeteries in areas not currently designated for burial could also be explored. It would be important to

ensure that any space thus identified is deliverable on a cost-effective basis, as well as being acceptable in aesthetic, environmental, cultural and heritage terms.

7.2.8 The capacity at Wilmslow Cemetery could be significantly enhanced by overcoming the adverse ground conditions on Plot 3, which prevent its use for coffin burials. Without detailed site investigations, it is not possible to be certain whether the challenging ground conditions might be overcome.

7.2.9 One option to create new burial space could be to install concrete burial chambers, either below or above ground level. This would require an assessment of ground conditions by the supplier of the chambers to ensure their long-term stability. It would also require liaison with the Environment Agency to confirm the acceptability of the proposal in terms of any impact upon groundwater.

7.2.10 Concrete burial chambers are popular amongst certain groups, particularly people from the Caribbean and Italy, but can also have a more general appeal. They are more expensive to provide than standard earth graves and this is normally reflected in the price charged to bereaved families. It would therefore be appropriate to undertake consultation to ascertain whether burial chambers would be an acceptable option to the local community.

7.2.11 Figure 28 below combines data for estimated capacity with levels of demand for new graves in 2017 to provide indicative figures for years of continued capacity. Figure 28 assumes that demand at Crewe Coppenhall and Crewe Badger Avenue would be met locally at Crewe Meadow Brook.

Cemetery	Available graves	Demand in 2017	Capacity in years
Alderley Edge	1,322	11	120
Congleton	792	14	59
Crewe Coppenhall	0		0
Crewe Badger Avenue	0		0
Crewe Meadow Brook	6,705	62	108
Knutsford	426	15	29
Macclesfield	2,718	33	84
Nantwich	918	28	33
Sandbach	235	26	9
Weston	474	4	135
Wilmslow	283	16	18
Totals	**13,873**	**206**	**67**

Figure 28: Estimated capacity in Cheshire East Council cemeteries.
Source: Cheshire East Council Cemetery Records

7.2.12 However, the ONS 2014-based projections illustrated at Figure 23 indicate a 26.2 per cent increase in deaths in Cheshire East for the period between 2016 and 2039. The tables below at Figures 29 and 30 illustrate revised estimated numbers of graves remaining at each cemetery, when the percentage projected change in deaths for each year to 2039 is applied to the annual demand for new graves at each cemetery. This provides a more realistic understanding of future capacity.

7.2.13 For the purposes of this illustration, it is assumed that once capacity is no longer available at Sandbach, it would be accommodated at Crewe Meadow Brook, and similarly demand at Wilmslow would be met at Alderley Edge.

7.2.14 Crewe Badger Avenue and Crewe Coppenhall are omitted through having no capacity for new graves. Estimated capacity at the proposed extensions at Alderley Edge and Weston are included.

	Alderley Edge	Congleton	Crewe Meadow Brook	Knutsford	Macclesfield
2018	322	792	6,705	426	2,718
2019	314	781	6,635	408	2,685
2020	306	770	6,565	390	2,652
2021	298	759	6,493	372	2,618
2022	290	747	6,421	353	2,584
2023	281	736	6,349	335	2,550
2024	273	725	6,276	316	2,516
2025	264	713	6,202	297	2,481
2026	256	701	6,094	277	2,445
2027	247	689	5,986	258	2,409
2028	238	677	5,875	238	2,373
2029	229	664	5,761	217	2,335
2030	220	652	5,648	197	2,298
2031	211	639	5,531	176	2,260
2032	201	626	5,413	155	2,220
2033	192	613	5,294	133	2,181
2034	182	600	5,172	111	2,141
2035	172	586	5,048	89	2,100
2036	162	572	4,921	66	2,058
2037	134	558	4,794	43	2,016
2038	106	544	4,664	20	1,973
2039	76	529	4,531	0	1,930

Figure 29: Estimated annual capacity in Cheshire East Council cemeteries.
Source: Cheshire East Council Cemetery Records

	Nantwich	Sandbach	Weston	Wilmslow	All Cemeteries
2018	918	235	474	283	12,873
2019	894	205	469	269	12,660
2020	870	175	464	255	12,447
2021	845	144	459	241	12,228
2022	821	113	454	226	12,009
2023	796	83	449	212	11,791
2024	771	51	443	197	11,566
2025	745	19	438	182	11,342
2026	720	0	433	167	11,092
2027	694	0	427	152	10,862
2028	667	0	422	137	10,626
2029	640	0	416	121	10,384
2030	612	0	410	105	10,142
2031	585	0	405	89	9,895
2032	556	0	399	72	9,641
2033	528	0	393	55	9,388
2034	498	0	387	38	9,129
2035	468	0	380	21	8,864
2036	438	0	374	3	8,594
2037	408	0	368	0	8,320
2038	376	0	361	0	8,044
2039	345	0	355	0	7,762

Figure 30: Estimated annual capacity in Cheshire East Council cemeteries.
Source: Cheshire East Council Cemetery Records

7.2.15 The data for remaining capacity in Figures 29 and 30 suggest that there is sufficient capacity overall to meet demand for new graves for a considerable period, even beyond 2039, albeit that during this time Sandbach and Wilmslow cemeteries will become full and demand will switch to alternative locations.

7.2.16 Figure 31 below illustrates the potential future availability of new grave spaces in the Council's cemeteries that currently have space for new graves. The chart incorporates demand rising to 2039 in line with the ONS 2014-based projections and then continuing to rise at 2 per cent per year. The chart also includes demand switching from one cemetery to another as and when capacity is fully utilised.

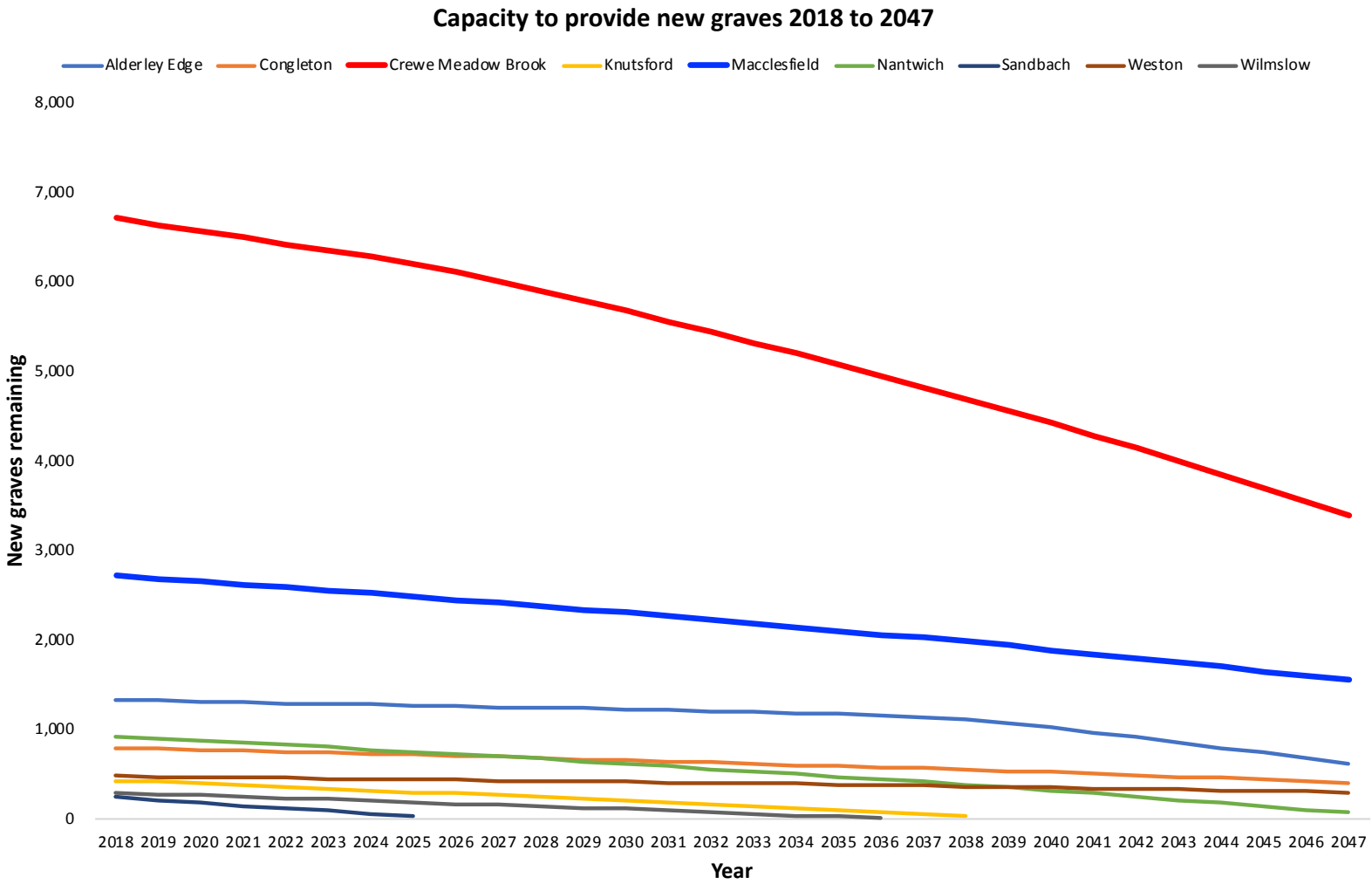

Figure 31: Capacity to provide new graves 2018 to 2047

Source: Cheshire East Council Cemetery Records

7.3 Drive-time catchment mapping and analysis – current situation

7.3.1 A key factor influencing most people's choice of cemetery or crematorium for a funeral is its location relative to the people who will attend the funeral, and there is a general preference to minimize travel times.

7.3.2 Drive-time mapping is a tool that facilitates an understanding of catchment areas, populations and numbers of death.

7.3.3 Sophisticated computer software enables the identification of travel times by road traffic and its graphical representation as isochrones. These are irregular coloured shapes plotted on a map showing all of the geographical areas that are within pre-defined drive-times of selected locations.

7.3.4 Where a Funeral Director's hearse and limousine(s) lead even a short cortège of mourners' vehicles to a cemetery, travel speeds are often much lower than for normal traffic.

7.3.5 This is mainly a consequence of drivers trying to keep the cortège together when negotiating junctions so that everybody finds their way to the cemetery and arrives together at the right time for the funeral service.

7.3.6 The computer software accounts for varying travel speeds depending upon the roads within the search area and for this report has also accounted for the generally lower speeds achieved by funeral vehicles. The use of drive-time catchment mapping, using travel speeds of 60% of normal traffic, has been accepted at numerous Planning Appeals as being a valid approach to defining crematoria catchments. There is no reason why this approach is not applicable to cemeteries.

7.3.7 The maps below illustrate isochrones identifying areas within specified drive-times of those Cheshire East Council's cemeteries with space remaining for burials.

7.3.8 It important to note that each isochrone shows the geographical area around its respective cemetery, in which residents would find that particular cemetery to be their closest out of the nine illustrated. There are churchyards and town and parish council cemeteries not illustrated, which may provide local burial in closer proximity than the respective Cheshire East cemetery.

7.3.9 Figure 32 below illustrates the 15-minute drive-time catchments:

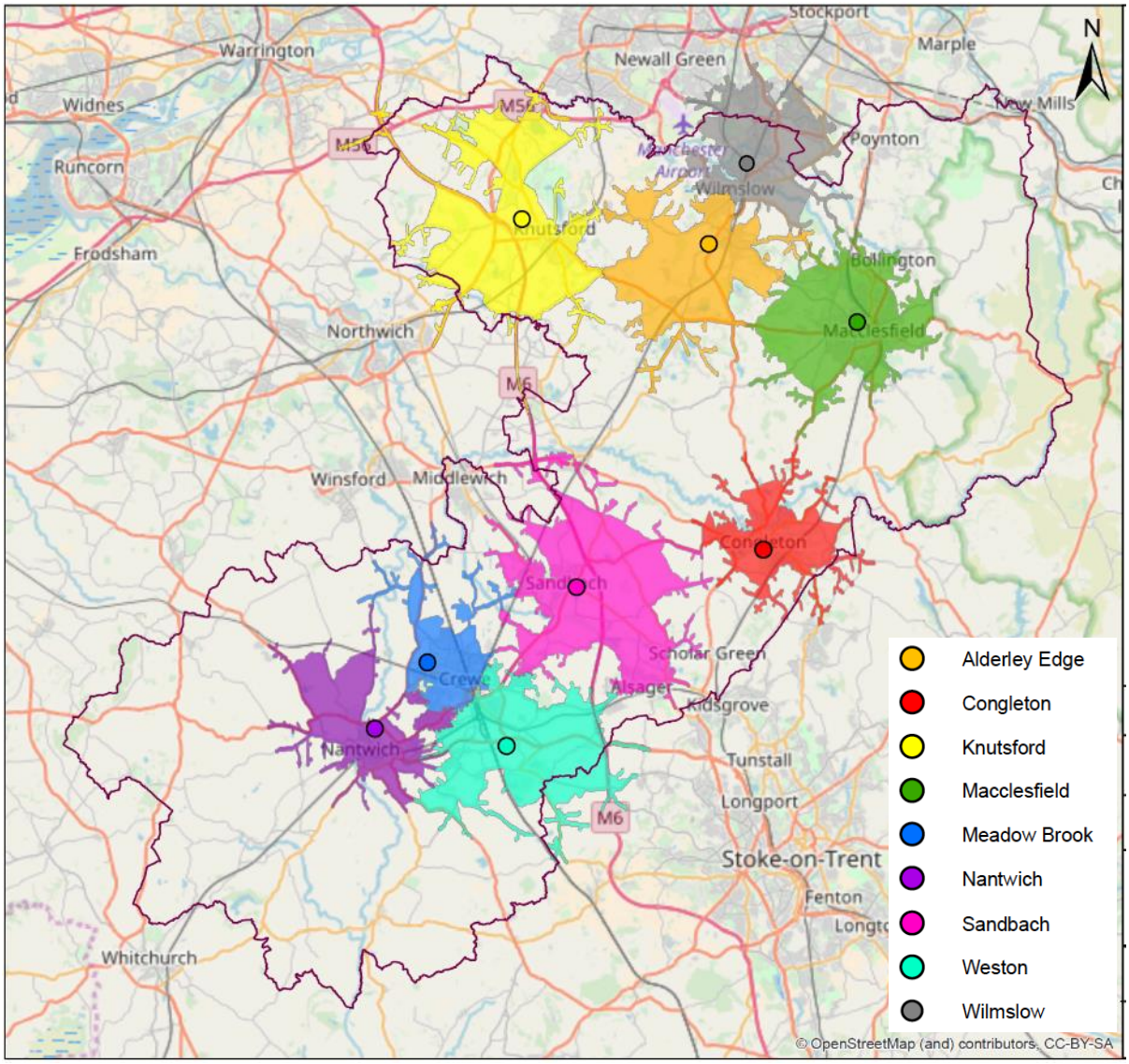

Figure 32: Cheshire East cemeteries 15-minute drive-time catchments

7.3.10 Figure 33 below illustrates the 30-minute drive-time catchments:

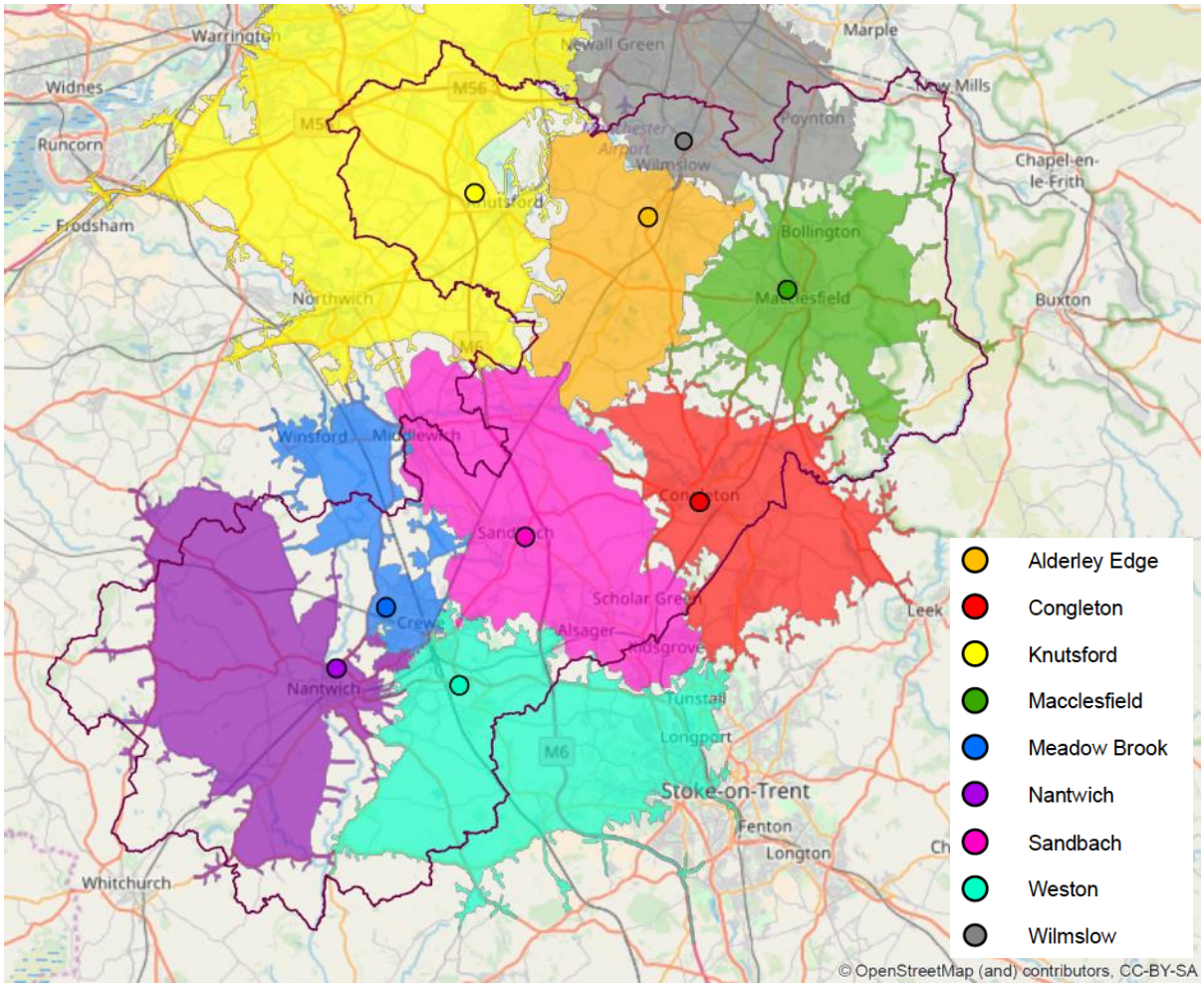

Figure 33: Cheshire East cemeteries 30-minute drive-time catchments

7.3.11 It can be seen that, as the drive-time increases to 30 minutes, most of the catchments extend beyond the boundary of Cheshire East.

7.3.13 Figure 34 below illustrates the 45-minute drive-time catchments:

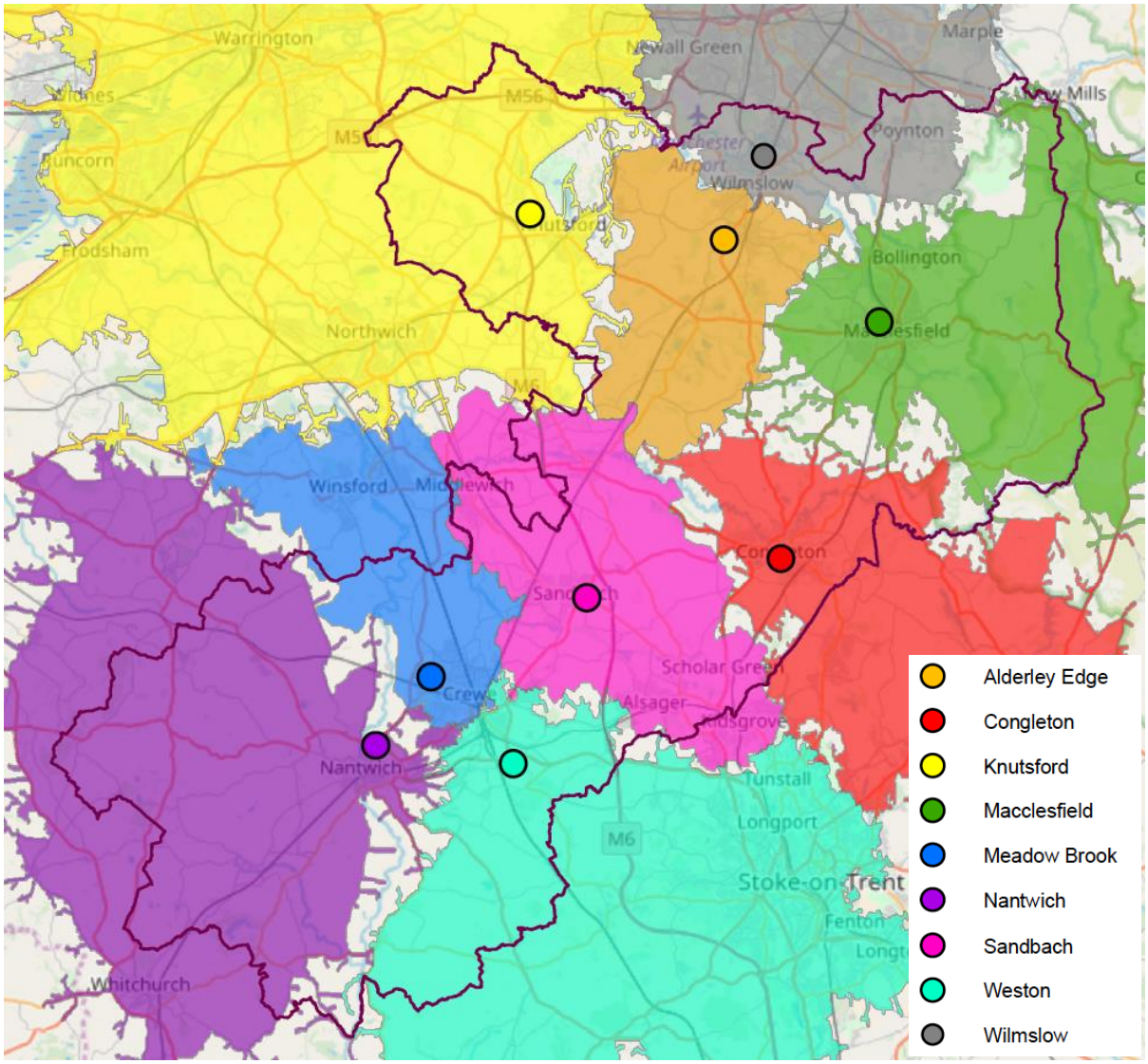

Figure 34: Cheshire East cemeteries 45-minute drive-time catchments

7.3.14 Figure 35 below illustrates the 60-minute drive-time catchments:

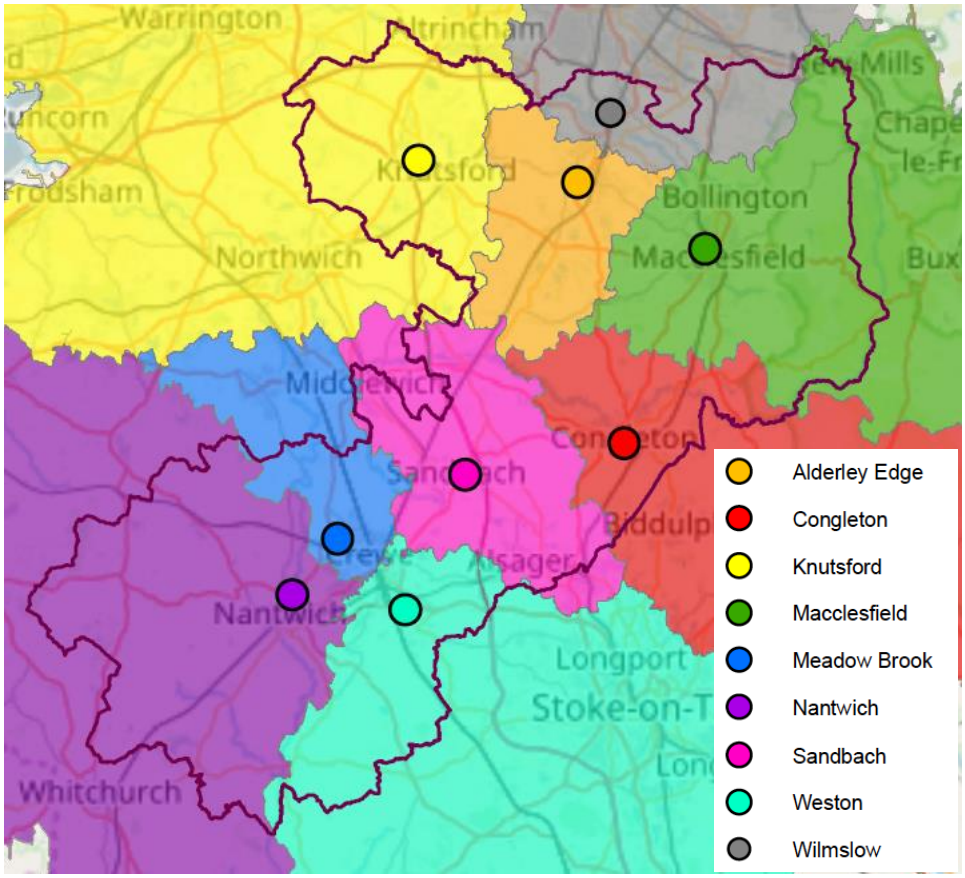

Figure 35: Cheshire East cemeteries 60-minute drive-time catchments

7.3.15 The isochrones illustrated in Figures 32 to 35 provide a useful visual representation of the geographical extent of the catchment area of each cemetery, on the basis that people would normally choose the closest cemetery.

7.3.16 The computer software does not only identify geographical catchment areas, but also generates data on population and deaths within each drive-time catchment.

7.3.17 The data are based upon Lower Super Output Area (LSOA) level, which are geographical areas used by the ONS for statistical purposes and contain an average of 1,500 people. The population data is taken from the Census 2011, as being the most accurate and the data on deaths relates to deaths occurring in 2016, the most recent data available at LSOA level.

7.3.18 Figure 36 below illustrates the population of Cheshire East within each drive-time catchment around each cemetery with new graves available:

Cemetery	Population in 2011 within each drive-time catchment			
	15 Mins	30 Mins	45 Mins	60 Mins
Alderley Edge	16,096	23,298	23,298	23,298
Congleton	24,992	26,482	26,482	28,529
Knutsford	15,209	16,790	16,790	20,366
Macclesfield	56,890	62,402	67,667	67,667
Crewe Meadow Brook	43,480	43,480	46,348	46,348
Nantwich	24,372	30,886	34,847	40,063
Sandbach	34,769	66,501	66,501	66,501
Weston	25,408	27,733	29,458	29,458
Wilmslow	21,633	36,227	37,475	42,813
Totals	**262,849**	**333,799**	**348,866**	**365,043**
% of population	**71%**	**90%**	**94%**	**99%**

Figure 36: Drive-time catchment populations 2011
Source: Drive-time computer software

7.3.19 Figure 37 below illustrates the numbers of deaths in Cheshire East 2016 within the various drive-time catchments of each council cemetery:

Cemetery	Deaths in 2016 within each drive-time catchment			
	15 Mins	30 Mins	45 Mins	60 Mins
Alderley Edge	207	279	279	279
Congleton	297	323	323	334
Knutsford	166	173	173	209
Macclesfield	582	656	708	755
Crewe Meadow Brook	422	422	456	456
Nantwich	313	400	443	476
Sandbach	370	680	680	680
Weston	239	252	274	274
Wilmslow	188	418	433	516
Totals	**2,784**	**3,603**	**3,769**	**3,979**
% of deaths	**70%**	**91%**	**95%**	**100%**

Figure 37: Drive-time catchment deaths 2016
Source: Drive-time computer software

7.3.20 Figure 13 above indicates that total coffin burials in Cheshire East Council cemeteries during 2016 totalled 331. This total represent 8.4 per cent of deaths in Cheshire East in that year.

7.3.21 Figure 38 below applies this overall 8.4 per cent figure to the deaths in 2016 within each drive-time catchment illustrated in Figure 37. This enables the calculation of the potential number of burials that might be expected at each cemetery from its respective drive-time catchment:

Cemetery	Calculated Burials (8.4% of deaths within each drive-time catchment)			
	15 Mins	30 Mins	45 Mins	60 Mins
Alderley Edge	17	23	23	23
Congleton	25	27	27	28
Knutsford	14	15	15	18
Macclesfield	49	55	59	63
Crewe Meadow Brook	35	35	38	38
Nantwich	26	34	37	40
Sandbach	31	57	57	57
Weston	20	21	23	23
Wilmslow	16	35	36	43
Totals	**234**	**303**	**317**	**334**

Figure 38 Drive-time catchment calculated burials 2016
Source: Drive-time computer software

7.3.22 Figure 39 below illustrates for each drive-time catchment the variation between actual and calculated burials, i.e. the actual burials in Cheshire East Council cemeteries in 2016, as recorded in the council's cemetery records, as opposed to the numbers of burials calculated at 8.4 per cent of deaths occurring, which are identified by the specialist software within each drive-time catchment. Note that burials at both Crewe Badger Avenue and Crewe Coppenhall are included within Crewe Meadow Brook:

Cemetery	Actual Burials 2016	Variation between actual and calculated			
		15 Mins	30 Mins	45 Mins	60 Mins
Alderley Edge	23	6	0	0	0
Congleton	17	-8	-10	-10	-11
Knutsford	27	13	12	12	9
Macclesfield	63	14	8	4	0
Crewe Meadow Brook	86	51	51	48	48
Nantwich	44	18	10	7	4
Sandbach	31	0	-26	-26	-26
Weston	4	-16	-17	-19	-19
Wilmslow	36	20	1	0	-7
Totals	**331**	**97**	**28**	**14**	**-3**

Figure 39: Drive-time catchment actual burials and variation from calculated burials 2016
Sources: Actual Burials - Cheshire East Cemetery Records;
Calculated Burials - Drive-time computer software

7.3.23 Figures 38 and 39 are based upon applying the average 8.4 per cent of deaths across Cheshire East that resulted in a coffin burial in the Council's cemeteries in 2016.

7.3.24 Overall, there is only a difference of 3 between the total number of actual burials recorded (331) and the calculated number (334) within a 60-minute drive-time of the combined council's cemeteries.

7.3.25 A 30-minute drive-time has been recognised at a number of planning appeals as a desirable industry standard. Figures 38 and 39 illustrate that, overall, there is only a difference of 28 between the total number of actual burials (331) and the calculated number (303) within a 30-minute drive-time of the council's cemeteries.

7.3.26 The variation between calculated and actual figures within the shorter drive-times is likely to reflect the availability of alternative burial sites offered by other providers within the area concerned.

7.3.27 Crewe Meadow Brook appears to attract significantly more burials than might be expected from the calculations.

7.3.28 This may be due in part to the inclusion of actual burials at Crewe Coppenhall and Crewe Badger Avenue within the figure for actual burials at Crewe Meadow Brook. The drive-time catchment mapping and associated data reflect the current situation, where new graves are not available at Crewe Coppenhall and Crewe Badger Avenue. If these two cemeteries could still offer new graves, their drive-time catchments would extend into that shown for Weston.

7.3.29 The lack of new grave availability at Crewe Coppenhall and Crewe Badger Avenue is likely to lead people to choose Crewe Meadow Brook as their closest alternative. The extent to which this happens will only become clear from actual figures for demand in 2018 and future years.

7.4 Drive-time catchment mapping and analysis – Two principal cemeteries.

7.4.1 This section considers in isolation the two main urban areas, Crewe and Macclesfield, to examine the potential full extent of their catchments. Unlike the drive-time analysis for all nine cemeteries, the catchments have been allowed to merge, identifying areas which fall within an equal travel-time to either cemetery.

7.4.2 Figure 40 below illustrates the 15-minute drive-time catchments for Crewe Meadow Brook and Macclesfield:

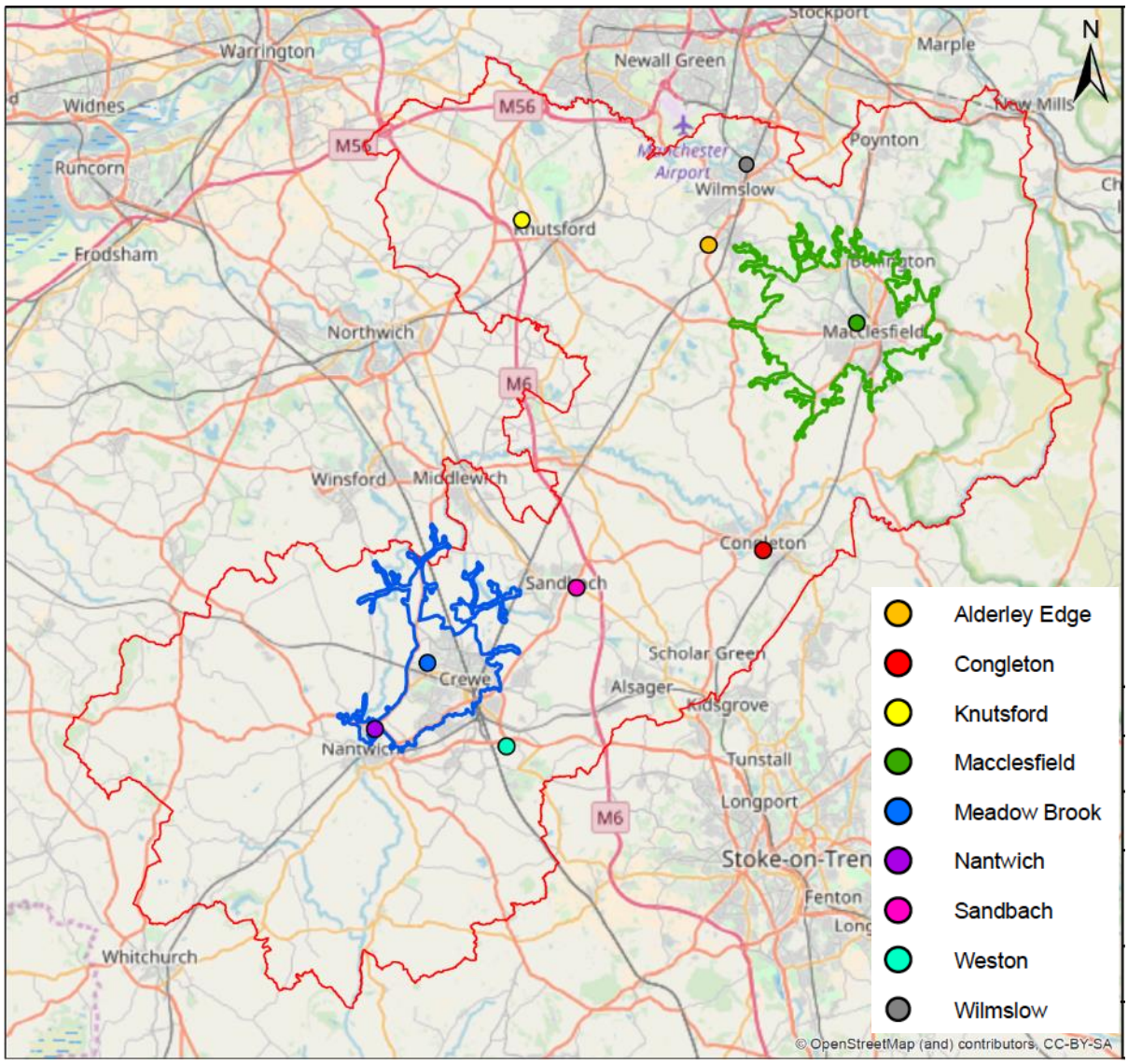

Figure 40: 15-minute drive-time catchments for Crewe Meadow Brook and Macclesfield

7.4.3 Figure 41 below illustrates the 30-minute drive-time catchments for Crewe Meadow Brook and Macclesfield:

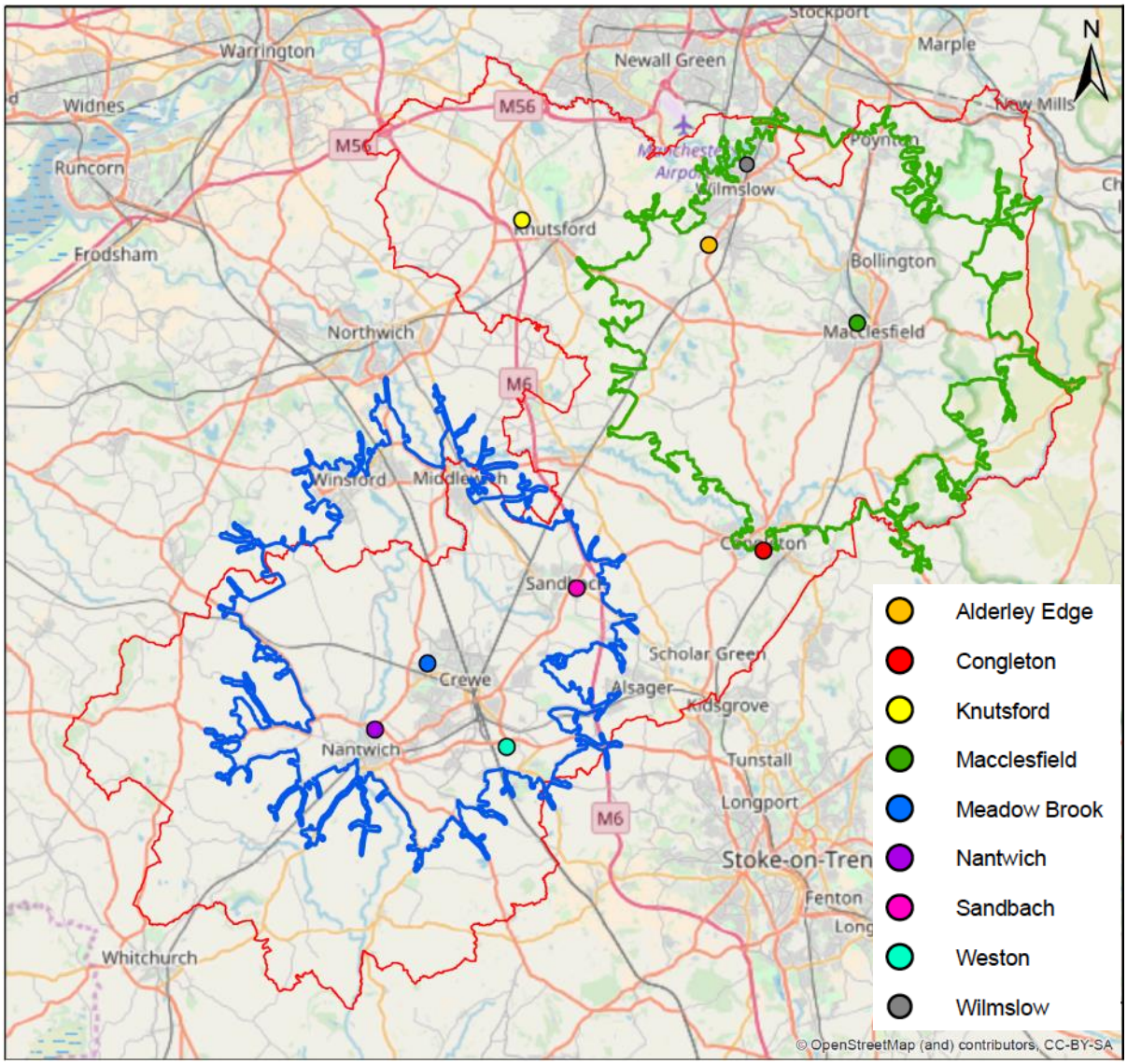

Figure 41: 30-minute drive-time catchments for Crewe Meadow Brook and Macclesfield

7.4.4 Figure 42 below illustrates the 45-minute drive-time catchments for Crewe Meadow Brook and Macclesfield:

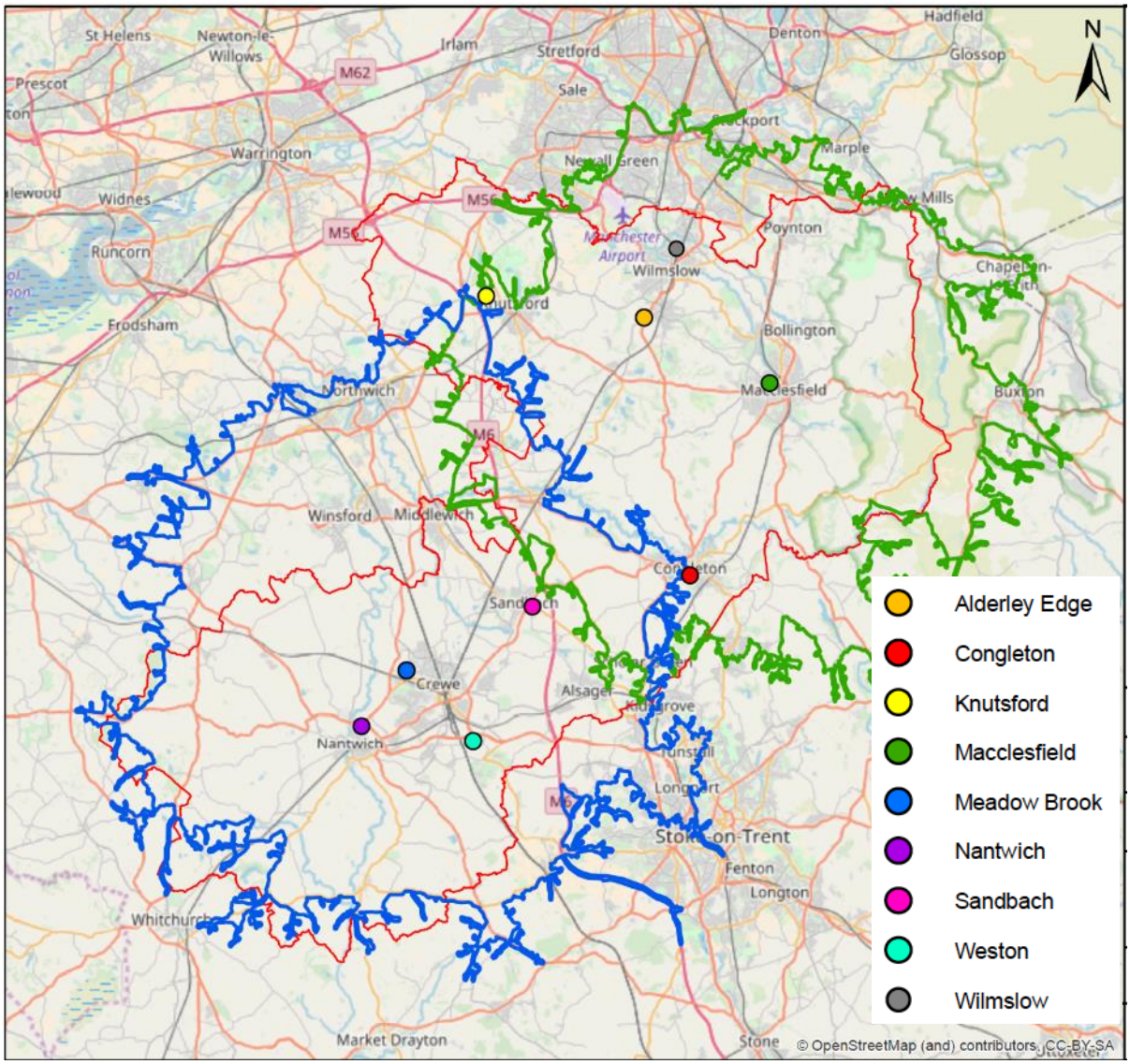

Figure 42: 45-minute drive-time catchments for Crewe Meadow Brook and Macclesfield

7.4.5 Figure 43 below illustrates the 60-minute drive-time catchments for Crewe Meadow Brook and Macclesfield:

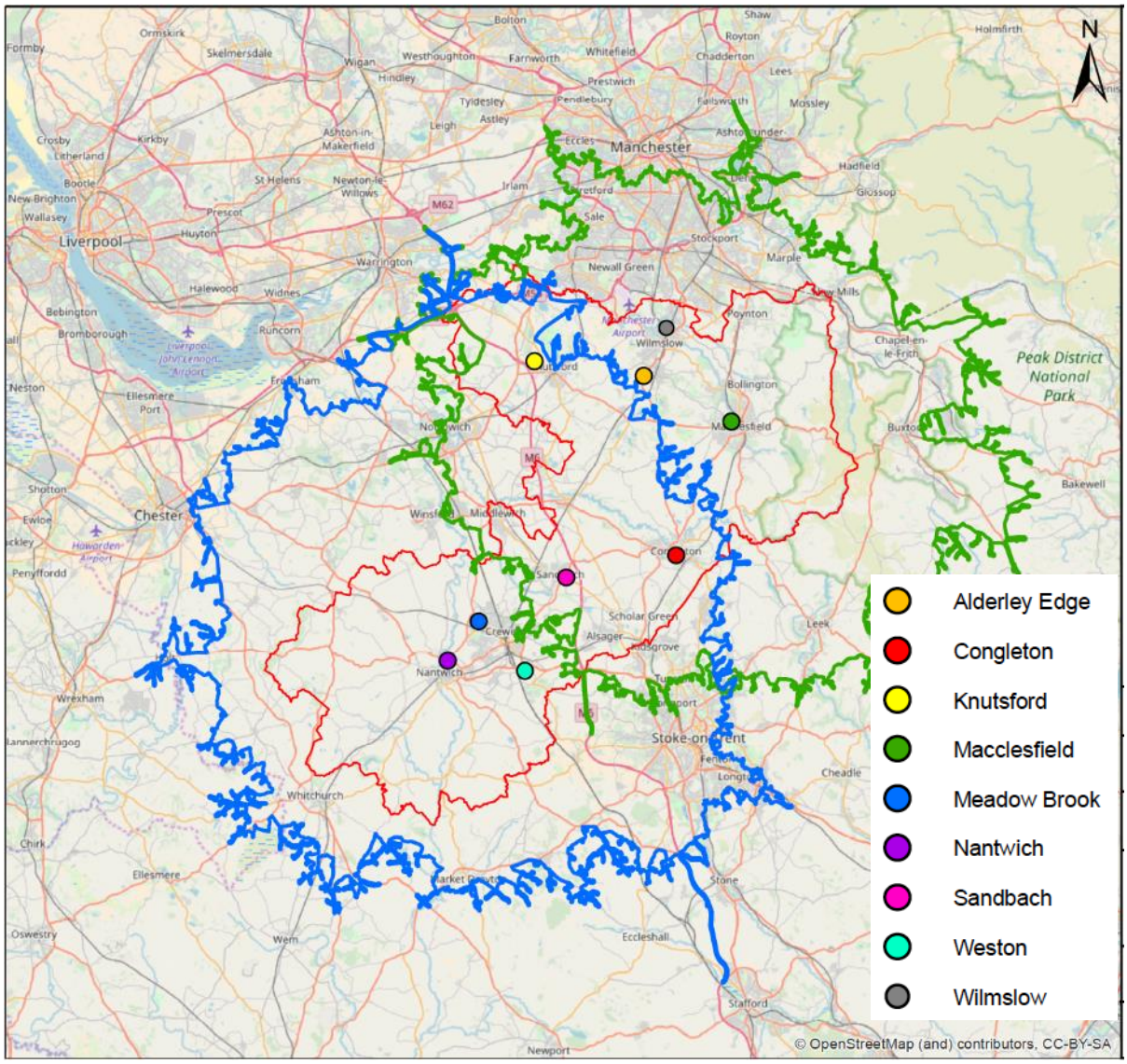

Figure 43: 60-minute drive-time catchments for Crewe Meadow Brook and Macclesfield

7.4.6 Figure 44 below illustrates the population of Cheshire East in 2011 within the drive-time catchment around each cemetery, including any overlap between catchments. The percentages refer to the proportion of the total population of Cheshire East residents within each catchment:

Cemetery	Population			
	15 Mins	30 Mins	45 Mins	60 Mins
Macclesfield	**54,455**	**124,600**	**193,507**	**251,499**
	14.7%	33.7%	52.3%	67.9%
Crewe Meadow Brook	**59,602**	**140,686**	**185,553**	**238,071**
	16.1%	38.0%	50.1%	64.3%

Figure 44: drive-time catchment populations 2011
Source: Drive-time computer software

7.4.7 The isochrones illustrated in Figure 41 reveals that there is no catchment overlap within a 30-minute drive-time of each site. Figure 45 suggests that 265,286 people, 71.7 per cent of the population of Cheshire East in 2011, lived within a 30-minute drive-time of either one or both of these two cemeteries.

7.4.8 In comparison, Figure 36 illustrates that there were 333,799 people, 90 per cent of the population of Cheshire East in 2011, who lived within a 30-minute drive-time of one of the Council's nine cemeteries.

7.4.9 It is perhaps surprising that the current nine cemeteries include within a 30-minute drive-time only 68,513 more residents of Cheshire East in 2011 than just the locations of two of these same cemeteries. This is likely to be a reflection of the relative population densities and travel times in the various locations.

7.4.10 Figure 45 below illustrates the numbers of deaths in 2016 of Cheshire East residents within each drive-time catchment around each cemetery, including any overlap between catchments. The percentages refer to the proportion of the total of deaths of Cheshire East residents in 2016 within each catchment:

Cemetery	Deaths within each drive-time catchment			
	15 Mins	30 Mins	45 Mins	60 Mins
Macclesfield	**552**	**1,403**	**2,138**	**2,748**
	13.9%	35.4%	54.0%	69.4%
Crewe Meadow Brook	**598**	**1,428**	**1,946**	**2,483**
	15.1%	36.1%	49.1%	62.7%

Figure 45: drive-time catchment deaths 2016
Source: Drive-time computer software

7.4.11 Figure 45 suggests that 2,831 deaths, 71.5 per cent of deaths in the population of Cheshire East in 2016, were of residents within a 30-minute drive-time of one or the other of these two cemeteries.

7.4.12 Figure 46 below superimposes the separate 30-minute drive-time catchment isochrones for Crewe Meadow Brook and Macclesfield from Figure 41 over the 30-minute drive-time catchment isochrones for all nine cemeteries to enable a visual comparison:

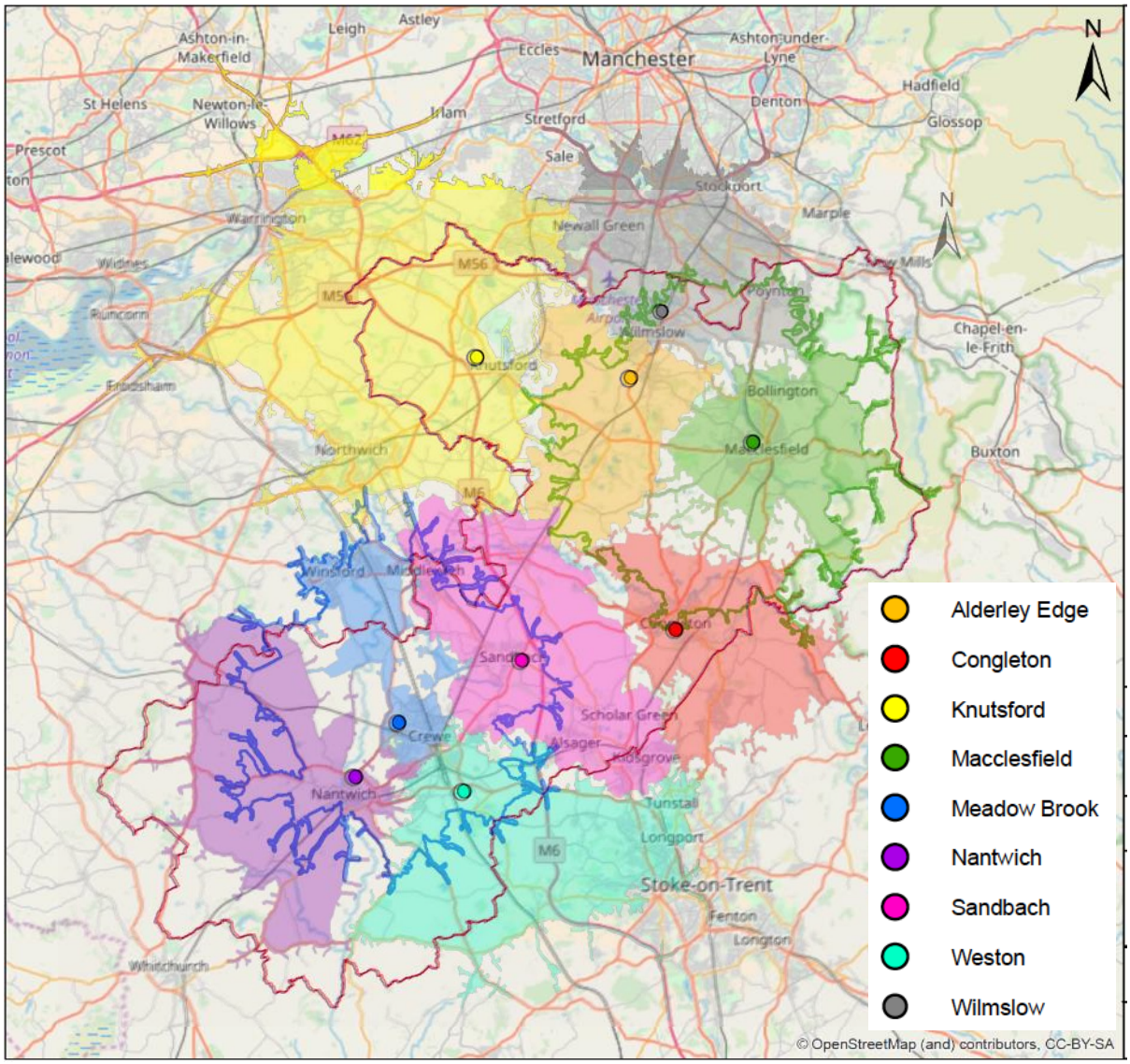

Figure 46: Comparison of 30-minute drive-time catchments

7.4.12 Figure 46 reveals the catchment areas of the individual cemeteries where they extend beyond the 30-minute drive-time catchments of Crewe Meadow Brook and Macclesfield.

7.4.13 Knutsford seems to be entirely beyond the 30-minute drive-time catchments of Macclesfield. Knutsford Cemetery is owned by Knutsford Town Council.

7.4.14 It is important to recognise that the drive-time catchments of town and parish council cemeteries and parish churchyards are not illustrated.

7.4.15 The drive-time catchment analysis suggests that Cheshire East Council might wish to consider Crewe Meadow Brook and Macclesfield as its two principal cemeteries and continue to operate and maintain their other cemeteries.

8.0 Vision, policies and objectives

8.1 The vision is to ensure that the quantitative and qualitative needs of the people of Cheshire East for burial are met, by working with other providers, both existing and potential, to enable this provision to be located in proximity to the population, which is often widely dispersed across Cheshire East's 1,166 square kilometres.

8.2 The vision requires an awareness of levels of demand and capacity and their distribution, to seek to meet those needs through developing appropriate provision in terms of location and type of burial facilities.

8.3 The key policy is for Cheshire East Council to focus its long-term burial provision in two principal cemeteries in Crewe and Macclesfield, whilst continuing to operate and maintain the other cemeteries. The future management of the seven cemeteries outside of these two main conurbations, and the development of additional provision, could better meet local needs by being the responsibility of town and parish councils.

8.4 A policy of optimising burial space in existing cemeteries, sensitive to aesthetic, heritage and access considerations, would maximise the period during which each cemetery will be able to offer new graves.

8.5 A policy on an appropriate fee structure for exclusive rights of burial agreed with reference to supply and demand that could cover a range of exclusive rights that befits both the bereaved and the Council, would provide greater flexibility and sustainability.

8.6 Exclusive rights of burial could be offered with a range of periods, such as 25, 50 and 75 years, a range of renewal options, such as five or ten years, and priced accordingly. The shortest period would be offered at the lowest price and would benefit those unable to afford the longer periods. It would enable them to subsequently renew the exclusive rights at affordable rates if they so wished. This would be a more appropriate way to provide equality of opportunity than a single price.

9.0 Cemetery Strategy Short Term

9.1 The strategic management of the cemeteries requires ready access to reliable data, which will be provided by:

- Consolidation of the three separate BACAS databases.
- Inclusion of mapping of graves in BACAS for all cemeteries.
- Confirm ability of BACAS to produce management statistics suited to the specific needs of Cheshire East Council.
- Provision of resources, including training in the use of the mapping program, to identify graves in each section of each cemetery that are empty, available and deliverable.
- Audit of data held within BACAS to ensure accuracy.

9.2 Review periods of exclusive rights, extension periods and pricing structure.

10.0 Cemetery Strategy Medium Term

10.1 Research potential solutions to overcoming difficult ground conditions at Wilmslow Cemetery.

10.2 Progress the development of the extension of Weston Cemetery.

10.3 To consider, where appropriate, the transfer of existing facilities or working to set up a trust for future cemetery provision where there is a desire to provide more local provision over and above Cheshire East's principal provision.

11.0 Cemetery Strategy Long Term

11.1 Cheshire East Council to continue to manage the two principal cemeteries at Crewe and Macclesfield, providing burial facilities that are sustainable, through a combination of the measures already taken in the short and medium term.

11.2 Continue to consider the transfer of existing facilities and or the creation of trusts for future cemetery provision, where appropriate, (as 10.3 above).

11.3 The short-term actions relating to BACAS will provide ready access to accurate and reliable data and associated mapping will enable the Council in the long-term to:

- Optimise the use of land already available within existing cemeteries.

- Continue liaison, co-operation and appropriate degrees of joint-working, with town and parish council and churches to ensure continued burial space provision to meet local need.

Cheshire East Council

Cemetery Regulations

Introduction

Cheshire East Borough Council welcomes all visitors to their cemetery grounds. Visitors are kindly asked to respect the peace, dignity and reverence of these facilities in order to promote them as places of tranquillity for quiet reflection.

Visitors are requested to contribute to the peaceful environment that the Council seeks to maintain within the cemeteries by acting in a dignified and respectful manner at all times and to comply with the requirements of these Regulations and relevant Terms and Conditions.

These regulations are the general terms and conditions under which Cheshire East Council operates its 11 cemeteries. They are designed to ensure the safe and peaceful operational enjoyment of the cemeteries for all visitors and staff.

Additional specific terms and conditions apply to particular areas and features within the sites.

Locations

Northern Area	**Address**	**Post Code**
Bereavement Administration Office (North)	The Cemetery Lodge, 87 Prestbury Road, Macclesfield. Telephone 01625 383 946-8	SK10 3BU
Alderley Edge Cemetery	Chelford Road, Alderley Edge	SK9 7TQ
Knutsford Cemetery	Tabley Hill Lane, Tabley	WA16 0EW
Macclesfield Cemetery & Crematorium	Prestbury Road, Macclesfield	SK10 3BU
Wilmslow Cemetery	Manchester Road, Wilmslow	SK9 2LE

Southern Area	**Address**	**Post Code**

Bereavement Administration Office (South)	The Cemetery Office, Market Close, Crewe. Telephone 01270 685 545	CW1 2NA
Congleton Cemetery	Howey Lane, Congleton	CW12 4AE
Crewe Coppenhall Cemetery	Reid Street, Coppenhall	CW1 3DZ
Crewe Badger Avenue Cemetery & Crematorium	Badger Avenue, Crewe	CW1 3JG
Crewe Meadow Brook Cemetery	Minshull New Road, Crewe	CW1 3PP
Nantwich Cemetery	Whitehouse Lane, Nantwich	CW5 6HP
Sandbach Cemetery	The Hill, Sandbach	CW11 1JJ
Weston Cemetery	Cemetery Road, Weston	CW2 5LQ

Memorial masons and contractors may only undertake work in the cemeteries on Mondays to Fridays during the standard times of opening, excluding Public Holidays.

Access

Private motor vehicles may use the designated roads within the cemeteries, respecting the cemetery environment. They must not exceed 10 mph and must not be driven off the roads onto adjoining areas at any time.

Parking is available in designated car parks within the cemeteries at Congleton, Crewe Badger Avenue, Crewe Meadow Brook and Macclesfield. Vehicles may be parked on the roads within the cemeteries, provided the vehicle remains wholly on the carriageway, except for the cemeteries at Crewe Coppenhall and Weston, where there is no vehicular access.

Buses and coaches must not enter the cemeteries and all passengers must disembark at the entrance, unless given prior consent by the council or the council's agents.

The roads within the cemeteries must not be used for the purpose of learning to drive.

Cycles are permitted in the cemeteries, but must be ridden on the roads only and at a maximum speed of 10 mph.

Skateboarding, roller skating and similar activities are not permitted within the cemeteries.

Children under the age of 10 years may only visit the cemeteries if accompanied and supervised by a responsible adult.

Dogs are permitted within the cemeteries, but must be kept under strict control and on a lead at all times. The person in charge of a dog is responsible for cleaning up and appropriately disposing of any dog fouling that may occur within the cemeteries.

Horses are not permitted within the cemeteries, with the exception of horses used to draw a hearse.

Conduct

Our cemeteries are places of peace and reflection. In the interests of others, we will not permit anyone to:

- create any disturbance or commit any nuisance
- interfere with, or act in a disrespectful manner towards, any burial taking place
- interfere with any grave, vault, memorial, plants or trees
- play at any game or sport
- consume alcohol, except in association with burial ritual or by prior authorisation from the Bereavement Services Manager
- use threatening, offensive or abusive language towards any staff member or visitor or assault any staff member or visitor
- undertake commercial filming or photography without prior authorisation from the Bereavement Services Manager
- undertake guided walks or tours without prior authorisation from the Bereavement Services Manager

Any person who fails to meet these reasonable standards of conduct will be asked to leave the site immediately and also may be subject to civil or criminal action as appropriate.

Burials Procedure

All burials must initially be booked with the staff at the relevant Bereavement Administration Office. By arrangement with the relevant Bereavement Administration Office, a member of staff can be available to meet the family or the bereaved or their representatives at the cemetery to discuss and clarify the arrangements. Alternatively, bookings can be placed by telephone.

The booking must then be confirmed by delivery of the Council's fully completed 'Notice of Interment' form, together with the Registrar's Certificate or Coroner's Order, or other relevant legally required authorisation for the burial to that Office.

In the case of burials requiring new graves or new plots for ashes, it is advisable for the family concerned to visit the cemetery of their choice to see the types of graves that are on offer at that particular site and to understand any restrictions on types of memorial that may be applicable.

New graves or new plots for ashes are normally prepared in sequence. Where a family wish to select a grave or plot that is outside of this sequence, an additional fee is payable.

If any official documents are transmitted electronically, the originals must be received by the appropriate area Bereavement Administration Office before the funeral may proceed.

The timescales for delivery of the documents are set out below:

Type of burial	**Delivery of Notice of Interment and Registrar's or Coroner's certificate to the appropriate Bereavement Administration Office**
Coffin burial in a new grave	Minimum of 3 working days before the burial
Coffin burial in a reopened grave	Minimum of 2 working days before the burial
Ashes burial	Minimum of 2 working days before the burial

The Council shall not be responsible for:

- Any discrepancies, errors or omissions in any 'Notice of Interment' or other document relating to a funeral or the consequences arising from such discrepancies, errors or omissions.
- Failure to complete any documents appropriately and in accordance to the law relating to a funeral or the late receipt of any 'Notice of Interment' or other documents will result in the delay of the funeral.

Where the funeral involves the reopening of a purchased grave, the funeral may only proceed where sufficient space remains in the grave and under one of the following circumstances:

- The written consent of the registered owner of the exclusive rights is included on the 'Notice of Interment.'
- The funeral is that of the registered owner of the exclusive rights.
- In any other circumstances, the ownership of the exclusive rights must be formally transferred to the person legally entitled to ownership before the funeral may take place. This transfer should be completed using forms supplied by the Council.

All fees associated with a burial in the Council's cemeteries must be received at the appropriate Bereavement Administration Office together with the Notice of Interment and Registrar's or Coroner's certificate.

All graves and ashes plots will be prepared by the Cemetery Staff or their nominated agent.

Where mourners wish to backfill a grave, advance notice of this should be communicated to the Bereavement Administration Office on the Notice of Interment.

Types of coffin / container

The type of coffin or other container that will be accepted for burial in the cemeteries must be appropriate for the type of burial:

- **Standard burial**: any type of coffin or casket except zinc-lined, lead-lined or made of metal.
- **Shroud burial**: the shrouded body should be brought to the cemetery in a coffin, from which it is removed prior to lowering the shrouded body into the grave.

The standard grave space provided in the cemeteries accommodates most sizes of coffin and casket. However, in the case of a particularly large coffin or casket, it will be necessary to allocate and charge for 2 grave spaces to enable the burial to take place.

Private Graves / Exclusive Rights of Burial

The cemeteries and each grave space within them are the property of the Council. However, the Council may grant the Exclusive Right of Burial within a grave space or ashes plot for 100 years, subject to specific terms and conditions relevant to the particular type of grave or plot selected in each case.

There is a fee payable for the purchase of the Exclusive Right of Burial. In addition, there is a fee payable for each burial that takes place in the grave or plot.

The Council issues a formal Deed of Grant of Exclusive Right of Burial for each grave or plot and, together with these Regulations and the associated Terms and Conditions issued at the same time, this forms the legal contract between the Council and the purchaser.

The Exclusive Right of Burial entitles the registered holder(s) to:

- Be buried in the grave or plot, subject to space being available;
- Authorize further burials in the grave or plot, subject to space being available;
- Apply and erect a suitable memorial on the grave or plot, in accordance with the Regulations and Terms and Conditions specific to the type of grave;
- Apply for an additional inscription on a memorial on the grave or plot.

Ownership of the Exclusive Right of Burial does not give individuals or families the right to place any items on a grave or plot that are not permitted in cemeteries. Such items include, but are not restricted to, wind chimes, windmills, flags, lights, candles, any kind of fencing and anything made of glass. These restrictions form part of the Terms and Conditions of the sale of the Exclusive Right of Burial. The Council reserves the right to remove any item that they consider unsuitable from any grave without notice. Any item removed will be retained at the cemetery for one month pending collection by the individual concerned, after which it will be disposed of if unclaimed.

No burial may take place within a grave and no memorial may be erected upon a grave without the written consent of the registered owner of the Exclusive Right of Burial in that grave.

The Council will grant the Exclusive Right of Burial in a grave to one named individual. Where desired, the Council will grant the Exclusive Right of Burial in a grave to two named individuals. Each registered owner of the Exclusive Right of Burial may be buried in the grave without the consent of the other registered owner, subject to there being sufficient space within the grave.

However, the written consent of both registered owners will be required to enable a memorial to be erected on the grave or to permit the burial in the grave of any other person.

Possession of the Deed of Grant of Exclusive Right of Burial in itself does not prove ownership of the exclusive rights. The ownership of the Exclusive Right of Burial belongs to the purchaser as registered by the Council at the time of the sale of the right or following the registered transfer of ownership.

The ownership of the Exclusive Right of Burial may be transferred either during the owner's lifetime or after their death, using the appropriate Council Forms.

At least one year prior to the expiry of the Exclusive Right of Burial in a grave, the Council will seek to contact the registered Grantee offering to extend the Exclusive Right of Burial. However, where the Exclusive Right of Burial in any grave expires and is not renewed, it will revert to the Council.

In such cases, neither the original purchaser of the Exclusive Right of Burial nor anyone to whom the Exclusive Right of Burial may have been transferred has any rights to the grave. The Council reserves the right to remove any memorial on a grave where the Exclusive Right of Burial has expired and after 3 months to use or dispose of the memorial in any manner it thinks fit.

It is the responsibility of the owner of the Exclusive Right of Burial to inform the Council of any change of address or their intention to transfer ownership of the right.

Public graves

A public grave is one in which no exclusive right of burial has been granted and in which the Council may bury the bodies of unrelated people at any time.

There is a fee payable for each burial that takes in the grave or plot.

If it is desired to erect a memorial upon a public grave, it will be necessary to purchase the Exclusive Right of Burial, which includes the right to erect and maintain a memorial. This option is only available in relation to the most recent burial in the grave.

Memorials

Memorials must conform to the specific standards set for each type of grave and contained within the relevant Terms and Conditions. These standards relate to design, materials, size and methods of fixing.

Memorial masons and their employees and/or subcontractors must be suitably qualified, experienced and competent to perform all works necessary when erecting, dismantling and repairing memorials to meet current industry and statutory Health and Safety requirements and guidelines.

The standard of workmanship will be evidenced by qualifications and registration obtained from an accreditation scheme operated by either the National Association of Memorial Masons Retail (NAMM) or the British Register of Accredited Memorial Masons (BRAMM) or equivalent.

All memorials shall be erected to conform to the most recent edition of the National Association of Memorial Mason's 'Recommended Code of Working Practice' or the British Register of Accredited Memorial Masons' 'Blue Book'.

The details of each proposed memorial must be submitted to the appropriate Bereavement Administration Office using the Council's Memorial Application form. The memorial may only be erected / installed following written approval by the Council, issued in the form of a Permit.

Subject to the type of grave selected, it may be necessary to allow a period of 12 months to pass following a burial before a memorial can be erected upon a grave.

The Council reserves the right to remove any memorial, which either does not conform to its description on approved the Memorial Application form or which is erected without the permission of the Council. The memorial will be retained at the cemetery for 3 months only, pending collection by the individual concerned, after which it will be disposed of if unclaimed. The Council reserves the right to take action against the responsible memorial mason, in accordance with the Council's licensing scheme or the BRAMM Scheme or equivalent.

The maintenance and insurance of the memorial is the responsibility of the owner of the Exclusive Right of Burial.

Grounds maintenance

The maintenance of the grounds, including the cutting of all grass areas and the excavation of graves is the responsibility of the Council.

In order to excavate or gain access to excavate a grave, it may be necessary to temporarily place plant, equipment and excavated materials on top of adjacent graves. The period during which this may be necessary will be kept to a minimum. Once the burial has been completed, the grave will be backfilled and the surface of any adjacent grave affected by the works will be made good.

Following a burial, the grave will be backfilled and any floral tributes placed carefully over the grave. All floral tributes, including plastic bases and 'oasis', may be removed and disposed of by the Council 14 days after the burial.

Subject to the specific Terms and Conditions for the grave concerned, the owner of the Exclusive Right of Burial in a grave may plant and cultivate suitable, low-growing plants or place cut flowers within a specified area of the grave. The Council reserves the right to remove plants, plastic flowers, cut flowers, wreaths or other such items in the interests of maintaining the site to the highest standards.

Following each burial in an earth grave, the ground will settle over a period of months. The Council will routinely top up the level of any grave that sinks in this way for up to one year from the date of the burial.

The Council reserves the right of passage by people and machinery over all graves for all purposes in connection with the cemeteries, including but not limited to grounds maintenance; preparation of graves; erection, removal and repair of memorials; memorial safety inspections. The Council reserves the right to cover or temporarily remove any memorial in connection with burials in the cemeteries.

When a grave is excavated for a second or subsequent burial, it may be necessary to remove the memorial upon the grave to enable safe excavation. It is the responsibility of the owner of the

exclusive rights in the grave to arrange for the memorial to be removed and replaced upon the grave after a suitable period has elapsed to allow for the settlement of the backfilled ground.

When a grave is excavated, it may be necessary to temporarily remove one or more memorials to enable access to the grave. In such circumstances, the affected memorial(s) will be replaced immediately following the funeral.

Payments

Payments for all goods and services must be received by the Council prior to any funeral service, burial or erection of a memorial in any of the cemeteries.

Responsibility for loss or damage

The Council is not liable for any damage or loss of personal property caused by third parties within Cemetery.

Comments, suggestions and complaints

The staff at the cemeteries are here to assist you and to ensure that the highest standards of service are achieved in the cemeteries. If you wish to leave any comments or feedback then please e-mail us at XXX. If for any reason you consider that our standards are not being met, please raise the matter in the first instance with the Bereavement Services Manager at the appropriate Bereavement Administration Office.

The Council's Complaints Procedure is available from our office or on our website.

Review of Regulations

The Council reserves the right to review and amend at any time these Regulations and any Terms and Conditions of sale of exclusive rights.

These Regulations were approved and adopted by the Council on XXX

Definitions

"**Council**" means Cheshire East Council

"**Cemetery**" means any cemetery provided and maintained by Cheshire East Council.

"**Resident or Parishioner**" means any person residing within Cheshire East Council who can provide proof of residency, either with a Council Tax Bill or via the Electoral Register.

"**Coffin**" or "**Casket**" means any container within which a body or cremation ashes of a person may be buried in the cemetery. All containers used for burial must be suitable for the purpose and have adequate identification of the deceased therein.

"**Burial**" or "**Interment**" means the placing of a coffin, or other container containing a body or ashes into any type of grave or plot for ashes.

"**Grave**" means a burial place formed in the ground by excavation and surrounded by earth sidewalls.

"**Grave space**" or "**Plot**" means the area allocated by the Council and comprising of the grave itself and its surrounding sidewalls of earth.

"**Exclusive Right of Burial**" means the right to decide who is buried in a specific grave, the type of memorial that may be erected upon the grave and the inscription upon it, all subject to these Regulations and the terms and conditions attached to the Deed of Grant of Exclusive Rights issued by the Council. The Council may periodically review and modify the Cemetery Regulations and terms and conditions. The granting of the exclusive right of burial includes the granting of the right to erect and maintain a memorial upon the grave, subject to the completion of the Council's memorial application form and subject to the memorial complying with the Regulations and Terms and Conditions relevant to the type of grave.

"**Purchased**" or "**Private**" grave or plot means a grave in which the Council has granted the Exclusive Right of Burial.

"**Public**" or "**Unpurchased**" grave means a grave in which the Council has not granted the Exclusive Right of Burial and in which the Council may permit the burial of unrelated people at the Council's discretion.

"**Lawn grave**" means a grave space where the surface of the grave and the adjoining ground is level, clear of obstructions and maintained as a grass lawn. An approved memorial may be erected and maintained at the head end of the grave space within a border 18" (457mm) deep.

"**Traditional grave**" means a grave space upon which an approved memorial with kerbs may be erected and maintained.

"**Memorial**" means any memorial authorized by the Council to be installed and maintained within the cemeteries.

"**BRAMM**" means the British Register of Accredited Memorial Masons

"**NAMM**" means the National Association of Memorial Masons

“Unsuitable” means anything deemed by the council to negatively impact on the cemetery environment or other users of the cemetery.

“Suitable planting” means the selection of plants that will not exceed a height of 450mm or spread of 450mm [I think maximum dimensions should be specified, but these are simply suggestions]

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FORWARD PLAN FOR THE PERIOD ENDING 31ST DECEMBER 2018

This Plan sets out the key decisions which the Executive expects to take over the period indicated above. The Plan is rolled forward every month. A key decision is defined in the Council's Constitution as:

> "an executive decision which is likely –
>
> (a) to result in the local authority incurring expenditure which is, or the making of savings which are, significant having regard to the local authority's budget for the service or function to which the decision relates; or
>
> (b) to be significant in terms of its effects on communities living or working in an area comprising one or more wards or electoral divisions in the area of the local authority.
>
> *For the purpose of the above, savings or expenditure are "significant" if they are equal to or greater than £1M."*

Reports relevant to key decisions, and any listed background documents, may be viewed at any of the Council's Offices/Information Centres 5 days before the decision is to be made. Copies of, or extracts from, these documents may be obtained on the payment of a reasonable fee from the following address:

Democratic Services Team
Cheshire East Council
c/o Westfields, Middlewich Road, Sandbach Cheshire CW11 1HZ
Telephone: 01270 686472

However, it is not possible to make available for viewing or to supply copies of reports or documents the publication of which is restricted due to confidentiality of the information contained.

A record of each key decision is published within 6 days of it having been made. This is open for public inspection on the Council's Website, at Council Information Centres and at Council Offices.

This Forward Plan also provides notice that the Cabinet, or a Portfolio Holder, may decide to take a decision in private, that is, with the public and press excluded from the meeting. In accordance with the Local Authorities (Executive Arrangements) (Meetings and Access to Information) (England) Regulations 2012, 28 clear days' notice must be given of any decision to be taken in private by the Cabinet or a Portfolio Holder, with provision for the public to make representations as to why the decision should be taken in public. In such cases, Members of the Council and the public may make representations in writing to the Democratic Services Team Manager using the contact details below. A further notice of intention to hold the meeting in private must then be published 5 clear days before the

meeting, setting out any representations received about why the meeting should be held in public, together with a response from the Leader and the Cabinet.

The list of decisions in this Forward Plan indicates whether a decision is to be taken in private, with the reason category for the decision being taken in private being drawn from the list overleaf:

1. Information relating to an individual
2. Information which is likely to reveal the identity of an individual
3. Information relating to the financial or business affairs of any particular person (including to authority holding that information)
4. Information relating to any consultations or negotiations, or contemplated consultations or negotiations, in connection with any labour relations matter arising between the authority or a Minister of the Crown and employees of, or office holders under the authority
5. Information in respect of which a claim to legal and professional privilege could be maintained in legal proceedings
6. Information which reveals that the authority proposes (a) to give under any enactment a notice under or by virtue of which requirements are imposed on a person; or (b) to make an order or direction under any enactment
7. Information relating to any action taken or to be taken in connection with the prevention, investigation of prosecution of crime

If you would like to make representations about any decision to be conducted in private at a meeting, please email:

Paul Mountford, Executive Democratic Services Officer
paul.mountford@cheshireeast.gov.uk

Such representations must be received at least 10 clear working days before the date of the Cabinet or Portfolio Holder meeting concerned.

Where it has not been possible to meet the 28 clear day rule for publication of notice of a key decision or intention to meet in private, the relevant notices will be published as soon as possible in accordance with the requirements of the Constitution.

The law and the Council's Constitution provide for urgent key decisions to be made. Any decision made in this way will be published in the same way.

Forward Plan

Key Decision and Private Non-Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 17/18-62 Route and Rota Optimisation	To delegate authority to the Executive Director Place, in consultation with the Portfolio Holder for Environment and the Director of Legal Services, to develop and implement the route and rota optimisation proposals through Ansa Environmental Services Ltd.	Portfolio Holder for Environment	August 2018		Ralph Kemp	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-7 Local Development Scheme	To seek approval for an update to the Local Development Scheme, a formal document setting out the plans which the Council will use in pursuit of its planning functions. The Local Development Scheme is a public document. As well as updating existing plans, the Local Development Scheme will formally signal that the Council will prepare an Area Action Plan for Crewe Hub Station and environs.	Portfolio Holder for Housing, Planning and Regeneration	Not before 31st Aug 2018	Each of the Plans listed in the Local Development Scheme will be subject to informal and formal consultation, plus independent Examination.	Adrian Fisher, Head of Planning and Policy	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-8 Statement of Community Involvement	To seek agreement to publish a revised Statement of Community Involvement for 6 weeks' public consultation. The Statement will set out how the Council will involve and engage with the public and partners in pursuit of its planning functions. The Statement covers both planning applications and planning policy.	Portfolio Holder for Housing, Planning and Regeneration	Not before 31st Aug 2018	The draft Statement of Community Involvement will be subject to six weeks consultation to run concurrently with the consultation on the second stage of the Local Plan – the Site Allocations & Development Policies Document. Following this, all comments will be considered and revisions made as appropriate before a final version of the Statement of Community Involvement is prepared for approval.	Adrian Fisher, Head of Planning and Policy	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-9 Site Allocations and Development Policies Document	To seek agreement to publish a first draft of the Cheshire East Site Allocations and Development Policies Document together with its supporting evidence for 6 weeks' public consultation.	Portfolio Holder for Housing, Planning and Regeneration	Not before 31st Aug 2018	Approval is being sought to carry out public consultation, building on the significant consultation and engagement that has already taken place in developing the draft Site Aallocations and Development Policies Document.	Jeremy Owens	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19 -12 North Cheshire Growth Village	To seek agreement to publish a Draft Supplementary Planning Document for North Cheshire Growth Village (known as The Garden Village at Handforth) and to undertake public consultation.	Portfolio Holder for Housing, Planning and Regeneration	Not before 31st Aug 2018	The draft Supplementary Planning Document will be subject to six weeks consultation to run concurrently with the consultation on the second stage of the Local Plan – the Site Allocations & Development Policies Document. Following this, all comments will be considered and revisions made as appropriate before a final version of the Supplementary Planning Document is prepared for approval.	Adrian Fisher, Head of Planning and Policy	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-13 Supply of household recycling and waste bins	To authorise officers to take all necessary actions to implement the proposal to charge for the supply of new and replacement household waste and recycling bins and containers, following consultation as part of the MTFS, acceptance at February Council and borough-wide consultation.	Portfolio Holder for Environment	September 2018		Ralph Kemp	N/A
CE 18/19-6 Re-Procurement of Contracts for Fresh Produce and Multi-temperature Food (Frozen and Grocery Products)	Cabinet to approve the re-tendering process to award these contracts. A robust EU tender Procedure will be undertaken and the successful provider identified for each lot.	Cabinet	11 Sep 2018		Mark Bayley	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-14 European Social Fund Sub Regional Bid for Intensive Supported Employment Provision	To support the sub regional proposal for a bid submission to the Cheshire and Warrington Local Enterprise Partnership via a direct call under Lots 1.2 and 1.4 in line with the proposed timeline outlined in the report and authorise officers to take all necessary actions to implement the proposal.	Cabinet	11 Sep 2018		Sonia Bassey	N/A
CE 18/19-10 Everybody Sport and Recreation Performance Report 2017/18 and Leisure Operating Agreement - Proposed Extension	Cabinet will be asked to note the Leisure Trust Annual Report for 2017/18 and to approve the extension of the current Leisure Operating Agreement with Everybody Sport and Recreation for a further five years to allow the Trust to continue to improve the delivery of the Council's leisure services and outcomes in terms of health and wellbeing for local residents.	Cabinet	9 Oct 2018		Mark Wheelton	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-16 Crewe HS2 Hub Station and Hub Station Area	To authorise officers to progress project development of an enhanced Crewe hub station and to take all necessary actions to prepare and submit all necessary planning applications. To authorise the preparation and submission of listed building application and the making of a compulsory purchase order to acquire the necessary land and interests to deliver the Crewe Hub. To authorise officers to take all necessary actions to develop and adopt an Area Action Plan for the Crewe Hub Station area.	Cabinet	6 Nov 2018			N/A
CE 18/19-17 Approval to Commission Universal Information and Advice Service	This is a contract for providing impartial information and advice services. The current contract expires on 31st March 2019. Authority will be sought to commission a new service with effect from 1st April 2019.	Cabinet	6 Nov 2018		Liz Rimmer	N/A

Key Decision	Decisions to be Taken	Decision Maker	Expected Date of Decision	Proposed Consultation	How to make representation to the decision made	Private/ Confidential and paragraph number
CE 18/19-1 Havannah Primary School - Change in Age Range	To approve a proposed change in age range from 4-11 to 3-11 for implementation in October 2018, having given due consideration to the response to the statutory proposal notice.	Cabinet	4 Dec 2018		Jacky Forster	N/A
CE 18/19-15 Mental Health Strategy	To seek approval from Cabinet for the adoption of the Cheshire East Mental Health Strategy.	Cabinet	4 Dec 2018		Lucy Cooper	N/A
CE 18/19-11 Adoption of Community Infrastructure Levy	To seek agreement to adopt the Community Infrastructure Levy (CIL) Charging Schedule following public examination on 12/13 September 2018.	Council	13 Dec 2018		Adrian Fisher, Head of Planning and Policy	
CE 17/18-51 Medium Term Financial Strategy 2019-2022	To approve the Medium Term Financial Strategy for 2019-2022, incorporating the Council's priorities, budget, policy proposals and capital programme.	Council	21 Feb 2019		Alex Thompson	N/A

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Environment and Regeneration Overview and Scrutiny

Date of Meeting: 17 September 2018

Report Title: Work Programme

Portfolio Holder: Cllrs A Arnold, P Bates and D Stockton

Senior Officer: Acting Director of Legal Services

1. Report Summary

1.1. To review items in the Work Programme listed in the schedule attached, together with any other items suggested by Committee Members.

2. Recommendation

2.1. That the work programme be reviewed.

3. Reasons for Recommendation

3.1 It is good practice to review the work programme and update accordingly

4. Other Options Considered

4.1. There are no further options to consider.

5. Background

5.1 The schedule attached has been updated following the last meeting of the committee.

5.2 Members are asked to review the schedule attached to this report, and if appropriate, add new items or delete items that no longer require any scrutiny activity. When selecting potential topics, Members should have regard to the Council's new three year plan and also to the general criteria listed below, which should be applied to all potential items when considering whether any Scrutiny activity is appropriate.

5.3 The following questions should be asked in respect of each potential work programme item:

- Does the issue fall within a corporate priority;
- Is the issue of key interest to the public;

- Does the matter relate to a poor or declining performing service for which there is no obvious explanation;
- Is there a pattern of budgetary overspends;
- Is it a matter raised by external audit management letters and or audit reports?
- Is there a high level of dissatisfaction with the service;

5.4 If during the assessment process any of the following emerge, then the topic should be rejected:

- The topic is already being addressed elsewhere
- The matter is subjudice
- Scrutiny cannot add value or is unlikely to be able to conclude an investigation within the specified timescale

6. Implications

6.1. Legal Implications

6.1.1. There are no legal implications at this stage.

6.2. Finance Implications

6.2.1. There are no financial implications at this stage

6.3. Equality Implications

6.3.1. There are no equalities implications at this stage.

6.4. Human Resources Implications

6.4.1. There are no human resources implications at this stage.

6.5. Risk Management Implications

6.5.1. There are no risk management implications at this stage.

6.6. Rural Communities Implications

6.6.1. There are no implications for rural communities.

6.7. Implications for Children & Young People

6.7.1. There and no implications for children and young people at this stage.

6.8. **Public Health Implications**

6.8.1. There are no direct implications for public health.

7. Ward Members Affected

7.1. All.

8. Access to Information

8.1. The background papers can be inspected by contacting the report author

9. Contact Information

9.1. Any questions relating to this report should be directed to the following officer:

Name: Katie Small

Job Title: Scrutiny Officer

Email: Katie.small@cheshireeast.gov.uk

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Environment and Regeneration Overview and Scrutiny Committee Work Programme – August 2018

Date:17.09.2018 Time: 2.00pm Venue: Capesthorne Room	Date: 15.10.18 Time:2.00pm Venue:- Capesthorne Room	Date: 12.11.2018 Time: 2.00pm Venue: Council Chamber, Crewe	Date:21.01. 2019 Time: 2.00pm Venue: Committee Suite, Sandbach	Date:18.03.2019 Time: 2.00pm Venue: Capesthorne Room

Item	Description/purpose of report/comments	Outcome	Lead Officer/ organisation/ Portfolio Holder	Suggested by	Current position	Key Dates/ Deadlines
Local Transport Plan (LTP)	To give consideration to the consultation process prior to cabinet.	Cheshire is a green and sustainable place.	Director and Acting deputy Chief Executive	Director and Acting Chief Executive	Committee Report	17 September 2018
Cemeteries and Churchyards	To give consideration to the draft Cemeteries Strategy.	Cheshire is a green and sustainable place.	Strategic Commissioner for Waste	Strategic Commissioner for Waste	Committee Report	17 September 2018
Air Quality Action Plan and Strategy	To scrutinise the action plan and strategy.	Cheshire is a green and sustainable place	Executive Director Place	Committee	Committee report	17 September 2018
Strategic Infrastructure Programme	To Scrutinise the programme, and receive a presentation on the projects delivered.	Cheshire is a green and sustainable place.	Commissioning manager for Highways.	Committee	Presentation	15 October 2018
Air Quality Annual Status Report	To scrutinise the Air Quality Annual Status Report	Cheshire is a green and sustainable place	Executive Director Place	Committee	Committee report	15 October 2018

Environment and Regeneration Overview and Scrutiny Committee Work Programme – August 2018

Well managed highway infrastructure code of practice	To scrutinise the risk based approach and review the proposals for the new ways of working.	Our local communities are strong and supportive/ Cheshire is a green and sustainable place.	Strategic Commissioner for Highways	Strategic Commissioner for Highways		15 October 2018
Performance Scorecard	To scrutinise the performance of the areas of work which fall within the remit of the Committee	Our local communities are strong and supportive/ Cheshire is a green and sustainable place.	Executive Director for Place	Committee	Committee Report Quarterly Reports	15 October 2018 21 January 2019 18 March 2019
Bus Routes Review	To receive an update report following the recent bus routes review.	Cheshire is a green and sustainable place.	Executive Director-Place and PH For Children and Families	Committee	Committee Report	12 November 2018
Tatton Park Vision	To scrutinise phase two of Tatton Park Vision	Cheshire is a green and sustainable place. Cheshire East has a strong and resilient economy	Head of Rural & Cultural Economy	Committee		12 November 2018
Household waste recycling centres review	To scrutinise the results of the consultation. Report received on 21 March. Further progress reports TBA.	Cheshire is a green and sustainable place.	Strategic Commissioner for Waste. Portfolio Holder	Strategic Commissioner for Waste	Committee update report	12 November 2018

			for Regeneration			
Food waste Collection, Organic waste Treatment Solution	To scrutinise the progress made. Report received on 21 March. Further progress reports TBA	Cheshire is a green and sustainable place	Strategic Commissioner for Waste. Portfolio Holder for Regeneration	Strategic Commissioner for Waste.	Update report	Site Visit TBA
Flood Risk Management	To scrutinise flood risk management in Cheshire East.	Cheshire is a green and sustainable place	Commissioning Manager for Highways	Scrutiny requirement	Annual review	18 March 2019

Possible Task and Finish groups

- Parking strategy-Progress report

Site Visit

- Middlewich Waste Transfer Station-Visit to be arranged.

Possible Future Items

- TSS including Licensing of vehicle.

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