Low Emissions Supplementary Planning Guidance

City of York Council

Version 1.3 – DRAFT

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Contents

Summary

Air quality has a significant impact on public health, both on mortality and on quality of life. It is important that action is taken to minimise these impacts.

Local planning decisions have an important role to play in maintaining and improving local air quality, since they can significantly affect the design, location and management of emission sources and sensitive receptors.

This guidance aims to assist developers to improve air quality and lower transport emissions in line with the aims and objectives of the York Air Quality Action Plan (AQAP) and Low Emissions Strategy (LES)[1]. The guide is based on the guidance note *'Low Emissions and Air Quality Guidance for Development Management'* produced by the Low Emissions Strategies Partnership (LESP)[2].

It seeks to:

- Minimise the impact of development in terms of harmful pollutant emissions and deterioration in local air quality
- Prevent public exposure to unacceptable levels of air pollution
- Specify and tailor emission mitigation to specific site characteristics, taking into account the nature of the site, the scale of the site and exposure risks posed by the site

The guidance explains:

- How to classify a development site and what level/type of air quality assessment is needed to accompany an application
- City of York Council's design and emission mitigation expectations and the circumstances under which further emission mitigation may be needed
- How to undertake emission, concentration and exposure assessments *(where required)*
- How air quality recommendations in relation to applications will be made

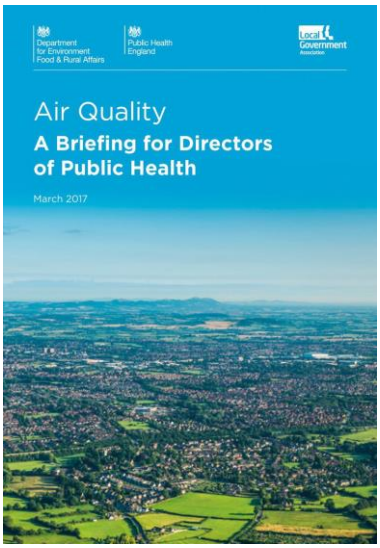
[1] Documents available online at https://www.york.gov.uk/AirQualityActionPlan

[2] Specific acknowledgement is made to Rob Pilling and Katherine Stanger (formerly of Green Sphere Ltd) who provide programme management for the LESP and who have been instrumental in the development of the approach and methodology used in this guide.

1 Why does air quality matter?

1.1 National Context

Air pollution is associated with a number of adverse health impacts. It is linked to many major modern health challenges such as heart disease, strokes, asthma, chronic obstructive pulmonary disease (COPD), lung cancer, diabetes and dementia[3]. 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[4,5]. The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[6], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[7].



Air pollution can also have economic impacts through sickness absence and reduced productivity of a workforce. This, in turn, can affect goods, services and supply chains. Impacts on the economy can also arise through damage to historic monuments (and associated restoration costs) and impacts on ecosystem processes affecting drinking water, timber production and nature (and associated remediation costs). The coronavirus pandemic has clearly demonstrated the critical link between human health and economic prosperity.

"It is the largest environmental risk to the public's health"

A briefing for Public Health Directors (March 2017)

It is important that action is taken both locally and nationally to improve air quality.

All local authorities have a statutory duty to work towards compliance with the National Air Quality Objectives. These are health-based objectives for key pollutants set out in the National Air Quality Strategy (NAQS). Local authorities have additional duties relating to air quality under the Public Health Outcomes Framework (PHOF). These relate specifically to reducing exposure to man made particulate matter (particularly $PM_{2.5}$).

[3] Every breath we take – The lifelong impact of Air Pollution, Royal College of Physicians Report, February 2016
[4] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[5] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[6] Defra. Air quality appraisal: damage cost guidance, July 2020
[7] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

Air quality objectives for nitrogen dioxide are currently exceeded at many roadside locations across the UK, leading to the declaration of Air Quality Management Areas (AQMAs) in many local authority areas. Exceedances are due mainly to the impact of traffic emissions, particularly those from diesel vehicles. Other combustion processes such as power generation or commercial and domestic space heating can also make a local contribution.

Whilst air quality has improved significantly in recent decades and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further. The 2019 Clean Air Strategy[8] sets out the case for action, with goals even more ambitious than EU requirements to reduce exposure to harmful pollutants. The Road to Zero[9] sets out the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of AQMAs are designated due to elevated pollutant concentrations heavily influenced by transport emissions.

The recent Environment Act 2021[10] will enable more effective action to tackle air pollution and deliver health benefits, as well as increasing transparency, co-operation between authorities and accountability at all levels. Specifically, the 2021 Act requires new standards to be set for fine particulate matter ($PM_{2.5}$) and strengthens provisions for local authorities to tackle pollution from domestic burning (a significant source of $PM_{2.5}$ in the UK).

The National Institute for Health and Care Excellence (NICE) has published guidance on measures to improve air quality[11]. Such guidance outlines that the planning process can be an important mechanism for reducing exposure to air pollutants and mitigating the impact of vehicle trips. Recommendations include the provision of charging points for electric vehicles in workplaces, commercial developments and residential areas to facilitate zero-emission travel. Minimising exposure of vulnerable groups to air pollution via careful design and siting of developments should also be a consideration.

1.2 Local Context

Through monitoring of air quality across the city, City of York Council has previously identified some areas of the city centre, around the busy inner ring road, where long term annual average nitrogen dioxide (NO_2) concentrations are above health based objective levels. These areas have been incorporated into an Air Quality Management Area (AQMA). York's current city centre AQMA is shown in Appendix A.

The AQMA includes areas where members of the public are likely to be exposed to air pollution regularly over long periods of time, such as residential properties and schools.

[8] Defra. Clean Air Strategy, 2019
[9] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018
[10] https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted
[11] See https://www.nice.org.uk/guidance/ng70

These are known as 'relevant locations'. Roads are also included within the AQMA boundary and reflect the wider area that residents and businesses stated they wanted to see air quality improved following public consultation.

Transport emissions remain the main source of NO_x across York's AQMA and wider area. Whilst NO_x emissions from petrol and diesel cars continue to make up the majority of these emissions, heavier diesel vehicles such as HGVs and some buses have also been shown to have a disproportionate impact in some areas of the city. The emissions contribution from buses has reduced significantly in recent years due to the introduction of a Clean Air Zone (CAZ) in the city centre and upgrades to vehicles serving high frequency bus routes. This has been complemented by new zero emission electric buses serving the majority of York Park & Ride routes.

City of York Council's Local Transport Plan places a strong emphasis on reducing the overall number of vehicle trips made in the city by encouraging the use of sustainable transport modes (walking, cycling and low emission public transport). Minimising the number of vehicle trips remains a high priority, but as the city continues to grow and York's population increases some trip growth is inevitable.

City of York Council's Air Quality Action Plan (AQAP3) and Low Emission Strategy (LES) support economic growth and delivery of the Local Plan by ensuring the emission impact of future vehicle trips is minimised as far as possible. The aim is to ensure that as many trips as possible are made by low emission vehicles, particularly those which run on electric or use hybrid technology. Progress on the implementation of AQAP3 and the LES are reported annually to DEFRA in York's Annual Status Report (ASR)[12].

Since publication of the LES, York has:

- Delivered a fully electric Park & Ride (P&R) site at Poppleton Bar and introduced electric buses across other P&R sites. The York P&R service now includes one of the largest fleets of electric double decker buses outside London.
- Launched a Clean Air Zone (CAZ) for buses. Buses making 5 or more entrances to the city centre CAZ per day are now required to be Ultra Low Emission Buses (ULEB) (Euro VI diesel or electric).
- Launched a Low Emission Taxi Grant scheme for taxi drivers licensed by City of York Council. We have encouraged >30% of the York taxi fleet to change to low emission alternatives (petrol hybrid or electric); a significant number of these have been supported by our innovative taxi grant scheme. We have also strengthened Taxi Licensing policy and introduced conditions about the types of vehicles that can be licensed.

[12] See https://www.york.gov.uk/AirPollutionReports

- Delivered extensive ‘pay as you go’ fast and rapid charge public electric vehicle recharging facilities across the city. In addition, we have delivered ultra-rapid charging facilities via our network of charging Hyper-Hubs.
- Introduced low emission vehicles into City of York Council’s fleet, including a number of fully electric waste collection vehicles.
- Reduced ‘grey fleet’ trips and worked in partnership with Enterprise Car Club to provide a range of low emission pool vehicles at various locations across CYC’s estate.
- Implemented a package of measures aimed at deterring stationary vehicles from idling, including a ‘Kick the Habit’ anti-idling awareness raising campaign aimed at encouraging people to think about the importance of clean air and the impact this has on their health.
- Offered advice on operational best practice to fleet operators through an ECO Stars Fleet Recognition Scheme

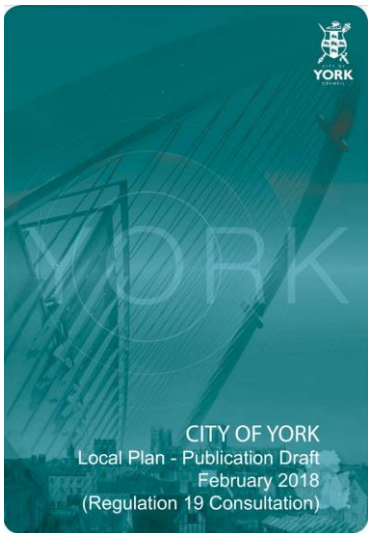
In addition to the above, York continues to deliver on walking, cycling and public transport improvements through the Local Transport Plan and I-Travel York Sustainable Travel programmes.

Current progress with air quality improvement measures in York can be viewed in our latest Annual Status Report, available on City of York Council’s webpage.

2 Planning and air quality improvement

2.1 Role of Planning

CYC are currently working towards a New Local Plan that will be fully compliant with the National Planning Policy Framework (NPPF) and other relevant regulations[13]. Once adopted, the new Local Plan will determine how the city develops over the next 15 years and beyond.



The new Local Plan will respond to the issues facing York and will consider issues such as transport priorities, air quality and climate change. The plan will reflect the city's economic ambitions and help to deliver economic success, whilst building strong communities and protecting and enhancing York's unique environment.

Without local planning interventions, peak traffic levels could increase by up to 20% in some areas of the city by 2032[14]. This has the potential to significantly impact on York's air quality and increase the number of people exposed to harmful levels of pollution. Development increases demand for all types of vehicle trips including buses, taxis, refuse trucks and delivery vehicles as well as personal car journeys. Many of these trips are an essential part of York's economy and some are still made by diesel vehicles that have a disproportionate impact on York's air quality. The aim of the York Low Emission Strategy is to shift these trips to cleaner forms of transport.

Without local planning intervention, additional trip demand arising from development may continue to be met by mainly diesel vehicles which have the greatest negative impact on York's air quality

A low emission planning approach can help mitigate the emission and wider air quality impacts of future development by:

- minimising further growth in harmful pollutant emissions
- avoiding significant impact on local air pollutant concentrations
- protecting members of the public from unacceptable exposure to air pollutants
- supporting wider air quality improvement measures

[13] See https://www.york.gov.uk/LocalPlanSubmission for updates
[14] City of York Council Local Plan Transport Topic Paper, September 2017

Travel Plans are a feature of many planning applications and aim to improve opportunities for sustainable travel in the form of walking, cycling and public transport improvements. Travel plans have an important role to play in reducing the transport impacts of development, but they are rarely able to completely prevent traffic growth. This guidance aims to address any 'residual' emissions that remain, after a development has explored all opportunities for 'traditional' best practice sustainable travel measures and incorporated City of York Council's minimum emission mitigation requirements.

2.2 National Policy Context

The National Planning Policy Framework (NPPF)[15] provides guidance on how planning can take account of the impact of new development on air quality. This replaces guidance previously provided via National Planning and Policy statements. The NPPF identifies air quality as a material consideration in planning decisions and states that the planning system should:

- contribute to and enhance the natural and local environment by: preventing both new and existing developments from contributing to or being put at unacceptable risk from soil, air, water or noise pollution or land instability **(Paragraph 174);**

- planning policies and decisions should also ensure that new development is appropriate for its location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development **(Paragraph 185);**

- sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local Air Quality Action Plan **(Paragraph 186);**

- ensure developments are designed to enable charging of plug-in and other ultra low emission vehicles in safe, accessible and convenient locations **(Paragraph 112);**

[15] https://www.gov.uk/government/publications/national-planning-policy-framework--2

Any air quality issue relating to land use and development is capable of being a material planning consideration. However, the weight given to air quality in making a planning application decision will depend on such factors as:

- the severity of the impacts on air quality
- existing air quality in the vicinity of the proposed development
- the sensitivity of the end use of the development.
- the length of time people are likely to be exposed at a location
- the positive benefits provided through other material considerations

With careful consideration and appropriate mitigation, new development can help to protect and improve air quality by:

- reducing the need for vehicle trips
- encouraging the uptake of low emission vehicles
- minimising existing and new exposure to poor air quality
- supporting and contributing towards the delivery of local Air Quality Action Plans (AQAPs) and other council strategies

2.3 Local Policy Context

City of York Council's Local Plan Air Quality Policy (ENV1), sets out to reduce pollutant emissions across the entire York area to help safe guard compliance with air quality objectives and reduce particle concentrations (for which there are no known safe limits).

City of York Council has produced a Low Emission Strategy (LES) and Air Quality Action Plan (AQAP3) to reduce pollutant concentrations within the current AQMAs and to provide longer term protection of public health.

All development proposals must be fully compatible with the aims and objectives of the current York LES and AQAP. In particular developments must:

- prevent the need to declare further AQMAs in the city
- prevent any increase in the number of people exposed to poor air quality in the city
- prevent city wide emission growth as far as possible, via on-site mitigation measures where possible and/or contributions towards delivery of other LES/AQAP measures at a city-wide level

Improving local air quality and reducing carbon emissions are essential to the future well-being of York and its residents, but this has to be balanced against opportunities for

economic growth, new development and the ability of residents and visitors to travel freely around the city.

Local air quality improvement and climate change prevention are currently dealt with as separate issues within the local planning regime, but both have an important role to play in lowering emissions across York and should complement each other wherever possible. Whilst air quality and climate change are intrinsically linked and there may often be common emission sources contributing to local air pollution and greenhouse gas emissions (e.g. combustion of fossil fuels), it should be noted that in some areas conflicts can arise. Examples include the use of diesel fuel and the promotion of biomass boilers within urban areas.

Air quality improvement strategies and planning decisions should complement wider climate change/carbon reduction agendas and should be well aligned to recognise synergies and prevent conflict.

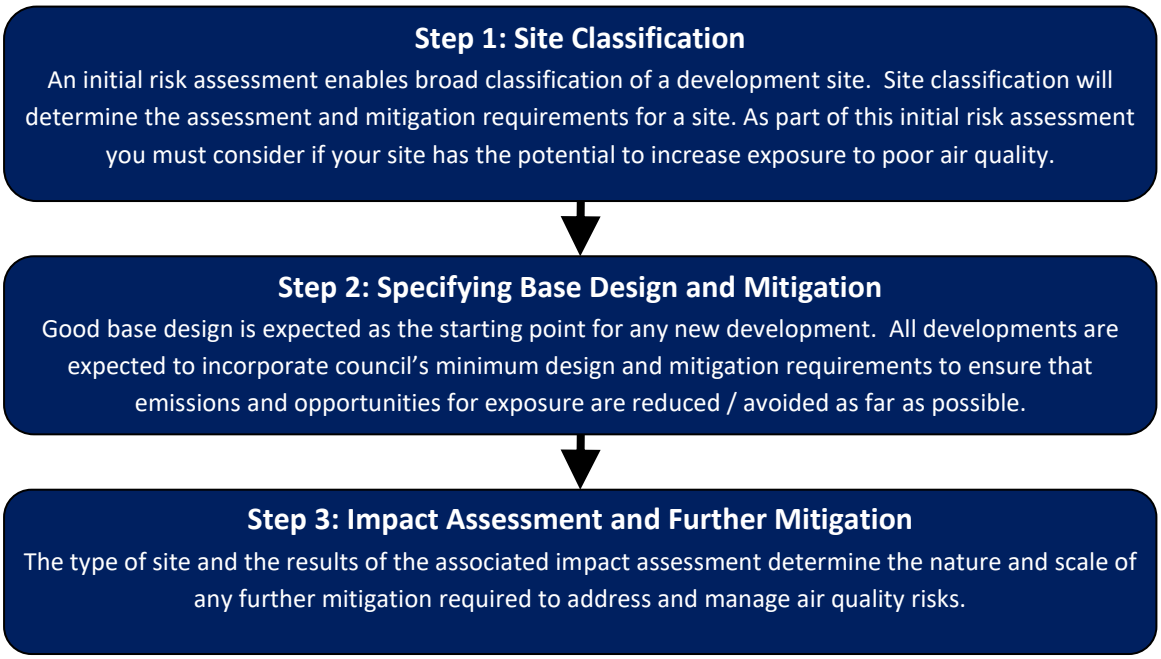
3 Process Overview

The approach outlined in this document aims to address three distinct development risks relating to air quality:

- **Pollutant Emissions** - emissions arising either from individual developments or cumulatively through a number of smaller-scale developments. A low emission planning approach aims to reduce and mitigate pollutant emissions across the entire York area.
- **Local Concentrations** - detectable changes to ambient concentrations of air pollutants directly attributable to use of a particular site. Developments located within, or in close proximity to, an Air Quality Management Area (AQMA) are given particular attention in this guidance.
- **Human Exposure** - harm to individuals arising as a result of exposure to air pollutants through the occupation and/or use of a site. Any proposal that brings new population into an existing area of air quality concern, or causes deterioration in air quality for existing residents is given particular attention in this guidance.

The approach comprises three main steps as shown in figure 1 below:

Figure 1: Low Emission Planning Approach



The stages above will allow City of York Council to determine the acceptability of a planning application with regards to air quality and emissions. The steps outlined above should be carried out by you as part of your application. In some instances you may require a suitably

qualified environmental consultant to assist you with these steps but please check that this is necessary before engaging these services (see 'pre-planning' below).

The assessment and mitigation requirements set out in this document are tailored specifically to the type, size and location of development under consideration. This ensures that:

- the level of air quality assessment and mitigation required is always proportionate to the risk posed by the development
- air quality assessment need not be an onerous process. For many sites, best practice can be demonstrated via the application of the standard mitigation measures outlined in this document.
- the need for detailed quantitative air quality/emissions assessments is eliminated for all but the largest developments and those sites which present significant exposure risks to new or existing receptors on the site

The approach outlined in this guidance provides a consistent, well defined and effective approach to mitigating emission growth from new developments and protecting local air quality. It is designed to build upon existing sustainable travel requirements and to address residual emission growth.

3.1 Pre-application advice

The pre-application phase of development management is part of the positive and proactive planning service provided by City of York Council[16]. We welcome and encourage early discussions with those considering development, particularly in relation to environmental planning issues and the application of this guidance. Pre-application discussions in relation to air quality enable a clear understanding of site classification, site impacts and assessment / mitigation needs. They also allow a shared understanding of the constraints and opportunities for a development site.

You are strongly recommended to agree a scope of works with CYC prior to employing the services of an environmental consultant. This will help you to avoid submitting of the wrong type of assessment and prevent unnecessary delays with your application.

[16] To cover the costs of this service we do charge a fee which relates to the level and range of officer support provided. Further information is available online at: https://www.york.gov.uk/info/20049/planning_advice_and_guidance/1190/pre-application_planning_advice

4 Site Classification and Exposure Risk

4.1 Site Classification Criteria

Sites should be classified in accordance with the table and flow chart below. All sites within the York boundary are classified type 1 as a minimum and may be 'upgraded' to a type 2 or 3 if they exceed the outlined thresholds. Site classification will determine the level of air quality risk associated with your site and help to determine the level of assessment and mitigation needed. As part of the site classification process, you will be required to identify if your site is considered to be exposure sensitive (i.e. has the potential to increase exposure to poor air quality) (see section 4.2).

Due to the changing nature of air quality and influence of many other local factors, CYC reserves the right to classify a site differently based on local circumstances and local knowledge. It is recommended that the site type and level of assessment required is confirmed with CYC at the earliest opportunity.

Table 1: Site Classification Criteria

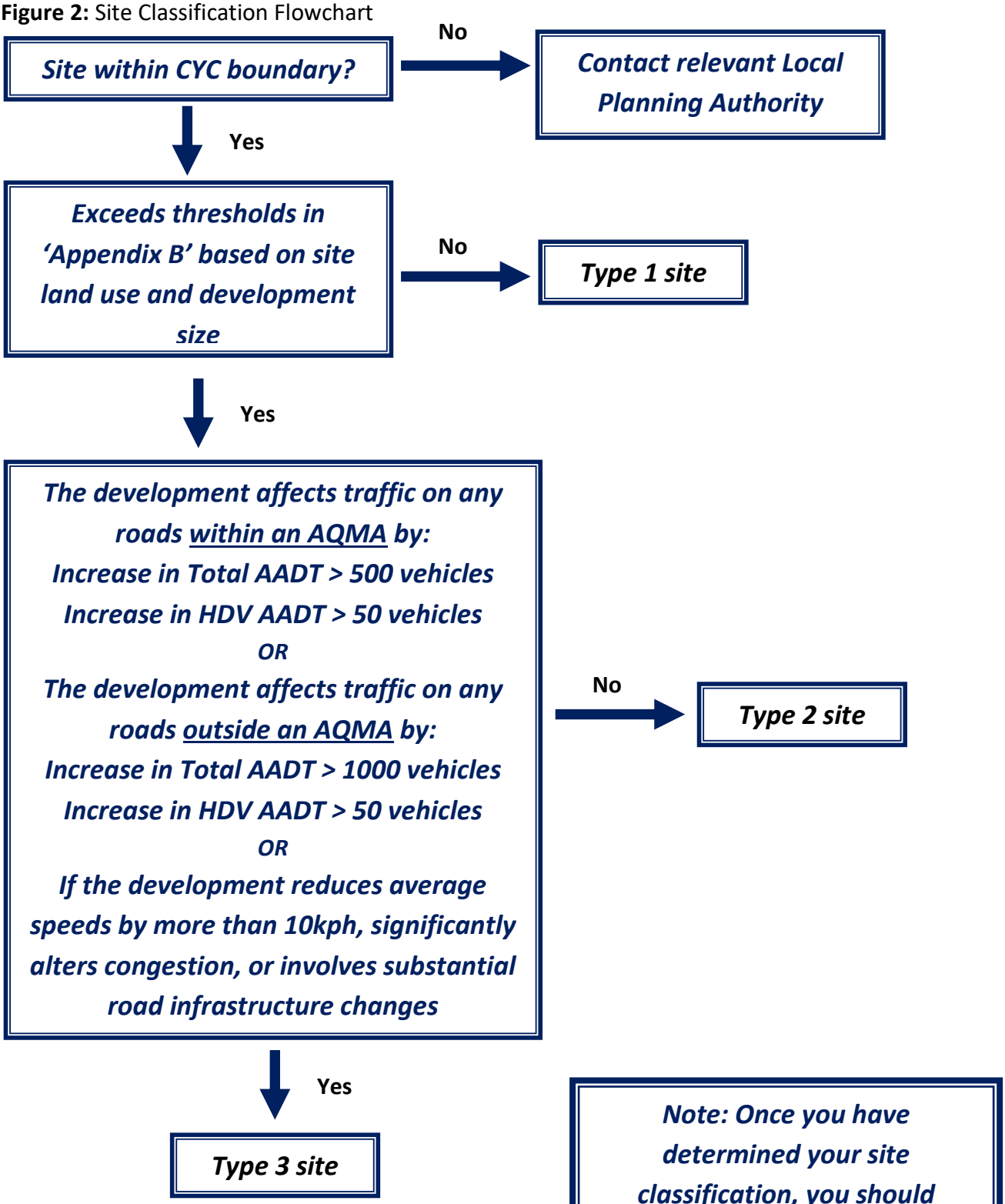
Site Type	Description	Criteria	Risks
Type 1	All sites located within the CYC boundary	Site located within CYC boundary and to which none of the Type 2 or Type 3 site criteria apply	Low Risk Site
Type 2	Sites likely to generate higher levels of traffic and pollution	Exceeds thresholds based on site land use and development size (thresholds are outlined in Appendix B) *Example: A housing development >80 units would be classified a Type 2 site (as a minimum)*	Pollutant Emissions
Type 3	As Type 2, but generating even higher levels of traffic and likely to pose a specific risk in existing areas of poor air quality.	A Type 2 site that exceeds the following thresholds: If the development affects traffic on any roads within an AQMA by: ***Increase in Total AADT > 500 vehicles*** ***Increase in HDV AADT > 50 vehicles*** **OR** If the development affects traffic on any roads outside an AQMA by: ***Increase in Total AADT > 1000 vehicles*** ***Increase in HDV AADT > 50 vehicles*** **OR** If the development reduces average speeds by more than 10kph, significantly alters congestion, or involves substantial road infrastructure changes	Pollutant Emissions & Local Concentrations

AADT: Annual Average Daily Traffic Flow HDV: Heavy Duty Vehicle

Flow chart for determining site classification

The following flow chart can be used to help classify your development

Figure 2: Site Classification Flowchart



4.2 Exposure Sensitive Sites

Any Type 1, 2 or 3 site has the potential to increase exposure to poor air quality. Exposure sensitive sites are defined as outdoor, non-occupational locations, where members of the public are likely to be regularly exposed to poor air quality. Exposure sensitive sites do not include places of work (e.g. office space) unless members of the public have regular access. The definition of an exposure sensitive site will depend on the particular air quality standard under consideration, examples include:

- **When considering Annual Mean Objectives** – building facades of residential properties, schools, hospitals and care homes
- **When considering 8 Hour / 24 Hour Objectives** – all locations for the annual mean, plus hotels and garden spaces
- **When considering 1 Hour Objectives** – all locations for the annual mean, 8 hour mean and 24 hour mean, and any other outdoor locations where members of the public could be reasonably be expected to spend 1 hour or more.

An exposure sensitive site, sometimes known as a 'relevant location', is an outdoor location where members of the public are likely to be regularly exposed to poor air quality. Developments must demonstrate how exposure issues have been addressed and minimised through the principles of good design.

An assessment of the likelihood of a development introducing additional exposure will be broadly determined using the following criteria:

- The proposal is within or adjacent to an AQMA
- The proposal is in an area not formally designated as an AQMA but where the Local Authority has concerns over elevated levels of pollution
- The proposal is within 20m of a road outside an AQMA where total AADT > 10,000 (all vehicles)
- Any other location where the Local Authority considers that there is a risk of the Air Quality Objectives being exceeded (e.g. near large fugitive emission sources).

Development proposals must demonstrate how exposure issues have been addressed and minimised through the principles of good design. Further information about mitigating exposure is provided in section 5.2.

5 Base Design and Mitigation

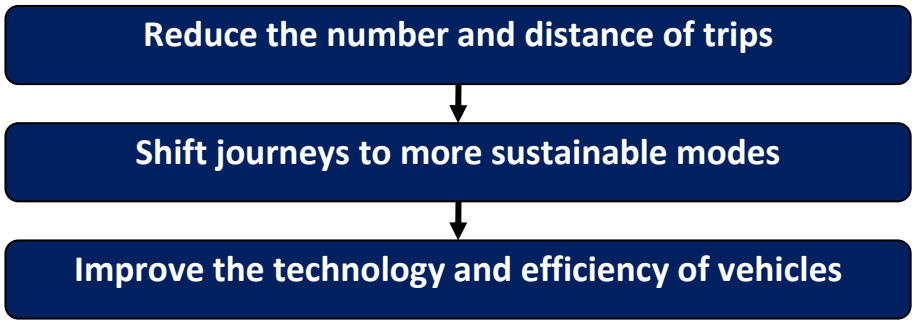
5.1 Good Base Design – A Starting Point for Development

Mitigation is no substitute for good environmental design. Good base design is expected as the starting point for any new development. All developments are expected to give detailed thought to the location, layout and general features of their site to ensure additional emissions and opportunities for exposure are avoided as far as possible.

Base design as a minimum should normally include:

- a site location which maximises opportunities for the use of sustainable transport (a sustainable location). Base design should always adhere to the established sustainable transport hierarchy as shown below.

Figure 3: Sustainable Transport Hierarchy



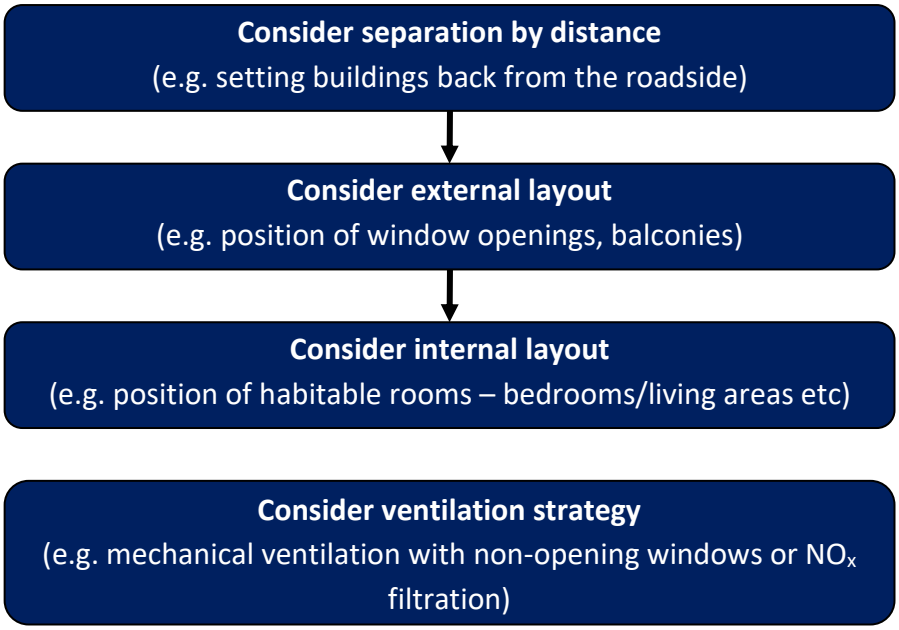
- a design which minimises opportunities for additional exposure of occupants to air pollution (with particular attention paid to existing air quality in the area and sensitivity of occupants)
- basic opportunities to recharge an Electric Vehicle (EV). Further information on City of York Council's minimum requirements for EV charging can be found in this chapter.

Careful definition of the base site design within a planning application is important to highlight the positive design features of a proposal and to provide a firm reference point for identifying any residual emissions and additional mitigation necessary.

5.2 Base Design - Minimising Pollutant Exposure

Developments on exposure sensitive sites (see section 4.2) should aim to reduce exposure to poor air quality as far as practically possible. This should be considered as part of the site's base design. The following exposure mitigation hierarchy should be followed to ensure that openings to habitable rooms (e.g. windows to bedrooms and living areas) do not allow residents to experience pollution levels exceeding Air Quality Objectives and that effective room ventilation is maintained at all times. Items higher up the hierarchy should be used as a priority. Non-opening windows and mechanical ventilation should only be considered as a last resort, but in some instances it is recognised that they may be the only means of adequately addressing exposure, particularly for existing buildings in city centre locations. NO_x filtration may be a viable alternative to non-opening windows in some areas.

Figure 4: Exposure Mitigation Hierarchy



Where continuous mechanical supply and extract ventilation systems are considered necessary, they should incorporate heat recovery (MVHR) and be designed to meet current Building Regulations with respect to the provision of fresh air and the extraction of stale air. Developers should provide a maintenance schedule for such ventilation systems and clarify responsibility for running costs and maintenance works, including replacement NO_x filtration medium if applicable, in line with the manufacturer's recommendations. Systems should be retained and maintained in accordance with an agreed schedule.

Where the proposed design of a development leaves uncertainty regarding the pollution levels at facades with openings to habitable rooms, and the Local Planning Authority has concerns about elevated levels of pollution, the developer may be required to provide further information about the quality of air likely to enter the development through site-

specific monitoring. Wherever possible, this should be carried out prior to submission of the planning application and before determination. The scope of any such monitoring should be agreed upfront with City of York Council.

5.3 Base Design - Provision of Electric Vehicle (EV) Charging Infrastructure

A standard level of electric vehicle (EV) charge point provision *('active provision')* is expected as part of the base site design for all developments in York, unless the development has no parking.

To prepare for increased demand for charging points in future years, appropriate cable routes *('passive provision')* should be included in the scheme design and development in alignment with current Building Regulations.

Approved Document S: infrastructure for charging electric vehicles provides technical guidance regarding the provision of EV charge points and cable routes.

From 15th June 2022, Approved Document S takes effect and applies to new residential and non-residential buildings; buildings undergoing a material change of use to dwellings; residential and non-residential buildings undergoing major renovation; and mixed-use buildings that are either new or undergoing major renovation.

The table below provides a guide to CYC's minimum requirements for EV charging.

Table 2: Minimum Requirements for Provision of Electric Vehicle Charging

Development type	EV Charging Provision
Residential (or residential aspects in a mixed-use development).	**Active / Passive Provision** • Developments should meet minimum requirements as set out in Approved Document S: Infrastructure for the charging of electric vehicles (2021)
Non-residential / other development types	**Passive provision** • Developments should meet minimum requirements as set out in Approved Document S: Infrastructure for the charging of electric vehicles (2021) **Active provision** • A minimum of 5%* of the total parking provision on a site should include EV charge points. • Developments should additionally satisfy the minimum requirements as set out in Approved Document S: Infrastructure for the charging of electric vehicles (2021) ** 5% calculation rounded up the nearest full charge point (i.e. 30 parking spaces requires 2 EV charge points, 9 spaces requires 1 EV charge point).*

Requirements for passive provision / cable routes, where required, are outlined in Approved Document S (para 6.3 – 6.12)

Technical requirements for 'active' EV charge points are outlined in Approved Document S (para 6.2). All EV charge points installed in York should meet these requirements.

All electrical circuits/installations shall comply with the electrical requirements in force at the time of installation. EV charge points should be serviced and maintained in line with the manufacturer's recommendations.

5.4 Additional Requirements

In addition to good base design (as detailed earlier in this chapter), planning applications for certain types of development will need to include additional supporting documents shown in the table below. Such documents will demonstrate to City of York Council that best endeavours are being used to reduce emissions from a site during construction and operational phases. For type 3 sites, changes in air quality and any emissions arising from your site will need to be fully quantified. A full explanation of all document types is provided below. To assist in identifying the correct documents to submit with your planning application, you should ensure that you have completed the relevant checklist found at Appendix C.

Table 3: Planning Requirements by Site Type

Site Type	Summary of Base Design Requirements	Supporting documents required for Planning Application	Relevant Checklist
Type 1	Provision of electric vehicle charging infrastructure *(see 5.3)* For exposure sensitive sites, ensure that the 'Exposure Mitigation Hierarchy' has been considered. Exposure reduction measures incorporated into the site design should be outlined in an Exposure Assessment *(see 5.2)* An 'Idling Management Plan' may be required for some developments (see *'explanation of documents / assessment types'* below)	Construction Environmental Management Plan (CEMP)*	Type 1 Site Mitigation Checklist *(see Appendix C)*
Type 2		Construction Environmental Management Plan (CEMP) Low Emission Travel Plan	Type 2 Site Mitigation Checklist *(see Appendix C)*
Type 3		Construction Environmental Management Plan (CEMP) Low Emission Travel Plan Emissions Assessment & Mitigation Statement Concentration Assessment	Type 3 Site Mitigation Checklist *(see Appendix C)*

** generally only required for Type 1 sites where the development includes significant demolition, earthworks, construction and/or track-out*

Explanation of documents / assessment types

- **Construction Environmental Management Plan (CEMP)** – a plan to identify the steps and procedures that will be implemented during construction to minimise the creation and impact of dust resulting from the site preparation, demolition, groundwork and construction phases of the development. The plan should include a site-specific risk assessment of likely dust impacts and propose appropriate mitigation measures to minimise emissions to air and restrict dust to within the site boundary. Risk assessments should be carried out in line with the IAQM guidance[17]. The CEMP should also provide details on the management and control processes on the site.
- **Low Emission Travel Plan** – production of a site-specific low emission travel plan to minimise vehicle trips and promote sustainable travel to and from the site. A low emission travel plan goes further that a regular travel plan and is expected to consider further opportunities for promotion of low emission vehicles and alternative fuels. Minimum requirements for basic and low emission travel plans are shown in the Mitigation Matrix at Appendix C. The requirement for a travel plan should be confirmed with CYC Highways. In the event that a travel plan is required for a site, this should be a 'low emission travel plan'.
- **Emissions Assessment and Mitigation Statement** – used to quantify changes in emissions as a result of development and any associated mitigation over and above the council's minimum requirements. The emissions assessment will identify the environmental damage costs associated with the proposal and determine the scale of effort required to mitigate any additional impacts. Calculations should be undertaken using DEFRA's latest Emissions Factor Toolkit[18] (to estimate emissions) and IGCB Air Quality Damage Costs[19] for the specific pollutant of interest (to calculate the resultant damage cost). The mitigation statement provides an overview of any additional mitigation measures proposed (see Mitigation Matrix at Appendix C for examples). Further information is provided on emissions assessment and damage costs in Appendix D.
- **Concentration Assessment** – used to assess the change in ambient pollutant concentrations arising from development and the implications this has for meeting health based air quality objectives and managing additional public exposure to poor air quality. Further information about the expected contents of a concentration assessment can be found in the checklist in Appendix E. EPUK guidance on 'Planning for Air Quality'[20] provides useful technical context particularly in relation to the detailing

[17] Assessment of dust from demolition and construction (IAQM, 2014) available online at: http://iaqm.co.uk/guidance/
[18] https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html
[19] https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-guidance
[20] http://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

undertaking of concentration assessment. However, it is emphasised that the guidance contained within this City of York Council guidance document takes precedence in terms of the local decision making process.

- **Exposure Assessment** - used to determine if future occupants of a development are likely to be exposed to unacceptable levels of air pollutant. It is a simple screening exercise undertaken by reviewing local monitoring data, considering location of AQMAs and discussion with the local authority air quality officer. The exposure assessment should make broad conclusions regarding the exposure risk presented by the development. In some circumstances, site specific air quality monitoring will be needed to inform the exposure assessment. City of York Council operates an extensive network of air quality monitors that can sometimes be used for this assessment. Section 5.1 provides further information and advice on mitigating exposure through the principles of good design.
- **Idling Management Plan** - Some developments may have the potential to cause air pollution as a result of emissions from idling vehicles. Examples include drive-through food retail establishments, supermarkets, click-and-collect facilities or other types of development where there is the potential for customers to sit in parked vehicles with the engines running. Such developments will be asked to provide a statement, to be agreed by the Local Planning Authority, outlining how idling emissions will be minimised across the development. Examples of measures to address this issue include onsite anti-idling signage, 'no-idling' zones and a written anti-idling policy. Applicants should demonstrate through a written idling management plan that best endeavours have been used to prevent unnecessary idling on a site.
- **Mitigation checklists** - a checklist should be completed for all Type 1, 2 and 3 sites to ensure that the development has incorporated the council's minimum mitigation requirements. Different checklists are available in Appendix C, corresponding to different types of development. All items outlined on the checklist should be completed as part of your submission.
- **Additional Assessment Requirements** - It should be noted that sites falling under other regulatory regimes including Environmental Permitting Regulations, Waste Management Licensing and EIA Regulations may require alternative or additional assessments relating to air quality.

5.5 Further Mitigation

By following the principles of good design outlined in this guidance and incorporating the council's minimum mitigation requirements into your development it is likely that no further interventions will be required to make your type 1 or type 2 development acceptable in air quality terms.

However, for type 3 sites, mitigation measures may sometimes require strengthening to ensure they address all relevant risks. This may occur where a development is expected to cause or worsen an exceedence of an Air Quality Objective or where the emissions from a site cannot be adequately mitigated via City of York Council's minimum mitigation requirements. In such circumstances, a further range of mitigation measures will need to be identified for your site. Some examples are provided in the Mitigation Matrix at Appendix C.

Developers should consider a number of different measures and select an appropriate mix, which delivers mitigation commensurate to the scale and impact of the development. To demonstrate this, you will be required to provide a mitigation statement (see Appendix D). The mitigation statement will be used to determine if the mitigation proposed for a site is reasonable and proportionate to the air quality damage costs.

5.6 Financial contributions

Where substantial residual emissions and damage costs are still likely to arise after application of mitigation measures, CYC may request an additional financial contribution. Such contributions will be used to facilitate the uptake of low emission vehicles and infrastructure elsewhere in the city in line with the aims and objectives of the York Low Emission Strategy and Air Quality Action Plan. Example investment areas could include:

- New low emission buses and taxis
- Retrofitting of buses and taxis
- Investment in low emission refuse collection / refuelling infrastructure
- Investment in low emission delivery infrastructure and vehicles
- Green infrastructure within the city

The list above is not exhaustive and contributions would be tailored to the location and emission impact of the development in question. Where financial contributions are sought, responsibility for achieving and demonstrating associated good value emission reduction and management will pass to City of York Council.

Developers are encouraged to identify potential mitigation requirements and emission risks at an early stage in the planning process and to discuss their implications with CYC at the earliest opportunity. This dialogue will help establish site specific expectations at an early stage of the project.

5.7 Mitigation and the use of Planning Conditions

The weight given to air quality in consideration of a particular planning application and the acceptability of any identified mitigation measures will be determined by City of York Council. Where mitigation measures are agreed, these will be taken forward via the use of planning conditions, or Section 106 agreements.

6 Site Recommendations

When making recommendations about the acceptability of a planning application with respect to air quality, the following principles apply:

City of York Council will generally support applications that:

- have taken appropriate steps to identify and minimise pollutant emissions
- are unlikely to cause unacceptable local concentration impacts
- do not pose unacceptable risk in terms of human exposure

City of York Council will generally not support applications that:

- fail to adequately identify and address pollutant emissions
- are likely to cause unacceptable local concentration impacts
- pose unacceptable risk in terms of public exposure
- are likely to contravene the measures and/or aspirations of City of York Council's Air Quality Action Plan or Low Emission Strategy.

In this context, the following definitions apply:

"Taken appropriate steps to identify and minimise pollutant emissions"

Definition: a developer has identified and implemented a package of measures that delivers mitigation commensurate to the scale and impact of the development

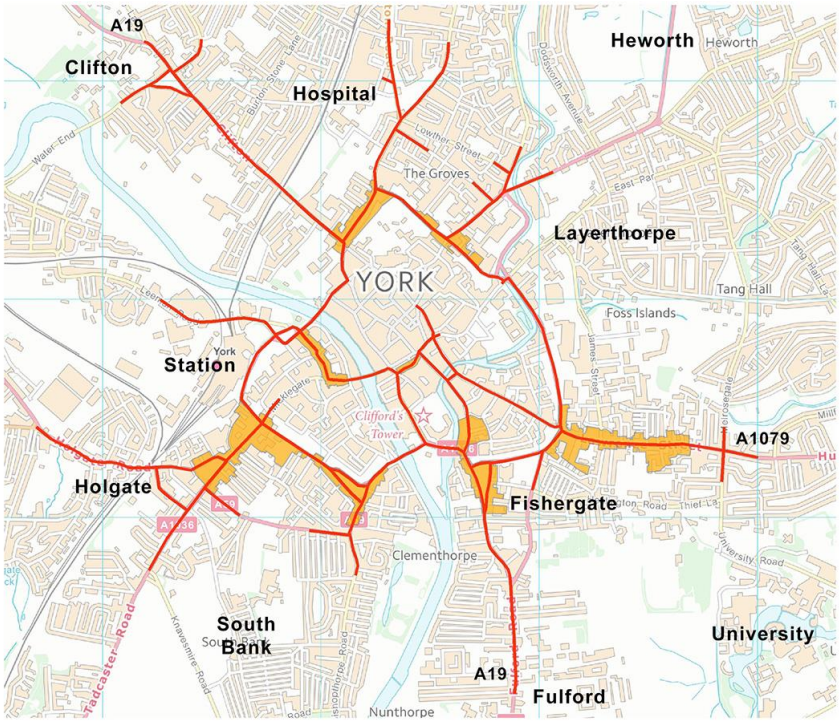
"Unacceptable local concentration impacts"

Definition: a development increases pollutant concentrations by 5% or more of the corresponding air quality objective value. If any air quality deterioration is observed in an AQMA, or in an area where the annual mean NO_2 is already >38µg/m^3, this is considered a severe impact likely to lead to objection.

"Unacceptable risk in terms of human exposure"

Definition: where development creates or increases human exposure to poor air quality (where annual mean NO_2 >38 µg/m^3) and suitable exposure reduction measures have not been identified as part of the development

Appendix A: Air Quality Management Area (AQMA) in York



City of York Council Air Quality Management Area for Nitrogen Dioxide Order No. 5

Boundary of the Air Quality Management Area

Roads included for annual mean objective

Properties included for annual mean objective

CITY OF YORK COUNCIL

Appendix B: Site Classification Thresholds (Type 2)

The table below provides size based thresholds for Type 2 site classification based different land use types (note: Data are derived from previous DfT transport assessment guidelines).

The current Use Classes were last updated on 1 September 2020. The reader should refer to the Planning Portal[21] for more information of the changes.

Table B1: Type 2 site classification thresholds based on different land use types

Land use	Land Use Description	Unit	Threshold
E *(Previously A1)*	Food retail	GFA m^2	>800
E *(Previously A1)*	Non-food retail	GFA m^2	>1500
E *(Previously A2)*	Financial and professional services	GFA m^2	>2500
E *(Previously A3)*	Restaurants and cafes	GFA m^2	>2500
Sui Generis *(Previously A4)*	Drinking establishments	GFA m^2	>600
Sui Generis *(Previously A5)*	Hot food takeaway	GFA m^2	>500
E(g) *(Previously B1)*	Business / Office	GFA m^2	>2500
B2	General industry	GFA	All Sites
B8	Storage or distribution	GFA	All Sites
C1	Hotels	Bedroom	>100
C2	Hospitals and nursing homes	beds	>50
C2	Residential education	Student	>150
C2	Institutional hostels	Resident	>400
C3	Dwelling houses	Dwelling Unit	>80
E(e-f) / F1 *(Previously D1)*	Non residential institutions	GFA	>1000
E(d) / F2(c-d) / Sui Generis *(Previously D2)*	Assembly and leisure	GFA	>1500
-	Others	Discuss	Discuss

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[21] https://www.planningportal.co.uk/permission/common-projects/change-of-use/use-classes

Appendix C: Base Mitigation Checklists by Site Type & Mitigation Matrix

C1: Base Mitigation Checklists

Type 1 Site Mitigation Checklist

	Measure	Details	Completed?	Comments
A	**Construction Environmental Management Plan (CEMP)***	Risk assessment of dust impacts inline with IAQM guidance?	Yes / No	
		Suitable dust mitigation measures identified?	Yes / No	
B	**EV Charging**	Provision of electric vehicle charging infrastructure?	Yes / No	
C	**Exposure Mitigation**	Exposure sensitive site?	Yes / No	
		Exposure mitigation considered as part of Exposure Assessment?	Yes / No	
D	**Idling Management Plan**	Potential for vehicle idling by customers on site?	Yes / No	
		Statement provided outlining how idling emissions will be minimised?	Yes / No	

** only required for Type 1 sites where the development includes significant demolition, earthworks, construction and/or track-out*

Type 2 Site Mitigation Checklist

Measure		Details	Completed?	Comments
A	**Construction Environmental Management Plan (CEMP)**	Risk assessment of dust impacts inline with IAQM guidance?	Yes / No	
		Suitable dust mitigation measures identified?	Yes / No	
B	**EV Charging**	Provision of electric vehicle charging infrastructure?	Yes / No	
C	**Exposure Mitigation**	Exposure sensitive site?	Yes / No	
		Exposure mitigation considered as part of Exposure Assessment?	Yes / No	
D	**Idling Management Plan**	Potential for vehicle idling by customers on site?	Yes/ No	
		Statement provided outlining how idling emissions will be minimised?	Yes / No	
E	**Low Emission Travel Plan**	Production of site-specific low emission travel plan incorporating CYC's minimum requirements (see C2: Mitigation Matrix)	Yes / No	

Type 3 Site Mitigation Checklist

Measure		Details	Completed?	Comments
A	**Construction Environmental Management Plan (CEMP)**	Risk assessment of dust impacts inline with IAQM guidance?	Yes / No	
		Suitable dust mitigation measures identified?	Yes / No	
B	**EV Charging**	Provision of electric vehicle charging infrastructure?	Yes / No	
C	**Exposure Mitigation**	Exposure sensitive site?	Yes / No	
		Exposure mitigation considered as part of Exposure Assessment?	Yes / No	
D	**Idling Management Plan**	Potential for vehicle idling by customers on site?	Yes / No	
		Statement provided outlining how idling emissions will be minimised?	Yes / No	
E	**Low Emission Travel Plan**	Production of site specific low emission travel plan incorporating CYC's minimum requirements (see C2: Mitigation Matrix)	Yes / No	
F	**Emissions Assessment / Mitigation Statement**	Emissions Assessment using Emission Factor Toolkit	Yes / No	
		Damage cost calculation undertaken	Yes / No	
		Mitigation Statement completed, including overview of additional mitigation measures proposed and quantification of impacts	Yes / No	
G	**Concentration Assessment**	Concentration Assessment undertaken in line with checklist shown in Appendix E	Yes / No	

C2: Mitigation Matrix

Measure (List not exhaustive and intended as a guide. It may be adapted for particular locations / site uses)	**Type of Development / Land Use**		
	Residential	**Workplace**	**Visitor-Based Facility**
Guide to expected contents of basic travel plan (default measures)			
Appointment of travel plan coordinator, responsible for promoting, monitoring and reviewing the travel plan	Yes	Yes	Yes
Support local travel to school and school travel plan initiatives	Yes	-	-
Green travel vouchers	Yes	-	-
Interest free loans to purchase cycles and/or public transport season tickets	Yes	Yes	Yes (for staff)
Smarter Travel Information Pack	Yes (residents pack)	Yes (staff pack)	Yes (information leaflet)
Establishment of Green Travel Group	Yes	-	-
Promotion of walking, cycling, public transport and car clubs. Car club vehicles should be low emission variants.	Yes	Yes	Yes
Support improving information systems for public transport, including promotion of journey planning services. Public transport service details should be made available to residents/staff. This should include information about low emission bus services	Yes	Yes	Yes

Measure (List not exhaustive and intended as a guide. It may be adapted for particular locations / site uses)	**Type of Development / Land Use**		
	Residential	**Workplace**	**Visitor-Based Facility**
in the city.			
Consideration of pedestrian links to public transport stops, and provision of new bus stop infrastructure where necessary.	Yes	Yes	Yes
Guaranteed lift home (GLH) scheme	-	Yes	Yes (for staff)
Marketing aimed at persuading a switch to sustainable travel modes with incentives, especially low emission vehicles. This could include a newsletter or organising a 'sustainable transport week' to raise awareness.	Yes	-	-
Covered, secure cycle parking	Yes (for residents)	Yes (for staff)	Yes (for visitors)
Cycle mileage rates / cycle allowance	-	Yes (for staff)	Yes (for staff)
Cycle training and awareness schemes	-	Yes	Yes (for staff)
Establishment of a Bike User Group (BUG) to raise and discuss cycling issues	Yes	Yes	Yes (for staff)
Engage with local authority and Sustrans to ensure appropriate standards of cycle ways adjacent to sites and good links to the local cycle network	Yes	Yes	Yes
Provision of pool bikes, consider bike/e-bike scheme	-	Yes	Yes (for staff)
Walking / cycling buddy schemes (matches people with others who have similar journeys)	Yes	Yes	Yes (for staff)

Measure (List not exhaustive and intended as a guide. It may be adapted for particular locations / site uses)	**Type of Development / Land Use**		
	Residential	**Workplace**	**Visitor-Based Facility**
Motorcycle parking spaces (marked and signed)	Yes	-	Yes
Website sustainable travel information	Yes	Yes	Yes
Site layouts should facilitate and encourage walking/on-site walking routes	Yes	Yes	Yes
On-site benches	Yes	-	Yes
Notice boards / travel information point	Yes (external)	Yes (internal)	Yes (internal)
Car share parking spaces and initiatives	-	Yes	Yes
Shower/changing/locker facilities with drying areas	-	Yes	Yes
Consideration of alternative working practices e.g. home working, home office space, flexi-time etc	Yes	Yes	Yes (for staff)
Expected contents of 'Low Emission' Travel Plan (required for type 2 or 3 site) ***[measures are additional to basic travel plan requirements]***			
Information about electric vehicles and charging infrastructure provided in householder 'welcome pack', staff 'induction pack' or equivalent.	Yes	Yes	Yes (for staff)
Promotion of low emission taxi services in the city	Yes	Yes	Yes
Travel plan includes mechanisms for encouraging the uptake of low emission fuels and technologies.	Yes	Yes	Yes
Fleet operations should provide a strategy for reducing emissions, including the uptake or low emission vehicles and fuels. Smart driving training	-	Yes	Yes

Measure (List not exhaustive and intended as a guide. It may be adapted for particular locations / site uses)	**Type of Development / Land Use**		
	Residential	**Workplace**	**Visitor-Based Facility**
schemes should be considered for all drivers.			
Commercial vehicles should comply with the most recent European Emission Standard and utilise low/zero emission technologies wherever appropriate.	Yes (vehicles used to service the site)	Yes	Yes
Further Mitigation – examples of measures that can be considered over and above minimum requirements to mitigate / offset emissions			
Provision of on-site electric vehicle charging infrastructure above the council's minimum standards	Yes	Yes	Yes
Financial contribution to off-site electric vehicle recharging infrastructure to promote wider electric vehicle uptake.	Yes	Yes	Yes
Provision of new or enhanced public transport services to the site. This may include low emission shuttle services to public transport interchange, rail station or P&R facilities.	Yes	Yes	Yes
Procurement of ultra low emission service vehicles (e.g. waste collection services).	Yes	Yes	Yes
Provision of contribution towards infrastructure projects that will encourage use of sustainable transport (walking / cycling / public transport) where	Yes	Yes	Yes

Measure (List not exhaustive and intended as a guide. It may be adapted for particular locations / site uses)	**Type of Development / Land Use**		
	Residential	**Workplace**	**Visitor-Based Facility**
there is a proven need.			
Supporting low emission car clubs / Include low emission car club vehicle(s) as part of development. *Car clubs can also include vans for business related journeys or shopping trips for bulky items.*	Yes	Yes	-
Promotion of green infrastructure on-site or off-site	Yes	Yes	Yes
Financial contribution to support City of York Council's air quality monitoring network	Yes	Yes	Yes

Appendix D: Emissions Assessment & Damage Cost Calculation

Damage Cost Calculation

Damage costs are a simple way to value changes in air pollution. They estimate the cost to society of a change in emissions of different pollutant. Damage costs are provided by pollutant, source and location.

The emissions damage cost calculation is summarised as follows:

- **Step 1:** Identifying the additional trip rates generated by the development (usually from the Transport Assessment)
- **Step 2:** Calculate the emissions associated with the additional traffic (NO_x and PM) using DEFRA's Emissions Factor Toolkit. If the proposal includes alternative fuels there are 'advanced options' in the toolkit to take account of this. The latest version of the toolkit, together with a comprehensive user guide, can be found at: https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html

  The output from the emissions factor toolkit is in 'kg of pollutant' per year and requires converting to 'tonnes of pollutant per year'.

  Example: 60 kg pollutant per year = 0.06 t of pollutant per year

  Trip length data should be taken from the Transport Assessment. It is recommended that the trip rates used in the calculation are agreed with City of York Council's Highways Department.
- **Step 3:** Calculate the air quality damage costs associated with the emissions quantified in step 2 above, using DEFRA's IGCB Air Quality Damage Costs.
- **Step 4:** Estimate a cumulative 5 year damage cost (or a damage cost over the anticipated lifetime of the site occupation/operation if less than 5 years).

It is important to ensure that the council's minimum mitigation requirements have already been incorporated into the development prior to undertaking the emission assessment (i.e. a standard provision of electric vehicle charging infrastructure and travel plan etc). In this way, the emissions assessment highlights any 'residual emissions' that require additional mitigation.

As part of the emissions assessment, a mitigation statement should be submitted that provides a summary of any additional mitigation measures proposed (see below).

Mitigation Statement

A mitigation statement is required for all type 3 sites and must include:

- **Damage Costs** - A summary of the emissions damage cost calculation (see above)
- **An Emission Mitigation Plan** – a plan showing what level of emissions mitigation is proposed in relation to the development in the form of default on-site mitigation (CYCs minimum requirements), additional on-site mitigation and additional off-site mitigation. An estimate should be made of the impact that the mitigation measures will have on emissions (i.e. mitigated mass of pollutant), the financial cost of the mitigation measure to the developer, together with a timed plan for when and how each measure will be implemented
- **Residual Impacts** - details of any 'residual' emissions and damage costs likely to remain after all mitigation measures have been applied

The mitigation statement will be used by City of York Council to determine if the additional mitigation proposed for a site is considered reasonable and proportionate to the emissions harm generated by the site. It will also be used to determine any financial contributions considered necessary to offset any remaining 'residual' emissions.

A Mitigation Statement should highlight site damage costs, the mitigation measures proposed, and any residual emission impacts likely to remain. This statement will be used by City of York Council to determine if 'best endeavours' have been used in the context of reducing emissions from your site.

Appendix E: Concentration Assessment Checklist

No.	Action	Check
1	Overview of the scheme to which the study relates? What is the development? Where is the development? How much parking is proposed?	
2	A description of the assessment methodology? What tools / models have been used?	
3	Appropriate modelling scenarios and projection to future years?	
4	Have traffic flows been approved by CYC? Have traffic flows, speeds and assumed modal splits been clearly documented? Has an explanation of how traffic flows have been derived been provided?	
5	Details of other emission sources considered (e.g. point sources, area sources etc)	
6	Appropriate use of emission factors?	
7	Details of background concentrations and met data discussed?	
8	Map of modelled receptor points? Have these been agreed with CYC? Do they reflect areas of maximum relevant exposure?	
9	Do contour maps (if used) show sufficient detail to show impacts at receptors? Are keys consistent between all contour maps?	
10	Verification of modelled results against local monitoring data? Does the model behave well?	
11	Description of relevant standard and comparison of modelled results with the relevant air quality objectives?	
12	Details and proposals for mitigation?	
13	Conclusions drawn and clearly stated?	

Note: *Environmental Protection UK (EPUK) guidance on 'Planning for Air Quality' provides useful technical context particularly in relation to the detailed undertaking of concentration assessments. However, it is emphasised that this guidance note takes precedence in terms of the local decision-making process. Particular attention is drawn to the definition of 'unacceptable local concentration impacts' in section 6.*