



**Doncaster
Council**

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Air Quality Technical Planning Guidance 2022

Guidance for developers

August 2022

Foreword

Local Planning Authorities have to weigh up the economic, social and environmental factors when deciding to grant or refuse planning permission or decide if conditions are required to achieve sustainable development.

Air quality is a material consideration that Planners are required to take into account when making their plans and when taking planning decisions. Planners will be guided by specialist advice from air quality officers and consultants when making their decisions, however, in the past, this specialist advice has focussed on the “significance of impact” leading to adversarial debates on the level of impacts that a development may, or may not have on air quality. This can be baffling to the lay-person and allows air quality to steadily deteriorate because, although a development when taken in isolation may not have a significant impact on air quality, when taken in the wider context of existing levels of pollution, traffic growth and other development it can contribute to a very steady decline in air quality.

This technical guidance aims to proactively reverse that direction of travel . This new approach recognises that most development, however large or small, can have an impact on air quality and provides for a proportionate level of mitigation to be put in place to achieve sustainable development.

In addition, this guide simplifies the assessment model meaning that, for the vast majority of small and medium development, developers can simply select from a suite of mitigation options rather than pay for consultancy services. This approach also provides greater certainty to the development management process, so that developers, planners and the public can have greater confidence in the scale and kind of mitigation that will be required to make a development sustainable in air quality terms.

This technical guide will allow the Local Planning Authority to support its Local Polices and Plans and to achieve and maintain air quality objectives, which ultimately protect public health.

Acknowledgements

This Guide is based on the work of the West Yorkshire Low Emissions Strategy Group (WYLES) with specific input from the Air Quality Officer at Wakefield Council. The specification for EV Charging has been adopted from work of Officers at Barnsley Council. We are appreciative of this work and for being granted permissions to use this work as a basis for Doncaster Council’s Guidance.

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Summary

This technical guidance aims to help the planning authority deliver national air quality objectives through cost effective service planning brought about by the joint working across those sections of the authority that can influence air quality.

The spatial planning system has an important role to play in improving air quality and reducing exposure to air pollution. Whilst planning policy cannot solve immediate air quality issues, suitably employed it can ensure that any likely scheme impacts are reasonably mitigated and future scheme users are able to make green choices.

This technical guidance deals primarily with those pollutants regulated under the Local Air Quality Management (LAQM) regime and the impacts of traffic emissions on air quality, although the increasing use of biomass boilers is becoming an important local planning issue and is acknowledged to play an increasing role in poor air quality. The assessment and control of dust impacts during demolition and construction is also considered, dust contributes to airborne particulate matter, in addition to dust soiling which is assessed against nuisance regulation. Greenhouse gas emissions are not addressed explicitly, as they are covered by other initiatives, but synergies exist between measures to minimise climate change and local air quality impacts.

This guidance provides a template for integrating air quality considerations into land-use planning and development management policies thus influencing the reduction of road transport emissions.

The air quality assessment process follows a three-stage process:

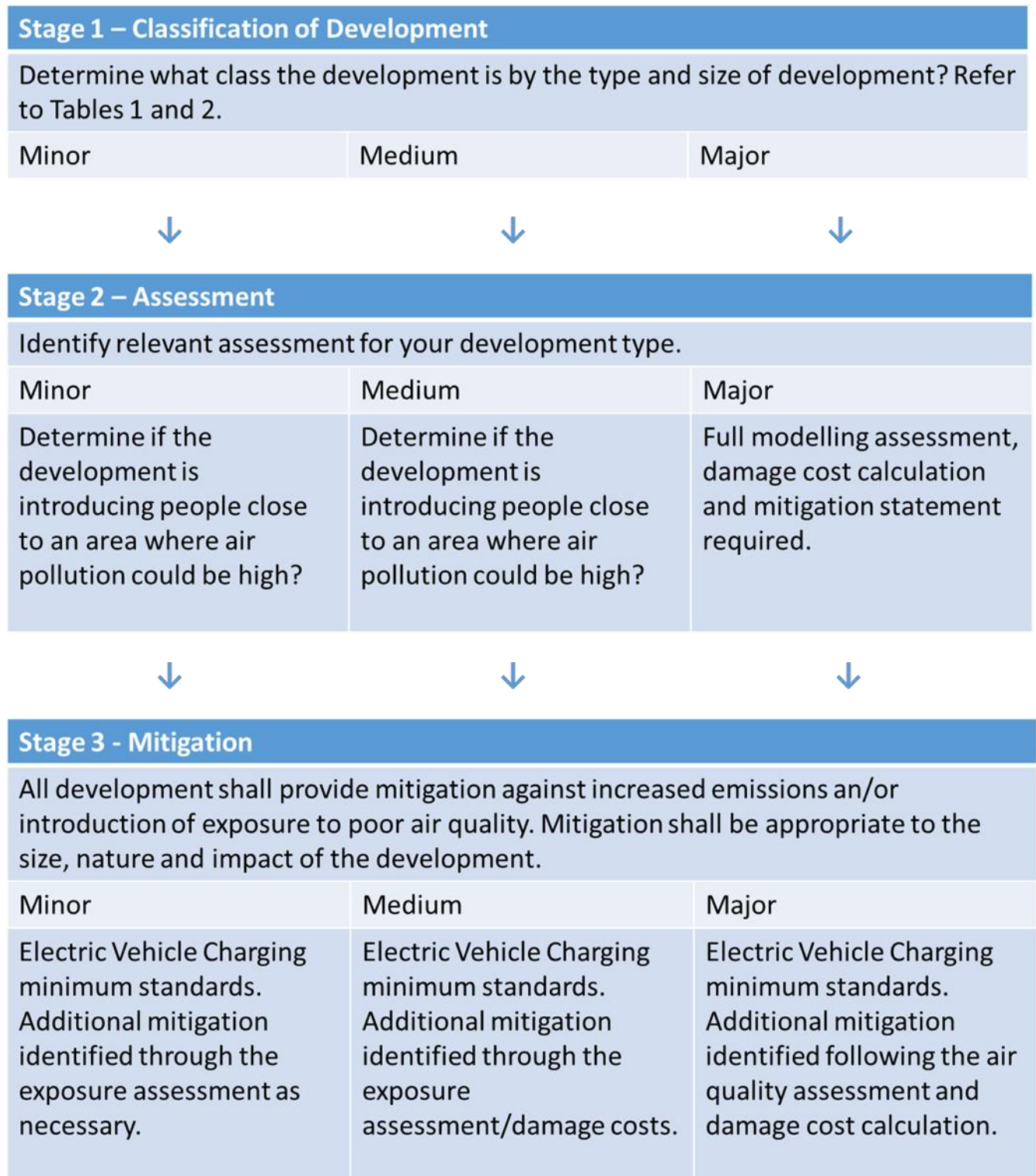
- i. Determining the classification of the development proposal;
- ii. Assessing and quantifying the impact on local air quality;
- iii. Determining the level of mitigation required by the proposal to meet Local Development Plan requirements.

The assessment process is summarised in the flow chart overleaf.

Pre-Planning Discussions

In order to avoid unnecessary delays in the planning process and ensure optimum scheme design and sustainability, it is vital for communication at an early stage in any significant proposal. It is therefore essential that pre-application discussions with the relevant air quality personnel take place to confirm the classification of the development and the assessment requirements.

Figure 1: The Air Quality Assessment and Mitigation Flow Chart



Introduction

New developments have the potential to affect air quality. Local planning policy will play a significant role in ensuring that development schemes are designed to be sustainable. This guidance aims to:

- Introduce an air quality assessment approach that includes the quantification of impacts, formulation of damage costs and identification of mitigation measures to offset increased emissions from development.
- Tackle cumulative impact.
- Provide a clear and consistent process to developers, planners and local communities.
- Embed land-use planning in the Council's Air Quality Action Plan

Planning Policy Framework

National Policy

National planning policy is now set by the National Planning Policy Framework (NPPF). The NPPF places a general presumption in favour of sustainable development, stressing the importance of local development plans. One of its objectives states;

“to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy”.

It goes on to state (paragraphs 174 and 186) that:

“Planning policies and decisions should contribute to and enhance the natural and local environment by: ... e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality”

And;

“Planning policies and decisions should 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”.

Local Planning Policy

The Planning and Compulsory Purchase Act 2004, amended by the Localism Act 2011 requires planning authorities to prepare Local Plans (previously known as Local Development Framework). The Local Plan is the main document for all land use development and should be read in conjunction with;

- Planning Policy Guidance;
- Supplementary Planning Documents;
- Site Specific Proposals;
- Neighbourhood Plans;
- Other guidance documents such as this Technical Planning Guidance.

The Local Plan will identify land areas for future development and include a number of strategic and development policies relating to local air quality management that fulfil the National Planning Policy Framework sustainable development criteria. This Technical Guide supports the implementation of the strategic and development policy framework. An example of current policy context is included in Appendix 1.

Local Air Quality Management

The Environment Act 1995 established the Local Air Quality Management regime. It requires local authorities to review and assess ambient air quality in their areas against health-based standards for a number of specific pollutants prescribed in the Air Quality Regulations 2000 (as amended 2002). If there is a risk that levels of air pollution in any part of the authority's area will be higher than the prescribed objectives, the authority is required to designate an Air Quality Management Area (AQMA). It is then required to produce an Air Quality Action Plan that sets out measures required to achieve the objectives.

It is not necessarily the case that a proposed development in an area of poor air quality will have a negative impact. However, it is important to recognise when such a development might introduce additional people into an area of poor air quality.

The declaration of an AQMA does not mean that there should be no new development within that area. Rather it means that greater weight must be given to the consideration of air quality impacts and their mitigation.

In addition, the boundary of an AQMA does not necessarily define the limit of poor air quality. The only constraint on the boundary definition is that it should be at least as large as the area of exceedence, where there is **relevant exposure**.

The fact that a development is within or close to an AQMA does not mean that it is necessarily affecting an area of exceedence of the objective, or that it is being affected by air pollution that exceeds the objective. On the other hand, a development could introduce new exposure into an area of poor air quality, which has not been identified and declared as an AQMA, where previously there was no relevant exposure.

Air Quality and Emissions Mitigation Assessment Process

The process shown in Figure 1 involves a staged process of classification, impact assessment and mitigation.

Stage 1 Development Classification - where development is classified by size and likely impact on air quality.

Stage 2 Assessment of Impacts - establish where exposure exists and/or carry out impact assessment.

Stage 3 Mitigation - select/propose a range of measures appropriate to the impact of the development.

The three stages are explained in more detail below.

Stage 1: Development Classification

Three levels of development classification are determined using criteria adapted from the Department for Transport¹.

The three classes are Minor, Medium and Major. Using the criteria in Table 1 and 2 (page 8 & 9) establish the classification as follows;

Minor – does **not** meet the criteria in Table 1.

Medium – meets **any one** of the criteria in Table 1 but none in Table 2.

Major – meets **any one** of the criteria in Table 1 **and any one** of the criteria in Table 2.

Stage one is complete once a decision on the classification is made, move onto stage two.

¹https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263054/guidance-transport-assessment.pdf

Table 1: Air Quality Impact Classification Criteria

Use Class	Description	Threshold (GFA)
B2 General industrial	Use for industrial process other than one falling within class E(g) (previously class B1) (excluding incineration purposes, chemical treatment or landfill or hazardous waste)	>4000m2
B8 Storage or distribution	This class includes open air storage.	>5000m2
C1 Hotels	Hotels, boarding and guest houses where no significant element of care is provided (excludes hostels)	>100 bedrooms
C2 Residential institutions	Residential care homes, hospitals, nursing homes, boarding schools, residential colleges and training centres	>50 beds
C2A Secure Residential Institution	Use for a provision of secure residential accommodation, including use as a prison, young offenders institution, detention centre, secure training centre, custody centre, short term holding centre, secure hospital, secure local authority accommodation or use as a military barracks	>50 beds
C3 Dwellinghouses	a) covers use by a single person or a family, a couple whether married or not, a person related to one another with members of the family of one of the couple to be treated as members of the family of the other), an employer and certain domestic employees (such as an au pair, nanny, nurse, governess, servant, chauffeur, gardener, secretary and personal assistant), a carer and the person receiving the care and a foster parent and foster child	>50 units
E Commercial, Business and Service	(a) Display or retail sale of goods, other than hot food (b) Sale of food and drink for consumption (mostly) on the premises (c) Provision of: (i) Financial services, (ii) Professional services (other than health or medical services), or (iii) Other appropriate services in a commercial, business or service locality (d) Indoor sport, recreation or fitness (not involving motorised vehicles or firearms or use as a swimming pool or skating rink.) (e) Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner) (f) Creche, day nursery or day centre (not including a residential use) (g) Uses which can be carried out in a residential area without detriment to its amenity: (i) Offices to carry out any operational or administrative functions, (ii) Research and development of products or processes (iii) Industrial processes	a - >800m2 b & c - >2500m2 d - >1500m2 e & f - >1000m2 g - >2500m2
F1 Learning and non-residential institutions – Use (not including residential use) defined in 7 parts	(a) Provision of education (b) Display of works of art (otherwise than for sale or hire) (c) Museums (d) Public libraries or public reading rooms (e) Public halls or exhibition halls (f) Public worship or religious instruction (or in connection with such use) (g) Law courts	>1000m2
F2 Local community – Use as defined in 4 parts	(a) Shops (mostly) selling essential goods, including food, where the shop's premises do not exceed 280 square metres and there is no other such facility within 1000 metres (b) Halls or meeting places for the principal use of the local community (c) Areas or places for outdoor sport or recreation (not involving motorised vehicles or firearms) (d) Indoor or outdoor swimming pools or skating rinks	a- n/a b- >1000m2 c & d - >1500m2
Sui Generis	All other uses not defined above. Each will need to be considered in line with the additional considerations below.	As a guide previously the following thresholds applied; cinemas and entertainment venues >1500m2 Pub, wine bars or drinking establishments >600m2 Hot food takeaway >500m2
Other		
Where a transport statement or assessment is required		
Any development proposing 100 or more parking spaces		
Increase in total Annual Average Daily Traffic (AADT) of >500 vehicles		
Increase in Heavy Duty Vehicle AADT of >50 vehicles		

Table 2: Major Development Additional Classification Criteria

- Where the proposed development falls within the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 and includes air quality and/or transport as a specific likely impact.
- Proposals located within an Air Quality Management Area (AQMA).
- Proposals that could introduce or significantly alter congestion (DfT Congestion) and includes the introduction of substantial road infrastructure changes.
- Proposals that include additional HGV movements by more than 10% total trips.
- Proposals located in an area of concern, typically where the nearest monitoring results from the current Annual Status Report show a level >90% of the relevant objective.
- Proposals requiring a Permit under the Environmental Permitting Regulations.
- Where Combined Heat and Power (CHP), biomass or biofuel boilers are proposed for heating or power.

Once the development has been classified it is necessary to go to the next stage, where possible impacts are screened and/or assessed.

Stage 2: Assessment of Impacts

The assessment process differs depending on the classification of the development.

Stage 2 Minor Proposals

If the development is classified (in stage one) as minor it may not create an additional air quality problem but it will add to the local air pollution burden and, potentially, introduce more people to existing levels of poor air quality. An exposure assessment may be required.

Exposure Assessment

The requirement for an assessment when potentially introducing additional exposure and/or receptors will be needed if the following criteria apply:

- Is the proposal adjacent to or within a designated [AQMA](#)?
- Is the proposal in a location 20metres from roads at or above the relevant national objective highlighted on the [DEFRA GIS](#) modelled maps?
- Is your proposal either land use type C1,C2, C3, C4 OR D1, as listed in Table 1 and within 20metres of roads with more than 10,000 AADT?

The outcome of the exposure assessment will determine the levels of mitigation required to make the development acceptable. If there are no acceptable mitigation options the recommendation to the planning officer will be to consider refusing the proposal on air quality grounds.

In all cases default mitigation shall be applied.

Stage 2 Medium Proposals

If the development is classified as medium, it may not create an additional air quality problem but will add to the local air pollution burden. The cumulative impact of such proposals on air quality must be recognised with a damage cost assessment.

In addition, an assessment of the likelihood of introducing additional exposure and/or new receptors will be required if the proposal also meets the criteria below:

- Is the proposal adjacent to or within a designated [AQMA](#)?
- Is the proposal in a location 20metres from roads at or above the relevant national objective highlighted on the [DEFRA GIS](#) modelled maps?
- If your proposal is either land use type C1,C2, C3, C4 OR D1, as listed in Table 1 and is within 20metres of roads with more than 10,000 AADT?

The outcome of the damage cost assessment will determine the levels of mitigation required to make the development acceptable.

The recommendation to the planning officer may be to consider refusing the proposal on air quality grounds should no suitable mitigation be identified.

In all cases default mitigation shall be applied.

Stage 2 Major Proposals

The scale and nature of proposals with a major classification is such that a detailed air quality assessment will be required to determine the impact on public health and the local environment.

The assessment requires the change in pollutant concentrations, due to the proposal, to be calculated. Mitigation measures should be identified at design stage, and modelled where practicable.

The methodology used for the determination of pollutant concentration change shall meet the requirements of the Department for the Environment, Food and Rural Affairs (DEFRA) Technical Guidance Note LAQM TG. (16)². Further details of the air quality assessment requirements are shown in Appendix 2.

A damage cost assessment of pollutant emissions attributable to the development shall be determined for all major proposals.

The pollutant emission costs calculation will identify the environmental damage costs associated with the proposal and determine the amount (value) of mitigation that the LPA expect to be spent on measures to mitigate the impacts. The calculation utilises the most recent DEFRA Emissions Factor Toolkit³ to estimate the additional pollutant emissions from a proposed development and the latest DEFRA IGCB Air Quality Damage Costs for the specific pollutant of interest, to calculate the resultant damage cost⁴.

The calculation process includes:

- Identifying the additional trip rates generated by the proposal (from the Transport Assessment);
- The emissions calculated for the pollutants of concern (NO_x and PM₁₀) (from the Emissions Factor Toolkit);
- The air quality damage costs calculation for the specific pollutant emissions (from DEFRA IGCB);
- The result is accumulated to cover a five-year period.

The calculation is summarised below with further details of the process along with an example calculation shown in Appendix 3.

Box 1: Road Transport Emission Calculation Summary

Cost of Road Transport Emission Increase=

\sum [Estimated trip rate for 5 years x Emission rate per 10km per vehicle type x Damage Costs]

If there is no acceptable mitigation the recommendation to the planning officer will be to consider refusing the proposal on air quality grounds.

² - <http://laqm.defra.gov.uk/documents/LAQM-TG16-April-16-v1.pdf>

³ - <http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html>

⁴ - <https://www.gov.uk/guidance/air-quality-economic-analysis>

Stage 3: Mitigation

The outcome of stage 2 (Assessment) identifies the level of air quality impact and is then used to determine the level of mitigation required in respect to the potential effects upon health and the local environment, **if** the proposal does not consider this in the scheme design.

The scale of damage cost, where applicable, will determine the level of appropriate mitigation required for specific proposals. Measure identification will be assisted by;

- The outcomes from the Transport Statement/Assessment;
- Specific needs identified in site specific spatial policy allocations;
- Travel Awareness/Planning and/or Highway Development where these are required;
- Defra air quality guidance (Defra Measures Guidance)

It is preferred that mitigation is integrated into a proposal as part of the application but where this is not the case, the Local Planning Authority will require this through planning conditions.

Default mitigation measure **examples** are presented for each type of proposal. This is not an exhaustive list and should be adapted for particular locations and needs identified by relevant officers and by the scale of damage costs. The authority will consider and welcome innovative measures aimed at protecting and/or improving local air quality.

Type 1 Mitigation (Minor Proposal)

If the proposal meets the exposure criteria in Stage 2, mitigation measures from the applicant will be required to reduce the level of exposure; in all cases default mitigation shall be applied by the LPA. The additional mitigation may be in the form of:

- Determining the extent of exposure either by short-term screening monitoring or utilising the distance calculation provided by Defra (DEFRA Distance) at the proposed location to identify the concentrations;
- Redesigning the proposal to reduce the ingress of pollution;
- Including a stand-off distance and/or vegetation boundary from the development.

Paragraph 101 of the NPPF requires a proposal to 'be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations'.

Therefore, the default mitigation (Box 2) includes a standard level of EV provision that shall be provided by the developer, **where car parking is proposed** as part of the development. This is required as a minimum and is set in the Local Plan.

Box 2: Type 1 Default Mitigation

For residential developments, 1 charging point should be provided per unit (dwelling with dedicated parking for private usage).

For any public usage (such as retail) 1 charging unit per 20 parking spaces.

For business/staff usage 1 charging point per 10 staff parking spaces.

These ratios may change as electric vehicle usage increases where there is an increased demand for vehicle recharging.

In developments where short stay parking is likely, fast charging infrastructure should be used to promote high turnover of charging spaces.

Further information about the standard of the electric charging recommended by Doncaster Council are shown in Appendix 4.

Type 2 Mitigation (Medium Proposals)

Medium proposals may require a detailed Travel Plan by the Council's Transport and Highways Teams and additional measures to improve air quality can be incorporated into this plan. Where damage costs have been calculated Doncaster Council expects to see **additional or enhanced measures** added to the normal level of measures expected in any travel plan.

The NPPF requires a Travel Plan where "developments that will generate significant amounts of movement".

Travel Plan guidance is available online as Planning Practice Guidance; the most current version should be used. Discussions should take place with the appropriate Transport Officers to ensure any Travel Plan meets the basic requirements.

Generally, in respect of the Travel Plan it is essential that:

- The travel plan should be approved by the LPA. Pre-application advice will therefore be essential.
- The agreed targets and objectives included in the travel plan are secured for implementation by the mutual agreement of the local authority and the developer/applicant (normally by means of a Section 106 agreement).
- The outputs of the travel plan (typically trip levels and mode split) are annually monitored against the agreed targets and objectives by the Transport section of Doncaster Council.
- Should the travel plan not deliver the anticipated outputs or meet the targets and objectives further mitigation, alternative measures or compensation measures need to be identified and implemented.
- A named co-ordinator is essential to the success of the travel plan. For larger schemes a commitment in terms of staff resource allocation will be expected.

Default mitigation examples that could be incorporated into the scheme design include those in Box 3. The list is not exhaustive and there may be additional issues that are site-specific and reflect local conditions that may be necessary to make the development acceptable. In particular, additional measures may be required for developments with significant HDV movements over and above what would traditionally be included in a travel plan.

Box 3 Type 2 Mitigation

- Minor proposal mitigation
- 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 stop 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 encouraging 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.

Type 3 Mitigation (Major Proposal)

The pollution damage costs attributed to the predicted emission changes will determine the level of mitigation compensation required to negate their impact.

A suite of possible compensation measures beyond the proposal scheme design are listed below. This is not an exhaustive list and will be adapted for particular locations and needs as identified by relevant officers. The type, scale and the specifics of measures should be agreed with the planning authority.

Box 4: Type 3 Mitigation

Support measures to reduce the need to travel:

- Alternative working practices – flexitime, teleworking, homeworking, videoconferencing, compressed work periods.
- Local sourcing of staff, products and raw materials.
- Development and use of hub distribution centres employing low emission deliveries.
- Provision of discounted on-site shopping, eating, child-care, banking facilities.

Support measures to reduce polluting motorised vehicle use:

- Development of car clubs and car sharing with financial incentives and promotion.
- Use of pooled low emission vehicles – cars, vans, taxis, bicycles.
- Support smart driving training schemes.
- Provision of dedicated low emission shuttle bus including managed pick-up and drop-off.
- Contribution to the emerging low emission vehicle refuelling infrastructure.
- Contribution to low emission waste collection services.
- Incentives for the take-up of low emission vehicle technologies and fuels.
- Sign-up to accepted Environmental Fleet Recognition Scheme.

Measures to support improved public transport:

- Provision of new or enhanced public transport services to the site.
- Shuttle services to public transport interchange, rail station or park and ride facilities.
- Support improving information systems for public transport.
- Supporting free city bus expansion schemes.
- Promoting low emission bus service provision.
- Support air quality monitoring programmes.

Further measures to promote walking and cycling:

- Improvements to district walking and cycling networks including lighting, shelters, and information points and timetables.
- Support cycle training and awareness schemes.
- Bike/e-bike hiring schemes.
- Guaranteed ride home in emergencies.
- Support secure and safe cycle parking facilities.

Measures to promote sustainable travel plans:

- Support local travel to school and school travel plans initiatives.
- Marketing aimed at persuading a switch to sustainable modes with incentives.
- Promotion of subsidised/sponsored travel plan measures through social and other media.
- Supporting community/local organisation groups to promote sustainable travel.

Many measures are typically incorporated into a Travel Plan and this is welcomed but air quality mitigation measures should not be simple duplication of the measures provided in a travel plan. It should be clear that they are **additional or enhanced** to account for the specific air quality impact of the development. The air quality damage costs should provide for additional measures over and above those required to meet generic sustainable transport initiatives.

Such agreed measures will be taken forward by condition where possible, or with other appropriate agreements where they are not incorporated into the scheme design.

Proposal Mitigation Statement

Each development shall provide a brief mitigation statement which must include:

- The calculated pollutant emission cost, where relevant.
- Proposed mitigation/compensation measures.
- Estimated mitigation cost that is equivalent to the value of the emissions calculation (appropriate to the type and size of development and local policy requirements).
- Estimated impact on emissions/concentrations from the mitigation proposal.
- A proposed demolition/construction management plan that includes; a brief project description and likely sources of dust emissions, measures to be adopted to minimise dust emissions, emergency measures to be adopted in the event of an incident and incident logging and reporting procedures.

Validation checklist

A completed checklist is available for each of the proposals, completion of which will aid the developer and Council to ensure all elements of the assessment have been completed.

This checklist should be included with the application and any AQA. Further details are provided in Appendix 5.

Planning Recommendation

The impact on air quality can be a material consideration in the determination of a planning application. Each decision must be a balance of all material considerations depending on the individual merits and circumstances of the proposal. The weight given to the impact on air quality in the consideration of a planning application and the acceptability of proposed mitigation measures lies with the relevant local planning authority. Any agreed measures will be taken forward by condition where possible.

Appendix 1

Doncaster Planning Policy Context

The Local Plan (2015-2035) was adopted fully in September 2021.

The Local Plan now becomes part of the statutory development plan for the Borough and carries full weight when considering planning applications. It replaces the previous plans and policies.

The Local Plan and associated policies determine how we want Doncaster to look and feel; and the policies and proposals needed to guide development to the right places whilst protecting and improving the environment and people's quality of life.

The Local Plan delivers the new homes, businesses, jobs, shops and infrastructure needed over the next 15 years.

Policy 54: Pollution

*Development proposals that are likely to cause pollution, or be exposed to pollution, will only be permitted where it can be demonstrated that pollution can be avoided, or where mitigation measures (such as those incorporated into the design and layout of development) will minimise significantly harmful impacts to acceptable levels that protect health, environmental quality and amenity. When determining planning applications, the agent of change principle will be applied, and particular consideration will be given to:
C) the impact on national air quality; especially but not limited to Air Quality Management Areas, areas potentially close to the EU limit value, other sensitive areas and the aims and objectives of the Air Quality Action Plan. An Air Quality Assessment will be required to enable clear 151 [go to Contents] decision making on any relevant planning application.*

This policy sets out the context for dealing with air quality impacts from development however should be read along with the whole of The Local Plan. Chapter 7: Transport, Access and Infrastructure is especially important with the following policies being particularly relevant to air quality; Policy 12: Strategic Transport Network (Strategic Policy) and Policy 13: Promoting Sustainable Transport in New Developments (Strategic Policy). In addition Policy 58: Low Carbon and Renewable Energy (Strategic Policy) and Appendix 6: Parking Standards should be noted.

Consideration of air quality impacts will need to include any potential impacts on the borough's natural environment with regards Policy 30: Valuing Biodiversity and Geodiversity (Strategic Policy).

Supplementary Planning Documents are under development and as and when available should be used to inform any application, along with this technical guidance.

Appendix 2 Detailed Air Quality Assessments

Air Quality Assessment Protocol to determine the Impact of Vehicle Emissions from Development Proposals

An air quality assessment should clearly establish the likely change in pollutant concentrations at relevant receptors resulting from the proposed development during both the construction and operational phases. It must take into account the cumulative air quality impacts of committed developments (i.e. those with planning permission).

The assessment will require dispersion modelling utilising agreed and up-to-date monitoring data, traffic data and meteorological data. The modelling should be undertaken using recognised, verified local scale models by technically competent personnel and in accordance with LAQM TG(16).

If the assessment deviates from the guidance, Doncaster Council will not accept the findings without consultation with the LAQM helpdesk and accept no liability for any delays resulting from this.

The assessment report should follow a suitable format with all the relevant details available in one document so that Doncaster Council can fully qualify the conclusions.

The developer or their representative should fully agree any methodology prior to the start of the assessment.

The following elements would be required for any assessment submitted to Doncaster Council in support of a planning application classified as Major.

Description	Details	Other
Proposal description	Identification of on-site sources of pollution	
	Expected traffic changes	
	Number of dwellings/units	
	Numbers of parking spaces for commercial, leisure and industrial	
	Area sensitivity with regards the Air Quality Objectives	
	Identification of receptors	
	Pollutants considered and those scoped out and a description of the relevant standards	
	Relevant Planning and Policy Context	
Methodology	The methodology should be approved with the relevant Council team prior to starting	
	Identify changes to traffic levels due to the development and/or identify type of installation/plant for point sources	The Borough of Doncaster is a Smoke Control Area and all installations must be Clean Air Act exempt.

	Obtain appropriate, current and recognised emissions source data and meteorological data of the same base year	
	Explain basis for NOx:NO2 calculations	
	Describe the current baseline concentrations from local and national information including any monitoring undertaken	
	In addition for point sources information on stack parameters are required and details of nearby building that may impact dispersion	
	Identify and describe demolition and construction phase impacts	
	Identify a range of local receptors (worst case locations)	
Impact Assessment/Results	Establish a modelled baseline scenario at current monitoring points and the identified receptors	
	Modelling to include at least 2 further scenarios – do-nothing and do-something. These must include cumulative impacts from other local development.	
	Model the do-something scenario with mitigation measures in place (where slight adverse or worse impacts are predicted)	
	Verification exercise	
	Explanation of assumptions	
	Include all model parameters details in an appendix	
	Present estimated emissions changes for both construction and operational phases	
	Assess significance of changes with particular emphasis on areas close to the objectives, those identified as breaching or worsening of exceedances of the objectives	
	Identify if the Air Quality Action Plan is compromised or if the developer can contribute to measures within the plan	

	Include a damage cost calculation	
Conclusions	Summarise the results. Does the development lead to a worsening of air quality against the objectives?	
	Are there conflicts with Policy/AQAP and if so can these be overcome?	
	Where mitigation is proposed a statement should be included.	Preferably all mitigation should be provided on site and where possible at design stage or incorporated into the Travel Plan where appropriate. It should be clear what additional measures or how traditional measures have been enhanced to offset the calculated AQ emissions.

Methodologies that do not follow defra's current LAQM TG(16) including updates and addendums may not be accepted. Doncaster Council will consult with the Helpdesk in such cases.

Air Quality Monitoring

In some cases it will be appropriate to carry out a short period of air quality monitoring as part of the assessment work. This will help where new exposure is proposed in a location with a complex road layout and/or topography, which will be difficult to model or where no data is available to verify the model. Monitoring should be undertaken for a minimum of six months using agreed techniques and locations with any adjustments made following Defra technical guidance.

Assessing Demolition/Construction Impacts

The demolition and construction phases of development proposals can lead to both nuisance dust and elevated fine particulate (PM10 and PM2.5) concentrations. Modelling is not appropriate for this type of assessment, as emissions rates vary depending on a combination of the construction activity and meteorological conditions, which cannot be reliably predicted. The assessment should focus on the distance and duration over which there is a risk that impacts may occur. The Institute of Air Quality Management (IAQM)⁵ has produced a number of definitive guidance documents to which this guidance refers. The document 'Guidance on the Assessment of Impacts of Construction on Air Quality and the Determination of their Significance' should be the reference for reporting construction assessment.

Cumulative Impacts

The NPPF (paragraph 181) recognises that a number of individual development proposals within close proximity of each other require planning policies and decisions to consider the cumulative impact of them. Difficulties arise when developments are permitted sequentially, with each individually having only a relatively low polluting potential, but which cumulatively result in a significant worsening of air quality.

This will occur where:

- i. A single large site is divided up into a series of units, such as an industrial estate or retail park;
- ii. A major development is broken down into a series of smaller planning applications for administrative ease; and
- iii. There are cumulative air quality impacts from a series of unrelated developments in the same area.

The first two cases the cumulative impact will be addressed by the likelihood that a single developer will bring forward an outline application for the whole site which should include an air quality assessment as part of an Environmental Assessment. For major developments that are broken down into a series of smaller planning applications, the use of a 'Master or Parameter Plan' that included an air quality assessment will address the cumulative impact.

The following template tables have been included for use by consultant's completing an AQA. The tables contain a reference for all the information that should be contained in all assessments. These formats are optional but all information should be provided as indicated, any omissions will result the AQA being returned prior to review.

⁵ – IAQM www.iaqm.co.uk

Table A: NO₂ Concentrations for baseline, opening year do-minimum and do-something scenarios.

Receptor Ref	Baseline (Current Year)	Opening DM	Opening DS	Change (%) between DS/DM
Monitoring Point as Receptor (Verification Site)				
Monitoring point				
Receptor x				
Receptor y				
New receptor				
Etc				

Table B: Model Input Parameters

Parameter	Details
Model Name and version	
Met Data (Location & Year)	
Roughness	
Monin-Obukhov Length	
NO _x to NO ₂ Conversion Method	
Background Information (Grid Refs and dates)	
Emission Factors Toolkit Version	
Emissions Factor Years Used	

Vehicle Split	Diesel Car	Petrol Car	M/cycle	LGV	Bus	HGV (artic)	HGV (rigid)
Euro Vehicle Split							

Table C: Traffic Flow Data used within screening and modelling exercise

Link/Road Name	Grid Reference	Annual Average Daily Traffic and % HGV					
		Baseline		Opening Year DM		Opening Year DS	
		AADT	%HGV	AADT	%HGV	AADT	%HGV

Please cite the reference for the traffic data.

Table D: Verification Exercise

Location	Monitored NO2 in µg/m3	Modelled NO2 in µg/m3	% Difference	Within 10%? Y/N

Include an appropriate graph comparing modelled and monitored results. If not within 10% then an adjustment factor must be calculated. Please include additional tables and graphs as appropriate.

The calculation utilises the current Emissions Factor Toolkit (EFT)* to determine the transport related emissions from a development proposal. If the proposal is to include alternative fuels or technology i.e. LPG, EV etc, then there are “advanced options” within the EFT to accommodate this.

A screen shot of the input and output pages are shown below:

IFT2011_v52c [Compatibility Mode] - Microsoft Excel non-commercial use

Home Insert Page Layout Formulas Data Review View

Cut Copy Paste Format Painter Clipboard Font Alignment Number Styles Conditional Formatting Format as Table Cell Styles Insert Delete Format Cells Editing

D6 Emissions calc

	A	B	C	D	E	F	G	H	I
1	Select Pollutants		Select Outputs		Additional Outputs		Advanced Options	Click the button to:	
	<input checked="" type="checkbox"/> NOx <input type="checkbox"/> PM10 <input type="checkbox"/> PM2.5 <input type="checkbox"/> NOx(TRL) <input type="checkbox"/> Carbon Dioxide <input type="checkbox"/> Hydrocarbons		<input type="checkbox"/> Air Quality Modeling (g/km's) <input type="checkbox"/> Emissions Rates (g/km) <input checked="" type="checkbox"/> Annual Link Emissions		<input type="checkbox"/> Breakdown by Vehicle <input type="checkbox"/> Source Apportionment <input type="checkbox"/> PM by Source		<input type="checkbox"/> Euro Compositions <input type="checkbox"/> Alternative Technologies <input type="checkbox"/> Output % Contributions from Euro Classes	<div>Run EFT</div> <div>Clear Input Data</div>	
2									
3	Please Select from the Following Options:		Export Outputs						
4	Area		England (not London)						
5	Year		2012						
6	Traffic Format		Basic Split		File Name: Emissions calc				
7	Select "Basic Split" or "Detailed Option 1 to 4" above								
8									
9	SourceID	Road Type	Traffic Flow	SHDV	Speed(kph)	No of Hours	Link Length (km)		
10	Emissions calc	Urban (not London)	2.7	0	50	24	10		
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Intro Quick Start QA Input Data

The screenshot shows a Microsoft Excel spreadsheet with the following data:

Source_Name	Pollutant_Name	All Vehicle (Annual Emissions (kg/yr except CO2 tonnes/yr))	All LDV (Annual Emissions (kg/yr except CO2 tonnes/yr))	All HDV (Annual Emissions (kg/yr except CO2 tonnes/yr))
Emissions calc	NOx	3.255	3.255	
Emissions calc	PM10	0.380	0.380	

The output is in kg of specified pollutant per year and requires converting to tonnes per year. This is then multiplied by the IGCB damage costs for the specified pollutant. The following example demonstrates the calculation based on a development with 10 domestic properties.

EFT Input:

10 household (urban not London) (NOx and PM10)

X 27 (trip/traffic ratio for 10 houses)

X cars only (0% HGV)

X 50kph (avg. speed)

X 10km (NTS UK avg.)

EFT Output = 32.55kg/annum (NOX) & 3.795kg/annum (PM10)

= 0.0325tonnes/annum (NOX) & 0.003795tonnes/annum (PM10)

X £955/tonne (NOx) + £48,517/tonne (PM10)

= £31.08 = £184.15

X 5 (years)

= £155.42 = £920.76

Total = £1,076

Notes:

1. Trip Rates are sourced from the Transport Assessments and local authority where available.
2. Trip Length uses the National Travel Survey* - (UK average = 10km).
3. The IGCB damage costs are the central estimates (currently NOx = £955/tonne & PM10 transport average £48,517).

Appendix 4 EV Charging Specification

Electric Vehicle Charging Point Example Specification as at 2022:

All installations should meet the latest relevant electrical safety requirements. Electrical safety rests with the developer at all times. All installations will also be consistent with the requirements of the new building regulations in England for the installation of electric vehicle charge points or cable routes (Approved Document S; <https://www.gov.uk/government/publications/infrastructure-for-charging-electric-vehicles-approved-document-s>)

Introduction

It is important that future electric vehicle charge point (EVCP) requirements are met as we transition from the internal combustion engine to electric vehicles, ensuring that new development in the Borough meets future demands.

Furthermore, it is also necessary that the Council keeps in step with developments and that subsequent guidance reflects the Council experience of developing our own EVCP network and our continued dialogue with industry experts, developers and end-users in order to ensure that the ongoing installation of EVCPs locally meets the requirements of end users.

Consequently, the Council has determined that future development provides the following:

For residential developments, 1 charging point should be provided per unit (dwelling with dedicated parking for private usage).

For any public usage (such as retail) 1 charging unit per 20 parking spaces.

For business/staff usage 1 charging point per 10 staff parking spaces.

These ratios may change as electric vehicle usage increases where there is an increased demand for vehicle recharging.

In developments where short stay parking is likely, fast charging infrastructure should be used to promote high turnover of charging spaces.

The Council may however consider alternative solutions for commercial, retail and industrial development, should the applicant submit an Electric Vehicle Charge Point and Infrastructure Strategy identifying the optimum EVCP capability for that development.

Method

Doncaster Council Design Guidance SPD previously set a requirement for EVCPs based on numbers of parking spaces this guidance provides detail to the type of EVCP needed to provide a robust and useable network suitable for the coming decade.

Doncaster Council therefore require “mode 3”, minimum 7 kW (32 AMP) points in all development. Justification for this minimum specification is based upon current

Government proposals for EVCPs installed for residential development, this justification is detailed below.

Residential Requirement

In 2019, the Government published a [consultation](#) relating to future requirements for electric vehicle charging points, which can be summarised as:

“Government proposes specifying a minimum 7 kW (32 AMP) charge point both for residential and non-residential buildings. Some early home installations are 3.6 kW (16 AMP) charge points, however, today the majority of the installations are 7 kW and expected increases in battery sizes and technology developments could make charge points less than 7 kW obsolete for future car models. Our discussions with industry indicate 7 kW is a sufficiently future-proofed standard for home charging.

A 7 kW standard also better enables some of the smart charging benefits (i.e. managing of the supply of electricity to the vehicle over time) than slower speed charge points because any modulation in charge can be more quickly compensated for at other times. This reduces the impact on the local network and could reduce the spare capacity needed to operate the charge point.

Most new homes have a 100 Amp connection as standard. In most cases, it is possible to accommodate a 7 kW charge point within this connection, even when assuming the minimum diversity factor. This means that in single houses there is often no additional electrical capacity cost as a result of adding a 7kW charge point.”

Commercial/Retail/Industrial Requirement

In considering this minimum specification requirement, we also require mode 3, minimum 7 kW (32 AMP) for commercial/retail/industrial development. We acknowledge the differing requirements for non-residential development and will consider alternative solutions should the applicant submit an EVCP and Infrastructure strategy which identifies the optimum capability for that development.

Any submitted Electric Vehicle Charge Point and Infrastructure Strategy may wish to consider likely future use of the proposed development, likely end-user profile of the charge points, likely future use of the charge points themselves and provision of additional infrastructure in order to unlock demand when appropriate. Other issues that could be considered include likely “user” dwell time at the charge point, grid capacity and subsequent type of charge point in order to meet these and any other relevant requirements as identified within the Strategy.

This is not an exhaustive list and it will be for the applicant to determine the relevant issues to be addressed in the Strategy.

If submitted, the Electric Vehicle Charge Point and Infrastructure Strategy shall be agreed by the Local Planning Authority (LPA). The LPA recognises however that the Strategy may result in the provision of actual numbers of charge points less than the current 10% requirement, should the Strategy provide sufficient justification for these reduced numbers, taking into account the issues detailed above. For instance, this may result in the proposal for a lower number of EVCPs but of a higher specification (e.g. fewer number of rapid chargers).

Infrastructure for charging Electric Vehicles: Approved Document S

This guidance is aligned with the updated building regulation in England for the installation of electric vehicle charge points or cable routes (Department for Levelling Up, Housing and Communities, Approved Document S¹), and developers shall comply with this regulation when presenting their EVCP proposals.

In particular, paragraph of 6.2 of Approved Document S states the following with regard to the technical requirements for electric vehicle charge points:

“6.2 Each electric vehicle charge point should meet all the following.

a. Be designed and installed as described in BS EN 61851.

b. Have a minimum nominal rated output of 7kW.

c. Be fitted with a universal socket (also known as an untethered electric vehicle charge point). Alternatively, in exceptional circumstances, such as for a self-build property, if the vehicle requirements are already known, a tethered electric vehicle charge point may be acceptable.

d. Be fitted with an indicator to show the equipment’s charging status that uses lights, or a visual display.

e. Be a minimum of a Mode 3 specialised system for electric vehicle charging running from a dedicated circuit, or equivalent, as defined in BS EN IEC 61851-1.

f. The requirements of BS 7671.

g. The requirements in the IET’s Code of Practice: Electric Vehicle Charging Equipment Installation.

NOTE: Other legislation may also apply to the installation of electric vehicle charge points. For example, the Alternative Fuels Infrastructure Regulations 2017.

These regulatory requirements are therefore consistent with the guidance within this appendix.

Assessment of EVCP requirement

The Council’s default position is that EVCPs will be required for new development, including change of use from commercial/retail/industrial to residential. We do however consider the requirement of the National Planning Policy Framework. Paragraph 110 of the NPPF requires a scheme proposal to “be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations”.

Therefore, a standard level of electric vehicle recharging provision is expected unless:

- the proposal has no parking provision;
- the site is accessed for less than 20 minutes, or;
- the site does not attract motorised vehicles on a daily basis

¹ Version 25.02.22 update

Furthermore, there may applications where it is not considered appropriate to require EVCPs, such as change of use from one form of commercial/retail/industrial to another where no net increase in new car parking spaces is proposed. Conversely, change of use from commercial to residential, even with net decrease in car parking spaces will likely require the provision of EVCPs.

There may be other circumstances, which come to light as a consequence of the application, which render the requirement of EVCPs not appropriate, but only where sufficient justification for these circumstances can be provided and agreed. All applications will therefore be considered on individual circumstances as well as within the framework of this guidance. Of course, the applicant may wish to install EVCPs, regardless of meeting this guidance.

Electrical Safety Standards

The applicant shall conform with all electrical and safety standards / regulations etc required for the installation of EVCPs. Future liability for conforming to these requirements will be the responsibility of the applicant. The applicant shall determine which electrical safety standards are appropriate

Guidance

The Council does not provide specific guidance for the safe and proper installation of EVCP, but further guidance can be found at the following sources listed in the table below. The following sources are not definitive nor exhaustive, and the applicant is expected to ensure that all electrical and safety standards / regulations etc. are considered and adhered to and obtain expert advice where necessary Furthermore, Doncaster Council does not take responsibility for the validity and relevance of the below tabulated guidance.

Electrical Safety	https://electrical.theiet.org/wiring-matters/years/2020/80-may-2020/the-iet-code-of-practice-for-electric-vehicle-charging-equipment-installation-4th-edition/
Electrical Safety	https://www.beama.org.uk/resourceLibrary/beama-guide-to-electric-vehicle-infrastructure.html
General Guidance	https://www.local.gov.uk/electric-vehicles-charge-points-and-planning-policies This guidance has links to additional guidance resource
Approved Document S	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1057375/AD_S.pdf

Appendix 5 Validation Checklist

Development Proposal:

Pre-Planning Discussions: Yes/No (delete as applicable)

Classification: Minor/Medium/Major (delete as applicable)

Explain briefly the rationale for classification: (e.g. did not meet criteria laid down in table 1).....
.....
.....

Assessment type submitted: Exposure only / Exposure with Emission Cost Calculation / Detailed Air Quality Assessment with Emissions Cost Calculation (please circle)

Please make sure that the relevant methodology has been followed and all information has been provided.

Mitigation Statement: Yes/No (delete as applicable)

Please make sure that the relevant information has been provided including emissions costs assessment, mitigation measures and costing/predicted impact and Construction Management Plan.

Signature:.....**Print Name:**.....

Position Held:.....**Date:**.....

References

Doncaster Council Local Development Framework (2012)

<http://www.doncaster.gov.uk/services/planning/local-development-framework-and-local-plan>

Doncaster Council Local Plan (2018) <http://www.doncaster.gov.uk/services/planning/local-plan>

Department for Environment, Food & Rural Affairs, Local Air Quality Management: Technical Guidance (16), (February 2018)

https://www.google.co.uk/search?q=laqm+technical+guidance&rlz=1C1GGRV_enGB751GB751&oq=LAQM&aqs=chrome.2.69i57j0j69i59j69i65j69i60l2.4279j0j7&sourceid=chrome&ie=UTF-8

Department for Environment, Food & Rural Affairs, Emissions Factors Toolkit,

<https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html>

Department for Environment, Food & Rural Affairs, Air Quality Economic Analysis (2015)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/460398/air-quality-econanalysis-damagecost.pdf

Department for Transport (2017) Guidance on Transport Assessment,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/263054/guidance-transport-assessment.pdf

Institute of Air Quality Management, Guidance on land-use planning and development control: Planning for air quality (January 2017) <http://iaqm.co.uk/guidance/>

Institute of Air Quality Management, Assessment of dust from demolition and construction, (2014) <http://iaqm.co.uk/guidance/>

Ministry of Housing, Communities & Local Government, National Planning Policy Framework, (July 2018)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/740441/National_Planning_Policy_Framework_web_accessible_version.pdf

West Yorkshire Low Emissions Group, West Yorkshire Technical Planning Guidance (2016),

<https://www.bradford.gov.uk/media/3591/air-quality-and-emissions-planning-guide.pdf>