North Northamptonshire Council

Meeting: EAP Climate Change, Environment & Growth

Date: Tuesday 22nd November 2022

Time: 2.00 pm

Venue: Remote Meeting via Zoom (this meeting is not the subject of public meeting requirements)

The meeting will be available for the public to view live at the 'Democratic Services North Northants' YouTube channel.

To members of the EAP Climate Change Environment & Growth

Councillors Harriet Pentland (Chair), Tim Allebone, Jennie Bone, Lyn Buckingham, Dez Dell, Jan O'Hara and Kevin Watt

Agenda

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Adele Wylie, Monitoring Officer
North Northamptonshire Council

Proper Officer
14th November 2022

This agenda has been published by Democratic Services.
Committee Administrator: Raj Sohal

☎ 07500 607949
rajvir.sohal@northnorthants.gov.uk

Meetings at the Council Offices

This meeting will be held using the Zoom platform.

Members' Declarations of Interest

Members are reminded of their duty to ensure they abide by the approved Member Code of Conduct whilst undertaking their role as a Councillor. Where a matter arises at a meeting which **relates to** a Disclosable Pecuniary Interest, you must declare the interest, not participate in any discussion or vote on the matter and must not remain in the room unless granted a dispensation.

Where a matter arises at a meeting which **relates to** other Registerable Interests, you must declare the interest. You may speak on the matter only if members of the public are also allowed to speak at the meeting but must not take part in any vote on the matter unless you have been granted a dispensation.

Where a matter arises at a meeting which **relates to** your own financial interest (and is not a Disclosable Pecuniary Interest) or **relates to** a financial interest of a relative, friend or close associate, you must disclose the interest and not vote on the matter unless granted a dispensation. You may speak on the matter only if members of the public are also allowed to speak at the meeting.

Members are reminded that they should continue to adhere to the Council's approved rules and protocols during the conduct of meetings. These are contained in the Council's approved Constitution.

If Members have any queries as to whether a Declaration of Interest should be made please contact the Monitoring Officer at – monitoringofficer@northnorthants.gov.uk

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North Northamptonshire Council

Minutes of a meeting of the EAP Climate Change, Environment & Growth
Held at 9.30 am on Wednesday 26th October 2022 as a Remote Meeting via Zoom

Present:-

Members

Councillor Harriet Pentland (Chair)
Councillor Tim Allebone
Councillor Dez Dell
Councillor Jan O'Hara
Councillor Lyn Buckingham
Councillor Kevin Watt

Officers

Ian Achurch	Head of Economy and Strategy
Nick Bolton	Co-Founder – Electric Corby
George Candler	Executive Director – Place and Economy
Greg Haynes	Climate Change Officer
Lisa Johnson	Director of Public Affairs – Starship Technologies
Raj Sohal	Democratic Services Officer

Also in attendance – Councillor Graham Lawman

7 Apologies for Absence

Apologies for absence were received from: Councillor Jennie Bone.

8 Members' Declarations of Interest

No declarations were made.

9 Minutes from Meeting held on 6 October 2022

RESOLVED that:

The minutes from the meeting held on the 6th October 2022 were approved as a correct record.

10 NN2NZ - progress report from Electric Corby

The Panel considered a presentation by The Co-Founder of Electric Corby, which outlined the objectives of the 'North Northamptonshire to Net Zero' project.

During discussion, the principal points were noted:

- One member posited that large logistics companies based in Northamptonshire should be encouraged to implement solar panel technology, in compliance with net zero targets.
- Members suggested that North Northamptonshire Council should continue collaborate with local farmers, in promoting energy efficiency.

- Members supported the notion that planning policy around new housing developments could tie-in with net zero plans, by the promoting passive housing and implementing speed limits around residential areas.

- Members queried whether public opinion could still feed in to the North Northamptonshire to Net Zero plan and questioned how this could be done.

- One member explained that although fertiliser, used for agriculture, was gas-intensive, it would not be realistic to aim to remove it completely from farming (food production). The member also expressed concern around the cost-effectiveness of moving towards hydrogen-powered vehicles.

- Members expressed concern that a 'low carbon route' would not be financially viable for many local residents unless companies and markets could be influenced to make this more cost-effective.

In response, The Co-Founder of Electric Corby clarified that:

- Officers were engaging with planners and had explored the implementation of speed limits and low emission zones around residential areas and would continue to analyse the effects of such measures.

- The NN2NZ.co.uk website provided an online form, which local residents could use to contact the local authority.

- The transition to hydrogen would be a significant challenge however, it would have a role to play in achieving net zero.

RESOLVED that:

The report be noted.

11 Starship Technology

The Panel considered a presentation by The Director of Public Affairs from Starship Technologies, which outlined the rollout of Starship delivery technology across North Northamptonshire, to achieve decarbonisation.

During discussion, the principal points were noted:

- Members acknowledged that the effectiveness of Starship's delivery machines would be dependent on ensuring North Northamptonshire pavements and roads were maintained to a good standard.

- Members expressed support for the implementation of such technology to deter local residents from driving and using less environmentally-friendly methods of transport to take short trips to shops.

- One member queried how towns were selected for Starship Technology rollout and questioned whether robots would be implemented in other areas of North Northamptonshire.

In response, The Director of Public Affairs clarified that:

- There was potential to engage with smaller businesses in implementing Starship delivery technology.

- Delivery robots required recharging every 18 hours and used, on average, the same amount of energy used to boil a cup of water for every delivery. Deliveries were usually limited to a radius of 3 kilometres.

- Following successful rollouts in Northampton and Milton Keynes, Starship would seek to expand to other areas of North Northamptonshire.

RESOLVED that:

The report be noted.

12 Close of Meeting

It was noted that the next meeting of the Climate Change, Environment and Growth Executive Advisory Panel would be held virtually, via Zoom, on Tuesday 22nd November at 2:00pm.

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North Northamptonshire Council

Climate Change, Environment and Growth Executive Advisory Panel Tuesday 22nd November 2022

Report Title	**Draft Asset Disposal Policy**
Report Author	**Jonathan Waterworth - Assistant Director Assets & Environment. Jonathan.Waterworth@northnorthants.gov.uk**
Lead Member	**Cllr Graham Lawman – Executive Member for Highways, Travel & Assets. Graham.Lawman@northnorthants.gov.uk**

List of Appendices

Appendix A – Draft Asset Disposal Policy

1. Purpose of Report

1.1 The Chief Responsible Officer, confirmed as the Executive Director, Place and Economy (Deputy Chief Executive) is responsible for ensuring that procedures are put in place detailing arrangements for the management of property and land assets.

1.2 This includes producing an asset strategy, a policy and processes for governance purposes and ensuring the Council maintains accurate records on its land holdings. This record system is called the Terrier.

1.3 This report introduces the draft Asset Disposal Policy; a policy and process that supports the constitutional delegations by providing a co-ordinated approach to internal asset review.

1.4 The draft Asset Disposal Policy will form part of a suite of asset management policies, with an overarching asset strategy to be brought before Executive in Spring 2023.

2. Executive Summary

2.1 The Council holds an extensive portfolio of land and buildings and has an obligation to bring forward surplus sites for development within a reasonable timeframe and generate opportunities to stimulate housing and inward investment leading to economic growth and job creation.

2.2 It is government policy that local authorities should dispose of surplus and under-used land and property, wherever possible. The Council has wide discretion to

dispose of its assets (such as land or buildings). When disposing of assets, the Council is subject to statutory provisions. The Council grants delegations for disposals in the constitution which set financial limits, based on best consideration. Details can be found in Appendix A of the draft Policy Document.

2.3 It is important that the Council maintains a central process for asset evaluation and review, to ensure opportunities are maximised and risks of unplanned costs are mitigated. A co-ordinated approach supports good governance and ensures that assets are progressed in a timely manner.

2.4 The asset management team are responsible for maintaining the Council's property and land Terrier, responsible for publishing data and for obtaining annual statutory valuations, which is an important part of the Medium-Term Financial Planning process.

2.5 The draft disposal policy and process due to be presented to Executive in December will support these requirements by providing a central forum for governance and documentation.

3. **Recommendations**

3.1 It is recommended that the Executive Advisory Panel consider and provide feedback on the proposed draft Asset Disposal Policy.

3.2 Reason for Recommendations:

3.2.1 The Council has fiduciary responsibilities to progress surplus vacant sites within a reasonable time, which government policy recommends is no later than two years, to ensure value for money is achieved. The draft Asset Disposal Policy supports this outcome.

3.2.1 Progressing disposals of surplus properties in a co-ordinated way will contribute to the Corporate Plan and the commitment to be carbon neutral by 2030.

3.2.2 The draft Asset Disposal Policy supports a timely process, which will reduce revenue costs and assist the council to achieve capital receipts as identified in the Capital Strategy.

3.2.3 The Policy supports centralised current record keeping; a requirement of the constitution.

3.3 Alternative Options Considered:

3.3.1 The Council could choose not to adopt a co-ordinated draft Asset Disposal Policy, but, this would lead to uncertainty and increased risks of unplanned expenditure.

4. Report Background

4.1 The way the Council manages its land/property assets can have a significant impact both on the quality of services delivered to the public and the local environment.

4.2 Effective asset management is essential in bringing 'agility' to land and property assets so that the delivery of the Council's goals and objectives are realised in a sustainable manner, at the right time and on budget.

4.3 The consolidation of separate legacy councils into one Unitary Council in April 2021, brought with it the amalgamation of different property portfolios. The consolidation of property databases and asset valuations is ongoing and detailed information on the portfolio is held on the asset Terrier.

4.4 The central Terrier is required to:

- Provide data for the annual publication of the property and land register as required in the Transparency Code.
- Provide accurate information to the Council's valuers for annual review as part of the financial code.
- For the asset management team to review and analyse the portfolio for alternative uses and make recommendations to the Council.

5. Issues and Choices

5.1 The Council is required to have detailed arrangements in place for property and land management. The constitution delegates broad authority in relation to asset disposals, but, is silent on the mechanisms the council employs for co-ordinating asset disposals across the council.

5.2 The draft Asset Disposal Policy documents the way that surplus and underutilised assets will be reviewed across the Council, creating a formal forum for sharing information before assets are progressed to the wider market. This mitigates any risk of an un-coordinated approach to asset disposal across the organisation.

5.3 Once the Council has determined an asset is not required for council use, there will be an opportunity to progress assets to the wider market, to other public sector partners and or for community asset transfer. Appendix B of the policy document provides greater detail on the review and decision-making process.

6. Next Steps

6.1 Implement the draft Asset Disposal Policy, including establishing the Asset Management Review Group as detailed in the policy.

7. Implications (including financial implications)

7.1. Resources, Financial and Transformation

7.1.1 A critical source of funding required to finance the Council's Capital Programme is capital receipts from the sale or disposal of Council owned land and buildings. Other sources of finance available include Government grants, borrowing (that requires repayment via existing revenue budgets), capital reserves and revenue financing (although due to increasing pressures on revenue budgets, this is no longer viable in many cases).

7.1.2 The value of a capital receipt received in any financial year, if less than £10,000 per asset can be allocated to the Council's revenue budget. Any capital receipt that exceeds this de-minimus value will be a corporate receipt to support the funding of the Council's capital programme.

7.1.3 Incidental revenue costs of asset disposals (such as marketing and legal costs) can be offset against the capital receipt up to a maximum limit of 4% of the gross capital receipt (on an asset-by-asset basis). Where significant additional costs are anticipated or required (such as demolition and site clearance costs), these costs will need to be met from either existing revenue budgets or additional budget approvals, which will result in additional financial pressures in the short to medium term. If site preparation activity is deemed to enhance the future value of the site, then such additional costs may be financed from capital resources. This will minimise the short-term revenue budget pressures but places further demand on the financing requirements of the Capital Programme.

7.1.4 Surplus sites incur revenue holding costs, direct costs include security, inspections, business rates or council tax, and reactive repairs. Such sites are not secured as long-term holdings and, if the council were to retain them longer term, then insurance representatives would need to be consulted on additional security measures and so costs would increase further.

7.2. Legal and Governance

7.2.1. The most common legislation regulating asset disposals is the Local Government Act S123 which requires a council to obtain best consideration that can reasonably be obtainable.

7.2.2. The Councils financial procedure rules require assets to be marketed on the open market unless there are exceptional circumstances specific to the site, whereby the only reasonable option is to sell by private treaty. A council may dispose of a site in this way subject to obtaining market value.

7.2.3 The Council must ensure that it complies with its Disposal Policy and all relevant laws when determining that assets are surplus to requirements and subsequently selling those assets.

7.2.4 Risk Management: The Council have an agreed policy which sets out the mechanism for progressing the potential sale of surplus assets. The policy seeks to ensure that any disposal is carried out in a fair and transparent manner and, in adhering to the policy, it is anticipated that any risks associated with the sale of any Council land and property is mitigated.

7.3. Relevant Policies and Plans

7.3.1. These proposals will assist the Council in delivery its fiduciary responsibilities and assist the Council in meeting its commitments in the Corporate Plan, in particular providing Modern Public Services that are value for money.

7.4. Risk

7.4.1. The recommendations above ensure the council mitigates the risks associated with holding vacant property or surplus property.

7.4.2. A marketing campaign for all relevant sites provides transparency and gives opportunity for the wider market to tender. This mitigates the risks of challenge.

7.5. Consultation

7.5.1. Ward Members will be consulted as part of the disposal process.

7.6. Consideration by Executive Advisory Panel

7.6.1. This report has been considered by the Executive Advisory Panel Climate Change, Environment and Growth.

7.7. Consideration by Scrutiny

7.7.1. Scrutiny Commission can consider the Policy as part of their work programme and will also include feedback on the draft policy from the Asset Rationalisation Scrutiny Panel.

7.8. Equality Implications

7.8.1. An Equality Screening Assessment has been completed and confirms there are no negative impacts on one or more equality groups.

7.9. Climate and Environment Impact

7.9.1. The Council, having declared a climate change and environment emergency in June 2021, is committed to reducing its climate impact both within its own Council buildings and in working with businesses and the wider community to achieve carbon neutral emissions. Disposal of the sites with buildings would directly reduce the Council's carbon footprint.

7.9.2. Any developments would be required to meet the energy standards contained within the building regulations.

7.9.3 As part of the Asset review process, consideration as to the sustainability of the asset will be included, in particular whether retaining the asset can support the Council's climate change objectives and carbon reduction target.

7.10. Community Impact

7.10.1 This proposal has no direct community impact. The proposed policy works in tandem with the Council's Community Asset Transfer policy, which seeks to provide opportunities for community groups to forward expressions of interest in Council assets.

7.11. Crime and Disorder Impact

7.11.1 There are no direct crime and disorder impacts arising from this report.

8. Background Papers

8.1 There are no background papers to this report.

Appendix A – Constitution Extract

Constitution Reference			
9.7 Financial Procedure Rules			Comments
Part 3 Responsibilities	3.48	The Executive also monitors revenue and capital spending against agreed limits, agreeing externally funded initiatives, to approve the commencement of tender processes where the value of the proposed contract is in excess of £500,000, or is otherwise a key decision, approving the termination of contracts where the value is in excess of £500,000, to approve the introduction of charges, or changes to charges for services, to approve the acquisition, retention or disposal of assets with a value in excess of £500,000.	Assumption as 28.5 below, at market value. Any requirements for less than best transfers will be required to be authorised by the CFO as part of the disposal process.
	3.37	All Chief Officer Functions are described in the Scheme of Delegation, Part 9.2 of the Constitution.	
Part 9.7	11	To dispose of land and property designated as surplus to requirements in accordance with S123 of the Local Government Act 1972. All Corporate Leadership Team In accordance with statutory right to buy provisions for council owned homes. In all other instances, where the total value of the asset being disposed of does not exceed £250,000.	Assumption as 28.5 below, at market value. Any requirements for less than best transfers will be required to be authorised by the CFO as part of the disposal process.
	6	Council's Medium Term Financial Plan (MTFP) (one of the Councils provides a four-year overview of the Council's anticipated resources, expenditure commitments, and resulting savings requirement.	Requirement for a balanced budget. Revenue impact of disposals required to be considered as part of MTFP
	7	Medium Term Capital Programme	Requirement for a balanced budget. Capital receipts targets form part of the capital programme
	28.1	The responsible Chief Officer will produce a five-year Corporate Asset Management Plan for the purpose of the overall strategic management of the Council's assets. This will be updated on an annual basis .	Disposal Policy form part of the CAMP due for presentation to Executive 2023

	28.2	... The responsible Chief Officer will ensure that procedures are put in place for the safeguarding and security of the Council's assets, including the keeping of asset registers; a terrier of land and property;	The responsible officer for general fund corporate property and land is... but other Chief Officers have responsibilities for other assets under their control eg furniture, housing.
	28.3	Chief Officers are responsible for ensuring the proper use..... this requirement applies to all assets, including ….land and buildings.	The main use is categorised and placed on the terrier, the valuation of which is determined by the use and the figure forms part of the balanced portfolio and balanced budget. Change of use follows a re-catagorisation process.
	28.4	The responsible Chief Officer will ensure that detailed arrangements are put in place for the disposal of assets. All sales or purchases of land and buildings will be undertaken in accordance with the scheme of delegation.	The disposal policy and process addresses this requirement
	28.5	Valuation of Assets will be in line with the CIPFA Code of Practice on Local Authority Accounting in the United Kingdom. Sale of Assets will be at market value unless special circumstances have been agreed.	The disposal process addresses this requirement.
	29, 29.1 & 29.2	Disposal of Land, Property ..All land and property except for former Council houses sold to tenants, or other property likely to exceed £5,000 in value, which have been declared surplus to requirements must be sold either by auction with a reserve price, or by competitive tender, unless the Council specifically determines otherwise. Before inviting tenders or instructing an auctioneer for the sale of land or property, a valuation shall be obtained from the Estates function or an independent qualified Valuer, and in the case of a sale by auction, this valuation shall be the reserve price. Competitive tender shall normally dispose of all other surplus assets unless the CFO determines otherwise in a particular case.	This disposal process addresses this requirement

Appendix 1 – Constitution Extract Disposal of Property and Land Assets

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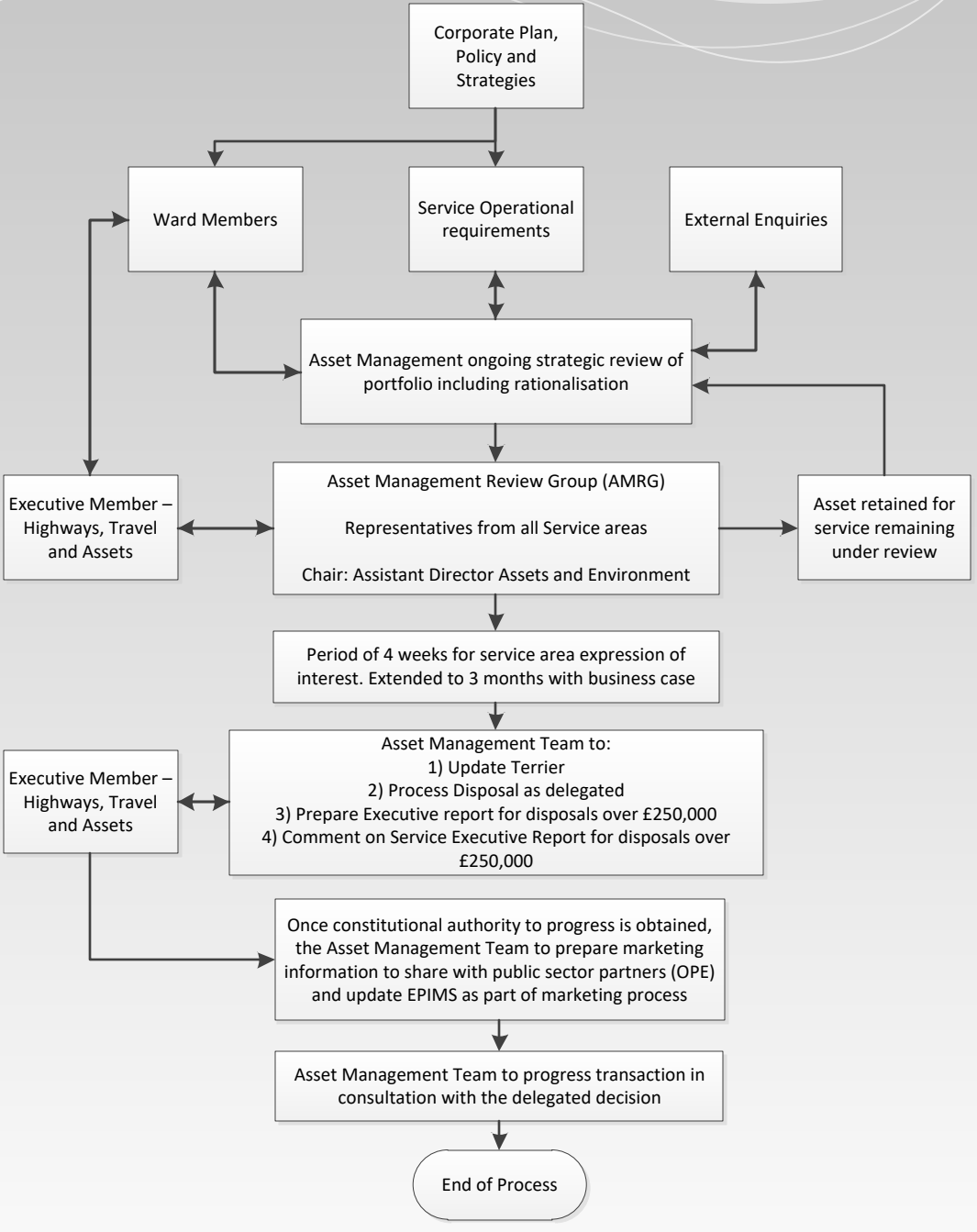
November 15, 2022

Disposal Process (Draft)



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North Northamptonshire Council

Asset Disposal Policy

December 2022 Version 1

www.northnorthants.gov.uk

Document Version Control

Complete this section, making sure to include the following information:
Author (Post holder title): Assistant Director Assets & Environment
Type of document: Policy
Version Number: V1
Document File Name:
Issue date:
Approval date and by who (CMT / committee): Executive
Document held by (name/section): Asset Management
For internal publication only or external also?: External
Document stored on Council website or Intranet?: Both
Next review date: As required

Change History

Issue	Date	Comments

NB: Draft versions 0.1 - final published versions 1.0

Consultees

Internal	External
Executive Member of Highways, Travel and Assets	N/A
Asset Rationalisation Scrutiny Panel	
EAP Climate Change, Environment & Growth	

Distribution List

Internal	External
e.g., Individual(s) / Group / Section	e.g., Stakeholders / Partners /Organisation(s)

Links to other documents

Document	Link

Additional Comments to note

Make any additional comments as might be relevant here

Contents

1.0 Introduction / foreword

1.1 North Northamptonshire Council has a diverse and extensive service delivery requirement. This service need requires the Council to own a varied property and land portfolio held by the general fund. This asset base is constantly evolving to ensure it meets the corporate strategies and continues to remain value for money, therefore, at times, the Council will dispose of surplus and underutilised sites.

1.2 Whilst the Council's constitution delegates a broad range of powers to dispose of property and land, it is important that a co-ordinated approach is applied to ensure the Council has a systematic and transparent approach to disposals in line with statute and government policy.

1.3 The Constitution requires the Chief Responsible Officer, the Executive Director of Place & Economy (Deputy Chief Executive), to put in place detailed arrangements for the disposal of assets. This is delegated through to the Assistant Director of Assets & Environment.

1.4 This policy documents these detailed arrangements, defines the scope of disposals, internal consultation undertaken and provides a process to be used.

2.0 Scope

2.1 This policy applies to property and land described in 2.1, for disposals as defined in 2.2 and appropriation in land as defined in 2.3.

2.2 The policy provides details on the sharing of asset information, through the formation of an Asset Management Group. This forum will provide for a consultation period for service areas and Members (through the Executive Member for Highways, Traffic & Assets) to review disposals and appropriation of land.

2.3 Following this period of consultation, the Asset team will progress the next steps through the constitutional process.

2.4 **General Fund Property and Land Holdings**

2.5 The policy applies to all general fund property and land holding categories, including:

- Sports and wellbeing – Community Halls, Public Opens spaces, Leisure and Sports Centres, pocket parks, libraries.
- Civic and Ceremonial – Formal meeting areas for council decision making, registrars, memorials.
- Residential accommodation, excluding dwellings forming part of the Housing Revenue Account - e.g., traveller sites held by the general fund.
- Housing estate land - e.g., requests for additional garden land.
- Social Care – accommodation for the Childrens Trust and Adult Social Care.
- Economic development and regeneration – business centres, build leases.
- Infrastructure – roads, paths.
- Operational – depots, recycling centres.
- Commercial units – to earn income to support the finances of the council to pay for service delivery.
- Assets to be developed.

2.6 **Disposal definition for the purpose of this policy**

2.7 The Local Government Act 1972 S123 defines a disposal as a lease granted for a term of 7 years or more and the Land Registry Act 2002 extended the requirements to register interests in land, lowering the qualifying period from 21 years to 7 years.

2.8 This policy is concerned with longer term contractual agreements and freehold sales and will apply to:

- Freehold Sales.
- Agreement for an option to sell or option to lease where greater than 21 years.
- New leases granted for vacant premises for a term of 21 years or an assignment of a term of a lease with more than 21 years left to run.
- New leases granted for vacant premises for a term over 7 years if there is an option for renewal that takes the lease over the 21-year period.
- Appropriation in common land – the change of use from unrestricted public open space to a lettable hereditament.

2.9 Leases for a term of 21 years or less remain subject to the delegations in the Constitution and the asset management team surveyors lead lease negotiations for service areas and deal with lease renewals and protected tenancies. A lettings policy covering the considerations for such leases will be brought to Executive for approval early in 2023.

2.10 **Appropriation Definition for the purpose of this policy.**

2.11 Where the authority has allocated land for specific purposes, such as open spaces, any changes of use will be considered as part of this process.

2.12 Certain categories are regulated by statute with strict process requirements. Open space is defined as “any land laid out as a public garden, or used for the purpose of public recreation, or land which is disused burial ground.”

2.13 Examples of appropriation may be a decision to turn part of an open space into a lettable hereditament, e.g., a football pitch on public land.

3.0 Policy outcomes

3.1 The outcomes of the policy are:

- To provide detailed arrangements for the disposal of assets as required in the constitution.
- To provide a process for asset review which will support decision making.
- To ensure there is a methodical forum for consultation with other service areas.
- To enable the asset management team to maintain a current property and land terrier.

4.0 Asset Disposal Policy

4.1 This disposal and land policy supports compliance with regulations and provides a methodical process for review which will assist decision makers as detailed in the constitution. The policy outlines the regulatory and governance requirements and then documents the detailed process that must be followed.

4.2 **Disposals**

4.3 The policy and process support not only the Councils constitution but also the legal governance framework.

4.4 The main powers to dispose of land are found in the following legislation:

- S123 of the Local Government Act 1972 and
- S233 Town and Country Planning Act 1990

4.5 These provide the requirement for the council to obtain best consideration for disposals, which is defined to include leases granted for a term of 7 years or more, option agreements, reversionary leases and freehold sales.

4.6 Exceptions to this requirement were permitted, provided the council adhered to a process of review, to balance the requirements of economic, social or environmental outputs against the need to ensure best consideration. Any less than best disposals required the permission of the Secretary of State to seek permission in all instances.

4.7 This requirement for permission from the Secretary of State was relaxed with the introduction of the General Disposal Consent 2003 (circular 06/2003) which provided for a council to authorise disposals of less than best consideration if the difference in (capital) value was less than £2m. Differences in capital value over £2m still require consent from the Secretary of State and the assets team provide lead in this process.

4.8 The relaxation of the process did not lessen the requirement for a council to exercise sound judgement in considering the economic, social and environmental benefits of a disposal at less than best consideration, weighed against the foregone value of the asset.

4.9 There has been much case law confirming a council must exercise its fiduciary duties reasonably (constitutional law case Roberts v Hopwood 1925). Added to this are the public law principles, requiring the council to have regard to the material consideration on the

financial accounts with respect to capital and revenue impacts of any decision. Procurement laws can also apply if the disposal includes an agreement to carry out work or provide the Council with an interest in land, such as a sale and leaseback. This is a complex area of law, and each decision would be considered with appropriate legal and asset advice.

4.10 **Appropriation**

4.11 The powers to appropriate assets are found in the following laws:

- S122 of the Local Government Act 1972 and
- S232 Town and Country Planning Act 1990

4.12 Appropriation in this context means transferring the allocation of the assets from one purpose to another.

4.13 Local authorities usually allocate assets for specific purposes under different statutory powers. They may have acquired the land pursuant to a statute which then regulates how the land must be allocated or managed (e.g., housing or public health purposes) or they may have acquired land for general purposes (e.g., under s.120 of the Local Government Act 1972).

If the local authority determines a need to transfer assets from one purpose or function to another, perhaps for redevelopment or service transfer, then it must document the appropriation of the asset.

4.14 The key procedural points are as follows:

- The land must already belong to the council
- The land must be no longer required for the purpose for which it is currently appropriated; and
- The purpose for which the council is appropriating must be authorised by statute.

4.15 **The Constitution**

4.16 The Council complies with the above legal framework through the governance process documented in the constitution. An extract of the constitution linked to disposals is attached on **Appendix A**.

4.17 The financial delegations set clear financial limits on disposals and the requirement that disposals are at market value and so represent best consideration. The constitution provides for the Chief Responsible Officer to document how these relationships interlink, which this disposal policy addresses.

4.18 **Asset Management Review Group**

4.19 To provide a forum for sharing information on surplus and underutilised assets, an Asset Management Review Group will be formed and chaired by the Assistant Director of Assets & Environment.

4.20 The sharing of information is a way to identify whether the Council has an alternative use for a site before being progressed further by the asset management team and as a forum for assets to be systematically reviewed.

4.21 The current ways of identifying surplus or underutilised assets are:

- The asset management team identify sites that may either be vacant, no longer meet the councils' objectives and/or are underutilised.
- The commercial estates team have a vacant property to let which has limited prospects of being relet or would require significant capital investment.
- The service areas inform the Asset Management team of a property they use which no longer meets their needs.
- Ward Councillors provide suggested uses based on local resident needs and community feedback.
- External parties, businesses, community organisations, other public sector organisations and residents contact the council expressing an interest in a site.

4.22 As part of the decision-making process the Asset Management team will undertake testing as below:

<u>The Surplus Test</u>

As a guide, land and property is considered as potentially surplus to the Council's requirements where:

- it is in a location that makes little or no contribution to the delivery of the Council's services, strategic or corporate objectives.
- it is not currently meeting its objectives and there is no realistic potential for achieving these objectives within a reasonable time frame.
- The cost of improving energy efficiency to meet the Council's strategy, including the Carbon Neutral commitment, outweighs the value for money test.
- it is required to contribute to the rationalisation programme to reduce operational costs.
- The transfer contributes to the specific community service provision.

<u>The Under-Used Test</u>

As a guide, land and property is considered as potentially under-used if:

(a) part of the site is vacant and is likely to remain vacant for the foreseeable future
(b) the income being generated from the site is consistently below that which could be achieved from:
  (i) disposing of the site and reinvesting the income.
  (ii) an alternative use.
  (iii) intensifying the existing use.
(a) only part of the site is used for service delivery and this could be delivered from an alternative site.
(b) In the case of land, the contribution to protecting and enhancing the natural, built and historic environment, including helping to improve biodiversity, is outweighed by the

benefit of alternative use for social or economic purposes, such as development for commercial or housing purposes, or could be provided on another site with equal or greater benefit.

4.23 Information as above will be collated by the asset management team for review at the Asset Management Review Group (AMRG). Each service will have the opportunity to nominate a representative. Data to be considered will include, where relevant:

- Planning policy – current and potential use of assets
- Asset Categorisation – the current use and reason for holding
- Asset capital valuation for accounting purposes – current value and materiality issues
- Revenue – impact of any changes to the revenue budget
- Fabric Condition – repairs information, condition surveys
- Energy Rating – to fit with the Councils carbon management plan
- Social Value attributed to the asset – such as community use or support.
- H&S information – fire risk assessments, water hygiene, asbestos, electrical
- FWOW strategy – need for rationalisation
- Community asset transfer policy – if a community asset the wider opportunities
- Service Strategies
- Return on investment – value for money analysis

4.24 Each asset is held under a category and will support options considered for property and land. Commercial investment assets provide an important revenue stream, with the income used to support service delivery and achieve a balanced budget. Assets held in this category are unlikely to be available for operational service use or community use, unless there is limited market demand for the property and the return on capital investment required will not achieve the rental levels to justify the expenditure.

4.25 Assets held for operational or community use may provide more opportunities for service areas to consider as part of their service plans.

4.26 Government policy and statute requires surplus assets to be disposed within a reasonable time. The Housing and Planning Act 2016, Part 8 Section 208 places a duty on local authorities to prepare and publish a report of surplus land where the authority continues to hold the land two years from the decision-making date. Added to this, underutilised and surplus assets result in holding costs, such as maintenance, security, business rates, inspections, health and safety etc. It is, therefore, important that the council mitigates its revenue holding costs to a limited period, allowing sufficient time to allow a viable opportunity for change of use to be presented to the AMRG before it is progressed through the constitutional process and onto the wider market.

4.27 Preparing a site for wider marketing takes time, may incur procurement processes for marketing, requires legal review and ongoing asset management review of opportunities that add value.

4.28 For this reason, there will be a limited period for services to provide a robust business case to demonstrate a viable alternative change in use. The initial period that services will have to express an interest in a surplus or underutilised site will be four weeks from presentation of

the asset at the AMRG. They will then have a further three months to prepare a robust business case to include financial support for any plans.

4.29 If no service area can demonstrate a clear and robust business case for a property brought before the AMRG, then the asset management team will discuss wider opportunities for the asset via the Executive Member of Highways, Travel and Assets, in consultation with the Assistant Director of Assets & Environment, with recommendations made to the Executive on the next steps, as required by the consultation, which may include:

- Asset management team preparing the site for wider public sector partner review to determine whether the property and land meets their needs (for example via the one public estate partners). Alternative use by any North Northamptonshire partners must be supported by an approved business case and would be subject to purchase at market value.
- Asset Management team preparing the site to market to obtain best consideration.
- Regeneration team preparing the site to apply for a government funding bid opportunity for economic development, housing and regeneration opportunities for external parties.
- Asset Management team in consultation with community services progress the site to market through the assets of community value regime and/or community asset transfer policies.

4.30 A detailed process chart is provided at **Appendix B**, including when service area, Ward Member and Executive Member consultation takes place.

4.31 The Asset Management team will submit an annual surplus property progress report to Executive.

5.0 Next steps

5.1 Establish the AMRG meetings with appropriate Terms of Reference.

5.2 Publish the Asset Disposal Policy and share with appropriate stakeholders.

6.0 Glossary of terms

Term	Definition
Disposal	Freehold sale of land, lease over 21 years for vacant unit and or assignment, easement, wayleave

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North Northamptonshire Council

Item no:

To be added by Dem Services

Climate Change, Environment and Growth Executive Advisory Panel Date 22nd November 2022

Report Title	**Air Quality Review – North Northamptonshire**
Report Author	Catherine Clooney, Interim Environmental Protection Manager
Executive Member	Cllr David Brackenbury – Executive Member for Growth and Regeneration and Cllr Harriet Pentland - Executive Member Climate and Green Environment

Appendix 1: NNC Air Quality Annual Status Report (ASR) 2022

1. Purpose of Report

To provide a further position statement to the Climate Change, Environment and Growth Executive Advisory Panel on:

1.1 DEFRA's Appraisal of the 2022 submitted Air Quality Annual Status Report (ASR)

1.2 Update on progress of the Public Health Funding Bid and the Joint Strategic Needs Assessment (JSNA)

1.3 Revised Local Air Quality Management (LAQM) Statutory Policy and Technical Guidance for England

2. Executive Summary

2.1 In June 2022 North Northamptonshire Council (NNC) submitted its first ASR (Appendix 1) to DEFRA for the new unitary authority, as part of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

2.2 DEFRA determined that based on the evidence presented by NNC the conclusions reached are acceptable for all sources and pollutants and that a further ASR should be submitted in 2023. The report was highlighted as being well structured, detailed, and providing the information specified in the Guidance. Several comments designed to help inform future reports were provided and these will be implemented and taken on board for the next ASR.

2.3 North Northamptonshire Council do not have any declared Air Quality Management Areas (AQMAs).

2.4 Non-automatic (passive) monitoring of NO_2 was conducted at 100 sites during 2021. During 2021, no monitoring site exceeded the annual mean air quality objective for NO_2 of 40µg/m^3.

2.5 As there are no AQMAs within North Northamptonshire Council no Air Quality Action Plan (AQAP) is required to be produced, however a number of measures to improve air quality have still been implemented (see para 5.1.4 below). This was commended by DEFRA and it was outlined that measures to improve air quality should continue to be developed and reported.

2.6 The Public Health team have been consulted on and have approved the ASR 2022 and it will soon be published on the council website once accessibility requirements have been fully met.

3. Recommendations

The Climate Change, Environment and Growth Executive Advisory Panel (EAP) is asked to support the following considerations:

3.1 To continue with the current arrangements of monitoring air quality in line with the National Air Quality Objectives.

3.2 To note the acceptance of the ASR 2022 by DEFRA and their appraisal report findings.

3.3 To note an update on the Public Health Funding Bid and the JSNA application.

1.4 To note Revised Local Air Quality Management (LAQM) Statutory Policy and Technical Guidance for England.

Reasons for recommendation

To ensure the Council continues to maintain its commitment to monitoring, reviewing and taking measures to improve local air quality, whilst at the same time using funding to implement extra projects to assist with further measures.

4. Report Background

4.1 NNC continues to monitor NO_2 concentrations by a network of diffusion tubes which are replaced each month and sent off to the lab for analysis. A draft consolidated ASR of all former sovereign areas was submitted to DEFRA by the deadline of 30th June 2022 (appendix 1).

4.2 Air quality levels are monitored through analysis of compliance against the NO_2 annual mean air quality objective of 40µg/m3.There are no AQMA's across

North Northamptonshire, due to a history of non-exceedances and subsequently there have been no AQAP's produced to date.

4.3 Despite not having a formal AQAP, North Northamptonshire has taken forward a number of direct measures in pursuit of improving local air quality.

5. Issues and Choices

5.1 DEFRA'S Appraisal Report

A summary of the findings of this report are as follows:

5.1.1 On the basis of the evidence provided by the local authority the conclusions reached are acceptable for all sources and pollutants. Following the completion of this report, North Northamptonshire Council should submit an Annual Status Report in 2023.

5.1.1 The highest recorded annual mean NO_2 concentration was 33.4µg/m^3 occurring in Rothwell. Overall NO_2 concentrations across the local authority have been decreasing since 2017, however between 2020-2021 there were some increases and some decreases which is likely due to the effects of vehicle traffic numbers varying following the COVID-19 patterns of lockdown and easing of restrictions Overall data capture was good for all monitoring locations in 2021, with only one monitoring location requiring annualisation.

5.1.2 The diffusion tube mapping is comprehensive and clearly demonstrates the monitoring network. The ASR provides a clear breakdown of historical data (and maps) of each monitoring site. Trends are clearly presented and discussed and a robust comparison with air quality objectives is provided.

5.1.3 The report contains only a small amount of discussion on existing measures to improve air quality that would also act to reduce $PM_{2.5}$ emissions. It is considered that many of the measures implemented or proposed will help to reduce $PM_{2.5}$ emissions however these are not discussed in detail within the required section. Future ASR's should include additional measures and link to the climate change strategy and transport plan to review measures that have the potential to improve PM2.5 emissions.

5.1.4 Despite there being no AQMAs within North Northamptonshire Council and as such no AQAP produced, a number of measures to improve air quality have still been implemented. These measures derive from the Northamptonshire Transportation Plan (2012) and the Northamptonshire Climate Change Strategy (2020-2023). Some of the key measures include, promoting transport alternatives, low carbon vehicles promoted through taxi age policy, company vehicle procurement scheme, the Voi Scooter project expanding electric scooter use which between April 2021 and March 2022 replacing 244,081 car trips In addition, East Northamptonshire Greenway Project is ongoing to create walking

and cycling routes and new planning applications are directed by the requirements of the EMAQN 'Air Quality and Emissions Mitigation - Guidance for Developers'.

5.1.5 The additional report containing a review of LAQM within the former administrative areas of Corby, East Northamptonshire, Kettering and Wellingborough is provided. Future ASR's should address these recommendations which include extending the network, inclusion of particulate monitoring and continuing to develop measures to improve air quality. Additional monitoring should be employed on Silver Street, Wellingborough. Alternatively there are a number of monitoring locations where NO2 concentrations have consistently been below the annual mean objective, these monitoring locations could instead be relocated to areas of greater concern.

5.2 Public Health

5.2.1 A successful bid was submitted for Public Health funding and a grant of £80k was awarded for two Air Quality Project Officers to undertake project work to improve air quality across North Northamptonshire, by carrying out a package of different measures/innovations. The Environmental Protection Team are finalising details relating to monitoring and sustainability, prior to the grant being implemented. It is hoped that the project officers will be in post by the end of the financial year. The Air Quality Project Officers will actively work to improve the air quality within North Northamptonshire by working with the Environmental Protection Team, Planning, Highways and Public Health Colleagues in addition to external agencies by:

- Working with internal and external partners to publicise more sustainable methods of travel including walking, cycling, e-scooters/bikes.

- Source and utilise any grant funding available to work with the local taxi trade to switch to electric vehicles and encourage other stakeholders to look at early replacement of diesel taxis with electric and hybrid alternatives.

- Work closely with Highways to collect better monitoring data from traffic flows and wider air quality monitoring beyond current NOx tube network to allow better targeting of activity. Look at strategies such as those pertaining to buses.

- Produce future bids for DEFRA air quality grant work.

- Conduct work on The Air Quality (Domestic Solid Fuel Standards) (England) Regulations in association, to work on any new PM2.5 objectives as a result of legislative introductions.

- Raise more awareness via national campaigns and working with education to campaign against idling at schools and through events such as National Clean Air Day. Engage with School Streets campaign, to promote traffic/emission free zones around schools and promote walking children to school, especially in built up areas. Encourage employers/businesses to adopt Cycle2Work schemes, promote cycling through Cycling Northants, improve cycling signage and networks. Look into enhanced street cleaning practices to reduce particulate matter present on busy streets.

- Survey of all industrial sites to identify any new or existing units that may require an Environmental Permit under the Environmental permitting regime, e.g. paint sprayers & waste burners.

- Review of existing Smoke Control Areas and consider implementing further areas in light of an increased use of solid fuel burners and assessment of poorer economic areas to determine if there is an increase in solid fuel burning in light of increases in energy/gas prices.

- Liaise with Planning for the adoption of the East Midlands Air Quality Network document as a North Northamptonshire Council Supplementary Planning Document (SPD).

5.2.2 Environmental Protection are continuing to work with colleagues in WNC and the Public Health team in terms of JSNA and the Integrated Care Partnership ICP Emerging outcomes framework and proposed local area partnerships to ensure that the importance of air quality as a determinant of health is recognised A JSNA is a process that looks at the current and future health, care and wellbeing needs of Northamptonshire residents to inform and guide the planning and commissioning of health, wellbeing and social care services. The JSNA uses the Healthy Assets and Hazard Index (AHA) as a way of looking at the impact of air quality (AQ). AQ is recognised as a JSNA health determinant based on AQMA'S. It has been recommended to public health that compliance with the national air quality objectives/limits could be assessed, as a determinant with the caveat that the limits do not as yet recognise the importance of particulate matter but that this is changing as a result of the Environment Act 2021. It was also recommended to include the existing DOI – mortality from particulate matter already in the Public Frameworks indicator. Environmental Protection

5.3 LAQM Policy and Technical Guidance

5.3.1 In August DEFRA published a revised Local Air Quality Management (LAQM) Statutory Policy Guidance document for England (attached). This guidance sets out what local authorities should do and the legal duties with which they must comply to improve local air quality. The document was produced following a consultation process which ran for 10 weeks until 6th June 2022. This is the first update to the LAQM policy guidance since 2016.

5.3.1 The revised policy guidance reflects the strengthened LAQM framework provided for by Schedule 11 of the Environment Act 2021 (the Act) which enables local authorities to take more effective, co-ordinated actions to achieve their air quality objectives and deliver improvements to public health. The review also includes the introduction of new areas for local authority consideration, which reflect new research, policies and priorities in the field of local air quality these include air quality disparities, community engagement, air quality and climate change.

5.3.2 An updated version of the LAQM Technical Guidance has also been produced which corresponds to updates in the policy guidance. Key updates relevant to NNC include:

- An updated study on assumptions for exceedances of short term NO_2 objectives has affirmed that at concentrations above 60 μgm^3 as an annual average, there is the potential for exceedances of the 1-hour objective.

- From 2023 in England, local authorities are required to produce an Air Quality Strategy where they have declared no AQMA's. It is proposed that the air quality project officers will commence work on the NNC Air Quality Strategy once in post.

- The Act introduces the concept of 'Air Quality Partners' – including neighbouring local authorities and the Environment Agency as well as designated 'relevant public authorities'.

- The designation of National Highways as a 'relevant public authority' – it is aimed to lay the designation in Autumn, this will require the National Highways to collaborate with local authorities to improve air quality – becoming an 'air quality partner' where locally relevant.
- There is no target for PM currently, though it is recognised that this is as important as PM and NO_2. The Environment Act 2021 requires that a limit for $PM_{2.5}$ is set, and there has just been a consultation on how this will be achieved. There are 2 suggestions:

    1. Annual Mean Concentration Target ('concentration target') – a target of 10 micrograms per cubic metre (µg m-3) to be met across England by 2040

2. Population Exposure Reduction Target ('exposure reduction target') – a 35% reduction in population exposure by 2040 (compared to a base year of 2018)

It is proposed that this can either be managed nationally by DEFRA by a combination of monitoring through the national (Automatic Urban and Rural Network) AURN monitoring stations and modelling or that this is undertaken by local authority, the former is viewed to be the preferred option. PM monitoring and modelling is resource intensive, the equipment and software is expensive, most local authorities do not undertake this currently and requires technical expertise.

6 Implications (including financial implications)

6.1 Resources and Financial

6.1.1 A small number of officers within the Environmental Protection teams across Regulatory Services, are trained and equipped to carry out air quality monitoring assessments. An Air Quality consultant is paid annually to analyse all the data from each sovereign area and to write and produce the Annual Air Quality Status Report. Accordingly, no additional resources or finances are required for the work that is carried out, but additional staffing resources via the two public health funded Air Quality Officers will assist the team to progress, implement and maintain measures and actions to address local air quality.

6.2 Legal

6.2.1 The Council must continue to meet its requirements under Part IV of the Environment Act 1995.

6.3 Risk

6.3.1 There are no significant risks to note arising from the proposed recommendations in this report, but to do nothing places the Council at risk of not meeting the requirements of the Environment Act 1995, reducing air quality and therefore increasing the likelihood of an AQMA being declared.

6.4 Consultation

6.4.1 Internal Officer consultation has taken place to inform the drafting of this report and its recommendations. There is no legal requirement upon the Council to undertake any form of formal consultation in respect of air quality, but the council will continue to raise awareness of local air quality through wider engagement and education.

6.5 Climate Impact

6.5.1 It is considered that the implementation of the recommendations would have a positive impact on climate change. To ensure the Council have no potential AQMA's in the future, it is recommended that monitoring is continued.

6.6 Community Impact

6.6.1 It is considered that there are no community impacts associated with this report. LA's may however be asked to prioritise actions to ensure that they are maximising the beneficial impact on vulnerable groups/those at higher risk of poor air quality, with a policy area under the National Air Quality Strategy assessing air quality disparities.

7 Background Papers

7.1 North Northamptonshire Council Annual Status Report 2022

7.2 DEFRA Appraisal Report

7.3 AECOM Review Report 2022

7.4 Local Air Quality Management PG(22)

7.5 Local Air Quality Management TG(22)

7.6 Local Air Quality Public Health Funding Bid

2022 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

Date: June, 2022

Information	North Northamptonshire Details
Local Authority Officer	Catherine Clooney
Department	Environmental Protection
Address	North Northamptonshire Council Sheerness House 41 Meadow Road Kettering NN16 5TL
Telephone	0300 126 3000
E-mail	Catherine.Clooney@northnorthants.gov.uk
Report Reference Number	2022 ASR
Date	30/06/2022

Executive Summary: Air Quality in Our Area

Air Quality in North Northamptonshire

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

The mortality burden of air pollution within the UK is equivalent to 28,000 to 36,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

In April 2021, Corby Borough Council, Kettering Borough Council, East Northamptonshire District Council and Borough Council of Wellingborough merged to become North Northamptonshire Council, a new unitary authority. This will bring new opportunities to how air quality is managed in the area with the intention of harmonising and uniting the diffusion tube network and ASR process.

In North Northamptonshire, sources of air pollution include recent developments, industry and transportation. There has been notable growth and regeneration in the Corby area in recent years, including the demolition of coal fire power station and former steelworks and the several residential developments. The area surrounding Wellingborough has also experienced high levels of residential development in recent years. The eastern part of the district is predominantly rural. In this area, as well as across the entire district, Nitrogen dioxide (NO_2) is the key pollutant of concern in the borough, which is primarily produced by road traffic. In 2020, pollutant levels were low in Kettering, Corby, Wellingborough and East

[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] Defra. Air quality appraisal: damage cost guidance, July 2021

[4] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

Northamptonshire and as such there are no plans to introduce an AQMA in any of these areas.

In 2021, North Northamptonshire undertook monitoring at 100 non-automatic (diffusion tube) sites. This report includes the latest NO_2 results from diffusion tube monitoring carried out across the whole area and shows the trends over the last five years. The results of the monitoring highlight an overall decreasing trend in that time. However, the trend between 2020 and 2021 can often contradict this, with some increases in concentrations monitored in some locations. This is likely due to an increase in traffic in 2021 compared to the restrictions on activity in 2020 due to the COVID-19 pandemic. However, no concentrations exceeding the AQS objective value of 40 µg/m^3 were recorded in North Northamptonshire in 2021.

Actions to Improve Air Quality

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[5] sets out the case for action, with goals to reduce exposure to harmful pollutants. The Road to Zero[6] 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 Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

As North Northamptonshire Council (NNC) does not have any AQMAs, there is no requirement for a formal AQAP. However, several actions have been taken by the Council to improve air quality. Actions taken chiefly relate to decreasing traffic related NO_2 pollution through promoting alternative travel, and as a consequence of action on climate change.

The Voi Scooter project successfully replaced 244,081 car trips with trips using electric scooters in 2021, which resulted in a reduction in 85,300 Kg of carbon equivalent.

[5] Defra. Clean Air Strategy, 2019

[6] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

North Northamptonshire also continues to support projects which aim to reduce emissions and improve air quality, such as the East Northamptonshire Greenway Project. The East Midlands Air Quality Network (EMAQN) 'Air Quality and Emissions Mitigation - Guidance for Developers' also continues to be implemented. The EMAQN guidance is technical planning guidance which aims to improve air quality across the East Midlands, through preventing new emission sources and encouraging emissions reductions.

Conclusions and Priorities

The air quality in North Northamptonshire is generally good and concentrations remain below the AQS objectives. Although the five-year trend decreases overall, some increases in concentrations can be seen between 2020 and 2021. This is not unexpected, with the increases in traffic after the 2020 COVID-19 pandemic.

As there are no plans to introduce an AQMA in North Northamptonshire, there remains no requirement to publish an AQAP. That said, measures to improve air quality continue to be implemented. Moving forward, the priorities for North Northamptonshire are:

- To continue monitoring and the review of air quality in line with national air quality objectives;
- Continue the streamlining process commenced since the creation of the unitary authority to improve air quality reporting and actions;
- Work together with other departments of the Council i.e. planning and Highways, to manage local air quality and raise awareness on its role in achieving a sustainable environment;
- Continue to review all planning applications that are referred to the Environmental Protection team in terms of national and EMAQN guidance, ensuring any impacts upon local air quality are quantified; and
- Promote initiatives to reduce emissions of air pollution across the district through partnerships with schools, businesses and communities.
- As several areas within North Northamptonshire are developing rapidly it will remain important to monitor air quality and any new sources of pollution.

Local Engagement and How to get Involved

Air quality continues to move up the political agenda as there is a greater understanding of the issues and complexities around the quality of the air we all breathe. Industry, agriculture,

transport, planning and individuals are being encouraged to look at interventions, behavioural changes and practical actions to improve air quality.

The primary source of air pollution in the North Northamptonshire is NO_2 arising from transport sources. There are many transport alternatives the public can use to help improve air quality:

- **Walking, cycling or electric scooter** – these are the most environmentally friendly modes of transport as well as the added benefit of keeping fit and healthy;
- **Public transport** – the use of public transport reduces the number of private vehicles on the roads, easing congestion therefore reducing concentrations of roadside pollutants;
- **Car-sharing** – if a similar journey is shared with another individual car-sharing is a good way at reducing the number of private vehicles as well as reducing the cost of commuting, if sharing fuel costs This can be promoted via travel plans through the workplace and within schools; and
- **Alternative fuel / more efficient vehicles** – Choosing a vehicle that meets the specific needs of the owner, fully electric, hybrid fuel and more fuel-efficient cars are available. If residents are considering swapping to an electric vehicle, the government offers up to 75% grant funding towards the cost of installing electric vehicle charge points at domestic properties through the Electric Vehicle Homecharge Scheme (EVHS). For information on how to apply, please see the gov.uk website.

An additional way to improve air quality is by considering alternatives to garden waste disposal other than burning and burning smokeless fuels. The public can also assist by reporting pollution incidents within the North Northamptonshire area.

For more information on what the Council is doing to improve air quality in the North Northamptonshire, please get in contact with the local Environmental Health Officer, or go to https://www.northnorthants.gov.uk/environment

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of North Northamptonshire Council with the support and agreement of the following officers and departments:

This ASR has been approved by:

This ASR has not to date been signed off by a Director of Public Health but consultation will be undertaken.

If you have any comments on this ASR please send them to the report author

Table of Contents

Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in North Northamptonshire during 2021. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by North Northamptonshire to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 12 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

North Northamptonshire Council currently does not have any declared AQMAs.

Maps of North Northamptonshire Council's monitoring locations are available in Appendix D.

2.2 Progress and Impact of Measures to address Air Quality in North Northamptonshire

2021 is the first year in which an ASR has been produced for the combined North Northamptonshire area. Previous measures and feedback relate to the individual areas of Corby Borough Council, Kettering Borough Council, East Northamptonshire District Council and Borough Council of Wellingborough.

Defra's appraisal of last year's ASRs concluded that:

- The 2020 Corby report was acknowledged but not appraised by Defra due to its lateness, though comments from the 2019 ASR have been considered, and implemented into this year's report where relevant.
- Though there were no AQMAs within Corby, Wellingborough, Kettering or East Northamptonshire, therefore there is no formal requirement for an AQMA, despite this a good level of detail and discussion was provided around measures to reduce and manage air quality.
- Monitoring results for Corby were clearly presented and the context of the effect of COVID-19 on results is discussed.
- For Corby, the October monitoring data for site 10N is much higher than the other months at the same location. Data should be reviewed for anomalous data such as this and commentary provided as to whether there was a reason that concentrations were higher. Should there be no explanation, the Local Authority may consider removing such data.
- In the Corby and East Northamptonshire ASRs, a link was provided to the Public Health Outcomes Frameworks with details and a history of the fraction of mortality attributable to $PM_{2.5}$, this was welcomed.
- Appropriate QA/QC was applied to the Corby, Kettering and East Northamptonshire results; with distance correction and annualisation calculations provided in the Appendix. The inclusion of the output from the Diffusion Tube Data Processing Tool was welcomed.
- Kettering Council recorded an exceedance at RW4 in 2019, however in 2020 there was no longer and exceedance. This could have been influenced by the pandemic. Therefore, the Council should continue to monitor this location and could include more monitoring here to focus in on this potential hotspot.
- For Kettering, it was noted that the Council should consider including a link to the Public Health Outcomes Framework, indicator D01 specifically could be mentioned.

- In East Northamptonshire's ASR, under Table A.2, the report did not confirm that the results presented had been bias adjusted; whilst this appears to have been carried out, and is stated within the text, confirmation of this in the check box provided beneath the table is required in adherence with good practice.
- A discussion of new pollutant sources was provided within Appendix C of the East Northamptonshire ASR, which was commended.
- Diffusion tube mapping was clear in East Northamptonshire's ASR and clearly depicted the locations of all monitoring sites. It would be beneficial for the Council to include an additional map depicting all sites within the district boundary, for completeness. This would also allow the reader to understand the spatial distribution of monitoring sites within the Council's jurisdiction.
- Additional monitoring sites should be deployed on Silver Street in Wellingborough to further assess the annual mean NO_2 concentrations apparent within the street canyon environment. Where possible these should be placed at locations that are relevant to the annual mean objective.
- When the 2022 ASR is completed for North Northamptonshire, the Council should submit their diffusion tube results through the Diffusion Tube Data Entry System (DTDES) within the LAQM Portal. This was not done for Wellingborough 2021 ASR.
- Within the accompanying excel ASR spreadsheet Table A.3 is relevant for automatic annual mean NO_2 results, diffusion tube results are not required within this table.

North Northamptonshire has no active AQMAs and subsequently has produced no AQAP's to date. Despite not having a formal AQAP, North Northamptonshire has taken forward a number of direct measures during the current reporting year of 2021 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Although an AQAP does not exist, air quality in the district is addressed through the Northamptonshire Transportation Plan (2012) and the Northamptonshire Climate Change Strategy (2020-2023). Since forming in 2021 North Northamptonshire has committed to becoming carbon neutral by 2030.

As the primary source of pollution in North Northamptonshire Council is traffic related NO_2, a number of air quality measures relate to promoting transport alternatives. Low carbon vehicles are promoted through a taxi age policy and incentives for low carbon taxis. A company vehicle procurement scheme is also in place to encourage local businesses to

replace their fleet with lower emission vehicles. The Office for Low Emission Vehicles (OLEZ) project has also successfully installed electric vehicles charging points across the borough.

The Voi Scooter project aims to expanded electric scooter use in UK towns to encourage tan uptake in this mode of transport with a focus on replacing car journeys in North Northamptonshire. The most up to date data shows that between April 2021 and March 2022, 244,081 car trips were replaced and a reduction of 85,300 Kg CO_2e was attributed to this. The areas where this project is ongoing is Corby, Kettering, Rushden and Higham Ferrers and Wellingborough.

An additional project to encourage alternative transport is the East Northamptonshire Greenway project. This project is working to create walking and cycling routes in the Nene Valley. The Greenway is being developed in phases, some of which are already completed, and others will follow within the next few years. The Greenway will help connect East Northamptonshire's communities to a central route that will run from Wellingborough Railway Station in the south, to Peterborough railway station in the north, and vice-versa. It will link open spaces together with opportunities for informal recreation and alternative means of transport to services and facilities. The project will also provide safe routes for young people who walk and cycle to school. The Greenway is predominantly for walkers and cyclists, and in parts horse riders are welcome where the route is a bridleway

All new planning applications continue to be directed to the requirements of the EMAQN 'Air Quality and Emissions Mitigation - Guidance for Developers'. The technical planning guidance for East Northamptonshire Council that was prepared in conjunction with the EMAQN and has been developed to supplement the National Planning Policy Framework (NPPF). The requirements of EMAQN ensure there is a consistent and thorough approach to the impact the proposed development may have on air quality and recommends mitigation measures to offset any development.

A Joint Strategic Needs Assessment (JSNA) was undertaken by Northamptonshire County Council, which concluded that air pollution is estimated to account for 3.9% of number of years lost due to ill-health, disability or early death (DALYs) in Northamptonshire. An estimated £2,569 per person per year is spent on dealing with NO_2 in the health and social care system. This rises to £7,569 per person per year for PM. A 'plan on a page' was produced, which is shown in Figure 2.1. This prioritises: securing clean growth and innovation that tackle emissions from industry, vehicles, products, combustion and agriculture and support both improvements in air quality and decarbonisation; protecting the

environment by monitoring the impacts of air pollution on natural habitats; reduce nitrogen oxides emissions from transport; reduce $PM_{2.5}$, sulphur dioxide and Non-methane volatile organic compounds emissions at home; reduce emissions of ammonia from farming; and reduce emissions from industry.

Figure 2.1 - County JSNA 'Plan on a Page'

Public Health Plan on a page: Commissioning for Outcomes (Air Quality) — Northamptonshire County Council

Vision:
- Improving air quality to reduce hazardous health impacts that air pollution can have across a person's lifetime, the associated health inequalities, and its burden on NHS and social care costs attributable to air pollution.
- To ensure that local action plan to reduce air pollution remains robust and relevant to make Northamptonshire cleaner and healthier and attractive place to live, visit, work and play.

Priorities: Secure clean growth and innovation that tackle emissions from industry, vehicles, products, combustion and agriculture and support both improvements in air quality and decarbonisation; protecting the environment by monitoring the impacts of air pollution on natural habitats; reduce nitrogen oxides emissions from transport; reduce PM2.5, sulphur dioxide and Non-methane volatile organic compounds emissions at home; reduce emissions of ammonia from farming; and reduce emissions from industry.

Our Approach

Whole system approach: Air quality is just one factor influencing the management of urban environments and travel patterns. Others include: economic development and retail, planning, tourism/ visitor strategies, housing growth, workplace travel needs, access to services including healthcare and access to education.
Achieved through:
- Partnership working (health, local government, roads, planning, workplaces, schools) across the system and for all ages.
- Clear leadership on air quality issues.

Addressing existing problems and preventing new ones:
A number of areas in the county have identified/designated Air Quality Management Areas, where air quality is worse than the recommended legal limits. Further such areas may be created due to future housing growth/development and the associated increase in travel.
Achieved through:
- Targeted efforts in known problem areas.
- Preventative measures to avoid further Air Quality Management Areas being required.

Behavioural Change :
Assist relevant partners to address air quality and increase sustainable travel, including: environmental health teams, planning departments, transport and highways and major organisations /employers.
Achieved through:
- Social marketing.
- Influencing on policy.
- Partnership creation and advocacy.
- Health promotion.
- Northamptonshire Health Protection Committee to monitor air quality issues.

Evidence based approach
There is increasing scientific evidence of the health impacts of air pollution, particularly for vulnerable people such as the elderly, the very young and those with certain health conditions, even at pollution levels within the legal limits. Explore new evidence of effective approaches to reduce and mitigate risks.
Achieved through:
- Joint Strategic Needs Assessment (JSNA).
- Return on Investment (ROI) tools.
- Evaluation.

Our Commitment/Enablers

Reducing inequalities: services which mitigate inequalities and work to overcome variation - by location, approach and policy.

System partnerships: engage and co-produce with partners / stake-holders e.g. NHS, schools, prisons, workplaces and local government.

Continued investment in advocacy and policy, and programmes to increase active travel and use of green spaces.

Engagement and co-production of research aligning with evidence. Evaluation to monitor and assure service delivery and quality.

Embed *Health in all Policies:* a common way of influencing the wider determinants of health: transport policy, economic development policy including industries and agriculture, planning policy, fuel and poverty management and town centre management.

Measures of Success

- All areas meet legal air quality limit values.
- Adoption of sustainability policies and actions among partners.
- Improved Infrastructure for cycling / walking.
- Increased rates of active/sustainable travel.
- Reductions in traffic congestion.
- Improved air quality measures at key sampling sites.
- Increased awareness in organisations and the public.
- Reduced respiratory disease in high traffic areas.

Public Health Northamptonshire

With the merger of the four authorities in 2021, a review was conducted into the air quality reporting conducted within each area to ascertain the strengths and weakness of the respective authorities' LAQM work, so that best practices could be taken forward with North Northamptonshire. This report produced several recommendations, which are to be taken forward through NNC's LAQM reporting. This report is submitted alongside this ASR.

Funding is being pursued to employ two additional officers on a short-term basis, who's roles would be focussed on air quality.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Transport plan to promote walking, cycling and public transport in order to support the modal shift away from the private car.	Policy Guidance and Development Control	Other Policy	2020	2025	North Northamptonshire Council	-	-	-	-	Ongoing	-	Publish a cycle strategy, decrease transport CO_2 emissions	Cycling Strategy has Local Government CO_2 Emissions published on Gov.UK	Source: Corby Borough Council's 'Action on Climate Change' 2020-2025
2	Encourage lower carbon transport alternatives and increase the proportion of low-carbon fuelled vehicles.	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2020	2025	North Northamptonshire Council	-	-	-	-	Ongoing	-	Measure occurrences of charging	2020/21 charging episodes had decreased by 27.5% from 2019/20, which we believe is due to the restrictions imposed by the COVID-19 lockdowns	Source: Corby Borough Council's 'Action on Climate Change' 2020-2025
3	Work with taxi companies and licence holders to consider low carbon vehicles	Promoting Low Emission Transport	Taxi emission incentives	2020	2025	North Northamptonshire Council	-	-	-	-	Ongoing	CO_2/NO_2	Number of Electric vehicles	There are now 6 LEVC Hackney Carriages licenced in Corby. There was previously 9 in 2019, we estimate this has been reduced due to lack of business through COVID-19.	Source: Corby Borough Council's 'Action on Climate Change' 2020-2025
4	Promote low carbon fleet and staff vehicles schemes in the business sector	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	2020	2025	North Northamptonshire Council	-	-	-	-	Ongoing	CO_2/NO_2	Number of Electric/hybrid vehicles	There are now 6 LEVC Hackney Carriages licenced in Corby. There was previously 9 in 2019, we estimate this has been reduced due to lack of business through COVID-19.	Source: Corby Borough Council's 'Action on Climate Change' 2020-2025
5	Measure home energy conservation act requirements as part of statutory Home Energy Conservation Act 1995	Policy Guidance and Development Control	Other Policy	2017	2021	North Northamptonshire Council	-	-	-	-	Ongoing	-	Home energy conservation measures	Report published May 2019 – next report due 2021	Source: Corby Borough Council's HECA Report 2019
6	East Midlands Air Quality Network – Engaged	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	2016	2016	Regional local authorities – environmental health, planning, public health and transport colleagues; Public Health England	-	NO	Funded	< £10k	Completed - Ongoing	Reduced emissions from transport; reduced exposure to air pollution	Attendance at regional meetings. Completion of Work Plan - health improvement, source reduction, exposure reduction	Ongoing – meet twice per year and share information in between meeting dates	-
7	Implement East Midlands Air Quality Planning Guidance; link to other local and regional policies	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	2018	Regional local authorities – environmental health, planning, public health and transport colleagues; Public Health England	-	NO	Funded	< £10k	Ongoing	Reduced emissions from transport; reduced exposure to air pollution	Guidance embedded in local and regional policy	Document has been approved and published by PHE. Local implementation now required. Ongoing discussions with Planners to see how this will be done	COVID-19 has presented issues to implementation timeframes

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
8	Installing Electric Vehicle Charging Points	Promoting Low Emission Transport	Other	2018	2020	Local Authority Environmental Health	OLEZ	NO	Funded	£10k - 50k	Ongoing	Reduced emissions from transport	Number of EV charging points	OLEV application has been approved Procurement completed and installation is underway	
9	Environmental Permitting – Risk Rating Inspections	Environmental Permitting	Introduction/increase of environment charges through permit systems and economic instruments	2016	2017	Local Authority Environmental Health	Permitting Annual Fees	NO	Funded	£10k - 50k	Ongoing	Reduced industrial emissions	Inspection frequency dependant on risk – higher risk premises are inspected more frequently. Penalty in risk rating for contributing to local air quality issues	Implementation ongoing	Staff numbers and competence/skills for higher risk installations
10	Enforcement of Environmental Permit Conditions	Environmental Permitting	Other measure through permit systems and economic instruments	2016	2016	Local Authority Environmental Health	Permitting Annual Fees	NO	Funded	£10k - 50k	Ongoing	Reduced Industrial Emissions	Enforcement of conditions of permits as required	Implementation ongoing	Staff numbers and competence/skills for higher risk installations
11	Planning conditions requiring construction/demolition management plans to include dust suppression AND enforce dust/mud controls where no planning condition exists through legislation	Policy Guidance and Development Control	Other Policy	2016	2016	Local Authority Environmental Health and Planning	-	NO	Funded	< £10k	Ongoing	Improved dust mitigation reducing PM_{10} , $PM_{2.5}$ locally and reducing nuisance complaints	Planning conditions/Interaction with developers in response to complaints or proactive visits	Implementation on- going	Environmental Health is not a statutory consultee so can only recommend conditions
12	Age policy for Taxis	Promoting Low Emission Transport	Taxi licensing conditions	2016	2016	Local Authority Environmental Health	-	NO	Not Funded	< £10k	Completed - Ongoing	Reduced traffic emissions including PM_{10} and $PM_{2.5}$	Number of taxis licensed	Ongoing	Waiting for Government Guidance to be issued that will require more stringent emission controls - EURO 5
13	Health and Wellbeing Officer/Sports Development Officer in Post	Alternatives	Promotion of cycling and walking	2016	2016	North Northamptonshire	-	NO	Funded	£10k - 50k	Ongoing	Reduced emissions from transport; reduced exposure to air pollution	Increased physical activity	Healthy Walks Programme - volunteer lead monthly walk. Promotion of physical activity on website. Supporting One-You PHE Campaign	-
14	VOI Scooter Project	Promoting Low Emission Transport	Public Vehicle Procurement Prioritising uptake of low emission vehicles	-	-	VOI technology	VOI technology	No	Funded	-	Implemented	1.84kg $PM_{2.5}$	-	Total number of rides since launch is approximately 70k.	-
15	East Northamptonshire Greenway Project	Promoting Travel Alternatives	Promotion of cycling	-	-	North Northamptonshire Council	-	No	-	-	Implemented	-	-	Begun to develop walking and cycling routes in the Nene Valley	-
16	Northamptonshire Climate Change Strategy	Policy Guidance and Development Control	Low Emissions Strategy	-	-	North Northamptonshire Council	-	No	-	-	Implemented	-	-	North Northamptonshire Council (NCC)	-
17	Climate Task and Finish Group	Policy Guidance and Development Control	Other policy	-	-	North Northamptonshire Council	-	-	-	-	-	-	-	Group set up by NNC to facilitate actions to improve climate change.	-
18	Joint Strategic Needs Assessment (JSNA)	Policy Guidance and Development Control	Other policy	2020	2021	Northamptonshire County Council	County	No	Funded	Unknown	Ongoing	Exposure to pollutants	'Plan on a Page' outcomes	Completed, recommendations to be followed up	Brings together information from many different sources and partners relating to the population of Northamptonshire

Measure No.	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
19	LAQM Audit & Streamlining Air Quality Processes post-merger	Policy Guidance and Development Control	Other policy	2021	2022	North Northamptonshire Council	Internal	No	Funded	<£10k	Implemented	N/a	Implementing audit recommendations	Completed	Facilitating merger of processes
20	Air Quality Officer post	Policy Guidance and Development Control	Other policy	2020	2023	North Northamptonshire Council	AQ Grant	Yes	Funded	£20-40k	Ongoing	N/a	Officers in post	Funding being pursued	Funding being granted and Availability of staff

2.3 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

North Northamptonshire does not currently monitor for concentrations of $PM_{2.5}$ or PM_{10}. However, the following measures address $PM_{2.5}$:

- Environmental Protection team are consulted and comment on planning applications in respect to potential air quality issues generated by traffic, dust and construction.
- Investigation of nuisance complaints for dust and smoke and encouragement of smokeless fuels.
- As part of the National Carbon Reduction Initiative, Kettering is encouraging the planting to reduce concentrations of $PM_{2.5}$ in certain areas.
- In Kettering, planning conditions are imposed on planning consents requiring the submission and approval of construction/demolition management plans where the development is likely to generate dust near to an existing residential area the scheme includes dust and mud control such as damping down road areas, proactively planning mitigation measures in response to weather forecasts and proactively carrying out site inspections regularly to assess if further mitigation is needed in response to local conditions.

For more information regarding smoke control visit:
https://www.northnorthants.gov.uk/environmental-health/bonfires

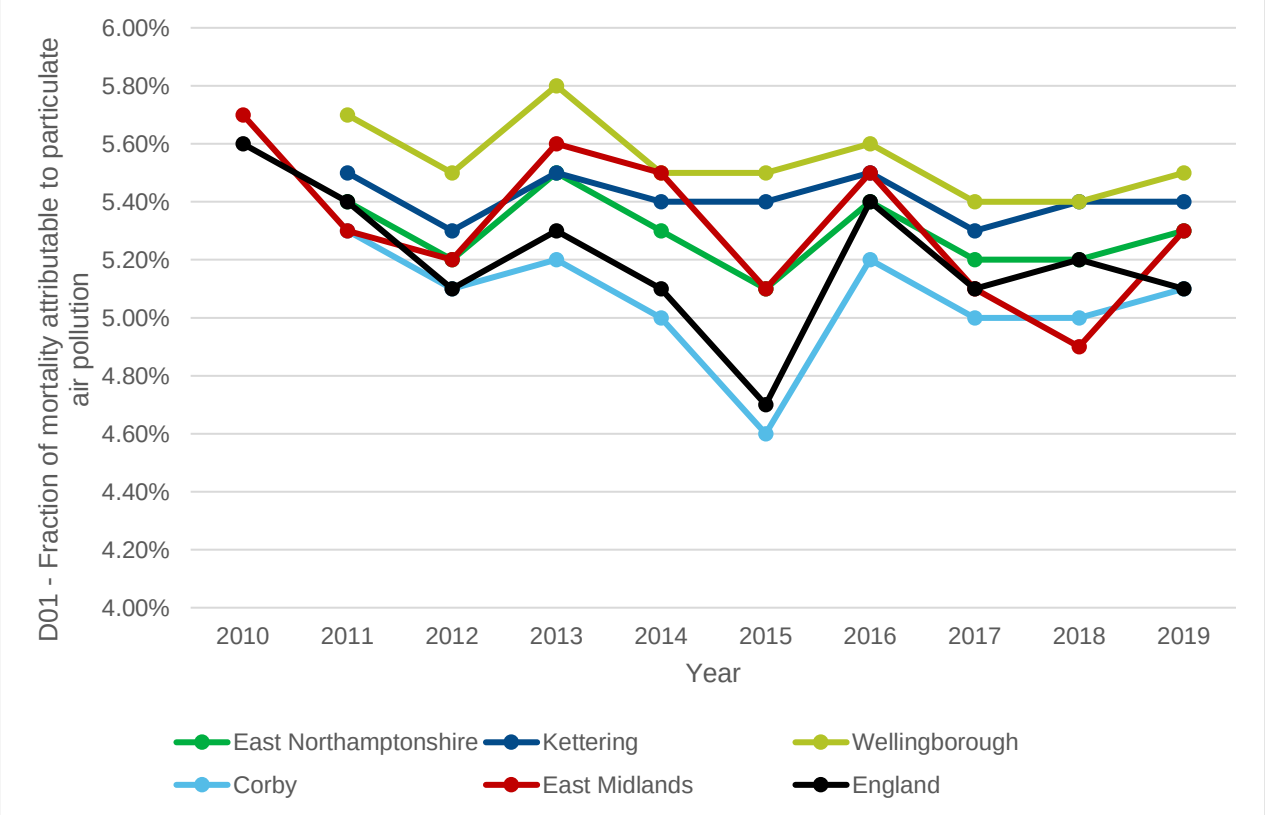
The Public Health Outcomes Framework (PHOF) indicator DO1 – Fraction of mortality attributable to particulate ($PM_{2.5}$) is a useful indicator to determine the impact of $PM_{2.5}$ in a region. As North Northamptonshire is a new area in 2021, there is no DO1 indicator data available yet. However, the trend in values for Corby, Kettering, East Northamptonshire and Wellingborough since 2010 are shown in Figure 2.1. Table 1.1 shows that the 2019 values for North Northamptonshire areas are the same or slightly higher that the average D01 value for England, indicating the fraction of mortality caused by particulate air pollution in North

Northamptonshire is slightly above average. In future years data will be available for North Northamptonshire as a whole.

Table 2.2 – D01; Fraction of mortality attributable to particulate air pollution (old method) for North Northamptonshire areas, East Midlands and England for 2019

Year	East Northamptonshire	Kettering	Wellingborough	Corby	East Midlands	England
2019	5.3%	5.4%	5.5%	5.1%	5.3%	5.1%

Figure 2.2 – D01; Fraction of mortality attributable to particulate air pollution (old method) for North Northamptonshire areas, East Midlands and England between 2010-2019



3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

This section sets out the monitoring undertaken within 2021 by North Northamptonshire and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2017 and 2021 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

North Northamptonshire Council did not undertake any automatic (continuous) monitoring in 2021.

3.1.2 Non-Automatic Monitoring Sites

North Northamptonshire Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 100 sites during 2021. Table A. 1 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A. 2 in Appendix A compares the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring

site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment). For diffusion tubes, the full 2021 dataset of monthly mean values is provided in Appendix B.

During the monitoring period of 2021, no sites recorded annual concentrations above the objective value of 40 µg/m^3. As no sites have monitored concentrations greater than 60 µg/m^3, it is considered unlikely that the 1-hour mean objective was exceeded at any sites within North Northamptonshire.

The highest recorded NO_2 concentration in 2021 was 33.4 µg/m^3, which occurred at Site RW4 in Rothwell. The overall trend between 2017 and 2021 is a decreasing one. However, between 2020 and 2021 the trend changes, with some decreases but also some small increases. On average, recorded NO_2 concentrations increased by 1.4 µg/m^3 between 2020 and 2021, with a maximum increase of 6.2 µg/m^3 and a maximum decrease of 9.3 µg/m^3. As previously mentioned, this is likely due to the recovery of vehicular traffic numbers post COVID-19 lockdowns.

3.2.2 Particulate Matter (PM_{10})

No PM_{10} monitoring was carried out in North Northamptonshire during 2021.

3.2.3 Particulate Matter ($PM_{2.5}$)

No $PM_{2.5}$ montioring was carried out in North Northamptonshire during 2021.

3.2.4 Sulphur Dioxide (SO_2)

No SO_2 montioring was carried out in North Northamptonshire during 2021.

Appendix A: Monitoring Results

Table A. 1 - Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
C1	Elizabeth Street	Roadside	488424	288706	NO_2	No	22.0	1.0	No	3.4
C2	Occupation Road	Roadside	488354	289329	NO_2	No	0.0	11.0	No	3.1
C3	High Street, Old Village	Roadside	489380	288833	NO_2	No	0.0	6.0	No	3.6
C4	South Rd	Roadside	489399	288605	NO_2	No	7.0	1.0	No	2.0
C5	Weldon Road	Roadside	489997	288821	NO_2	No	0.0	15.0	No	3.1
C6	Little Stanion/A43/A6116 Roundabout	Roadside	490981	287322	NO_2	No	180.0	3.0	No	3.3
C7	Priors Hall/A43 Roundabout	Roadside	492992	289919	NO_2	No	168.0	1.0	No	3.3
C8	Kirby Road, Gretton	Urban Background	490063	294032	NO_2	No	0.0	15.0	No	3.5
C9	Berryfield Road, Cottingham	Urban Background	484133	290194	NO_2	No	0.0	13.0	No	3.4
C10	Danesholme Road/A6003	Urban Background	485788	287272	NO_2	No	89.0	5.6	No	3.3
C11	Oldland Road	Roadside	487675	287373	NO_2	No	68.0	2.3	No	3.4
C12	Beanfield Avenue	Roadside	487039	288292	NO_2	No	5.0	2.0	No	3.4
C13	Lakeside Health Centre	Roadside	487546	288816	NO_2	No	317.0	1.5	No	3.4
C14	George Street	Roadside	488135	288494	NO_2	No	84.0	1.0	No	3.2
C15	Constable Road	Roadside	488180	288325	NO_2	No	9.0	7.0	No	-
C16	Shannon Court	Roadside	488122	287817	NO_2	No	0.0	10.0	No	3.4
C17	Gainsborough Rd	Roadside	488387	288122	NO_2	No	12.0	1.0	No	3.2
KT10	Newlands Street	Roadside	486783	278948	NO_2	No	2.7	2.7	No	2.4
KT11	London Road/Bowling Green Road	Roadside	486887	278246	NO_2	No	2.6	2.3	No	2.4
KT12	Victoria Street	Roadside	486974	278895	NO_2	No	1.5	1.7	No	2.7
KT13	London Road cemetery	Urban background	486956	278338	NO_2	No	2.0	69.9	No	2.5
KT14	Eden Street/Eskdail St	Roadside	486925	279028	NO_2	No	1.6	1.9	No	2.4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
KT15	Montagu St o/s Pauls	Roadside	486951	278904	NO_2	No	0.5	3.1	No	2.3
KT16	Montagu Street o/sBostons Diner	Roadside	486869	278877	NO_2	No	0.4	1.3	No	2.3
KT18	Stamford Road o/s J. Witness	Roadside	487049	278942	NO_2	No	2.6	3.2	No	2.4
KT20	Bowling Green Road o/s no 9	Roadside	486793	278254	NO_2	No	1.3	10.7	No	2.4
KT21	London Road/Southlands	Roadside	486954	278099	NO_2	No	0.5	3.9	No	2.4
KT22	Woodcroft Way by flats	Roadside	487406	277653	NO_2	No	2.0	5.7	No	2.1
KT23	Bowling Green Road o/s Council offices	Roadside	486787	278276	NO_2	No	0.6	7.3	No	2.4
KT24	Sheep Street o/s HSS Hire shop	Roadside	486648	278233	NO_2	No	3.4	6.4	No	2.4
KT25	o/s 47 Bowling Green Road	Roadside	486718	278236	NO_2	No	1.7	3.7	No	2.4
KT26	112 London Road	Roadside	487146	277860	NO_2	No	2.8	4.1	No	2.4
KT28	London Rd/St Mary's Road Junction	Roadside	486929	278204	NO_2	No	1.4	18.4	No	2.4
KT29	opp 1 St Mary's Road	Roadside	486972	278223	NO_2	No	1.0	5.9	No	2.3
KT31	London Rd o/s pocket park	Roadside	486910	278240	NO_2	No	2.9	42.3	No	2.4
KT32	London Rd o/s cemetery	Roadside	486890	278322	NO_2	No	2.0	14.1	No	2.4
KT33	o/s 15 London Road	Roadside	486846	278497	NO_2	No	0.4	6.1	No	2.4
KT34	Horsemarket Bus Stop	Roadside	486786	278599	NO_2	No	0.8	19.5	No	2.3
KT35	Silver Street opp Café Culture	Roadside	486778	278779	NO_2	No	0.8	4.0	No	2.3
KT36	O/S Simpson & Partners	Roadside	486799	278850	NO_2	No	2.0	5.6	No	2.4
KT38	O/S 157 St Marys Rd	Roadside	487718	278679	NO_2	No	1.5	6.2	No	2.2
KT39	O/S 144 Windmill Ave	Roadside	487751	278505	NO_2	No	2.3	19.5	No	2.3
KT40	O/S 141 Windmill Ave	Roadside	487725	278388	NO_2	No	0.8	11.3	No	2.2
KT41	Windmill Ave Junc Barton Rd	Roadside	487893	277471	NO_2	No	1.7	18.4	No	2.1
KT43	Lower St/junc Northfield Ave	Roadside	486153	278930	NO_2	No	3.2	8.0	No	2.4

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
KT44	O/S St Edwards Church London Rd	Roadside	486894	278216	NO_2	No	2.3	5.0	No	2.5
KT45	Pytchley Road o/s No 6	Roadside	487563	277433	NO_2	No	3.0	24.0	No	2.5
KT46	Northfield Av opp Carpet Right	Roadside	486161	279067	NO_2	No	1.2	7.1	No	2.6
KT47	Northampton Road/Drill Hall Court flats	Roadside	486398	278274	NO_2	No	4.0	1.3	No	2.5
KT48	Hawthorn Road o/s School	Roadside	486871	277840	NO_2	No	2.4	3.0	No	2.3
BL1	Higham Rd junc Finedon Rd	Roadside	490048	274399	NO_2	No	5.4	2.0	No	2.4
RW1	Opposite Old Bank	Roadside	481465	281208	NO_2	No	1.6	2.1	No	2.3
RW2	Post Office High St	Roadside	481550	281233	NO_2	No	1.8	1.8	No	2.4
RW3	O/S Wheelwright House Squires Hill	Roadside	481498	281096	NO_2	No	2.8	1.5	No	2.3
RW4	O/S ST Flooring	Façade	481481	281149	NO_2	No	2.1	0.3	No	2.4
RW5	O/S Something Special Bridge St	Roadside	481515	281217	NO_2	No	0.5	2.5	No	2.3
ENC 1	Oakleas Rise (no.37)	Urban Background	499867	278066	NO_2	No	1.0	1.5	No	3.0
ENC 2	Traffic light on bridge, Bridge St (no.34)	Roadside	499161	278629	NO_2	No	3.0	1.7	No	2.5
ENC 3	Huntingdon Rd	Roadside	500208	278510	NO_2	No	18.0	3.0	No	2.8
ENC 4	Market Rd, corner of Grove Road (no.32)	Roadside	499573	278515	NO_2	No	1.0	1.5	No	2.7
ENC 5	Junction Way (no.36)	Urban Background	499792	277873	NO_2	No	N/A	1.6	No	2.5
ENC 6	Brick Kiln Road	Roadside	499119	273561	NO_2	No	14.0	2.0	No	2.3
ENC 7	Wheelwright Close (no. 8)	Urban Background	500193	273219	NO_2	No	5.0	1.0	No	2.9
ENC 8	London Road adj to 60 Titty Ho	Roadside	499103	272329	NO_2	No	2.0	2.4	No	2.5
ENC 9	High Street	Roadside	494525	270591	NO_2	No	5.0	1.6	No	2.5
ENC 10	Kestrel Close (opp no.23)	Urban Background	496068	269885	NO_2	No	5.0	37.0	No	2.6
ENC 11	Elizabeth Way (no.34)	Roadside	496320	269420	NO_2	No	8.0	1.6	No	3.0
ENC 12	High St	Roadside	495920	268317	NO_2	No	6.0	1.3	No	2.9
ENC 13	High St outside 18/20	Kerbside	495962	268388	NO_2	No	6.0	0.9	No	2.7

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) [1]	Distance to kerb of nearest road (m) [2]	Tube Co-located with a Continuous Analyser?	Tube Height (m)
ENC 14	Higham Rd (no.16)/Washbrook Rd junction	Roadside	495587	267402	NO_2	No	7.0	1.9	No	2.5
ENC 15	Beaconsfield Terrace	Roadside	495711	267120	NO_2	No	3.0	1.6	No	2.6
ENC 16	Newton Road (no.42)	Roadside	496039	266643	NO_2	No	7.0	1.8	No	2.4
ENC 17	Newton Road (no.18)	Roadside	495924	266621	NO_2	No	1.0	1.5	No	2.7
ENC 18	Park Place (nr entrance)	Roadside	495883	266560	NO_2	No	3.0	1.5	No	2.9
ENC 19	Newton Rd	Roadside	495849	266613	NO_2	No	2.0	1.3	No	2.9
ENC 20	Newton Rd, over A6 (Outside Lodge Farm)	Roadside	497127	266143	NO_2	No	13.0	2.3	No	2.4
ENC 21	A6/Spire Way Roundabout	Roadside	496682	267872	NO_2	No	N/A	3.3	No	2.2
ENC 22	Hayden Road	Urban Background	496772	266967	NO_2	No	10.0	1.6	No	2.6
ENC 23	Farnham Drive (no.64)	Roadside	494895	265669	NO_2	No	12.0	2.1	No	2.8
ENC 24	Washbrook Road crossroads (217 Wellingborough Road)	Roadside	494963	266988	NO_2	No	3.0	1.7	No	2.5
ENC 25	Washbrook Road crossroads (218 Wellingobrough Rd)	Roadside	494936	267014	NO_2	No	5.0	1.6	No	2.6
ENC 26	Ditchford Road	Roadside	493108	267347	NO_2	No	N/A	1.5	No	2.2
ENC 27	Wentworth Drive (opp no.19)	Roadside	503209	289307	NO_2	No	10.0	1.5	No	2.6
ENC 28	North St (no.58)	Roadside	504272	288433	NO_2	No	3.0	1.8	No	2.8
ENC 29	St Osyths Lane	Roadside	504222	288110	NO_2	No	1.3	1.1	No	2.8
ENC 30	5 Laamas Cottages	Roadside	497862	289284	NO_2	No	7.0	1.3	No	2.8
ENC 31	Top Road	Roadside	501961	290525	NO_2	No	15.0	1.5	No	2.1
ENC 32	Woodfield, Collyweston	Urban Background	499960	302429	NO_2	No	6.0	1.9	No	2.4
ENC 33	Outside Stables 123 Northampton Road	Roadside	494755	267911	NO_2	No	7.0	0.8	No	2.7
W1	Silver Street	Urban Centre	489131	267820	NO_2	No	0.0	2.9	No	2.9
W2	Alma Street	Kerbside	489382	266144	NO_2	No	0.3	1.7	No	2.5
W3	Northampton Road	Roadside	487831	267169	NO_2	No	2.4	3.8	No	2.6
W4	Finedon Road	Kerbside	489868	268204	NO_2	No	2.3	1.5	No	2.4
W5	Butlin Court	Roadside	49033	266433	NO_2	No	0.5	1.5	No	2.6

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
W6	Mill Road	Urban Background	490002	268946	NO_2	No	0.0	3.1	No	2.6
W7	Ultra Close	Roadside	490351	267400	NO_2	No	4.5	2.8	No	2.9
W8	Kettering Road	Roadside	488431	274049	NO_2	No	0.0	3.4	No	2.5
W9	Market Street	Urban Background	489226	267829	NO_2	No	N/A	3.4	No	2.9
W10	Irthlingborough Road	Roadside	429372	271928	NO_2	No	2.3	1.5	No	2.4
W11	Broad Green	Roadside	488788	268215	NO_2	No	-	2.3	No	2.7

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A. 2 - Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2021 (%) (2)	2017	2018	2019	2020	2021
C1	488424	288706	Roadside	91.7	91.7	26.4	33.8	21.6	17.6	16.8
C2	488354	289329	Roadside	91.7	91.7	15	18.3	15.5	13.1	12.3
C3	489380	288833	Roadside	91.7	91.7	19.5	20.6	20.2	16.4	16.9
C4	489399	288605	Roadside	91.7	91.7	22.3	25.9	24.6	24.3	15.1
C5	489997	288821	Roadside	91.7	91.7	24.5	26.2	24.3	20.3	19.8
C6	490981	287322	Roadside	91.7	91.7	-	-	20.9	17.6	17.8
C7	492992	289919	Roadside	91.7	91.7	-	-	17.9	16.1	16.7
C8	490063	294032	Urban Background	91.7	91.7	11.6	12.6	14.5	9.8	9.4
C9	484133	290194	Urban Background	91.7	91.7	9.5	9.6	9.3	6.7	6.6
C10	485788	287272	Urban Background	91.7	91.7	-	-	18.4	19.2	15.8
C11	487675	287373	Roadside	91.7	91.7	-	-	25.5	21.9	26.9
C12	487039	288292	Roadside	91.7	91.7	-	-	17.2	14.3	14.7
C13	487546	288816	Roadside	91.7	91.7	-	-	18.6	16.7	16.4
C14	488135	288494	Roadside	91.7	91.7	25.8	31.9	28.7	22	24.4
C15	488180	288325	Roadside	91.7	91.7	15.2	17.8	15.3	22.1	23.9
C16	488122	287817	Roadside	91.7	91.7	15	20	17.5	14.1	14.2
C17	488387	288122	Roadside	91.7	91.7	22.6	22.6	20.9	16	16.4
KT10	486783	278948	Roadside	92.3	92.3	26.5	28.1	24.4	18	20.4
KT11	486887	278246	Roadside	100.0	100.0	**40.2**	38.3	37.3	26.9	30.9
KT12	486974	278895	Roadside	100.0	100.0	31.2	26.6	27.3	19.9	23.3
KT13	486956	278338	Urban background	100.0	100.0	18.4	15.6	15.2	11.4	13.2
KT14	486925	279028	Roadside	75.0	75.0	-	21.8	26.1	20.7	22.8
KT15	486951	278904	Roadside	100.0	100.0	-	28	30	22.1	24.8
KT16	486869	278877	Roadside	100.0	100.0	-	29.4	30	23.4	26.6
KT18	487049	278942	Roadside	100.0	100.0	-	27.3	29.6	22	25.3
KT20	486793	278254	Roadside	100.0	100.0	-	38	35	26.4	29.8
KT21	486954	278099	Roadside	100.0	100.0	-	35.8	32.9	23.9	28.6
KT22	487406	277653	Roadside	100.0	100.0	-	22.7	22	15.3	17.9
KT23	486787	278276	Roadside	100.0	100.0	-	-	34.1	23.9	30.1
KT24	486648	278233	Roadside	82.7	82.7	-	-	25.3	18.8	22.2
KT25	486718	278236	Roadside	100.0	100.0	-	-	29.9	21.9	25.6
KT26	487146	277860	Roadside	100.0	100.0	-	-	26.3	20	22.9
KT28	486929	278204	Roadside	100.0	100.0	-	-	30.4	20.7	24.6
KT29	486972	278223	Roadside	100.0	100.0	-	-	25.7	18.6	22.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2021 (%) [2]	2017	2018	2019	2020	2021
KT31	486910	278240	Roadside	92.3	92.3	-	-	28.3	22.5	24.6
KT32	486890	278322	Roadside	92.3	92.3	-	-	29.1	22.6	25.9
KT33	486846	278497	Roadside	92.3	92.3	-	-	25.1	18.9	22.3
KT34	486786	278599	Roadside	100.0	100.0	-	-	28.8	18.9	22.7
KT35	486778	278779	Roadside	100.0	100.0	-	-	30.2	22.2	25.0
KT36	486799	278850	Roadside	100.0	100.0	-	-	28.6	21.3	23.4
KT38	487718	278679	Roadside	100.0	100.0	-	-	28.5	18.9	22.6
KT39	487751	278505	Roadside	100.0	100.0	-	-	24.6	17.9	19.3
KT40	487725	278388	Roadside	100.0	100.0	-	-	25.8	17.7	21.7
KT41	487893	277471	Roadside	42.3	42.3	-	-	39.5	25.4	20.5
KT43	486153	278930	Roadside	75.0	75.0	-	-	-	23.3	23.9
KT44	486894	278216	Roadside	100.0	100.0	-	-	-	24.3	23.6
KT45	487563	277433	Roadside	100.0	100.0	-	-	-	22.9	21.1
KT46	486161	279067	Roadside	100.0	100.0	-	-	-	24.7	23.2
KT47	486398	278274	Roadside	75.0	75.0	-	-	-	26.5	26.8
KT48	486871	277840	Roadside	100.0	100.0	-	-	-	16.5	14.6
BL1	490048	274399	Roadside	100.0	100.0	-	-	-	16.3	15.4
RW1	481465	281208	Roadside	100.0	100.0	38.5	34.8	32.6	21.7	26.1
RW2	481550	281233	Roadside	100.0	100.0	26.9	29.9	28.5	21.3	25.8
RW3	481498	281096	Roadside	100.0	100.0	-	-	28.2	18.4	21.5
RW4	481481	281149	Roadside	100.0	100.0	-	-	**42**	28.8	33.4
RW5	481515	281217	Roadside	100.0	100.0	-	-	29.9	19.8	22.3
ENC 1	499867	278066	Urban Background	100.0	100.0	19.7	17.5	16.3	12.3	12.9
ENC 2	499161	278629	Roadside	100.0	100.0	22.6	22.2	20.8	14.5	14.9
ENC 3	500208	278510	Roadside	100.0	100.0	24.1	20.8	21.8	16.0	18.4
ENC 4	499573	278515	Roadside	100.0	100.0	19.4	17.1	16.9	11.4	12.0
ENC 5	499792	277873	Urban Background	100.0	100.0	-	19.7	20.2	14.0	15.0
ENC 6	499119	273561	Roadside	100.0	100.0	28.8	29.8	29.8	19.2	23.7
ENC 7	500193	273219	Urban Background	100.0	100.0	15.8	13.5	13.2	12.1	9.8
ENC 8	499103	272329	Roadside	100.0	100.0	-	16.8	16.0	12.1	13.5
ENC 9	494525	270591	Roadside	100.0	100.0	22.4	20.3	20.1	14.9	15.8
ENC 10	496068	269885	Urban Background	100.0	100.0	21.7	21.4	19.9	14.3	15.6
ENC 11	496320	269420	Roadside	100.0	100.0	19.7	18.3	18.1	13.0	13.6
ENC 12	495920	268317	Roadside	100.0	100.0	35.7	32.8	32.1	24.4	25.3
ENC 13	495962	268388	Kerbside	100.0	100.0	-	36.4	36.3	26.4	26.6
ENC 14	495587	267402	Roadside	100.0	100.0	32.2	33.3	32.3	23.7	25.6

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2021 (%) [2]	2017	2018	2019	2020	2021
ENC 15	495711	267120	Roadside	90.4	90.4	28.2	28.0	26.1	20.9	23.6
ENC 16	496039	266643	Roadside	100.0	100.0	25.3	22.1	20.6	15.1	16.1
ENC 17	495924	266621	Roadside	90.4	90.4	37.1	33.4	32.6	26.0	28.0
ENC 18	495883	266560	Roadside	100.0	100.0	19.7	16.6	17.9	11.9	12.9
ENC 19	495849	266613	Roadside	100.0	100.0	33.9	33.2	29.9	24.1	25.7
ENC 20	497127	266143	Roadside	100.0	100.0	17.4	15.7	16.1	11.5	11.0
ENC 21	496682	267872	Roadside	90.4	90.4	-	23.2	21.4	16.3	18.0
ENC 22	496772	266967	Urban Background	100.0	100.0	-	16.6	16.6	12.0	12.4
ENC 23	494895	265669	Roadside	100.0	100.0	17.1	15.5	14.8	9.8	11.0
ENC 24	494963	266988	Roadside	100.0	100.0	-	36.8	36.8	26.9	29.7
ENC 25	494936	267014	Roadside	100.0	100.0	36.3	34.6	32.3	24.4	27.1
ENC 26	493108	267347	Roadside	100.0	100.0	-	24.0	21.0	15.6	17.3
ENC 27	503209	289307	Roadside	100.0	100.0	14.0	11.2	10.9	7.6	7.7
ENC 28	504272	288433	Roadside	100.0	100.0	23.5	21.4	19.5	13.5	15.0
ENC 29	504222	288110	Roadside	100.0	100.0	-	21.2	17.3	12.2	12.6
ENC 30	497862	289284	Roadside	100.0	100.0	-	13.3	11.8	9.1	9.5
ENC 31	501961	290525	Roadside	100.0	100.0	-	9.9	10.0	6.9	7.1
ENC 32	499960	302429	Urban Background	100.0	100.0	14.4	11.5	10.7	8.2	8.2
ENC 33	494755	267911	Roadside	92.3	92.3	-	-	20.1	15.9	19.0
W1	489131	267820	Urban Centre	92.3	92.3	**41.4**	35.8	42.3	30.2	32.2
W2	489382	266144	Kerbside	92.3	92.3	29.3	22.7	28.6	20.5	22.9
W3	487831	267169	Roadside	92.3	92.3	28.4	22.8	25.8	18.8	20.5
W4	489868	268204	Kerbside	92.3	92.3	24.8	18.9	25.2	16.1	16.0
W5	49033	266433	Roadside	92.3	92.3	24.4	20.2	21.4	15.9	16.5
W6	490002	268946	Urban Background	92.3	92.3	19.9	15.7	18.7	13.8	14.0
W7	490351	267400	Roadside	92.3	92.3	30.0	25.1	27.8	20.6	22.0
W8	488431	274049	Roadside	92.3	92.3	25.9	21.6	24.2	17.0	17.0
W9	489226	267829	Urban Background	92.3	92.3	24.9	21.0	23.3	15.8	17.0
W10	429372	271928	Roadside	92.3	92.3	31.2	25.6	31.6	21.1	24.0
W11	488788	268215	Roadside	92.3	92.3	30.8	24.3	29.8	21.4	24.3

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16.**

☒ **Diffusion tube data has been bias adjusted.**

☒ **Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction.**

Notes:

The annual mean concentrations are presented as µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure A. 1 – Trends in Annual Mean NO_2 Concentrations in Corby (1)

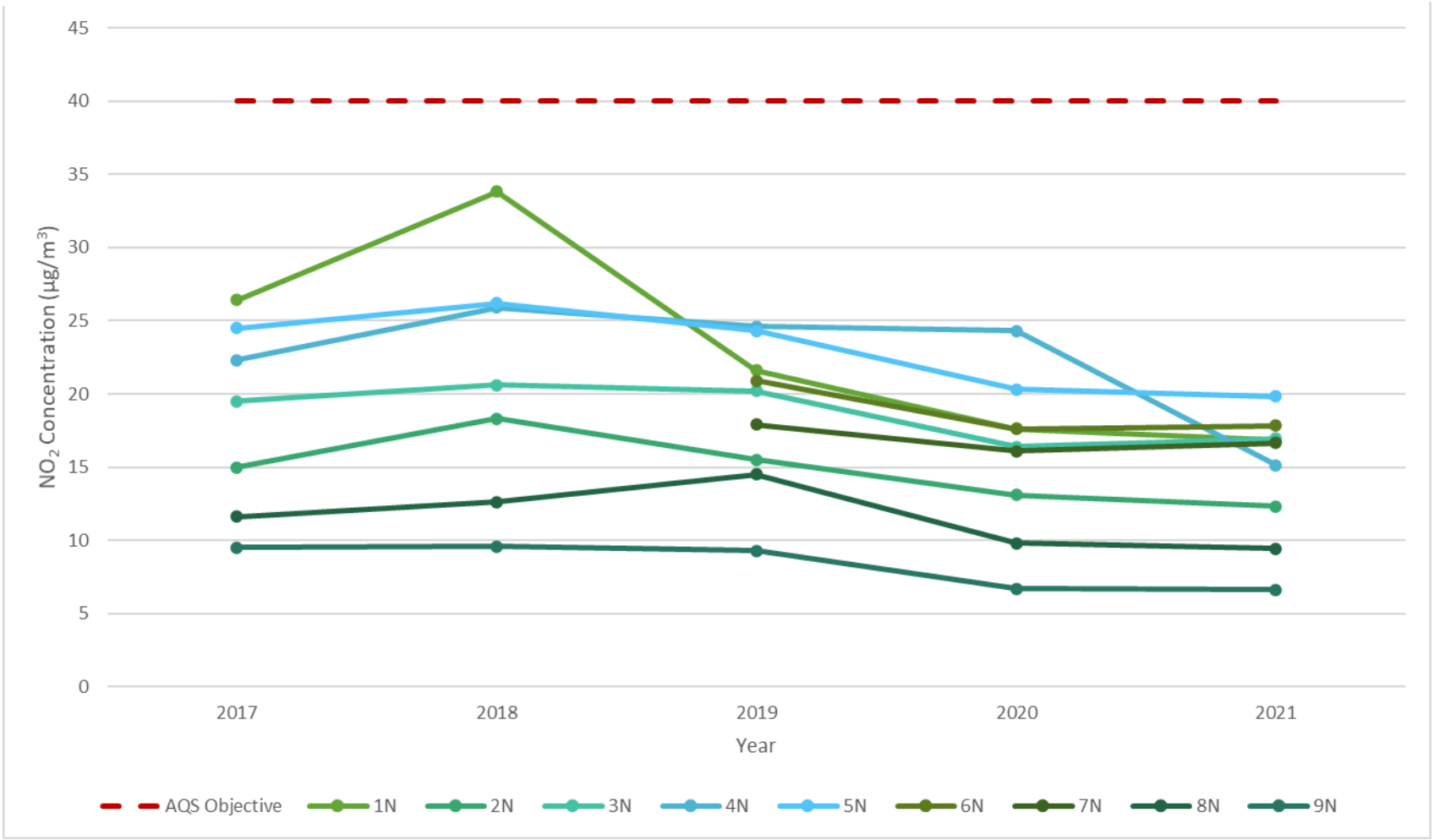


Figure A. 2 – Trends in Annual Mean NO_2 Concentrations in Corby (2)

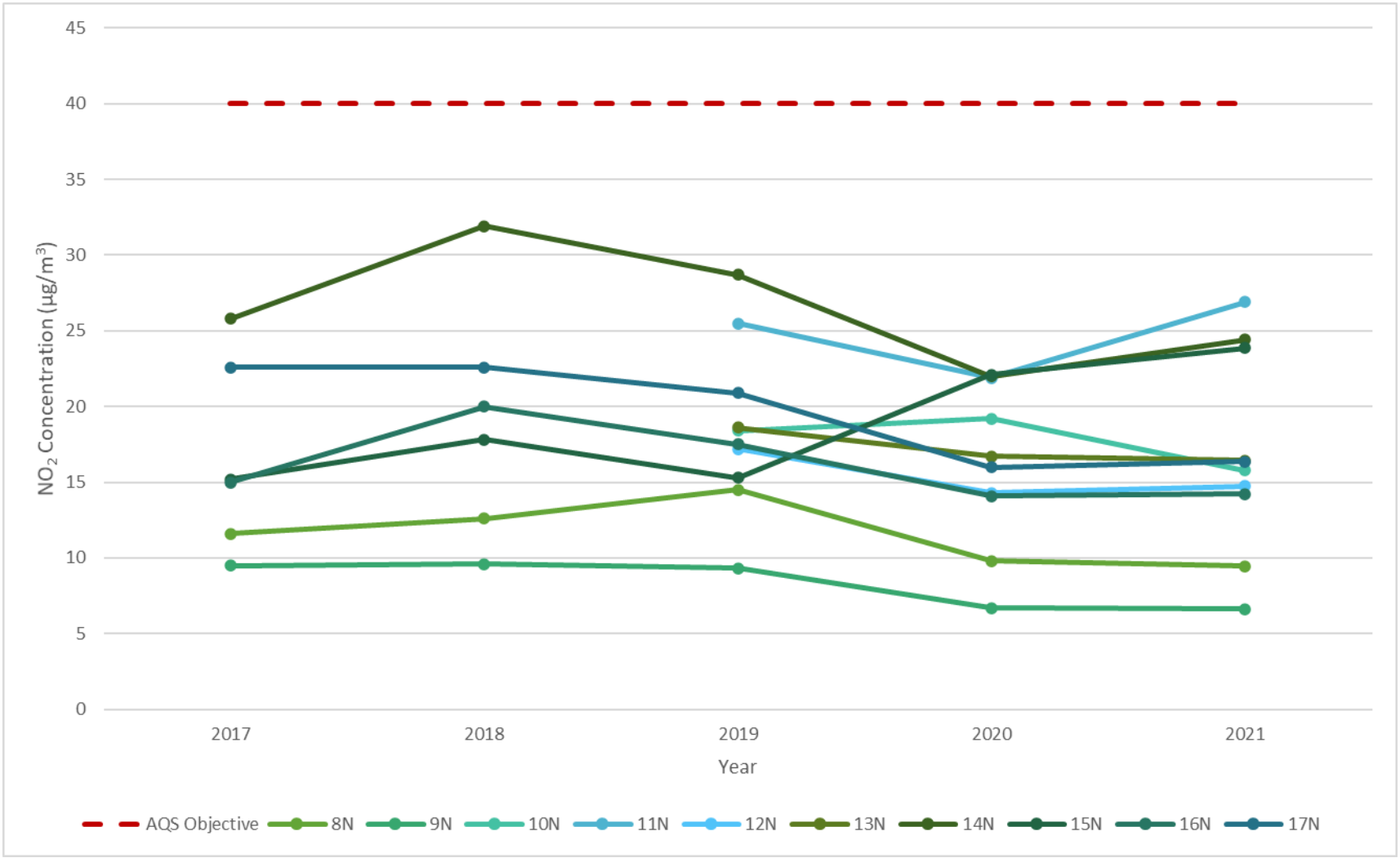


Figure A. 3 – Trends in Annual Mean NO_2 Concentrations in Kettering (1)

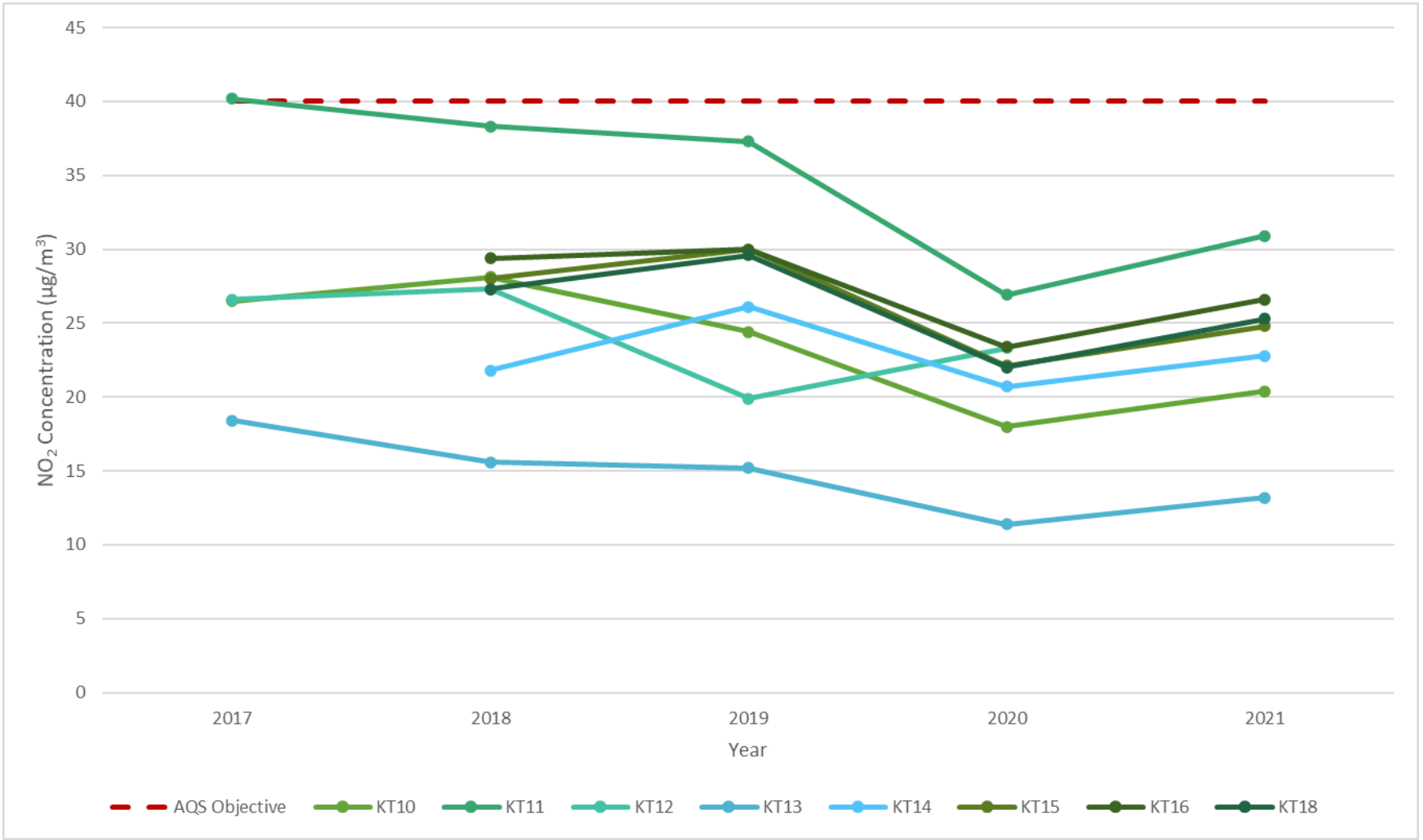


Figure A. 4 – Trends in Annual Mean NO_2 Concentrations in Kettering (2)

Figure A. 5 – Trends in Annual Mean NO_2 Concentrations in Kettering (3)

Figure A. 6 – Trends in Annual Mean NO_2 Concentrations in Kettering (4)

Figure A. 7 – Trends in Annual Mean NO_2 Concentrations in Burton Latimer and Rothwell

Figure A. 8 – Trends in Annual Mean NO_2 Concentrations in East Northamptonshire (1)

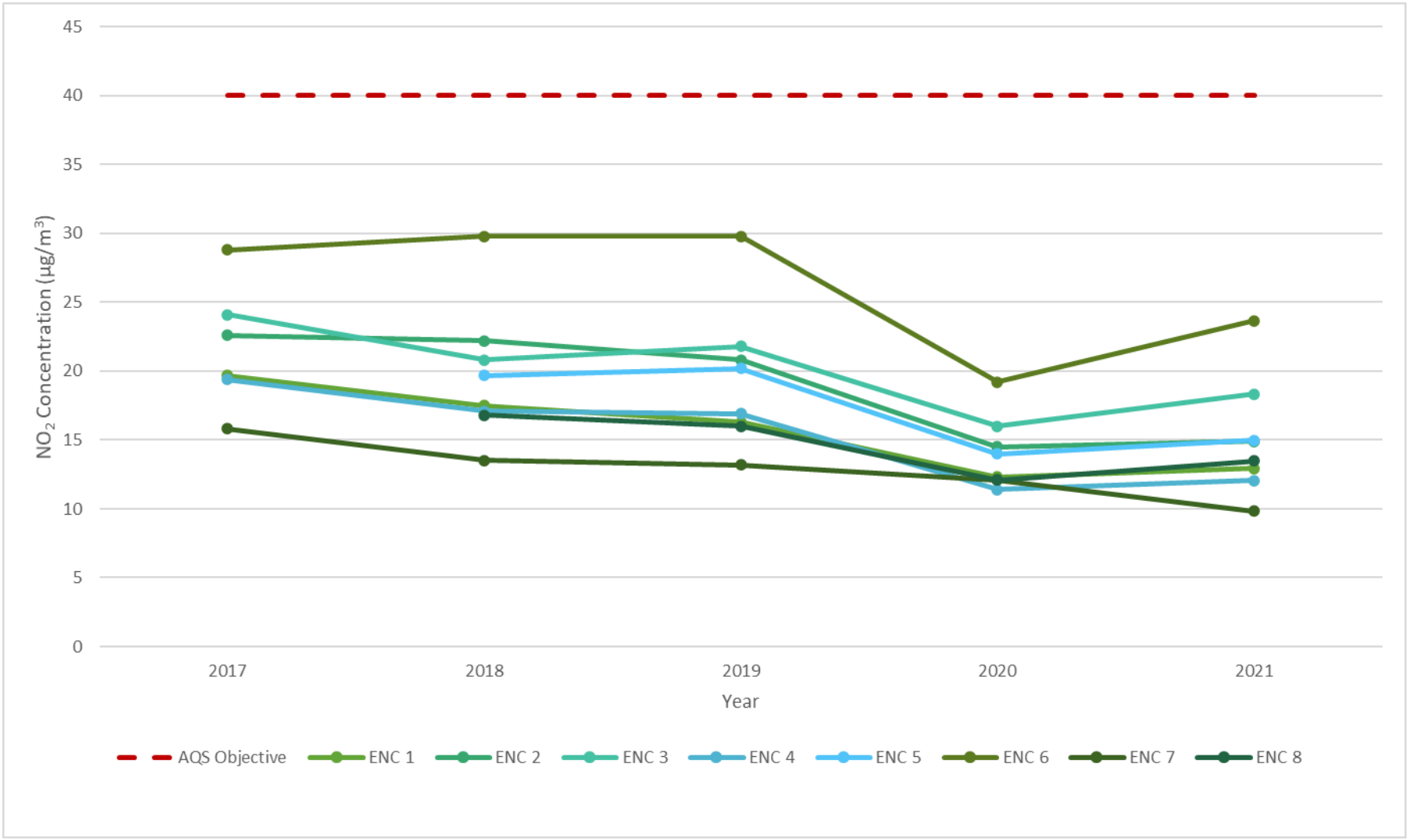


Figure A. 9 – Trends in Annual Mean NO_2 Concentrations in East Northamptonshire (2)

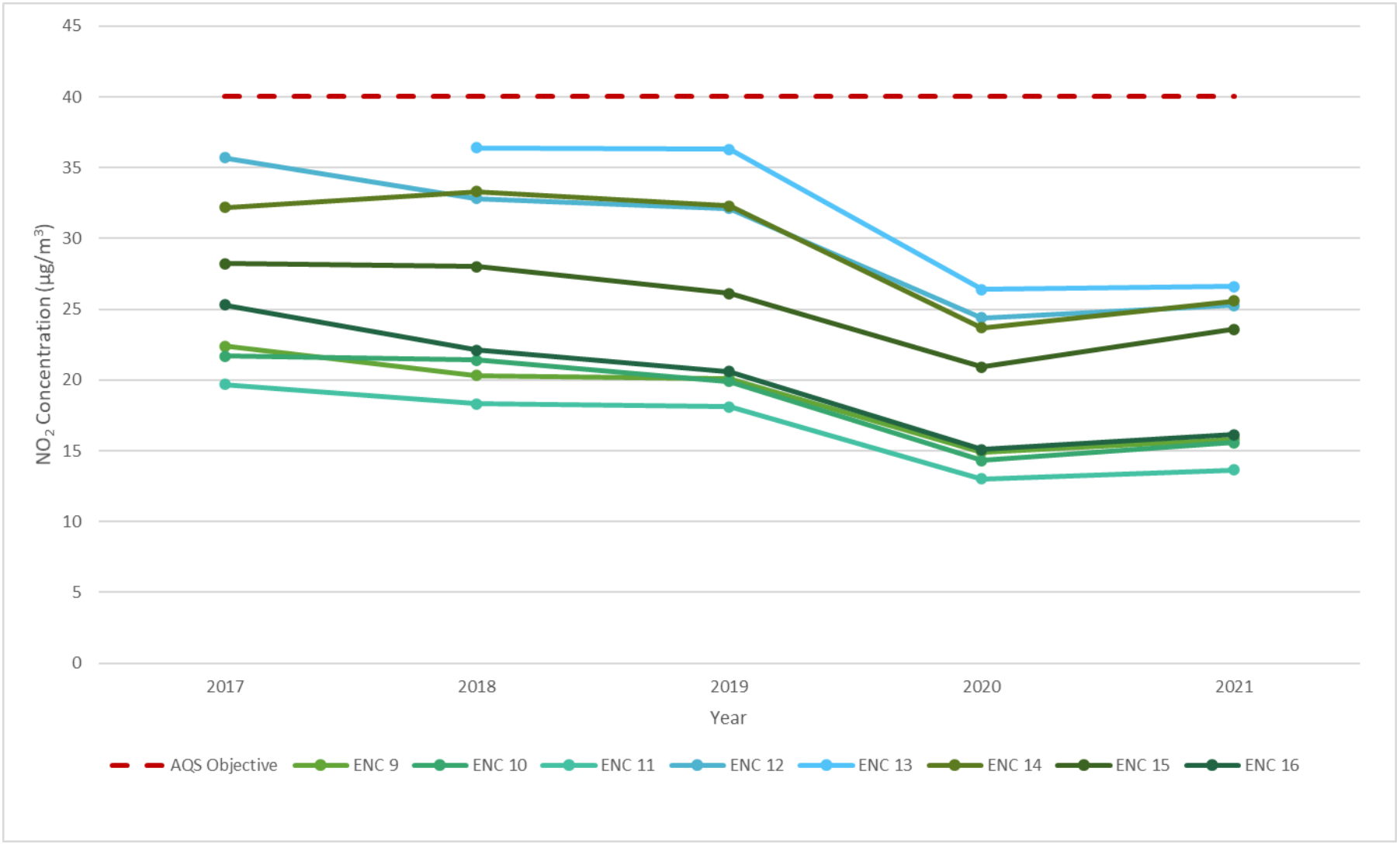


Figure A. 10 – Trends in Annual Mean NO_2 Concentrations in East Northamptonshire (3)

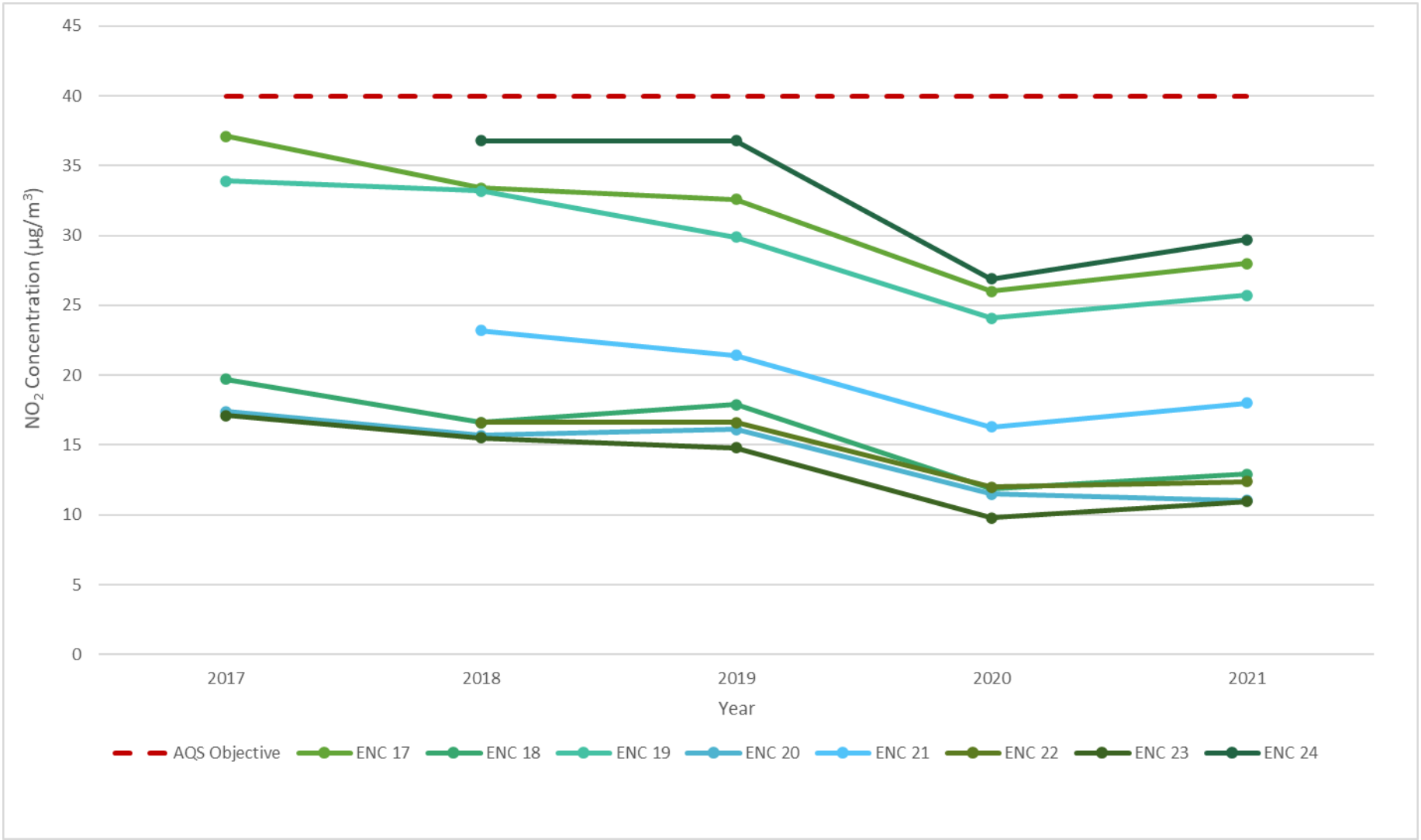


Figure A. 11 – Trends in Annual Mean NO_2 Concentrations in East Northamptonshire (4)

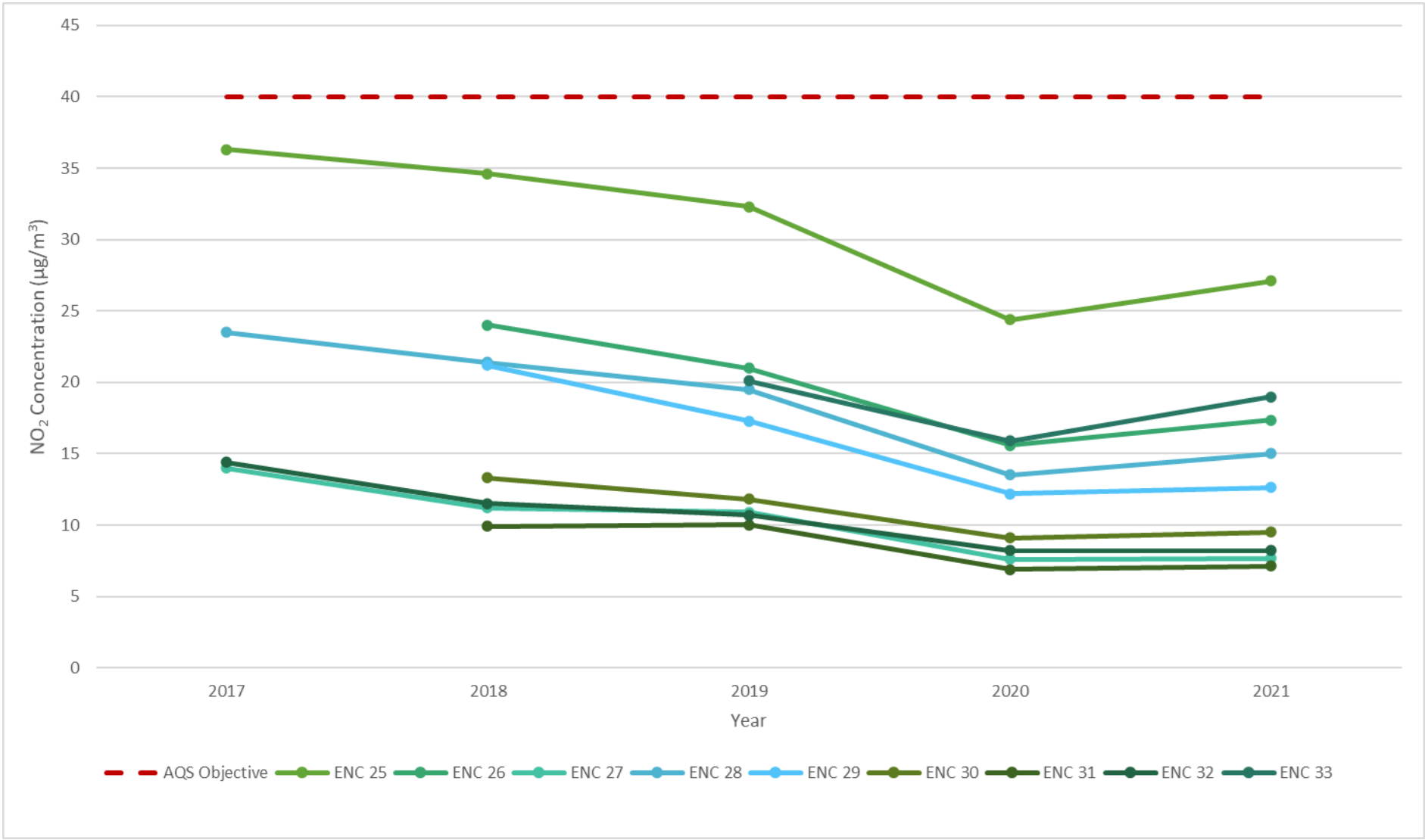
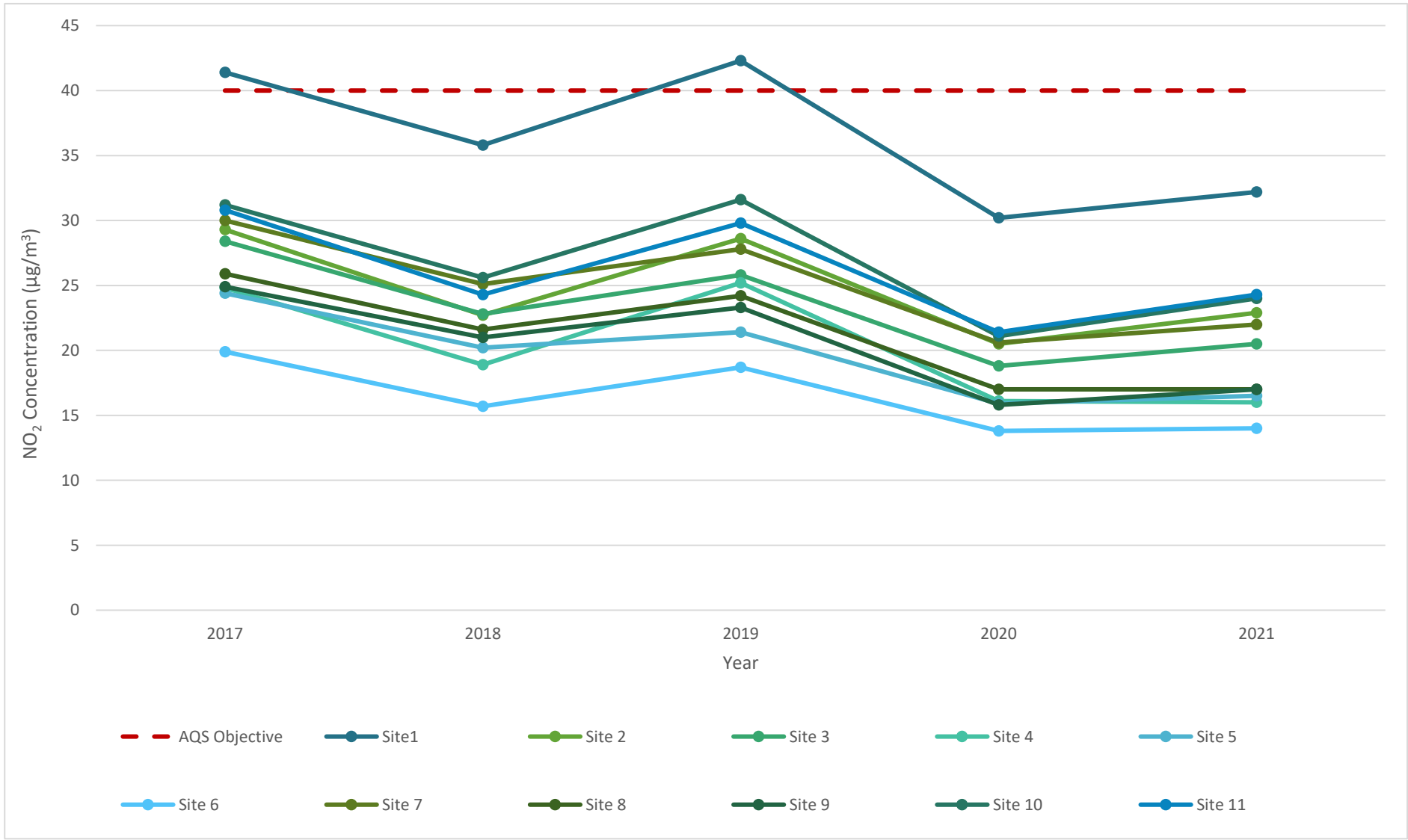


Figure A. 12 – Trends in Annual Mean NO_2 Concentrations in Wellingborough (1)



Appendix B: Full Monthly Diffusion Tube Results for 2021

Table B.1 – NO_2 2021 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Comment
C1	488424	288706	27.0	22.1	19.8	16.5	16.6	16.2	16.7	9.9	missing	25.0	27.0	26.0	20.1	16.8	
C2	488354	289329	20.0	18.5	13.1	13.7	12.4	12.5	12.7	8.0	missing	17.5	16.3	17.7	14.7	12.3	
C3	489380	288833	28.4	24.2	19.1	20.2	16.5	16.7	17.7	8.7	missing	23.4	23.4	24.1	20.2	16.9	
C4	489399	288605	27.4	24.2	17.0	16.3	13.5	13.5	13.9	9.1	missing	23.3	21.2	19.9	18.0	15.1	
C5	489997	288821	34.2	24.7	22.9	22.8	20.5	18.9	19.6	9.8	missing	30.5	30.5	26.2	23.6	19.8	
C6	490981	287322	27.1	26.2	20.7	22.3	17.9	20.2	19.3	9.9	missing	22.9	22.6	24.4	21.2	17.8	
C7	492992	289919	26.7	20.5	17.5	17.5	17.8	13.8	16.4	9.4	missing	26.3	23.4	30.9	19.8	16.7	
C8	490063	294032	16.0	13.7	11.0	9.3	7.1	6.4	5.8	5.1	missing	12.2	13.6	25.1	11.2	9.4	
C9	484133	290194	13.7	9.1	7.5	6.3	4.5	5.1	5.2	4.6	missing	9.2	11.2	11.6	7.9	6.6	
C10	485788	287272	25.6	19.5	20.0	19.1	14.6	18.8	17.0	9.1	missing	28.8	22.6	10.3	18.8	15.8	
C11	487675	287373	75.3	25.9	26.0	27.1	22.7	23.8	23.9	41.8	missing	33.3	34.7	22.2	32.0	26.9	
C12	487039	288292	24.2	21.1	17.3	16.3	12.8	12.4	12.6	8.3	missing	18.9	20.6	29.8	17.5	14.7	
C13	487546	288816	29.7	24.2	20.7	17.0	15.5	15.2	16.6	9.3	missing	23.9	23.6	20.7	19.6	16.4	
C14	488135	288494	36.1	30.9	30.3	33.0	24.4	29.4	25.8	23.2	missing	31.0	29.8	23.7	29.1	24.4	
C15	488180	288325	31.6	32.1	29.6	30.5	29.5	31.0	28.1	8.9	missing	36.4	27.9	26.1	28.4	23.9	
C16	488122	287817	20.6	22.9	16.6	18.3	14.3	14.6	15.0	10.6	missing	18.4	16.3	18.0	16.9	14.2	
C17	488387	288122	27.8	22.8	19.3	19.3	14.9	15.4	15.7	8.1	missing	23.6	24.1	23.7	19.5	16.4	
KT10	486783	278948	Missing	24.8	22.5	22.6	21.0	21.5	27.6	25.5	27.9	20.2	30.8	22.4	24.3	20.4	
KT11	486887	278246	36.5	36.0	31.9	30.6	32.2	35.3	41.3	41.2	41.8	35.7	45.2	33.7	36.8	30.9	
KT12	486974	278895	32.6	26.0	24.4	28.0	23.1	24.1	31.7	29.5	30.1	26.9	31.2	25.8	27.8	23.3	
KT13	486956	278338	15.6	16.7	12.9	11.5	10.2	10.5	15.1	17.7	20.4	16.5	25.7	15.8	15.7	13.2	
KT14	486925	279028	31.1	28.8	23.6	26.4	19.7	21.9	missing	missing	missing	27.2	34.5	30.6	27.1	22.8	
KT15	486951	278904	35.3	27.8	28.4	29.5	25.2	27.1	33.1	31.4	31.7	23.4	34.1	26.9	29.5	24.8	
KT16	486869	278877	36.8	31.5	28.8	30.5	25.8	25.6	29.9	33.3	37.3	33.0	38.9	28.0	31.6	26.6	
KT18	487049	278942	34.9	30.1	28.9	31.3	26.2	27.1	17.7	32.8	36.2	30.8	35.8	30.3	30.2	25.3	
KT20	486793	278254	39.9	36.4	32.7	37.0	30.0	32.1	38.8	36.3	35.9	32.5	42.4	32.2	35.5	29.8	
KT21	486954	278099	33.5	35.2	32.8	34.2	27.0	29.6	35.4	36.2	41.1	30.4	41.5	31.5	34.0	28.6	
KT22	487406	277653	24.8	19.0	18.7	20.2	12.9	17.8	23.4	24.7	23.6	20.5	29.5	21.1	21.3	17.9	
KT23	486787	278276	37.0	34.9	37.8	31.4	30.2	33.8	38.7	34.3	40.9	34.8	44.8	31.0	35.8	30.1	
KT24	486648	278233	29.7	27.6	25.1	25.0	22.0	22.5	missing	missing	31.8	26.2	34.9	19.7	26.5	22.2	
KT25	486718	278236	32.8	30.2	33.1	29.5	25.3	27.9	33.3	30.6	36.2	28.4	37.0	22.1	30.5	25.6	
KT26	487146	277860	30.1	28.3	27.8	25.4	15.7	22.0	26.5	27.1	32.6	26.5	40.0	25.8	27.3	22.9	
KT28	486929	278204	31.6	31.8	28.6	26.2	25.3	25.6	22.0	30.7	38.4	29.1	42.3	19.8	29.3	24.6	
KT29	486972	278223	27.7	27.0	25.0	25.2	21.0	22.7	25.3	32.9	32.1	28.0	36.9	23.5	27.3	22.9	
KT31	486910	278240	30.3	31.9	25.8	28.7	13.1	26.6	29.9	missing	39.3	29.2	37.4	29.3	29.2	24.6	
KT32	486890	278322	30.2	33.7	26.1	28.9	19.4	25.9	28.8	missing	40.5	29.8	44.4	31.4	30.8	25.9	
KT33	486846	278497	29.6	25.8	25.0	22.6	20.0	21.9	26.5	missing	33.7	26.2	38.1	22.3	26.5	22.3	
KT34	486786	278599	33.5	26.4	29.6	27.0	21.0	21.7	30.6	27.6	32.0	26.2	29.5	18.8	27.0	22.7	
KT35	486778	278779	31.8	30.1	26.1	25.7	21.8	26.9	28.8	34.2	34.8	26.3	40.2	31.2	29.8	25.0	
KT36	486799	278850	36.1	27.4	29.6	27.0	18.0	25.7	30.2	31.1	32.2	17.2	33.7	26.8	27.9	23.4	
KT38	487718	278679	26.4	25.7	27.1	28.8	21.0	21.9	28.0	29.6	31.3	22.4	37.1	23.4	26.9	22.6	
KT39	487751	278505	26.0	23.6	27.0	20.0	20.6	19.9	24.4	20.3	25.8	18.9	31.1	18.8	23.0	19.3	
KT40	487725	278388	27.2	27.8	22.0	19.9	15.5	19.1	39.0	25.0	32.4	21.6	35.3	25.6	25.9	21.7	
KT41	487893	277471	27.4	missing	24.3	34.6	missing	28.6	missing	missing	missing	missing	missing	29.0	28.8	20.5	
KT43	486153	278930	30.6	30.3	27.4	27.8	25.7	26.8	missing	missing	missing	25.9	36.4	25.2	28.5	23.9	
KT44	486894	278216	34.3	26.8	31.1	28.9	25.2	27.1	31.9	16.9	28.9	28.5	35.3	21.8	28.1	23.6	
KT45	487563	277433	31.2	24.8	25.9	23.7	21.2	23.7	29.1	27.8	23.7	23.4	28.2	18.4	25.1	21.1	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Comment
KT46	486161	279067	28.4	28.7	29.8	24.3	19.3	22.9	26.6	26.8	31.3	29.5	37.9	25.8	27.6	23.2	
KT47	486398	278274	37.0	32.7	30.9	31.9	22.8	missing	32.9	35.1	32.7	31.0	missing	missing	31.9	26.8	
KT48	486871	277840	18.9	17.9	16.7	13.7	10.4	11.9	17.3	16.9	21.4	18.7	27.5	16.8	17.3	14.6	
BL1	490048	274399	20.0	19.3	17.2	16.0	14.3	13.7	17.2	18.5	24.9	16.0	27.5	16.0	18.4	15.4	
RW1	481465	281208	31.0	31.7	31.7	29.6	24.1	27.6	26.6	30.1	35.4	31.3	41.3	32.2	31.0	26.1	
RW2	481550	281233	31.3	29.9	33.6	30.3	29.0	29.8	30.8	29.8	33.6	30.4	37.1	23.4	30.7	25.8	
RW3	481498	281096	29.9	24.7	24.1	23.8	21.6	24.2	27.5	27.5	25.7	25.6	30.0	22.9	25.6	21.5	
RW4	481481	281149	38.8	36.8	36.6	37.8	32.5	35.0	39.6	42.3	50.4	38.5	51.5	37.6	39.8	33.4	
RW5	481515	281217	30.2	25.1	27.3	24.7	21.6	23.7	28.7	27.3	27.1	24.7	32.3	25.3	26.5	22.3	
ENC 1	499867	278066	24.4	17.6	16.9	12.8	12.8	10.1	10.0	9.6	15.5	15.7	21.3	17.9	15.4	12.9	
ENC 2	499161	278629	23.6	16.8	12.1	16.0	17.5	16.5	15.8	14.7	21.3	19.0	22.3	17.6	17.8	14.9	
ENC 3	500208	278510	26.3	25.9	23.4	18.8	20.6	17.9	19.7	16.6	24.9	20.8	25.6	21.7	21.8	18.4	
ENC 4	499573	278515	20.2	17.6	15.8	12.4	12.4	9.8	9.0	8.1	14.4	15.5	20.4	16.6	14.3	12.0	
ENC 5	499792	277873	24.1	22.1	18.9	13.3	16.2	12.9	13.5	12.4	20.8	19.1	21.9	18.9	17.8	15.0	
ENC 6	499119	273561	34.2	29.0	28.8	25.9	28.2	24.8	27.7	24.3	31.1	24.1	32.4	27.5	28.2	23.7	
ENC 7	500193	273219	19.5	14.1	12.1	8.0	8.9	6.6	6.9	7.3	10.5	13.1	18.8	14.9	11.7	9.8	
ENC 8	499103	272329	22.4	18.0	18.3	11.9	12.9	12.4	12.6	13.0	15.5	16.3	22.4	16.8	16.0	13.5	
ENC 9	494525	270591	27.8	25.5	17.9	17.6	15.7	13.7	14.4	13.4	19.0	17.8	22.8	20.5	18.9	15.8	
ENC 10	496068	269885	21.6	17.5	17.6	19.1	17.6	16.3	18.0	16.3	18.8	17.6	22.8	19.4	18.5	15.6	
ENC 11	496320	269420	22.2	20.9	16.6	13.8	12.8	12.7	11.4	11.0	15.6	17.6	21.8	18.4	16.2	13.6	
ENC 12	495920	268317	28.9	32.8	33.7	26.7	28.0	24.7	29.3	27.7	31.8	29.6	39.1	28.8	30.1	25.3	
ENC 13	495962	268388	40.6	34.2	35.1	24.7	28.2	27.1	24.4	26.7	35.0	29.8	40.3	34.2	31.7	26.6	
ENC 14	495587	267402	34.8	35.2	30.0	27.8	32.9	27.5	31.2	25.3	34.8	25.8	33.3	27.0	30.5	25.6	
ENC 15	495711	267120	30.3	33.3	26.4	24.3	27.5	23.7	missing	22.8	33.0	28.0	31.6	27.9	28.1	23.6	
ENC 16	496039	266643	31.5	23.6	20.4	15.7	17.6	13.7	13.6	12.4	21.5	18.9	21.4	20.1	19.2	16.1	
ENC 17	495924	266621	37.6	34.8	35.0	25.4	34.2	29.6	missing	27.8	37.8	29.8	39.3	35.2	33.3	28.0	
ENC 18	495883	266560	21.3	18.8	17.4	14.7	12.5	9.1	10.0	10.4	14.7	15.8	22.1	17.5	15.4	12.9	
ENC 19	495849	266613	33.2	31.9	32.1	29.5	28.7	29.6	30.7	27.6	36.8	24.8	36.2	26.4	30.6	25.7	
ENC 20	497127	266143	19.6	15.9	12.4	9.4	13.1	9.0	8.2	8.5	12.6	15.6	18.4	15.1	13.1	11.0	
ENC 21	496682	267872	25.9	23.9	20.9	18.4	20.3	18.5	19.5	17.0	25.5	missing	24.1	21.9	21.4	18.0	
ENC 22	496772	266967	22.7	17.8	15.3	13.0	12.0	9.5	9.8	9.4	13.1	15.3	21.5	17.5	14.7	12.4	
ENC 23	494895	265669	19.3	15.7	12.4	13.9	10.9	8.3	8.6	8.3	12.1	14.2	17.8	15.2	13.1	11.0	
ENC 24	494963	266988	41.5	39.6	35.6	26.0	37.8	30.2	33.3	27.5	38.4	35.0	39.6	39.7	35.4	29.7	
ENC 25	494936	267014	40.4	32.1	29.0	27.0	33.1	28.4	31.9	28.6	34.9	29.6	42.8	29.4	32.3	27.1	
ENC 26	493108	267347	28.8	25.7	20.0	15.9	21.1	16.0	17.8	14.5	22.9	19.7	24.0	21.3	20.6	17.3	
ENC 27	503209	289307	15.9	12.4	8.6	6.8	6.5	5.4	5.6	5.4	8.2	9.4	13.6	11.7	9.1	7.7	
ENC 28	504272	288433	23.6	20.1	16.8	15.1	16.6	14.7	16.3	12.7	19.5	19.3	20.3	19.3	17.9	15.0	
ENC 29	504222	288110	20.3	17.0	15.1	12.9	11.2	10.2	11.0	10.5	16.7	16.5	19.9	19.0	15.0	12.6	
ENC 30	497862	289284	17.3	13.1	10.7	8.5	9.9	7.6	8.2	7.6	11.6	11.7	16.8	12.9	11.3	9.5	
ENC 31	501961	290525	13.0	10.5	7.9	7.0	7.2	6.0	5.8	5.5	7.7	8.9	11.4	11.1	8.5	7.1	
ENC 32	499960	302429	16.1	11.5	10.1	6.9	8.1	5.4	5.9	6.1	8.3	10.5	15.4	13.0	9.8	8.2	
ENC 33	494755	267911	28.5	24.2	22.5	17.1	18.1	22.7	27.5	22.3	missing	21.4	24.4	19.8	22.6	19.0	
W1	489131	267820	41.5	42.7	38.1	32.1	40.0	30.7	37.8	28.4	43.9	42.9	missing	44.1	38.4	32.2	
W2	489382	266144	31.0	30.8	27.6	27.2	24.2	21.3	23.0	21.5	31.2	28.7	missing	32.8	27.2	22.9	
W3	487831	267169	28.2	28.9	23.9	21.9	23.3	18.3	20.7	19.8	28.2	27.6	missing	27.2	24.4	20.5	
W4	489868	268204	25.5	25.1	16.5	18.6	16.2	13.2	16.1	14.3	19.0	20.0	missing	24.9	19.0	16.0	
W5	49033	266433	12.9	26.1	21.4	22.4	17.4	17.5	18.1	19.3	20.2	20.0	missing	20.5	19.6	16.5	
W6	490002	268946	21.8	22.3	16.8	17.1	12.5	11.9	13.2	9.9	17.6	19.4	missing	21.3	16.7	14.0	
W7	490351	267400	29.1	29.2	24.4	24.3	24.8	21.0	21.8	21.9	31.0	30.5	missing	29.9	26.2	22.0	
W8	488431	274049	26.0	24.5	19.5	19.6	19.2	15.5	16.8	16.9	20.0	22.4	missing	22.8	20.3	17.0	
W9	489226	267829	27.0	24.0	17.9	19.5	20.8	14.2	16.2	13.2	21.4	23.3	missing	26.0	20.3	17.0	
W10	429372	271928	26.7	31.1	24.2	30.0	29.8	28.6	29.6	25.7	32.9	29.4	missing	26.3	28.6	24.0	
W11	488788	268215	33.3	33.7	27.6	28.4	25.5	25.4	27.1	24.9	30.4	29.2	missing	33.0	29.0	24.3	

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG16**

☒ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

☒ **Where applicable, data has been distance corrected for relevant exposure in the final column.**

☒ **North Northamptonshire confirm that all 2021 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**.

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within North Northamptonshire During 2021

North Northamptonshire has not identified any new sources relating to air quality within the reporting year of 2021.

Additional Air Quality Works Undertaken by North Northamptonshire During 2021

North Northamptonshire has not completed any additional works within the reporting year of 2021 that have not already been mentioned.

QA/QC of Diffusion Tube Monitoring

Diffusion tubes were provided by Gradko during the 2021 monitoring year with the preparation method of 20% TEA in Water. Gradko international laboratory takes part in the LAQM Air PT scheme. They received a score of 75% for September to October 2020 (AR040) and 25% for January to March 2021 (AR042).

The diffusion tube survey has been completed in adherence with the 2021 Diffusion

Tube Monitoring Calendar. In Corby, diffusion tubes were exposes for slightly longer than the Defra recommended timescales.

Diffusion Tube Annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. In addition, any sites with a data capture below 25% do not require annualisation. Annualisation was required for one site in North Northamptonshire; KT41. Annualisation was undertaken in line with LAQM.TG16 with the calculation method detailed in Table C.2.

The following urban background automatic monitors were used to the inform the

annualisation process:

- Coventry;
- Leamington Spa;
- Leicester University; and
- Northampton

All other diffusion tube monitoring locations within North Northamptonshire recorded data capture of 75% therefore annualization was not required.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2021 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG16 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

North Northamptonshire have applied a National bias adjustment factor of 0.84 to the 2021 monitoring data, as per Figure C. 1. A summary of bias adjustment factors used by North Northamptonshire over the past five years is presented in Table C. 1. Version 3/22 of the national bias adjustment factor spreadsheet was used in 2021. Prior to 2021, the borough areas of Corby, Kettering, East Northamptonshire and Wellingborough used the same diffusion tubes and used national bias adjustment factors. The 2020 bias adjustment factor is also included in Table C. 1.

Table C. 1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2021	National	03/22	0.84
2020	National	03/21	0.81
2019	-	-	-
2018	-	-	-
2017	-	-	-

Figure C. 1 – National Diffusion Tube Bias Adjustment Factor Spreadsheet, 2021

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadhseet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2022
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1:	Step 2:	Step 3:	Step 4:								
Select the Laboratory that Analyses Your Tubes from the Drop-Down List	Select a Preparation Method from the Drop-Down List	Select a Year from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.								
If a laboratory is not shown, we have no data for this laboratory.	If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data[2]	If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953								
Analysed By[1]	Method To update your selection, choose (All) from the pop-up list	Year[2] To update your selection, choose (All)	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[5]	Bias Adjustment Factor (A) (Cm/Dm)	
Gradko	20% TEA in water	2021	R	Bedford Borough Council	11	34	31	7.6%	G	**0.93**	
Gradko	20% TEA in water	2021	R	Bedford Borough Council	11	19	17	11.7%	G	**0.90**	
Gradko	20% TEA in water	2021	R	Blackburn with Darwen Borough Council	12	27	20	32.3%	G	**0.76**	
Gradko	20% TEA in water	2021	R	Brent Council	12	51	46	9.9%	G	**0.91**	
Gradko	20% TEA in water	2021	R	Gateshead Council	10	23	19	23.8%	G	**0.81**	
Gradko	20% TEA in water	2021	R	Gateshead Council	12	25	22	13.7%	G	**0.88**	
Gradko	20% TEA in water	2021	R	Gateshead Council	11	27	25	9.8%	G	**0.91**	
Gradko	20% TEA in water	2021	R	Gateshead Council	12	31	25	26.6%	G	**0.79**	
Gradko	20% TEA in water	2021	R	Gateshead Council	12	32	34	-4.1%	G	**1.04**	
Gradko	20% TEA in water	2021	KS	Marylebone Road Intercomparison	11	53	42	25.0%	G	**0.80**	
Gradko	20% TEA in Water	2021	R	Monmouthshire County Concil	11	35	29	21.8%	G	**0.82**	
Gradko	20% TEA in water	2021	R	Belfast City Council	12	25	20	24.3%	G	**0.80**	
Gradko	20% TEA in water	2021	UC	Belfast City Council	12	25	20	28.5%	G	**0.78**	
Gradko	20% TEA in water	2021	R	Belfast City Council	12	42	35	19.8%	G	**0.84**	
Gradko	20% TEA in water	2021	R	Belfast City Council	12	38	27	39.4%	G	**0.72**	
Gradko	20% TEA in water	2021	UB	Dudley MBC	12	20	15	36.0%	G	**0.74**	
Gradko	20% TEA in water	2021	R	Dudley MBC	12	30	29	4.2%	G	**0.96**	
Gradko	20% TEA in water	2021	R	Dudley MBC	12	42	40	5.5%	G	**0.95**	
Gradko	20% TEA in Water	2021	R	Lambeth	10	91	62	46.6%	G	**0.68**	
Gradko	20% TEA in water	2021	R	Lancaster City Council	13	38	32	18.4%	G	**0.84**	
Gradko	20% TEA in water	2021	R	Lancaster City Council	13	28	27	4.9%	G	**0.95**	
Gradko	20% TEA in water	2021		**Overall Factor[3] (32 studies)**				**Use**		**0.84**	

NO_2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

No diffusion tube NO_2 monitoring locations within North Northamptonshire required distance correction during 2021, due to the low concentrations monitored.

Table C. 2 - Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Lemington Spa	Annualisation Factor Northampton Spring Park	Annualisation Factor Leicester University	Annualisation Factor Coventry Allesley	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean	Comments
KT41	0.8539	0.8750	0.7821	0.8735	0.8461	28.8	24.4	

Appendix D: Map(s) of Monitoring Locations and AQMAs

Figure D.1 – Map of Non-Automatic Monitoring Sites across North Northamptonshire

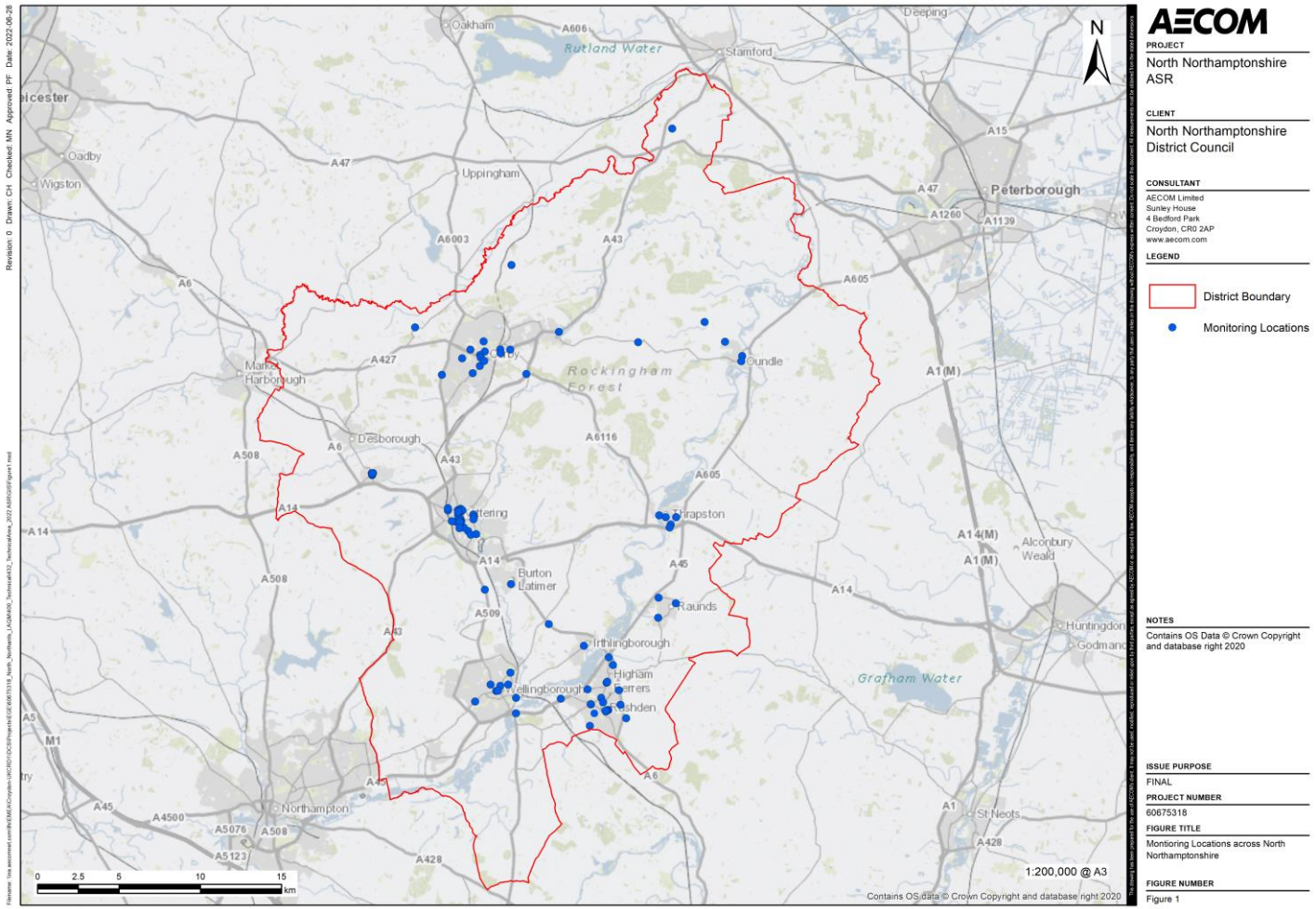


Figure D.2 - Map of Non-Automatic Monitoring Sites in Corby and Oundle

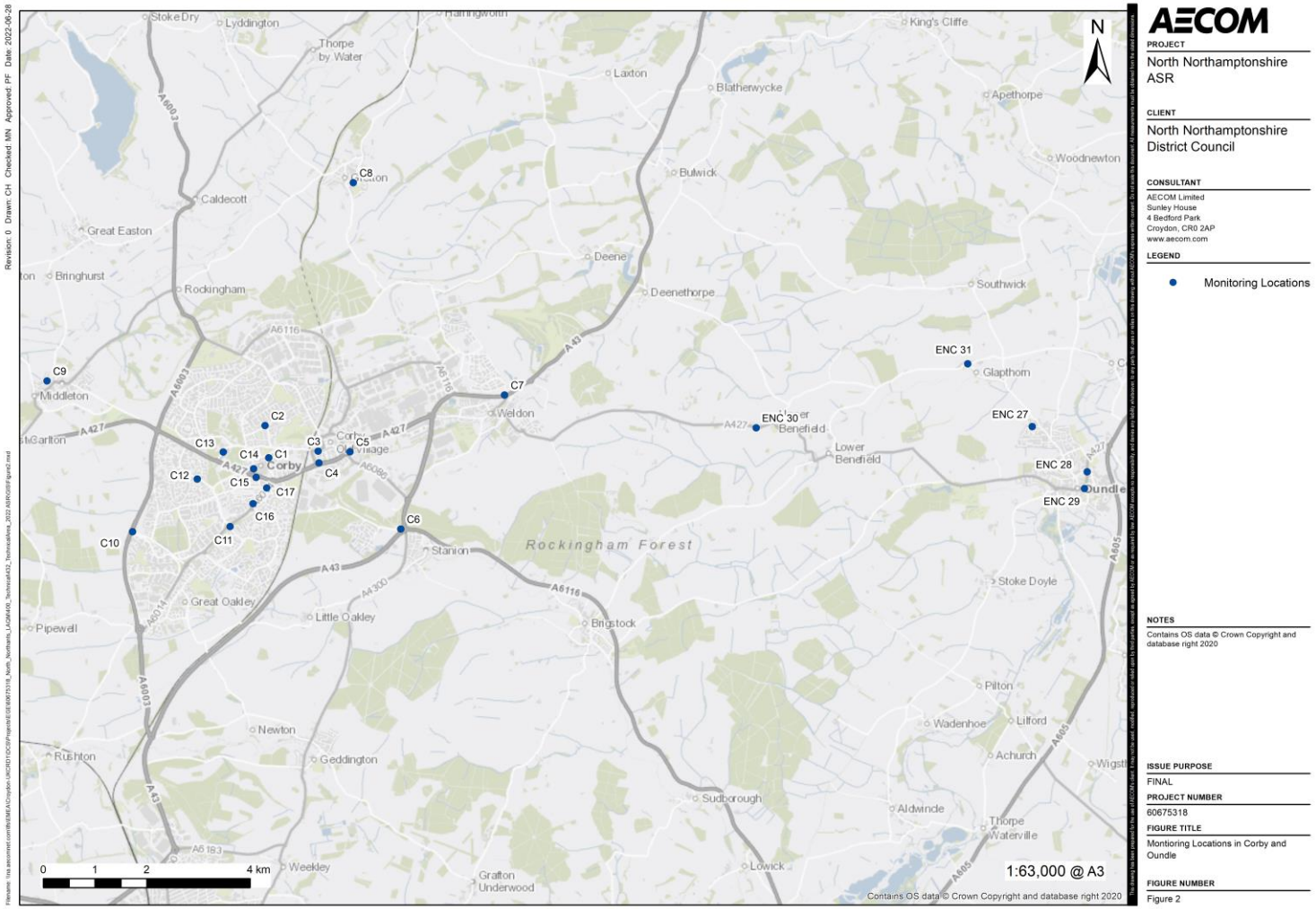


Figure D.3 - Map of Non-Automatic Monitoring Sites in Thrapston and Raunds

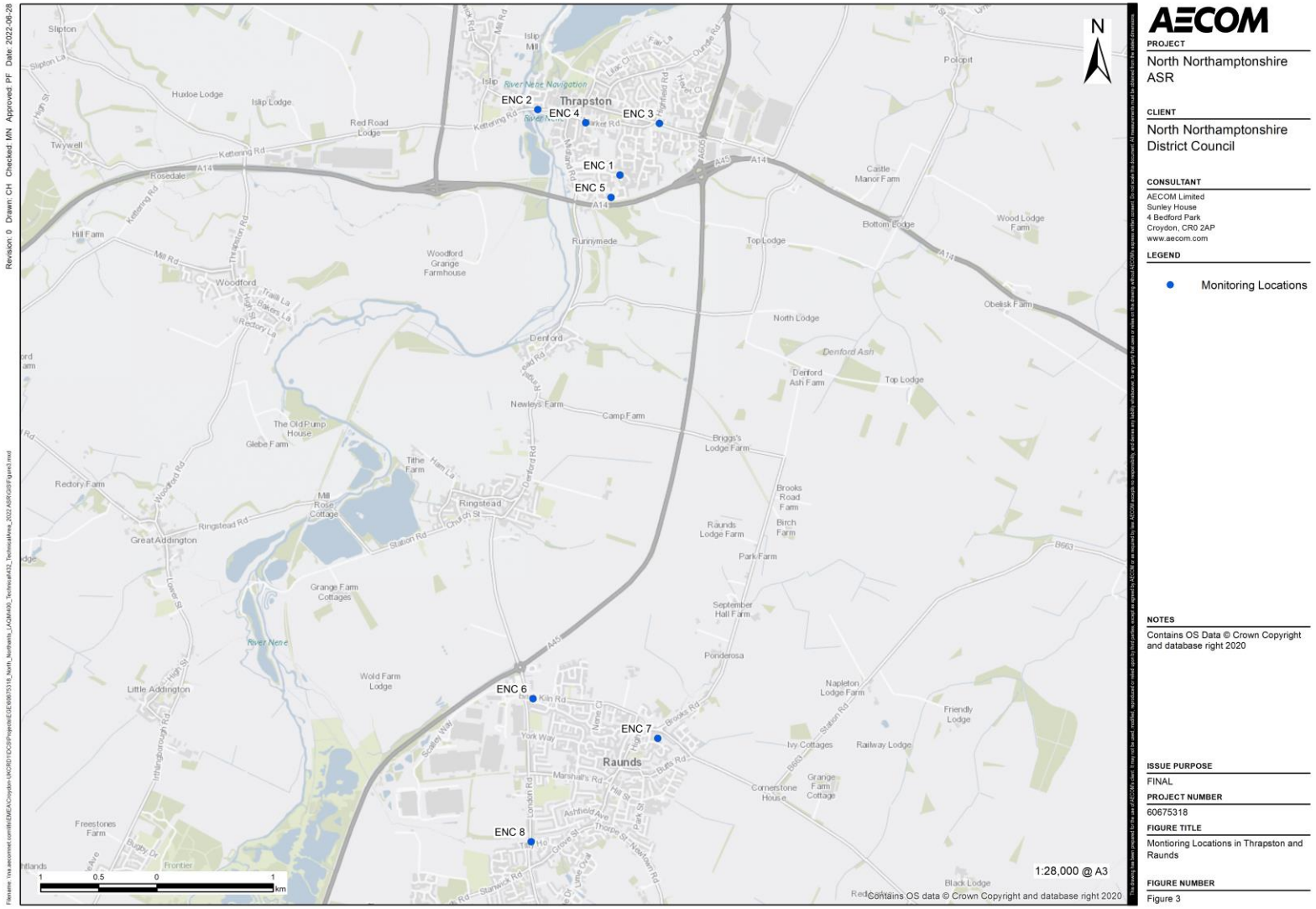


Figure D.4 - Map of Non-Automatic Monitoring Sites in Kettering

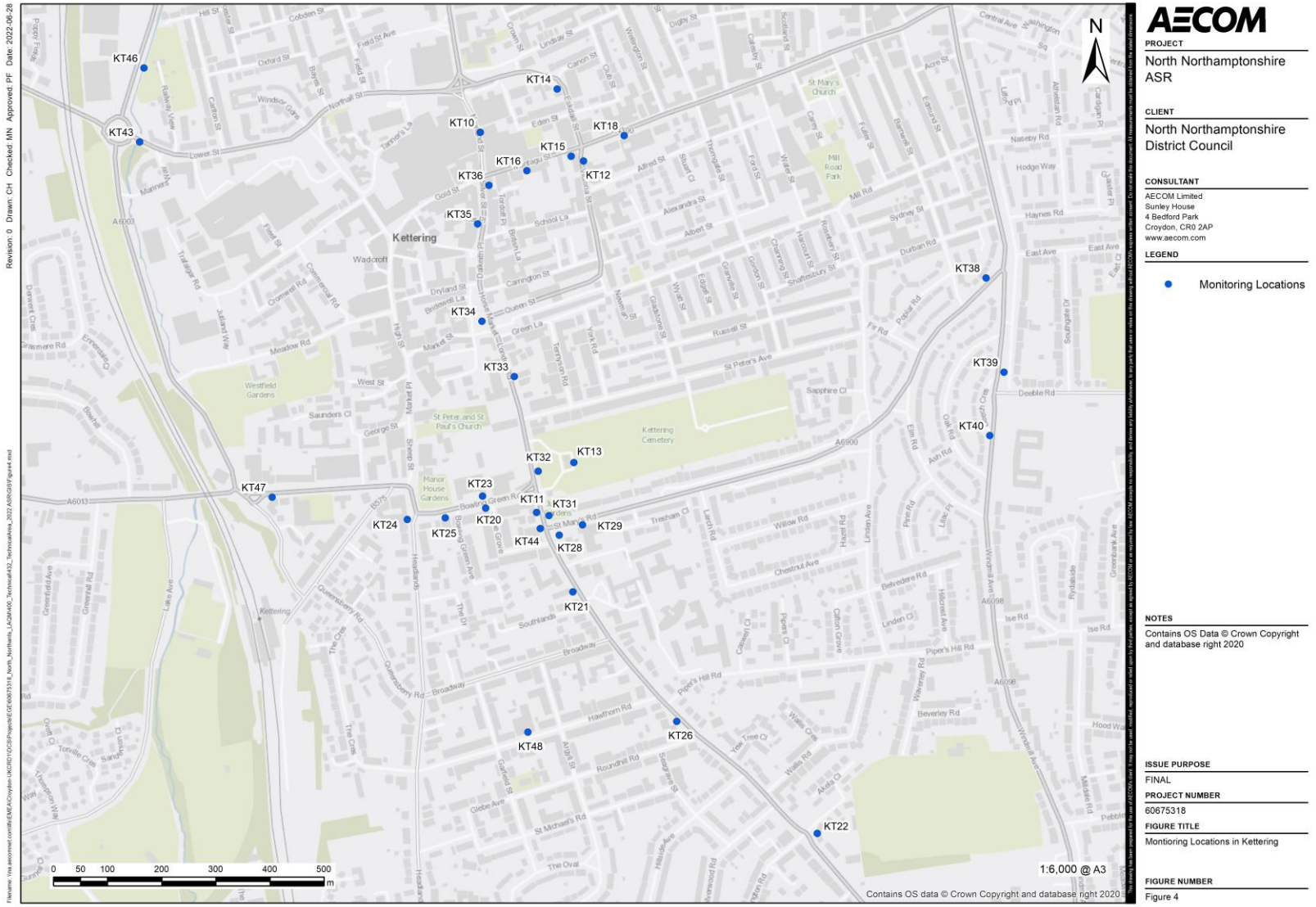


Figure D.5 - Map of Non-Automatic Monitoring Sites in Rothwell and Burton Latimer

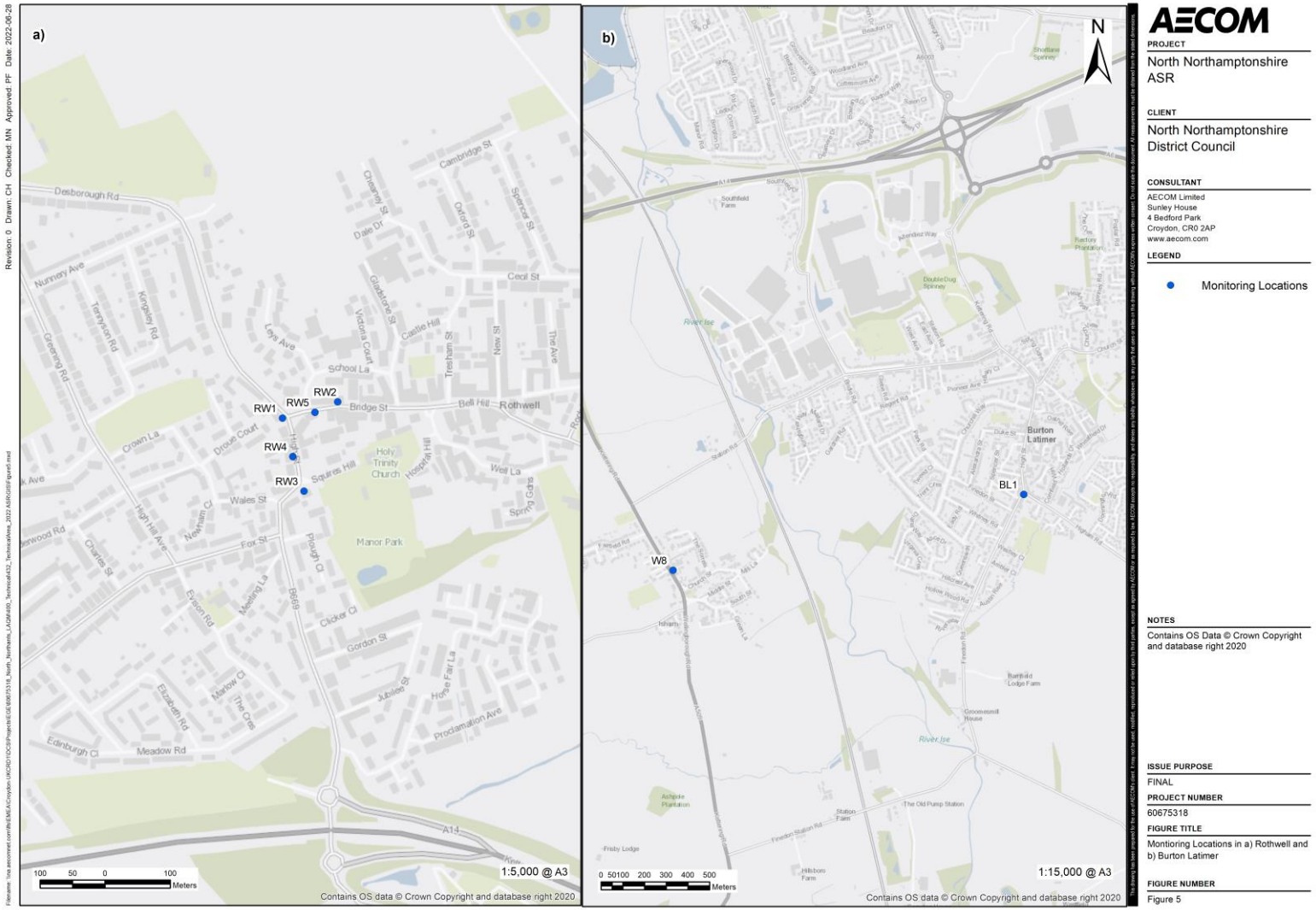
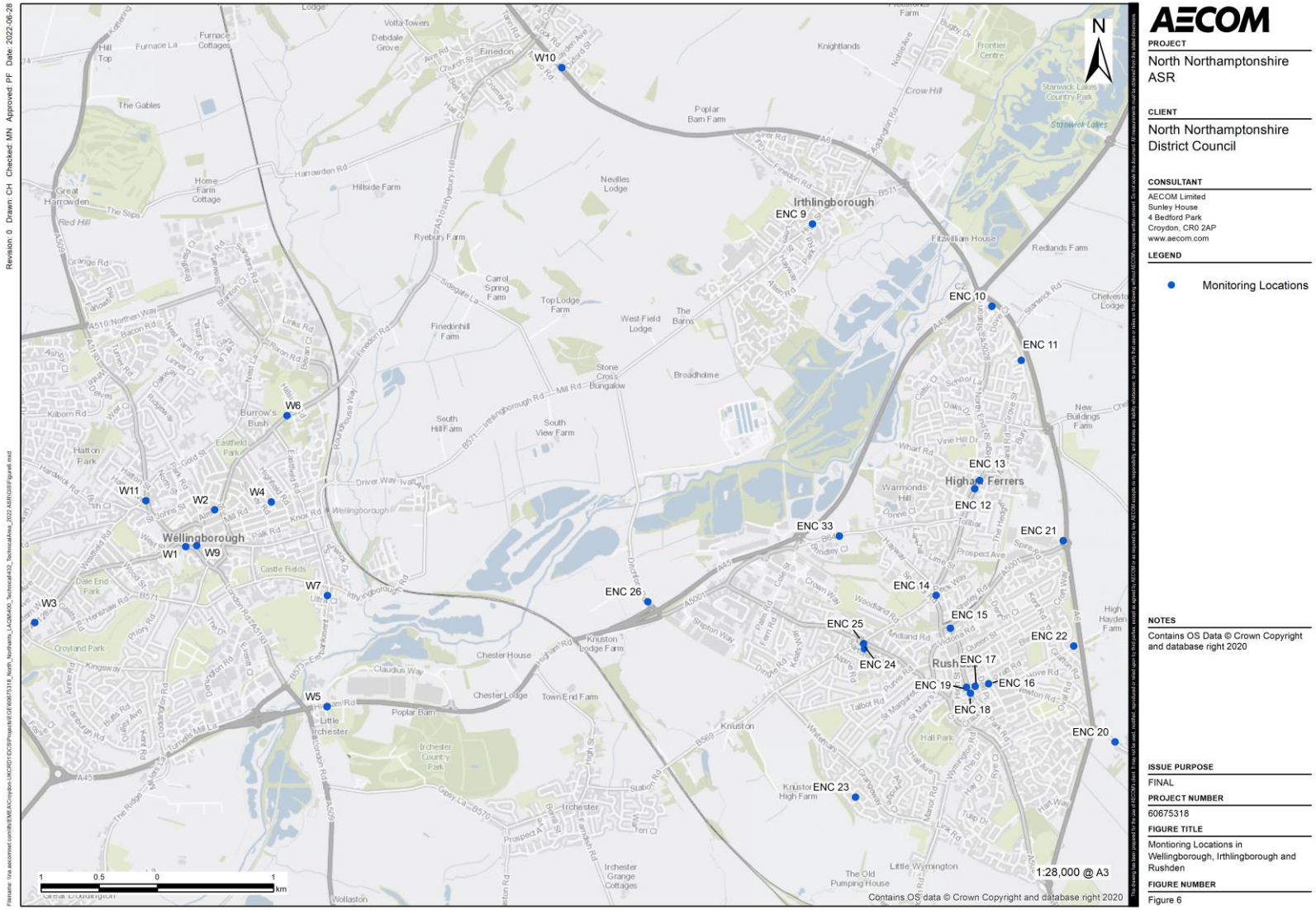


Figure D.6 - Map of Non-Automatic Monitoring Sites in Wellingborough, Irthingborough and Rushden



AECOM

PROJECT
North Northamptonshire ASR

CLIENT
North Northamptonshire District Council

CONSULTANT
AECOM Limited
Sunley House
4 Bedford Park
Croydon, CR0 2AP
www.aecom.com

LEGEND
Monitoring Locations

NOTES
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ISSUE PURPOSE
FINAL

PROJECT NUMBER
60675318

FIGURE TITLE
Montioring Locations in Wellingborough, Irthlingborough and Rushden

FIGURE NUMBER
Figure 6

Revision: 0 Drawn: CH Checked: MN Approved: PF Date: 2022-06-28

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[7]

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[7] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EMAQN	East Midlands Air Quality Network
EU	European Union
EVHS	Electric Vehicle Homecharge Scheme
FDMS	Filter Dynamics Measurement System
JSNA	Joint Strategic Needs Assessment
LAQM	Local Air Quality Management
NNC	North Northamptonshire Council
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

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