

NORTH WEST LEICESTERSHIRE DISTRICT COUNCIL

CABINET – TUESDAY, 24 SEPTEMBER 2019

Title of report	2019 AIR QUALITY ANNUAL STATUS
Key Decision	a) Financial No b) Community Yes
Contacts	<p>Councillor Andrew Woodman 07932 758555 andrew.woodman@nwleicestershire.gov.uk</p> <p>Strategic Director of Place 01530 454555 james.arnold@nwleicestershire.gov.uk</p> <p>Head of Community Services 01530 454832 paul.sanders@nwleicestershire.gov.uk</p>
Purpose of report	<p>To seek the following:</p> <ol style="list-style-type: none"> 1. Approval of the annual status report for submission to the Department for Environment, Food and Rural Affairs (DEFRA) 2. The amendment of the Coalville Air Quality Management Area (AQMA) 3. The revocation of the M1 Air Quality Management Area (AQMA)
Reason for decision	Compliance with Part VI of the Environmental Protection Act 1995
Council priorities	<p>Green Footprints Communities are Clean and green</p> <p>Homes and Communities Residents live in High Quality affordable homes Improve the quality of life for our residents</p>
Implications:	
Financial/Staff	None Discernible
Health and Safety	None Discernible
Risk Management	None Discernible
Equalities Impact Screening	None Discernible
Human Rights	None Discernible
Transformational Government	None Discernible

Comments of Head of Paid Service	Report is satisfactory
Comments of Section 151 Officer	Report is satisfactory
Comments of Deputy Monitoring Officer	Report is satisfactory
Consultees	None
Background papers	Previous Air quality assessments are available on the councils website https://www.nwleics.gov.uk/pages/local_air_quality_review_and_assessment
Recommendations	<p>THAT CABINET:</p> <ol style="list-style-type: none"> 1. APPROVES THE ANNUAL STATUS REPORT FOR SUBMISSION TO DEFRA 2. AGREES TO AMEND THE COALVILLE AIR QUALITY MANAGEMENT AREA 3. APPROVES THE REVOCATION OF THE M1 AIR QUALITY MANAGEMENT AREA

1.0 BACKGROUND

- 1.1 Air quality has a big effect on human health, the natural and manmade environment and the climate.
- 1.2 All councils have a statutory responsibility to assess the present and future air quality of their area in relation to the requirements of the National Air Quality Strategy and identify the main sources of the pollutants affecting air quality.
- 1.3 Air pollution is a complex mix of particles and gases; both natural and human in origin.
- Particulate matter (PM) and nitrogen dioxide (NO₂) are major components of urban air pollution.
 - Nitrogen dioxide (NO₂) is one of a group of gases called nitrogen oxides (NO_x). Diesel light duty vehicles (cars and vans) are the largest source of nitrogen dioxide emissions
 - Much of the PM in urban pollution hotspots, particularly those close to roads, can come from traffic sources
 - Activities such as transport, industrial processes, farming, energy generation and domestic heating can have a detrimental effect on air quality.
- 1.4 The pollutants affecting the air quality in North West Leicestershire, are particulates and nitrogen dioxide. These have the following health implications:
- Particulate matter (PM): Strongest evidence for effects on health is associated with fine particles (PM_{2.5}), long-term exposure increases poor health and death from heart and lung diseases, classified as “carcinogenic”: can cause lung cancer.

- Nitrogen dioxide (NO₂): A respiratory irritant, associations with reduced lung development and respiratory infections in early childhood and effects on lung function in adulthood. Some studies have also shown associations of outdoor NO₂ with adverse effects on health, including reduced life expectancy.
- 1.5 Local authorities are responsible for monitoring air quality, working with local stakeholders. Officers review and assess air quality in the district to determine whether the area is likely to achieve the targets set out by Government. If officers think a target will not be met, the council needs to declare an Air Quality Management Area (AQMA) covering the part of the district where the problem lies. Officers must then draw up an air quality action plan stating how aim to targets will be met, consulting neighboring local authorities, businesses, local people, the Highways Agency, the Environment Agency and others.
- 1.6 Monitoring is undertaken in various ways and the council is required to monitor the 1 hour mean and annual mean of NO₂. The 1 hour mean is the exceedance of the air quality standard for short periods averaged over an hour. This is because exceedances over this hourly average is more likely to affect adults and children with existing lung and heart problems.
- 1.7 The council also monitors the annual mean which is the average of the exceedances over a whole year. This is because exceedances over this annual average generally increase the risk of people developing lung and heart conditions.
- 1.8 With regard to the 1 hour mean a relevant receptor is any location where a member of the public can be reasonably expected to spend more than 1 hour on a regular basis, the annual mean applies to the facade of domestic dwellings.
- 1.9 The limits/standards are set out below:

Pollutant	Time Period	Objective / Value
Nitrogen Dioxide (NO ₂)	1-hour mean	200 µg.m ⁻³ not to be exceeded more than 18 times a year
	Annual mean	40 g.m ⁻³

- 1.10 To meet these responsibilities the council has a published Air Quality Strategy and as a result of assessing these pollutants there are currently 5 declared AQMAs for the exceedance of NO₂.
- 1.11 Three AQMA's are declared for exceeding the annual mean air quality standard for NO₂:
- Derby Road/London Road, Kegworth
 - This applies to domestic properties along Derby Road and London Road (Figure 1)
 - Bondgate, Castle Donington (Figure 2)
 - This applies to domestic properties along Bondgate
 - Copt Oak (Figure 3)
 - This applies to 4 domestic properties at Corner Farm.
- 1.12 Two AQMA's are declared for exceedances of both the annual mean and 1 hour mean air quality standard for NO₂:
- M1 at Mole Hill Farm, Kegworth (Figure 4)
 - This applies to 1 domestic property
 - Broomleys Road/Stephenson Way junction, Coalville (figure 5)

- This applies to 4 domestic properties and pedestrians walking through the junction
- 1.13 There are 31 diffusion tubes around the district to monitor levels of Nitrogen Dioxide (NO₂). A map of these locations can be found at Figure 6.
- 1.14 The council operated an automatic monitor within Coalville AQMA to assess the hourly mean air quality for NO₂. The monitor was decommissioned in September 2018 at the end of the contract as sufficient data had been collected to show the hourly mean air quality standard had not been exceeded since 2011.
- 1.15 Each year the council is required to publish an annual status report (ASR) to the Department for Environment, Food and Rural Affairs (DEFRA). The template local authorities are expected to follow for this report is provided in a government technical guidance document. The overall aim of this document is to report on progress in achieving reductions in concentrations of emissions relating to relevant pollutants below air quality objective levels. It is also where local authorities identify new or changing sources of emissions.

Core requirements of the ASR:

- To report progress on the implementation of measures in the local air quality action plan and other measures and their impact in reducing concentrations below air quality objectives;
 - To provide a summary of monitoring/modelling data (either locally retrieved and/or from the national network) in order to assess the air quality situation in your area and likelihood of air quality breaches, and to provide the necessary evidence base for the impact of air quality measures;
 - To report on significant new developments that might affect local air quality; and
 - To present information in a public-facing executive summary for the lay reader so that the local public can more easily engage with local air quality issues and measures taken to improve it.
- 1.16 Within the scheme of delegation officers can publish the ASR annually when there are no amendments but if there are amendments officers have to prepare a report for Cabinet approval.
- 1.17 The ASR can be viewed at appendix 1.

2.0 COALVILLE AQMA

- 2.1 The Coalville AQMA was declared in 2008 for exceedances of the annual mean air quality standard for Nitrogen dioxide (NO₂), it was amended in 2011 to reduce its area and again in 2012 to include exceedances of the 1 hour mean air quality standard.
- 2.2 The automatic monitor was located within the Coalville AQMA and was primarily to monitor exceedances of the 1 hour mean air quality standard. The AQMA was amended to include an exceedance of the 1 hour mean on the 1st April 2012 following 29 exceedances of the standard in a 4 month period of 2010.
- 2.3 Since 2012 the 1 hour mean has not been exceeded more than the permitted **18 times per year**. The monitoring results are presented below:

Exceedances of the 1-hour mean objective

Year	Number of Exceedances of the 1-hour mean
September 2010	29
2011	20
2012	3
2013	2
2014	7
2015	0
2016	4
2017	0
To September 2018	0

2.4 As the monitoring has shown 7 years of compliance with the 1-hour mean air quality standard the Coalville AQMA should be amended to remove the exceedance of this standard.

2.5 The AQMA will still be in place for an exceedance of the annual mean air quality standard and will continue to be monitored through diffusion tubes.

3.0 M1 AQMA

3.1 The M1 AQMA was declared in 2001 for the exceedance of the hourly mean air quality standard for Nitrogen Dioxide, it was amended in 2004 to reduce its area and again in 2011 to include exceedances of the 1-hour mean air quality standard.

3.2 The only domestic property within the AQMA (Molehill House) was demolished as part of the construction of the Kegworth Bypass.

3.3 As there is no longer a domestic property within the AQMA should be revoked.

4.0 ONGOING WORK

4.1 The council continues to monitor air quality using diffusion tubes and assesses the air quality within the district on an ongoing basis and these results are reported in the ASR.

4.2 The council is in the processes of drafting new air quality action plans for the Coalville, Copt Oak, Castle Donington and Kegworth AQMA's and these will be completed by June 2020.

- 4.3 Officers have developed actions that can be considered under 5 broad topics:
- Policy guidance and development control
 - Promoting travel alternatives
 - Public information
 - Transport planning and infrastructure
 - Traffic management
- 4.4 Priorities are to:
- Tackle emissions due to congestion at peak times
 - Educate and inform the public of air quality
 - Ensure air quality is a key consideration in the planning process
- 4.5 Though the council has a duty to produce the action plan the implementation of the actions may be outside of the councils control e.g. highway improvements.
- 4.6 Following completion of the Kegworth bypass is likely that air quality will improve within Kegworth. Monitoring will need to be undertaken for several years to determine if compliance with the Annual Mean air quality standard for Nitrogen Dioxide has been achieved within Kegworth. This will be completed using the currently deployed diffusion tube locations within Kegworth.
- 4.7 The construction of the Castle Donington relief road has commenced, following its completion and the provision of traffic calming measures along High Street, Castle Donington, it is likely that an improvement in air quality within the Castle Donington AQMA will occur. Monitoring will need to be undertaken for several years to determine if compliance with the Annual Mean air quality standard for Nitrogen Dioxide will be achieved. This will be completed using the currently deployed diffusion tube locations within Castle Donington.

5.0 RELATED WORK

- 5.1 Although Cabinet are being asked to approved the recommendations contained within this report, it is felt helpful to provide Cabinet with an overview of other work streams that link into the local air quality regime.
- 5.2 Leicestershire County Council Public Health have recently published the Joint Strategic Needs Assessment <http://www.lsr-online.org/leicestershire-2018-2021-jsna.html> which now includes a chapter on Air quality and health. The purpose of the Joint Strategic Needs Assessment (JSNA) is to:
- To improve the health and wellbeing of the local community and reduce inequalities for all ages.
 - To determine what actions the local authority, the local NHS and other partners need to take to meet health and social care needs, and to address the wider determinants that impact on health and wellbeing.
 - To provide a source of relevant reference to the Local Authority, Clinical Commissioning Groups (CCGs) and NHS England for the commissioning of any future services.

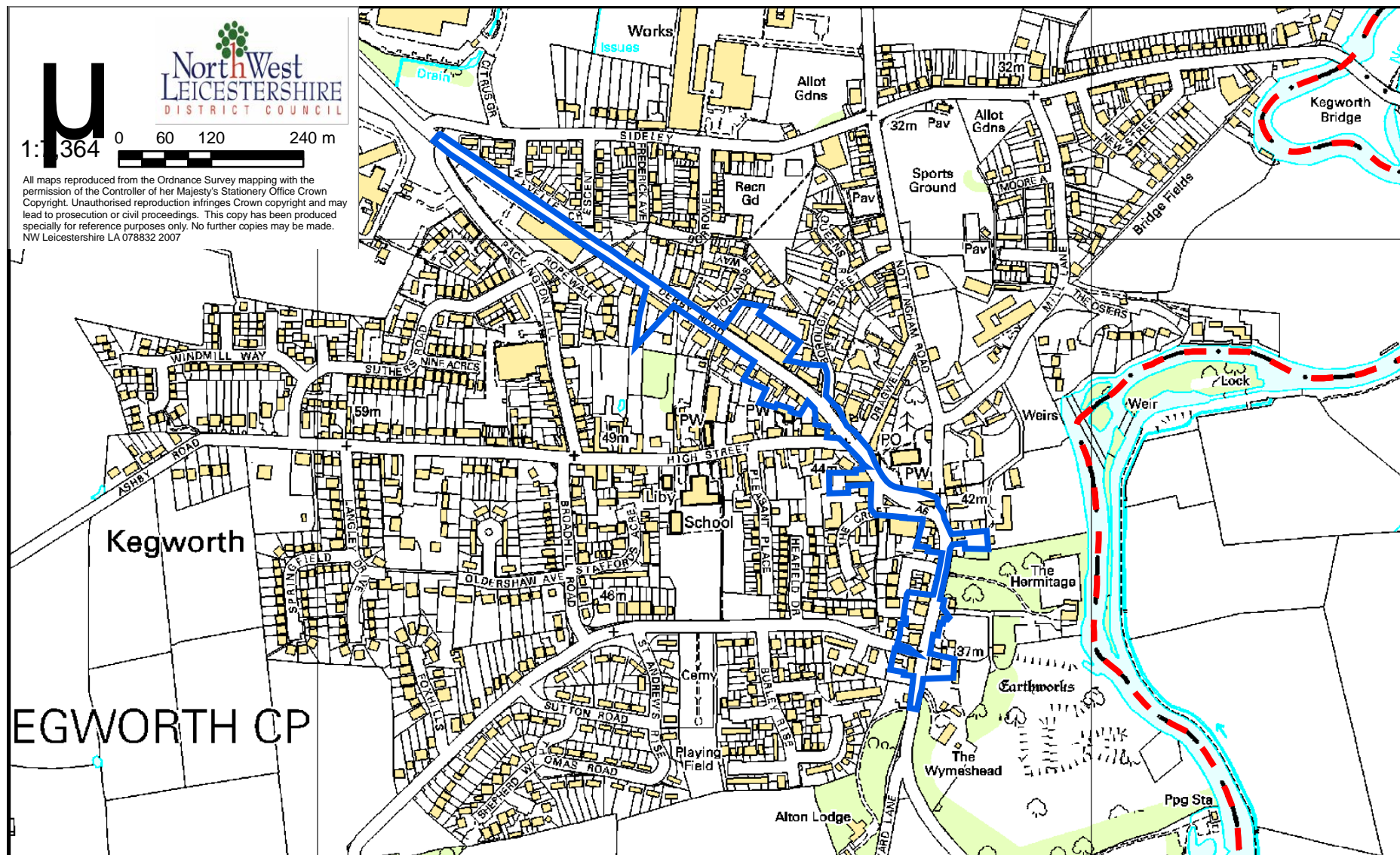
The JSNA chapter has reviewed the population health needs of the people of Leicestershire in relation to air quality. This has involved looking at the determinants of poor air quality, the health needs of the population in Leicestershire related to air quality, the policy and guidance supporting improvements in air quality, existing services and the breadth of services that are currently provided.

- 5.3 The key recommendations from the JSNA are that the Leicestershire Air Quality and Health Partnership Steering Group should agree a plan to deliver joint actions to tackle poor air quality and related health issues. All key partners and stakeholders should commit to deliver this plan over the next three years. Six objectives, and associated recommendations, are set out within the report and the group is currently working on drafting an action plan. A series of workshops have been scheduled for October 2019 and relevant Officer's will be attending.
- 5.4 The council is currently in the processes of drafting a carbon neutral action plan, many of the potential actions may also serve to reduce the emission of air quality pollutants however as the districts air quality problems all relate to traffic, until significant electrification of the vehicles using the roads occurs the carbon neutral agenda is unlikely to have a measurable impact on air quality.

6.0 RECOMMENDATIONS

- 6.1 To approve the annual status report for submission to DEFRA, to amend the Coalville air quality management area and revoke the M1 air quality management area. The draft orders are attached in appendix 2 and 3.

Figure 1 **Kegworth AQMA (highlighted in blue).**



Castle Donington Air Quality Management Area

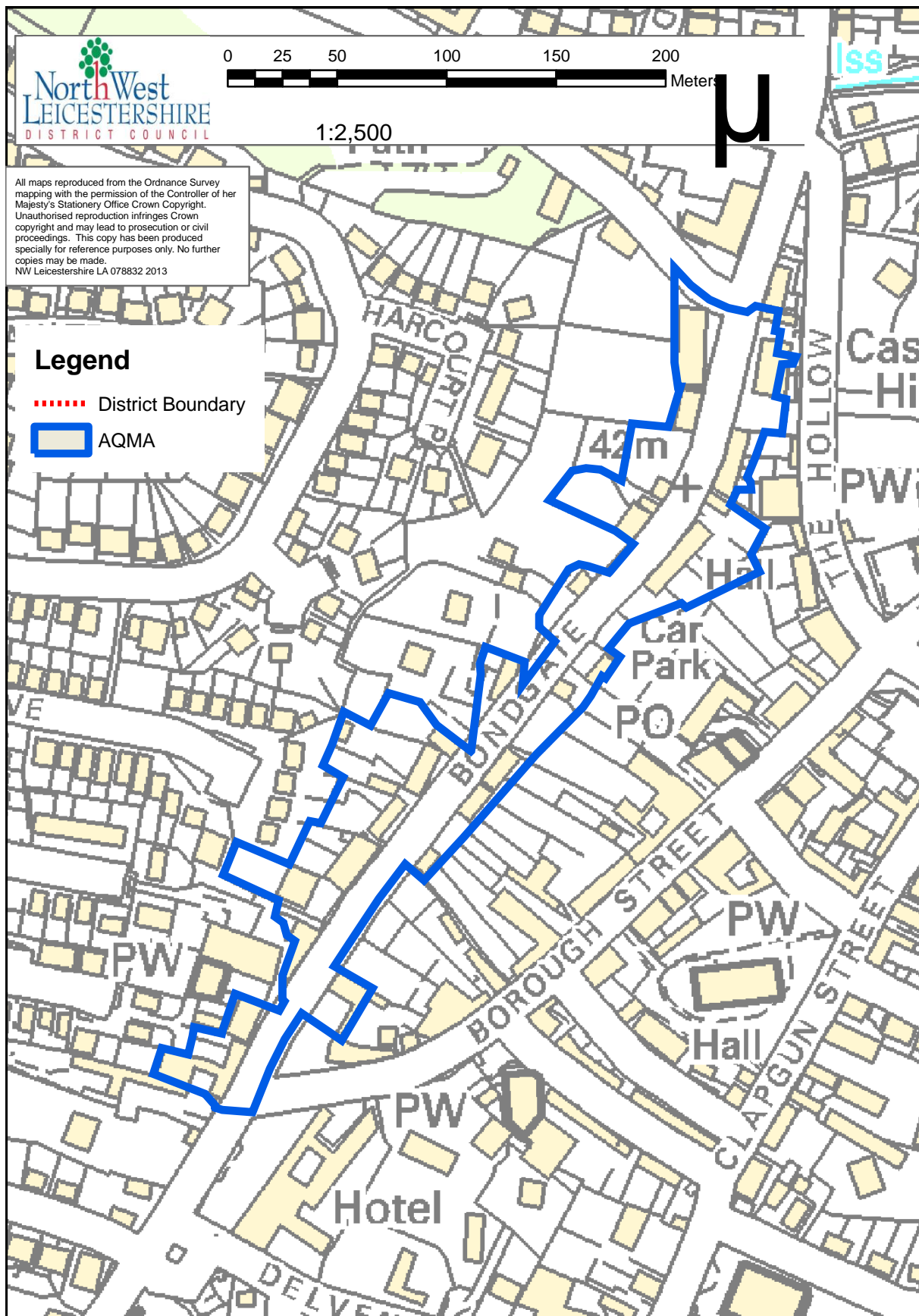


Figure 3 Copt Oak AQMA

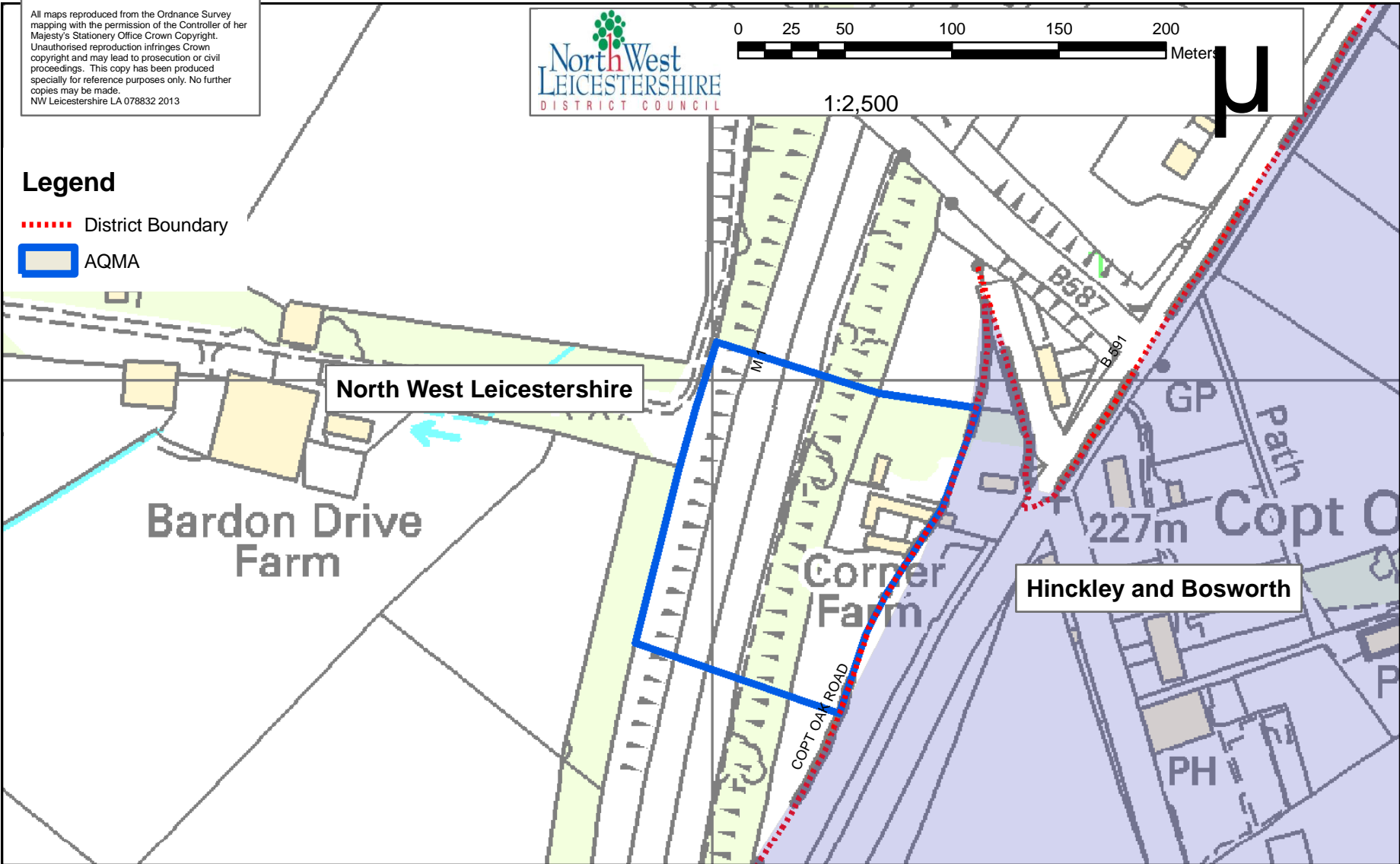


Figure 4

M1 AQMA (Outlined in Dark Blue)

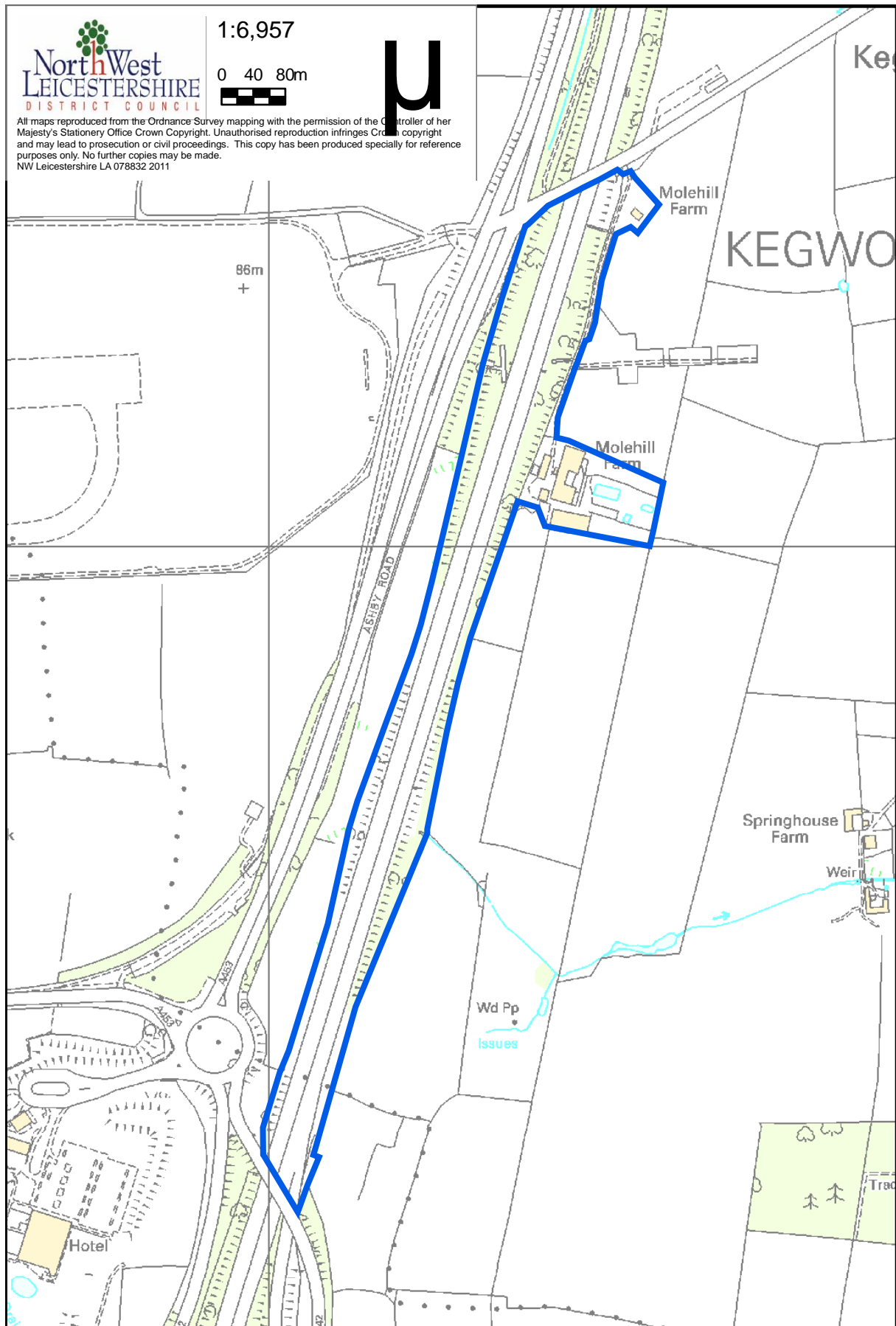


Figure 1

Coalville Air Quality Management Area (Broom Leys Junction)

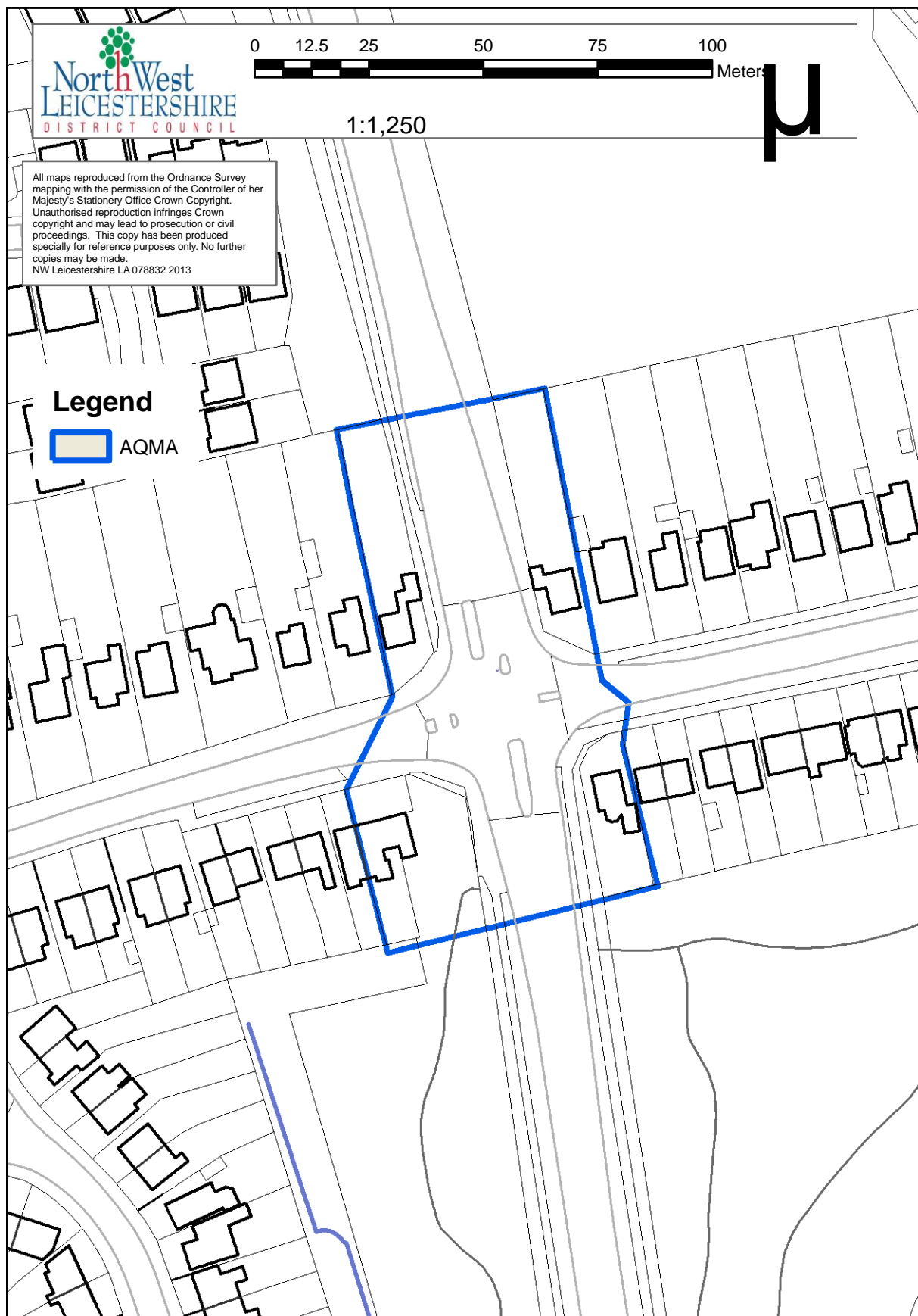


Figure 6 Map of Non-Automatic Monitoring Sit

