ILI Cato Ltd
33 Bothwell Road
Hamilton LM3 0AS
c/o Tom Allan
Project Manager
Logan PM

By email:

Dear Tom

Air Quality Impact Assessment – Large-scale Data Centre (Cato)
Camilla Farm, Auchtertool, Fife KY2 5XW

I refer to your instruction of 19th August 2025 to conduct an air quality impact assessment (AQIA) for the proposed large-scale data centre at Auchtertool, Fife. The proposed scheme will include the formation of new access roads and the erection of buildings to house the data centre. You have advised that Fife Council require that your proposed planning application must be accompanied by an AQIA in accordance with local plan policies 1 and 10[1] and that this should consider both construction and operational impacts, taking account of potential combined impacts and relevant local and national Guidance.[2]

You have advised that the operation of the proposed scheme will generate ~300 vehicle movements per day (24-hour AADT). It is anticipated that the data centre will be powered by mains electricity with high-capacity standby generators. The standby generators will be for emergency use only, but will be tested regularly.[3] The site location is shown in Figure 1 at the end of the text.

The short-term nature of the likely operation of the standby generators indicates that the short-term emissions from these units will not adversely affect the nearest designated ecological site nearby.[4]

Further details on the project description are presented in Appendix 1.

[1] Policies 1 and 10 advise that proposals must have no significant detrimental impact on amenity in relation to Air Quality with particular emphasis on the impact of development on designated Air Quality Management Areas (AQMA). It also advises that an air quality assessment may be required for developments that are within AQMAs or where the proposed development may cause or significantly contribute towards a breach in air quality management standards. Development proposals that lead to a breach of National Air Quality Standards or a significant increase in concentrations within an existing AQMA will not be supported. Supplementary guidance will provide additional information, detail and guidance on air quality assessments, including an explanation of how proposals could demonstrate that that they would not lead to an adverse impact on air quality. Fife Council's Air Quality in Fife Advice for Developers (available to view online at the following link: https://www.fife.gov.uk/__data/assets/pdf_file/0028/76087/AQ_Develop_Guide_2020.pdf) advises that an air quality impact assessment (AQIA) is required where the construction and occupation of a proposed development has the potential to increase road traffic emissions and if the proposal would introduce ten new parking spaces or more and would be a residential development with a site area of more than 0.5 hectares or it would be for more than 9 residential units.
[2] Fife Council 25th March 2025. 25/00551/PREAPP|Pre-application for data centre complex of data halls, cooling plant, electricity substations, emergency plant, gatehouse, access roads, parking, fencing, pond and associated landscaping and infrastructure|Land To The North Of Camilla Road Gleniston Auchtertool Fife
[3] No details on the specific location of the generators are currently available at this stage of planning. It is anticipated that the potential air quality impacts from the standby generators will be assessed in more detail post-planning to ensure that emissions from the installation will not contribute to any exceedance of the short-term (99.8%ile) 1-hour NO_2 at any sensitive receptor. The standby generators will only be used in the event of grid failure. Emissions of NO_x are therefore unlikely to affect sensitive ecology.
[4] Camilla Loch Biological SSSI https://magic.defra.gov.uk/MagicMap.html

Baseline Air Quality

Fife Council has conducted air quality monitoring at numerous sites throughout the county using NO_2 diffusion tubes. There is only one local air quality monitoring site within the study area (Cowdenbeath High Street FCW14). The results from the nearest air quality monitoring sites around the proposed development are presented in Table 1 below. These monitoring sites are all at roadside or kerbside locations within town centres. The results from these monitoring sites indicate that levels of NO_2 have complied with the statutory annual mean Limit Value of 40ug/m^3 since the commencement of air quality monitoring, even at roadside locations.[5] The results exhibit a downwards trend, having reduced from 28 ug/m^3 in 2008 to 13 ug/m^3 in 2024, (the latest available published data for FCW14). The results for recent years are summarised in Table 1 below.

Table 1 - Baseline NO_2 at nearest air quality monitoring sites in Study Area

Site	2019	2020	2021	2022	2023	2024
Cowdenbeath FCW14	19	14	16	14	15	13
Lumphinans FCW38						10
Crossgate FCW34					14	13
Crossgate FCW33					14	13
Crossgate FCW32					18	15
Kirkcaldy FCC16				11	12	12
Kirkcaldy FCC17				11	13	12
Kirkcaldy FCC18				11	13	12

N.B. units = ug/m^3 NO_2 annual mean – blanks cells = no data

Estimates of background pollution of particles (PM_{10} and $PM_{2.5}$) and oxides of nitrogen (NO_x and NO_2) have been obtained from the Scottish Government sponsored air quality archive.[6]

Table 2 – Background Air Pollution in Study Area (2025)

OS x	OS y	NO_x	NO_2	PM_{10}	$PM_{2.5}$
317500	691500	9.6	7.3	8.7	4.3
318500	691500	8.5	6.5	8.4	4.1
319500	691500	9.8	7.4	7.8	4.1
320500	691500	9.4	7.1	8.7	4.2
321500	691500	8.5	6.5	8.8	4.1
322500	691500	7.8	5.9	8.9	4.1
317500	690500	9.4	7.1	7.7	4.1
318500	690500	11.2	8.4	7.7	4.1
319500	690500	16.1	11.7	8.1	4.5
320500	690500	10.4	7.8	9.4	4.3
321500	690500	8.5	6.5	9.0	4.2
322500	690500	7.6	5.8	9.2	4.1
317500	689500	11.0	8.3	8.6	4.3
318500	689500	17.0	12.4	8.0	4.2
319500	689500	9.7	7.3	7.4	3.9
320500	689500	8.1	6.2	8.4	4.0
321500	689500	7.5	5.7	9.0	4.0
322500	689500	7.2	5.5	9.2	4.0
Maximum		17.0	12.4	9.4	4.5
Average		9.9	7.4	8.5	4.1
Criteria		**30***	**40**	**18**	**10**

N.B. Units = ug/m^3 annual mean - *NO_x criterion is for ecological receptors

The data in Table 2 above presents the reported estimated background concentrations for 2025 for the nearest 1km resolution grid points to the proposed development. This

[5] https://www.scottishairquality.scot/latest
[6] https://www.scottishairquality.scot/data/mapping/data

indicates that background air pollution in the study area is well below the relevant statutory annual mean Limit Value for NO_2 and the Scottish Government's annual mean Objectives for particles. The estimated background levels of NO_x are plotted in Figure 2.

Operational Impacts from Road Traffic

Current non-statutory professional Guidance published by the IAQM indicates that no quantitative impact assessment should normally be required for developments outwith an air quality management area (AQMA) where the scheme road traffic flows are <500 AADT 24-hour.[7] A lower threshold of 100 AADT 24-hour applies where the scheme is within or adjacent to an AQMA. Fife Council has revoked all AQMA in the Council's area, so there are no AQMA that could be affected by the scheme.[8]

Based on the assessment and supplementary information provided by the applicant's transport consultant, no significant increase in road traffic is forecast as a consequence of the scheme, during either the construction or operational phases. On this basis, the total number of forecast vehicle trips generated by the scheme is well below the 500 AADT 24-hour threshold that would normally trigger the requirement for a quantitative AQIA outwith an AQMA.

Combined Impacts

At the pre-application consultation stage, Fife Council raised a concern about the potential combined impacts from the atmospheric emissions associated with flaring operations at the Mossmorran complex. Atmospheric emissions from Mossmorran are regulated by the Scottish Environment Protection Agency (SEPA). SEPA installed a continuous, near-real-time monitoring network following community concerns.[9] The latest published review of air quality monitoring around Mossmorran concluded that '…the emissions from the Mossmorran and Braefoot Bay facilities did not result in air pollutant levels that pose a significant health risk to members of the local community.'[10]

Table 3 – Air Quality Monitoring – SEPA Auchtertool September 2024 – September 2025

Pollutant	Parameter	EAL*	Measured Level	%EAL
NO_2	annual mean	40	21	53%
	short-term (99.8%ile)	200	44	22%
PM_{10}	annual mean	18	13	74%
	short-term	50	23	46%
	short-term (98.1%ile)	50	38	75%
$PM_{2.5}$	annual mean	10	7	75%

N.B. all units = ug/m^3 *EAL = Environmental Assessment Level (air quality standard)

The results from the most recent year's monitoring data[11] are plotted in Charts 1 – 4 attached and summarised in Table 3 above. SEPA apparently also measure local wind direction, but these data are not available online, so it has not been possible to determine if the air quality monitoring site at Auchtertool was downwind of Mossmorran during higher pollution episodes.

[7] Institute of Air Quality Management (IAQM) January 2017. Land-use planning and development control: Planning for air quality V1.2.
[8] https://www.scottishairquality.scot/laqm/aqma#!/la/468
[9] SEPA November 2021 Review of air quality monitoring at the Mossmorran complex.
[10] Independent Air Quality Monitoring Review Group 9th April 2025. Mossmorran & Braefoot Bay Independent Air Quality Expert Advisory Group 2023 annual report.
[11] https://informatics.sepa.org.uk/MossmorranAirQualityNetwork/ (from 8th-Sep-24 to 7th September 2025)

The overall results from SEPA's air quality monitoring indicate that air pollution at the proposed development site is likely to comply with all relevant air quality standards.

The most likely impact from the proposed installation would be short-term NO_2 emissions from the standby generators. As can be seen from Table 3 above, the current level of air quality is 22% of the 99.8%ile (the statutory Limit Value to protect human health from short-term exposure to NO_2). The introduction of standby generators is therefore unlikely to cause significant adverse impacts provided the potential impacts are adequately considered at detailed design stage.

Construction Impacts

The proposed development is likely to be relatively distant (>100m) from any highly sensitive residential receptors. There is insufficient detail available at thus stage of planning to determine the potential dust emission magnitude (in terms of the total building volume and the surface area of earthworks). The potential dust impacts from the construction phase shall be assessed post-planning to help inform the potential adverse significance in terms of the methodology set out in IAQM Guidance and thence to minimise any potential adverse impacts.[12] Mitigation measures to be adopted for the project during construction are set out in Appendix 2.

Space Heating and Domestic Hot Water

The scheme proposes that space heating and domestic hot water for the proposed development shall be provided by electricity by air source heat pumps (ASHP).

Conclusions

The background levels of pollution are well below the statutory Limit Value for NO_2 and the Scottish Government's Objectives for PM_{10} and $PM_{2.5}$. The local and national trend in air quality is likely to continue to gradually improve as older, more polluting vehicles are removed from the roads.

The traffic forecast to be generated by the scheme is below the threshold that would normally trigger the requirement for an assessment in terms of the IAQM's professional guidance. The impact from road traffic generated by the proposed development is therefore likely to be of Negligible significance in terms of the assessment framework proposed in the IAQM's non-statutory professional Guidance.

The results from the nearest air quality monitoring sites to the proposed development site (even at roadside/kerbside locations) and the published background estimates of air pollution indicate that air quality is unlikely to adversely affect the existing sensitive receptors adjacent to the proposed development.

The results from SEPA's air quality monitoring at Auchtertool indicates that local air quality downwind of the Mossmorran Complex is unlikely to exceed relevant air quality standards. Air quality impacts from the scheme are therefore unlikely to adversely affect local air quality. This indicates that there is likely to be little benefit or need to conduct a quantitative AQIA.

[12] IAQM 2023. Guidance on the assessment of dust from demolition and construction. (V2.1)

The following additional work should be conducted post-planning to protect the health and amenity of local residents:

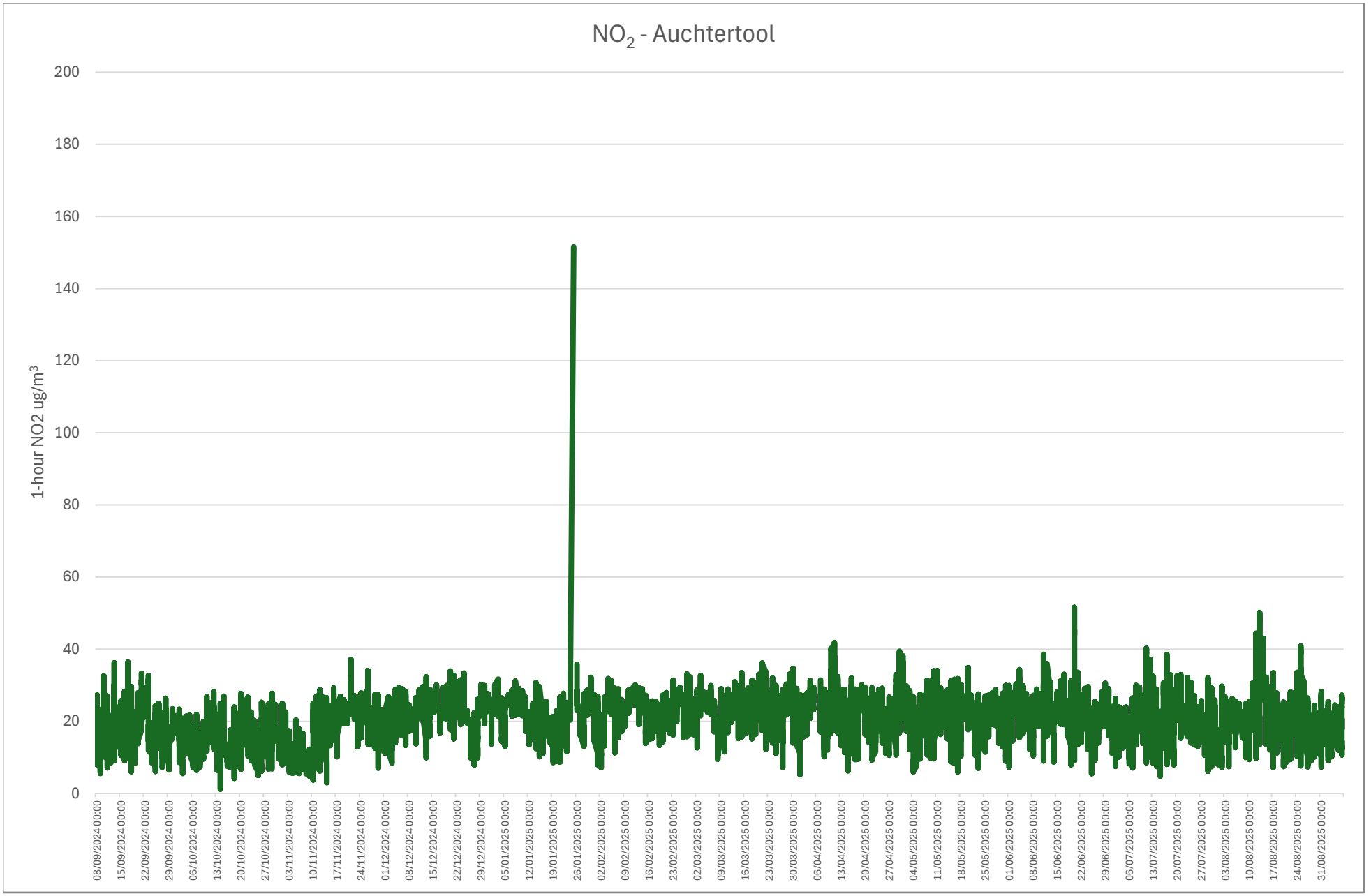
- Confirm the rating of the proposed standby generators in MW, NO_x emission factors, the location of the units, and the heights of the proposed flues. All flues should be designed to discharge vertically with a minimum efflux velocity of 15m/s. The requirement for a detailed quantitative assessment shall be determined post-planning to the satisfaction of the local authority; and

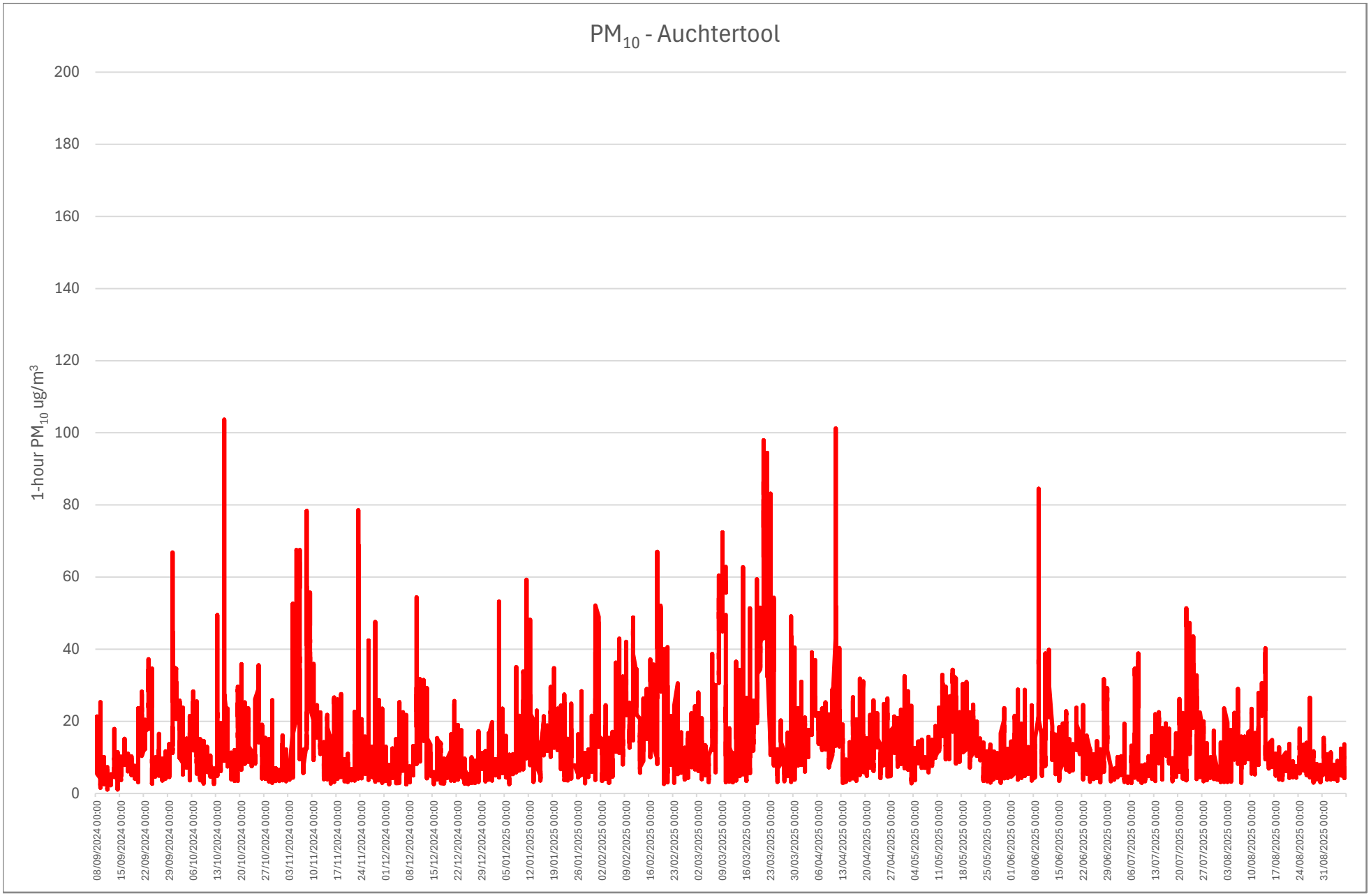
- The potential dust impacts from the construction phase including groundworks shall be assessed post-planning to the satisfaction of the local authority.

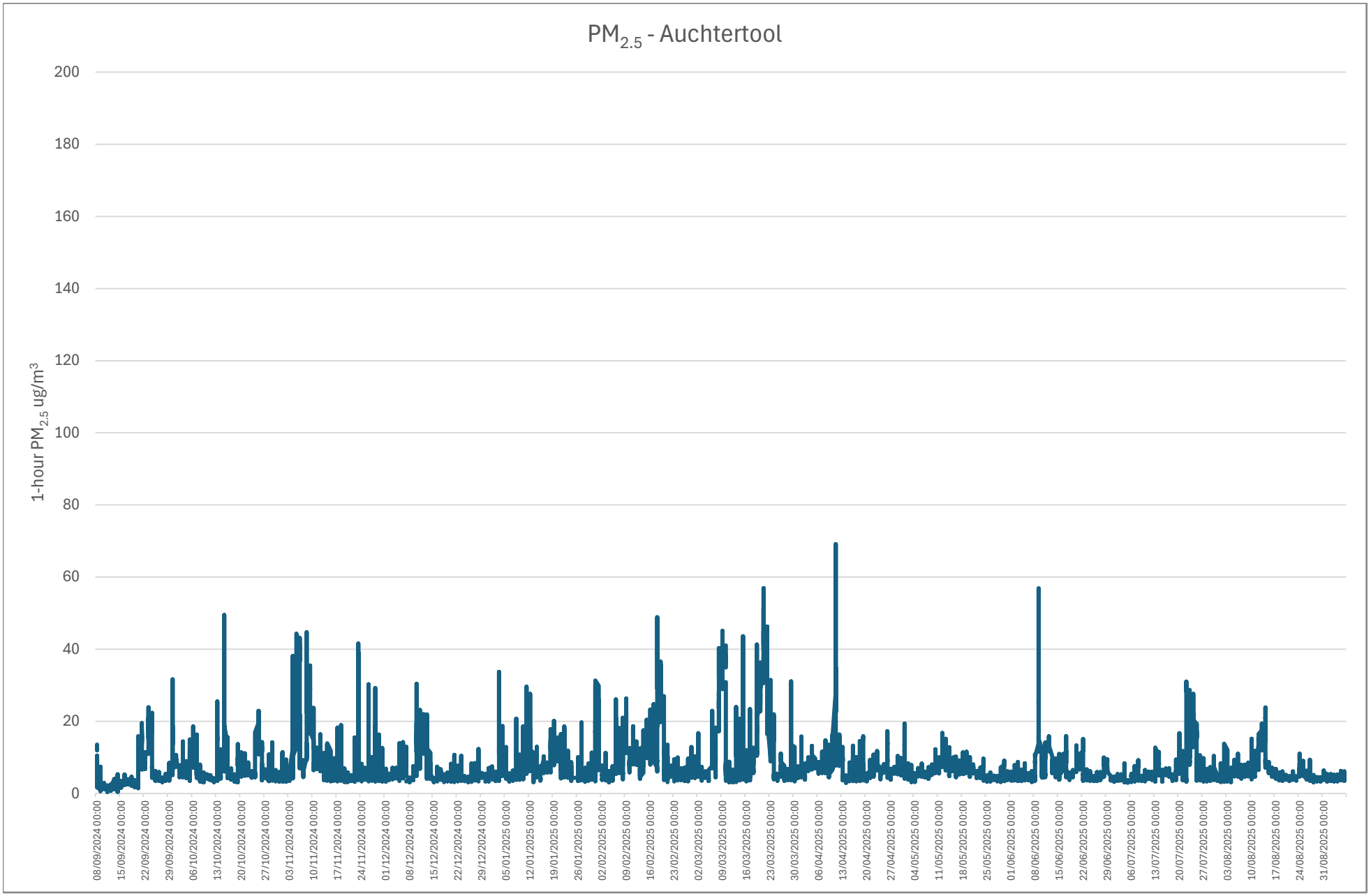
In these circumstances I suggest that you should submit this letter to Fife Council's Protective Services and the Planning Officer to confirm that this provides sufficient information to enable them to determine the application.

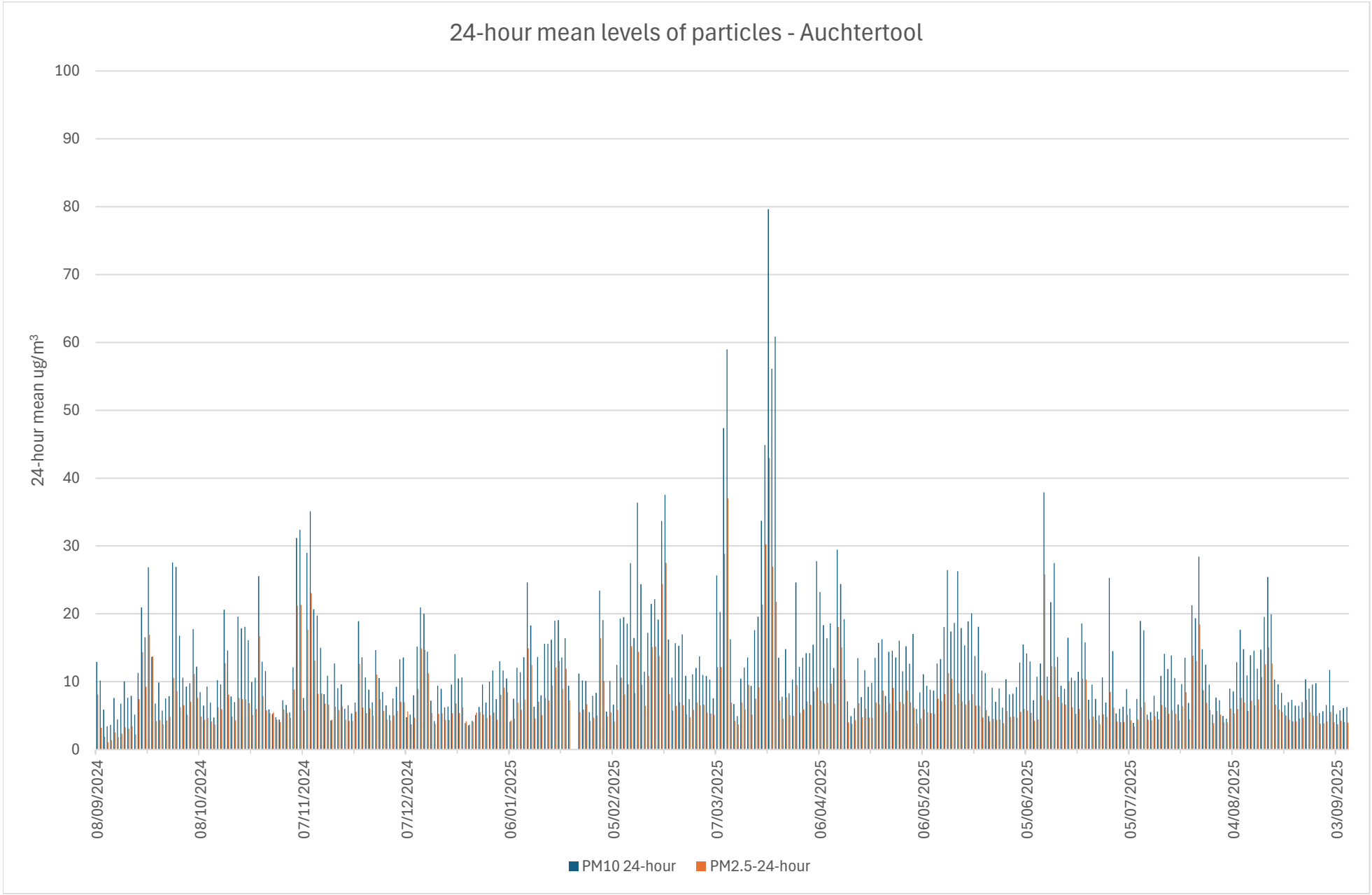
Kind regards

Steve Fraser *BSc MPhil CEnv MIoA MCIWM*


NO2 - Auchtertool
1-hour NO2 ug/m3
200
180
160
140
120
100
80
60
40
20
0
08/09/2024 00:00
15/09/2024 00:00
22/09/2024 00:00
29/09/2024 00:00
06/10/2024 00:00
13/10/2024 00:00
20/10/2024 00:00
27/10/2024 00:00
03/11/2024 00:00
10/11/2024 00:00
17/11/2024 00:00
24/11/2024 00:00
01/12/2024 00:00
08/12/2024 00:00
15/12/2024 00:00
22/12/2024 00:00
29/12/2024 00:00
05/01/2025 00:00
12/01/2025 00:00
19/01/2025 00:00
26/01/2025 00:00
02/02/2025 00:00
09/02/2025 00:00
16/02/2025 00:00
23/02/2025 00:00
02/03/2025 00:00
09/03/2025 00:00
16/03/2025 00:00
23/03/2025 00:00
30/03/2025 00:00
06/04/2025 00:00
13/04/2025 00:00
20/04/2025 00:00
27/04/2025 00:00
04/05/2025 00:00
11/05/2025 00:00
18/05/2025 00:00
25/05/2025 00:00
01/06/2025 00:00
08/06/2025 00:00
15/06/2025 00:00
22/06/2025 00:00
29/06/2025 00:00
06/07/2025 00:00
13/07/2025 00:00
20/07/2025 00:00
27/07/2025 00:00
03/08/2025 00:00
10/08/2025 00:00
17/08/2025 00:00
24/08/2025 00:00
31/08/2025 00:00


PM10 - Auchtertool
1-hour PM10 ug/m3
200
180
160
140
120
100
80
60
40
20
0
08/09/2024 00:00
15/09/2024 00:00
22/09/2024 00:00
29/09/2024 00:00
06/10/2024 00:00
13/10/2024 00:00
20/10/2024 00:00
27/10/2024 00:00
03/11/2024 00:00
10/11/2024 00:00
17/11/2024 00:00
24/11/2024 00:00
01/12/2024 00:00
08/12/2024 00:00
15/12/2024 00:00
22/12/2024 00:00
29/12/2024 00:00
05/01/2025 00:00
12/01/2025 00:00
19/01/2025 00:00
26/01/2025 00:00
02/02/2025 00:00
09/02/2025 00:00
16/02/2025 00:00
23/02/2025 00:00
02/03/2025 00:00
09/03/2025 00:00
16/03/2025 00:00
23/03/2025 00:00
30/03/2025 00:00
06/04/2025 00:00
13/04/2025 00:00
20/04/2025 00:00
27/04/2025 00:00
04/05/2025 00:00
11/05/2025 00:00
18/05/2025 00:00
25/05/2025 00:00
01/06/2025 00:00
08/06/2025 00:00
15/06/2025 00:00
22/06/2025 00:00
29/06/2025 00:00
06/07/2025 00:00
13/07/2025 00:00
20/07/2025 00:00
27/07/2025 00:00
03/08/2025 00:00
10/08/2025 00:00
17/08/2025 00:00
24/08/2025 00:00
31/08/2025 00:00

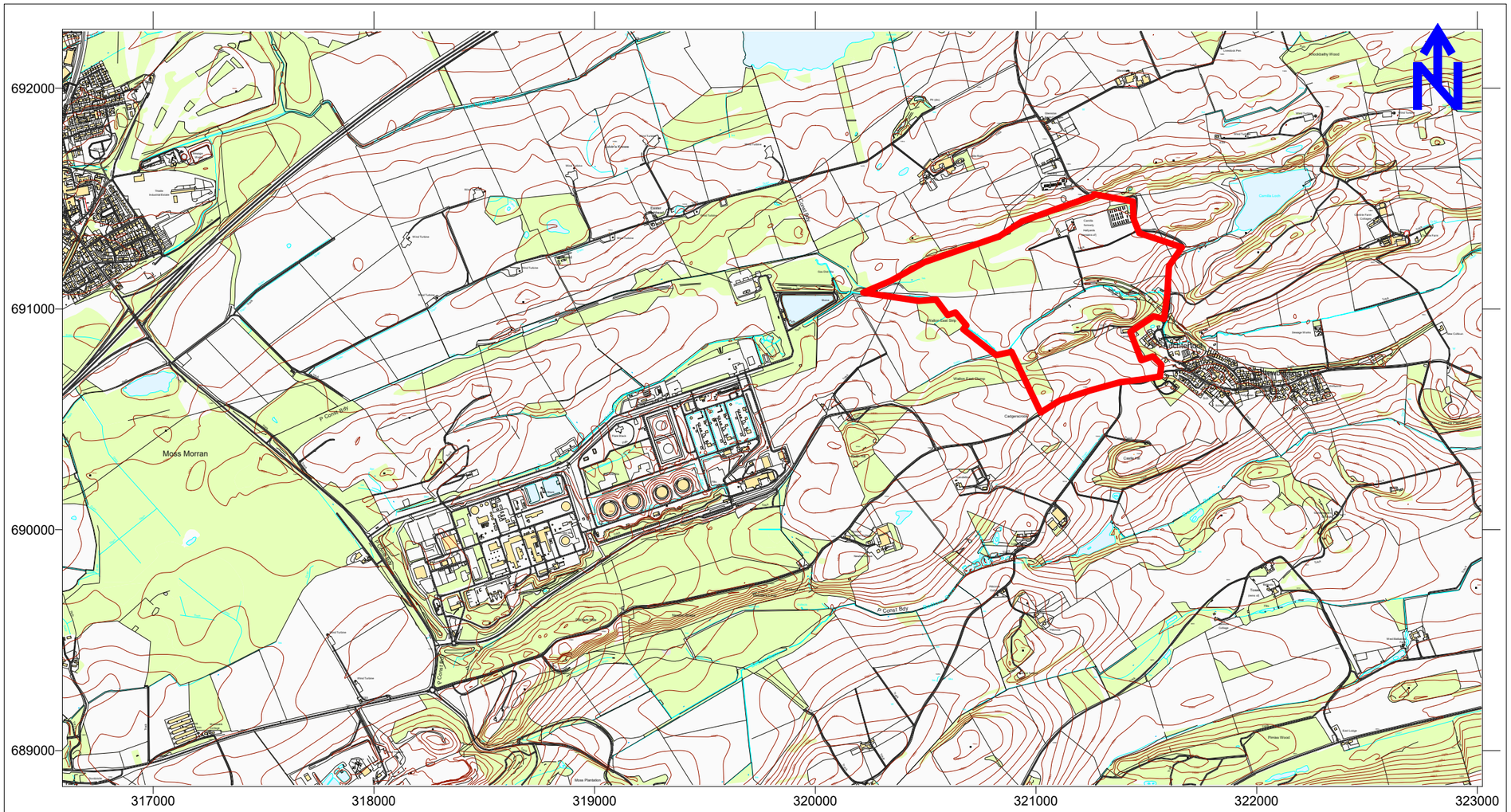

PM2.5 - Auchtertool
1-hour PM2.5 ug/m3
200
180
160
140
120
100
80
60
40
20
0
08/09/2024 00:00
15/09/2024 00:00
22/09/2024 00:00
29/09/2024 00:00
06/10/2024 00:00
13/10/2024 00:00
20/10/2024 00:00
27/10/2024 00:00
03/11/2024 00:00
10/11/2024 00:00
17/11/2024 00:00
24/11/2024 00:00
01/12/2024 00:00
08/12/2024 00:00
15/12/2024 00:00
22/12/2024 00:00
29/12/2024 00:00
05/01/2025 00:00
12/01/2025 00:00
19/01/2025 00:00
26/01/2025 00:00
02/02/2025 00:00
09/02/2025 00:00
16/02/2025 00:00
23/02/2025 00:00
02/03/2025 00:00
09/03/2025 00:00
16/03/2025 00:00
23/03/2025 00:00
30/03/2025 00:00
06/04/2025 00:00
13/04/2025 00:00
20/04/2025 00:00
27/04/2025 00:00
04/05/2025 00:00
11/05/2025 00:00
18/05/2025 00:00
25/05/2025 00:00
01/06/2025 00:00
08/06/2025 00:00
15/06/2025 00:00
22/06/2025 00:00
29/06/2025 00:00
06/07/2025 00:00
13/07/2025 00:00
20/07/2025 00:00
27/07/2025 00:00
03/08/2025 00:00
10/08/2025 00:00
17/08/2025 00:00
24/08/2025 00:00
31/08/2025 00:00


24-hour mean levels of particles - Auchtertool
24-hour mean ug/m³
100
90
80
70
60
50
40
30
20
10
0
08/09/2024
08/10/2024
07/11/2024
07/12/2024
06/01/2025
05/02/2025
07/03/2025
06/04/2025
06/05/2025
05/06/2025
05/07/2025
04/08/2025
03/09/2025
PM10 24-hour
PM2.5-24-hour

Figures

Cato Auchtertool
Fife

Figure 1
Site Location



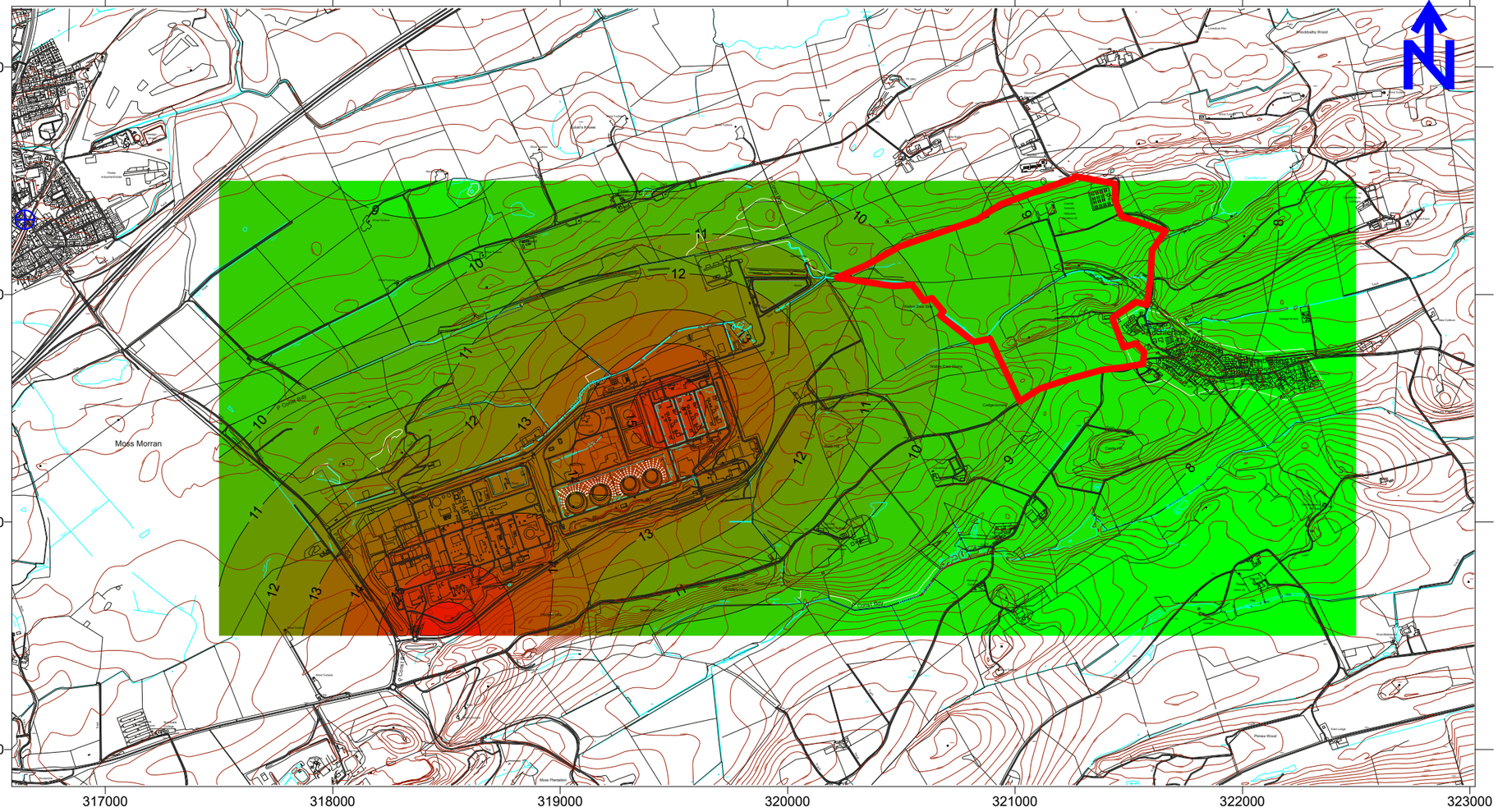
indicative site location

AS 1158 Cato Auchtertool AQIA - 8th September 2025 : Crown copyright Ordnance Survey 0100031673

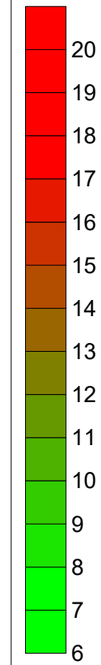
The Airshed

Cato Auchtertool
Fife

Figure 2
Background Air Quality



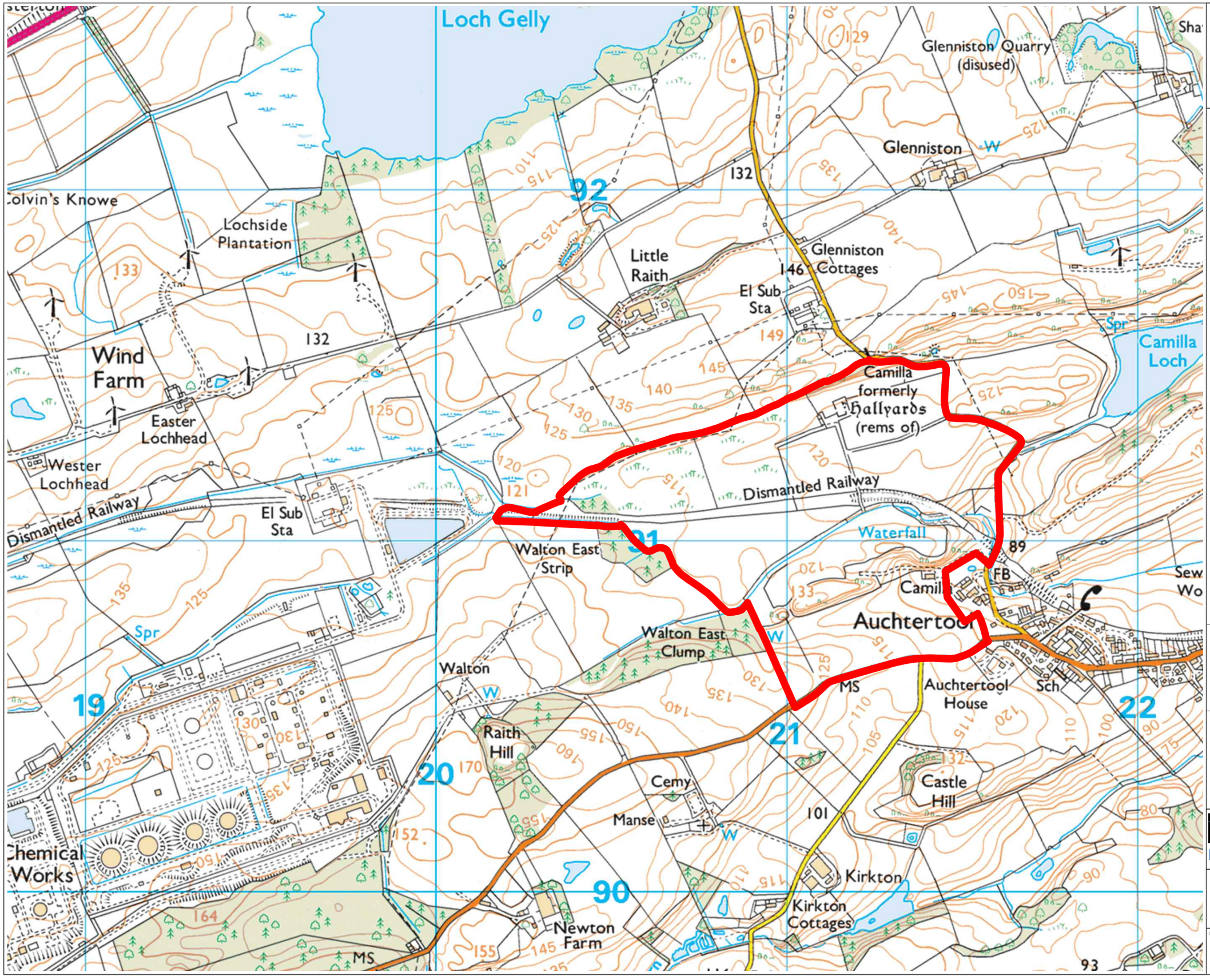
units = ug/m3 NOx annual mean (2025)
from Scottish Government
https://www.scottishairquality.scot/data/mapping/data



AS 1158 Cato Auchtertool AQIA - 8th September 2025 : Crown copyright Ordnance Survey 0100031673

The Airshed

Appendix 1 – Project Description



Cato

Site

Site at Auchtertool,
Mossmorran, Fife
KY2 5XW

N

Scale 1:10,000 at A3

0 100 200

metres

© Crown Copyright and database right 2025
Ordnance Survey 0100031673
© Copyright LoganPM Ltd 2025

LOGAN PM
Energy Project Management

Location Plan

Drawing number	Status
J407/025/05022025	Draft

APPENDIX 2
DUST CONTROL MEASURES DURING DEMOLITION AND CONSTRUCTION

Scope

1. These procedures shall apply to any demolition, groundworks and construction operations undertaken by the applicant and their appointed subcontractors at the proposed large-scale data centre at Auchtertool during the construction of the proposed development.

2. Potentially dusty operations include: changes to the landform, the removal and storage of topsoil and subsoils; the movement of vehicles on unpaved surfaces, re-surfacing, laying of services and other groundworks; the erection of buildings; the storage of building materials and waste products.

3. These measures shall include a formal consultation procedure with Fife Council to ensure that they are made aware of any potentially dusty activities.

Aims

4. The aim of these procedures is to prevent or minimise the release of dust particles from demolition, groundworks and construction operations to atmosphere. Dust means all particles < 75um in diameter. Potential adverse effects from the release of dust particles include loss of amenity due to deposition and soiling of surfaces; damage to crops and other vegetation and human respiratory ill-health due to inhalation. Most airborne particles from groundworks and construction are above the diameter at which adverse effects on human health are likely to occur. These procedures are intended to protect the amenity of sensitive receptors around the proposed development, with particular emphasis on adjacent residential areas.

Responsibility

5. The main contractor shall be responsible for ensuring that there are adequate resources for the effective implementation of these procedures.

6. The main contractor shall appoint a named senior manager who shall be responsible for ensuring that these procedures are implemented on a day-to-day basis during the construction project.

7. All employees and appointed sub-contractors engaged in the construction project shall be made aware of the potential environmental effects of dust and their respective roles in ensuring compliance with environmental standards.

Preamble

8. Design and engineering control to minimise impacts from each phase of any groundworks, and construction operations include: the timing and phasing of operations; the location dusty activities away from sensitive receptors where practicable; the selection and use of appropriate plant and methods of working; and the use of dust suppression water sprays. Adequate process supervision is also required to ensure that members of staff are

adequately trained and aware of their environmental responsibilities and that the appropriate dust control measures are implemented.

Operating Procedures for Dust Suppression

9. Prior to the commencement of any demolition operations, the applicant shall ensure that a comprehensive audit of potentially hazardous materials is conducted within the buildings to identify the presence of asbestos containing materials or other potentially hazardous materials.

10. Prior to the commencement of any new phase of ground works or construction the proposed method of working and dust suppression techniques shall be formally reviewed by the main contractor. Where practicable, dusty activities shall be kept as far as possible from sensitive receptors. The outcome of all such reviews shall be recorded.

11. The main contractor shall provide a telephone 'hotline' to enable direct contact between members of the public and the site agent, to enable rapid response to dust complaints.

12. The main contractor shall formally advise the local EHO from Fife Council of the proposed methods of working or any changes proposed. The main contractor shall take account of feedback as appropriate. The outcome of all consultations and feedback shall be recorded.

13. All mobile plant introduced onto the site shall comply with the Stage 1 emission limits for off road vehicles as specified by EC Directive 97/68/EC. All mobile plant shall be maintained to prevent or minimise the release of dark smoke from vehicle exhausts. Details of vehicle maintenance shall be recorded.

14. The main contractor shall ensure that risk of dust annoyance from the operations is assessed throughout the working day, taking account of wind speed, direction, and surface moisture levels. The main contractor shall ensure that the level of dust suppression implemented on site is adequate for the prevailing conditions. The assessment shall be recorded as part of documented site management procedures.

15. Internal un-surfaced temporary roadways shall be sprayed with water at regular intervals as conditions require. The frequency of road spraying shall be recorded as part of documented site management procedures.

16. Surfaced roads and the public road during all ground works shall be kept clean and swept at regular intervals using a road sweeper as conditions require. The frequency of road sweeping shall be recorded as part of documented site management procedures.

17. All vehicles operating within the site on unsurfaced roads shall not exceed 15mph to minimise the re-suspension of dust.

18. Where dust from the operations are likely to cause significant adverse impacts at sensitive receptors, then the operation(s) shall be suspended until the dust emissions have been abated. The time and duration of suspension of working and the reason shall be recorded.

19. This dust management plan shall be reviewed monthly during the construction project and the outcome of the review shall be recorded as part of the documented site management procedures.

20. No fires or burning of wastes shall be permitted on site during construction.