



UNIVERSAL DESTINATIONS & EXPERIENCES UK PROJECT

Former Kempston Hardwick Brickworks
and adjoining land, Bedford

Environmental Statement Volume 3

Appendix 8.2 - Air Quality Model De- tails

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1. AIR QUALITY MODEL DETAILS

1.1.1. Table 1-1 provides air quality model details including setup and input assumptions, and handling of outputs.

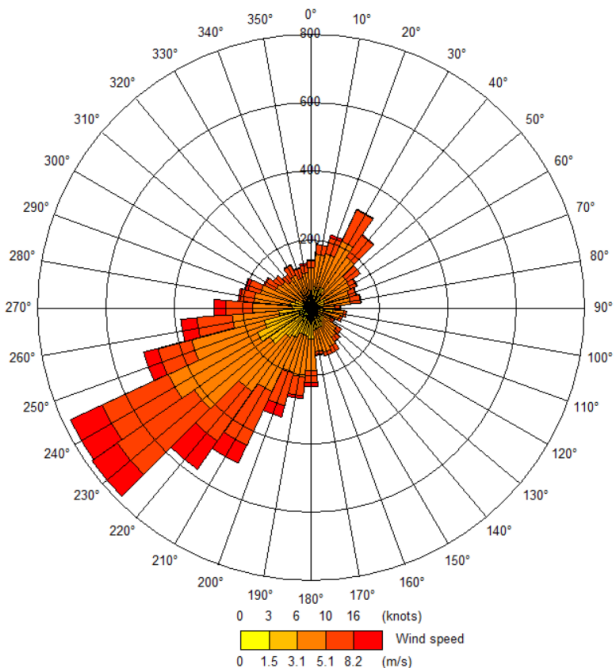
Table 1-1 - Air Quality Model Details

Item	Notes
Dispersion model software	ADMS-Roads ¹ version 5.0.1.3
Setup	Coordinate system: OSGB 1936 British National Grid (epsq:27700) Dry deposition option used for NH ₃ (including plume depletion)
Road Sources	<p>Nitrogen oxides (NO_x), particulate matter 10 (PM₁₀) and particulate matter 2.5 (PM_{2.5}) emissions</p> <ul style="list-style-type: none"> Calculated using Department for Environment Food and Rural Affairs' (Defra) Emissions Factors Toolkit² version 13; Area: England (Not London); Year: 2023 (baseline), 2029 (Peak Construction), 2031 (opening year), 2041 (Primary Phase complete) and 2050 (for 2051 Future Year); Traffic Format: Basic Split; Road Type: Rural (Not London), Urban (Not London), and Motorway (Not London) for fast dual carriageway; and Output: Air Quality Modelling (g/km/s). <p>Ammonia (NH₃) emissions</p> <ul style="list-style-type: none"> Calculated using Air Quality Consultants Ltd Calculator for Road Emissions of Ammonia³ version V2A; Area: England (Not London); Year: 2023 (baseline), 2031 (opening year), 2041 (Primary Phase complete) and 2050 (for 2051 Future Year); Traffic Format: Basic Split; Road Type: Rural (Not London), Urban (Not London), and Motorway (Not London) for fast dual carriageway; Output: Air Quality Modelling (g/km/s); and 'NH₃GRASSLAND' added to ADMS-Roads pollutant palette with a deposition velocity of 0.02m/s, and 'NH₃FOREST' added to ADMS Roads pollutant palette with a deposition velocity of 0.03m/s. <p>(Note: deposition velocities taken from AQTAG06, GRASSLAND = short vegetation, FOREST = tall vegetation.)</p>

¹ Cambridge Environmental Research Consultants (2024) *ADMS-Roads*. Available at: <https://www.cerc.co.uk/environmental-software/ADMS-Roads-model.html> [Accessed: 14 May 2025].

² Department for Environment, Food and Rural Affairs (2024) *Local Air Quality Management Support Website: Emissions Factors Toolkit (EFT)*, version 13. Available at: <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/emissions-factors-toolkit/> [Accessed: 14 May 2025].

³ Air Quality Consultants (2025) *Calculator for Road Emissions of Ammonia CREAM V2A*. Available at: <https://www.aqconsultants.co.uk/resources> [Accessed: 14 May 2025].

Item	Notes
Meteorology (South of Bedford)	<ul style="list-style-type: none"> ■ Cranfield 2023 (missing data infilled from Bedford); ■ Site latitude: 52.1 degrees; ■ Dispersion site surface roughness: 0.5m; ■ Dispersion site minimum Monin-Obukhov length: 10m; ■ Meteorological measurement site surface roughness: 0.2m; ■ Meteorological measurement site minimum Monin-Obukhov length: 10m; ■ Surface albedo: 0.23; ■ Priestley Taylor parameter: 1; ■ Height of wind measurement: 10m; ■ Wind data in sectors of 10 degrees; and ■ Meteorological data are hourly sequential.
Meteorology (Bedford Town Centre)	<ul style="list-style-type: none"> ■ Cranfield 2023 (missing data infilled from Bedford); ■ Site latitude: 52.1 degrees; ■ Dispersion site surface roughness: 0.7m; ■ Dispersion site minimum Monin-Obukhov length: 30m; ■ Meteorological measurement site surface roughness: 0.2m; ■ Meteorological measurement site minimum Monin-Obukhov length: 10m; ■ Surface albedo: 0.23; ■ Priestley Taylor parameter: 1; ■ Height of wind measurement: 10m; ■ Wind data in sectors of 10 degrees; and ■ Meteorological data are hourly sequential.
Wind rose as generated from met data using ADMS wind rose viewer	

Item	Notes
Background pollutant data	<p>Not input to model directly but incorporated in the post-processing of model outputs to give predictions of total pollutant concentrations.</p> <p>Defra 1 x 1 km background data (2021 reference year)⁴ for annual mean concentrations of NO_x, nitrogen dioxide (NO₂), PM₁₀ and PM_{2.5} for 2023, 2029, 2031 and 2040 were used. The future year background predictions assume that emissions reduce over time in line with Government forecasts. Given that the Defra background maps are provided up to and including 2040, there are no data for dates beyond that. As such, the 2040 background pollutant concentrations used for 2051 scenarios are likely to be conservative given Government policy, particularly reductions in PM_{2.5}. ‘Sector removal’ was not undertaken as not all roads within each background grid square were provided within the traffic data.</p> <p>Background data for NH₃ and N-dep for the 2021 mid-year were taken from the Air Pollution Information System (APIS)⁵. Unlike the Defra background data, the data from APIS require manipulation to predict background concentrations in future years; this was done with reference to the Joint Nature Conservation Committee’s Nitrogen Futures publication⁶. For the assessment, the Nitrogen Futures ‘business as usual’ scenario was adopted whereby NH₃ background concentrations increase by approximately +0.08% year on year and N-dep (which depends on NO_x and NH₃ levels) decreases by approximately -1.04% year on year, up to and including 2040 (to be consistent with Defra background data).</p>
Grids	Specified points (discrete receptors)
Time varying emissions	Time varying emissions (.fac) were used for both the South of Bedford and Bedford town centre models. For the main model, a national 2023 7-day profile was used; and for Bedford town centre, a traffic count point on Ampthill Road was used to generate 7-day profile.
Output	<p>Long-term concentrations (µg/m³) NO_x, PM₁₀, PM_{2.5}, ‘NH₃GRASSLAND’ and ‘NH₃FOREST’</p> <p>(Note: GRASSLAND = short vegetation, FOREST = tall vegetation)</p>
Post-processing of model outputs	<p>Calculation of NO₂ (NO_x), PM₁₀, PM_{2.5} and NH₃ Concentrations</p> <p>Model outputs (i.e., modelled road source contributed) NO_x, PM₁₀ and PM_{2.5} were adjusted following model verification (discussed later in this appendix), in accordance with LAQM.TG(22)⁷ for NO_x.</p> <ul style="list-style-type: none"> Total annual mean NO_x (µg/m³) = adjusted modelled road source contributed NO_x (µg/m³) + background NO_x (µg/m³);

⁴ Department for Environment, Food and Rural Affairs (2025) *Local Air Quality Management Support Website: Background Maps 2021 Reference Year Background Maps*. Available at: <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/background-maps/> [Accessed: 14 May 2025].

⁵ UK Centre for Ecology and Hydrology (2024) *Air Pollution Information System (APIS)*. Available at: <https://www.apis.ac.uk/introduction.html> [Accessed: 14 May 2025].

⁶ Joint Nature Conservation Committee (2020) *Nitrogen Futures*. Available at: <https://jncc.gov.uk/our-work/nitrogen-futures/#project-outputs> [Accessed: 14 May 2025].

⁷ Department for Environment, Food and Rural Affairs (2025) *Local Air Quality Management Technical Guidance (TG22)*. Available at: <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf> [Accessed: 14 May 2025].

Item	Notes
	<ul style="list-style-type: none"> ■ Total annual mean PM₁₀ (µg/m³) = adjusted modelled road source contributed PM₁₀ (µg/m³) + background PM₁₀ (µg/m³); and ■ Total annual mean PM_{2.5} (µg/m³) = adjusted modelled road source contributed PM_{2.5} (µg/m³) + background PM_{2.5} (µg/m³). <p>Defra NO_x to NO₂ calculator⁸ version 9.1 was used to determine road source contributed NO₂ and total annual mean NO₂ from adjusted modelled road source contributed NO_x and background NO₂.</p> <p>To indicate compliance with the 24-hour mean PM₁₀ standard, <i>LAQM.TG(22)</i>⁷ gives the following equation that relates the annual mean concentration to the number of exceedances of the 50µg/m³ threshold, where up to 35 exceedances are allowed:</p> <ul style="list-style-type: none"> ■ Number of 24-hour mean PM₁₀ exceedances of 50µg/m³ = $-18.5 + 0.00145 \times \text{annual mean}^3 + (206 \div \text{annual mean})$. <p>Note: where the annual mean PM₁₀ concentration is less than 16.5µg/m³ then the number of exceedances of the 24-hour mean standard can be assumed to be zero (the relationship is invalid for annual mean concentrations less than 14.8µg/m³).</p> <p>To indicate compliance with the 1-hour mean NO₂ standard, <i>LAQM.TG(22)</i>⁷ advises that compliance is likely if the annual mean concentration is less than 60µg/m³.</p> <p>For NH₃, no adjustment was undertaken as there were no appropriate monitoring data to allow model verification for this pollutant.</p> <ul style="list-style-type: none"> ■ Total annual mean NH₃ (µg/m³) = modelled road source contributed NH₃ (µg/m³) + background NH₃ (µg/m³). <p>Calculation of N-dep</p> <p><i>Step 1 – calculate dry deposition fluxes:</i></p> <ul style="list-style-type: none"> ■ Dry NO₂ deposition flux (µg/m²/s) = road source contributed NO₂ (µg/m³) * dry NO₂ deposition velocity for short vegetation (0.0015m/s) or tall vegetation (0.003m/s); and ■ Dry NH₃ deposition flux (µg/m²/s) = road source contributed NH₃ (µg/m³) * dry NH₃ deposition velocity for short vegetation (0.02m/s) or tall vegetation (0.03m/s). <p><i>Step 2 – convert dry deposition fluxes to dry deposition rates:</i></p> <ul style="list-style-type: none"> ■ Dry N-dep due to NO₂ (kg/ha/yr) = dry NO₂ deposition flux (µg/m²/s) * 96; and ■ Dry N-dep due to NH₃ (kg/ha/yr) = dry NH₃ deposition flux (µg/m²/s) * 259.7. <p><i>Step 3 – calculate total dry deposition rate:</i></p> <ul style="list-style-type: none"> ■ Total dry N-dep (kg/ha/yr) = dry N-dep due to NO₂ (kg/ha/yr) + dry N-dep due to NH₃ (kg/ha/yr) + background N-dep for short or tall vegetation (kg/ha/yr).

⁸ Department for Environment, Food and Rural Affairs (2024) *Local Air Quality Management Support Website: NO_x to NO₂ Calculator v9.1*. Available at: <https://laqm.defra.gov.uk/air-quality/air-quality-assessment/nox-to-no2-calculator/> [Accessed: 14 May 2025].

AIR QUALITY MODEL VERIFICATION

- 1.1.2. Model verification was undertaken in accordance with Defra technical guidance *LAQM.TG(22)*⁷. Due to the differing data sources and local conditions, the dispersion models were split, with the primary model covering areas south of Bedford and another covering key areas within Bedford town centre. As such, each model has a separate verification process.
- 1.1.3. All the monitoring sites included in the model verification are established local authority monitoring sites (Bedford Borough Council) at roadside, next to the modelled/affected road network, in accordance with Defra technical guidance *LAQM.TG(22)*⁷.
- 1.1.4. To reduce the uncertainty associated with predicted concentrations, model verification has been carried out following guidance set out in *LAQM.TG(22)*⁷. As the model has been verified against local monitoring data for NO₂ and adjusted accordingly, there can be reasonable confidence in the predicted NO₂ concentrations for the future baseline and do-something scenarios. However, verification of particulate matter concentrations is rarely possible due, in part, to an absence of suitable monitoring and, where data are available, the very small contribution made by emissions from road traffic to total concentrations. The latter effect means that attributing a difference in concentration between a roadside monitored concentration and an area average background concentration (such as provided by the Defra background maps⁴) to road emissions is difficult. Moreover, there are examples within Defra's Automatic Urban and Rural Network⁹, where monitored roadside concentrations are lower than the corresponding background concentration and/or concentrations monitored at nearby urban background sites. In contrast, for NO_x/NO₂, the road increment to local concentrations is readily identifiable.
- 1.1.5. For these reasons, it is not appropriate to generate verification factors for PM₁₀ and PM_{2.5} using the same methodology as for NO₂ verification. Historically, studies have applied the model adjustment factor; however, there is little scientific basis for this since the mechanisms for generation of these pollutant species are different.
- 1.1.6. Notwithstanding this, where PM₁₀/PM_{2.5} specific verification factors have been calculated, the value obtained is less than one. There is widespread evidence for the under-prediction of NO_x emissions from vehicles, but no equivalent evidence base for particulate matter emissions. In the absence of strong evidence for the necessity to apply model adjustment to modelled outputs of particulate matter, predicted concentrations of PM₁₀ and PM_{2.5} have not been adjusted.

South of Bedford Town Centre – NO_x/NO₂

- 1.1.7. Ideally, verification is undertaken using ratified monitoring data from roadside continuous monitoring locations, which are set back the kerb at between 1 and 10m (typically) and are reasonably representative of the receptor locations of interest. However, all monitoring sites that are adjacent to the affected road network are NO₂ diffusion tubes, which are less accurate than well maintained continuous monitoring instruments.
- 1.1.8. Of the monitoring locations adjacent to the road network that fulfil the above criteria, only SB59 (a Central Bedfordshire monitoring location)¹⁰ was not included as there was no model link within the traffic data for the corresponding part of Woburn Road.

⁹ Department for Environment, Food and Rural Affairs (2025) *UK AIR Air Information Resource website*. Available at: <https://uk-air.defra.gov.uk/networks/network-info?view=aur> [Accessed: 14 May 2025].

¹⁰ Central Bedfordshire Council (2024) *2024 Air Quality Annual Status Report (ASR)*. Available at: https://www.centralbedfordshire.gov.uk/info/52/types_of_pollution/292/air_quality/3 [Accessed: 14 May 2025].

- 1.1.9. The following tables and figures set out the model verification that was undertaken for the model to the south of Bedford.

Step 1 – Total NO₂ Comparison Prior to Adjustment

Table 1-2 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) Before Adjustment – South of Bedford

Site ID	Background Annual Mean NO ₂	Total Monitored Annual Mean NO ₂ (A)	Total Modelled Annual Mean NO ₂ (B)	B-A (C)	C/A (%)
DT71	11.0	27.3	15.3	-12.0	-43.9%
DT72	11.0	29.9	15.0	-14.9	-49.9%
DT77	7.6	14.7	8.8	-5.9	-40.0%
DT82	7.5	14.5	8.7	-5.8	-39.9%

Table 1-3 - Summary of the Differences between Monitored and Modelled Concentrations before Adjustment – South of Bedford

Differences Between Monitored and Modelled Concentrations	Number
Within +10%	0
Within -10%	0
Total Within ±10%	0
Within +10 to +25%	0
Within -10 to -25%	0
Total Within ±10 to ±25%	0
Over +25%	0
Under -25%	4
Total Greater ±25%	4
Total Within ±25%	0

- 1.1.10. Before adjustment, no modelled concentration was within ±25% of the monitored concentration. The model was revisited although no reasonable refinements could be determined.

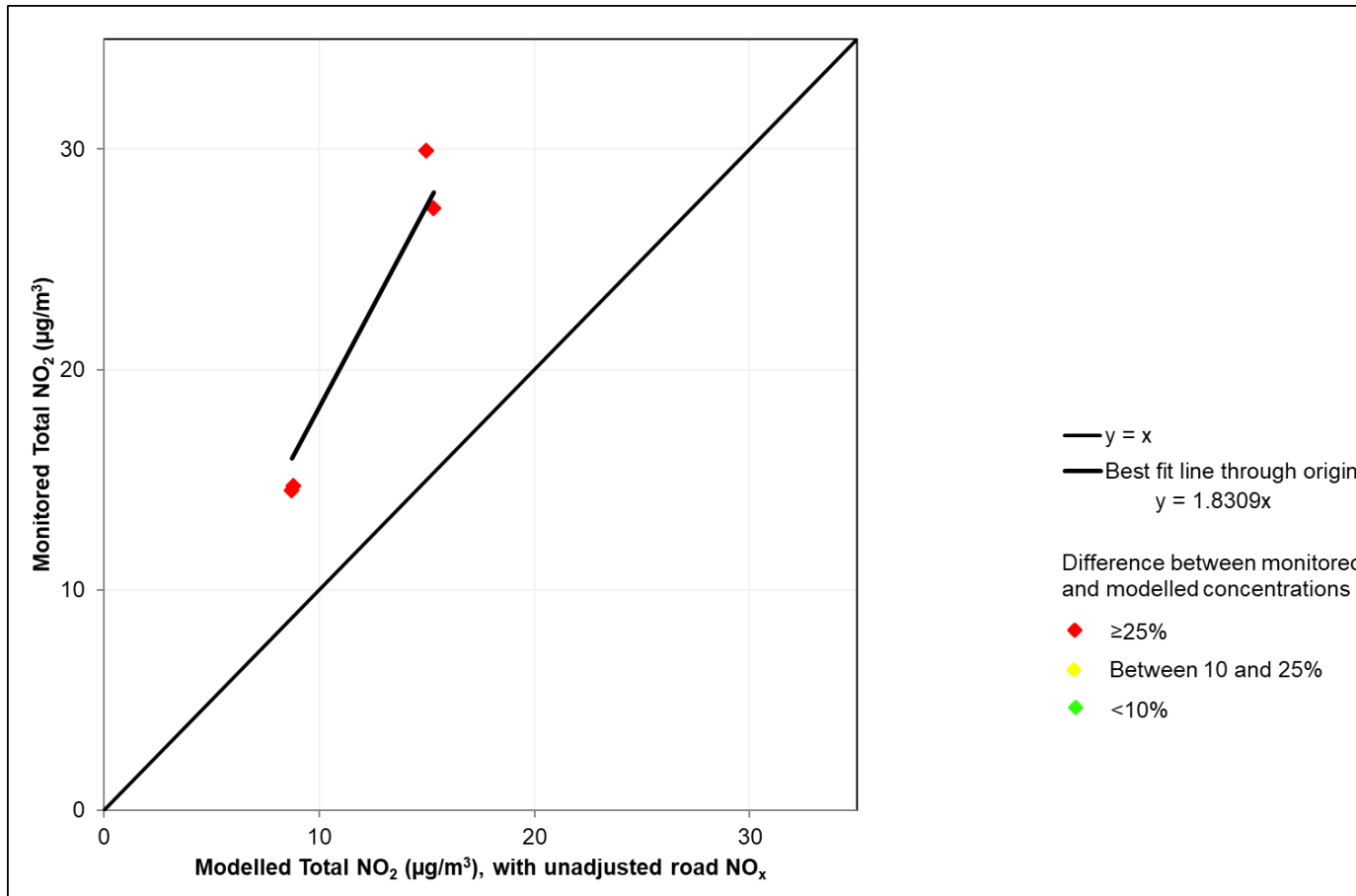


Figure 1-1 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) before Adjustment – South of Bedford

Step 2 – Determination of Adjustment Factor for Modelled Road Contributed NOx

Table 1-4 - Comparison of Monitored and Modelled Road Contributed Annual Mean NOx ($\mu\text{g}/\text{m}^3$) before and after Adjustment – South of Bedford

Site ID	Monitored Road NOx (B)	Modelled Road NOx (C)	B/C	Adjusted Modelled Road NOx
DT71	38.5	9.2	4.1965	44.5
DT72	45.7	8.4	5.4330	40.9
DT77	15.0	2.4	6.2263	11.7
DT82	14.9	2.6	5.7962	12.5

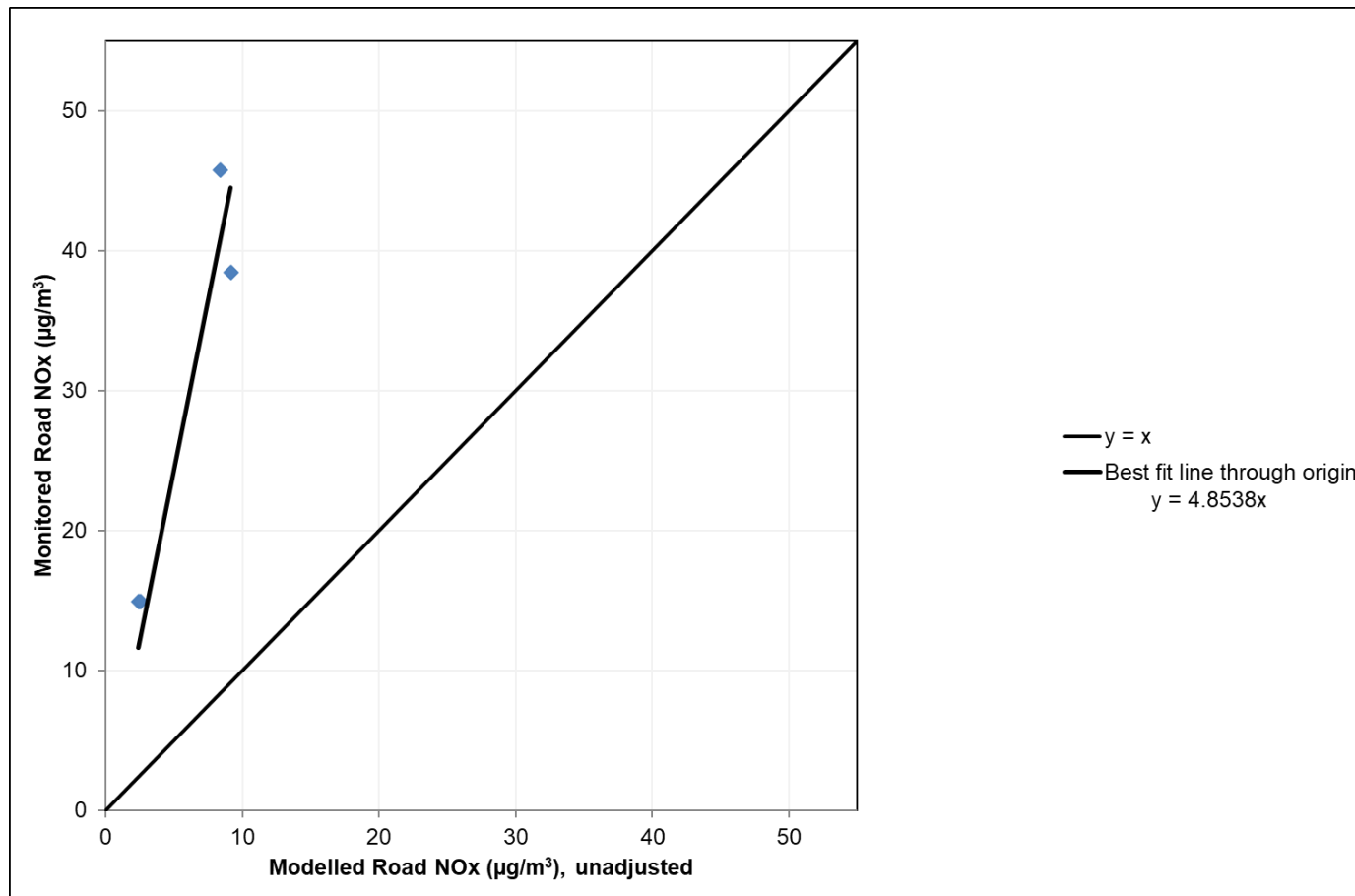


Figure 1-2 - Monitored and Modelled Road Contributed Annual mean NOx (µg/m³) and Determination of Adjustment factor for Modelled Road Contributed NOx – South of Bedford

Adjustment factor = 4.8538

Step 3 - Total NO₂ Comparison After Adjustment

Table 1-5 - Comparison of Monitored and Modelled total Annual Mean NO₂ (µg/m³) after Adjustment – South of Bedford

Site ID	Background Annual Mean NO ₂	Total Monitored Annual Mean NO ₂ (A)	Total Modelled Annual Mean NO ₂ (B)	B-A (C)	C/A (%)
DT71	11.0	27.3	29.5	2.2	7.9%
DT72	11.0	29.9	28.2	-1.7	-5.8%
DT77	7.6	14.7	13.2	-1.5	-10.2%
DT82	7.5	14.5	13.4	-1.1	-7.6%

Table 1-6 - Summary of the Differences between Monitored and Modelled Concentrations after Adjustment – South of Bedford

Differences Between Monitored and Modelled Concentrations	Number
Within +10%	1
Within -10%	2
Total Within ±10%	3
Within +10 to +25%	0
Within -10 to -25%	1
Total Within ±10 to ±25%	1
Over +25%	0
Under -25%	0
Total Greater ±25%	0
Total Within ±25%	4
Uncertainty Statistics	
Statistic	Value
Root Mean Square Error (RMSE)	1.7µg/m ³
Fractional Bias (FB)	0.025

- 1.1.11. The adjustment process has resulted in a better fit of modelled concentrations with those from monitoring. With adjustment, all four modelled concentrations are within $\pm 25\%$ of monitored concentrations.
- 1.1.12. For annual mean NO_2 , the ideal RMSE is less than $4\mu\text{g}/\text{m}^3$ (i.e., within 25% of the air quality standard). The FB value can range between +2 and -2, where a positive value indicating underprediction and a negative value overprediction. The ideal FB value is zero.
- 1.1.13. The adjusted model for South of Bedford has an RMSE of $1.7\mu\text{g}/\text{m}^3$, which is 4.25% of the standard, and the small positive FB value of 0.025 indicates a tendency to slight underprediction.

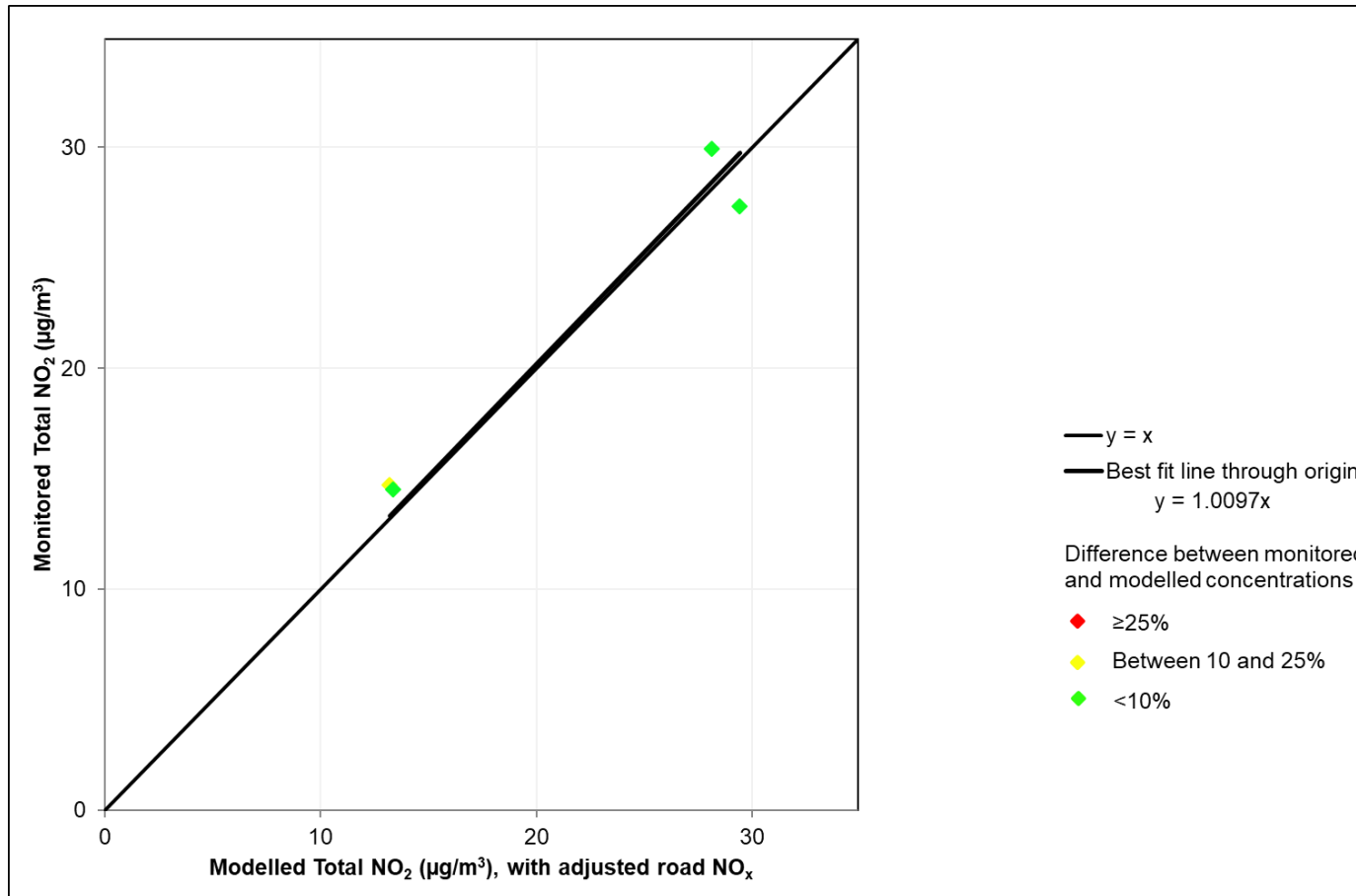


Figure 1-3 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) after Adjustment – South of Bedford

Bedford Town Centre – NO_x/NO₂

- 1.1.14. Eight monitoring locations were used for verification. These are on the modelled road network at roadside and are reasonably representative of modelled receptors.
- 1.1.15. The following monitoring locations adjacent to the modelled road network were excluded from verification:
- Prebend Street continuous monitoring site (CM1)¹¹ and triplicate diffusion tubes DT66, DT67 and DT68: Excluded as this is within a gap between the buildings that form the eastern side of the street canyon along Prebend Street and as such is not representative of exposure at the building facades facing into the street canyon;
 - DT16: This location has low data capture in 2023 (42.3%);
 - DT33: This location is adjacent to an ornamental brick wall for a set of gates, which is likely to be leading to conditions that are contributing to unrealistically high concentrations. It is also not representative of any receptor locations, nor are there any receptors under similar conditions (including distance to the kerb) in the vicinity of the location; and
 - DT73: This location is a kerbside site (within 1m of the kerb) and is not representative of any receptor locations of interest.
- 1.1.16. The following tables and graphs set out the model verification that was undertaken for the main model.

Step 1 – Total NO₂ Comparison Prior to Adjustment

Table 1-7 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) before Adjustment – Bedford town centre

Site ID	Background Annual Mean NO ₂	Total Monitored Annual Mean NO ₂ (A)	Total Modelled Annual Mean NO ₂ (B)	B-A (C)	C/A (%)
DT71	11.0	27.3	15.1	-12.2	-44.8%
DT72	11.0	29.9	15.6	-14.4	-48.0%
DT42	11.1	33.5	15.7	-17.8	-53.2%
DT44	10.9	33.6	17.5	-16.1	-48.0%
DT36	10.9	28.5	14.9	-13.7	-47.9%
DT28	10.9	31.9	17.4	-14.5	-45.4%
DT35	10.9	32.1	14.9	-17.2	-53.7%
DT20*	10.9	40.9	17.7	-23.2	-56.7%

Notes:

* Concentrations at DT20 on Prebend Street is likely influenced by complex building/street canyon effects and/or traffic that are not accounted for in the modelling.

¹¹ Bedford Borough Council (2024) *2024 Air Quality Annual Status Report (ASR)*.
<https://www.bedford.gov.uk/environmental-issues/noise-nuisances-and-pollution/air-quality/air-quality-overview>

Table 1-8 - Summary of the Differences between Monitored and Modelled Concentrations before Adjustment – Bedford town centre

Differences Between Monitored and Modelled Concentrations	Number
Within +10%	0
Within -10%	0
Total Within $\pm 10\%$	0
Within +10 to +25%	0
Within -10 to -25%	0
Total Within ± 10 to $\pm 25\%$	0
Over +25%	0
Under -25%	8
Total Greater $\pm 25\%$	8
Total Within $\pm 25\%$	0

- 1.1.17. Before adjustment, no modelled concentrations were within $\pm 25\%$ of monitored concentrations. For these locations, the model was revisited although no reasonable refinements could be determined.

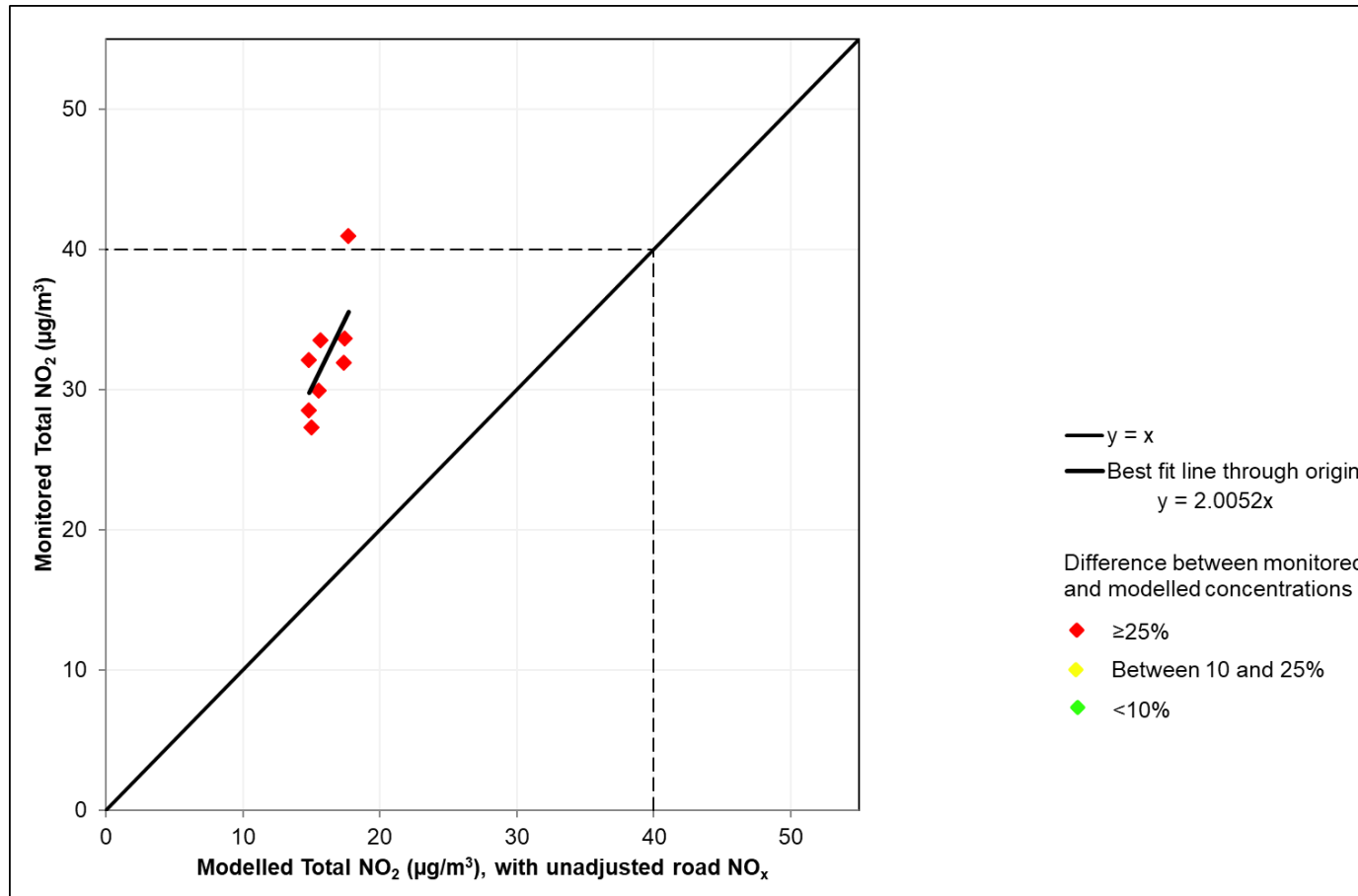


Figure 1-4 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) before Adjustment – Bedford Town Centre

Step 2 – Determination of Adjustment Factor for Modelled Road Contributed NOx

Table 1-9 - Comparison of Monitored and Modelled Road Contributed Annual Mean NOx ($\mu\text{g}/\text{m}^3$) before and after Adjustment – Bedford Town Centre

Site ID	Monitored Road NOx (B)	Modelled Road NOx (C)	B/C	Adjusted Modelled Road NOx
DT71	38.5	8.6	4.4739	38.5
DT72	81.7	9.7	8.4293	43.4
DT42	43.4	9.9	4.3977	44.2
DT44	45.7	14.2	3.2119	63.8
DT36	56.4	8.4	6.7314	37.5
DT28	57.1	14.1	4.0418	63.2
DT35	42.0	8.4	4.9966	37.7
DT20	51.9	14.8	3.5007	66.4

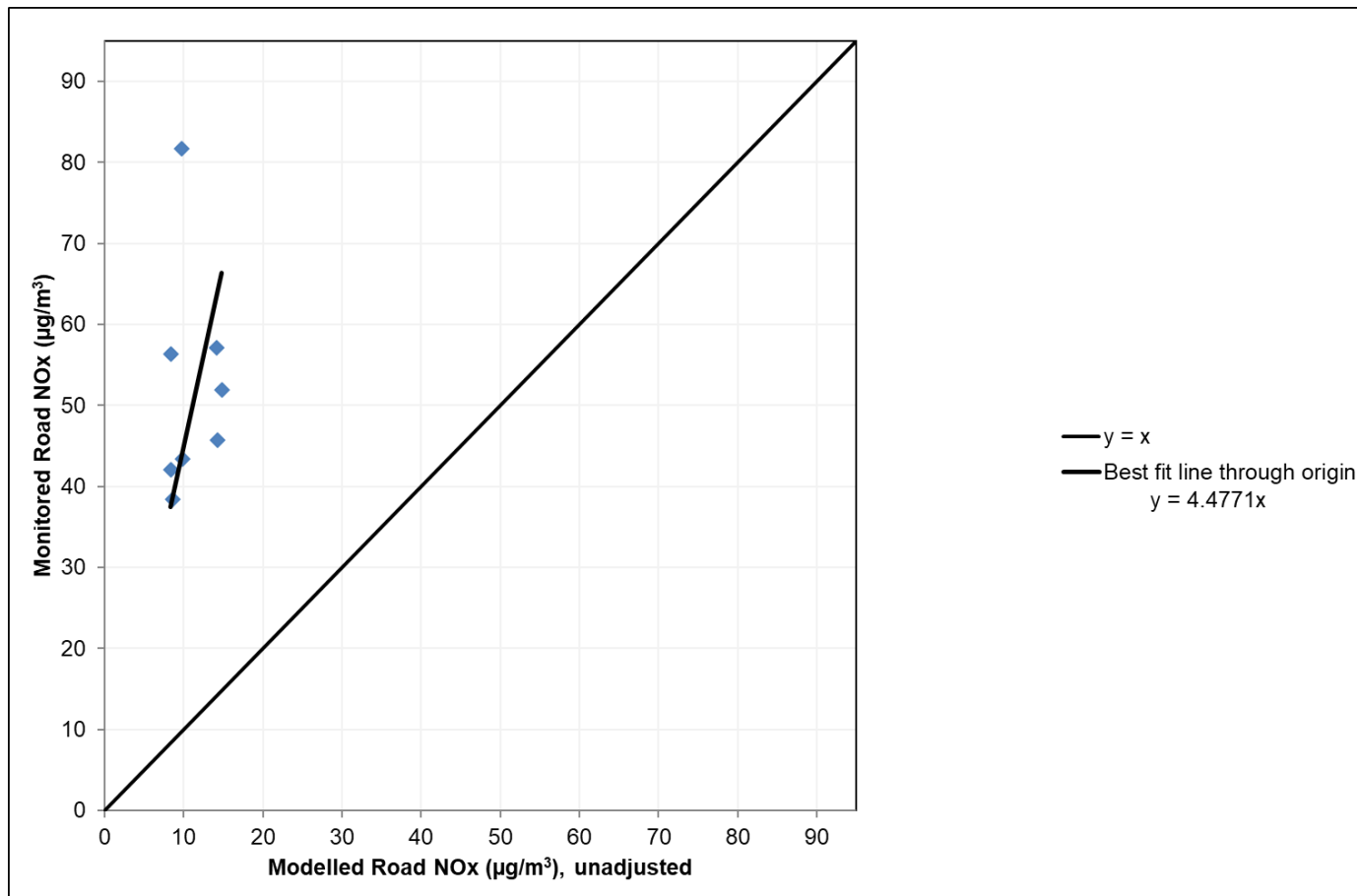


Figure 1-5 - Monitored and Modelled Road Contributed Annual Mean NOx (µg/m³) and Determination of Adjustment Factor for Modelled Road Contributed NOx – Bedford Town Centre

Adjustment factor = 4.4771

Step 3 - Total NO₂ Comparison After Adjustment

Table 1-10 - Comparison of Monitored and Modelled Total Annual mean NO₂ (µg/m³) after Adjustment – Bedford Town Centre

Site ID	Background Annual Mean NO ₂	Total Monitored Annual Mean NO ₂ (A)	Total Modelled Annual Mean NO ₂ (B)	B-A (C)	C/A (%)
DT71	11.0	27.3	27.3	0.0	0.0%
DT72	11.0	29.9	29.1	-0.8	-2.8%
DT42	11.1	33.5	29.4	-4.1	-12.2%
DT44	10.9	33.6	35.7	2.1	6.3%
DT36	10.9	28.5	26.9	-1.7	-5.8%
DT28	10.9	31.9	35.5	3.6	11.4%
DT35	10.9	32.1	26.9	-5.2	-16.2%
DT20	10.9	40.9	36.5	-4.4	-10.8%

Table 1-11 - Summary of the Differences between Monitored and Modelled Concentrations after Adjustment – Bedford Town Centre

Differences Between Monitored and Modelled Concentrations	Number
Within +10%	2
Within -10%	2
Total Within ±10%	4
Within +10 to +25%	1
Within -10 to -25%	3
Total Within ±10 to ±25%	4
Over +25%	0
Under -25%	0
Total Greater ±25%	0
Total Within ±25%	8
Uncertainty Statistics	

Differences Between Monitored and Modelled Concentrations	Number
Statistic	Value
Root Mean Square Error (RMSE)	3.2µg/m ³
Fractional Bias (FB)	0.041

- 1.1.18. The adjustment process resulted in a better fit of modelled concentrations with those from monitoring. After adjustment, all modelled concentrations are within $\pm 25\%$ of monitored concentrations.
- 1.1.19. For annual mean NO₂, the ideal RMSE is less than 4µg/m³ (i.e., within 25% of the air quality standard). The FB value can range between +2 and -2, where a positive value indicating underprediction and a negative value overprediction. The ideal FB value is zero.
- 1.1.20. The adjusted model for Bedford town centre has an RMSE of 3.2µg/m³, which is 8% of the standard, and the small positive FB value of 0.041 indicates a tendency to slight underprediction.

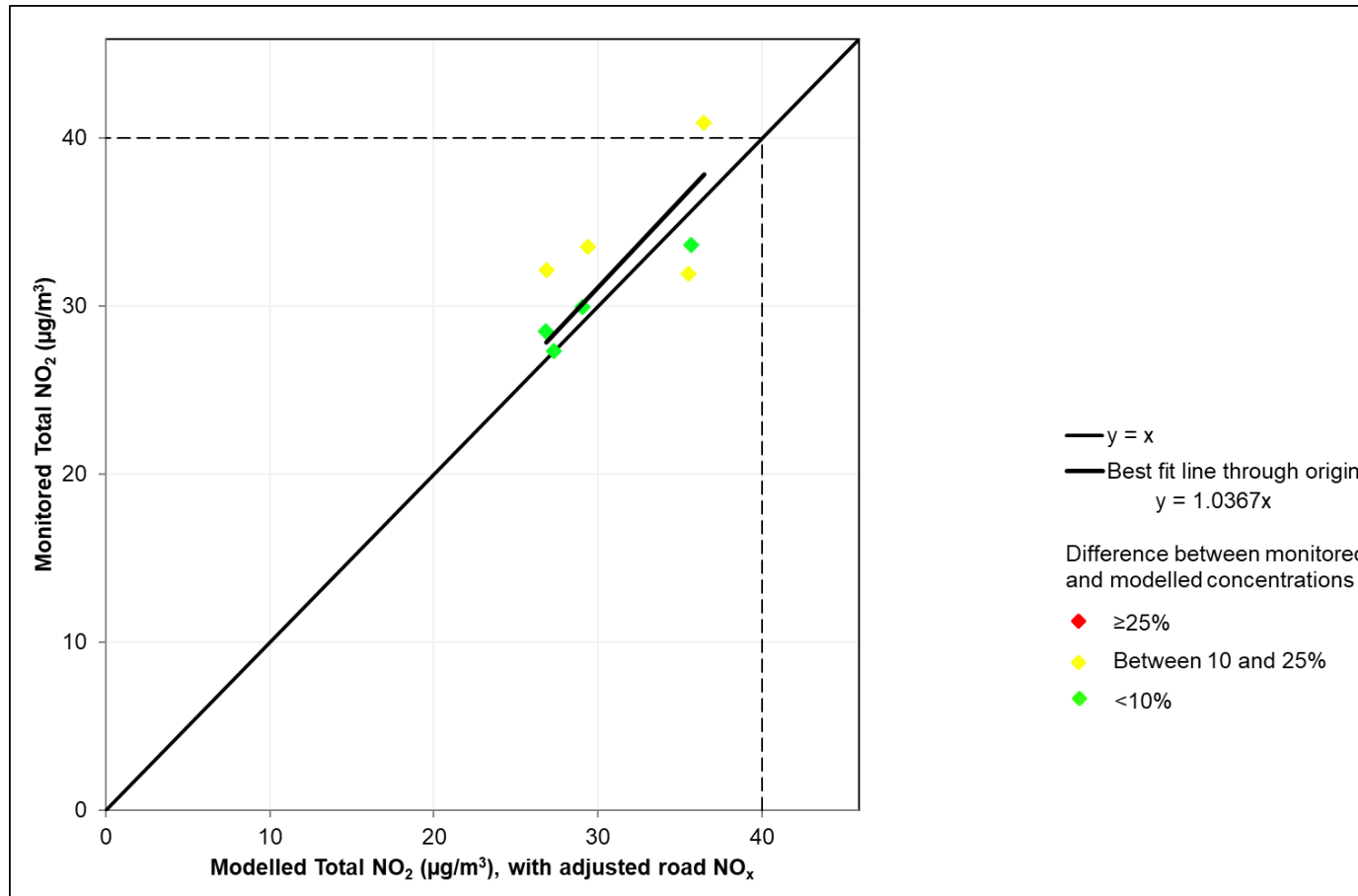


Figure 1-6 - Comparison of Monitored and Modelled Total Annual Mean NO₂ (µg/m³) after Adjustment – Bedford Town Centre



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