F5J Council's response to Q83-84 air quality - August 2020

INSPECTORS' QUESTION 83

Paragraph 8.50 of the Plan states that transport generated emissions are the main source of poor air quality. It also identifies the AQMAs within the borough. Can the Council provide maps showing the AQMA locations and provide us with details on the reasons for their designations? What plans are in place to improve air quality in the AQMAs? Is any development proposed in the vicinity of these AQMAs (including commitments and allocations), which could impact on traffic levels through the AQMAs? If so, can these developments be identified on the AQMA maps please?

Maps showing the AQMA locations and details on the reasons for their designations

1. Currently Brentwood Borough Council has three AQMAs, out of seven AQMAs declared in 2005; these were declared due to exceedances of Nitrogen Dioxide (NO2), a pollutant largely linked to transport emissions.

2. Details and boundaries maps of the remaining three AQMAs are published on the Council's website, DEFRA website, and are listed below:

AQMA number	Description	Date Declared	Pollutants
Brentwood AQMA No.2	The AQMA comprises parts of Brook Street, Brentwood and the A12.	10/01/2005	Nitrogen dioxide NO2
Brentwood AQMA No.4	The AQMA comprises parts of Warescot Road, Hurstwood Avenue and Ongar	10/01/2005	Nitrogen dioxide NO2

	Road, Brentwood and the A12.		
Brentwood AQMA No.7	The AQMA comprises parts of Ongar Road, Ingrave Road, High Street and Shenfield Road, Brentwood in proximity to Wilsons Corner (the junction of the A128 and A1203).	10/01/2005	Nitrogen dioxide NO2

Table 83.1: Remaining AQMAs in Brentwood

What plans are in place to improve air quality in the AQMAs?

3. Currently the Brentwood Borough Council Air Quality Action Plan (2008) sets out the Council's measures to achieve air quality limit values. At table 6 it summarises various actions that constitute the Action Plan, many of which have been implemented.

4. The Transport Assessment (evidence document C35) sets out a package of sustainable mitigation measures which specifically mitigate direct and indirect traffic impacts of new development proposed in the draft Local Plan, including air quality issues. For example, it recognises that having five high schools located in the central area of Brentwood Borough generate a significant volume of parents dropping off and picking up their children (and air quality in AQMA No.7) and proposes measures such as School Clear Zone Park, and pick-up/ drop-off points for parents to drop off their children. Sustainable mitigation measures are detailed in Table 7-1 of the Transport Assessment and listed below:

    i. Create School Clear Zone to restrict all vehicles from stopping, parking for drop off during AM/PM peaks from a specific area(s).

    ii. Deliver Park, Ride or Stride facilities for workers within Brentwood T.C. or drop/pick up off points for parents to drop off their children.

    iii. Plan and deliver in phases 'Quietway' cycle routes in Brentwood initially connecting Transfer Hubs to Town Centre schools.

    iv. Ban all large freight vehicle from stopping deliveries within the Central Brentwood zone and A128 corridor during AM/PM peaks.

    v. Policy requiring all new developments dependent on location to be 'Car light' and/or encourage e-vehicles.

    vi. Introduce a pedestrian wayfinding system like Legible London.

    vii. Create and/or promote a multiple service App making access to smart car hire/ community buses/ booking bikes (including e-bikes) etc. easier.

viii. Introduce electrical parking points to encourage use of such vehicles and plan and deliver other IT infrastructure redundancy to allow future implementation of emerging SMART systems.

ix. Create through phases a new multi-modal interchange at West Horndon Station.

5. Other plans that would contribute to minimising traffic impacts on air quality in the AQMAs include:

- The Southern Brentwood Growth Corridor: A Sustainable Transport Integration Vision (evidence document C37) outlines the principles and proposals that will underpin the integrated development of sustainable transport infrastructure required to support proposed development in the southern growth corridor.

- The Brentwood Cycling Action Plan (evidence document C36) which plays a key part in the commitment to establishing a coherent, comprehensive and advantageous cycle network across Essex.

- The M25 junction 28 improvement scheme co-ordinated and led by Highways England, and potentially the M25 J28 Designated Funds Cycling Scheme following ongoing discussion with Highways England, Essex County Council and LB Havering. These are expected to make positive improvements to AQMA No.2.

Is any development proposed in the vicinity of these AQMAs (including commitments and allocations), which could impact on traffic levels through the AQMAs? If so, can these developments be identified on the AQMA maps please?

6. Proposed development in the vicinity of these AQMAs are detailed in Table 83.3 below:

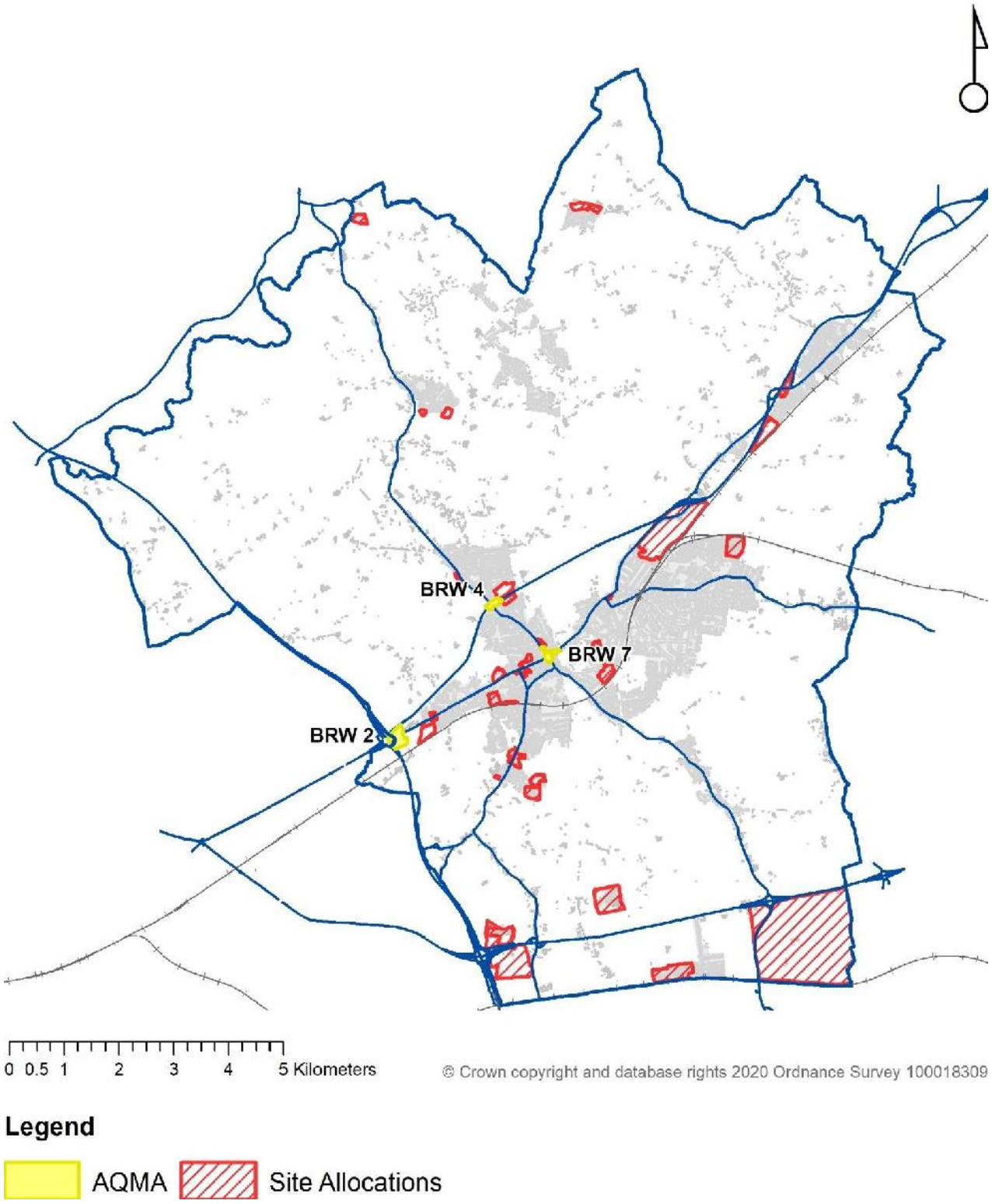
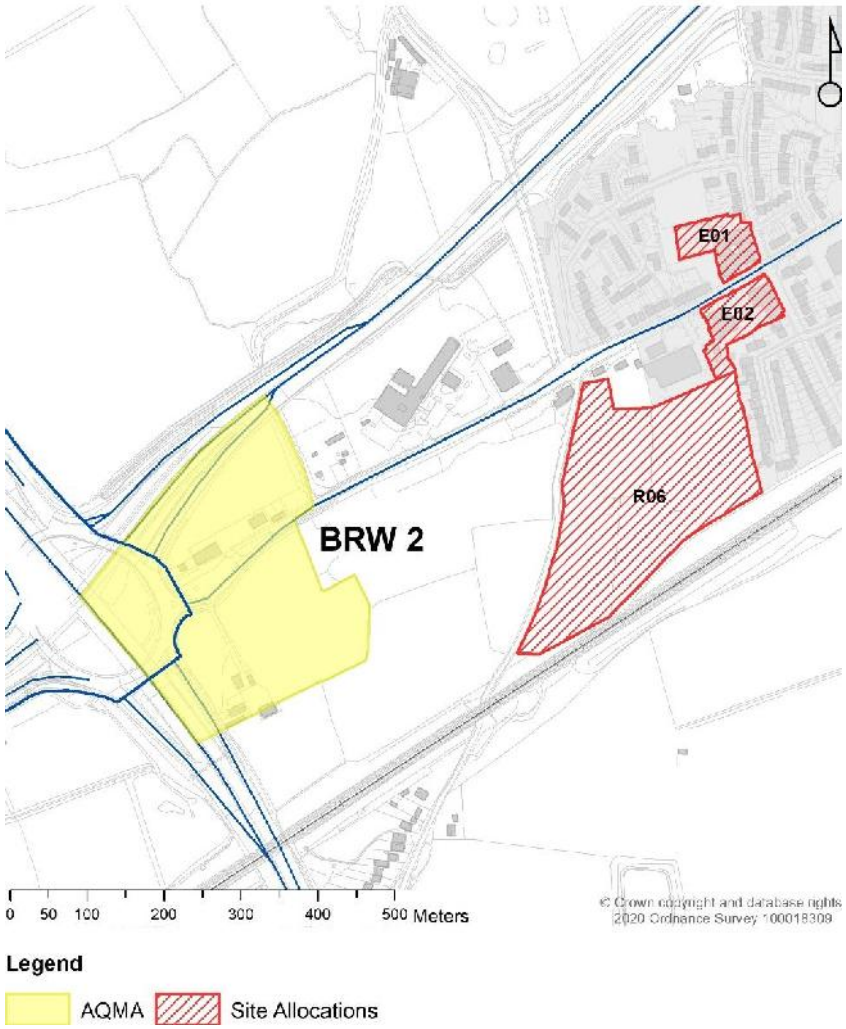
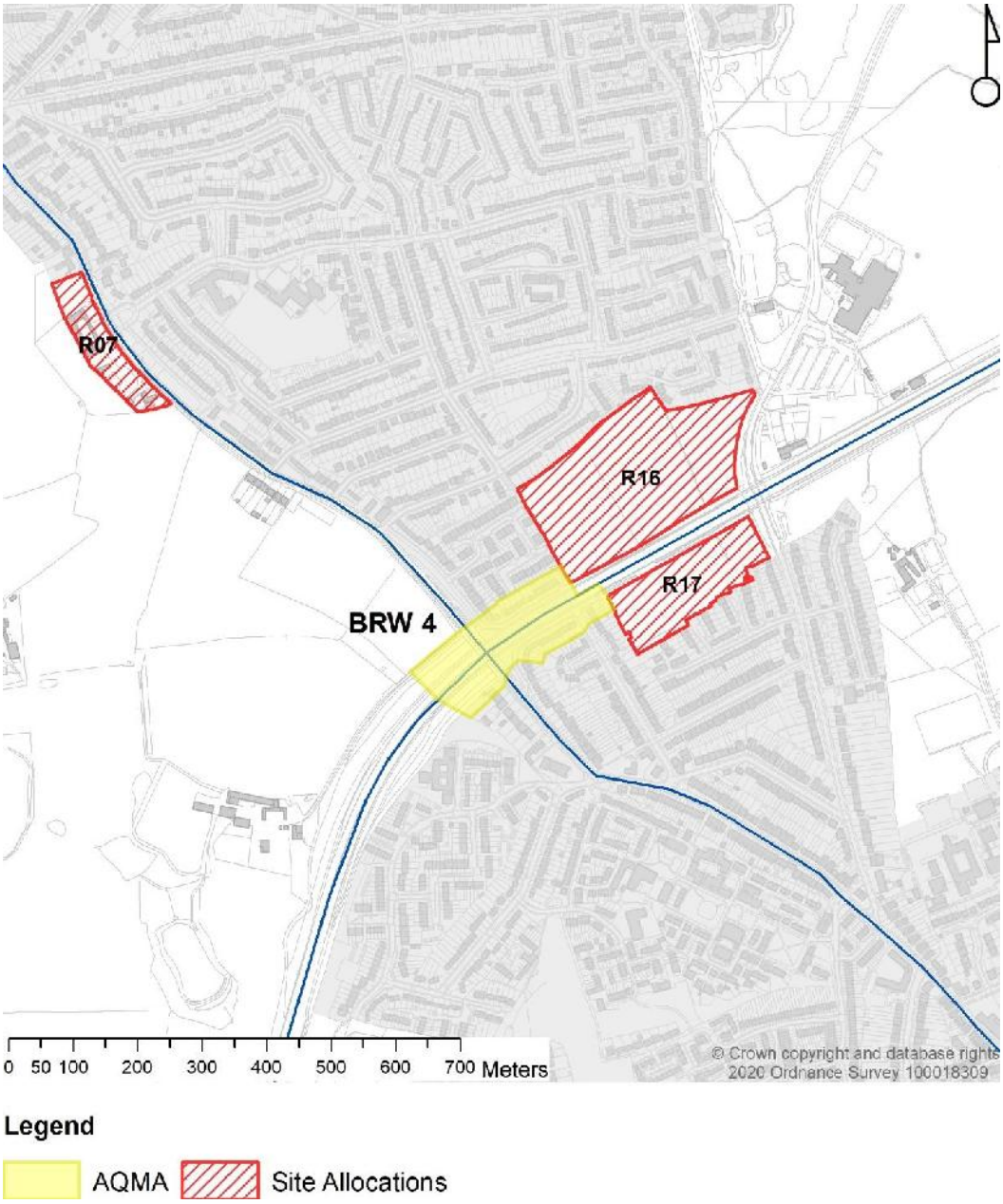
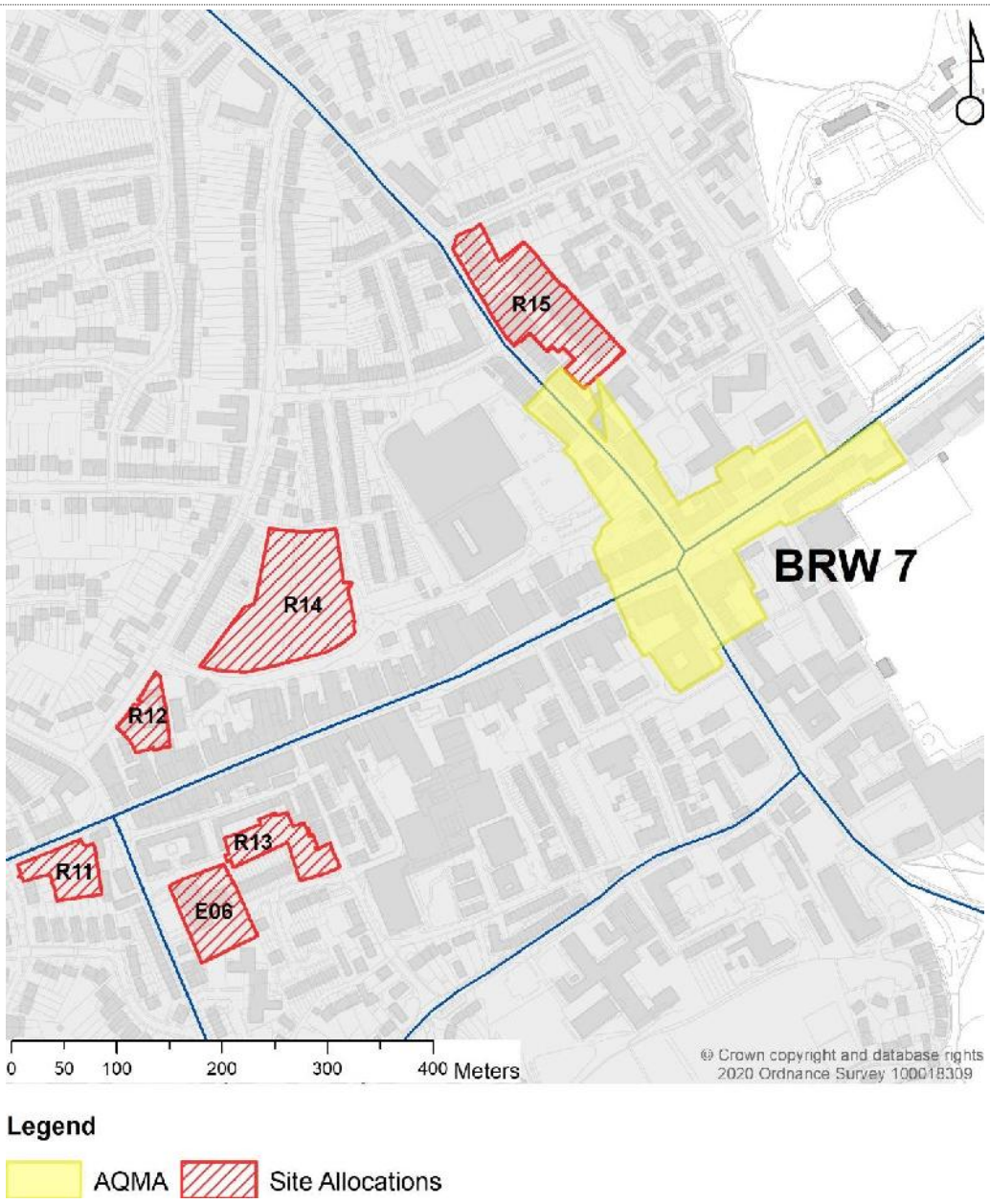


Figure 83.2: AQMAs and site allocations in Brentwood Borough

AQMA number	Description	Committed development and proposed allocations in the vicinity which could impact on traffic levels through the AQMAs
		
Brentwood AQMA No.2	The AQMA comprises parts of Brook Street, Brentwood and the A12.	Site allocations • Site R06: Land off Nags Head Lane, Brentwood (125 dwellings) • Site E01 and E02 Brook Street Employment Area (please note: both sites are existing allocated employment lands therefore their traffic generation is considered as part of background traffic) Committed development • M25 Junction 28 Improvement scheme



Brentwood AQMA No.4	The AQMA comprises parts of Warescot Road, Hurstwood Avenue and Ongar Road, Brentwood and the A12.	Site allocations • Site R16 & R17: Land off Doddinghurst Road, Pilgrims Hatch and Brentwood (200 dwellings) • Site R07: Sow and Grow Nursery, Pilgrims Hatch (38 dwellings)



Brentwood AQMA No.7	The AQMA comprises parts of Ongar Road, Ingrave Road, High Street and Shenfield Road, Brentwood in proximity to Wilsons Corner (the junction of the A128 and A1203).	Site allocations • Site R11: Westbury Road Car Park (45 dwellings) • Site R12: Land at Hunter House, Brentwood (48 dwellings) • Site R13: Chatham Way car park, Brentwood (31 dwellings) • Site R14: William Hunter Way car park, Brentwood (300 dwellings) • Site R15: Wates Way Industrial Estate, Brentwood (80 dwellings)

		• Site E06: OCE offices (existing allocated employment land therefore its traffic generation is considered as part of background traffic) Extant planning permissions, prior approvals and permission subject to S106 on sites of 10 or more dwellings • 17/01008/FUL CM15 9BB (14 dwellings) • 16/01265/FUL CM15 8AP (18 dwellings) • 18/00959/FUL CM14 4RG (18 dwellings) • 18/01212/FUL CM4 9DU (10 dwellings) • 17/00246/PNCOU CM15 9BB (25 dwellings) • 17/00151/PNCOU CM15 8TA (70 dweliings) • 18/01184/PNCOU CM15 9BB (26 dwellings) • 19/00267/PNCOU CM15 8AH (10 dwellings) • 19/00194/PNCOU CM15 8TA (72 dwellings)

Table 83.3: Proposed development in vicinity of the existing AQMAs

INSPECTORS' QUESTION 84

Have assessments been carried out to determine the impact that the planned growth within the Plan will have on air quality within the borough, including the AQMAs? Are there any forecasts available to assess future levels of traffic emissions, particularly where the majority of growth is proposed?

7. The NPPF at paragraph 181 is clear that planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or

mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage.

8. The main air pollutants in Brentwood come from nitrogen dioxide (NO2) which is largely linked to road traffic emissions.

9. Brentwood Borough Council has three remaining Air Quality Management Areas (AQMA) which are all located in the Central Brentwood Growth Corridor, around popular junctions on the A12 and a section of the A128, as detailed above.

10. There are no known other areas that are approaching consideration of an AQMA based on our monitoring throughout the Borough.

11. The draft 2020 Air Quality Annual Status Report (ASR) (soon to be published on Essex Air website) reported that in 2019 Brentwood measured no exceedances of the Air Quality Objectives at relevant exposure in all AQMAs. The report also found that measured pollution is on a downwards trend and that from 2018, all locations are more than 10% below the Air Quality Objectives. The ASR reports of previous years are available on Essex Air website.

12. This is at least the fifth year running where no exceedances at relevant exposure have been identified. The table below, extracted from the draft 2020 ASR, presents historical air quality monitoring data from AQMA 2, AQMA 4 and AQMA 7.

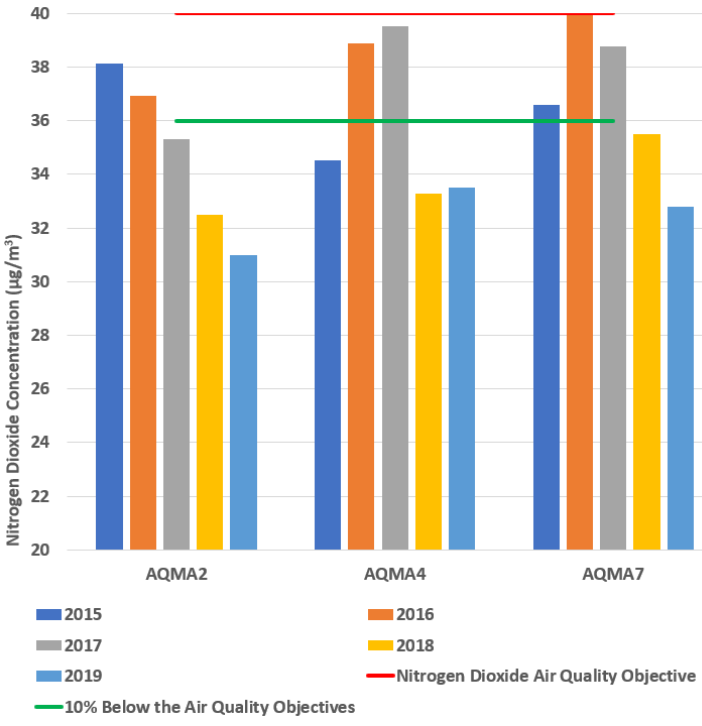


Table 84.1: Maximum Concentrations in AQMAs (at Relevant Exposure)

13. In addition to the national trend of improved fleet emissions, the proposed 2021 extension of the London Ultra-Low Emission Zone (ULEZ) from Central London out to the North Circular boundary is likely to drive an improvement of the vehicle fleet emissions on routes into and out of London, through Brentwood either along the A12 or around the M25 which could lead to further downward trend of concentrations in AQMA2 and AQMA4.

14. The continued compliance that has been measured provides Brentwood Borough Council with a reasonable level of certainty that an exceedance will not occur again at these locations and provides sufficient evidence to allow for AQMA 2, AQMA 4 and AQMA 7 to be revoked.

15. At these AQMAs, there is currently no significant committed development (except supporting highways mitigation measures such as the M25 Junction 28 as detailed in Question 83) and at present it is likely that there will be no exceedances of the air quality objectives, even allowing for a substantial amount of growth.

16. Since the main source of air pollution in Brentwood is road traffic emissions on major roads and around the main junctions, findings from the Transport Assessment (evidence document C35) in terms of likely traffic impact from the Local Plan on junctions within these AQMAs provide some insights into the impacts of planned growth on air pollution resulting from traffic.

Central Brentwood Growth Corridor

AQMA 2				
Relevant Junctions	**Likely traffic impact from the Local Plan development allocations on junctions**			
	AM/PM	Baseline	Reference	Local Plan
M25 Junction 28	AM	0.89	1.24	1.56
	PM	0.84	1.22	1.76
AQMA 4				
Relevant Junctions: n/a				
AQMA 7				
Relevant Junctions	**Likely traffic impact from the Local Plan development allocations on junctions**			
	AM/PM	Baseline	Reference	Local Plan
A128 Ongar Road/William Hunter Way	AM	0.96	1.11	1.21
	PM	0.98	1.06	1.15
	AM	0.78	0.84	0.9

A128 Ongar Road / A1023 Shenfield Road / A128 Ingrave Road / A1023 High Street	PM	0.78	0.71	0.72

Table 84.2: Junction Modelling Summary Results (extracted from table 8.3 and 8.4 of the Transport Assessment)

17. The modelling have been expressed as a factor, which refers to the ratio between flow and capacity. A figure of 1.00 represents the position where an arm or movement at the junction has reached the capacity of that arm or movement. The Base Case Scenario is based on data from observed counts; the Reference Case Scenario is based on additional trips from committed developments within Brentwood and neighbouring authorities and applying additional background growth; the Local Plan Growth Scenario is based on additional trips associated with the Local Plan proposals.

18. From these findings, a package of sustainable transport measures and a number of highways schemes and to mitigate the traffic impact of the Local Plan growth (and consequently air quality) on Central Brentwood Growth Corridor have been examined and proposed in the Transport Assessment and the Infrastructure Delivery Plan.

Southern Brentwood Growth Corridor

19. There is currently no AQMAs within the Southern Brentwood Growth Corridor. However, as a large amount of planned growth are directed towards the Southern Growth Corridor, traffic impacts have been modelled allowing identification and detailing of a number of highways schemes to mitigate the traffic impact of the planned growth along the A127 and Lower Thames Crossing (and consequently air quality). This work is on-going in collaboration with stakeholders such as Highways England, Lower Thames Crossing Teams, Essex County Council and relevant developers.

20. With regards to transport emissions, there is the potential to achieve new homes and jobs in close proximity, deliver a new bus route linking the A127 corridor to Brentwood[1], ensure good access to West Horndon station (and in turn enable commuting into London by train), deliver the highest quality walking and cycling infrastructure and also increase the offer at West Horndon local centre. On the other hand, it is acknowledged that there will be easy access by motorists onto the strategic road network. Therefore, there is a very strong emphasis for sustainable travel in Southern Brentwood Growth Corridor, particularly the links to West Horndon Railway station, along with physical improvements at the station. This will potentially lead to a reduction in forecast highway traffic, particularly for longer distance trips towards London. The Southern Brentwood Growth Corridor: A Sustainable Transport Integration Vision (evidence document C37) outlines the principles and proposals that will underpin the integrated development of sustainable transport infrastructure, required to support the proposed major development sites within the southern area of the Local Plan.

[1] The Transport Assessment highlights that there is an opportunity to provide services that will link Dunton Hills Garden Village (and Basildon), West Horndon Station, Brentwood Enterprise Park, Childerditch Business Park and Brentwood.

Other considerations and conclusion

21. Air pollution in Brentwood is mainly result from transport emissions; therefore, the transport assessment provides some insights into cumulative impacts of planned growth on traffic and consequently air quality. At the existing AQMAs which concentrate around the Central Corridor, past records have maintained far below the Air Quality Objectives, allowing for a substantial amount of growth. At the Southern Corridor, on-going work will continue to ensure cumulative impacts will be mitigated to an acceptable level in line with the Government's guidelines.

22. As development in the Local Plan comes forward, the Council will continue to monitor and assess the quality of air to determine if it is likely to meet the standards set out in the Government's Air Quality Objectives and action appropriately.

23. The impacts of the LDP spatial strategy and site allocations on air quality have been appraised by each of the Sustainability Appraisal throughout the plan-making stages. In the January 2019 issue, section 9.2 of the SA (page 49) appraised the Proposed Submission Plan and concluded that significant negative effects are not predicted.

24. Policy BE16 of the Local Plan sets out that new development will be required to provide reasonable and proportionate financial contributions/mitigation measures where necessary to mitigate the transport impact of the development to an acceptable degree. This could include investment in infrastructure, services, Low Emission Zone, or behavioural change measures (including enforcement) to encourage the use of sustainable modes of transport.

25. In addition, relevant site-specific policies reference the need to account for noise and air pollution; and a number of overarching policies support the achievement of air quality objectives and a 'modal shift' away from the private car, such as:

    - Policy SP01: Sustainable Development;
    - Policy SP03: Health Impact Assessments;
    - Policy SP05: Construction Management;
    - Policy BE12: Car-limited Development;
    - Policy BE13: Sustainable Means of Travel and Walkable Streets;
    - Policy BE15: Electric and Low Emission Vehicle;
    - Policy BE16: Mitigating the Transport Impact of Development;
    - Policy HP16: Buildings Design; and
    - Policy NE05: Air Quality.