

Middlewick Ranges (SC2)

Section 2 – Colchester Borough Emerging Local Plan

Representation ID:

Respondent: Julie Ennifer

Air pollution

This statement addresses:

South Colchester (Policies SC1 to SC3), particularly on Middlewick Ranges (SC2).

The statement is being submitted on behalf of the Save the Middlewick Ranges campaign group. Colchester Borough Council's objectives and policies are detailed in the Sustainability Appraisal and the Emerging Local Plan. The building of 1,000 homes on Middlewick Ranges appears to be in direct opposition to several policy objectives mentioned in the Sustainability Appraisal:

- *Ensure new development is sustainable and **minimises the use of scarce natural resources** and **addresses the causes and potential impacts of climate change** and encourages renewable energy.* (see section 2)
- *Focus new development at sustainable locations to create new communities with distinctive identities **whilst supporting existing communities**, local businesses, and sustainable transport.* (see section 1)
- *Protect and enhance landscapes, biodiversity, green spaces, **air** and water quality, and river corridors.* (see section 1)

Section 1

Policy ENV5– Pollution and Contaminated Land in the Emerging Local Plan states that: Air pollution is subject to regulatory controls under Environmental Health Legislation including the Environmental Protection Act 1990, Pollution Prevention Act 1999 and the Environment Act 1995. In granting planning permission for something it **does not create any unacceptable pollution, or worsen an existing issue**, and where necessary implements mitigation measures to reduce / eliminate the problem. The National Planning Policy Framework seeks to prevent new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution.

Policy DM1 – Health and Wellbeing in the emerging Local Plan states that Colchester has designated Air Quality Management Areas (AQMA) due to levels of Nitrogen Dioxide (NO₂) that exceed legally binding limits and have a significant impact on the health of local residents. Development schemes with a potential to cause harmful emissions to the atmosphere, including considerations of cumulative impact, will be required to assess these impacts and provide appropriate mitigation in line with the Borough's Air Quality Action Plan (AQAP) and Low Emission Strategy (LES).

Proposals for developments within **designated Air Quality Management Areas (AQMAs)** or where development within a nearby locality may **impact on an AQMA** are required, first, to be located in such a way as to reduce emissions overall, and secondly to reduce the direct impacts of those developments. Applicants shall, prepare and submit with their application a relevant assessment, taking into account guidance current at the time of the application, which must be to the satisfaction of the Local Planning Authority. Permission will only be granted where the Council is satisfied that after selection of appropriate mitigation the development will not have an unacceptable significant impact on air quality, health and well - being.

The allocation of Middlewick for housing is in contradiction to several of these objectives and policies.

Human activities have contributed significantly to the creation of air borne pollutants, largely as a result of the burning of fossil fuels. Air pollution can result in harm to the natural environment and adverse effects on human health. The effects of long-term exposure to air pollution can lead to respiratory and inflammatory illness and also more serious conditions such as heart disease and cancer. In February 2016, the Royal College of Physicians published 'Every breath we take: the lifelong impact of air pollution' in which they claimed that each year in the UK, around 40,000 deaths are attributable to exposure to outdoor air pollution. Air pollution can also damage plants and animals which in turn can affect biodiversity and crop yields. ¹

On 16 December 2020, Southwark Coroner's Court in London found that **air pollution** "made a material contribution" to the death of nine-year-old Ella Adoo-Kissi-Debrah. From a legal perspective, David Wolfe QC, a barrister specialising in public law, said: "Although this decision does not have any binding impact on other courts, it is still important as the first formal legal recognition of air pollution as contributing to the death of a particular individual. ²

In his ruling, the coroner Philip Barlow said that Ella had been exposed to levels of two air pollutants, nitrogen dioxide (NO₂) and particulate matter, in excess of the limits set by the World Health Organisation. ³

The legal limit for the air pollutant Nitrogen Dioxide (NO₂), which comes from exhaust fumes, is 40µg/m³ (Micrograms Per Meter Cubed). Areas of Colchester that exceed EU guidelines have been declared Air Quality Management Areas (AQMAs). Colchester has three Air Quality Management Areas. Exceedances of the Legal EU Limit vary throughout Colchester, with many measured sites not exceeding the limit. This means a definitive answer on how much Colchester exceeds the limit is not possible. In 2019 there were 12 measured sites which exceeded the legal limit as an annual mean. These include residential streets such as Brook Street, East Hill and parts of Mersea Road and Military Road. ⁴

In CBC's 2020 Air Quality Annual Status Report, AQMA Area 1 - Central Corridors which comprises of High Street, Head Street, North Hill, Queen Street, St Botolph's Street, St Botolph's Circus, Osborne Street, Magdalen Street, Military Road, Mersea Road, Brook Street, East Street and St Johns Street was declared at 53.3 µg/m³. ⁵

It is also very relevant to mention that the figures above, even while significantly over the legal limit were recorded during a national lockdown when the majority of people were not permitted to go out on unnecessary journeys.

Statistics in 2018 indicated that households in the UK had an average of 1.2 cars. ⁶ The National Travel Survey 2019 states that 76% of households own at least one car. ⁷

Using these figures it suggests that allocation of 1,000 homes to the area adds an additional 1,200 or so cars to the area, adding additional congestion to already polluted roads, including Mersea Road which already exceeds EU guidelines. There is no train station anywhere near by so based on current trends and behaviour it is likely that most journeys will be made by car.

The results of the Colchester Travel Diary survey (July 2007) found that the largest proportion of trips (55%) in the AM peak (0600-0900) are journeys to the workplace, followed by journeys to

school (11%), the remainder of journeys are to shops / local services, leisure services and for business.⁸

The scale of development meets the threshold for the delivery of a new primary school as identified in the ECC Developer's Guide to Infrastructure Contributions (2016).

The Central Office of Public Interest's air quality report states that Old Heath primary school (a near by school) has recorded air pollution levels just under WHO limits. Development on the Wick is likely to tip this over the edge so it will be above the legal limits.⁹

Pollution hotspots - According to the latest figures (2018) Colchester currently has 12 (up from 9) areas that fail to meet government air quality targets of 40 and below. The limit deemed safe by the World Health Organisation. The worst offending location in the town is Mersea Road, where one section gave a reading of 52.4. Nine of the 12 areas are on the 4 roads that are used by traffic from South Colchester and will be the roads used by the 1000 houses proposed for Middlewick. As can be seen the figures are rising in these areas. Here is the list of ranked areas in Colchester with more than 40 micrograms of nitrogen dioxide per cubic metre of air that will be impacted by traffic from South Colchester (2017 figures in brackets):

1. Mersea Road 21 - 52.4 (46.44)
2. Osborne Street - 51.5 (43.25)
- 3 Brook Street 28 - 50.5 (48.55)
4. Mersea Road 12 - 48.6 (43.92)
7. Brook Street 23 - 46.9 (45.7)
- 8 Mersea Road 9 - 42.9
- 9 Mersea Road 10 - 42.7
10. St Botolph's Street - 42.5
11. St John's Street - 42.3 (42.83)

As stated above development on Middlewick Ranges will negatively impact on two Air Quality Management Areas and 9 of the 12 pollution hotspots, Brook Street/Magdalen Rd, and Mersea Rd/St Botolph's Roundabout, which are the main routes into the town centre and moving North and East. Policy ENV5 on pollution states that "Proposals will be supported that will not result in an unacceptable risk to public health or safety, the environment, general amenity or existing uses due to the potential of air pollution.... .. Permission will only be granted where the Council is satisfied that after selection of appropriate mitigation the development will not have an unacceptable significant impact on air quality, health and well -being." There is no way mitigation will be able to offset pollution in these hotspots where levels are already above limits considered dangerous to health. Mitigation would have to involve the planting of large numbers of street trees, which would take years to grow to reach maturity in order to have a significant impact on air quality. However, both Brook Street and the northern end of Mersea Road have very narrow pavements, and no space to plant street trees, let alone large enough numbers to have a noticeable impact on air quality. In addition housing has been allocated in Mersea and Battleswick farm which will increase traffic on these roads. Hence mitigation of worsening air quality resulting from development of Middlewick in accordance with policy ENV5 would be impossible, making the allocation unsound.

As identified in Colchester Borough Councils 'Sustainability Appraisal Environmental Report', 'One of the biggest challenges to Colchester's future development is traffic growth and the dominance of the car as the main mode of travel. The 2011 Census indicated that 79.4% of households own one or more cars or vans with over 12,000 more cars in the area since 2001'.

Despite the boroughs efforts in moving towards a more sustainable travel model, it is well known that significant behaviour change will be required in order to reduce car dependency, and the time scale for effective change is not yet known.⁹

In Colchester, many of the people most susceptible to air pollution are being exposed to toxic air in the places they should feel most safe.

71% of schools and colleges, care homes, hospitals and GPs are in areas above the WHO's guideline for PM2.5. That's made up of:

- 39 (68%) Schools & colleges
- 43 (72%) Care homes
- 3 (100%) Hospitals and 10 (71%) GPs.¹⁰

1 in 20 deaths in Colchester are linked to pollution. Children are particularly at risk – research has shown pollution effects their lung growth and development. The elderly and those with heart and respiratory conditions are also vulnerable to its effects.¹¹

With the current situation as significant as it is, planning for further development of this scale, following current models of design and infrastructure, the situation will only get worse. Inclusion of the Middlewick Ranges into the local plan does not therefore support existing communities in terms of their health and safety or protect air quality.

Section 2

We now wish to highlight areas within the National Policy Framework 2012

11. Conserving and Enhancing the Natural Environment.

Paragraph 109. “The planning system should contribute to and enhance the natural and local environment by:

- *protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *recognising the **wider benefits of ecosystem services**;*
- *preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, **air**, water or noise pollution or land instability” (...)*

Paragraph 110. “In preparing plans to meet development needs, the aim should be to **minimise pollution** and other adverse effects on the local area and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.”

It is our believe that the natural environment and its wider benefits of services they provide to the residents of Colchester are being dangerously overlooked in terms of air quality and pollution and carbon capture. The Middlewick ranges provides acid grassland, soil, trees and hedges, all of which are vital mechanisms in air quality and in climate change mitigation.

Our biggest mitigation for air pollution are organisms capable of photosynthesis, including trees, grasses, plants and hedges.

Trees play an important role in removing the main greenhouse gas carbon dioxide from the atmosphere and storing it as carbon. They also provide a home for nature, clean up air pollution and reduce flood risk.

According to Friends of the Earth and the Government's National Forest Inventory (NFI) 8% of the Colchester area is woodland. The highest proportion in similar areas is 34%. But the NFI does not include trees outside woodland such as small woods, groups of trees and lone trees. According to aerial survey company Bluesky International Ltd total tree cover in the area is 10 - 20%. All areas should aim to double tree cover as soon as possible. Those areas with very little tree cover (less than 10%) should make an additional commitment to increase tree cover to 20%. For those few areas with already high levels of tree cover (30% or more) it may not be feasible to double tree cover. However, even in these areas some more tree planting will be possible. ¹²

Scientists have reported that in just seven days a 1-metre length of well-managed dense hedge will mop up the same amount of pollution that a car emits over a 500-mile drive. Hedgerows play a significant role in reducing the rate of climate change, through carbon storage. A new hedgerow may store 600 – 800 kg of CO₂ equivalent per year per km, for up to 20 years. the UK's Committee on Climate Change 2019 report suggested the hedgerow network be extended by 40% as part of the UK's 2050 net zero target. Removing them would be causing significant damage and all efforts should be made to preserve them and encourage more. ^{13,14}

The Middlewick Ranges contains various important habitats including lowland dry acid grassland which is a UK priority habitat, other types of grassland, and some heathland. The area of acid grassland is estimated to be 40.2 hectares (see figure 1). The figures are based on the Stantec report.

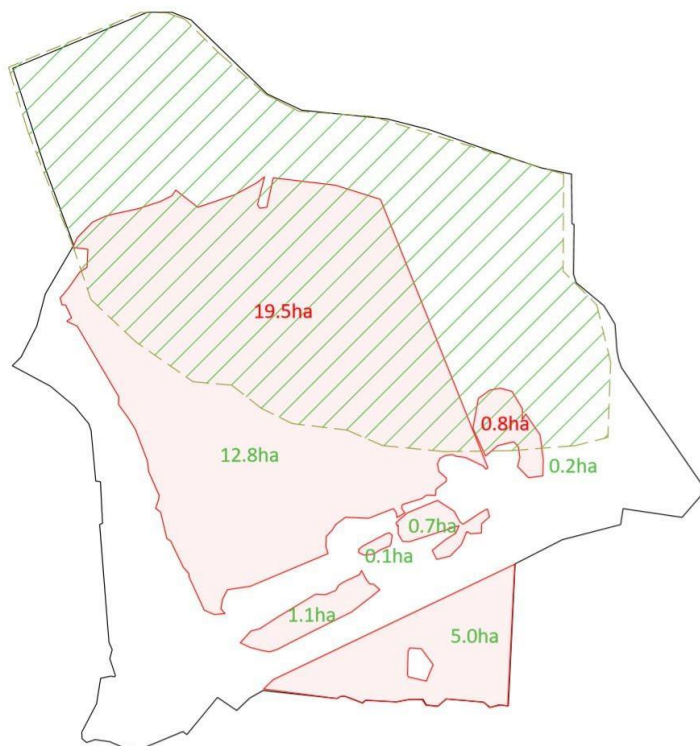


Figure 1. Area of acid grassland on the Middlewick Ranges (Save the Middlewick committee)

In a Natural England Research Report 'Carbon storage by habitat' (2012) they state that 'Maintaining and restoring biodiverse native habitats is preferable to (re)creating them' and that **acid grassland** hold some of the highest levels of carbon within its soil, they recommend that these habitats should not be disturbed, If the land is managed to retain carbon, they have the potential to sequester the equivalent to 1.7 and 5.3 years worth of UK annual emissions respectively. ¹⁵

In another publication by Natural England they state that ‘The remaining areas of lowland acid grassland in Essex are still of considerable nature conservation value, both at a county level, and in the context of south east England. The lowland acid grassland of Essex suffers from considerable problems of neglect and habitat degradation. The heaths and acid grassland relics of the Chelmsford to Colchester area have the greatest priority for restoration and the creation of new habitat.’¹⁶

Trees and wooded areas like areas within the wick also help to absorb carbon plus help adapt to a changing climate, by reducing the risk of flooding, providing shade for wildlife, reducing soil erosion and helping to cool down towns and cities. According to the Woodland Trust they absorb 400+ tonnes of carbon per hectare.¹⁷

There is no other treatment for the levels of air pollution already being reached in Colchester, other than a need for behaviour change all of which could take years to achieve, there is no safe amount to breathe in, residents of Colchester are being deliberately exposed to more as the levels of development keep rising and greenspaces where we can seek refuge from the air are being removed. The impacts of removal of natural habitat to accommodate houses (and therefore more cars and traffic) will not only have an impact in the local area to those residents of South Colchester that rely on this site as their ‘green lung’ but the wider impact of habitat removal and increased congestion and therefore air pollution will ripple across the borough too.

The inclusion of the Middlewick ranges into the Local Plan was made in 2016, since then some very fundamental and significant changes have occurred globally and locally, including The Intergovernmental Panel on Climate Change (IPCC) special report being published in 2018 followed by the UK Government declaring a climate emergency and committing to reach net zero by 2030, then too did Colchester Borough Council in 2019. We do not believe the initial planning has taking into consideration more recent findings or science.

Therefore building 1,000 more homes (plus infrastructure and amenities) on a site so significant in its role in climate protection and mitigation does not align with this declaration or promise of reaching net zero. We therefore do not believe that this development will reduce pollution and greenhouse gas emissions or improve environmental quality in terms of air or soil quality and ask that the site be removed from the local plan and efforts are merged to ensure the site is given the rightful protection and recognition that it deserves.

Appendix 1

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