EVERGREEN INFRASTRUCTURE AIR QUALITY STATEMENT - WARREN ROAD, WORTHING

Background

Redmore Environmental Ltd was commissioned by Lawrence Baker Limited to provide an Evergreen Infrastructure Air Quality Statement to address planning condition 22 for the development of a care home at 106 - 108 Warren Road, Worthing.

Planning permission has been granted by Worthing Borough Council (WBC) (reference: AWDM/0769/20) for the development, subject to a number of conditions. These include the following in relation to air quality:

> "22. Air Quality:
> Air Quality Mitigation measures shall be implemented in accordance with the Air Quality Assessment by Redmore Environmental Consultants, (ref: 3537r3) dated 17th August 2020, in particular the mitigation measures at pages 34-35, including Table 23, (subject to the prior submission and agreement in writing by the Local Planning Authority of further details of evergreen infrastructure and the air quality value of the particular plants which it comprises, and any necessary updating of landscaping details).
> Reason: To minimise emissions and impact on air quality in accordance with Policies 16 & 17 and paras 180 - 181 of the National Planning Policy Framework, 2019."

An Evergreen Infrastructure Air Quality Statement has therefore been completed to address the above condition by detailing the evergreen infrastructure to be planted as part of the proposals.

This Evergreen Infrastructure Air Quality Statement should be read in conjunction with the Mitigation Measures Verification Report[1] (reference: 3537c1) produced by Redmore Environmental to address planning condition 23.

Proposed Mitigation Measures

A damage cost assessment was undertaken in accordance with the Air Quality and Emissions Mitigation Guidance for Sussex[2] as part of the Air Quality Assessment[3] completed by Redmore Environmental and submitted as part of the planning application. This indicated that the development should include mitigation measures to reduce the air quality impacts of road traffic

1 Mitigation Measures Verification Report, Reference: 3537c1, Redmore Environmental, 2024.
2 Air Quality and Emissions Mitigation Guidance for Sussex, Sussex Air Quality Partnership, 2020.
3 Warren Road, Worthing, Air Quality Assessment, Reference: 3537r3, Redmore Environmental, 2020.

emissions equal to £7,796. As part of the contribution, £4,099 was dedicated to investment in evergreen infrastructure. Further detail on the evergreen infrastructure is provided in the following statement.

Trees and Air Quality

There is evidence that trees remove air pollutants from road vehicle exhaust emissions and improve air quality through a process known as 'air scrubbing'[4]. Evergreen trees provide air scrubbing throughout the year and broadleaf species providing greater efficiency when in leaf, due to higher leaf surface areas. The differences in species of trees plays an important role in estimating pollutant capture.

Proposed Landscape Strategy

A range of trees will be included within the development as part of the Landscape Strategy, developed by The Landscape Partnership. The total cost of planting will be £30,914.50, which exceeds the value of £4,099 detailed in the Air Quality Assessment[5]. Species include 12 Field Maples categorised as having the greatest capacity to improve air quality and Leyland Cypress categorised as having medium potential to improve air quality in accordance with the 'Trees and Sustainable Urban Air Quality'[6] research paper by Lancaster University & Centre of Ecology and Hydrology.

Approximately 50% of the trees and shrubs to be planted will be evergreen. The Landscape Partnership provided the following statement in relation to the landscape design of the proposals:

> "As part of the planning condition 22, Air Quality mitigation measures planning condition our landscape Architects, The Landscape Partnership, developed a landscape design that responded to the planners condition. The Landscape Partnership ensured that they included approximately 50% of the shrub species used are evergreen to assist with improving the air quality of the garden of the Cinnamon Care Home."

Full details of the quantity and species to be planted in the landscape design are shown in the approved drawing 'Detailed Planting Proposals'. It should be noted that at the end of the

4 Urban Air Quality, Woodland Trust, 2012.
5 Warren Road, Worthing, Air Quality Assessment, Reference: 3537r3, Redmore Environmental, 2020.
6 Trees and Sustainable Urban Air Quality, Lancaster University, undated.

construction phase, Cinnamon will undertake a snag of the soft landscaping works to ensure they have been installed in accordance with the approved drawing.

A Landscape Maintenance and Management Plan[7] has been prepared by The Landscape Partnership which provides the maintenance and long-term management of all external softworks. This includes a schedule of required maintenance for 1-year following completion, followed by a landscape management manual for use of the site operators, Cinnamon, for a 14-year period. The covered works will ensure that all new and existing trees are well maintained to encourage plant growth and ensure maximum air quality benefits.

Summary

Evergreen trees provide air quality scrubbing throughout the year and play an important role in improving air quality. The Landscape Strategy for the proposals include a range of species that will be planted, including approximately 50% evergreen trees and shrubs. The total cost of the planting will be £30,914.50 which exceeds the calculated value stated in the condition of £4,099.

Based on the above information, it is suggested that planning condition 22 is discharged.

Evergreen Infrastructure Air Quality Statement produced by Emily Macey, Senior Air Quality Consultant, Redmore Environmental, on 25th October 2024.

[7] Landscape Maintenance and Management Plan for Care home at Warren Road, Worthing, The Landscape Partnership, 2023.