

100 Hillside View
Peasedown St. John
Bath
BA2 8EU

21st November 2022

Dear Councillor Warren,

Planning Application Reference: 22/03938/FUL

I am writing to you in your capacity as Cabinet Member for Climate and Sustainable Travel and specifically the carbon emissions associated with the construction of the development subject to the above planning application.

This application relates to a greenfield site in Peasedown St John with steeply sloping topography. The topography means that development will require the excavation of the hillside to create building platforms, likely to be constructed from reinforced concrete and the extensive use of retaining walls, likely to be constructed from dense breeze blocks.

As you are no doubt aware the Council is currently consulting on amendments to the Local Plan. These revisions include a proposed new policy DM4 Whole Life Carbon Assessment, which addresses the need for developers to reduce the whole life carbon emissions of their proposals.

My research indicates that the carbon footprint of reinforced concrete is between 0.06 to 0.47 kgCO₂/kg depending on manufacturing process and specification. Using the Engineering Drawings supplied by the applicant I have estimated that the underbuilding (construction platform) required to construct the buildings in the north-east corner of the site – which represents about 10% of the total build – will require 23m³ of reinforced concrete, assuming a uniform 500mm thickness. The density of normal concrete is typically 2,245kg/m³. Using this value i.e. excluding the rebar used in reinforced concrete, the underbuilding will have a volumetric carbon footprint of between 134.7kgCO₂/m³ and 1,055.2 kgCO₂/m³, meaning the construction of this platform alone will be between 3 and 24 tonnes CO₂.

Dense breeze blocks typically have a density 2,300kg/m³. A block of standard dimensions has a volume of 0.009m³, giving a mass of 21.76kg/block. Using the previously mentioned range gives a carbon footprint per block of between 1.3 and 10.2kgCO₂. The amount of retaining walls to be built is extensive. Assuming a retaining wall would be (at least) two blocks thick, then a 10m long by 1m high section will contain 211 blocks and have a carbon footprint of between 275 and 2,152kgCO₂.

In addition, there are the carbon emissions associated with removing an unspecified quantity of excavation material from the site. The site engineering required means it is unlikely that any material other than topsoil will be able to be reused on-site.

I hope these estimates demonstrate that the carbon ‘cost’ of constructing the proposed development does nothing to help the Council address the Climate Emergency and renders it unsustainable when compared to similar development on less challenging sites.

Bearing this in mind and that the proposed amendments to the Local Plan are currently out to consultation, giving them some weight as emerging policy in planning decisions may I prevail upon you to discuss the whole life carbon implications of the proposed development with planning officers.

Yours sincerely,

Tom Clifford