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**ASSESSMENT OF TRAFFIC RELATED AIR QUALITY
TO
DISCHARGE CONDITION 3 OF PLANNING APPLICATION REFERENCE
CM/6/18/PL
FOR
THE CHANGE OF USE TO DEVELOP A CONCRETE BATCHING PLANT
BY
AGGREGATE INDUSTRIES UK LIMITED
ON
LAND AT NORTHWOOD FARM
YAPTON ROAD
WEST SUSSEX**



Assessment Of Traffic Related Air Quality
To
Discharge Condition 3 Of Planning Application Reference CM/6/18/PL
for the
Change of Use to Develop a Concrete Batching Plant
on
Land at Northwood Farm
Yapton Road
West Sussex
by
Aggregate Industries UK Limited

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CONTENTS

- 1. INTRODUCTION**
- 2. SITE LOCATION**
- 3. SCREENING OF TRAFFIC RELATED AIR QUALITY IMPACTS**
- 4. PROPOSED VEHICLE MOVEMENTS**
- 5. IMPACT OF CHANGES ON LOCAL AIR QUALITY**



1. INTRODUCTION

- 1.1 This Technical Note documents the impact on local air quality from the operation of a proposed concrete batching plant on land at Northwood Farm, Yapton Road in West Sussex. The proposed development has planning permission granted by Arun District Council (dated 12th July 2018). Condition 3 of the planning permission states:-

'No development shall take place before a report has been submitted to and approved in writing by the Local Planning Authority, which assesses the potential Air Quality impacts from the site and provides mitigation measures if necessary. Thereafter, the use shall not commence until the approved scheme has been fully implemented.'

Reason: To safeguard the amenities of nearby residents in accordance with Arun District Local Plan policies GEN7 and GEN34'.

- 1.2 It is expected that the concrete batching plant would generate and export around 320 m³/d of concrete from the site. The proposed site is relatively remote. The nearest residential areas are located to the north in Yapton at a distance of 450 m. Proposed residential housing at The Landings on the former Ford Airfield are in excess of 500 m from the site activities. Therefore, the impact of site activities on local residents is considered to be negligible given the distance between the site and sensitive receptor locations.
- 1.3 Vehicles accessing the concrete batching plant will do so from Yapton Road. Ingress and egress from Yapton Road may be from the north through Yapton or from the south from the A259. Therefore, vehicles may pass through Yapton or pass adjacent to The Landings which has proposed housing adjacent to Yapton Road to the northeast of the road. Therefore, the impact of traffic movements on the local road network should be considered.



- 1.4 Therefore, the assessment has considered the impact of additional road traffic movements and in particular changes in heavy duty vehicle (HDV) movements.

2. SITE LOCATION

- 2.1 The site is located within a rural area but close to other waste and industrial activities. The site is located within the administrative area of Arun District Council (ADC). The location of the site is provided in *Figure 1*. The site access road joins Yapton Road just to the south of Yapton.

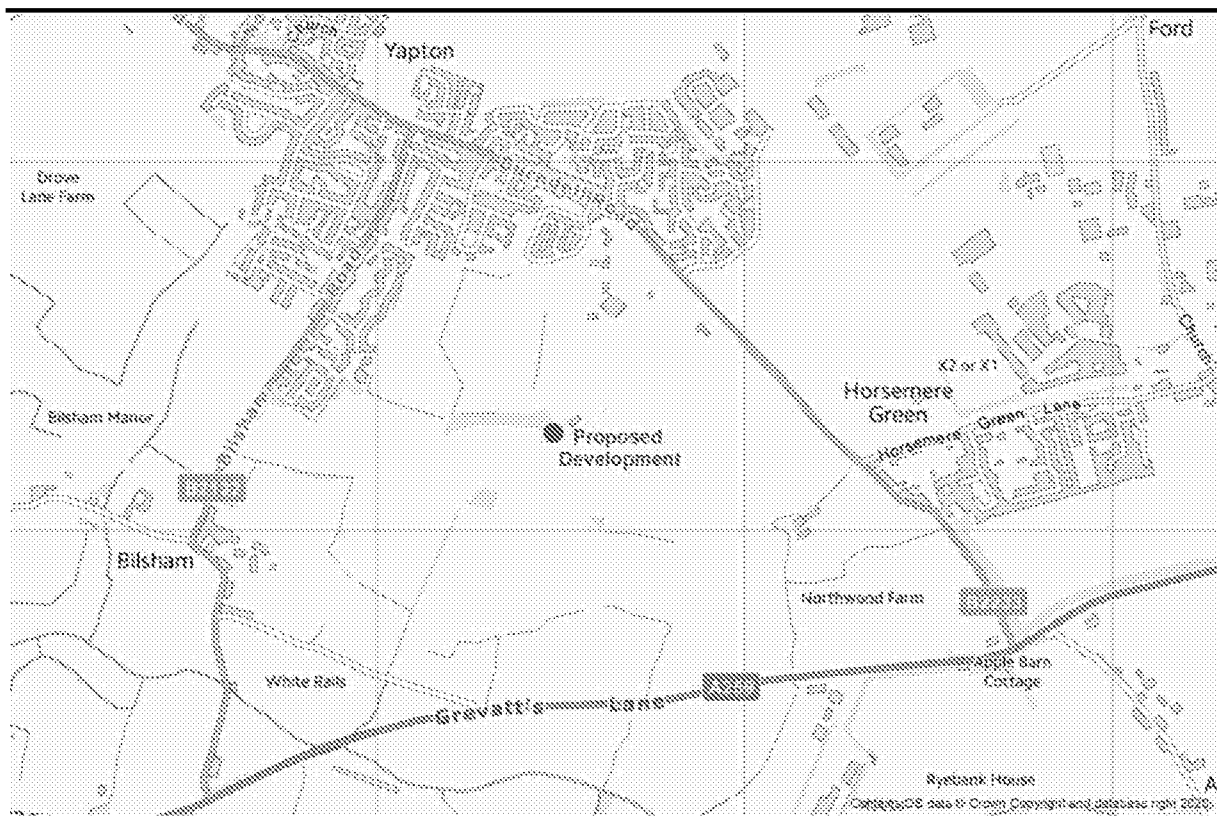


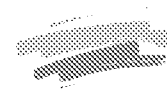
Figure 1: Site Location Plan

- 2.2 The site is relatively remote from residential development. However, Yapton Road which becomes Burndell Road to the north is fronted predominantly by residential properties within Yapton and Climping. The Landings is located on the former Ford Airfield between Climping and Yapton with residential properties close to the roadside although it is noted that there will be a green buffer between housing and the roadside. Therefore, any increase in traffic has the potential to affect the amenity of local and future residents.



2.3 As stated in the recent Annual Status Report (ASR) ¹, air quality monitoring carried out by Arun District Council indicates that there is good air quality within the District, and in particular the air quality objectives for nitrogen dioxide (NO₂) are being met. Thus, it has not been necessary to declare an Air Quality Management Area (AQMA) within the District.

¹ 2020 Air Quality Annual Status Report (ASR), Arun District Council (June 2020)



3. SCREENING OF TRAFFIC RELATED AIR QUALITY IMPACTS

- 3.1 Guidance is provided by the Institute of Air Quality Management (IAQM) on indicative criteria for requiring an air quality assessment in their land-use planning development control: planning for air quality (January 2017) ². For sites that are not located within an air quality management area, these are 500 light duty vehicles (LDVs) AADT (annual average daily traffic) and/or 100 heavy duty vehicles (HDVs) AADT. Where there is an AQMA this is reduced to 100 LDV and 25 HDV movements as the AADT.

² Land-Use Planning & Development Control: Planning for Air Quality, EPUK and IAQM (January 2017)



4. PROPOSED VEHICLE MOVEMENTS

4.1 Details of traffic movements generated by the proposed development have been provided by the operator, Aggregate Industries UK Limited and are based on 320 m³/d of concrete generated five days per week, 48 weeks per year (total annual production of 76,800 m³/a). In addition, to the concrete exported from the site, there will be imports of sand, other aggregate materials and cement.

4.2 A summary of the proposed HDV movements is provided in *Table 1*. These are the number of vehicles per day and the AADT assuming the site operates for 240 days per annum. The following assumptions have been adopted in calculating vehicle movements:-

- the production process will require 640 tonnes/d of sand and other aggregates;
- sand and aggregates will be delivered to the site in 19.5 tonne loads (60%) and 29.5 tonne loads (40%);
- the production process will require 96 tonnes/d of cement;
- cement will be delivered to the site in 30 tonne loads; and
- concrete will be exported from the site in 8 m³ loads.

Source	Number Per Day	Number as the AADT
Import dry cement	6.4	4
Import of sand and aggregates	54	36
Concrete export	80	53
<i>Total Daily Movements</i>	<i>140</i>	<i>93</i>

Table 1: Number of proposed HDV movements

4.3 Therefore, the number of HDV movements per day would be 93 movements as the AADT and is below the 100 HDV movements requiring a detailed assessment.



5. IMPACT OF CHANGES ON LOCAL AIR QUALITY

- 5.1 Even assuming that all of the proposed 93 HDV movements (as the AADT) head north through Yapton or south adjacent to The Landings and Climping, the number of HDVs is below that required for a detailed assessment (100 HDV movements outside an AQMA).
- 5.2 It is concluded that the impact of the proposed concrete batching plant on local air quality would be neutral. Therefore, it is considered that mitigation measures would not be necessary.

