RE: Suffolk Minerals Plan – Geological Review for a Wangford Replacement Site
(including comment on future extensions to Wangford Quarry and the Henham Estate – a current CEMEX prospect)

Dear Shaun

Scope

A review of potential replacement sites for Wangford Quarry has been undertaken. This is in response to the request for sites issued by Suffolk County Council as part of its mineral planning process. A summary plan showing the area is included as 1705-S139-SUF-L-001.

To be viable, the quarry must be able to supply the current market with, critically, a product with a significant element of gravel. A standalone site must comprise a deposit of at least 2mt to justify the initial investment. Any extensions to Wangford Quarry are not subject to a minimum tonnage but are to be considered on an individual basis.

The AONB and SSSI designations (which cover a significant area) have been highlighted as part of the exercise. Other designations have not been highlighted. Consideration has not been given to the potential impact of any designations at this stage of the exercise, which sets out to assess the geology only. The potential impact of environmental designations will be reviewed in detail as part of the planning process.

Definition of Area of Search

To be commercially viable, a replacement for Wangford Quarry must be within one hour (maximum economic distance) of both key markets (size and demand) of Norwich and Ipswich. An analysis\(^1\) of the 1 hour travel times from the centre of both towns is shown on Drawing No. 1705-S139-SUF-D-002. The overlap areas define the area of search, which also emphasises the exceptional location of Wangford Quarry.

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\(^1\) Carried out using the calculator available on www.traveltime.propertywide.co.uk.

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Assessment of Geology - Methodology

The BGS online mapping portal has been referred to and the areas mapped as glacial sand and gravel (at a 1:100,000 scale). These areas are presented on Drawing No. 1705-S139-SUF-D-003. The 1:50,000 is then referred to and presented on Drawings 1705-S139-SUF-D-004 and 1705-S139-SUF-D-005. Care has been taken to accurately digitise and present boundaries, however, because they have been taken several sources and then hand-digitised, there is potential for some discrepancy to occur. The original sources should be referred to for any detailed work.

Assessment of Geology – Findings

The key findings of this study are listed below:

i. Two areas, referenced Area 1 and Area 2 are deemed to provide a suitable location for a replacement site for Wangford Quarry. Both are shown on Drawing No. 1705-S139-SUF-L-001. Area 1 comprises 15sq.km of land around Wangford Quarry (including Henham Estate) and Area 2 comprises around 180sq.km located around Diss.

ii. The superficial geology within Area 1 is shown on drawing no. 1705-S139-WAN-D-004. The area is shown to be underlain by glacial deposits. These are dominated by 'Till' (usually comprising silt, clay and boulders) and ‘Sand and Gravel’. There is also a significant outcrop of Crag within the area (deposited around 2.6m years ago in marine conditions and deemed to be unsuitable for economic aggregate extraction due to poor grading characteristics and, in particular, to the significant amount of shell fragments within the deposit). The sand and gravel deposits have been shown at Wangford and other sites in the vicinity to be coarse enough for economic aggregate production.

iii. The superficial geology within Area 2 is dominated by non-mineral Glacial Till (1705-S139-WAN-D-005). Coarse deposits, comprising mainly Fluvio-glacial River Terrace and alluvial deposits related to the River Stour, form the main areas of geology to be targeted by potential sand and gravel extraction. A review of the potential economic sand and gravel areas found that the deposits in this area have been either, built upon, are too small to provide a sufficient resource to warrant the investment required to start a new quarry, or are fragmented by roads, and properties. In addition to the location and extent of the deposits, some of the boreholes drilled within the area have been reviewed. These found that the deposits are dominated by fine-grained materials. Such deposits preclude the setting up of viable quarry and plant.

iv. Market (1hr distance from key markets) and geological constraints (requirement for coarse deposit) have ruled out all other areas within Suffolk, except for areas in the vicinity of the existing Wangford Quarry.

http://www.bgs.ac.uk/data/mapViewers/home.html?src=topNav
v. The Henham Estate and any extensions to Wangford Quarry can be considered as potentially suitable replacements to the current reserve at Wangford Quarry.

If you have any questions, or if you need anything else, please do not hesitate to contact the undersigned.

Yours sincerely,

Steven Hopkins (Engineering Geologist)
For CEMEX UK Materials Limited (National Reserves Development Department)

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Appendix 1: Drawing No. 1705-S139-SUF-D-001 – Key locations, boundaries and designations
Appendix 2: Drawing No. 1705-S139-SUF-D-002 – One hour travel times from centre of Norwich and Ipswich
Appendix 3: Drawing No. 1705-S139-SUF-D-003 – Geology overview
Appendix 4: Drawing No. 1705-S139-SUF-D-004 – Area 1 – detailed geology
Appendix 5: Drawing No. 1705-S139-SUF-D-004 – Area 2 – detailed geology
Appendix 1. Drawing

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