

**Knights Park, Saffron Walden, Essex**

**784-B050339**

## **Minerals Assessment**

**Kier Ventures Limited**

**November 2023**

**Document prepared on behalf of Tetra Tech Environment Planning Transport Limited.  
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## 1.0 INTRODUCTION

- 1.0.1 Tetra Tech has been instructed by Kier Ventures Limited (Kier) to prepare a Minerals Assessment to inform a planning application for a residential-led development at a site referred to Knights Park, in Saffron Walden, Essex.
- 1.0.2 A Minerals Resource Assessment is required because the site is located within a Minerals Safeguarding Area for chalk as identified by Essex County Council (ECC) on its policies map.
- 1.0.3 The purpose of the report is to provide an assessment of the most suitable and sustainable management of any identified resource at the site considering the economic viability of the resource and environmental constraints.

## 1.1 PROPOSED DEVELOPMENT

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- 1.1.1 The proposed development is for 56 residential dwellings and associated infrastructure with areas of public open space. A layout plan of the proposals is included in Appendix A.
- 1.1.2 The site is over a total footprint of approximately 3.5 hectares (ha) and is located at National Grid Reference TL 55237 37404.
- 1.1.3 As shown on the Sketch Site Layout in Appendix A, a dense area of tree and hedgerow planting will form the southwestern facing boundary of the site.

## 1.2 SITE LOCATION AND SETTING

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### Location

- 1.2.1 The proposed development site is to the northeast of Thaxted Road, in the southeast of Saffron Walden. The site is approximately centred at National Grid Reference (NGR) TL 55237 37404.

### Site Description and Setting

- 1.2.2 The site comprises two agricultural fields which are both bounded by hedgerows and trees. The site area is approximately 3.5 ha. There is a new housing development located immediately to the north of the site. There are also new houses to the west of the northern part of the site. Commercial and industrial premises are to the south/ southwest of the site with agricultural land bordering the site to the southeast and east. The commercial and industrial premises include a gym, a supermarket, and a recycling centre. An area of woodland is located to the northeast of the site.

Ecology

- 1.2.3 There are no statutory designated ecological sites within proximity of the site boundary.

Water Environment

- 1.2.4 OS mapping indicates a surface water drainage ditch runs across the northern boundary of the site. There are no other surface water features within or in proximity of the site. The GOV.UK Flood Map for Planning Service shows that the site is located within Flood Zone 1. Flood Zone 1 is described as land at lowest risk of flooding, having a less than 1 in 1,000 annual probability of river or sea flooding.
- 1.2.5 The bedrock geology beneath the site is identified as a Principal Aquifer. The Environment Agency defines Principal Aquifers as layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.
- 1.2.6 The site is located within a Source Protection Zone 3 (Total catchment). This zone is defined as the total area needed to support the abstraction or discharge from the protected groundwater source.

## 2.0 GEOLOGICAL SITE SETTINGS

### 2.1 BRITISH GEOLOGICAL SURVEY GEOLOGY

2.1.1 With reference to the British Geological Survey (BGS) GeoIndex website, the site has no recorded superficial deposits.

2.1.2 The BGS shows that the bedrock geology at the site is White Chalk Subgroup. The lithological description provided by the BGS is 'chalk with flints. With discrete marl seams, nodular chalk, sponge-rich and flint seams throughout. Typology of flints and incidence of marl seams is important for correlation.' The BGS show that the chalk is thick and state:

*'Variable depending on degree of post-Cretaceous erosion and the relative development of its constituent formations. Onshore the thickest development is within the Hampshire/Sussex area of the Southern Province, where up to about 470 to 515 m of strata are preserved; the most chronostratigraphically complete succession is in Norfolk but is thought there to be only some 350 m thick; within the Northern Province up to 500m are preserved but the thickest succession is within the North Sea area where about 800 to 1100m are preserved.'*

### 2.2 ESSEX COUNTY COUNCIL MINERALS SAFEGUARDING AREA

2.2.1 As described in the previous chapter the site is located within a Minerals Safeguarding Area for chalk as identified by Essex County Council (ECC) on its policies map.

## 3.0 MINERALS SAFEGUARDING POLICY

- 3.0.1 The safeguarding of non-renewable resources, such as minerals, is a key aspect of sustainable development. Paragraph 210 of the National Planning Policy Framework (NPPF), which was last updated in July 2021, obliges Mineral Planning Authorities to define MSAs and Minerals Consultation Areas (MCA) when preparing local plans.
- 3.0.2 MSAs are produced to define known locations of specific mineral resources of local or national importance and to ensure these resources are not needlessly sterilised by non-mineral development, though MSAs carry no presumption that the resource will be worked.

### 3.1 ESSEX MINERALS LOCAL PLAN

3.1.1 The development site is located within the county of Essex and Essex County Council (ECC) act as the mineral planning authority. ECC's Minerals Local Plan was (EMLP) adopted in July 2014 and provides the planning policies for minerals development in Essex until 2029.

3.1.2 The EMLP contains Policy S8 – 'Safeguarding mineral resources and mineral reserves', which states: -

*"By applying Mineral Safeguarding Areas (MSAs) and/ or Mineral Consultation Areas (MCAs), the Mineral Planning Authority will safeguard mineral resources of national and local importance from surface development that would sterilise a significant economic resource or prejudice the effective working of a permitted mineral reserve, Preferred or Reserve Site allocation within the Minerals Local Plan...*

*... Mineral Safeguarding Areas are designated for mineral deposits of sand and gravel, silica sand, chalk, brickearth and brick clay considered to be of national and local importance, as defined on the Policies Map.*

*The Minerals Planning Authority shall be consulted on:-*

- a) all planning applications for development on a site located within an MSA that is 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay; and*
- b) any land-use policy, proposal or allocation relating to land within an MSA being considered by the Local Planning Authority for possible development as part of preparing a Local Plan (with regard to the above thresholds).*

*Non-mineral proposals that exceed these thresholds shall be supported by a minerals resource assessment to establish the existence or otherwise of a mineral resource of economic importance. If, in the opinion of the Local Planning Authority, surface development should be permitted, consideration shall be given to the prior extraction of existing minerals."*

3.1.3 As described previously in this report, the application site is located in an MSA for chalk.

## 3.2 ECONOMIC IMPORTANCE

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3.2.1 The most recent county Authority Monitoring Report (AMR) for minerals is for the period 1<sup>st</sup> April 2020 – 31<sup>st</sup> March 2021. The purpose of the AMR is to monitor the progress of preparing Local Plans and other planning advice documents, duty to co-operate measures, and to assess the extent to which the objectives of minerals and waste policies were achieved.

3.2.2 Previous AMRs in Essex show chalk has no landbank maintenance requirement because it is extracted as an industrial mineral rather than as an aggregate.

3.2.3 The EMLP recognises chalk has relatively few uses in comparison to other minerals and the main use is for agricultural purposes with small quantities used in the pharmaceuticals industry. Paragraph 3.117 of the EMLP states: -

*“There is only limited interest in chalk extraction in the County and there is no national policy requirement to maintain a landbank for this type of mineral. The Plan does not make any site-specific proposals for this mineral to be extracted.”*

3.2.4 There is currently only one permitted chalk extraction site in Essex. The site, Newport Chalk Quarry at Chalk Farm, is located approximately 8km south of the site. This site has been operating since the 1980s and planning permission was granted in 2017 (reference ESS/32/17/UTT) to extend the timescale of the development for operations to be completed by 2042. This facility would therefore continue to provide a supply of chalk beyond the EMLP period. The EMLP recognises in paragraph 3.118 that: -

*“...this existing chalk extraction site in Essex is considered to be sufficient to meet current and future demand. The Plan does not make any site-specific proposals for this mineral to be extracted.”*

3.2.5 EMLP Policy S7 – Provision of Industrial Minerals relates to the operations at Newport Chalk Quarry. The Policy states: -

*“The small-scale extraction of chalk will only be supported for agricultural and pharmaceutical uses at Newport Quarry as identified within the Policies Map. Extraction of chalk for other uses, such as aggregate, fill material or for engineering will not be supported.”*

## 3.3 OTHER POLICY CONSIDERATIONS

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3.3.1 The extraction of minerals has the potential to cause amenity impact. Paragraph 5.20 of the EMLP identifies that local amenity can be protected by minimising work in sensitive areas by creating buffer zones between residential areas and mineral extraction. Paragraph 5.20 states: -

*“A minimum of a 100m ‘buffer zone’ from the extraction face to the wall of a residential property would normally be required to minimise the impact of working on local amenity”.*



### 3.4 ANALYSIS

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- 3.4.1 This section has identified the planning policy in respect of minerals safeguarding. This policy is designed to ensure that economically viable mineral resources are not unnecessarily sterilised and that where non-mineral development is permitted that due consideration is given to ensuring that appropriate investigations are undertaken to establish if the mineral deposits are of economic importance can be recovered as part of the development process from prior extraction.
- 3.4.2 The policy is flexible in allowing effective sterilisation of a resource where the economic viability of extracting the resource is not likely. The Plan also recognises that demand differs between resource type and identifies chalk as having a lower demand. Policy S7 states that small-scale extraction of the chalk resources at the existing Newport Chalk Quarry will only be permitted where the resource will be used for agricultural and pharmaceutical purposes and not for aggregate, fill material or engineering will not be supported by the Mineral Planning Authority.
- 3.4.3 In addition, the Plan recognises the impact of mineral resource extraction on local amenity and there requires a minimum of 100m buffer between the extraction face and the wall of a residential property.

## 4.0 VIABILITY ASSESSMENT OF FULL PRIOR EXTRACTION

### 4.1 NEED

- 4.1.1 EMLP Planning Policy S8: 'Safeguarding mineral resources and mineral reserves' places emphasis on the requirement of Minerals Resource Assessments to identify if the site is located on a resource of **economic importance** to prevent the sterilisation of economically important minerals (bold text added for emphasis).
- 4.1.2 The EMLP recognises that there is less demand for chalk in comparison to other minerals resources. Paragraph 3.117 states that there is only limited interest in chalk resources in the County. The chalk quarry located at Newport Chalk Quarry some 8k to the south of the site is anticipated to be sufficient to meet the current and future demand for chalk throughout the remainder and beyond the Plan period with the closure of the site required by 2042.
- 4.1.3 The full prior extraction of the mineral would require a full mineral planning application and subsequent permission. A mineral planning application would be expected to include a robust demonstration of need. The previous section has described there in no clear demand for working additional chalk reserves in the county. It is considered that the chalk reserves that underly the site cannot be considered economically important.

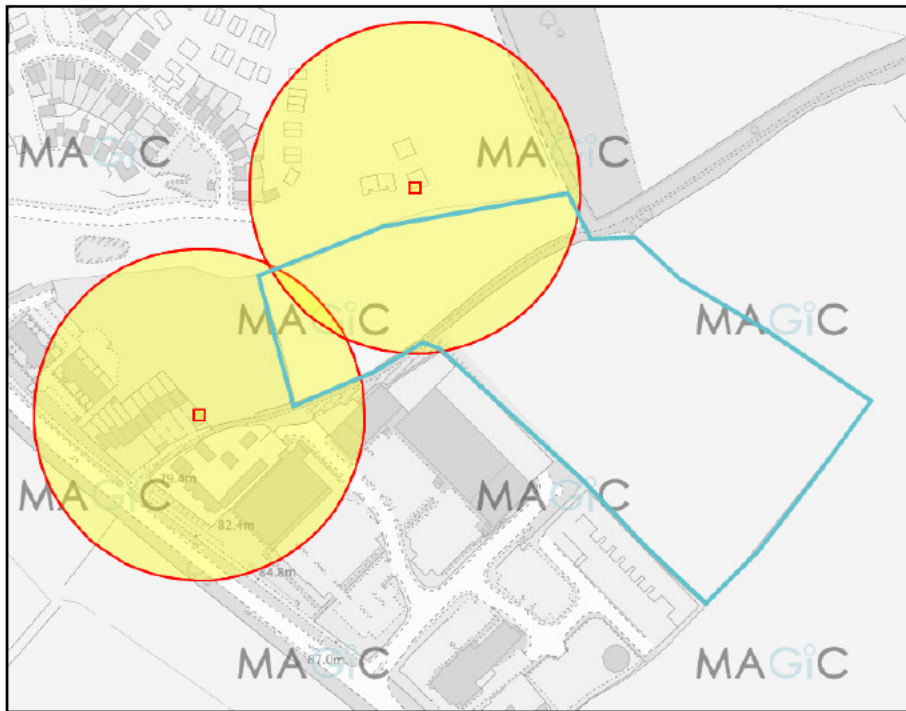
### 4.2 CONSTRAINTS

- 4.2.1 The environmental setting of the site in respect of surrounding land uses and features, such as the natural and built environment, has the potential to constrain the physical extraction of mineral.
- 4.2.2 Figure 1, overleaf, shows a map extract from the Magic.gov.uk website of the nearest residential properties with 100m buffer zones applied. It shows that almost all the northern part of the site would fall within a 100m buffer zone, although no houses are proposed in this area of the site.
- 4.2.3 Whilst the land uses are possibly not as sensitive, buffer zones would likely also be required from the commercial and industrial premises to the west. These features can be seen on the both the appended plan and Figure 1 below. Buffer zones could also be required from the trees and hedgerows, both on the boundary of the site and from the woodland to the northwest to protect these habitats.
- 4.2.4 Quarry sites tend to be more isolated from existing built development.

### 4.3 SUMMARY

- 4.3.1 The analysis provided in this section suggests that there is no identifiable demand for the full prior extraction of the underlying chalk resource at the site. This section of the report has also identified existing constraints from the built and natural environment that would act as an impediment to the extraction of mineral reserves.

Figure 1: Annotated Extract from Magic.gov.uk

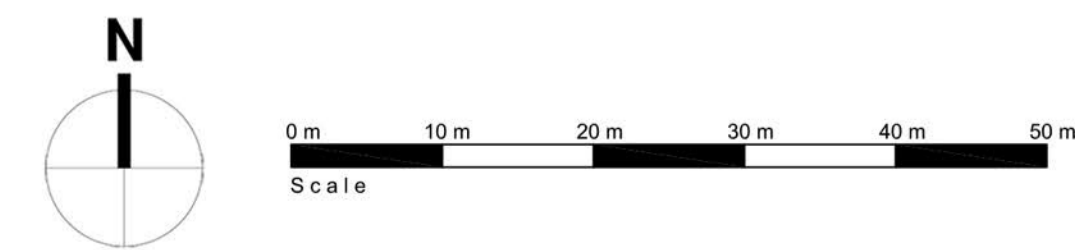


## 5.0 CONCLUSION AND RECOMMENDATIONS

- 5.0.1 Tetra Tech has been instructed by Kier to prepare a Minerals Resource Assessment to support an outline planning application for the residential development of up to 56 dwellings at a site referred to Knights Park, in Saffron Walden, Essex.
- 5.0.2 A Minerals Resource Assessment is required because the site is located within a Minerals Safeguarding Area (MSA) for chalk.
- 5.0.3 Paragraph 3.117 of the EMLP states *“There is only limited interest in chalk extraction in the County”* and the EMLP also shows that the uses of chalk are limited.
- 5.0.4 The EMLP states that the one existing chalk quarry located at Newport Chalk Pit in Essex is considered to be sufficient to meet both current and future demand for the mineral. As such the EMLP does not make any site-specific proposals for this mineral to be extracted. AMRs that have recently been published in Essex state that chalk has no landbank maintenance requirement.
- 5.0.5 This report has also described how any future mineral extraction at the site would be constrained by existing built development and the natural environment.
- 5.0.6 Policy S8 states that a Minerals Resource Assessment should establish the existence or otherwise of a mineral resource of economic importance. The demand for chalk reserves is very limited, due the limited uses of the mineral. It is not considered that the reserves can be considered economically important, and a full mineral extraction is simply not viable as there is not enough demand for the resource.
- 5.0.7 The site borders housing and other existing built development. The suitability of the site to be worked for minerals is therefore highly questionable. Quarry sites tend to be more isolated from existing built development. For example, if this site was promoted as a chalk quarry through the Minerals Plan process it is considered likely it would be scoped out at an early stage. At 3.5ha, the site is also very small for a chalk quarry, and it considered that it would not be commercially viable for the site to be worked as standalone resource.
- 5.0.8 Excavation works, as part of the preparatory earthworks, would be required for the construction of the proposed development. This would include the foundations of the houses and works required for building roads and drainage systems. If meaningful quantities of chalk are encountered, excavated and cannot be reused on site (for e.g. in levelling works) it is recommended that the developer manages this resource in the most appropriate and sustainable manner possible. This will likely depend on the amount of surplus material generated (if there is any). This information is not available for this outline application, but would be available as part of the detailed submission.

**Drawings**

Sketch Site Layout. Drawing Number 3119/C/1005/SK/H



Client:  
KIER GROUP

Project:  
LAND SOUTH OF SAFFRON WALDEN SITE

Drawing Title:  
SKETCH SITE LAYOUT

Scale:  
1:500 @ A1

Revision	Drawn	Check	Date



Project No'	Class	Dwg No'	Status	Rev
3119	C	1005	SK	H

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