

Review of Essex Minerals Local Plan 2014

Assessment of Candidate Sand and Gravel Sites



Essex County Council



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Executive Summary

Essex County Council (ECC) is the statutory Minerals and Waste Planning Authority (MWPA) for the County of Essex. The MWPA is required to produce a Minerals Local Plan (MLP) which sets out the policy framework against which proposals for minerals development and associated issues can be assessed through the planning system.

The MLP includes sites allocated for mineral working which have been assessed as suitable for development in principle. Site allocations become areas where, if a planning application is received for their development, there is a greater likelihood that permission will be granted given the location has policy support. Accordingly, if a planning application is submitted for mineral working at a site allocation there can be greater certainty, for the applicant, that this will be deemed acceptable to the MWPA, subject to the proposal also complying with other relevant policy and guidance.

ECC is updating its MLP and extending the plan period from 2029 to 2040. As part of the updating process, it is necessary to allocate additional sites for the working of sand and gravel to ensure that a steady and adequate supply of aggregate, as required by national policy, is maintained.

Additional sites have been nominated for allocation in the MLP by site promoters via two 'Call for Sites.' The 'Call for Sites' involved inviting landowners, operators, and other interested parties to nominate sites which they consider suitable. A total of

52 sites have been assessed for their suitability for mineral extraction which includes four sites allocated in the adopted MLP Plan which have, to date, not come forward as applications for development.

This report sets out the results of the assessments intended to determine the suitability of the sites and therefore informs the process of deciding which sites should be allocated for quarrying development in an updated MLP.

Criteria-led site assessment methodologies have been applied that reflect the planning priorities in Essex. Assessment methodologies were devised for each of 16 assessment criteria. Each site was graded against each criterion by applying quantitative and qualitative measures, for its suitability against a Red-Amber-Green (RAG) scale.

The main report includes the RAG grade and key assessment findings for each Site. Detailed assessments are included in the appendices.

36 sites were found to have at least one Red grade which broadly means that, at least for criteria against which the Red grade was applied, the likely impact of the Site is serious and without focussed consideration, mitigation of that impact would be difficult to achieve.

Decisions on whether to allocate sites with Red grades will be taken in the future following further public consultation on this report, including with the Site promoters and other stakeholders including statutory environmental bodies and local communities. Further, additional

information that may be received through future consultation could result in changes being made to the assessed grade.

The site-specific detailed assessments in this report will be the primary method through which sites will be selected as preferred sites. There is also a need to take strategic planning issues into consideration in order to serve the growth needs of Essex as a whole.

Abbreviations

AA	Appropriate Assessment
AMR	Annual Monitoring Report
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plans
ECC	Essex County Council
EiP	Examination in Public
EPS	European Protected Species
GIS	Geographic Information Systems
HGV	Heavy Goods Vehicles
HRA	Habitats Regulations Assessment
km	Kilometre
LAA	Local Aggregate Assessment
LCA	Landscape Character Area
LNR	Local Nature Reserve
LoGS	Local Geological Site
LoWS	Local Wildlife Site
mtpa	Million tonnes per annum
MLP	Essex Minerals Local Plan 2014
MWPA	Mineral and Waste Planning Authority
NPPF	National Planning Policy Framework
NNR	National Nature Reserve
OS	Ordnance Survey
PRoW	Public Rights of Way
RAG	Red-Amber-Green
SA	Sustainability Appraisal
SAC	Special Area of Conservation
SM	Scheduled Monument
SEA	Strategic Environmental Assessment
SFRA	Strategic Flood Risk Assessment
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
tpa	Tonnes per annum

Candidate Sites by District

	District/Borough/City						
	Braintree	Chelmsford	Colchester	Epping	Maldon	Tendring	Uttlesford
Candidate Site	A47 - Bradwell - Monk's Farm A48 - Bradwell - Grange Farm A49 - Colemans Farm - Hill Broad Farm A50 - Colemans Farm - Eastern extension (Appleford Farm) A51 - Colemans Farm - North extension (Hill Broad Farm) A52 - Colemans Farm - Southern extension A54 - Whiteheads A82 - Colemans Farm - Elm Springs Extension A83 - Colemans Farm - Hole Farm A84 - Colemans Farm - Appleford Farm North Extension A89 - Covenbrooke Hall Farm A90 - Rayne Quarry A92 - Land at Pattiswick Hall Farm A93 - Land at Pattiswick Hall Farm A94 - Land at Highfields Farm A96 - Rayne Quarry D7 - Land at Pond Farm	A55 - Sheepcotes Southern A56 - Sheepcotes Western A57 - Chalk End - Roxwell A59 - Lowleys Farm A60a - Shellow Cross Farm A60b - Shellow Cross Farm A91 - Land at Chignal St James	A61 – Heckfordbridge A62 - Heckfordbridge A95 - Land at Bellhouse Farm South	A63 - Patch Park - Abridge	A58 - Little Smiths A64 - Land East of Asheldham Quarry A65 - Land South of Asheldham Quarry A66 - White House Farm - Woodham Walter	A67 - Church Farm - Alresford A68 - Crabtree Farm - Great Bentley A69 - Frating Hall A71 - Lodge Farm - Alresford A72 - Martells - Southern extension A73 - Martells - Western extension A74 - Thorrington Hall Farm A79 - Crown Quarry - North of Wick Lane A80 - Crown Quarry - South of Wick Lane A85 - Martells - North of Frating Road A86 - Martells - North of Frating Road A87 - Martells - East of Slough Lane A88 - Gurnhams Farm	A75 - Land at Orford, Ugley - Bollington Hall Ltd A76 - Elsenham A77 - Westward Extension to Highwood Quarry - Little Easton
Previously allocated sites	A6 - Bradwell Quarry		A31 - Maldon Road, Birch				A22 - Little Bullocks Farm A23 - Little Bullocks Farm

1 Introduction

- 1.1 Essex County Council (ECC) is the statutory Minerals and Waste Planning Authority (MWPA) for the County of Essex. The MWPA is required to produce a Minerals Local Plan which sets out the policy framework against which proposals for minerals development and associated issues can be assessed through the planning system.
- 1.2 The current iteration of the Essex Minerals Local Plan (MLP) was adopted in 2014. It contains strategic policies (which implement the County Council's vision and objectives for minerals planning), development management policies (used to determine planning applications) and site-specific details for preferred sites for future mineral extraction. The MLP can be found here: [Minerals and waste planning policy: Minerals Local Plan - Essex County Council](#).
- 1.3 Regulation 10A of the Town and Country Planning (Local Planning) (England) Regulations 2012 and paragraph 33 of the National Planning Policy Framework (NPPF) state, that in respect of a Local Plan, a review to assess which policies need updating, if any, must be completed every five years, starting from the date of adoption of the Local Plan. An assessment of whether to review the MLP was completed in 2019 and this concluded that a number of its policies required amending.
- 1.4 Proposed amendments to the MLP were subsequently consulted on for a period of six weeks between 18th March and 29th April 2021. This consultation was carried out under Regulation 18 of the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended).
- 1.5 This consultation was predicated on the basis that the adopted MLP continued to plan for a steady and adequate supply of aggregates in Essex and that the existing allocated sites provided sufficient mineral resources to support current need within and outside the county.

- 1.6 Sites allocated for development in the MLP are those which have been assessed as suitable for development in principle. Site allocations are areas where, if a planning application is received for their development, there is a greater likelihood that permission will be granted given the location has policy support. However, that is not to say that permission will automatically be granted, as the full detailed proposals for working of the Site would be considered in much greater detail at the planning application stage, than assessed at site allocation stage. The detailed assessment at the application stage may, for example, find that previously unidentified impacts may arise from the proposed detailed method of working of the Site and/or find that impacts, identified at site allocation stage, have not been demonstrated to be mitigatable to an acceptable level. It is important to note that the assessments are largely based on the information submitted by site promoters at the 'Call for Sites' stage.
- 1.7 The significance of site allocations is that they provide greater certainty that there are suitable sites available for development, that the allocated location is suitable in principle ahead of more detailed assessment and, in turn, that a steady and adequate supply of aggregate will be maintained to address 'need' as required by national planning policy. By providing clarity where mineral development would be supported in principle, site allocations help enable delivery of essential materials through a Plan-led system.
- 1.8 Whilst new site allocations were recognised as being required before the end of the Plan period in 2029, it was considered that a Call for Sites could take place in a subsequent periodic review as needs would remain met over this review period. However, following an assessment of the comments received to the April 2021 consultation, where this approach was proposed, a review of existing evidence and the current rate of plan preparation, it was considered that the emerging amended MLP would be likely to fail the 'Tests of Soundness' (as set out in the NPPF) if it did not contain additional site allocations. This was due to the possibility that the Plan would not be 'consistent with national policy,' 'positively prepared' or 'justified.'
- 1.9 On that basis, an informal public engagement exercise took place on Policy S6 (Provision for sand and gravel extraction) of the MLP in February to March 2022. Policy S6 quantifies the need for sand and gravel across the plan period, which is the main mineral excavated in Essex. This engagement set out the revised approach, which was to ensure that a sufficient supply of sand and gravel had been properly planned for to the end of the MLP period by (2029), by allocating new sand and gravel sites in the updated MLP. In light of this, a 'Call for Sites' exercise was undertaken alongside the informal engagement on Policy S6.

- 1.10 During the Call for Sites, interested landowners, or those acting on their behalf, submitted 37 sites to be assessed for their suitability to contribute to future supplies of sand and gravel.
- 1.11 Subsequently, in light of good practice advice, the decision was taken to extend the Plan period from 2029 to 2040 to ensure the updated MLP covers a period of at least 15 years once adopted. As such, a reassessment of sand and gravel requirements was undertaken and a second Call for Sites was carried in Autumn 2022, this time seeking sites that were deliverable before 2040. The second Call for Sites resulted in a further 19 sites coming forward for consideration. Four sites were subsequently withdrawn.
- 1.12 To determine whether any of the sites promoted during the two Call for Sites exercises are suitable for allocation in the updated MLP it is necessary to assess their likely impacts on communities and the environment. This report explains the process of assessing the suitability of the 52 nominated sites (candidate sites) and the results of that assessment (see Section 3).
- 1.13 Furthermore, several (4) sites allocated in the adopted MLP (2014) have not, to date, been developed or granted planning permission and, although these sites have already been through a site selection process which found them previously suitable for allocation, it is important to reassess them alongside the newly promoted sites to reassess their deliverability and suitability using the revised Site Assessment Methodology.
- 1.14 In summary, the allocation of sites in the updated Minerals Local Plan will follow the process in the table below (completed stages are shown as shaded; timetable for stages 7 to 10 is to be confirmed):

Table 1: Stages of Site Allocation

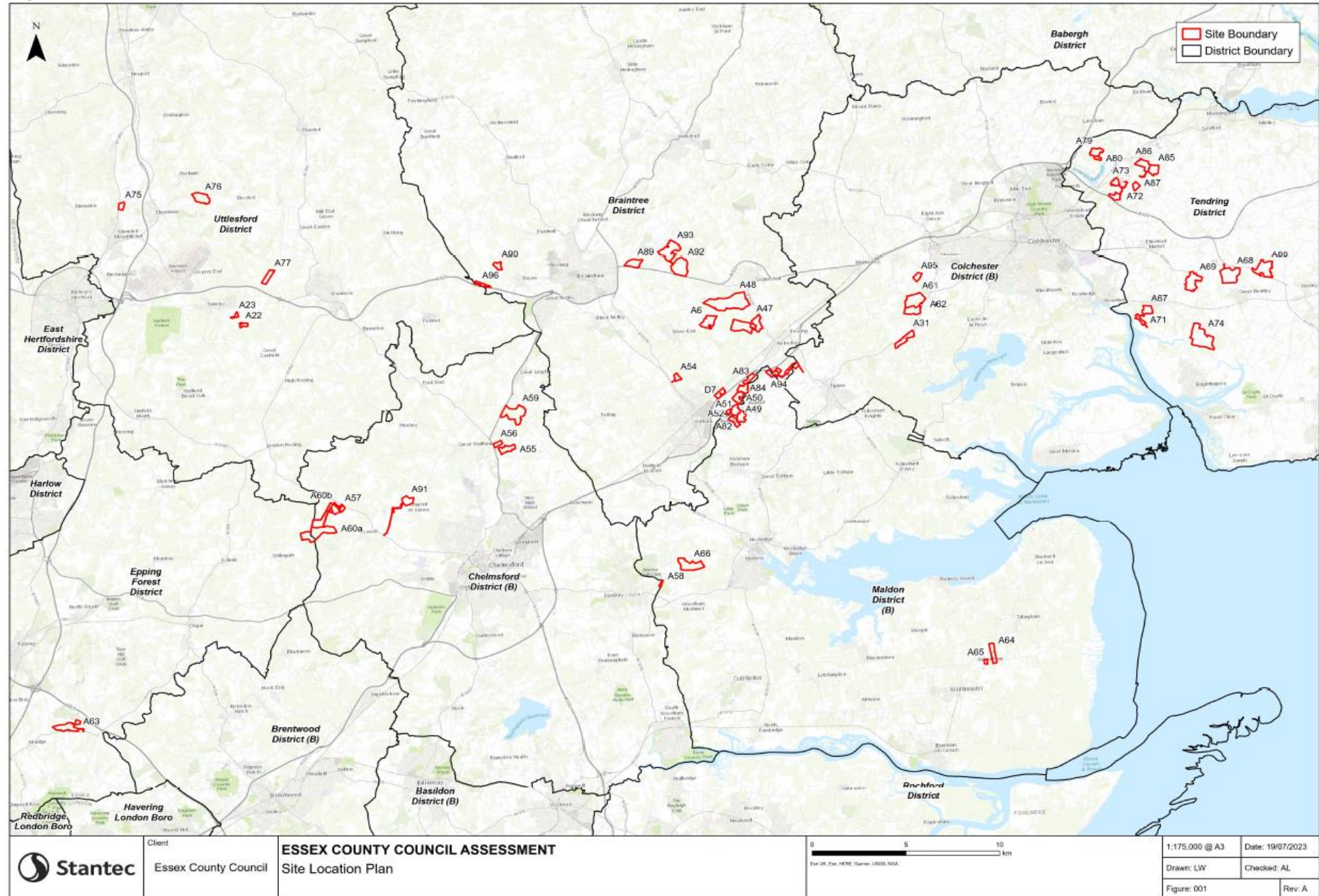
Stage	When	Activity
Stage 1	Autumn 2021	Assess requirement for new site allocations to meet need for sand and gravel
Stage 2	Feb to Mar 2022	First Call for Sites (37 sites nominated)
Stage 3	July 2022	Reassessment of requirement for new site allocations to meet need for sand and gravel
Stage 4	Sept to Nov 2022	Second Call for Sites (19 sites nominated)
Stage 5	Feb to Nov 2023	CURRENT STAGE - Assessment of suitability of all 52 Candidate Sites (4 sites were withdrawn) including Sustainability Appraisal and preparation of Site Assessment Report

Stage	When	Activity
Stage 6	Winter 2023 (TBC)	Consultation on Site Assessment Report and Plan updates (Reg 18)
Stage 7	TBC	Consider comments and confirm Sites for Allocation
Stage 8	TBC	Publication of Sites for Allocation for representations (Reg 19)
Stage 9	TBC	Independent examination of Sites for Allocation including: <ul style="list-style-type: none"> - Submission - Examination inc. hearings - Publication of modifications to Sites for Allocation - Inspector's Report
Stage 10	TBC	Adoption of Updated MLP including Allocated Sites

- 1.15 Site assessment methodologies have been applied that reflect the planning priorities in Essex. Assessment methodologies were devised for each of the 16 assessment criteria, allowing each site to be graded. This was achieved by applying quantitative and qualitative measures to identify potential impacts based on a specific criterion and a Red-Amber-Green scale. A red grade indicates that a site has a constraint(s) of a significance that could be difficult to mitigate and that may make the Site more difficult to allocate. The broad meaning of each grade, in relation to each assessment criteria is set out in Table 2 in Section 2.
- 1.16 This report forms part of the evidence base informing the Regulation 18 consultation on the candidate sites and proposed revisions to the Essex MLP. Following the receipt of comments from this consultation, the results of this assessment may be updated, in order to confirm which sites are considered eligible for allocation in the updated MLP.
- 1.17 Details of the approach applied to provide an assessment of site suitability is set out in Section 2 and Appendices B to I.

- 1.18 The location of all the Candidate Sites assessed is set out in Figure 1 below.
- 1.19 While this report provides findings which indicate the suitability of a site for allocation, no judgements regarding which sites will be chosen as preferred sites for allocation have been made. Instead, this report is a factual presentation of the assessment findings which will allow an opportunity for stakeholders (including communities, industry, and statutory environmental bodies e.g., Natural England) to comment on the findings and the RAG grades applied.

Figure 1: Location of Candidate Sites



2 The Mineral Site Assessment Process

- 2.1 The suitability of each site has been assessed to establish the likelihood of planning permission being granted if an application were to be made for sand and gravel extraction in that location. The detail of the assessments is not to the same level as that which would be expected for a planning application but is sufficient to establish whether sand and gravel development in that location is acceptable in principle. The assessment criteria, and associated methodologies, have therefore been informed by relevant policies in the adopted MLP.
- 2.2 The assessment of the 52 candidate sites (including those sites allocated in the MLP but have yet to receive planning permission) was undertaken by specialist teams within Essex County Council and consultants BPP/Stantec.
- 2.3 The assessment of sites received through the 'Call for Sites' process involved:
- Validation of site information received through the 'Call for Sites' processes to the extent required to facilitate assessment;
 - GIS mapping of sites against features related to the assessment criteria;
 - Any necessary additional consultation/discussions with site promoters;
 - Review of ECC's case management system to establish results of any previous assessment undertaken related to relevant planning applications;
 - Consideration of any assessment of sites previously undertaken as part of the preparation of the adopted MLP;
 - Application of an assessment/RAG grading methodology devised for each assessment criterion; and,
 - Visits to sites.
- 2.4 Assessment of those four sites allocated in the adopted MLP that have not been granted planning permission involved the following:
- Review of Replacement Minerals Local Plan Report: Pre-submission draft Site Assessment Report (Nov 2012) Report;
 - GIS mapping of sites against features relating to the assessment criteria;
 - Review of any previous assessments undertaken related to relevant planning applications;
 - Application of the assessment/RAG grading methodology devised for each assessment criteria; and,
 - Visits to sites.
- 2.5 Separate assessment pro-formas were devised for each assessment criterion based on a template pro-forma. This ensured assessment findings are presented in a consistent manner. The pro-forma also provides for potential cumulative impacts to be reported.

GIS Mapping

- 2.6 GIS maps were prepared for each site which include key spatial information such as that which describes the presence of any constraints to development e.g., the location of a proximate Site of Special Scientific Interest (SSSI). These maps helped aid desktop assessment of potential impact of the sites upon:
- National and international designated sites: AONB; SSSIs; SACs; SPAs; Ramsar sites; Ancient Monuments; registered Historic Parks and Gardens; Priority Habitat Inventory; Ancient Woodland.
 - Local Wildlife Sites (LoWS); Local Nature Reserves (LNR); Special Roadside Verges; Air Quality Areas (AQMA); water resources and flood zones; site geology; Public Rights of Way.
 - Soil quality (Agricultural Land Classification).
 - Hydrology and hydrogeology (Including flooding).
 - Location in relation to Essex's major road network (considering how sites might result in lorry movements through villages or on unsuitable minor roads);
 - Green Belt (noting that mineral extraction operations are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it¹);
 - Proximity to Airport Safeguarding Zones;
 - Proximity to existing utility networks; and
 - The proximity of any possible sensitive receptors such as residential areas and education establishments.
- 2.7 The proximity of Local Geological Sites (LoGS) was found using The Essex Field Group Geology Site Map (Geology Site Map: essexfieldclub.org.uk).

Site Visits

- 2.8 While much of the assessment relied on information available in online databases, this was supplemented by visits to each of the candidate sites. The site visits provided an opportunity to support and verify certain findings established using desktop information. It is important to note that the assessments were largely based on information provided by the Site promoters about potential site operations such as the extent of working and means of accessing the Site.

¹ NPPF 2021. Chapter 13 – Protecting Green Belt Land, Paragraph 150. Available from: [National Planning Policy Framework \(publishing.service.gov.uk\)](https://www.gov.uk/government/publications/national-planning-policy-framework)

- 2.9 During the visits information was collected on the site conditions and documented with photographs. This included potential points of access to the highway, the proximity to and type of adjoining land uses, and potential views of the site from Public Rights of Way, proximal residential, farm and commercial properties and the wider landscape. For some assessments sites were examined from publicly accessible points only.

Previous Site Assessments

- 2.10 In some cases, sites had already undergone some assessment of their suitability under different assessment regimes. This is particularly true for those sites which were submitted through previous Call for Sites' exercise, including some which are currently allocated in the MLP, but also relates to sites where a planning application had previously been made but was unsuccessful. Relevant information was gleaned from such assessments and used to compliment the findings from the above activities.

Assessment Criteria

- 2.11 Using information obtained from the sources outlined above, a 'traffic light' ('red-amber-green' ('RAG')) grading of each site was undertaken against 16 criteria which are set out below:
- Landscape and Visual Sensitivity
 - Biodiversity
 - Historic Buildings
 - Archaeology
 - Flooding
 - Transport
 - Access
 - Public Rights of Way (PRoW)
 - Geo-environmental
 - Hydrology, Hydrogeology and Drainage
 - Air Quality
 - Soil Quality
 - Services & Utilities
 - Health & Amenity
 - Green Belt
 - Airport Safeguarding Zones
- 2.12 The criteria above reflect those used to determine the suitability of the mineral sites allocated in the adopted Essex Minerals Local Plan 2014. Appendices B-I detail how each criterion links to ECC planning priorities.

- 2.13 The RAG grading provides an indication of a site's performance against different assessment criteria and helps highlight where there may be significant issue(s) associated with developing a particular site. The RAG grading approach is outlined in Table 2.

Table 2: Outline of RAG grading approach

Sensitivity Grade	Description
Red	The impact is likely to be serious and mitigation to make the Site acceptable would be difficult.
Red-Amber	The impact is likely to be major and is likely to require high levels of mitigation to make the Site acceptable.
Amber	The impact is likely to be moderate and is likely to require medium levels of mitigation to make the Site acceptable.
Amber-Green	The impact is likely to be minor and may require low levels of mitigation to make the Site acceptable.
Green	There is likely to be no impact that requires mitigation.

- 2.14 Decisions on whether to allocate sites graded Red against any assessment criteria will be taken in the future following public consultation on this report, including with the site promoters and other stakeholders (e.g. statutory environmental bodies and local communities). Additional information that may be received through future consultation could result in changes being made to the assessed grades.
- 2.15 To ensure consistent and transparent application of the grades, a detailed grading methodology was used that sets out how grades are applied depending on the different characteristics of each site as they relate to each site assessment criterion. The methodologies for each assessment criterion are set out in Appendices B-I.
- 2.16 Cumulative impacts relating to the candidate sites have been identified separately to the RAG assessments. Cumulative impacts have been assessed in this manner because the impacts of other non-mineral development are outside of the MPA's control and may be subject to change. Therefore, including them in the RAG assessment would not be an accurate reflection of the potential cumulative impact of the Site.

- 2.17 It is however acknowledged that cumulative impacts are important to take into consideration at an early stage therefore any potential cumulative impacts on the environment and local community, along with the impact on the highway network have been identified for each site where applicable. Cumulative impacts include those associated with existing and/or candidate mineral sites and other cumulative impacts i.e., those outside the MPA's ability to control such as planning permission for nearby residential development, or potential existing local plan allocations. Cumulative impacts will be assessed in detail at site selection and planning application stages and tested through future consultation.

3 Summary of RAG Assessment – Sites Received through the Call for Sites Process

RAG Summary

- 3.1 The table below provides a summary of the results of the RAG assessment for those sites received through the Call for Sites process. The sites have been assessed using the site boundary as opposed to the mineral extraction area as this is subject to change. In addition, the site area has the potential to accommodate mitigation measures. The 'red line' boundaries of each site are set out in Appendix J.
- 3.2 Key findings have been included in the summaries which are those matters identified during the assessments which have had a particular impact on deciding which grade should be applied to particular criteria.

SUMMARY OF RAG GRADES

Criteria	A6	A22	A23	A31	A47	A48	A49	A50	A51	A52	A54	A55	A56	A57	A58	A59	A60a	A60b	A61	A62	A63	A64	A65	A66	A67	A68
Landscape and Visual Sensitivity	Red/Amber	Amber	Amber	Amber	Amber	Amber	Red/Amber	Amber	Amber	Amber	Amber/Amber	Amber	Amber/Amber	Amber/Amber	Amber/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Amber/Amber	Amber	Amber/Amber	Amber/Amber
Biodiversity	Red/Amber	Amber	Red/Amber	Amber	Amber/Amber	Red/Amber	Amber	Amber	Amber	Amber	Amber	Amber	Red/Amber	Amber/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Amber	Red/Amber	Amber/Amber	Amber	Amber	Red/Amber	Amber/Amber
Historic Buildings	Red/Amber	Green	Green	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Red/Amber	Amber/Amber	Amber	Amber	Green	Amber/Amber	Green	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Red/Amber	Amber	Amber	Red/Amber	Red/Amber
Archaeology	Amber	Amber/Amber	Amber/Amber	Amber	Amber/Amber	Amber	Amber	Amber	Amber	Amber	Amber/Amber	Amber	Amber/Amber	Amber	Amber/Amber	Amber	Red/Amber	Red/Amber	Amber	Amber	Red/Amber	Amber	Amber	Red/Amber	Amber	Red/Amber
Flooding	Amber	Amber	Amber	Amber	Amber	Amber/Amber	Amber	Amber	Amber	Red/Amber	Amber	Amber	Green	Green	Amber	Amber	Amber	Amber	Amber	Amber	Red/Amber	Amber	Green	Amber	Amber	Green
Transport	Green	Amber	Amber	Green	Green	Green	Red/Amber	Red/Amber	Green	Green	Green	Green	Green	Amber/Amber	Green	Amber/Amber	Amber/Amber	Amber/Amber	Amber	Amber	Amber/Amber	Red/Amber	Red/Amber	Amber/Amber	Red	Amber/Amber
Access	Green	Green	Green	Red/Amber	Green	Red/Amber	Green	Red/Amber	Green	Green	Amber/Amber	Green	Green	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Green	Green	Red/Amber	Red/Amber	Red/Amber
Public Rights of Way	Red/Amber	Green	Red/Amber	Green	Red/Amber	Red/Amber	Red/Amber	Green	Red/Amber	Green	Green	Red/Amber	Green	Green	Green	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Green	Red/Amber
Geo-Environmental	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Hydrology, Hydrogeology & Drainage	Red/Amber	Amber/Amber	Green	Amber	Amber	Red/Amber	Amber	Amber	Amber	Amber	Amber/Amber	Amber/Amber	Amber/Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber/Amber	Green	Green	Red/Amber	Amber	Amber
Air Quality	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Amber	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Soil Quality	Amber	Amber	Amber	Amber/Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber/Amber	Amber	Amber/Amber	Amber	Amber	Red/Amber
Services & Utilities	Amber	Red/Amber	Amber/Amber	Amber	Amber	Amber	Red/Amber	Red	Red/Amber	Amber	Red/Amber	Amber/Amber	Green	Amber	Green	Amber	Red/Amber	Red/Amber	Red	Red	Red	Amber/Amber	Green	Green	Amber/Amber	Green
Health & Amenity	Red	Green	Amber	Red	Red/Amber	Red	Red	Red/Amber	Red/Amber	Green	Green	Red	Red/Amber	Amber	Red/Amber	Red	Red	Red	Red	Red	Red	Red/Amber	Red	Amber	Red/Amber	Amber
Green Belt	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red/Amber	Green	Green	Red/Amber	Red/Amber	Green	Green	Red/Amber	Green	Green	Green	Green	Green
Airport Safeguarding Zones	Green	Amber/Amber	Amber/Amber	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Amber/Amber	Green	Green	Green	Green

Criteria	A69	A71	A72	A73	A74	A75	A76	A77	A79	A80	A82	A83	A84	A85	A86	A87	A88	A89	A90	A91	A92	A93	A94	A95	A96	D7
Landscape and Visual Sensitivity	Amber /Green	Red/ Amber	Amber /Green	Amber	Amber	Amber	Amber	Amber	Amber /Green	Amber /Green	Amber /Green	Amber	Amber	Amber /Green	Amber	Amber	Amber	Amber /Green	Amber	Amber /Green	Red/ Amber	Red/ Amber	Amber	Red/ Amber	Red/ Amber	Amber /Green
Biodiversity	Amber	Red/ Amber	Amber	Amber	Red/ Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber /Green	Amber	Amber /Green	Amber	Amber	Red/ Amber	Amber /Green	Amber	Amber /Green	Red/ Amber	Red/ Amber	Amber	Red/ Amber	Red/ Amber	Green
Historic Buildings	Red/ Amber	Amber /Green	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Amber	Red/ Amber	Red/ Amber	Amber	Red	Amber	Green	Amber	Red/ Amber	Red/ Amber	Amber	Red/ Amber	Amber /Green	Amber	Red/ Amber	Red	Red	Amber	Red/ Amber
Archaeology	Amber	Amber	Amber	Amber /Green	Amber	Amber /Green	Amber /Green	Amber /Green	Amber	Amber /Green	Amber /Green	Amber	Red	Amber	Red	Amber	Amber /Green	Amber /Green	Amber /Green	Amber	Amber	Amber	Red/ Amber	Amber	Amber	Amber
Flooding	Green	Green	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Red/ Amber	Amber	Amber	Green	Amber	Amber	Amber	Amber	Green	Amber /Green	Amber	Amber	Amber	Amber
Transport	Amber /Green	Red	Amber	Amber	Amber /Green	Amber /Green	Amber	Green	Amber	Amber	Green	Red/ Amber	Red/ Amber	Amber	Amber	Amber	Red/ Amber	Red/ Amber	Amber	Green	Red	Red	Red/ Amber	Amber	Amber	Red/ Amber
Access	Red/ Amber	Red/ Amber	Green	Green	Red/ Amber	Red/ Amber	Green	Green	Red/ Amber	Green	Green	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Green	Red/ Amber	Red/ Amber	Green	Amber	Red	Red	Red	Green	Red/ Amber	Red/ Amber
Public Rights of Way	Red/ Amber	Red/ Amber	Green	Green	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Green	Green	Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Green	Green	Green
Geo-Environmental	Green	Green	Green	Green	Green	Amber	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Hydrology, Hydrogeology & Drainage	Amber /Green	Amber	Amber	Amber	Amber /Green	Red/ Amber	Amber /Green	Amber	Red/ Amber	Amber	Amber	Amber	Amber	Amber /Green	Amber	Amber /Green	Amber /Green	Amber	Amber	Amber	Red/ Amber	Red/ Amber	Amber	Red/ Amber	Red/ Amber	Amber
Air Quality	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Soil Quality	Red/ Amber	Amber	Red/ Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Red	Red/ Amber	Red/ Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber	Amber
Services & Utilities	Red	Amber /Green	Amber	Green	Red/ Amber	Green	Red	Amber	Red	Green	Amber /Green	Green	Red	Amber	Amber	Amber /Green	Amber /Green	Amber /Green	Amber	Red	Green	Amber /Green	Red	Red/ Amber	Red	Red
Health & Amenity	Red/ Amber	Red/ Amber	Red/ Amber	Red	Red	Amber	Red/ Amber	Amber	Red	Red	Red/ Amber	Red/ Amber	Red/ Amber	Red/ Amber	Red	Amber	Red	Red	Red	Amber	Red	Red	Red	Red	Red	Red
Green Belt	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Airport Safeguarding Zones	Green	Green	Green	Green	Green	Red	Amber /Green	Amber /Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Amber /Green	Green	Green	Green	Green	Green	Green	Green

Site by Site Summaries

- 3.3 A summary and constraints map, highlighting the features of relevance to planning matters of each locality within which a site has been promoted, is provided below. The methodologies for each criterion and detailed results of the RAG assessment for each site are provided in Appendices B to I.

Details of generic mitigation measures

- 3.4 Certain measures may be taken to mitigate impacts which have been identified. Such mitigation will apply to most sites and this is outlined below. The following measures are generic in that they are not tailored to a specific site. Conditions attached to any future planning permission, should one be granted, will be site-specific and will explicitly define features to be protected and mitigation measures to be employed.

Landscape

- Any existing hedgerows on Site, and any identified as an important landscape feature, should be retained and enhanced. Opportunities for landscape character enhancement should be considered as part of any mitigation.
- Existing vegetation should be retained, protected, and strengthened as it is contributing to the characteristics of the landscape character area in which the Site is located.
- Mitigation from visual impact on various receptors would need considering in the likely form of advance planting for screening and bunding where appropriate.

Historic Buildings

- Where designated heritage assets are close to the Site, mitigation measures such as planting, or screening could help to lessen the level of this harm.

Archaeology

- Historic England should be consulted at the earliest opportunity to assess the impact on the setting of any Scheduled Monuments where relevant.

Flooding

- Generic mitigation measures as set out in the SFRA will apply to the Site.
- A 3 metre buffer strip should be retained adjacent to any main river to allow access for maintenance.

Assessments to be undertaken at the planning application stage

- 3.5 In order to establish in detail the level and nature of impacts which may occur from mineral working more assessments will need to be undertaken and the results provided with a planning application. This information will help inform the nature of mitigation measures to be applied. The need for such assessments will apply to most sites and these have been outlined below:

Historic Buildings

- A Heritage Impact Assessment would be required to understand the effect on the significance and settings of the heritage assets and could indicate potential mitigation measures.

Archaeology

- Mitigation will comprise an initial desk-based assessment and rectified aerial photographic assessment followed by a programme of trial trenching.
- Mitigation would comprise a programme of pre-determination open area excavation targeted on the concentrations of any significant archaeological remains identified in the trial trenching and possible strip, map, and record in areas of dispersed archaeological remains.
- Mitigation will comprise a programme of pre-determination archaeological evaluation comprising desk-based assessment and geophysical survey.
- Dependant on the results of the geophysical survey, test pitting and targeted trial trenching may be required to support any planning application to define the extent and significance of archaeological and geoarchaeological deposits on the Site.
- Depending on the results of desk-based assessments, there will potentially need to be trial trenching to define the significance of archaeological deposits thought to be present to support any planning application. This would be followed by a programme of open area excavation targeted on the features identified in the trial trenching.

Transport and Access

- The highway transportation and access site assessments that have been carried out at this stage are based on limited supporting highway information. A Transport Assessment and detailed drawings of the access arrangements, including a Stage 1 Road Safety Audit and designers' response will be required at the appropriate stage. The scope of the Transport Assessment would be agreed in advance with the Highway Authority.

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A6	Bradwell Quarry (a)	Braintree	Agricultural	37.5	2.5

The Site is proposed to be an extension to an existing mineral site (Bradwell Quarry) and is located adjacent to the south-eastern boundary of Bradwell Quarry. The Site area is approximately 37.5 ha and is proposed for 2.5 million tonnes of sand and gravel extraction. The Site operations would be in sequence to mineral operations across Site A7 within the MLP 2014. The adjoining uses include the existing Bradwell Quarry and agricultural fields. The village of Silver End is located to the west of the Site. This Site would be accessible from the existing main Site access via the A120. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red/Amber	Amber	Amber	Green	Green	Red/Amber	Green	Red/Amber	Green	Amber	Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA), which includes the predominantly arable farmland and well hedged fields. The River Blackwater and associated valley features have limited presence within the immediate landscape, and therefore reduces the sensitivity of the Site to minerals extraction. Consideration for appropriate enhancement of field hedgerow condition should be considered to mitigate the impacts on landscape and visual impact.
- Storey's Wood (reference Bra178) Local Wildlife Sites LoWS is situated immediately beyond the southern boundary. This is an Ancient Woodland and is therefore classed as irreplaceable habitat. Upney Wood LoWS is c.216 to the east.
- The Site comprises arable fields. It contains boundary and internal hedgerows and lines of mature trees, which are Priority habitats, ditches, and ponds. There is a relatively large area of agricultural grassland in the east and there are areas of Lowland Mixed Deciduous Woodland Priority Habitat. To the

south of the Wayfarers Site is an area of Lowland Mixed Deciduous Woodland Priority habitat, with a pond, and this area would be removed.

- The Site is graded Red-Amber because it could have major impacts upon the adjacent ancient woodland, which is an irreplaceable habitat, and a serious impact upon the LoWS and Priority habitats and species and is likely to require high levels of mitigation to make the Site acceptable. Impacts may include changes to the hydrology of the veteran tree and ancient woodland, smothering of leaves by dust, disturbance e.g. by noise and lighting. It could result in the direct loss Woodland and Hedgerow Priority habitats, loss of ponds and watercourses, grassland, and habitat for Priority farmland species.
- Any application would require demonstration that it would not affect the hydrology of the ancient and Priority habitat Woodlands, candidate veteran trees, retained Hedgerows, ditches and water bodies and appropriate buffers should be provided. It is likely that mitigation would require a substantial buffer from the ancient woodland in accordance with the Government's Advice on ancient woodlands. The water quality of the retained ponds and watercourses should not be allowed to deteriorate. Adequate and appropriate compensatory habitat should be provided for the loss of Hedgerow and Woodland Priority habitats, watercourses, ponds, other habitats and for farmland birds.
- Development on this Site would likely cause high levels of less than substantial harm to the significance of three listed buildings which are in close proximity to the boundary of the Site. These are: Woodhouse Farmhouse (Grade II, List UID: 1123843), Ancillary building/Brewhouse, Woodhouse Farm (Grade II, List UID: 1123844) and The Pump at Woodhouse Farm (Grade II, List UID: 1169918).
- Two designated heritage assets are within the red line boundary for the Site but excluded from the phased extraction. These are Allshot's Farmhouse (Grade II: List UID: 1337612) and Barn 45m North West of Allshot's Farm (Grade II, List UID: 1169906). As all designated heritage assets are close to or within the red line boundary of the Site, mitigation such as planting or screening could lessen this harm however it is unlikely that a neutral impact will be possible.
- There are non-designated heritage assets also within the wider setting of the Site, which form part of the former RAF base which was operational here during the Second World War. Braintree District Council have no formal Local List, however recent applications at the Site relating to Bradwell Quarry and the consented Integrated Waste Management Facility (currently in construction) have identified the squadron offices and other structures as non-designated heritage assets during the planning process.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.

- The Site lies within an area of archaeological features as identified through archaeological evaluation. The archaeological sites identified are limited in scale and are of local to regional significance.

There are no identified sites within the area of archaeological evaluation which would require preservation in situ. Any areas which have not yet had archaeological evaluation will require archaeological trial trenching and assessment for the survival of WWII buildings or structures.

- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA. The Site has been identified as having a 'low' groundwater flood risk. The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding. One Public Right of Way crosses the Site. Three Public Rights of Way border the Site. Three Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). There are three small water bodies within the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV underground and overhead electricity cables as well as low voltage underground cables which supply the existing on Site buildings. Multiple overhead and underground Openreach BT power lines are within the Site boundary. On Site buildings are supplied by local Anglian Water mains which are within the Site boundary. Utilities supplying existing on site buildings that may be demolished will be disconnected. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Two residential buildings, three commercial buildings, and one building of unknown use are within the Site. Six commercial buildings (Allshots Enterprise Area) are adjacent to the boundary of the Site (0m). Five commercial buildings (Allshots Enterprise Area) are outside the Site boundary less than or equal to 20m from the Site. Six commercial buildings (Allshots Enterprise Area) and one farm building are more than 20m but less than or equal to 50m from the Site. Two residential buildings and one farm building are more than 50m but less than or equal to 250m from the Site. Given the

proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

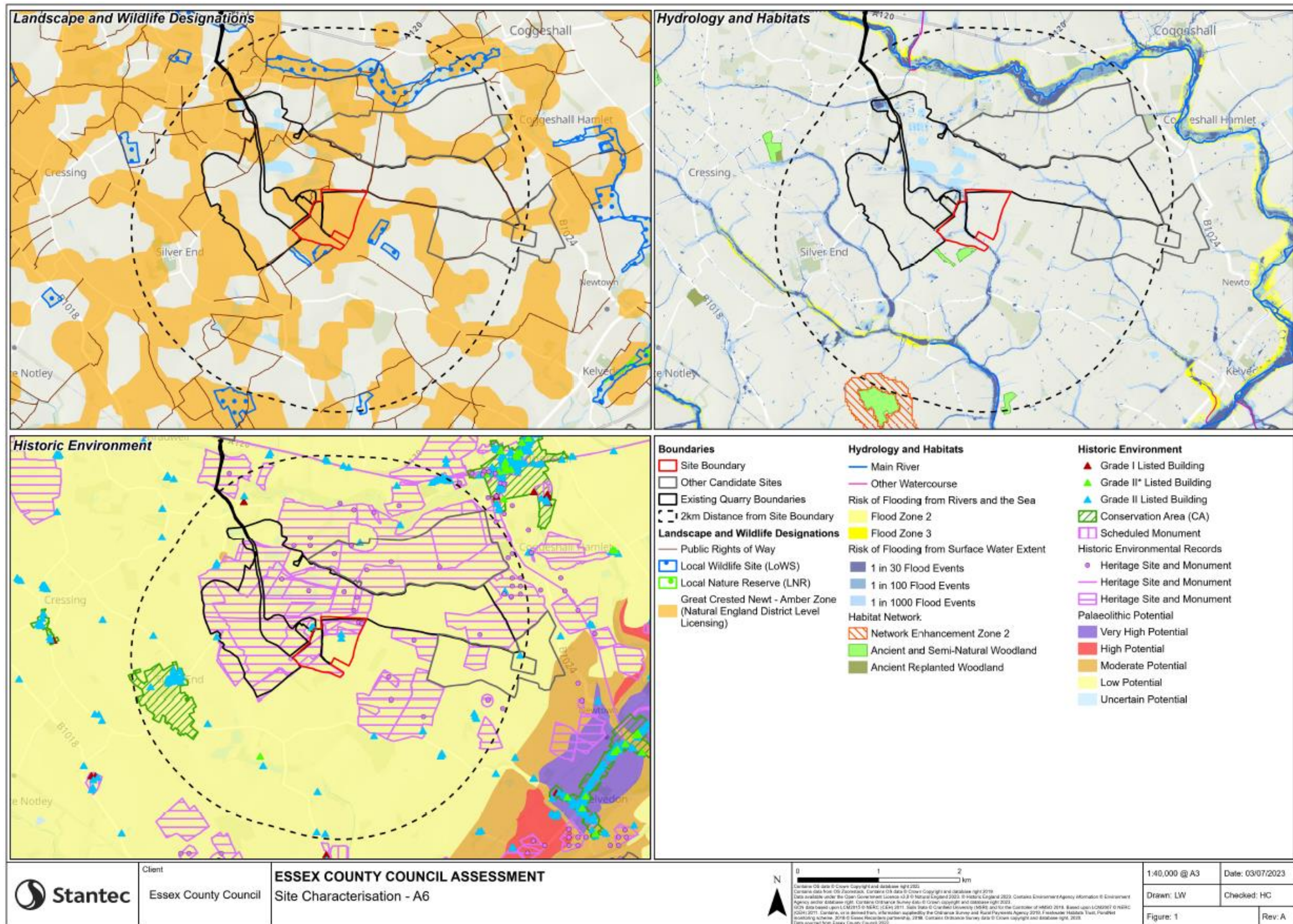


Figure 3.1: A6 - Bradwell Quarry (a)

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A22	Little Bullocks Farm, (a)	Uttlesford	Agricultural	6.9	0.64

The Site is proposed to be an extension to an existing mineral site (Crumps Farm Quarry) and is located south of the B1256, to the east of Hope End Green and south west of Little Canfield. The Site area is approximately 6.9 ha and is proposed for 0.64 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. The adjoining uses include the Crumps Farm Quarry to the north, agricultural fields, and woodland. The village of Hope End Green is located to the west of the Site. This Site is proposed to be accessible via existing access (located at the north eastern corner of Crumps Farm Quarry) onto B1256, a short connection to the A120. There are existing enforcement investigations at Crumps Farm Quarry, therefore, the outcome of these may influence this allocation assessment in due course. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Green	Amber /Green	Amber	Amber	Green	Green	Green	Amber /Green	Green	Amber	Red/ Amber	Green	Green	Amber /Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) and possesses some characteristic features of the LCA, which includes the arable farmland landscape. The works would erode the existing attractive features of the small, secluded valley, (which is most attractive at the east) and the views of it from the public footpath. Overall, sensitive Mitigation for visual impact toward public receptors will be required to keep in context with the local landscape character.
- Site A22 is within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Hatfield Forest SSSI and National Nature Reserve (NNR), c.3.1 kilometres west and High Wood Dunmow SSSI, c.2.4 kilometres east. Hatfield Forest is one of the largest woodlands in Essex and includes a wide range of habitats including Woodpasture and Parkland Priority habitat. High Woods, Dunmow SSSI which is an ancient woodland site, with sections which

comprise ancient replanted woodland. Additionally, Flitch Way Local Nature Reserve (LNR) is c. 812 metres north and Elsenham Wood SSSI is c. 4.9 kilometres north. The Site is 115 metres south of an existing, active minerals site; Crump's Farm.

- There are four Local Wildlife Sites (LoWS) within one kilometre. Canfield End Pastures LoWS is adjacent to the Site boundary on the east side. This LoWS comprises two pastures which represent a scarce Essex habitat, being damp, streamside grasslands with a diverse flora.
- Multiple mature trees are present on-Site, as are several Hedgerows Priority habitats.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make the Site acceptable. The proposals could have a moderate impact upon the natural environment including Priority habitats and species. This includes the direct impact to the nearby LoWS, River Roding watercourse, mature trees, as well as potential hydrological impacts to retained habitats, and loss of and disturbance to habitats for Priority farmland species. Any application would require demonstration that there would be no adverse effects and the operations would not affect the hydrology of water sensitive habitats e.g. the irreplaceable habitat and the River Roding.
- Other mitigation measures should be used, such as watering to suppress dust and wildlife sensitive lighting. General best practice pollution prevention would be likely. Activities which have the highest potential to generate dust, such as haul roads and mineral stockpiles, should be located away from watercourses, woodlands and the other existing habitats and should be regularly dampened to minimise dust emissions. Water run-off from the Site should not be allowed to enter directly into the watercourses.
- The Essex Historic Environment Records show this area lies within Historic landscape area 8 Hatfield Forest and the Hallingburys. The historic mapping shows that part of this area used to be woodland. The surviving historic field boundaries are likely to be of ancient origin. It is likely that a range of historic landscape feature may survive, and any environmental assessment should include a walk over survey.
- The Site would be generally screened from the south by vegetation on the boundary (which should be protected and retained) and by landform however, the Site would be overlooked from the other (north) slope of the valley. Mitigation to reduce any impact on these views should be considered where appropriate.
- The Site lies within an area known to contain multi-period archaeology from the Late Bronze Age to the medieval period situated close to the Pincey Brook. Excavations to the north show settlement evidence from the Bronze Age through to the post medieval period, both on and set back from the line of Stane Street the Roman road from Colchester to Braughing.

- A sequence of cropmarks are known from arial photography extending across the Site forming a large enclosure or early field system.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA. The Site has been identified as having a 'high' groundwater flood risk. Both of these elements of flood risk are due to a main river being located to the east of the Site. The Site is predominantly within Flood Risk Zone 1 (92.2%) and therefore that area of the Site is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Crumps Farm onto the B1256 which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety. Internal access routes need to be considered to ensure they are feasible.

- The Site has low groundwater vulnerability. A watercourse (River Roding) is 10m east and 20m north east of the Site and another watercourse is 10m north. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site is within 100m of a high pressure gas main (Cadent Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas main to make the Site acceptable which may include its diversion and/or protection.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within an Airport Safeguarding Zone (Stansted Outer Zone). Restoration proposals assume the Site would be returned to agricultural use meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts. Detailed assessment of this matter would need to accompany any planning application.

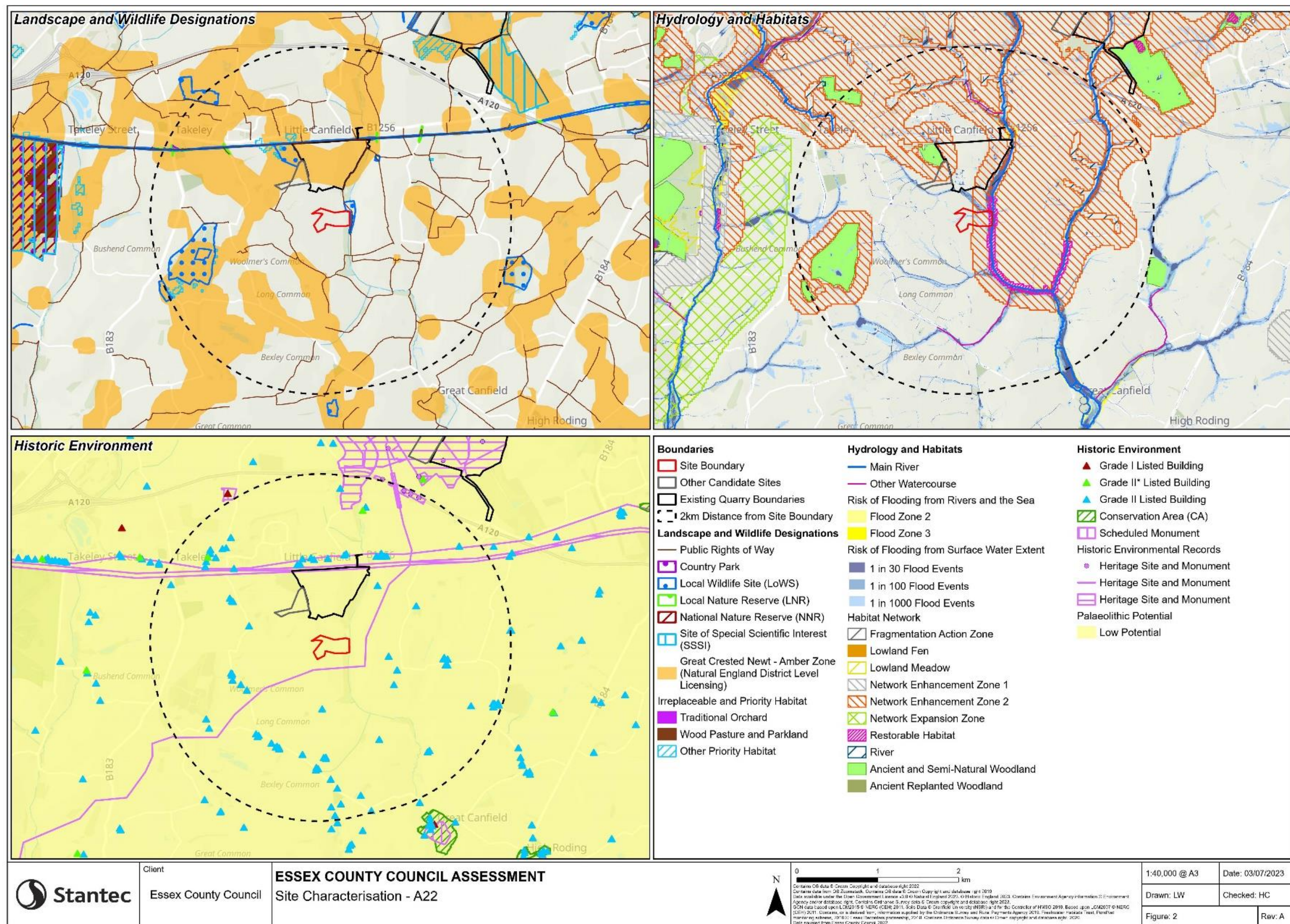


Figure 3.2: A22 - Little Bullocks Farm, (a)

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A23	Little Bullocks Farm, (b)	Uttlesford	Agricultural	5.5	0.06

The Site is proposed to be an extension to an existing mineral site (Crumps Farm Quarry) and is located south of the B1256, to the north east of Hope End Green and south west of Little Canfield. The Site area is approximately 5.5 ha and is proposed for 0.06 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. The adjoining uses include the Crumps Farm Quarry, agricultural fields, woodland, and residential buildings within the village of Hope End Green. The village of Hope End Green is located to the west of the Site. This Site is proposed to be accessible via existing access (located at the north eastern corner of Crumps Farm Quarry) onto B1256, a short connection to the A120. There are existing enforcement investigations at Crumps Farm Quarry, therefore, the outcome of these may influence this allocation assessment in due course. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Red/Amber	Green	Amber /Green	Amber	Amber	Green	Red/Amber	Green	Green	Green	Amber	Amber /Green	Amber	Green	Amber /Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) and possesses only limited characteristic features of the LCA, which includes the arable farmland landscape.
- Site A23 is within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Hatfield Forest SSSI and National Nature Reserve (NNR), c.2.7 kilometres west and High Wood Dunmow SSSI, c.2.5 kilometres east. Hatfield Forest is one of the largest woodlands in Essex and includes a wide range of habitats including Woodpasture and Parkland Priority habitat. High Woods, Dunmow SSSI which is an ancient woodland site, with sections which comprise secondary woodland. Additionally, Flitch Way Local Nature Reserve

(LNR) is c. 220 metres north and Elsenham Wood SSSI is c. 4.3 kilometres north.

- There are five Local Wildlife Sites (LoWS) within one kilometre. Runnel's Hey is adjacent to the Site boundary on the northwest side. This LoWS is listed as ancient woodland, which is classed as irreplaceable habitat. Multiple mature trees are present within the bordering line of trees along the southeast side.
- The Site comprises two fields, one which is arable in active crop rotation, whilst the other field, which is adjacent the ancient woodland, comprises modified grassland. Wet drainage ditches border the west and eastern boundaries. A line of mature broadleaved trees divides the Site in two centrally. Site access is not clear from the plans provided. However, the Site adjoins directly to the neighbouring active Crumps Farm quarry and waste site. The eastern boundary is partially bordered by a line of mature, broadleaved trees and a wet drainage ditch. The River Roding is 500 metres east of the Site, the bordering drainage ditches eventually lead in to the River Roding. There is a haul road proposed on the plan connecting A22 and A23, which would cross a ditch that feeds into the River Roding. Therefore, there are a number of potential pollution pathways between the Site and River Roding, for water quality.
- The Site is graded Red-Amber because ecological impacts are likely to be major and it is likely to require high levels of mitigation to make the Site acceptable. The Site could have a major impact upon the adjacent ancient woodland (irreplaceable habitat). The proposals could have a serious impact upon the natural environment including local designations and Priority habitats and species. This includes the direct and indirect impacts to the nearby LoWS, mature trees, as well as potential hydrological impacts to retained habitats. These trees could be affected directly and indirectly; e.g. through direct habitat loss, changes to the hydrology; smothering of leaves by dust, disturbance e.g. by noise and lighting. In addition, other protected and Priority species using the adjacent band of scrub and grassland habitat e.g. bats, Hazel Dormouse and reptiles could be impacted. It could also result in disturbance and loss of habitat for Priority farmland species, e.g. Skylark.
- Any application would require demonstration that there would be no adverse impacts to the adjacent ancient woodland (irreplaceable habitat) and that the operations would not affect the hydrology of the ancient woodland or the River Roding. Mitigation may include - but not be limited to - substantial buffers between the Site and the LoWS and ancient woodland and the nearby watercourses; prevention of deterioration of water quality to the River and its tributary watercourses, and ecological improvements to the watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks. Adequate and appropriate compensation may be required for the loss of any habitat within the LoWS, and loss of habitat for Priority farmland species.

- The Site lies within an area known to contain multi-period archaeology from the Late Bronze Age to the medieval period situated close to the Pincey Brook. Excavations to the north show settlement evidence from the Bronze Age through to the post medieval period, both on and set back from the line of Stane Street, the Roman road from Colchester to Braughing.
- A sequence of cropmarks are known from aerial photography extending across the Site forming an earlier field system and potential woodland boundary.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Crumps Farm onto the B1256 which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety. Internal access routes would need to be considered to determine whether feasible.

- 1 Public Right of Way crosses the Site. 1 Public Right of Way borders the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- Sixteen residential buildings, two farm buildings and four commercial buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be

required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.

- The Site is within an Airport Safeguarding Zone (Stansted Outer Zone). Restoration proposals assume the Site would be returned to agricultural use meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts Detailed assessment of this matter would need to accompany any planning application.

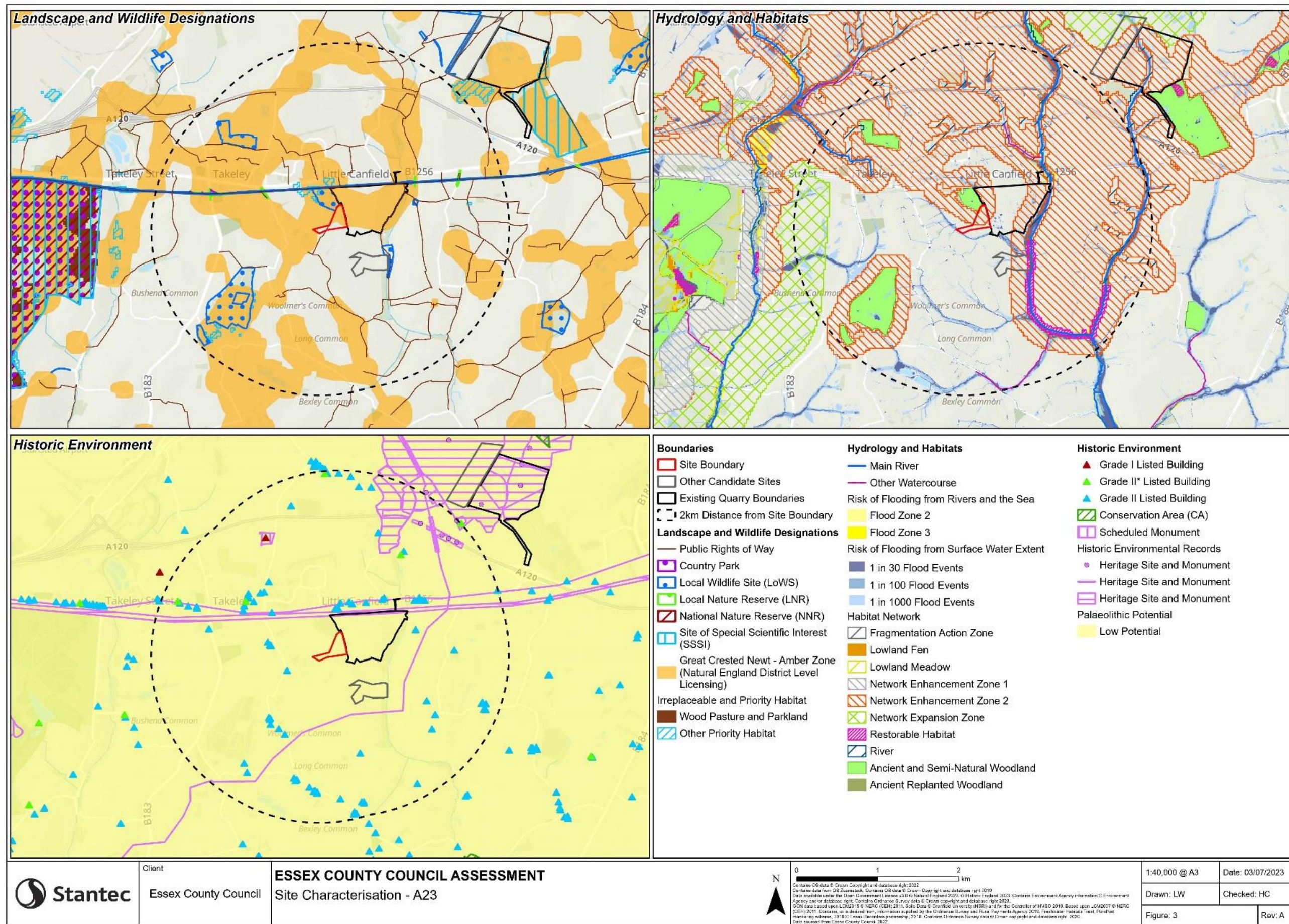


Figure 3.3: A23 - Little Bullocks Farm, (b)

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A31	Maldon Road	Colchester	Agricultural	25	4

The Site is proposed to be an extension to an existing mineral site (Birch Quarry) and is located to the south of Maldon Road, west of Birch. The Site area is approximately 25 ha and is proposed for 4 million tonnes of sand and gravel extraction. Minerals would be moved by conveyor under Maldon Road for processing and exported via the existing Site access. Extraction would not commence until after extraction at the existing quarry and all necessary restoration phases have been completed. The adjoining uses include the existing Birch Quarry, agricultural fields, access roads and residential buildings. The village of Birch is located to the east of the Site. This Site would be accessible via B1022. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber	Amber	Green	Red/Amber	Green	Green	Amber	Green	Amber/Green	Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site lies in historic landscape area 28, the Abberton Area with good field boundary survival. On the southern boundary two areas of ancient woodland are preserved.
- There are a number of woodland blocks adjacent to the southern boundary of the Site alongside gappy but established hedgerow and hedgerow trees. The Site itself is divided in several parcels by a mix of well-established hedgerow, hedgerow trees and tree belt. The Site has some attractive varying landform with a number of landscape features such as feature mature trees to the eastern boundary.
- Taking account of the vegetation and landform, much of the Site would be overlooked from the road by the long north-west boundary. A bund could prevent this, but would in itself, be intrusive. There would be some views of the Site from quite distant houses to the north and through the gaps in vegetation from footpath to the east.

- The need for screening views from the footpath to the south varies depending on landform and gaps through existing vegetation.
- The Site is within the Site of Special Scientific Interest Impact Risk Zone for Abberton Reservoir Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site. There are also potential pollution pathways – e.g. water quality - between the proposed mineral Site and international wildlife sites that would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- A number of Priority habitat hedgerows and three Lowland Mixed Deciduous Woodland Priority habitat adjacent to the boundary could be affected directly and indirectly. Two of these woodlands may be partly ancient. The internal Hedgerow Priority habitat may be lost, as well as a watercourse and associated Lowland Mixed Deciduous Woodland Priority habitat.
- The Site is graded Amber because ecological impacts are likely to be moderate and likely to require medium levels of mitigation to make the Site acceptable. The Site could have a moderate impact upon international and national designations and would be likely to require medium levels of mitigation. Moderate impacts are anticipated upon Priority habitats due to the loss of several Hedgerows, the internal water course and associated woodland and potential impacts to adjacent woodland Priority habitat. The Site could have major impacts upon irreplaceable habitats if the adjacent woodlands are found to be ancient; in which case the Site would be classified as Red/Amber.
- Key mitigation is likely to include prevention of hydrological changes to Woodlands; substantial buffers between the Quarry and the Woodlands and Hedgerows; and prevention of deterioration of water quality to the watercourse. Adequate and appropriate compensation may be required for the loss of Hedgerows, the watercourse, and losses of habitat for Priority farmland species.
- The allocation of the Site would likely result in ‘less than substantial’ harm at a mid-level to the significance of two Grade II listed buildings through a change within their settings: Roundbush Farmhouse (List UID: 1238544); and Barn to East of Roundbush Road (List UID: 1274130).
- The allocation of the Site is not considered to result in an impact to Palmer’s Farmhouse (List UID: 416803) or Brakes Farmhouse (List UID: 1238503)
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an extensive cropmark landscape. These include at least one enclosure, trackways, and ring ditches within the Site. A similar spread of

crop marks is visible around the Site indicating a dispersed settlement pattern within the immediate area.

- Excavation in the adjacent area has identified multi-period archaeological deposits with settlements of Bronze Age through to medieval date.
- There is also the potential for Palaeolithic or Pleistocene deposits within the gravels.
- A pre-determination desk based archaeological assessment, and a geo-archaeological assessment and aerial rectification will be required as part of the supporting data for the planning application.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1, which is not at risk from fluvial flooding.
- Restoration of the Site following operational closure should consider the inclusion of flood reduction measures such as NFM and/or tree planting to reduce risks across the wider catchment.
- Access is proposed via an existing access serving Birch Quarry onto the B1022 Maldon Road which includes a ghost island right turn lane. This is acceptable in principle.
- To export minerals by HGV via the existing access it is proposed that minerals will be delivered by conveyor to the existing quarry. This will require a crossing of the B1022. No details provided.
- It is proposed that the existing agricultural access serving the Site will be used for limited access by low loader/plant but not for export of minerals by HGV. Further assessment of the suitability of this access will be required should the Site progress. It is noted that the applicant controls extensive frontage onto Birch Road to provide visibility splays and/or a new access location if required.
- The Site is within a Zone III - Total Catchment Groundwater SPZ and has low/medium to low groundwater vulnerability. A watercourse is present within the Site boundary and feeds into the Roman River. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 3 quality soil (good to moderate quality land), which has the potential for being BMV land but is likely to have a minor impact on soil quality and agricultural land. Appropriate consideration would be required

to assess whether any impacts on soil quality and agricultural land require mitigation.

- The Site contains 33kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- One farm building is present within the Site. One residential building is outside the Site boundary less than or equal to 20m from the Site. Four residential buildings, one farm building and one sports facility (fishing lake) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

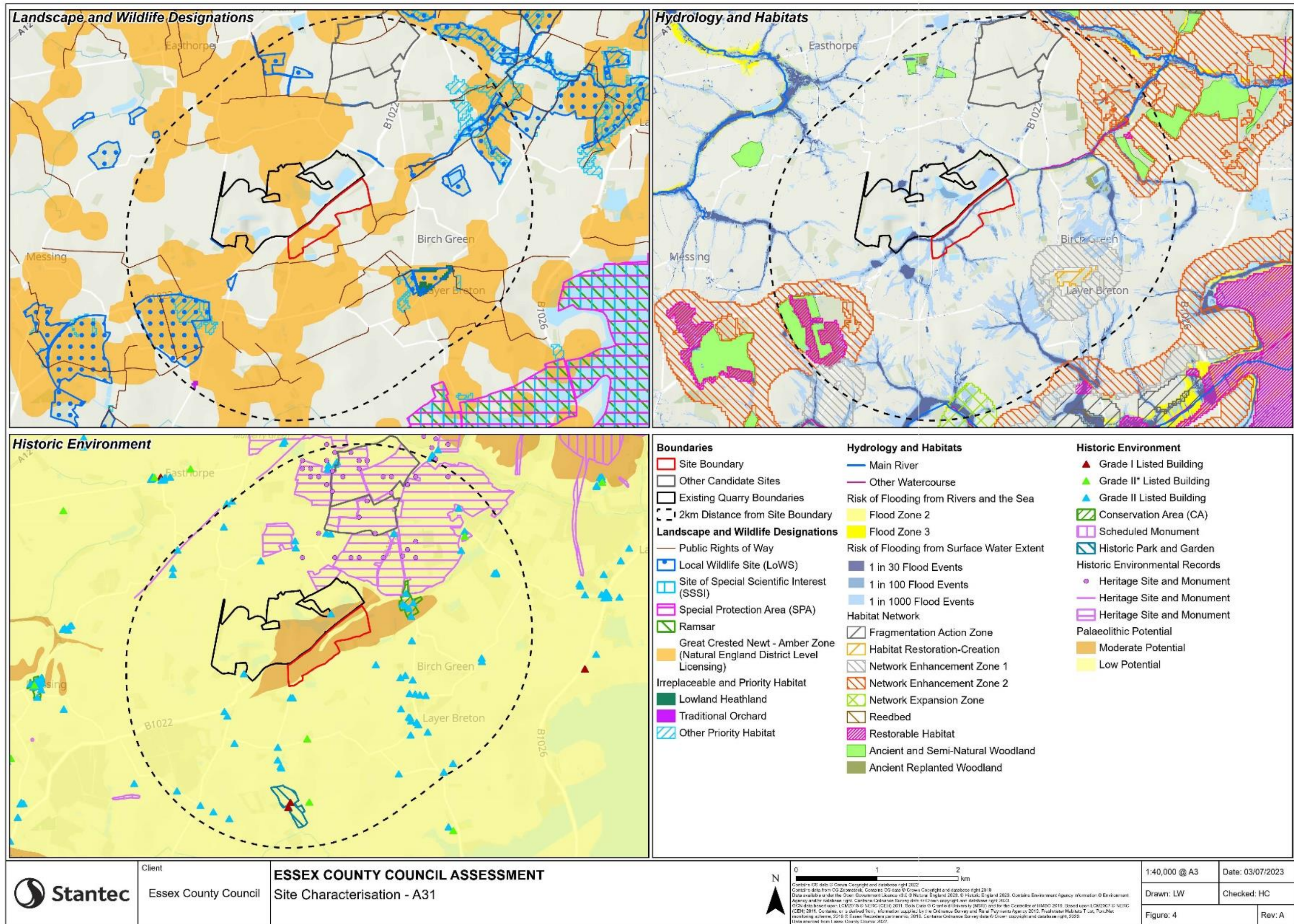


Figure 3.4: A31 - Maldon Road
Review of Essex MLF 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A47	Bradwell – Monk's Farm	Braintree	Agricultural	84.8	4

The Site is promoted as an extension to an existing mineral Site (Bradwell Quarry) and is located to the east of Bradwell Quarry. The Site area is approximately 84.8 ha and is proposed for 4 million tonnes of sand and gravel extraction which would be processed through the existing on-Site washing and screening plant located within Bradwell Quarry. The submission notes that the Site's mineral extraction operations would commence in a planned and systematic manner consecutively to the existing mineral site. The adjoining uses include agricultural fields, and residential, farm, and commercial buildings. The village of Kelvedon is located south and south east of the Site. The Site would be accessed using the existing access from the A120 and the internal haul road would be extended. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber /Green	Red/ Amber	Amber /Green	Amber	Green	Green	Red/ Amber	Green	Amber	Green	Amber	Amber	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA), which includes the predominantly arable farmland and well hedged fields. The River Blackwater and associated valley features has limited presence within the immediate landscape, and therefore reduces the sensitivity of the Site to minerals extraction.
- There are few important landscape designations within the surrounding landscape, with the exception of a few Priority Habitats (Deciduous Woodland and Woodpasture/Parkland) within the wider landscape.
- Site A47 comprises a number of arable fields with numerous boundary and internal Hedgerows and lines of mature trees and associated ditches, which are Priority habitats. There are two small areas of woodlands adjacent to the boundaries- one of which is mixed plantation- and some ponds on the

boundaries. Pantling's Lane border of the Site is an historic lane bordered by Hedgerows and Lowland Mixed Deciduous Woodland Priority habitat.

- There are two Local Wildlife Sites (LoWS) within 500 m of the Site. Upney Wood LoWS is c.355 metres to the west and is an ancient woodland, and therefore irreplaceable habitat. Coggeshall Hall Farm LoWS is c.425m metres east of the Site; this LoWS is a river valley site and the adjacent sections of the River Blackwater are also included.
- The access route for the haul road is not provided but it could require cutting through Pantling's Lane, which would dissect this important wildlife corridor and this should be avoided if at all possible. Dewatering would be required which could have an impact on the surrounding habitats.
- The Site is graded Amber /Green because ecological impacts are likely to be minor and likely to require low levels of mitigation to make the Site acceptable. The Site could have a moderate impact upon the natural environment including and Priority habitats and species due to the loss of a number of Hedgerows and watercourses and potential hydrological impacts to retained habitats.
- Mitigation is likely to include prevention of hydrological changes to retained habitats, appropriate buffers between the Quarry and retained habitats; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats. Adequate and appropriate compensation may be required for the loss of Hedgerows, the watercourse, and losses of habitat for Priority farmland species.
- The allocation would affect the setting of the following designated heritage assets:
 - Monks Farm Cottages, Pantlings Lane (Grade II, List UID: 1171147)
 - Pound Farmhouse, Coggeshall Road (Grade II, List UID: 1123812).
- The Site will have no direct impact to any heritage assets; the impact will be indirect, due to a change to the assets' settings. Due to the proximity of the Site to the listed buildings identified above, and the contribution the Site makes to the significance of these buildings, the proposed Site is considered to cause either a mid or a low level of harm to their significance.
- The effect on Monks Farm Cottages will be higher than the effect on the significance of Pound Farmhouse, due to the location of the Site. Whilst the Site is part of the wider setting of Pound Farmhouse, the Site is part of the immediate setting of Monks Farm Cottages and will all but entirely encircle this heritage asset. The Site will affect the setting of Monks Farm Cottages in a way which is considered to cause a mid-level of less than substantial harm to the significance of the asset. The harm to the significance of Pound Farm is at the lower end of less than substantial.

- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. The Site contains evidence for an historic field boundary of unknown date and historic landscape features.
- There is potential for evidence for Medieval and later settlement along Pantlings Lane
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- 3 Public Rights of Way cross the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site within Zone III Total Catchment Groundwater SPZ and has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). No water body is present within the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within 250m of a high pressure gas mains (National Grid Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Three commercial buildings and a farm building are outside the Site boundary less than or equal to 20m from the Site. One commercial building, one residential building and two farm buildings are more than 20m but less than or equal to 50m from the Site. One farm building and twenty eight residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to

be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

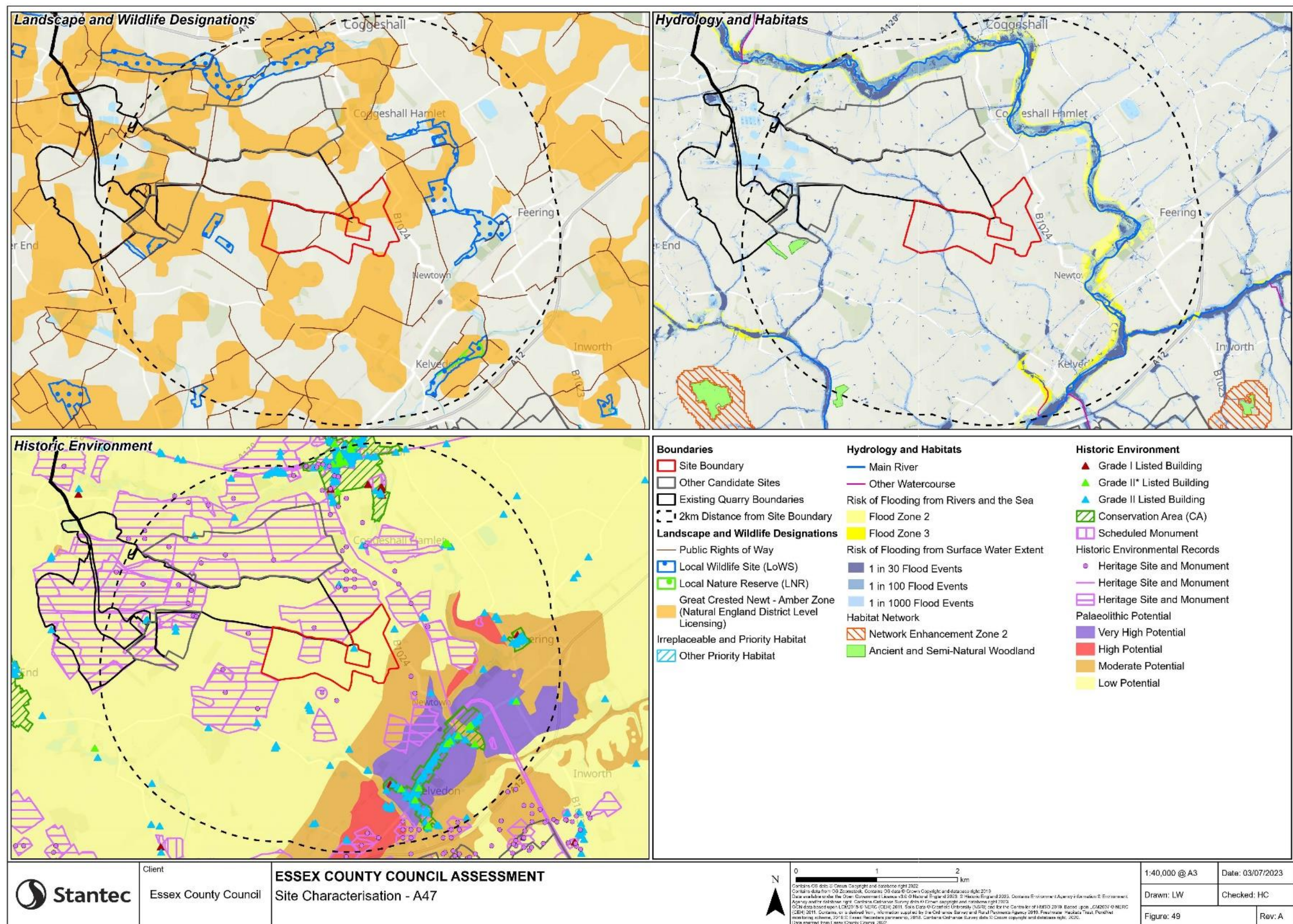


Figure 3.5: A47 - Bradwell – Monk's Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A48	Bradwell – Grange Farm	Braintree	Agricultural	143.15	12.2

The Site is promoted as an extension to existing mineral site (Bradwell Quarry) and is located to the north east of Bradwell Quarry. The Site area is approximately 143.15 ha and is proposed for 12.2 million tonnes of sand and gravel extraction which would be processed through the existing on-Site washing and screening plant located within Bradwell Quarry. The submission notes that the Site's mineral extraction operations would commence in a planned and systematic manner consecutively to the existing mineral site. The adjoining uses include agricultural fields, residential and farm buildings and Bradwell Quarry. The small town of Coggeshall is located north east of the Site. The Site would be accessed using the existing access from the A120 and the internal haul road would be extended, crossing Cuthedge Lane. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Red/Amber	Red/Amber	Amber	Amber /Green	Green	Red/Amber	Red/Amber	Green	Red/Amber	Green	Amber	Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA), which includes the predominantly arable farmland and well hedged fields. However, the River Blackwater and associated valley features run along the northern boundary of the Site, separated by The Essex Way public footpath. The extensive linear poplar and willow plantations are a distinctive feature within the setting of 'The Essex Way' and northern areas of the Site. Particular consideration must be held for providing an adequate buffer to The Essex Way.
- Appropriate consideration would be required to mitigate the visual impacts affecting PRoW's travelling through and adjacent to the Site.
- There is a veteran Oak tree located just beyond the northern boundary of the Site A48. Veteran trees are irreplaceable habitat.

- The closest Local Wildlife Site (LoWS) is Blackwater Plantation (Bra186) which is 80m to the north, downhill in the Blackwater valley. This forms an important wildlife corridor along the Blackwater valley and comprises a variety of valuable habitats. There is hydrological and habitat connectivity between site A48 and the LoWS. There are a number of other designated sites downriver, which are designated for their riparian/ valley habitats; Upney Wood LoWS is c.355 metres to the south and is an ancient woodland, and therefore irreplaceable habitat.
- This Site comprises a number of arable fields with numerous boundary and internal Hedgerows and lines of mature trees and associated (predominantly dry) ditches and ponds, which are Priority habitats. There is a patch of deciduous plantation woodland and two small clusters of mature trees within the Site. A number of Priority species are present on Site.
- The Site is graded Red/Amber because it could have a serious impact upon the natural environment including local designations and priority habitats and species; this includes potential impacts to the River Blackwater and its associated riparian habitats which have been designated as Local Wildlife Sites. In addition, the Site could have moderate impacts upon irreplaceable habitats, i.e. the veteran tree situated just beyond the northern boundary. There would also be a direct loss of a number of Hedgerows, mature trees and watercourses and potential hydrological impacts to retained habitats and loss of, and disturbance to, habitats for Priority farmland species.
- Mitigation is likely to include prevention of hydrological changes to the River Blackwater and its associated habitats, and to retained habitats; adequate and appropriate buffers between the Quarry and the veteran tree, Hedgerows and LoWS; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks. Adequate and appropriate compensation would be required for the loss of Hedgerows, trees, woodland, watercourses, and loss of habitat for Priority farmland species.
- The allocation will affect the setting of the following designated heritage assets:
 - Curd Hall (Grade II, List UID: 1123140)
 - Scrip's Cottage At Rear of Scrip's House (Grade II, List UID: 1169367)
- The Site will have no direct impact to any heritage assets; the impact will be indirect, due to a change to the assets' settings.
- Due to the proximity of the Site to the listed buildings identified above, and the contribution the Site makes to the significance of these buildings, the proposed Site is considered to cause either a mid or a low level of harm to their significance.

- The effect on Curd Hall will be higher than the effect on the significance of Scrip's Cottage, due to the location of the Site. Whilst the Site is part of the wider setting of Scrip's Cottage, the Site is part of the immediate setting of Curd Hall and will immediately abut the southern extent of the listed building's curtilage. The Site will affect the setting of Curds Hall in a way which is considered to cause a mid-level of less than substantial harm to the significance of the asset. The harm to the significance of Scrips Cottage is at the lower end of less than substantial.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence and archaeological trial trenching evaluation, which has identified various concentrations of remains, indicative of archaeological sites of local to regional significance within the Site.
- There are no identified sites within the area of archaeological evaluation which would require preservation in situ.
- A Scheduled Monument lies within 1km of the Site.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via the existing junction with the A120 which consists of single lane dual carriageway with central reservation to accommodate right turning HGVs exiting the Site and right turn facility for right turning vehicles entering the Site. This is acceptable in principle.
- To export materials by dump truck to the processing plant would require a crossing of the local road network (Cuthedge Lane). No details provided.
- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- 4 Public Rights of Way cross the Site. 5 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site lies within Zone III Total Catchment Groundwater SPZ and has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection

Areas (Surface Water). A watercourse (River Blackwater) is 180m north of the Site and four small water bodies are located within the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.

- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 33kV electric overhead lines and 11kV overhead lines within the Site boundary. Openreach BT power lines are present within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- One farm building, one residential building and one sports facility (cricket ground) are present within the Site boundary. Two residential buildings and one sports facility (sports pavilion) are outside the Site boundary less than or equal to 20m from the Site. Four residential buildings are more than 20m and less than or equal to 50m from the Site. Ninety seven residential buildings and one community facility (allotments) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

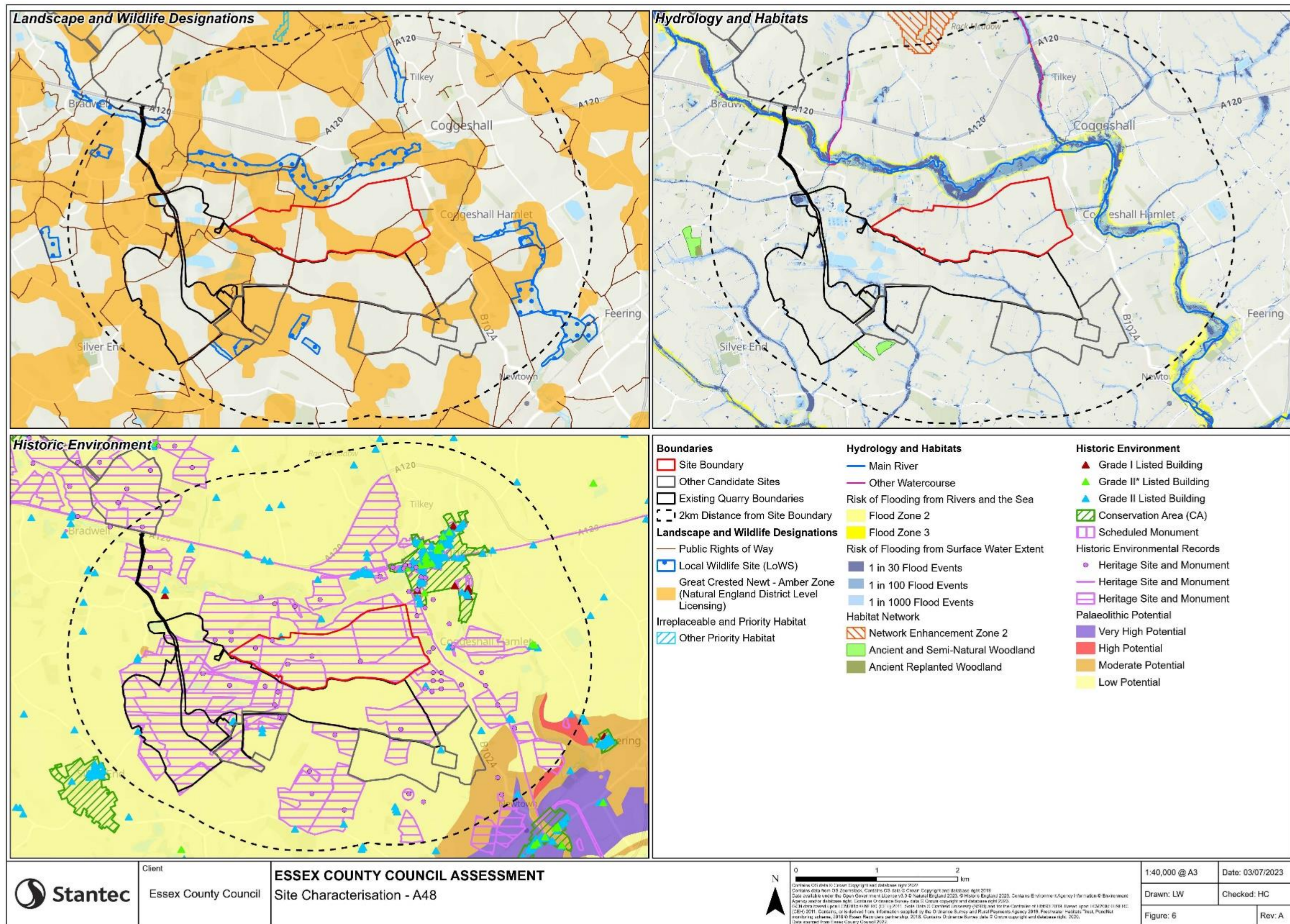


Figure 3.6: A48 - Bradwell – Grange Farm
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023 49

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A49	Colemans Farm - Hill Broad Farm Full Site	Maldon	Agricultural	40.74	2

The Site is promoted as an extension to an existing mineral Site (Colemans Farm Quarry) and is located to the south east of Colemans Farm Quarry. The Site area is approximately 40.74 ha and is proposed for approximately 2 million tonnes of sand and gravel extraction which would be transported internally to an existing plant site at Colemans Farm Quarry, where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry and, subject to allocation, could be operated alongside Site A50. The adjoining uses include agricultural fields, woodland, Colemans reservoir and residential and commercial buildings. The hamlet of Rivenhall is located 800m north of the Site. Access to the Site is through the access arrangements for the existing workings at Colemans Farm Quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Amber	Red/Amber	Amber	Amber	Red/Amber	Green	Red/Amber	Green	Amber	Green	Amber	Red/Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). Located on the edge of the River Blackwater, the western parcel of the Site comprises linear willow and poplar plantation which is a strong local feature of the landscape. The remainder of the Site comprises arable fields separated by established hedgerows, also located on the valley sides. With open views of the river, appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.
- Elm Springs Priority Habitat (Deciduous Woodland) defines the western site boundary, and Stowling & Crierswood Ancient Woodland is located 0.3km to

the south of the Site. The River Blackwater valley is located on the immediate boundary to the west, with strong intervisibility between the Site and the river. Appropriate consideration would be required to mitigate the physical impacts on Elm Springs with a suitable buffer. Mineral extraction within this location would significantly alter the setting of the River Blackwater valley, where a substantial buffer would be required.

- The River Blackwater follows the length of the western boundary and there is another watercourse within the Site which feeds into the River which is likely to be removed. These create a potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.
- The Site is situated on low-lying land and comprises several arable fields; an area of Lowland Mixed Deciduous Woodland Priority habitat is located within the Site, to the west of the River Blackwater.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect the hydrology of on-site and off-site habitats. The proposals are also just over 100 metres from Braxted Park Local Wildlife Site. Substantial buffers are likely to be required near to the Lowland Mixed Deciduous Woodland Priority habitat, River Blackwater and other watercourses and their water quality must not be affected by the proposals. Affected Hedgerows and watercourses should be adequately and appropriately compensated.
- The allocation of The Site would have a major detrimental impact on the setting of the following Grade II listed buildings:
 - Appleford Bridge (List UID: 1111108)
 - Appleford Bridge Cottage (List UID: 1317172)
 - 1 and 2 School House (List UID: 1400105)
- The change to the setting of the listed buildings would amount to a mid-level of less than substantial harm to their significance.
- There would be a moderate impact on the significance of the Grade II listed Garden Wall of Little Braxted Hall (List UID: 1111073), resulting in a low level of less than substantial harm.
- There would be a minor impact on the setting of the group of three designated heritage assets at Great Braxted Hall resulting in the lowest level of less than substantial harm.
- The group of heritage assets at Little Braxted are unlikely to be affected, other than through minor environmental impacts.

- The Site lies within an area of archaeological features as identified through aerial photographic evidence. In the northern area of the Site a circular enclosure is interpreted as being of prehistoric date and possibly a ritual monument
- A series of linear features may represent possibly prehistoric or later land division along the river valley.
- A scheduled monument lies within 1km of the Site.
- Palaeolithic archaeological remains and Pleistocene faunal remains have been recovered from river gravels within the vicinity of the Site.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1 however parts of the Site within FRZ2 and FRZ3 associated with the River Blackwater are prone to fluvial flooding.
- Any potential changes to the porosity of the ground following works and its effects on groundwater levels will need to be mitigated.
- Restoration of the Site following operational closure should consider the inclusion of flood reduction measures such as NFM and/or tree planting to reduce risks across the wider catchment.
- Access proposed via an existing access from Little Braxted Lane which is classified as a local route (other) in Essex County Council's Development Management Route Hierarchy. This accords with (i) in the methodology (see Appendix G Transport for full methodology):

Access to a suitable existing junction with the main road network, via a suitable section of an existing road, as short as possible, without causing a detrimental impact upon the safety and efficiency of the network.

- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site has unproductive/low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse (River Blackwater) is within the Site boundary and is 20m west and 30m north east,

another watercourse is 5m south west and an additional watercourse is 80m south. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead and underground electricity lines within the Site boundary. The Site is within 100m of a high pressure gas mains (Cadent Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impacts on the gas main to make the Site acceptable which may include diversion and/or protection.
- One residential building is present within the Site. Two residential buildings are outside the Site boundary less than or equal to 20m from the Site. One residential building is more than 20m but less than or equal to 50m from the Site. Nine residential buildings are more than 50m but less than or equal to 250m from the Site, Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

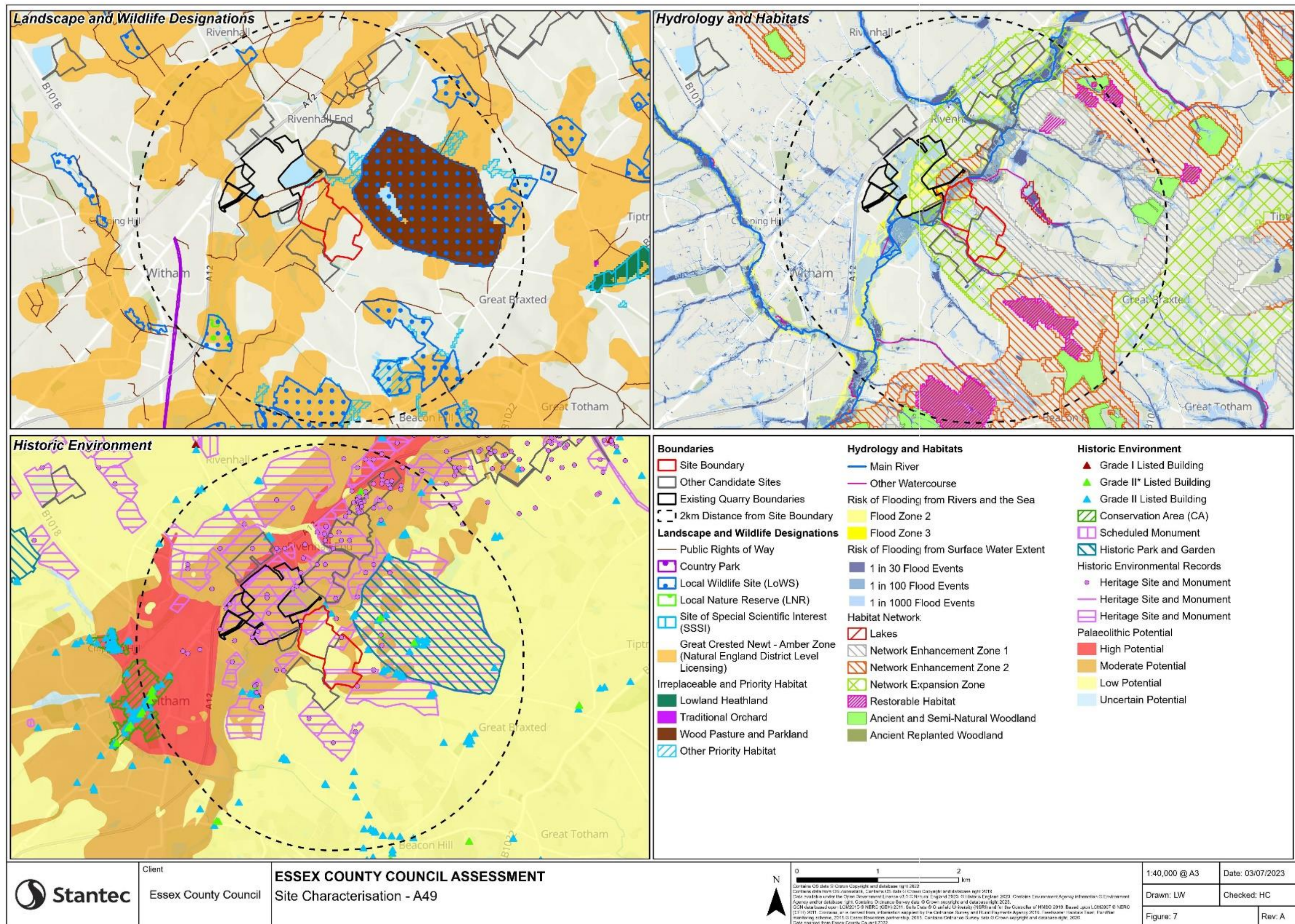


Figure 3.7: A49- Colemans Farm - Hill Broad Farm Full Site
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A50	Colemans Farm - Eastern extension (Appleford Farm)	Braintree	Agricultural	24.25	0.93

The Site is promoted as an extension to an existing mineral Site (Colemans Farm Quarry) and is located to the east of Colemans Farm Quarry. The Site area is approximately 24.25 ha and is proposed for 0.93 million tonnes of sand and gravel extraction which would be transported to an existing plant Site at Colemans Farm Quarry, where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry. The adjoining uses include agricultural fields, woodland, Colemans reservoir, residential, farm and commercial buildings. The hamlet of Rivenhall is located 300m north and north east. Access to the Site is through the existing access into Appleford Farm. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Amber	Amber	Red/Amber	Red/Amber	Green	Green	Amber	Green	Amber	Red	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is significantly characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). Located close to the River Blackwater, the Site is lined by linear willow and poplar trees which are a strong local feature of the landscape. The remainder of the Site comprises arable fields with open views of the river. Appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.
- The River Blackwater valley is located close to the boundary to the east with strong intervisibility between the Site and the river. A number of Priority

Habitats (Deciduous Woodland) are located close to the eastern boundary of the Site, largely along the river edge. Mineral extraction within this location would significantly alter the setting of the River Blackwater valley, where a substantial buffer would be required.

- The River Blackwater follows one boundary and its tributaries follow two other boundaries. There are potential pollution pathways – e.g. water quality - between the proposed mineral Site and international wildlife sites that would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- The Site is situated on low-lying land and comprises two arable fields; an area of Lowland Mixed Deciduous Woodland Priority habitat is located in the centre of one of these fields. The woodland would be lost by these proposals.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect on-site and off-site habitats. Substantial buffers are likely to be required near to the River Blackwater, other watercourses and central Woodland and their water quality must not be affected by the proposals.
- The Site is approximately 75 metres to the north of the Grade II listed Appleford Bridge (List UID: 1111108). In terms of visual impact, there would be a low level of harm (Amber) to the Grade II Listed Appleford Bridge resulting from the visual impact of the scheme. There would be an environmental impact on the bridge and its setting, resulting from dust, noise, illumination at night and the movement of traffic.
- The use of the 250-year-old bridge by heavy goods vehicles (HGVs) travelling to and from the Site would potentially have a damaging impact on its fabric, along with the higher probability of vehicle strikes. The bridge is currently in frequent use by heavy goods vehicles day-to-day. Therefore, a Structural Survey of the bridge carried out by a Heritage Accredited Structural Engineer, would be required to inform a decision as to the extent of any possible harm resulting from its increased use by HGVs.
- The impact of noise, dust, and movement of HGVs, will have a low-level of adverse environmental impact on the settings of Appleford Bridge Cottage (List UID: 1317172); Grade II Listed Witham Lodge and Entrance Gates (List Entry Number: 1337342); Grade II listed brick-built boundary wall of Braxted Park (List Entry Number: 1111073). With controls over the routes and frequency of HGVs travelling to and from the Site, this could be effectively mitigated.
- A Scheduled Monument lies within 200m of the Site. Historic England should be consulted at the earliest opportunity to assess the impact on the setting of the Scheduled Monument.

- Archaeological evaluation has been completed across part of the Site which has identified concentrations of archaeological remains.

The Site lies within an area of archaeological features as identified through aerial photographic evidence and archaeological investigation. The Site contains concentrations of multi-period archaeological features. The Site also has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.

- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1, however 18% is within FRZ2&3 associated with the River Blackwater.
- Access is proposed via a modified access serving Appleford Farm onto Braxted Road which is a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety

- From a highway viewpoint Braxted Road, Oak Road and Henry Dixon Road and associated connections to the Main/Strategic Road Network via the A12 Trunk Road are not suitable in their current form.
- A Transport Statement scoping report supporting site A50 indicatively shows a modified access arrangement on drawing 15057-26B of the existing access serving Appleford Farm. This does not currently show that simultaneous access for two HGVs can be achieved satisfactorily but indicates that appropriate visibility splays are likely to be achievable at this location to accord with surveyed vehicle speeds.
- Interaction of modified access to Appleford Farm with Braxted Bridge and existing minerals access serving Colemans Farm required.
- Principle of access not agreed.
- The Site has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse (River Blackwater) is 30m south, and 10m and 70m south east of the Site and another watercourse is 5m north. There is a small water body present within the Site boundary.

Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. An overhead Openreach BT power line is present within the Site. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion and/or protection may not be possible and/or may be cost prohibitive.
- Three residential buildings, three commercial buildings and a farm building (Appleford Farm) are outside the Site boundary less than or equal to 20m from the Site. Three residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

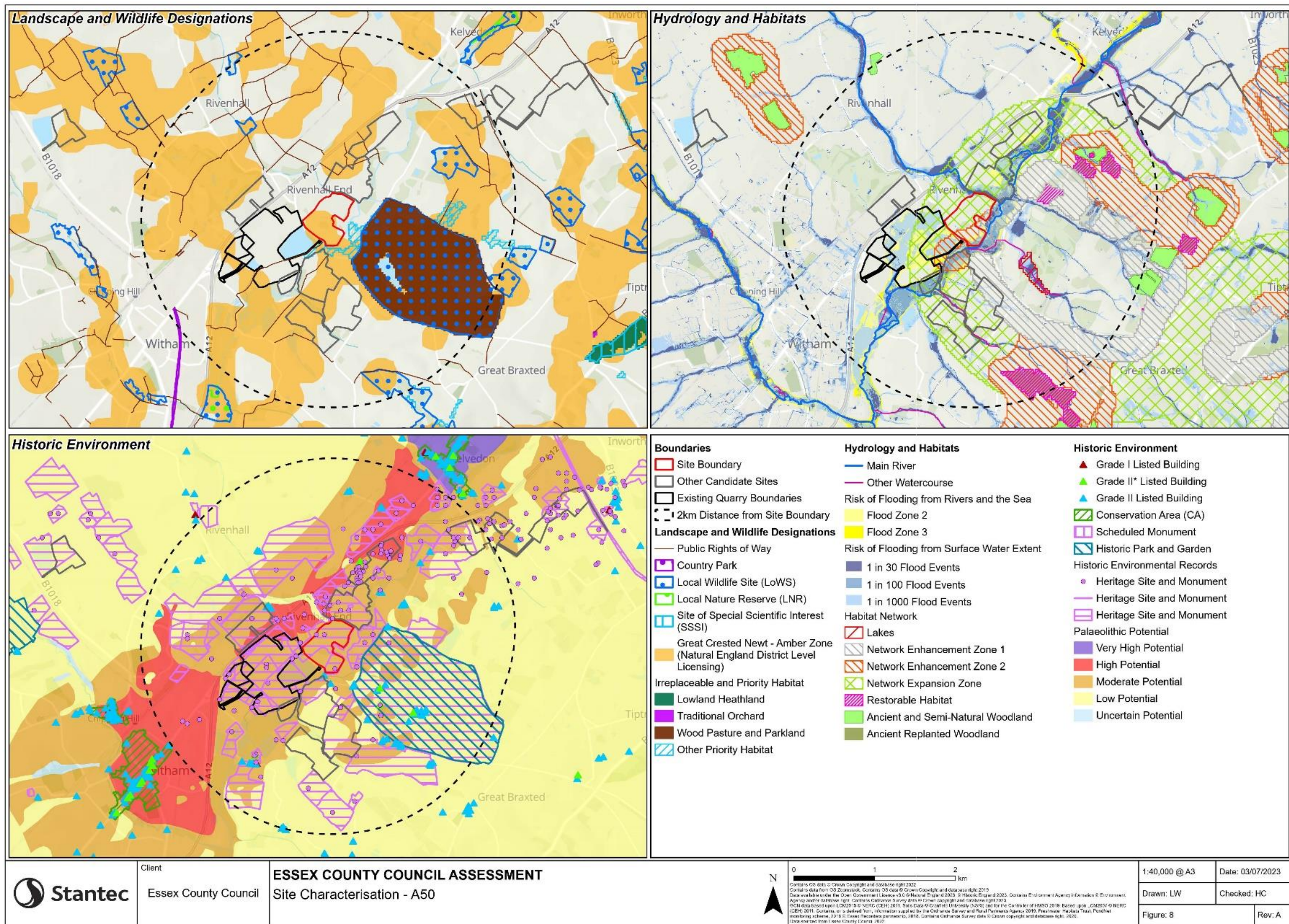


Figure 3.8: A50 - Colemans Farm - Eastern extension (Appleford Farm)
Review of Essex MLF 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A51	Colemans Farm - North extension (Hill Broad Farm)	Maldon	Agricultural	19.77	0.6

The Site is promoted as an extension to an existing mineral Site (Colemans Farm Quarry) and is located to the south west of Colemans Farm Quarry. The Site area is approximately 19.77 ha and is proposed for approximately 0.6 million tonnes of sand and gravel extraction which would be transported internally to the existing plant Site at Colemans Farm Quarry, where it will be washed, graded, and stocked prior to export off Site. . It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry and, subject to allocation, could be operated alongside Site A50. The adjoining uses include agricultural fields, woodland, Colemans reservoir and residential and commercial buildings. The hamlet of Rivenhall is located 800m north of the Site. Access to the Site is through the access arrangements for the existing workings at Colemans Farm Quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber	Amber	Green	Green	Red/Amber	Green	Amber	Green	Amber	Red/Amber	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is significantly characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). Located on the river edge of the River Blackwater, the Site comprises linear willow and poplar plantation which is a strong local feature of the landscape which increases the complexity of the Site. The remainder of the Site comprises arable fields separated by established hedgerows, also located on the valley sides. With open views of the river, appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.

- The River Blackwater valley is located on the immediate boundary to the west, with strong intervisibility between the Site and the river. Appropriate consideration would be required to mitigate the physical impacts on Elm Springs with a suitable buffer. Mineral extraction within this location would significantly alter the setting of the River Blackwater valley, where a substantial buffer would be required.
- The River Blackwater follows the length of the western boundary and there is another watercourse within the Site which feeds into the River which is likely to be removed. These create a potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.
- The Site is situated on low-lying land and comprises two arable fields; an area of Lowland Mixed Deciduous Woodland Priority habitat is located within the Site, to the west of the River Blackwater.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect the hydrology of on-site and off-site habitats. Substantial buffers are likely to be required near to the Lowland Mixed Deciduous Woodland Priority habitat, River Blackwater and other watercourses and their water quality must not be affected by the proposals. Affected Hedgerows and watercourses should be adequately and appropriately compensated.
- The northern tip of the Site is adjacent to the Grade II Listed Appleford Bridge (List UID: 1111108). There is a high degree of visibility between the Site to the south and the heritage asset. The Site is an important part of the asset's setting and is currently pastoral in character and undeveloped. There is likely to be a considerable visual impact on this agrarian character from the quarrying of the Site. The allocation of the Site would have a negative impact on the setting of the bridge, resulting in a mid-level of less than substantial harm.
- The north-east boundary of the Site also abuts the curtilage boundary of the Grade II Listed Appleford Bridge Cottage (List UID: 1317172). The excavation of the Site would result in a mid-level of less than substantial harm, due to the visual intrusion of the quarrying works on the bridge's setting.
- Mitigation in the form of landscaping or screens of vegetation is unlikely to significantly reduce the visual impact on both the bridge and cottage. The mid-level of harm resulting from the visual impact could not be effectively mitigated.
- The structural impact of heavy vehicle use on the Grade II Listed Appleford bridge would need to be assessed by a heritage structural engineer in order

for the impact of its use in conjunction with the Site to be understood. At present, the impact is unknown. Once a structural survey report has been submitted it would then be possible to assess the level of harm to the bridge resulting from the scheme. Should any impacts be found to result from the bridge's use by HGVs in conjunction with the Site activity, mitigation in the form of the prohibition of use of the bridge by HGVs would reduce any direct physical impacts on the bridge.

- The impact on other nearby heritage assets would be limited to environmental impacts of dust, noise and traffic and would be low.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- In the northern area of the Site a circular enclosure is interpreted as being of prehistoric date and possibly a ritual monument.
- A series of linear features may represent possibly prehistoric or later land division along the river valley.
- A Scheduled Monument lies within 1km of the Site.
- Palaeolithic archaeological remains and Pleistocene faunal remains have been recovered from river gravels within the vicinity of the Site.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is predominantly within FRZ1, although 43% of the Site is within FRZ3 and FRZ2.
- The implementation of sediment and erosion control measures, e.g., silt fences, sediment basins, and vegetative cover, to prevent soil erosion and sedimentation in water bodies will help reduce the risk of flooding by maintaining proper stormwater management and preventing sediment build-up in waterways.
- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse (River Blackwater) is within the Site boundary and is 20m west and 30m north east, another watercourse is 5m south west, a watercourse is 80m south and an

additional watercourse is 90m south. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead and underground electricity lines within the Site boundary. The Site is within 100m of a high pressure gas mains (Cadent Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas main to make the Site acceptable which may include diversion and/or protection.
- Two residential buildings are outside the Site boundary less than or equal to 20m from the Site. One residential building is more than 50m but less than or equal to 250m from the Site, Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

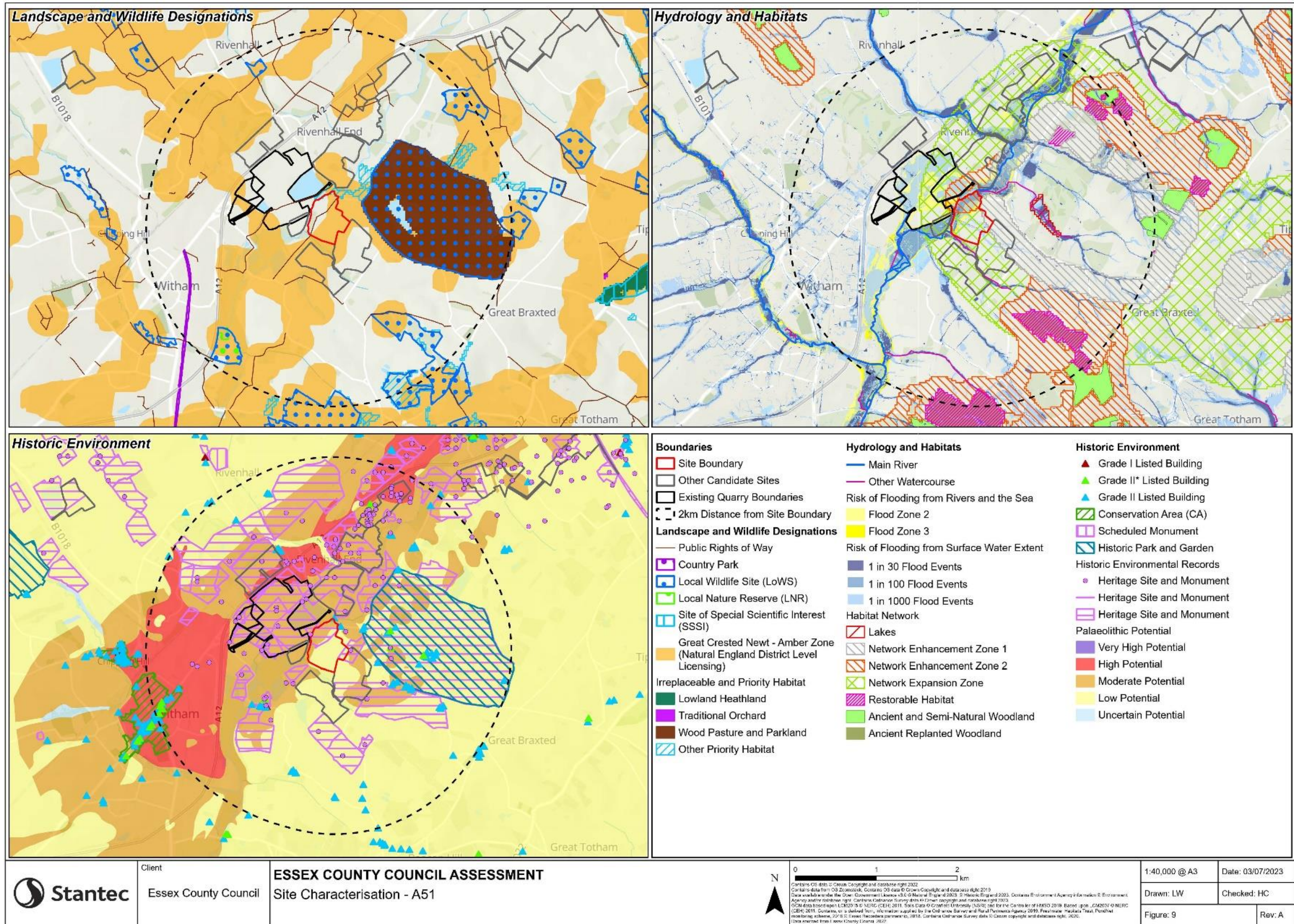


Figure 3.9: A51 - Colemans Farm - North extension (Hill Broad Farm)
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A52	Colemans Farm - Southern extension	Braintree	Agricultural	4.13	0.11

The Site is promoted as an extension to an existing mineral Site (Colemans Farm Quarry) and is located to the south of Colemans Farm Quarry. The Site area is approximately 4.13 ha and is proposed for 0.11 million tonnes of sand and gravel extraction which would be transported to the existing Colemans Farm Quarry plant Site, where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry. The adjoining uses include agricultural fields and woodland. The town of Witham is located to the west of the Site. Access to the Site is proposed through the existing Little Braxted Lane access into, and internal haul roads through, Coleman's Quarry. However, should A12 improvements be constructed, then access could potentially be via the proposed Braxted Road access. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber /Green	Amber	Red/ Amber	Green	Green	Green	Green	Amber	Green	Amber	Amber	Green	Green	Green

Key findings of the assessment are as follows:

- The Site is located within the River Blackwater valley floor and is therefore very characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). The east, south and west boundaries are defined by the linear poplar and willow plantations that line the banks of the River Blackwater that runs close to the boundary of the Site. The Site itself is very flat and comprises grassland which makes up the valley floor landscape character. Mineral extraction of the Site will significantly alter the setting of the River Blackwater and surrounding character.
- Elm Springs Priority Habitat (Deciduous Woodland) is located 0.1km to the east of the Site, and Strowling & Crierswood Ancient Woodland is located 0.4km to the south-east of the Site. The River Blackwater valley defines the

southern boundary and is a prominent feature within the immediate landscape. Appropriate consideration would be required to mitigate the physical impacts on The River Blackwater with a suitable buffer.

- Public Rights of Way (PRoW) are not located immediately adjacent to the Site; however, a footpath runs to the south of the River Blackwater (Footpath 1) and a bridleway to the north (Bridleway 29). The PRoWs provide open views of the Site in the context of the River Blackwater and linear plantations which acts as a prominent feature in the foreground/background, respectively.
- The River Blackwater is close to the Site's eastern boundary creating a potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.
- The Site is situated on low-lying land and comprises an arable field; an area of Lowland Mixed Deciduous Woodland Priority habitat is located immediately south of the Site.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect the hydrology of on-site and off-site habitats. Substantial buffers are likely to be required near to the Lowland Mixed Deciduous Woodland Priority habitat and River Blackwater and water quality must not be affected by the proposals. The affected hedgerows should be compensated.
- To the southwest of the Site is a group of designated heritage assets, which are as follows:
 - Little Braxted Mill, Grade II Listed (List UID: 1308828)
 - Kitchen/Dovecote north of Little Braxted Hall, Grade II* listed (List UID: 1146757)
 - Summer House at Little Braxted Hall, Grade II listed (List UID: 1146764)
 - Garden Wall of Little Braxted Hall, Grade II Listed (List UID: 1111065).
 - Little Braxted Hall and Railings, Grade II Listed (List UID: 1111063).
 - Church of St Nicholas, Grade I Listed (List UID: 1111066).
 - Monument in St Nicholas Churchyard, Grade II Listed (List UID: 1146792)
- Due to the spatial separation of these heritage assets from the Site, the impacts of quarrying at the Site are likely to be minor, amounting to the lowest level of less than substantial harm, and may require low levels of mitigation to make the Site acceptable.
- Any application should be accompanied by a heritage statement that assesses the impact on the listed buildings, along with an assessment of the significance of the unlisted farmhouse and barn at Coleman's Farm, both of which have been much altered but are of some antiquity.

- Mitigation to keep buildings and structures a sufficient distance from the heritage assets, or screening options, along with traffic management plans, could provide effective mitigation.
- The Site lies within an area of recorded multi-period archaeological activity as revealed by aerial photographic evidence and archaeological investigations in the surrounding fields.
- There are recorded alluvial deposits within the Site which have high potential for preservation of waterlogged deposits and palaeoenvironmental evidence.
- Palaeolithic archaeological remains and Pleistocene faunal remains have been recovered from river gravels within the vicinity of the Site.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is predominantly (95%) within FRZ3 and is therefore at risk from fluvial flooding.
- The Site has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse (River Blackwater) is 5m south east, and 20m east and another watercourse is and 60m south east. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within 250m of high pressure gas mains (Cadent Gas). Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on gas mains. Such mitigation may include diversion and/or protection.

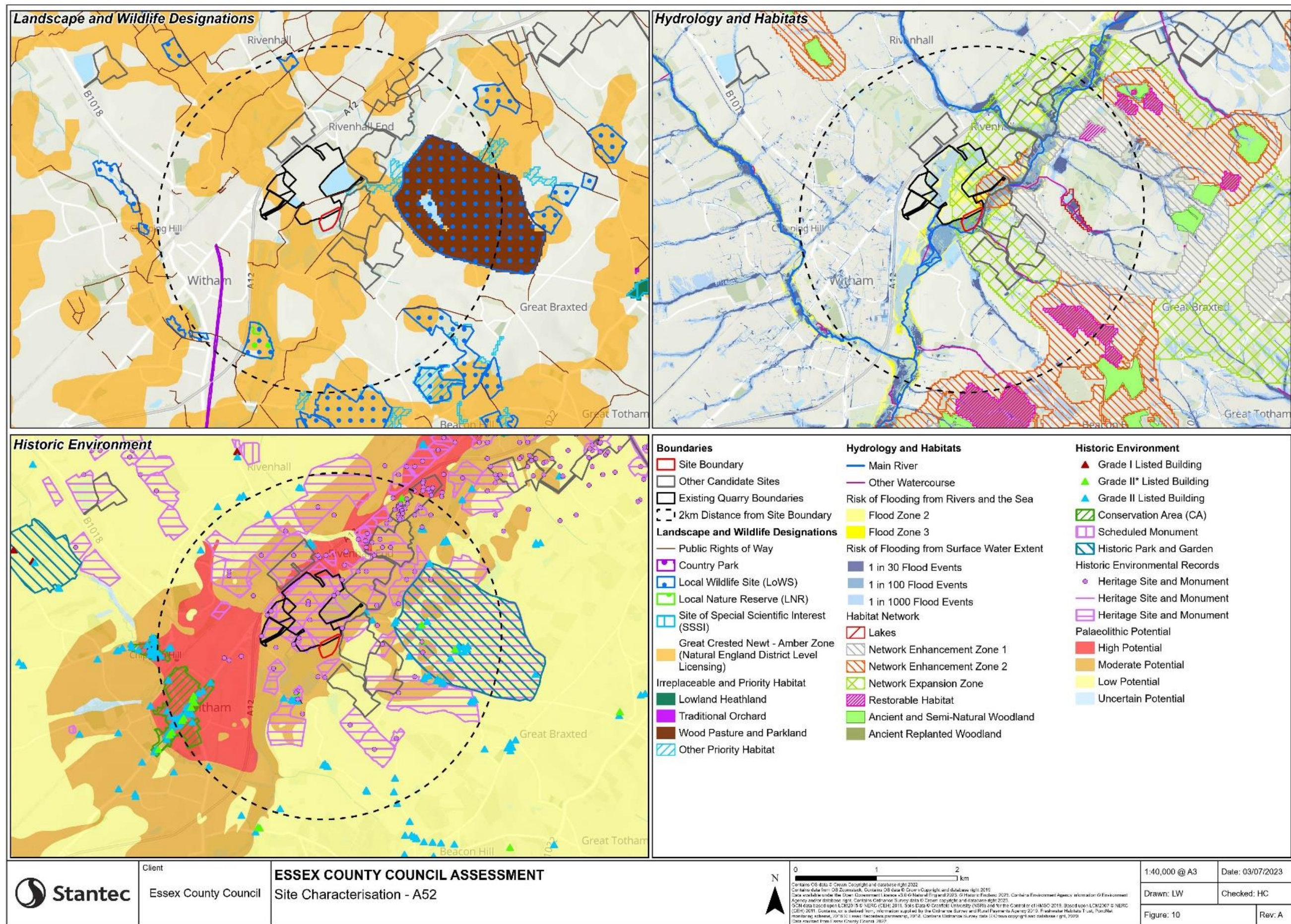


Figure 3.10: A52 - Colemans Farm - Southern Extension
Review of Essex MLF 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A54	Whiteheads	Braintree	Agricultural	10.22	0.4

The Site is proposed to be a new Site at Whiteheads Field, Cressing Road, Witham. This Site area is approximately 10.22 ha and is proposed for 0.4 million tonnes of sand and gravel extraction and the creation of a reservoir to support existing farm operations. Additional infrastructure needed on site includes a gravel wash plant. The adjoining uses include agricultural fields, woodland and a reservoir. The town of Witham is located to the south of the Site. Access is proposed via the B1018. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Amber	Amber /Green	Amber	Green	Amber /Green	Green	Green	Amber /Green	Green	Amber	Red/ Amber	Green	Green	Green

Key findings of the assessment are as follows:

- The Site comprises several characteristics of the Central Essex Farmlands (B1) Landscape Character Area (LCA), including the medium sized arable fields marked by hedgerows, with woods and copses providing structure and edges in the landscape. Appropriate consideration is required to protect characteristic features of the LCA, particularly the woodland on the southern boundary, which would require an adequate buffer to mitigate potential impacts on the landscape.
- Site A54 comprises a single arable field bounded by hedgerows and is adjacent to a large farm reservoir. The haul road would pass between the reservoir and a narrow strip of Lowland Mixed Deciduous Woodland Priority habitat woodland with a boundary hedgerow, before joining the B1018. The Site's boundary hedgerows include standard mature trees and (dry) ditches and are Priority habitat. There is a strip of Lowland Mixed Deciduous Woodland Priority habitat on the southern boundary, some of which falls within the Site boundary including a pond and two trees protruding into the field.
- One of the trees protruding into the field is a candidate veteran tree because it has some of the required veteran features and could develop further features through the life cycle that were not captured at the time of the survey. There

are at least two other candidate veteran trees on or near to the Site boundary. Veteran trees are an irreplaceable habitat.

- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make it acceptable. The Site could have moderate impacts upon irreplaceable habitats due to the presence of candidate veteran trees. The Site could have a moderate impact upon the natural environment particularly the adjacent Lowland Mixed Deciduous Woodland and Hedgerow Priority habitats, upon Priority species and the large adjacent waterbody.
- Any application would require demonstration that it would not affect the hydrology of the woodlands, candidate veteran trees, Hedgerows, ditches, and waterbody, and appropriate buffers should be provided; the water quality of the waterbody should not be allowed to deteriorate. Other mitigation measures should be used, such as watering to suppress dust and wildlife sensitive lighting.
- The allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of two Grade II listed buildings through change within their settings: Hungry Hall Farmhouse (List UID: 1123868); Hole Farmhouse (List UID: 1146854).
- The allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of one registered park and garden: Faulkbourne Hall (List UID: 1000341).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of discreet recorded multi-period archaeological activity as revealed by archaeological investigations within the Site and adjacent quarry.
- There is a high probability for the continuation of postmedieval ditches into the Site which represent historic field boundaries.
- Middle Iron Age and Medieval settlement activity may continue into areas of the Site which have received no previous archaeological investigation.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.

- Access is proposed via an existing access onto the B1018 which includes a ghost island right turn lane. This access has been used previously by HGVs but will require re-modelling/mitigation to bring it back up to an appropriate standard.
- The Site has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains low voltage underground cables within the Site boundary. The Site is within 100m of a high pressure gas mains (Cadent Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas main to make the Site acceptable which may include diversion and/or protection.

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A55	Sheepcotes – Southern	Chelmsford	Agricultural	25.19	1.97

The Site is promoted as an extension to an existing mineral Site (Sheepcotes Quarry) and is located the south of Sheepcotes Quarry. This Site area is approximately 25.19 ha and is proposed for 1.97 million tonnes of sand and gravel extraction with processing and distribution at the adjacent Sheepcotes processing plant. Operations at the Site will commence following the completion of the currently consented agricultural reservoir. The adjoining uses include woodland, agricultural fields, residential and farm buildings. The village of Little Waltham is located to the west of the Site. This Site would be accessible from the A131 via the existing processing area and access road. The practicality of the internal haul route from the public highway would need to be explored further especially with regard to the existing reservoir. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Amber	Amber	Green	Green	Red/Amber	Green	Amber /Green	Green	Amber	Amber /Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1). The Site possesses limited characteristic features of the LCA including the irregular field pattern of arable farmland reducing the sensitivity of the landscape. The Site largely comprises three arable fields with hedgerow boundaries and a small portion of grazing to the north. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Site A55 is within the Impact Risk Zone for the River Ter Site of Special Scientific Interest (SSSI), which is located approximately 2.2 km north-east of the Site. This is a geological SSSI and therefore potential ecological impacts are not considered further.

- The Site itself comprises three relatively large arable fields with boundary and internal hedgerows and some mature standard trees. Sheepcotes Wood is situated c.350 m north of the Site. This woodland is designated as a Local Wildlife Site; it is an ancient woodland which is therefore irreplaceable habitat.
- The Site is graded Amber because it could have major impacts upon the adjacent Lowland Mixed Deciduous Woodland and Orchard Priority habitats; involves the loss of Priority habitat Hedgerows and habitat for Priority farmland species. It could also have moderate impacts upon at least one significant Oak tree and several adjacent ponds. Impacts may include changes to the hydrology of the woodlands and Traditional orchard, smothering of leaves by dust, disturbance e.g. by noise and lighting and loss of habitat for Priority farmland species. Loss of Hedgerow Priority habitats and habitats for farmland Priority bird species should be compensated. The internal Hedgerows should be retained if at all possible.
- The allocation of the Site would likely result in 'less than substantial' harm at a moderate level to the significance of one Grade II listed building through change within its settings: Spartigans Hall (List UID: 1263954).
- Further to the southeast is the Grade II listed Alsteads Farmhouse (List UID 1172595) and Wilderness (List UID: 1122050). However, the Site is well separated from these assets by Leighs Road and Spartigans Hall. Therefore, the allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of these two assets.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the above three heritage assets. The fundamental change in land use and land character would dilute the ability to understand and appreciate their significance.
- The Site lies within an area known to contain areas of multi-period archaeology from the Late Bronze Age to the medieval period.
- Archaeological evaluation and excavation on the adjacent quarry to the north of the Site identified a late Bronze Age/Early Iron Age cremation as well as other features and Late Iron Age/Roman features indicative of settlement activity in the area.
- Aerial photographic evidence shows the presence of two large irregular enclosures in the eastern part of the Site. These have been tentatively interpreted as being of late prehistoric date, based on their shape and comparison to other settlement sites of a similar shape and size which have been excavated.
- Any complex deposits identified may need to be preserved in situ.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.

- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- 4 Public Rights of Way cross the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines and low voltage underground cables within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines and underground cables. Such mitigation may include diversion and/or protection.
- One farm building is present within the Site. One residential building is outside the Site boundary less than or equal to 20m from the Site. Two farm buildings and four residential buildings are more than 20m but less than or equal to 50m from the Site. Nine residential buildings and one farm building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

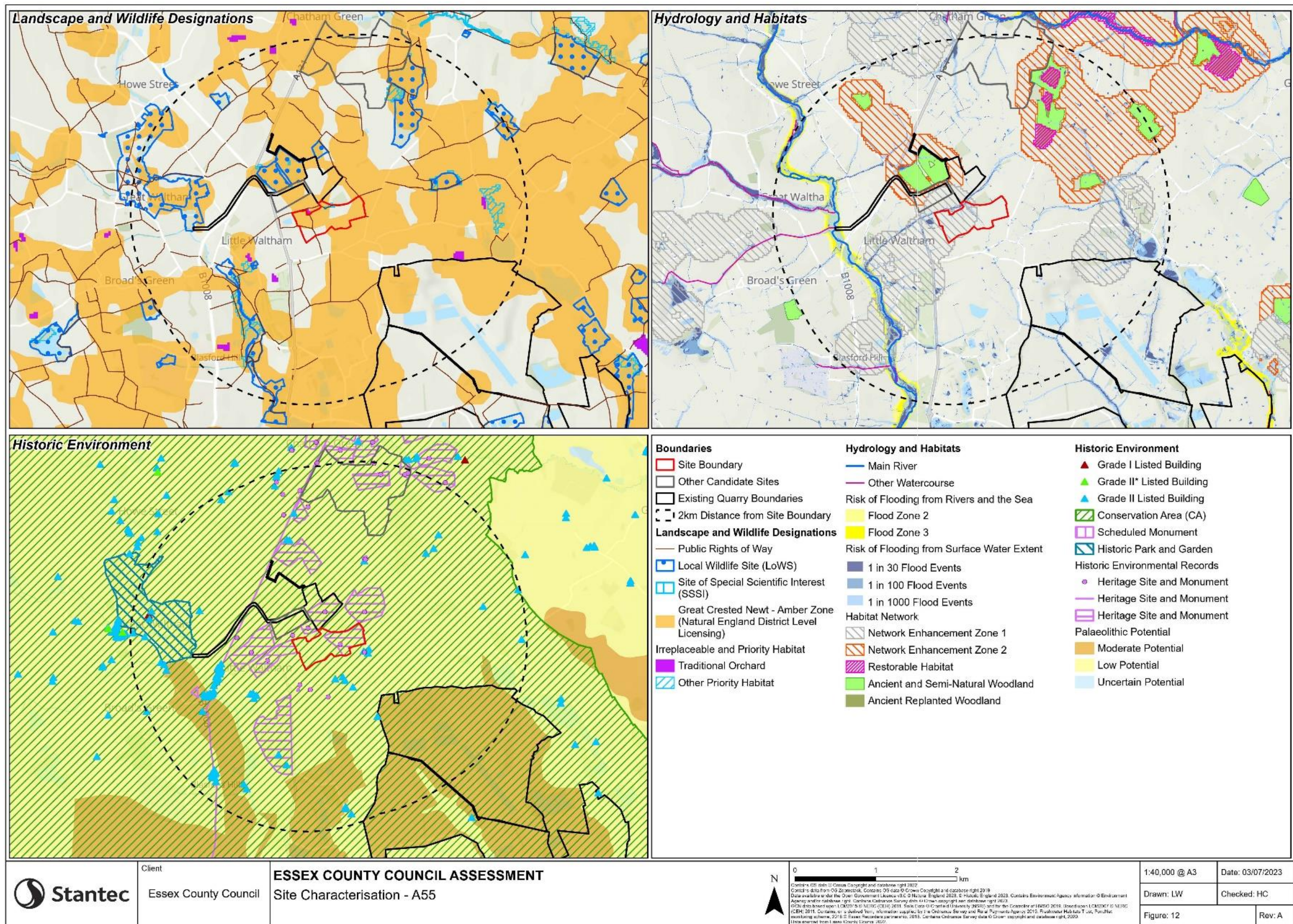


Figure 3.12: A55 - Sheepcotes - Southern
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<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A56	Sheepcotes - Western	Chelmsford	Agricultural	9.88	1.06

The Site is promoted as an extension to an existing mineral Site (Sheepcotes Quarry) and is located adjacent to the western boundary of Sheepcotes Quarry. This Site area is approximately 9.88 ha and is proposed for 1.06 million tonnes of sand and gravel extraction with processing and distribution at the adjacent Sheepcotes processing plant. Operations at the Site will commence following the completion of the currently consented agricultural reservoir. The adjoining uses include woodland, agricultural fields, residential and farm buildings. The village of Little Waltham is located to the south west of the Site. This Site would be accessible from the A131 via the existing processing area and access road. The practicality of the internal haul route from the public highway would need to be explored further especially with regard to the existing reservoir. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Red/ Amber	Green	Amber /Green	Green	Green	Green	Green	Green	Amber /Green	Green	Amber	Green	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1). The Site possesses few characteristic features of the LCA, only a single arable field with hedgerow boundaries, reducing the sensitivity of the landscape. Appropriate consideration is required to protect and/or enhance the characteristic features of the LCA and mitigate the impacts on the landscape.
- Sheepcotes Wood located immediately on the northern boundary is a designated Local Wildlife Site (LoWS) and Ancient Woodland, demonstrating a moderate contribution toward the local green infrastructure and visual amenity. Impacts on Sheepcotes Wood must be mitigated through a substantial buffer.
- While there are no Public Rights of Way (PRoW) crossing the Site, there is a footpath following Sheepcotes lane adjacent to the Site to the south. Due to

the elevated nature of the Site, the mineral extraction works will be difficult to screen from the PRoW.

- Site A56 is within the Impact Risk Zone for the River Ter Site of Special Scientific Interest (SSSI), which is located approximately 2.2 km north-east of the Site. This is a geological SSSI and therefore potential ecological impacts are not considered further.
- The Site is an arable field bounded by hedgerows which are Priority habitat. Sheepcotes Wood is situated immediately to the northern boundary. This designated as a Local Wildlife Site. It is an ancient woodland which is therefore irreplaceable habitat. The only existing gap in the Hedgerow between A56 and the adjacent Sheepcotes processing plant is immediately adjacent to the which could cause additional dust, disturbance, and potential damage to the soil adjacent to the woodland.
- The Site is graded Red-Amber because it could have major impacts upon the adjacent ancient woodland, which is irreplaceable habitat, and could have a serious impact upon the LoWS and Priority habitats and species. Impacts may include changes to the hydrology of the ancient woodland, smothering of leaves by dust, disturbance e.g. by noise and lighting. It could result in loss of habitat for Priority farmland species. Any extraction would require demonstration that it would not affect the hydrology of the ancient woodland to the north and it is likely that mitigation would require a substantial buffer from the ancient woodland. Activities which have the highest potential to generate dust, such as haul roads and mineral stockpiles, should be located away from Sheepcotes Wood and the other existing habitats, and should be regularly dampened to minimise dust emissions.
- The Site lies within an area known to contain areas of multi-period archaeology from the Late Bronze Age to the medieval period.
- Archaeological evaluation and excavation on the adjacent quarry to the east of the Site identified a late Bronze Age/Early Iron Age cremation as well as other features and Late Iron Age/Roman features indicative of settlement activity in the area.
- Aerial photographic evidence shows the presence of two large irregular enclosures to the south-east of the Site within Site A55. These have been tentatively interpreted as being of late prehistoric date, based on their shape and comparison to other settlement sites of a similar shape and size which have been excavated.
- Immediately to the south of the Site aerial photographic evidence has identified two irregular pond or quarry features.
- The Site has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration

would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land– this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- One residential building is more than 20m but less than or equal to 50m from the Site. One farm building and one residential building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

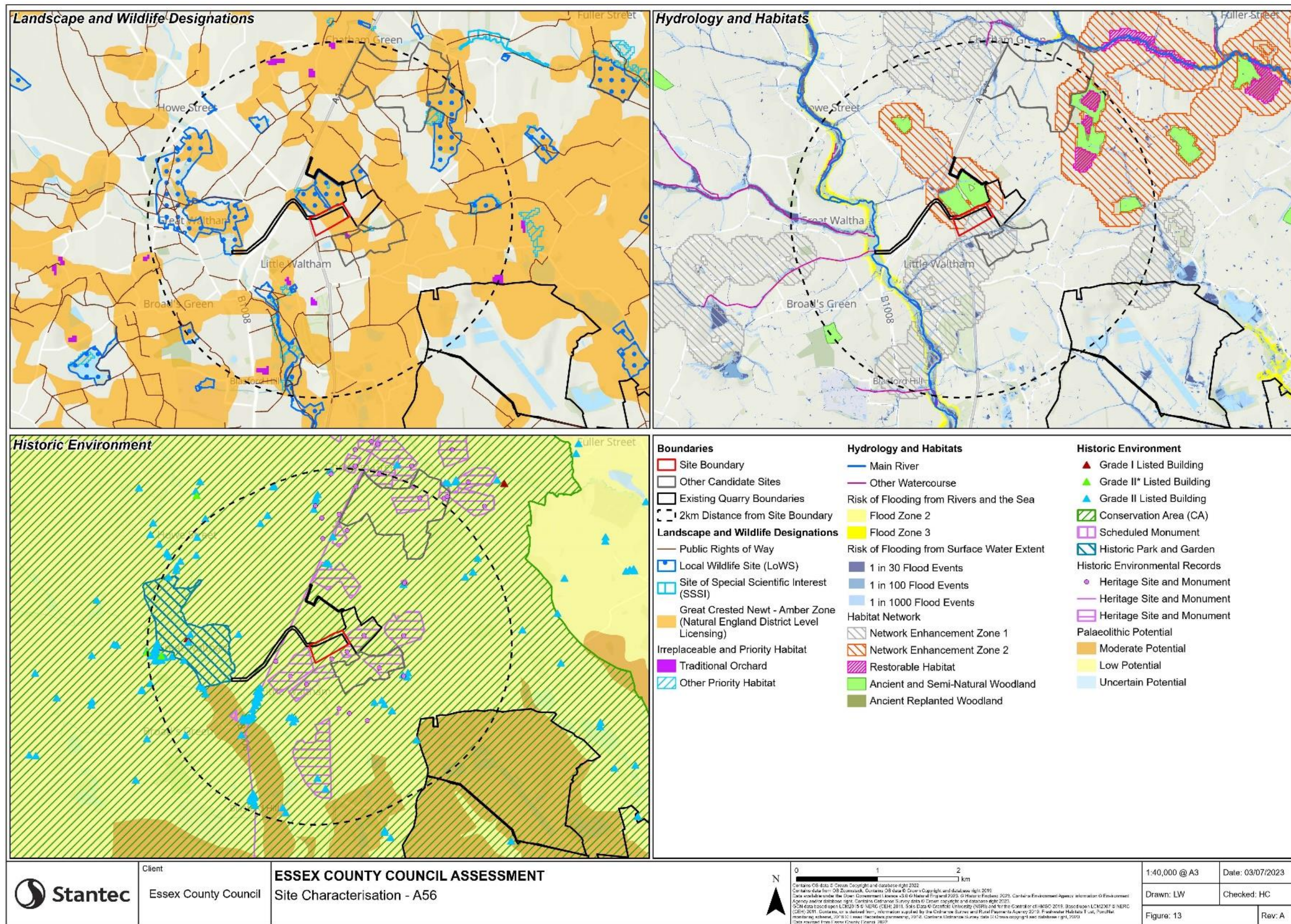


Figure 3.13: A56 - Sheepcotes - Western

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A57	Chalk End	Chelmsford	Agricultural	6.6	0.25

The Site is promoted as an extension to Site A40 which was allocated in the Mineral Local Plan 2014. The Site is located to the north of the previously allocated Site A40 and south of Salt's Green Road (A1060). The Site area is approximately 6.6 ha and is proposed for 0.25 million tonnes of sand and gravel extraction. The adjoining uses include woodland and agricultural fields. The village of Roxwell is located to the south east of the Site. This Site would be accessible from the A1060 from the haul road approved as part of application for Chalk End Quarry at land south of A1060 (Salt's Green), Chalk End, Roxwell (ESS/77/20/CHL). See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber/Green	Amber/Green	Amber/Green	Amber	Green	Amber/Green	Red/Amber	Green	Green	Amber	Green	Amber	Amber	Amber	Red/Amber	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) of which the Site possesses a number of distinct characteristic features of the LCA including the irregular field pattern of arable farmland intersected by hedgerows. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Chalk Spring is located west of the Site and is a designated priority habitat. The woodland demonstrates a significant contribution toward the local green infrastructure and visual amenity.
- A Public Right of Way (PRoW) borders the south boundary of the Site, this connects to a significantly wider network of PRoWs. Appropriate consideration would be required to mitigate the impacts of the PRoW which may include visual screening.
- Site A57 comprises the south-eastern half of a large arable field, the outer edges of which are partially bounded by Hedgerows, which are Priority

habitat. This Site would create an extension to a permitted quarry which has not yet commenced. Boundary ditches feed into Newland Brook which eventually feeds into the River Can.

- Roxwell Road Verge 9 Local Wildlife Site (reference Ch13) and Boyton SRV (SV-CHL9) are c.100m from the Site, on Roxwell Road. There is a strip of horse pasture beyond the western boundary Hedgerow. There are several areas of Lowland Mixed Deciduous Woodland within 1km, including an area located c.55m to the north-west of the Site, next to the horse pasture.
- The Site is graded Amber/Green because ecological impacts could be minor and are likely to require low levels of mitigation to make the Site acceptable. The Site could have a moderate impact upon Priority habitats and species. The Site could have moderate impacts upon the nearby Lowland Mixed Deciduous Woodland Priority habitat and to water quantity and quality of the nearby watercourses. Buffers are likely to be required near to Hedgerows and ditches and their water quality must not be affected by the proposals.
- The allocation of the Site would likely result in change in the wider agrarian setting of Grade II listed Newland Hall (List UID: 1235663) and Barn at Newland Hall (List UID: 1237443). These are located within 500m of the Site, and the impact on these assets is likely to be the lowest level of 'less than substantial' harm due to the increased distance and separation by the intervening natural environment.
- The Site lies within an area known to contain areas of multi-period archaeology with extensive Roman deposits present immediately adjacent to this Site.
- Archaeological evaluation on the adjacent quarry application to the south-west of the Site has identified extensive Roman occupation. The archaeological work is ongoing and will require extensive excavation if the development proceeds.
- The Scheduled Roman villa at Chignall St James lies to the west of the Site.
- The Site lies within a landscape with extensive cropmark evidence. A number of enclosures, potentially of prehistoric date are recorded in the area.
- Two moated medieval sites are located in close proximity to the Site.
- Access is proposed via an existing consented access under planning application ESS/77/20/CHL onto the A1060, which is classified as a main distributor in Essex County Council's Development Management Route Hierarchy. This accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- It is also understood that the Site has direct access to the haul road associated with ESS/77/20/CHL . (see highway access comments)
- The Site is proposing to use an access approved under ESS/77/20/CHL, onto A1060. However, given the increase in HGV movements, alterations to the access arrangement are likely to be required to provide a ghost island right turn lane access from the A1060.
- The Site has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A watercourse is 50m west of the Site and another watercourse (Newland Brook) is 160m south west. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within 250m from a high pressure gas mains. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Two residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.
- The Site is located within the Metropolitan Green Belt in the Chelmsford City Council area. NPPF (paragraph 150) states that mineral extraction is not inappropriate development in the Green Belt provided the development preserves openness and does not conflict with the purposes of including land within the Green Belt. The Site will contain a mobile plant, additional landscape planting will be provided to the eastern boundary and bunds will be created along the Site boundary which has the potential to impact openness. Due consideration of impact on the Green Belt would need to be given in determining whether this would be inappropriate development or not.

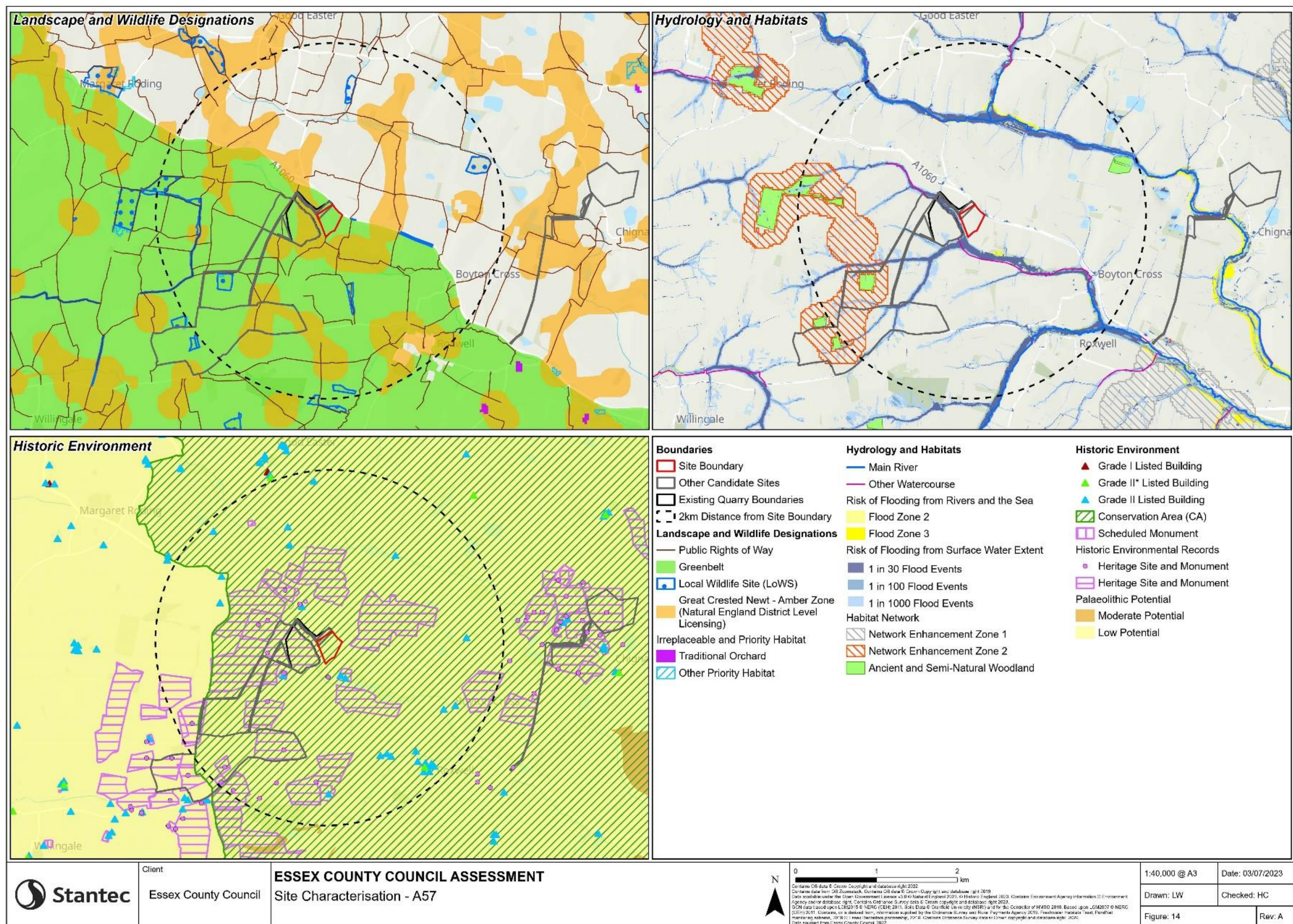


Figure 3.14: A57 - Chalk End
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A58	Little Smiths	Chelmsford	Agricultural	3.8	0.31

The Site is promoted as an extension to an existing mineral Site (Royal Oak Quarry) and is located north of Royal Oak Quarry. This Site area is approximately 3.8 ha and is proposed for 0.31 million tonnes of sand and gravel extraction. The operations of the Site would follow on from the existing Royal Oak Quarry consented operations. The adjoining uses include woodland, agricultural fields, and residential buildings. The village of Danbury is located to the west and south-west of the Site. Site access and connection to the highway network is already approved by an existing permission at Royal Oak Quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber/Green	Red/Amber	Green	Amber/Green	Amber	Green	Red/Amber	Green	Green	Amber	Amber	Amber	Green	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Danbury Hills (D3) and the Site itself possess little to no characteristic features of the LCA, this is influenced largely by the small scale of the Site. The surrounding landscape however does demonstrate the wooded hills particularly immediately east abutting the boundary where Thrift Wood is located.
- Thrift Wood is a Priority Habitat of Deciduous Woodland and extends along the full length of the eastern boundary of the Site. This coincides with National Historic Landscape Characterisation (NHLC) defining the Site as typically ancient in origin.
- One Public Rights of Way (PRoW) footpath 4 (Woodham Mortimer) offers views of the Site and it set within Thrift Wood where vegetation screens the view for the most part.
- There is a potential pollution pathway for water quality between the watercourse on the edge of Site A58 and a number of statutory wildlife sites.

The potential for Likely Significant Effects to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.

- Site A58 is within the Impact Risk Zone for the Woodham Walter Common Site of Special Scientific Interest (SSSI), which is located approximately 1km north-west. The intervening land use is currently farmland with hedgerows and a golf course, creating habitat connectivity between Site A58 the SSSI.
- Thrift Wood Local Wildlife Site (Ma7) is immediately adjacent to the eastern boundary. It is Ancient Replanted Woodland and therefore classed as irreplaceable habitat. Warren Pit (Ma8) Local Wildlife Site (LoWS) is 10 metres to the north of the Site and there are two other LoWS within 1km.
- A candidate veteran Oak tree is located on the eastern boundary on the edge of the adjacent Thrift Wood, and another candidate is to the north of the Site on the western boundary. Candidate veteran trees have some of the required veteran features and have the potential to develop further features during the tree's life cycle that were not captured at the time of the survey. Veteran trees are classed as irreplaceable habitat.
- The Site is a relatively narrow field following along the north-western boundary of Thrift Wood LoWS. It is bordered by mature Hedgerow Priority habitat with mature standard trees on the north and western boundaries. The southern boundary comprises a partially wet stream valley and hedgerow with no mature trees. This watercourse runs eastwards into the adjacent ancient woodland.
- The Site is graded Red-Amber because it could have major impacts upon the adjacent ancient woodland, which is irreplaceable habitat, and a serious impact upon the LoWS and Priority habitats and species and it is likely to require high levels of mitigation to make the Site acceptable. It could have a moderate impact upon the candidate veteran trees (irreplaceable habitat). Impacts may include changes to the hydrology of the ancient woodland, candidate veteran trees and Hedgerows and watercourse, smothering of leaves by dust, disturbance e.g. by noise and lighting. It could result in disturbance and loss of habitat for Priority farmland species.
- Any application would require demonstration that it would not affect the hydrology of the ancient woodland and other habitats listed above. It is likely that mitigation would require a substantial buffer from the ancient woodland and candidate veteran trees in accordance with Government Advice. Water run-off from the Site should not be allowed to directly enter the watercourse.
- The Essex Historic Environment Record records the presence of cropmarks within the Site. Evidence from aerial photographs also indicates the presence of a potential trackway and enclosure. The enclosure may be related to the historic woodland or be of earlier date.

- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via the existing quarry access off A414 Maldon Road. The existing ghost island right turn lane is not of sufficient width to accommodate a HGV clear of the running lanes, and visibility splays from the access is limited due to overgrown vegetation.
- The Site has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse is within the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- An AQMA was designated 1.73km south west of the Site between Gay Bowers Lane and Danbury Village Green, adjacent to Eves Corner. An Air Quality Action Plan is being prepared by Chelmsford City Council. Medium levels of mitigation are likely to be required to ensure the Site does not have an unacceptable impact on air quality which take account of how traffic to and from the Site may impact the AQMA.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- One sports facility (golf course) and one residential building are outside the Site boundary less than or equal to 20m from the Site. One residential building is more than 20m but less than or equal to 50m from the Site. One residential building is more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

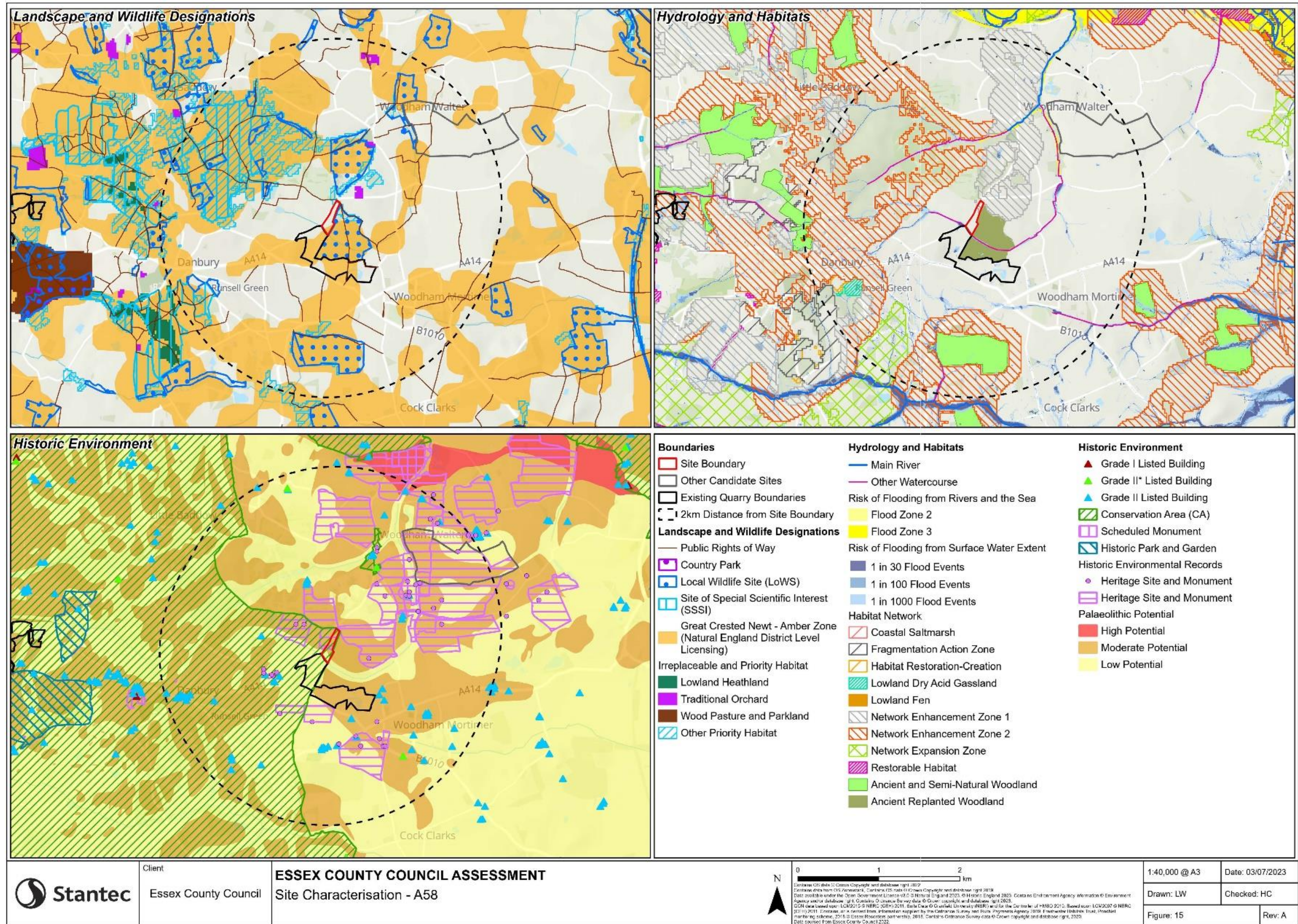


Figure 3.15: A58 - Little Smiths
 Review of Essex MLF 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A59	Lowleys Farm	Chelmsford	Agricultural	75	7.50

The Site is promoted as a new mineral site at Goodmans Road, Chelmsford. The Site area is approximately 75 ha and is proposed for 7.50 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. Infrastructure needed on site includes a processing plant. The adjoining uses include agricultural fields and woodland. The village of Great Leighs is located to the north of the Site. This Site would be accessible from the Chelmsford Bypass. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red/Amber	Amber	Amber	Amber /Green	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) of which the Site possesses a number of distinct characteristic features of the LCA including the irregular field pattern of arable farmland intersected by a complex matrix of hedgerows. In turn this creates a strong sense of complexity increasing the sensitivity to the landscape features. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Lyonshall Wood located on the eastern boundary is a designated Local Wildlife Site (LoWS) and Ancient Woodland and demonstrates a significant contribution toward the local green infrastructure and visual amenity.
- Site A59 is within the Impact Risk Zone for the River Ter Site of Special Scientific Interest (SSSI) and the SSSI is located approximately 0.25 km from the Site. This is a geological SSSI and therefore potential ecological impacts are not considered further.

- Lyonshall Wood Local Wildlife Site (LoWS) is situated immediately adjacent to the eastern boundary. This is an ancient woodland which is therefore irreplaceable habitat.
- The Site comprises several arable fields bounded by mature hedgerows and mature trees which are Priority habitat. There are a number of candidate veteran trees on the northern boundary and near to Lyonshall Wood. The internal Hedgerow Priority habitats and associated trees, ditches and ponds would be removed to accommodate the development. Appropriate and adequate compensatory habitat would be required. The River Ter is situated less than 100 m from the northern boundary.
- The Site is graded Red-Amber because it could have major impacts upon the River Ter, adjacent ancient woodland, which is irreplaceable habitat, and could have a serious impact upon the LoWS and Priority habitats and species. Substantial buffers are likely to be required near to the adjacent Woodland. Appropriate and adequate compensatory habitat would be required for the loss of Hedgerow Priority habitat and associated trees, ditches, and ponds.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of two Grade II listed buildings through a profound change within their immediate settings: Goodmans Farmhouse (List UID: 1122135) and Barn to the east of Goodmans Farmhouse (List UID: 1171336).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The western edge of the Site abuts the Roman Road from Chelmsford to Braintree. Archaeological evaluation has shown the presence of Late Iron Age and Roman occupation to the south of the Site.
- The northern part of the Site lies within an area known to contain areas of cropmark complexes. A series of enclosures are recorded both within and outside the Site.
- A farmstead is recorded on the first edition OS maps, which is no longer extant.
- The historic field pattern, although suffering some boundary loss probably has its origins in the medieval period and is unchanged on all the available historic maps.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.

- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed onto the A131, which is classified as a Strategic Route in Essex County Council's Development Management Route Hierarchy. This accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- There must be no impact on the delivery / construction of the Chelmsford north-east Bypass.
- The proposed access arrangement would depend upon the timescales for the delivery of the Chelmsford northeast bypass (CNEB).
- There must be no impact on the construction of the Chelmsford northeast bypass (as approved - CC/CHL/85/21).
- The proposed access arrangement to the Site would depend upon the timescales of the delivery of the Chelmsford northeast bypass. Therefore, two options for site access to proposed quarry are possible. Please see comments below.
- Off existing alignment of A131;
 - The existing access points onto A131 are via field accesses.
 - There is no detailed information submitted to demonstrate that a site access can be provided to current standards.
- With Chelmsford Northeast Bypass constructed
 - An agricultural access is currently shown off roundabout near Chatham Green it would need to be demonstrated that this access can provide appropriate access geometry and visibility splays to accommodate regular use by HGVs and that this would not impact on the safety or capacity of the proposed roundabout.
- 10 Public Rights of Way cross the Site. 1 Public Right of Way borders the Site. 1 Public Right of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.

- The Site has low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A watercourse (Straw Brook) is 40m north of the Site and is 100m north west and 190m north east, and River Ter is 90m north east. A culverted stream or drainage ditch is around all field boundaries. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Overhead Openreach BT power lines are present within the Site boundary. Local Essex and Suffolk Water mains are located within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- One residential building is adjacent to the boundary of the Site (0m). Four residential buildings are outside the Site boundary less than or equal to 20m from the Site. Sixteen residential and one commercial building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

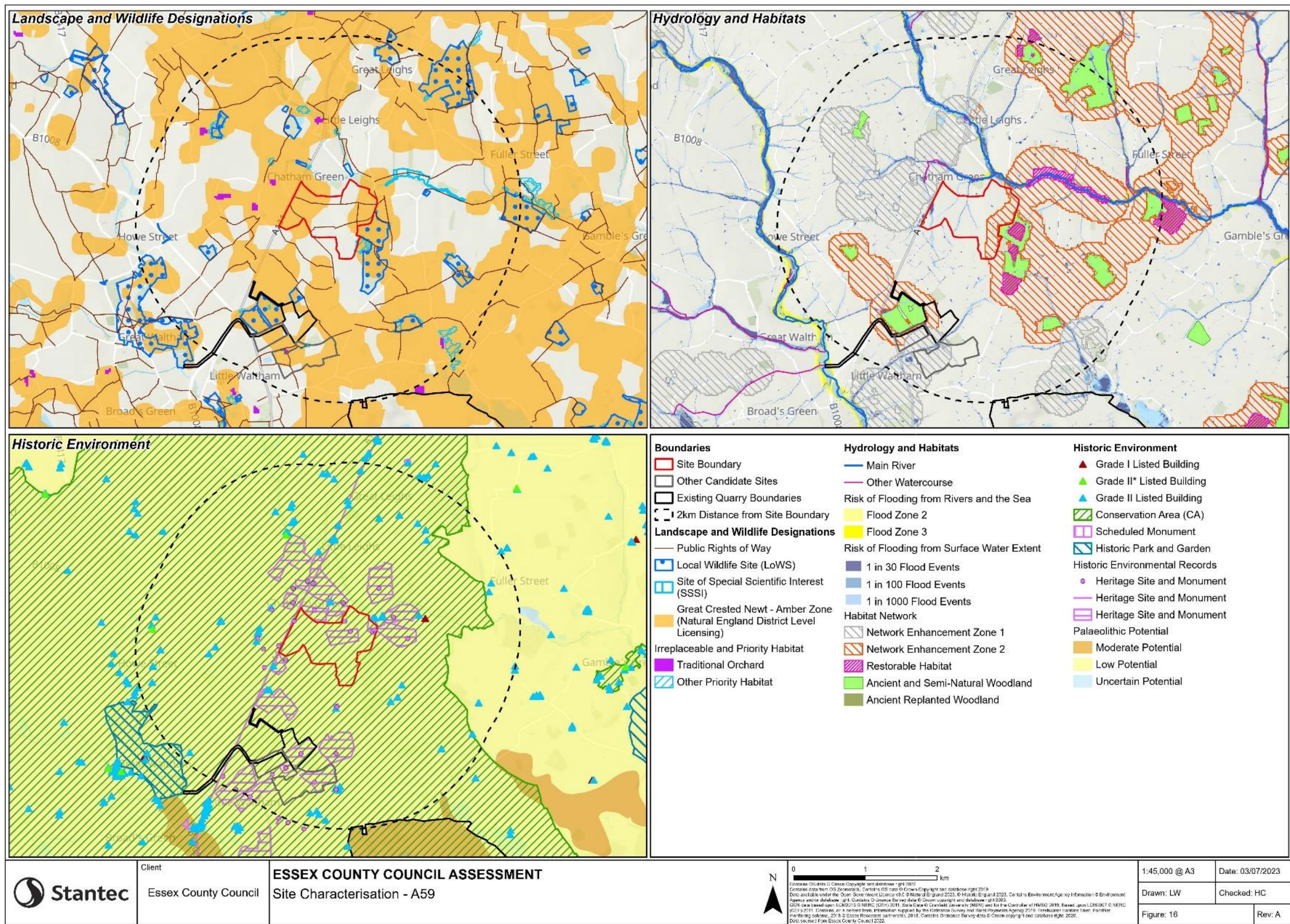


Figure 3.16: A59 - Lowleys Farm
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A60a	Shellow Cross Farm (A60a) - Chelmsford	Chelmsford	Agricultural	103	3.25

The Site is promoted as a new mineral Site at Shellow Cross Farm, Chelmsford. The Site is located south of Salt's Green Road (A1060) and north of Skreens Park Road. The Site is approximately 103 hectares, with 82.3 ha in the southern part of the Site. The Site is proposed for 3.25 million tonnes of sand and flint stone extraction. The Site could be worked at any time during the plan period. The adjoining uses include woodland, agricultural fields, residential and farm buildings. Roxwell village and civil parish is located to the south east of the Site. Access is proposed off the A1060. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Amber /Green	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Red/Amber	Red	Red/Amber	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) of which the Site possesses a number of distinct characteristic features of the LCA including the irregular field pattern of arable farmland intersected by hedgerows and small woodlands, this creates a strong sense of complexity increasing the sensitivity to the landscape features. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Bushey-Hays Spring Wood is located within the centre of the southern parcel and is a designated Ancient Woodland with two thirds of the area designated as a Local Wildlife Site (LoWS). The woodland demonstrates a significant contribution toward the local green infrastructure and visual amenity.
- Site 60(a) comprises a number of arable fields situated between Screens Park Road and Roxwell Rd (A1060). A cross-country haul road links the southern sections of the Site to the northern areas and to Roxwell Rd (A1060). The

boundary and internal Hedgerows are Priority habitats, they are historic and there are a number of significant boundary trees.

- Bushey-hays Spring Local Wildlife Sites (LoWS) is within the Site boundary and it is proposed that the extraction completely surrounds it. Rowes Wood LoWS is on the northern border and Skreens Wood LoWS is 125m from the Site. All of these LoWS are also ancient woodland and are therefore classed as irreplaceable habitat. Another area of Lowland Mixed Deciduous Woodland Priority habitat within the Site, adjacent to Bushey-hays Spring, is present on the First Edition OS maps and so it is possible that it could be ancient woodland and therefore classed as irreplaceable habitat. The woodland would be lost by these proposals. Additional consideration to this woodland is required and if it is irreplaceable habitat, losses are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain calculations. The haul road appears to be situated within boundary habitat of Lowland Mixed Deciduous Woodland Priority habitat and Hedgerow Priority habitat which would therefore require some removal of the habitat.
- Several Hedgerow Priority habitats and mature trees would require removal, as well as several ditches. Other Hedgerows and ditches would need sections removing to create the haul road.
- The Site is graded Red-Amber because it could have major impacts upon Bushey-hays and Rowes Wood ancient woodlands, which are both irreplaceable habitat, and a serious impact upon these LoWS and other Priority habitats and species and is likely to require high levels of mitigation to make the Site acceptable. Impacts may include direct habitat loss, significant changes to the hydrology of the ancient woodlands; smothering of leaves and disturbance. There would be a significant loss of habitat connectivity in the area through the loss of, and dissection of, numerous Hedgerows. It could also result in disturbance and loss of habitat for Priority farmland species, e.g. Skylarks.
- The development must not affect the hydrology of the ancient woodlands, Hedgerows and watercourses and it is likely that mitigation would require a substantial buffer from the ancient woodlands in accordance with the Government's Advice on ancient woodlands. There may be less severe impacts if extraction is not on all sides of the ancient woodland. Ancient woodland losses are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain requirement. Other mitigation may include buffers between the Site and Hedgerows; careful consideration to phasing to minimise impacts; rapid restoration and creation of new replacement habitats,

prevention of deterioration of water quality to watercourses. Adequate and appropriate compensatory habitat should be provided for the loss of Woodland and Hedgerow Priority habitat, watercourses and for farmland birds.

- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed buildings through a profound change within their immediate settings: Shellow Cross Farmhouse (List UID: 1366203), Barn 100 metres east-northeast of Shellow Cross Farmhouse (List UID: 1168923), Skreens Lodge (List UID: 1111251) and Mountneys House (List UID: 1235719).
- The impact to Rows Farmhouse (List UID: 1169285) is likely to be the lowest level of 'less than substantial' harm due to the increased distance from the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area known to contain areas of multi-period archaeology with extensive Roman and medieval deposits likely to be present within areas of this Site.
- Archaeological evaluation on the northern part of the quarry proposal has identified extensive Roman occupation. The archaeological work is ongoing and will require extensive large scale excavation if development proceeds.
- Within the southern part of the Site two probable moated sites, likely to be of medieval date are located within the Site.
- Two scheduled moats located, one immediately west of Skreens Lodge lies on the opposite side of Shellow Road from the Site, the second lies to the south west of the proposed Site.
- Other cropmarks indicate the presence of further enclosures of an unknown date. Immediately to the south and north of the Site further cropmark complexes are recorded with track ways and field systems indicative of potential medieval occupation.
- The access road bisects a range of archaeological deposits known from cropmark evidence.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.

- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing consented access under planning application ESS/77/20/CHL onto the A1060, which is classified as a main distributor in Essex County Council's Development Management Route Hierarchy. This accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- It is also understood that the Site has direct access to the haul road associated with ESS/77/20/CHL (see highway access comments)
- No access should be taken from Skreens Park Road.
- The Site is proposing to use an access approved under ESS/77/20/CHL, onto A1060. However, given the increase in HGV movements, alterations to the access arrangement are likely to be required to provide a ghost island right turn lane access from the A1060.
- 9 Public Rights of Way cross the Site. 1 Public Right of Way borders the Site. 5 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A watercourse is present within the Site boundary and another watercourse (Newland Brook) is 140m south of the Site. Drainage ditches are located across the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within 100m of high pressure gas mains. Overhead and underground Openreach BT power lines are within the Site boundary crossing the proposed access. Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas mains to make the Site acceptable which may include diversion and/or protection.

- One residential building is adjacent to the boundary of the Site (0m). Two residential buildings and two farm buildings (Elms Farm and Shellow Cross Farm) are outside the Site boundary less than or equal to 20m from the Site. Three residential buildings, two commercial buildings and one farm building (Skeens Park Farm) are more than 20m but less than or equal to 50m from the Site. Twenty four residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.
- The Site is located within the Metropolitan Green Belt in the Chelmsford City Council and Epping Forest District Council areas. NPPF (paragraph 150) states that mineral extraction is not inappropriate development in the Green Belt provided the development preserves openness and does not conflict with the purposes of including land within the Green Belt. The Site will contain bunds along the Site boundary, landscape planting and bunding/screening to reduce the view of the Site for properties along Elm Road which has the potential to impact openness. Due consideration of impact on the Green Belt would therefore need to be given in determining whether this would be inappropriate development or not.

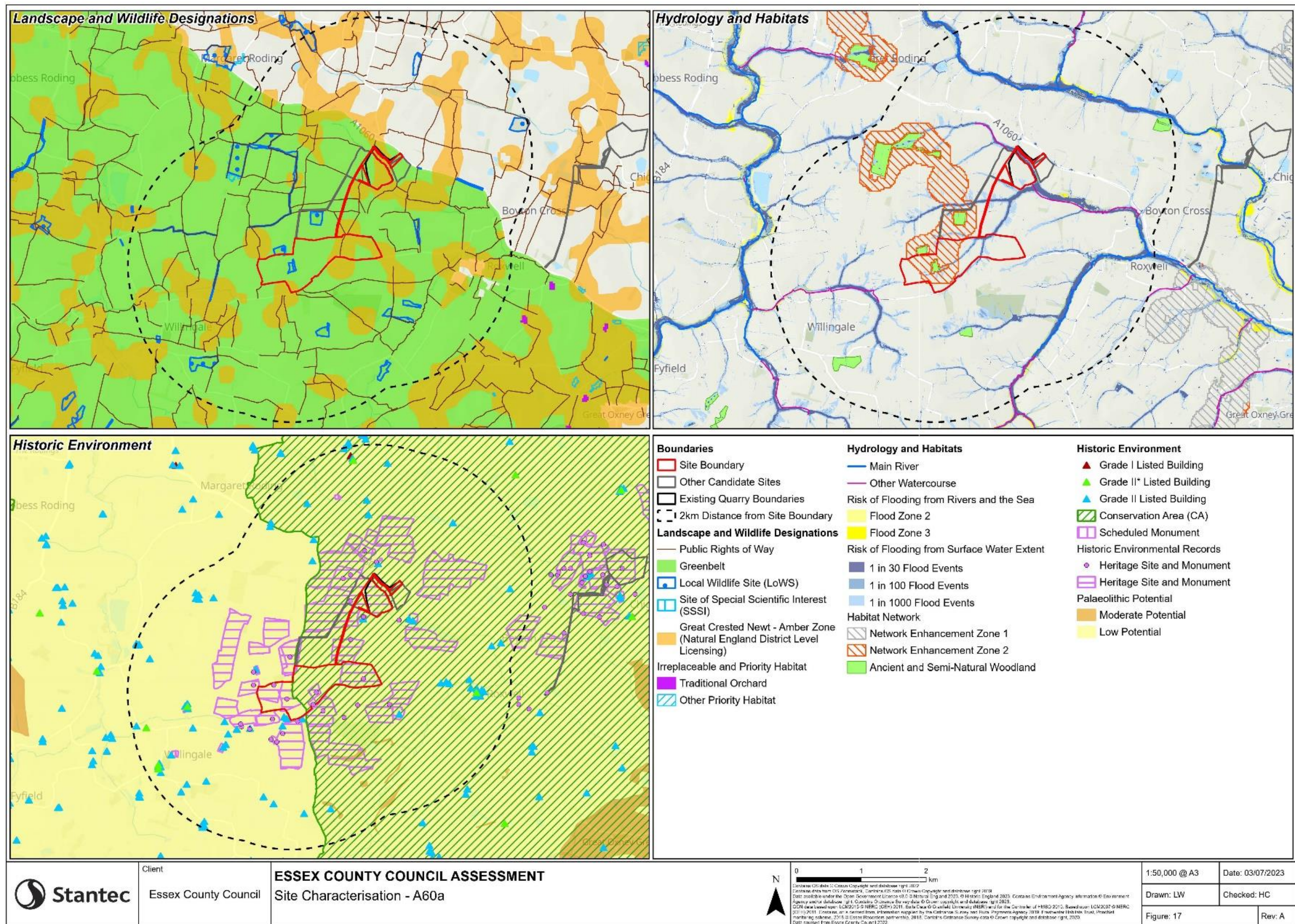


Figure 3.17: A60a - Shellow Cross Farm - Chelmsford

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A60b	Shellow Cross Farm (A60b) - Chelmsford	Chelmsford	Agricultural	103	3.5

The Site is promoted as a new mineral Site at Shellow Cross Farm, Chelmsford. The Site (including both the northern and southern parcel) is approximately 103 hectares. The southern parcel is proposed for 3.5 million tonnes of sand and gravel extraction. The adjoining uses include woodland, agricultural fields, and residential and farm buildings. Roxwell village and civil parish is located to the south east of the Site. Access is proposed off the A1060. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red/Amber	Red/Amber	Amber	Amber/Green	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Red/Amber	Red	Red/Amber	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) of which the Site possesses a number of distinct characteristic features of the LCA including the irregular field pattern of arable farmland intersected by hedgerows and small woodlands, this creates a strong sense of complexity increasing the sensitivity to the landscape features. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Bushey-Hays Spring is located within the centre of the southern parcel and is a designated Ancient Woodland with two thirds of the area designated as a Local Wildlife Site (LoWS). The woodland demonstrates a significant contribution toward the local green infrastructure and visual amenity.
- Site A60(b) comprises a number of arable fields situated to the north of Screens Park Road and Roxwell Rd (A1060). A cross-country conveyor links the southern sections of the Site to the northern areas of the Site. It is not clear how vehicles and staff would access the southern areas of Site. The

boundary and internal Hedgerows are Priority habitats, they are historic and there are a number of significant boundary trees.

- Bushey-hays Spring Local Wildlife Sites (LoWS) is within the Site boundary and it is proposed that the extraction completely surrounds it. Rows Wood LoWS is on the northern border and Skreens Wood LoWS is adjacent to the conveyor and less than 200m from the main Site area. All of these LoWS are also ancient woodland and are therefore classed as irreplaceable habitat. There is another area of Lowland Mixed Deciduous Woodland Priority habitat within the Site, adjacent to Bushey-hays Spring; this is present on the First Edition OS maps and so it is possible that it could be ancient and therefore classed as irreplaceable habitat. The woodland would be lost by these proposals. Additional consideration to the woodland is required and if it is irreplaceable habitat, losses are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain calculations. The haul road appears to be situated within boundary habitat of Lowland Mixed Deciduous Woodland Priority habitat and Hedgerow priority habitat which would therefore require some removal of the habitat.
- Several Hedgerow Priority habitats and mature trees would require removal, as well as several ditches. Other Hedgerows and ditches would need sections removing to create the conveyor.
- The Site is graded Red-Amber because it could have major impacts upon Bushey-hays and Rows Wood ancient woodlands, which are both irreplaceable habitat, and a serious impact upon these LoWS and other Priority habitats and species and is likely to require high levels of mitigation to make the Site acceptable. Impacts may include direct habitat loss, significant changes to the hydrology of the ancient woodlands; smothering of leaves and disturbance. There would be a significant loss of habitat connectivity in the area through the loss of, and dissection of, numerous Hedgerows. It could also result in disturbance and loss of habitat for Priority farmland species, e.g. Skylarks.
- The development must not affect the hydrology of the ancient woodlands, Hedgerows and watercourses and it is likely that mitigation would require a substantial buffer from the ancient woodlands in accordance with the Government's Advice on ancient woodlands. There may be less severe impacts if extraction is not on all sides of the ancient woodland. Ancient woodland losses are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain requirement. Other mitigation may include buffers between the Site and Hedgerows; careful consideration to phasing to

minimise impacts; rapid restoration and creation of new replacement habitats, prevention of deterioration of water quality to watercourses. Adequate and appropriate compensatory habitat should be provided for the loss of Woodland and Hedgerow Priority habitat, watercourses and for farmland birds.

- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed buildings through a profound change within their immediate settings: Shellow Cross Farmhouse (List UID: 1366203), Barn 100 metres east-northeast of Shellow Cross Farmhouse (List UID: 1168923), Skreens Lodge (List UID: 1111251) and Mountneys House (List UID: 1235719).
- The impact to Rows Farmhouse (List UID: 1169285) is likely to be the lowest level of 'less than substantial' harm due to the increased distance from the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area known to contain areas of multi-period archaeology with extensive Roman and medieval deposits likely to be present within areas of this Site.
- Archaeological evaluation on the northern part of the quarry proposal has identified extensive Roman occupation. The archaeological work is ongoing and will require extensive large-scale excavation if development proceeds.
- Within the southern part of the Site two probable moated sites, likely to be of medieval date are located within the Site.
- Two scheduled moats located, one immediately west of Skreens Lodge lies on the opposite side of Shellow Road from the Site, the second lies to the south west of the proposed Site.
- Other cropmarks indicate the presence of further enclosures of an unknown date. Immediately to the south and north of the Site further cropmark complexes are recorded with track ways and field systems indicative of potential medieval occupation.
- The access road bisects a range of archaeological deposits known from cropmark evidence.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.

- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing consented access under planning application ESS/77/20/CHL onto the A1060, which is classified as a main distributor in Essex County Council's Development Management Route Hierarchy. This accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- It is also understood that the Site has direct access to the haul road associated with ESS/77/20/CHL (see highway access comments)
- No access should be taken from Skreens Park Road.
- The Site is proposing to use an access approved under ESS/77/20/CHL, onto A1060. However, given the increase in HGV movements, alterations to the access arrangement are likely to be required to provide a ghost island right turn lane access from the A1060.
- 9 Public Rights of Way cross the Site. 3 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A watercourse is present within the Site boundary and another watercourse (Newland Brook) is 140m south of the Site. Drainage ditches are located across the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land– this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site is within 100m of high pressure gas mains. Overhead and underground Openreach BT power lines are within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on gas mains to make the Site acceptable which may include diversion and/or protection.
- One residential building is adjacent to the boundary of the Site (0m). Two residential buildings and two farm buildings (Elms Farm and Shellow Cross Farm) are outside the Site boundary less than or equal to 20m from the Site.

Three residential buildings, two commercial buildings and one farm building (Skeens Park Farm) are more than 20m but less than or equal to 50m from the Site. Twenty four residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

- The Site is located within the Metropolitan Green Belt in the Chelmsford City Council and Epping Forest District Council areas. NPPF (paragraph 150) states that mineral extraction is not inappropriate development in the Green Belt provided the development preserves openness and does not conflict with the purposes of including land within the Green Belt. The Site will contain a processing plant, a mobile plant area including mobile washing and dry screener and bunding/screening to reduce the view of the Site for properties along Elm Road which has the potential to impact openness. Due consideration of impact on the Green Belt would therefore need to be given in determining whether this would be inappropriate development or not.

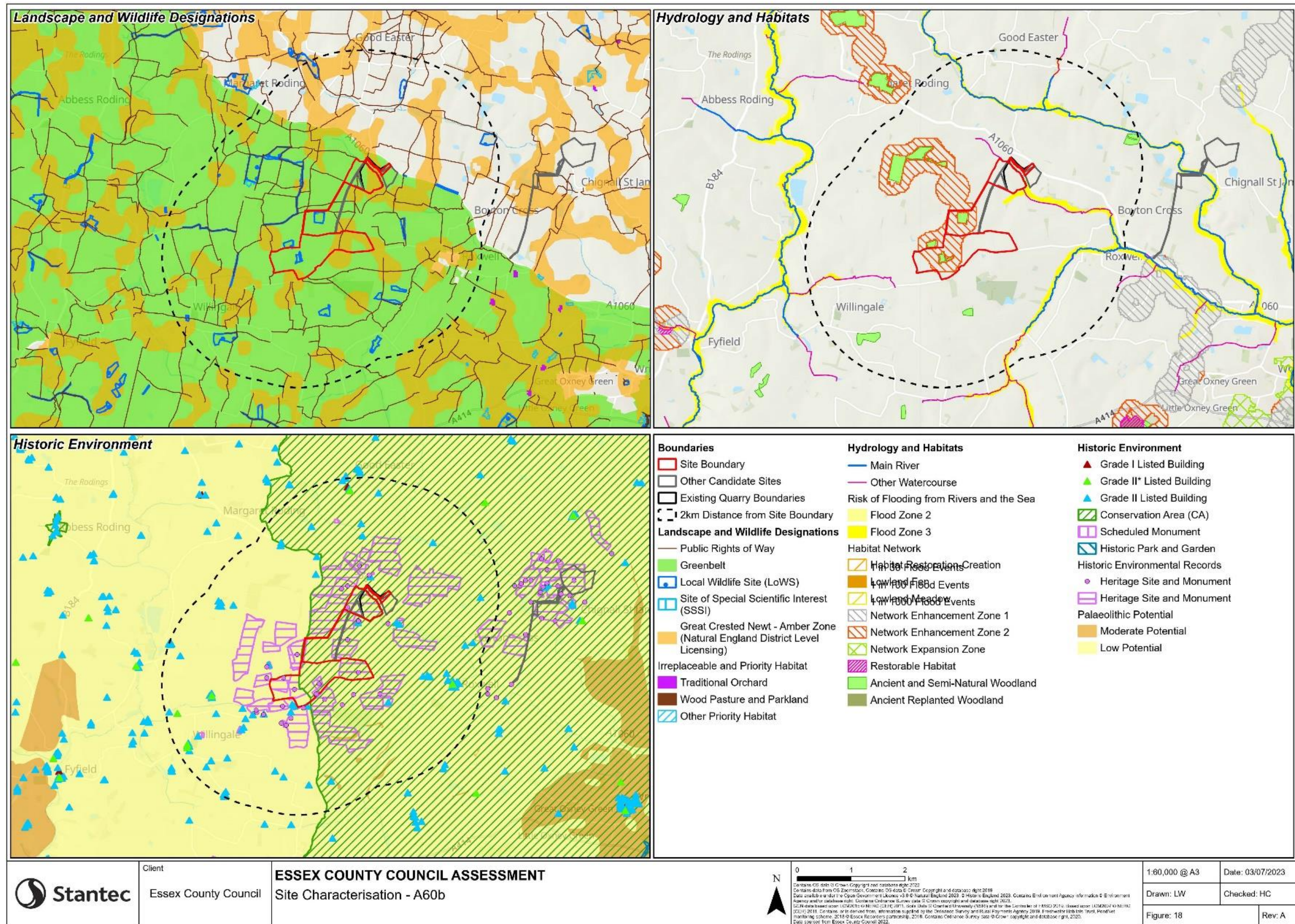


Figure 3.18: A60b, Shallow Cross Farm (A60b) - Chelmsford
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A61	Heckford Bridge - Site 1	Colchester	Agricultural	61.16	5

The Site is promoted as an extension to an existing mineral Site (Colchester Quarry) and is located south of Colchester Quarry. Colchester Quarry is split into two areas (Stanway Quarry and Bellhouse Quarry). The Site is approximately 61.16 hectares and is proposed for 5 million tonnes of sand and gravel extraction. The Site operations would be in sequence to Colchester Quarry. Infrastructure needed on site includes a conveyor to convey material to Stanway Quarry and the existing processing plant. The adjoining uses include woodland, agricultural fields, residential and farm buildings. The village of Birch is located south of the Site. Access is proposed to be via the existing Colchester Quarry. The primary route for export of mineral is via Warren Lane to the A12 Eight Ash Green Junction, utilising the newly constructed Western Bypass. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Amber	Red/Amber	Amber	Amber	Amber	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is within an attractive undulating landscape with landscape and historic features in view. Perceived as a rural landscape with some sense of tranquillity although these qualities are affected and reduced by the presence of Colchester Quarry. Consideration should be given to preserving and enhancing the characteristics of the landscape character area for the Site.
- Feature trees and hedgerows as field boundaries with some historic value. Retention, protection and strengthening should be considered as part of mitigation. Appropriate distance buffer areas from field boundaries will be required.
- There are attractive panoramic views of the surrounding landscape from the public footpath crossing the Site. There will be an adverse effect on the public rights of way users and other receptors with regards visual impact, in

particular long-distance view of St Peters Church to the south. It will be difficult to mitigate for the loss of this view and existing panoramic views from this public footpath.

- Site A61 is 3.4km northwest of Abberton Reservoir Special Protection Area, Ramsar site and Site of Special Scientific Interest (SSSI); it is not within the minerals SSSI Impact Risk Zone. The nearby Roman River is a tributary of the River Colne, which contains the Colne Estuary SSSI, Special Protection Area and Ramsar site and Essex Estuaries Special Area of Conservation. The Site is also upstream of the Roman River SSSI and Upper Colne Marshes SSSI and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. Although these are some distance from the Site, the River creates a potential pollution pathway between A61 and these statutory sites, with respect to water quality and water quantity. The potential pollution pathway between the proposed mineral Site and international wildlife sites would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- The closest Local Wildlife Site is the Gol Grove and Hanging Wood Local Wildlife Site (Co58) is c.50 m north-east of the main extraction Site and would be an estimated 25 metres from the conveyor. This LoWS comprises the ancient woodlands.
- The Site comprises sloping arable and agriculturally improved grass fields partly bounded by Priority Hedgerow habitat. There are three internal hedgerows which are Priority habitat, and some mature trees in the centre of the field which would require removal but could not be accessed. The northern boundary is mostly bordered with Lowland Mixed Deciduous Woodland Priority habitat and broadleaved ? plantation woodland. The Site is evaluated as having a 'County' level of importance for wintering birds.
- There is at least one Notable mature Oak trees and a number of other large mature Oak trees which are significant boundary features.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make it acceptable. The Site could have major impacts upon the internal Hedgerows which are Priority habitat, the loss of a small number of trees of unknown quality in the field. Other Priority habitat Hedgerows could be dissected through the creation of the conveyor. The Site could have moderate impacts upon irreplaceable habitats (ancient woodlands) and upon the local designations and Priority habitats and species e.g. the Roman River, and Gol Grove and Hanging Wood Local Wildlife Site and direct loss of sections of Hedgerows to accommodate the conveyor and the adjacent Priority habitat woodland. Impacts may include changes to the water quantity and quality of the River, severance of the habitat network and Priority habitats (Hedgerows). It could result in disturbance and loss of habitat for Priority farmland species.
- Any application would require demonstration that the operations would not affect the hydrology of the adjacent ancient woodland, the Roman River and

other boundary habitats. Appropriate mitigation and compensatory habitat should be provided for loss of the Hedgerows and habitat for Priority farmland species. Water run-off from the Site should not be allowed to enter directly into watercourses.

- The allocation of The Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed buildings through a change within their settings: Walnut Tree Farmhouse (List UID: 117353); Barn To South Of Walnut Tree Farm (List UID: 117354); Bockingham Hall (List UID: 117351); and Barn To South Of Bockingham Hall (List UID: 117351).
- The impact to Upper Hill Farmhouse (List UID: 416803) is likely to be the lowest level of 'less than substantial' harm due to the increased distance from the Site.
- The allocation of The Site would likely result in 'less than substantial' harm at the lowest end of the spectrum to three Grade II listed buildings. This being, Wishing Well Cottage (List UID: 416034); *Hillside Villa (List UID: 415990) and The Angel Public House (List UID: 415988)*.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an extensive cropmark landscape. These include at least one enclosure and a trackway within the Site. A similar spread of crop marks is visible around the Site indicating a dispersed settlement pattern within the immediate area.
- Metal detecting finds include items of prehistoric, early medieval, and medieval date.
- Historic farm complexes are located just outside the north-western side of the Site, comprising the historic Bockingham Hall and Walnuttree Farm.
- The Site has potential for Palaeolithic or Pleistocene deposits within the gravels.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Stanway Quarry onto Warren Lane which is classified as a Secondary Distributor in Essex County

Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- Access is proposed via an existing access serving Stanway quarry onto Warren Lane which includes a ghost island right turn lane. This is acceptable and unlikely to require mitigation for use by HGVs.
- To export minerals by HGV via the existing access it is proposed that the mineral will be transported to the existing quarry by conveyor. This will need to cross the local road network (Fountains Lane). No detail provided.
- 2 Public Rights of Way cross the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site within a Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. A watercourse (Roman River) is 50m north east of the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead and underground electricity cables within the Site boundary. The Site contains a high pressure gas mains (Cadent Gas) within the Site boundary. Local Essex and Suffolk Water mains are present within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Five residential buildings are within the Site. Two residential buildings and ten commercial buildings (Birch Business Centre) adjacent to the boundary of the Site (0m). Five residential buildings are outside the Site boundary less than or equal to 20m from the Site. Four residential buildings and, one farm building (Bockingham Hall Farm) are more than 20m but less than or equal to 50m from the Site. Fourteen residential buildings are more than 50m but less than

or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

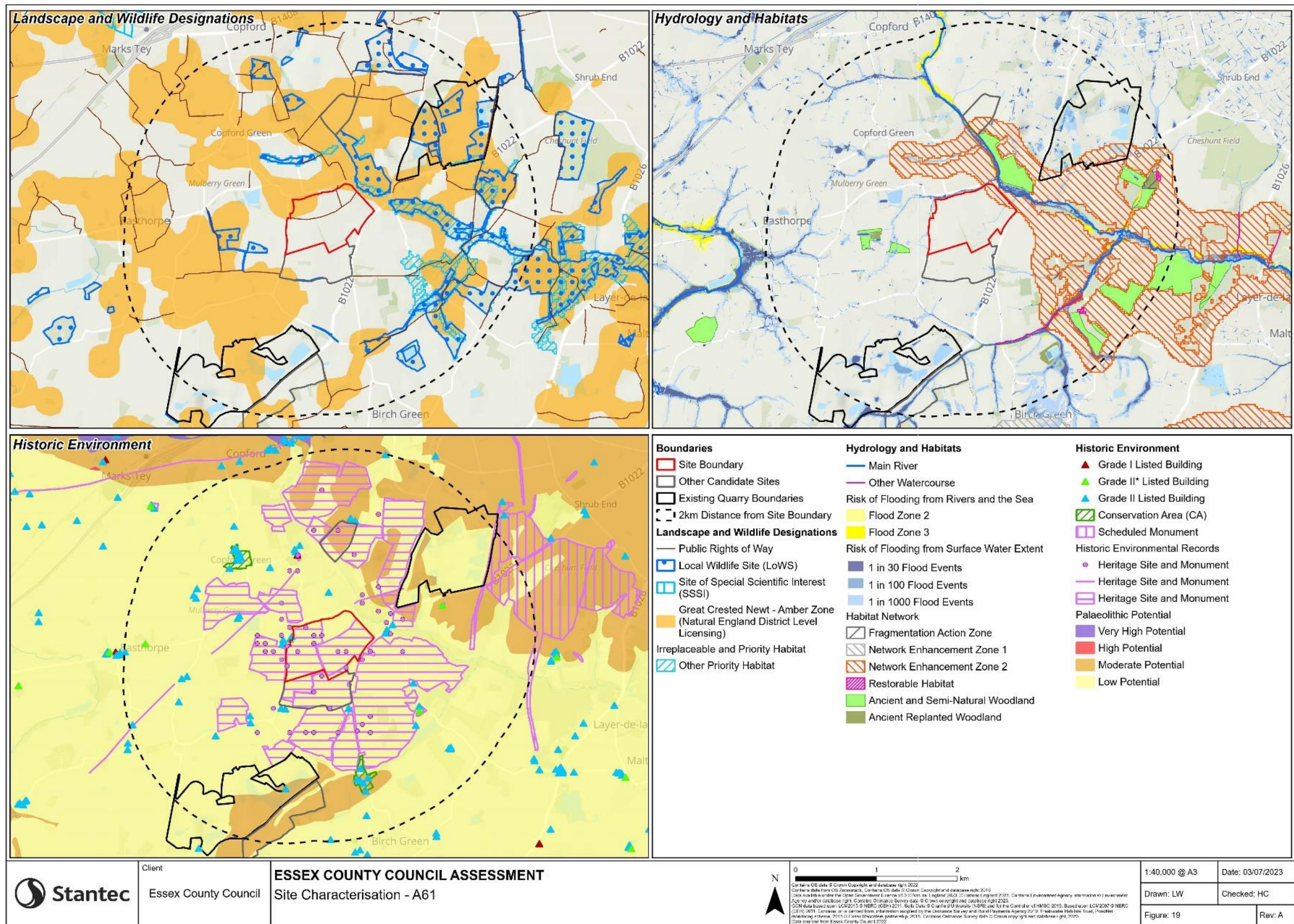


Figure 3.19: A61 - Heckford Bridge – Site 1

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A62	Heckford Bridge - Site 2	Colchester	Agricultural	94.44	8.2

The Site is promoted as an extension to an existing mineral Site (Colchester Quarry) and is located south of Colchester Quarry. Colchester Quarry is split into two areas (Stanway Quarry and Bellhouse Quarry). The Site is approximately 94.44 hectares and is proposed for 8.2 million tonnes of sand and gravel extraction. The Site operations would be in sequence to Colchester Quarry. Infrastructure needed on site includes a conveyor to convey material to Stanway Quarry and the existing processing plant. The adjoining uses include woodland, agricultural fields, residential and farm buildings. The village of Birch is located south of the Site. Access is proposed to be via the existing Colchester Quarry. The primary route for export of mineral is via Warren Lane to the A12 Eight Ash Green Junction, utilising the newly constructed Western Bypass. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Amber	Red/Amber	Amber	Amber	Amber	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is within an attractive undulating landscape with landscape and historic features in view. It is perceived as a rural landscape with some sense of tranquillity although these qualities are affected and reduced by the presence of Colchester Quarry. Consideration should be given to preserving and enhancing the characteristics of the landscape character area for the Site.
- There are significant oak trees and hedgerow field boundaries with some historic value. Their retention, protection, and strengthening should be considered as part of mitigation and appropriate distance buffer areas will be required.
- There are attractive panoramic views of the surrounding landscape from the public footpath crossing the Site. There will be an adverse effect on the public

rights of way users and other receptors with regards visual impact, as well as long distance view of St Peters Church to the south. It will be difficult to mitigate for the loss of this view and existing panoramic views from this public footpath.

- The Site's parcel to the south is exposed along its west south and eastern boundaries. A bund could help with this, but would, in itself, be intrusive. Advance planting along this boundary could help to provide mitigation more in keeping with the existing character.
- Site A62 is c.3km northwest of Abberton Reservoir Special Protection Area, Ramsar site and Site of Special Scientific Interest (SSSI); it is just outside of the minerals SSSI Impact Risk Zone. The nearby Roman River is a tributary of the River Colne, which contains the Colne Estuary SSSI, Special Protection Area and Ramsar site and Essex Estuaries Special Area of Conservation. The Site is also upstream of the Roman River SSSI and Upper Colne Marshes SSSI and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. Although these are some distance from the Site, the River creates a potential pollution pathway between A61 and these statutory sites, with respect to water quality and water quantity. The potential pollution pathway between the proposed mineral Site and international wildlife sites would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- The closest Local Wildlife Site is the adjacent Beckingham Hall Road Verge (Co53) which is also a Special Roadside Verge (Hardy's Green SV-COL1). Gol Grove and Hanging Wood Local Wildlife Site (Co58) is c.50 m north-east of the main extraction Site and would be an estimated 25 metres from the conveyor. This LoWS comprises the ancient woodlands (irreplaceable habitat).
- The Site comprises sloping arable and agriculturally improved grass fields partly bounded by Hedgerows (Priority habitat). There are several internal Hedgerows which are priority habitat, and some mature trees in the centre of the field which would require removal but could not be accessed and a small plantation woodland. The northern boundary is mostly bordered with Lowland Mixed Deciduous Woodland Priority habitat and broadly plantation woodland, which contain a pond and a watercourse. There is another watercourse on the southern boundary as well as a Special Roadside Verge which is also designated as a Local Wildlife Site. The Site is evaluated as having a 'County' level of importance for Wintering Birds by the Site proposer's ecologist.
- There are at least two Notable mature Oak trees and a number of other large mature Oak trees which are significant boundary features, including one on the southern boundary of the small internal woodland. One of the Notable trees on the eastern boundary is a prominent feature in its locality.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make it acceptable. ,The Site could have major impacts upon the internal Hedgerows

which are Priority habitat, the loss of a small number of trees of unknown quality in the field. Other Priority habitat Hedgerows could be dissected through the creation of the conveyor. The Site could have moderate impacts upon irreplaceable habitats (ancient woodlands) and upon the local designations and Priority habitats and species e.g. the Roman River, and Gol Grove and Hanging Wood Local Wildlife Site and direct loss of sections of hedgerows to accommodate the conveyor and the adjacent Priority habitat woodland. Impacts may include changes to the water quantity and quality of the River, severance of the habitat network and Priority Hedgerow habitats . It could result in disturbance and loss of habitat for Priority farmland species.

- Any application would require demonstration that the operations would not affect the hydrology of the adjacent ancient woodland, the Roman River and other boundary habitats. Appropriate mitigation and compensatory habitat should be provided for loss of the hedgerows and habitat for Priority farmland species. Water run-off from the Site should not be allowed to enter directly into watercourses.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of three Grade II listed buildings through a change within their settings: *Beckingham Hall (List UID: 1238478)*; *Lodge To East of Beckingham Hall (List UID: 1274178)*; and *Post Office Cottages (List UID: 1387257)*.
- The allocation of the Site would likely result in 'less than substantial' harm at the lowest end of the spectrum to four Grade II listed buildings. These being: Walnut Tree Farmhouse (List UID: 1306202); Barn to South West of Walnut Tree Farmhouse (List UID: 1110901); Bockingham Hall (List UID: 1306200); and Barn to South of Bockingham Hall (List UID: 1337417).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance. The proximity of the Site to the heritage assets also presents challenges.
- The Site lies within an area known to contain areas of archaeological features visible as cropmarks from the air. These include at least one enclosure and a trackway within the Site.
- A sequence of crop marks is visible immediately to the south of the Site indicating a complex site with multiple enclosures. The cropmarks indicate a dispersed settlement pattern of probable multi-period date.
- Metal detecting finds include items of prehistoric, early medieval, and medieval date.
- Historic farm complexes are located just outside the north-western side of the Site, comprising the historic Bockingham Hall and Walnuttree Farm, and to the south-west at Beckingham Hall.

- There is potential for Palaeolithic or Pleistocene deposits within the gravels.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Stanway Quarry onto Warren Lane which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- Access is proposed via an existing access serving Stanway quarry onto Warren Lane which includes a ghost island right turn lane. This is acceptable and unlikely to require mitigation for use by HGVs.
- To export minerals by HGV via the existing access it is proposed that the mineral will be transported to the existing quarry by conveyor. This will need to cross the local road network (Fountains Lane). No detail provided.
- 2 Public Rights of Way cross the Site. 4 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site within a Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. A watercourse (Roman River) is 50m north east of the Site. A drainage ditch runs along the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead and underground electricity cables within the Site boundary. The Site contains a high pressure gas mains (Cadent Gas) within the Site boundary. Local Essex and Suffolk Water mains are

present within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.

- Seven residential buildings are within the Site. Two residential buildings and ten commercial buildings (Birch Business Centre) adjacent to the boundary of the Site (0m). Twelve residential buildings are outside the Site boundary less than or equal to 20m from the Site. Eight residential buildings and, one farm building (Bockingham Hall Farm) are more than 20m but less than or equal to 50m from the Site. Twenty two residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

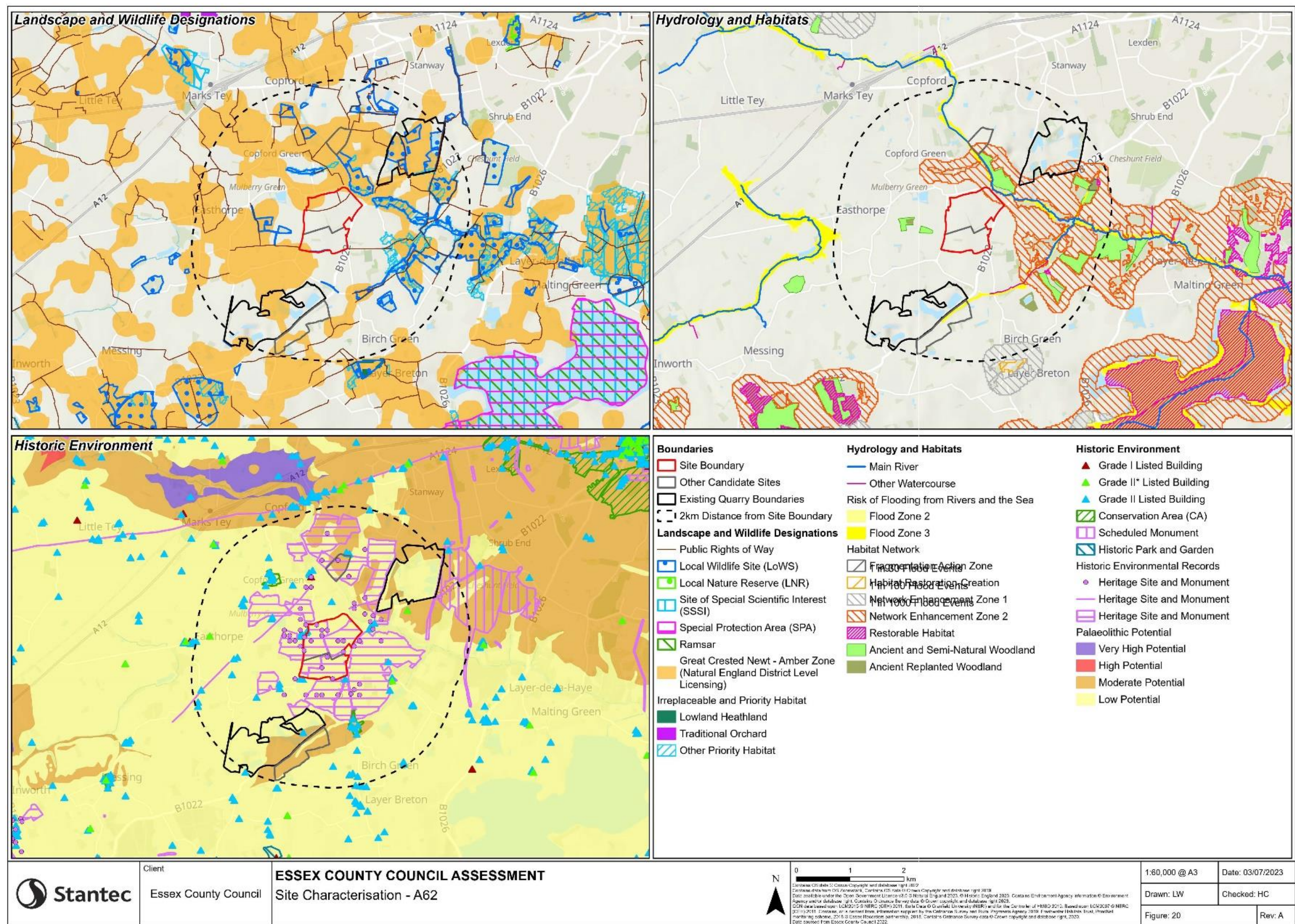


Figure 3.20: A62 - Heckford Bridge – Site 2

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A63	Patch Park, Abridge	Epping Forest	Agricultural	54	1

The Site is promoted as a new site at Patch Park Farm, Ongar Road, Abridge, Romford. The Site area is approximately 54 ha and is proposed for 1.00 million tonnes of sand and gravel extraction to be transported to a processing plant within the eastern half of the Site. Infrastructure needed on site includes a mobile wash plant. The adjoining uses include agricultural fields, and commercial and residential buildings. The village of Abridge is located south west of the Site. Access to the Site will be via the A113. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Amber	Red/Amber	Red/Amber	Amber/Green	Red/Amber	Red/Amber	Green	Amber/Green	Green	Amber/Green	Red	Red	Red/Amber	Red

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Roding Valley (C4), the Site possesses a number of distinctive characteristic features of the LCA, including the wide valley bottom, thick hedgerows with hedgerow trees and riverside trees. The combination of varied landscape features within the Site increases the sensitivity of this landscape. It would not be possible to screen views of the Site from receptors on the valley slopes and distant views.
- The eastern extent of the Site is designated as a Local Wildlife Site Priority Habitat Inventory as Coastal and Floodplain Grazing Marsh increasing the views to natural features.
- Two Public Rights of Way (PRoW) intersect the Site with open views of the Site. The footpaths on the lower levels would lose their existing views; one of these footpaths is part of the Three Forests Way. Due to landform, any bunding could appear as an intrusive element from the valley slopes.

- There are a number of mature trees within the Site which form part of the landscape views. These should be protected alongside the existing vegetated field boundaries as part of mitigation strategy. Opportunities should be considered for landscape enhancement and restoration where landscape condition is poor.
- The Site includes landscape of very high quality. The proposal would have a large effect on this stretch of the Roding valley and could cause lasting damage.
- The Site is within a minerals Site of Special Scientific Interest (SSSI) Impact Risk Zone for Curtismill Green SSSI.
- The River Roding follows the southern boundary for the western half of this Site and also passes through the centre of it creating a potential pollution pathway for water quality between the proposed Site and the statutory and non-statutory wildlife sites at Roding Valley Meadows.
- The Site is situated on relatively flat low-lying land in the Roding Valley and comprises arable land and Coastal and Floodplain Grazing Marsh Priority habitat. *The River Roding* would be directly impacted, as well as a number of watercourses and Hedgerows and Coastal and Floodplain Grazing Marsh Priority habitat.
- The Site is graded Red/Amber because ecological impacts could be major and are likely to require high levels of mitigation to make the Site acceptable. The Site's surface and groundwater may be affected, which in turn could affect the hydrology of on-site and off-site habitats. Substantial buffers are likely to be required near to the retained Priority habitat and River Roding, and water quality must not be affected by the proposals. Significant compensation is likely for the loss of small watercourses, diversion of the River Roding and Priority habitats -including the Coastal and Floodplain Grazing Marsh and Hedgerows - and habitats supporting Priority species.
- The allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of eleven Grade II listed buildings through change within their settings: *Brook Farmhouse (List UID: 1123967); Barn to Left of Brook Farmhouse (List UID: 1169830); Skinners Farmhouse (List UID: 1306362); Outbuilding to Left of Skinners Farmhouse (List UID: 1337557); Large, Roofed Cattle Yard to East of Hill Farmhouse (List UID: 1337529); Open Barn to South East of Hill Farmhouse (List UID: 1123989); Hill Farmhouse (List UID: 1123988); Granary to South of Hill Farmhouse (List UID: 1169544); Barn 40 Metres South West of Hill Farmhouse; (Lambourne Parish) (List UID: 1111127); Barn at Waters Farm, North East of Domestic Buildings (List UID: 1111157); Barn Approximately 25 Metres North East of Pryors Farmhouse (List UID: 1165769).*
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and

land character would undermine the ability to understand and appreciate their significance.

- The Site contains a wide range of archaeological deposits identified from aerial photography.
- In the far western corner two enclosures are recorded interpreted as being of potential prehistoric date. One is a double ditched enclosure. On the northern edge a series of rectilinear enclosures are recorded, potentially either settlement enclosures or a field system. In the central part of the Site a minimum of 4 large ring ditches, probably representative of a Bronze Age cemetery of barrows. Also in this sequence a rectangular enclosure which may also be funerary or potentially a settlement enclosure.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 3 (79%) and therefore these areas are at risk from fluvial flooding.
- The Site is proposed to be served by the creation of a new access onto the A113 Ongar Road. The A113 is a Main Distributor Road and accords with (ii) in the methodology (*see Appendix G Transport for full methodology*):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- Access is proposed onto the A113 but is graded Red/Amber as there is no access information provided.
- Appropriate access geometry and visibility splays will need to be demonstrated as achievable.
- Appropriate mitigation required to facilitate the access and its use.
- 2 Public Rights of Way cross the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has unproductive/low/medium to low groundwater vulnerability. A watercourse (River Roding) is present within the Site boundary and is 90m west. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 3 quality soil (good to moderate quality agricultural land) and Grade 4 quality soil (poor quality agricultural land), which has the potential for being BMV land but is likely to have a minor impact on soil quality and agricultural land. Appropriate consideration would be required to assess whether any impacts on soil quality and agricultural land require mitigation.
- The Site contains 11kV overhead electricity cables within the Site boundary. An underground Openreach BT power line is present within the Site boundary. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would be likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- One residential building is within the Site. One sports facility (fishing lake) and associated buildings, one residential building and one farm building are adjacent to the boundary of the Site (0m). One sports facility (golf course), one residential building and one commercial building are outside the Site boundary less than or equal to 20m from the Site. One farm building, one commercial building and four residential buildings are more than 20m but less than or equal to 50m from the Site. Two buildings of unknown use, a commercial building, a farm building and nine residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.
- The Site is within an Airport Safeguarding Zone (Stapleford Outer Zone). Restoration proposals assume the Site would be Coastal and Floodplain Grazing Marsh (included in the Priority Habitat Inventory) meaning the nature of the Site is likely to attract birds and therefore is likely to have a serious impact on aircraft safety and increase the risk of bird strike for aircrafts. Mitigation to make the Site acceptable would be difficult. Wet working of the Site would not be acceptable, and neither would a restoration scheme that included waterbodies.
- The Site is located within the Metropolitan Green Belt in the Epping Forest District Council area. NPPF (paragraph 150) states that mineral extraction is not inappropriate development in the Green Belt provided the development preserves openness and does not conflict with the purposes of including land within the Green Belt. The Site will contain landscape planting and a mobile wash plant which has the potential to impact openness. Due consideration of impact on the Green Belt would therefore need to be given in determining whether this would be inappropriate development or not.

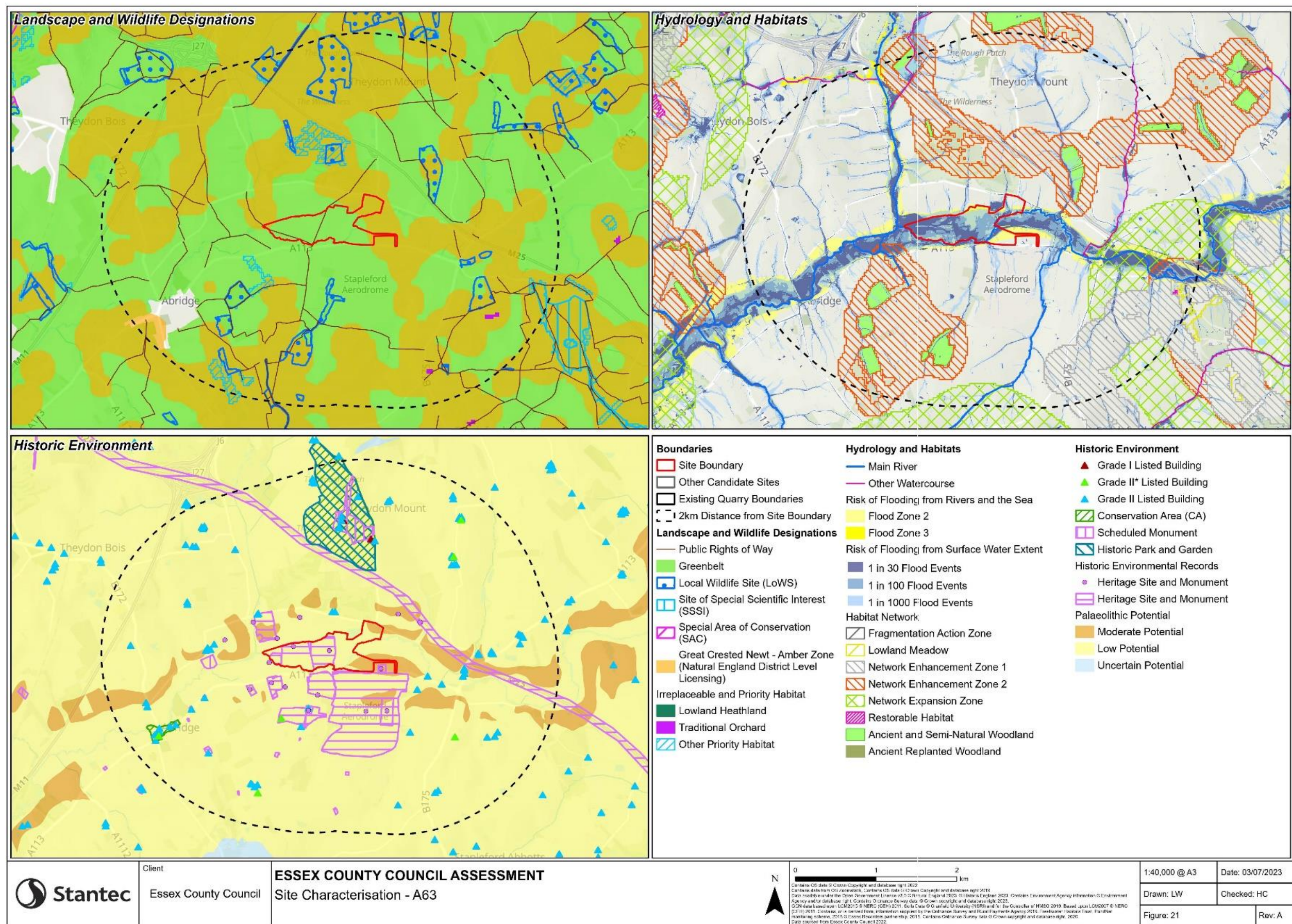


Figure 3.21: A63 - Patch Park, Abridge

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A64	Land East of Asheldham Quarry	Maldon	Agricultural	24.3	2

The Site is promoted as an extension to the existing mineral site (Asheldham Quarry) and is located to the east of Asheldham Quarry. The Site area is approximately 24.3 hectares and is proposed for 2 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. The adjoining uses include agricultural fields, residential and farm buildings, and woodland. The village and parish of Asheldham is located to the west of the Site. The Site would be accessed through the existing Asheldham quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber /Green	Red/ Amber	Amber	Amber	Red/ Amber	Green	Red/ Amber	Green	Green	Green	Amber	Amber /Green	Red/ Amber	Green	Amber/ Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) for this Site is Dengie and Foulness Coast (F3) and the Site possesses a number of characteristic features, which includes the large scale, flat landscape with a sense of openness and wide views toward the North Sea. Views are obtained of the reclaimed marshlands for arable farmland which are located close to the south-east. Located away from Dengie Crops and the working Asheldham Quarry, parts of the Site also have a rural tranquil character. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Site A64 is not within a minerals Site of Special Scientific Interest Impact Risk Zone (IRZ). However, it is situated just outside of several IRZs as it is located in the middle of the Dengie peninsula which is surrounded on three sides by coast and estuaries, which are all internationally designated. The Blackwater Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site is 3 km to the north. The Dengie SSSI, National

Nature Reserve, SPA and Ramsar site is 4.5km to the east. The Crouch and Roach Estuaries SSSI, SPA and Ramsar site is 5.8km to the south. These designated areas are also within the Essex Estuaries Special Area of Conservation and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone.

- There is a watercourse less than 300 m east of the Site which is the boundary of the next field. This drains into a main river c.500 metres to the south. From here it makes its way eastwards towards the coast. This creates hydrological connectivity with the Dengie SSSI, National Nature Reserve, SPA and Ramsar site. Although these are some distance from the Site, the watercourses create a potential pollution pathway between A64 and these designated sites, with respect to water quality and water quantity. The potential for the likely significant effects to the SPA and Ramsar site and SAC would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- Site A64 is a field of agricultural grassland to the east of the extant Asheldham Quarry. Much of the Site is bounded by Hedgerows (Priority habitat) or mature trees and scrub. There is a patch of Lowland Mixed Deciduous Woodland Priority habitat on the eastern boundary- which could be lost to the development- and a large pond/small lake. There are two mature trees within the field that would be lost to the development.
- The Site is graded Amber- Green because ecological impacts are likely to be minor and likely to require low levels of mitigation to make the Site acceptable. The Site could have a minor impact upon international or national designations. This includes impacts to water quality of the tributary watercourses. The Site could have a moderate impact upon the natural environment including local designations and Lowland Mixed Deciduous Woodland and Hedgerow Priority habitats and Priority species. This includes impacts to mature trees within the field which would be lost, and surrounding perimeter vegetation and numerous water bodies. It could result in disturbance and loss of habitat for Priority farmland species, e.g. Skylarks. The surrounding water bodies, Lowland Mixed Deciduous Woodland and Hedgerow Priority habitats could also be indirectly affected e.g. through changes to the hydrology; smothering of leaves by dust, disturbance e.g. by noise and lighting.
- Any application would require demonstration that the operations would not affect the hydrology of the existing water bodies, Hedgerows, small woodland, and other boundary habitats. Mitigation may include - but not be limited to - adequate and appropriate buffers between the Site and these habitats; prevention of deterioration of water quality to watercourses; compensatory habitat for farmland Priority species. Water run-off from the Site should not be allowed to enter directly into the watercourses.
- The allocation of The Site would likely result in 'less than substantial' harm at a mid-level to the significance of New Hall Farmhouse ((list UID: 119187) due to a change within its setting.

- The impact to Asheldham Youth Church of St Lawrence (List UID: 119188) is likely to be the low level of 'less than substantial' harm due to the increased distance from The Site.
- The impact to Asheldham Hall (List UID: 473017) would likely be at the lowest end of 'less than substantial' harm due to the distance and intervening development. There are likely to be environmental impacts from the allocation of The Site.
- The allocation of the Site would have a cumulative impact on the listed buildings.
- The undeveloped, agrarian landscape of The Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies adjacent to an area known to contain extensive areas of archaeological features identified through previous archaeological excavation. To the west of the Site archaeological evaluation and excavation has shown the presence of extensive Late Iron Age and Roman occupation. Excavation has also identified the presence of Saxon occupation. Both this and the earlier occupation will extend into the new Site area.
- Within the Site, cropmarks from aerial photography indicate a sequence of linear features being present. Their date at present is unclear but is probably similar to those already identified to the west.
- There is high potential for Palaeolithic archaeological remains and palaeoenvironmental remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- The Site is proposed to be served by the use of an existing access onto the B1021 Tillingham Road. The B1021 is a Secondary Distributor Road and accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains overhead and underground 11kV electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- Three buildings of unknown use and one farm building are outside the Site boundary less than or equal to 20m from the Site. Three residential buildings are more than 20m but less than or equal to 50m from the Site. Six residential buildings, two farm buildings, two commercial buildings and one community facility (place of worship) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.
- The Site is within an Airport Safeguarding Zone (Tillingham and Southend). Restoration proposals assume the Site would be returned to agricultural use meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts. Detailed assessment of this matter would need to accompany any planning application.

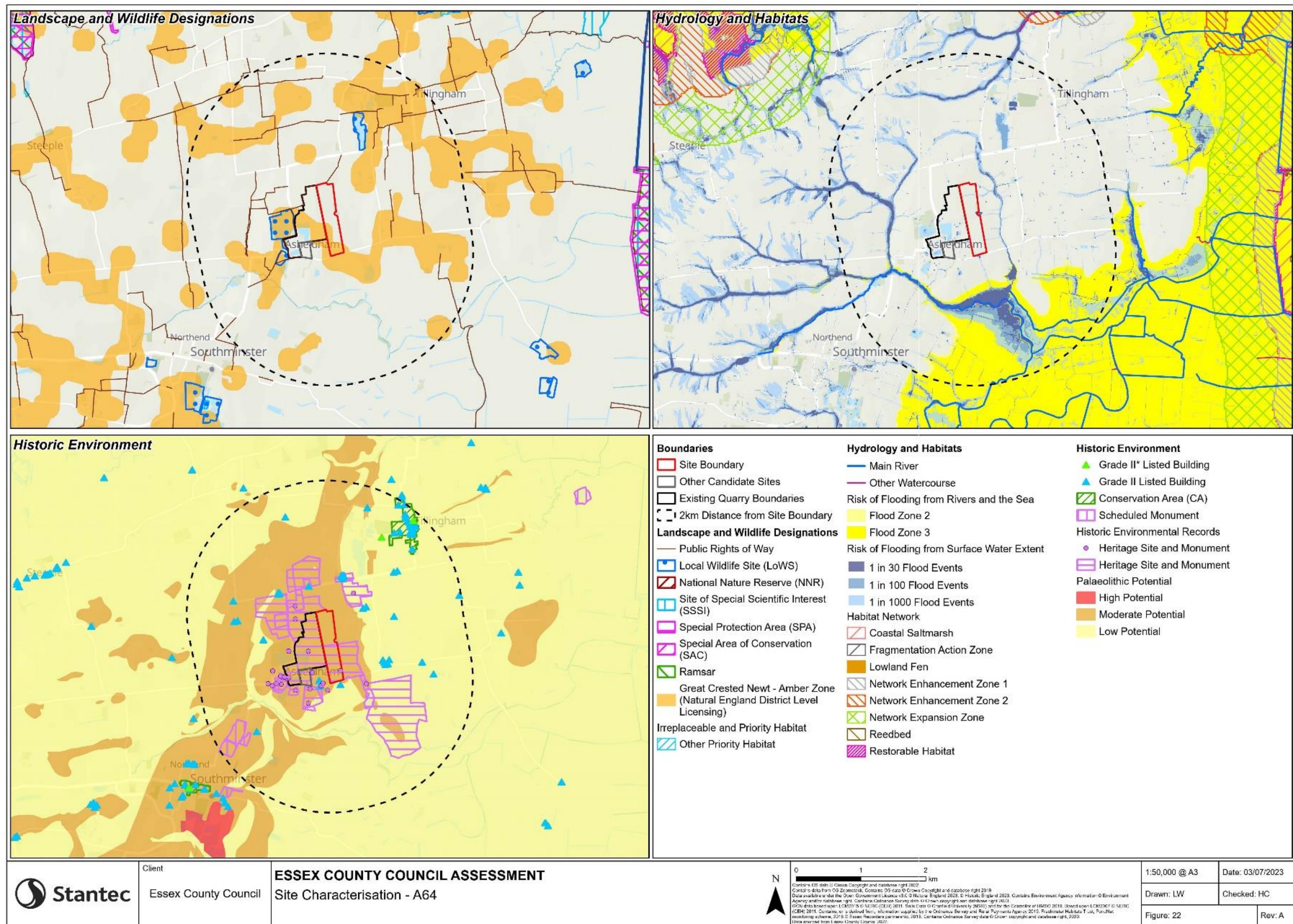


Figure 3.22: A64 - Land East of Asheldham Quarry
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<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A65	Land South of Asheldham Quarry	Maldon	Agricultural	4	0.1

The Site is promoted as an extension to an existing mineral Site (Asheldham Quarry) and is located adjacent to the southern boundary of Asheldham Quarry. The Site area is approximately 4 hectares and is proposed for 0.1 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. The adjoining uses include agricultural fields, farm buildings and woodland. The village and civil parish Asheldham is located to the west of the Site. The Site would be accessed through the existing Asheldham Quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Amber	Amber	Green	Red/ Amber	Green	Red/ Amber	Green	Green	Green	Amber /Green	Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Dengie and Foulness Coast (F3) and possesses only limited characteristic features of the LCA, only including the arable farmland landscape. The limited sense of openness and absence of wide views of the mudflats and saltmarshes reduces the potential sensitivity of the Site.
- Site A65 is not within a minerals Site of Special Scientific Interest Impact Risk Zone (IRZ). However, it is situated just outside of several IRZs as it is located in the middle of the Dengie peninsula which is surrounded on three sides by coast and estuaries, which are all internationally designated. The Blackwater Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site is 3 km to the north. The Dengie SSSI, National Nature Reserve, SPA and Ramsar site is 4.5km to the east. The Crouch and Roach Estuaries SSSI, SPA and Ramsar site is 5.8km to the south. These designated areas are also within the Essex Estuaries Special Area of

Conservation and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone.

- It is not known whether there is any hydrological connectivity between the Site and the nearest river which feeds into the Dengie SSSI, National Nature Reserve, SPA and Ramsar site. Although some distance from the Site, any watercourse would create a potential pollution pathway between A65 and these designated sites, with respect to water quality and water quantity. The potential for the likely significant effects to the Dengie SPA and Ramsar site and Essex Estuaries SAC would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- Site A65 is a relatively small arable field, much of which is bounded by remnant Hedgerows (Priority habitat), mature trees and scrub. There is a patch of woodland plantation in the north-east corner eastern boundary which could be lost to the development. There is an existing waste processing plant which is located just beyond the north-west boundary.
- There are two candidate veteran mature Oak trees on the southern boundary of the Site. There is another mature Oak Tree on the southern boundary which is Notable. Candidate veteran trees have some of the required veteran features and have the potential to develop further features during the tree's life cycle that were not captured at the time of the survey. Veteran trees are classed as irreplaceable habitat.
- The Site is graded Amber because ecological impacts are likely to be moderate and likely to require low levels of mitigation to make the Site acceptable. The Site could have a minor impact upon international or national designations. This includes impacts to water quality of the tributary watercourses. The Site could have moderate impacts upon irreplaceable habitats i.e. candidate veteran trees. The Site could have a major impact upon the natural environment including Local Wildlife Sites, neighbouring waterbodies, Lowland Mixed Deciduous Woodland and Hedgerow Priority habitat and Priority species. It could result in disturbance and loss of habitat for Priority farmland species, e.g. Skylarks. The surrounding water bodies, Lowland Mixed Deciduous Woodland and Hedgerow Priority habitat could also be indirectly affected.
- Any application would require demonstration that the operations would not affect the hydrology of the existing water bodies, Hedgerows, small woodland, and other boundary habitats. Mitigation may include - but not be limited to - adequate and appropriate buffers between the Site and these habitats, particularly the candidate veteran trees; prevention of deterioration of water quality to watercourses; compensatory habitat for farmland Priority species. Water run-off from the Site should not be allowed to enter directly into the waterbodies.

- The allocation of The Site would likely result in 'less than substantial' harm at a low-level to Asheldham Youth Church of St Lawrence (List UID: 119188) due to change within its setting.
- The impact to Asheldham Hall (List UID: 473017) would likely be the lowest level of 'less than substantial' harm due to the intervening development.
- The allocation of this Site would have a cumulative impact upon the listed buildings.
- The undeveloped, agrarian landscape of The Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies adjacent to an area known to contain extensive areas of archaeological features identified through aerial photographic cropmarks and previous archaeological excavation.
- The Site lies within an extensive cropmark complex a large part of which has been excavated. The archaeological evaluation and follow-on excavation has shown the presence of extensive Late Iron Age and Roman occupation.
- Within the Site cropmarks from aerial photography indicate potential enclosures, probably of a similar date to the areas already excavated.
- The Site lies to the west of the medieval church of St Lawrence which is designated at Grade II dating to the fourteenth century. Historically this would have formed a church/hall complex with Asheldham Hall.
- There is high potential for Palaeolithic archaeological remains and palaeoenvironmental remains.
- The Site is proposed to be served by the use of an existing access onto the B1021 Tillingham Road. The B1021 is a Secondary Distributor Road and accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.

- The Site contains Grade 3 quality soil (good to moderate quality land), which has the potential for being BMV land but is likely to have a minor impact on soil quality and agricultural land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land.
- One farm building is adjacent to the boundary of the Site (0m). Commercial buildings associated with Dengie Crops and two commercial buildings are more than 20m but less than or equal to 50m from the Site. Nine residential buildings, one community facility (place of worship) and one commercial building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

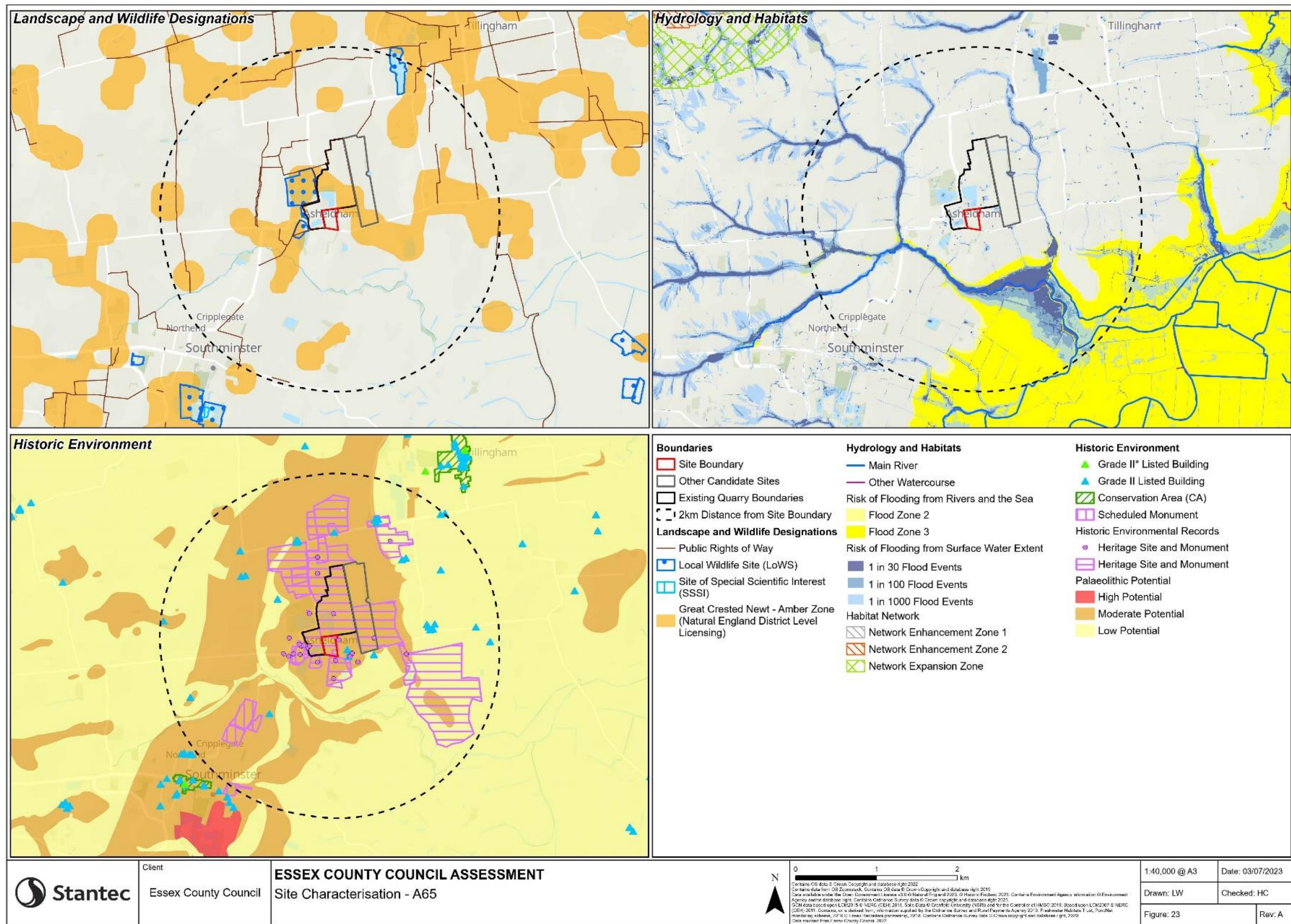


Figure 3.23: A65 - Land South of Asheldham Quarry
 Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023 132

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A66	White House Farm	Maldon	Agricultural	56	4

The Site is promoted as a new Site for mineral extraction at Woodham Walter, Maldon. The Site area is approximately 56 hectares and is proposed for an estimated 4 million tonnes of sand and gravel extraction over an estimated life cycle of 15 years. Infrastructure needed on site includes a processing plant. The adjoining uses include agricultural fields, farm buildings and woodland. The village of Woodham Walter is located to the west of the Site. The Site would be accessed to the south onto the Maldon Road (A414). This would include modifications of the existing Tom Tit Lane. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Red/Amber	Amber	Amber /Green	Red/Amber	Red/Amber	Green	Red/Amber	Green	Amber	Green	Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Blackwater/Brain/Lower Chelmer Valleys (C6), and the Site possesses a small portion of characteristic features of this LCA, including landform and particularly gentle valley sides. The modern loss of historical field boundaries limits the potential sensitivity of the Site.
- Public Rights of Way (PRoW) run within the Site and along the Site's northern boundary some of which provide circular walks from Woodham Walter through the woodlands and across the open arable landscape. Appropriate consideration would be required to mitigate the impacts on the PRoW users which may include visual screening.
- Site A66 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for the Blackwater Estuary SSSI, Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation. It is 2.5km directly from these sites and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. There is a potential pollution

pathway for water quality between the watercourse near to Site A66 and the statutory wildlife sites listed above. The potential for Likely Significant Effects to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.

- To the west of the Site, on the Danbury Ridge, are several Sites of Special Scientific Interest. The closest is Woodham Walter Common SSSI which is 1.7km away. The Wilderness (Ma11) Local Wildlife Site (LoWS) is adjacent to the western Site boundary. There are four other LoWS within 1 km of the Site.
- The adjacent LoWS -The Wilderness -is a streamside woodland that may have ancient origins. The pits to the north have a great wildlife diversity and include Wet Woodland Priority habitat. There is also Lowland Mixed Deciduous Woodland Priority habitat beyond the boundary in the southwest corner. Bog Wood (Ma22) LoWS is 220m the east and comprises probably ancient woodland. Manor Road Complex LoWS (Ma14) is c.1km downstream of the Site, connected by the watercourse.
- The Site comprises two large arable fields with boundaries which contain Hedgerows and tree lines (Priority habitat). Two connecting ditches with occasional trees -dry at the time of survey- cut through the Site. The ditch in the south-west corner passes through the adjacent Local Wildlife Site and into the associated north-south watercourse. This creates potential surface water / hydrological connectivity to this watercourse and beyond, towards the river Chelmer. There is a mature notable Oak tree located on the southern boundary. Approximately 2km kilometres of private access road would be constructed; however, it is not clear on the plans where this would be located and so potential impacts are not assessed.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have a major impact upon local designations and Priority habitats and species. This includes impacts to water quantity and quality of the watercourses on and near to the Site; to the adjacent The Wilderness LoWS, the Priority Hedgerow habitat and nearby Lowland Mixed Deciduous Woodland Priority habitat. In addition, smothering of leaves by dust, disturbance e.g. by noise and lighting. The Site could also result in disturbance and loss of habitat for Priority farmland species. Any application would require demonstration that the operations would not adversely affect the LoWS, the hydrology of the watercourses and associated habitats, or the waterbodies, Hedgerows, and other boundary and nearby habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats and prevention of deterioration to water quality to the watercourses.
- The allocation of the Site would result in 'less than substantial' harm at a low-level to six Grade II listed buildings including: Black Cottages (list UID: 1147136); Barn about 30 metres southeast of Whitehouse Farmhouse (list UID: 3521890); Ashman's Farmhouse (list UID: 1308659); Barns and

Outbuildings approximately 4 metres southeast of Ashman's Farmhouse (list UID: 1337368); Cartlodge approximately 8 metres southeast of Barn (list UID: 1147162); and Granary approximately 7 metres southeast of Barn (list UID: 1110962).

- The impact to Ruins of Old Woodham Walter Hall (list UID: 1337371) is likely to be the lowest level of 'less than substantial' harm due to existing landscaping and lack of visibility between the listed buildings and the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The northern part of the Site lies within an extensive cropmark landscape with large enclosures, probably containing settlement evidence, which extends into the Site.
- A double circular enclosure is recorded in the centre of the Site. From the shape and dimensions this is likely to be of prehistoric date.
- The Site abuts the Scheduled Monument of Woodham Walter Hall which lies on the south-western corner of the Site. The Nationally important site will need to be carefully considered in any submission and will require discussions with Historic England to assess if this Site with its present red line is viable. Documentary evidence indicates a deer park was located to the east of the Scheduled Hall which would place the Site within it.
- To the north of the Site lies a further Scheduled Monument comprising a cropmark complex including a triple ditched enclosure, probably of Late Iron Age date. This sits within a much wider area of cropmarks located to the north of the Site.
- Historic England should be consulted at the earliest opportunity as the quarrying will impact on the setting of the Scheduled monuments and may have a direct impact on drying out of deposits.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Site A66 is proposed to be served by the creation of a new access onto the A414 Maldon Road. The A414 is a Main Distributor Road and accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) above is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- The Site is graded Red/Amber as there is no access information provided.
- Appropriate access geometry and visibility splays will need to be demonstrated as achievable.
- Appropriate mitigation required to facilitate the access and its use.
- An additional crossing of the local road network (Old London Road) will be required. No details provided. This will require further technical assessment.
- 3 Public Rights of Way cross the Site. 5 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A watercourse is 30m west of the Site and another watercourse is 100m west. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- Ten residential buildings and a caravan park are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.

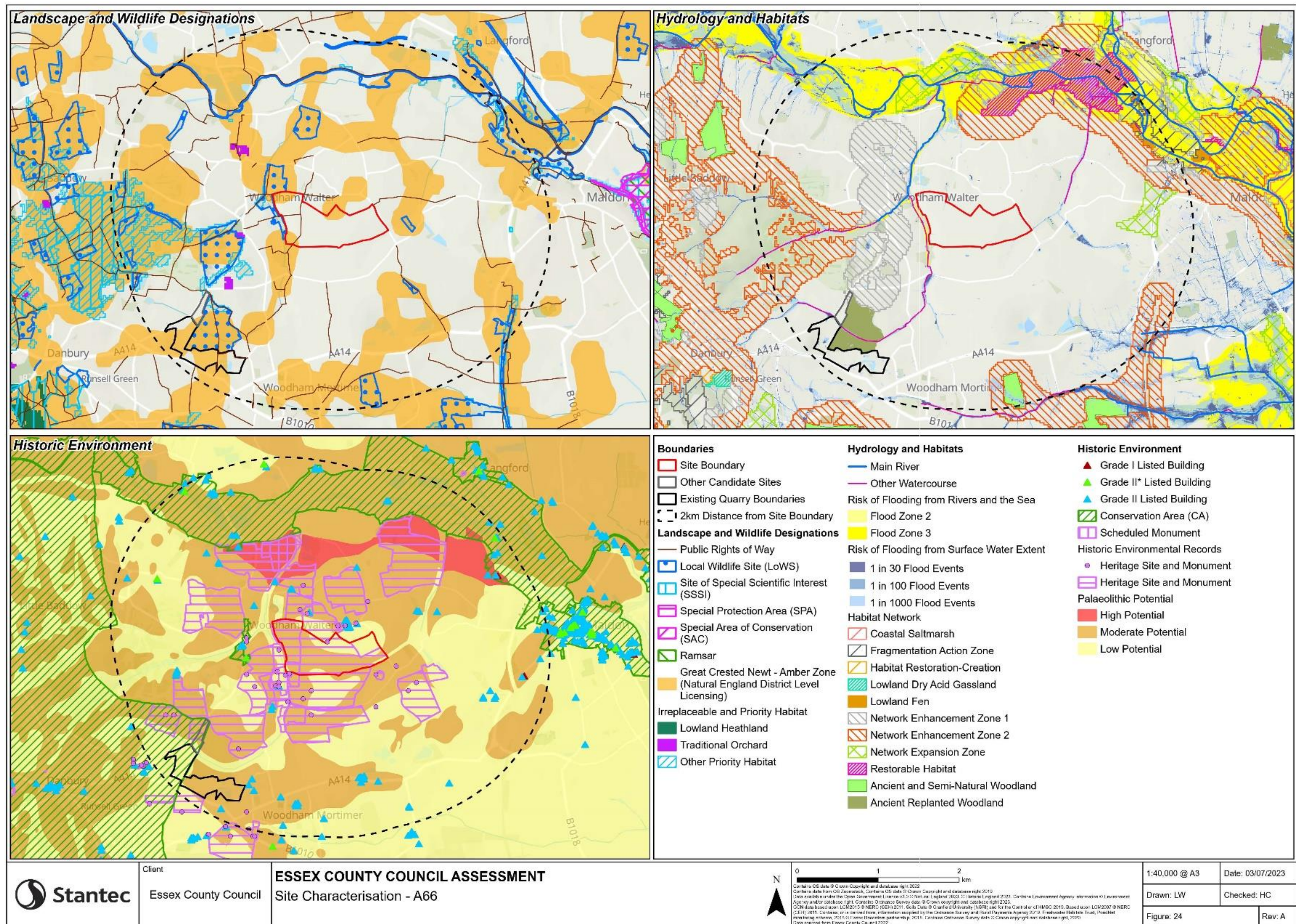


Figure 3.24: A66 - White House Farm
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023 137

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A67	Church Farm	Tendring	Agricultural	21	2

The Site is promoted as an extension to an existing Site for mineral extraction (Alresford Quarry) and is located to the north of Alresford Quarry. The Site area is approximately 21 hectares and is proposed for an estimated 2 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. The adjoining uses include agricultural fields, two waterbodies, farm buildings and woodland. The village of Alresford is located to the north and north east of the Site. The Site would be accessed using the existing haul road that serves Alresford Quarry. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber/Green	Red/Amber	Red/Amber	Amber	Amber	Red	Red/Amber	Green	Green	Amber	Green	Amber	Amber/Green	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3) of which the Site possesses a limited number of distinct characteristic features including large flat farmland plateau, with straight and regular field patterns.
- The southern boundary of Site A67 is unclear. Distances below are based upon the red line boundary shown on the GIS map. If the boundary includes the additional southern field, the distance from A67 to the River Colne and designated sites listed below would be less.
- Site A71 is 400 metres northeast of the Colne Estuary Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site, the Essex Estuaries Special Area of Conservation (SAC) and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. These areas contain Coastal Saltmarsh and Mudflats Priority habitats. The Colne Estuary is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species. The potential for Likely Significant Effects to the SPA, SAC and Ramsar site would need to be

considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.

- Alresford Lodge Pits Local Wildlife Site (LoWS) is adjacent to the Site. An additional nine LoWS are found within one kilometre. The Ancient Woodlands of Crestland Wood and Oldhall Wood are 255 metres and 497 metres from the Site, respectively. The western part of the Site might comprise Acid Grassland Priority habitat. A Priority Hedgerow habitat is located on part of the western boundary and another is on the eastern boundary of the field.
- There is a candidate veteran tree in north-west corner of the Site, on the western boundary and there are several other mature trees which may have potential to be veteran or ancient trees within this western boundary Hedgerow. Candidate veteran trees have some of the required veteran features and have the potential to develop further features during the tree's life cycle that were not captured at the time of the survey. Veteran and ancient trees are irreplaceable habitat.
- The adjacent Alresford Lodge Pits LoWS contains Lowland Mixed Deciduous Woodland Priority habitat and large waterbody. Sixpenny Brook is on the other side of this; it runs roughly parallel with the western boundary and is c.70m from the extraction Site at its closest point. The access road runs through the Lowland Mixed Deciduous Woodland next to the large waterbody, and continues to the extant Alresford Quarry processing plant, via Site A71. This access road crosses Sixpenny Brook. Sixpenny Brook leads into the Colne estuary via Alresford Creek thereby creating a direct pollution pathway to it.
- The Site is graded Red/Amber because ecological impacts are likely to be major and it is likely to require high levels of mitigation to make the Site acceptable. Detailed studies combined with a Habitats Regulations Assessment (Appropriate Assessment) would be required to assess whether the Site would have a major impact upon the River Colne and its associated international and national designations and whether the adverse effects on the integrity of internationally important wildlife sites could be avoided with appropriate mitigation to the satisfaction of Natural England. This includes impacts to water quality affecting the designated (and Priority) habitats of the River Colne and other tributary watercourses; disturbance to, and loss of functionally-linked land for, breeding and wintering birds for which the SSSI, SPA and Ramsar site are designated.
- The Site could have a moderate impact upon irreplaceable habitats, i.e. the candidate veteran tree - and the Hedgerow containing other trees which may be veteran or ancient. The Site could also have a major impact upon Local Wildlife Sites and Priority habitats and species, particularly if the habitat which may be Acid Grassland were to be removed. Hedgerows and Lowland Mixed Deciduous Woodland Priority habitats adjacent to the boundary could be affected directly and indirectly.

- Other mitigation is likely to include prevention of hydrological changes to the Woodlands and Hedgerows; substantial buffers between the Quarry and the Woodlands and Hedgerows; and prevention of deterioration of water quality to the River Colne; prevention of disturbance to breeding and non-breeding birds using the River Colne which are designation features of the SSSI, SPA and Ramsar site; watering to suppress dust; and wildlife sensitive lighting. Compensation would be required for the loss of the Acid Grassland.
- There is an access track already in place but there are narrow sections near to the hedgerows and tree lines these will need careful consideration to ensure that they are not adversely affected.
- Other mitigation measures should be used, such as watering to suppress dust and wildlife sensitive lighting. General best practice pollution prevention would be likely. Activities which have the highest potential to generate dust, such as haul roads and mineral stockpiles, should be located away from watercourses, woodlands and the other existing habitats and should be regularly dampened to minimise dust emissions.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of three Grade II listed Church Farmhouse (list UID: 120146).
- The impact to Ruins of Church of St Peter (list UID: 120147) is likely to be a low-level of 'less than substantial' harm.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. In the northern area of the Site a circular enclosure is interpreted as being of prehistoric date and possibly a ritual monument. Further possible ring ditches are recorded within the Site.
- A scheduled monument lies within 200m to the south of the Site.
- The Site has potential to contain Palaeolithic archaeological remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access proposed via a new access off a private road serving Alresford Quarry then onto Wivenhoe Road which is classified as a Secondary Distributor in

Essex County Council's Development Management Route Hierarchy. *This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):*

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- From a highway viewpoint there are concerns regarding the ability for HGVs to connect satisfactorily with the Main Road Network.
- Access proposed via a new access off a private road serving Alresford Quarry then onto Wivenhoe Road. Due to potential increase in HGV movements on top of the current vehicle movements, mitigation measures to upgrade the existing junction with Wivenhoe Road would be required.
- Impact the additional HGV movements will have on Bridleway 13 (Alresford_157).
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. A watercourse (Sixpenny Brook) is present within the Site boundary and a drainage ditch is present along the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- Four residential buildings are less than or equal to 20m from the Site. Forty two residential buildings and one commercial building are more than 20m but less than or equal to 50m from the Site. One school, two care homes. One nursery, four commercial buildings, one community facility (place of worship), one rail station, and two hundred and nineteen residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

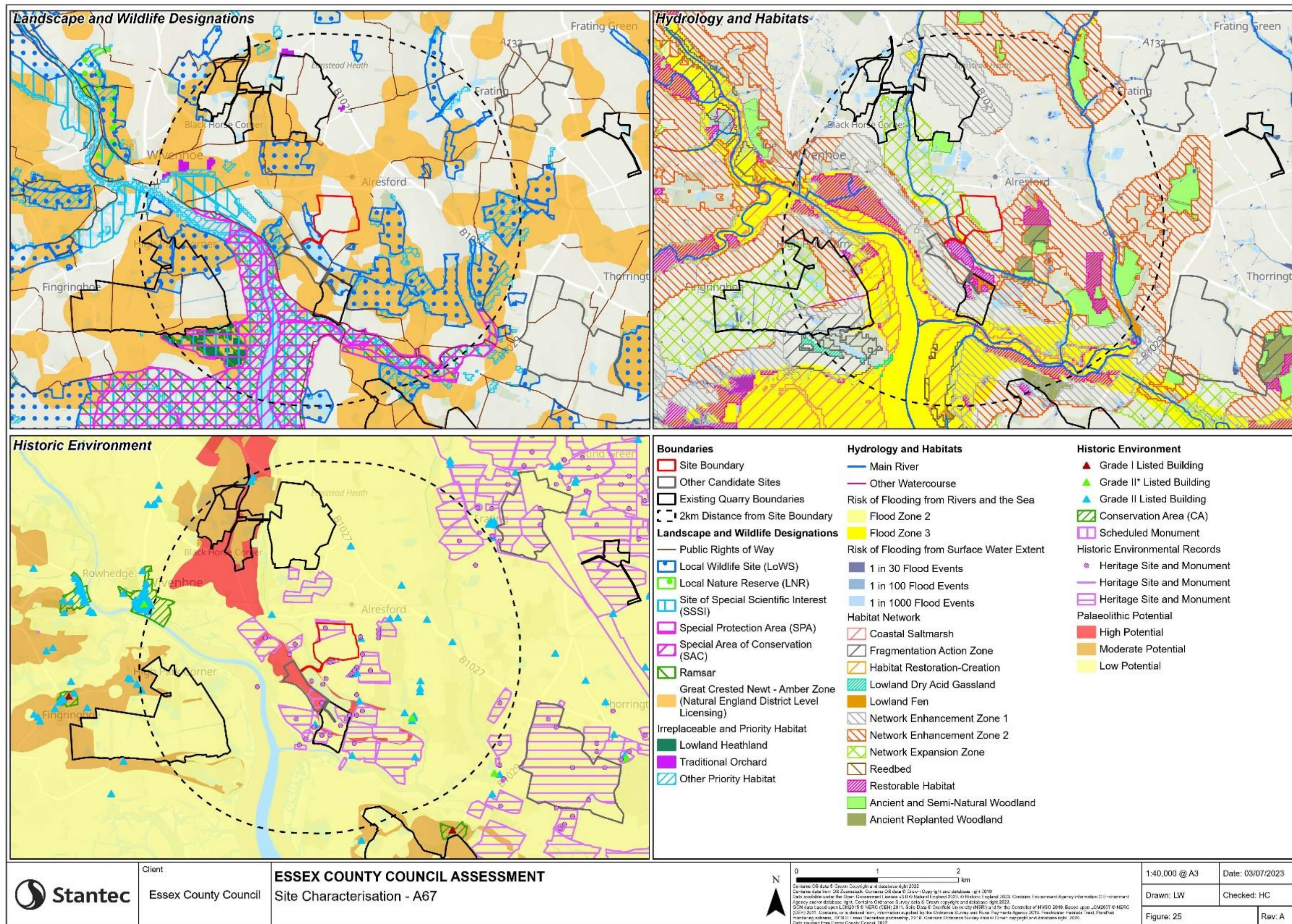


Figure 3:25 A67 - Church Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A68	Crabtree Farm	Tendring	Agricultural	67.62	6.10

The Site is promoted as a new minerals site at land to the south of Colchester Road, Great Bentley. The Site area is approximately 67.62 ha and is proposed for 6.10 million tonnes of sand and gravel with processing and distribution from a minerals processing plant on site. Infrastructure needed on site includes an improved Site entrance, mineral processing plant, recycling plant, ancillary equipment, and infrastructure. The adjoining uses include the Bentley Brook, agricultural fields, and residential and farm buildings. The village of Great Bentley is located to the south of the Site. This Site would be accessible from the Colchester Road A133. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber /Green	Red/ Amber	Red/ Amber	Green	Amber /Green	Red/ Amber	Red/ Amber	Green	Amber	Green	Red/ Amber	Green	Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3) of which the Site possesses a limited number of distinct characteristic features including large flat farmland plateau straight and regular field patterns.
- Bentley Brook is located to the west contributing toward the local blue infrastructure.
- Site A68 comprises several arable fields, separated by species poor Hedgerow Priority habitat, many of the hedgerows possessed mature trees. Adjacent to the west are two small reservoirs and a pond is located to the northwest. A wet ditch borders the northern boundary. Site A68 is not located within a Site of Special Scientific Interest Impact Risk Zone. The Site is located c. 3.4 kilometres from the Colne Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), Ramsar site, the Essex Estuaries Special Area of Conservation (SAC) and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone.

- The Site may act as functionally-linked land for birds which are qualifying features of the Colne Estuary SPA and Ramsar site. This potential would need to be tested with appropriate surveys at application stage.
- The Site was not found to contain any ancient, veteran and candidate veteran trees; however, there are mature trees present across the northern boundary, with features considered likely to allow those trees to become veteran in the future, given the levels of degradation. Ancient and veteran are considered to be irreplaceable habitat.
- There are three Local Wildlife Sites (LoWS) found within one kilometre of the Site. The nearest, Bentley Brook Te50, is located c. 50 metres west, which is listed as Lowland Mixed Deciduous Woodland Priority habitat and ancient woodland.
- The Site is graded Amber-Green because ecological impacts are likely to be minor and may require low levels of mitigation to make the Site acceptable. It could have a moderate impact upon the natural environment including Priority habitats and species. This includes the direct loss of Hedgerow Priority habitat with mature trees, as well as potential hydrological impacts to retained habitats, and loss of and disturbance to habitats for Priority farmland species.
- Mitigation is likely to include prevention of hydrological changes to retained habitats, buffers between the Quarry and the nearby woodland, river, and hedgerows; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks. Adequate and appropriate compensation may be required for the loss of hedgerows, and loss of habitat for Priority farmland species.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of three Grade II listed buildings through a change within their settings: Crabtree Farmhouse (List UID: 1111405); Grange Farmhouse (List UID: 1111409); and Barn approximately 35 metres north east of Grange Farmhouse (List UID: 1306639).
- The impact to Sturrick Farmhouse (List UID: 1169253) is likely to be the lowest level of 'less than substantial' harm due to the increased distance from the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.

- Complex probable multi-period archaeological remains are densely concentrated along the boundary with Bentley Brook including potential prehistoric ritual monuments and settlement evidence. Evidence for prehistoric, Roman, and Medieval settlement and activity to the south of the Site has been confirmed through archaeological investigation.
- Access proposed via a new access serving the proposed site onto the A133 which is classified as a Strategic Route in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- New access required onto the A133.
- The proposed location of the access with existing junctions to the north-west and with the A133 roundabout to the east would make access onto the A133 difficult particularly during the peak periods, without significant mitigation measures
- Based on the signed speed limit the location of the proposed access has poor visibility in both directions as it is on the inside of a slight bend.
- The carriageway fronting the application may need to be widened to accommodate an appropriate junction arrangement.
- The proposal would have a significant impact on Bridleway 2 (Great Bentley_165).
- 1 Public Right of Way crosses the Site. Appropriate consideration would be needed to mitigate potential impacts on the Public Right of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. A watercourse (Bentley Brook) is 70m west of the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 1 quality soil (excellent quality agricultural land), Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate agricultural land) which is BMV land. Approximately over two thirds of the Site is in Grade 2 and one third is in Grade 1 and 3. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.

- Two farm buildings, and eight residential buildings are more than 50m but less than or equal to 250m from the Site. One commercial building is more than 50m but less than or equal to 250m from the Site access. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.

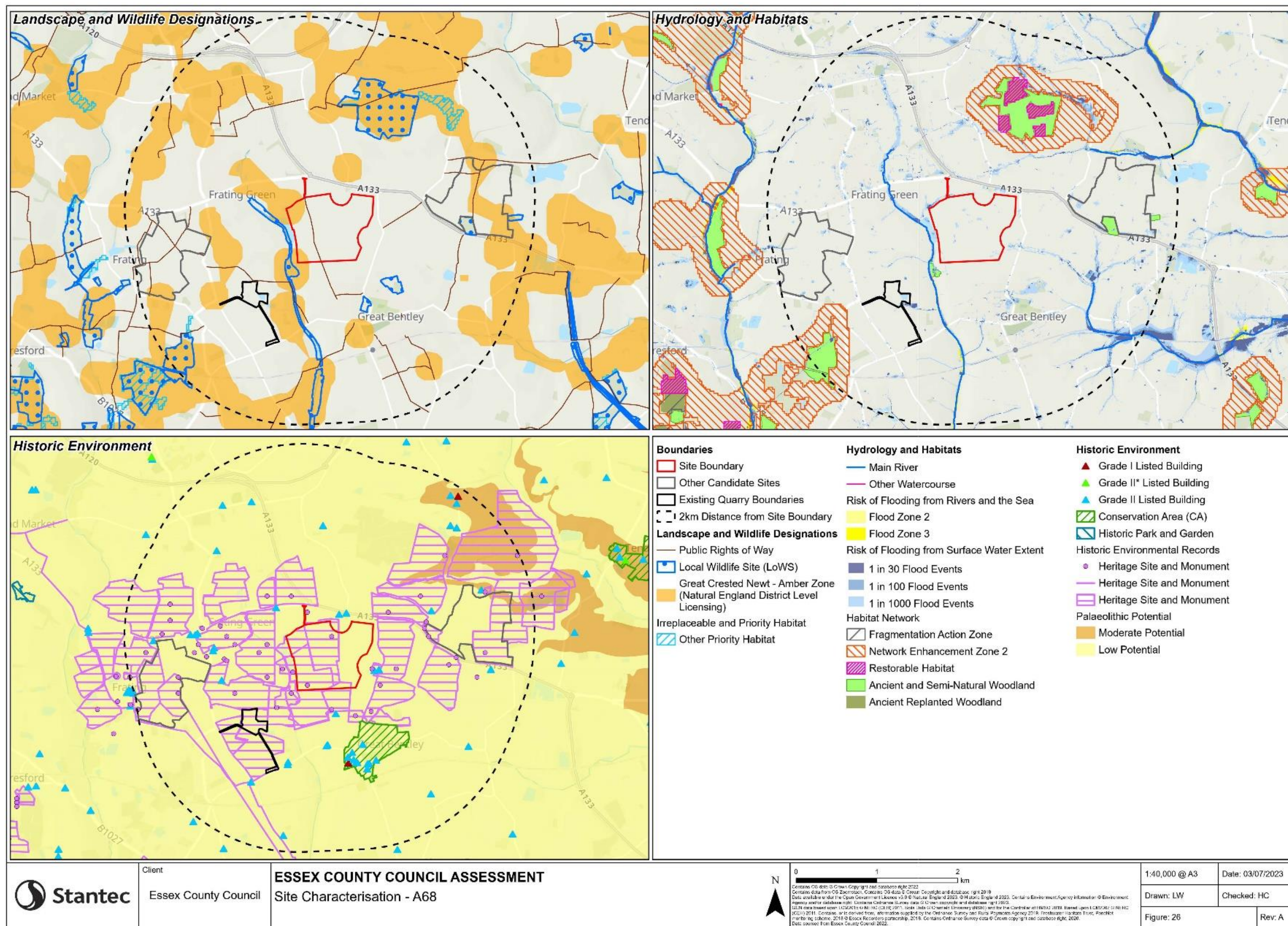


Figure 3.26: A68 - Crabtree Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A69	Frating Hall	Tendring	Agricultural	47	4

The Site is promoted as a new minerals Site at Frating, Tendring. The Site area is approximately 47 ha and is proposed for 4.00 million tonnes of phased sand and gravel extraction with restoration using inert material. The Site could be worked at any time during the plan period. Infrastructure needed on site includes a processing and stock area and weighbridge and associated welfare facilities. The adjoining uses include agricultural land, Main Road (A133), Great Bentley Road and Rectory Road (B1029), and residential and commercial buildings. The village of Frating is located to the north east of the Site. This Site would be accessed from the Colchester Road A133. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber/Green	Amber	Red/Amber	Amber	Green	Amber/Green	Red/Amber	Red/Amber	Green	Amber/Green	Green	Red/Amber	Red	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3) of which the Site possesses a limited number of distinct characteristic features including large flat farmland plateau, with straight and regular field patterns.
- Site A69 is located in Site of Special Scientific Interest Impact Risk Zone for the Colne Estuary Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site. It is 2.3 kilometres from the Colne Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), Ramsar site and Essex Estuaries Special Area of Conservation. The Site is 2.7 kilometres from the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. Additionally, the Site is 4.7 kilometres from the Colne Local Nature Reserve (LNR). The Colne Estuary is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species. There is moderate potential for significant effects to the integrity of the Colne Estuary SPA and Ramsar site and Essex Estuaries SAC which need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.

- The Site may act as functionally-linked land for birds which are qualifying features of the Colne Estuary SPA and Ramsar site. This potential would need to be tested with appropriate surveys at application stage.
- The Site was not found to contain any ancient, veteran and candidate veteran trees; However, there are mature trees present across the Site and within the Site's hedgerows. Whilst not identified on this site, ancient woodlands and ancient and veteran trees are irreplaceable habitats. There are a number of Hedgerows Priority habitat adjacent to the Site boundary and within the Site.
- Church Road Wood, Frating Te32 Local Wildlife Sites (LoWS) is c.100 metres from the Site. An additional five LoWS are found within one kilometre. Te32 is listed as Lowland Mixed Deciduous Woodland Priority habitat. There is one ancient woodland within 500 metres of the Site, Hockley Wood, which is located 400 metres south.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make the Site acceptable. Detailed studies combined with a Habitats Regulations Assessment (Appropriate Assessment) would be required to assess whether the Site would have a moderate impact upon the Colne Estuary and its associated international and national designations and whether the adverse effects on the integrity of internationally important wildlife sites could be avoided with appropriate mitigation to the satisfaction of Natural England. This includes impacts to water quality of the Colne Estuary and other tributary watercourses via surface and ground water; disturbance to breeding and wintering birds for which the Colne Estuary SSSI, SPA and Ramsar site are designated; and loss of functionally-linked land e.g. for Brent Geese.
- In addition, the Site could have moderate impacts upon impact upon Local Wildlife Sites, one of which is located in close proximity to the Site. A number of Hedgerow Priority habitat adjacent to the boundary and within the Site with mature trees could be affected directly and indirectly by the proposals.
- Other mitigation measures should be used, such as watering to suppress dust and wildlife sensitive lighting. General best practice pollution prevention would be likely. Activities which have the highest potential to generate dust, such as haul roads and mineral stockpiles, should be located away from watercourses, woodlands and the other existing habitats and should be regularly dampened to minimise dust emissions. Water run-off from the Site should not be allowed to enter directly into the watercourses.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed building due to a change in their setting: Old Church House (list UID: 120078); Frating Hall (list UID: 120079); Granary approximately 50 metres southeast of Frating Hall (list UID: 120084); and Barn approximately 40 metres east of Frating Hall (list UID: 120083)

- The impact to Ivy Lodge (list UID: 120090) would be a low level of 'less than substantial' harm due to the greater distance from the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site contains a wide range of archaeological deposits identified from aerial photography. In the southern area of the Site two enclosures are recorded interpreted as being of potential prehistoric date.
- On the western and central areas a series of rectilinear enclosures are recorded, potentially either settlement enclosures or a field system. Aerial photographs show a large number of pit like features in at least two of the fields within the Site.
- To the west of the Site lies the historic church/hall complex at Frating Hall. The setting of a number of heritage assets will be affected. The Frating church to the west of the south western corner of the Site has the potential to have occupation of medieval date in its vicinity.
- Access proposed via a new access serving the proposed site onto the A133 which is classified as a Strategic Route in Essex County Council's Development Management Route Hierarchy. This corresponds to (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- New access required onto A133 – minimum T-junction with designated right turn lane on the A133, extension of street lighting, currently terminates at the terminal signs for the 40-mph speed limit for Frating village.
- Appears to have good visibility in both directions if vegetation is cut back and maintained.
- The carriageway fronting the application appears to be capable of accommodating an appropriate junction arrangement.
- Evidence of new bus infrastructure (shelter, footway, pedestrian refuge) being installed close to the proposed site access, these may need to be re-located.
- 3 Public Rights of Way cross the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.

- The Site is within Zone III - Total Catchment Groundwater SPZ and has medium to low groundwater vulnerability. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 1 quality soil (excellent quality agricultural land) and Grade 2 quality soil (very good quality agricultural land) which is BMV land. Approximately half the Site is in Grade 1 and half the Site is in Grade 2. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. The Site contains a high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Thirteen residential buildings, one farm building, and two commercial buildings are outside the Site boundary less than or equal to 20m from the Site. Eighteen residential buildings are more than 20m but less than or equal to 50m from the Site. Forty two residential buildings and one farm building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

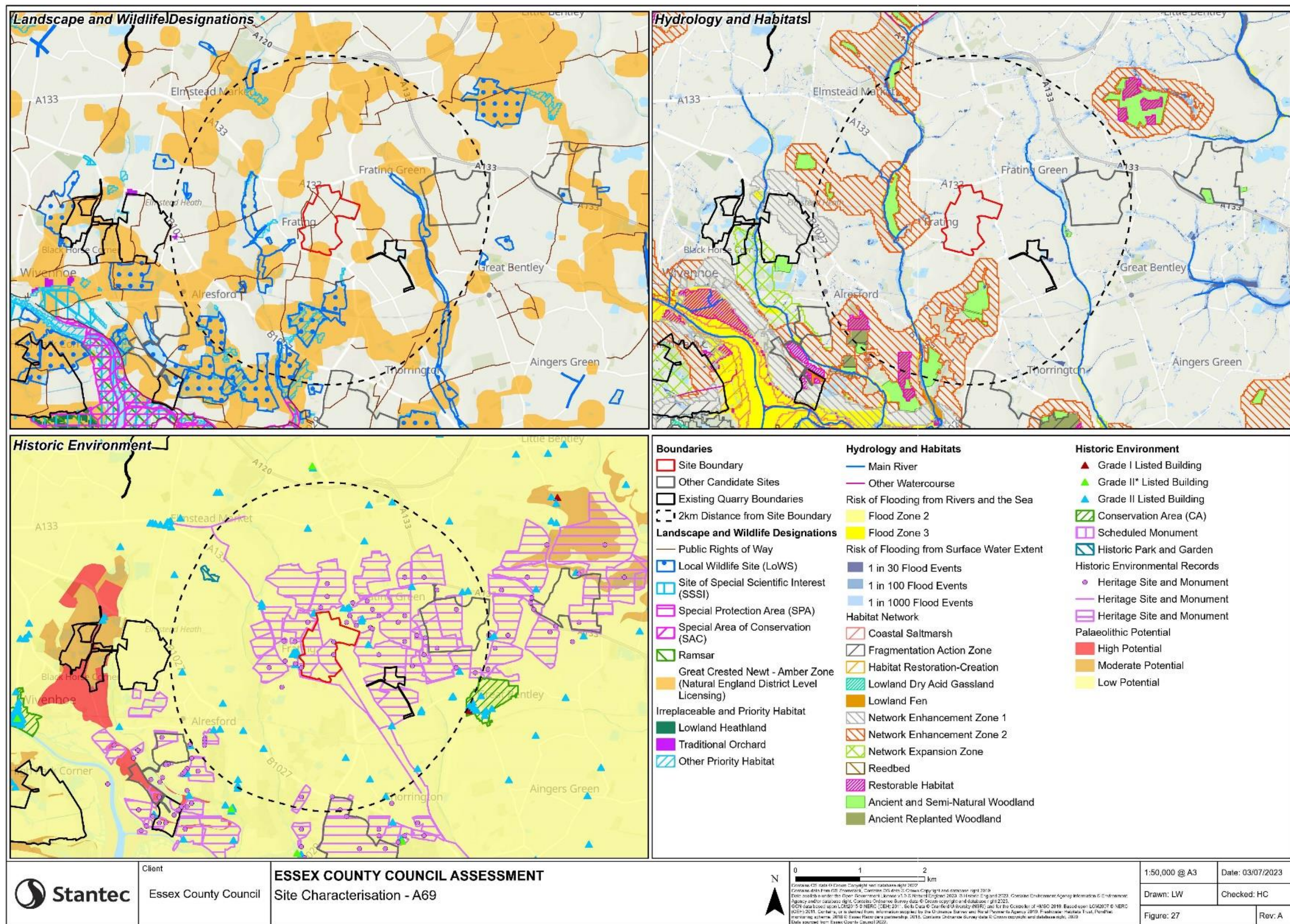


Figure 3.27: A69 - Frating Hall
Review of Essex MLF 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023 152

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A71	Lodge Farm	Tendring	Agricultural	11.2	0.8

The Site is promoted as an extension to the existing mineral site (Alresford Quarry) and is located to the north-west of Alresford Quarry. The Site area is approximately 11.2 ha and is proposed for 0.8 million tonnes of sand and gravel extraction which would be excavated and transported to the existing plant site at Alresford Quarry. The Site could be worked at any time during the plan period and if Site A67 is also allocated these sites would be worked consecutively. The adjoining uses include the Sixpenny Brook, two waterbodies, an access road (unnamed), Alresford Lodge Pits Local Wildlife Site woodland, agricultural fields, and the existing Alresford Quarry. The village of Alresford is located to the north of the Site. This Site would be accessed from the existing established quarry haul road at Alresford Quarry. The suitability of the existing access would need to be considered further. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Amber/Green	Amber	Green	Red	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Amber/Green	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3), notwithstanding this, the Site is close to the border of Dengie and Foulness Coast (F3) of which the Site is more aligned with in terms of remote tranquil character, demonstrating a number of distinct characteristic features from both LCAs including arable farmland with widely dispersed blocks of woodland/small copses with open views. Appropriate consideration is required to protect the characteristic features of the LCA.
- Two Public Rights of Way (PRoW) travel along and through the Site allowing views west across toward the River Colne. The views allowed of the River Colne are considered sensitive, and proposed mineral extraction would be located between the PRoW and the river. We would therefore expect these views to be screened and the perceptual quality from these receptors to be adversely impacted, with limited mitigation options.

- Site A71 is in a highly sensitive location. It is 130 metres from the Colne Estuary Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site, the Essex Estuaries Special Area of Conservation (SAC) and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. These areas contain Coastal Saltmarsh and Mudflats Priority habitats. The Colne Estuary is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species. There is a high potential for adverse effects to the integrity of the SPA, SAC and Ramsar site which need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- The Site also contains a number of ancient, veteran and candidate veteran trees; ancient and veteran trees are considered to be irreplaceable habitat.
- Two Local Wildlife Sites are adjacent to the Site, and there are a number of Priority habitat Hedgerows and three Lowland Mixed Deciduous Woodlands (Priority habitat) adjacent to the boundary. The Site contains Acid Grassland Priority habitat which would be lost.
- The Site is graded Red/Amber because ecological impacts are likely to be major and it is likely to require high levels of mitigation to make the Site acceptable. Detailed studies combined with a Habitats Regulations Assessment (Appropriate Assessment) would be required to assess whether the Site would have a major impact upon the River Colne and its associated international and national designations and whether the adverse effects on the integrity of internationally important wildlife sites could be avoided with appropriate mitigation to the satisfaction of Natural England. This includes impacts to water quality affecting the designated (and Priority) habitats of the River Colne and other tributary watercourses; disturbance to, and loss of functionally-linked land for, breeding and wintering birds for which the SSSI, SPA and Ramsar site are designated.
- In addition, the Site could have major impacts upon irreplaceable habitats (veteran and ancient trees) and ancient Hedgerows, Acid Grassland and Lowland Mixed Deciduous Woodlands which are Priority habitats could be affected directly and indirectly.
- Other mitigation is likely to include prevention of hydrological changes to the Woodlands and Hedgerows; substantial buffers between the Quarry and the Woodlands and Hedgerows; and prevention of deterioration of water quality to the River Colne; prevention of disturbance to breeding and non-breeding birds using the River Colne which are designation features of the SSSI, SPA and Ramsar site; watering to suppress dust; and wildlife sensitive lighting. Compensation would be required for the loss of the Acid Grassland. Veteran and ancient trees losses are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain requirement.

- The allocation of the Site would result in lowest-level of 'less than substantial' harm to the Grade II listed Alresford Lodge (list UID: 120148).
- There would be a cumulative impact arising from the allocation of the Site due to an existing quarry to the northeast of Alresford Lodge (list UID: 120148).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. In the southern area of the Site an enclosure, possible trackway, and pits, recorded as cropmark features, suggest archaeological activity.
- A scheduled monument lies within 500m to the east of the Site.
- The Site has high potential to contain Palaeolithic archaeological remains.
- Access proposed via a new access off a private road serving Alresford Quarry then onto Wivenhoe Road which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):
 - Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.
- From a highway viewpoint there are concerns regarding the ability for HGVs to connect satisfactorily with the Main Road Network.
- Access proposed via a new access off a private road serving Alresford Quarry then onto Wivenhoe Road. Due to potential increase in HGV movements on top of the current vehicle movements, mitigation measures to upgrade the existing junction with Wivenhoe Road would be required.
- Impact the additional HGV movements will have on Bridleway 13 (Alresford_157).
- 2 Public Rights of Way cross the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.

- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. A watercourse (Sixpenny Brook) is 130m north east of the Site and River Colne is 130m west. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Overhead Openreach BT power lines are present within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on electricity lines and power lines. Such mitigation may include diversion and/or protection.
- One residential building is less than or equal to 50m from the Site. Eleven residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

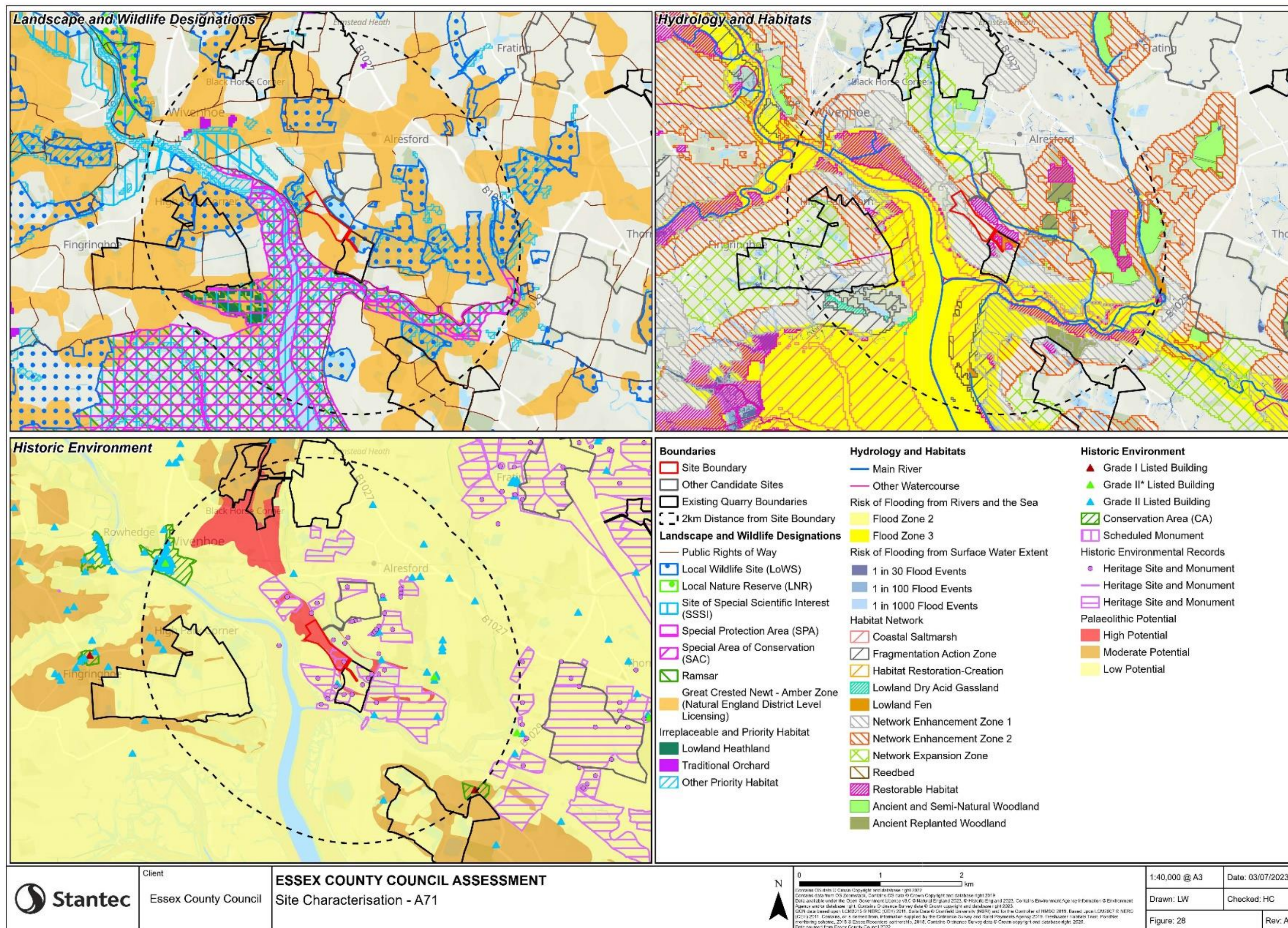


Figure 3.28: A71 - Lodge Farm
Review of Essex MLP 2014 - Assessment of Candidate Sand and Gravel Sites, November 2023 157

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A72	Martells - Southern Extension	Tendring	Agricultural	16.98	1.17

The Site is promoted as an extension to the existing minerals site (Martells Quarry) and is located to the south west of Martells Quarry. The Site area is approximately 16.98 ha and is proposed for 1.17 million tonnes of sand and gravel extraction with processing and distribution from the Martells Quarry processing plant. Site operations are proposed to commence in sequence to the permitted Martells Quarry Western Extension Area. The adjoining uses include the existing Martells Quarry, Slough Lane, woodland, agricultural fields and farm and commercial buildings. The village of Ardleigh is located to the north of the Site. This Site would be accessed via A120 using the existing Martells Quarry access. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Red/ Amber	Amber	Amber	Amber	Green	Green	Green	Amber	Green	Red/ Amber	Amber	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is located in Landscape Character Area (LCA) Tendring Plain (E3), and possesses a number of characteristic features, including the large flat arable plateau, straight regular field pattern, low trimmed hedgerows, and woodland copses. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Site A72 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Bullock Wood, which is located 1.92km to the west, and for Ardleigh Gravel Pit. Bullock Wood SSSI is an ancient woodland site. There is habitat connectivity between the Site and Bullock Wood SSSI but this connectivity is reduced by intervening roads. The haul road would travel over Ardleigh Gravel Pit SSSI, which is a geological SSSI situated within another part of Martells Quarry and waste site complex.

- A watercourse immediately north of the Site runs west and joins Salary Brook. Salary Brook feeds into the River Colne. The Site is c.10.5km from the Colne Estuary SSSI, Special Protection Area (SPA) and Ramsar site and the Essex Estuaries Special Area of Conservation (SAC) via watercourses there is hydrological connectivity between them. In addition, Upper Colne Marshes Special Scientific Interest (SSSI) is c. 7km downstream of the Site and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone is c.5.2 km downstream from the Site. In addition, most of Salary Brook downstream of the Site passes through a number of Local Wildlife Sites and a Local Nature Reserve. Salary Brook then joins the River Colne where it passes through more Local Wildlife Sites. There is a potential for the Site to impact water quality and quality of Salary Brook and the River Colne and their associated riparian habitats, which are mostly Priority habitats. The potential for the likely significant effects to the Colne Estuary SPA and Ramsar site, and Essex Estuaries SAC would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.
- Walls Wood is the closest Local Wildlife Site to the Site and is c.220m west of it. This is a relatively large site consisting of probably ancient streamside woodland. Ancient Woodland is irreplaceable habitat. There are three other Local Wildlife Sites within 1km, one of which is also Special Roadside Verge.
- Site A72 comprises two arable fields bounded by Hedgerows and lines of trees- most of which are Priority habitat-, and deciduous plantation woodland. There is mature Oak tree on the north-west boundary which is considered to be a Notable boundary feature of the Site.
- Lowland Mixed Deciduous Woodland Priority habitat is situated on part of the northern boundary and the above-mentioned watercourse flows westwards from this into Salary Brook. The northern Site boundary appears to fall within the strip of Woodland Priority habitat. This woodland is present on the first edition OS map; therefore, it could be ancient and additional investigations should be made. Ancient woodland is irreplaceable habitat.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have a moderate impact upon international or national designations, through impacts to water quality. The Site could have a major impact upon Salary Brook and upon local designations, ancient woodlands and other Priority habitats and species. This includes impacts to water quantity and quality of the adjacent watercourse and Lowland Mixed Deciduous Woodland Priority habitat as the groundwater may be affected through changes to hydrology. If the adjacent woodland were to be confirmed as ancient woodland, the Site's RAG assessment would be upgraded to Red-Amber.
- Any application would require demonstration that the operations would not affect the hydrology of the watercourse and associated habitats, Salary Brook, downstream LoWS, Woodland, Hedgerows, and other boundary habitats.

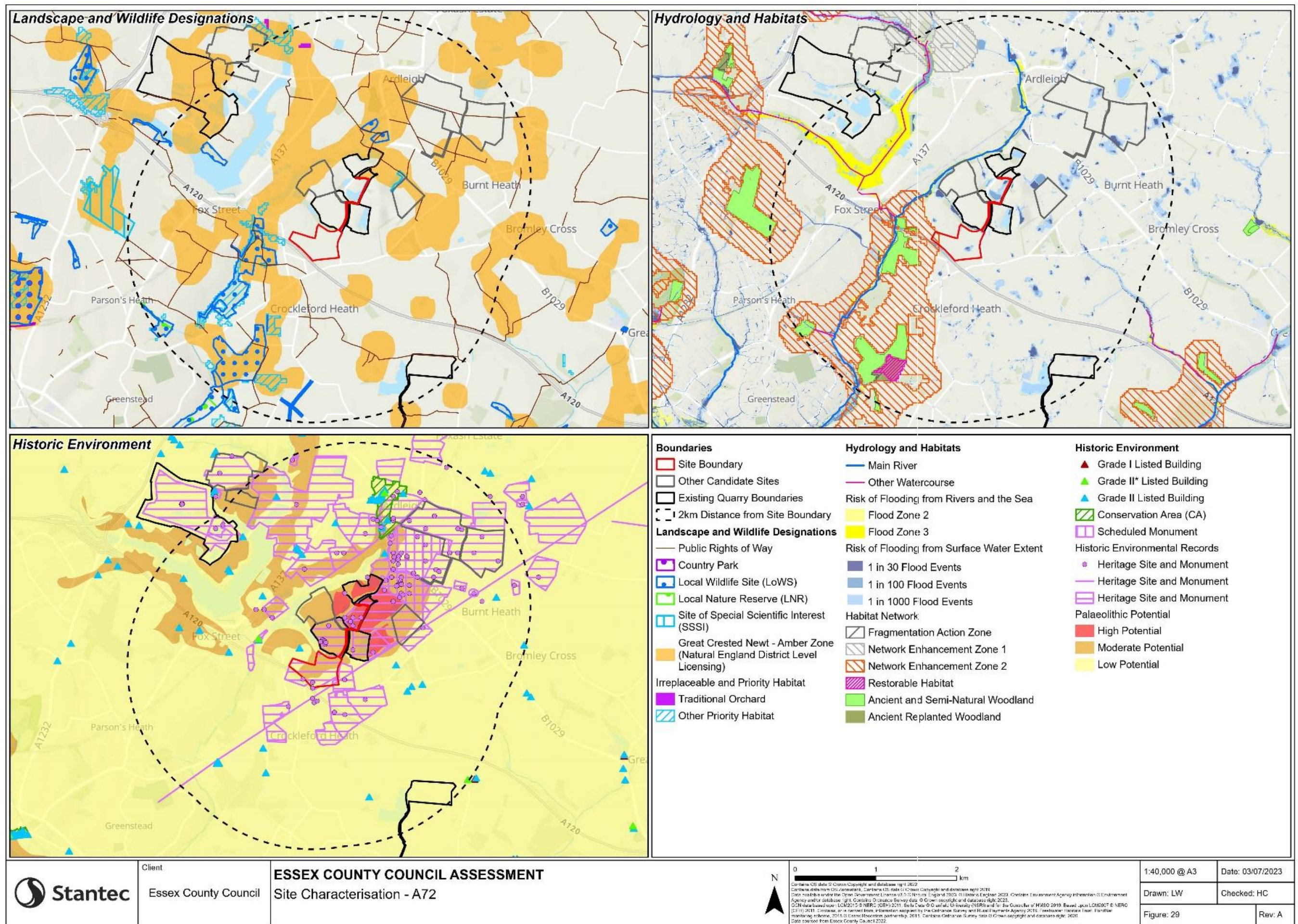
Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats; and prevention of deterioration to water quality to the watercourses and Salary Brook. Natural England should be consulted with respect to mitigation for the haul road continuing to cover one unit of Ardleigh Gravel Pit SSSI. Compensatory habitat for Priority farmland species may be required.

- The allocation of the Site in conjunction with the active Martells quarry site would likely result in 'less than substantial' harm at a mid-level to the significance of Grade II listed Hulls Farmhouse (List UID: 1112055).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the listed building and the fundamental change in land use and land character would undermine the ability to understand and appreciate its significance.
- The cumulative impact of this proposal and the proposed site allocation A73 Martells Western Extension would likely represent a high level of 'less than substantial' harm to the setting and significance of Hulls Farmhouse due to substantial curtailment of the agrarian landscape.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- The Site contains evidence for a possible Roman road and further linear features, some of which represent historic agricultural features.
- The Site lies within 1km of a Scheduled Monument
- The Site has potential to contain Palaeolithic archaeological remains.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Martells Quarry onto Slough Lane which is classified as a local road in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an

assessment of the impact on road safety. Access to existing proposed sites and sequencing would need to be considered further.

- For this further extension of the quarry the continued use of the private track access to the A120, via the lorry park, is required.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. The Site is within Drinking Water Protection Areas (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 1 quality soil (excellent quality agricultural land) and Grade 2 quality soil (very good quality agricultural land) which is BMV land. Approximately one sixth of the Site is in Grade 1 and five sixths of the Site are in Grade 2. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land -- this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains local Affinity Water pipelines within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Commercial activity (Martells Industrial Estate), two residential buildings and farm buildings associated with Slough Farm are more than 20m but less than or equal to 50m from the Site. Two commercial buildings and seventeen residential buildings are more than 50m but less than or equal to 250m from the Site. One residential building and one commercial building are more than 50m but less than or equal to 250m from the Site access. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.



<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A73	Martells - Western Extension	Tendring	Agricultural	13.28	0.25

The Site is promoted as an extension to the existing minerals site (Martells Quarry) and is located to the west and north west of Martells Quarry. The Site area is approximately 13.28 ha and is proposed for 0.25 million tonnes of sand and gravel extraction with processing and distribution from the Martells Quarry processing plant. Site operations to commence in sequence to the permitted Martells Quarry Western Extension Area. The adjoining uses include the existing Martells Quarry, Slough Lane, eight waterbodies, agricultural fields, woodland, commercial buildings, and a railway line. The village of Ardleigh is located to the north of the Site. This Site would be accessible via A120 using the existing Martells Quarry access. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber /Green	Amber	Amber	Green	Green	Green	Amber	Green	Amber	Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is located in Landscape Character Area (LCA) Tendring Plain (E3), and possesses a number of characteristic features, including the large flat arable plateau, straight regular field pattern, low trimmed hedgerows, and woodland copses. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Site A73 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Bullock Wood, which is located c.2km to the south-west. Bullock Wood SSSI is an ancient woodland site. There is habitat connectivity between the Site and Bullock Wood SSSI but this connectivity is reduced by intervening roads. The haul road would travel over part of Ardleigh Gravel Pit SSSI, which is a geological SSSI situated within another part of Martells Quarry and waste site complex.

- The Site is adjacent to Salary Brook (Main River) which, in turn, feeds into the River Colne. The Site is c.10km upstream of the Colne Estuary SSSI, Special Protection Area (SPA) and Ramsar site and the Essex Estuaries Special Area of Conservation (SAC). In addition, Upper Colne Marshes Special Scientific Interest (SSSI) is c. 7km downstream and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone is c.5.2 km downstream of the Site. Most of Salary Brook downstream of the Site also passes through a number of Local Wildlife Sites and a Local Nature Reserve and the River Colne passes through more Local Wildlife Sites. There is a potential for the Site to impact water quality and quality of Salary Brook, the River Colne, and their associated Priority habitats (Mudflats, Coastal Saltmarsh and Coastal and Floodplain Grazing Marsh). The potential for the likely significant effects to the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC would need to be considered further through a plan-level Habitats Regulations Assessment and any subsequent planning application.
- Walls Wood is the closest Local Wildlife Site to the Site and is c.220m south-west of it. This consists of probably ancient streamside woodland with younger woodland blocks. Ancient Woodland is irreplaceable habitat. A small component of the Site is on the same side of the A120, connected by woodland and hedgerows. There are three other Local Wildlife Sites within 1km, one of which is also Special Roadside Verge.
- Site A73 comprises an arable field bounded by Hedgerows and lines of trees- most of which are Priority habitat-, and deciduous plantation woodland. The Site is partly within a Great Crested Newt Amber Risk Zone.
- There is a veteran tree on the eastern boundary. There is also a candidate a veteran tree near to this, which is likely to be ancient and another Candidate veteran tree on the southern boundary.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have moderate impacts upon irreplaceable habitats, i.e. ancient and veteran trees, and candidate veteran trees. The Site could have a major impact upon Salary Brook and upon local designations, and other Priority habitats and species. This includes impacts to water quantity and quality of Walls Wood LoWS, the adjacent waterbodies, Traditional Orchard, and Lowland Mixed Deciduous Woodland Priority habitats. In addition, smothering of leaves by dust, disturbance e.g. by noise and lighting. The Site could also result in disturbance and loss of habitat for Priority farmland species, e.g. Skylarks.
- Any application would require demonstration that the operations would not adversely affect Ardleigh Gravel Pit SSSI, downstream LoWS, the hydrology of the Salary Brook and associated habitats, or the waterbodies, Hedgerows, veteran and ancient trees, and other boundary and nearby habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats and prevention of deterioration to water quality to the watercourses and Salary Brook. Natural England should be

consulted with respect to mitigation for the haul road continuing to run over one unit of Ardleigh Gravel Pit SSSI buried beneath it. Compensatory habitat for Priority farmland species may be required.

- The allocation of the Site in conjunction with the active Martells quarry site would likely result in 'less than substantial' harm at a mid-level to the significance of Grade II listed Hulls Farmhouse (List UID: 1112055).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the listed building and the fundamental change in land use and land character would undermine the ability to understand and appreciate its significance.
- The cumulative impact of this proposal along with the proposed site allocation A72 Martells Southern extension would likely represent a high level of 'less than substantial' harm to the setting and significance of Hulls Farmhouse due to substantial curtailment of the agrarian landscape.
- There are no non-designated or designated heritage assets recorded within the Site.
- The Site lies within an area of multi-period archaeological features as identified through aerial photographic evidence and archaeological investigation.
- The Site lies within 700m of a Scheduled Monument
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene palaeoenvironmental remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Martells Quarry onto Slough Lane which is classified as a local road in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an

assessment of the impact on road safety. Access to existing proposed sites and sequencing would need to be considered further.

- For this further extension of the quarry the continued use of the private track access to the A120, via the lorry park, is required.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. The Site is within Drinking Water Protection Areas (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- Commercial activity (Martells Industrial Estate) is adjacent to the boundary of the Site (0m). One residential, four commercial buildings, and a railway line are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would be likely difficult to achieve.

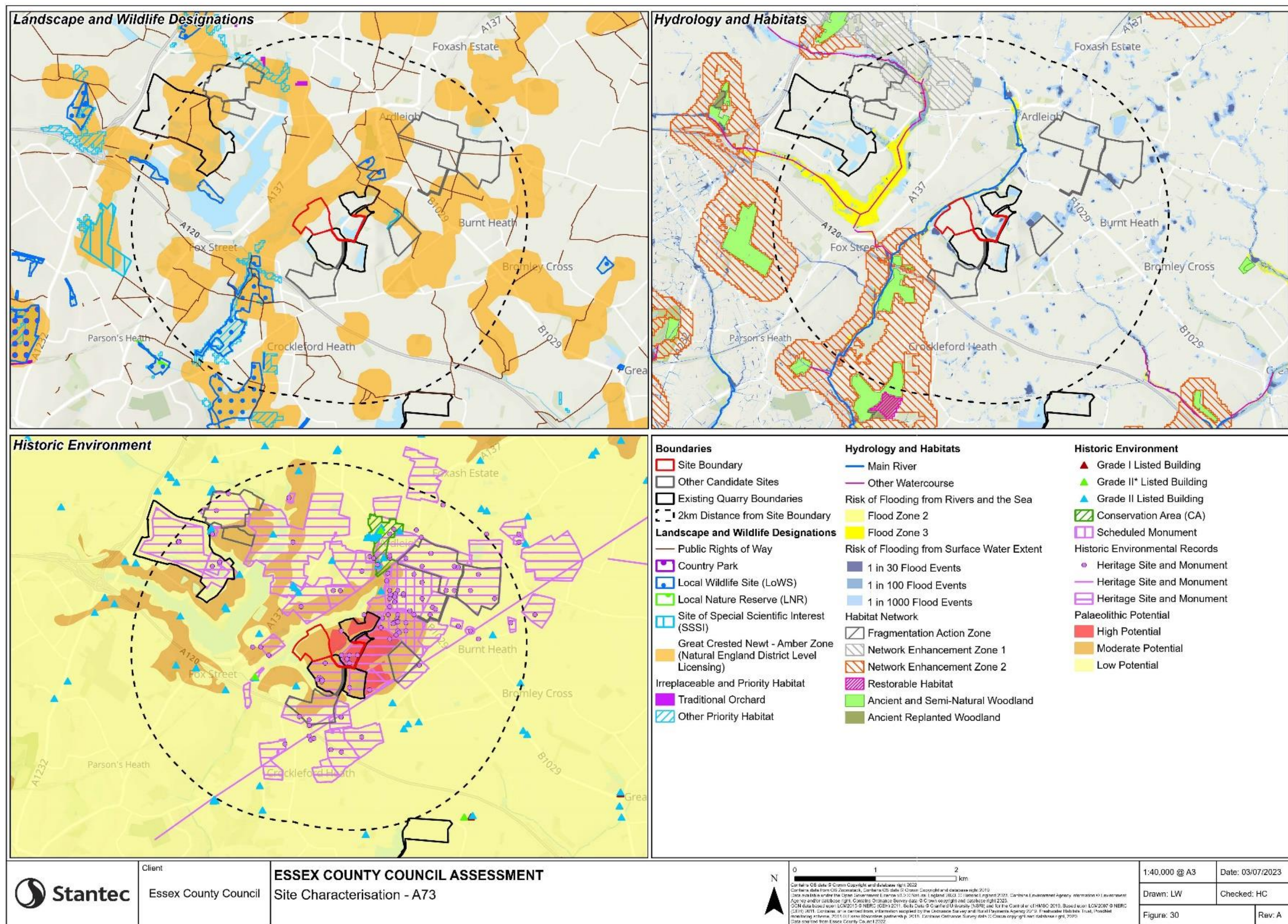


Figure 3.30: A73 - Martells – Western Extension
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<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A74	Thorrington Hall Farm	Tendring	Agricultural	105.6	4.70

The Site is promoted as a new minerals Site at Clacton Road, Thorrington, Tendring. The Site area is approximately 105.6 ha and is proposed for 4.70 million tonnes of sand and gravel extraction. The Site could be worked at any time during the plan period. Infrastructure needed on site includes a processing plant. The adjoining uses include agricultural fields, residential and commercial buildings, Clacton Road, Brightlingsea Road and woodland. The village of Thorrington is located to the north of the Site. A new road access to the Site is likely to be provided to the B1027 between Avocet Place and the property lying to the north of the Clacton Road, east of Station Road and west of Avocet Place. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Red/Amber	Red/Amber	Amber	Amber	Amber/Green	Red/Amber	Red/Amber	Green	Amber/Green	Green	Amber	Red/Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3) of which the Site possesses a limited number of distinct characteristic features including large flat farmland plateau, with straight and regular field patterns.
- St Mary Magdalen Church (Grade II* listed) is located on the north-eastern boundary of the Site, directly adjacent to the Ancient Woodland. There are strong views of the Church over the field hedgerows from the public footpath 8 (Thorrington) that runs through the Site. Whilst the immediate setting of the Church may have little impact as a result of mineral extraction, the wider setting of the Church are views in will be adversely affected.
- Site A74 is in a highly sensitive location. It is 280 metres from the Colne Estuary Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site, and 330 metres from the Essex Estuaries Special Area of Conservation (SAC) and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. These areas contain Coastal Saltmarsh and

Mudflats Priority habitats. The Colne Estuary is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species. There is a high potential for significant effects to the integrity of the SPA, SAC and Ramsar site which need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.

- The Site also contains a number of ancient, veteran and candidate veteran trees; ancient and veteran trees are considered to be irreplaceable habitat.
- Two Local Wildlife Sites are adjacent to the Site, both of which are listed as Lowland Mixed Deciduous Woodland Priority habitat and ancient woodland. There are a number of Hedgerows Priority habitat adjacent to the Site boundary and within the Site.
- The Site is graded Red-Amber because ecological impacts are likely to be major and it is likely to require high levels of mitigation to make the Site acceptable. Detailed studies combined with a Habitats Regulations Assessment (Appropriate Assessment) would be required to assess whether the Site would have a major impact upon the River Colne and its associated international and national designations and whether the adverse effects on the integrity of internationally important wildlife sites could be avoided with appropriate mitigation to the satisfaction of Natural England. This includes impacts to water quality affecting the designated (and Priority) habitats of the River Colne and other tributary watercourses; disturbance to, and loss of functionally-linked land for, breeding and wintering birds for which the Colne Estuary SSSI, SPA and Ramsar site are designated e.g. for Brent Geese.
- In addition, the Site could have major impacts upon irreplaceable habitats (veteran and ancient trees) and ancient woodland. Hedgerows and Lowland Mixed Deciduous Woodlands which are Priority habitats could be affected directly and indirectly by the proposals.
- Other mitigation is likely to include prevention of hydrological changes to the Woodlands and Hedgerows Priority habitats; substantial buffers between the Quarry and the Woodlands and Hedgerows Priority habitats; and prevention of deterioration of water quality to the River Colne; prevention of disturbance to breeding and non-breeding birds using the River Colne which are designation features of the SSSI, SPA and Ramsar site; watering to suppress dust; and wildlife sensitive lighting. Compensation would be required for the loss of farmland bird habitat. The loss of the veteran and ancient trees losses is not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain requirement.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of the Grade II* listed Church of St Mary

Magdalene (List UID: 1265150) and neighbouring Grade II listed Thorrington Hall (List UID 1235267).

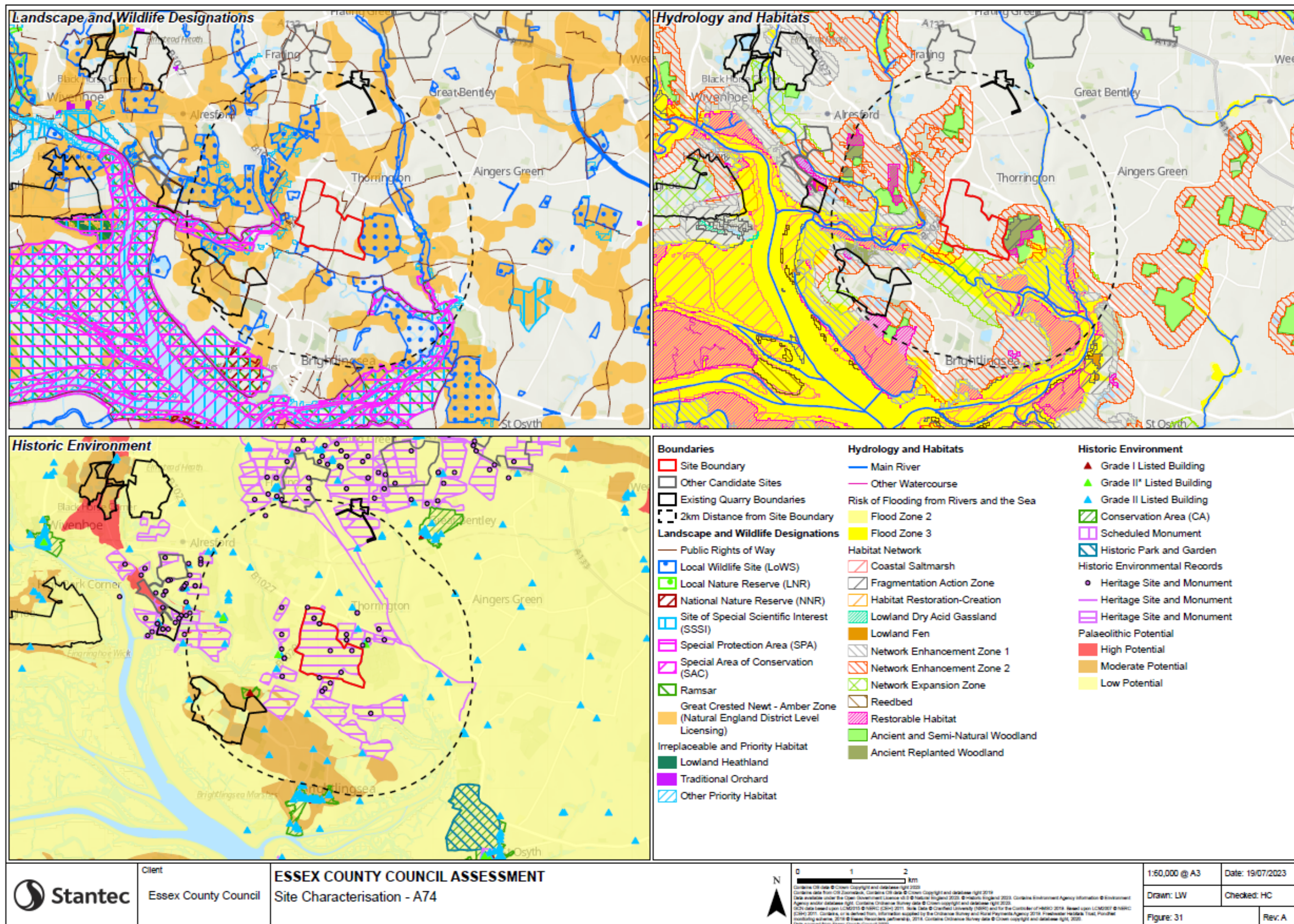
- The Site is undeveloped open, agrarian land which contributes to the setting and significance of both listed buildings. There has been a low degree of change to this landscape over time and the listed buildings currently enjoy a sense of seclusion and tranquillity, which allows their significance to be appreciated.
- The church tower is a landmark and it is likely that views across the Site would be disrupted by built development and vehicular movement associated with such a fundamental change in land use and character.
- The Site contains a wide range of archaeological deposits identified from aerial photography.
- On the western area of the Site a sequence of small enclosures and two possible ploughed flat burial mounds are present along with former field boundaries. On the eastern area of the Site a series of linear features located at right angles to a probable trackway are recorded.
- Within the surrounding area a range of other cropmark sites are recorded comprising a similar mix of circular features possibly representing barrows, enclosures, and linear features.
- The church/hall complex of Thorrington Hall lies to the northeast of the Site.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access proposed via a new access serving the proposed site onto the B1027 which is classified as a Main Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- However, the implementation of a 7.5 tonne weight restriction on Alresford viaduct on the B1027 north-west of Wivenhoe Road, Alresford, and the implementation of a diversion route to avoid the weak structure mean that all HGV movements from the Site would be directed eastwards on the B1027 to St Osyth and Clacton on Sea and then northwards onto the A133.

- Concerns over HGV traffic generation/routeing from site, in particular for Thorrington village.
- Access proposed by the creation of a new access onto the B1027. No details provided.
- Appears to have good visibility in both directions
- Concerns over route from site to main road network due to 7.5T weight restriction on the B1027 Main Road, Alresford.
- Due to potential increase in HGV movements on top of the current vehicle movements, mitigation measures to upgrade the existing junction (double mini roundabout) with Tenpenny Hill, Station Road, B1029 Brightlingsea Road and B1027 Clacton Road may be required. The junction has been highlighted as part of Tendring's Local Plan.
- 2 Public Rights of Way cross the Site. 3 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has unproductive/medium to low groundwater vulnerability. A water body is present within the Site boundary and a large drainage ditch runs along the Site. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. The Site contains intermediate pressure gas mains (allocated by Cadent Gas) within the Site boundary. Local Anglian Water foul rising mains are present within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas main and foul rising main to make the Site acceptable which may include diversion and/or protection.
- Two residential buildings are adjacent to the boundary of the Site (0m). Fifty six residential buildings are outside the Site boundary less than or equal to 20m from the Site. Twenty two residential buildings and two commercial buildings are more than 20m but less than or equal to 50m from the Site. Two community facilities (place of worship), one community facility

(allotments), commercial activity (industrial estate), one outdoor amenity (play area), one sports facility (recreation ground), six commercial buildings and two hundred and three residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.



<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A75	Land at Orford	Uttlesford	Vacant and unused	11.5	1.80

The Site is promoted as a new minerals Site at Orford land, Ugley. The Site area is approximately 11.5 ha and is proposed for between 1.50 and 1.80 million tonnes of sand and gravel through a phased approach to minimise impact with restoration taking place as well as stripping the top soil with bench working. The Site could be worked at any time during the plan period. Infrastructure needed on site includes a mobile plant. The adjoining uses include agricultural fields, woodland, residential and commercial buildings, and the B1383. The village of Elsenham is located to the east of the Site. This Site would be accessible by the B1383, with minor improvements required. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber /Green	Amber	Amber /Green	Red/Amber	Red/Amber	Amber	Red/Amber	Green	Amber	Green	Amber	Green	Red

Key findings of the assessment are as follows:

- The majority of the Site is covered by Landscape Character Area (LCA) North West Essex Chalk Farmland (A1) on the boundary of Stort Valley (C2). The Site possess high-quality characteristic features of the LCA, demonstrating strong examples of distinct landform including strongly rolling landform with panoramic views from ridgetops.
- The eastern boundary of Site A75 is unclear. The plans provided in Figures 1 to 3 of Appendix A show two different boundaries. Distances below are based upon the red line boundary shown on the GIS map. If the boundary includes the additional eastern section, the Site would be significantly larger.
- Site A76 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Quendon Wood SSSI which is an ancient woodland site c.2.7km to the north of the Site.
- There are four Local Wildlife Sites (LoWS) within one kilometre. Alsa Lodge LoWS is immediately adjacent and has an important invertebrate fauna.

Aubrey Buxton Reserve LoWS is 450m to the southwest and has a complex of copses, grassland, and numerous ponds. The other two LoWS are ancient woodlands.

- This Site is an undulating grassy site bounded by mature Hedgerows and trees and small patches of broadleaved woodland. The eastern boundary cuts through the middle of a field. There is a watercourse running through the Site and also a mature Hedgerow with large mature Oak trees (Priority habitat), in a separate location. These might need to be removed to accommodate the development. A Main River passes near to the western boundary of the Site, on the other side of Cambridge Road, which feeds into Stansted Brook; this which eventually feeds into the River Roding.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make it acceptable. The Site could have major impacts upon Priority habitat, particularly if the internal Hedgerows, mature trees, and watercourse were to be removed. The Site could have a moderate impact upon irreplaceable habitats (ancient woodlands); local designations (the LoWS) and the river. Impacts could include changes to the water table, altering the water quality smothering of leaves by dust; disturbance e.g. by noise and lighting; and disturbance and loss of habitat for Priority farmland species, e.g. Skylarks.
- Any application would require demonstration that the operations would not affect the nearby LoWS, the hydrology of the ancient woodlands, watercourses, and boundary habitats. Appropriate mitigation and compensatory habitat may be required for the loss of the Hedgerow Priority habitat, mature trees, watercourse, and habitat for Priority farmland species. Water run-off from the Site should not be allowed to enter directly into watercourses.
- The allocation of The Site would likely result in 'less than substantial' harm at a mid-level to the significance of one Grade II* listed building and one Grade II listed building through a change within their settings: Orford House (List UID: 1221630); and Orford House Cottage and Garage Block 15 Metres to East of Orford House (List UID: 1273750).
- The allocation of The Site would likely result in 'less than substantial' harm at the low end of the spectrum to two Grade II listed buildings. This being, Ivy, Park, and Rose Cottage (*List UID: 1221629*) and *L Shaped Range of Barns to West of Alsa Lodge* (*List UID: 1221438*).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance. In particular, the proximity of the Site to the heritage assets and the topography of The Site also presents challenges.

- The Essex Historic Environment Record records one known area of archaeological deposits impacted comprising a series of former field boundaries.
- Cartographic evidence shows the Site lies to the immediate south of the historic complex at Orsett House, whose grounds historically extended into this area.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed onto the B1383 which is classified as a Main Distributor *in* Essex County Council's Development Management Route Hierarchy. This corresponds with(ii) in the methodology (see Appendix G Transport for full methodology):

Where (i) is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

- The Site is graded Red/Amber as there is no access information provided other than a reference to improvements to existing agricultural access with provision of visibility splays. This would not be sufficient for regular HGV access from the B1383.
- Appropriate access geometry and visibility splays will need to be demonstrated as achievable.
- Appropriate mitigation required to facilitate the access and its use.
- A right turn lane from the B1383 may be required and it appears that sufficient site frontage is available to provide this if required.
- 3 Public Rights of Way cross the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- Also Lodge Gravel Pit, a potential LoGS is 10m south of the Site. The Site is likely to require medium levels of mitigation to preserve and maintain geological features to an acceptable level.
- The Site is within Zone II - Outer Protection Zone and Zone III - Total Catchment Groundwater SPZ and has medium to high groundwater

vulnerability. A watercourse is 30m west of the Site. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.

- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- Four commercial buildings, one farm building, twenty two residential buildings, one community facility and one nursery are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.
- The Site is within an Airport Safeguarding Zone (Stansted Outer Zone). Restoration proposals assume the Site restoration would be partial infilling with wetlands meaning the nature of the Site is likely to attract birds and therefore is likely to have a serious impact on aircraft safety and increase the risk of bird strike for aircrafts. Mitigation to make the Site acceptable would be difficult. Wet working of the Site would not be acceptable and neither would a restoration scheme that included waterbodies.

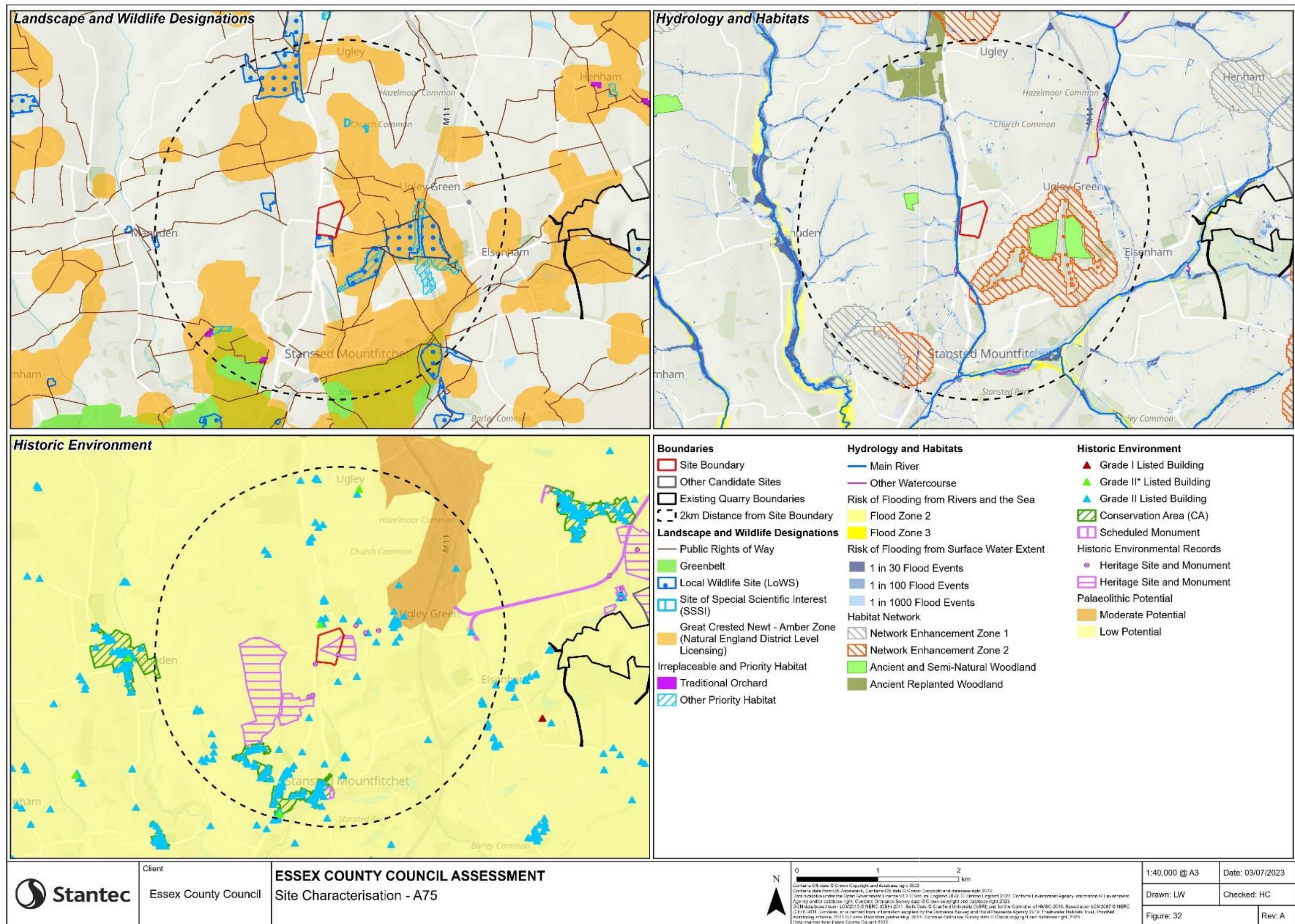


Figure 3.32: A75 - Land at Orford

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A76	Elsenham	Uttlesford	Agricultural	16.8	2

The Site is promoted as an extension to an existing mineral Site (Elsenham Quarry) and is located to the north of Elsenham Quarry. The Site area is approximately 16.8 ha and is proposed for 2.0 million tonnes of sand extraction with a phased mineral extraction with restoration using inert material to original ground levels. The Site could be worked at any time during the plan period. The adjoining uses include Elsenham Quarry, agricultural fields, the B1051 and Brick End Lane and residential and commercial buildings. The village of Elsenham is located to the west of the Site. This Site would be accessible using the existing quarry access points to the surrounding highway network, the main access being to the south onto Hall Road, whilst a local access is provided to Henham Road an existing restricted local access. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber/Green	Amber	Amber	Green	Red/Amber	Green	Amber/Green	Green	Amber	Red	Red/Amber	Green	Amber/Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) and the Site possesses only limited characteristic features of this LCA, which includes the arable farmland landscape. The limited sense of complexity due to historic hedgerow removal reduces potential sensitivity of the Site.
- Site A76 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Elsenham Woods SSSI which is an ancient woodland site. There are two separate parts to the SSSI and the closest part is located c.300 metres to the south of the Site.
- There are four Local Wildlife Sites (LoWS) within one kilometre. Pledgdon Green LoWS is less than 12 metres to the south and Palegate Meadow is c.166m to the east, both LoWS are old grasslands. Hawland Wood is c.405m and Lady's Wood/Regents Spring is c.445m to the south. Both of these are also Ancient Woodlands, which is classed as irreplaceable habitat.

- The Site is an arable field bounded partly by ditches with scrub and Hedgerows (mostly Priority habitat), mature trees and a small area of Lowland Mixed Deciduous Woodland Priority habitat on the western boundary. There are two hedgerows within the field and a small cluster of mature Oaks and other trees within the field that could not be accessed during the survey. Skylark (a Priority species) use the Site. Stansted Brook passes near to the northwest corner of the Site, which eventually feeds into the River Roding.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make it acceptable. The Site could have a moderate impact upon national designations (i.e. Elsenham Woods SSSI); irreplaceable habitats (ancient woodlands); local designations (the LoWS); Priority habitats and species and Stansted Brook. Impacts could include changes to the water quality of the Stansted Brook, smothering of leaves by dust, disturbance e.g. by noise and lighting. The internal hedgerows and a small number of trees of unknown quality in the field may need to be removed. It could result in disturbance and loss of habitat for Priority farmland species.

Any application would require demonstration that the operations would not affect the nearby LoWS, the hydrology of Elsenham Woods SSSI, ancient woodlands, watercourses, and boundary habitats. Appropriate mitigation and compensatory habitat may be required for the loss of the internal trees and hedgerows and habitat for Priority farmland species. Water run-off from the Site should not be allowed to enter directly into watercourses.

- The allocation of The Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed buildings through a change within their settings: Pledgon Hall (List UID: 1278392); and Barn to South of Pledgon Hall, On West Side (List UID: 1230881); Barn to South East of Pledgon Hall, on East Side of Yard (List UID: 1278393); and Pledgon Farmhouse (List UID: 1231098).
- The allocation of The Site would likely result in 'less than substantial' harm at the low end of the spectrum to one Grade II listed building. This being, Palegate Farmhouse (*List UID: 1322562*).
- The allocation of The Site would likely result in 'less than substantial' harm at the lowest level to one Grade II listed building, Elm Cottage (List UID: 1230893).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance. In particular, the proximity of the Site to the heritage assets and the topography of The Site also presents challenges.
- The Site lies within an area known to contain extensive areas of multi-period archaeology from the Late Bronze Age to the medieval period.

- The Site has been previously evaluated in 2011 identifying dispersed evidence of Late Bronze Age to medieval remains. The evidence also indicates the potential for Roman and medieval settlement surviving with the Site.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed onto Hall Road/Parsonage Road which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds with(iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- As HGVs cannot take access via Stansted Airport extensive use of the Secondary Distributor network is required to access the A120/M11 passing through Takeley local junctions.
- 1 Public Right of Way cross the Site. 1 Public Right of Way borders the Site. 5 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has low groundwater vulnerability. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains strategic Affinity Water pipelines within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would

likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.

- Five residential buildings are outside the Site boundary less than or equal to 20m from the Site. Six residential buildings are more than 20m but less than or equal to 50m from the Site. Commercial activity (business park), two commercial buildings and seventeen residential buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.
- The Site is within an Airport Safeguarding Zone (Stansted Outer Zone). Restoration proposals assume the Site would be returned to agricultural use meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts. Detailed assessment of this matter would need to accompany any planning application.

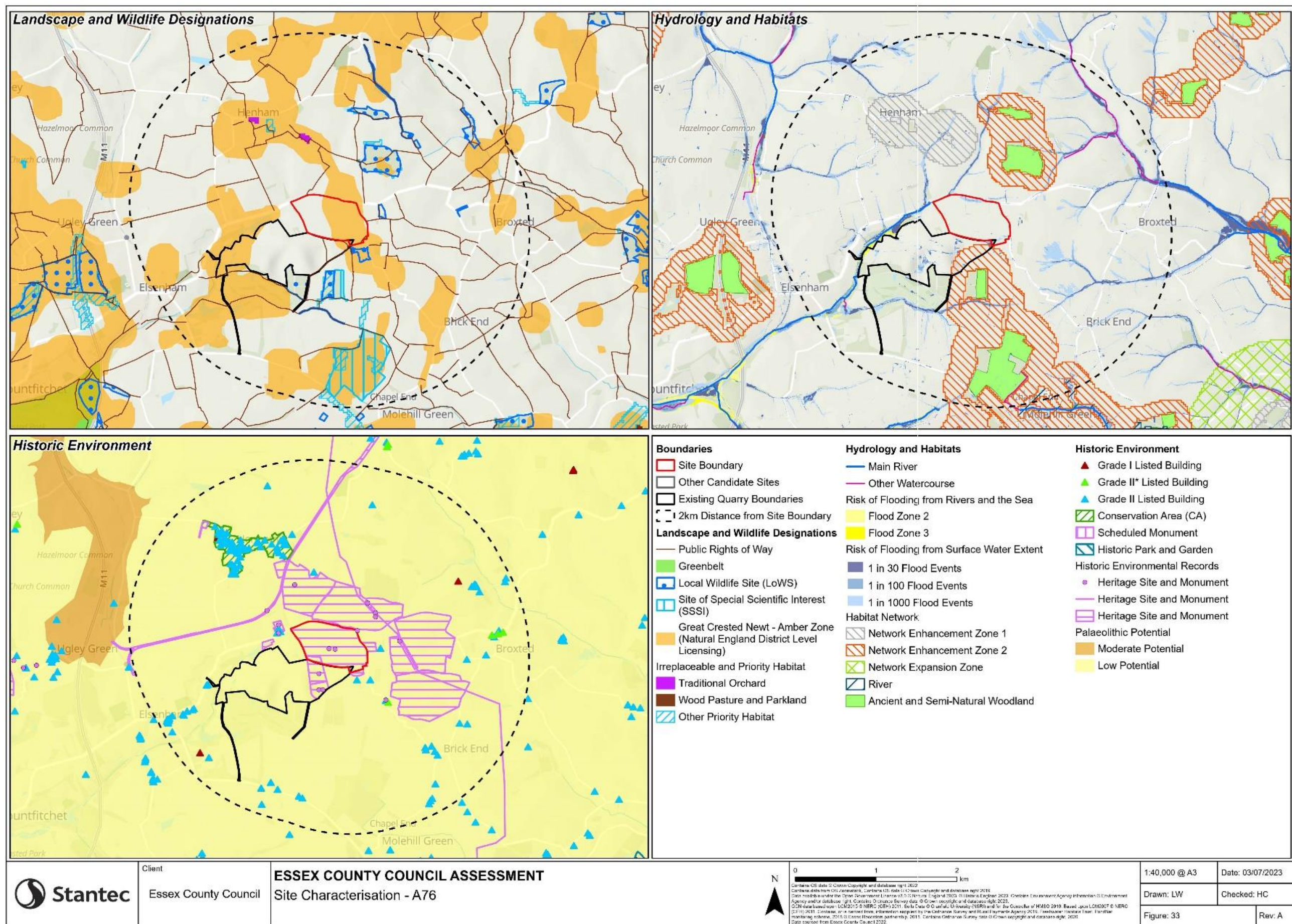


Figure 3.33: A76 - Elsenham

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A77	Westward Extension to Highwood Quarry	Uttlesford	Agricultural	19.45	1.23

The Site is promoted as an extension to an existing mineral site (Highwood Quarry) and is located adjacent to the western boundary of Highwood Quarry. The Site area is approximately 19.46 ha and is proposed for 1.23 million tonnes of sand and gravel extraction with processing and distribution from the adjacent Highwood Quarry. The Site operations would commence in sequence to Highwood Quarry. The adjoining uses include agricultural fields, woodland, and Highwood Quarry. The town of Great Dunmow is located to the east of the Site. The Site would be accessed using existing Highwood Quarry access to A120 via B1056. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Amber /Green	Amber	Green	Green	Red/ Amber	Green	Amber	Green	Amber	Amber	Amber	Green	Amber /Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1) and possesses only limited characteristic features of the LCA, which includes the arable farmland landscape. The limited sense of complexity due to the scale and single land use reduces potential sensitivity of the Site.
- Existing vegetation to Site's boundaries and within the Site should be protected.
- Site A77 is within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for High Woods, Dunmow SSSI which is an ancient woodland site. The SSSI is located c. 500 metres southeast of the Site, in close proximity to the existing Highwood Quarry. Ancient woodlands are classed as irreplaceable habitat. The Site borders the existing quarry site Highwood Quarry to the east. Hatfield Forest SSSI and National Nature Reserve (NNR) is c. 4.7 kilometres

from the Site. Hatfield Forest is one of the largest woodlands in Essex and includes a wide range of habitats including Woodpasture and Parkland Priority habitat. The River Roding is located c. 370 metres west.

- A mature willow, located along the western boundary was assessed as being likely to qualify as an ancient tree specimen. Ancient and veteran trees are irreplaceable habitats. There are a number of mature trees present along the western boundary. There are no hedgerows present on Site.
- Little Easton Airfield Local Wildlife Sites (LoWS) is partially within the Site, along the western boundary and extends one kilometre west.
- The Site is graded Amber because ecological impacts are likely to be moderate and it is likely to require medium levels of mitigation to make the Site acceptable. The proposals could have a moderate impact upon the natural environment including Priority habitats and species. This includes the direct impact to the on Site/ adjacent LoWS, ancient trees, which are an irreplaceable habitat, as well as potential hydrological impacts to retained habitats, and loss of and disturbance to habitats for Priority farmland species. Any application would require demonstration that there would be no adverse effects on the integrity of the High Woods, Dunmow SSSI, and ancient woodland and that the operations would not affect the hydrology of the River Roding.
- The allocation of The Site would likely result in 'less than substantial' harm at a low level to the significance of the Grade II* listed building, Stone Hall (*List UID: 1334091*).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of this asset and the fundamental change in land use and land character would undermine the ability to understand and appreciate its significance. The proximity of the Site to the heritage asset also presents challenges.
- It is considered likely that medium levels of mitigation would be required, efforts should be made to avoid structures/buildings to the south of The Site and a robust landscaping scheme implemented.
- The Site lies within an area known to contain areas of multi-period archaeology from the Late Bronze Age to the medieval period.
- Archaeological evaluation on the existing quarry area has found evidence of Late Prehistoric and medieval occupation. This worked proved there was limited impact from the later development of the Site as an airfield.
- The Site lies within a medieval deer park associated with Little Easton Manor that was redeveloped into an airfield in the Second World War

- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- 4 Public Rights of Way cross the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has low groundwater vulnerability. Hydrogeological issues were identified for the adjacent site, due to potential impact on Little Easton ponds and mitigation was required. It is likely similar mitigation would be required for this site. The Site is likely to have a moderate impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains a high pressure gas mains (Cadent Gas) within 250m of the Site. An underground Openreach BT power line is within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- One residential building is more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.
- The Site is within an Airport Safeguarding Zone (Stansted Outer Zone). Restoration proposals assume the Site would be returned to agricultural use meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts. Detailed assessment of this matter would need to accompany any planning application.

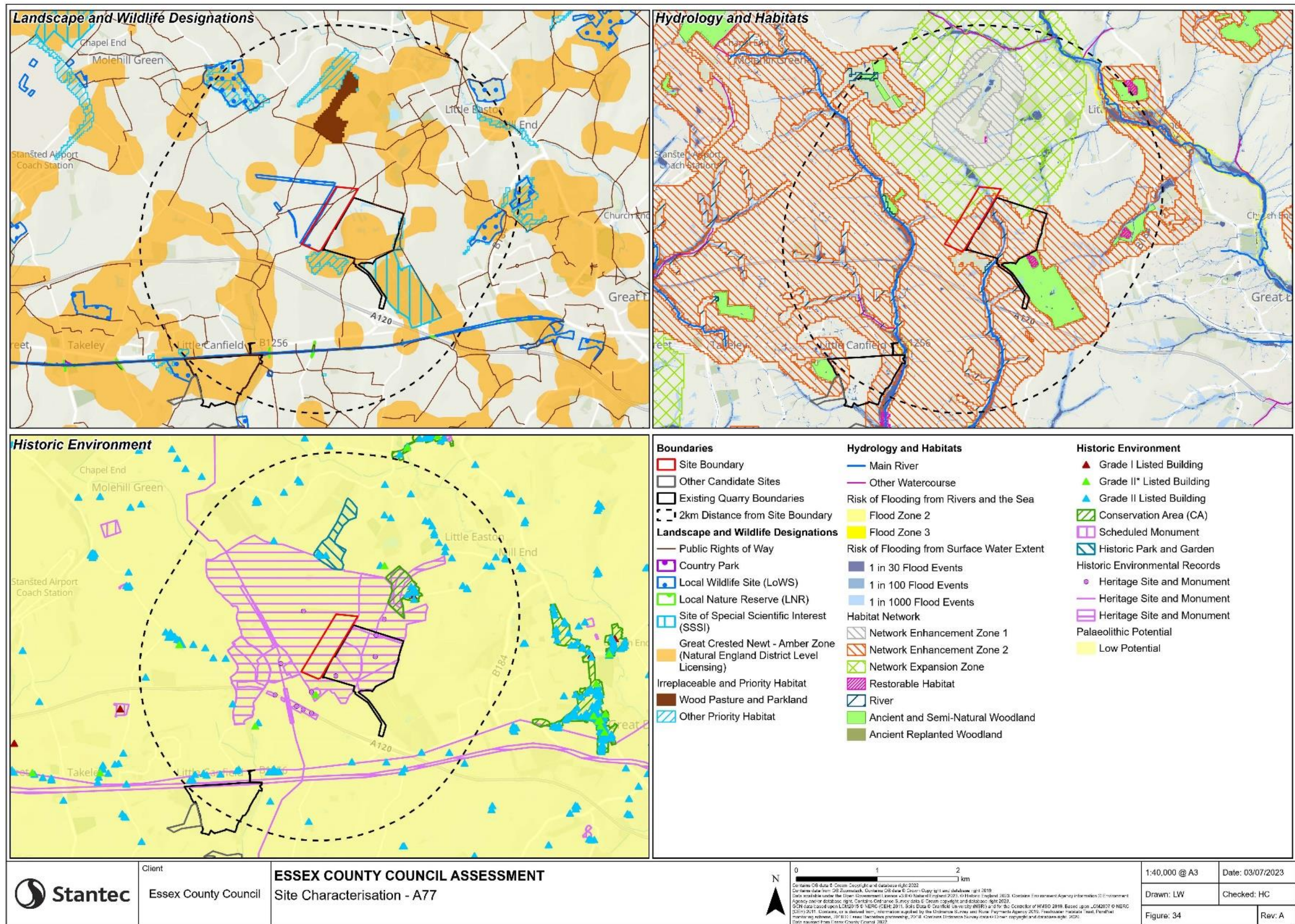


Figure 3.34: A77 - Westward Extension to Highwood Quarry

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A79	Crown Quarry – North of Wick Lane	Tendring	Agricultural	23.19	1

The Site is promoted as an extension to Crown Quarry, located north of Wick Lane and west of Ardleigh. The Site area is approximately 23.19 ha and is proposed for 1 million tonnes of sand and gravel extraction with processing and distribution from the adjacent Crown processing plant. Extraction would not commence until after extraction at the existing quarry has been completed. The adjoining uses include agricultural fields, woodland, and residential and farm buildings. The village of Ardleigh is east of the Site. The Site is promoted as accessible via the use of the existing Crown Quarry site access to the highway network and through creating a new crossing point to allow vehicles to cross Wicks Lane through the internal access road at Crown Quarry. The feasibility of crossing Wick Lane would need to be explored with the Highway Authority. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Red/ Amber	Amber	Amber	Amber	Red/ Amber	Green	Green	Red/ Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Tendring Plain (E3) Landscape Character Area (LCA), comprising the large flat arable farmland plateau which is broken up by low trimmed hedgerows and woodland copses. Whilst the Site is characteristic of the area, the level plateau and hedgerows reduce the sensitivity of the Site to mineral extraction.
- Dedham Vale Area of Outstanding Natural Beauty (AONB) is located 1km to the north of the Site, however the flat plateau and hedgerows limit potential views from the Site. Priority Habitats (Deciduous Woodland) are located along the northern boundary of the Site and require a buffer area to minimise potential harm to this area of woodland. Birch Wood Ancient Woodland is also located 0.5k to the north-west of the Site.

- Site A79 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Bullock Wood, and Cattawade Marshes SSSI and Stour Estuary Special Protection Area (SPA) and Ramsar site. Ardleigh Gravel Pit is 2.3km from the Site; this is a geological SSSI and so ecological impacts are not considered further. Bullock Wood SSSI is on the opposite side of the A120; this road creates a substantial barrier to the movement of species, except birds. Lapwing and Brent Goose are both listed on the waterbird assemblage for the Stour Estuary Special Protection Area and it is possible that the Site could be used by these species as functionally linked land for the SPA. However, the SPA is c4.7km to the northeast and there are numerous fields in between, and so the likelihood of the Site being used by a significant proportion of the population (greater than 1%) is considered to be low.
- There is hydrological connectivity between the Site and Ardleigh Reservoir. Water leaving the Reservoir feeds into Salary Brook (Main River) which, in turn, feeds into the River Colne. Given the distance and intervening reservoir it is not expected for there to be water quality impacts to the designated sites and Priority habitats downstream including Colne Estuary SSSI, Special Protection Area (SPA) and Ramsar site, Essex Estuaries Special Area of Conservation (SAC). Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone, Local Wildlife Sites and Local Nature Reserve, The potential for likely significant effects to the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC would need to be considered further through a plan-level Habitats Regulations Assessment and any subsequent planning application, but Likely Significant Effects from air and water quality impacts have been scoped out due to the distance and the intervening reservoir, based on professional judgement.
- There are two Local Wildlife Sites (LoWS) within 1 km. Birch Wood, Langham LoWS is also an ancient woodland; the intervening landscape includes Lowland Mixed Deciduous Woodland Priority habitat and hedgerows creating habitat connectivity.
- The Site is predominantly an arable field bordered by hedgerows which are mostly Priority habitat. Lowland Mixed Deciduous Woodland Priority habitat is adjacent to the northern Site boundary. A small area of Lowland Mixed Deciduous Woodland and a pond are on the Site in the north-east corner. It appears from the Block Proposals Plan that these would be retained. There is a Hedgerow (Priority habitat) which protrudes into the field and would be lost to the development. There are several mature Oak trees on the boundaries which are Notable or significant boundary features of the Site. The southern boundary runs along Wick Lane; this is a narrow road with boundary hedgerows (Priority habitat) on either side. The Site would require a road crossing point, including visibility splays, across Wick Lane, which would require removal of sections of Hedgerow Priority habitat.
- The Site is graded Amber because ecological impacts are likely to be moderate and is likely to require medium levels of mitigation to make the Site acceptable. The Site could have a major impact upon the natural environment including Ardleigh Reservoir and Priority habitats and species, including the

direct loss of Hedgerow Priority habitat. This also includes impacts to water quantity and quality of the watercourses on and near to the Site; to Priority Hedgerow habitat and adjacent Lowland Mixed Deciduous Woodland Priority habitat. In addition, smothering of leaves by dust, disturbance e.g. by noise and lighting. The Site could also result in disturbance and loss of habitat for Priority farmland species.

- Any application would require demonstration that the operations would not adversely affect the water quality of Ardleigh Reservoir, the watercourses and associated habitats, Hedgerows mature trees, and other boundary and nearby habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats and prevention of deterioration to water quality to the watercourses.
- The allocation of the Site in conjunction with the existing active Crown Quarry site would likely result in 'less than substantial' harm at a mid-level to the significance of Grade II listed Wick Farmhouse (List UID: 1253913) and Barn Adjacent to Road at Wick Farm (List UID: 1253914).
- There would also be less than substantial harm at a mid-level to Bloomfields Farmhouse (List UID: 1253915) and Barn Approximately 40 Metres North East of Bloomfields Farmhouse (List UID: 1261548), and to Fountain Farmhouse (List UID: 1253912) at the lowest level.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the listed buildings and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The cumulative impact of this proposal along with the proposed site allocation A80 Crown Quarry – South of Wick Lane would likely represent a high level of 'less than substantial' harm to the setting and significance of Wick Farmhouse and Barn due to substantial curtailment of the agrarian landscape to the north and east of the farm.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- Evidence for Iron Age settlement and Roman activity has been recovered from the surrounding area.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.

- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access proposed via an existing access serving Crown Quarry onto the Old Ipswich Road which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds with(iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- Access proposed via an existing access serving Crown Quarry onto Old Ipswich Road. This is acceptable in principle. Any access via Wick Lane would need to be considered further in consultation with the Highway Authority.
- The proposal would require a new crossing point either side of Wick Lane to enable the existing site access to be used to export minerals by HGV. No details provided.
- The Site is within Zone III - Total Catchment Groundwater SPZ and unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A water course is 10m north east of the Site and another water course is 190m south east. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- One residential building is within the Site boundary, two residential buildings and two farm buildings are adjacent to the boundary of the Site (0m). Four residential buildings and one farm building are outside the Site boundary less than or equal to 20m from the Site. Two residential buildings are more than 20m but less than or equal to 50m from the Site. Four residential buildings,

one building of unknown use and six farm buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

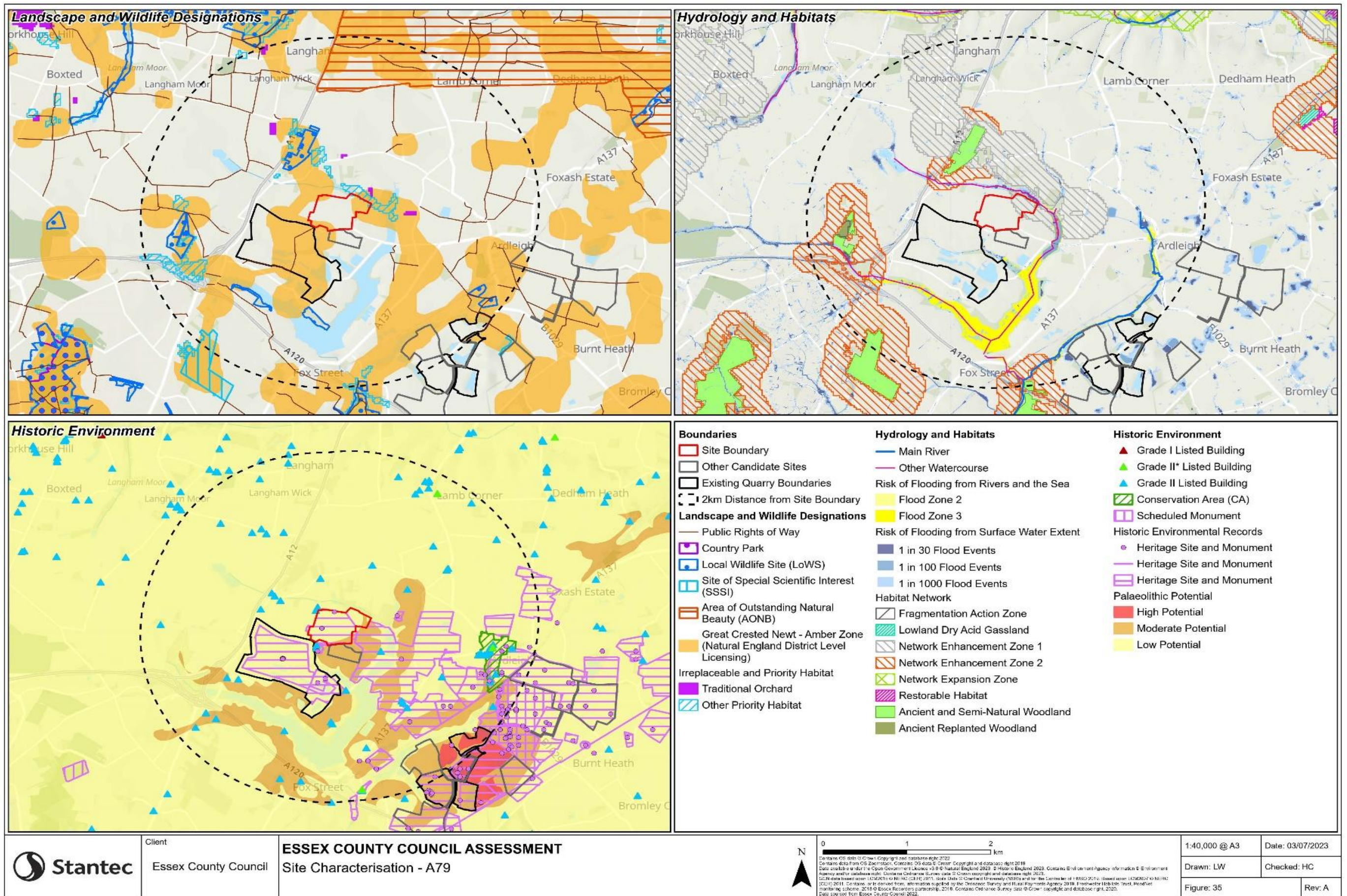


Figure 3.35: A79 - Crown Quarry – North of Wick Lane

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A80	Crown Quarry - South of Wick Lane	Tendring	Agricultural	5.88	0.26

The Site is promoted as an extension to Crown Quarry, located south of Wick Lane and west of Ardleigh. The Site area is approximately 5.88 ha and is proposed for 0.26 million tonnes of sand and gravel extraction with processing and distribution from the adjacent Crown Quarry processing plant. Extraction would not commence until after extraction at the existing quarry has been completed. The adjoining uses include agricultural fields, woodland, residential and farm buildings, and Crown Quarry. The village of Ardleigh is east of the Site. The Site is promoted as accessible via a new access track to connect to Crown Quarry and the use of the existing Crown Quarry site access to the highway network. Internal access to reach Old Ipswich Road would need to be considered further. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Red/ Amber	Amber /Green	Amber	Amber	Green	Green	Green	Amber	Green	Amber	Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Tendring Plain (E3) Landscape Character Area (LCA), comprising the large flat arable farmland plateau which is broken up by low trimmed hedgerows and woodland copses. Whilst the Site is characteristic of the area, the level plateau and hedgerows reduce the sensitivity of the Site to mineral extraction.
- Dedham Vale Area of Outstanding Natural Beauty (AONB) is located 1km to the north of the Site, however the flat plateau and hedgerows limit potential views from the Site. Priority Habitats (Deciduous Woodland) are located along the northern boundary of the Site and require a buffer area to minimise potential harm to this area of woodland. Birch Wood Ancient Woodland is also located 0.5km to the north-west of the Site.

- Site A80 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Bullock Wood (1.75km to the southwest). Bullock Wood SSSI is on the opposite side of the A120; this road creates a substantial barrier to the movement of species. Ardleigh Gravel Pit is 2.3km from the Site; this is a geological SSSI and so ecological impacts are not considered further.
- It is considered possible that there would be hydrological connectivity between the Site and Ardleigh Reservoir. Water leaving the Reservoir feeds into Salary Brook (Main River) which, in turn, feeds into the River Colne. Given the distance and intervening reservoir it is not expected for there to be water quality impacts to the designated sites and Priority habitats downstream including Colne Estuary SSSI, Special Protection Area (SPA) and Ramsar site, Essex Estuaries Special Area of Conservation (SAC). Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone, Local Wildlife Sites and Local Nature Reserve. The potential for likely significant effects to the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC would need to be considered further through a plan-level Habitats Regulations Assessment and any subsequent planning application, but Likely Significant Effects from air and water quality impacts have been scoped out due to the distance and the intervening reservoir, based on professional judgement.
- There are two Local Wildlife Sites (LoWS) within 1 km. Birch Wood, Langham LoWS is c. 90 m north-west of the Site; this is an ancient woodland. The intervening landscape includes Lowland Mixed Deciduous Woodland Priority habitat and hedgerows, creating habitat connectivity.
- The Site sits within a relatively small arable field to the south of Wick Lane. Wick Lane is a narrow road with boundary hedgerows (Priority habitat) on either side. There is also a line of trees on the eastern boundary. The Hedgerows are Priority habitats. There is a small area of Lowland Mixed Deciduous Woodland Priority habitat 100 metres to the east of the Site. The Site would utilise the existing processing plant via a new internal access road. This access road would cross through the field to the south and would then have to cut through an area of Lowland Mixed Deciduous Woodland Priority habitat. This would result in the loss of a small section of woodland dissecting the two remaining segments.
- The Site is graded Amber because ecological impacts are likely to be moderate and is likely to require medium levels of mitigation to make the Site acceptable. The Site could have a major impact upon the natural environment including Ardleigh Reservoir and other surrounding waterbodies. The Site could have a moderate impact upon Priority habitats and species including the Lowland Mixed Deciduous Woodland and Hedgerow Priority habitats. In addition, smothering of leaves by dust, disturbance e.g. by noise and lighting. The Site could also result in disturbance and loss of habitat for Priority farmland species.
- Any application would require demonstration that the operations would not adversely affect the water quality of the nearby waterbodies, Hedgerows, and other boundary and nearby habitats. Mitigation may include - but not be

limited to - an adequate and appropriate buffer between the Site and these habitats and prevention of deterioration to water quality to the watercourses.

- The allocation of the Site in conjunction with the existing active Crown Quarry site would likely result in 'less than substantial' harm at a mid-level to Wick Farmhouse (List UID: 1253913) and Barn Adjacent to Road at Wick Farm (List UID: 1253914),
- There would also be 'less than substantial' harm at a low level to the significance of Grade II listed Fountain Farmhouse (List UID: 1253912).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the listed buildings and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The cumulative impact of this proposal along with the proposed site allocation A79 Crown Quarry North of Wick Lane would likely represent a high level of 'less than substantial' harm to the setting and significance of Wick Farmhouse and Barn due to substantial curtailment of the agrarian landscape to the north and east of the farm.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. Evidence for Iron Age settlement and Roman activity has been recovered from the surrounding area. The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access proposed via an existing access serving Crown Quarry onto the Old Ipswich Road which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds with(iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety. The feasibility of access onto Wick Lane would need to be considered.

- The Site is within Zone III - Total Catchment Groundwater SPZ and medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- One building of unknown use is within the Site boundary. Three farm buildings are more than 20m but less than or equal to 50m from the Site. Ten residential buildings and six farm buildings more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

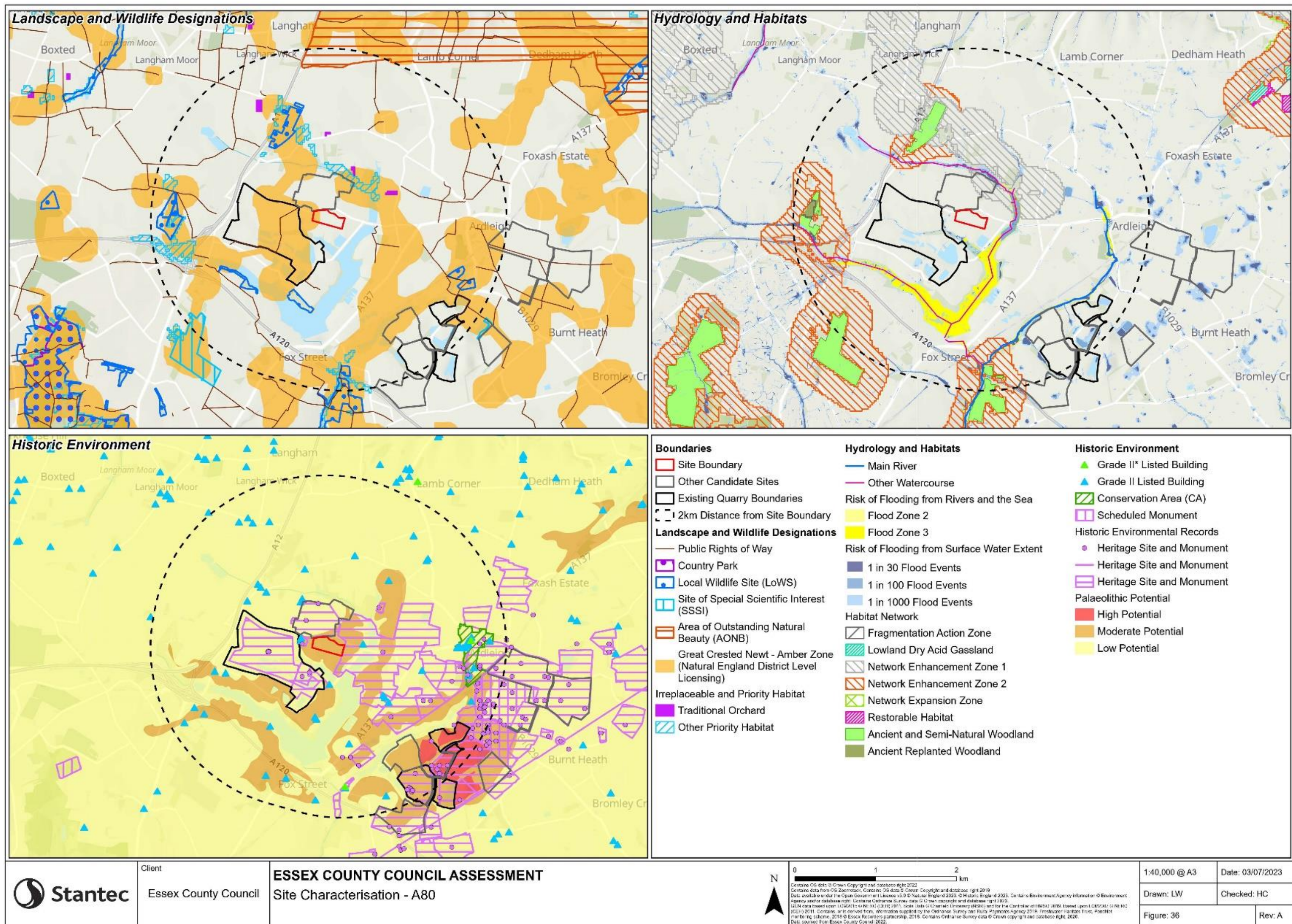


Figure 3.36: A80 - Crown Quarry – South of Wick Lane

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A82	Colemans Farm – Elm Springs Extension	Braintree	Agricultural	15.42	1

The Site is promoted as an extension to an existing mineral Site (Colemans Farm Quarry) and is located south of Colemans Farm Quarry immediately adjacent to Site A49. The Site is proposed as a further extension (in addition to Site A49). The Site area is approximately 15.42 ha and is proposed for approximately 1 million tonnes of sand and gravel extraction which would be transported internally to an existing plant Site at Colemans Farm Quarry, where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry and could be worked prior to Site A49. Infrastructure needed includes a field conveyor network/ADT compatible bailey bridge for transport of sand and gravel over the River Blackwater to the plant via Site A49. In addition, a supporting network of haul roads would be needed for the import of inert materials for the restoration of the Site. The adjoining uses include agricultural fields, woodland, a waterbody, and residential and commercial buildings. The town of Witham is located to the west of the Site. Access to the Site is through the access arrangements for the existing workings at Colemans Farm Quarry, including crossing over the River Blackwater via Site A49 for connection to the plant site. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber	Amber	Amber /Green	Amber	Green	Green	Amber	Green	Amber	Green	Amber	Amber /Green	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is significantly characteristic of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area. The Site itself is arable farmland with well hedged boundaries, located on the valley side of the River Blackwater. Linear poplar and willow plantations are visible from the Site towards the north-west, where the valley floor runs close to the boundary. Appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.

- The River Blackwater valley is located 0.1km to the north, with strong intervisibility between the Site and the river. Consideration for the visual impact on the River Blackwater valley landscape will also need to be considered.
- Public Rights of Way (PRoW) run along the south-western boundary and to the north-west of the Site. Footpath 1 (Little Braxted) provides occasional views into the Site in field entrances although is largely separated from the Site by established hedgerows. Footpath 2 (Great Braxted) has open views of the Site from the valley floor, although is partially screened owed to the elevation changes.
- The River Blackwater is situated 140 metres from the northwest of Site A82 and there are watercourses near to the Site's boundaries which feed into the River. These create a potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.
- The Site is situated on sloping land and comprises two arable fields. Several areas of Lowland Mixed Deciduous Woodland Priority habitat are situated on the boundaries of the Site. A section of Elm Springs Woodland Priority habitat will require removal to allow access from Site A49.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect the hydrology of the nearby habitats. Substantial buffers are likely to be required near to the Lowland Mixed Deciduous Woodland Priority habitat and watercourses to prevent water quantity impacts; their water quality must not be affected by the proposals. The Priority woodland habitat and watercourse directly affected would need to be adequately and appropriately compensated.
- There is the potential for a low-level of less than substantial harm to the important group of heritage assets at Little Braxted (including the Grade I listed Church of St Nicholas), due to environmental impacts on the tranquillity of their setting.
- There is the potential for low level of less than substantial harm to other nearby heritage assets, resulting from the movement of traffic.
- The results of the assessment assume that all materials would be transported via Site A49 and that there would be no Site access via Little Braxted Road (as proposed by the Site promoter). The cumulative impact of Site A82 and A49 is therefore an important consideration in this case.

- There are no designated or non-designated heritage assets recorded on the Essex Historic Environment Record (EHER) within the Site and little archaeological investigation has taken place within the area to inform on the potential for archaeological remains.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. These may indicate ritual and agricultural activity associated with nearby settlement.
- Palaeolithic archaeological remains and Pleistocene faunal remains have been recovered from river gravels within the vicinity of the Site.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- One Public Right of Way borders the Site. Two Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way which could include diversion.
- The Site has unproductive/low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course is present within the Site boundary, another is 50m north east of the Site and an additional water course (River Blackwater) is 140m north. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- Commercial activity (industrial estate) is less than or equal to 20m from the Site. Commercial activity (industrial estate) is more than 20m but less than or equal to 50m from the Site. Seven residential buildings, one farm building and commercial activity (industrial estate) are more than 50m but less than or

equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

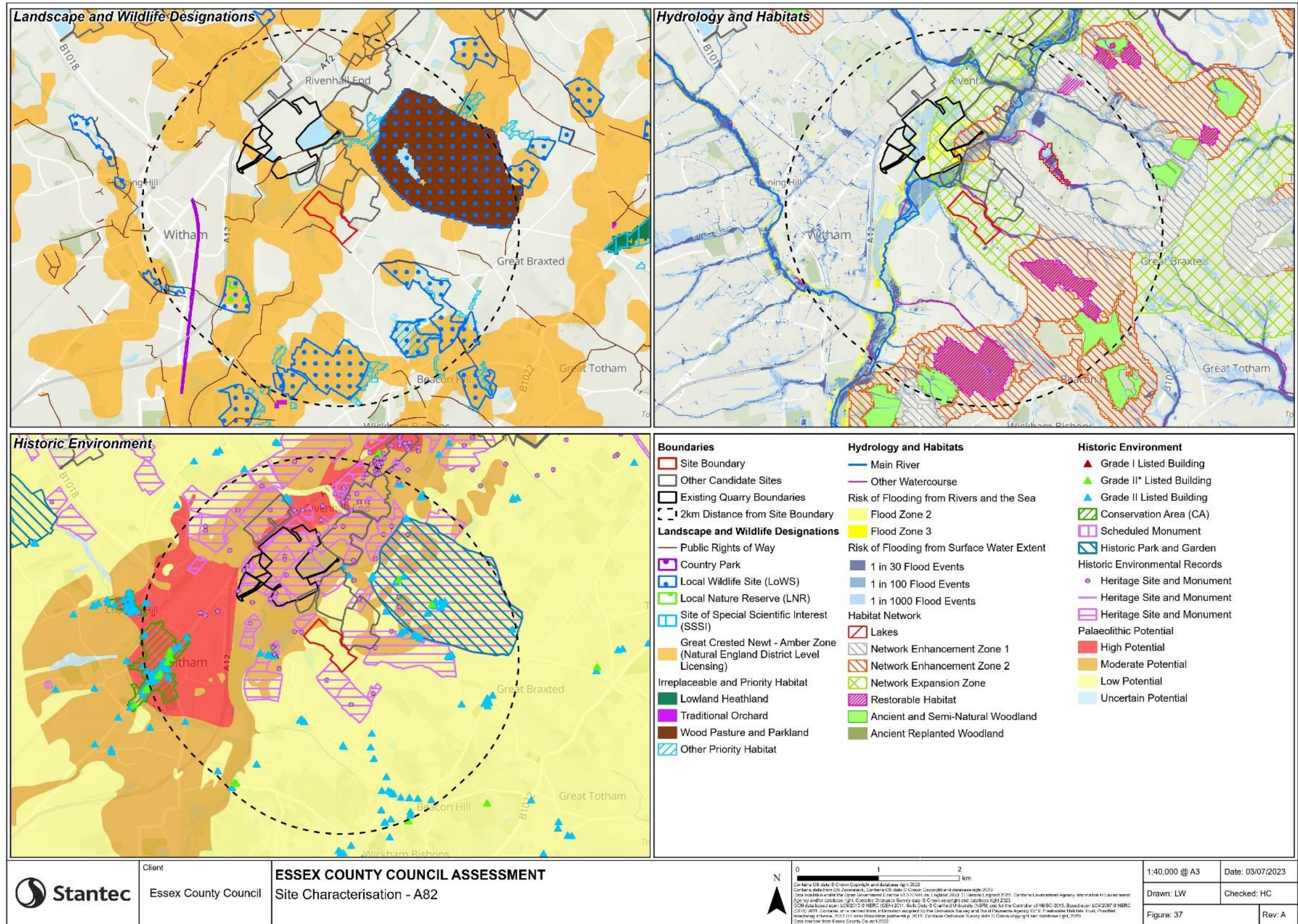


Figure 3.37: A82 - Colemans Farm – Elm Springs Extension

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A83	Colemans Farm – Hole Farm	Braintree	Agricultural	14.17	0.8

The Site is promoted as an extension to an existing mineral site (Colemans Farm Quarry) and is located north east of Colemans Farm Quarry, and north east of Site A50. The Site is proposed as a further extension in addition to Site A50. The Site area is approximately 14.17 ha and is proposed for approximately 0.8 million tonnes of sand and gravel extraction which would be transported to a plant site where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry. Infrastructure needed includes a supporting network of haul roads for the import of inert materials for the restoration of the Site. The adjoining uses include agricultural fields, woodland, the A12, and residential and commercial buildings. The village of Kelvedon is located to the north east of the Site. Proposed access is via the existing access into Appleford Farm and would pass through Site A84 and A50. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber /Green	Red	Amber	Amber	Red/ Amber	Red/ Amber	Red/ Amber	Green	Amber	Green	Amber	Green	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). Located close to the River Blackwater, the Site is lined by linear willow and poplar trees which are a strong local feature of the landscape. The remainder of the Site comprises arable fields with open views of the river. Appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.
- A public right of way (PRoW) Footpath 27 (Kelvedon) enters the Site on the south-eastern edge, crossing the River Blackwater. The footpath then runs through the Site to Hole Farm and provides open views across the whole site.

- The River Blackwater is c.65 metres east of the Site there are several watercourses on or near to the Site which feed into the River. These create potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly to the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.
- The Site is situated on low-lying land east of the A12 and comprises arable fields and contains several watercourses. An area of Lowland Mixed Deciduous Woodland Priority habitat is located next to the Site, near the River.
- The Site is graded Amber/Green because it could have a moderate impact upon the River Blackwater, local designations and Priority habitats and species -including the nearby Lowland Mixed Deciduous Woodland Priority habitat and farmland species- and are likely to require low levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect on-site and off-site habitats. Buffers are likely to be required near to watercourses and their water quality must not be affected by the proposals.
- The allocation of the Site and the proposed quarrying works would result in a high level of less than substantial harm to the Grade II* Listed Hole Farmhouse (List Entry Number: 1123803). The quarrying of the Site would fundamentally alter the last surviving part of the listed building's original setting.
- The impact on other nearby heritage assets to the south and east would be minor.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. The Site contains a circular cropmark feature and pits suggestive of ritual or settlement activity.
- The Site lies within 300m of a scheduled monument and further evidence for extensive prehistoric ritual activity.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains. Mitigation will be required in areas which have not been previously investigated.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.

- Access is proposed via a modified access serving Appleford Farm onto Braxted Road which is a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety

- From a highway viewpoint Braxted Road, Oak Road and Henry Dixon Road and associated connections to the Main/Strategic Road Network via the A12 Trunk Road are not suitable in their current form.
- A Transport Statement scoping report supporting site A50 indicatively shows a modified access arrangement on drawing 15057-26B. It is proposed that this access also serves sites A83 and A84. This does not currently show that simultaneous access for two HGVs can be achieved but indicates that appropriate visibility splays are achievable at this location to accord with surveyed vehicle speeds.
- Confirmation of land ownership and highway boundary required but it is likely that access could be modified further.
- Interaction of modified access to Appleford Farm with Braxted Bridge and existing minerals access serving Colemans Farm required.
- 1 Public Right of Way crosses the Site. 5 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course is 70m south east of the Site and River Blackwater is 90m north east. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.

- One public building (fire rescue and service), one residential building and one farm building is outside the Site boundary less than or equal to 20m from the Site. Four farm buildings, five residential building and one commercial building are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

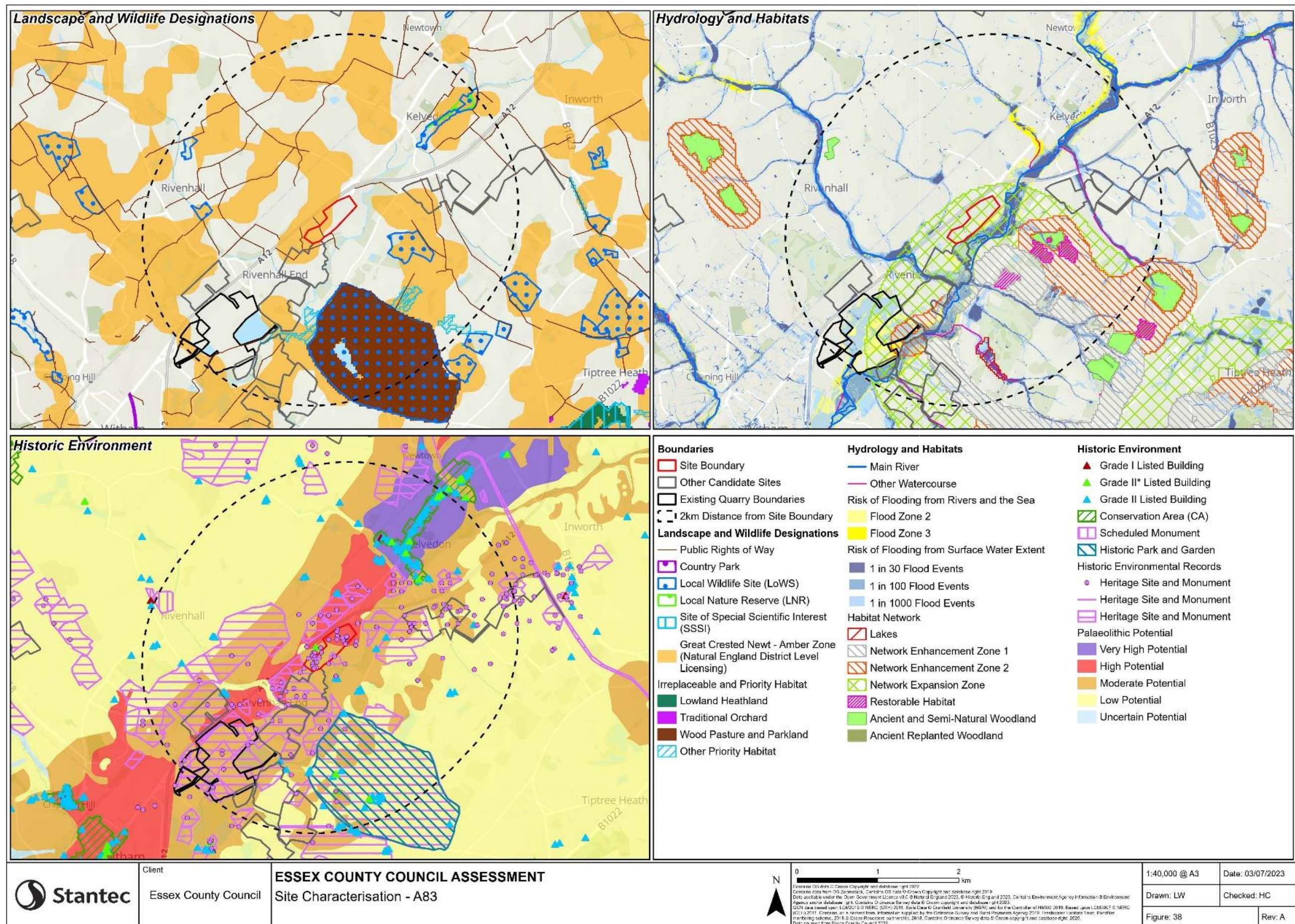


Figure 3.38: A83 - Colemans Farm – Hole Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A84	Colemans Farm – Appleford Farm North Extension	Braintree	Agricultural	18.4	0.69

The Site is promoted as an extension to an existing mineral site (Colemans Farm Quarry) and is located north east of Colemans Farm Quarry, and immediately adjacent to Site A50. The Site is proposed as a further extension in addition to Site A50. The Site area is approximately 18.4 ha and is proposed for approximately 0.69 million tonnes of sand and gravel extraction which would be transported to the dedicated plant site which serves Colemans Farm Quarry where it will be washed, graded, and stocked prior to export off Site. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Colemans Farm Quarry and would work in concert with Site A50 if it were also allocated. The adjoining uses include agricultural fields, woodland, and commercial buildings. The village of Kelvedon is located to the north east of the Site. Proposed access is via the existing access into Appleford Farm and would pass through Site A50. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Red	Red/Amber	Red/Amber	Red/Amber	Red/Amber	Green	Amber	Green	Amber	Red	Red/Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Blackwater/Brain/Lower Chelmer (C6) Landscape Character Area (LCA). Located close to the River Blackwater, the Site is lined by linear willow and poplar trees which are a strong local feature of the landscape. The remainder of the Site comprises arable fields with open views of the river. Appropriate consideration is required to protect the characteristic features of the LCA, particularly on the setting of the River Blackwater valley floor, and mitigate the impacts on the landscape.
- The River Blackwater follows the length of the eastern boundary and there are three other watercourses on or near to the Site which feed into the River.

These create potential pollution pathway for water quality between the proposed mineral Site and a number of statutory wildlife sites. The potential for Likely Significant Effects, particularly on the Blackwater Estuary Special Protection Area and Ramsar site and the Essex Estuaries Special Area of Conservation will need to be considered through a plan-level Habitats Regulations Assessment.

- The Site is situated on low-lying land and comprises two arable fields; an area of Lowland Mixed Deciduous Woodland Priority habitat is located next to the Site, to the east of the River.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect the hydrology of on-site and off-site habitats. Substantial buffers are likely to be required near to the River Blackwater and other watercourses and their water quality must not be affected by the proposals.
- The nearest heritage assets to The Site are as follows:
 - Mill House and attached Mill Bridge (List UID: 1166135)
 - Small outbuilding containing a pigeon house approximately 7 metres to rear (south) of the Mill House, Grade II listed (List UID: 1111080)
 - Outbuilding approximately 2 metres left (east) of the Mill House Grade II listed (List UID: 1111081).
- The impact on these assets would be low and would impact the tranquillity of the heritage assets' setting, with mitigation possible. For other nearby heritage assets to the east and south there would be a minor impact with mitigation possible.
- A scheduled monument lies within the Site. This Nationally important site will need to be carefully considered in any submission and will require discussions with Historic England to assess if this Site should be considered for the Minerals Plan.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence and archaeological investigation. This includes a Neolithic ritual monument and later prehistoric activity forming a multi-period ritual landscape.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'high' groundwater flood risk.

- The Site is predominantly within FRZ3 (56%) and therefore is at risk from fluvial flooding.
- Access is proposed via a modified access serving Appleford Farm onto Braxted Road which is a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety

- From a highway viewpoint Braxted Road, Oak Road and Henry Dixon Road and associated connections to the Main/Strategic Road Network via the A12 Trunk Road are not suitable in their current form.
- A Transport Statement scoping report supporting site A50 indicatively shows a modified access arrangement on drawing 15057-26B. It is proposed that this access also serves sites A83 and A84. This does not currently show that simultaneous access for two HGVs can be achieved but indicates that appropriate visibility splays are achievable at this location to accord with surveyed vehicle speeds.
- Confirmation of land ownership and highway boundary required but it is likely that access could be modified further.
- Interaction of modified access to Appleford Farm with Braxted Bridge and existing minerals access serving Colemans Farm required.
- 2 Public Rights of Way cross the Site. 3 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course is present within the Site boundary, River Blackwater is 5m north east, 10m east and 20m south of the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.

- The Site contains 11kV underground electricity lines within the Site boundary. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- One public building (fire service and rescue) is more than 20m but less than or equal to 50m from the Site. Four residential buildings, three commercial buildings and three farm buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

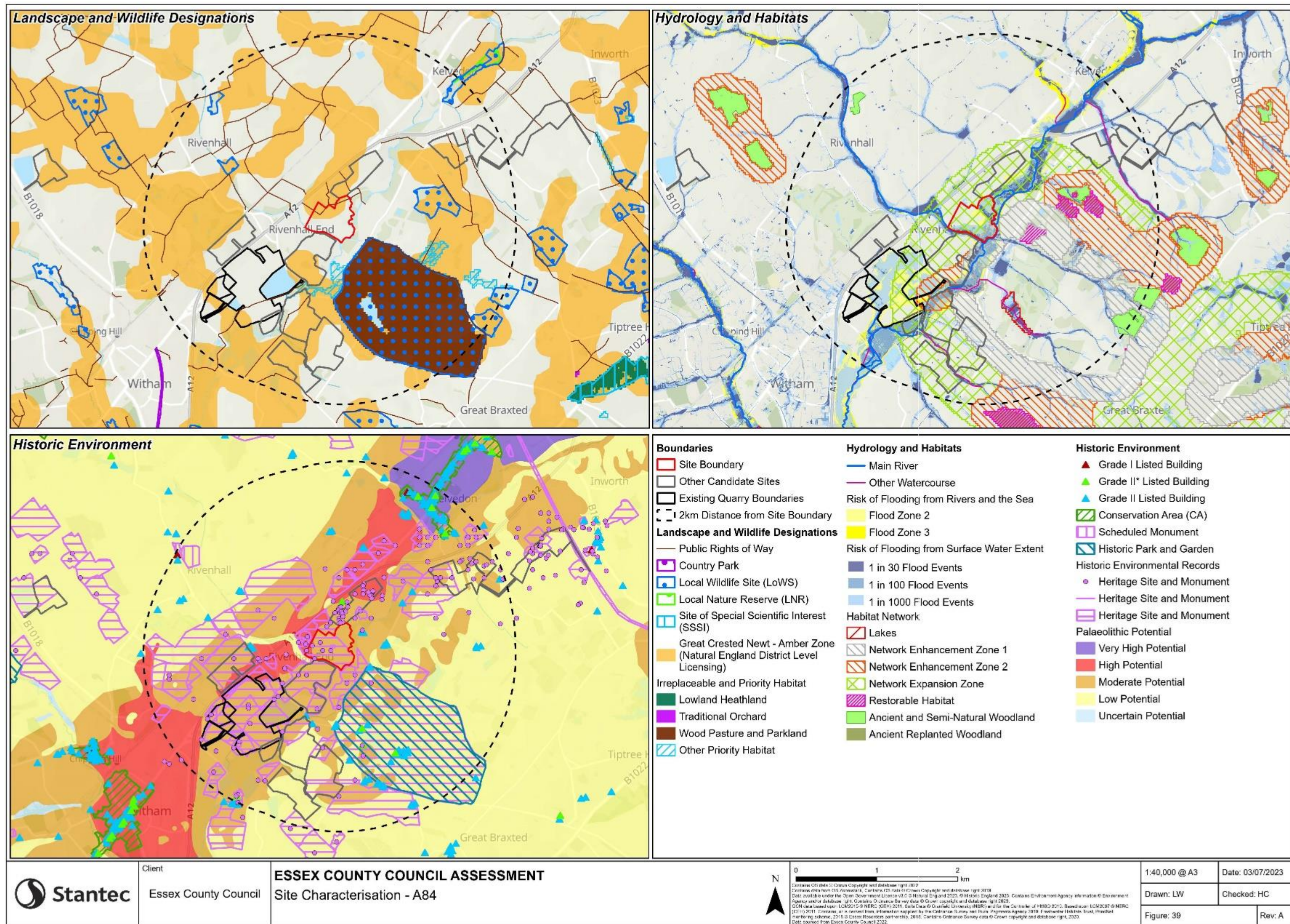


Figure 3.39: A84 - Colemans Farm – Appleford Farm North Extension

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A85	Martells – North of Frating Road (East)	Tendring	Agricultural	26.12	1.9

The Site is promoted as an extension to an existing mineral Site (Martells Quarry) and is located north east of Martells Quarry, and immediately adjacent to Site A86. The Site area is approximately 26.12 ha and is proposed for approximately 1.9 million tonnes of sand and gravel extraction with processing and distribution occurring from Martells processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Martells Quarry, after extraction at Site A73, if allocated. Infrastructure would include crossing points on Morrow Lane and Frating Road. The adjoining uses include agricultural fields, woodland, Home Farm Reservoir and residential, farm and commercial buildings. The village of Ardleigh is located to the north west of the Site. Proposed access is via internal access tracks to Martells Quarry and the use of the existing Martells Quarry site access to the highway network. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber /Green	Green	Amber	Amber	Amber	Red/ Amber	Red/ Amber	Green	Amber /Green	Green	Red	Amber	Red/ Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Tendring Plan (E3) Landscape Character Area (LCA), comprising the large flat arable farmland plateau which is broken up by low trimmed hedgerows. Other characteristic features such as the woodland copses are not prevalent within this location. Whilst the Site is characteristic of the area, the level plateau and hedgerows reduce the sensitivity of the Site to mineral extraction.
- Dedham Vale Area of Outstanding Natural Beauty (AONB) is located 1km to the north of the Site, with the Stour and Orwell Estuaries Ramsar and Site of Special Scientific Interest (SSSI) located 2.5km to the north-east. The flat plateau and hedgerows limit potential views from the Site towards the Ramsar, AONB and SSSI.

- Footpath 28 (Ardleigh) runs through the centre of the Site, providing open views of the field. There will be an adverse effect on the public rights of way users and other receptors with regards visual impact.
- Site A85 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Cattawade Marshes SSSI, Stour Estuary SSSI and Stour and Orwell Estuaries Special Protection Area (SPA) and Ramsar site. There is no known pollution pathway between Site A85 and these statutory sites. However, the potential for the likely significant effects to the Stour and Orwell SPA and Ramsar site would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application. The access road passes next to Ardleigh Gravel Pit SSSI, which is a geological SSSI.
- There are two Local Wildlife Sites within 500 metres of the Site.
- The Site would be an extension to the existing Martells Quarry complex and comprises part of a large arable field which is partly bordered by hedgerows, mature trees, and woodland. The Site is bordered by Little Bromley Road and Morrow Lane; these have mature trees and hedgerows (Priority habitat) on either side. There is a patch of Woodland beyond the eastern boundary, which is believed to be plantation woodland.
- The internal access road would need to cross Morrow Lane into site A86 and be shared with this Site. This would require removing a section of hedgerow. The haul road continues southwards following the eastern boundary of the field to the south-west of A85, it crosses Frating Road, passes through another arable field and heads westwards, passing next to Ardleigh Gravel Pit SSSI and cutting through the field boundary trees and plantation woodland.
- The Site is graded Amber-Green because ecological impacts are likely to be minor and may require low levels of mitigation to make the Site acceptable. The Site could have a minor impact upon a national designation- i.e. Ardleigh Gravel Pit SSSI and moderate impact upon Priority habitats and species, including impacts to Priority Hedgerow habitat. The Site could also result in disturbance and loss of habitat for Priority farmland species.
- Any application would require demonstration that the operations would not adversely affect Ardleigh Gravel Pit SSSI, Hedgerows and other boundary habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and hedgerows and tree lines. Compensatory habitat for Priority farmland species may be required.
- The Site lies within 200m of a scheduled monument.
- The Site contains evidence associated with the scheduled monument recorded through aerial photography.

- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene palaeoenvironmental remains.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Martells Quarry onto Slough Lane which is classified as a local road in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- For this further extension of the quarry the continued use of the private track access to the A120, via the lorry park, is required.
- The proposal would require a new crossing point either side of Frating Road to enable access to the existing site access and a haul road on the south side of Frating Road and would be shared with site A86.
- Access is proposed via an existing access serving Martells Quarry onto Slough Road, currently excludes a ghost island right turn lane. This is acceptable in principle.
- To export minerals by HGV via the existing access the Site would require a new crossing point of Frating Road (B1029) and Morrow Lane to enable access to the existing site access and a haul road on the south side of Frating Road, this would be shared with site A86. No detail provided.
- The proposal would impact on several PROW routes north and south of Frating Road; public footpath: 10, 31, 42 (Ardleigh_158).
- 1 Public Right of Way crosses the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has medium to low groundwater vulnerability. The Site is likely to have a minor

impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.

- The Site contains Grade 1 quality soil (excellent quality agricultural land) which is BMV land. The Site would require mitigation on the impacts on soil quality and agricultural land to make the Site acceptable which would be difficult to achieve.
- The Site contains 33kV electric overhead lines and 11kV overhead lines within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Two residential buildings, three commercial buildings, two farm buildings and an agricultural structure are outside the Site boundary less than or equal to 20m from the Site. One farm building and two residential buildings are more than 20m but less than or equal to 50m from the Site. Three residential buildings, one building of unknown use, commercial activity (industrial estate) and an agricultural structure are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, high levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. high level noise screening and extensive dust suppression measures.

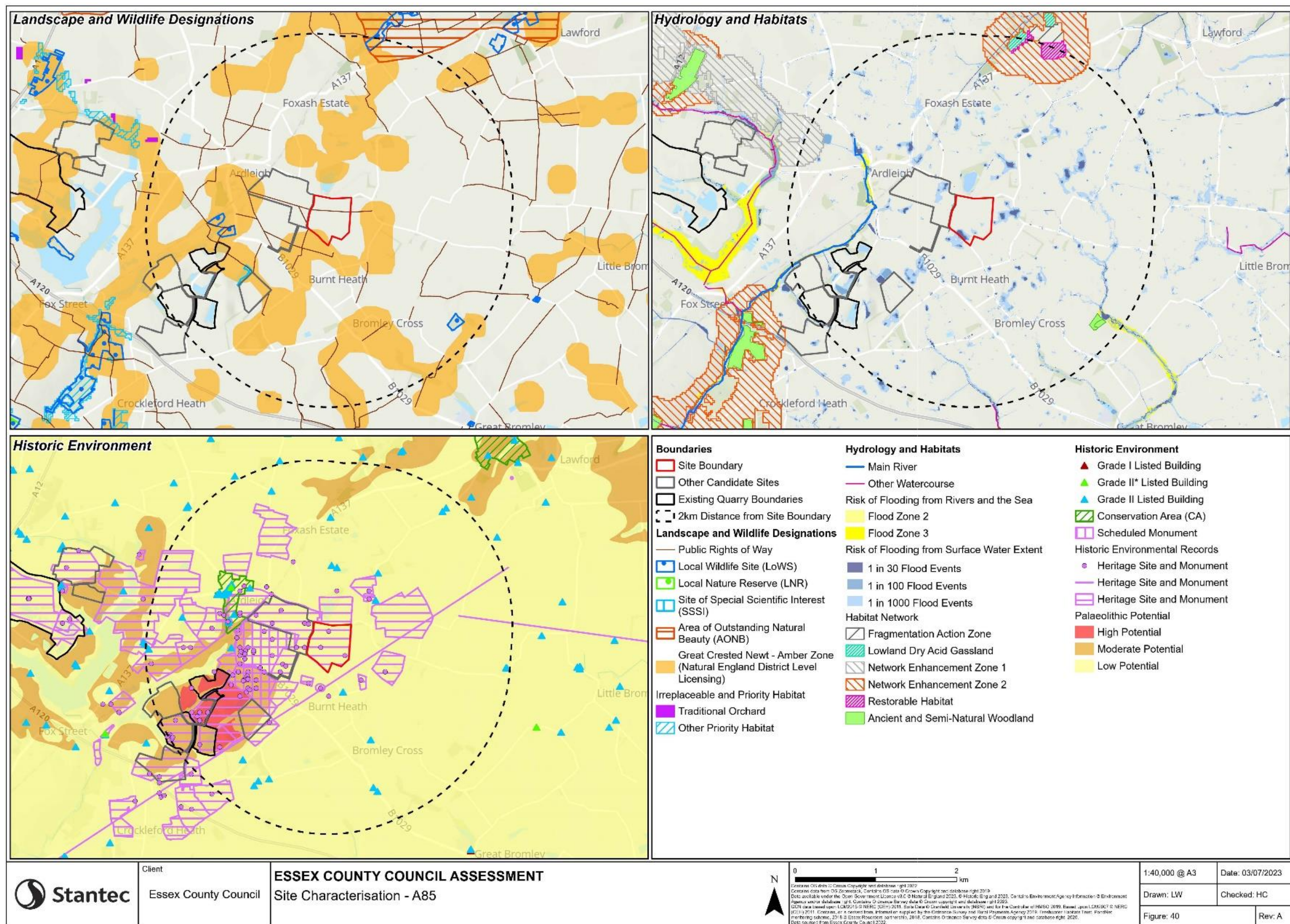


Figure 3.40: A85 - Martells – North of Frating Road (East)

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A86	Martells – North of Frating Road (West)	Tendring	Agricultural	28.9	2

The Site is promoted as an extension to an existing mineral Site (Martells Quarry) and is located north east of Martells Quarry, and immediately adjacent to Site A85. The Site area is approximately 28.9 ha and is proposed for approximately 2 million tonnes of sand and gravel extraction with processing and distribution occurring from Martells processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Martells Quarry, after extraction at Site A73, if allocated. Infrastructure needed includes crossing points on Frating Road. The adjoining uses include agricultural fields, a railway line, woodland, and residential, and commercial buildings. The village of Ardleigh is located to the west of the Site. Proposed access is via internal access tracks to Martells Quarry and the use of the existing Martells Quarry site access to the highway network. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Amber	Red	Amber	Amber	Red/Amber	Red/Amber	Green	Amber	Green	Red/Amber	Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site is very characteristic of the Tendring Plan (E3) Landscape Character Area (LCA), comprising the large flat arable farmland plateau which is broken up by low trimmed hedgerows. Other characteristic features such as the woodland copses are not prevalent within this location. The lack of hedgerows on the Site peripheries increase the sensitivity, as the characteristic landscape is highly visible from the wider landscape.
- Dedham Vale Area of Outstanding Natural Beauty (AONB) is located 1km to the north of the Site, with the Stour and Orwell Estuaries Ramsar and Site of Special Scientific Interest (SSSI) located 2.5km to the north-east. The flat plateau and hedgerows limit potential views from the Site towards the Ramsar, AONB and SSSI.

- Footpaths 27 and 28 (Ardleigh) run through the centre of the Site, providing open views of the field. There will be an adverse effect on the public rights of way users and other receptors with regards visual impact.
- Site A86 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Cattawade Marshes SSSI, Stour Estuary SSSI and Stour and Orwell Estuaries Special Protection Area (SPA) and Ramsar site. There is no known pollution pathway between Site A86 and these statutory sites. However, the potential for the likely significant effects to the Stour and Orwell SPA and Ramsar site would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application. The access road passes next to Ardleigh Gravel Pit SSSI, which is a geological SSSI.
- There are two Local Wildlife Sites within 500 metres of the Site.
- There is a candidate veteran Oak tree located on the north-eastern boundary which may also be ancient. Veteran and ancient trees are irreplaceable habitat.
- The Site comprises part of a large arable field which is partly bordered by hedgerows and mature trees. The Site is situated between Little Bromley Road, Morrow Lane, Frating Road and a railway line. Little Bromley Road, Morrow Lane are narrow lanes with mature trees and Hedgerows (Priority habitat) on either side. The internal access road would follow the eastern boundary of the field to the south of the main Site area, pass through another arable field, pass immediately north of the Ardleigh Gravel Pit SSSI and cross through field boundary trees and plantation woodland.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have moderate impacts upon irreplaceable habitats i.e. the candidate veteran tree which is potentially ancient. The Site could have a minor impact upon a national designation- i.e. Ardleigh Gravel Pit SSSI and moderate impact upon Priority habitats and species, particularly to Hedgerow Priority habitat. The Site could also result in disturbance and loss of habitat for Priority farmland species, e.g., Skylarks.
- Any application would require demonstration that the operations would not affect Ardleigh Gravel Pit SSSI, Hedgerows and other boundary habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and the candidate veteran tree, which is potentially ancient, a notable boundary feature tree, Hedgerows, and tree lines. Compensatory habitat for Priority farmland and wetland species may be required.
- The allocation of the Site would likely result in 'less than substantial' harm at low level to the significance of Ardleigh Conservation Area through a change within its setting and would require medium levels of mitigation to make it acceptable.

- The impact to Grade II listed New Hall (List UID: 1112056) is likely to be a low level of 'less than substantial' harm due to change of its wider setting but also due to the intensified use of the Site, with an increase of vehicular traffic, noise and pollution which would affect the sense of seclusion which contributes to the significance of the listed building. Some mitigation would be provided by the existing mature vegetation.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies adjacent to a scheduled monument and Historic England should be consulted prior to this Site being considered.
- The Site lies within an area of dense archaeological features as identified through aerial photographic evidence.
- The Site contains evidence for trackways and land division which extend from a multi-period archaeological site containing evidence for ritual, settlement, and industrial activity.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene palaeoenvironmental remains.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Martells Quarry onto Slough Lane which is classified as a local road in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- For this further extension of the quarry the continued use of the private track access to the A120, via the lorry park, is required.

- The proposal would require a new crossing point either side of Frating Road to enable access to the existing site access and a haul road on the south side of Frating Road and would be shared with site A85.
- Access is proposed via an existing access serving Martells Quarry onto Slough Road, currently excludes a ghost island right turn lane. This is acceptable in principle.
- To export minerals by HGV via the existing access the Site would require a new crossing point of Frating Road (B1029) to enable access to the existing site access and a haul road on the south side of Frating Road, this would be shared with site A85. No detail provided.
- The proposal would impact on several PROW routes north and south of Frating Road; public footpath: 10, 31, 42 (Ardleigh_158).
- 4 Public Rights of Way cross the Site. 4 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 1 quality soil (excellent quality agricultural land) and Grade 2 quality soil (very good quality agricultural land) which is BMV land. Approximately over nine tenths of the Site is in Grade 1 and less than nine tenths of the Site is in Grade 2. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 33kV electric overhead lines and 11kV overhead lines within the Site boundary. Local Anglian Water foul rising mains are present within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Four residential buildings are adjacent to the boundary of the Site (0m). An agricultural structure is outside the Site boundary less than or equal to 20m from the Site. One farm building is outside the Site boundary less than or equal to 20m from the Site access. Two residential buildings and one public building (Essex Highways) are more than 20m but less than or equal to 50m

from the Site. Sixty three residential buildings, one community facility (allotments), one community facility (cemetery), two commercial buildings and three farm buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

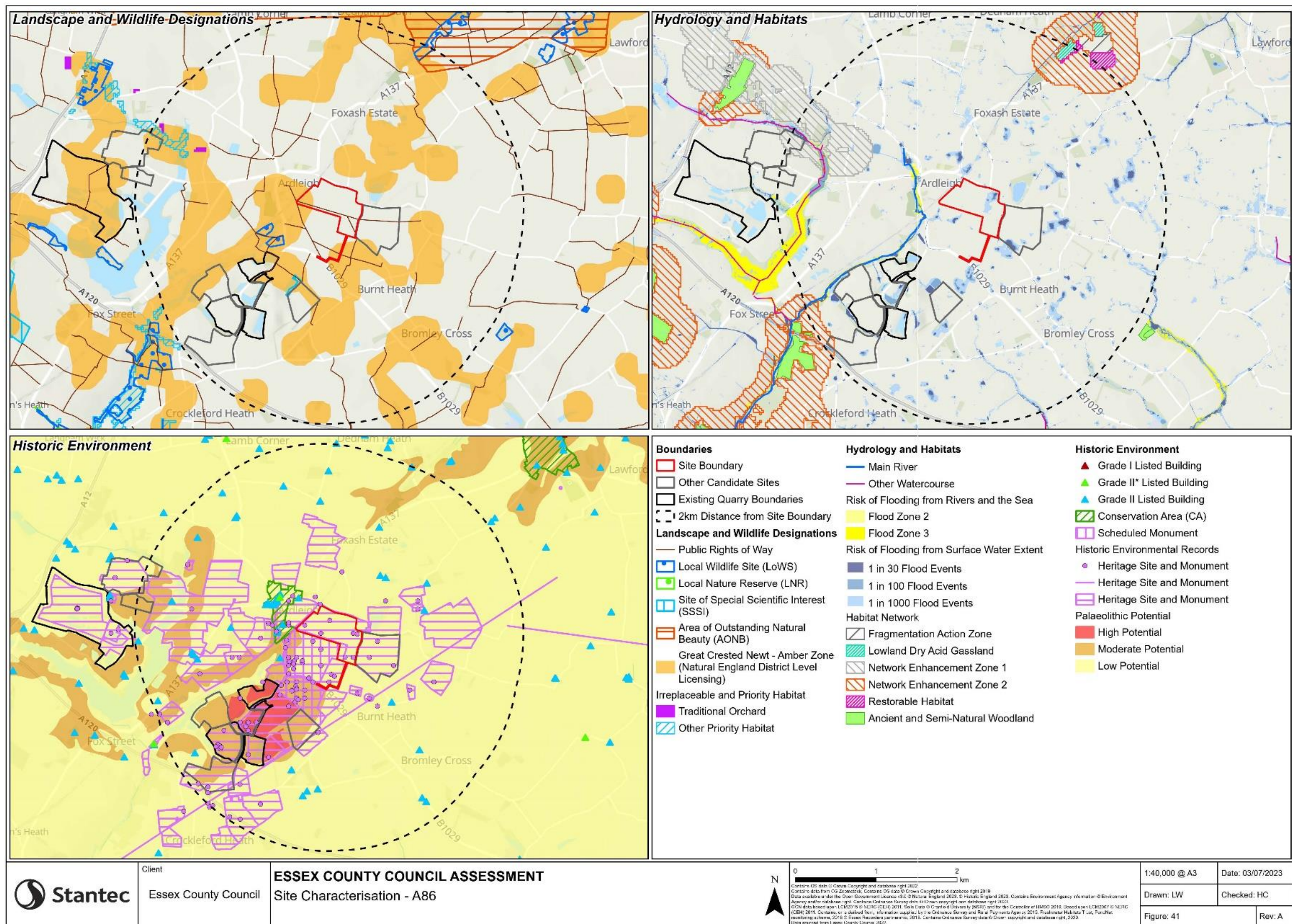


Figure 3.41: A86 - Martells – North of Frating Road (West)

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A87	Martells – East of Slough Lane	Tendring	Agricultural	10.47	0.56

The Site is promoted as an extension to an existing mineral Site (Martells Quarry) and is located east of Martells Quarry and west of Park Road. The Site area is approximately 10.47 ha and is proposed for approximately 0.56 million tonnes of sand and gravel extraction with processing and distribution occurring from Martells processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Martells Quarry, after extraction at Site A73, if allocated. The adjoining uses include agricultural fields, two waterbodies, Martells Quarry, and residential and farm buildings. The village of Ardleigh is located to the north of the Site. Proposed access is via internal access tracks to Martells Quarry and the use of the existing Martells Quarry site access to the highway network. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber	Green	Amber	Green	Red/Amber	Green	Amber/Green	Green	Red/Amber	Amber/Green	Amber	Green	Green

Key findings of the assessment are as follows:

- The Site is located in Landscape Character Area (LCA) Tendring Plain (E3), and possesses a number of characteristic features, including the large flat arable plateau, straight regular field pattern, low trimmed hedgerows, and woodland copses. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- Footpath 12 (Ardleigh) runs along the north-eastern boundary of the Site, providing open views of the flat farmland plateau.
- Site 87 is just within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for the Stour Estuary SSSI and Stour and Orwell Estuaries Special Protection Area (SPA) and Ramsar site. There is no known pollution pathway between Site A87 and the statutory sites. However, the potential for the likely significant effects to the Stour and Orwell SPA and Ramsar site

would need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application. Ardleigh Gravel Pit SSSI is on the northern boundary of the Site; this is a geological SSSI.

- There are two Local Wildlife Sites within one kilometre of the Site.
- The Site comprises an arable field which is partly bordered by hedgerows and woodland. A Hedgerow with a watercourse, and patches of Lowland Mixed Deciduous Woodland Priority habitat border part of the Site, on the southern corner. This area is part of Ardleigh Park and is part of an area of former historic parkland. Deciduous plantation woodland habitat is situated on part of the north-western boundary and beyond this is an open waterbody. The woodland is within the boundary of one part of Ardleigh Gravel Pit SSSI and the trees could potentially impact this geological SSSI, as outlined above.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have a moderate impact upon a national designation- i.e. Ardleigh Gravel Pit SSSI and upon Priority habitats and species. This includes impacts to water quantity and quality of the adjacent watercourse, waterbody, Lowland Mixed Deciduous Woodland, and Hedgerow Priority habitats. In addition, smothering of leaves by dust, disturbance e.g. by noise and lighting. The Site could also result in disturbance and loss of habitat for Priority farmland and wetland species.
- Any application would require demonstration that the operations would not adversely affect Ardleigh Gravel Pit SSSI, the hydrology of the watercourse, waterbody, Woodlands, Hedgerows, and other boundary habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats and prevention of deterioration to water quality to the watercourses and waterbody. Natural England should be consulted with respect to mitigation for Ardleigh Gravel Pit SSSI. Compensatory habitat for Priority farmland and wetland species may be required.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of Grade II listed Ardleigh Park (List UID: 1112050) through a change within its setting and would require high levels of mitigation to make it acceptable;
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of this asset and the fundamental change in land use and land character would undermine the ability to understand and appreciate its significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence. The Site contains evidence for a probable Roman road and linear features.

- The Site lies adjacent to a scheduled monument and is likely to contain archaeological remains associated with the Scheduled Monument. As such, Historic England should be consulted prior to this Site being included within the Mineral Plan
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene palaeoenvironmental remains.
- Access is proposed via an existing access serving Martells Quarry onto Slough Lane which is classified as a local road in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- For this further extension of the quarry the continued use of the private track access to the A120, via the lorry park, is required.
- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site has medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 1 quality soil (excellent quality agricultural land) and Grade 2 quality soil (very good quality agricultural land) which is BMV land. Approximately three quarters of the Site is in Grade 1 and one quarter of the Site is in Grade 2. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- Sixteen residential buildings and five farm buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive

receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.

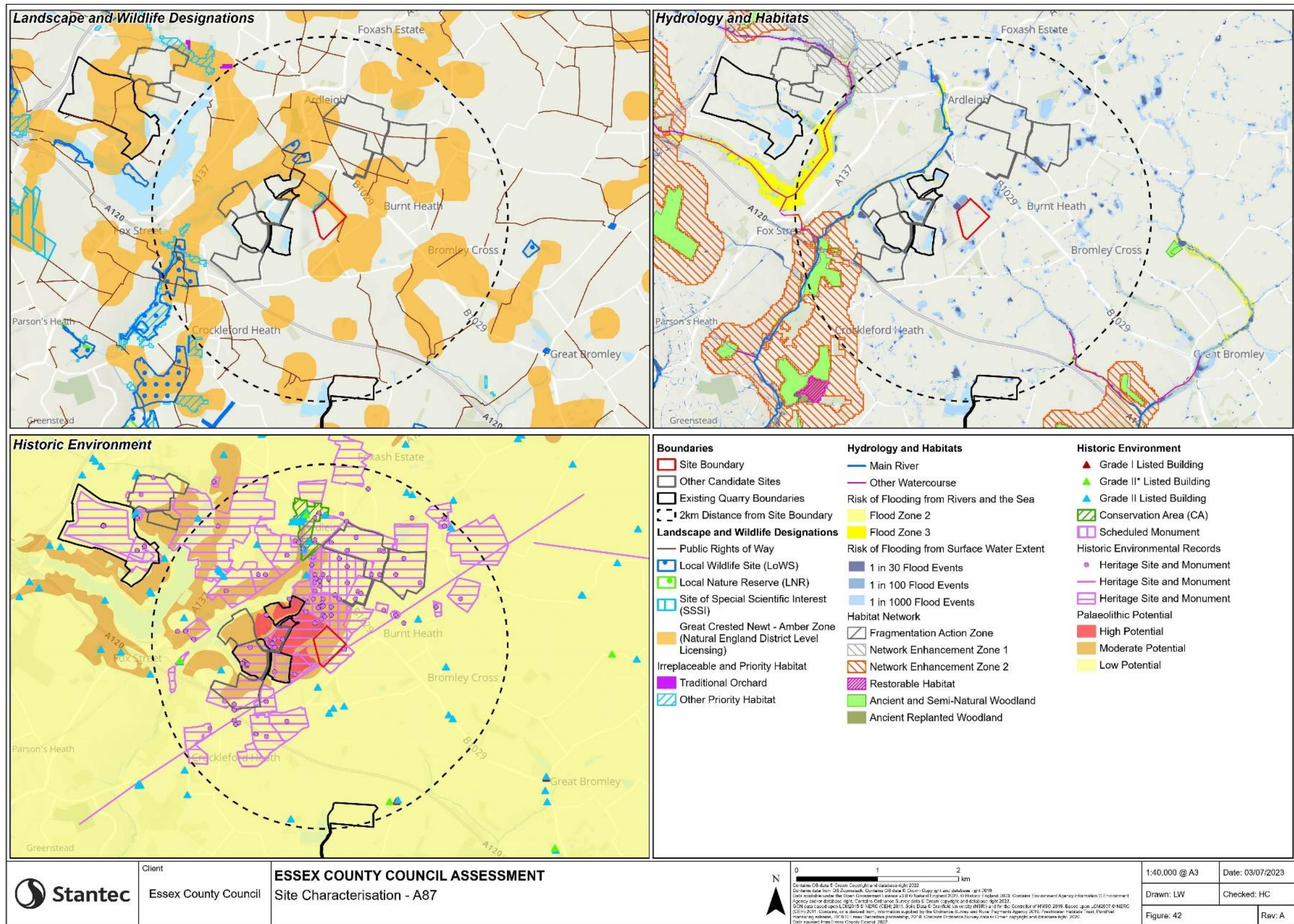


Figure 3.42: A87 - Martells – East of Slough Lane

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A88	Gurnhams Farm	Tendring	Agricultural and partly developed golf course	61	2.2

The Site is promoted as a new Site at Church Road, Little Bentley, Colchester. The Site area is approximately 61 ha and is proposed for 2.2 million tonnes of materials for sand and gravel extraction over an estimated life cycle of 10 years. If Site A69 is allocated the Site would be worked in sequence following A69. Additional infrastructure needed on site includes a processing plant and associated stocking area. The adjoining uses include agricultural fields, woodland, the A133 Colchester Road, and residential and commercial buildings. The village of Weeley is south east of the Site. The Site is promoted as accessible via Church Road to A133 Colchester Road. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Red/Amber	Red/Amber	Amber/Green	Amber	Red/Amber	Red/Amber	Red/Amber	Green	Amber/Green	Green	Amber	Amber/Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Tendring Plain (E3) of which the Site possesses a moderate number of distinct characteristic features including straight and regular field patterns with mainly low trimmed hedgerows matrix of hedgerows with specimen hedgerow trees. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- High Barn Wood and Shair Wood abut the Site boundary and are designated Local Wildlife Sites (LoWS) and Ancient Woodland. Both demonstrate a significant contribution toward the local green infrastructure and visual amenity.
- Site A88 is in a moderately sensitive location. It is just within the Site of Special Scientific Interest Impact Risk Zone for Weeleyhall Wood Site of Special Scientific Interest (SSSI), which is located 2.8 kilometres southeast. Additionally, the Site is 5.1 kilometres from the Colne Estuary SSSI, Special

Protection Area (SPA), Ramsar site and Essex Estuaries Special Area of Conservation and the Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone. The Colne Estuary is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species. The Site is 5.8 kilometres from Hamford Water SSSI, SPA, SAC, Ramsar and National Nature Reserve (NNR). Similar to the Colne Estuary, Hamford Water is an important area for overwintering waterbirds in the UK and is of international importance for several breeding bird species. There is a moderate potential for significant effects to the integrity of the SPA, SAC and Ramsar sites which need to be considered further through the plan-level Habitats Regulations Assessment and any subsequent planning application.

- The Site may act as functionally-linked land for birds which are qualifying features of the Colne Estuary SPA and Ramsar site and Hamford Water SPA and Ramsar site. This potential would need to be tested with appropriate surveys at application stage.
- The Site is within the Holland Brook catchment, which discharges to the sea at Holland on Sea. Holland Haven Marshes SSSI (7.1 kilometres from the Site), Upper Holland Brook LoWS (4.7 kilometres from the Site) and Great Holland Pits LoWS (7.8 kilometres from the Site) are all located along Holland Brook. The pollution pathways from the nearby watercourses to the Holland Haven Marshes SSSI and nearby LoWS would need to be assessed. Any watercourses in these locations are likely to feed into the Holland Brook catchment. Therefore, they could result in cumulative impacts upon water quantity and quality to the Holland Haven Marshes SSSI. Due to the location of the Site and relevant catchments, Hamford Water and Colne estuary are not expected to be impacted directly or indirectly by pollution pathways.
- Two ancient woodlands border the Site to the south and east. There are mature trees present across the Site and within the Site's hedgerows. Ancient woodlands are classed as irreplaceable habitats.
- Two Local Wildlife Sites are adjacent to the Site, both of which are listed as Lowland Mixed Deciduous Woodland Priority habitat and ancient woodland. There are a number of Hedgerows Priority habitat adjacent to the Site boundary and within the Site.
- The Site is graded Red-Amber because ecological impacts are likely to be major and it is likely to require high levels of mitigation to make the Site acceptable. Detailed studies combined with a Habitats Regulations Assessment (Appropriate Assessment) would be required to assess whether the Site would have a major impact upon the Colne Estuary and Hamford Water and their associated international and national designations and whether the adverse effects on the integrity of internationally important wildlife sites could be avoided with appropriate mitigation to the satisfaction of Natural England. This includes impacts to water quality of the Colne Estuary and other tributary watercourses via surface and ground water; disturbance to breeding and wintering birds for which the Colne Estuary SSSI, SPA and

Ramsar site and Hamford Water SSSI, SPA, SAC, Ramsar and NNR are designated; and loss of functionally-linked land e.g. for Brent Geese. Additionally, the proposals could have a serious impact upon the natural environment including Priority habitats and species. This includes the direct impact to the nearby Local Wildlife Site and ancient woodland, which is an irreplaceable habitat, mature trees, as well as potential hydrological impacts to retained habitats, and loss of and disturbance to habitats for Priority farmland species.

- In addition, the Site could have major impacts upon irreplaceable habitat, the Site is adjacent to two ancient woodlands. Hedgerows and Lowland Mixed Deciduous Woodlands which are Priority habitats could be affected directly and indirectly by the proposals. Substantial buffers between the Site, adjacent ancient woodlands and the hedgerows and nearby waterbody are likely to be needed. Activities which have the highest potential to generate dust, such as haul roads and mineral stockpiles, should be located away from watercourses, There should be the prevention of disturbance to breeding and non-breeding birds using the River Colne and Hamford Water which are designation features of those SSSI, SPA and Ramsar sites, woodlands, and the other existing habitats.

The loss of irreplaceable habitat, with regard to the adjacent ancient woodland is not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain requirement. Compensation would also be required for the loss of farmland Priority species habitat.

- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of Grade II listed Gurnhams (List UID: 1169294) through a change within its setting.
- The impact to Grade II listed Fisher's Farmhouse (List UID: 1111417) is likely to be a low level of 'less than substantial' harm due to the intervening presence of the A133 and established vegetation.
- The impact on Grade II listed Warren's Farmhouse (List UID: 1308683) is likely to be the lowest level of 'less than substantial' harm due to the distance from the Site.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area which contains extensive cropmarks, those within the Site comprises a track way and linear features.

- To the north and north-east of the Site a wide range of enclosures are recorded from aerial photography tentatively interpreted as being of prehistoric date.
- The historic field pattern has suffered considerable boundary loss since the late 20th century.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access proposed via an existing access off Church Road which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):
- Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.
- Immediately north of the existing access, Church Road a 17-tonne environmental weight limit is in place so all HGV movements would have to exit south to the junction with A133.
- There are highway concerns about the operation of the junction of Church Road with the A133 as there has been a high accident record in recent years. However, for the most recent 3-year period (01/04/2018 to 31/03/2023) there have been two injury accidents recorded, 1 slight just north of Church Road junction (Sept. 2020) and 1 serious south of the Church Road junction (July 2021) although accidents are recorded in the vicinity of the junction due to the proliferation of the access on a busy main road.
- The situation may be compounded by the close proximity of the Church Road/ A133 junction to the petrol station and vehicle trade centre.
- The existing vehicle movements on the A133, particularly in the peak periods and the proposed increase in the number of slow turning HGVs in/out of the Church Road/A133 junction would make it difficult for HGVs to access the A133 safely without mitigation measures, particularly right turning movements onto the A133.

- Access proposed via an existing access off Church Road. This access has been used previously by HGVs in connection with minerals extraction and will require mitigation to bring it up to an appropriate standard.
- Church Road is subject to the National Speed Limit of 60mph, appropriate site access and forward visibility splays will need to be demonstrated. The existing access is constructed with kerb radii and narrows down to a width of 5.8 metres, localised widening of the access would be required. South of the existing access Church Road is approximately 6 metres wide to its junction with the A133.
- The existing access is approximately 70 metres north of the junction with the A133 a Strategic Route in Essex County Council's Development Management Route Hierarchy.
- Immediately north of the existing access, Church Road a 17-tonne environmental weight limit is in place so all HGV movements would have to exit south to the junction with A133, localised widening of the road would be required.
- Existing right turn lane on A133 serving Church Lane requires further investigation in terms of its ability to accommodate right turning HGVs whilst maintaining through traffic.
- 3 Public Rights of Way cross the Site. 4 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/low/medium to low groundwater vulnerability. The Site is likely to have a minor impact on hydrology, hydrogeology, and drainage. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- Overhead Openreach BT power lines are within the Site boundary supplying the existing building. Utilities supplying existing on site buildings that may be demolished will be disconnected. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the power lines. Such mitigation may include diversion and/or protection.

- Two farm buildings are within the Site boundary. One residential building is outside the Site boundary less than or equal to 20m from the Site. One residential building, three commercial buildings and two farm buildings are more than 20m but less than or equal to 50m from the Site. Ten farm buildings, sixteen residential buildings, two commercial buildings and commercial activity (business park) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

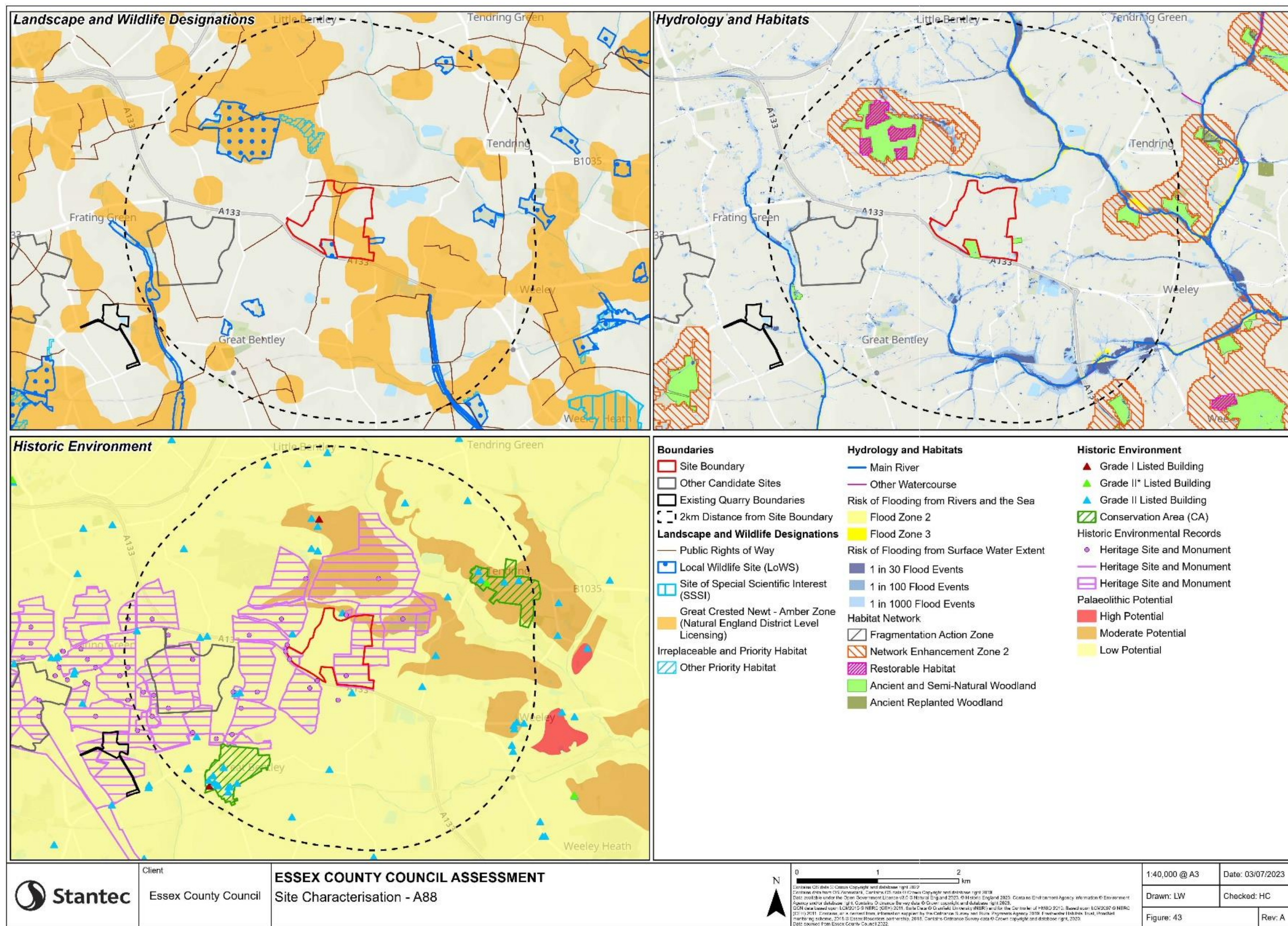


Figure 3.43: A88 - Gurnhams Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A89	Covenbrooke Hall Farm	Braintree	Agricultural	29.53	2.45

The Site is promoted as a new Site at land to the east of King's Lane, Stisted. The Site area is approximately 29.53 ha and is proposed for 2.45 million tonnes of materials for sand and gravel extraction with processing and distribution over an estimated life cycle of 23 years. Additional infrastructure needed on site includes a processing plant and new access route. The adjoining uses include agricultural fields, the A120 Coggeshall Road, and residential and commercial buildings. The town of Braintree is west of the Site. The Site is promoted as accessible via a new access from King's Lane to A120 Coggeshall Road. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber /Green	Amber	Amber /Green	Amber	Red/ Amber	Red/ Amber	Red/ Amber	Green	Amber	Green	Amber	Amber /Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Site bridges two Landscape Character Areas (LCA), and possesses features of both areas, including arable farmland with well-hedged medium to large fields (Blackwater/Brain/Lower Chelmer Valleys, C6) and small woods and copses that provide structure and edges to the landscape (Central Essex Farmlands, B1). Appropriate consideration is required to protect the characteristic features of the LCA, particularly the effect on the established tall hedgerows and trees that line the field boundaries.
- Footpath 21 (Stisted) runs through the Site and along the northern boundary, providing open views of the enclosed fields. Footpath 22 (Stisted) runs along the eastern boundary, although the extent of established field boundaries restricts views into the Site.
- Site A89 comprises three arable fields bounded by deciduous plantation woodland and an internal ancient hedgerow and strip of broadleaved deciduous plantation woodland. There is an ancient hedgerow and (partly dry ditch) – which is Priority habitat - on the eastern boundary adjacent to the

plantation woodland. The internal hedgerow is Priority habitat and has a single significant mature boundary Oak tree. The internal hedgerow and broadleaved deciduous plantation woodland would be removed. There is another ancient hedgerow and associated ditch on the south of the woodland plantation that is located on the northern boundary.

- The eastern boundary contains ancient Field Maple trees and a locally notable Oak tree that is a prominent boundary feature of the Site.
- The River Blackwater is to the north and east and is c.420 metres at its closest point, with Coastal and Floodplain Grazing Marsh Priority habitat identified adjacent to the River, less than 300 m from the Site. There is hydrological and habitat connectivity between the Site and the Blackwater valley via a watercourse, Hedgerows and Lowland Deciduous Woodland Priority habitat.
- The Site is designated Amber /Green as ecological impacts are likely to be minor and may require low levels of mitigation to make the Site acceptable. It could have a moderate impact upon Priority habitats and species. This includes the direct loss of an ancient hedgerow within a mature tree, and loss of the central broadleaved plantation woodland and a small section on western boundary, as well as potential hydrological impacts to retained habitats, and loss of- and disturbance to- habitats for Priority farmland species.
- Mitigation is likely to include prevention of hydrological changes to retained habitats, buffers between the Quarry and the woodlands and Hedgerows; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks. Adequate and appropriate compensation may be required for the loss of Hedgerows, woodland, watercourses, and loss of habitat for Priority farmland species.
- The Site will affect the setting of four designated heritage assets:
 - Jenkin's Farmhouse (Grade II, List UID: 1123903)
 - Barn Approximately 5m NE of Jenkin's Farmhouse, List UID: 1123878)
 - Cartlodge/Granary at Jenkin's Farm (Grade II, List UID: 1234243)
 - Barn Approximately 10m N of Jenkin's Farmhouse (Grade II, List UID: 123450)
- The Site will have no direct impact to any heritage assets; the impact will be indirect, due to a change to the assets' settings. Due to the proximity of the Site to the listed buildings identified above, and the contribution the Site makes to the significance of these buildings, the proposed Site is considered to cause a mid to low level of harm to their significance.
- As the designated heritage assets are close to the Site, mitigation measures such as planting or screening could mitigate against some of this harm.

- The Site contains evidence recorded on the Essex Historic Environment Record (EHER) through aerial photography for historic field boundaries and historic quarrying and a modern military related structure is recorded within the Site.
- The Site lies along a Roman road.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.
- Remains of a Cold War structure would require assessment and possible building recording should they survive within the Site.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Site A89 proposes access onto Kings Lane which forms part of the Local Road Network prior to accessing the A120 Trunk Road that forms part of the Strategic Road network.
- Whilst noting that A89 has the potential to meet with scenario (i) set out in the methodology (see Appendix G Transport for full methodology):

Access to a suitable existing junction with the main road network, via a suitable section of an existing road, as short as possible, without causing a detrimental impact upon the safety and efficiency of the network.

- Neither Kings Road or its junction with the A120 Trunk Road are considered 'suitable' in their current form and it is unclear what mitigation can be provided. Further investigation is required by the Site promotor.
- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- From the information provided It is unclear if safe access to the Site can be achieved from Kings Lane and whether the intensification in use of the A120/Kings Lane junction by HGVs can be appropriately mitigated.
- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with

National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.

- 2 Public Rights of Way cross the Site. 1 Public Right of Way borders the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has a low/medium groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Overhead Openreach BT power lines are within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on electricity lines and power lines. Such mitigation may include diversion and/or protection.
- One building of unknown use is adjacent to the boundary of the Site (0m). Two residential buildings and one commercial building are outside the Site boundary less than or equal to 20m from the Site. Five residential buildings and nine commercial buildings are more than 20m but less than or equal to 50m from the Site. Twenty residential buildings, thirteen farm buildings, one commercial building and commercial activity (business park) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would be likely difficult to achieve.

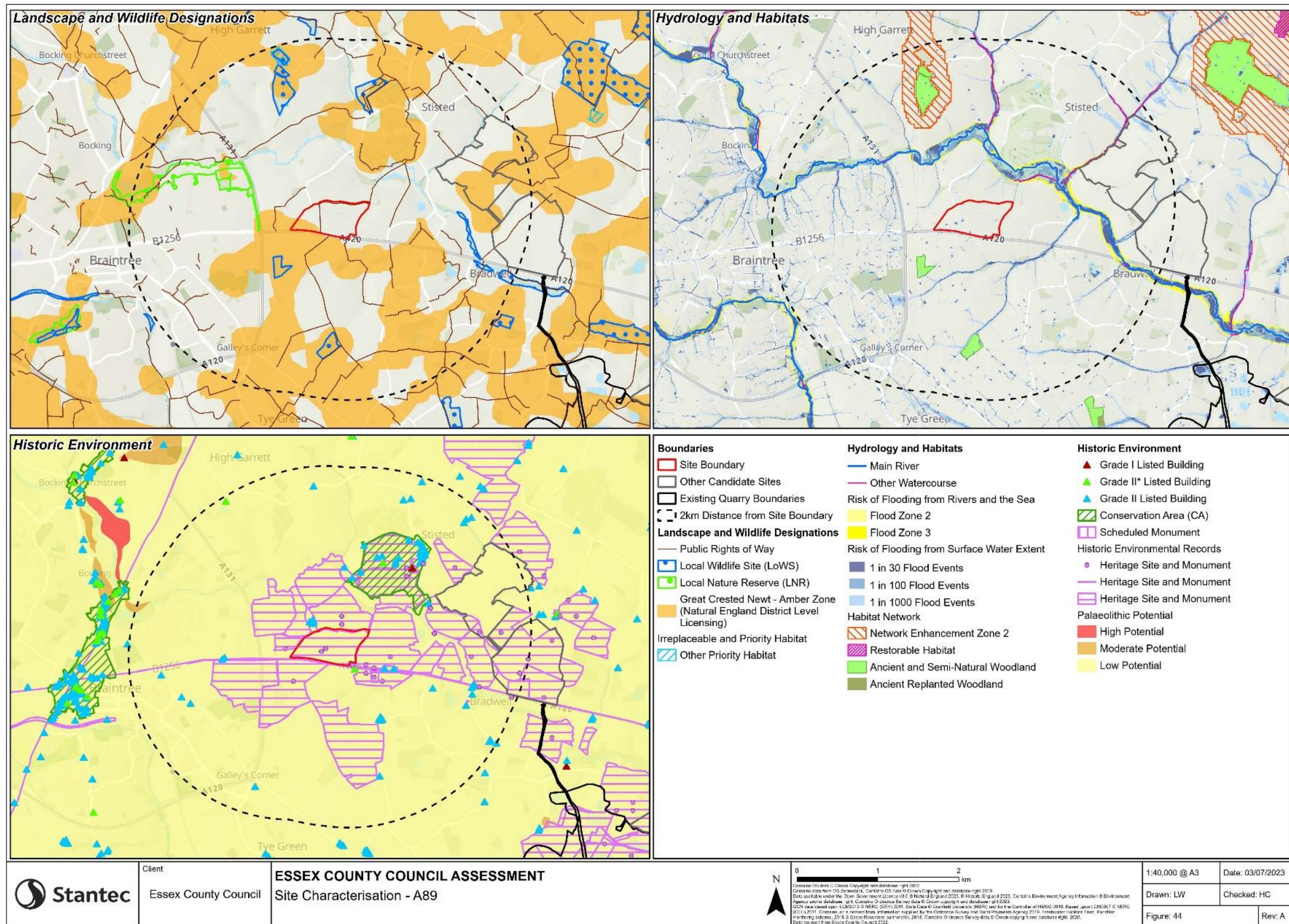


Figure 3.44: A89 - Covenbrooke Hall Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A90	Rayne Quarry – Northern Extension	Braintree	Agricultural	13.4	1

The Site is promoted as an extension to an existing mineral Site (Rayne Quarry) and is located north of Rayne Quarry and west of Pods Lane. The Site area is approximately 13.4 ha and is proposed for approximately 1 million tonnes of sand and gravel extraction with processing occurring from the existing Rayne Quarry processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Rayne Quarry. The adjoining uses include agricultural fields, woodland, and residential and farm buildings. The village of Rayne is located to the south east of the Site. Proposed access is via the existing access to Rayne Quarry which is off the B1256 (Dunmow Road), linking with the A120. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red/Amber	Amber/Green	Amber	Amber	Green	Red/Amber	Green	Amber	Green	Amber	Amber	Red	Green	Amber/Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1), the Site possesses limited characteristic features of this including an arable landscape of medium sized fields. Appropriate consideration is required to protect the characteristic features of the LCA.
- There is a veteran Oak tree located to the north-east of the Site on the boundary and another on the south-east of the Site on the boundary. Veteran trees are classed as irreplaceable habitat.
- The Site is bounded by Hedgerows and ditches (Priority habitat) on the northern and eastern boundaries. On the south and south-western boundary are plantation woodlands. Skylarks are present on-site which are a Priority species.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable.

The Site could have moderate impacts upon irreplaceable habitats, i.e. the veteran trees. The Site could have a moderate impact upon Priority habitats and species including Hedgerows and disturbance and loss of habitat for Priority farmland species. This includes impacts to water quantity and quality of the watercourses.

- Any application would require demonstration that the operations would not affect the hydrology of the veteran trees, hedgerows, and other boundary habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats, particularly the veteran trees, and prevention of deterioration to water quality to the watercourses. Water run-off from the Site should not be allowed to enter directly into watercourses. Compensatory habitat for Priority farmland species may be required.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of four Grade II listed buildings through change within their settings: Cottage on Opposite Side of Road and Approximately 70 Metres North West of Pound Farmhouse (List UID: 1122762); Pound Farmhouse (List UID: 1338151); Outbuilding Adjacent to Rear Left of Pound Farmhouse (List UID: 1122760); Pound Farmhouse (List UID: 1338151); Barn and Cartlodge Approximately 30 Metres North West of Pound Farm House and Adjacent to Road (List UID: 1122761).
- The allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of three Grade II listed buildings through change within their settings: Gould's Farmhouse (List UID: 1122764); Granary Approximately 4 Metres North of Gould's Farm House (List UID 1122765); Barn Approximately 12 Metres South west of Gould's Farmhouse (List UID: 1147670).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site contains evidence recorded through aerial photography for historic field boundaries.
- Prehistoric, Late Iron Age/Roman, and Roman settlement activity is recorded in the surrounding area.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.

- Access is proposed via an existing access serving Rayne Quarry onto the B1256 which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- 1 Public Right of Way crosses the Site. 1 Public Right of Way is within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. The Site is within 250m of high pressure gas mains (National Grid Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which may include diversion and/or protection of services and utilities.
- Two residential buildings are adjacent to the boundary of the Site (0m). Four residential buildings are outside the Site boundary less than or equal to 20m from the Site. Eight residential buildings and four farm buildings are more than 20m but less than or equal to 50m from the Site. Four residential buildings and six farm buildings are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.
- The Site is within an Airport Safeguarding Zone (Rayne). Restoration proposals assume the Site would be returned to agricultural use and include nature conservation with low level restoration utilising indigenous

soil resources only meaning the nature of the Site is unlikely to attract birds and therefore is likely to have a minor impact on aircraft safety and should not increase the risk of bird strike for aircrafts. This would need to be considered further at the Further Assessment Phase.

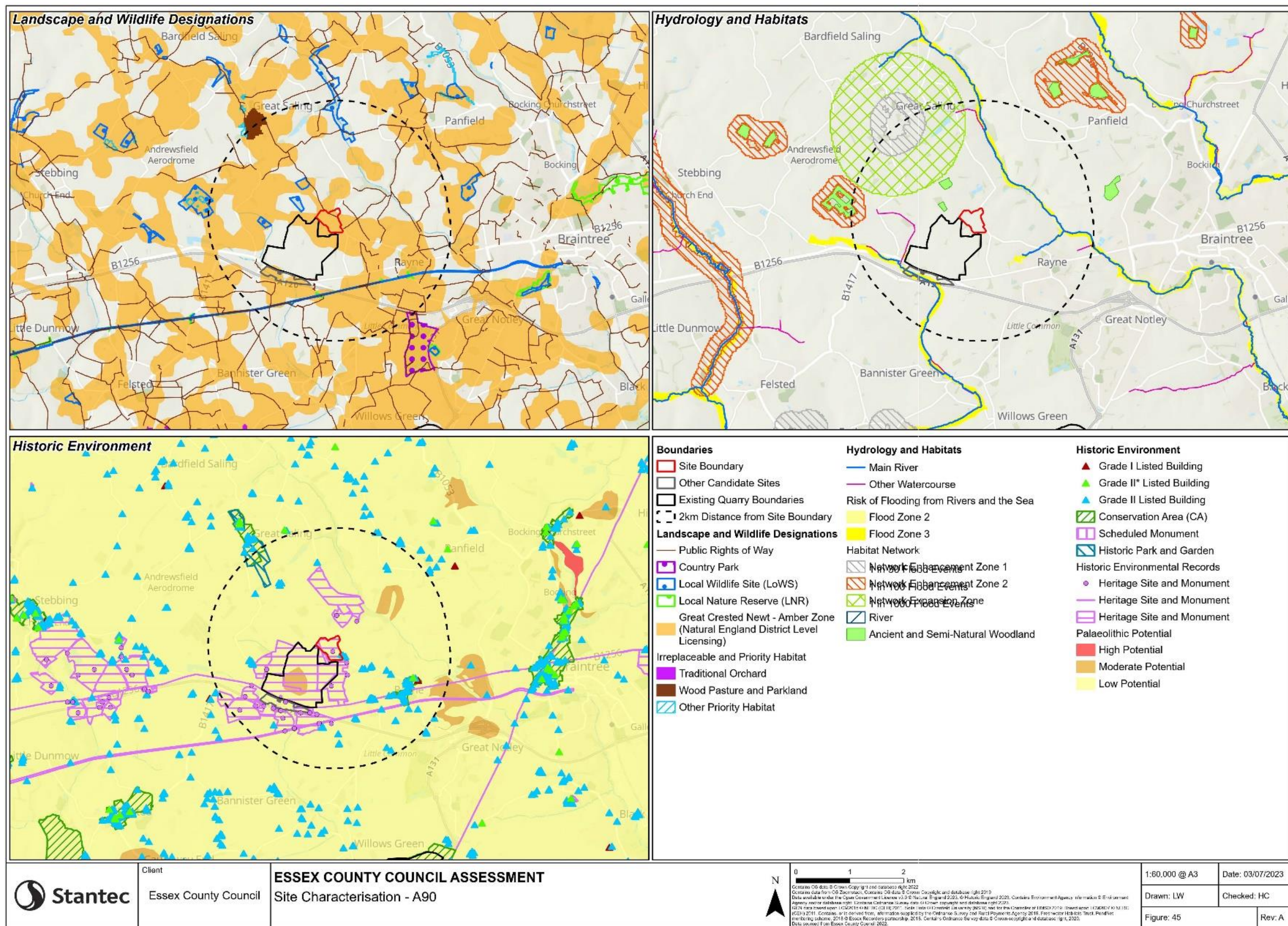


Figure 3.45: A90 - Rayne Quarry – Northern Extension

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A91	Land at Chignal St James	Chelmsford	Agricultural	24.1	0.68

The Site is promoted as a new Site at land at Chignal St James, Chelmsford to the east of Mashbury Road. The Site area is approximately 24.1 ha and is proposed for 0.68 million tonnes of materials for sand and gravel extraction which will be transferred to the Roxwell Quarry Complex by means of conveyer over an estimated life cycle of 8 years. Additional infrastructure needed on site includes a conveyer passing under Mashbury Road through the existing culvert and across land. The adjoining uses include agricultural fields, a large waterbody, and residential buildings. The city of Chelmsford is south east of the Site. The Site's access is promoted as aligned with the existing track entrance which is opposite the Site and transported via conveyer to the Roxwell Quarry Complex. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Amber /Green	Amber /Green	Amber	Amber	Green	Amber	Red/ Amber	Green	Amber	Green	Amber	Red	Amber	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1). The Site possesses limited characteristic features of the LCA including the irregular field pattern of arable farmland located within a network of narrow lanes, reducing the sensitivity of the landscape. The Site spans across areas of two arable fields bisected by a ditch. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape.
- The area to be extracted is a large arable field situated to the north-east of the former Roxwell Quarry complex which is currently being restored. The River Can is c.260 m south-west of the extraction site and could be affected during the transportation of the materials off-site. There is hydrological connectivity between the River Can and the proposed minerals operations; a conveyer would be used at this point of the transportation process.

- Nearby riparian habitats along the River Can include several areas of Lowland Mixed Deciduous Woodland Priority habitat, floodplain grassland and broadleaved deciduous plantation woodland.
- The Site is graded Amber/Green because it could have a moderate impact upon the River Can and Priority habitats and species -including the nearby Lowland Mixed Deciduous Woodland Priority habitat and farmland Priority species. It is Likely to require low levels of mitigation to make the Site acceptable. The Site's groundwater may be affected, which in turn could affect habitats. Buffers are likely to be required near to Hedgerows, woodland and watercourses and their water quality must not be affected by the proposals.
- The allocation of the Site would likely result in 'less than substantial' harm at a lowest level to the significance of four Grade II listed building through change within its settings: Stevens Farmhouse (List UID: 1263975); Range of farm buildings to north of Stevens Farmhouse (List UID: 1247730); Chignal Hall (List UID: 1170001) and Granary at Chignal Hall (List UID 1247781).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of Stevens Farmhouse and associated farm buildings. The fundamental change in land use and land character would dilute the ability to understand and appreciate their significance.
- To the north-west of the Site lies a Scheduled Roman Villa; one of the few masonry villas within Essex. The detail of this site has been identified from cropmark evidence. The Site sits within the landscape associated with the villa.
- Within the Site fieldwalking has identified the presence of a large concentration of Roman roof tile and some brick. This evidence may represent a further building within this area. Also identified were a wide range of flint artifacts including a hand axe and other pottery of a prehistoric date.
- Immediately to the south-west of the Site excavations identified a middle to late Iron Age settlement.
- The impact on the setting of the villa will have to be carefully assessed to identify if this can be mitigated and early consultation with Historic England will be required.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1 (98.5%) and this area is not at risk from fluvial flooding.

- It is understood that the Site is to the north of the former quarry site at 'Roxwell Quarry Complex' and would utilise the existing access onto A1060 and the haul road.
- Existing access benefits from a ghost island right turn lane onto A1060.
- Appropriate visibility splays will need to be demonstrated.
- No access to be taken from Mashbury Road.
- 4 Public Rights of Way cross the Site. 2 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A water course (River Can) is within the Site boundary, Roxwell Brook is 30m south west and 170m south east and another water course is 130m south. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Openreach BT power lines are within the Site boundary crossing the proposed access. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. The Site is within 250m of high pressure gas mains (National Grid Gas). Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Twenty two residential buildings, one farm building, one community facility (village hall), one school, and one sports facility (playing field) are more than 50m but less than or equal to 250m from the Site. Eighteen residential buildings, six commercial buildings, and one farm building are more than 50m but less than or equal to 250m from the Site access. Given the proximity of sensitive receptors, medium levels of mitigation are likely to be required to make the Site acceptable in terms of impacts on health and amenity e.g. low level noise attenuation measures.

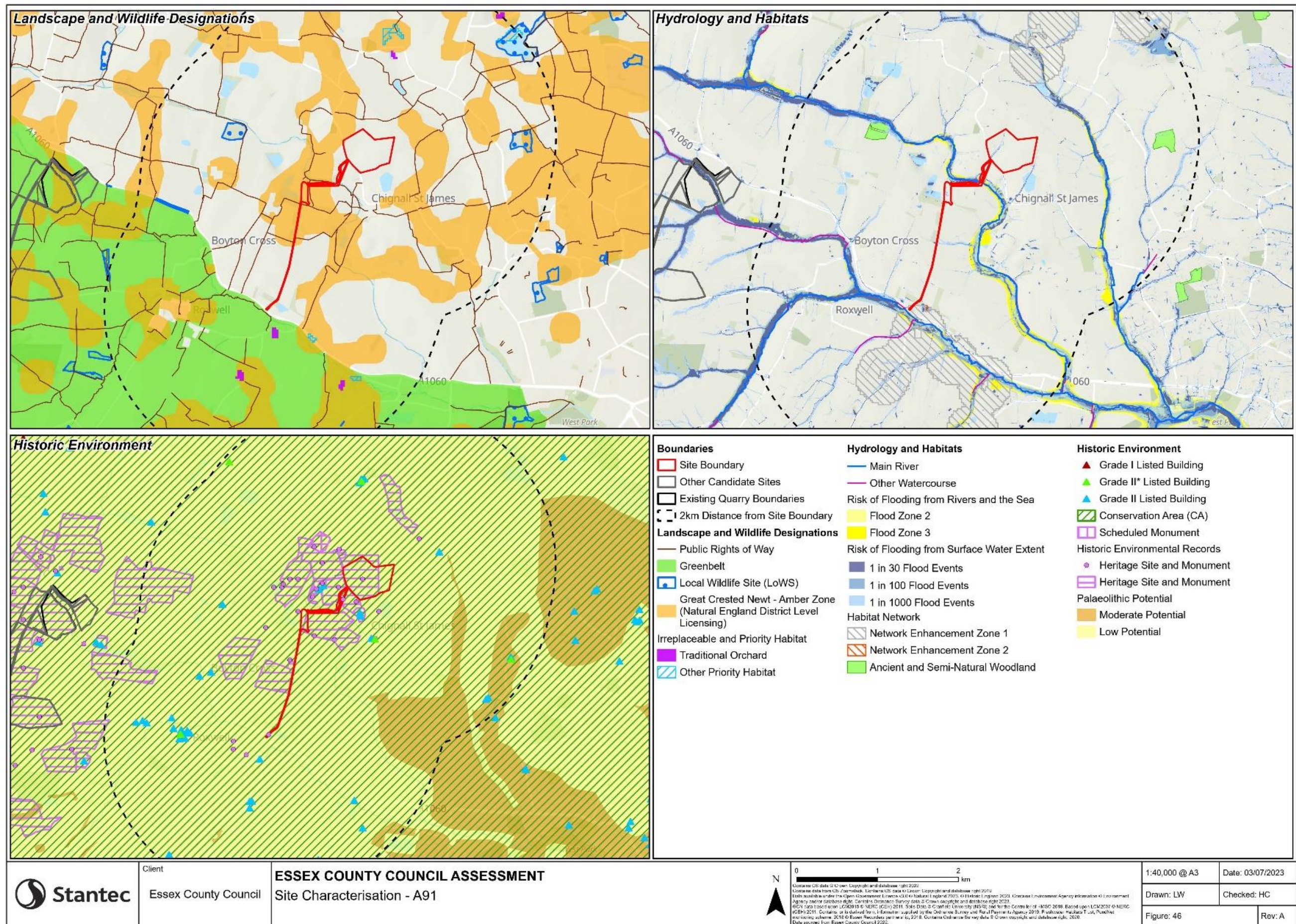


Figure 3.46: A91 - Land at Chignal St James

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A92	Land at Pattiswick Hall Farm – Small Site	Braintree	Agricultural	65.45	3.4

The Site is promoted as a new Site at land at Doghouse Lane, Pattiswick, Braintree. The Site area is approximately 65.45 ha and is proposed for 3.4 million tonnes of materials for sand and gravel extraction which will be transported to a processing plant on site where it will be washed, graded, and stocked before being exported off site. Additional infrastructure needed on site includes a processing plant with ancillary facilities, site management infrastructure and a network of haul roads across the Site. The adjoining uses include agricultural fields, woodland, the A120 and residential, commercial and farm buildings. The town of Braintree is located to the west of the Site. The Site is promoted as accessible via a new site access off the A120. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Amber	Amber	Green	Red	Red	Red/Amber	Green	Red/Amber	Green	Amber	Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA), which includes the predominantly arable farmland and well hedged fields. The River Blackwater and linear plantations are visible from the Site at the foot of the valley near Bradwell, although are not located within the Site. Strong views are obtained from the Site into the surrounding characteristic landscape. Consideration for appropriate enhancement of field hedgerow condition should be considered to mitigate the impacts on biodiversity and views from the surrounding immediate landscape.
- There are few important landscape designations within the surrounding landscape, with the exception of a few Priority Habitats (Coastal and Floodplain Grazing Marsh and Deciduous Woodland) surrounding the River Blackwater to the south and south-west. There are a number of other Priority

Habitats (Deciduous Woodland) in the landscape surrounding the Site, such as Prior's Wood and Captain's Wood.

- Public Right of Way (PRoW) Footpath 45 (Bradwell) runs through the centre of the Site between Bradwell and Pattiswick and provides strong views of the entire Site.
- Site A92 is within the Site of Special Scientific Interest Impact Risk Zone for Belcher's and Broadfield Woods Site of Special Scientific Interest (SSSI). This is located c.2.5km to the north of the Site and is an ancient woodland.
- The closest Local Wildlife Site (LoWS) is Blackwater Plantation West (reference Bra 158) which is less than 60 metres to the south of the Site, downhill. The ancient woodlands of the Marks Hall estate are just over 2.2km north of the Site and include several ancient woodland Local Wildlife Sites.
- Site A92 comprises arable fields bounded partly by Hedgerows, which are Priority habitat, and a ditch. There are two internal Hedgerows and a separate ditch. The ditches flow south toward the River Blackwater. Internal hedgerows, trees and the watercourse would be removed. A new access onto the A120 would need to cut through the boundary Hedgerow (Priority habitat). Priority species are present on-site.
- There are few scattered trees near the watercourse which would be lost to the development. This includes an Ancient Oak tree, a possible Ancient Oak tree and Notable mature Oak. Ancient trees are classed as irreplaceable habitats. On the northern boundary is a boundary group of mature Oak trees, that collectively form a significant landscape feature.
- The Site is graded Red/Amber because it could have a serious impact upon Priority habitats and species; this includes potential impacts to the River Blackwater and its associated riparian habitats. In addition, the Site could have major impacts upon irreplaceable habitats, i.e. the Ancient tree situated within the Site. There would also be a direct loss of two Hedgerows and dissection through another; loss of a Notable tree and a watercourse. There could be potential hydrological impacts to retained habitats and loss of- and disturbance to- habitats for Priority farmland species.
- Mitigation is likely to include prevention of hydrological changes to the River Blackwater and associated its habitats, and to retained habitats; adequate and appropriate buffers between the Quarry and Hedgerows, trees, and watercourses; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks.
- Adequate and appropriate compensation would be required for the loss of Hedgerows, trees, watercourses, and loss of habitat for Priority farmland species. Losses to irreplaceable habitats (including ancient trees) are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and

bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain calculations.

- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- The Site lies adjacent to a Roman road and contains cropmark evidence for possible settlement or ritual activity and agricultural activity.
- The creation of a new access onto the A120 is contrary to Department for Transport Circular 1/2022 Strategic Road network and the delivery of sustainable development. Policy objection from National Highways.
- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- 1 Public Right of Way crosses the Site. 3 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to the Public Right of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course (River Blackwater) is 60m south west of the Site. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- Two residential buildings are adjacent to the boundary of the Site (0m). Eight residential buildings and one building of unknown use are outside the Site boundary less than or equal to 20m from the Site. Five residential buildings

and two commercial buildings are more than 20m but less than or equal to 50m from the Site. Five commercial buildings, twenty one residential buildings, five farm buildings and one community facility (place of worship) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

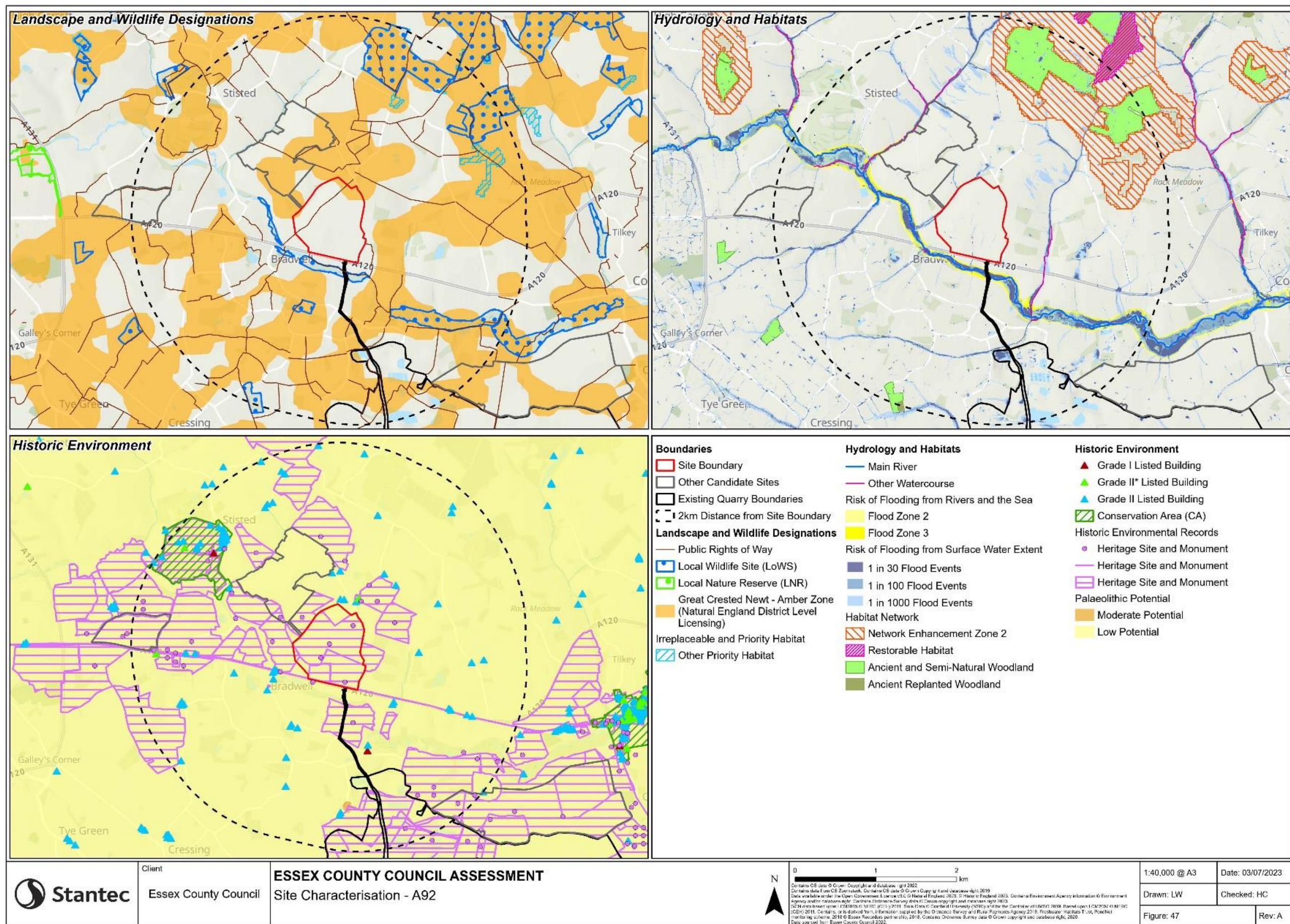


Figure 3.47: A92 - Land at Pattiswick Hall Farm – Small Site

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A93	Land at Pattiswick Hall Farm – Full Site	Braintree	Agricultural	130.74	8.2

The Site is promoted as a new Site at land at Doghouse Lane, Pattiswick, Braintree. The Site area is approximately 130.74 ha and is proposed for 8.2 million tonnes of materials for sand and gravel extraction which will be transported to a processing plant on site where it will be washed, graded, and stocked before being exported off site. Additional infrastructure needed on site includes a processing plant with ancillary facilities, site management infrastructure, conveyer infrastructure and a network of haul roads across the Site. The adjoining uses include agricultural fields, woodland, sewage works, the A120 and residential, commercial and farm buildings. The town of Braintree is located to the west of the Site. The Site is promoted as accessible via a new site access off the A120. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red/Amber	Amber	Amber/Green	Red	Red	Red/Amber	Green	Red/Amber	Green	Amber	Amber/Green	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA), which includes the predominantly arable farmland and well hedged fields. The River Blackwater and linear plantations are located on the south-west boundary, although are not located within the Site. Strong views are obtained from the Site into the surrounding characteristic landscape. Consideration for appropriate enhancement of field hedgerow condition should be considered to mitigate the impacts on biodiversity and views from the surrounding immediate landscape.
- There are few important landscape designations within the surrounding landscape, with the exception of a few Priority Habitats (Coastal and Floodplain Grazing Marsh and Deciduous Woodland) surrounding the River Blackwater to the south and south-west. There are a number of other Priority

Habitats (Deciduous Woodland) in the landscape surrounding the Site, such as Prior's Wood.

- All Saints Church (Grade I) at Stisted is a prominent feature within the landscape within the northern parcel and is emphasised by the presence of Footpath 19 (Bradwell) which provides historic direct access across the Site.
- Public Right of Way (PRoW) Footpath 45 (Bradwell) runs through the centre of the southern parcel between Bradwell and Pattiswick and provides strong views of the entire Site. The footpath connects to Footpath 19 (Bradwell) within the northern parcel which provides further views across the Blackwater Valley.
- Site A93 is within the Site of Special Scientific Interest Impact Risk Zone for Belcher's and Broadfield Woods Site of Special Scientific Interest (SSSI). This is located c.1.6km to the north of the Site and is an ancient woodland.
- The closest Local Wildlife Site (LoWS) is Blackwater Plantation West (reference Bra 158) which is less than 60 metres to the south of the Site, downhill. The ancient woodlands of the Marks Hall estate are just over 800m north of the Site and include several ancient woodland Local Wildlife Sites.
- Site A93 comprises arable fields bounded partly by Lowland Mixed Deciduous Woodland and Hedgerow Priority habitats, and ditches on several boundaries. There are several internal Hedgerows and a separate ditch. The ditches flow south toward the River Blackwater. Internal hedgerows (Priority habitat), mature Oak trees and the watercourse would be removed or need dissecting to accommodate a haul road and access onto the A120.
- There are few scattered trees near the watercourse in the southern portion of the Site which would be lost to the development. This includes an Ancient Oak tree, a possible Ancient Oak tree and Notable mature Oak. Ancient trees are classed as irreplaceable habitats. On the northern boundary of the south part of the Site is a boundary group of mature Oak trees, that collectively form a significant landscape feature. The connecting haul road is shown to cut through this group and would remove a mature Oak tree.
- The Site is graded Red/Amber because it could have a serious impact upon Priority habitats and species; this includes potential impacts to the River Blackwater and its associated riparian habitats. In addition, the Site could have moderate impacts upon irreplaceable habitats, i.e., the Ancient tree situated within the Site. There would also be a direct loss of Hedgerows and dissection through several more; loss of a possible Ancient tree, a Notable tree, mature tree, and a watercourse. There could be potential hydrological impacts to retained habitats and loss of- and disturbance to- habitats for Priority farmland species.
- Mitigation is likely to include prevention of hydrological changes to the River Blackwater and associated its habitats, and to retained habitats; adequate and appropriate buffers between the Quarry and Hedgerows, trees, and

watercourses; and prevention of deterioration of water quality to watercourses. In addition, phasing to minimise impacts and rapid restoration and creation of new replacement habitats, ensuring that hedgerows and other newly created habitats connect with existing and historic habitat networks.

- Adequate and appropriate compensation would be required for the loss of Hedgerows, trees, watercourses, and loss of habitat for Priority farmland species. Losses to irreplaceable habitats (including ancient trees) are not permitted within the Government's Biodiversity Net Gain (BNG) Metric and bespoke assessment and compensation would be required to be agreed with the MPA. Any bespoke compensation would be outside the BNG Metric calculations (The Biodiversity Metric 4.0 User Guide, 2023); bespoke compensation would be required, which could not count towards any Biodiversity Net Gain calculations.
- The allocation will likely cause 'less than substantial harm' harm to the setting of 8 designated heritage assets. These are:
 - 44 and 45 Old Lane, (Grade II, List UID: 1123849)
 - Harvey's Farmhouse (Grade II, List UID: 137613)
 - Pattiswick Hall (Grade II, List UID: 1337592) and ancillary building 35m east of Pattiswick Hall (Grade II, List UID: 1123881)
 - Wren's Cottage (Grade II, List UID: 1123886)
 - Church of St Mary the Virgin (Grade II*, List UID: 1168451)
 - 9 Water Lane (Grade II, List UID: 1337590)
 - Stisted Conservation Area
- The Site will have no direct impact to any heritage assets; the impact will be indirect, due to a change to the assets' settings.
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of the listed buildings and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- Due to the proximity of the Site to the listed buildings identified above, and the contribution the Site makes to the significance of these buildings, the proposed Site is considered to cause either a mid or a low level of harm to their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- The Site lies adjacent to a Roman road and contains cropmark evidence for possible settlement or ritual activity and agricultural activity.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.

- The Site is predominantly within Flood Risk Zone 1 and those areas are not at risk from fluvial flooding.
- The creation of a new access onto the A120 is contrary to Department for Transport Circular 1/2022 Strategic Road network and the delivery of sustainable development. Policy objection from National Highways.
- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- 5 Public Rights of Way cross the Site. 1 Public Right of Way borders the Site. 3 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has unproductive/low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course (River Blackwater) is 60m south west of the Site, another water course is 2m north, an additional water course is 10m north west and another is 20m north west. There is a small water body in the northern half of the Site. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Further investigation and consultation would be needed to determine whether mitigation measures are needed to avoid any impact on the electricity lines. Such mitigation may include diversion and/or protection.
- One farm building is within the Site boundary. Two farm buildings and two residential buildings are adjacent to the boundary of the Site (0m). Ten residential buildings and one building of unknown use are outside the Site boundary less than or equal to 20m from the Site. Five residential buildings and two commercial buildings are more than 20m but less than or equal to 50m from the Site. Eleven commercial buildings, thirty five residential buildings, five farm buildings and one community facility (place of worship) are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the

levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

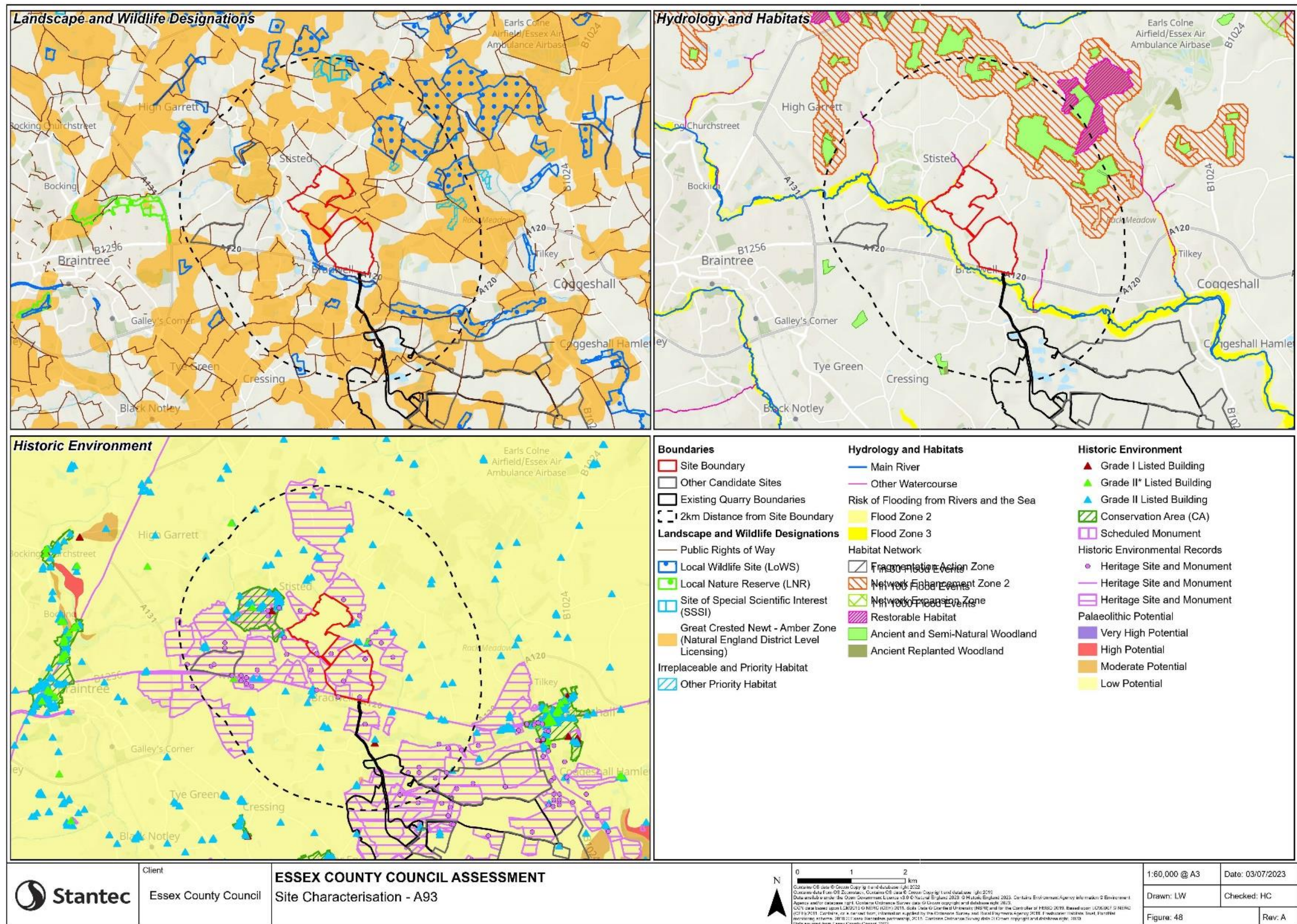


Figure 3.48: A93 - Land at Pattiswick Hall Farm – Full Site

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A94	Land at Highfields Farm	Braintree	Agricultural	34.69	0.75

The Site is promoted as a new Site at land at Highfields Farm, Highfields Lane, Kelvedon. The Site area is approximately 34.69 ha and is proposed for 0.75 million tonnes of materials for sand and gravel extraction which will be transported to a processing plant on site where it will be washed, graded, and stocked before being exported off site. Additional infrastructure needed on site includes a processing plant with ancillary facilities, site management infrastructure, and a network of haul roads across the Site. The adjoining uses include agricultural fields, woodland, Highfield Solar Farm, the A12, and residential, commercial and farm buildings. The village of Kelvedon is located to the north of the Site. The Site is promoted as accessible via a new site access off the Inworth Road (B1023). See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber	Amber	Red	Red/Amber	Amber	Red/Amber	Red	Red/Amber	Green	Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses a number of features of the Tiptree Ridge (D4) Landscape Character Area (LCA), including its location on the ridge providing views north-west across the Blackwater valley, the tall, dense hedgerows, and the medium scale field pattern. Appropriate consideration is required to protect the characteristic features of the LCA, particularly concerning views of the Site from across the River Blackwater.
- Site A94 is within the Site of Special Scientific Interest (SSSI) minerals Impact Risk Zone for Tiptree Heath SSSI (c.2.7km to the southeast). It is considered that the likelihood of impacting Tiptree Heath SSSI is likely to be low, using professional opinion.
- Kelvedon Hall Wood Local Wildlife Site (LoWS) is 240m to the southwest and is Ancient Woodland. Brockwell Meadows LoWS is c.365m to the north/ north-

west adjacent to the River Blackwater. Part of Brockwell Meadows is also designated as Local Nature Reserve (LNR). An additional 5 LoWS are within 1km of the Site. Two of these – i.e. Inworth Wood (Co6) and Perry's Wood (Co5)- are also both ancient woodland and are located 430m and 460m from the Site, respectively.

- The Site comprises a number of arable fields; bounded by Hedgerows and lines of mature trees which are Priority habitat and a number of other ditches. A Hedgerow (Priority habitat)/ line of mature trees and associated watercourse runs across the centre of the western area, the water heading towards the River Blackwater. There is a Hedgerow (Priority habitat)/ line of mature trees and associated ditch (dry at the time of survey) crossing through the eastern part of the Site. These would potentially require removal to accommodate the development. Additional sections of Hedgerow Priority habitat may require removal to accommodate visibility splays and access routes. The River Blackwater is c.260 metres from the Site at its closest point; there is hydrological connectivity to the River via the watercourses.
- There is a veteran Ash tree on the southern boundary of the Site, in the western part. Veteran trees are irreplaceable habitat.
- The Site is graded Amber because ecological impacts could be moderate and are likely to require medium levels of mitigation to make the Site acceptable. The Site could have moderate impacts upon irreplaceable habitats, i.e. the veteran tree and ancient woodlands. The Site could have a major impact upon the natural environment including loss of, and indirect impacts to Hedgerow Priority habitat, mature trees, watercourses. This includes impacts to water quantity and quality of the watercourse which could, in turn, affect the River Blackwater and associated habitat, some of which is designated as LoWS and LNR.
- Any application would require demonstration that the operations would not affect the hydrology of the veteran tree, nearby ancient woodlands, hedgerows, mature tree lines, ditches and other boundary and nearby habitats. Mitigation may include - but not be limited to - an adequate and appropriate buffer between the Site and these habitats, particularly the veteran trees, and prevention of deterioration of water quality to the watercourses. Water run-off from the Site should not be allowed to enter directly into watercourses. Compensatory habitat for the loss of Hedgerows (Priority habitat)/ lines of mature trees and ditches, and Priority farmland species may be required.
- The allocation of the Site would result in a high level of less than substantial harm to the significance of the Grade II listed Highfields Farmhouse and attached cottage (List UID: 1337626).
- It would also result in a low level of less than substantial harm Grade I Listed Parish Church of All Saints (List UID: 1224592).

- It would further result in the lowest level of less than substantial harm to the Grade II Listed Inworth Hall (List UID: 1224616).
- The scheme would result in the lowest level of less than substantial harm to the Grade II Listed Harborough Cottage (List UID: 1224587).
- Mitigation in the form of planting and open landscape areas is unlikely to effectively reduce the levels of harm.
- The undeveloped, agrarian landscape of the Site makes a positive contribution to the setting of these assets and enhances their significance. The fundamental change in land use, land character and environmental impacts from noise, dust and vehicle movements would undermine the ability to understand and appreciate their significance.
- The Site lies within an area of archaeological features as identified through aerial photographic evidence.
- The Site contains evidence for possible prehistoric ritual activity, settlement, and Roman industrial activity and the nationally important site of an Iron Age warrior may lie within the Site.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene palaeoenvironmental remains.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- Access is proposed from Windmill Hill which is a local road that connects to the B1029 which is a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This corresponds to (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- From a highway viewpoint Windmill Hill, the B1023 and connections to the Main/Strategic Road Network via the A12 Trunk Road are not suitable in their current form.

- Any access taken from Windmill Hill (which lies within the Colchester district) would not be supported by the Highway Authority due to the unsuitability of Windmill Hill and the local road network.
- The applicant may wish to consider a haul road across the B1023, for which details would need to be submitted before any comments could be made.
- The Highway Authority note the presence of Public Rights of Way within the Site. All details relating to the PROW should be agreed with the Highway Authority, this may include a package of measures to protect and enhance the PROW network.
- Crossing of Highfield Road required. No detail provided.
- 5 Public Rights of Way cross the Site. 4 Public Rights of Way are within 100m of the Site. Appropriate consideration would be needed to mitigate potential impacts on these Public Rights of Way and high levels of mitigation may be required which is likely to include diversion especially with regard to those Public Rights of Way crossing the Site.
- The Site has unproductive/low/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course is within the Site boundary. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Virgin media power lines are within the Site boundary. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Two farm buildings are adjacent to the boundary of the Site (0m). Two residential buildings are outside the Site boundary less than or equal to 20m from the Site. One residential building is more than 20m but less than or equal to 50m from the Site. Two residential buildings, and three farm buildings are more than 50m but less than or equal to 250m from the Site. Two residential buildings, and three farm buildings are more than 50m but less than or equal to 250m from the Site access connecting the two sections of the Site. Twelve residential buildings and one community facility (place of worship) are more

than 50m but less than or equal to 250m from the Site access. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

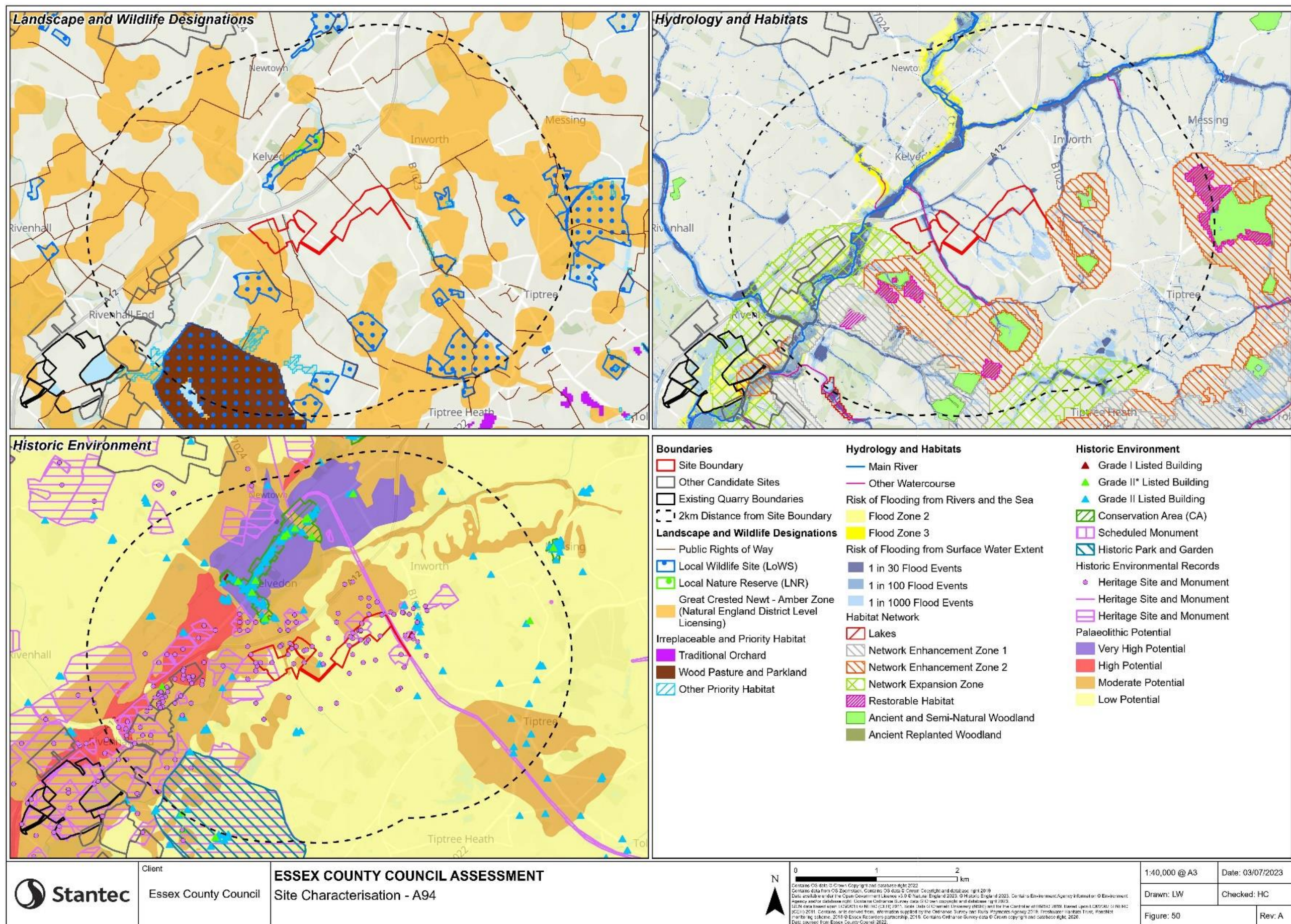


Figure 3.49: A94 - Land at Highfields Farm

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A95	Land at Bellhouse Farm South	Colchester	Agricultural	12.68	0.83

The Site is promoted as an extension to an existing mineral Site (Colchester Quarry) and is located adjacent to the western boundary of Colchester Quarry. Colchester Quarry is split into two areas (Stanway Quarry and Bellhouse Quarry). The Site area is approximately 12.68 ha and is proposed for approximately 0.83 million tonnes of sand and gravel extraction with processing occurring from the existing Stanway Quarry processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Bellhouse Quarry or extracted during the time period for Colchester Quarry permitted working and processing. Infrastructure needed on site includes extensions to existing field conveyor to Stanway Quarry. The adjoining uses include agricultural fields, woodland, Colchester Quarry, Roman River, and residential, commercial and farm buildings. The town of Colchester is located to the east of the Site. Proposed access is via the existing access to Colchester Quarry off Warren Lane to the A12 Eight Ash Green junction utilising the newly constructed Western Bypass for access onto the A12. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Red	Amber	Amber	Amber	Green	Green	Green	Red/Amber	Green	Amber	Red/Amber	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses a number of characteristic features of the South Colchester Farmlands LCA, which includes the large flat farmland plateau, dissected by occasional small narrow valleys, with arable land use, dispersed blocks of woodland and straight regular fields. Views are obtained from either side of the Roman River valley of the characteristic arable landscape, with views partially obscured by the woodland presence surrounding the river. Appropriate consideration is required to protect the characteristic features of the LCA and mitigate the impacts on the landscape character. However, the undulating character of the Site will make mitigation difficult.

- Public Rights of Way (PRoW) runs along the full extent of the western and northern boundaries of the Site. The footpath to the south provides the user with open views of the Site within the context of the listed buildings (Bellhouse Farm), the Ancient Woodland and the Roman River. Mitigation may be difficult due to the topography and elevated position of the public footpath.
- The Site is located adjacent to the Roman River, an ancient woodland, and would require the loss of two mature oak trees located in the centre of the Site.
- Although the Site is not within the Site of Special Scientific Interest Minerals Impact Risk Zone it would be upstream of several SSSIs, a Special Protection Area (SPA) and a Special Area of Conservation. It is situated approximately 4.5 km northwest of Abberton Reservoir SPA.
- The Site is graded Red-Amber because it could have major impacts upon the adjacent ancient woodland, which is irreplaceable habitat, and an serious impact upon the Gol Grove and Hanging Wood Local Wildlife Site (Co58), the Roman River and associated habitats, Priority habitats and species and would require the loss of two mature oak trees.
- Any application would require demonstration that the operations would not affect the hydrology of the adjacent ancient woodland, the Roman River, veteran trees and other boundary habitats and it is likely that mitigation would require a substantial buffer from the ancient woodland and Roman River. Quarrying or excavation within 16 metres of any main river must meet Environmental Agency requirements.
- The allocation of The Site would likely result in 'less than substantial' harm at a high-level to the significance of three Grade II listed buildings through a change within their settings: Bellhouse Farmhouse (List UID: 1224861); Barn to East of Bellhouse Farmhouse (List UID: 1266618); and Barn to North East of Bellhouse Farmhouse (List UID: 1224838).
- The allocation of The Site would likely result in 'less than substantial' harm at the low end of the spectrum to three Grade II listed buildings. This being, Copford Hall (List UID: 1238819), Stables Cottage (List UID: 1238915) and Boathouse at Copford Hall (List UID: 1273946).
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the Grade I listed Church of St Michael and All Angels (List UID: 1274018).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance. In particular, the proximity of the Site to the heritage assets also presents challenges.

- The Site lies adjacent to an area which contains extensive cropmarks. The cropmarks comprise a series of enclosures probable of Late Iron Age or Roman date.
- The western edge of the Site abuts the route of a projected Roman road running from Colchester in a south westerly direction. The Site also lies within the Valley of the Roman River with the potential for Palaeoenvironmental deposits within the valley bottom.
- To the north of the Site lies a farm complex dating to the late sixteenth or early seventeenth century containing a group of listed buildings.
- The Site has moderate potential for Pleistocene deposits with potential for Palaeolithic and palaeoenvironmental remains.
- The Site is assessed as having a 'low' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is predominantly within Flood Risk Zone 1 (96.85%) and this area is not at risk from fluvial flooding.
- Access is proposed via an existing access serving Stanway Quarry onto Warren Lane which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- The Site is within Zone III - Total Catchment Groundwater SPZ unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A water course (Roman River) is within the Site boundary. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage — high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land — this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. The Site is within 100m of high pressure gas mains (Cadent Gas). Further

investigation and consultation would be needed to determine appropriate mitigation measures to avoid impact on the gas main to make the Site acceptable which may include its diversion and/or protection.

- Two farm buildings are adjacent to the boundary of the Site (0m). Two residential buildings and one building of unknown use is outside the Site boundary less than or equal to 20m from the Site. One farm building, two commercial buildings and three buildings of unknown use are more than 20m but less than or equal to 50m from the Site. One residential building, one commercial building and two buildings of unknown use are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

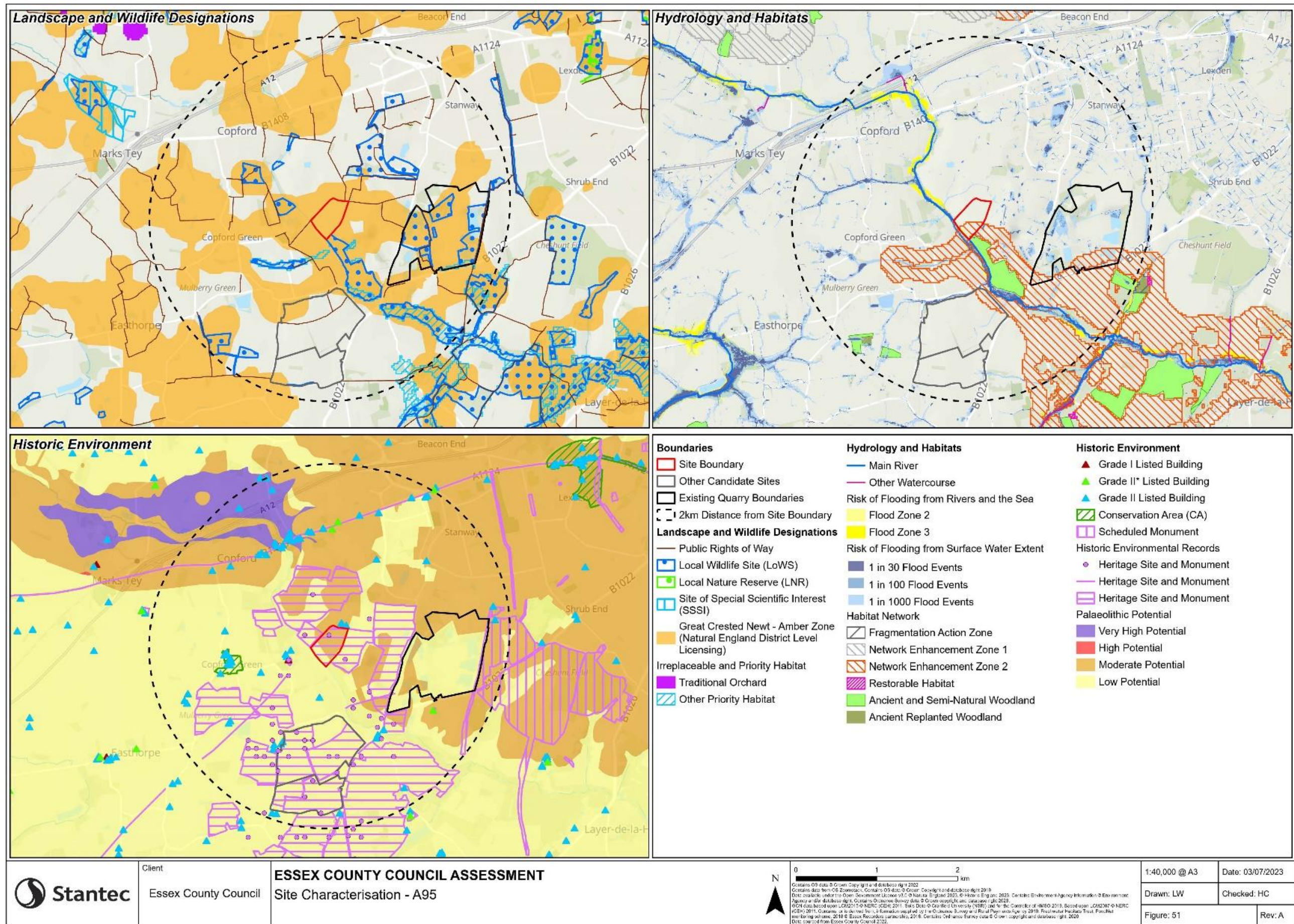


Figure 3.50: A95 - Land at Bellhouse Fam South

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
A96	Rayne Quarry – Southern Extension	Braintree	Agricultural	11.3	0.2

The Site is promoted as an extension to an existing mineral Site (Rayne Quarry) and is located south of Rayne Quarry and north of the A120. The Site area is approximately 11.3 ha and is proposed for approximately 0.2 million tonnes of sand and gravel extraction with processing occurring from the existing Rayne Quarry processing plant. It is proposed that once granted consent mineral extraction would follow on from the consented extraction activities at Rayne Quarry and following extraction at Site A90 if consented. The adjoining uses include agricultural fields, woodland, Rayne Quarry, a waterbody, B1256 (Dunmow Road), A120, and residential buildings. The village of Rayne is located to the east of the Site. Proposed access is via the existing access to Rayne Quarry which is off the B1256 (Dunmow Road), linking with the A120. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Red/Amber	Red/Amber	Amber	Amber	Amber	Amber	Red/Amber	Green	Green	Red/Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Landscape Character Area (LCA) is Central Essex Farmlands (B1), the Site possesses some characteristic features of this, notably, small woods and copses that provide structure and edges to the landscape within an arable landscape of medium sized fields. Appropriate consideration is required to protect the characteristic features of the LCA, particularly the effect on the established tall hedgerows and wooded plantation that bound the southern boundary.
- A large portion of the Site is currently woodland and 1ha of this was planted under English Woodland Grant Schemes – Broadfields Farm with a Woodland Creation Grant in 2012. This area should be retained and enhanced with an appropriate buffer.

- This Site is a relatively narrow area of land between the A120, B1256 and B1417. These roads- and in particular the A120- create a barrier to the movement of wildlife. The River Ter (a Main River) cuts through the middle of the Site. The northern part of the Site comprises arable land bounded by strips of woodland plantation between the northern boundary and the road. The southern part comprises low-lying land along the River Ter valley and includes Lowland Mixed Deciduous Woodland, watercourses, lines of trees, plantation woodland and floodplain grassland with young, scattered trees. It appears from the submitted Proforma and plans that all internal habitats would be removed, including an estimated 490 metre stretch of the River Ter and its associated habitats.
- The Site is graded Red- Amber because ecological impacts are likely to be major and likely to require high levels of mitigation to make the Site acceptable. The Site could have a serious impact upon the natural environment including the River Ter and Priority habitats and species. It would involve the direct loss of an extensive area of habitat along the wildlife corridor. It would result in dissecting habitat in an area where the movement of species is already hindered by several roads, particularly the A120. There is potential for it to seriously adversely affect a number of protected and Priority species utilising the river corridor such as Water Vole, Otters, and bats.
- Any application would require demonstration that the operations would not affect the hydrology of the River Ter and its associated habitats, trees, and other boundary habitats in the long term. Off-site compensatory habitat in a suitable location would need to be provided for the significant loss of river and associated habitats, the other habitats and for farmland Priority species.
- The allocation of the Site would likely result in 'less than substantial' harm at a low level to the significance of five Grade II listed buildings through change within their settings: Cartlodge Approximately 100 Metres South East of Blake House Farmhouse (List UID: 1122782); Farm Outbuilding Range Approximately 20 Metres South West of Blake House Farmhouse and Adjoining the Road (List UID: 1365611); Barn Approximately 60 Metres South East of Blake House Farmhouse (List UID: 1365607); Farm Outbuilding Range Approximately 15 Metres South of Blake House Farmhouse (List UID: 1238998); Blake House Farmhouse (List UID: 1122781).
- The undeveloped, agrarian landscape of the Site contributes to the setting and significance of these assets and the fundamental change in land use and land character would undermine the ability to understand and appreciate their significance.
- The Site contains evidence recorded through aerial photography for historic field boundaries.
- The Site lies along a Roman road and Roman settlement and burial activity is recorded in the immediate area.

- Alluvial deposits associated with the River Ter have potential to preserve palaeoenvironmental remains and waterlogged deposits.
- The Site is assessed as having a 'high' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'medium' groundwater flood risk.
- The Site is predominantly within FRZ1 (58.7%), however 35% of the Site is with FRZ3 and is at risk from fluvial flooding.
- Access is proposed via an existing access serving Rayne Quarry onto the B1256 which is classified as a Secondary Distributor in Essex County Council's Development Management Route Hierarchy. This accords with (iii) in the methodology (see Appendix G Transport for full methodology):

Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity and form of the road and an assessment of the impact on road safety.

- The A120 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- The Site lies to the south/west of the existing Rayne Quarry on the opposite side of the B1256. There is no information submitted to demonstrate whether an access or crossing that complies with highway standards can be achieved on to the B1256.
- Access to the A120 Trunk Road is located immediately to the east of the Site. This forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- The Site is within Zone III - Total Catchment Groundwater SPZ and has a low/unproductive groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water). A water course (River Ter) is within the Site boundary and is 160m north west, another water course is 150m north west. Appropriate consideration would be required to mitigate the potential impacts on hydrology, hydrogeology, and drainage – high levels of mitigation may be required.
- The Site contains Grade 2 quality soil (very good quality agricultural land) and Grade 3 quality soil (good to moderate quality land), which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil

quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.

- The Site contains 11kV overhead electricity lines within the Site boundary. Overhead Openreach BT power lines are within the Site boundary. The Site contains high pressure gas mains (National Grid Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Three residential buildings are adjacent to the boundary of the Site (0m). Seven residential buildings are outside the Site boundary less than or equal to 20m from the Site. Three residential buildings are more than 20m but less than or equal to 50m from the Site. Nine residential building, five commercial buildings and one building of unknown use are more than 50m but less than or equal to 250m from the Site. Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

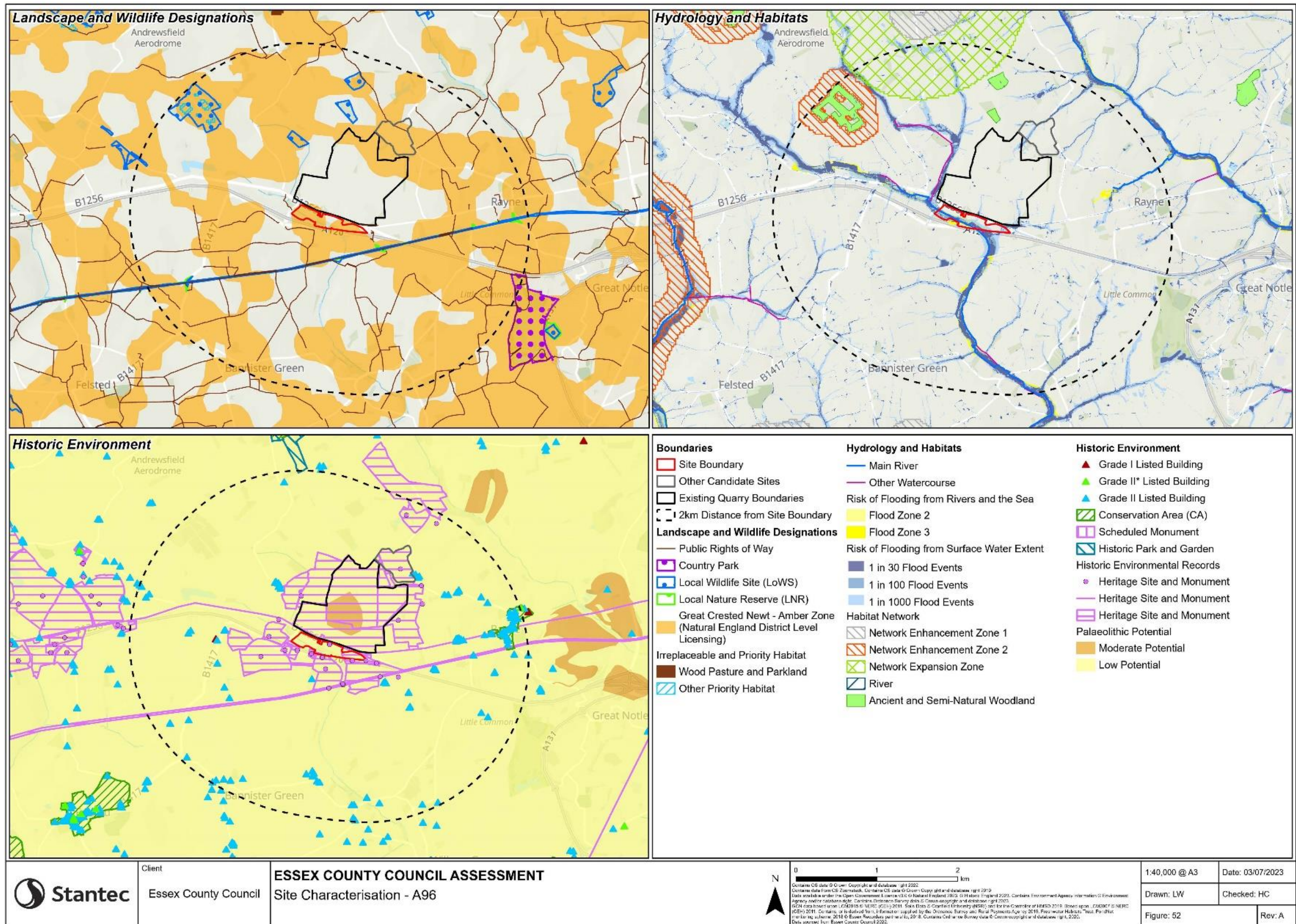


Figure 3.51: A96 - Rayne Quarry – Southern Extension

<i>Candidate Site Reference</i>	<i>Candidate Site Name</i>	<i>District</i>	<i>Existing use</i>	<i>Site Area (ha)</i>	<i>Potential Yield (million tonnes)</i>
D7	Land at Pond Farm (transhipment site)	Braintree	Agricultural	15.38	n/a

The Site is promoted as a new Site at land to the north of London Road, Pond Farm, Witham. The Site area is approximately 15.38 ha and is promoted as a transhipment site for road and rail which would involve the import and export of hard rock within England. The estimated throughput is 0.4 million tonnes per annum. The adjoining uses include agricultural fields, woodland, a railway line, the A12, and residential and commercial buildings. The town of Witham is located to the west of the Site. The Site is potentially promoted as accessible utilising infrastructure installed as part of the A12 improvement works. See Appendix J for a detailed map of the Site.

Summary of RAG Assessment

The results of the technical and desktop RAG assessment are detailed below.

Landscape and Visual Sensitivity	Biodiversity	Historic Buildings	Archaeology	Flooding	Transport	Access	Public Rights of Way	Geo-Environmental	Hydrology, Hydrogeology and Drainage	Air Quality	Soil Quality	Services & Utilities	Health & Amenity	Green Belt	Airport Safeguarding Zones
Amber /Green	Green	Red/ Amber	Amber	Amber	Red/ Amber	Red/ Amber	Green	Green	Amber	Green	Amber	Red	Red	Green	Green

Key findings of the assessment are as follows:

- The Site possesses few characteristics of the Brain/Blackwater/Lower Chelmer (C6) Landscape Character Area (LCA) with the exception of the arable farmland with well hedged boundaries. The limited number of characteristic features and the Site's disconnect from the wider characteristic landscape, owed to the A12 and railway separation, reduces the sensitivity of the Site.
- There are no important landscape features located within the immediate vicinity of the Site, however a number of small Priority Habitats (Deciduous Woodland) are located on the opposite side of the A12. The limited number of important designations reduces the overall sensitivity of the Site.
- The allocation of the Site would likely result in 'less than substantial' harm at a mid-level to the significance of the Grade II listed Pond Farmhouse (List UID: 1122597), and the Barn to the west of Pond Farm (List UID: 1264934).

- The impact on the Grade II listed Barn to the south of Pond Farmhouse at is likely to be at the lower end of 'less than substantial.'
- The undeveloped, agrarian landscape of the Site makes a positive contribution to the setting of these assets and enhances their significance. The fundamental change in land use, land character and environmental impacts would undermine the ability to understand and appreciate their significance.
- The Site contains evidence recorded on the Essex Historic Environment record for a possible settlement enclosure. Prehistoric, Late Iron Age/Roman, and Roman settlement activity is recorded in the surrounding area. The Site also lies along a Roman road.
- The Site has potential to contain Palaeolithic archaeological remains and Pleistocene faunal and palaeoenvironmental remains.
- The Site has been part evaluated and archaeological mitigation has been agreed in the western section as part of the A12-A120 widening scheme.
- The Site is assessed as having a 'medium' potential for surface water flood risk as identified within the SFRA.
- The Site has been identified as having a 'low' groundwater flood risk.
- The Site is entirely within Flood Risk Zone 1 and therefore is not at risk from fluvial flooding.
- It is unclear from the information provided as to the proposed access strategy having regard to the current road layout and future scenarios associated with the A12 DCO.
- Access from the local highway network via Eastways Industrial estate is constrained and access to the current A12 would be contrary to Department for Transport Circular 1/2022 Strategic Road network.
- The A12 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- It is unclear from the information provided as to the proposed access strategy having regard to the current road layout and future scenarios associated with the A12 DCO.
- Access from the local highway network via Eastways Industrial estate is constrained and access to the current A12 would be contrary to Department for Transport Circular 1/2022 Strategic Road network.

- The A12 Trunk Road forms part of the Strategic Road Network managed by National Highways. Whilst an initial conversation has taken place with National Highways to inform this RAG grade it is imperative that they are formerly consulted at the appropriate time.
- The Site has unproductive/medium to low groundwater vulnerability. The Site is within a Drinking Water Safeguard Zone (Surface Water) and is within Drinking Water Protection Areas (Surface Water). A water course is 90m north of the Site. Appropriate consideration would be required to mitigate potential impacts on hydrology, hydrogeology, and drainage.
- The Site contains Grade 2 quality soil (very good quality agricultural land) which is BMV land. Appropriate consideration would be required to mitigate the impacts on soil quality and agricultural land – this is likely to include removal of soils for stockpiling prior to reuse, potentially in site restoration.
- The Site contains 11kV overhead electricity lines within the Site boundary. Overhead Openreach BT power lines are within the Site boundary. The Site contains high pressure gas mains (Cadent Gas) within the Site boundary. Further investigation and consultation would be needed to determine appropriate mitigation measures to make the Site acceptable which would likely include diversion and/or protection. Diversion/protection may not be possible and/or may be cost prohibitive.
- Nine residential buildings are adjacent to the boundary of the Site (0m). Ten residential buildings, one commercial building, and one building of unknown use are outside the Site boundary less than or equal to 20m from the Site. Twelve residential buildings and one sports facility (golf course) are more than 20m but less than or equal to 50m from the Site. Seventy seven residential buildings, four commercial buildings and commercial activity (business park) are more than 50m but less than or equal to 250m from the Site, Given the proximity of sensitive receptors, mitigation would be required, however, the levels of mitigation required to ensure that there are no serious impacts on health and amenity would likely be difficult to achieve.

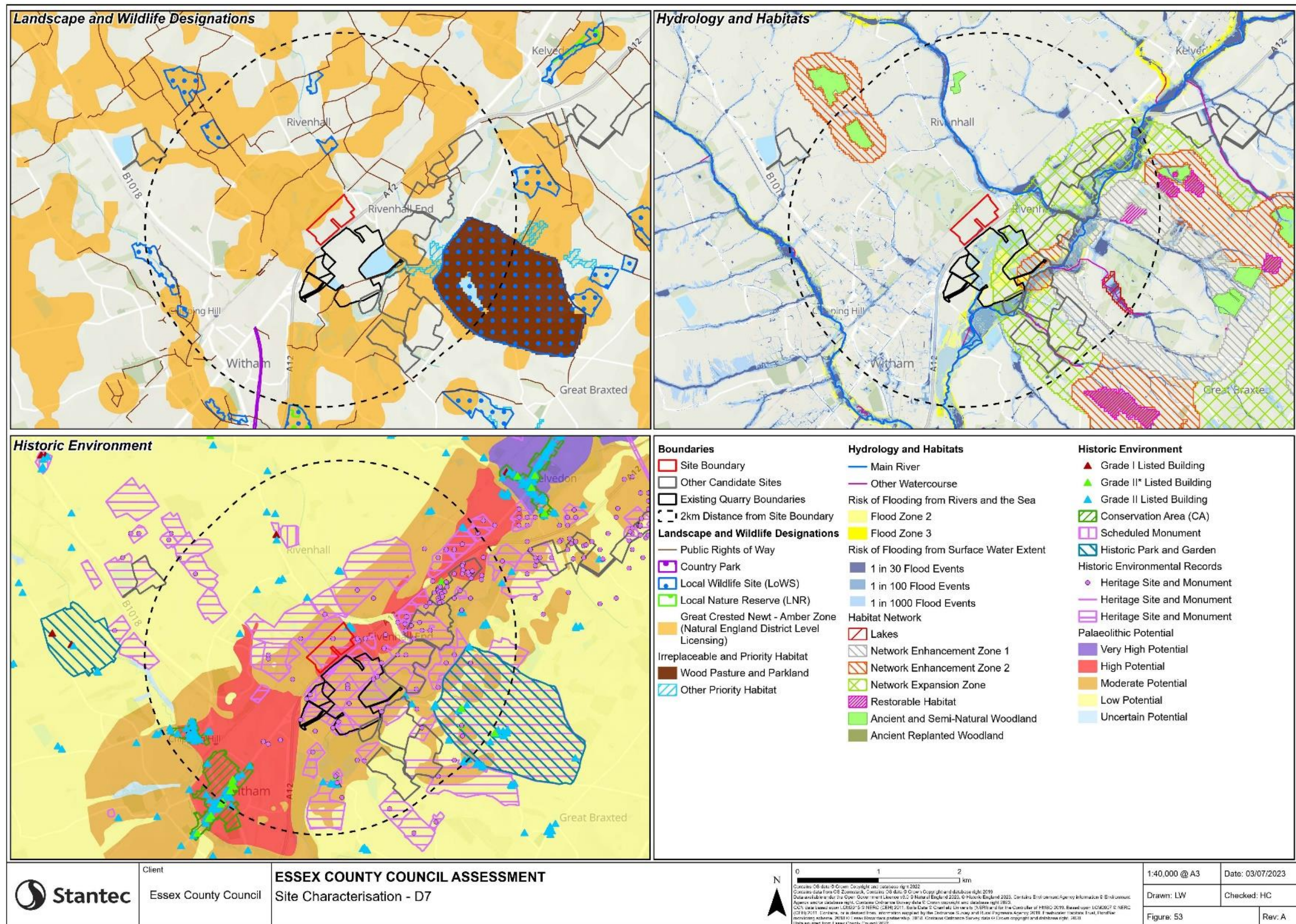


Figure 3.52: D7 - Land at Pond Farm (transshipment site)

4 Yield

- 4.1 Estimates of sand and gravel yield (in tonnes) for the sites submitted through the Call for Sites process were provided by promoters. In some cases further information to verify estimates of yield was requested. Based on information currently available, the total yield of sand and gravel from all the candidate sites assessed is approximately 117.55 million tonnes.
- 4.2 ECC has prepared a separate paper entitled “*Minerals Local Plan Review Topic Paper - Forecasting the Need for Mineral Provision in Essex 2025 – 2040*” that considers the required demand for sand and gravel up to 2040 and 7 years beyond (to ensure an adequate landbank is in place). The paper considers a number of forecasting scenarios and will inform what estimated yield (tonnage) is needed for the plan period and beyond. In turn this figure will inform the final site selection process to ensure a steady and adequate supply of aggregate is maintained over the plan period and beyond.

5 Next Steps

- 5.1 This report forms part of the evidence base informing a second Regulation 18 consultation on candidate sites and proposed revisions to the Essex Minerals Local Plan.
- 5.2 The application of Red grades against certain assessment criteria means that information currently available suggests an unacceptable impact may result from the development of the Site and mitigation sufficient to make the Site acceptable may not be achievable. Decisions on whether to allocate sites graded Red against any assessment criteria will be taken in the future following public consultation on this report, including with the Site promoters and other stakeholders including statutory environmental bodies and local communities.
- 5.3 In light of comments received during the consultation, site assessment findings (and associated RAG grades) may be updated.
- 5.4 An updated version of this report, or an addendum, will take account of the information received through the future Regulation 18 consultation. This will be used to assist in determining which sites will be proposed for allocation in the revised MLP. In deciding on which sites to propose for allocation, the spatial distribution of the Candidate Sites across Essex will be taken into account.
- 5.5 The results of the site assessment following comments received will then need to be considered in the context of wider strategic planning issues. Such issues could include growth locations, infrastructure demand, productive capacity, and ensuring that large landbanks are bound up in very few sites do not stifle competition. What should constitute a strategic planning issue for the purposes of the site assessment methodology will also be consulted on through the Regulation 18 consultation.
- 5.6 As shown in Table 1, once agreed, a final draft of the MLP (as well as an updated or addended version of this report) will be published for representations prior to submission to the Secretary of State for independent examination of the MLP's soundness and legality.
- 5.7 The sites reviewed have also been subject to a separate Sustainability Appraisal. This includes an assessment of how each site performs against a set of social, environmental, and economic objectives informed by the technical assessment of each site.