



Response to Draft Replacement Essex Mineral Local Plan Consultation

Site A31, Maldon Road, Birch, CO5 9XE

**On behalf of Hanson Quarry Products Europe Limited trading as Heidelberg
Materials**

Chipping Sodbury, South Gloucestershire, Bristol, BS37 6AY

Prepared by:

SLR Consulting Limited

Treenwood House, Rowden Lane, Bradford on Avon,
BA15 2AU

SLR Project No.: 402.065289.00001

Client Reference No: 00027

9 April 2024

Revision: Final

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
Draft	8 April 2024	Jo Freyther	Ben Ayres	Ben Ayres
Final	9 April 2024	Jo Freyther	Ben Ayres	Ben Ayres

Basis of Report

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it on behalf of Hanson Quarry Products Europe Limited trading as Heidelberg Materials (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations, and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations, and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.



Table of Contents

Basis of Report	i
1.0 Introduction	1
1.1 RAG Assessment results for Site A31	1
2.0 Review of RAG Assessment	2
2.1 Landscape and Visual Sensitivity	2
2.1.1 SLR’s Response.....	2
2.2 Appendix C - Biodiversity	13
2.2.1 Applied Ecology and Hanson Response.....	13
2.3 Appendix D - Historic Buildings	15
2.3.1 SLR’s Response.....	15
2.4 Appendix F - Flooding and Appendix I – Hydrology, Hydrogeology and Drainage	18
2.4.1 SLR’s Response.....	18
2.5 Appendix G - Transport.....	19
2.5.1 SLR’s Response.....	19
2.6 Appendix H – Access	19
2.6.1 SLR’s Response.....	19
2.7 Appendix I - Public Rights of Way, Geo-Environmental, Hydrology, Hydrogeology & Drainage, Air Quality, Soil Quality, Services & Utilities, Health & Amenity, Green Belt, and Airport Safeguarding Zones.....	20
2.7.1 SLR’s Response.....	20
2.7.2 Review of Sensitive Receptor Locations.....	21
2.7.3 Review of RAG Assessment Rating	21
Summary	22

Figures in Text

Figure 2.1 – 1888-1913 Outline Mapping from National Library of Scotland	2
Figure 2.2 Screenshot of Ancient Woodland from MAGIC.....	3
Figure 2.3 Stantec Site Characterisation Plan.....	3
Figure 2.4 Screenshot of Listed Buildings from MAGIC.....	4
Figure 2.5 - Drawing B7r187a - Advance Planting.....	5
Figure 2.6 Current context of Roundbush Farm and Barn, showing establishes and recent planting	15
Figure 2.7 View of Roundbush Farmhouse from Roundbush Road, looking towards the site – dashed Red.	16
Figure 2.8 View of Roundbush Farm from Roundbush Road	16



Figure 2.9 View of Roundbush Farmhouse from the south west corner of the Site before recent woodland planting. There is a paddock separating the Site from the House and Barn..... 17

Figure 2.10 View of Roundbush Farmhouse and Barn from the north west edge of the new woodland planting. There will be no views of the Site from the Farmhouse and Barn when the woodland matures..... 17

Photographs in Text

Photo 1 - Photograph of Completed Advanced Planting Along the Northeastern Boundary .. 6

Photo 2 - Photograph of Completed Advanced Planting along Southern Boundary..... 7

Photo 4 - Photograph of Completed Advanced Planting along Western Boundary..... 8

Photo 5 - Photograph of Completed Advanced Planting along Near to Roundbush Bungalow
..... 9

Tables in Text

Table 1-1 ECC RAG Assessment for Site A31 1

Table 2-1 Sensitivity Assessment..... 11



1.0 Introduction

Essex County Council (ECC) are currently undertaking a consultation exercise on the site assessment reports for the 52 candidate sites which were submitted to ECC during the Call For Sites exercise.

SLR Consulting Limited have worked with Hanson Quarry Products Europe Limited, trading as Heidelberg Materials, to prepare this response to the assessment reports for Site A31 Maldon Road, Birch.

1.1 RAG Assessment results for Site A31

ECC’s RAG assessment for Maldon Road, Birch is set in Table 1-1.

Table 1-1 ECC RAG Assessment for Site A31

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

We believe the categories assessed as Green are correct, so have restricted this report to the review of categories assessed as Red, Red/Amber and Amber. In some instances, clarification has been provided for categories assessed as Green i.e. Transport.

Our assessment has been undertaken by qualified professionals, all of whom are familiar with site A31 and the operational Birch Pit, to the north of Maldon Road.



2.0 Review of RAG Assessment

2.1 Landscape and Visual Sensitivity

Section 2.1 provides a response to ECC’s Minerals Plan Review - Assessment of Candidate Sites, Appendix B - Landscape and Visual Sensitivity, which identified the site as **Amber** for Landscape and Visual Sensitivity.

2.1.1 SLR’s Response

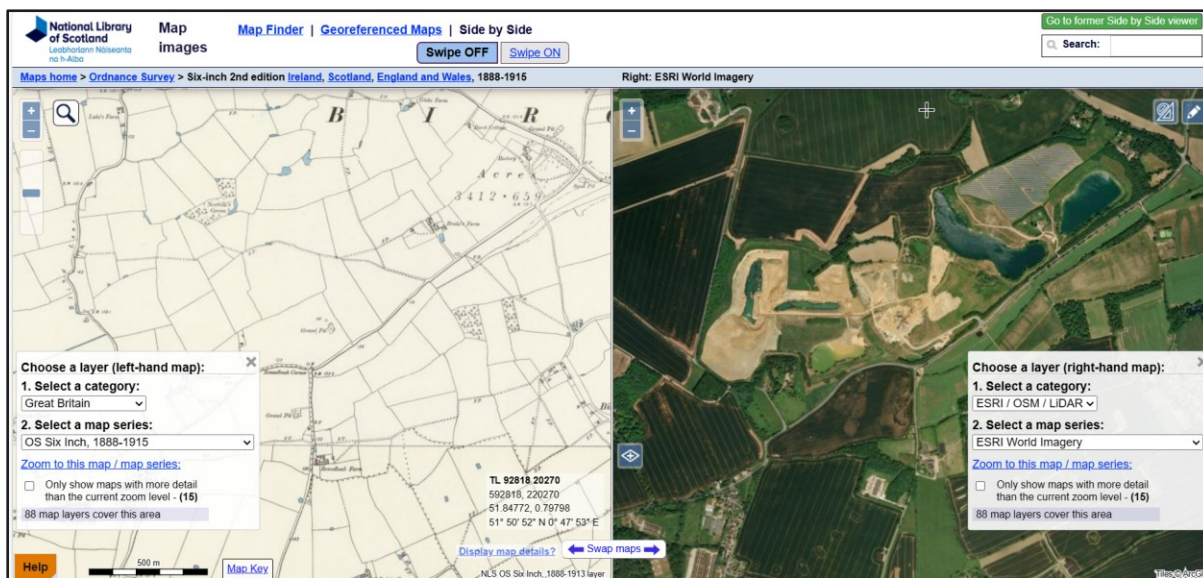
ECC’s First bullet states that “*The Site lies in historic landscape area 28, the Abberton Area with good field boundary survival.*” The 1888-1913 mapping (National Library of Scotland) – see Figure 2.1, shows the existing water course within the site and the two woodland blocks to the south of the site.

However, several of the field boundaries extending north-south and dividing the site into smaller parcels in the late 19th Century mapping are no longer present, as illustrated by the aerial photo in Figure 2.1 (with larger field parcels as a result). This includes three short sections of field boundary between the watercourse and road, and two longer sections south of the watercourse.

The site does not therefore display good field boundary survival. **This should be acknowledged in the RAG Assessment.**

Gravel pits are also indicated to the north of Maldon Road and to the west of Roundbush Road on this late 19th Century mapping. A sand pit is also indicated to the north-east of the site, by the junction between Maldon Road and Lower Road, confirming that this land use also forms part of the historic landscape context. **This should also therefore be acknowledged in the RAG Assessment.**

Figure 2.1 – 1888-1913 Outline Mapping from National Library of Scotland

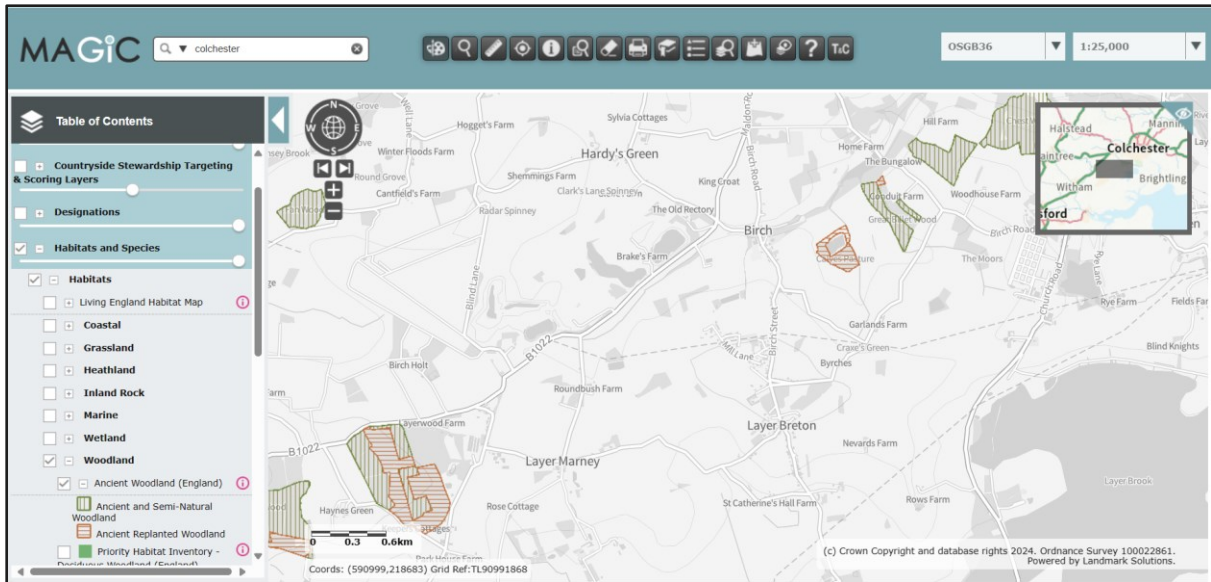


ECC’s First bullet also claims that “*On the southern boundary two areas of ancient woodland are preserved.*”

These woodland blocks are not identified as ancient woodland on MAGIC – see Figure 2.2 below. The nearest ancient woodland is Calves Pasture at c1km to the east of the site.



Figure 2.2 Screenshot of Ancient Woodland from MAGIC



The Stantec Site Characterisation plan attached to the A31 Site Summary, also does not show these woodland blocks as Ancient Woodland – see Figure 2.3 below.

It is recommended that the RAG assessment is reviewed on this basis.

Figure 2.3 Stantec Site Characterisation Plan

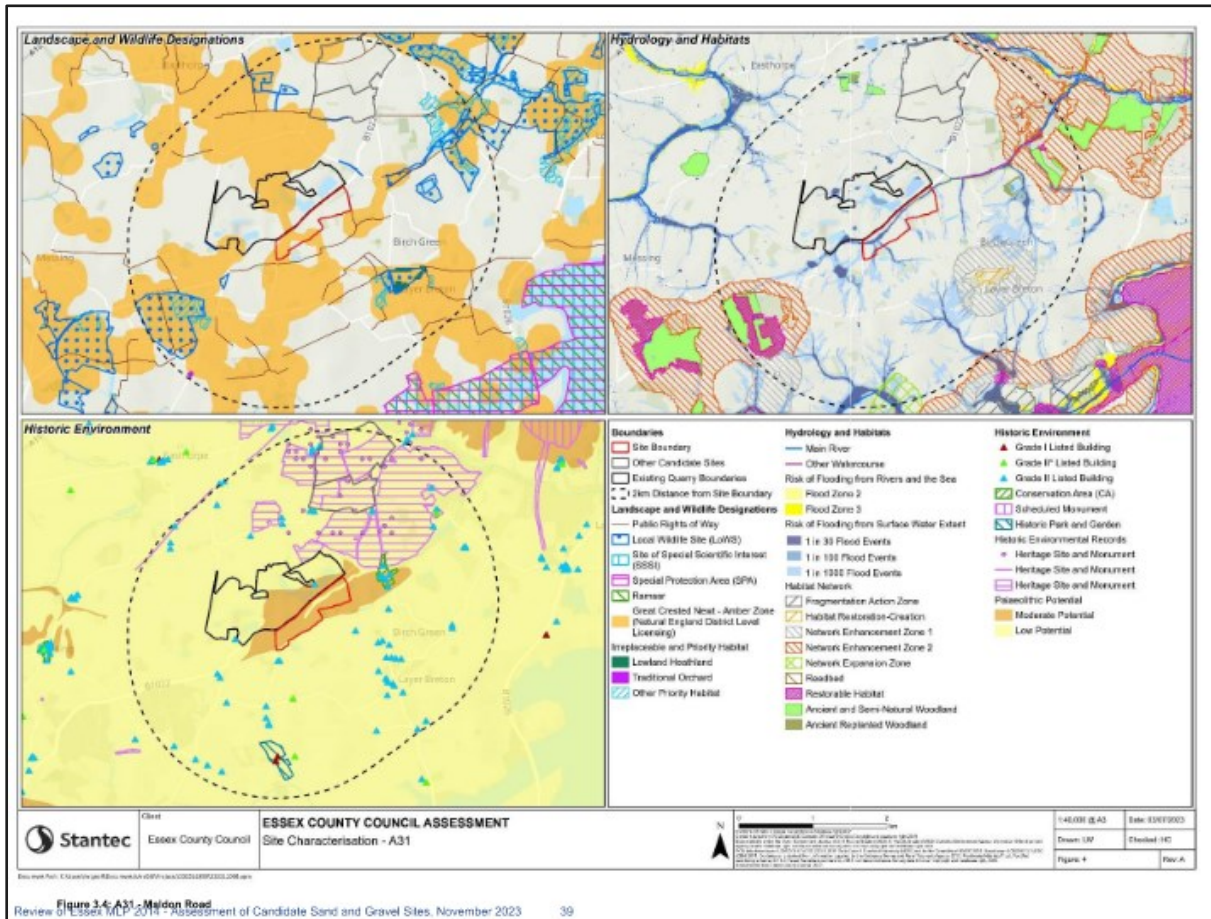


Figure 2.3: A31 - Maldon Road
 Review of Essex MPA 2017 - Assessment of Candidate Sand and Gravel Sites, November 2023 39



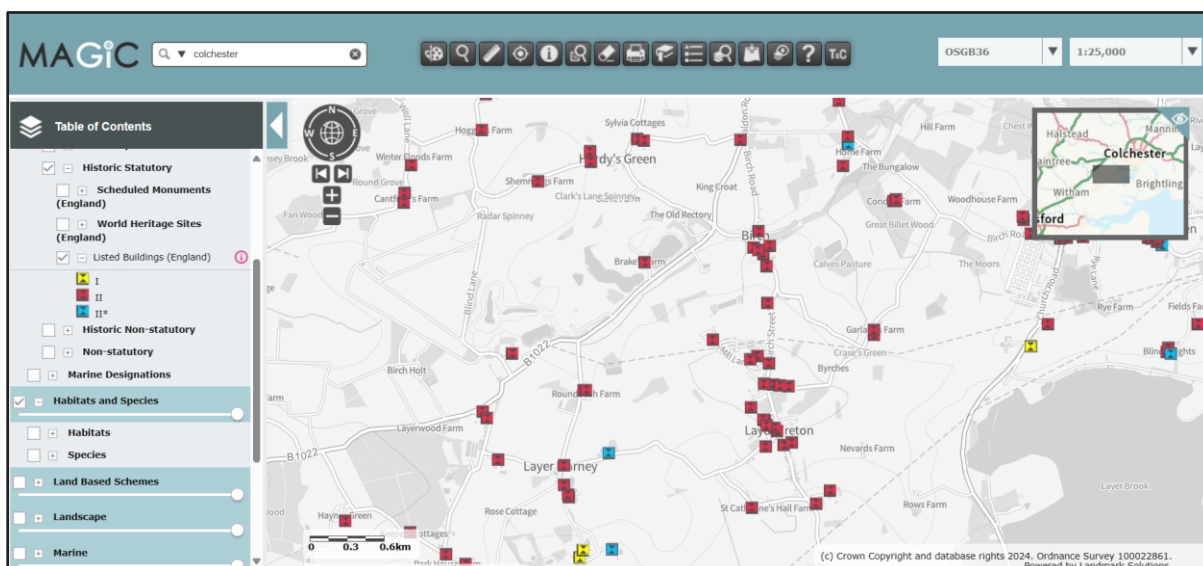
ECC's First bullet also refers to the need for a "full assessment of the historic environment".

Although historic elements and cultural influences will be reviewed as part of the landscape and visual baseline (for example where they may inform a sense of time depth or as part of landscape character), cultural heritage impacts would not be considered in the landscape and visual impact assessment. Copies of the ZTVs and baseline photography will be provided to the specialist team undertaking the cultural heritage impact assessment (which would usually include an assessment of the potential impacts upon the setting of heritage assets, such as Listed Buildings or Registered Park and Gardens).

Figure 2.4 shows that the nearest listed buildings are Roundbush Farmhouse (Grade II) and Barn to east of Roundbush Road (Grade II) at c150m to the south-west of the site and Brakes Farmhouse (Grade II) at 100m to the north of the site (north of Maldon Road). There are also several listed buildings within the Conservation Area at Birch village and associated with Birch Green (including The White House (Grade II) and Church Cottages (Grade II) at c400m away from the site, to the east. There are no listed buildings within the site itself.

The Layer Marney Tower is c1.5km to the south of the site. It is a listed building (Grade I brick-built gatehouse with four towers flanked by square turrets, described as a dominant and impressive landmark) and is surrounded by early 20th Century gardens and the remains of a medieval deer park, which is a Registered Park and Garden (Grade II). However, it is confirmed through ZTV and fieldwork that this area would not be within the potential visual influence of the proposals.

Figure 2.4 Screenshot of Listed Buildings from MAGIC



ECC's Second bullet states that "Existing vegetation should be retained, protected and strengthened as it contributes to the characteristics of the landscape character area in which the Site is located"

With the exception of the new entrance (and associated visibility splays), all perimeter vegetation will be retained and will provide good screening for the development overall. In addition, advanced hedgerow and tree planting has now been completed by the operator to improve gappy perimeter hedges in accordance with **Drawing B7r187a** (attached at Figure 2.5).

This will provide further screening as it matures and compensation for the loss of the internal vegetation. Hedgerow and woodland planting as part of final restoration would also provide further mitigation for loss of existing vegetation.



Figure 2.5 - Drawing B7r187a - Advance Planting

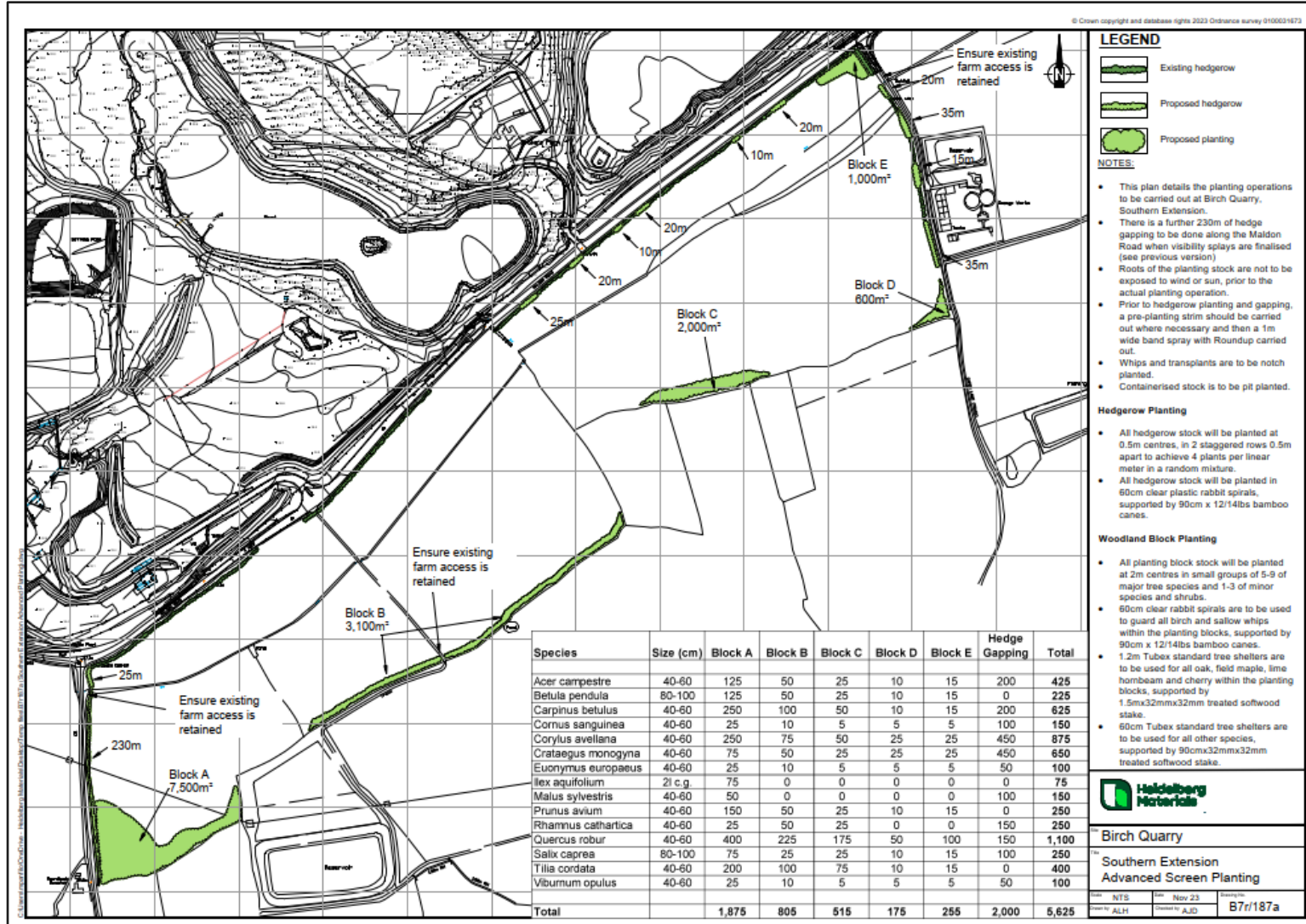


Photo 1 - Photograph of Completed Advanced Planting Along the Northeastern Boundary



ECC's Third bullet states that *"Taking account of the vegetation and landform, much of the Site would be overlooked from the road by the long north-west boundary."*

As noted above, advance planting has been completed, including some gapping up of the roadside hedge. Both sides of the site entrance will be planted/ hedges translocated and gapped up at the back of the visibility splays next winter. The road itself is national speed limit and does not have a footpath adjacent, thus limiting visual receptors to passing travellers (rather than recreational users).

Options for the location and design of temporary soil storage bunding are currently being reviewed as part of the working scheme. This bunding will incorporate suitable side slope gradients and crest levels to maximise screening potential, without becoming intrusive elements in their own right. It is anticipated that except for initial stripping, the main mineral extraction working would be hidden. Temporary storage mounds could be placed in areas where there are views in to the site from Roundbush Bungalow, the southern and eastern PROW and western boundary whilst the planting establishes **This should be acknowledged in the RAG Assessment.**

Fourth bullet states that *"There are a number of properties in close proximity to the Site, with Roundbush bungalow to the south-west corner at most risk of adverse impact unless protected by keeping development away with sufficient buffer distance"*

A minimum 100m standoff is proposed to the mineral extraction area and advance planting has already been carried out to establish a new woodland buffer and screening as it matures. This would reduce the risk of adverse impact and should be acknowledged in the RAG Assessment.

ECC's Fifth bullet states that "*The need for screening views from the footpath to the south varies depending on landform and gaps through existing vegetation.*"

Advance planting has already been carried out to establish a new hedgerow and tree belts between the existing woodlands along the southern boundary of the site in accordance with Drawing B7r187 and shown in Photo 2. This will provide additional screening as it matures.

Photo 2 - Photograph of Completed Advanced Planting along Southern Boundary



ECC's Sixth bullet states that "*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.*"

Advance planting has already been carried out to establish a new hedgerow with trees along the eastern boundary of the site in accordance with Drawing B7r187a. This will provide screening as it matures and should be acknowledged in the RAG Assessment.

Hanson are exploring the possibility of making a viewing platform/ info point on the footpath along the eastern edge of the boundary to actively invite views, engagement and interest from the users of the PROW.

There will not be any views of the proposed mineral extraction areas from distant houses to the north. **The RAG assessment should be amended to account for this.**

Photo 3 - Photograph of Completed Advanced Planting along Western Boundary



ECC's Seventh bullet states that *"Mitigation from noise and visual impact from various receptors would need considering in the form of advance planting for screening and bunding where appropriate."*

Advance hedgerow and tree block planting has now been completed along the western boundary, as shown in Photo 3 to improve gappy perimeter hedges and infill gaps between existing woodland blocks. **This should be acknowledged in the RAG Assessment.**

Options for the location and design of temporary soil storage bunding are currently being reviewed as part of the working scheme. This bunding will incorporate suitable side slope gradients and crest levels to maximise screening potential, without becoming intrusive elements in their own right.

"Results of the technical RAG assessment"

ECC's Second paragraph states that *"Late 19th Century maps show Maldon Road to the northern boundary of the Site and the presence of the two copses that are located on the southern boundary of the Site. The stream that runs from east to west within the Site is also*

present. The proposal lies in historic landscape area 28, the Abberton Area with good field boundary survival.”

As noted above the 1888-1913 mapping (National Library of Scotland), shows that the site does not display good field boundary survival. **This should therefore be acknowledged in the RAG Assessment.**

Gravel pits and a Sand pit are also indicated on this late 19th Century mapping, confirming that this land use forms part of the historic landscape context. **This should be acknowledged in the RAG Assessment.**

ECC’s Seventh paragraph states that *“Roundbush bungalow to the south-west corner is at most risk of adverse impact.”*

As noted above, a minimum 100m standoff is proposed to the mineral extraction area and advance planting has already been carried out to establish a new woodland buffer and screening as it matures in accordance with Drawing B7r187a and shown in Photo 4. **This reduces the potential risk of adverse impact and should be acknowledged in the RAG Assessment.**

Photo 4 - Photograph of Completed Advanced Planting along Near to Roundbush Bungalow



ECC’s Eighth paragraph states that *“the Site is open on its western boundary. Topography aids to screen part of the Site but it opens up towards the road junction to the north, where the Site is clearly visible at this point.”*

Advance hedgerow and tree block planting has now been completed to improve gappy perimeter hedges and infill gaps, including along the western site boundary.

ECC's Ninth paragraph states that *"The road that runs along its long north-west boundary has views over much of the Site. Although there is some screening from vegetation by the road & along the bottom of the valley, much of this is elm which will die, much of it has large gaps or is missing (especially on the west half) and the landform increases the visual prominence of the south slope of the valley."*

As noted above, advance planting has already been carried out to establish a new buffer to the northern boundary and screening as it matures. Options for the location and design of temporary soil storage bunding are currently being reviewed as part of the working scheme. This bunding will incorporate suitable side slope gradients and crest levels to maximise screening potential, without becoming intrusive elements in their own right. It is anticipated that except for initial stripping, the main mineral extraction working would be hidden. **This should be acknowledged in the RAG Assessment.**

Tenth paragraph states that *"The eastern boundary is open along the bottom half with young hedging to the top half of the eastern boundary. Feature trees are present along this boundary. Gaps along this boundary allow for long and attractive distance views towards the west of the Site and existing vegetation."*

As noted above, advance planting has already been carried out to establish additional screening as it matures.

Landscape Character Area – key characteristics present

It is stated that *"The Site lies in the South Colchester Farmlands character area in the county landscape character assessment. The key landscape sensitivity and accommodation of change issues for this Landscape Character Area are as follows:"*

ECC's First Bullet notes the *"Moderate Intervisibility"*

The advance planting which has already been carried out around the site boundaries will provide enclosure and reduce the potential visibility of the proposed mineral extraction areas.

The moderate intervisibility of the *South Colchester Farmlands* character area would not be adversely affected by the proposals, and would be retained.

ECC's Second Bullet notes the *"Tranquil character away from edge of Colchester"*

The site is located in a rural area with relatively few nearby visual receptors. However, the presence of the busy Maldon Road does affect the tranquillity of the site.

The introduction of plant and vehicle movements during working hours would contrast with the existing stillness within the site, which would reduce the sense of tranquillity to varying degrees. However, this would only take place in active cells and be temporary in nature, as once restored the site would return to a similar level of tranquillity.

The perception of any change to tranquillity would be limited to the immediate surroundings, such as the footpath to the east, although this is already influenced by traffic travelling along the Maldon Road and the sewage works.

The proposed quarry extension would also avoid the need for processing and site management areas to be established on a new greenfield site, thus offering a better option for the character area as a whole.

The tranquil character of the wider *South Colchester Farmlands* area would be protected, especially over the long-term once worked out and restored.

ECC's Third Bullet notes the *"Integrity of woodlands, hedgerow field pattern"*

The mature woodlands to the south of the site and most of the vegetation around the boundaries will be retained and enhanced with additional advance planting. The exception would be hedgerows which may be affected from works to the new entrance (and associated

visibility splays). Advanced hedgerow and tree planting has now been completed will improve the gappy perimeter hedges.

There are some hedgerows and trees within the site, although the field pattern has been altered. Where practical, the final restoration scheme will include reinstating the 19th Century field pattern or similar, taking into account any constraints and opportunities for new wetland creation.

Thus, the integrity of woodlands and hedgerow field pattern of the wider *South Colchester Farmlands* area would be retained and enhanced.

ECC's Fourth Bullet concludes that "*Landscape Sensitivity Level: Medium*"

The landscape sensitivity is no more than Medium. This is typical for a rural location and shouldn't be a barrier to potential mineral extraction development.

The site is a shallow valley, mostly intensively managed agricultural fields, with a limited number of mature trees being the only obvious physical attributes / unusual landscape elements. The fields have been noticeably enlarged, with some boundaries removed since the 19th Century.

There are no national landscape designations within the site or immediately surrounding area. There are no landmark buildings or natural features.

Sensitivity Assessment

The following criteria within Table 2-1 Sensitivity Assessment should be reviewed as follows:

Table 2-1 Sensitivity Assessment

Criteria	Comment	Sensitivity Grading
<i>Landform and landscape features</i>	The existing shallow valley landform is able to accommodate mineral extraction and a reduction in ground levels, and would still resemble a valley feature, subject to a suitable restoration design and incorporation of wetland features	Medium-Low sensitivity
<i>Enclosure by Vegetation</i>	The advance planting which has already been carried out will increase the level of enclosure by vegetation and should be reflected in the assessment	Low sensitivity
Historic Character	The site does not have good field boundary survival (fields have been enlarged). Also sand and gravel pits are long-standing features in the local landscape, dating back to 19th Century	Low sensitivity
<i>Openness to Public Views</i>	The advance planting which has already been carried out will increase the level of enclosure by vegetation and should be reflected in the assessment	Medium-Low sensitivity
<i>Openness to Private Views</i>	The advance planting which has already been carried out will increase the level of enclosure by vegetation and should be reflected in the assessment	Low sensitivity

Criteria	Comment	Sensitivity Grading
<i>Views towards landmark buildings/natural features</i>	There are no landmark buildings or natural features in the site. The advance planting which has already been carried out will increase the level of enclosure by vegetation and should be reflected in the assessment	Low sensitivity
<i>Perceptual Quality</i>	The tranquillity and attractive qualities of the Site are degraded by the existing works at Birch Quarry to the north, neighbouring sewage works site to the east, the traffic along the Maldon Road and overhead powerlines to the south and west	Low sensitivity

ECC state that “*The Site has some attractive varying landform with a number of landscape features such as feature mature trees to the eastern boundary. These features contribute to an increase on sensitivity levels.*”

The site is currently a shallow valley, sloping towards the water course. The excavation of mineral will inevitably reduce ground levels, with restoration anticipated to be to a similar valley feature, albeit at a lower level with additional wetland along the existing watercourse. The sensitivity levels of the site for mineral extraction and its subsequent restoration must therefore be lower than other potential development proposals (such as permanent built elements).

ECC state that “*The tranquillity and attractive qualities of the Site are somehow degraded by the existing works at Birch Quarry to the north, particularly towards the western part of the Site and by neighbouring sewage works site to the east, reducing the sensitivity on this Site.*”

Traffic along the Maldon Road also reduces the tranquillity of the site and there is an overhead powerline to the south and west and this should be recognised in the RAG Assessment.

ECC state that “*Site A31 has been assessed as having an overall Medium sensitivity to mineral extraction.*”

The landscape sensitivity is no more than Medium.

It is suggested that the landscape sensitivity should be re-classified as **Low**, based on the following amendments to the RAG assessment:

- The existing shallow valley landform is able to accommodate mineral extraction and a reduction in ground levels, and would still resemble a valley feature, subject to a suitable restoration design and incorporation of wetland features.
- Acknowledge the completed advance planting which will increase enclosure and restrict public views;
- Recognising that the site does not have good field boundary survival (fields have been enlarged since the 19th Century);
- Sand and gravel pits are long-standing features in the local landscape, dating back to 19th Century;
- Lack of private views;
- There are no landmark buildings or natural features in the site;
- Perceptual quality is already influenced by the existing workings, sewage works, Maldon Road and overhead powerlines.

As such the RAG assessment for landscape and visual sensitivity should be **Green**.

2.2 Appendix C - Biodiversity

Section 2.2 provides a response to ECC's Minerals Plan Review - Assessment of Candidate Sites, Appendix C- Biodiversity.

This identified the site as **Amber** for Biodiversity.

2.2.1 Applied Ecology and Hanson Response

Applied Ecology, who undertook a Preliminary Ecological Assessment (PEA) at the site in 2022 and are continuing to undertake a range of protected species surveys, have confirmed that the two woodland blocks that border the Site are not ancient woodland according to Natural England's own ancient woodland database. The closest area of ancient woodland known as Calves Pasture is located 470m to the east of the Site. The locations of the statutory wildlife sites and ancient woodland, in relation to the southern extension site, are shown in Figure 2.2 above.

It has also been confirmed that there is no Lowland Mixed Deciduous Woodland Priority habitats next to the watercourse. The semi-mature Ash tree, located on the south-eastern boundary of the Site and considered by ECC to be a candidate veteran tree has been inspected by an arborist, who confirmed that the tree is displaying signs of ash die back.

There are no proposals to remove any priority woodland habitat. Sufficient standoffs would be designed into the mineral working and restoration scheme to ensure that there is no derogation of the woodland blocks.

The European Qualifying Features for Abberton Reservoir SPA and RAMSAR are a list of waterbirds (various ducks, mute swan, coot and great crested grebe). None of these species have any dependency upon the proposed southern extension land area, and we are confident that the proposed mineral extraction is highly unlikely to result in any adverse impact on this European site.

In respect to water quality, the working and restoration schemes would be designed and operated to protect against pollution entering the river. Section 2.5 presents SLR's response on the water environment and states that *'With regards the groundwater flood risk, the proposals are an extension to the existing quarry which has an existing and effective groundwater management system in place which includes dewatering to waterbodies within former phases of the Site. The extension will therefore utilise the same system and benefit from the existing licences and permits in place (although these will potentially need to be varied to include the extension area). This groundwater management would also be used to manage surface water run-off from the quarry and any off-site inputs, such as from the flow pathways shown on surface water flood mapping from the south-west'*.

ECC's concerns over dust are noted, however, except for soil stripping operations which can be dust suppressed, the majority of Hanson's operations will take place half way down the mineral deposit, which is many metres below ground level, thereby containing dust emissions.

In relation to Great Crested Newts (GCN), the Applied Ecology survey confirmed that no GCNs were found. However, GCNs have been considered in the proposed restoration scheme which includes the advanced planting that will bolster habitat buffering and connectivity.

The primary focus of the restoration scheme is intended to turn an arable field into a rich and varied wildlife site, that would enhance the biodiversity value of the local area and create significant opportunity for habitat creation on site.

We believe that the proposed Restoration Concept Design will meet ECC's requirements to compensate for lost habitat and provide enhancement, as this includes the following:

- Reedbed, c. 11.1ha;
- Open Mosaic (open faces, bare grounds, scrub, grassland), c. 14.9ha;
- Broadleaved woodland c. 2ha (mainly advance screening);
- Mixed, native new hedges to follow historic field patterns and enhance ecological connectivity c. 2.7km;
- Existing hedges to be gapped up and managed to ensure ecological connectivity across site c. 0.3km;
- Diverted watercourse 1,570m; and
- Open water c. 2.3ha.

Further to this, the restoration scheme also involves:

- Possibility of 3m high sand and overburden faces to be left open, making up 15% of lark margin restoration, to provide invertebrate habitat, potential sand martin nesting and geological interest;
- Reconstructed shorelines to incorporate micro-topography through the creation of humps and hollows by excavator on completion of bulk restoration earthworks;
- Areas of reedbed, and shallow water to incorporate pools, scraped, ledges and ditches to create a varied under water habitat; and
- Islands to provide nesting habitats for waders, ducks and terns.

On the basis of the information and clarifications provided in Section 2.2, we request that the RAG grading is changed to **Amber/Green** as we believe that the site meets the criteria for Amber/Green set out in ECC's Table 2: Biodiversity RAG Sensitivity Grade Table, in Appendix C.

2.3 Appendix D - Historic Buildings

Section 2.3 provides a response to ECC's Minerals Plan Review - Assessment of Candidate Sites, Appendix D – Historic Buildings, which identified the site as **Red/Amber**.

2.3.1 SLR's Response

The Essex RAG review indicates the following level of harm to listed buildings:

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 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 RAG review was carried out based upon the site boundary submitted and does not take into account intervening development, existing screening by trees and advance planting that has been carried out.

The current context can be seen in **Figure 2.6**. The house is orientated to the west and there are no windows facing towards the site, as shown in **Figure 2.8**. The advanced planting that will extend the existing woodland westwards will create a dense screen and the few filtered views which are present now, will be entirely blocked.

Figure 2.6 Current context of Roundbush Farm and Barn, showing establishes and recent planting



Figure 2.7 View of Roundbush Farmhouse from Roundbush Road, looking towards the site – dashed Red.



Figure 2.8 View of Roundbush Farm from Roundbush Road



Figure 2.9 View of Roundbush Farm from the south west corner of the Site before recent woodland planting. There is a paddock separating the Site from the House and Barn.



Figure 2.10 View of Roundbush Farm and Barn from the north west edge of the new woodland planting. There will be no views of the Site from the Farmhouse and Barn when the woodland matures



When the recently planted woodland matures, there will be no views of the Site from the Roundbush Farmhouse and Barn. The woodland will be fully assimilated into the landscape and would be a continuum of the woodland to the east. The undeveloped, agrarian landscape of the site contributes to the setting and significance of these assets, but the site is separated from the farmstead by a paddock, as well as the recently planted woodland. There would be no fundamental change in the ability to understand and appreciate the significance of the assets.

We consider that any effect upon the significance of these assets is at the lower end of the 'less than substantial scale' and would request that in respect of historic buildings the grading is changed to **green/amber** during extraction, and **green** following restoration.

2.4 Appendix F - Flooding and Appendix I – Hydrology, Hydrogeology and Drainage

Section 2.5 provides a response to ECC's Minerals Plan Review - Assessment of Candidate Sites, Appendix F – Flooding and Appendix I – Hydrology, Hydrogeology and Drainage, which identified the site as **Amber**.

2.4.1 SLR's Response

It is acknowledged that the site is partially located within areas of low, medium and high surface water flood risk associated with the watercourse which flows through the application site (the Birch Brook).

ECC have stated that the Birch Brook is a 'main river', however a review of the Environment Agency Statutory Main River Map¹ confirms that this is not classified as a main river through the application site and should therefore be considered a minor watercourse.

Hanson are aware of the potential impact of this watercourse on the proposed development and potential mitigation both during the active and post-restoration phases are under discussions and assessment, this will include the potential to divert the watercourse during the active phase (subject to obtaining watercourse consent from ECC) and re-instatement post-restoration to include NFM and potential ecological betterment.

With regards the groundwater flood risk, the proposals are an extension to the existing quarry which has an existing and effective groundwater management system in place which includes dewatering to waterbodies within former phases of the Site. The extension will therefore utilise the same system and benefit from the existing licences and permits in place (although these will potentially need to be varied to include the extension area). This groundwater management would also be used to manage surface water run-off from the quarry and any off-site inputs, such as from the flow pathways shown on surface water flood mapping from the south-west.

SLR therefore agrees with the grading with regards to flood risk as **amber** but also consider that the flood risk is well understood and can be adequately managed / mitigated based on Hasons long experience of working in the area and through appropriate management of the watercourse. Both the diversion of the watercourse and potential for long-term improvements to the watercourse, ecology and flood risk will be discussed and agreed with ECC prior submission of planning.

¹ [Statutory Main River Map \(arcgis.com\)](https://arcgis.com)

2.5 Appendix G - Transport

Section 2.6 provides a response to ECC's Minerals Plan Review - Assessment of Candidate Sites, Appendix G – Transport, which identified the site as **Green** for Transport.

2.5.1 SLR's Response

SLR is in agreement with the findings in Appendix G but would like to clarify that the proposals will not result in any changes to the operation of the existing purpose-built access junction with ghost right turn lane facility.

The only new traffic will relate to restoration works, which require the delivery of plant and infill material via an upgraded access junction on the opposite side of Maldon Road from the existing Birch Pit Quarry. A junction improvement scheme will be provided as part of the planning application, supported by a Stage 1 Road Safety Audit, which will be contained within the Transport Assessment.

The conveyor design will also be provided within the planning application which demonstrates that a safe and acceptable design is achievable. The detailed design of the conveyor would be agreed with the local highway authorities by planning condition.

As such, it is agreed that the transport impacts upon the safety and efficiency of the road network will not be detrimental and the RAG assessment for Transport should indeed be Green.

2.6 Appendix H – Access

Section 2.7 provides a response to ECC's Minerals Plan Review - Assessment of Candidate Sites, Appendix H – Access, which identified the site as **Red/Amber** for Access.

2.6.1 SLR's Response

Appendix H has given 'Access' a Red/Amber grading, which according to ECC's Sensitivity Grading assumes that *'The access is not acceptable in its current form and it is unlikely that mitigation is possible to make the Site acceptable'*.

The existing field access will be upgraded to a design which considers highway safety and operation. Based on the predicted additional traffic numbers and review of junction visibility, it is expected that a simple priority junction, designed to accommodate HGVs, would be acceptable. The site access would be metalled well into the site to ensure that vehicles can leave the highway safely, efficiently and without issue.

It is expected that there would be no residual detrimental effects to the local highway network in terms of capacity or operation, and sustainable transport modes such as cycle, bus, and rail are also expected to remain un-affected by the works.

Consequently, we request that the RAG grading is changed to **Amber/Green** as in line with ECC's Sensitivity Grading for Access, we consider that *'The access is not acceptable in its current form and is likely to require low levels of mitigation to make the Site acceptable'*.

2.7 Appendix I - Public Rights of Way, Geo-Environmental, Hydrology, Hydrogeology & Drainage, Air Quality, Soil Quality, Services & Utilities, Health & Amenity, Green Belt, and Airport Safeguarding Zones

The following section provides a response to Essex County Council (ECC)'s Minerals Plan Review - Assessment of Candidate Sites, Appendix I – Health and Amenity, which rated the site as **Red**.

Candidate Site Reference	Candidate Site Name	
A31	Maldon Road	
Criteria	Grading	Comments
Public Rights of Way	Green	PRow 124_13 is 5m north-east of the Site and PRow 142_1 is 45m south-west of the Site. There are no PRow's within or bordering the Site. The Site is likely to have no impact on PRow's that requires mitigation.
Geo-Environmental	Green	The Site is more than 20m from a LoGS and therefore is likely to have no impact on the geological environment that requires mitigation as geological features will be preserved and maintained.
Hydrology, Hydrogeology & Drainage	Amber	The Site within a Zone III - Total Catchment Groundwater SPZ and has low/medium to low groundwater vulnerability. The Site is not within a Drinking Water Safeguard Zone (Surface Water) and is not within Drinking Water Protection Areas (Surface Water). A water course is present within the Site boundary and feeds into the Roman River. No water body is present within the Site boundary. The Site is likely to have a moderate impact on hydrology, hydrogeology and drainage and is likely to require medium levels of mitigation to make the Site acceptable.
Air Quality	Green	The Site is more than 2km from an AQMA and therefore is likely to have no impact on an air quality that requires mitigation.
Soil Quality	Amber/Green	The Site contains Grade 3 quality soil (good to moderate quality land), which has the potential for being BMV land. The Site is likely to have a minor impact on soil quality and agricultural land and may require low levels of mitigation to make the Site acceptable.
Services & Utilities	Amber	The Site contains 33kV overhead electricity lines within the Site boundary. The Site is likely to have a moderate impact on utilities and is likely to require medium levels of mitigation to make the Site acceptable.
Health & Amenity	Red	One farm building is present within the southern boundary and adjacent to the Site to the west. One residential building is located 10m south west. Two residential building are located 110-140m south west, one residential building is 140m north, and one residential building is located 200m north east. One sports facility (fishing lake) is 140m east, and one farm building is 190m south west. The Site is likely to have an unacceptable impact on health and amenity and mitigation to make the Site acceptable would likely be difficult to achieve.
Green Belt	Green	The Site is not within a Green Belt. The nearest Green Belt is 22.2km away. The Site is likely to have no impact on preservation of the openness of the Green Belt that requires mitigation and would not conflict with purpose of including land within it.
Airport Safeguarding Zones	Green	The Site is not within an Airport Safeguarding Zone. The nearest Airport Safeguarding Zone is 9.6km away. The Site is likely to have no impacts on aircraft safety that require mitigation and would not increase the risk of bird strikes for aircraft.

2.7.1 SLR's Response

Hydrology, Hydrogeology and Drainage have been covered in Section 2.5, therefore, this section is limited to Services and Utilities and Health and Amenity.

The Site assessment note confirms that the A31 contains 33kV overhead electricity lines within the Site boundary. Hanson have experience of working below, and in proximity to powerlines, and the standard safe working practices will be maintained whilst working underneath the line, in liaison with the local distribution supplier.

Although no issues are foreseen with working under the lines, the lines are on a wayleave, so could be removed /diverted at a given notice period if needed.

The ECC methodology for the grading of Health and Amenity states the following with regard to distances of receptors from the site:

“Red: Sensitive receptors are either within or adjacent (0m) to the site boundary. Therefore, the Site is likely to have a serious impact on health and amenity and mitigation to make the Site acceptable would likely be difficult to achieve.

Red-Amber: Sensitive receptors are less than or equal to 50m or within the site boundary. Therefore, the Site is likely to have a major impact on health and amenity and is likely to require high levels of mitigation to make the Site acceptable.

Amber: Sensitive receptors are more than 50m but less than or equal to 250m from the site boundary. Therefore, the site is likely to have a moderate impact on health and amenity and is likely to require medium levels of mitigation to make the site acceptable.

2.7.2 Review of Sensitive Receptor Locations

It is noted that there is no farm building present within the site, as such ECCs statement of “*One farm building is present within the southern boundary*” is deemed to be incorrect.

There are no buildings or sensitive land-uses within or immediately adjacent to the site boundary. The closest human receptor to the site boundary would be Roundbush Bungalow which is within 20m of the southwestern boundary.

Hanson are proposing a 100m stand-off between the extraction area and Roundbush Bungalow and advance planting has already been carried out to establish a new woodland buffer as shown in Drawing B7r187a (**Figure 2.5**). Block A is a substantial planting of woodland comprising a total area of 7,500m² and located in the southwestern corner of the site.

Block A increases the distance between the extraction area and Roundbush Bungalow to over 100m. The established woodland will also act as a significant dust and noise screen.

In summary, the advanced planting increases the distance between the proposed extraction area and off-site receptors to over 100m and will provide an effective screen for airborne dust emissions and noise as it matures. This reduces the potential risk of adverse impact and should be acknowledged in the RAG Assessment. It is recommended that the RAG assessment is reviewed on this basis.

2.7.3 Review of RAG Assessment Rating

With regard to the scale and nature of the activities on site, the proposed quarry extension would not require any processing or site management areas to be established, and the transfer of material by conveyor to the existing facilities in Birch Pit reduces the need for internal site haulage. Both of these elements significantly lessens the potential for fugitive dust and noise emissions from the proposed extension.

Furthermore, Hanson operates an effective dust management regime as part of their existing operations in Birch Pit which would continue to be implemented and adhered to in any future extension activities. Best practice mitigation that would be employed as standard during any mineral operations would include the following:

- Water suppression used as required (i.e. tractor and bowser for internal haul routes, site preparation, excavation, restoration);
- Wind boards installed along the length of the conveyor route;
- Phased working areas for both site preparation, excavation and restoration;
- Use of conveyor system to transfer material, minimising on-site haulage on unpaved routes;
- Temporary soil storage bunds along Site perimeter as additional screening (location and design currently under review) and
- Establishing dust and noise management scheme, including procedures for complaints, monitoring, contingency plans, responsibilities and training requirements.

On account of the advanced planting, the closest sensitive receptor to activities on site is considered to be aligned with an Amber rating i.e. “*Sensitive receptors are more than 50m but less than or equal to 250m from the site boundary*”. It is considered that the potential for impacts from dust and noise generation would be aligned with that of the Amber rating stating, “the site is likely to have moderate impact on health and amenity and would require medium levels of mitigation to make the site acceptable”.

Based on the absence of any sensitive receptors within or immediately adjacent to the site boundary, and the revised minimum distance to sensitive receptors due to the completed advance planting, it is suggested that the distance criterion for off-site receptors be re-considered.

On account of the additional screening afforded by the advance plating and the best practice mitigation that would be employed as a minimum, the site is not considered to have an unacceptable impact on health and amenity with regard to noise, dust and air quality that would make mitigation hard to achieve.

It is recommended the RAG assessment for health and amenity in relation to noise, dust and air quality should be **Amber**.

Summary

ECC's RAG assessment for site A31 currently includes a **Red/Amber** rating for 'Historic Buildings' and 'Access' and a **Red** rating for 'Health and Amenity'.

ECC guidance states that "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".

This report has reviewed the site assessments for the Red and Amber graded categories and has provided information, in relation to proposed mitigation, which we believe should lead to following changes in RAG ratings:

- Access – **Red/Amber** to **Amber/Green**
- Biodiversity – **Amber** to **Amber/Green**
- Health and Amenity – **Red** to **Amber**
- Historic Buildings – **Red/Amber** to **Amber/Green**
- Landscape and Visual Sensitivity - **Amber** to **Green**



Making Sustainability Happen