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Site A6 - Bradwell Quarry

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

Summary of RAG Assessment

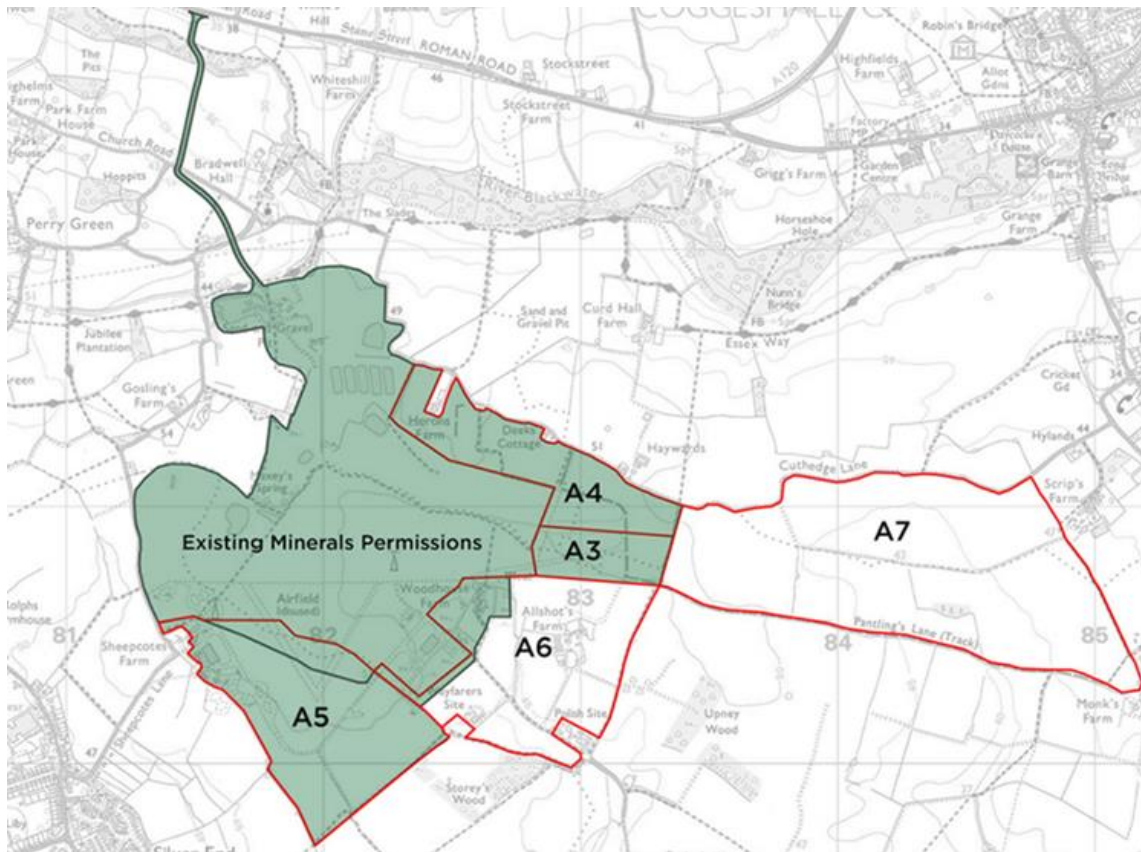
The results of the technical and desktop RAG assessment are detailed below.

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

Landscape and Visual Sensitivity

The RAG Assessment highlights that:

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.



Site A6 is located adjacent on the south-eastern boundary of Bradwell Quarry, and lies to the north east of the former quarrying operations within Site A5 (38ha), to the south east of the former Site A2 quarrying operations (22.6 ha) and the site of the Rivenhall Integrated Waste Management Facility, to the south of the former quarrying operations within Sites A3 and A4 (30 ha), and south west of the existing quarrying operations within Site A7 (65 ha).

Site A6 lies within Landscape Character Area (LCA) C6, the Blackwater/Brain/Lower Chelmer Valley.

The key characteristics of LCA C6, as described in the Essex Landscape Character Assessment, are as follows:

- *Shallow valleys.*
- *Predominantly arable farmland with well hedged medium to large fields.*
- *The Brain and the Upper Blackwater Valleys are narrow with undulating valley sides.*
- *The Lower Chelmer, and the Blackwater near Maldon, have wide flat valley floors, and gentle valley sides.*
- *Extensive linear poplar and willow plantations are a distinctive feature.*

The overall character of LCA C6 is described as:

“The Brain and the Upper Blackwater valleys are relatively narrow with moderate slopes. By contrast, the Lower Chelmer and the Blackwater, south of Langford, have wide floodplains with gentle valley sides and are more open in character. Medium scale, arable farmland dominates throughout their length, with a predominantly strong pattern of hedgerow boundaries with frequent hedgerow trees. Tree cover is high along the banks of the rivers with willow and poplar plantations common as well as pockets of wet alder/willow woodland. Small settlements are dispersed along valley sides or cluster around a few key bridging

points. The towns of Braintree, Witham and Maldon occupy valley side locations, but along with the major roads that cross the area have a limited impact on character.

The LCA makes the following observations in regard of landscape condition:

- *Farmland hedgerows are generally in good condition, although there are localised areas of fragmentation.*
- *The condition of the settlements is mixed. Some of the towns such as Braintree and Witham have intrusive industrial and housing development and some modern out of character infill tends to occur in the villages close to them.*
- *Gravel workings are locally visually prominent.*

The sensitivity evaluation concluded the landscape within the LCA C6 is of medium sensitivity to change from mineral extraction.

The RAG Assessment recognises that: *The Site possesses few characteristic features of the Blackwater/Brain/Lower Chelmer Valleys (C6) Landscape Character Area (LCA) ... and therefore reduces the sensitivity of the Site to minerals extraction.*

The RAG Assessment rightly acknowledges that the sensitivity of LCA C6 has reduced but fails to state (as it does for Site A47): *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.*

Furthermore, the Landscape and Visual Impact Assessments that were completed for the neighbouring mineral extraction areas within Bradwell Quarry (Site A2, Sites A3 and A4, Site A5 and Site A7) did not identify any unacceptable adverse effects associated with their development, and there is no reason to expect that the development of Site A6 would be any different. In addition, any adverse landscape effects arising from their development within the LCA C6 were localised and temporary.

Based on the above, the RAG Assessment of Red/Amber is considered overly conservative based on the findings of the assessment and previous Landscape and Visual Impact Assessments.

As a minimum, Site A6 should be reassessed as Amber.

Biodiversity

The RAG Assessment highlights that:

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.

With reference to the Site-specific requirements for Site A6 within Appendix One of the existing Minerals Local Plan it should be noted that:

5. *Storeys Wood Local Wildlife Site (BRA 178) adjoins the southern boundary. An appropriate buffer of at least 15m would be required around this woodland and protection afforded to the woodland contained to the south and west of the site.*

And, the former quarrying operations across Site A5 had a similar site-specific requirement, namely:

4. *Storeys Wood Local Wildlife Site (BRA 178) abuts the southern east boundary. An appropriate buffer of at least 15m would be required to prevent damage to this site.*

The application of a "buffer of at least 15m" from the Storeys Wood Local Wildlife Site (BRA 178) within Site A6 would be increased by a further offset of at least 21m to the edge of the extraction boundary, i.e. a standoff of at least 36m.

The RAG Assessment also notes that the Upney Wood Local Wildlife Site (LoWS) is c.216m to the east of the Site A6 Site Boundary (i.e. at least c. 237m from the extraction boundary). Considering the separation distance of Upney Wood from the footprint of Site A6, mineral extraction operations would have no impact on Upney Wood, and in line with the existing Site-specific requirements set out within Appendix One of the existing Minerals Local Plan would not require any specific mitigation measures.

The application of a "buffer of at least 15m" from Storeys Wood is not considered to be a "high level of mitigation", and existing operational experience within Site A5 has demonstrated that the offset from the woodland provides suitable protection.

The existing trees and hedgerow around the perimeter of the Site A6 extraction boundary would be protected by Root Protection Areas and further offset at least 21m from the edge of the quarrying operations. Such measures are standard environmental controls and should not be considered to be a "high level of mitigation".

There would be no direct loss to the perimeter Woodland and Hedgerow Priority habitats around Site A6.

In terms of hydrology, the RAG Assessment does not acknowledge that the existing ponds and field ditches across Site A6 (and the surrounding area) are surface water fed and unconnected to any watercourse or groundwater source. Therefore, the water quality of existing ponds and field ditches around Site A6 would be unaffected by mineral extraction operations and would remain unchanged.

Site A6 is located adjacent on the south-eastern boundary of Bradwell Quarry, and lies to the north east of the former quarrying operations within Site A5 (38ha), to the south east of the former Site A2 quarrying operations (22.6 ha) and the site of an Rivenhall Integrated Waste

Management Facility, to the south of the former quarrying operations within Sites A3 and A4 (30 ha), and south west of the existing quarrying operations within Site A7 (65 ha). Surveys have demonstrated that mobile species such as farmland birds will move around the site and into adjacent areas as each phase of the mineral extraction works proceeds. Therefore, the impacts of any quarrying operations across Site A6 on farmland birds would be low.

Based on the above, the RAG Assessment of Red/Amber for Biodiversity is considered to be overly conservative and unreasonable for an allocated "Reserve Site" within the existing Minerals Local Plan.

As a minimum, Site A6 should be reassessed as Amber.

Historic Buildings

The RAG Assessment highlights that:

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 Northwest 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.

Woodhouse Farm Complex

There are several buildings and structures at Woodhouse Farm, which include the Woodhouse Farmhouse (C17), Brewhouse (C18), and Pump (C19) – each Grade II Listed; Cart Shed, Feed Barn, Pigsties, farmyard-, brewhouse-, and farmhouse-walls – all C19, curtilage listed; and, a steel framed barn (C20).

The Farmhouse is a former two storey timber frame building, plastered externally with some weatherboarding, roofed with handmade plain tiles, of early C17, altered in C18 and C19 construction.

The Brewhouse is a former single storey ancillary building and was used as a bakehouse, brewhouse, and stable; it is weatherboarded and plastered externally, with some red brick in Flemish bond, roofed with handmade red plain tiles, originally built in the C18 and extended in C19. Its roof has collapsed, and the building is currently encased in protective scaffold.

The Pump is made from wrought and cast iron, and wood of early C19 construction. It was originally located adjacent to the Brewhouse's southern elevation. The Pump was removed in 2012.

The Woodhouse Farmhouse (C17), the Brewhouse (C18), and the Pump (C19) are each Grade II Listed. The Farmhouse is in a derelict condition – its windows and doors are boarded, it has a temporary metal sheet roof, and is stabilised with temporary structural propping throughout. Although the Brewhouse roof has collapsed, its walls remain largely intact and stable, protected from weather by a metal casing (late-C20). The Pump and Well was located immediately to the south of the Brewhouse. The timber and metal Pump was removed from the well head in 2012 and is in secure storage, on-site. The Pigsties, Brewhouse yard walls and Farmhouse garden wall are Grade II curtilage listed. They are in poor condition, with sections of brickwork fallen or missing. The well is concealed by a corbelled brickwork dome not visible, covered by earth; and, a recent video survey has shown it to be in good visual condition.

Planning permission(s) has been granted under 23/00352/LBC and 23/00351/FUL for the refurbishment of the Grade II listed Woodhouse C17 Farmhouse, C18 Brewhouse, C19 Pump and well, C19 Pigsties, and ancillary structures, yards and gardens, including adaptations for use as a local heritage and airfield museum, visitor and education centre.

Site A6 would be to the east of Woodhouse Farm Complex and would have no direct impact upon the buildings.

The setting of Woodhouse Farm is a mixture of rural and industrial land-uses. The area around the buildings is generally wooded, serving to separate the Complex from the former World War II airfield that has been subject to mineral extraction operations across Bradwell Quarry (Site A2, Sites A3 and A4, Site A5 and Site A7) and the development of the Rivenhall Integrated Waste Management Facility.

The key components of the historic setting and significance of the heritage assets at Woodhouse Farm can be summarised as:

- Age and architectural value as a group.
- Group value of the range of assets present illustrating the continuity of the use of the site through the medieval to post medieval periods.
- Relationship to watercourse feeding the moat.
- Continuing relationship to the historic road system to the south.

Allshots Farm

Allshot's Farm is situated within the centre of Site A6 and would be at least 100m from the extraction boundary. The quarrying operations across Site A6 would have no direct impact upon the buildings.

Historically, Allshot's Farm was part of the Felix Hall estate, which is located approximately 2km to the southeast of Site A6. The access is now from the south, from the Woodhouse Lane spur off Hollow Road. The group includes the following Grade II buildings:

Allshot's Farmhouse House: *Circa 1600, extended in C20. Timber framed, plastered, roofed with machine-made red plain tiles. 2 bays aligned approx. NE-SW with stack at NE end; originally the house extended further in this direction, demolished in C20.*

Barn c. 45m NW of Allshot's Farmhouse. Barn: *Circa 1700. Timber-framed, weatherboarded, roofed with corrugated iron. 5 bays aligned approximately east-west with original midstrey to south.*

Allshot's Farm is depicted on a 1605 map (ERO D/DM P3) and may have origins in the medieval period. Later documents indicate that this farm was part of the Felix Hall manor, formerly Filliol Hall. The estate was put up for sale in 1913 (ERO SALE/B4005) at which time "All Shots" was described as "... an exceptionally fine small sporting estate". Blocks of woodland to the south-east are a remnant of Upney Wood, part of this estate. Other (non-designated) buildings are present in the general area including a number of modern buildings. The area is generally used for light industrial purposes, including a scrapyards and car repair works. Its boundaries are partly hedged, with groups of trees present, and these serve to screen the farmstead. Areas of quarrying and restoration operations across Bradwell Quarry (Site A2, Sites A3 and A4, Site A5 and Site A7) are located to the south, west and north of Allshot's Farm and the development of the Rivenhall Integrated Waste Management Facility is located to the west.

The key components of the historic setting and significance of the heritage assets at Allshots Farm can be summarised as: Age and group value of the historic buildings; Farmhouses outlook is towards the agricultural buildings and the barn opposite; and, Areas of wood, grassland and a pond are present to the south of the farmhouse, these are part of the historic layout of the farm.

The current light industrial land-use within the vicinity of the farm (the Polish Site) could be considered to detract from the setting of the assets both visually and by making the group as a whole difficult to read, masking the relationships between the historic features and the surrounding landscape.

Summary

Allshot's Farm is situated within the centre of Site A6 would be at least 100m from the extraction boundary. The quarrying operations across Site A6 would have no direct impact upon Allshot's Farm. Other (non-designated) buildings are present in the general area including a number of modern buildings. The area from which it derives its significance is generally used for light industrial purposes, including a scrapyards and car repair works. It lies in relatively close proximity to the existing/former quarrying and restoration operations within Bradwell Quarry to the south, north and west and the development of the Rivenhall Integrated Waste Management Facility. On this basis the magnitude of impact and effect of the quarrying operations across Site A6 could be considered to cause moderate levels of less than substantial harm.

Woodhouse Farm lies to the northwest of Site A6 and is in closer proximity to the existing/former quarrying and restoration operations within Bradwell Quarry. It lies in relatively close proximity to the existing/former quarrying and restoration operations within Bradwell Quarry to the south, north and west and the development of the Rivenhall Integrated Waste Management Facility. On this basis the magnitude of impact and effect of the quarrying operations across Site A6 could be considered to cause moderate levels of less than substantial harm.

The works across Site A6 will be of a limited duration (approximately 3 to 5 years), so its impact upon the heritage assets in its vicinity would be temporary. The subsequent restoration of the landscape means that the long-term impact of its allocation on the setting and significance of the affected heritage assets would be Neutral.

Based on the above, the RAG Assessment of Red/Amber for Historic Buildings is considered to be overly conservative and unreasonable for an allocated “Reserve Site” within the existing Minerals Local Plan for assets likely to experience Moderate Adverse impacts from any quarrying and restoration works across Site A6.

As a minimum, Site A6 should be reassessed as Amber.

Archaeology

The RAG Assessment highlights that:

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.

In terms of the archaeological sensitivity of Site A6, the RAG Assessment of Amber is fair and reasonable, based on the existing archaeological understanding of the site.

Flooding

The RAG Assessment highlights that:

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.

The Core Strategy and Local Plan are supported by the Braintree District Strategic Flood Risk Assessment (SFRA). Within the SFRA, Table 3-2 identifies the fluvial flood zone definition of Flood Zone 1 as: Land having a less than 1 in 1,000 (0.1%) annual probability of river flooding. Shown as clear on the Flood Map – all land outside Flood Zones 2 and 3.

Table 4-1 identifies Flood Zone 1 as being of Very Low Risk of Flooding from Surface Water (RoFSW).

The Site A6 restoration scheme would create a low-level restoration scheme with rolling shallow valley side slopes reinstating an agricultural landscape with biodiverse features that will improve the views, visual amenity, character, diversity and quality of the landscape compared to its existing setting.

Based on the above, the RAG Assessment for Flooding of Amber is considered conservative given the site’s setting within Flood Zone 1 and the proposed low level restoration profile, it is considered that Site A6 should be reassessed as Amber/Green.

Transport

The RAG Assessment of Green for Transport reflects the fact that Bradwell Quarry has an established means of access to and from the strategic road network (A120 Coggeshall Road) and promotes the principles of sustainable transport, whereby HGVs have direct access to suitable route(s), optimise the efficient use of the main road network and apply the route hierarchy.

Access

The RAG Assessment of Green for Access reflects the fact that Bradwell Quarry has established crossing points over Church Road and Ash Lane have operated in a controlled and safe manner for many years and do not suffer from a poor Personal Injury Accident (PIA) record.

Public Rights of Way

The RAG Assessment identifies that:

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.

Footpath 8 (Kelvedon) cuts through Site A6 in a north westerly direction.

As the quarrying operations progress across Site A6, Footpath 8 (Kelvedon) would be temporarily diverted around the working area to maintain its interconnection with other public rights of way. Footpath 8 (Kelvedon) would be reinstated to either its original, or an agreed alternative definitive alignment, as the restoration works progress across the site.

Other public rights of way would be unaffected by the quarrying operations within Site A6.

Site A6 is allocated as a “Reserve Site” within the existing Minerals Local Plan and within Appendix One, the Site-specific issues to be addressed, it notes that:

- 7. PROW footpath Kelvedon 8 crosses the site and would require temporary diversion during operations.*

Based on the above, the RAG Assessment of Red/Amber for Public Rights of Way is considered to be overly conservative and unreasonable for an allocated “Reserve Site” within the existing Minerals Local Plan.

As a minimum, Site A6 should be reassessed as Amber.

Geo-Environmental

The RAG Assessment of Green for Geo-Environmental reflects the fact that Site A6 is more than remote from any Local Geological Sites (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

The RAG Assessment identifies that:

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 is within Zone III - Total Catchment Groundwater SPZ and has low groundwater vulnerability and there are two licensed groundwater abstractions within a 5 km radius of Site A6.

From available information, and particularly experience gained from the quarrying operations across the extractive areas of Site R (71.6 ha), Site A2 (22.6 ha), Sites A3 and A4 (30 ha) and Site A5 (38ha), an area of 162.2 ha, the Kesgrave Formation sand and gravel deposits beneath the site contain minor amounts of water.

Blackwater Aggregates' existing quarrying operations across the Bradwell Quarry have demonstrated that the sand and gravel deposits contain minor amounts of water; and, the variation in the groundwater depths (saturated thickness of the sand and gravel layer) above the London Clay indicate that groundwater conditions are likely to be influenced by natural variations on the surface of the London Clay and overlying (permeable) sand and gravel deposits.

Based on extensive experience of managing the groundwater beneath Bradwell Quarry it suggests that as the mineral extraction operations progress across Site A6 the quarry dewatering is unlikely to impact any off-site groundwater abstractions.

Surface water run-off will typically drain into the working area(s) of the quarry and any surface water accumulations or groundwater will be controlled and contained within the footprint of the working area(s).

As the works progress across the site, water will typically be managed in order to prevent any recirculation into the existing or proposed working areas.

The existing ponds and field ditches across Site A6 (and the surrounding area) are surface water fed and unconnected to any watercourse or groundwater source, and there are no ponds nor water features within the footprint of the Site A6 extraction area. Therefore, the existing ponds and field ditches around Site A6 would be unaffected by mineral extraction operations and would remain unchanged.

Based on the above, the RAG Assessment for Hydrology, Hydrogeology & Drainage of Amber could be considered slightly conservative, and considering the operational understanding of the groundwater and surface water management works across Bradwell Quarry and those likely to be encountered within Site A6, it should be reassessed as Amber/Green.

Air Quality

The RAG Assessment of Green for Air Quality reflects the fact that Site A6 more than 2km from an AQMA and therefore is likely to have no impact on an air quality that requires mitigation.

Furthermore, the local amenity can be protected by minimising work in sensitive areas and creating 'buffers' between residential areas and mineral workings. A minimum of a 100m 'buffer zone' from the extraction face to the wall of a residential property would be maintained to minimise the impact of working on local amenity.

Soil Quality

The RAG Assessment identifies that:

The Site contains Grade 2 quality soil (very good quality agricultural land) which is Best and Most Versatile (BMV) land. The Site is likely to have a moderate impact on soil quality and agricultural land and is likely to require medium levels of mitigation to make the Site acceptable.

In line with existing operational practices across Bradwell Quarry, the criteria for moving topsoil and subsoil will be based on the measurement of the Lower Plastic Limit.

Topsoil and subsoil stripping, storage and placement will be carried out in line with best operational practice to protect the structure and quality of the topsoil and subsoil as a material resource.

On a sequential basis, as the restoration works progress across Site A6, areas of restored land will enter into agricultural aftercare, whereby the restoration works will be cultivated and treated appropriately for up to 5 years to restore the structure and stability of the sub-soil, topsoil and landform to normal agricultural uses.

In terms of Soil Quality, the RAG Assessment of Amber is fair and reasonable.

Services & Utilities

The RAG Assessment identifies that:

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 onsite buildings that may be demolished will be disconnected. 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..

All services within the footprint of Site A6 would be diverted under “lift and shift” Wayleave Agreement around the perimeter of the extraction boundary or affected working area(s). Existing overhead supplies would be diverted via underground ducts where possible.

There would be no significant impacts associated with the diversion of the services around Site A6 and no significant impact on utility supplies.

Based on the above, the RAG Assessment for Services and Utilities of Amber is considered overly conservative and considering that “lift and shift” Wayleave Agreements are in place, it should be reassessed as Amber/Green for a “Reserve Site” within the existing Minerals Local Plan.

Health & Amenity

The RAG Assessment identifies that:

Six buildings are located within the Site boundary, these include two residential buildings, three commercial buildings, and one building of unknown use. Six commercial buildings (Allshots Enterprise Area) are adjacent to the south eastern boundary (0m). Five commercial buildings (Allshots Enterprise Area) are 20m of the Site to the south east. Six commercial buildings (Allshots Enterprise Area) are 30-40m of the Site to the south east. One farm building is 30m north west. One residential building is 100m north west and one farm building is 120m north west. One residential building is 170m south east of the Site. 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.

In submitting information associated with Site A6 a site-specific requirement was that of identifying the “Extraction boundary” to support the assessment of the site.

Whilst two residential buildings, The Lodge and Allshot’s Farm, sit within the Site A6 Site Boundary, at the point of closest approach they will be at least 100m from the extraction boundary.

Quarrying operations will only be carried out during the day on weekdays and Saturday mornings.

Within the existing Minerals Local Plan section 5.20 states that: *Local amenity can be protected by minimising work in sensitive areas and creating 'buffers' between residential areas and mineral workings. A minimum of a 100m 'buffer zone' from the extraction face to the wall of a residential property would normally be required to minimise the impact of working on local amenity.*

Similarly, within the Replacement Minerals Local Plan, Table 3 and sections 3.125, 3.132 and 3.134 highlight that "... extraction is not permissible less than 100m from the façade of a dwelling if impacts are demonstrably mitigatable."; and section 5.9 states: *Local amenity can be protected by minimising work in sensitive areas and creating 'buffers' between residential areas and mineral workings. A minimum of a 100m 'buffer zone' from the extraction face to the wall of a residential property would normally be required to minimise the impact of working on local amenity.*

However, as noted within Section 3.1 of the Assessment of Candidate Sand and Gravel Sites "... The sites have been assessed using the site boundary as opposed to the mineral extraction area as this is subject to change. ..." therefore, in the event that the Replacement Mineral Local Plan increases the "buffer zone", the mineral extraction area within Site A6 would be "subject to change" to protect local amenity in sensitive areas. However, any adjustment to the mineral extraction boundary would result in a loss of some of the mineral reserve.

Notwithstanding the above, Site A6 is allocated as a "Reserve Ste" within the existing Minerals Local Plan, and it should be noted that:

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.

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.

Furthermore, based on Blackwater Aggregates' quarrying operations across Bradwell Quarry the following should be noted:

Noise and Vibration Controls

Local amenity will be protected by minimising work in sensitive areas and creating 'buffers' between residential areas and mineral workings within Site A6.

A minimum of a 100m 'buffer zone' from Site A6 to the façade of The Lodge and Allshot's Farm is a recognised requirement to minimise the impact of working on local amenity.

Stand-offs or 'buffer zones' of 100m have previously been applied to heritage assets and residential properties around Bradwell Quarry, and in certain circumstances, where properties are either owned by, or under the control of Blackwater Aggregates, at their closest point the operational face of the quarrying operations has been within 35m.

The "buffer zones" provide (and have proven to provide) effective protection to the properties and heritage assets from noise and ground borne vibration.

All quarrying, restoration and mineral processing operations across Site S6 would follow existing and industry recognised best practice(s):

- All plant and vehicles within the site will have efficient exhaust silencers and acoustic enclosures to their engines, with plant undergoing regular maintenance.
- Any plant or vehicle which is considered to be excessively noisy, or poorly maintained, will not be permitted to operate on the site; and,
- Mineral washing, screening and processing will take place within the existing processing facilities located in Bradwell Quarry.

Routine noise monitoring would be carried out around Site A6 to demonstrate compliance with any noise conditions.

Dust

Dust will be managed and controlled within Site A6 so there will be little impact on neighbouring residential properties. The quarrying operations would be at least 100m away from The Lodge and Allshot's Farm with screening and dust suppression to reduce any potential dust impact.

To control and minimise dust the following operational control measures would be implemented in line with existing and industry recognised best practice(s), namely:

- Speed restrictions will apply to all vehicles on site to minimise the uplift of dust created by the vehicle draught.
- Throughout the summer months or periods of prolonged dry weather, dust suppression measures will be employed; and
- Quarrying and restoration works will be undertaken in a phased and systematic manner, adopting industry recognised best practice and the established operational principles that have been applied by Blackwater Aggregates.

Based on the above operational principles, dust is not anticipated to impact on areas surrounding Site A6.

Routine dust monitoring and management measures would continue to be applied within and around Site A6 in line with a Dust Management Plan.

Lighting

Site A6 is situated within a suburban/rural transition area (as defined in the Bortle Scale classification) and the proposed site will only be moderately affected by the current levels of sky glow and glare within the vicinity.

Any lighting that may be required in or around temporary compounds would be controlled by the standard hours of the site operations and would be screened from view.

As the quarrying and restoration operations progress across Site A6, no temporary or fixed lighting would be installed within the working areas or along any haul roads to and from the site. Headlamps fitted on the plant and equipment used within the quarry will provide safe levels of lighting between 07:00 and 18:30.

Environmental Best Practice

The Minerals Working and Active Landfills Environmental Award Scheme is operated by Essex County Council to benchmark and assess the environmental standards achieved by operational sites. Since commencing quarrying operations on Rivenhall Airfield in 2000,

Blackwater Aggregates have won the Gold Award, i.e. the highest score achievable reflecting a good standard in all aspects surveyed in respect of compliance with planning control and the commitment to minimising the potential environmental impact of the mineral and/or landfill operations at the site, every year since the scheme originated.

Works across Site A6 would follow the established principles of environmental best practice, thereby minimising any impact of the site to local residents.

Conclusion

Site A6 is allocated as a “Reserve Site” within the existing Minerals Local Plan and the significance of its allocation was tested through independent examination by the Planning Inspectorate.

Based on the above, the RAG Assessment for Health and Safety of Red is considered to be incorrect and overly conservative, by failing to recognise that the quarrying operations across Site A6 would be at least 100m from any residential property across a “Reserve Site” allocated for sand and gravel extraction within the Existing Mineral Local Plan.

Sites allocated for development in the Minerals Local Plan are those which have been assessed as suitable for development in principle.

Both the existing Minerals Local Plan and Replacement Local Plan correctly recognises that: *Local amenity can be protected by minimising work in sensitive areas and creating ‘buffers’ between residential areas and mineral workings. A minimum of a 100m ‘buffer zone’ from the extraction face to the wall of a residential property would normally be required to minimise the impact of working on local amenity.*

Based on the above, the RAG Assessment for Health and Safety should be reassessed as Amber/Green.

Green Belt

The RAG Assessment of Green reflects the fact that Site A6 is not within a Green Belt. The nearest Green Belt is 17.7km 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

The RAG Assessment of Green for Airport Safeguarding Zones reflects the fact that Site A6 is not within an Airport Safeguarding Zone. The nearest Airport Safeguarding Zone is 7km to the north of the site. 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.

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