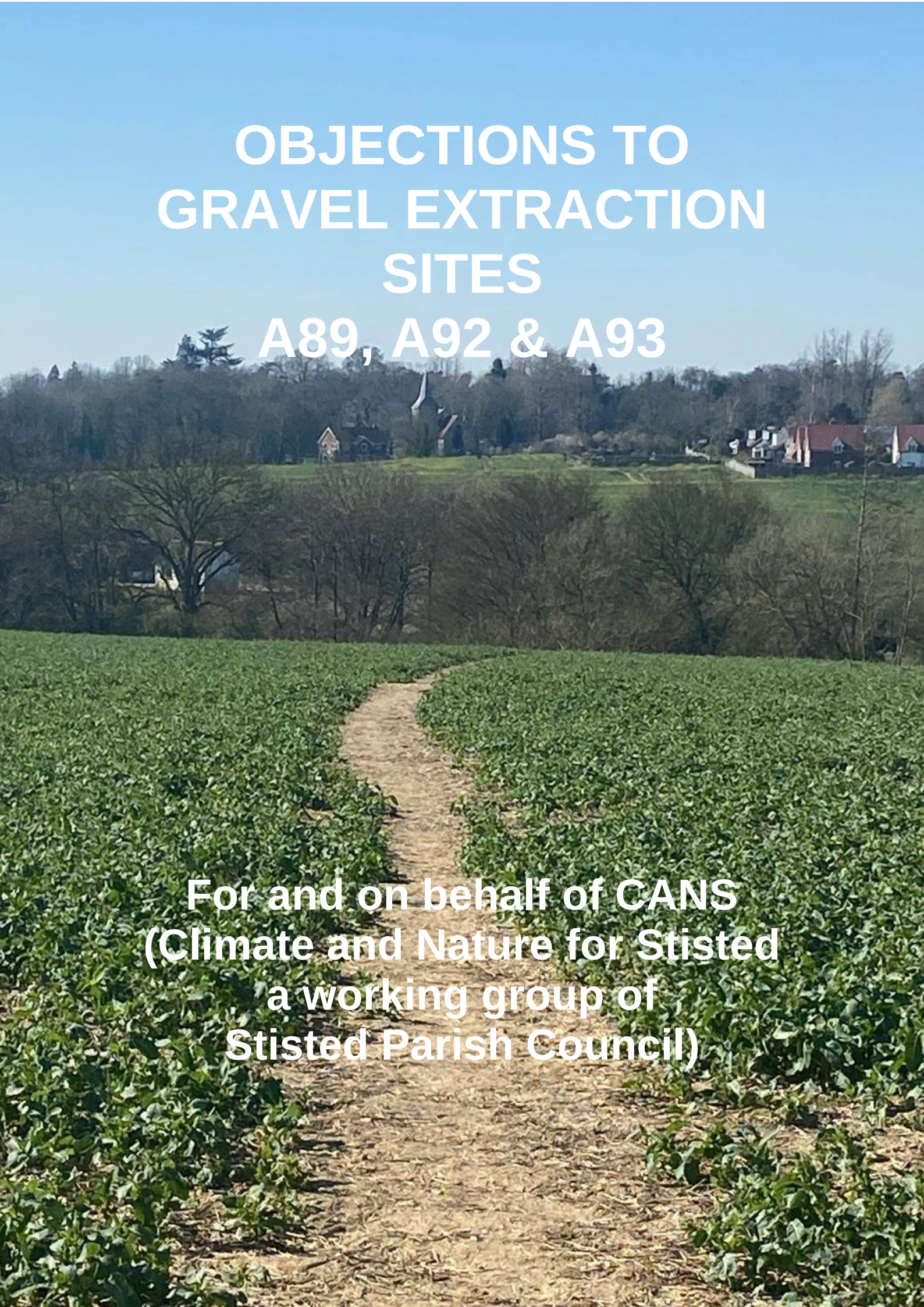

OBJECTIONS TO GRAVEL EXTRACTION SITES A89, A92 & A93

For and on behalf of CANS
(Climate and Nature for Stisted
a working group of
Stisted Parish Council)

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OBJECTIONS TO GRAVEL SITES A89, A92 & A93

1.0 Introduction to Stisted and CANS (Climate and Nature for Stisted)

Located North East of Braintree, Stisted is populated by around 600 people and has a village school, post office, village hall, allotments and is home to many small businesses. This is a real community with a good mix of both young families and more mature residents.

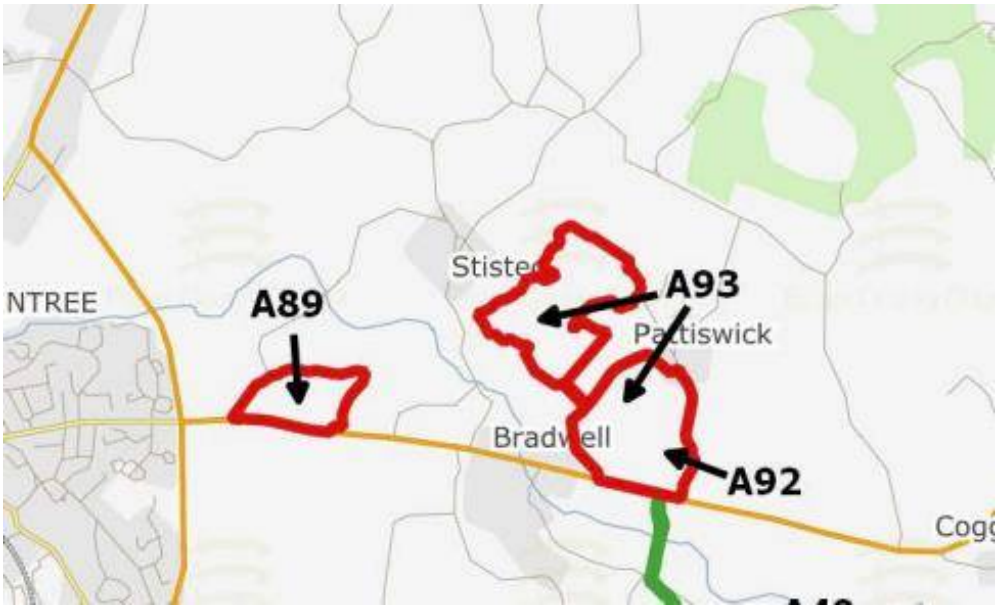
CANS is a group, set up by local people, with the aim of building a thriving, sustainability focused community with a reduced carbon footprint, we are a recognised working party of Stisted Parish Council and are represented by Councillor Mark Hughes.

Our aims are to support biodiversity and carbon reduction in the areas of nature, transport, energy conservation, waste management, planning, construction and legalisation. We aim to improve community engagement and wellbeing.

2.0 Summary and Aims

CANS are objecting to the proposals for gravel extraction sites A89, A92 and A93.

Candidate Site Reference	Candidate Site Name	District	Existing use Site	Area (ha))	Potential Yield (million tonnes)
A89	Covenbrooke Hall Farm	Braintree	Agricultural	29.53	2.45
A92	Land at Pattiswick Hall Farm small site	Braintree	Agricultural	65.45	3.4
A93	Land at Pattiswick Hall Farm Full Site	Braintree	Agricultural	130.74	8.2



Following on from the public consultation event, Talking About Nature, which was held in May 2023, CANS are developing the Plan for Nature which focuses on nine specific goals. This plan has the overarching goal of conserving and enhancing the natural environment, promoting biodiversity, and fostering sustainable land use practices within the village and its surrounding areas. The specific aims and objectives of the plan are outlined below, alongside the possible negative effects of the proposed gravel pits on these aims and objectives:

2.1 Aim - Biodiversity Conservation: To protect and enhance the biodiversity of Stisted by conserving native species, restoring habitats, and preventing the spread of invasive species.

Possible negative impact of proposed Gravel Pits

a. Habitat Destruction: Gravel extraction activities involve the removal of vegetation and disruption of natural habitats, leading to habitat destruction and fragmentation. Loss of habitat reduces the availability of suitable habitat for native species, diminishing their populations and biodiversity in the area.

b. Loss of Native Species: The destruction of habitats due to gravel extraction can directly harm native species by displacing them from their natural environment or causing physical harm. Species reliant on the affected habitats may face increased competition for limited resources or may be unable to find suitable alternative habitats, leading to declines in their populations.

c. Disruption of Ecosystem Processes: Gravel extraction can disrupt ecosystem processes such as nutrient cycling, water filtration, and pollination, which are essential for maintaining biodiversity and ecosystem function. Disruption of these processes can have

cascading effects on native species and their habitats, leading to further declines in biodiversity.
d. Introduction of Invasive Species: Gravel extraction activities may create pathways for the introduction and spread of invasive species into the area. Invasive species can outcompete native flora and fauna, disrupt ecosystem balance, and degrade habitat quality, posing significant threats to native biodiversity.
e. Barriers to Restoration: The presence of gravel extraction pits can act as barriers to habitat restoration efforts aimed at enhancing biodiversity and conserving native species. Restoration activities may be impeded by the physical presence of extraction pits or by the need to mitigate the environmental impacts associated with extraction operations, limiting the effectiveness of conservation measures in the area.

2.2 Aim - Climate Resilience: To increase the village's resilience to climate change by implementing nature-based solutions, such as tree planting and wetland restoration, to mitigate the impacts of extreme weather events.

Possible negative impact of proposed Gravel Pits
a. Loss of Carbon Sink: Gravel extraction involves the removal of vegetation and topsoil, which act as carbon sinks by absorbing and storing carbon dioxide from the atmosphere. Clearing land for extraction pits reduces the area available for carbon sequestration, contributing to the loss of natural carbon storage and reducing the parish's capacity to mitigate climate change.
b. Release of Greenhouse Gas Emissions: The excavation, processing, and transportation of gravel generate greenhouse gas emissions, primarily from diesel-powered machinery and vehicles used in extraction operations. These emissions contribute to climate change by releasing carbon dioxide and other pollutants into the atmosphere, exacerbating global warming and its associated impacts on climate resilience.
c. Habitat Destruction and Fragmentation: The establishment of gravel extraction pits can result in the destruction and fragmentation of natural habitats, including woodlands, grasslands, and wetlands, which provide critical ecosystem services and support biodiversity. Loss of habitat reduces the resilience of ecosystems to climate change impacts, such as extreme weather events, habitat degradation, and species loss.
d. Water Pollution and Runoff: Gravel extraction activities may lead to the contamination of water sources through sedimentation, erosion, and chemical runoff from mining operations. Pollution of rivers, streams, and groundwater diminishes water quality and compromises the availability of clean water for drinking, irrigation, and aquatic habitats, undermining the resilience of ecosystems and communities to climate-related water stress and pollution risks.
e. Land Degradation and Soil Erosion: The excavation and disturbance of land for gravel extraction can result in soil erosion, compaction, and degradation, leading to loss of soil fertility, reduced agricultural productivity, and increased vulnerability to erosion and landslides. Land degradation undermines the resilience of ecosystems and agricultural systems to climate variability and extreme weather events, exacerbating soil erosion, desertification, and food insecurity.

f. Community Disruption and Vulnerability: The establishment of gravel extraction pits may disrupt local communities and livelihoods by displacing residents, disrupting social networks, and altering land use patterns. Displacement and disruption increase the vulnerability of communities to climate change impacts, such as loss of housing, livelihoods, and access to essential services, exacerbating social inequalities and disparities in climate resilience.

2.3. Aim - Community Engagement: To actively engage the local community, including residents, schools, farms and businesses, in conservation efforts and environmental education programs.

Possible negative impact of proposed gravel pits

a. Loss of Community Spaces: Gravel extraction pits may occupy land that could otherwise be used for community activities, such as outdoor recreation, nature walks, and environmental education programs. The loss of accessible green spaces limits opportunities for residents to connect with nature and participate in conservation initiatives.

b. Disruption of Wildlife Habitats: Gravel extraction activities disrupt natural habitats and wildlife populations, diminishing opportunities for community members to observe and learn about local flora and fauna. Decreased biodiversity and habitat fragmentation make it more challenging to engage the community in conservation efforts aimed at protecting and restoring native species and ecosystems.

c. Noise and Visual Disturbance: The operation of gravel extraction pits generates noise, dust, and visual disturbances that may detract from the appeal of outdoor learning environments and community gathering spaces. Loud machinery, heavy traffic, and industrial infrastructure can disrupt educational activities, reduce the effectiveness of environmental education programs, and deter community participation in outdoor events and workshops.

d. Air and Water Pollution Risks: Gravel extraction activities pose risks of air and water pollution through emissions of dust, particulate matter, and sediment runoff from mining operations. Pollution concerns may discourage community members, particularly schools, farms, and businesses, from participating in outdoor activities and environmental education programs due to health and safety considerations.

e. Loss of Agricultural Land: Gravel extraction pits may encroach upon agricultural land, displacing farms and disrupting local food production systems. The loss of farmland diminishes opportunities for community members to engage in sustainable agriculture practices, learn about food production, and support local farming initiatives as part of conservation and environmental education efforts.

f. Economic Disruption: The establishment of gravel extraction pits may disrupt local businesses and economic activities dependent on tourism, outdoor recreation, and environmental education. Negative perceptions of the environmental impact of extraction activities can deter visitors and investors, reducing opportunities for

community engagement and economic growth associated with conservation and sustainability initiatives.

2.4. Aim - Sustainable Land Use: To encourage and support sustainable land use practices that minimise habitat fragmentation, reduce pollution, and promote responsible agriculture.

Possible negative impact of proposed Gravel Pits

a. Habitat Fragmentation: Gravel extraction pits disrupt natural habitats and ecosystems, leading to habitat fragmentation and loss of biodiversity. Fragmentation impedes the movement of wildlife populations, reduces genetic diversity, and diminishes ecosystem resilience to environmental stressors. Sustainable land use practices aim to minimise habitat fragmentation by preserving contiguous habitat corridors, restoring degraded landscapes, and protecting key biodiversity hotspots.

b. Pollution Risks: Gravel extraction activities pose risks of air, water, and soil pollution through emissions of dust, particulate matter, and chemical runoff from mining operations. Pollution harms native flora and fauna, degrades water quality, and compromises soil fertility, undermining the ecological integrity of surrounding ecosystems. Sustainable land use practices prioritise pollution prevention and mitigation measures, such as implementing erosion control measures, adopting low-impact mining techniques, and implementing wastewater treatment systems to minimise pollution risks.

c. Loss of Agricultural Land: Gravel extraction pits may encroach upon agricultural land, displacing farms and reducing the availability of arable land for responsible agriculture practices. Loss of agricultural land diminishes opportunities for sustainable food production, local food sovereignty, and agroecological practices that promote soil health, biodiversity conservation, and carbon sequestration. Sustainable land use practices aim to preserve and enhance agricultural landscapes through land stewardship, crop diversification, and soil conservation measures that support long-term food security and environmental sustainability.

d. Disruption of Watersheds and Hydrological Systems: Gravel extraction activities disrupt watersheds and hydrological systems, altering natural drainage patterns, increasing sedimentation, and degrading aquatic habitats. Disruption of watersheds impacts water quality, aquatic biodiversity, and ecosystem services such as flood regulation and groundwater recharge. Sustainable land use practices focus on watershed management strategies, such as riparian buffer zones, wetland restoration, and stormwater management techniques, to safeguard water resources and enhance ecosystem resilience to climate change.

e. Economic Impacts: The establishment of gravel extraction pits may have negative economic impacts on local communities dependent on sustainable land-based activities, such as agriculture, forestry, and ecotourism. Displacement of farms, loss of agricultural productivity, and degradation of natural landscapes diminish economic opportunities and livelihoods associated with responsible land use practices. Sustainable land use practices support diversified and resilient local economies by promoting sustainable livelihoods, supporting small-scale producers, and fostering value-added industries that prioritise environmental stewardship and social equity.

2.5. Water Quality: To improve and protect the quality of local water bodies, such as rivers and streams, through pollution reduction measures and riparian zone restoration.


Possible negative impact of proposed Gravel Pits

a. Sedimentation and Erosion: Gravel extraction activities disturb soil and sediment, increasing the risk of erosion and sedimentation in nearby water bodies. Sediment runoff from mining operations can degrade water quality, impair aquatic habitats, and smother aquatic vegetation, negatively impacting the health and biodiversity of rivers and streams. Riparian zone restoration efforts to stabilise banks, prevent erosion, and filter sediment may be compromised by the increased sediment load from extraction activities.

b. Chemical Contamination: Gravel extraction activities may introduce pollutants such as heavy metals, hydrocarbons, and chemicals used in mining operations into local water bodies through surface runoff, leaching, and accidental spills. Chemical contamination poses risks to aquatic organisms, including fish, invertebrates, and amphibians, and may impair water quality for drinking, recreation, and irrigation purposes. Pollution reduction measures, such as riparian buffers and vegetated swales, may be less effective in mitigating chemical contamination if pollutants are introduced directly into water bodies.

c. Habitat Degradation: Gravel extraction pits alter the natural landscape and hydrology of riparian areas, disrupting habitat connectivity and ecological processes critical for maintaining healthy aquatic ecosystems. Loss of riparian vegetation, wetlands, and streamside habitat reduces habitat complexity, biodiversity, and resilience to environmental stressors, impairing the ability of rivers and streams to support diverse aquatic communities and provide essential ecosystem services.

d. Water Quantity and Flow Regulation: Gravel extraction activities may alter the flow regime and hydrological dynamics of local water bodies, affecting water quantity, timing of flows, and streamflow patterns. Changes in water quantity and flow regulation can impact aquatic habitats, riparian vegetation, and downstream ecosystems dependent on reliable water sources. Riparian zone restoration efforts to enhance flow regulation and water retention capacity may be compromised by alterations to stream channels and groundwater recharge processes resulting from extraction activities.

e. Regulatory Compliance and Enforcement: Gravel extraction pits may pose challenges for regulatory compliance and enforcement of pollution reduction measures and riparian zone restoration requirements. Inadequate monitoring, enforcement, and oversight of extraction activities may result in non-compliance with environmental regulations and failure to address negative impacts on water quality and riparian habitats. Insufficient resources and capacity for regulatory agencies to monitor and enforce compliance with pollution reduction measures and restoration requirements may undermine efforts to improve and protect the quality of local water bodies.

2.6. Aim - Habitat Restoration: To restore and enhance damaged or degraded natural habitats within Stisted and its surroundings, including woodlands, wetlands, meadows, and watercourses.

Possible negative impact of proposed Gravel Pits

a. Habitat Destruction: Gravel extraction activities involve the removal of vegetation and topsoil, which can result in the destruction of natural habitats, including woodlands, wetlands, and meadows. Habitat destruction reduces the availability of suitable habitat for native flora and fauna, impeding efforts to restore and enhance biodiversity in the area.

b. Fragmentation of Habitat: Gravel extraction pits can fragment contiguous habitat corridors and disrupt ecological connectivity between natural habitats, isolating wildlife populations and reducing genetic diversity. Habitat fragmentation hinders the ability to restore and enhance damaged or degraded habitats by impeding the movement of species and limiting opportunities for ecosystem recovery and regeneration.

c. Disruption of Hydrological Systems: Gravel extraction activities may alter the hydrology of the landscape, impacting watercourses, wetlands, and riparian habitats. Changes in water flow, groundwater recharge, and surface runoff resulting from extraction activities can degrade aquatic habitats, reduce water quality, and impair the functioning of wetland ecosystems, making it more challenging to restore and enhance damaged or degraded habitats.

d. Soil Disturbance and Erosion: Gravel extraction operations disturb soil and sediment, increasing the risk of erosion, sedimentation, and loss of soil fertility in surrounding habitats. Soil disturbance and erosion can degrade terrestrial and aquatic habitats, reduce plant productivity, and exacerbate nutrient pollution in watercourses, hindering efforts to restore and enhance damaged or degraded habitats.

e. Introduction of Invasive Species: Gravel extraction pits may provide opportunities for the introduction and spread of invasive plant species, which can outcompete native vegetation and disrupt ecosystem processes. Invasive species colonisation can inhibit efforts to restore and enhance damaged or degraded habitats by altering species composition, reducing habitat suitability, and impeding the establishment of native plant communities.

f. Loss of Ecological Services: Gravel extraction activities may diminish the provision of ecological services, such as carbon sequestration, flood regulation, and pollination, provided by natural habitats within Stisted and its surroundings. Loss of ecological services undermines the resilience of ecosystems and communities to environmental stressors, reducing their capacity to recover and adapt to changing conditions

2.7. Aim - Wildlife Corridors: To create and maintain wildlife corridors and green spaces that allow for the movement of wildlife between different habitats, ensuring genetic diversity and population resilience.


Possible negative impact of proposed Gravel Pits

a. Habitat Fragmentation: Gravel extraction activities disrupt contiguous habitat corridors and natural connectivity between different habitats, fragmenting the landscape and impeding the movement of wildlife species. Fragmentation isolates populations, restricts gene flow, and reduces genetic diversity within wildlife populations, making them more vulnerable to environmental stressors and reducing their resilience to habitat loss and degradation.

b. Loss of Habitat: Gravel extraction involves the removal of vegetation and topsoil, resulting in the loss of critical habitat for wildlife species, including nesting sites, foraging areas, and sheltering habitat. Loss of habitat reduces the availability of suitable habitat for wildlife, limiting opportunities for movement and dispersal between habitats, and increasing competition for limited resources among wildlife populations.

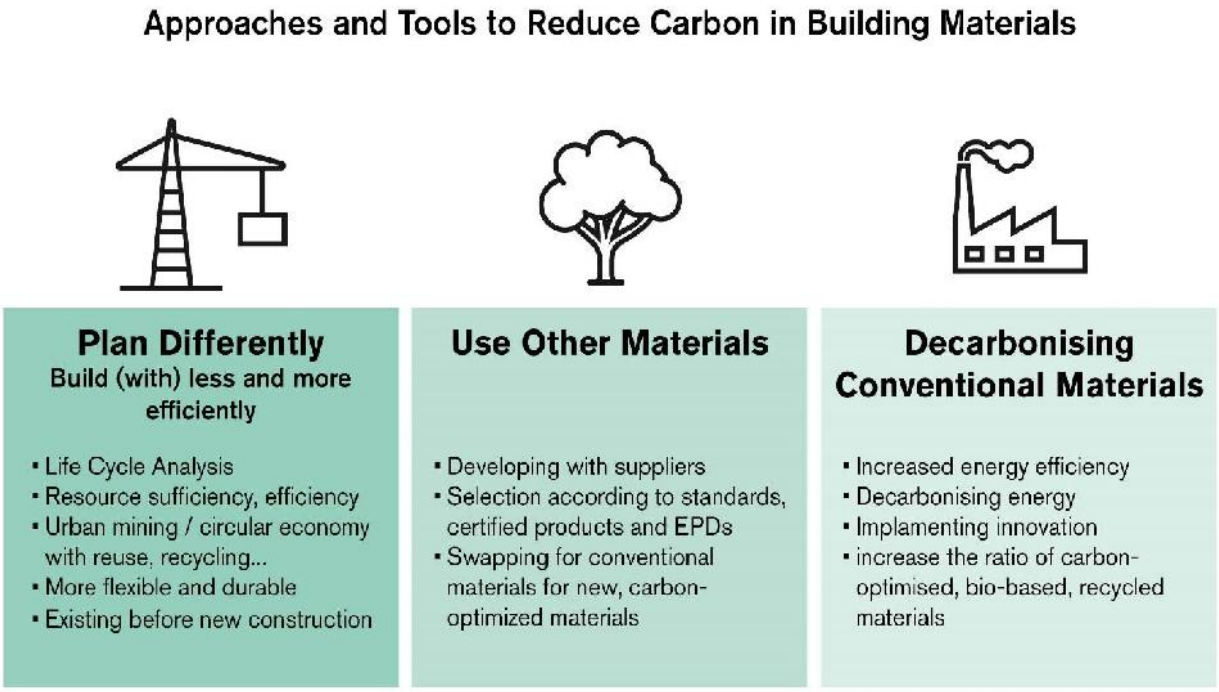
c. Barriers to Movement: Gravel extraction pits and associated infrastructure, such as roads, fences, and barriers, create physical obstacles that inhibit the movement of wildlife between different habitats. Barriers to movement restrict the ability of wildlife to access essential resources, such as food, water, and mates, and limit opportunities for dispersal, colonization, and adaptation to changing environmental conditions.

d. Increased Mortality Risk: Gravel extraction activities and associated traffic increase the risk of wildlife mortality through collisions with vehicles, entrapment in extraction pits, and disturbance from noise and vibration. Increased mortality rates reduce population sizes, disrupt population dynamics, and compromise the long-term viability of wildlife populations, particularly for species with limited dispersal ability or specialised habitat requirements.

e. Displacement and Disruption: Gravel extraction activities may displace wildlife from their natural habitats and disrupt ecological processes critical for maintaining healthy populations and functioning ecosystems. Displacement and disruption increase stress levels, reduce reproductive success, and impair habitat suitability for wildlife species, making them more susceptible to predation, disease, and other threats.

f. Loss of Ecosystem Services: Gravel extraction pits and associated infrastructure replace natural habitats and green spaces that provide essential ecosystem services, such as pollination, pest control, and nutrient cycling, necessary for the health and functioning of ecosystems. Loss of ecosystem services undermines the resilience of wildlife populations and ecosystems to environmental change, reducing their capacity to adapt and recover from disturbances.

2.8. Aim - Sustainable Development Criteria: To establish criteria for sustainable development that emphasise eco-friendly construction practices, energy efficiency, and the use of renewable energy sources.



Possible negative impact of proposed Gravel Pits

a. High Carbon Emissions: Gravel extraction activities, coupled with the transportation and construction processes involved in road building, result in high carbon emissions. The use of heavy machinery and diesel-powered vehicles in extraction and transportation contributes to greenhouse gas emissions, undermining efforts to promote eco-friendly construction practices and reduce carbon footprints in future development projects.

b. Increased HGV Use: Gravel extraction pits require the use of heavy goods vehicles (HGVs) to transport materials to and from the construction site. The influx of HGV traffic on local roads increases congestion, noise pollution, and air pollution, posing risks to public health and safety. High HGV use restricts the ability to establish criteria for future sustainable development that Prioritise energy efficiency and Minimise the environmental impact of transportation.

c. Resource Depletion: Gravel extraction depletes natural resources, such as aggregates and minerals, which are essential for road building and construction projects. The accessibility of a new gravel pit and the aggregate it could produce reduces the opportunities to incorporate eco-friendly construction practices, such as using recycled materials and low-impact building techniques, in future development projects.

d. Land Use Conflicts: Gravel extraction pits may conflict with other land uses and development priorities, such as renewable energy projects, green infrastructure initiatives, and conservation efforts aimed at protecting sensitive habitats and biodiversity hotspots. Conflicts over land use allocation and resource allocation limit the ability to establish criteria for future sustainable development that address competing interests, social equity, and environmental justice in the local area.

2.9. Aim - Public Access: To provide safe and enjoyable opportunities for the public including residents of Stisted and the wider population to access and enjoy nature, including the creation of nature trails, birdwatching sites, and recreational areas. During Covid lockdown, residents of Braintree enjoyed walks in Stisted as it was local and accessible on foot, after Covid, this has continued and Stisted regularly welcomes visitors and walkers who enjoy the beautiful views and easily accessed unspoilt countryside walks.

Possible negative impact of proposed Gravel Pits

a. Loss of Green Spaces: Gravel extraction pits require the clearance of land, resulting in the loss of green spaces and natural areas that could otherwise be used for recreational purposes. The conversion of natural habitats into industrial sites diminishes the availability of open spaces for nature-based activities, such as hiking, picnicking, and wildlife observation.

b. Disruption of Wildlife Habitats: Gravel extraction activities disrupt natural habitats and wildlife populations, reducing opportunities for public enjoyment of nature and wildlife viewing. Disturbance from extraction operations may drive wildlife away from the area or alter their behaviour, making it more difficult for the public to observe and appreciate local flora and fauna.

c. Safety Concerns: Gravel extraction pits pose safety risks to the public due to the presence of heavy machinery, uneven terrain, and potential hazards associated with mining operations. Public access to extraction sites may be restricted or prohibited for safety reasons, limiting opportunities for outdoor recreation and nature-based activities in the area.

d. Noise and Visual Pollution: Gravel extraction activities generate noise and visual pollution that detract from the natural beauty and tranquillity of the surrounding landscape. Loud machinery, truck traffic, and industrial infrastructure may disrupt the peace and quiet of natural areas, making them less enjoyable for recreational use and nature appreciation.

e. Limited Accessibility: Gravel extraction pits may be inaccessible or difficult to reach for members of the public, particularly those with mobility challenges or disabilities. Lack of accessible trails, amenities, and facilities in and around extraction sites restricts opportunities for people of all ages and abilities to access and enjoy nature in the area.

f. Negative Perception: The presence of gravel extraction pits in Stisted Parish may create a negative perception of the area as an industrial zone rather than a natural or recreational destination. Negative perceptions may deter visitors and tourists from exploring the area, reducing opportunities for public engagement with nature and outdoor recreation in the community.

3. 0 Background

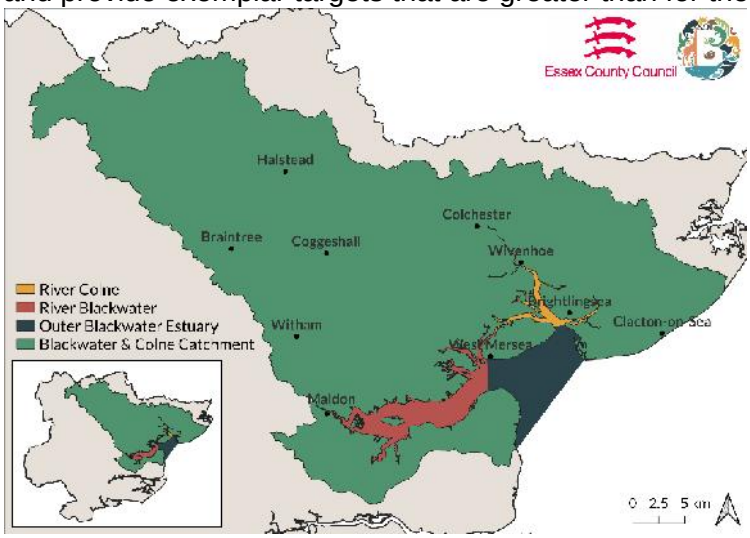
3.1 The Essex Climate Action Plan & Climate Focus Area

The Essex Climate Action Commission is an independent body set up by Essex County Council to advise on how best to tackle the climate challenge and become a net zero emissions county. Essex Climate Action Commission's (ECAC) Net Zero: Making Essex Carbon Neutral report.

Essex County Council's Climate Focus Area (CFA) was developed as one of the recommendations of the ECAC report. The CFA is located in the Blackwater and Colne river catchment areas and is a pilot project aimed at accelerating and showcasing best practice in sustainable land stewardship in collaboration with local councils, charities, residents, landowners and businesses.

The CFA aims to accelerate action and provide exemplar targets that are greater than for the wider Essex County. These areas will provide more focus for change – Stisted is within the CFA. There targets are:

- Adopting Sustainable Land Stewardship Practices: 100% by 2030 and
- Natural Green Infrastructure: 30% by 2030.



These are ambitious targets that the residents of Stisted are keen to work towards.

3.2 Local Nature Plans

Parishes, towns, district, city and borough councils are also playing their part in building a cleaner, low-carbon future for Essex, with one of the recommendations of the Commission being that town and parish councils develop local nature and biodiversity plans.

Essex County Council (ECC) successfully applied to be one of five funded 'Project Group Areas' for the national Local Climate Engagement (LCE) Programme. Subsequently in Essex, three local parishes were chosen to test out further community engagement to support the development of a specific nature action plan locally.

Stisted Parish Council and CANS (Climate and Nature for Stisted) were approached to see if they would be willing to take part in the LCE project. They had demonstrated interest in developing their own nature planning and were in the Essex Climate Focus Area.

3.3 Local Climate Engagement (LCE) national programme

LCE is a national programme to enable local authorities and partnerships to plan, commission and deliver high quality public engagement in their climate decision-making, in a way that benefits both them and their local population.

3.4 Talking About Nature

a. 'Talking about Nature' was a series of three community workshops developed to improve community engagement on climate issues in Essex in May 2023. They supported three town and parish councils to create Local Nature Plans, informed by the views and priorities of local residents. The overarching question was:

b. What should your town council prioritise in their Nature Plan in order to improve and protect nature, wildlife and green spaces in your area?

The priorities created by participants in the workshops are being used by the local town and parish councils to create Local Nature Plans, currently in progress and due to be completed

in 2024. At the end of the workshop – participants voted on the ideas and issues that were most important to them and these will feature as key themes within those Nature Plans.

c. Concerns highlighted at Talking About Nature

Participants in Stisted are concerned about the long-term impact on nature, for now and for future generations, in particular they are concerned about the impact of development, which can feel beyond their influence. Comments reflected a fear of loss of habitat, diversity and green space.

d. Strategic impact

For ECC, the workshops were a 'showcase' within the CFA that helps meet their ambitions to have deeper community engagement in climate planning for local biodiversity and nature in Essex.

The workshops have:

- involved a wider group of residents than usually get involved in nature planning
- improved understanding for councils about what is important to local residents
- brought a deeper understanding of the 'lived experience' of people across communities to enrich what is known already
- helped the local town or parish council develop a deeper understanding of issues and barriers facing some residents
- helped identify priorities, opportunities and ideas to improve and protect nature, wildlife and green spaces in the parish or town

The intention was for the local councils to use outputs from the workshops to help inform or create a Local Nature Plan which will help determine how the natural environment in the area is looked after in the future. It would describe how the parish or town councils can best use its influence, funds and resources to improve nature and green infrastructure locally.

4.0 Main Report – CANS Objections to A89, A92 and A93

This report will cover the following areas and address many of the criteria highlighted on the traffic light scheme outlined in the Candidate Sites Assessment.

4.1 Gravel extraction – Are there more sustainable alternatives to creating new gravel pits?

a. **Recycled Concrete Aggregate (RCA):** Crushed concrete from demolished structures can be recycled and used as a base or sub-base material for road construction. RCA reduces the demand for virgin aggregates, diverts construction waste from landfills, and conserves natural resources.
b. **Crushed Rock Fines:** Crushed rock fines, also known as quarry dust or crusher fines, can be used as a sustainable alternative to gravel for road surfacing and stabilisation. This byproduct of quarry operations is often used as a base material in road construction and helps improve drainage and compaction.
c. **Geosynthetics:** Geosynthetic materials, such as geotextiles, geogrids, and geocells, offer sustainable solutions for soil stabilisation, erosion control, and pavement reinforcement in road construction. These synthetic materials provide cost-effective and environmentally friendly alternatives to traditional construction methods.

Use of Recycled Aggregates: In order to align with the priorities outlined for the Climate Focus Area we should prioritise the use of recycled aggregates, such as crushed concrete or reclaimed asphalt pavement (RAP), sourced from demolition waste or construction materials. These recycled materials can serve as substitutes for natural gravel in various construction applications, reducing the need for new extraction and minimising environmental impact.

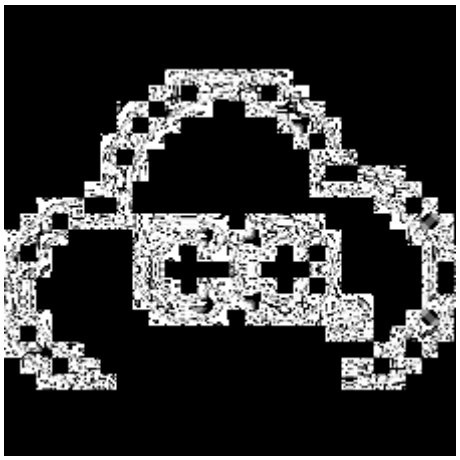
4.2 Carbon Footprint – How will the introduction of three gravel extraction sites negatively impact on our target for net zero emissions?

CANS and Stisted villagers are keen to reduce the impact of our carbon footprint. This is difficult as we have to rely on cars for the majority of travel as there is no public transport available. HGV lorries, in small lanes with the possibility of up to 800,00 traffic movements, would massively impact the carbon released into the atmosphere in our village.

Calculation Estimate

- Distance per journey: 10 miles each way, so 20 miles round trip.
- Total distance travelled by all lorries:
  700,000 movements × 20 miles = 14,000,000 miles
- Fuel consumption per mile: This depends on the specific vehicle and load, but assuming an average of 8 miles per gallon (mpg) for HGVs carrying heavy loads.
- Total fuel consumption: 14,000,000 miles / 8 mpg = 1,750,000 gallons of diesel fuel.
- Total carbon emissions: 1,750,000 gallons × 2.68 kg CO2 per gallon ≈ 4,690,000 kg CO2.
- Converting to tonnes: 4,690,000 kg / 1000 = **4,690 tonnes of CO2 emitted.**

This enormous amount of damaging carbon emissions are in direct opposition to Essex County Council and the CFA's climate specific goals.



4.3 Landscape and Visual Sensitivity – The importance of the village and how the proposed pits could damage our beautiful landscape.

Stisted is a rural historic settlement which has changed very little in the past two hundred years. It is situated within a conservation area and has an elevated position and attractive open views over the surrounding countryside. The village has gently sloping fields leading down to the valley and the river Blackwater; more intimate and beautiful enclosed views can be found within the valley and woodland areas.

The landscape is relatively undeveloped and reflects 18th and 19th century agricultural practices. Ancient woodlands and hedgerow, scattered copses and green open meadows are an integral part of Stisteds' landscape.

4.3.1 Footpaths - History

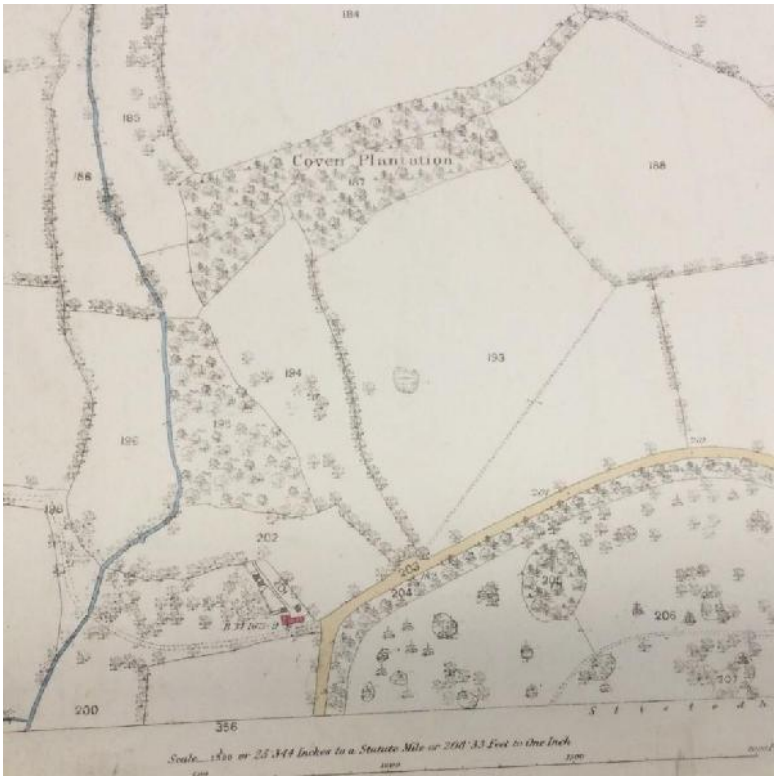
Footpaths are part of the landscape tapestry of Stisted, maps of old show their presence over the centuries; they are inextricably entwined in the social and economic history of our landscape. As Thomas Wright says in 'The Picturesque Beauties of Great Britain' where he reports of the manor of Stisted as" one of the places the traveller remembers for the charm of its setting, with its cobweb-shaped chimneys, the rookery by the church, rolling meadows towards Roman Stane Street (now the A120), and the horizon of the trees lined against the sky".

The ‘exquisite Ordnance Survey of 1875’ as prepared by Captain HG Pelleau shows individual trees, hedgerows and footpaths - hedgerows are shown on this map as part of the peasant landscape park as referenced in ‘The History of the Countryside’ by Oliver Rackham - a study of Essex countryside environments. The fields are bordered by ancient hedgerows and individual trees which have been pollarded over the years.

Some of the hedgerows as shown in Pelleau’s map are long gone; to lose more would be detrimental to the diversity of Stisted’s abundance of species, particularly birds.

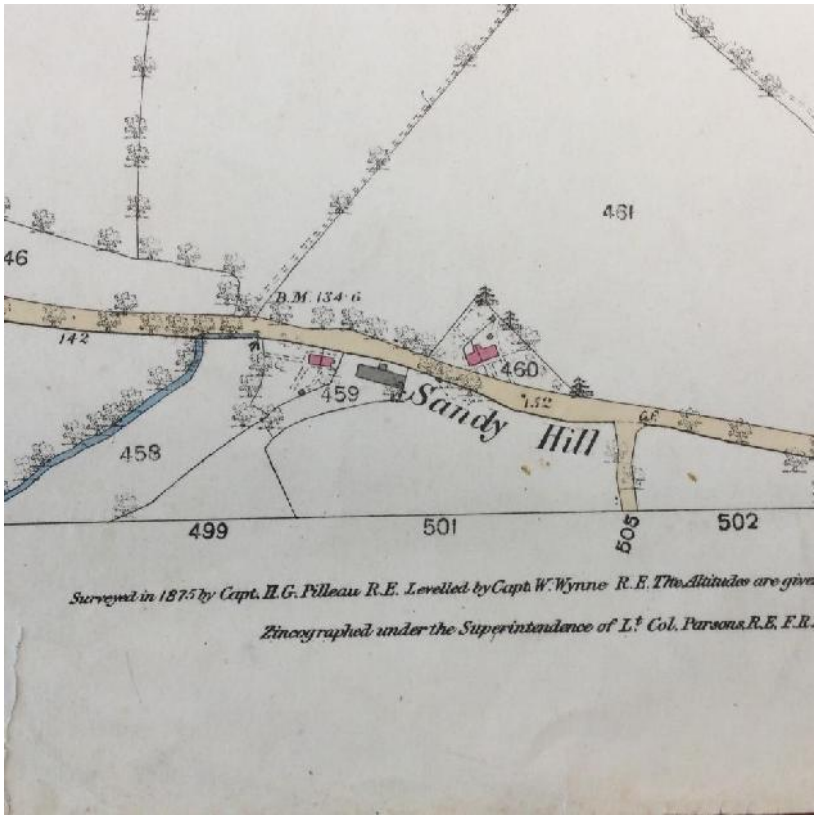
Many of the ancient rights of way – such as those along A89, A92 and A93 - still exist and are footpaths and bridleways which give access to Stane Street (now A120).

Several of the rights of way are interconnected and form a network across the proposed sites, indicating the historical use by travellers back as far as the 13th century, accessing these routes to travel between Stisted, Coggeshall and further afield to other settlements.



Going even further back in history, these public rights of way may be traced to Saxon times and earlier; there are noteworthy records of monks from Coggeshall Abbey travelling - as detailed by Ralph in 1206

(referenced in the manuscript of ‘The Vision of Thurkill’ by Eileen Gardiner 1993 held in the British Library).



The proposed mineral extraction sites will severely restrict, or even completely remove, existing ancient and current footpaths and bridleways – this is in particular relation to footpaths 21,22, 45 and other public rights of way cross A89, 92, 93 – in particular the Pattiswick Hall site A93.

View taken walking across to Covenbrook.

4.3.2 Loss of amenities

Further loss and fragmentation of the surrounding landscapes of Stisted will negatively impact on walking groups, families and horse riders, and will also impact wildlife habitation corridors. There is an further obvious risk of loss of archaeological features as listed in the Stisted Neighbourhood Plan (Liz Lake Associates – Landscape Architects) 'we need to seek to protect the river valley landscape and surrounding areas from further fragmentation by resisting development, particularly for those areas containing archaeological features'.

The impact of the proposed gravel pits of A89, A92, A93 will negatively impact the priority habitats held within the landscapes of all three sites. There are several ancient woodlands in close proximity to all three sites and these are of historical and archaeological importance as highlighted above, as well as forming part of the unique character landscape that comprises much of the rolling valleys and hills of A89,92 and A93. Highlighting these sites, the rural landscapes as approached travelling along any of the village lanes of Kings Lane, Water Lane and Doghouse all offer bucolic views of the hills rising away from the river valley.

Further along Back Lane looking east towards Pattiswick Farm (A92/93), the traveller is presented with a similar ancient unchanged panorama looking across the valley and down to the stream – a noteworthy aspect of this landscape in that it provides a vital wildlife corridor linking the water meadows along the Blackwater river at the bottom of Stisted to Monkswood some 1.5 miles away, as well as the SSSI sites of Belchers and Broadfield Woods.

The elevated aspect of all three sites is significantly high (as highlighted in the topographical map – 'Stisted Neighbourhood Plan' Landscape assessment study 2020, Liz Lakes Landscape Architect p22) such that no mitigation or screening would be sufficient to hide the irreparable loss of character landscape that mineral extraction would create in relation to the significant conservation areas historical sites of Stisted Church, Village and the surrounding areas of Pattiswick and Bradwell. The higher plateau elevations of all three site A89,92&93 would likely involve significant alterations to the landscape, hydrology and ecosystems. Greater engineering measures to address issues such as slope stability, hydrological and erosion control would have a further detrimental impact on any attempted mitigation. No 'replacement of habitat or reconstruction of landscape' will re-create the ancient and unchanged unique vistas these approaches offer. The proposed extraction at any of the three sites of A89, 92 & 93 will cause irreplaceable loss of these ancient and unique character landscapes.

See Appendix 1

4.3.3 Essex County Council Replacement Mineral Local Plan Review 2025-2040 Objections to A89

Essex County Council Replacement Mineral Local Plan Review 2025-2040 **OBJECTION - A89**	
Covenbrooke Hall Farm	**Visual landscape Direct Landscape Impact**
Site bridges two important landscape areas • Well-hedged medium to large fields • Small woods and copses • Internal ancient hedgerow with priority habitat on the eastern boundary – which would be removed. • Field maples and a notable oak tree would be removed. • Southerly aspect of A89 is within 300m of grazing water marsh priority landscape.	• Visual loss of character landscape and scenery through loss of ancient hedgerows • Visual loss of character through destruction of vital wildlife corridors, loss and/or significant depletion of sighting of wildlife and birds. • Visually sensitive character landscape loss of broadleaf deciduous plantation and field maples. • Removal of woodland would cause hydrological changes to the adjacent grazing water marsh meadows (a priority habitat – extraction site proposed to be within 300m of this at-risk site), visual loss of the many species of birds that use this area as part of their migratory pattern, will also affect the many species of bats and owls that reside in the adjacent woodland. • Historic Habitat networks would be destroyed.
Recorded evidence by Essex Historical Environment record of historic boundaries, achieved through aerial photography of historic field boundaries and historic quarrying. • Palaeolithic archaeological remains evident. • Evidence of Pleistocene faunal remains. • Cold war structure	Unique character landscape and visual histories of these sites would be irretrievably lost to future generations.
Footpath 111_42, 111_21 and 111_22 run either directly through or immediately adjacent to A89	Direct loss of footpath running through A89. Re-route alternatives are limited – would mean the complete loss of public access to the character landscape and vistas these routes currently provide. • Those footpaths adjacent to the proposed extraction site would see greatly reduced pedestrian access, as walkers would not wish to be exposed to the dust, fumes and noise of a gravel pit. This loss of direct access means in turn the loss

	of a visual and character landscape amenity to the communities of Braintree, Stisted, Bradwell and beyond. • It is worth noting that these footpaths were heavily accessed during the COVID pandemic by walkers from all of the above areas. These paths provided an important mental-health and well-being outlet through access to the beautiful visual characteristics of the views of surrounding farmland, together with the known health benefits of the outdoor environment.
Footpath 111_45 looking north up towards A89.	Visually sensitive loss of the character landscape. Hydrological impact on the adjacent priority grazing marsh water meadows, would mean the loss of sighting of birds, bats, owls and other species that regularly visit this area.
Potential rerouting of electricity and power lines	Further detrimental visual effect of re-routed powerlines on landscape views from footpaths
A89 is at a higher elevation than Stisted Village and surrounding areas – the proposed site would mean the irreplaceable loss of ancient character landscapes views in relation to significant conservation areas historical sites such as Stisted Church and village.	A89 is topographically elevated above Stisted village. The site would be in full view (and equally have a negative impact) on the panoramic character landscape views from Stisted village and Church – a conservation area listed in the Doomsday book, Braintree Golf Club – a popular public amenity, and Stisted Duke of Kent Court, a care home housed in a historically important building.
Proximity of A89 to Stisted village and dwellings	Stisted is visually grounded by the surrounding character farmland. The ebb and flow of the visual impact of seasonal changes within these sites is an inherent part of the psyche of our communities.
As a general point, the ‘Landscape and Wildlife designation’ map on p241 does NOT indicate the ancient woodlands and hedgerows that are highlighted within the text of A89 site assessment document, nor does it indicate the priority habitats on the ‘Historic Environment’ map.	

Objections to A92

Essex County Council Replacement Mineral Local Plan Review 2025-2040 **OBJECTION - A92**	
Land at Pattiswick Hall Farm – Small Site	**Visual landscape Direct Landscape Impact**
There are strong panoramic views from the site into the surrounding characteristic farmland	A92 would cause a serious impact on the sensitive character farming landscape, causing a fundamental and significant - and irreversible change – to its character. Plateau elevation of the site is such that any mitigation attempts at screening would be inadequate and would significantly alter the unique visual characteristics of this site.
A92 is within a Sites of Special Scientific Interest (SSSI) impact risk zone, priority habitats surround the site. These are ancient woodlands, hedgerows and ditches, all of which provide a vital wildlife access corridor.	Risk of irreplaceable loss of ancient and significant characteristic views south across the river valley, east towards Holborn Grange, and west toward Stisted Church and the vista of Stisted
A92 would have a serious impact on priority habitats and associated species through the loss of watercourses that feed down to the river.	The irreplaceable view of several ancient oaks would be lost (should not be permitted within the governments' Biodiversity Net Gain metric) • Loss of these ancient networks of footpaths and right of way will have an impact on the priority habitats, hedgerows and wildlife corridors, meaning the visually sensitive loss of both access areas and the animals, birds and other creatures that use them.
Site lays adjacent to a Roman road, aerial photography shows archaeological and cropmark evidence of ancient settlements	Unique character landscape and visual histories of these sites would be irretrievably lost for future generations. Extraction on this site would also mean the loss of ability to understand and appreciate their importance.
Footpaths 67_45 runs directly through A92	Re-siting this footpath will mean the loss of this visually significant amenity. Walking north offers the viewer a strong panoramic view across the entire site.
Footpath 67_19 has direct views across to A92	Walking from Bradwell along this site offers beautiful scenic views to the north across

	the Blackwater valley. Extraction at this site will mean the loss of these ancient and visually significant views.
Footpath 67_46 has direct views across the westerly aspect of A92.	This footpath brings the walker out onto Doghouse Lane and upwards facing towards the historic view of Bradwell, south across the River valley and west towards to Stisted. Ancient trees are within this vista, A92 extraction will mean the permanent and irreplaceable loss of these habitats and their significant characteristics . • Those footpaths adjacent to the proposed extraction site would see greatly reduced pedestrian access, as walkers would not wish to be exposed to the dust, fumes and noise of a gravel pit. This loss of direct access means in turn the loss of a visual and character landscape amenity to the communities of Braintree, Stisted, Bradwell, Coggeshall and beyond. • It is worth noting that these footpaths were heavily accessed during the COVID pandemic by walkers from all of the above areas. These paths provided an important mental-health and well-being outlet through access to the beautiful visual characteristics of the views of surrounding farmland, together with the known health benefits of the outdoor environment.
Two residential buildings are less than 20metres from A92, five are less than 50metres, five commercial buildings plus twenty-one residential and five further farm buildings are less than 250 metres.	This will bring about a serious detrimental impact on Stisted, Pattiswick and Bradwell communities. A92 rises in an elevated position to the north, east and west of the majority of these dwellings/buildings and will severely affect the landscape surrounding these properties.
Proximity of A92 to villages and dwellings	Stisted, Pattiswick and Bradwell are visually grounded by the surrounding character farmland. The ebb and flow of the visual impact of seasonal changes within these sites is an inherent part of the psyche of our communities.
As a general point, the ‘Landscape and Wildlife designation’ map on p255 does NOT indicate the ancient woodlands and hedgerows that are highlighted within the text of A92	

Objections to A93

Essex County Council Replacement Mineral Local Plan Review 2025-2040 **OBJECTION - A93**	
Land at Pattiswick Hall Farm – Full Site	**Visual landscape Direct Landscape Impact**
Strong views are provided by A93, and is possible the highest plateau site, providing expansive views southwards towards Stisted village, with All Saints Church (Grade I). High Plateau top of A93, as highlighted in the topographical map – 'Stisted Neighbourhood Plan' Landscape assessment study 2020 (Liz Lakes Landscape Architect p22).	A93 would cause a serious impact on the sensitive character farming landscape, causing a fundamental, significant - and irreversible change – to its character. • Plateau elevation of the site is such that any mitigation attempts at screening would be inadequate and would significantly alter the significant visual characteristics of this site. • Loss of visually significant farmland characteristic from all approaches – within the footpath systems that run through site A93, and from all surrounding lanes, as well as from the village itself, even to the northern border of the A120. • The elevation of site A93 is such that - given the approach north from the top of Water lane – no degree of screening /tree/mound construction will hide the sight …and would mean the permanent loss of the unique character landscape looking north across the River valley and upwards to the top of the site.
All Saints Church Stisted a prominent feature within this historical and unique landscape, as well as an integral feature of Stisted Conservation area	Looking west from footpath 111_19, All Saints Church has a specific visual relationship with Stisted village, particularly from the elevated position of A93. This visual contribution is of unique significance to this ancient medieval building, mineral extraction from this site would mean the permanent loss of this expansive and significant outlook.
A93 lies within the 'impact risk zone' of SSSI at Belcher's and Broadfield Woods. These are ancient woodlands, the river tributary and ancient hedgerow running through this site provides a vital wildlife corridor to these and other wooded areas such as Monkswood and beyond to Marks Hall estate ancient woodland.	Serious impact on priority habits and associated loss of wildlife corridors and their unique visual characteristics

Ancient trees within the site – specifically an Ancient Oak and two possible ancient/mature oaks. On the northern and western boundaries is a boundary group of mature oak trees	Significant landscape feature, loss of this together with the associated ancient hedgerows and the varied wildlife that access them. • A93 would further cause a deterioration of the immediate natural environment and its integrated character appearance.
'Grassy Piece' is a small, wooded area at the top of A93 and is of great significance. Within this site is thought to be an ancient Marl Pit, and of archaeological import.	Wooded area provides a significant landscape feature looking up the hill from Back Lane and further down into the village. The wood appears to crest the hill when viewed – loss of this existing landscape structure would impact on the surrounding areas characteristics. • This wooded piece and ancient hedgerow also forms part of the wildlife corridor coming up from the water meadows. Loss of this site would also mean the loss of sightings of the numerous wildlife and bird species that frequent this area. • Migratory Grey Lag geese access the field to the lower southerly aspect of A93 and are regularly seen in their hundreds during the winter months. Loss of this feeding ground will impact on both the wildlife that access it, and the unique visual experience they provide. • Loss of the unique aspect of the Marl Pit archaeological feature and visual histories of this site would be irretrievably lost for future generations. Extraction on this site would also mean the loss of ability to understand and appreciate its importance.
Hydrological impact on the stream and the river it feeds. Flooding risk as a result of banking, along with slope stability and erosion risk of possible banking to provide screening of the pit site. There is local knowledge of regular flooding across Water Land before Shelborn Bridge as well as at the ford further north up the lane, sufficient to prevent access.	Grey Lag and other migratory birds frequent this site. • Concerns over the hydrological impact on the southern aspect of A93 with subsequent determinantal effect on the water meadows along the river. Possible irreversible changes to these habitats and the visual impact of those change to the character landscape held therein.

Impact on proximity to numerous Grade II listed properties. Character cottages form an integral part of the village scenery as approaching Stisted along Water Lane.	Irreplaceable loss of the medieval vista characteristics involving these properties. • Water Lane north after Shelborn bridge has several historic old cottages providing significant characteristics to this approach into the village. A93 would rise above and behind these dwellings, permanently altering the visual landscape of this site and associated dwellings.
Multiple footpaths either direct cross A93, run adjacent to or directly overook the proposed site.	Footpath 111_44 has a direct outlook across Back Lane, over the tributary stream valley and across to the hill rising up to the plateau. The height and elevation involved would be too great for sufficient mitigation. The character landscape of this aspect would be irreparably lost. • Footpath 111_12 runs directly through the site and would be lost. • Footpath 111_30 would run adjacent of the northern edge of A93 • These footpaths adjacent to the proposed extraction site would see greatly reduced pedestrian access, as walkers would not wish to be exposed to the dust, fumes and noise of a gravel pit. This loss of direct access means in turn the loss of a visual and character landscape amenity to the communities of Braintree, Stisted, Bradwell, Coggeshall and beyond. • It is worth noting that these footpaths were heavily accessed during the COVID pandemic by walkers from all of the above areas. These paths provided an important mental-health and well-being outlet through access to the beautiful visual characteristics of the views of surrounding farmland, together with the known health benefits of the outdoor environment. • It is worth noting that the footpaths of 111_19 and 111_12 are particularly preferred by local dog walkers; the open views these sites provide means dogs may be safely allowed off-lead with adequate time to spot nearby wildlife. The loss of these wonderful amenities would

	have a significant impact on the well-being of human and canine alike, as well as a loss to the immediate character landscape.
Power lines lie within A93, these would need to be re-sited	Further detrimental visual effect of re-routed powerlines on landscape views from footpaths
One farm building is within A93. Two dwellings and two farm buildings are immediately adjacent to A93 extraction site boundary. Ten dwellings are within 20m, five dwelling are within 50m, and multiple – including a church are within 250m	This will bring about a serious detrimental impact on Stisted, Pattiswick and Bradwell communities. A93 rises in an elevated position to the north and east of the majority of these dwellings/buildings and will severely affect the landscape surrounding these properties, and the setting of these buildings within the landscape
Proximity of A93 to Stisted village boundary and surrounding settlements/dwellings	Stisted, Pattiswick and Bradwell are visually grounded by the surrounding character farmland. The ebb and flow of the visual impact of seasonal changes within these sites is an inherent part of the psyche of our communities.

NB – For ALL footpath codes as detailed above, please refer to 'The Stisted Neighbourhood Plan, Landscape Assessment Study July 2020' Liz Lakes Associates, Landscape Architects p35, Figure 12, Public Rights of Way

See Appendix 5

4.3.4 Trees - Putting a Value on Trees

Background

Trees do more than just capture carbon, they fight the cruel effects of climate change, they can reduce flooding (flood protection estimated to be £6.5 billion in the UK), reduce city temperatures, reduce pollution and keep soil nutrient-rich. It's not just creating new woodland that is important, the UK's precious semi-natural ancient woodlands store a huge quantity of carbon and can continue to accumulate more, even though they could be centuries old. Woods and trees are our allies in the fight against a changing climate, yet just 13% of the UK's land area is covered by trees (compared to the EU's average of 37%).

Mature trees provide essential habitat for a diverse range of wildlife, including birds, mammals, insects, and fungi. They offer food, shelter, nesting sites, and breeding grounds, supporting biodiversity and ecological balance in rural landscapes.

Mature trees contribute to the aesthetic beauty and character of rural landscapes, defining scenic vistas, framing views, and adding depth and texture to the surroundings. They serve as landmarks and focal points, enhancing the cultural and recreational value of the countryside.

a. Trees that would be felled in proposals A89, A92 and A93

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Two huge oaks in the middle of the proposed site A93 close behind Oak Leaf Cottage.

"The bottom line is we need more trees and need protect the ones we already have."

Plans for proposed gravel pits around Stisted, sites A89, A92 and A93 - would result in the felling of many significant oak trees, including a copse of established oaks and many native trees and ancient hedgerows across the sites.

This is in contradiction to Braintree District Council's own Tree Strategy documentation:

"4.4 In addition there are two policies within the Core Strategy document (September 2011) which refer to protection of the countryside and the natural environment. These policies are relevant to the broader issues of trees in the landscape and their value as a key indicator in biodiversity assessments and a marker for the quality of the natural environment"

"Policy CS5 The Countryside - Development outside town development boundaries, village envelopes and industrial development limits will be strictly controlled to uses appropriate to the countryside, in order to protect and enhance the landscape character and biodiversity, geodiversity and amenity of the countryside".

"Policy CS8 Natural Environment and Biodiversity - All development proposals will take into account of the potential impacts of climate change and ensure the protection and enhancement of the natural environment ."

The copse above on the edge of the Stisted A93 proposed site, is made up of established oaks and other native trees, the pictures below show in greater detail that there are two ponds within the copse which provide important habitats for nature as detailed in our report.

Trees and hedges on the top boundary of Stisted A93 providing a long wildlife corridor between the fields running up to Pattiswick Hall Farm.

These habitats are on the boundary of A93 along Dixplash Road, so green and full of life on a February winters' day, providing a vital wildlife corridor with large tree clusters and undergrowth. The ditches provide run offs from the fields providing vital drainage across the two proposed sites past the cottages into the river Blackwater on the opposite side of Water Lane. This part of the road often floods, if these important drainage habitats were removed where would rain water go.

4.3.5 Regulating Water Flow and Flood Prevention

Mature trees play a crucial role in regulating water flow and mitigating the impacts of flooding in rural areas. Their deep root systems help stabilise soil, reduce erosion, and enhance infiltration, while their canopy intercepts rainfall, reducing surface runoff and flooding downstream.

Water Lane regularly floods and becomes impassable to vehicles severely limiting access in and out of the village. Removal of trees would result in increased flooding.

Tree roots help to bind soil together, preventing erosion and improving soil stability. When trees are removed, particularly along riverbanks or in upland areas, the soil becomes more susceptible to erosion, leading to sedimentation in rivers and watercourses. This can increase the risk of channel blockages and exacerbate flood risk during periods of heavy rainfall. Trees play a crucial role in regulating the water cycle by absorbing and transpiring water through their leaves. This process, known as evapotranspiration, helps to reduce the volume of water entering rivers and streams, thereby mitigating flood risk. When trees are removed, particularly in deforested areas, there is less vegetation to intercept rainfall and absorb excess water, leading to increased surface runoff and the potential for flash flooding.

These veteran and notable trees are on the borders of the A93 site. Mature trees have intrinsic value and evoke a sense of wonder, awe, and connection with nature.

Mature trees in rural settings are invaluable assets, offering a multitude of benefits ranging from carbon capture and wildlife habitat to landscape aesthetics, flood mitigation, and human well-being.

Protecting and preserving these natural treasures is essential for maintaining healthy and resilient rural ecosystems and ensuring a sustainable future for generations to come.

4.3.6 Tree Planting in Stisted

CANS has acquired and supplied 200 tree saplings to be planted on Covenbrook Farm, Braintree Golf course, and a few around the Village itself. CANS achieved this within our first year of formation. We have plans to implement this annually and hopefully increase this number each year.

Therefore it is distressing to think that the proposed gravel pits around the village could negate the benefits of our first years' positive tree planting. Unfortunately tree planting initiatives across Britain are not actually keeping up with natural tree loses through nature, i.e. drought, storms, development: let alone actually increasing tree numbers. Braintree District Council state in their Tree Strategy, that for every tree lost (owned by BDC), they promise to plant 3 hoping to counterbalance this, but figures show the UK planted a total of 12,960 hectares of new woodland in the year to 31 March 2023 - less than half the target of 30,000 hectares of new woodland creation annually by 2025 and down from 13,860 hectares in 2021/22. We are desperate to retain the trees that residents and wildlife enjoy in our local environment.

Trees recently planted at Stisted Golf Club acquired by CANS through the Woodland Trust.

4.4 Wildlife impact – The wildlife and biodiversity in the area in and around Stisted and how could the introduction of three gravel extraction sites impact on our wildlife and biodiversity.

a. Background

Stisted boasts a wide and varied community of interacting animals, birds and insects. The main eco systems include Grasslands, Water meadows, Woodlands, rivers and ponds. Stisted also has a golf course which is managed sustainably, and beautiful wide-open spaces. Currently Stisted has the ideal environment to support a wide range of habitats and food chains for all of the species listed in this document. However, our counties wildlife has been on the decline for the last 50 years. Loss of habitat such as farmland, hedgerows, food, breeding areas and roosts etc combined with the use of pesticides have taken their toll. Once these eco systems are interfered with and become endangered, food chains will break down and many species of our flora and fauna will be put at risk.

b. CANS and Community Engagement

Stisted is proud of its' wildlife and actively works to protect existing wildlife habitats and establish ways we can support and encourage nature and biodiversity in the village and surrounding areas. CANS is a working party for Stisted Parish Council. We work in conjunction with Essex Wildlife Trust, The Woodland Trust, Essex Bat Group, Essex Butterfly Conservation Trust and the RSPB.
Examples:- ESSEX sparrow survey. RSPB Garden bird watch. Essex Butterfly Conservation Trust Butterfly Count, Essex Bat Group Survey, EWT River condition survey. CANS is aware of the studies and results published by these recognised bodies.
CANS members and numerous villagers have taken part in various studies in order to identify current wildlife population numbers and record any decline of a particular species. CANS won sponsorship from Essex County Council, to represent a typical Essex village. We hosted a community workshop resulting in writing a 'Nature Plan' that is being used as a national template.

A 'Pizza and Nature' evening hosted by CANS in the village hall which was attended by a large percentage of the village. This featured an 1 hour long video presentation of Stisted's Flora and Fauna containing 150 images and videos illustrating varied and diverse wildlife. There was also a presentation on rewilding. Education regarding Conservation was a key goal for our evening.

The pictures of flora and fauna within this document were taken in Stisted and downloaded from Stisted Village Nature Watch, facebook page or other CANS Members' photo stock.

c. Natures' Perspective - Current eco systems and food chains.

The removal of fertile historic farmland and replacement with gravel extraction sites will have a negative affect on our local eco systems and its species of flora and fauna.
At the top of the food chain, Stisted has many predators such as:- Buzzards, Red Kites, Barn Owl, Tawney Owl, Little Owl, Hobbies, Mink, Stoats, Foxes etc. These creatures feed on Water voles, mice, other birds, frogs, ducklings, rats, squirrels, rabbits, leverets and these will be affected by river, light, dust, noise and traffic pollution which upset the balance of nature and will have a detrimental affect on the health of Stisted's Wildlife.

Barn Owl **Tawny Owl** **Little Owl**



The fertile farmland surrounding the beautiful village of Stisted, the River Blackwater and its flood plains and water meadows have long been home to many species of birds, animals, fish and insects. Here are some less common species and note that some even make the Conservation status Red list. Brown Hare, Hedgehogs, Mink, Cuckoo, Otters, Skylark, Nightingale, Swifts, House Sparrows, Harvest mice, Bats, Peregrine Falcons, Newts and dragon flies like the Scarce Chaser.

Scarce Chaser – Red list **Hare – Status 'Concern'** **Cuckoo - Red list**



The more commonly found species range from animals including Rabbits, Badgers, voles, shrews, moles, Foxes, Stoats, Otters, White Egrets and Herons and those below :-

Deer – Muntjac shown below, Roe and Fallow deer,



Bird species – Sky lark, Pheasants, Partridge, Red legged Partridge, Quail, Greater spotted woodpecker, Green Woodpecker, Goldfinches, Fieldfare, Redwing, Lapwing, yellowhammer, Rooks, Starlings, Redpoll, Siskins, Greenfinch, Blue Tit, Long tailed tit, Coal tit, Great tit, Black cap, Linnet, Corn bunting are present in all three of the proposed areas for Gravel Extraction. Stisted currently has a healthy population of finches. In particular the Goldfinch is probably the most common bird. We also have a number of House Sparrows that particularly love Hedgerows. The farmland identified for Gravel extraction calls for the removal of many hedgerows, trees and important habitat for our wildlife.

We must protect our Nature in order to safeguard its health and for years to come.

Red Legged Partridge

Lesser Redpoll – Red list

House Sparrow – Red list

The river Blackwater and its flood plains provide habitat for Kingfishers, Lizards, Newts, frogs, Swallows, White Egrets and common Herons. Grey lag geese migrate here each year in their hundreds to enjoy the farm land, water meadows and either side of the river banks for up to six months of the year. The river also contains many fish.

Female Common Newt **Male Common Newt** **Kingfisher**



Fish – including Chubb, Dace, Gudgeon, Minnow, Red throat, Lambrey, eels, ruff, perch and pike have been recorded in water board surveys for water quality and river health.

ESSEX Wildlife Trust carried out a survey of the river on behalf of CANS and they provided a conservation plan. An action plan is being drawn up by CANS in conjunction with Braintree golf club who are our partners in keeping the river safe from pollution and invasive species like Himalayan Balsam and controlling nutrients that may upset the rivers eco system.

Insects. Important insects that we all need to survive such as the **pollinators** etc must be mentioned and our fertile farmland is home to many different species of insect as follows :-

Beetles. Stag Beetles, Common red soldier beetle, Red headed cardinal beetle, Black spotted longhorn, crawling water beetles, water boatman, Rose chafer.

Bees- Honey Bees, Buff tailed Bumble bee, red tailed bumble bee, common carder bee, Common wasps, European hornet, Asian Hornet, Giant horntail.

White Tailed Bumble Bee **Red Tailed Bumble Bee - Worker**


Butterflies – Red Admiral, Painted Lady, Peacock, Comma, Small tortoiseshell, Common blue, small copper, Cabbage whites, Monarch, Swallow tails, Meadow brown, Large White, speckled wood, Orange tip, Holly blue, Common blue.

Note CANS takes part in a national butterfly count throughout the summer months.

Peacock **Comma** **Small Tortoiseshell**



Moths. Angle Shades, Herald, Peppered, Brimstone, Buff tip, hawk moths.

Poplar Hawk Moth **Hummingbird Hawk Moth** **Buff Tip**



Other Insects include - earwigs, Ladybirds, centipedes, aphids, arachnids, Lacewing, snails, slugs etc.

Flora- Stisted provides our insects and animals with vast variety of habitats including plants, trees, flowers, shrubs and brambles that populate the fringes of these farmed fields. These provide food, shelter and cover for many of Stisted's fauna.



d. Further considerations
Water table – CANS are concerned that the gravel extraction methods may result in a change to our local water tables and it is possible that historic aquafers, the river and its tributaries will be affected in a detrimental way if the projects go ahead.

Carbon emissions - With the Government pushing councils hard for a considerable reduction in their Carbon Footprint, how can releasing tons of Carbon by removing top soil to make way for Gravel extraction align with current carbon reduction targets. The fuel used and hence the air pollution and Carbon released from the plant, machinery and vehicles involved could be huge.
Crystaline Silica and other dusts. – It is known that extracting gravel produces carcinogenic dust that requires strict control.

The human population and our local flora and fauna could potentially be subjected to Crystaline Silica dust that is hazardous to anything that inhales it. We understand that safety measures will be in place but there have been examples whereby some quarries have failed to manage dust effectively and have been served improvement notices accordingly. Therefore no systems are fail safe. No doubt we will be reassured that there will be the strictest safety measures in place. However, the potential for widespread silica release is still there.

Conservation – Why endanger classic countryside and interfere with the natural beauty of our village and impact our flora and fauna in such a detrimental way when other location options are available. We have Red Listed and protected species that our eco systems and historical habitats are helping to recover.

e. Nature Conclusion - We conclude that converting healthy, fertile, food and wildlife producing farmland into Carbon emitting, fossil fuel burning, Crystaline Silica, sand and dust producing gravel extraction sites is likely to be extremely detrimental to our existing eco systems in and around the beautiful village of Stisted and it will contradict the very reason for Conservation, Nature plans and the protection of our Climate and Nature going forward in years to come.

See Appendix 2

4.5 Loss of amenities – How the loss of amenities could negatively impact Stisted and Braintree residents and the wider community.

Braintree welcomes dog walkers, horse riders, angling clubs and cycling, and walking groups that regularly come to the village encouraged by the proximity to Braintree, the peaceful location and scenic views.

Disruption to the peace and beauty of the area would deter visitors and deny them the opportunity of relaxing in this peaceful oasis.

4.5.1 Stisted Golf Club

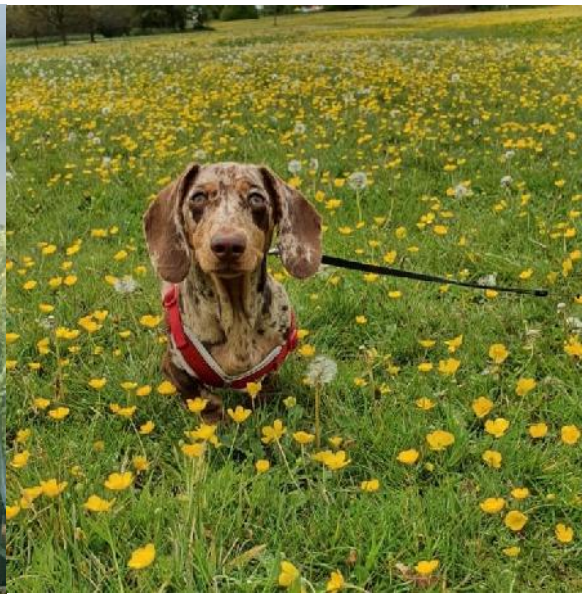
The golf club is an asset to the village and with CANS and local people, this is a huge amenity benefit for the village and wider community.

a. **Disruption to Travel:** Increased traffic from heavy goods vehicles (HGVs) associated with the gravel pit operation could lead to disruption and delays for golf club users traveling to and from the facility.
b. **Disturbance to a Peaceful Game:** The noise generated by quarry operations, including machinery, reversing alarms and vehicle movements, could disrupt the peaceful ambiance of the golf course and impact the golfing experience for club users. Loud noises from the quarry may be distracting or intrusive, affecting concentration and enjoyment during games.
c. **Visual Impact:** The visual impact of a gravel pit near the golf course, including industrial infrastructure, machinery, and excavation activities, may detract from the aesthetic appeal of the surroundings and compromise the scenic beauty of the golfing environment. This could diminish the overall experience for golf club users and affect the marketability of the facility.
d. **Safety Concerns:** Increased traffic from HGVs traveling to and from the gravel pit could pose safety risks for golf club users, particularly pedestrians and cyclists accessing the facility. The presence of large trucks on nearby roads may heighten the risk of accidents, collisions, and near misses, raising concerns about public safety and traffic management in the area.

e. **Potential Economic Impacts:** Negative perceptions or disruptions associated with the gravel pit proposal could deter golf club users, visitors, and potential members from patronising the facility, leading to potential economic losses for the club. Reduced demand for golfing services and amenities could impact revenues, membership retention, and the long-term viability of the club.

4.5.2 Walkers, dog walker and local walking groups

Stisted is a magnet for walkers of all kinds; be this organised groups, dog walkers or keen hiking enthusiasts. Stisted is an attractive location for many reasons, its' peaceful location, scenic tranquillity and abundance of well kept paths and nature walks. Dogs and owners alike enjoy the benefits of walking in peaceful and attractive countryside.



Local dog Monty, happy to share the countryside with a herd of deer.

4.5.3 Horse Riding

Stisted has many horse riders and enthusiasts who regularly use the roads and trails around the village. However, increased traffic on local lanes would be dangerous for both horse and rider.

Extract from Horse & Hound Magazine

"A total of 68 horses died on Britain's roads last year and 125 were injured, despite changes to the Highway Code aimed at improving their safety.

Two more horses have already been killed on the road in 2023, according to the British Horse Society (BHS), which released its 2022 statistics on 29 January."

The recommendations are to keep at least 2 metres between a vehicle and a horse, this would be impossible with an HGV or lorry on a single track road and is difficult with a standard car.

Horse rider on narrow in Pattiswick demonstrating narrowness of country lane.

4.5.4 Cycling

Stisted is regularly visited by cyclists including the Braintree group “Braintree Easy Riders”, where the group take advantage of the easily accessible beautiful countryside and lanes. However, negotiating past vehicles on our narrow country lanes can prove difficult, the introduction of further traffic including HGV’s would make cycling on these roads extremely dangerous.

4.6 Health & Wellness of Residents -How the creation of new gravel extraction pits could impact residents.

a. Health Concerns
As a community we are extremely worried not only about the loss of our open spaces but our rights of way across lands that have been inhabited for millennia. We are also rightly concerned about the health dangers that the development of new quarries very close to our village will bring. Our concerns are not new as complaints about quarrying activities have been voiced as far back as the 1890s (1). More importantly the issues of concern have remained the same over time, and these include visual intrusion, damage to landscapes, traffic, smoke, noise, dust, loss of agricultural land, the deterioration in water quality but more importantly the effect on health and wellbeing of the citizens who live, and work close to quarries.

b. Silica Dust
Silica dust released during the extraction of gravel poses a significant risk to the health of our community. Silica (quartz or silicon dioxide) is classified as a human carcinogen (2) and exposure to silica dust poses a major health risk which is particularly dangerous to children and older people. Due to the potential small size of crystalline Silica, it can enter the lungs and lodge there. This is then encapsulated causing permanent lung damage or potentially cause cancer. Prevailing winds can carry this fine silica over a wide distance. Therefore, the risk of inhalation is increased when quarries or gravel pits are sited near communities. The closer communities are to the source, the higher the concentration and danger.

The following health problems have been significantly linked to proximity to silica either as a worker or by communities sited close to the extraction sites. These include silicosis, lung cancer, tuberculosis, and increased lung irritation. Fundamentally we currently do not have a cure for silicosis; once these fine particles enter the lungs, the body has no means to expel them (International Agency for Cancer Research).

Crystalline Silica can also attach itself to inanimate objects like homes, outdoor and playground equipment, trees, plants, grass, and vehicles, therefore the risks facing communities increases when near a site. Crystalline Silica can also infiltrate home and schools' heating and cooling systems and thus far there has been no viable way to mitigate

this risk. A further point to note is that dust containing silica is cumulative; therefore, for each day of operation more and more of this hazardous dust will accumulate inside and around homes and schools thus increasing the health risks to our children and our community.

c. Silicosis

Silicosis is an insidious disease that can take several years before many of the symptoms of this pernicious disease are noticed and many people do not notice until long after exposure to silica dust. The symptoms can get worse, even if you're no longer exposed. The symptoms can develop up to 10-20 years after exposure, although it can sometimes develop after 5-10 years.

The main symptoms of silicosis are:

- a persistent cough
- persistent shortness of breath
- weakness and tiredness

As the condition continues to worsen, the symptoms may become more severe. Some people may eventually find simple daily activities such as walking or climbing stairs very difficult and may be largely confined to their house or bed.

Furthermore, the condition can ultimately be fatal due to respiratory failure or if serious complications develop, and whilst this is currently rare in the UK there are other associated medical conditions which employees exposed to this dust may develop, such as connective tissue disease (4) and systemic sclerosis (5). However, it is also clear from the scientific evidence that communities residing close to quarry sites have a higher prevalence of respiratory symptoms compared to those not exposed to quarry dust (6). Commonly reported adverse health effects by people who reside nearby quarry sites include nasal infection, cough, and asthma (7).

d. Loss of Amenities

We live in a rural community and are lucky to have some wonderful amenities close by which offers communities like ours great health and wellbeing benefits. However, this could be potentially disrupted and destroyed by noise and traffic congestion caused by the siting of an extraction site close by which would seriously affect the quality of peoples' lives. Many of the roads around our village and the local area are single lane traffic which have grown from the laneways of old. We are already seeing major traffic disruption when the A120 is closed or there are diversions. This in turn increases the level of pollution and particulates into the air. The ability of local citizens to walk or cycle safety is already compromised and this would be further affected by the potential increases in traffic. The proposed sites pose significant risk to the health and wellbeing of our local communities and the loss of amenities such as public bridleways will affect our enjoyment as well as others' enjoyment of the wonderful landscapes earmarked for development.

It is ironic that cities like London have introduced clean air zones to protect the health of local communities, but our local leaders are advocating more pollution, more health hazards, as well as the destruction of a rural community.

"In a few short years the ULEZ has prevented tens of thousands of tonnes of toxic nitrogen oxide emissions from being released and the London-wide expansion is enabling 5 million more Londoners to breathe cleaner air." 28 Dec 2023

See Appendix 4

e. Loss of active travel opportunities

Safety Hazards for Pedestrians and Cyclists: The presence of heavy goods vehicles on narrow, single-track lanes poses significant safety risks for pedestrians and cyclists. These large vehicles have limited manoeuvrability and require ample space to navigate, increasing the likelihood of accidents or collisions with vulnerable road users.

Heavy goods vehicles emit pollutants such as particulate matter, nitrogen oxides, and carbon dioxide, which can pose health risks to pedestrians and cyclists traveling along the same routes. Exposure to vehicle emissions has been linked to respiratory problems, cardiovascular diseases, and other adverse health effects, particularly in vulnerable populations such as children, the elderly, and individuals with pre-existing health conditions.

The constant movement of heavy lorries transporting gravel to and from the proposed extraction sites could generate significant noise pollution, disrupting the peaceful rural environment and detracting from the quality of life for residents. The noise from vehicle engines, brakes, and reversing alarms can also pose safety concerns for pedestrians and cyclists by masking auditory cues and increasing the risk of accidents.

The introduction of heavy goods vehicles into a village with limited or non-existent active travel infrastructure, such as pavements, bike lanes, and pedestrian crossings, further exacerbates the dangers faced by pedestrians and cyclists. Without adequate infrastructure to separate vulnerable road users from motorised traffic, active travel becomes even more hazardous and impractical.

The potential risks not only undermine efforts to promote active travel but also jeopardise the safety, health, and well-being of residents within the community.
All children from year 7 upwards have to go to schools and colleges outside the village, the introduction of heavy goods vehicles onto narrow single track roads would mean the route into the village would be fraught with danger especially for cyclists and pedestrians.

4.7 Loss of Agricultural Land

The combined area of the proposed gravel pits amount to the loss of 225.72 hectares of good agricultural land. In addition, Stisted has also lost 67 hectares with the recent conversion of agricultural land for a solar farm. Losing this much land to carbon intensive gravel extraction could have significant implications for Essex County Council's Climate Focus Areas' goals and could negatively impact food security in the area.

The land in question is situated at the edge of the East Anglian Grain belt for the country and has been awarded grade 2 agricultural land. At a time when emphasis is on growing local food, with reduced air miles to aid the current food supply crisis it is the removal of agricultural land is in direct opposition to current policy. (stated by NFU on 19-2-24.)


Possible negative impact of the proposed gravel pits.
a. Loss of Productive Farmland: Grade 2 agricultural land is characterised by good quality soil and moderate fertility, making it suitable for a wide range of crops. Converting this land to gravel extraction pits would result in the permanent loss of productive farmland, reducing the overall capacity for food production in the region.
b. Decreased Local Food Supply: With a growing emphasis on growing local food to reduce air miles and increase food security, the loss of grade 2 agricultural land would hinder the ability of the local community to produce food locally. This could lead to increased dependence on imported food sources and a reduction in the resilience of the local food supply chain.
c. Disruption of Agricultural Activities: The establishment of gravel extraction pits would disrupt existing agricultural activities in the area, including farming operations and supply chains. Noise pollution, increased traffic, and land disturbance associated with gravel extraction could negatively impact farmers' ability to cultivate crops and manage their land effectively.
d. Impact on Carbon Sequestration and Emissions Reduction:
Loss of agricultural land to gravel pits and solar farms reduces the area available for carbon sequestration through natural processes such as plant growth and soil carbon storage. Decreased vegetation cover and soil disturbance associated with gravel extraction can release stored carbon into the atmosphere, contributing to greenhouse gas emissions and undermining efforts to mitigate climate change.
e. Reduced Agricultural Production and Food Supply:
The loss of fertile agricultural land to non-agricultural uses limits the area available for food production, reducing agricultural output and potentially compromising food security in the area. Farmers may face challenges in finding suitable land for cultivation, leading to decreased crop yields, loss of income, and increased reliance on imported food sources, which can have economic and social implications for local communities.

4.8 Access and Road congestion

The residents of Stisted and Pattiswick are familiar with traffic incidents on their narrow rural roads. If there is a blockage on the A120, then these local roads are often used as a short cut. One day of heavy traffic causes irreparable damage to verges and ditches resulting in the widening of country lanes and flooding due to ditches being damaged.

Essex Highways “We believe the A120 is not fit for purpose and is long overdue an upgrade. We are not alone either, as more than four out of five people who responded to our 2017 consultation agreed.”

National Highways “The A120 is a key route for the local and national economy. Commuters, freight, residents and businesses suffer daily lengthy delays on this single-carriageway road which costs the country millions of pounds every year.

The proposals for improving this stretch of road, initially developed by Essex County Council (ECC), were transferred to National Highways in 2020. Since the transfer, National Highways has been validating and updating the work completed by ECC. This work has now concluded.
The programme of enhancements within the third Road Investment Strategy (RIS3) remains the mechanism through which new schemes, such as A120 Braintree to A12, are developed and their delivery planned.
In its Ministerial Statement to Parliament in March 2023, the government announced that work on the future pipeline of schemes that have been earmarked for RIS3 (covering 2025 to 2030) will now be considered for delivery as part of RIS4 (beyond 2030).”

In addition, there is the impact of the Rivenhall incinerator on both the A120 and local traffic.

James Abbott District Councillor for Witham & Braintree said: “This plant would be a major waste incinerator built in the countryside with over 400 HGV movements per day.”

Therefore, the current A120 is likely to remain over 20% over planned capacity until beyond 2030.

The junction is at the A120 is at an incline, hence the HGV extraction transport will have difficulty moving from stationary, waiting to exit, creating queues, causing delays and consuming excess fuel of all concerned, expending carbon footprint. It already can take 10 minutes to exit the lanes.

Additional gravel lorries all day for twenty years will add to the current excessive delays getting out of Kings Lane and Water Lane junctions of the A120. For cyclists and motorists using both Kings Lane and Water Lane exits onto the A120, these junctions will be come an even more dangerous hot spot with accidents occurring on a regular basis.

Photos taken on 29th February following disruption on the A120. Damage to verges and ditches clearly visible.

If the proposed three gravel sites were in operation, this could result in over 800,00 HGV lorry movements over the life of the pits.

If gravel is wet, meaning the gravel weighs heavier than when dry, then this could mean that there would be considerably more lorry movements resulting in even more damage.

Vehicles trying to pass on narrow lanes following an accident on the A120.

Possible negative impact of the proposed gravel pits on roads and access.

a. Road Damage and Deterioration:
The repeated passage of heavy trucks on narrow rural lanes can lead to accelerated wear and tear of the road surface, causing potholes, cracks, and surface degradation.
Increased traffic from HGVs can result in road widening, disrupting the natural landscape and altering the character of the rural lanes.
b. Traffic Congestion and Safety Hazards:
High volumes of HGV traffic can cause congestion and delays on single-track lanes, especially during peak construction periods, creating safety hazards for road users, including pedestrians, cyclists, horse riders and motorists.
Narrow road widths and limited visibility may exacerbate the risk of accidents, collisions, and near misses between vehicles, particularly at blind bends or junctions.
c. Noise and Air Pollution:
The constant rumble of heavy trucks and diesel engine emissions can contribute to noise pollution in the surrounding area, disturbing residents and wildlife and detracting from the rural tranquillity.

Diesel exhaust emissions from HGVs can degrade air quality, releasing pollutants such as nitrogen oxides (NOx), particulate matter (PM), and carbon monoxide (CO) into the atmosphere, posing health risks to nearby communities.

d. Impact on Wildlife and Biodiversity:

Increased traffic volume and noise levels can disrupt natural habitats and wildlife corridors, leading to stress, displacement, and potential decline in local wildlife populations. Collisions between vehicles and wildlife may occur more frequently, resulting in injury or mortality among vulnerable species, such as mammals, birds, and amphibians.

e. Community Disruption and Displacement:

Heavy traffic from gravel extraction activities can disrupt daily routines, limit access to amenities, and reduce the quality of life for residents living along affected rural lanes. Increased construction-related activities, such as dust generation, vibration, and light pollution, may further impact community well-being and social cohesion, leading to tensions and conflicts among residents.

f. Environmental Degradation and Landscape Alteration:

The cumulative impact of HGV movements on rural lanes can result in irreversible damage to the natural landscape, including loss of vegetation, soil compaction, and alteration of natural drainage patterns. Fragmentation of habitats and loss of scenic vistas may degrade the aesthetic value of the countryside, affecting tourism, recreation, and local economies dependent on the rural landscape.

Additional issue with gravel site traffic on the already congested A120

g.Traffic Congestion and Delays: The A120 frequently experiences congestion during peak travel times, leading to delays for motorists. Traffic congestion is often exacerbated by factors such as roadworks, accidents, and insufficient road capacity, particularly at junctions and bottleneck areas along the route.

h. Accident Hotspots: Certain sections of the A120 have been identified as accident hotspots due to factors such as high traffic volumes, narrow lanes, inadequate visibility, and challenging road conditions. These accident-prone areas pose safety risks for motorists and increase the likelihood of collisions and road traffic incidents.

i. Pinch Points and Capacity Constraints: The A120 has several pinch points and capacity constraints, particularly at junctions, roundabouts, and narrow sections of the road. These bottlenecks limit the flow of traffic and contribute to congestion, especially during peak travel periods.

j. Traffic Volume and Road Capacity: The capacity of the A120 is determined by factors such as lane width, road geometry, and traffic flow characteristics. While the road has undergone improvements and upgrades over the years, including resurfacing and junction enhancements, it still struggles to accommodate the growing volume of traffic, particularly heavy goods vehicles (HGVs) and large vehicles.

k. Negative Impacts of Increased HGV Traffic: The introduction of additional HGV traffic generated by three gravel pits along the A120 would exacerbate existing issues related to congestion, safety, and road capacity. Heavy goods vehicles are larger and slower-moving than other vehicles, increasing the risk of accidents, exacerbating congestion, and putting additional strain on road infrastructure.

4.9 Light and Noise Pollution

CANS and Stisted PC have recently installed LED street lights in Stisted. Research was carried out on the negative effects on bats and insects with overly bright street lights. As a result of this research the current street lights have warm white lamps, shades and diffusers and are on timers to protect bats and insects. In Winter months and on overcast days, the proposed gravel extraction site would be using high intensity lighting for operational and safety reasons.

Negative Effects of Proposed Gravel Pit on Human and Animal Residents
Light pollution refers to the excessive or misdirected artificial light, produced by human activity, which disrupts the natural darkness of the night sky. The siting of a gravel pit within rural Stisted, will result in high levels of light pollution, affecting both human and animal residents.

4.9.1 Wildlife

a. **Disruption of Natural Cycles:** Light pollution can interfere with the natural cycles of wildlife, particularly those that rely on darkness for feeding, mating, migration, and navigation. For example, nocturnal animals may have difficulty hunting or avoiding predators if their natural habitats are illuminated at night.
b. **Altered Behaviour:** Many species have evolved to rely on specific light cues for important behaviours. Artificial light can confuse or disrupt these behaviours.
c. **Habitat Fragmentation:** Light pollution can fragment habitats by creating barriers of light that prevent species from accessing important resources or migrating between areas. This fragmentation can lead to decreased genetic diversity and increased isolation of populations, which can negatively impact the long-term survival of species.
d. **Attraction to Light Sources:** Some species are attracted to artificial light sources, which can lead to harmful consequences. Insects, for example, may be drawn to artificial light, resulting in increased mortality due to collisions, predation, or disruption of natural behaviours such as mating.
e. **Impact on Plants:** Light pollution can also affect plant life by disrupting processes such as photosynthesis and flowering cycles. Additionally, artificial light at night can interfere with the ability of certain plants to synchronize their growth and reproductive cycles with seasonal changes in light duration, potentially leading to reduced reproductive success.
f. **Ecological Imbalance:** The cumulative effects of light pollution on wildlife populations can disrupt ecological balance and lead to cascading effects throughout ecosystems. For example, declines in insect populations due to attraction to artificial

lights can have ripple effects on food webs, affecting species that rely on insects as prey or pollinators.

4.9.2 Bats and nocturnal creatures

a. **Disruption of Foraging Behaviour:** Many bat species are nocturnal and rely on darkness to hunt for insects. Light pollution can disrupt their foraging behaviour by reducing their ability to detect prey or by attracting insects away from their natural habitats. This disruption can lead to decreased feeding success and ultimately impact bat populations.
b. **Alteration of Roosting Patterns:** Bats often roost in dark, secluded areas during the day. Light pollution can disrupt their roosting patterns by illuminating roost sites or nearby areas, making them less suitable for resting and reproduction. This disturbance can cause stress to bats and may lead them to abandon roosts in search of darker, more secure locations.
c. **Interference with Navigation:** Bats use echolocation to navigate and locate prey in the dark. Light pollution can interfere with their ability to echolocate effectively by creating background noise or visual distractions. This interference can impair their navigation skills, making it more difficult for bats to find food, locate roosts, or navigate through their habitat.
d. **Displacement from Habitats:** Some bat species are sensitive to light and may avoid areas with high levels of light pollution. As a result, light-polluted areas may become unsuitable or inaccessible for these bats, leading to habitat loss and fragmentation. This displacement can further exacerbate existing pressures on bat populations, such as habitat destruction and climate change.
e. **Increased Vulnerability to Predation:** Light pollution can make bats more visible to predators, such as owls and aerial predators, by illuminating their flight paths or roosting sites. This increased visibility can make bats more vulnerable to predation and may contribute to population declines, especially in areas where natural predators are abundant.

4.9.3 Residents

a. **Sleep Disturbance:** Excessive artificial lighting from the gravel extraction site can disrupt the natural darkness of the night sky, making it difficult for residents to achieve restful sleep. Exposure to light at night can interfere with the production of melatonin, a hormone that regulates sleep-wake cycles, leading to sleep disturbances and insomnia among residents.
b. **Increased Stress and Anxiety:** The presence of bright lights and constant illumination can create a sense of unease and anxiety among residents, particularly those who value the tranquillity and natural beauty of their rural surroundings. Chronic exposure to light pollution may exacerbate stress levels and contribute to mental health issues such as anxiety and depression.
c. **Disruption of Circadian Rhythms:** Light pollution can disrupt the body's natural circadian rhythms, which regulate various physiological processes such as sleep, metabolism, and hormone production. Irregular exposure to artificial light at night can confuse the body's internal clock, leading to disruptions in sleep patterns, mood regulation, and overall well-being.
d. **Impaired Night Vision:** Excessive artificial lighting can impair residents' night vision and hinder their ability to see stars, constellations, and other celestial objects in the night sky. This loss of connection to the natural world and the beauty of the cosmos can diminish the overall aesthetic appeal of the rural landscape and negatively impact residents' sense of wonder and appreciation for their surroundings.
e. **Physical Health Risks:** Chronic exposure to light pollution has been linked to various physical health risks, including an increased risk of obesity, diabetes, cardiovascular disease, and certain types of cancer. Disruption of circadian rhythms and sleep disturbances associated with light pollution can contribute to these health

conditions, posing significant risks to the well-being of residents in the affected village.

f. **Social Disruption:** Light pollution from the gravel extraction site may disrupt social activities and community gatherings that occur outdoors during the evening hours. Residents may be less inclined to spend time outside or participate in recreational activities such as stargazing, walking, or gardening due to the presence of bright artificial lights and the associated discomfort or nuisance.

4.9.4 Noise Pollution – On residents and Wildlife

a. Disturbance to Daily Activities:

Noise from quarry operations can disrupt daily activities such as sleeping, working, studying, and relaxation for residents living in proximity to the site. Continuous exposure to loud noise can lead to annoyance, stress, and sleep disturbances, affecting overall quality of life.

b. Health Impacts:

Prolonged exposure to high levels of noise pollution has been associated with various health impacts, including increased risk of cardiovascular diseases, hypertension, hearing loss, and mental health issues such as anxiety and depression. Noise-induced stress responses, such as elevated blood pressure and cortisol levels, can have detrimental effects on physical and mental well-being, particularly among vulnerable populations such as children, the elderly, and individuals with pre-existing health conditions.

c. Impact on Property Values:

Persistent noise pollution from quarry operations can decrease property values in the surrounding area, making it less desirable for prospective buyers and renters. Residents may experience difficulty selling or renting their properties at fair market prices due to perceived noise nuisance and concerns about living in close proximity to industrial activities.

d. Disruption to Wildlife:

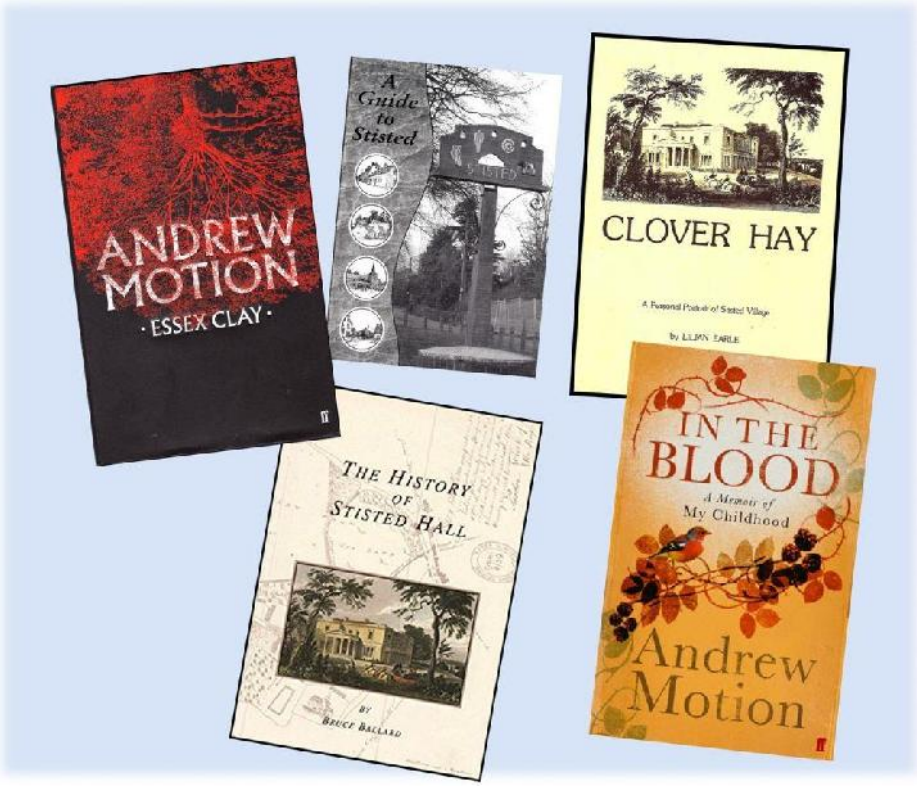
Noise from quarry machinery, blasting, and vehicle traffic can disrupt natural habitats and wildlife behaviour, leading to stress, displacement, and potential decline in local fauna populations.

Wildlife species sensitive to noise disturbance, such as birds, mammals, and amphibians, may avoid or abandon habitats near the quarry site, impacting biodiversity and ecological balance in the area

See Appendix 3

5. Historical and Cultural information

5.1 Historical Roots: Stisted has ancient roots, with evidence of human habitation dating back to prehistoric times. The village is mentioned in the Domesday Book of 1086, highlighting its long history of settlement.



Stisted has had its' fair share of famous visitors who enjoy the beautiful countryside and the proximity to London.

Clare Balding from the BBC's Ramblings is joined by the former poet laureate Sir Andrew Motion, to walk around the village of Stisted in Essex.

Sir Andrew Motion FRSL (1971, English) is a poet, novelist, and biographer. He was Poet Laureate from 1999 to 2009 and founded the Poetry Archive, an online resource of poems and audio recordings of poets reading their own work.

'Stisted is where my eyes first opened' ... Andrew Motion. Extract from article in The Guardian

“My father chose it – partly because his grandparents had lived there, and partly because Stisted felt to him like “proper country”. A Domesday site with scruffy hedges, tractors rumbling down the main street, a village shop, two pubs, and butterflies flip-flopping in cottage front gardens. That’s where my eyes first opened. That’s where I first began to care about poems. And that’s where the things I was reading fused with the things I was seeing. I don’t mean (or not entirely) that I became a “literary” child. I mean that the passages I most liked in Marvell, or Clare, or Edward Thomas, or Hardy, or Heaney, or Hughes – the people I enjoyed at the outset – helped me find the words to enter and enjoy the things around me.

The walk through the field outside my parents house that led over a rabbity ditch into the Ashground – bare Rackham boughs grinding together in winter, in early summer awash with bluebells that squeaked when I trod on them. The River Blackwater curling round the base of the slope that tilted down from the churchyard – a stream at this stage, but otherwise as good as its name: black and muttery and wiry as it disappeared towards Goldhanger and the estuary. The old Hall, long-since converted into a nursing home for the elderly, whose wan faces ghosted behind the windows as my brother and I trampled through the disastrously overgrown gardens, or bumped into the ruins of the summerhouse which had once revolved to take in a view of manicured lawns and well-tended walk-ways.”

Extract from Essex Clay by Andrew Motion


Sir Andrew backs group fighting to save home village from A120 plans

Poet fights for ‘holy and sacred’ village

Andrew Motion responded swiftly when Stisted was threatened with the re-routing of the A120.

Sir John Betemen visited Stisted and campaigned for the preservation of British architecture and landscapes “Essex has the deepest and least disturbed country within reach of London … flat agricultural scenery with its own old red-brick towns with weather-boarded side-streets.”

For Betjeman, “The flat part of Essex … is part of that great plain which stretched across to Holland and Central Europe.”

Negative impact of the introduction of three gravel extraction pits
It is doubtful whether Sir John Betjemen and Andrew Motion would have written about Stisted, or Claire Balding visited Stisted for BBC Radio 4 Ramblngs, if there were three large gravel extraction sites in place.

See Appendix 5

5.2 Historical and Listed Buildings

Stisted has over sixty Grade 2 listed buildings including Jenkins Farm adjacent to plot A89. These precious assets would be directly affected by the siting of the proposed gravel pits into this area.

Jenkins Farm – Grade 11 listed.

Stisted Church All Saints - A Grade 1 listed ancient building.

Stisted’s famous twisted chimneys

See Appendix 6

6. Conclusion

The positive effects of the Nature Consultation and workshops are still being felt and CANS has momentum and energy to inspire residents to actively appreciate and protect their village and work towards the ambitious goals of the Climate Focus Area. It has therefore come as a massive shock to discover the plans for three gravel extractions pits, and the environmental damage these will cause, being put forward in this environmentally special area.

There is massive inconsistency between the damaging local effect of the proposed gravel pits and the council's climate action goals in Essex County Council's climate action report, particularly regarding the potential release of carbon emissions from excavation activities and increased transportation-related emissions.

In summary, the proposal for three gravel extraction sites in Stisted, an historic village renowned for its ancient trees, listed buildings, and picturesque landscapes, presents grave concerns across various critical factors. The potential damage to climate, biodiversity, and traffic management not only jeopardises the natural and cultural heritage of the village but also poses significant risks to the well-being and safety of its residents. The extraction sites threaten to disrupt delicate ecosystems, harm vital wildlife habitats, and compromise the integrity of cherished historic structures. Furthermore, the introduction of heavy traffic on narrow rural roads stands to degrade the tranquil and scenic character of Stisted, undermining the very essence of its charm and allure. Given these profound implications, it is imperative that authorities prioritise the preservation of Stisted's unique heritage and reject the proposal for gravel extraction, safeguarding the village's environmental, cultural, and social legacy for generations to come.

7. Appendices

Appendix 1- 'The Stisted Neighbourhood Plan, Landscape Assessment Study July 2020' Liz Lakes Associates, Landscape Architects p35, Figure 12, Public Rights of Way

Link to Landscape Assessment Study

http://stistednp.org.uk/wp-content/uploads/2021/06/STISTED%20NEIGHBOURHOOD%20PLAN%20March%202021%20FINAL%20ISSUE%20HQ.pdf

Appendix 2 – 4.4 Wildlife. Nature Photographs from Stisted and Pattiswick

Graham Holloway - Personal Statement - I am a CANS representative and a member of Essex Wildlife trust, RSPB and the Woodland trust. All of the pictures of flora and fauna within this document were taken in Stisted and downloaded from my personal library or donated by the Stisted Village Nature Watch facebook page or other CANS Members photo stock.






Appendix 3 – Guidance, Legislation and reference material relating to climate and nature

1. The Environment Bill (2019-2021):

- The Environment Bill is a significant piece of legislation that outlines the UK government's commitment to addressing environmental challenges, including biodiversity loss and climate change.
- It includes provisions for establishing Local Nature Recovery Strategies (LNRS) that can guide local authorities in enhancing biodiversity and ecosystem resilience.
- The bill also introduces the concept of "biodiversity net gain," which requires developers to ensure that new developments result in a net gain for biodiversity.

2. National Planning Policy Framework (NPPF):

- The NPPF sets out the government's planning policies for England. It includes guidance on sustainable development, environmental protection, and biodiversity conservation.
- Local authorities are expected to incorporate biodiversity considerations into their Local Plans, and the NPPF provides guidance on this process.

3. Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services:

- This strategy outlines the UK government's commitments to halt the loss of biodiversity by 2020 and to restore and enhance ecosystems.
- It provides a framework for local authorities and organisations to develop their biodiversity plans and initiatives.

4. The Natural Environment and Rural Communities (NERC) Act 2006:

- The NERC Act provides a legal framework for the conservation and enhancement of the natural environment, including biodiversity.
- It established the duty to produce Biodiversity Action Plans (BAPs) at the local level and established Local Nature Partnerships (LNPs) to coordinate local action.

5. Local Nature Partnerships (LNPs):

- Local Nature Partnerships are local partnerships established to bring together organisations, local authorities, and communities to work collaboratively on nature conservation and enhancement projects.
- The UK government provides guidance and support for LNPs to develop local nature strategies and projects.

6. Essex Climate Action Plan (2021–2025)

7. Essex Net Zero Policy Study (July 2023)

8. Essex Climate https://www.essexclimate.org.uk/

Appendix 4 – 4.6 Health & Wellness Authors and references

Lynn McCullough MSc, BSc Midwifery Hons, PGCE, DN, RGN

Dr Anthony McGrath VR, DProf, MSC, PGCE, BSc (Accident & Emergency Nursing) BA (Hons)RMN, RGN, RNT, SFHEA

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Appendix 5 – Landscape and Visual Sensitivity -Appendices and References

Stories About Stisted

Essex Clay by Andrew Motion (poet laureate)
In the Blood by Andrew Motion (poet laureate)
A Poem On A Bridge by Andrew Motion (poet laureate)
Clover Hay by Lilian Earles
Picturesque Beauties of Great Britain by Thomas Wright
The History of the Countryside by Oliver Rackham

References

Map references by Captain H.G Pelleau (1875)
Essex Topographic Map (current from 1905) (showing elevations of landscapes) and Stisted's Land Character Landscape Areas
Essex Record's Office Chelmsford
Essex Heritage Environmental Records
Stisted's Neighbourhood Plan –Consultation Plan for Stisted Liz Lake Associates Landscape Architects

Map showing highlighted footpaths in Stisted.

Appendix 6 – Archive & Listed Buildings

Stisted Archive.

https://britishlistedbuildings.co.uk/england/stisted-braintree-essex

https://www.stisted-pc.co.uk/stisted-news/stisted-historical-archive/

Appendix 7 – Authors and contributors to this report.

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