

Colney Heath Parish Council (CHPC)

Proof of Evidence

Cumulative Impact

Witness M.F. Rawlins

1.1 Long term harm caused by quarrying in the Smallford area

1.2 How is cumulative impact defined in the planning framework?

National Planning Policy Framework rev 2021 (NPPF).

210. Planning policies should:

f) set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality.

1.3 *211. When determining planning applications, great weight should be given to the benefits of mineral extraction, including to the economy 65. In considering proposals for mineral extraction, minerals planning authorities should.*

1.4 *b) ensure that there are no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality.*

1.5 The NPPF para 211 supports mineral extraction but there should be no unacceptable adverse impacts and the cumulative impact from multiple sites but fails to define what these might be in detail so we must consider additional sources of information.

1.6 Hertfordshire Minerals Plan Adopted March 2007

MINERALS POLICY 11 ~ CUMULATIVE IMPACT

1.7 *Development which would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of minerals developments occurring either concurrently or successively will not be permitted.*

1.8 *4.2 Cumulative Impact*

4.2.1 MPS2 advises that policies should take into account the level of existing activity and impacts, the duration and nature of proposals for new or further working, and the extent of impacts which a particular site, locality, community, environment or wider area of mineral working can reasonably be expected to tolerate over a particular or proposed period. With respect to an individual site, the effect of all relevant impacts (i.e., of noise, dust, traffic, on landscape etc.) should be considered objectively. Impacts that are acceptable individually should not be regarded as unacceptable in combination without a proper assessment. Mineral Planning Authorities should also have regard where relevant to cumulative impacts of simultaneous and/or successive working of a number of sites in a wider area of commercially viable deposits. These may affect communities and localities over an extended period, depending on the nature, age and size of the site(s). (MPS2 para 12)

1.9 *4.2.2 Cumulative impacts will therefore be considered in terms of their spatial and temporal dimensions, as well as the acceptability or otherwise of the impacts arising from the proposed development itself. This will take into account the extent to which the environment could be impacted on by workings, including habitats and species, landscape character, cultural heritage, air quality, ground and surface water resources and quality, agricultural resources and flood risk.*

1.10 *4.2.3 Policy 11 provides an introductory framework for considering cumulative impact in regard to the other policies of this Plan. Cumulative impact will also be taken into account in deciding if a proposal should be subject to an environmental impact assessment.*

1.11 The current Hertfordshire Mineral Plan helps us understand and defines them in more detail, but the draft Hertfordshire Minerals Plan expands on Cumulative Impact therefore we include the following.

1.12 Hertfordshire Minerals Local Plan Proposed Submission January 2019 -

Objective 5. To protect people from harm, positively contribute to local residents' health and the natural, built and historic environments.

1.13 *Cumulative Impact*

12.6 Minerals development can have significant impacts upon the environment and local communities. This can be magnified by simultaneous and/or successive extraction in close proximity, by individual sites which cause numerous significant impacts, or by the extended working of a site resulting in many years of activity in one location.

1.14 12.7 National policy is very clear that cumulative impacts should be a material consideration and that environmental criteria should be set out to ensure that permitted operations do not have unacceptable adverse impacts on, amongst others, the following considerations:

1.15 From the draft Hertfordshire Minerals Plan (currently at pre submission stage) we have copied factors which are considered and we believe constitute long term harm.

1.16 From the list we need to consider those which require consideration as regard to this site and if they contribute to long term harm and/or cumulative impact.

1.17 Hertfordshire draft Minerals Plan: -

- Appearance, quality, and character of the landscape.*
- Biodiversity.*
- Geological interest.*
- Flood risk and flood alleviation*
- Quality of the water courses, groundwater and surface water*
- Best and most versatile agricultural land; and*
- Land stability.*

1.18 Built Environment:

- Delivery of strategic non-mineral Local Plan allocations*
- HGV movements*

1.19 Historic Environment:

- Heritage and archaeological assets; and*

- *Social, cultural, economic and environmental benefits of conservation.*

1.20 *Human Health and General Amenity:*

- *Unavoidable noise, dust and particle emissions and any blasting vibrations and*
- *Public Rights of Way*

1.21 *Transport Networks:*

- *Local roads*
- *Primary Route Networks*
- *Safety and congestion*
- *Additional trip generation; and*
- *Access to and effective operation of the Transport Network*

1.20 *Aviation Safety*

- *Risk of bird strike within the Aerodrome Safeguarding Areas around London Luton Aerodrome and London Stansted Aerodrome.*

1.21 *12.8 The list is not exhaustive and proposals will be appraised with regards to the cumulative impact of a proposal on a site-by-site basis taking into account any sensitive properties in close proximity to the proposal and the management and reclamation of other sites locally.*

1.22 We now consider each topic and if it applies to this site and how we can assess it.

1.23 *‘Flood risk and flood alleviation and Quality of the water courses, groundwater and surface water.’*

1.24 This is being predominantly dealt with by others in detail including the long-term harm from bromate and bromide.

1.25 We need to consider how the impact of bromate applies to this site and over what time scale.

- 1.26 A detailed internet search has failed to find any research carried out in the Hatfield area checking for an increase in cancer rates resulting from bromate, so risk is currently unknown.
- 1.27 Affinity Water are currently using the Hatfield pumping station to purge existing bromate/bromide from the aquifer, this water is lost to the public water supply. No studies have been supplied on the impact of any additional bromate contamination would have on the water resources and supply however unlikely they are claimed to be.
- 1.28 The residents of a wide area could be impacted if additional contamination is discovered, or the contamination is increased as a result of new mineral workings.
- 1.29 When considering the cumulative impact, we need to consider water supply.
- 1) Hertfordshire is in a lower rainfall part of the UK.
 - 2) The impact of Climate change is making summers warmer.
 - 3) The impacts on both the local water supply and north London due to the existence of the New River taking water from the Hertford-Ware area into London. The bromate plume is currently moving broadly in this direction
 - 4) The scale of house building required in the area by LPAs due to the standard methodology. Much of this is along the A414 corridor again to the east follows the direction of the plume. HCC estimate 50,000 new homes along this corridor.
 - 5) Environmental harm, The EA Local environment agency plan Colne action September 1998 identifies that many Hertfordshire rivers are in need of support to maintain flows rates in summer. This includes the river Colne which is to the south of the proposed site and the streams draining the proposed quarry site feed into the river Colne, this includes Ellenbrook. Without support in maintaining summer flow rates species of Water Voles, Kingfisher and Native crayfish are being lost.

1.30 HGV movements

The proposed site has no alternatives to road transport, and as it is supplying all of Hertfordshire and neighbouring authority areas, we need to consider this

factor in relation to the other sites currently operating in the area together with the possible routes.

1.31 The assessment to include distance from houses and peak time congestion.

1.32 ‘Human Health and General Amenity:

- ***Unavoidable noise, dust and particle emissions and any blasting vibrations***
- and***
- ***Public Rights of Way’***

1.33 Noise, dust, and particle emissions have clear and well defined maximum occupational limits however those do not include the impact on local residents so would not be beneficial in our understanding of cumulative impacts, therefore we must consider how long the residents will have to endure higher levels of noise, dust and particle emissions from mineral workings. HCC mineral plan does not assist us in determining time scales.

1.34 Dust and particle emissions from road transport

The long-term harm from this has not been assessed or considered, this harm comes in two forms, dust from spillage lorries leaving the quarry and diesel particulate emissions. The routing of all HGVs along Oakland Lane and St Albans Road (A1057) roads which are broadly residential has the potential to cause long term harm.

1.35 Mineral dust from lorries once deposited on road is blown around by repeated vehicles, the very fine dust is the most harmful.

1.36 Examples

- Oakland Lane lorries leaving Cemex site
- Tyttenhanger landfill Coursers Road despite having wheel washing facilities the road requires regular cleaning.
- Tyttenhanger quarry exit from main processing site on A414

1.37 HSE G404 Health surveillance for those exposed to respirable crystalline silica (RCS)

Although it arises in obviously dusty environments RCS dust is invisibly fine. It is breathed in through the nose and mouth and can stay in the lungs for many years. It can cause irreversible lung damage before any symptoms develop. The illness it causes may continue to worsen even after exposure stops.

1.38 Silicosis

Silicosis is a major disease risk from RCS dust. It causes small hard nodules of scar tissue to develop in the lungs that are seen on a chest X-ray. Silicosis usually takes some years to develop. There is also an acute form of silicosis that occurs at very high exposures. This can start within a short time and can kill within a few months of first exposure.

1.39 The main symptoms are cough and difficulty in breathing. Workers with silicosis are at increased risk of tuberculosis and lung cancer and may also develop kidney disease and arthritis (and related diseases). Those who work with silica may be at increased risk of some of those diseases even if they do not develop silicosis.

1.40 The HSE document highlights the dangers of silica dust but does not help us with safe limits for residents experiencing long term exposure.

1.41 Mortality in the UK industrial silica sand industry

Assessment of exposure to respirable crystalline silica.

T P Brown, L Rushton

1.42 Abstract

Aims: To develop a job-exposure matrix (JEM) from personal and static respirable crystalline silica (RCS) measurements in UK industrial silica sand workers.

1.43 Methods: A total of 2429 personal and 583 static RCS dust samples were collected using cyclone samplers at seven UK quarries between 1978 and

2000. These data were combined, and analysis of variance using general linear models was used to evaluate the effect of quarry, job, and year on RCS concentrations, and facilitate the creation of five quarry and three time categories with similar exposure levels by comparing the least-square GM RCS concentrations.

- 1.44 Results: The overall geometric mean (GM) RCS concentration was 0.09 mg/m³ (geometric standard deviation 3.9). Silica flour and dry job categories tended to have the highest RCS exposure and 13.3% of all samples exceeded the UK maximum exposure level of 0.3 mg/m³. RCS levels generally decreased over time.*
- 1.45 Conclusions: Data have been collected and used to develop a JEM for UK industrial silica sand workers between 1978 and 2000. Although there were some limitations in the data and certain assumptions were made, the use of available data to estimate exposure quantitatively is an improvement over the use of qualitative and surrogate measures of exposure. The continual collection of dust measurements in the industry is essential to facilitate the exploration of exposure-response relations that may exist between silica and silicosis, lung cancer, and other diseases.*
- 1.46 The United States OSHA Occupational Safety and Health Administration also identifies the risks from silica dust when excavating sand (OSHA Fact sheet Control of silica in construction).*
- 1.47 Decision Statement Bengo quarry APP/M1900/W/17/3178839 3rd January 2019*

Para 209 Dr Laura Horsfall (local resident and Senior Epidemiologist University College London) 107

During the time children spend at school (from 2 to 11 years) their lungs will double in size. This is a critical window of respiratory development, where even small environmental insults, such as chest infections, can have significant short and long-term impacts on health and wellbeing. Dust and

particulate matter, including carcinogenic silica would increase as a result of the quarry and there are no known safe levels of these pollutants. The HIA refers to sufficient evidence to establish the potential for the activities to affect health, but the IAQM states that there is little peer reviewed published literature on the impacts of dust from UK mineral sites.

- 1.48 *The HIA includes no studies that can guarantee the safety of mineral extraction on the immature lungs of children or vulnerable people. Almost all the data on silicosis is from young physically fit male workers and cannot be generalised.*
- 1.49 Evidence given at the Bengoe quarry inquiry suggested that there are no safe limits and that any level of silica dust is harmful.
- 1.50 Public Rights of way** – this is defined as a contributory factor to cumulative impacts but lacks any detail, so we need to consider this further.
- 1.51 The relationship of the site to other developments and the built environment, restrictions on access to the wider countryside.
- 1.52 As the current recommendation for adults is 10,000 steps per day, we should consider the areas available. The proposed site is currently open space - country park, we should consider alternatives and the impact on all generations.
- 1.53 The covid epidemic highlighted the importance of tranquil exercise. The area around Smallford and Ellenbrook having strong urbanising influences, the impact of rural areas becomes even more important for maintaining mental health and wellbeing.
- 1.54 Warwick University-
Green space is good for your mental health – the nearer the better!
First study to demonstrate relationship between green space and mental wellbeing at an individual level published Using data from 25,518 people, the

researchers show that Londoners who live within 300m of green space have significantly better mental wellbeing.

- 1.55 Proximity to green space was more important than lifestyle factors such as employment, income, and general health.*
- 1.56 It is hoped that planners will use the results to help create a healthier, happier and more productive urban landscape.*
- 1.57 Living within 300m of urban green space such as parks, nature reserves or play areas is associated with greater happiness, sense of worth, and life satisfaction - according to a new study by researchers at the University of Warwick, Newcastle University and the University of Sheffield.*
- 1.58 It has long been understood that individuals feel positive emotions when exposed to natural environments, and successive Governments have enshrined this in planning guidance – but how much green space is needed and how close does it need to be to people’s homes to make a difference?*
- 1.59 The study, published in the August issue of Applied Geography, found: -*

Overall there is a very strong relationship between the amount of green space around a person’s home and their feelings of life satisfaction, happiness and self-worth
- 1.60 Green space within 300m of home had the greatest influence on mental wellbeing*
- 1.61 An increase of 1 hectare – about the size of an international Rugby Union pitch – within 300m of residents was associated with an increase of 8 percentage points in a life satisfaction, 7 in worth and 5 in happiness.*
- 1.62 Green space was less important for mental wellbeing in Central London and East London*

1.63 Transport Networks:

- Local roads;
- Primary Route Networks;
- Safety and congestion;
- Additional trip generation

1.64 The Hertfordshire Minerals Plan identifies the types of roads to be considered but fails to define over what time scale it should apply. We need to consider the number of roads which have and would be impacted as the result of the scale of mineral workings in the area and how this would impact on the residents and over what time scale.

1.65 The Hertfordshire Minerals Plan helps us understand cumulative impacts and now we consider Brett's statements

1.67 Brett CUMULATIVE IMPACTS 13 –

13.9 Cumulative impacts may therefore result from a number of situations:

- *the interaction or proximity of two or more current quarries (not necessarily for the same type of mineral) or developments of a similar nature;*
- *the continuation of a particular working over time through successive extensions;*
- *the interaction or accumulation of different impacts at one site, affecting a range of sensitive receptors; and*
- *a combination of the above scenarios.*

1.68 LAND USE

Other Mineral Sites

1.69 *13.10 Hatfield Quarry, operated by CEMEX, lies to the north of the application site.*

- 1.70 *The processing plant is located off Oaklands Lane, approximately 200m to the west of the application site, whilst the extraction area (based on Google Earth) is located adjacent to Symondshyde Great Wood, around 1000m to the north of the application site. There are no other mineral operations in the immediate vicinity of the application site.*
- 1.71 *13.11 It is understood that the extant planning permission for Hatfield Quarry expires in October 2020 and as such, given the lead in time needed to establish the quarry at Hatfield Aerodrome, there would be little overlap of operations (estimated at around two years). As such the potential for there being significant cumulative impacts is low. Notwithstanding this, consideration has been given throughout the EIA to the potential for cumulative impacts to arise.*
- 1.72 *13.20 Also the Hatfield Quarry plant site area and associated elements and features (fencing, bunds and conveyor) are expected to be removed as part of the cessation of mineral extraction at the site in c. 2020, at which point there would be no cumulative visual effect of concurrent working with the proposed development.*
- 1.73 *13.21 The other potential cumulative visual effects are of a sequential nature, for example users of the road network or recreational visitors moving along the rights of way. However, this is also considered to be limited and mitigated by the existing urban fringe character of area, the limited duration of operations at Hatfield Quarry and the nature of the proposals at the application site, as described above.*
- 1.74 Brett's statement acknowledges that two mineral works (Cemex and the application site) in close proximity would be considered cumulative impact (13.9/13.10).
- 1.75 Brett's statement also implies that plants sited together with associated infrastructure of quarry works would be considered a cumulative visual effect.

1.76 Time Scale

We need to consider time scale in relationship to cumulative impact as neither the NPPF nor Hertfordshire Mineral Plan assist us on this matter.

- 1.77 Concurrent – then we should consider the impact from all sources within the area.
- 1.78 Consecutive – the total time (years) since the start of operations from the first site to the completion of operations on the last site within a defined area.
- 1.79 From Brett CUMULATIVE IMPACTS 13 submission they feel that 2 years is marginal as to its contribution to a cumulative impact, therefore one must infer their view is anything significantly longer than 2 years would contribute to a greater degree to cumulative impact.
- 1.80 The average life expectancy in England is currently approximately 80 years so any event lasting 80 or more years must be regarded as very significant impact.
- 1.81 With the average life expectancy of 80 years even 40 years must be regarded as a significant impact.

1.82 Location

We need to consider size and distance in relationship to cumulative impact again as neither the NPPF nor Hertfordshire Mineral Plan assist us on this matter.

- 1.83 When considering cumulative impact, we need to consider the traffic routes, location of homes, surrounding area and the access to areas denied by the quarry. The physical as well as the visual relationships and how these impact on the residents.

1.84 Weight given to Cumulative impact

Decision notice Secretary of State letter Bengo quarry
APP/M1900/W/17/3178839 dated 4th April 2019.

1.85 *Amenity and living conditions*

22. The Secretary of State has carefully considered the Inspector's reasoning at IR389-402 and agrees with his analysis. Overall the Secretary of State agrees with the Inspector that the appeal scheme would have an adverse effect on the living conditions of residents and on the amenity of the area which carries moderate weight against the proposal and would not accord with MLP Policy 18(viii) or with the aim of the NPSE to avoid significant adverse impacts on the quality of life (IR394, 402, 433, 442).

1.86 Planning Guidance - Minerals

How should mineral planning authorities assess the cumulative impact of minerals development?

1.87 Some parts of a mineral planning authority area may have been subjected to successive mineral development (such as aggregate extraction or surface coal mining) over a number of years. Mineral planning authorities should include appropriate policies in their minerals local plan, where appropriate, to ensure that the cumulative impact of a proposed mineral development on the community and the environment will be acceptable. The cumulative impact of mineral development is also capable of being a material consideration when determining individual planning applications.

Paragraph: 017 Reference ID: 27-017-20140306 Revision date: 06 03 2014

1.88 The Bengo quarry decision notice together with Planning Guidance state that cumulative impact should be a material consideration when determining individual applications and from the Secretary of States view should carry moderate weight.

2.1 Why is Ellenbrook a Hertfordshire Mineral Plan Preferred Site?

HERTFORDSHIRE MINERALS LOCAL PLAN REVIEW 2002-2016 Adopted March 2007

2.2 MINERALS POLICY 11 ~ CUMULATIVE IMPACT

Development which would result in an unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of minerals developments occurring either concurrently or successively will not be permitted.

2.3 Preferred Area 1 Land at former British Aerospace, Hatfield. Page 74 MLP

The proposed site is identified as being within a preferred area. The review highlights the risks from bromate although no indication is given, or analysis undertaken as to any other possible cumulative impacts therefore it is impossible to understand how it meets policy 11 and therefore why this site is included as preferred site.

2.4 The still active Cemex quarry adjoins the preferred area 1 and the EA map shows numerous historic landfill sites in the Smallford area.

2.5 The cumulative impact would be that two adjoining sites had been operating since 1960s (Cemex) until mid-late 2050s – over 90 years if permission is granted, together with the long history of mineral working in Smallford area.

2.6 Analysis of the individual sites identifies the following criteria which raises concerns if this site meets the policies in Hertfordshire Mineral Plan.

- Appearance, quality, and character of the landscape.
- Quality of the water courses, groundwater and surface water

2.7 Built Environment:

- HGV movements

2.8 Human Health and General Amenity

- Unavoidable noise, dust and particle emissions and any blasting vibrations

and

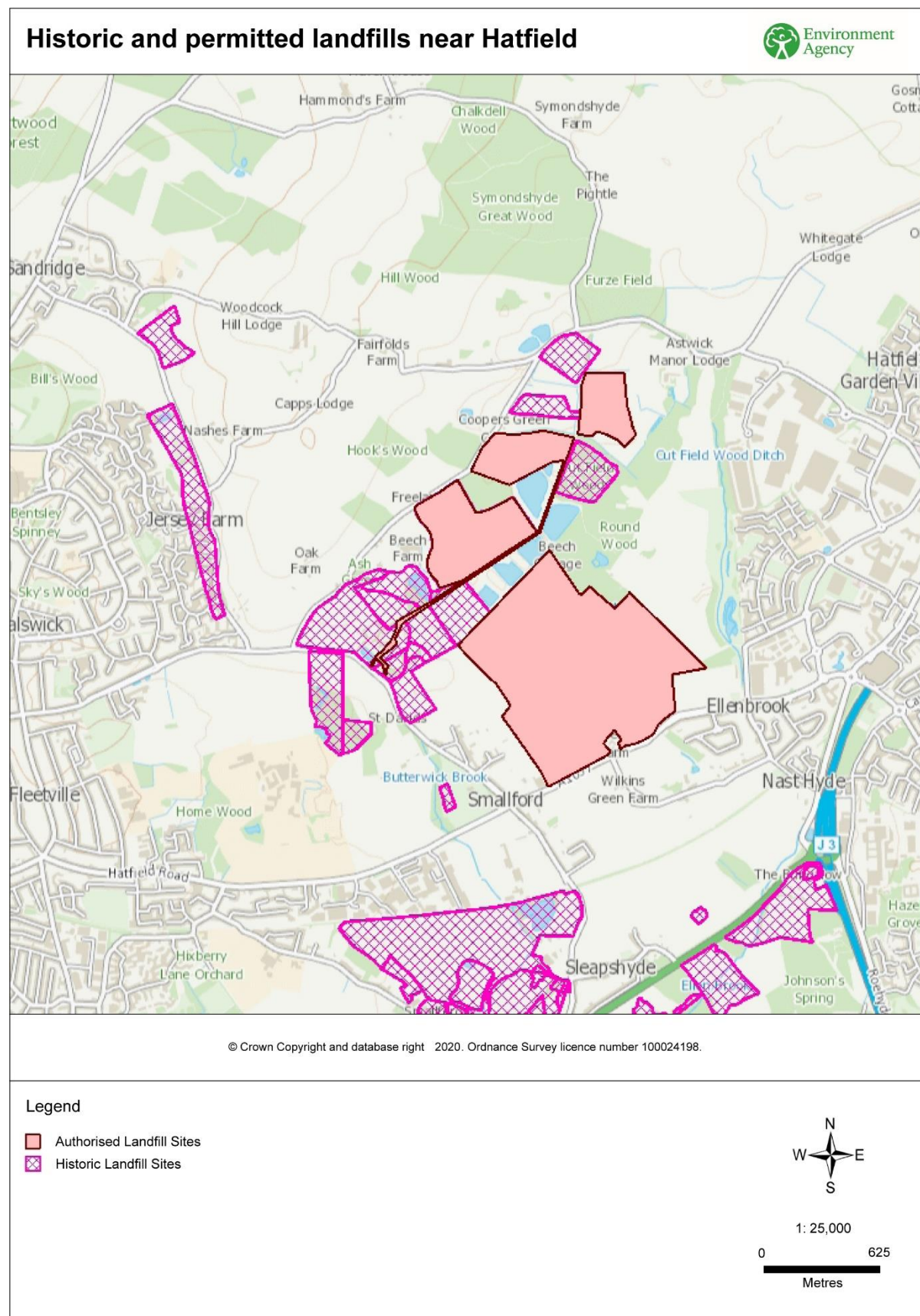
- Public Rights of Way

2.9 Transport Networks

- Local roads
- Primary Route Networks
- Safety and congestion
- Access to and effective operation of the Transport Network

2.10 The detailed analysis of the impact of each minerals site on Smallford and Ellenbrook settlements is set out below.

3.1 Smallford



3.2 Quarries within the locality and operational timescales

Smallford Pits active 1930s to September 1976 including backfilling, it should be noted the low standard of reinstatement on this site resulting in restrictions on its use are still in place.

3.3 Hatfield Quarry (Cemex) active from 1960s and still a working quarry with permission granted for approximately another 10 years. We need to include all sub sites connected with the main quarry as all the traffic and much of the dust and particulates from lorries come through Smallford.

3.4 The impact on rural amenities, exercise and relaxation while working close to the village had a significant impact, but now these areas have been reinstated to good standard. The processing area together with related ponds has had an industrial impact on the landscape but is reducing as the landscape planting has matured. Access is still impacted by the quarrying activities.

3.5 Oaklands Quarry (rear of St David's) pre 1940 little is known about this site but has been active close to the village.

3.6 Former Hatfield aerodrome site (proposed site) would run along the eastern side of much of Smallford village. Proposed to operate for 30-40 years depending upon current demand. The impacts on the village would be traffic, noise, dust and reduced access to the countryside.

3.7 Impacts on Smallford village

Location of nearest homes & distance to edge of proposed site

Station Road 137m

Oakland Lane 220m

Jove Gardens 125m

Radio Nurseries (under development) 100m

Popefield Farm (St Albans Road) 45m

3.8 Local facilities and distance to edge of the proposed site

Three Horseshoes PH outdoor sitting area 75m

Notcutts Garden Centre 15m

Jove Garden green space 15m

Radio nurseries green space 15m

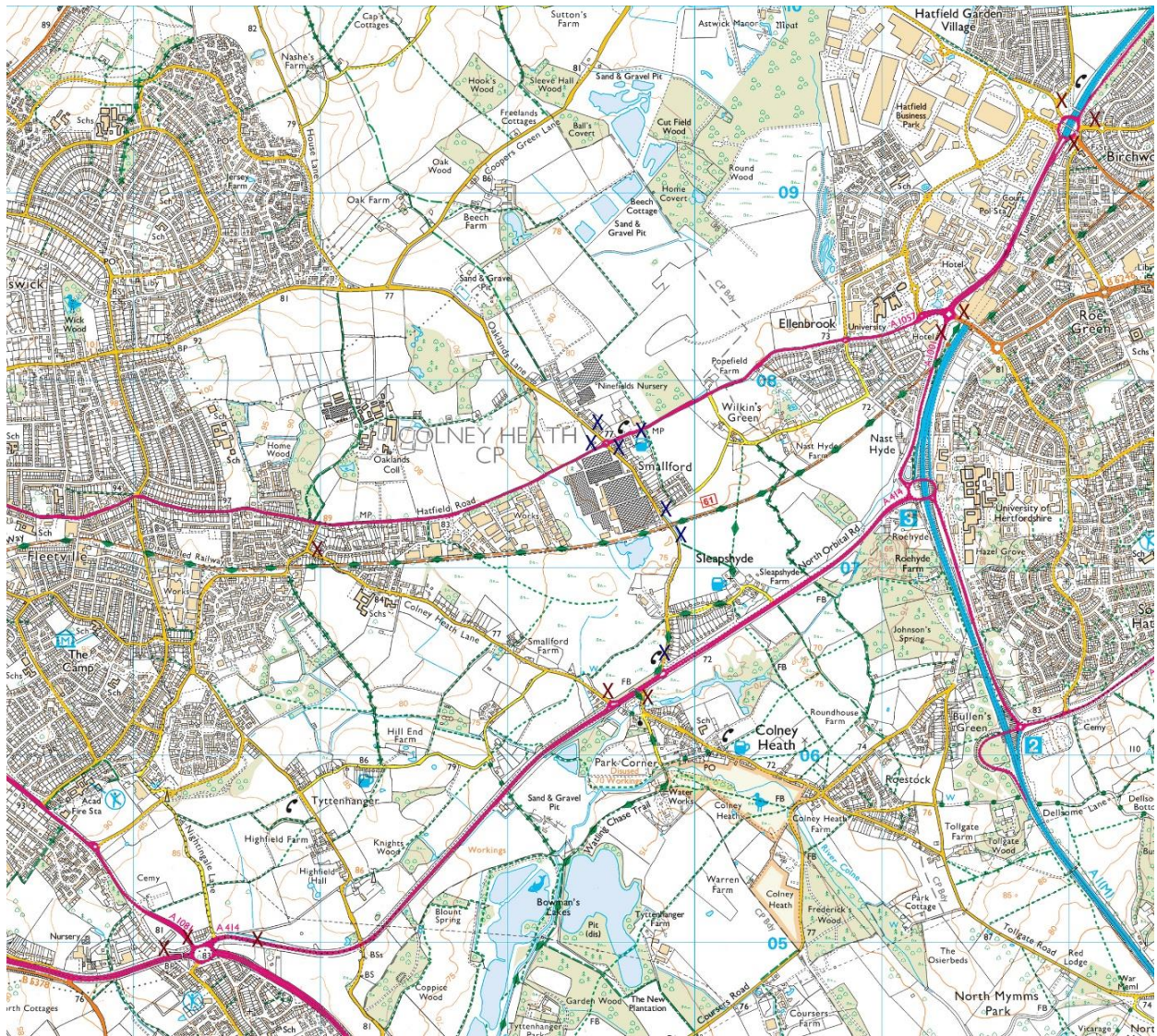
3.9 Dust and Vehicle particulates

The applicants statement states that little dust is expected beyond 250m from the site but as shown above there are a number of homes and community facilities within this radius.

- 3.10 No assessments have included dusts from vehicle spillage despite evidence of its occurrence along Oaklands Lane nor any longer-term harm to residents health.
- 3.11 The assessments are for dust levels resulting from the proposed work and so do not account for any longer-term harm resulting from dusts from other or previous sites.
- 3.12 No tests or assessment has been completed for crystalline silica dust resulting from the proposed quarry nor the existing quarries despite this being known as possible hazard. The assessment completed was for all <10um dust with mean daily levels quoted. The assessment failed to include any evidence as to the longer-term harm resulting from many tens of years exposed to crystalline silica dust.

3.13 Traffic

Due to weight limits through St Albans most of the traffic from Hatfield quarry (Cemex) must travel through Smallford and traffic from the proposed quarry due to the same restrictions travel to the edge of the village. Considerable dust is visible along Oaklands Lane and this harmful invisible dust particulates must be considered.

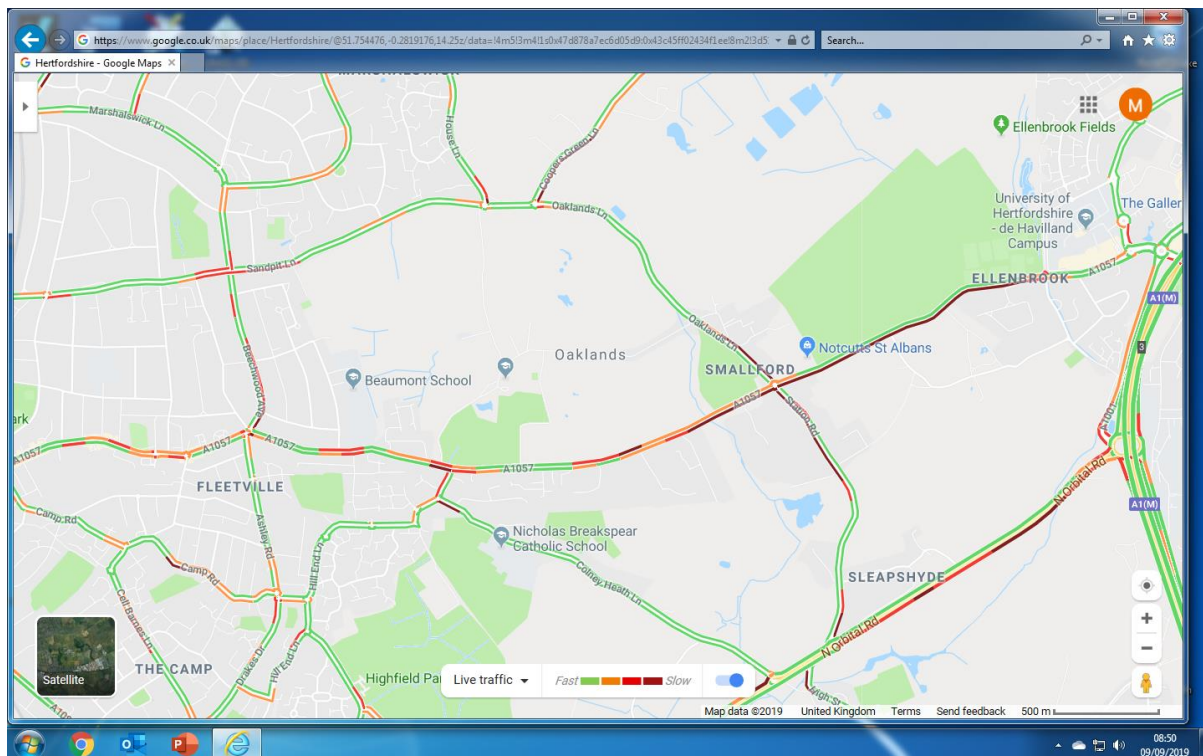


Map showing location of weight limits signs in St Albans and Hatfield area

Key- X 7.5 tons

X 3 tons axial limit

3.14 Peak time delays also have negative impact on residents and increase vehicle emissions.



Google traffic screen shot 9th September 2019 showing delays in Smallford.

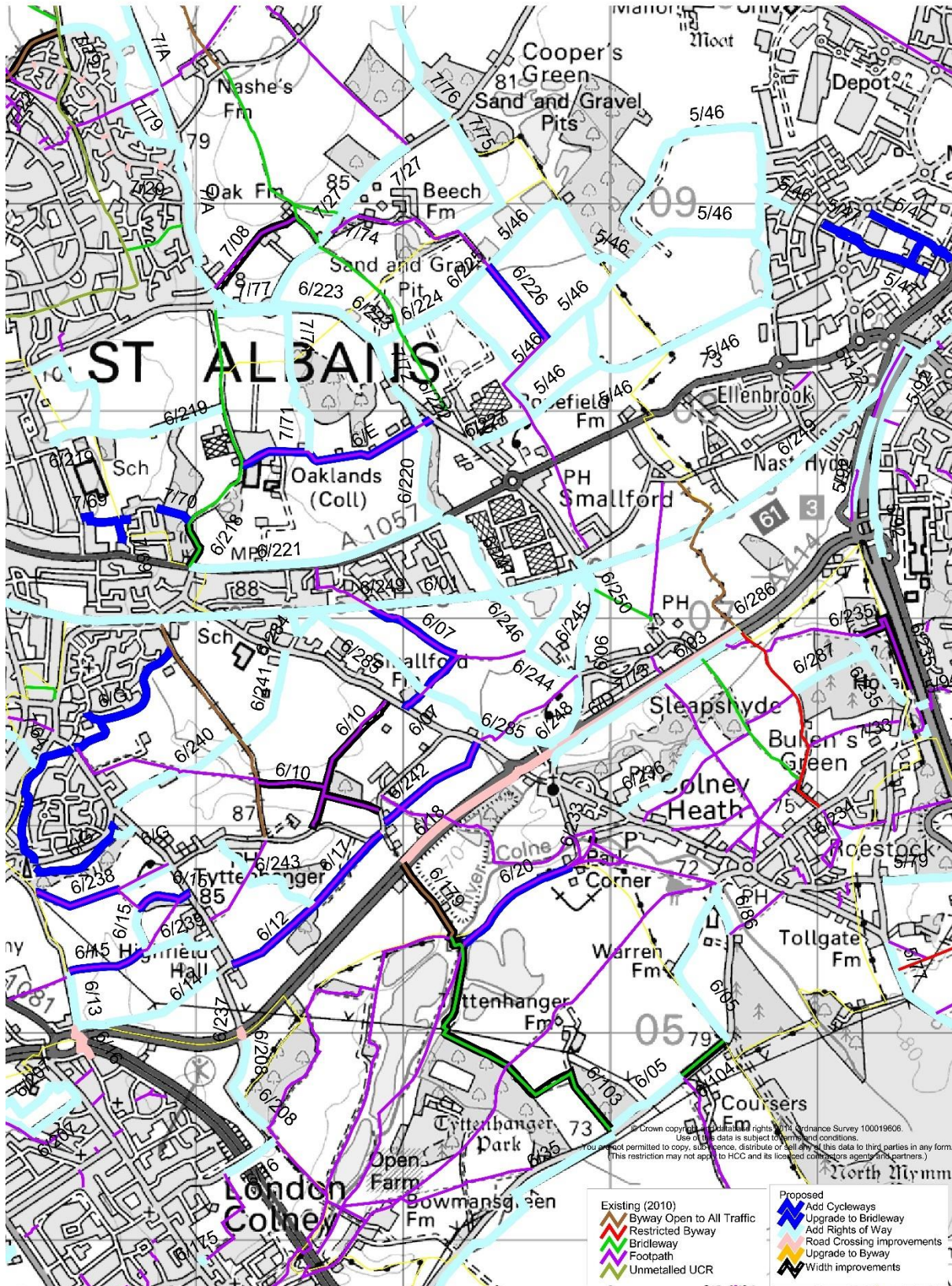
3.15 The data we have found and collected shows significant peak time delays along this road. The A1057 already has planning approval for up to 425 HGV movements per day when added with the proposed site 174 would take the quarry related HGV trips up to 599 per day or 1 lorry every 66.6 seconds throughout the working day from 7.00am to 6.00pm for what is substantially a residential road the impact would be very significant. (See CHPC proof of Evidence Highways and Traffic)

3.16 Access to countryside for exercise and relaxation

We need to consider the landscape around Smallford. To the northwest of the village lies a sports field then Oaklands College with its farmland, this area has restricted access walkers only being able to use North South and East drives. Other than South Drive the route through the college has an urbanised feel due to the college buildings, houses along the drives and the distant views of the businesses along Hatfield Road (A1057).

- 3.17 To the northeast of Smallford is the proposed site with Cemex site beyond. This is the most rural area near Smallford and is popular with residents for walking. Despite adjoining the Hatfield quarry, it has many routes heading in north-easterly direction. This area has suffered from historic loss of access due to active quarrying areas and continues to do so in the area of lagoons. Restrictions in routes due to path closures. Loss of visual amenities due to processing plant.
- 3.18 The area to the southeast is rural and is accessed via Alban Way. Alban Way is a combined pedestrian and cycleway many pedestrians feel uncomfortable using it due the high-speed cyclists. Beyond Alban Way are the Smallford Pits which while open still have considerable restriction on the activities permitted.

Colney Heath RoWIP - September 2014



Rights of way map, some routes are still proposed so still yet to be opened.

3.19 Bromate & water supply

Concern has been raised about the possible impacts from bromate in the water supply pre 2005 in the wider Hatfield area and any increase in cancer rates, but we are unable to find any studies to confirm or disprove this.

3.20 In the event of contamination of the water supply by bromate the impact has not been assessed therefore it remains a major concern to the residents of the area.

3.21 The residents could then stand the risk of prolonged water shortages until alternative supplies are brought online.

3.22 Ellenbrook residential area

Hatfield Quarry (Cemex) active from 1960s and still a working quarry with permission granted for approximately another 10 years. We need to include all sub sites connected with the main quarry as all the traffic and much of the dust and particulates from lorries come through Ellenbrook.

3.23 The processing area together with related ponds has industrial impact on the landscape but is reducing as the landscape planting has matured. Access is still impacted by the quarrying activities.

3.24 **Former Hatfield Aerodrome site (proposed site)** the site is to the northwest of the residential area of Ellenbrook. Proposed to operate for 30-40 years depending upon the then current demand. The impacts on residents would be traffic, noise, dust reduced access to the countryside.

3.25 **Smallford Pits** active 1930s to September 1976 including backfilling, it should be noted the low standard of reinstatement on this site resulting in restrictions on its use are still in place.

3.26 Impact on Ellenbrook

Distance from nearest houses to edge of site

St Albans Road 45m

Local facilities and distance to edge of the proposed site

University of Hertfordshire sport pitches 5-10m

Open space Ellenbrook Crescent 440m

Ellenbrook Recreation Ground and Play Area 610m

3.27 Dust and Vehicle particulates

The applicants statement states that little dust is expected beyond 250m from the site but as shown above there are a number of homes and community facilities are within this radius.

3.28 No assessments have included dusts from vehicle spillage despite evidence of its occurrence along Oaklands Lane and Tyttenhanger quarry nor any longer-term harm to residents' health.

3.29 The assessments are for dust levels resulting from the proposed work and so do not account for any longer-term harm resulting from dusts from other or previous sites.

3.30 No tests or assessment has been completed for crystalline silica dust resulting from the proposed quarry nor the existing quarries despite this being known as possible hazard. The assessment completed was for all <10um dust with mean daily levels quoted. The assessment failed to include any evidence as to the longer-term harm resulting from many tens of years exposed to crystalline silica dust.

3.31 Traffic

Due to weight limits through St Albans most of the traffic from Hatfield quarry (Cemex) must travel along St Albans Road (A1057) through Ellenbrook and traffic due to the same restrictions traffic from the proposed quarry through Ellenbrook (see map above). The impact from harmful invisible dust particulates must be considered.

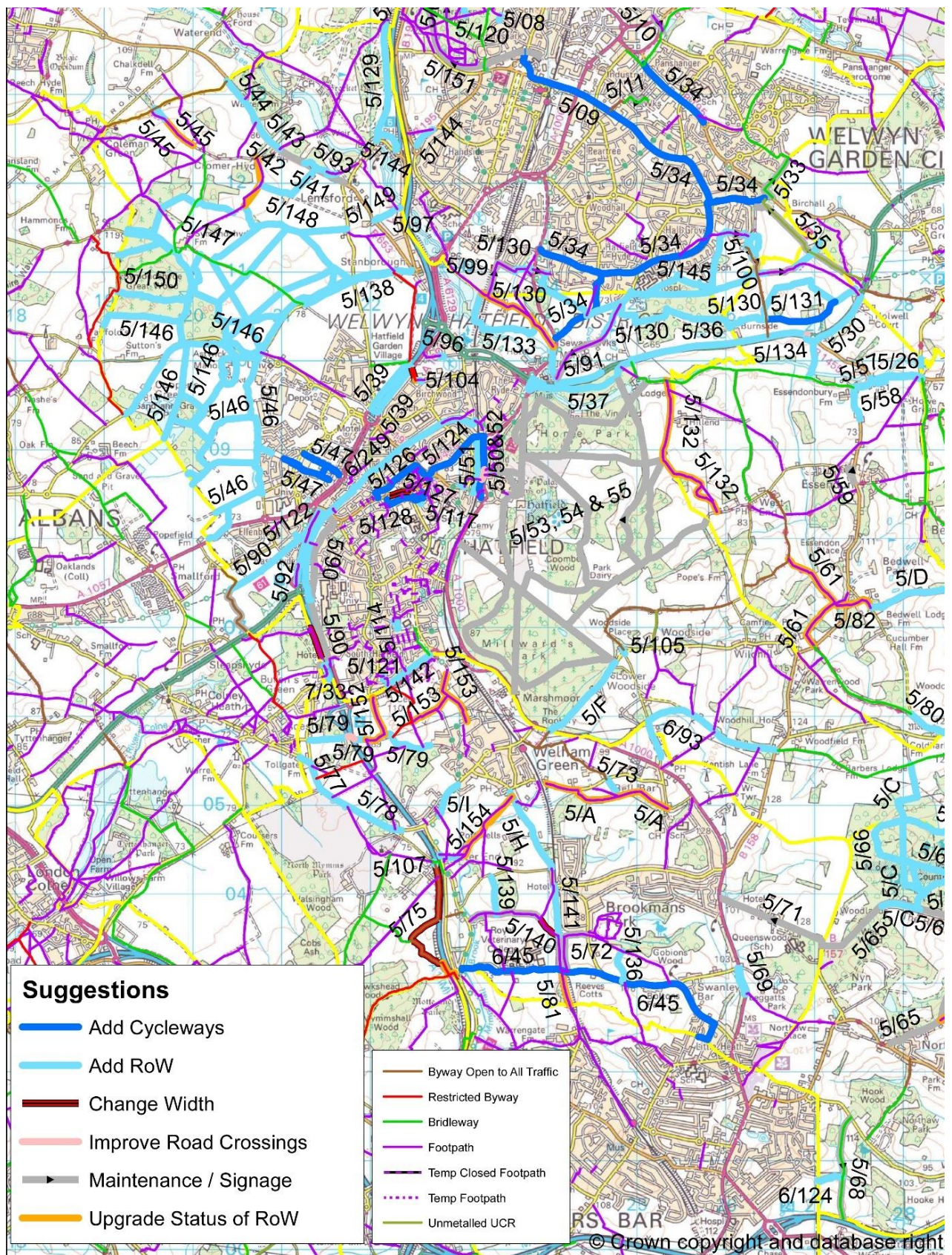
3.32 Peak time delays also have negative impact on residents and increase vehicle emissions (see image in Smallford review).

3.33 The data we have found and collected shows significant peak time delays along this road. The A1057 already has planning approval for up to 425 HGV movements per day when added with the proposed site 174 would take the quarry related HGV trips up to 599 per day or 1 lorry every 66.6 seconds throughout the working day from 7.00am to 6.00pm for what is substantially a residential road the impact would be very significant. (see CHPC proof of evidence Highways and Traffic)

3.24 Access to countryside for exercise and relaxation

The area surrounding Ellenbrook is heavily urbanised with university buildings and sports field to the north. To the east just beyond the residential area is A1M with Hatfield beyond. The area to the south is rural and is accessed via Alban Way which is combined pedestrian and cycleway, however some pedestrians feel uncomfortable using it due the high-speed cyclists. Beyond Alban Way are open fields which have limited footpaths (see Smallford review rights of way map) Smallford Pits approximately 1850m away which while open still have considerable restriction on the activities permitted.

3.25 The area to the northwest is currently a country park but is on the proposed quarry site currently under consideration. The country park offers a large area for walking and relaxation but if the quarry was approved would be negatively impacted for 30-40 years and beyond that due to time it would take any new planting to establish.



Rights of way map includes proposed (part of Welwyn Hatfield)

3.26 Bromate & water supply

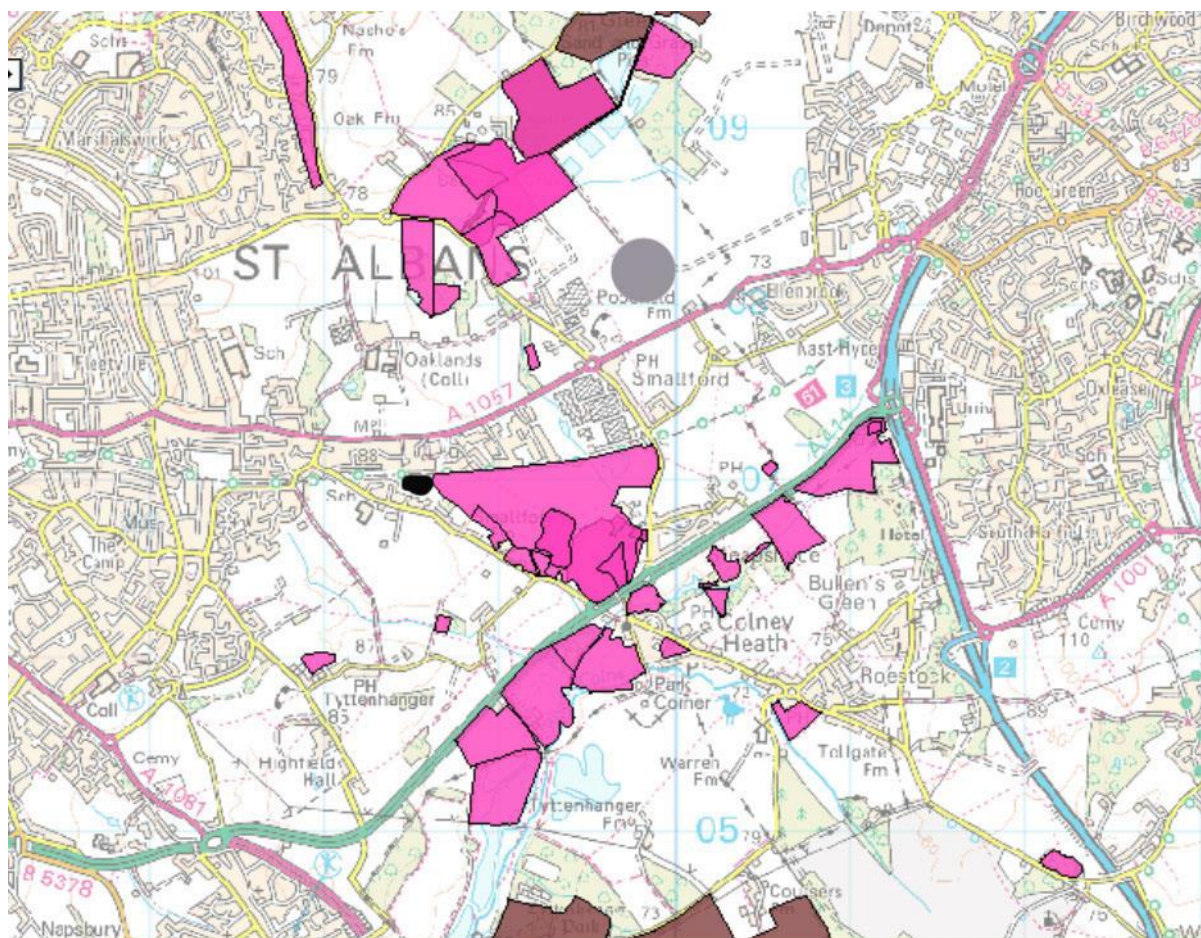
Concern has been raised about the possible impacts from bromate in the water supply pre 2005 in the wider Hatfield area and any increase in cancer rates, but we are unable to find any studies to confirm or disprove this.

3.27 In the event of contamination of the water supply by bromate the impact has not been assessed, therefore it must remain a major concern to the residents of the area.

3.28 The residents could then stand the risk of prolonged water shortages until alternative supplies are brought online.

4. Locations of Quarries considered

4.1 Map of historic landfill sites within the Smallford area.



Key - Pink historic site no longer active,

Black historic site not recorded on the EA website but confirmed by multiple sources,

Brown active landfill sites (2017)

Grey dot is centre of the proposed site.

4.2 Map of historic and current landfill site within/adjoining Colney Heath Parish (Environment Agency (EA) website, (now taken down) downloaded 2017) The areas in black has been added to mark the location of Swans Pit this was not on EA map but added by us, we do not have an alternative image.

4.3 Smallford Pits



Aerial photo c1939 showing Colney Heath pits bottom left, A414, then in the centre of photo Smallford pits the glasshouse of Glinwells and Smallford on the right. The top righthand corner shows quarrying at rear of St David's.

- 4.4 Smallford Pits, now owned by Hertfordshire County Council (HCC), to the south of Smallford quarried pre 1939 evidenced by 1939 aerial photos and still not fully reinstated.
- 4.5 Mineral working started in the mid-1930s the exact date is not known but by 1939 the working was well established as can be seen from the aerial photo. These sites were former gravel pits filled with commercial, household, and inert waste from 7th September 1945 to 8th September 1976. During the early phase of the back filling mixed waste from London was dumped on the site.

- 4.6 The standard of backfilling is very variable with much of the site still showing sign of construction waste. Access is still restricted to the paths with hazard notices on some routes.
- 4.7 The exact makeup of the material dumped is not known but the site still has signs warning people not to sit or lay on the ground. No active reinstatement is taking place.
- 4.8 The routes used by lorries is not known but residents had restricted access during the active phases mid 1930s until September 1976, and still have some restrictions due to the nature of the backfilling approximately 85 years from the commencement of work.



Smallford Pits image taken 20/02/2020 from near Alban Way looking southeast.



Smallford Pits showing construction waste image taken 29/02/2020 from rear of Smallford Work looking north.



Smallford Pits health & safety warning sign image taken 29/02/2020 mid way between Lyon Way and Colney Heath Lane.

4.9 Cumulative impacts

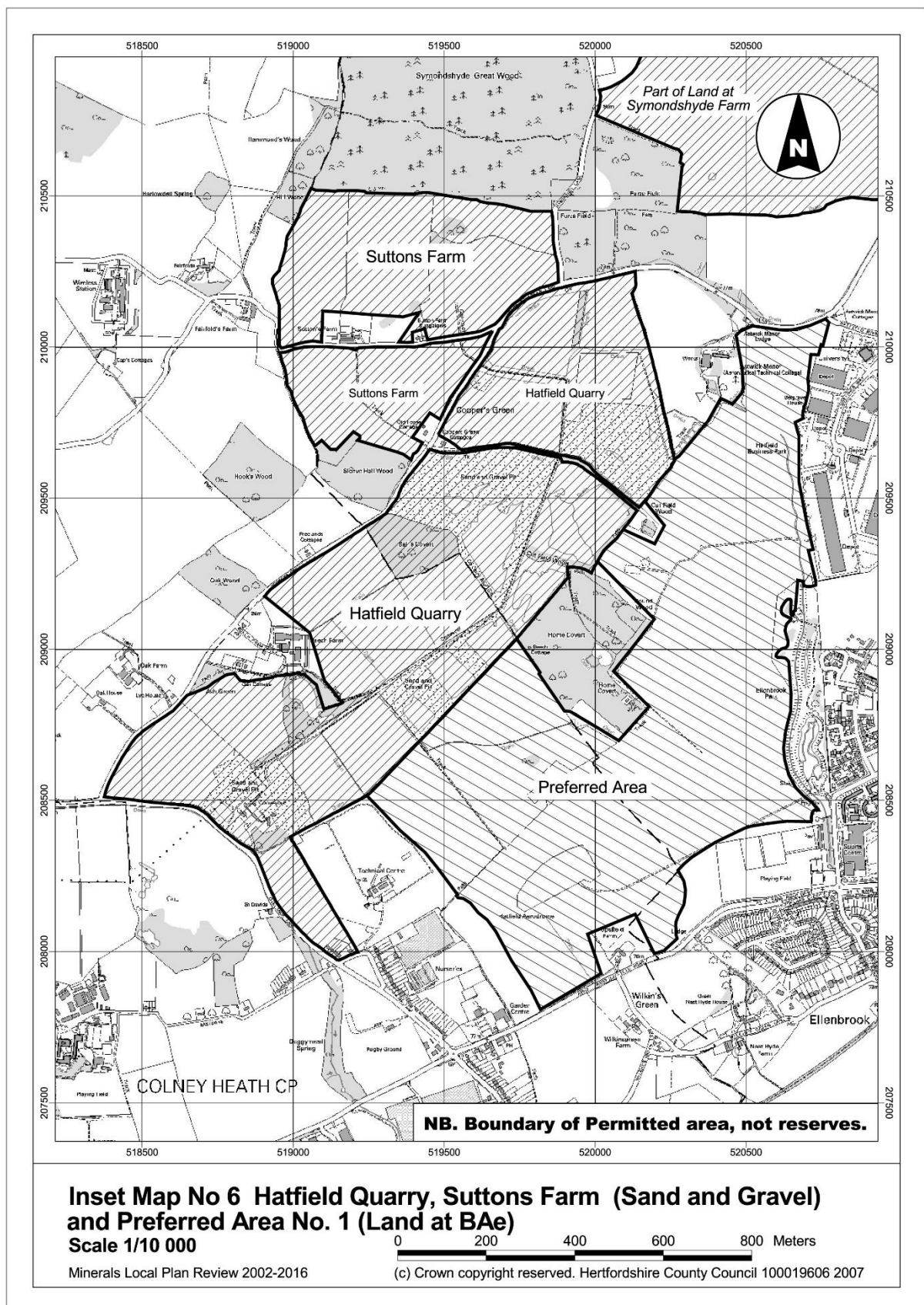
Traffic – mid 1930s to 1976 full routes are not known.

Cumulative impact from traffic about 40 years.

4.10 Loss of amenity – Access has been restricted from 1930 to 1976 due to quarrying followed by backfilling or tipping operations. From 1976 to the present day many activities are still restricted due the current state of site as identified by the warning signs and site inspection. It is acknowledged that the site is slowly recovering now, but some activities remain restricted.

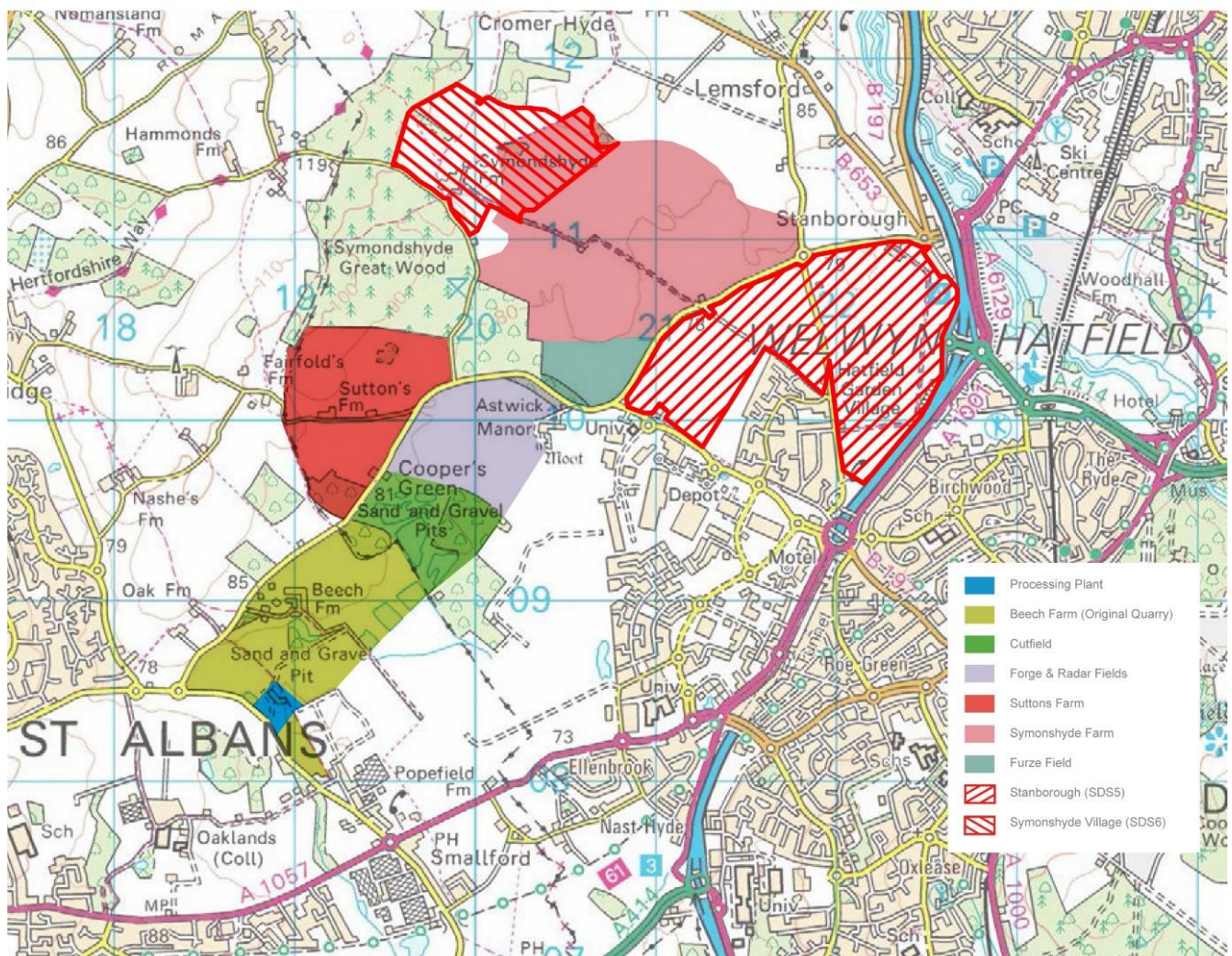
4.11 Cumulative impact loss of amenity minimum 70 years but still significantly restricted 85 years after quarrying commenced.

4.12 Hatfield Quarry (Cemex)



Map from Minerals plan showing relationship between Hatfield quarry (Cemex) and the proposed site together with the close relationship to Smallford dwellings.

Mineral sites associated
with the Hatfield Quarry



4 Mineral Extraction | Stanborough and Symonshyde Strategic Allocations

Map show the location of the Cemex Plant in relation to Smallford together with the quarry phasing of the area. Ref. Gascoyne Cecil Estates Mineral Extraction.

- 4.13 Cemex Hatfield (Oaklands Lane, Smallford) Work started in 1960s on this site and is still an active quarry site with mineral processing facilities, bagging plant and concrete mixing plant.
- 4.14 The current quarry operations are some distance to the northeast of Smallford and minerals are carried to the plant by conveyor. The earlier workings were much nearer to Smallford as shown on the EA map. Most of the output from this site must go through Smallford due to 7.5-ton weight restrictions on roads in St Albans & bridge over the Alban Way.

4.15 Brett in their planning application stated that quarrying at the Cemex site would cease by 2020 but Cemex have gained additional land and a time extension ref. 5/0963-18 approved in 2020 lasting 10 years so will be quarrying longer than stated until the early 2030s and would overlap with Brett if consent granted.

4.16 As Cemex already have approval for extraction until 2030 on its new working area which are all processed via Oaklands Lane.

4.17 Cumulative impacts

Water supply –

Working mineral area above the area of the contaminated aquifer but only as deep as the first mineral horizon. A very strict monitoring regime is in place, and despite the care, residents are concerned about any risks to the water supply.

4.18 **Traffic** – most lorries must enter and leave the site via Oakland Lane Smallford and the St Albans Road (A1057) Ellenbrook due to weight restrictions in St Albans and Station Road Smallford.

Cumulative impact lorries on using one route through Smallford and Ellenbrook from 1960s to 2030 a period of 75 years.

4.18 **Dust and noise** – dust from quarrying when areas along Oaklands Lane and adjoining the village were worked. Dust from vehicles since 1960s and continuing today, and this will continue as the only HGV access is via Smallford/Ellenbrook unless delivering inside the St Alban weight limit zone.

Cumulative impact dust and noise from 1960 to 2030, 75 years.

4.20 **Loss of Amenity** – Due the business units along Hatfield Road (A1057) and the restricted access to land of Oaklands College the area to the north and east of the village are some of the prime areas for exercise and relaxation for residents of Smallford. The access and visual impacts have changed with the phases of quarrying started in 1960s and still continues.

Cumulative impact from 1960 to 2030, 75 years.

4.21 Swans Pit

Swans pit in a sub area adjoining Smallford Pits and has been reinstated but this is not shown on any Environment Agency Land fill maps. In our view would not have significant impact on Smallford.

4.22 Oakland College (rear of St David's)

This is also on Oaklands Lane opposite to the current Cemex site. Little is known about the history of this site. It was worked pre-1940 and shows clearly in 1939 arial photo EPW011643. The site is also recorded on the EA website as backfilled land.

Cumulative impact

Quarrying all factors - pre-1940-time scale not known.

4.23 Colney Heath & Roehyde (A414)

Active pre 1939, now back filled 16th April 1947 - 30th November 1966 Colney Heath pit and 16th June 1977 - 15th October 1984 Roehyde pit. While the working had limited impact on Smallford, the resulting traffic had an impact on the wider area.

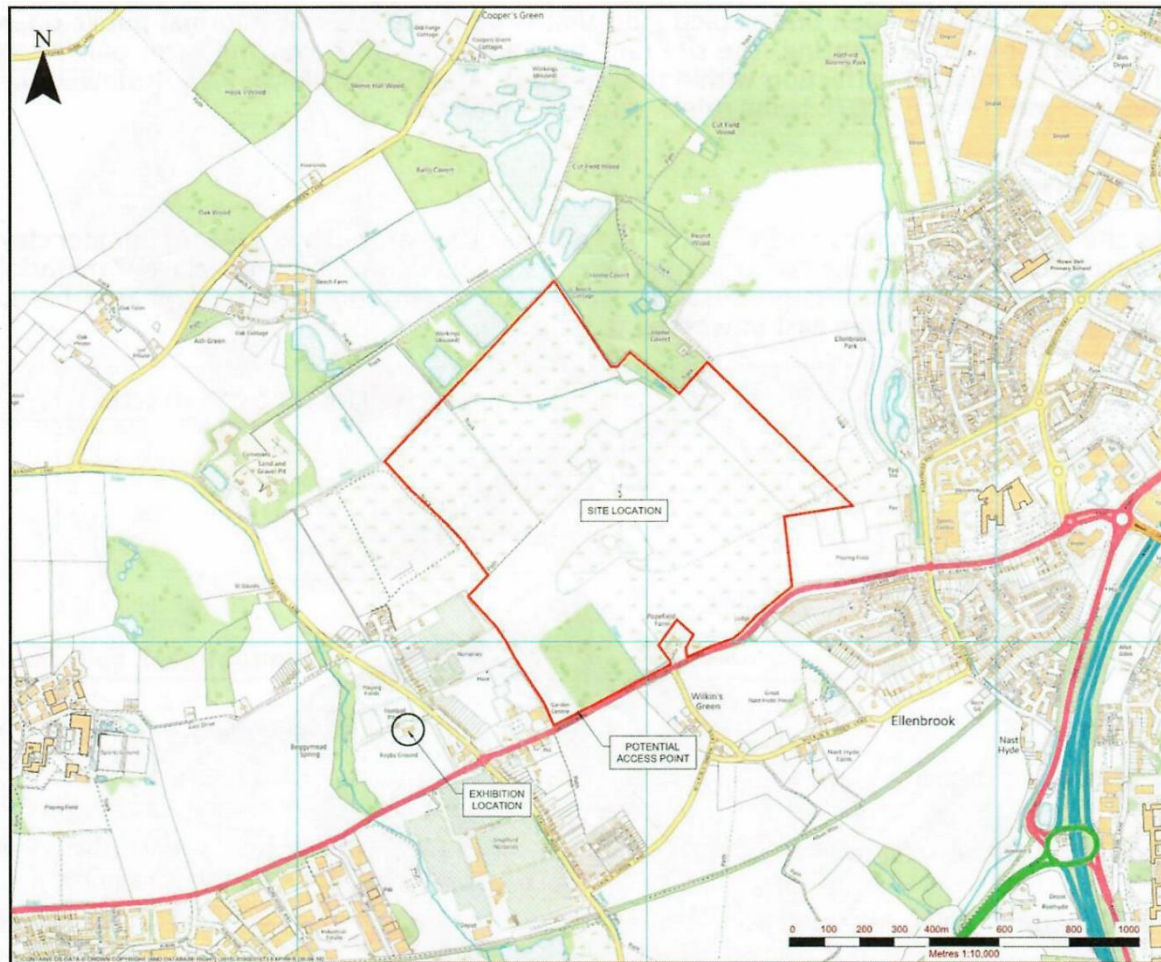
4.24 Colney Heath - Church Lane

An old quarry site now fully backfilled. In our view would have had limited impact on Smallford.

4.25 Tyttenhanger Pits

Large scale active workings, limited impact on Smallford but a significant impact on traffic on A414 including A414 A1M junction Hatfield south or the University roundabout and dust from lorries leaving the main site.

4.26 Proposed Quarry at former Hatfield Aerodrome (the appeal site)



Brett published site map showing its relationship to the residential area of Smallford and Ellenbrook.

4.27 Cumulative impacts

Traffic – The proposed route for HGV uses A1057 St Albans Road from Smallford to Hatfield via Ellenbrook. The A1057 is currently also used for most of the heavy traffic leaving and entering Hatfield quarry (Cemex) due to weight limits in St Albans area. The site entrance is located close to Smallford, just beyond Notcutts Garden Centre.

4.28 Cumulative impact of 32 years is the quoted duration of quarrying, but it's stated that only if they achieve the expected extraction rates. As the route is also used by the Hatfield quarry the total from the two sites would be a minimum 1960s – 2053 88 years.

4.29 The data we have found and collected shows significant peak time delay along this road. The A1057 already has planning approval for up to 425 HGV movements per day when added with the proposed site 174 would take the quarry related HGV trips up to 599 per day or 1 lorry every 66.6 seconds throughout the working day from 7.00am to 6.00pm for what is substantially a residential road the impact would be very significant. (See CHPC proof of Evidence Highways and Traffic)

4.30 Dust and noise – While onsite measures are in place to control noise and dust the Cemex site Oaklands Lane and Tarmac landfill site at Coursers Road Colney Heath demonstrate the issues of dust and noise from lorries. These sites have good onsite vehicle washing facilities, but the local road have considerable volumes of fine dust despite efforts by the operators to clean the highway. The long-term exposure to this dust could have negative impact on health.

4.31 Cumulative impact of 32 years is the quoted duration of quarrying but its stated only if they achieve the expected extraction rates. As the route is also used by the Hatfield quarry the total from the two sites would be a minimum 1960s – 2053 88 years.

4.32 Location of nearest homes & distance to edge of proposed site

Station Road Smallford 137m

Oaklands Lane Smallford 220m

Jove Gardens Smallford 125m

Radio Nurseries (under development) Smallford 100m

Popefield Farm (St Albans Road) Smallford 45m

St Albans Road Ellenbrook 45m

4.33 Local facilities and distance to edge of the proposed site

Three Horseshoes PH outdoor sitting area 75m

Notcutts Garden Centre 15m

Jove Garden green space 15m

Radio nurseries green space 15m

St Albans Rugby club 300m

University of Hertfordshire sport pitches Ellenbrook 5-10m

Open space Ellenbrook Crescent 440m

Ellenbrook Recreation Ground and Play Area 610m

- 4.34 In the environmental assessment considering dust the forecast was for no significant change at 250m, but many of the sensitive location are well with that radius.
- 4.35 Loss of Amenity** – The proposed quarry site is on the site of the Country Park which was setup as part of a S106 agreement following the closure of the airfield and the resulting development of Business Park.
- 4.36 Most of the land to the northeast of Ellenbrook towards Hatfield is developed and has a strong urban feel. The Ellenbrook estate only has small green space known as Ellenbrook Recreation Ground and Play Area. The area to the east has A414 and the A1M which restrict onward movement. The area to the southwest is more rural and is accessed via Alban Way. Alban Way is combined pedestrian and cycleway some pedestrians feel uncomfortable using it due the high-speed cyclists.
- 4.37 The Country Park is a safe well used open space popular with many residents as it currently provides strong rural feel in what is otherwise heavily urbanised area.
- 4.38 The importance of exercise and being able to explore quiet rural areas has been demonstrated during the covid lockdowns, This area plays an important role for the local residents.
- 4.39 The car park at Notcutts Garden Centre is used by people travelling from further away to park in, so they can access the country park. If the quarry is developed access could be restricted or considerable extra distance could be needed to walk before experiencing the countryside. It is understood the Notcutts have agreed the use of their car park while the Garden Centre is open.
- 4.40 Cumulative impact – 32 years plus for the residents of Ellenbrook dependent upon the quarry keeping to its schedule. For Smallford resident the period would be longer 1960s – 2053, 88 years again dependent upon the quarry keeping to its schedule.

5.1 Other demands for Land within the area

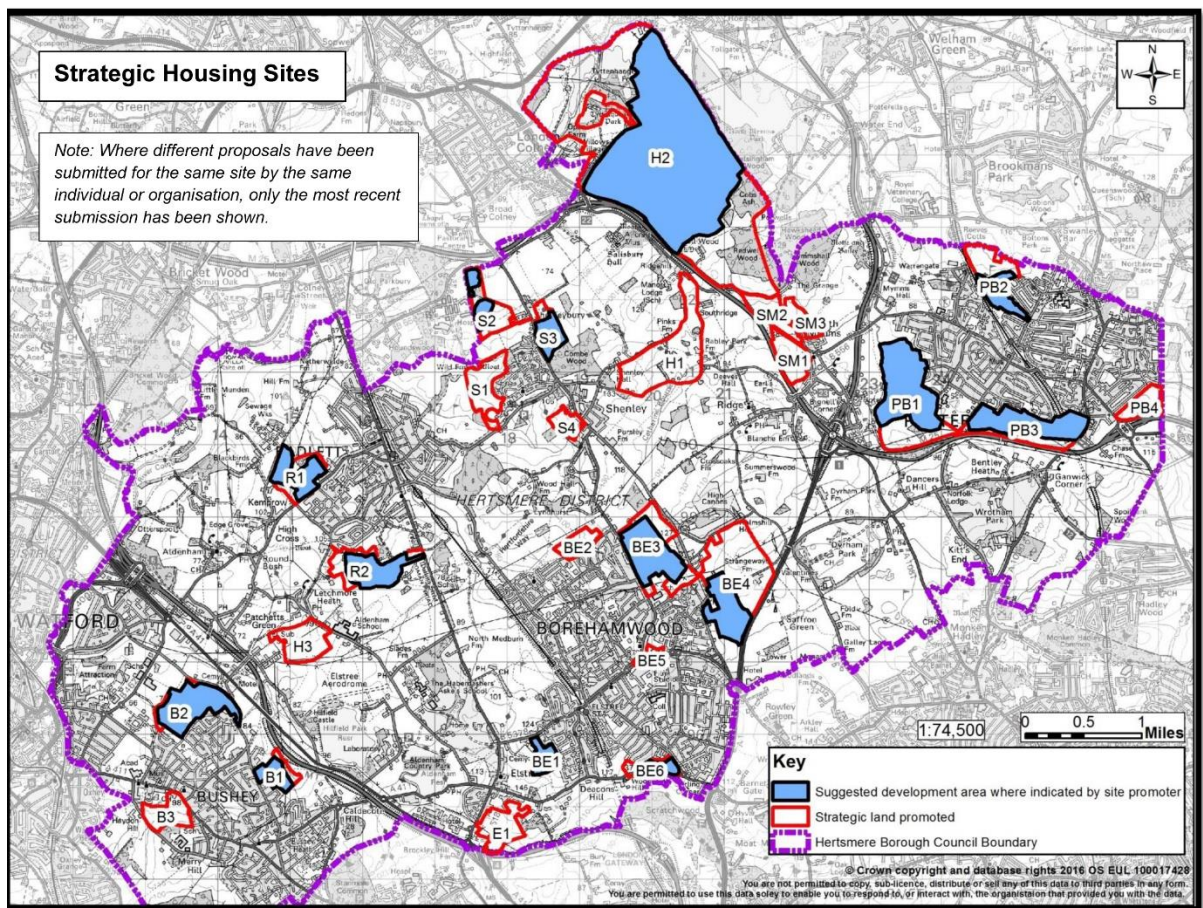
The loss of any open space has a significant impact on residents of the area due to other demands for land including development of housing.

5.2 Neither St Albans nor Welwyn Hatfield have an up-to-date Local Plans, so developers are promoting sites on case-by-case basis.

5.3 Welwyn Hatfield BC Local Plan is still Reg.22 the area adjoining the site to the north is one of the possible sites for inclusion in new Local Plan see map below.

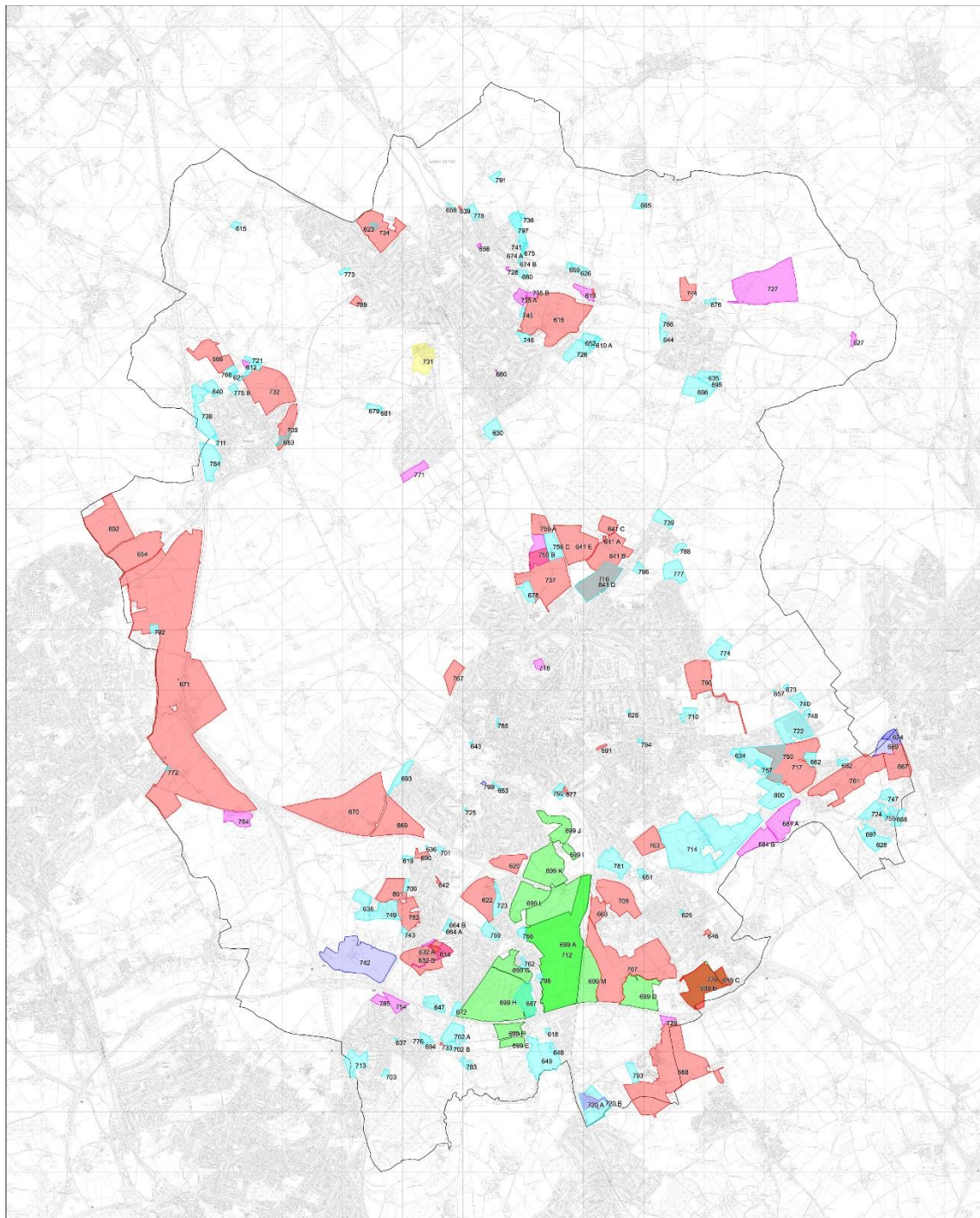


- 5.4 Hertsmere BC Local Plan now at Reg18 have promoted a large site the other side of the parish of Colney Heath, see map below H2.



Potential sites for Housing and Employment | Hertsmere Borough Council 10

5.5 The St Albans recent Call for Site resulted again in a considerable number of sites being promoted in Colney Heath Parish and along A414. While not all these sites will be developed it does demonstrate the significant demand for land in the area.



Call for Sites 2021 - Site Submissions

Key:

- Housing
- Employment
- Strategic Rail Freight Interchange (SRFI)
- Other Uses
- Housing Led Mixed Use
- Employment Led Mixed Use



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6 Conclusions

6.1 Legal Framework

The NPPF identifies that cumulative impact is a material consideration when determining mineral applications, and it also indicates that the impacts resulting from such should carry considerable weight when they are considered with other factors.

6.2 The Hertfordshire Mineral Plan Adopted March 2007 in 'Policy 11 Cumulative Impact' includes cumulative impacts as a consideration that must be considered.

6.3 The policy also continues to state that any development that has unacceptable cumulative impact on the environment of an area either in relation to an individual proposal having regard to the collective effect of different impacts, or in relation to the effects of a number of minerals developments occurring either concurrently or successively will not be permitted.

6.4 The same Mineral Plan identifies land at former BAE aerodrome as a preferred site but fails to show any consideration as to how it meets policy objective 11, this is rather alarming considering the proposed site adjoins a large-scale existing site.

6.5 The current draft Hertfordshire Mineral Plan 2019 has a similar policy 13 which is broadly similar but contains a little more detail in what factors need to be considered.

6.6 This draft Mineral Plan again includes the Former Hatfield Aerodrome site as a preferred site but again fails to state why the proposed site meet the objectives of Policy 13.

6.7 Therefore, the reader of either of the above Hertfordshire Mineral Plans would have no understanding if the proposed site meets the Cumulative Impact policies in either document.

6.8 Therefore, one should conclude the inclusion of Hatfield Aerodrome as a preferred site is unsound.

6.9 Timescales

Neither the NPPF or Hertfordshire Mineral Plans help us when considering timescales over which cumulative impacts should be considered, other than not **concurrently or successively** in the Hertfordshire Mineral Plan.

6.10 Brett's statement also implies that plants sited together with associated infrastructure of quarry works would be considered a cumulative visual effect.

6.11 As the proposed quarry would result in both concurrent and successive mineral quarrying at adjoining site neither would fail to meet Hertfordshire Mineral Plan policies, policy 11 adopted, policy 13 draft Minerals Plan.

6.12 When all the factors are considered well over 100 years in and around one small village there is a long-term cumulative harm.

6.13 Cumulative Impacts

Quarrying

Smallford Pits and Oaklands were operating in the 1930s, both close to Smallford. The proposed new quarry, again close to Smallford, would operate for 30-40years giving about 120 years of quarrying in Smallford area.

Continuous quarrying and related activities since the 1930s we believe is a long-term cumulative impact on the residents.

6.14 Dust

Both dust from mineral and vehicles cause long term harm, the evidence suggests that there is no safe level of crystalline silica dust. The assessments are for current levels rather than in longer term, there is no proof that long

term exposure to dust resulting from minerals particularly crystalline silica is safe.

6.15 Traffic

Most lorries must use one route along which is broadly along residential roads resulting in traffic delays, dust and particulates from emissions, long term to residents in the area.

6.16 Loss of Amenities

The communities of Smallford and Ellenbrook have significant restrictions on areas for exercise and relaxation due to surrounding built environment and restrictions on access and activities in other areas surround their communities. The development of proposed quarry would result in very significant reduction in the limited remaining facilities. As mineral working has taken place within the area since 1930s and not always with the highest standard of reinstatement, long term cumulative impact exists on residents.

6.17 Weighting given to cumulative Impacts

The area centred around Smallford has had quarrying since the 1930s so higher weighting would be appropriate. Some of the active workings are more remote from the settlements which would indicate a lower weighting. The traffic from multi quarries travelling along a limited road network together with significant restrictions access to open space for excess and relaxation again would indicate higher weighting should be applied to cumulative impacts.

6.18 On balance substantial would be the appropriate weighting to cumulative impacts once all factors are balanced, these factors would be of major significance to the residents of the area.

6.19 As stated above a cumulative impact and harm exist, the development of the proposed site would be contra to NPPF, Hertfordshire Minerals Plan policies therefore the appeal should be refused.