NRS Group of Companies

PLANNING APPEAL REF: APP/E1855/W/22/3310099

LEA CASTLE FARM, WOLVERLEY ROAD, BROADWATERS, KIDDERMINSTER, WORCESTERSHIRE

CUMULATIVE IMPACT ASSESSMENT

FEBRUARY 2023

Heatons
Planning Environment Design

Contents

Appendices

1 Assessment Methodology – Cumulative Impact

1.1.1 Cumulative impact assessment does not have a dedicated section within the NPPF. However, the consideration of cumulative effects from a development is referred to and required when evaluating the environmental impact of a development proposal. In regard to minerals development, NPPF paragraph 210 (f) states that planning policies should 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.

1.1.2 Minerals Local Plan Policy MLP 28 identifies that development should "not give rise to unacceptable adverse effects on amenity or health and well-being" and that a "level of technical assessment appropriate to the proposed development will be required to demonstrate that, throughout its lifetime and taking into account the cumulative effects of multiple impacts from the site and/or a number of sites in the locality".

1.1.3 Waste Core Strategy Policy WCS 14 states that development should "not have unacceptable adverse impacts on amenity" and that "cumulative effects must be considered". The policy notes that details of any mitigation or compensation proposals must be included and "where there will be unacceptable adverse impacts on amenity, proposals will only be permitted where it is demonstrated that the benefits of the development at the proposed site clearly outweigh any unacceptable adverse impacts".

1.1.4 What constitutes a robust assessment of cumulative effects has been considered by the High Court in the case of *The Queen (on the application of Leicestershire County Council)* v. *the Secretary of State for Communities and Local Government and UK Coal Mining Ltd (2007)* EWHC Admin 1427. The case, known as the 'Long Moor judgement', was heard before Mr Justice Burton and was focused around the Secretary of State's granting of planning permission upon appeal for surface coal mining at UK Coal's Long Moor site in Leicestershire.

1.1.5 The background to the case was that Leicestershire County Council (the Mineral Planning Authority or MPA) had originally refused planning permission on the grounds of cumulative impact. At appeal (where Heatons represented the Appellant) the Inspector and the Secretary of State accepted that none of the individual effects

was of sufficient dis-benefit to justify the refusal of permission and accepted that in the absence of a further 'proper assessment', there was nothing to suggest that the cumulative impact was such as to warrant the refusal of permission.

1.1.6 When the decision was challenged in the High Court, Mr Justice Burton criticised the MPA's evidence as being based on conclusions which were simple value judgements (my emphasis), with no supporting reasons. Importantly, he concluded that reasons underpinning any conclusions on cumulative effects must be provided by the MPA if an assessment is to be considered 'proper' in the context of MPS 2 Minerals policy statement 2: controlling and mitigating the environmental effects of minerals extraction in England, which was superseded by the NPPF in 2012. In paragraph 41 of his judgement he gives examples of such reasoning as including:

1. Even though each individual area of potential impact was not objectionable yet each such feature was close to objectionability that, although none could be said to be individually objectionable, yet because each was nearly objectionable, the totality was cumulatively objectionable; or
2. One, two, three or four of the particular features were close to being objectionable and that would be an important matter to take into account when looking at the totality; or
3. One particular combination of two or three otherwise unobjectionable features could cause objectionability in their totality; or
4. As was specifically addressed by the Interested Party and by the Inspector here, and found not to be the case, there could be some unusual feature or some unusual combination of features such as to render the combination objectionable when the individual feature was not.

1.1.7 The judgement of Mr Justice Burton therefore provides guidance as to how levels of objectionability should be assessed and how they might be considered in combination.

1.1.8 Following on from this case the Secretary of State granted planning permission on appeal in respect of the 'Telford case' (Huntington Lane) which involved a proposal by UK Coal to extract 900,000 tonnes of coal and 250,000 tonnes of fireclay near Telford. The Planning Inspector in this case considered that *"There are three categories of cumulative impact in which to consider as referred to in paragraph 12*

of MPS2: namely (i) successive effects (ii) simultaneous effects from concurrent developments, and (iii) combined effects from the same development."

1.1.9 The methodology for assessing cumulative impact in regard to this proposal therefore takes account of the above cases and specifically adopts the approach taken by the Inspector in the Telford case. This methodology has also been approved by the Secretary of State.

1.1.10 Accordingly, this assessment of cumulative effects will have regard to:

i. successive effects;

ii. simultaneous effects from concurrent developments, and

iii. combined effects from the same development.

1.1.11 It is proposed that the first and second elements of cumulative impact (successive and simultaneous effects from concurrent developments) are considered in parallel given that this assessment requires the identification of previous and new minerals developments in the locality (as well as other forms of development that might give rise to similar types of impact). The third element, combined effects from the same development, will be considered separately and will have regard to how potentially close each individual environmental impact is to being unacceptable or objectionable. This then enables a professional judgement to be made on the potential accumulated totality (i.e. the judged acceptability or otherwise of their combined environmental effect).

1.1.12 Regard will also be had to the potential for the proposal to give rise to a series of benefits (positive impacts) which could potentially offset or outweigh any harm which might be brought about by the proposed development. In this regard the cumulative impact assessment will therefore consider the potential cumulative benefits of the scheme.

2 Successive and Simultaneous Effects

2.1 Introduction

2.1.1 As part of the 'proper assessment' of the cumulative impacts of the proposal it is necessary to consider the potential successive and simultaneous effects of mineral development on the general locality. In geographical terms, the Appellant has taken

the 'general locality' as a radius of 1km from the centre of the proposed site representing a reasonable distance.

2.1.2 The assessment of successive and simultaneous effects considers the potential cumulative impact of past and potential future mineral workings on the local community. It also has regard to similar types of operations such as waste management developments and construction sites.

2.1.3 In terms of the simultaneous effects of concurrent developments, an assessment of existing mineral development (and other similar operations) in the study area has been carried out to consider the potential cumulative impact on the locality. The one obvious existing development is the current Lea Castle Village and wider allocation which is considered below in relation to both successive and simultaneous effects.

2.2 Successive Effects

2.2.1 Historically, the site formed a part of the c.220ha grounds of Lea Castle, which was built around 1762 and demolished in 1945. There has also been a number of applications submitted at the site over the years, in particular, planning applications for the construction of golf courses (one 18-hole and one 9-hole golf courses), with the first submitted to Wyre Forest District Council in March 1999 (ref. WF/0260/99). This application (WFDC) was refused at Planning Committee on 14th March 2000 and a subsequent appeal was withdrawn. However, an application (ref. WF/0211/01) was permitted by Committee on 17th July 2001 for 'construction of two new golf courses (18 hole and 9 hole), new clubhouse and ancillary facilities, new access to Castle Road, Cookley, new driveways and parking facilities, golf practice area and diversion of public footpaths'. This planning permission was never implemented.

2.2.2 Consideration of the cumulative impact of the proposed development alongside the existing land uses in the direct vicinity of the Site has led to the conclusion that there are no land uses in the locality of the Site that have the potential to result in significant adverse effects on nearby receptors, when combined with the anticipated impacts of this proposal.

2.2.3 The proposed development will therefore not be adding to an existing problem. The proposed development is driven by the geological prospects together with the

identified need in both adopted and emerging Minerals Local Plan Policy for the provision of a viable and high quality mineral.

2.2.4 As demonstrated within the Environmental Statement, the proposed development is environmentally acceptable, and the restoration proposals provide environmental benefits.

2.2.5 In light of the above, the successive impacts of the proposal are considered to be negligible.

2.3 Simultaneous Effects

2.3.1 In terms of mineral development, there are no mineral/mining related development in close proximity to the proposals at Lea Castle Farm which would be considered to have a simultaneous cumulative impact upon local receptors.

2.3.2 In terms of other types of development that could have a concurrent effect, to the east of the site on the opposite side of Wolverhampton Road, there is an allocation for around 1,400 dwellings (600 of these already have planning permission under 17/0205/OUTL) with a mix of employment and retail provision and known as Lea Castle Village. Development has commenced on the development of planning permission 17/0205/OUTL. In terms of the remaining 800 dwellings of the above allocation, an application was submitted in May last year (Ref: 22/0404/OUT) and is under determination.

2.3.3 Although planning application ref: 22/0404/OUT has not received the grant of planning permission, the development of the site has the potential to create new sensitive receptors and could also give rise itself to potential environmental impacts on existing receptors during the construction phase. Such impacts could potentially occur in conjunction with the development/operation of the proposed Lea Castle Farm development.

2.3.4 The main environmental effects that could arise from the housing site being constructed at the same time as the proposed development of Lea Castle Farm are noise, dust and visual impacts. The other impact that could contribute cumulatively to impact in the locality is construction traffic, which may combine with HGV traffic generated by the Lea Castle Farm site.

2.3.5 The potential housing development would be physically separated from the Lea Castle Farm site by both soil and overburden mounds along with Wolverhampton

Road. In terms of impacts it is considered that the combined effect of both developments taking place concurrently would only marginally increase the degree of overall impact and therefore would not give rise to objectionable concurrent effects. The potential housing development would be over 200m from the proposed extraction area. The impacts upon this site have been assessed as part of this Appeal. There are no unacceptable impacts assessed to arise from the proposals upon the existing or potential housing development.

2.3.6 It is noteworthy, that on review of the supporting documents submitted for planning application ref: 22/0404/OUT, there is no form of consideration for cumulative impacts from the Lea Castle Farm development. The Landscape and Visual Appraisal prepared by Wood does make reference to the Appeal development at paragraph 3.5.4 and states the following:

The Lea Castle Farm Sand and Gravel Quarry application (application reference 19/000053/CM) is currently under consideration with WCC. This site covers a 46 ha area comprising 26 ha of mineral extraction located approximately 25 m west of the Wider Site. If granted, this development would result in a number of new landscape and visual components being introduced across the site. The conclusions of the Landscape and Visual Impact Assessment (LVIA) for the Quarry application was that "the landscape and visual effects resulting from the Proposed Development would be temporary, progressive and localised and Not Significant. Progressive restoration to the post restoration scheme provides opportunities for both enhanced landscape, visual and amenity and wellbeing which will result in Beneficial effects."

2.3.7 The above does not challenge the findings of the LVIA and it can be assumed from the lack of challenge and consideration of the Appeal development, that the technical experts for application ref: 22/0404/OUT consider that no unacceptable impacts will arise from the proposals upon the potential housing development.

3 Combining the Potential Impacts

3.1 Introduction – Approach to Potential Levels of Objectionability

3.1.1 All mineral developments produce effects that occur together and their combined impact can potentially give rise to significant impacts. In terms of the methodology for assessing cumulative environmental effects from such operations this section follows the approach taken by the Planning Inspector in the consideration of UK

Coal's surface mining operation at Huntington Lane, Telford. The Inspector's approach in regard to this was subsequently endorsed by the Secretary of State on 6th October 2009.

3.1.2 In paragraph 552 of the Inspector's Report into the Telford proposal he noted "*For individually acceptable impacts to be elevated together to unacceptable impacts, they must have a synergistic effect*". In order to assess the combined effects properly it is necessary to consider whether some or all of the individually acceptable effects are so close to being unacceptable, that when combined together, the totality is unacceptable. In this regard the approach set out by Mr Justice Burton is considered appropriate to follow, the methodology of which is outlined above.

3.1.3 The potential benefits of the proposal are also identified so that they can be combined allowing the cumulative assessment to balance both positive and negative effects.

3.2 Consideration of the Potential Impacts

3.2.1 Before attempting to combine the potential impacts and adopting the approaches outlined it is first necessary to establish the potential level of objectionability for each area of potential impact. In doing so, careful regard has been had to the subject specific technical/professional reports of the various specialists contained in the Appendices of the Environmental Statement along with further technical work submitted in response to Regulation 25 requests during the determination of the Appeal application. Furthermore, as part of this Appeal, further technical assessments have been carried out in terms of LVIA, noise and air quality and dust. Set out below is a summary of the findings on each aspect and a view taken on the level of objectionability.

Landscape and Visual Impact

3.2.2 Consideration of potential new cumulative landscape and visual effects in conjunction with other developments that have been constructed, permitted or are applications that await determination since the ES have been prepared has been carried out for the Appeal. This assessment is supported by Figures 1 and 2, photoviews at Viewpoints 1 to 6 (Figures 3 to 10), Viewpoint 8 (Figure 14), and Viewpoint 21 (Figure 28) in Volume 2 of the evidence of Mr Neil Furber, which is attached at Appendix 1.

3.2.3 The potential for cumulative landscape and visual effects between the Proposed Development in conjunction with the permitted Lea Castle Development (17/0205/OUT) and adjacent allocated Site were considered at paragraph 5.27 page 31 and paragraph 7.13 page 58 of the submitted LVIA and at section 22.5 of the ES. The permitted development is now under construction and the allocated Site is covered by a planning application 22/040/OUT that is still to be determined at the time of writing.

3.2.4 The location of other developments (recently constructed, permitted or in the planning system) are illustrated on Figure 1 of the evidence of Mr Neil Furber (Appendix 1) in relation to the application and extraction boundaries of the Proposed Development.

3.2.5 The original submitted LVIA at paragraph 5.27 as part of the cumulative assessment also referred to 'other promoted residential areas to the south and east of the Site'. Furthermore, the ES at paragraphs 22.5.4, 22.5.7 and 22.5.8 make clear reference to planning permission at Stourbridge Road, which now appears to be completed (18/0163/FULL – 91 dwellings). It is clear that the ES and LVIA had accounted for 18/0163/FULL at Stoubridge Road, although additional smaller residential developments have since been approved and are listed below.

- 22/0235/PIP – 4 dwellings at Wolvereley Lodge - Application approved;
- 20/0217/FUL - Demolition of existing building and erection of 4 x two-bed bungalows. This development has now been completed; and
- 21/1200/OUT - erection of three dwellings, garages and associated operational development. This application and the subsequent appeal was refused i.e. this scheme does not form part of the cumulative assessment but is included for completeness.

<u>Lea Castle Mixed Use Development (17/0205/OUT and 22/040/OUT)</u>

3.2.6 Potentially significant cumulative effects upon landscape elements between the Lea Castle Mixed Use development and the Proposed Development are Neutral and potentially beneficial because both schemes seek retention of existing tree and hedgerow planting to the perimeter of the Sites and would contribute new planting as part of their respective mitigation schemes. There would be a permanent loss of agricultural land as part of the Lea Castle mixed use development, however the

Appeal Site would be fully restored after 11 years and the restored soil profiles will enable it to achieve BMV status in the future.

3.2.7 In terms of landscape character, both the Lea Castle mixed-use development and the Proposed Development lie within the Sandstone Estateland Landscape Type (LVIA Figure 4). As previously noted, and with reference to the Disturbed Land Plan (Drawing No. KD.LCF.011), the area of land where mineral is being extracted at any one time within the operational phase would be less than 10 hectares. The progressive restoration would result in long term improvements to landscape character, in terms of historical continuity i.e., reinstatement of avenue trees and the Broom Covert woodland, and the introduction of groups of parkland trees and acidic species rich grassland. Public access would be improved by the addition of new public rights of way illustrated on drawing no. KD.LCF.010A – Concept Restoration.

3.2.8 Cumulative landscape character and visual effects can be perceived in combination (where both developments are visible from the same location and in the same field of view), successively (where both developments are perceived from the same location by turning one's head), or sequentially, (where both developments are not visible at the same location but are perceived separately, in sequence, when travelling on a route). It is important when carrying out a cumulative landscape and visual assessment that effects in three-dimensions are fully understood. Just because two developments may be located relatively close to each other (as seen in a 2-dimensional plan view), does not necessarily equate to a cumulative effect that would be perceived in the field.

3.2.9 At Viewpoint 1 (See Figure 3 of the evidence of Mr N Furber), the residential development under construction (17/0205/OUT) can be glimpsed behind woodland in the far right of the view. New built development as part of 22/040/OUT would extend across the foreground and middle-ground of the view preventing any views from the public footpath towards the Appeal Site. Any views within the new mixed-use development are likely to be highly restricted by adjacent built form. Any theoretical glimpses of the extraction of Phases 4/5 would be limited to the perimeter screen bunds set below the horizon with potential glimpses of the initial soil strip on Phase 4, similar to an agricultural operation, with the extraction working eastwards and very quickly below the height of the perimeter bunds.

3.2.10 At Viewpoint 2 (See Figure 4 of the evidence of Mr N Furber at Appendix 1), new built development as part of 22/040/OUT would be partially visible to the left of the road corridor (beyond the extent of presented photography). By contrast the Proposed Development would be predominantly screened from view with the upper parts of the screen bunds potentially visible above and behind retained hedgerow planting. At nearby Viewpoint 9 (Figures 11 – 13 of Appendix 1), from a more elevated location that is closer to the Proposed Development but not publicly accessible, the limited and filtered views of part of the grass seeded screen bunds to the east of Phase 4 are illustrated in the photomontages. This temporary mounding would only be in place for approximately 5 years. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on openness.

3.2.11 At Viewpoint 3 (Figure 5 of Appendix 1), the manure heap on the horizon is located on land approximately 3m higher and 60m further to the west of the crest of the screen bund 18 that would be installed to the east of Phase 4. Bund 17 to the east of Phase 5 would be largely hidden by intervening hedgerow planting that would be retained and reinforced as part of the proposals. New built development as part of 22/040/OUT would be screened by retained belt of pine trees in the far right of the view, although successive visibility of new built development along Park Gate Road would be available (beyond the extent of presented photography).

3.2.12 At Viewpoint 4 (Figures 6-8 of the evidence of Mr N Furber – Appendix 1), situated further east along Park Road, more elevated views towards the screen bunds would be largely prevented by a belt of intervening pine trees. Any changes to the views and landscape character available would be restricted to the growth of advanced woodland planting on the horizon between the belt of pine trees and Castle Barns (Figure 8 of the evidence of Mr N Furber – Appendix 1), however the Lea Castle mixed use development (22/040/OUT), assuming it is permitted and under construction, would likely largely restrict and eventually fully screen any views of towards the Appeal Site.

3.2.13 Viewpoints 5 and 6 (Figures 9 and 10 of the evidence of Mr N Furber – Appendix 1) to the southeast are from the urban edge of Kidderminster and views would include combined visibility of the Lea Castle mixed use development (22/040/OUT) and the eastern edge of Phases 4 and 5, although this would be restricted to temporary

views of the grass seeded bunds associated with Phase 4 and to a lesser extent Phase 5, partially screened by existing vegetation that would be reinforced with new planting. The agricultural land to the east of the extraction area within the Appeal Site would be maintained. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on Green Belt openness.

3.2.14 Viewpoint 8 (Figure 14 of the evidence of Mr N Furber – Appendix 1), was taken from a locally elevated location where a public bridleway coincides with the access track to Castle Barns. There would be limited views of the Lea Castle mixed use development that would appear 'sandwiched' between the urban edge of Kidderminster in the background and the roofscape of Castle Barns and planting in the foreground. There would be no potential for any significant effects on the visual amenity of bridleway users or landscape character. The Proposed Development during Phases 4 and 5 would have a temporary Moderate Adverse effect that is Not Significant because of the direction of the working faces of mineral extraction, partly mitigated by advance planting and perimeter bunds. The cumulative effects upon landscape character and visual amenity resulting from views of both schemes would be Neutral i.e. not discernibly greater than for either scheme individually, noting the primary changes to views would result from temporary views of Phases 4 and 5. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible adverse effect on Green Belt openness.

<u>18/0163/FUL – 91 dwellings at Stoubridge Road</u>

3.2.15 The residential development has now been constructed and views from the northern edge of the new development would be similar to nearby Viewpoint 5 (Figure 9 of the evidence of Mr N Furber – Appendix 1). Views would include combined visibility of the Lea Castle mixed-use development (22/040/OUT) and the eastern edge of Phases 4 and 5, although this would be restricted to temporary views of the grass seeded bunds associated with Phase 4 and to a lesser extent Phase 5, partially screened by existing vegetation that would be reinforced with new planting. The open agricultural land to the east of the extraction area within the Appeal Site would be maintained. Notwithstanding the obvious fact that views of the temporary

grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on openness.

22/0235/PIP – 4 dwellings at Wolverley Lodge

3.2.16 The approved development is located to the northwest of Brown Westhead Park playing fields. The site adjoining the playing fields is bordered by tall conifer screens and other tree cover and any heavily filtered views of the proposed development from the playing field (Viewpoint 21 – Figure 28 of the evidence of Mr N Furber – Appendix 1) would not constitute a cumulative effect as the Proposed Development, including screen bunds, on the Appeal Site would not be visible.

20/0217/FUL - Erection of 4 x two-bed bungalows

3.2.17 The completed development on Brown Westhead Park is located to the east of the Appeal Site and is set down at a lower level such that there is no opportunity for any views of the Proposed Development from the bungalows themselves. Viewpoint 20 (Figure 27 of the evidence of Mr N Furber – Appendix 1) from the public footpath located between the two schemes, illustrates the very restricted views of the Appeal Site through woodland, however these views are only available intermittently from the public footpath on higher ground east of the bungalows. Very limited views of both developments are available from the footpath simultaneously (i.e., by turning one's head), however given the screening role of mature woodland cover, even in winter, it is assessed that the cumulative effect would be Neutral.

Cumulative Conclusions

3.2.18 The landform characteristics of the Site and surrounding land, implementation of advance planting, reinforced existing planting and grass seeded screen bunds, would in combination result in very limited cumulative effects with other developments recently constructed, permitted or in the planning system. Where very limited cumulative visibility of both schemes is available, as described above, the resulting level of cumulative effect on landscape character and visual amenity would be Neutral i.e. not discernibly greater than for the Proposed Development or other scheme/s individually.

3.2.19 In summary therefore, while there is potential for impact, the proposed development is not considered close to becoming an unacceptable adverse impact on the landscape or to visual receptors.

Impact of Noise

3.2.20 A Noise Assessment submitted with the original planning application was carried out by WBM Acoustic Consultants in order to establish baseline noise levels, make recommendations regarding site noise limits at the nearest dwellings to the site, and to test compliance with those noise limits to examine the potential noise impact of the proposed development. The potential impact is considered using the known noise output of mineral activities and specific plant and equipment proposed to be used, assessed against the sensitivity of the noise receptor.

3.2.21 The noise calculations assumed that all plant on site is operating simultaneously in the closest likely working areas to each receiver location for the proposed operations, in order to assess a 'worst-case' scenario. Appropriate stand-off distances have been designed-in to the proposed scheme to further soften noise impacts. The Noise Assessment concluded that calculated site noise levels due to mineral operations at the proposed site comply with the suggested site noise limits at all assessment locations.

3.2.22 As part of the Appeal, cumulative impact has been addressed in the evidence of Ms Rachel Canham (Appendix 2), with noise from construction activities at the Lea Castle Village site considered to be the most significant noise source associated with other developments that may have an impact on the noise sensitive receptors.

3.2.23 If construction noise was at the possible maximum limit at a noise sensitive receptor, noise from the quarry would be insignificant compared to the potential construction noise from the housing development. As such, the addition of site noise from the quarry would not change the cumulative noise impact at this receptor, as the noise environment would be controlled by construction noise.

3.2.24 Construction noise will be variable and temporary, and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. In addition, the calculated site noise levels due to the quarry are worst cases, assuming simultaneous extraction and infilling operations occurring at the nearest parts of the quarry to the receptor, which would not happen in practice. Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any receptor.

3.2.25 Concern has been raised by WCC about the cumulative impact on Heathfield Knoll School and the nursery. These are located approximately 1 kilometre from the Lea

Castle Village site. At this distance, any construction noise from the Lea Castle site is highly unlikely to be significant at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

3.2.26 As such, the consideration of cumulative impact does not alter the outcome of the original noise assessment of the site.

3.2.27 In terms of the Bungalow, it is accepted that the noise levels are on the limit for the receptor, however, this level is within the acceptable threshold, is a worst case scenario and for a 9 month period.

3.2.28 In conclusion, with the appropriate noise mitigation in place, the proposed development does not come close to the thresholds of being an unacceptable adverse impact in regards to noise.

Dust and Air Quality

3.2.29 The proposed extraction and infilling operations, together with associated vehicle movements, have the potential to generate dust and other aerial emissions. The original Dust Impact Assessment carried out by Vibrock Ltd and separate Air Quality Assessment carried out by EnviroCentre have been supplemented by further consideration of the potential cumulative impacts and effects on nearby landuses that may arise from such emissions in conjunction with the 'core' and 'wider' Lea Castle Village developments. This work has been undertaken by Ms K Hakwins of Smith Grant and can be found at Appendix 3.

3.2.30 This has considered both i) potential impacts on new receptors to be introduced by the Lea Castle Village developments and ii) potential cumulative impacts on existing receptors if the developments occur concurrently.

3.2.31 The dis-amenity assessment has considered the distance and orientation of proposed new receptors within both the 'core' area and the 'wider' area to the proposed extraction area. The nearest potential new receptors would be 240m to the east of the extraction area. Even if these properties were to be occupied whilst operations were occurring in Phases 4 and 5 of the Site, the resulting effects are predicted to be negligible. It is concluded that the proposals would not have any significant adverse effects on any proposed new receptors.

3.2.32 Two properties / areas of properties have been identified that lie within the relevant dis-amenity dust risk screening distances of both the proposed development and the 'wider' Lea Castle Village site, Castle Barns and Four Winds. The potential for

cumulative impacts at these receptors would only occur if extraction and restoration activities occurred in Phases 4 and 5 of the proposed development at the same time as construction activities in the western area of the wider Lea Castle Village development.

3.2.33 Taking into account distances and orientation, and the implementation of appropriate dust management and control measures, it is concluded that the contribution of dust amenity impacts that may arise if the western part of the wider Lea Castle Village development was to occur simultaneously with the proposed development would not result in significant adverse effects at either of these properties.

3.2.34 Potential cumulative contributions to local PM10 and PM2.5 concentrations from fugitive dust and vehicle emissions are also not predicted to result in significant adverse impacts at either proposed new, or existing, receptors. Similarly, potential cumulative contributions to local NO2 concentrations from vehicle emissions are not predicted to result in significant adverse impacts at either proposed new, or existing, receptors. No exceedances of existing National Air Quality Objectives are predicted.

3.2.35 With the appropriate air quality and dust mitigation measures in place, the proposed development does not come close to the thresholds of being an unacceptable adverse impact.

Ecology & Nature Conservation

3.2.36 An Ecological Impact Assessment (EcIA) has been prepared by Pleydell Smithyman which is informed by a Desk Study in order to obtain information of designated sites of nature conservation interest, and a suite of ecological surveys undertaken between 2016 and 2019. Further ecological work was carried out in response to Regulation 25 requests as follows:

- 1st Regulation 25 Submission
    - Response to Arboriculture and Protected Species Comments (CD3.04);
    - Appendix F – Biodiversity Net Gain Report (CD3.10); and
    - Dormouse Report (CD3.19).
- 2nd Regulation 25 Consultation Responses
    - Response to Dormice comments (CD5.18);

- Dormice Survey Drawing (CD5.19);
- Response to County Ecologist 17.09.21 (CD5.28); and
- Response to County Ecologist – 17.9.2021 (CD7.01).

- 3rd Regulation 25 Submission
  - Habitat Regulations Assessment (CD8.02);
  - Appendix 1 – Preliminary Ecological Appraisal (CD8.03);
  - Appendix 4 – Ecological Impact Assessment (CD8.06); and
  - Final Habitat Regulations Assessment – 29.4.2022 (CD8.09).

3.2.37 Furthermore, as part of the Appeal, an updated walkover survey has been carried out, which confirms the current baseline data remains representative of that submitted with the original application.

3.2.38 There are no statutory designated sites present within the application site. Existing habitats within the site include semi-improved neutral grassland, improved grassland, tall ruderal habitat, arable, hedgerows, scattered trees, hardstanding and surrounding broad-leaved and mixed woodland. Protected species surveys undertaken identified a range of species protected at district, local or parish level.

3.2.39 In terms of potential impacts, the habitats of the highest ecological importance (boundary deciduous woodland) will not be removed by the proposals. Overall, no significant adverse impacts are anticipated on habitats present within the site provided that restoration is delivered as proposed. A net biodiversity gain has been calculated.

3.2.40 A number of mitigation measures have been detailed to ensure that all legally protected species recorded within the site are adequately protected throughout the duration of the works. No significant negative impacts are anticipated on any known protected species present. A landscape and ecological management plan will be produced to ensure long-term biodiversity benefits.

3.2.41 In summary therefore, while there is potential for some impact, the proposed development is not considered close to becoming an unacceptable adverse impact on ecology.

Transport Impact

3.2.42 In terms of road traffic, a Transport Assessment has been prepared by The Hurlstone Partnership, which demonstrates that the development, including proposed new access location and design, are fully in accordance with both national and local policy. Empirical traffic survey data was obtained and a topographic survey of the road was also undertaken in order to ensure that an appropriate access arrangement with suitable visibility splays could be provided.

3.2.43 The impact of the proposed development on the local highway network has been found to be acceptable. The review undertaken confirms that in the worst case, the proposed development would attract an average of 77 loads / 154 HGV movements per day plus 22 movements (11 in / 11 out) associated with staff trips by the 11 employees within the site. The assessment has been based on the 154 HGV movements per day at the specific request of the Highway Authority, on the basis that back-hauling of sand and gravel exports with a load of imported fill be ignored, in order to represent the worst case. The highest increase in traffic over any baseline flow was found to be 1.7%, which falls well below the 5% threshold considered to represent a material increase in traffic

3.2.44 The Transport Assessment does not identify any unacceptable impact on highway safety or assess that the residual cumulative impacts on the road network would be severe. Data also confirms that the local roads routinely accommodate HGV traffic. The analysis of personal injury accident data recorded over the most recent 5 year period confirmed that there are no inherent characteristics of the local road network that unacceptably compromise safety for or as a result of HGV activity.

3.2.45 The traffic and transport impacts of the proposal do not come close to the thresholds of unacceptability.

Water Environment

3.2.46 BCL Hydro Consultant Hydrogeologists Limited undertook a Flood Risk Assessment and Drainage Strategy, and Hydrological and Hydrogeological Impact Assessment with regard to the proposed development at Lea Castle Farm.

Flood Risk and Drainage Strategy

3.2.47 The Flood Risk Assessment (FRA) has considered the existing drainage of the application site and outlines that as at present, the operational and post-restoration site will be drained by percolation to underlying strata. The Assessment has

determined that the only measure necessary to ensure compliance with the requirements of the NPPF is that the provision of a de-minimis volume of attenuation as freeboard with soakaway ponds to ensure that storm run-off from modified substrate will not cause a nuisance to post restoration on-site activities.

3.2.48 Upon implementation of the attenuating soakway ponds, the FRA demonstrates that the proposed development will not be significantly affected by current or future flooding from any source, and that the proposals will not increase flood risk elsewhere. In terms of EA Flood Risk Zonations, the proposed development is appropriate.

Hydrological and Hydrogeological Impact Assessment

3.2.49 The hydrological and hydrogeological impact assessments have initially assessed the baseline conditions at the application site to form a comprehensive understanding of the extant groundwater and surface water regimes. The Impact Assessment has concluded that the proposed development will not result in primary impacts on water resources (such as derogation of groundwater and surface water levels/flows/quality) and therefore no secondary impacts on water resources (such as volumes/quality of water available to existing or potential abstractions and/or flora/faunal communities).

3.2.50 Measures to reduce the potential for hydrological and/or hydrogeological impact have been designed into the proposed scheme, such as profiling materials during the operational phases of development to shed percolating rainfall via field drains to a number of unlined soakaways. No mineral operations will take place sub-water table or employ any dewatering.

3.2.51 In the proposed site restoration, prior to the backfilling of the voids with inert materials, a suitable liner will be used to minimise the risk of contaminating the underlying SSG aquifer. In addition, all incoming materials will be subject to inspection and segregation prior to landfilling.

3.2.52 The potential impact on water resources of the proposal do not come close to the thresholds of unacceptability.

<u>Archaeology and Cultural Heritage</u>

3.2.53 An Archaeological Desk-Based Assessment has been prepared by Worcestershire Archaeology and a geophysical assessment has been carried out which considers the site's potential for containing assets of archaeological significance, and the potential

impacts of the proposed development on archaeology and the existing 'baseline' heritage value of the site and it's setting. The findings of the Assessments are summarised below:

Archaeology

3.2.54 The Desk-Based Assessment found that there is limited evidence of prehistoric or Roman activity in the study area. There is also limited evidence for early medieval and medieval activity. Early historic mapping indicates that the site was probably agricultural (or common) land until the late 18th or early 20th century. The study area for the Desk-Based Assessment found very limited representation of any prehistoric, Roman, early medieval and/or medieval activity and therefore the potential for survival of assets dating to these periods within the site has been assessed as 'low'.

3.2.55 Historic mapping and other documents indicate that the site was formerly parkland around Lea Castle during the early 19th century prior to the conversion of the site to agricultural use. The western part of the site was also formerly used as a grass landing strip. Any archaeological evidence from the post-medieval and modern periods would probably relate to agriculture, parkland and/or the landing strip and therefore is considered as only locally informative and of low/negligible significance. The proposed development is not considered to pose a significant risk of damage / loss of any non-designated or below ground assets.

3.2.56 In terms of the geophysical assessment, the results suggest that nothing of significance will be found. Therefore, it is clear that the potential for impact on buried archaeology is sufficiently low to allow the application to be determined without the need for any further post determination archaeological work. It is considered that in terms of the requirement for any future archaeological investigation, the imposition of a condition on archaeology is appropriate in planning terms and is supported by the evidence. Following grant of permission, further dialogue will take place on archaeological considerations and appropriate submissions made.

Cultural Heritage

3.2.57 The Assessment has identified no designated monuments within or immediately adjacent to the site. Overall, it is not anticipated that any designated assets recorded in the study area will be significantly affected by the development,

although there will be a minor adverse impact of the Grade II listed North Lodges and Gateway to Lea Castle, which is located c. 250m from the site boundary. Restoration of some of the parkland features, including the tree lined avenues and Broom Covert will reduce the long-term impact of mineral extraction to an insignificant level and to a degree which is considered to be policy complaint.

3.2.58 In summary therefore, the proposed development is not considered close to becoming an unacceptable adverse impact on archaeology or cultural heritage receptors.

Soils and Land Quality

3.2.59 An Agricultural Land Classification and Soil Resource Report has been prepared by Kedd Development Limited and includes a summary of the existing climate, site, and soils present alongside an assessment of agricultural land classification (ALC) and soil storage/handling methods.

3.2.60 The distribution of agricultural land classification grades across the existing site is summarised as 21.3% Grade2, 66.5% Grade 3a, 1.7% Grade 3b. 10.5% of the site is non agricultural. The soil resources have been assessed as typically Medium Sandy Loam topsoil with overlying Loamy Medium Sand upper subsoil, sitting on sand and soft sandstone in the eastern area or slightly to moderately stony sand in the western area. The average soil depth overlying the mineral reserve is 0.7m deep.

3.2.61 In order to protect and conserve soil quality as required in the adopted and emerging Development Plan, soil storage and handling measures are recommended in the Report at Technical Appendix G. These measures are to be implemented in the scheme of soil storage and handling employed at the site.

3.2.62 The impact of the proposal on soils and agricultural land quality does not come close to the thresholds of unacceptability.

Arboriculture

3.2.63 The findings of the arboricultural survey have shown that where felling is considered necessary, of the five trees to be felled, only one is considered to be Category A (T26 – mature oak). A single Category B tree (T9 – mature oak) was originally proposed to be felled but has since been agreed with the Council to be retained. Despite benefitting from a TPO, T10 (mature oak) is classified as Category C with impact of removal classed as 'low', Tree T10 was also proposed to be felled but has since been agreed with the Council to be retained. T22 is a Category C veteran Sweet Chestnut

tree. Overall it was assessed as being of poor structural and physiological condition with the impact of its removal considered to be Low. It is suggested that the retention of trees T9 and T10 be secured by a condition.

3.2.64 The proposed extraction area stand-off from the mature trees present around the sites boundaries ensures that all other trees present on/at the edges of the site will be retained as part of the development proposals. It is proposed that these are protected during the works by erecting tree protection fencing in accordance with the requirements of BS 5837:2012, as part of the development proposals.

3.2.65 By reason of the above, the development will not give rise to a significant adverse impact upon arboricultural assets. Notwithstanding this, as set out in the restoration section of this statement, the proposed restoration scheme will create significant new woodland/scrubland habitat. The scheme will establish approximately 3.42 hectares of additional native woodland, which equates to 9,750 woodland trees), approximately 439 metres of hedgerows would be strengthened, approximately 579 metres of proposed new hedgerow planting (3,474 hedging plants) and new acidic rich meadow grassland, measuring approximately 7.5 hectares in area would be developed to promote biodiversity and educational opportunities. In addition, the restoration scheme includes the planting of approximately 170 avenue and parkland trees reinstating the historic avenue of trees along bridleways WC-625 and WC-626..

3.2.66 In conclusion it is considered that the impacts of the proposal upon arboriculture are not considered to be in themselves unacceptable nor near the thresholds of becoming an unacceptable environmental impact.

Lighting

3.2.67 There are no proposals to install permanent lights along any access track within what will become the mineral extraction area because all mobile plant used will have its own lighting

3.2.68 The aggregate processing plant will have safety lighting attached to the plant and equipment to illuminate operational areas and walkways. The aggregate processing plant will only be illuminated when operational (maximum 07:00-19:00). All lighting will be directed downwards (below 700 lumens) illuminating the operational area only. There will be periphery lighting columns at the HGV entrance to the aggregate processing area which will only be illuminated during operational hours (07:00-19:00).

3.2.69 The conveyor will have safety lighting attached to the loading and off-loading points to illuminate operational areas. The safety lighting will be motion sensor therefore will only be illuminated when operational. All lighting will be below 1.5m in height and directed downwards.

3.2.70 Weighbridge and wheelwash will have 3m column lighting. The office buildings will have external motion sensor safety lights. The car parking area will have 3m column lighting which will be on timer (07:00-19:00).

3.2.71 Prior to the installation of any lighting, the location and details will be agreed in writing with the Mineral Planning Authority.

3.2.72 All lighting will be designed and installed to illuminate the site and operation while reducing nuisance lighting to local residents.

3.2.73 The proposed development does not come close to the thresholds of being an unacceptable adverse impact.

Conclusions on the Potential Impacts

3.2.74 In terms of individual areas of potential impact, it is concluded that there would be no individual areas of objectionable environmental impact arising from the proposal. Potentially the most substantial effect that could contribute the most to cumulative harm is the impact upon the landscape character and visual appearance of the site during the course of the temporary operations. In the longer term, however, the restoration of the site would bring about overall improvements in landscape character and ecological enhancement.

3.3 Assessment of the Combination of Potential Impacts

Introduction – Methodology (Mr J. Burton)

3.3.1 In his judgement (reference EWHC Admin 1427 2007) Mr Justice Burton took the view that to make an assessment of cumulative impact on the basis of simple value judgements with no supporting reasons is inappropriate. In order for a 'proper assessment' to be carried out in the context of MPS 2 he outlined four possible tests that could be employed.

3.3.2 The assessment of the combined potential negative effects of the Lea Castle Farm proposals therefore generally follows Mr Justice Burton's approach and is set out below.

Test 1 - Even though each individual area of potential impact was not objectionable yet each such feature was close to objectionability that, although none could be said to be individually objectionable, yet because each was nearly objectionable, the totality was cumulatively objectionable.

3.3.3 In Section 3.2 above it has been considered that each individual area of potential impact is not, on balance, objectionable. Given the nature of mineral development, it is acknowledged though that the potential Landscape and Visual impact of the scheme would come close to the thresholds of acceptability. Although the potential noise, traffic and ecological impacts of the scheme would give rise to some negative impacts during the course of the operations, there would be no direct conflict with development plan policy and these individual issues would not come close to being objectionable. Similarly, the potential impacts on interests related to the water environment, archaeology, soils/land quality, arboriculture and lighting are not considered to come close to being objectionable on an individual basis.

3.3.4 Therefore, overall, only one of the individual areas of potential impact is considered to be close to being objectionable (Landscape and Visual impact). Whilst it is accepted that other individual areas would give rise to varying degrees of negative impact during the course of the development, they would not come close to being objectionable on an individual basis. It is therefore concluded that, because only one feature is considered to be close to being objectionable, and the other impacts do not come close to being objectionable or conflict with Development Plan Policy, the totality would not be objectionable.

Test 2 - One, two, three or four of the particular features were close to being objectionable and that would be an important matter to take into account when looking at the totality.

3.3.5 In this case only one particular feature is close to being objectionable; namely Landscape and Visual Impact. Therefore, we have to judge how important that matter is. To do this we have looked at how sensitive the area is in terms of landscape and visual matters. In this regard the site is not situated in an area of high landscape value (e.g. AONB, National Park etc) or designated as an Area of Local Landscape Significance in the Wyre Forest District Local Plan.

3.3.6 The site is located wholly within the West Midlands Green Belt. The primary function of this designation, however, is not to protect the landscape quality of the site or the surrounding area but to primarily prevent the coalescence of towns and preserve

the openness of the countryside. As set out in my proof, the proposed development would, notwithstanding its duration, be a temporary activity and whilst the proposal would disturb the site for a period of time, it would be progressively returned to an open state following completion of extraction and would be no more built up on completion of the development as a result of the proposal as it is now. There would be no permanent spatial or visual impact on the Green Belt.

3.3.7 Open views of the site would be possible from a number of public locations, particularly in elevated positions around the site during the temporary operational phases of the proposed development. For the most part the potential sensitive visual receptors are representative of a typical development of this nature and are not therefore elevated in terms of importance.

3.3.8 The absence of any specific landscape designations or specific development plan policy does not highlight any specific concerns and therefore raise its importance in the planning balance. The main potential negative visual impacts are only short term and in the medium to long term the restoration of the site would improve the character and visual interest of the landscape. There is not therefore any combination of particular features that are considered to be important matters that could give rise to objections in regard to test two.

Test 3 - One particular combination of two or three otherwise unobjectionable features could cause objectionability in their totality.

3.3.1 In consideration of this matter there are individual features (impacts) which are related in terms of subject matter or in regard to the receptors in which they have the potential to impact upon and could therefore be considered in combination, namely:

1. Landscape/Visual Impact and Ecological Impact; and
2. Local Amenity impacts such as Noise, Dust and Traffic.

3.3.2 In relation to point one, as discussed above, the predicted landscape and visual effects are considered to be close to being objectionable. The short to medium term negative impacts would though be mitigated by the long term overall improvements in character and visual interest of the landscape. Given that the potential ecological impact of the proposal is not judged to be close to being objectionable it is considered that in combination their totality would not amount to being objectionable.

3.3.3 In relation to the second suggested combination (local amenity impacts), none of the individual features are likely to give rise to direct conflict with development plan policy or exceed nationally recognized thresholds of potential nuisance related impacts. No major concerns are predicted in regard to HGV traffic resulting from the proposal. It is considered that because the potential impacts of noise, dust and traffic on local communities and individual properties (i.e. the nearest sensitive receptors) individually would each be well within the thresholds of objectionability their combined totality would not be objectionable.

3.3.4 In the light of the above it is concluded that there are no particular combination of two or three otherwise unobjectionable features that could cause objectionability in their totality.

Test 4 - As was specifically addressed by the Interested Party and by the Inspector here, and found not to be the case, there could be some unusual feature or some unusual combination of features such as to render the combination objectionable when the individual feature was not.

3.3.5 For the most part, the site and surroundings are typical in relation to the potential sensitive receptors, the issues and the potential impacts that tend to arise from mineral development of this nature.

3.3.6 The potential impact of noise upon receptors would comply with the development plan and well within the recognized limits set out in PPG. The potential impacts of noise would be short term and would not therefore come close to being objectionable on potential receptors.

3.3.7 Dust emissions from the proposed development are short term and would be controlled well within nationally recognized criteria by the use of a dust management plan and effective on site dust mitigation techniques and would not come close to being objectionable.

3.3.8 To therefore conclude on the fourth test, noise and dust impacts are well within the thresholds of objectionability. It is therefore concluded that because none of the two potential impacts comes close to being objectionable their combined impact do not accumulate to being objectionable.

Conclusions

3.3.9 It is considered the approach and methodology to assessing the combined negative effects is thorough and robust. Following an assessment of each of the four tests it

has been concluded that no objectionable combined negative effects would be brought about by the proposed development of Lea Castle Farm.

4 Other Potential Beneficial Effects

4.1.1 The proposed scheme would create a number of benefits which are summarised as follows:

1. **Meeting a sand and gravel need.** Section 5 of my Proof deals with the need for sand and gravel and sets out that there is an urgent need for the release of mineral reserves in Worcestershire. The Appeal Scheme would be a major contributor to the Council's landbank, which is currently not in compliance with NPPF paragraph 213.

2. **Environmental and Sustainability benefits.** Section 10.3 of my Proof deals with the environmental and sustainability benefits of the scheme and sets out that the site is located in a unique logistical position in the marketplace as Worcestershire has a clear divide in available resource. The northern half of the County in which the Appeal Site is located contains the solid sands (building and mortar markets) with the concreting sand and gravels from the terrace and glacial deposits in the south of the county. The two different resources serve different and distinct markets. Their location within the county would affect the distance they need to travel to market as well as the demand / pull on resources from outside the county to meet demand. The number of active and permitted sites (but non-operational) sites are also small in number which may affect the distance the reserves travel to market;

   When looking at the supply of mineral within a county a balanced spread of geographical location supply sources is very important in promoting sustainable development. Aggregates being bulky in nature, costly to transport / typically only transported about 30 miles from source. The closest county sand and gravel quarry to Kidderminster is Clifton Quarry, located circa. 24 miles away. The Appeal Proposal would help provide a balanced geographical spread of mineral supply sources; and

A further key consideration is the number of proposed and permitted large-scale residential schemes in close proximity to the Appeal Site. Large quantities of inert waste would arise from these large-scale schemes and the potential transport to and use of this material in the restoration scheme, aligns with the ethos of achieving sustainable development.

3. A range of socio economic benefits. Section 10.4 of my Proof deals with the socio economic benefits of the scheme and sets out how the Appeal Scheme would help provide and secure jobs for people directly and indirectly employed as part of the quarry operations and which contribute to the local economy through wages, business rates, use of local suppliers, and at a national level; to the economy through aggregates levy [a tax on sand, gravel and rock] and other taxation processes.

4. Restoration and biodiversity benefits. Section 10.5 of my Proof deals with the restoration and biodiversity benefits of the scheme and sets out how the benefits resulting from this proposed development are substantial and wide reaching, with a significant net gain in biodiversity.

4.1.2 It can be concluded that the benefits resulting from this proposed development are substantial and wide reaching and are considered to combine to provide a significant positive impact, which acts as a counter weight to the negative impacts.

5 Overall Conclusions – Cumulative Impact, Combined Positive and Negative Effects

5.1.1 The approach to assessing cumulative impact has followed the advice of Mr Justice Burton (in the Long Moor case) by considering the three categories of potential cumulative effects: successive effects; simultaneous effects from concurrent developments; and combined effects from the same development and then sets out reasoning behind the judgements reached.

5.1.2 The assessment of cumulative impact has had regard to positive and negative effects to ensure that an overall balanced judgement is reached. The potential positive impacts are particularly relevant when considering the combined effects from the same development. Care has been taken to ensure that any positive effects have not been double counted in the assessment work.

5.1.3 The assessment of successive effects has concluded that no significant adverse cumulative impact would occur from the proposed extension to the Lea Castle Farm site.

5.1.4 In terms of the assessment of simultaneous effects, the potential combined effect of the development of the planning application to the east of the site (application ref: 22/0404/OUT) being constructed at the same time as the proposed extension area is only likely to marginally increase the degree of overall impact. No objectionable concurrent effects are therefore likely to arise.

5.1.5 In terms of the combined effects, the only individual negative environmental impact that is considered to come close to the thresholds of being objectionable is the potential temporary landscape and visual impact of the scheme. The other environmental features are not considered to make a substantial contribution to cumulative harm. Given that only one feature is close to the thresholds of objectionability, and having regard to the fact that none of the environmental features have a synergistic effect, their combined impact is not objectionable. This conclusion has been reached having regard to the four tests recommended by Mr Justice Burton.

5.1.6 The proposal would have a number of positive effects which act as a counter weight to offset the identified negative impacts. The main points in relation to the benefits are that the proposal would meet a need for sand and gravel and bring about economic benefits and biodiversity gains.

5.1.7 In the light of the above it is concluded that the cumulative impacts of the scheme do not justify refusal of planning permission. This conclusion has been reached having regard in particular to the impact of each individual effect (each of which has been assessed to be well below the level of unacceptability, even when assessed in combination with other on-going or committed development), the temporary nature of the development, and the short, medium and long term benefits that the proposals will deliver.

Appendix 1 – Evidence of Mr N Furber

Town and Country Planning Act 1990 – Section 78 Town and County Planning (Development Management Procedure) (England) Order 2015 Town and Country Planning (Inquiries Procedure) (England) Rules 2002

LEA CASTLE QUARRY, WOLVERLEY

Application Reference: 19/000053/CM

Appeal Reference: APP/E1855/W/22/3310099

Landscape and Visual Proof of Evidence of
Mr Neil Furber BSc (Dual Hons), Dip LA, CMLI

on behalf of NRS Aggregates Ltd.

Volume 1: Main Proof of Evidence

January 2023

HCUK Group is a homeworking (since 2010) multi-disciplinary environmental practice. We offer expert, honest, and independent advice in archaeology, heritage, landscape, arboriculture, and planning based on our considerable experience. We provide a range of services that can be tailored to any site or case, supported by administrative, financial and HR teams. We began life as Heritage Collective LLP in 2010, before becoming Heritage Collective UK Limited in 2014. We became HCUK Group Limited in 2020.

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Author with date	Reviewer code, with date
NF, 30.01.2023	CB, 30.01.2023
NF, 24.01.2023	CB, 25.01.2023

Contents

Appendices

Figures

1. Introduction

Witness background

1.1 My name is Neil Robert Furber. I am a Chartered Member of the Landscape Institute and an Associate Director at HCUK Group Ltd.

1.2 I have over 25 years' experience working on a wide variety of projects across all the major development sectors including extensive experience of the landscape design and assessment of minerals projects since 1998. I have acted as a landscape expert witness for both Developer and Local Planning Authority clients since 2002. I am a Supervisor for the Landscape Institute and assess the submission of candidates seeking to become Chartered Landscape Architects.

1.3 The evidence which I have prepared and provide in this proof of evidence is true and has been prepared and is given in accordance with the guidance of my professional institution. I also confirm that the opinions expressed are my true and professional opinions.

Scope of Evidence

1.4 My evidence addresses two of the reasons for refusal issued by Worcestershire County Council.

2. "*Unacceptable impact on the openness of the Green Belt*", as far as relevant from a landscape and visual perspective including construction

phase and restoration impacts, with the planning proof of Mr Toland dealing with matters of inappropriate development.

3. *"Unacceptable impact on residential amenity and local schools",* limited to a review of residential visual amenity only, with other aspects of amenity including dust and noise covered in the proofs of evidence of Mr Toland, Ms Hawkins, and Ms Canham.

Approach

1.5 My evidence has been informed by the following:

a. My review of the Environmental Statement (ES) and documents submitted with the planning application with a particular focus on ES Volume 1 (CD1.03), the Landscape and Visual Impact Assessment technical appendix in ES Volume 2 (CD1.04), and the planning application drawings (CD1.17 to 1.32).

b. My review of Regulation 25 request responses that covered landscape matters i.e., June 2020 (CD3.02, 3.05, 3.07, 3.11, 3.16, 3.17. 3.18) and June 2021 (CD5.02 to 5.14 and CD5.23 and 5.24).

c. My review of the statutory consultation responses relevant to landscape and visual matters, including the Committee Report (CD10.01), responses from the County Landscape Officer (CD2.29, 4.32, 5.23, 6.23 and 6.36), and responses from the Herefordshire and Worcestershire Gardens Trust (CD2.08).

d. My observations following visits to the Site and/or surrounding area in late December 2022 and early January 2023.

e. Preparation of visualisations from representative viewpoints to reflect winter conditions and to account for updated best practice guidance[1] covering the presentation of visualisations that was issued by the Landscape Institute after the preparation of the ES visualisations. The visualisations include updated photomontages of the Proposed Development as Figures 3 to 36 at Volume 2 of my evidence. Updated photoviews have not been included from seven of the ES Viewpoints because either no view of the Proposed Development would be available due to intervening landform (i.e., Viewpoints 11, 12, and 19), or following my review in the field, an alternative view from a nearby publicly accessible location where a greater magnitude of change would be experienced has been included (i.e., Viewpoints 7, 14, 16, and 25). Finally, in three other locations, the micro-siting of the photoviewpoint relative to the view presented in the ES has been adjusted for other reasons e.g. Viewpoint 28 was taken from the footway and not the road for health and safety reasons, Viewpoint 30 was taken from a public footway where access to private land was not possible at the time of my site visit, and Viewpoint 18 was taken from the public footpath to the rear of properties on Brown Westhead to better represent views from

[1] Landscape Institute (2019) Technical Guidance Note 09/11

the rear elevation and gardens of these dwellings, although the latter was clearly assessed in the ES. Notwithstanding the minor changes to some of the viewpoint locations, in all cases my assessment of the magnitude of change and effect upon visual amenity accords with the submitted ES.

f. Additional annotated views from publicly accessible locations to support my evidence on Green Belt openness, addressing the second reason for refusal. These views are presented as Photoviewpoints A to E, at Figures 37 to 44 in Volume 2 of my evidence.

g. Consideration of potential new cumulative landscape and visual effects in conjunction with other developments that have been constructed, permitted or are applications that await determination since the ES have been prepared. This assessment is supported by my Figures 1 and 2, photoviews at Viewpoints 1 to 6 (Figures 3 to 10), Viewpoint 8 (Figure 14), and Viewpoint 21 (Figure 28) in Volume 2 of my evidence.

h. Reference is made to best practice guidance for Residential Visual Amenity Assessment (RVAA) at Appendix 1. I provide examples of similar permitted quarry schemes where residential properties lie close to temporary screen bunds (Appendices 2 to 4). Adopted SPD detailing typical separation distances between residential properties to ensure that outlook is not unacceptably affected is covered at Appendix 5.

2. Reason for Refusal 2: Impact on the Openness of the Green Belt

Background

2.1 In this section of my evidence, I set out my assessment of the effects that the Proposed Development would have upon the spatial and visual components of Green Belt openness[2].

2.2 Mr Toland, for the Appellant, considers that the Proposed Development would be appropriate development in the Green Belt[3] as openness would be preserved and the development would not conflict with the purposes of including land within the designation. No amendment to Green Belt boundaries would be required, and to the contrary, many of the compensatory improvements to environmental quality and accessibility that are typically considered for Green Belt land, when it is necessary to release adjoining Green Belt land for development,[4] would be delivered by the restoration scheme.

2.3 The Head of Planning and Transport in the Committee report (CD10.01) at paragraph 461 concluded:

"...There would be impacts, but only of a temporary duration, and relatively short for mineral extraction, with an appropriate restoration programme, back to a beneficial status in the Green Belt. The NPPF clearly envisages

[2] Planning Practice Guidance - paragraph 001 Ref ID 64-001-20190722
[3] NPPF – paragraph 150(a)
[4] Planning Practice Guidance - paragraph 002 Ref ID 64-002-20190722

that mineral extraction should benefit from the exemption in paragraph 150, and this proposal should benefit from those exemptions as it comes within the intended scope."

2.4 Central government recognises that changes to land occur over time and *"remediability"* is defined as *"taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness"* is explicitly recognised[5].

2.5 The Head of Planning and Transport in the Committee report (CD10.01) at paragraph 458 reached a contrary view to WCC's Statement of Case:

"…the proposal would not conflict with the fundamental aim of Green Belt policy or the five main purposes of Green Belt. Whilst the proposal would be visible, it would not be very visible due to the topography, proposed temporary soil storage / visual screening bunds, existing historic boundary walls and proposed planting, with any views being contained to relatively few receptors. It is considered that the visual impact on openness does not make this development "inappropriate".

Green Belt Purposes

2.6 Worcestershire County Council (WCC) contend[6] that the Proposed Development would result in a) *"unrestricted sprawl"* and c)

[5] Planning Practice Guidance - paragraph 001 Ref ID 64-001-20190722
[6] WCC Statement of Case – paragraphs 4.8 and 4.9

"encroachment" in conflict with two of the five NPPF purposes of the Green Belt[7].

2.7 WCC state that the Lea Castle mixed use development to the east of the Site *"heightens the functional requirements of the Appeal Site to protect the Green Belt from encroachment and sprawl"*[8] and that the Appeal Site is *"more sensitive to visual and spatial impacts on openness than other land parcels within the same Corridor"*[9].

2.8 WCC also state that the mitigation proposals, comprising screen bunds during the operational phase, and planting during the operational and restoration phases, would result in harm to openness[10],

2.9 Green Belt purpose a) is *"to check the unrestricted sprawl of large built-up areas"*[11]. The proposed development is not connected to a large built-up area (and therefore cannot lead to the sprawl of any such area), and neither cannot it be described accurately as itself being built development, that would read as sprawl of an existing built-up area (it is clearly 'other forms of development' falling within NPPF para.150 rather than within NPPF para.149 which deals with built development). Even if elements within the Site were to be considered as temporary built development e.g., the plant site, this has a modest footprint, is largely contained below existing ground

[7] NPPF – paragraph 138
[8] WCC Statement of Case – paragraph 4.15
[9] WCC Statement of Case – paragraphs 4.16
[10] WCC Statement of Case – paragraphs 4.18 to 4.20
[11] NPPF – paragraph 138 a)

levels and is a temporary feature that would be fully restored to agricultural land.

2.10 The Green Belt purpose c) to *"assist in safeguarding the countryside from encroachment"*[12] Given that mineral development may in principle be appropriate, provided it preserves openness[13] it is relevant to consider the spatial extent of the proposed extraction and how understand how this will interact with progressive restoration of individual phases, which will deliver containment including through the use of existing topography, existing woodland, proposed temporary screen bunds and new planting.

2.11 WCC identify the subdivision of the Green Belt into separate land parcels within the Wyre Forest Green Belt Review[14] (Figure 1). It is important to emphasise that these artificial subdivisions were undertaken to assess the suitability of land for release from the Green Belt, to inform the Council on the Green Belt sensitivity of parcels to meet development needs that are under the jurisdiction of the Local Planning Authority i.e., not mineral sites considered at County level and where no release of land from the Green Belt is required.

2.12 The Green Belt Review identifies the Appeal Site as being located within Parcel N7, that is approximately 120 hectares in area. The Appeal Site extraction area is approximately 26 hectares, from an overall site area of approximately 46 hectares and extraction area comprises less than 22% of

[12] NPPF – paragraph 138 c)
[13] NPPF – paragraph 150 a)
[14] WCC Statement of Case – Appendices WCC1 and WCC2

Parcel N7. The full extent of Parcel N7 is assessed in the Green Belt Review as having a *"contribution"* to prevent sprawl and encroachment in common with all other land parcels to the north and east of Kidderminster, except for a small parcel adjacent to the northern edge of Fairfield (N4). By contrast, most strategic land parcels to the northwest, west and southwest of Kidderminster are assessed to have a *"significant contribution"* to prevent sprawl and encroachment.[15]

2.13 In conclusion, whilst the Appeal Site would remain in the Green Belt, the Green Belt Review clearly demonstrates that the land parcel in which the Appeal Site is located (and only forms a minor part of), is of comparable sensitivity to potential release from the Green Belt to other parcels nearby, and less sensitive than the majority of land to the west, northwest and southwest of Kidderminster.

2.14 Following the Green Belt Review and adoption of the Wyre Forest District Local Plan in 2022, the Lea Castle Site for mixed use development was allocated with application 22/040/OUT pending consideration. Permitted residential development under 17/0205/OUT and located within the centre of the allocation is currently being constructed (see Figure 1).

2.15 WCC state that the Lea Castle mixed use development to the east of the Site *"heightens the functional requirements of the Appeal Site to protect the Green Belt from encroachment and sprawl"*[16]. I demonstrate in my analysis

[15] Figure 3.1 and Table 3.1 of the Wyre Forest District Council Green Belt Review – Strategic Analysis (2016)
[16] WCC Statement of Case – paragraph 4.15

of the visual component of openness below, that this statement, with respect to the proposed development, is not true.

2.16 Further considerations that apply to mineral sites in the Green Belt (including the temporal nature of effects and importance of restoration) were recognised by Lord Carnwath[17] who stated with respect to a Limestone Quarry extension that would be more visible and for a longer period than the Appeal Site:

> *"A large quarry may not be visually attractive while it lasts, but the minerals can only be extracted where they are found, and the impact is temporary and subject to restoration. Further, as a barrier to urban sprawl a quarry may be regarded in Green Belt policy terms as no less effective than a stretch of agricultural land."*

Spatial Component of Openness

2.17 With reference to the Disturbed Land Plan at CD1.21 the area of land where mineral is being extracted at any one time within the operational phase would be less than 10 hectares. The western half of the Site (comprising Phases 1-3) and over half of the extraction footprint, would be extracted and fully restored within 5 years.

2.18 The temporary plant site area, as the only part of the Appeal Site containing built development, is approximately 3.8 hectares in size and requires a

[17] WCC Statement of Case - Appendix WCC17: Judgment, R (on the application of Samuel Smith Old Brewery (Tadcaster) and others) (Respondents) v North Yorkshire County Council (Appellant) [2020] UKSC 3

short haul road of less than 100m in length between Wolverley Road and the ramp that connects to the plant site at a lower level. The temporary access road and plant site represents a relatively small component of the wider undeveloped landscape as illustrated on the plan at CD5.04.

2.19 The temporary plant site buildings illustrated on the plan and elevations at CD1.22 are modest in scale and would comprise three portacabins to accommodate the site office and welfare facilities. Two portacabins would be double stacked with an overall footprint of 12.4 x 4.2m and an overall height of 5.8m. The third smaller portacabin would have a footprint of 3.8m x 2.8m and would be 2.9m high. Other structures within the plant site area comprise the mineral processing plant, wheelwash, weighbridge, cylinders (tanks) for silt management and 12 parking spaces that is set out in more detail at paragraph 20 of the Committee Report (CD10.1).

2.20 In conclusion I assess that the Proposed Development would preserve the spatial component of Green Belt openness.

Visual Component of Openness

2.21 I will demonstrate in this section of my evidence, with reference to annotated photoviewpoints, how the majority of the Appeal Site is well contained by natural topography, mature woodland and built development. The Proposed Development, inclusive of carefully designed phasing, progressive restoration and additional mitigation measures has sought to

minimise potential adverse visual effects and consequently I conclude that the visual component of openness would be preserved.

2.22 The Head of Planning and Transport Planning of WCC at paragraph 452 of the Committee Report (CD10.01), noted that the Site baseline contains two distinct landscape characteristics when referring to "openness":

> *"The western area and the majority of the eastern area are contained and physically constrained by a combination of landform, topography, woodland blocks, established vegetation and in parts a stone / brick wall". These morphological and structural elements combine to help visually screen the periphery of the site. However, the outer eastern area of the site displays a distinct character of a much more open nature due to the topography, easterly sloping landform and limited amount of established vegetation. This results in this area being more visually prominent, with potentially a greater number of visual receptors including residents of Castle Barns, Four Winds, Broadwaters and properties off Wolverhampton Road (A449) and Stourbridge Road(A451) as well as users of the public highway and public rights of way located to the east of the site."*

2.23 Zones of Theoretical Visibility (ZTVs) of the Proposed Development were presented in Technical Appendix A of the ES as LVIA Figures 6 to 9 (CD1.04). To accord with best practice guidance, the ZTVs were computer modelled using landform only to present the 'worst-case' theoretical visibility of landform within the Site at different stages of the Proposed

Development. Theses 'bare earth' ZTV's do not account for intervening vegetation or built development.

2.24 The role of temporary screen bunds in limiting the visibility of the operational phases is illustrated in LVIA Figure 7, where the theoretical visibility of works within Phase 2 of any perceptible magnitude would be largely contained within the Appeal Site. The greater visibility at Phase 4 illustrated in LVIA Figure 8, largely relates to the extraction of mineral beneath higher ground within Phase 4, noting that this is a short-term effect and following the soil strip and higher-level extraction, the deeper extraction would be typically contained by higher land surrounding the phase, reinforced by perimeter screen bunds and planting.

2.25 Notwithstanding the limitations of the ZTVs, a comparison of LVIA Figures 6 and 9 illustrates that the landform of the restored scheme would have a similar geographical extent of theoretical visibility from the surrounding landscape as the existing situation.

2.26 My assessment is structured into four parts – firstly I cover the visual impact of the temporary built structures within the Plant Site, which arguably as built development are the only scheme component that have the potential to have any impact on Green Belt openness, secondly the access road and associated vehicles, and thirdly the phased mineral extraction and temporary screen bunds. Finally, I consider the cumulative impact of other relevant developments in the planning system since the ES was submitted.

Temporary built structures within the Plant Site

2.27 The plant site is located on lower ground within the Appeal Site and is set a minimum of 7m below existing ground levels to the west and approximately 12m to the east. The Plant Site would be surrounded by temporary screen bunds up to 5m high that would be grass seeded with 1:3 outer slopes (CD1.22). The temporary plant site buildings comprising three portacabins, the mineral processing plant and ancillary development would be screened from publicly accessible locations as they would be set down at a lower level and surrounded by screen bunds (refer to my more detailed description under the spatial component of openness above). The tallest point of the plant is 12m, however this is a narrow stocking conveyor, approximately 1m in width and the main processing plant is approximately 9m in height. The absence of built form in representative views includes the photomontages at Year 1 from Viewpoint 9: Castle Barns (Figure 12) and Viewpoint 17: Rear Garden of the Equestrian Centre Bungalow (Figure 22).

The Access and associated vehicle movements

2.28 Views of increased vehicle movements turning into and out of the Appeal Site would be confined to a localised geographic area on the Wolverley Road (Viewpoint 29 at Figure 34), noting visibility of vehicles approximately 100m to the west (Viewpoint 27 at Figure 32) would be very limited as vehicles would be travelling to and from the plant site, east of the junction onto Wolverley Road. Views of traffic turning into and out of the Site from the east would be restricted by landform characteristics, the perimeter wall

along Wolverley Road, and planting within the curtilage of Broom Cottage (Viewpoint 31 at Figure 36). It is acknowledged that views of dump trucks would be noticeable from a short section of Wolverley Road to the east of the access, however road users are not classified as the highest sensitivity receptors and properties adjoining the road on this section, namely Broom Cottage and Four Winds have limited views of the road corridor due to property orientation and the presence of evergreen screen planting. The Head of Planning and Transport Planning concluded at paragraph 457 of the Committee Report (CD10.1) that the transport assessment identifying the highest predicted increase in traffic from the operational phase would be 1.8% on this section of road, *"which falls well below the 5% threshold considered to represent a material increase in traffic"*.

Views of mineral extraction and screen bunds

2.29 Public views of the screen bunds from viewpoints beyond the boundary of the Appeal Site would be localised and typically very limited in extent. Private views are assessed separately under the residential visual amenity section of my evidence.

2.30 Views from the east are represented by Photoviewpoints 1-6 at Figures 3 to 10. The majority of the outer eastern facing fields within the Appeal Site will not be disturbed. The eastern extent of Phase 4/5 would be screened behind the existing higher ground of the undisturbed part of the Appeal Site further reduced by temporary screen bunds and tree and shrub planting. I agree with the ES conclusions that the maximum overall effect on visual

amenity from these locations would be Slight to Minimal Adverse during the operational phase.

2.31 Views from the north are represented by Photoviewpoints 8 and A (Figures 14 and 37). At Viewpoint 8, the high point on the bridleway route, extraction of mineral would be visible within Phase 4 and 5, however the direction of extraction would mitigate the visual impact with Phase 4 being extracted in an easterly direction and Phase 5 in a northerly direction so in both cases the working faces are screened. Soil stripping and initial extraction would be visible, and the progressive restoration of Phase 4 would limit the area of exposed mineral visible. All changes would be perceived well below the skyline and would not restrict views to the wider landscape beyond the Site. I agree with the ES conclusions that the maximum overall effect on visual amenity would be Moderate Adverse during the operational phase. At Viewpoint A, from the public bridleway, the elevation is some 15m lower than views from the same bridleway at Viewpoint 8 and a block of conifer trees in the far left of the view restricts visibility of the full horizontal extent of Phases 4/5. Consequently, whilst bridleway users would be closer to the extraction area than at Viewpoint 8, less of the area would be visible and the same mitigation achieved by the direction of extraction would also apply. The maximum overall effect on visual amenity would be Minor to Moderate Adverse during the operational phase and views across the wider landscape beyond the Appeal Site would be maintained.

2.32 Views from the south are represented by Viewpoints 24, 26, 27, 28, 29 and 31 at Figures 30 to 34 and 36. At Viewpoint 24, 27 and 28, fleeting visibility of bunds on the Appeal Site from the road corridor would be largely restricted by vegetation, buildings, and the wall along the southern boundary of the Appeal Site. I agree with the ES conclusions that the maximum overall effect on visual amenity from these locations would be "Minimal Adverse" from Viewpoints 24 and 28 and "Slight Adverse" from Viewpoint 27, where more of the perimeter grass seeded bunds around the Initial Phase and Phase 4 of the extraction area would be visible. At Viewpoint 26 representing views from the bridleway (residents at South Lodge have more restricted views), there would be very limited views of the screen bunds surrounding the initial phase of works. The ES concludes a "Moderate Adverse" effect based on a low magnitude for the nearby residential dwelling, however the magnitude and effect at this precise location for bridleway users would be slightly lower. I agree that there would be a medium magnitude and "Slight Adverse" effect for road users at Viewpoint 29 where the proposed access road would require the temporary removal of the brick wall and there would be views of a temporary access road and permitter bunds surrounding the Initial Works (plant site) and Phase 4.

2.33 Views from the west are represented by Viewpoints 18, 20, 21, 23 and E, at Figures 25 to 29 and 44. Views of the Proposed Development from Brown Westhead Park recreation ground (Viewpoint 21) and Wolverley Road near the junction with Brown Westhead Park (Viewpoint 23) would be prevented

by intervening landform resulting in a Neutral effect. Views from public footpath (FP62 2(C)) at Viewpoint 20 would be largely screened by intervening woodland, even in winter, and I agree with the ES conclusions that there would be a Very Slight Adverse temporary effect. The impact on Green Belt Openness would be negligible.

2.34 At Viewpoint 18 views from public footpath (FP623(B)) that also represent similar private views from the rear of dwellings at the northern end of Brown Westhead Park, would be heavily filtered by intervening woodland, even in winter. The magnitude of change resulting from views of screen bunds to the west of Phases 1-3 would be Very Low and the effect Slight Adverse from the public right of way. The impact on Green Belt Openness would be negligible.

2.35 At Viewpoint E (Figure 44), located on high ground on the western edge of Fairfield, approximately 1.5km west of the Site, the visible parts of the Site, predominantly comprising elevated parts of Phase 4, that would be barely perceptible and seen intermittently between intervening trees as a thin strip of arable land, located well below the horizon and contained between belts of tree planting/woodland. The sensitivity of residents would be High, and the magnitude would be Very Low, resulting in a Slight adverse effect upon visual amenity that is Not Significant. The impact on Green Belt Openness would be negligible.

2.36 Views from within the Appeal Site would be restricted to a section of a public bridleway (626(B)) that runs for approximately 350m between the

eastern and western phases of the Proposed Development and (625(B)) for approximately 350m along the northern boundary of the Site, and an approximately 300m long section of public footpath to the west (624 (B)) that would require temporary diversions during the operational phases. Views are represented by Viewpoints 15, B, C and D (Figures 17, 18 and 38 to 43). Views from the public bridleway 626(B) and similar views from nearby public footpath 624(B) would result in a Slight to Moderate Adverse Effect as set out in the ES at Viewpoint 15, noting that a temporary diversion of the footpath during Phases 1 and 2 (CD5.05 and CD5.06) would maintain alternative, largely unrestricted views across farmland, with temporary screen bunds forming low level new elements in the view. Views of the wider landscape to the west and by Phase 3, the landscape along the original footpath alignment would be restored (CD5.07). Screen bunds and straw bales would temporarily reduce views of the wider landscape to the west of the bridleway, however except for a narrow portion of views to distant countryside above Wolverley and Fairfield, largely restricted to the part of the view above the public footpath, baseline views are already foreshortened by woodland to the perimeter of the Appeal Site. At Viewpoint C, approximately mid-way along public bridleway 626(B) views to the east are currently largely foreshortened by rising ground within the Initial Works phase to the east (Figure 40) and rising ground to the south-east extending to Wolverley Road near Broom Cottage (Figure 41). The creation of a 4 to 5m high screen bund with 1:3 outer slopes around the Initial Works, offset from the public bridleway to ensure protection of

existing trees, would further restrict views in an easterly direction. These changes are temporary and the baseline views, due to the aforementioned landform characteristics, include a very limited proportion of the wider landscape within the Green Belt. A similar scenario would be experienced by users of bridleway 625(B) a short distance to the northeast (Viewpoint B), where the baseline views include rising landform that restrict views of the wider landscape to the southeast (Figure 39) and views of the wider countryside are restricted by woodland on rising ground beyond Castle Barns (Figure 38). At Viewpoint D from public footpath 624(B), existing rising landform also plays a role in restricting views of the wider landscape with the Green Belt (Figures 42 and 43), such that the introduction of screen bunds, whilst temporarily foreshortening views for parts of the route, the diversions and reinstated route following the restoration of Phases 1 and 2 would retain an open character.

2.37 It should be emphasised that any foreshortening of views from public rights of way within the Appeal Site because of the screen bunds would be temporary and would change as the phasing and progressive restoration occurred. Views from representative photoview locations are not perceived in isolation and the sequential experience of the landscape by public rights of way users within the Appeal Site would be such that open views of countryside within the Green Belt adjacent to the Appeal Site, and restored parts of the Appeal Site, would always be available during the operational phase of the Proposed Development.

2.38 I have demonstrated that the majority of the Appeal Site is well contained by natural topography, mature woodland and built development. The Proposed Development, using carefully designed phasing, progressive restoration and additional mitigation measures has sought to minimise potential adverse visual effects during the operational phase. Consequently, I conclude that the visual component of Green Belt openness would be preserved.

2.39 Restoration of the Appeal Site would generally replicate the existing landform. Land levels will generally be between 2 to 7 meters below existing levels with restored land gradients being between 1 in 8 and 1 in 30, which reflect existing land gradients. Restored soil profiles will be the same as those currently in-situ. The land uses changes reflect a combination of reinstatement of parkland features e.g., groups of parkland trees, WCC request for the establishment of acidic grassland within the Phase 1 area, biobiversity enhancement and significantly increased public access opportunities. The landscape proposals accord with the baseline landscape character guidelines set out at page 75 of the Worcestershire Landscape Character Assessment (CD12.04).

> *"Tree cover is predominantly provided by large, discrete plantation woodlands and tree belts. These are often planted with conifers, poplars, or other quick cropping species. The Sandstone Estatelands have the capacity to accommodate considerable areas of new woodland planting. With the decline and fragmentation of the hedgerow pattern, the development of a cohesive woodland structure, with woodland shape*

reflecting the pronounced regular landscape pattern, would considerably help to retain a sense of unity and scale to the landscape."

2.40 The Woodland guidelines produced by Worcestershire County Council and the Forestry Commission in 2010 identify the appropriate planting for each landscape character type in the county (see extract at my Appendix 1). For the Sandstone Estatelands Landscape Type, that the appeal site is located within, the following guidelines are stated:

- *Planting should ideally be in large blocks (field size and above) following the existing geometric field pattern.*
- *The woodland pattern can be further enhanced by planting of linear tree-belts.*
- *Parkland should be restored and conserved. The distinctive hedgerow pattern should also be restored and conserved, with priority given to primary hedgerows.*
- *Heathlands, a rare habitat of high biodiversity importance, are distributed throughout the Sandstone Estatelands.*

2.41 The restoration scheme on the appeal Site would provide:

- Approximately 7.5 hectares of ecologically diverse species-rich acidic grassland;
- 170 new parkland and avenue trees;
- 9,750 new native trees and shrubs (in woodland blocks);
- Approximately 1km of new native hedgerow planting and strengthening;

- Reinstatement of all Best and Most Versatile Agricultural land soil profiles;
- Recreational and increase public amenity opportunities with pocket parks for wellbeing, education, and physical fitness opportunities; and
- Additional public access / connectivity to the wider countryside as well as to and from Cookley and Lea Castle Village with an additional ~2.7km of new bridleway, footpath, and cycle way routes within the Site.

2.42 Following final restoration, I agree with the LVIA in the ES that the long-term effect upon landscape character of the Sandstone Estatelands LCT would be Moderate/Notable Beneficial and Significant. The effect upon visual amenity would range between Slight Adverse and Slight Beneficial and Not Significant, but more typically Neutral for most receptors.

Potential Cumulative Effects

2.43 The potential for cumulative landscape and visual effects between the Proposed Development in conjunction with the permitted Lea Castle Development (17/0205/OUT) and adjacent allocated Site were considered at paragraph 5.27 page 31 and paragraph 7.13 page 58 of CD1.04 (the submitted LVIA) and at section 22.5 of the ES (CD1.03). The permitted development is now under construction and the allocated Site is covered by a planning application 22/040/OUT that is still to be determined at the time of writing.

2.44 The location of other developments (recently constructed, permitted or in the planning system) are illustrated on my Figure 1 in relation to the application and extraction boundaries of the Proposed Development.

2.45 The LVIA at paragraph 5.27 (CD1.04) as part of the cumulative assessment also refers to *'other promoted residential areas to the south and east of the Site'*. Furthermore, the ES at paragraphs 22.5.4, 22.5.7 and 22.5.8 make clear reference to planning permission at Stourbridge Road (18/0163/FULL). It is therefore clear from my review that the ES and LVIA had accounted for 18/0163/FULL – 91 dwellings at Stoubridge Road, although additional smaller residential developments have since been approved and are identified on my Figure 1 and listed below.

- 22/0235/PIP – 4 dwellings at Wolvereley Lodge. Application approved.
- 20/0217/FUL - Demolition of existing building and erection of 4 x two-bed bungalows. This development has now been completed.
- 21/1200/OUT - erection of three dwellings, garages and associated operational development. This application and the subsequent appeal was refused i.e., this scheme does not form part of the cumulative assessment but is included for completeness.

Lea Castle Mixed Use Development (17/0205/OUT and 22/040/OUT)

2.46 Potentially significant cumulative effects upon landscape elements between the Lea Castle Mixed Use development and the Proposed Development are

Neutral and potentially beneficial because both schemes seek retention of existing tree and hedgerow planting to the perimeter of the Sites and would contribute new planting as part of their respective mitigation schemes. There would be a permanent loss of agricultural land as part of the Lea Castle mixed use development, however the Appeal Site would be progressively restored following mineral extraction in each phase and fully restored after 11 years and the restored soil profiles will enable it to achieve BMV status as agricultural land in the future if required (CD10.01).

2.47 In terms of landscape character, both the Lea Castle mixed-use development and the Proposed Development lie within the Sandstone Estateland Landscape Type (LVIA Figure 4 in CD1.04). As previously noted, and with reference to the Disturbed Land Plan at CD1.21, the area of land where mineral is being extracted at any one time within the operational phase would be less than 10 hectares. The progressive restoration would result in long term improvements to landscape character, in terms of historical continuity i.e., reinstatement of avenue trees and the Broom Covert woodland, and the introduction of groups of parkland trees and acidic species rich grassland. Public access would be improved by the addition of new public rights of way illustrated on CD5.11.

2.48 Cumulative landscape character and visual effects can be perceived in combination (where both developments are visible from the same location and in the same field of view), successively (where both developments are perceived from the same location by turning one's head), or sequentially, (where both developments are not visible at the same location but are

perceived separately, in sequence, when travelling on a route). It is important when carrying out a cumulative landscape and visual assessment that effects in three-dimensions are fully understood. Just because two developments may be located relatively close to each other (as seen in a 2-dimensional plan view), does not necessarily equate to a cumulative effect that would be perceived in the field.

2.49 At Viewpoint 1 (my Figure 3), the residential development under construction (17/0205/OUT) can be glimpsed behind woodland in the far right of the view. New built development as part of 22/040/OUT would extend across the foreground and middle-ground of the view preventing any views from the public footpath towards the Appeal Site. Any views within the new mixed-use development are likely to be highly restricted by adjacent built form. Any theoretical glimpses of the extraction of Phases 4/5 would be limited to the perimeter screen bunds set below the horizon with potential glimpses of the initial soil strip on Phase 4, similar to an agricultural operation, with the extraction working eastwards and very quickly below the height of the perimeter bunds. There would be a Neutral cumulative effect and no discernible effect on openness.

2.50 At Viewpoint 2 (Figure 4), new built development as part of 22/040/OUT would be partially visible to the left of the road corridor (beyond the extent of presented photography). By contrast the Proposed Development would be predominantly screened from view with the upper parts of the screen bunds potentially visible above and behind retained hedgerow planting. At nearby Viewpoint 9 (Figures 11 – 13), from a more elevated location that

is closer to the Proposed Development but not publicly accessible, the limited and filtered views of part of the grass seeded screen bunds to the east of Phase 4 are illustrated in the photomontages. This temporary mounding would only be in place for approximately 5 years. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on openness.

2.51 At Viewpoint 3 (Figure 5), the manure heap on the horizon is located on land approximately 3m higher and 60m further to the west of the crest of the screen bund 18 that would be installed to the east of Phase 4. Bund 17 to the east of Phase 5 would be largely hidden by intervening hedgerow planting that would be retained and reinforced as part of the proposals. New built development as part of 22/040/OUT would be screened by retained belt of pine trees in the far right of the view, although successive visibility of new built development along Park Gate Road would be available (beyond the extent of presented photography). There would be a Neutral cumulative effect and no discernible effect on openness.

2.52 At Viewpoint 4 (Figures 6-8), situated further east along Park Road, more elevated views towards the screen bunds would be largely prevented by a belt of intervening pine trees. Any changes to the views and landscape character available would be restricted to the growth of advanced woodland planting on the horizon between the belt of pine trees and Castle Barns (Figure 8), however the Lea Castle mixed use development (22/040/OUT),

assuming it is permitted and under construction, would likely largely restrict and eventually fully screen any views towards the Appeal Site. There would be a Neutral cumulative effect and no discernible effect on openness.

2.53 Viewpoints 5 and 6 (Figures 9 and 10) to the southeast are from the urban edge of Kidderminster and views would include combined visibility of the Lea Castle mixed use development (22/040/OUT) and the eastern edge of Phases 4 and 5, although this would be restricted to temporary views of the grass seeded bunds associated with Phase 4 and to a lesser extent Phase 5, partially screened by existing vegetation that would be reinforced with new planting. The agricultural land to the east of the extraction area within the Appeal Site would be maintained. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on Green Belt openness.

2.54 Viewpoint 8 (Figure 14), was taken from a locally elevated location where a public bridleway coincides with the access track to Castle Barns. There would be limited views of the Lea Castle mixed use development that would appear 'sandwiched' between the urban edge of Kidderminster in the background and the roofscape of Castle Barns and planting in the foreground. There would be no potential for any significant effects on the visual amenity of bridleway users or landscape character. The Proposed Development during Phases 4 and 5 would have a temporary Moderate Adverse effect that is Not Significant because of the direction of the working

faces of mineral extraction, partly mitigated by advance planting and perimeter bunds. The cumulative effects upon landscape character and visual amenity resulting from views of both schemes would be Neutral i.e. not discernibly greater than for either scheme individually, noting the primary changes to views would result from temporary views of Phases 4 and 5. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible adverse effect on Green Belt openness.

18/0163/FUL – 91 dwellings at Stoubridge Road

2.55 The residential development has now been constructed and views from the northern edge of the new development would be similar to nearby Viewpoint 5 (Figure 9). Views would include combined visibility of the Lea Castle mixed-use development (22/040/OUT) and the eastern edge of Phases 4 and 5, although this would be restricted to temporary views of the grass seeded bunds associated with Phase 4 and to a lesser extent Phase 5, partially screened by existing vegetation that would be reinforced with new planting. The open agricultural land to the east of the extraction area within the Appeal Site would be maintained. Notwithstanding the obvious fact that views of the temporary grassed bunds and new planting on the eastern edge of the Appeal Site would not constitute built development, there would be a Neutral cumulative effect and no discernible effect on openness.

22/0235/PIP – 4 dwellings at Wolverley Lodge

2.56 The approved development is located to the northwest of Brown Westhead Park playing fields. The site adjoining the playing fields is bordered by tall conifer screens and other tree cover and any heavily filtered views of the proposed development from the playing field (Viewpoint 21 – Figure 28) would not constitute a cumulative effect as the Proposed Development, including screen bunds, on the Appeal Site would not be visible. There would be a Neutral cumulative effect and no discernible effect on openness.

2*0/0217/FUL - Erection of 4 x two-bed bungalows*

2.57 The completed development on Brown Westhead Park is located to the east of the Appeal Site and is set down at a lower level such that there is no opportunity for any views of the Proposed Development from the bungalows themselves. Viewpoint 20 (Figure 27) from the public footpath located between the two schemes, illustrates the very restricted views of the Appeal Site through woodland, however these views are only available intermittently from the public footpath on higher ground east of the bungalows. Very limited views of both developments are available from the footpath simultaneously (i.e., by turning one's head), however given the screening role of mature woodland cover, even in winter, it is assessed that the cumulative effect would be Neutral and there would be no discernible effect upon Green Belt openness.

Cumulative Conclusions

2.58 The landform characteristics of the Site and surrounding land, implementation of advance planting, reinforced existing planting and grass seeded screen bunds, would in combination result in very limited cumulative effects with other developments recently constructed, permitted or in the planning system. Where very limited cumulative visibility of both schemes is available, as described above, I agree with the conclusions of the ES that the resulting level of cumulative effect on landscape character and visual amenity would be Neutral i.e., not discernibly greater than for the Proposed Development or other scheme/s individually.

3. Reason for Refusal 3: Impact on Residential Amenity

Background

3.1 Residential Amenity encompasses a range of considerations including outlook (views), noise and dust. The Planning Officer in his Committee Report (CD10.01) did not specifically consider residential visual amenity. The effects of the closest screen bunds upon residential visual outlook, first appeared at paragraph 5.7 in WCC's Statement of Case.

3.2 Screen bunds are employed as an embedded mitigation measure in most quarry developments, to address potentially unacceptable environmental impacts, notably noise and outlook, from the operational phase. The screen

bunds are a temporary soil store (grass seeded) and form an important part of the restoration material, located close to the phase being restored. The precise height and separation distance are frequently dictated by noise mitigation requirements. No concerns regarding the inclusion of screen bunds close to dwellings at the Appeal Site were raised by the County Landscape Officer, Head of Planning and Transport, or any other statutory consultee.

3.3 The Landscape Institute Technical Guidance Note 2/19 covering Residential Visual Amenity Assessment (RVAA), hereafter referred to as TGN 2/19 (see my Appendix 2), states at paragraph 2.1 that the guidance was produced to provide *"an informed, well-reasoned answer to the question: 'is the effect of the development on Residential Visual Amenity of such nature and/or magnitude that it potentially affects living conditions or residential amenity'…this is referred to as the Residential Visual Amenity Threshold* (or RVAT)*"*

3.4 RVAA is distinct from the LVIA that forms part of the ES (paragraph 3.7 of TGN 2/19 in my Appendix 2).

3.5 TGN 2/19 states that residential visual amenity should not be confused with judgements on residential amenity because the latter is a planning matter (paragraph 1.8 of my Appendix 2). In the case of the appeal proposal, residential amenity also includes consideration of the effects of noise and air quality on residents, as set out in the separate proofs of evidence on behalf

of the appellant (Ms Hawkins and Ms Canham) and then weighed in the planning balance in the proof of evidence of Mr Toland.

3.6 Paragraph 1.5 of TGN 2/19 (Appendix 2) states:

"…In respect of private views and visual amenity, it is widely known that no one 'has a right to a view'. This includes situations where a residential property's outlook / visual amenity is judged to be 'significantly' affected by a proposed development, a matter which has been confirmed in a number of appeal / public inquiry decisions."

3.7 Paragraph 1.6 of TGN 2/19 (Appendix 2) goes on to explain that it is not uncommon for development to have a significant effect on visual amenity and *"in itself this does not necessarily cause planning concern"*. It is however recognised that there are sometimes situations where the changes are so great that it *"is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before."*

3.8 TGN 2/19 states: *"..development types including potentially very large but lower profile structures and development such as road schemes and housing are unlikely to require an RVAA. Except potentially of properties in very close proximity (50m-250m) to the development."* The guidance then goes on to state that only properties within 100-150 metres of overhead transmission lines are potentially considered for inclusion in a RVAA, noting typical pylon heights range between 40m to 60m high, and unlike the temporary screen bunds proposed at the Appeal Site, are typically permanent structures.

3.9 In conclusion, following careful review of TGN 2/19 and considering the height and proximity of proposed bunds to residential properties at the Appeal Site, I can see no justification for a separate RVAA. Notwithstanding this conclusion, further analysis is necessary considering WCC's reason for refusal 3 and paragraph 5.7 of their Statement of Case.

Screen bunds at quarries close to residents

3.10 In my professional experience it is not unusual for temporary screen bunds to be employed as part of quarry schemes at the heights and separation distances from dwellings that are proposed at the Appeal Site. In this context, I set out below three recently permitted examples of screen bunds close to residential properties where there are broad similarities with the Proposed Development. Notwithstanding these comparisons, it is accepted that every proposal is assessed on its own merits.

a) Martells Quarry Extension, Ardleigh: Permission was granted by Essex County Council in 2021 (ESS/29/20/TEN). A 5m high screen bund is to be located close to Coronation Cottages where residents currently have ground and first floor views across open farmland. The toe and crest of the screen bund would be 12m and 27m respectively from the dwelling and the bund would be in place for at least 10 years. For details see Appendix 3.

b) Stanninghall Quarry, Horstead: Permission was granted by Norfolk County Council in 2021 (FUL/2020/0085). The separation distances between temporary soil screen bunds and residential properties that

have open views across arable farmland are 50m at the 'The Hollies' and 80m at Hill Farm. The bunds would be in place for 6.5 years. For details see Appendix 4.

c) Condover Quarry, Shrewsbury: Permission was granted in 2021 by Shropshire County Council (19/01261/MAW). Allfield Cottages are located to the south of the quarry and residents have views from the rear of the property and garden of open arable farmland. The permitted scheme includes a 5m high noise bund, topped with 2m high planting, located on rising ground for the duration of the operation phase (14 to 15 years). The separation distance between the crest of the bund and the dwelling is 68m. For details see Appendix 5.

Separation distances between permanent buildings

3.11 Consideration of acceptable separation distances between built form/engineered structures and nearby residents can be informed by the approach commonly adopted in housing developments. From my extensive experience working as a Landscape Architect on residential schemes, the typical separation distances between back-to-back housing is 20-23m. This separation is adopted to ensure that adequate daylight, sunlight, outlook, and privacy is achieved for all residents.

3.12 Local Planning Authorities frequently specify separation distances in adopted Supplementary Planning Documents (SPD). In the apparent absence of separation distances in SPD produced by Wyre Forest Council, at my

Appendix 6, I include extracts of East Staffordshire Borough Council's adopted "*Separation Distances and Amenity SPD*". The SPD illustrates at paragraph 4.3 under external separation standards that 21 metres should be designed between back-to back residential properties, noting at paragraph 4.7 this separation can be reduced to 12 metres where there are walls without habitable windows.

3.13 I consider that screen bunds of equivalent height and separation distance to permanent buildings e.g., a row of terraced houses, would have a reduced effect upon visual amenity of nearby dwellings because they are temporary structures, and they do not have windows that impact privacy. It is also noted that screen bunds on the Appeal Site would not exceed 6m in height, whereas two storey housing is typically 8m high to the ridge.

3.14 In terms of this Appeal, the separation distances between the closest dwellings and the screen bunds have been designed to be over three times greater than the minimum separation distances typically adopted for back-to-back housing. The separation distance between the western elevation of the Equestrian Centre bungalow and the crest of the 5 to 6m high temporary screen bund is approximately 62.5m, noting that the bund would be in place for only 9 months.

RVAA of closest dwellings

3.15 Notwithstanding my experience that there is no potential for the Residential Visual Amenity Threshold (RVAT) to be breached with respect to views of

the Proposed Development from the closest dwellings, the Council's Reason for Refusal 3 and their Statement of Case requires me to review the private outlook from dwellings that lie close to the Appeal Site boundary and have the potential for clear views of the Proposed Development. This assessment has been assisted by review of the ZTVs (CD1.04 – Appendix A - LVIA Figures 6 to 9) and observations in the field.

3.16 Where an assessment of likely views from a dwelling has necessitated review from the private curtilage of the dwellings, I have agreed access to the external space around the property with residents. Other fieldwork was undertaken from publicly accessible locations or the Site itself.

3.17 My assessment has been conducted in line with Steps 1 to 3 of TGN 2/19,[18] and adopts the methodology and approach set out in the submitted ES. The dwellings that are scoped into my assessment are listed below and are identified on the planning application drawings illustrating the phasing and progressive restoration of the Proposed Development (CD5.03-5.11):

- Equestrian Centre Bungalow;
- Keepers Cottage;
- North Lodges;
- Castle Barns/White House;
- Four Winds;

[18] Figure 1 at page 7 of TGN 2/19 in Appendix 2

- Broom Cottage;
- South Lodges; and
- Brown Westhead Park (dwellings at northern end of road).

Equestrian Centre Bungalow

3.18 Residents of the Equestrian Centre Bungalow have open views across arable farmland from the front of the L-shaped dwelling. The parking area at the front of the dwelling is accessed from a private track that connects Wolverley Road to the south with the Equestrian Centre to the north of the bungalow. A public bridleway follows the track before turning to the northeast, approximately 100m south of the bungalow. The views from the front of the dwelling are experienced from a bedroom window closest to the Appeal Site, with other windows to main living space and the front door, slightly set back (see my annotated photoviews at Figures 20 and 21). As part of the Proposed Development, a temporary 6m high soil bund would be located to the west of the dwelling and would be in-situ for approximately 9 months (the duration of the Phase 1 Works) as illustrated on the Phase 1 Working and Restoration Plan (CD1.25). There would be a clearly noticeable but temporary change in outlook resulting from the foreshortening and restriction of views to the wider landscape. The bund has been designed in an arc to acknowledge the proximity of the bungalow, with a separation of approximately 62.5m between the crest of the bund and the dwelling.

3.19 East facing views from the rear of the Bungalow comprise a garden and horse paddocks, with the arable farmland of the Appeal Site set beyond the public bridleway, located on gently undulating land (see existing view at Figure 22). A series of computer-generated photomontages of the Proposed Development at Year 1, 10 and 25, following the commencement of operations have been prepared (Figures 23 to 25) and these are an update to the photomontages prepared in the submitted ES, as they a) reflect winter conditions and b) reflect latest best practice guidance issued by the Landscape Institute in the latter half of 2019, after the ES photomontages had been prepared.

3.20 The effects upon the visual amenity of residents of the Bungalow are set out under Viewpoint 17 at page 46 of the ES LVIA Technical Appendix (CD1.04). I agree with the assessment in the ES that the residents are of high sensitivity, and that the magnitude during the operational phase, with embedded mitigation measures including the screen bunds and phased working in place, would be Medium. I also agree with the ES conclusion that there would be a Moderate adverse overall effect that would be Not Significant.

3.21 In my professional opinion and with reference to similar permitted examples set out above, I assess that the temporary presence of the screen bunds would not have the potential to breach the RVAT as defined in TGN 2/19 best practice guidance (Appendix 2).

Keepers Cottage

3.22 The dwelling is owned and occupied by the landowner. There are southerly views from the front elevation of the dwelling to Phases 4/5 of the Appeal Site and heavily filtered views towards the Initial Phase of work. (Viewpoint 13 – Figure 16). Perimeter screen bunds, over 150m distant, would restrict views of the deeper extraction, however the higher-level extraction and restoration would be temporarily visible above these bunds. I judge that the magnitude would be Low (not Very Low as assessed in the ES) and the overall effect on visual amenity Moderate and Not Significant. I assess that the temporary visibility of the screen bunds and activity associated with the construction phase would not have the potential to breach the RVAT.

North Lodges

3.23 Members of the landowner's family own the northern side of North Lodge and the southern side is part derelict and not occupied. The garden of the northern occupied lodge is surrounded by a tall conifer hedge and consequently no views of the Proposed Development are predicted. Theoretical views from the southern lodge (part derelict and currently unoccupied) are predicted to experience views from upper floor windows of Phases 4 and 5 that are heavily filtered by garden tree planting and mitigated by the direction of working. I agree with the ES conclusions that the magnitude would be Low and the theoretical effect upon residential visual amenity would be Slight adverse during the operational phase. North Barns are located over 170m from the extraction limit at the closest point

and in combination with the limited visibility it is concluded there would be no potential for the RVAT to be breached.

Castle Barns/White House

3.24 There are potential views towards Phase 4/5 of the Proposed Development from the rear of dwellings that face south, noting that ground floor views would typically be more restricted by intervening planting, than presented at Viewpoint 9 (Figures 11-13). As demonstrated by the photomontage's views of the screen bunds to Phase 4 would form a minor component of the view and closer to the properties and the temporary bunds installed prior to the extraction of Phase 5 would be screened by approximately 7 years growth of advanced woodland planting and reinforced hedgerow planting. The direction of excavation of Phase 4 eastwards would, in combination with the perimeter screen bunds, ensure there would not be views of quarry faces available from the dwellings. I agree with the ES conclusions that the magnitude would be Very Low to Low and the effect upon residential visual amenity would be Slight to Moderate Adverse and Not Significant during the operational phase.

3.25 Views from the access road to Castle Barns (Viewpoint 8 – Figure 14 and Viewpoint 10 – Figure 15) would be less restricted than from the dwellings, although partly mitigated by new planting, screen bunds and the direction of working of Phases 4/5. I agree with the ES that there would be up to a Moderate adverse effect that is Not Significant during the operational phase.

3.26 In conclusion given the limited visibility of the Proposed Development, largely restricted to the access track, and mitigation measures embedded into the scheme, there would be no potential for the RVAT to be breached from Castle Barns.

Four Winds

3.27 The front of the dwelling faces northwest and the garden boundary to Wolverley Road is flanked by tall conifers. Views towards the Site are predicted to be restricted to narrow and heavily filtered glimpses from some upper floor dormer windows. Views of the Proposed Development from the access drive at the junction with Wolverley Road, are effectively restricted by a tall brick wall and planting within the curtilage of Broom cottage (Viewpoint 31 – Figure 36). The ES assesses the potential views of Phase 4 including perimeter bunds as a low magnitude and a Moderate adverse effect that is Not Significant. Given the very restricted nature of the potential views, likely available from a single dormer window, I judge that heavily restricted views of the Proposed Development would likely be closer to the Very Low than Low Magnitude of change.

3.28 In conclusion given the limited visibility of the Proposed Development, largely restricted by conifer screen planting and the wall along Wolverley Road, there would be no potential for the RVAT to be breached from Four Winds.

Broom Cottage

3.29 The bungalow is under the control of the applicant and is understood to be currently unoccupied although it was assessed as being occupied in the ES to cover the worse-case scenario. Views northeast from the front of the dwelling would be largely restricted by mature tree planting, with any views of the Phase 4 extraction minimised by Bund 19. As illustrated in Viewpoint 30 (Figure 35) views west from the rear of the dwelling, towards the proposed temporary access road, would be screened by garden planting including an evergreen laurel hedge. Oblique views from the rear elevation and direct views north from the rear garden would be mitigated by the proposed reinforcement of the garden hedgerow and allowing the existing hedge to grown up. Further screening would be provided by low level bunds.

3.30 During the operational phase the ES records a Low magnitude and an overall Moderate effect that would be Not Significant, and I agree with this assessment. In conclusion given the limited visibility of the Proposed Development, largely restricted by mature planting and dwelling orientation relative to the Appeal Site, there would be no potential for the RVAT to be breached from Broom Cottage.

South Lodges

3.31 Members of the landowner's family own the eastern lodge and the western lodge is part derelict and not occupied. Theoretical views towards the Appeal Site from the western lodge as illustrated in Viewpoint 26 (Figure

31), would be heavily restricted by planting, including evergreen conifers along the rear garden boundary. Ground floor views from the eastern lodge are heavily restricted by a close board fence and upper floor views largely restricted by mature conifers trees and farm buildings.

3.32 During the operational phase the ES records a Low magnitude and an overall Moderate effect that would be not significant. I judge that heavily restricted views of the Proposed Development would be closer to the Very Low than Low Magnitude of change. Given the limited visibility of the Proposed Development, largely restricted by planting and/or fencing around the rear gardens, there would be no potential for the RVAT to be breached from either of the lodges.

Brown Westhead Park (Four dwellings at northern end of the road)

3.33 Views from dwellings along the central and southern part of Brown Westhead Park are set down several metres below the level of the woodland that borders the Site and consequently there is no potential for views of the Proposed Development. The four dwellings at the northern end of Brown Westhead Park are separated from the Appeal Site by a belt of mature woodland. When trees/shrubs are in leaf it is predicted that views towards the Appeal Site from the rear elevations and gardens of the dwellings would be fully or almost fully screened by the woodland. With reference to Viewpoint 18a and 18b (Figures 25 and 26), taken from the public footpath adjacent to the rear garden boundary of the dwellings, views towards Phases 1-3 in winter (65 to 150m distant) are predicted to be

heavily filtered, noting ground floor rear views from the dwellings would be further restricted by garden planting and/or close board fencing with heavily filtered views more likely from upper floor windows. Any heavily filtered views of the mineral extraction would be further minimised by the installation of temporary grass seeded screen bunds.

3.34 During the operational phase the ES records a Very Low to Low magnitude and an overall Slight to Moderate effect that would be Not Significant. I agree with this assessment, noting I judge that heavily restricted views of the Proposed Development would be closer to the Very Low than Low Magnitude of change. In conclusion given the limited visibility of the Proposed Development, largely restricted by mature woodland, there would be no potential for the RVAT to be breached from any dwelling on Brown Westhead Park.

Appendices

App. 1 Extracts from Trees and Woodland in Worcestershire – Biodiversity and Landscape Guidelines for their planting and management produced by Worcestershire County Council and the Forestry Commission (2010)

App. 2 Landscape Institute RVAA Technical Guidance Note 2/19

App. 3 Figures from the permitted Martells Quarry Extension, Ardleigh planning application (ESS/29/20/TEN)

App. 4 Figures from the permitted Stanninghall Quarry, Horstead planning application (FUL/2020/0085)

App. 5 Figures from the permitted Condover Quarry, Shrewsbury planning application (19/01261/MAW)

App. 6 Extracts of East Staffordshire Borough Council's adopted *Separation Distances and Amenity SPD* (2018)

Appendix 1 Extracts from 'Trees and Woodland in Worcestershire – Biodiversity and Landscape Guidelines for their planting and management' produced by Worcestershire County Council and the Forestry Commission (2010)

L12 Landscape Types: Sandstone Estatelands & Enclosed Commons

Main Geographic Areas:

THE SANDSTONE ESTATELANDS ARE CONCENTRATED ON THE KINVER PLATEAU. THE ENCLOSED COMMONS LIE TO THE EAST OF THE MALVERN HILLS, TO THE SOUTH OF GREAT MALVERN

These two Landscape Types are similar in many ways, differing primarily due to their soils and geology and in their consequent land use and ecological identities. Their tree cover character is however comparable and for the purposes of this document, the two Landscape Types can be considered together.

L12 LANDSCAPE CONTEXT

An open arable landscape with a regular pattern of large fields, defined by straight, late enclosure thorn hedges and straight-sided estate plantation woodlands. The main land use in the Sandstone Estatelands is arable farming.

Farmsteads and wayside dwellings are scattered and dispersed, and discrete settlement clusters are often in the form of small estate villages.

The strong geometric pattern of these landscapes creates a functional and ordered landscape. Large plantation woodlands provide a notable structural component to the landscape, although it is the field pattern that provides the overall unity. Relict areas of heathland in the Kinver area are often of high nature conservation importance.

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L12 WOODLAND AND TREE COVER CHARACTER

These are planned landscapes, with large, well-defined woodlands. Single species - especially coniferous - plantation woodlands with their regular boundaries, together with tree belts, provide a key element to the overall character. The landscape is open, with tree cover providing a framework to views, rather than producing a sense of enclosure by blocking them. Hedgerows are typically species-poor, dominated by hawthorn and noticeably lacking in hedgerow trees.

Tree cover along watercourses and drainage ditches is important, usually provided by willows and alder. Parkland features and associated ornamental planting add to the diversity of these landscapes.

The deterioration and reduced size of parklands is often evident, with parkland trees now located in areas of arable cultivation.

L12 GUIDANCE ON PATTERN, SIZE AND LOCATION

There is considerable potential for large new woodland planting throughout both these landscapes, helping to strengthen the estate character. Planting should ideally be in large blocks (field size and above) following the existing geometric field pattern. Mixed and coniferous woodland will be most appropriate on existing plantation sites and previously un-wooded arable sites. Plantations on ancient woodland sites are an important exception, where native woodland should be restored at the end of the current rotation. Coniferous planting is not recommended within the Malvern Hills AONB.

The woodland pattern can be further enhanced by planting of linear tree-belts, and strengthening planting along watercourses.

Parkland should be restored and conserved.

The distinctive hedgerow pattern should also be restored and conserved, with priority given to primary hedgerows.

Heathlands, a rare habitat of high biodiversity importance, are distributed throughout the Sandstone Estatelands.

Woodland creation should not be considered on heathland areas and remaining areas of permanent grassland.

Appendix 2 Landscape Institute RVAA Technical Guidance Note 2/19

Landscape Institute Technical Guidance Note

Residential Visual Amenity Assessment (RVAA)

Technical Guidance Note 2/19

15 March 2019

This Technical Guidance Note has been prepared in support of landscape and other appropriately qualified professionals who are engaged in RVAA. It is not prescriptive but aims to improve standards and it promotes a logical approach which should contribute to well informed decision making.

Foreword

The third edition of the Guidelines for Landscape and Visual Impact Assessment, GLVIA3, published in 2013, is well established as providing 'best practice guidance' when undertaking landscape and visual impact assessment (LVIA). With respect to visual impact the focus of GLVIA3 and LVIA is on public views and public visual amenity.

Residential Visual Amenity Assessment (RVAA) is a stage beyond LVIA and focusses exclusively on private views and private visual amenity. RVAA has become more common particularly when development proposals are the subject of a planning appeal. A RVAA may be used by the decision maker when weighing potential effects on Residential Amenity in the planning balance.

This Technical Guidance Note is prepared in support of landscape and other appropriately qualified professionals who are engaged in RVAA. It is not prescriptive but aims to improve standards. It promotes a logical approach which should contribute to well informed decision making.

I wish to express my thanks to all those who responded to the consultation draft, contributed by offering suggestions and submitted examples of RVAA*.

Marc van Grieken FLI

* Examples of RVAAs and their presentation tools may be added to the LI website or included in a revised edition of this note.

1. Introduction

Context

1.1 This Technical Guidance Note has been prepared to assist landscape professionals when undertaking Residential Visual Amenity Assessments (RVAA). People's visual amenity is defined in Guidelines for Landscape and Visual Impact Assessment – Third Edition, 2013 (GLVIA3)[1] as:

> *"the overall pleasantness of the views they enjoy of their surroundings"*

1.2 In this document, Residential Visual Amenity means: 'the overall quality, experience and nature of views and outlook available to occupants of residential properties, including views from gardens and domestic curtilage'. Residential Visual Amenity is one component of 'Residential Amenity'.

Views and visual amenity in the planning process

1.3 The planning system is designed to act in the public interest when making planning decisions. Nevertheless, effects on private interests are considered by planners in the 'planning balance'. This includes weighing effects on Residential Amenity.

1.4 Residential Amenity comprises a range of visual, aural, olfactory and other sensory components. Development can cause effects on one or more components of Residential Amenity, for example effects of noise, dust, access to daylight, vibration, shadow flicker, outlook and visual amenity. Sometimes this is referred to as 'living conditions'.

1.5 Changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that, no one has 'a right to a view.' This includes situations where a residential property's outlook / visual amenity is judged to be 'significantly' affected by a proposed development, a matter which has been confirmed in a number of appeal / public inquiry decisions. (see also **Appendix 1 Planning Precedent**).

1.6 It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook / visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before.

1.7 Appeals / public inquiries often consider the visual amenity component of Residential Amenity. Notably there have been many decisions relating to wind energy developments, perhaps not

[1] Guidelines for Landscape and Visual Impact Assessment, Third edition, Landscape Institute and Institute of Environmental Management and Assessment, 2013

surprising given the height and size of modern wind turbines. A selection of decision extracts is included as background information in **Appendix 1**.

1.8 Judgements formed in respect of Residential Visual Amenity should not be confused with the judgement regarding Residential Amenity because the latter is a planning matter. Nor should the judgement therefore be seen as a 'test' with a simple 'pass' or 'fail'.

1.9 Landscape professionals should confine their judgement to Residential **Visual** Amenity. The final judgement regarding effect on Residential Amenity (which to greater or lesser extent may be informed by the judgement formed by the landscape professional in respect of Residential **Visual** Amenity) is a planning matter and requires weighing all factors and likely effects (positive as well as negative) in the 'planning balance'. This is a matter for qualified planners and not for landscape professionals.

2. Purpose of RVAA

2.1 The purpose of RVAA is to provide an informed, well-reasoned answer to the question: 'is the effect of the development on Residential Visual Amenity of such nature and / or magnitude that it potentially affects 'living conditions' or Residential Amenity'? In this guidance this is referred to as the Residential Visual Amenity Threshold.

2.2 The Residential Visual Amenity Threshold remains a constant irrespective of the type and nature of the development being assessed in the RVAA. However, the factors which might contribute to the threshold being reached, or the way in which these are expressed, may be different for different types of development (for example, one might use terms such as 'overwhelming/overbearing' for tall structures, or 'overly intrusive' for a development overlooking a garden or principal room). Determining whether the threshold has been reached requires informed professional judgement. It is the process by which informed professional judgement is engaged to reach a conclusion regarding the Residential Visual Amenity Threshold that is the subject of this Technical Guidance Note. It is important that assessors communicate their conclusions in a measured, rational manner. In keeping with recommendations in GLVIA3 this should be done using succinct narrative as opposed to a numerical tabular assessment format. Tables summarising narrative can, however, be very helpful.

2.3 It should be noted that RVAA does not consider, or provide information on, the other components of Residential Amenity referred to above such as noise and air quality. Decision makers, practitioners and others should consider RVAA alongside other relevant documents relating to Residential Amenity that may be provided in support of an application.

RVAA and EIA

2.4 A LVIA prepared in accordance with GLVIA3 provides an appropriate starting point for a RVAA. LVIA usually forms part of Environmental Impact Assessment (EIA).

2.5 LVIA findings of significant (adverse) effects on outlook and /or on visual amenity at a residential property do not automatically imply the need for a RVAA. However, for properties in (relatively) close proximity to a development proposal, and which experience a high magnitude of visual change, a RVAA may be appropriate, and may be required by the determining / competent authority. The scope of a RVAA is normally agreed with the determining / competent authority.

3. Undertaking a RVAA

Approach

3.1 In terms of general approach RVAA should provide a transparent, objective assessment, grounded in GLVIA3 principles and processes, evaluating and assessing the likely change to the visual amenity of a dwelling resulting from a development. RVAA requires assessors to draw a conclusion whether the effect of the development on visual amenity and / or views from the property reaches the Residential Visual Amenity Threshold. Forming such a judgement requires experience in addition to thorough and logical evaluation and reasoning. Experience may be gained, for example, through peer review of the assessment by another landscape architect, or by visiting completed developments and checking if the changes in views and visual amenity were as predicted. Another form of reviewing one's judgement may be through analysing the information and reasoning used by planning Inspectors (England, Wales and Northern Ireland) and Reporters (Scotland) in reaching their findings and conclusions when they ascertain if the Residential Visual Amenity Threshold has been reached. However, assessors should not stray into the realms of planning balance.

Process

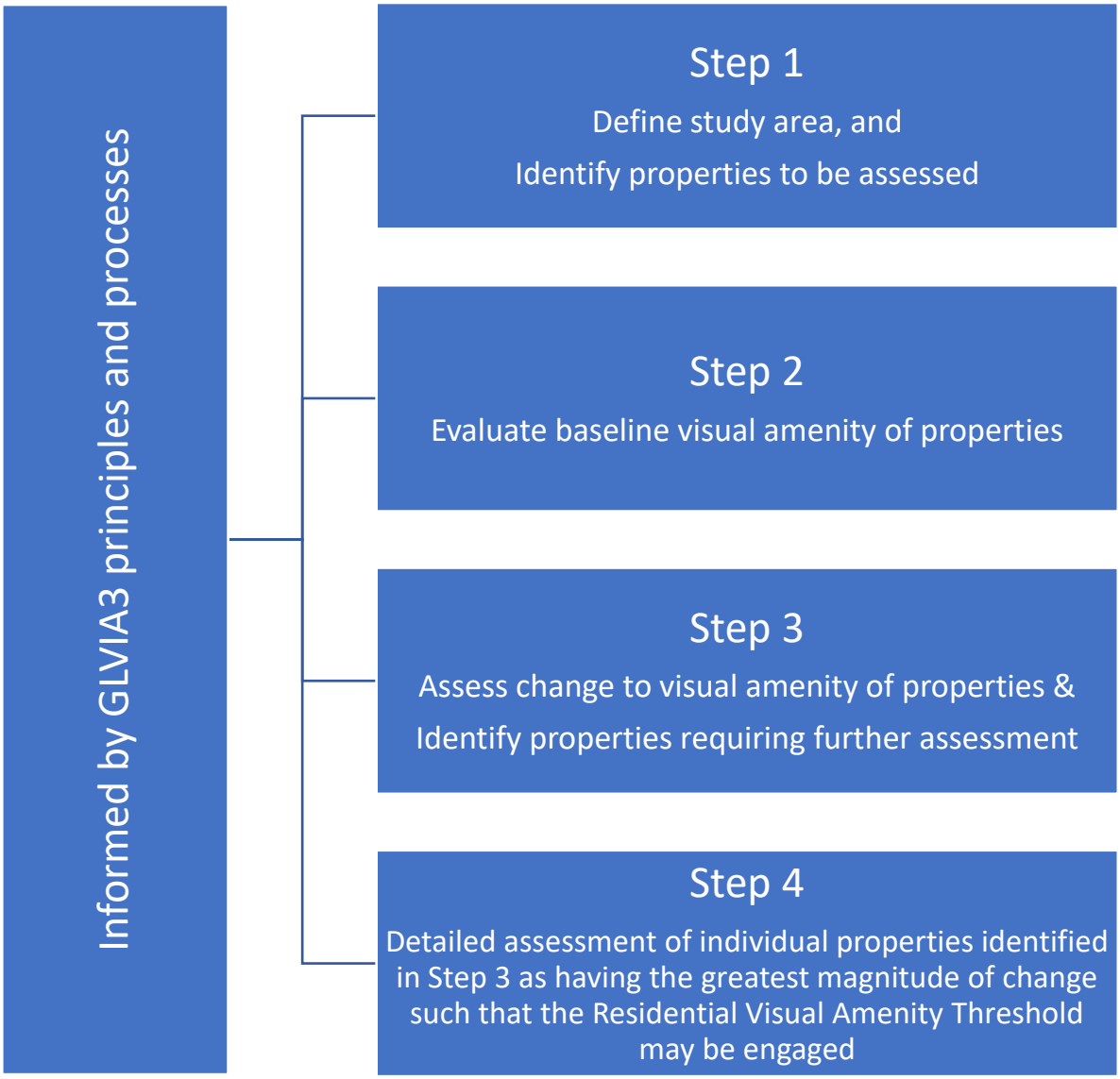
3.2 This guidance recommends that a full RVAA comprises four 'steps' and in situations where all four are engaged this will typically involve some iteration of the third and fourth steps. The first three steps fall broadly within the normal scope of LVIA consisting of an assessment of the magnitude and significance of visual effect (in the EIA context) and change to visual amenity likely to be experienced by occupants at those individual residential properties which were identified while scoping the RVAA.

3.3 The fourth and final step of RVAA requires a further assessment of change to visual amenity examining whether the Residential Visual Amenity Threshold is likely to be, or has been, reached. Whether or not this final step is engaged depends on the circumstances specific to the case. It will generally be clarified either during pre-application consultations relating to the accompanying LVIA, or subsequent to it during the RVAA. In any event RVAA should be considered supplementary to LVIA following on from, and informed by, the latter's findings and conclusions.

3.4 Consultation with the determining / competent authority is recommended to ensure that the scope of a RVAA accompanying an application is agreed in advance. In practice, a RVAA is generally only justified when the effect on Residential Visual Amenity could reach the Residential Visual Amenity Threshold.

3.5 The RVAA process is summarised below in **Figure 1 RVAA Process** and described in more detail in the following Methodology section.

Figure 1 RVAA Process



The relationship between GLVIA3 and this RVAA guidance

3.6 The RVAA approach and methodology set out in this document accords with GLVIA3 principles and processes. Paragraph 6.1 (page 98) of GLVIA3 states:

> *"An assessment of visual effects deals with the effects of change on views available to people and their visual amenity. The concern here is with assessing how the surroundings of individuals or groups of people may be specifically affected by changes in the content and character of views as a result of the change or loss of existing elements of the landscape and/or introduction of new elements."*

3.7 However, it should be stressed that, RVAA is distinct from LVIA as noted in GLVIA3 at paragraph 6.17 (pages 107 and 109), which states:

> *"Effects of development on private property are frequently dealt with mainly through 'residential amenity assessments'. These are separate from LVIA although visual effects assessment may sometimes be carried out as part of a residential amenity assessment, in which case this will supplement and form part of the normal LVIA for a project. Some of the principles set out here for dealing with visual effects may help in such assessments but there are specific requirements in residential amenity assessment."*

3.8 RVAA is concerned specifically with the effects of change to the views and visual amenity available to people at their place of residence. As explained above the key difference between RVAA and LVIA is that RVAA focuses on private visual amenity at individual properties whilst LVIA focusses on public amenity and views. In relation to private property and residential receptors GLVIA3 states at paragraph 6.36 (page 114):

> *"The issue of whether residents should be included as visual receptors and residential properties as private viewpoints has been discussed in Paragraph 6.17. If discussion with the competent authority suggests that they should be covered in the assessment of visual effects it will be important to recognise that residents may be particularly susceptible to changes in their visual amenity - residents at home, especially using rooms normally occupied in waking or daylight hours, are likely to experience views for longer than those briefly passing through an area. The combined effects on a number of residents in an area may also be considered, by aggregating properties within a settlement, as a way of assessing the effect on the community as a whole. Care must, however, be taken first to ensure that this really does represent the whole community and second to avoid double counting of the effects".*

3.9 It should be noted that 'combined effects on a number of residents' referred to above, by means of 'aggregating properties within a settlement' is a matter of LVIA and not of RVAA.

4. Methodology

4.1 The recommended four RVAA steps should provide a transparent, robust framework and reporting structure for the assessment, one which is grounded in established GLVIA3 principles and processes, as summarised below.

RVAA Steps

1. Definition of study area and scope of the assessment – informed by the description of the proposed development[2], defining the study area extent and scope of the assessment with respect to the properties to be included.

2. Evaluation of baseline visual amenity at properties to be included having regard to the landscape and visual context and the development proposed.

3. Assessment of likely change to visual amenity of included properties in accordance with GLVIA3 principles and processes.

4. Further assessment of predicted change to visual amenity of properties to be included forming a judgement with respect to the Residential Visual Amenity Threshold.

4.2 The RVAA steps are described in more detail as follows.

Step 1 – Definition of study area and scope of the assessment

4.3 The type and nature of development proposal and its likely effects informs the determination of both the need for, and the scope of, a RVAA. The description of the development should provide a robust, transparent basis for defining the extent of the study area and the scope, including which properties to include in the assessment. Mapping techniques such as Zone of Theoretical Visibility (ZTV) analysis are useful in this regard. The description of the development will be substantially the same as that used in the LVIA, but may be more focussed on a more limited geographic area.

4.4 There are no standard criteria for defining the RVAA study area nor for the scope of the RVAA, which should be determined on a case-by-case basis taking both the type and scale of proposed development, as well as the landscape and visual context, into account.

4.5 As a starting point the study area will typically be established using the general approach recommended in GLVIA3 (see Chapter 6, paragraph 6.2, page 98) and using such aids as ZTV mapping[3]. This should focus on identifying the properties to be included for assessment and should be proportionate to the proposed development in question having regard to the

[2] Type and nature of the development having regard to scale, form, massing etc and existing landscape context.
[3] GLVIA3, paragraph 5.2, page 70, and paragraphs 6.2, page 98, and 6.7-6.12, pages 101-103 etc.

landscape and visual context. Simply being able to see a proposed development from a property is no reason to include it in the RVAA.

4.6 Over the last few years a large number of RVAAs have been prepared, especially relating to wind energy proposals. Local Planning Authorities (LPA) have frequently requested 'study areas' of up to 3 or even 5 km. The logic for these (exceptionally) large study areas was based on certain findings of LVIAs which identified significant visual effects from 'settlements' or from clusters of residential properties within this range. This fails to recognise that RVAA is a stage beyond LVIA. Consequently, many RVAAs, including those of windfarms with large turbines (150m and taller), have included disproportionately extensive study areas incorporating too many properties. This appears to largely be based on the misconception that if a significant effect has been identified in the LVIA adjacent to a property at 2.5km it will also potentially lead to reaching the Residential Visual Amenity Threshold.

4.7 When assessing relatively conspicuous structures such as wind turbines, and depending on local landscape characteristics, a preliminary study area of approximately 1.5 - 2 km radius may initially be appropriate in order to begin identifying properties to include in a RVAA. However, other development types including potentially very large but lower profile structures and developments such as road schemes and housing are unlikely to require RVAA, except potentially of properties in very close proximity (50-250m) to the development. For example, when assessing effects of overhead transmissions lines, generally only those properties within 100 – 150 metres of the finalised route are potentially considered for inclusion in a RVAA.

4.8 Properties are normally assessed individually, but if their outlook and / or views are in all aspects the same (for example if a development is visible from the rear gardens only of a small row of houses) they could be assessed as one (group). This will be at the discretion of the assessor and will require a clear explanation of the reason for the grouping or clustering.

Step 2 – Evaluation of Baseline Visual Amenity

4.9 The next step involves describing and evaluating the baseline visual conditions at the properties to be included, informed as appropriate by desk study and fieldwork. Fieldwork is briefly discussed at the end of this section.

4.10 The existing (or baseline) visual amenity of a residential property should be described in terms of the type, nature, extent, and quality of views that may be experienced 'in the round' (see glossary) from the dwelling itself, including its 'domestic curtilage' (domestic gardens and access drives).

4.11 When evaluating the baseline, it is recommended that the following aspects are considered:

- the nature and extent of all potentially available existing views from the property and its garden / domestic curtilage, including the proximity and relationship of the property to surrounding landform, landcover and visual foci. This may include primary / main views from the property or domestic curtilage, as well as secondary / peripheral views; and

- views as experienced when arriving at or leaving the property, for example from private driveways / access tracks.

4.12 In accordance with GLVIA3 residents at home are considered, amongst 'visual receptors', to be the most 'susceptible' to change[4] and to attach most value to their private, views and visual amenity. They are therefore considered to be most sensitive[5].

Step 3 – Assessment of likely change to visual amenity of properties

4.13 The third step in the process assesses the magnitude and significance of likely visual effect at the included properties. Effects are examined in accordance with GLVIA3 principles and processes[6], considering the 'nature of the receptor' ('sensitivity' comprising 'value' and 'susceptibility') with the 'nature of effect'. The assessment findings may be recorded in both narrative and tabular form as appropriate, but the conclusion should be fully explained. The aim of Step 3 is to identify those properties requiring further assessment in Step 4 in relation to the Residential Visual Amenity Threshold judgement.

4.14 Considerations which provide a framework for describing and evaluating the predicted magnitude of visual change and related visual amenity effects which may lead to the property being considered in Step 4 include:

- Distance of property from the proposed development having regard to its size / scale and location relative to the property (e.g. on higher or lower ground);
- Type and nature of the available views (e.g. panoramic, open, framed, enclosed, focused etc.) and how they may be affected, having regard to seasonal and diurnal variations;
- Direction of view / aspect of property affected, having regard to both the main / primary and peripheral / secondary views from the property;
- Extent to which development / landscape changes would be visible from the property (or parts of) having regard to views from principal rooms, the domestic curtilage (i.e. garden) and the private access route, taking into account seasonal and diurnal variations;
- Scale of change in views having regard to such factors as the loss or addition of features and compositional changes including the proportion of view occupied by the development, taking account of seasonal and diurnal variations;
- Degree of contrast or integration of new features or changes in the landscape compared to the existing situation in terms of form, scale and mass, line, height, colour and texture, having regard to seasonal and diurnal variations;
- Duration and nature of the changes, whether temporary or permanent, intermittent or continuous, reversible or irreversible etc.; and

[4] GLVIA3, paragraph 6.33
[5] Ibid, paragraphs 6.31-6.36
[6] Footnote '13' (first instance) missing in consultation draft?

- Mitigation opportunities – consider implications of both embedded and potential further mitigation.

4.15 This step will typically involve both desk study and detailed fieldwork but is unlikely to require visits to individual properties which, for the purposes of this step, can generally be assessed from the nearest publicly available vantage / access point. Where this is not feasible then visits to certain individual properties (or clusters of) may be appropriate.

4.16 Step 3 should conclude by identifying which properties should be assessed further in the final step in order to reach a judgement regarding the Residential Visual Amenity Threshold.

Step 4 – Forming the RVAA judgement

4.17 The final step of RVAA involves a more detailed examination of the predicted effects on the visual amenity at those properties identified for further assessment in the previous step.

4.18 There is an important distinction between this concluding step of RVAA and the preceding one. In Step 3 the assessor has reached a conclusion with respect to magnitude and (EIA) significance of visual effect, and the change in visual amenity at the property. In this final step, and only for those properties where the largest[7] magnitude of effect has been identified, a further judgement is required. This concluding judgement should advise the decision maker whether the predicted effects on visual amenity and views at the property are such that it has reached the Residential Visual Amenity Threshold, therefore potentially becoming a matter of Residential Amenity. This judgement should be explained in narrative setting out why the effects are considered to reach the Residential Visual Amenity Threshold. Equally, judgements should explain why the threshold has not been reached.

4.19 The Residential Visual Amenity Threshold judgement should be communicated in a coherent manner, using text with clear descriptions, employing terminology which is commonly understood and descriptors which may have previously been used. Assessors should ensure that their judgements are unambiguous and have a clear, rational conclusion. Some examples of descriptions and descriptors that might be used include: 'blocking the only available view from a property', or 'overwhelming views in all directions'; and 'unpleasantly encroaching' or being 'inescapably dominant from the property'. It may also be useful to employ bespoke graphics such as annotated aerial photographs and wireframe visualisations to aid this further assessment in Step 4.

4.20 The key point regarding Step 4 is that the judgement required in this final, concluding step goes beyond the assessment undertaken in Step 3 which is restricted to judging the magnitude and significance of visual effect, typically as a supplement to the accompanying LVIA.

[7] In line with GLVIA3 best practice (page 38, paragraph 3.27, point 2), visual impact magnitude is expressed on a sliding scale from minimum to maximum, typically using descriptors such as negligible, small, medium and large. Being a continuum, each of these has its upper and lower limits. It is important for assessors to keep in mind that RVAA is only concerned with those properties in the highest magnitude category.

Fieldwork and Associated Activities

4.21 In keeping with advice on LVIA set out in GLVIA3 it is standard practice to carry out fieldwork and use various tools when undertaking a RVAA. Fieldwork will be focussed on those properties identified for inclusion in the RVAA in Step 1; for those properties included in Step 4 it may also include visiting those properties subject to occupier consent. It requires prior preparation (desk study) and appropriate tools and materials such as drawings, maps and visualisations etc. Dependent on assessment scope and consultation feedback more than one visit may be required. Fieldwork will typically include the following:

- Fieldwork – Initial fieldwork may be used during Steps 1-3 to evaluate and assess the general visual amenity of the included properties, based on assessment scope and consultation feedback. The scoping of properties from publicly accessible locations is usually appropriate. The initial fieldwork would typically form the basis for identifying those dwellings to be assessed in more detail in Step 4, namely those which may require detailed inspection of views and visual amenity, both from inside the property as well as from its garden and general curtilage;

- Visualisation – Preparation of suitable graphic and / or visual material such as ZTVs and wirelines may be appropriate for use during fieldwork and as an aid to assessment, in addition to aiding presentation of RVAA findings. Depending on the circumstances and consultation responses, and feedback from determining / competent authorities, the type and nature of visualisations may vary. In any event visualisations should be proportionate to the development proposal in question and appropriate to the project phase / assessment stage, and considered in the context of relevant best practice guidance including LI Technical Guidance Note 02/17[8] Such visualisations may be shared with residents at the appropriate stage when documents become publicly available, or as agreed between the parties and their clients; and

- Property Inspection – the purpose of the property inspection is to gather information pertinent to the assessment of Residential Visual Amenity. There are no standard protocols for property inspections but best practice dictates that they should be arranged between the parties on a case by case basis with the involvement of the determining / competent authority as and when appropriate. In the event that access to private property cannot be obtained, and having employed best endeavours to do so, assessment can and should be undertaken from appropriate publicly accessible locations.

4.22 Communication with local residents needs to be carefully planned and executed with sensitivity, demonstrating respect for residents' privacy. It is recommended that site visits and property inspections be conducted in pairs. Assessors should make it clear to residents that, although he/she is unable to comment on the findings during the site visit, the RVAA report will be made publicly available at the appropriate stage in the planning process.

4.23 Residents of private property are likely to be concerned regarding potential visual effects and change to the visual amenity of their homes. This concern is reflected in RVAA best practice which, as with LVIA and in line with advice in GLVIA3, considers residential receptors to be of

[8] 'Visual representation of development proposals', Landscape Institute Technical Guidance note 02/17 (31 March 2017)

the highest visual sensitivity (high susceptibility and high value)[9]. It is important that residents are made aware of this and how to make representations to the decision maker / competent authority regarding the proposed development in order to express any concerns felt.

Seasonal and Diurnal Considerations

4.24 Seasonal and diurnal variation (including lighting impacts) are factors that need consideration when assessing the visual amenity baseline and the likely visual effects resulting from a development proposal. Both these aspects form part of the evaluation factors / objective considerations set out in Step 3 of the RVAA process and should be dealt with in line with advice contained in GLVIA3 (refer paragraph 6.12, page 103 and paragraph 6.28, page 112).

Cumulative Considerations

4.25 Cumulative impacts on the landscape and visual resource are matters to be addressed in the LVIA of a proposed development in accordance with recommendations in GLVIA3 (refer Chapter 7). As a rule, future cumulative visual effects are not assessed in RVAA, the focus of which concerns effects on existing visual amenity. Existing cumulative development will form part of the baseline visual amenity considered in Step 2 of RVAA; future cumulative development is generally not a RVAA consideration. However, in certain circumstances, it may be appropriate to consider a particular cumulative proposal which is effectively already part of the existing landscape baseline. For example: where an extension to an existing development is consented, or under construction, but not yet built; or where two developments are proposed simultaneously. Such circumstances should be dealt with on a case by case basis in consultation with the competent / determining authority.

RVAA Presentation Techniques

4.26 Examples of RVAA graphics and presentation techniques generally can be found on the Directorate for Planning and Environmental Appeals (DPEA) website[10] (for Scotland) and the Planning Inspectorate[11] and Department for Communities and Local Government websites[12] (for England & Wales). Going forward practitioners may add examples of RVAAs and presentation tools to the LI website subject to client approvals and anonymising of individual properties. Meanwhile the aforementioned websites contain examples of RVAAs in the public domain made available by planning and other decision-making authorities.

[9] However, it is important to note that, RVAA is distinct from LVIA in that its ultimate purpose is to provide a further assessment of residential visual amenity concluding with a judgement in relation to the Residential Visual Amenity Threshold taking any previous LVIAs as the starting point, as explained in Section 3 Undertaking a RVAA above.
[10] http://www.dpea.scotland.gov.uk/
[11] https://acp.planninginspectorate.gov.uk/
[12] https://www.planningportal.co.uk/

5. Summary and Conclusions

5.1 The purpose of carrying out a Residential Visual Amenity Assessment (RVAA) is to form a judgement, to assist decision makers, on whether a proposed development is likely to change the visual amenity of a residential property to such an extent that it becomes a matter of 'Residential Amenity'. Potential effects on Residential Amenity are a planning matter and should not be judged by landscape architects.

5.2 The threshold at which a residential property's visual amenity becomes an issue of Residential Amenity has sometimes been described as the point when 'the effect(s) of the development on the 'private interest' is so great that it becomes a matter of 'public interest''. The planning system is only concerned with public interest. In certain circumstances, however, the effect of the development is so great that it is not in the public interest to create or allow 'such conditions' where they did not exist before. This is sometimes referred to as the 'public interest test'. However, this is a legal / planning term and not recommended for use by landscape practitioners. This guidance uses the term Residential Visual Amenity Threshold.

5.3 The recommended approach to undertaking a RVAA is grounded in principles and process set out in GLVIA3. The recommended method for undertaking a RVAA involves four steps. It follows a structured assessment process employing a range of objective criteria to underpin the ultimate professional judgement regarding the Residential Visual Amenity Threshold. The aim is to identify those residential properties whose visual amenity has the potential to be affected to the largest magnitude of impact. Properties with the highest magnitude of effect are assessed further culminating in a professional judgement as to whether the Residential Visual Amenity Threshold is likely to be reached at this property or not.

5.4 There are no hard and fast rules or criteria for making this judgement, but it does require objective, logical evaluation and reasoning, and must be explained in clear and common language. A RVAA judgement so executed will contribute to well informed decision making.

Glossary

The following glossary of terms commonly used in relation to RVAA is intended to supplement that provided in GLVIA3.

Planning balance

When forming a judgement if a development is acceptable or not, all relevant planning matters pertaining to the proposed development (both planning benefits and disbenefits) will be given, greater or lesser, weight in forming the judgement. This is often referred to as the 'planning balance'.

'In the round'

'In the round' means the combined or all-round visual amenity experience at, or from a property. Visual amenity is *"the overall pleasantness of the views they enjoy of their surroundings" (paragraph* 2.20, page 21; GLVIA)

Judgement

Judgement in RVAA (as in LVIA) means: the considered, well-reasoned, informed and dispassionate opinion of the qualified professional (refer GLVIA3 paragraphs 2.21-2.26, pages 21-22).

Outlook

The outlook of a property incorporates the views from, and visual amenity of, all aspects of the building and its domestic curtilage. Different 'aspects' of a property's outlook may be identified and assessed, namely its 'main' or 'front' aspect, as opposed to its 'side' or 'rear' aspects.

Overbearing

The Department for Communities and Local Government online planning portal defines 'overbearing' as *"the impact of a development or building on its surroundings, particularly a neighbouring property, in terms of its scale, massing and general dominating effect"*[13].

Principal room

The principal room(s) of a residential property is a living room, or one fulfilling the same primary use role. In some properties this room may not be located on the ground floor, but on an upper storey. A conservatory may also fulfil a living room / primary use role depending on the circumstances and the internal arrangement of the residence.

[13] https://www.planningportal.co.uk/directory_record/412/overbearing

Domestic curtilage

The domestic gardens and access drives / roads immediately surrounding a residential property including patios, terraces, courtyards and forecourts. The domestic curtilage does not extend to surrounding paddocks and other peripheral land / outbuildings within the property ownership, or to public or private approach roads.

Public interest

The 'public interest' is a legal term which the Merriam Webster online law dictionary defines as "the general welfare and rights of the public that are to be recognized, protected, and advanced"[14]. The Law Society online legal glossary defines it as "the overall welfare of the general public."[15]

Residential Amenity

The Merriam Webster online law dictionary defines 'amenity' as "the quality of being pleasant or agreeable", and further in relation to property as "the attractiveness and value of real estate or of a residential structure."[16]

Residential Visual Amenity

The overall quality, experience and nature of views and outlook available to occupants of residential properties, including views from gardens and domestic curtilage. It represents the visual component of Residential Amenity.

Residential Visual Amenity Threshold

The threshold at which the visual amenity of a residential property is changed and adversely affected to the extent that it may become a matter of Residential Amenity and which, if such is the case, competent, appropriately experienced planners will weigh this effect in their planning balance.

Scenic quality

The quality of a view in terms of 'scenery'; the scenic attributes of a view.

Significant effect / Significantly affected

When undertaking an LVIA as part of an EIA the assessor is required to report on all effects and to identify 'significant' effects. A LVIA should explain which of the range of effects reported are 'significant' in the context of EIA and why.

[14] https://www.merriam-webster.com/dictionary/interest#legalDictionary
[15] https://www.lawsociety.org.uk/for-the-public/legal-glossary/#P
[16] https://www.merriam-webster.com/dictionary/amenity

Visual amenity

The overall pleasantness of the views available to people of their surroundings which provide an attractive visual setting or backdrop for the enjoyment of activities of those living, working and recreating, visiting or travelling through an area (GLVIA3 Glossary, page 158).

Visual effects

Effects on specific views and on the general visual amenity experienced by people (GLVIA3 Glossary, page 158).

Visual impacts

The action which results in / causes the effect. For example, introducing a built structure into an undeveloped landscape will have an impact on the landscape and views which will be experienced by people as effects on local landscape character and visual amenity. It is the purpose of LVIA to judge the magnitude and significance of the resulting landscape and visual effects (see next entry)

Visual impacts versus effects

GLVIA3 distinguishes between landscape and visual impacts and effects. Paragraph 1.15 (page 9) *"This guidance generally distinguishes between the 'impact', defined as the action being taken, and the 'effect', defined as the change resulting from that action, and recommends that the terms should be used consistently in this way."*

Appendix 1 – Planning Precedent

Introduction

A1.1 This Appendix is intended to provide some background to the RVAA guidance with reference to inquiry / appeal decisions that illustrate how Inspectors and Reporters have reached conclusions in respect of Residential Visual Amenity.

Judgement

A1.2 In the Baillie decision Reporter David Russell concluded that assessing effects on private visual amenity is ultimately a matter of judgement[17]:

> *"Any assessment of acceptability in these circumstances relies on judgement rather than measurement."*

A1.3 And:

> *"Given that I have found that this wind farm, because of its visual prominence and proximity, would have a significant detrimental impact on the visual amenity of some of the people living nearby, and as the impact would be long term, that interpretation would appear to preclude the granting of consent for this application. However, the guidance also confirms that proposals are to be considered on a case by case basis, and I consider that this inevitably requires a judgement to be reached on the acceptability of the impacts identified."*

Reasoning

Clocaenog Forest Windfarm

A1.4 In the Clocaenog Forest windfarm Report of Findings in para 4.237[18], the inspector concludes:

> *However, for three properties there is a risk that residential amenity would be affected to such a degree that the PPW standard of "good neighbourliness" would not be achieved and there would be conflict with Policy NTE/7 of the CLDP, and VOE 9 of the DLDP. This level of impact, which could make a property an unattractive place in which to live, has been found to be against the public interest and therefore unacceptable in Inspectors' appeal decisions[266], and permission has been refused. I therefore consider that the adverse impact on the residential amenity of the three dwellings is important and relevant matter to be weighed against the benefits of the project under s104(7) of the PA2008.*

A1.5 The subsequent decision letter by the Secretary of State[19] concludes*:*

> *"The Secretary of State agrees that the arguments in this case and in respect of this particular issue are finely balanced. He agrees with the ExA's view that it is not possible*

[17] Erection of wind farm at Bardnaheigh Farm, Westfield, by Thurso (Baillie). Case reference IEC/3/105/3, 17th August 2009
[18] Clocaenog Forest Wind Farm, Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State for Energy and Climate Change, Wendy J Burden BA(Hons) DipTP MRTPI Examining Authority Clocaenog Forest Windfarm DCO
[19] Decision letter 12 September 2014, 12.04.09.04/217C, paragraph 4.14

to mitigate the impacts of the wind farm on the three properties in question. He considers the matter has been considered appropriately during the examination of the application and that residential amenity is not an issue of sufficient magnitude to justify the withholding of consent given the benefits of the Development. In these circumstances, he considers that the interference with the human rights of the occupants of the three properties would be proportionate and justified in the public interest."

Burnthouse Farm Windfarm

A1.6 At the Burnthouse Farm windfarm inquiry[20] Inspector Jill Kingaby stated at paragraph 119 of her report that:

"No individual has the right to a particular view but there comes a point when, by virtue of the proximity, size and scale of a given development, a residential property would be rendered so unattractive a place to live that planning permission should be refused. The test of what would be unacceptably unattractive should be an objective test."

A1.7 At paragraph 120 of the Burnthouse Farm report the Inspector comments further on the threshold for determining unacceptable effects on visual amenity:

"There needs to be a degree of harm over and above an identified substantial adverse effect to take a case into the category of refusal in the public interest. Changing the outlook from a property is not sufficient."

A1.8 In the conclusions on her report Inspector Kingaby addressed the living conditions of neighbouring occupiers and stated that:

"The methodology for assessing the visual impact on residential occupiers was considered fully at the Inquiry. I accept that the approach used by Inspectors in the Enifer Downs, Poplar Lane and Carland Cross Appeals and elsewhere should not be regarded as a mechanistic 'test' and has no status in terms of being part of statutory documentation or planning policy or guidance. However, it seems to me that a logical, transparent and objective approach to assessing visual impact should be adopted".

A1.9 The Inspector also observed that judging serious harm to living conditions which might lead to a recommendation for planning permission to be refused in the public interest is a more stringent requirement than identifying of a significant adverse effect in EIA, stating:

"I consider that when assessing the effect on visual outlook, it is helpful to pose the question 'would the proposal affect the outlook of these residents to such an extent i.e. be so unpleasant, overwhelming and oppressive that this would become an unattractive place to live?"

A1.10 Inspector Kingaby's recommendations were endorsed by the Secretary of State (SoS) and summarised in the SoS decision letter dated 6 July 2011 at paragraphs 10 and 11.

[20] Burnthouse Farm Windfarm, SoS Decision (APP/D0515/A/10/2123739) 6th July 2011

Langham Windfarm

A1.11 In the Langham Windfarm appeal decision[21] the Inspector stated that

> *"The planning system controls development in the public interest, and not in the private interest. The preservation of open views is a private interest, which the planning regime is not intended to protect. But public and private interests may overlap. The issue is whether the number, size, layout and proximity of wind turbines would have such an overwhelming and oppressive visual impact on a dwelling and its amenity space that they would result in unsatisfactory Living Conditions, and so unacceptably affect amenities and the use of land and buildings which ought to be protected in the public interest."*

Enifer Downs Windfarm

A1.12 The issue of Residential Visual Amenity was first addressed by Inspector Lavender in the Enifer Downs appeal decision[22] in which he observed that:

> *"when turbines are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden, there is every likelihood that the property concerned would come to be widely regarded as an unattractive and thus unsatisfactory (but not necessarily uninhabitable) place in which to live."*

A1.13 In coming to his decision Inspector Lavender considered the extent to which:

- the visual experience from the dwelling and garden may be comparable to "actually living within the turbine cluster" rather than a turbine cluster being present close by; or
- the experience of the turbines is "unpleasantly overwhelming and unavoidable".

Carland Cross Windfarm

A1.14 In the subsequent Carland Cross decision[23] Inspector Lavender elaborated and qualified his position stating:

> *"The planning system is designed to protect the public rather than private interests, but both interests may coincide where, for example, visual intrusion is of such magnitude as to render a property an unattractive place in which to live. This is because it is not in the public interest to create such living conditions where they did not exist before. Thus I do not consider that simply being able to see a turbine or turbines from a particular window or part of the garden of a house is sufficient reason to find the visual impact unacceptable (even though a particular occupier might find it objectionable)."*

[21] Langham Windfarm, Appeal Decision APP/D2510/A/10/2130539. 29th September 2011
[22] Enifer Downs Windfarm, Appeal Decision APP/X2220/A/08/2071880. 28thApril 2009
[23] Carland Cross Windfarm, Appeal Decision APP/D0840/A/09/2103026 19th Jan 2010

Preston New Road Exploration Works (Appeal A)

A1.15 In the Preston New Road (Appeal A) fracking development appeal case[24] the Secretary of State agreed with the Inspector stating in the decision letter:

> *"For the reasons given at IR12.117-12.120, the Secretary of State agrees with the Inspector that the proposal would not affect the outlook of any residential property to such an extent that it would be so unpleasant, overwhelming and oppressive that it would become an unattractive place to live (IR12.118)."*

[24] Preston New Road Exploration Works Secretary of State Decision (Appeal A) (APP/Q2371/W/15/3134386), 6th October 2016

Appendix 3 Figures from the permitted Martells Quarry Extension, Ardleigh planning application (ESS/29/20/TEN)

Martells - Proposed Western Extension

Phase 2 - Working & Restoration

5m High Storage / Screening / Noise Attenuation Bund

Coronation Cottages

Bund 1

Water (Pond)

Internal Site Vehicle Access Track

3m High Soil Storage / Screening Bund

Bund 2

Extension of Existing Water Abstraction Pipeline

Proposed Quarry Crossing Point . Initial 8m of internal access laid as tarmac with min. 25m level access to ramp.

Ongoing Restoration - 3rd Party Land

29.0

28.0

25.0

26.0

Phase 2

28.0

26.0

3m High Soil Storage / Screening Bund

Existing Martells Quarry Operational Area / Restoration Works

Bund 2

Undisturbed Agricultural Land

34.0

35.0

Slough Lane

Slough Farm

Pond

Issues

Phase 2 Operations

- Soils will be progressively stripped in a southerly direction.
- Where land has been restored to formation levels, stripped soils will be directly placed to form the soil profile. Remaining soils to be placed in temporary store within the extracted void. Topsoil bunds to be 3m in height, subsoil and overburden bunds no higher than 5m.
- Mineral will be extracted in a southerly direction with "as dug" mineral being transported by dump truck across Slough Lane to the existing Plant Site for processing, stocking and sale.
- Processing waste is to be placed within existing silt lagoons within the Plant Site. It will be allowed to settle and dry to a significant level before being transported back to the Western Extension Area where it will be placed as a fill material.
- The Site will be progressively restored using a combination of imported inert material, silt waste, interburden and the original in-situ soil profile. Imported inert material will enter the Site via the existing Martells Quarry entrance travelling on the internal Site vehicle access track, crossing Slough Lane and being deposited for restoration within the extracted quarry void.
- All restored land will be subject to a 5 Year Aftercare Period. This will include the proposed hedgerow adjacent to Slough Lane.

Materials Audit - associated with this Phase area

		Soils (m^3)				Mineral (Saleable Tonnes)		Inert Importation for Restoration (m^3)
Phase	Area (Ha)	Topsoil (0.3m)	Subsoil (0.3m)	Overburden (m^3)	Interburden (m^3)	Hoggin	Sand & Gravel	
2	4.48	13,460	13,460	1,870	37,450	34,640	402,960	257,000

Legend

- Application Boundary
- Other Land Under the Control of the Applicant
- Existing Woodland
- Water Bodies

Operational Proposals

- Hedgerow / Hedgerow Trees
- Phase 2 - Limit of Extraction
- Operational Land and Direction of Working
- Soil Storage / Screening / Noise Attenuation Bunds
- 35.0 Contours / Spot Levels (m aOD)
- Proposed Quarry Crossing Point
- Inert Importation to Restoration Formation / Subsequent Placement of the Restored Soil Profile
- Undisturbed Agricultural Land

pde. consulting limited chartered surveyors

PROJECT
Martells - Proposed Western Extension

DRAWING TITLE
Phase 2 - Working & Restoration

DATE
January 2021

SCALE
1:2,500 @ A3

DRAWING No.
KD.MTQ.2.005 Rev A

DRAWING STATUS
FINAL

01284 764085 . www.pdeconsulting.co.uk

No. 2 Coronation Cottages – Slough Lane. Southern elevation with ground and first floor windows facing soil bund. The toe and crest of screen bund will be 12m and 27m respectively from this property.
(Streetview - Bing Maps)

Appendix 4 Figures from the permitted Stanninghall Quarry, Horstead planning application (FUL/2020/0085)

Stanninghall Quarry

Block Phasing Proposals

Block Phasing Proposals
This drawings illustrates the overall operational proposals within the Application.

The Site access arragements are to remain the same as currently permitted, as is the plant site and stocking area. Four additional water / silt lagoons will be created for water management purposes.

Progessive phased mineral extraction, soil stripping and direct restoration will then take place through Phase 4B to 8 in a clockwise direction, before final extraction of mineral from beneath the plant site.

"As dug" mineral to be transported to the existing Plant Site by dump truck, processed into aggregates, temporarily stocked before leaving the Site by HGV to point of sale.

Active progressive restoration will take place to minimise the area of land required for mineral operations.

All undisturbed and restored land will be farmed / wildlife enhanced and subject to Aftercare Management.

Hill Farm
Topsoil Bund
Phase 6 Extraction
Phase 7 Extraction
Phase 5 Extraction
The Hollies
Topsoil Bund
Lodge Cottages
Horstead Lodge
Water Tower
Norwich Road
Beverley
Topsoil, Subsoil & Overburden Bunds
Horstead Lane
Remaining Permitted Mineral Extraction within Phase 4B
Subsoil Bund
Topsoil Bund
Internal Haul Road
Additional Silt & Fresh Water Lagoons
Existing Silt & Fresh Water Lagoons
Phase 8 Extraction
Overburden Bund
Subsoil Bund
Current Working & Progressive Restoration Area
Topsoil Bund
Topsoil Bund
Overburden Bund
Site Access
Stanninghall Road
Norwich Road
Clamp Wood
Setting Ponds
Gravel Workings
Conveyors
Hoppers
Quarry Road
Track
Pond
Observation Post
Reservoir
18.0
16.0
19.0
14.0
12.0
10.0
20.0
23.0
13.0
15.0
17.0

Legend

- *Planning Application Boundary*
- *Approximate Area of Land to be Restored Summer 2020*
- *Remaining Permitted Mineral (Phase 4B)*
- *Proposed Extraction Phasing Sequence (Phases 5 to 8)*
- *Remaining Permitted Mineral below the Plant Site*
- *Direction of Mineral Extraction*
- *Existing Water Management Lagoons*
- *Additional Water Management Lagoons*
- *Temporary Soil Storage / Screening Bunds - to be seeded / planted & maintained*
- *Advanced Hedgerow, Tree and Shrub Planting*

Summary of Materials

Phase	Soils / Overburden (m^3)	Quarry Waste (m^3)	Mineral - Saleable Tonnes (ST)	Est. Years based upon 300,000 TPA
4B	204,200	31,500	769,500	~ 2.6 Years
5	132,000	46,100	1,127,500	~ 3.7 Years
6	101,100	26,400	598,000	~ 2.0 Years
7	229,800	40,400	986,800	~ 3.3 Years
8	137,900	42,400	1,036,400	~ 3.5 Years
TOTAL	**805,000**	**186,800**	**4,518,200**	**~ 15.1 Years**
Plant Site	53,300	29,500	454,000	~ 1.5 Years
	858,300	**216,300**	**4,972,200**	**~ 16.6 Years**

KEDD Limited

TARMAC
A CRH COMPANY

Site Name:
Stanninghall Quarry - Proposed Extension

Drawing Name:
Block Phasing Proposals

FINAL

Drawn By:	***Scale @ A3:***
RGD/RJS	1:5,000
Date:	***Drawing Number:***
July 2021	KD.SH.D.008 **REV C**

The Hollies – Frettenham Road. View of southwestern and southeastern elevations of bungalow. Proposed bund to be offset approximately 45-75m from dwelling on three sides

(Bird's eye view - Bing Maps)

Hill Farm – Frettenham Road. View of southeastern elevation of bungalow. Proposed screen bund will be offset approximately 65m-100m from the dwelling on two sides

(Bird's eye view - Bing Maps)

Appendix 5 Figures from the permitted Condover Quarry, Shrewsbury planning application (19/01261/MAW)

All levels in metres above ordnance datum

Noise screen

Norton Farm

Tank

CONVEYOR

C'

A'

B'

87.2m

Powerline

PHASE 1- complete 81m aod

Bund 3m high 10000m3 TS/SS

BUND 1

Norton Cottage 85.5m

B

King's Furlong

PHASE 2- worked down to 81m aod

SS

TS

HAUL ROUTE

Bund 5m high TS and SS to complete bund

LANDFORM A

Temporary TS store

Bulfield Cottage

A

The Stud Farm

Bund 5m high TS and SS 34450m3

BUND 2

Screen planting

North Lodge

C

Path (um)

PHASE 2
Area 27,000m2

- Phase 2 topsoil placed in temporary store. Some subsoil and topsoil will be used to restore Phase 1 slopes.
- Topsoil and subsoil from Phase 2 to complete bund 2. Topsoil from footprint of Bund 2 to be stored in Bund 2, 5000m3.
- Subsoil stripped and placed into Landform A. Topsoil from the base footprint of Landform A to be stored in a temporary soil store.
- Extraction will commence in Phase 2 down to a level of 81m aod.

LEGEND

- PA Boundary
- Restoration planting
- Advance planting
- New hedgerow
- Soil strip areas
- Screenbund
- Soil movements subsoil (SS)
- Soil movements topsoil (TS)
- Extraction limit and phases
- Direction of working

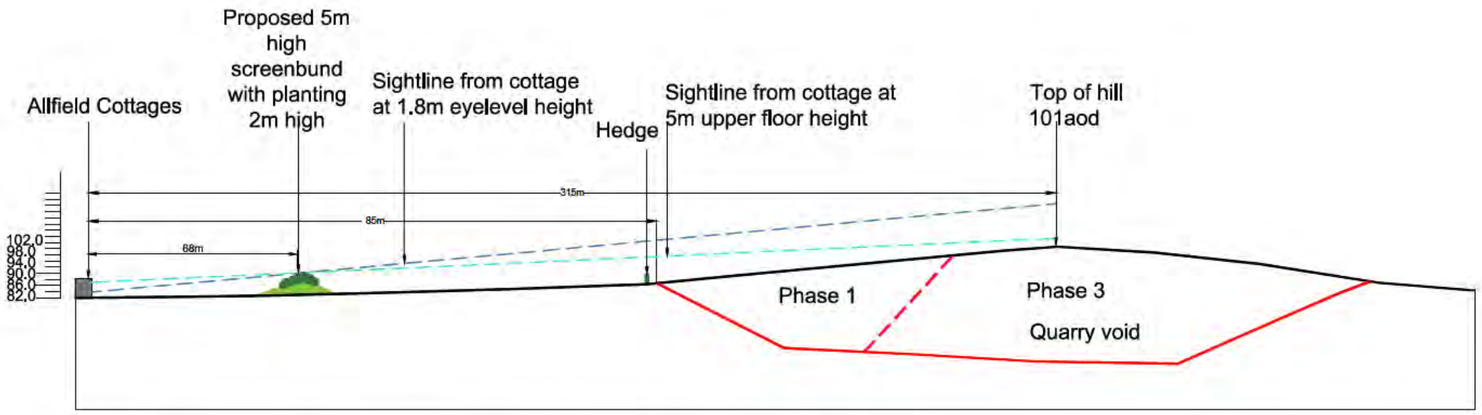
LANDESIGN
PLANNING & LANDSCAPE

Site: CONDOVER

Title: Working plan - Phase 2

Scale at A3	1:2500	Date	Aug 2018	Drawing No.
Drawn By	JEB	Checked By	IDB	LD104-CQ-104

All levels in metres above ordnance datum



Allfield Cottages section from southeast to northwest (A - A')
Scale 1:2000

[redacted]

LANDESIGN
PLANNING & LANDSCAPE

Site: CONDOVER

Title: Working plan section A - A'
Allfield Cottages

Scale at A3	1:2000	Date	Oct 2018	Drawing No.
Drawn By	JEB	Checked By	IDB	LD104-CQ-109

Figure 12.3 Existing view of Southern Extension from Allfield Cottages

Appendix 6 Extracts of East Staffordshire Borough Council's adopted *Separation Distances and Amenity SPD* (2018)

Separation Distances and Amenity SPD

East Staffordshire Borough Council

June 2019

1. Purpose of document

1.1 The purpose of this document is to improve the overall spacing standards for new residential developments to ensure that existing and future residents have a good level of amenity and privacy to enjoy the place where they live.

1.2 This document is intended to ensure developers provide sufficient amenity and privacy for existing and future residents across East Staffordshire.

1.3 The provision of adequate space between dwellings is an important element in achieving a high standard of design and layout and provides:

- adequate daylight and sunlight to rooms and rear gardens;
- reasonable privacy for dwellings within their proposed layout and to protect the privacy of existing dwellings;
- a satisfactory level of outlook, within new development and in relation to existing development;
- a reasonable area of private amenity space to allow such uses as drying washing, gardening and children's play, together with space for garden sheds, greenhouses and future adaptions to the dwelling;

1.4 This SPD is intended to ensure retention of amenity in all aspects of development, and ensure that by addressing one issue others are not compromised.

2. When is this SPD applicable

2.1 This document will be used to ensure adequate separation and amenity standards are provided with regard to all new dwellings and extensions, post adoption. The guide also applies where new dwellings or extensions are proposed adjacent or opposing existing older properties to ensure that existing resident's standards or separation and amenity are protected and retained.

2.2 The SPD does not apply to proposals which are permitted development, as such proposals are outside the control of the Local Planning Authority.

2.3 Guidance on what developments are considered permitted development ie do not require planning permission can be found on the Planning portal Website below,

https://www.planningportal.co.uk/info/200125/do_you_need_permission

3. Policy

3.1 This SPD supports the application of Local Plan Policy SP24 "High Quality Design" and Policy DP3 "Design of New Residential Development, Extensions and Curtilage Buildings" and this document builds on the above policies and seeks to provide greater clarity to developers and residents as to what standards are required to be met in terms of proposals for new housing and extensions.

3.2 You are advised to discuss your proposal with the Council at an early stage. Formal pre-application discussions can help avoid problems and delays once an application is

submitted. Further information, including the Pre-application Advice Protocol and charges for this, is available on the Council's web site.

3.3 Upon adoption Appendix 1 of the Design Guide will be revoked, as this document will supersede it.

4. Spacing standards

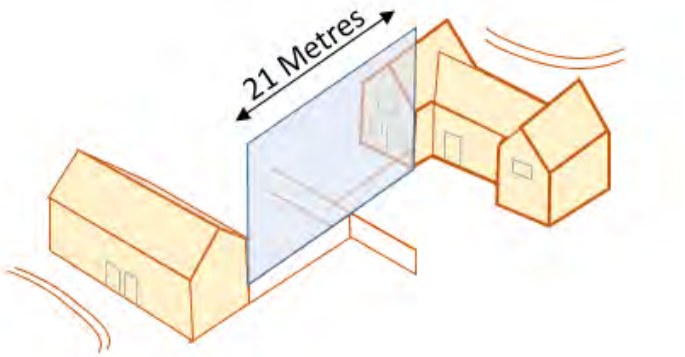
4.1 New housing developments should ensure a layout and design that provides high standards of privacy and outlook for both existing and proposed residents. Proposals should avoid the following in order to encourage high levels of amenity and privacy:

1. Siting new dwellings close to existing properties such that overlooking of existing windows and gardens occurs, significantly reducing existing levels of amenity.
2. Significant overbearing impacts on existing properties and their private amenity space.
3. The intensification of vehicular and pedestrian activity close to the boundary with existing residential properties or their gardens.

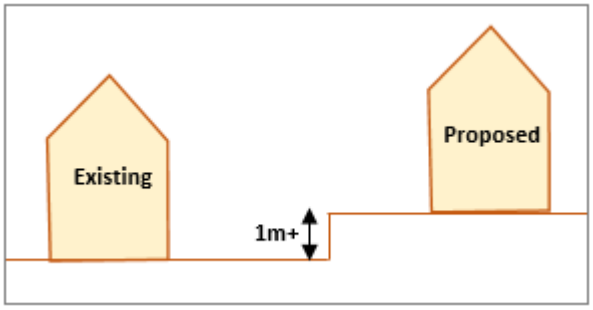
4.2 The external Spacing standards set out below will be expected and are intended to ensure that adequate separation distances, privacy and amenity are retained and provided as a result of new development.

External Separation Standards

4.3 The minimum back to back distance between habitable rooms should be 21 metres where dwellings are of the same number of storeys



4.4 Where dwellings differ in scale or finished floor level by a metre or greater the back to back distance should be increased in separation by 2 metres for each additional 1 metre of elevation.

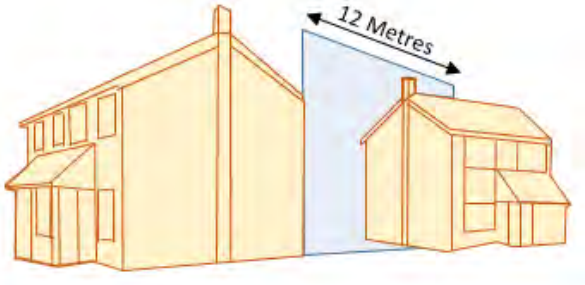


4.5 Separation to front elevations where level and or scale differences are apparent should also be increased however this would be on a 1 metre per 1 metre of elevation basis, as it

is considered that frontages are of a less private nature than rear facades, however this will protect outlook and prevent any significant overbearing impact.

4.6 Cross sections are therefore required to be provided to demonstrate levels, separation and this relationship. This includes where residential development is proposed adjacent to existing residents and land levels differ.

4.7 Proposed walls without habitable windows such as blank gable side elevations opposing habitable principle elevations should be a minimum of 12 metres apart where dwellings are of the same number of storeys.



4.8 Where differing in scale the separation distance should be increased by 2 metres for each additional storey.

NOTE – Where developments offer only minimum separation the Local Planning Authority will remove permitted development rights for extensions and alterations to ensure they retain control over future extensions which would necessitate the requirement for planning approval, in order to ensure that adequate separation and privacy is retained and further guidance is available in this document..

NOTE – It should be noted that the separation distances between habitable windows also applies to apartment blocks and that where apartment blocks are proposed adjacent to residential dwellings.

Amenity Standards

4.9 Private garden spaces are an essential component of high quality design, and a key to the creation of a sustainable residential environment, in terms of contributing to liveability, recreation and health, to urban greening, and the preservation or enhancement of local biodiversity. Garden spaces should be sufficient to accommodate most household activities and at the same time be adequate to offer visual delight, receive some sunshine, and encourage plant growth.

4.10 Private rear gardens of proposed dwellings should be a minimum of 50 sq. metres in area for two bedroom properties, with at least an additional 10 sq. metres for each additional bedroom.

Size of property	Minimum Garden Size (Sq. m)
2 bedroom house	50
3 bedroom house	60
4 bedroom	70
5 bedroom +	80
Apartments/flats	10 per unit

Figures (see separate Volume 2)

Town and Country Planning Act 1990 − Section 78 Town and County Planning (Development Management Procedure) (England) Order 2015 Town and Country Planning (Inquiries Procedure) (England) Rules 2002

LEA CASTLE QUARRY, WOLVERLEY

Application Reference: 19/000053/CM

Appeal Reference: APP/E1855/W/22/3310099

Landscape and Visual Proof of Evidence of
Mr Neil Furber BSc (Dual Hons), Dip LA, CMLI

on behalf of NRS Aggregates Ltd.

Volume 2: Figures to Proof of Evidence

January 2023

HCUK Group is a homeworking (since 2010) multi-disciplinary environmental practice. We offer expert, honest, and independent advice in archaeology, heritage, landscape, arboriculture, and planning based on our considerable experience. We provide a range of services that can be tailored to any site or case, supported by administrative, financial and HR teams. We began life as Heritage Collective LLP in 2010, before becoming Heritage Collective UK Limited in 2014. We became HCUK Group Limited in 2020.

Project Number: 08741

File Origin: https://heritagecollectiveuk.sharepoint.com/sites/8501-9000/Shared Documents/8701-8800/08741 - Lea Castle Farm, Worc/LAND/Reports/08741 01 Landscape PoE_Vol 2 Figures_FINAL.docx

Author with date	Reviewer code, with date
NF, 30.01.2023	CB, 30.01.2023
NF, 24.01.2023	CB, 25.01.2023

Figures

KEY:

- Appeal Site Boundary
- Proposed Extraction Area
- Green Belt
- Green Belt Parcels
- Cumulative Sites (Planning App Ref.)

N1 N2 N3 N4 N5 N6 N7 N8 N9 N10 N11 N12 NW2 NW4 NE1 NE2 NE3 NE5 NE6 NE7 NE8 NE9 E1 E2

22/0235/PIP

20/0217/FUL
21/1200/OUT

17/0205/OUT
22/040/OUT

18/0163/FULL

0 km 1 km

Drawing is not to a recognised scale

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Client:
NRS Aggregates Ltd

Project:
Lea Castle Farm

Drawn	Checked	Date:
NF	CB	Jan 2023

Drawing Title:
Figure 1: Green Belt and recent residential/mixed-use planning applications

HCUK GROUP

KEY:

Site Boundary

Viewpoints

Note:
ES Viewpoints 7, 11, 12, 14, 16, 19 & 25 not reproduced as Photoviewpoints.
New Photoviewpoints presented from locations A-E

0 km 1 km

Drawing is not to a recognised scale

Client:
NRS Aggregates Ltd

Project:
Lea Castle Farm

Drawn I Checked Date:
NF CB Jan 2023

Drawing Title:
Figure 2: Photoviewpoint locations

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:22
Direction: Southwest
Grid ref: 385056, 279442
Elevation: 78m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 3: Viewpoint 1 - Annotated Photoview from public footpath 628(B)

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:36
Direction: Southwest
Grid ref: 384658, 279250
Elevation: 68m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 4: Viewpoint 2 - Annotated Photoview from A449

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:29
Direction: Northwest
Grid ref: 384694, 278703
Elevation: 50m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 5: Viewpoint 3 - Annotated Photoview from A449/Park Gate Road

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:22
Direction: Northwest
Grid ref: 384907, 278669
Elevation: 63m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 6: Viewpoint 4 - Existing View / Year 1 from Park Gate Road

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage
produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:22
Direction: Northwest
Grid ref: 384907, 278669
Elevation: 63m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 7: Viewpoint 4 - Year 10 Photomontage from Park Gate Road

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage
produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:22
Direction: Northwest
Grid ref: 384907, 278669
Elevation: 63m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 8: Viewpoint 4 - Year 25 Photomontage from Park Gate Road

Job no. 08741

Drawing No. 03

Revision -

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Date: January 2023

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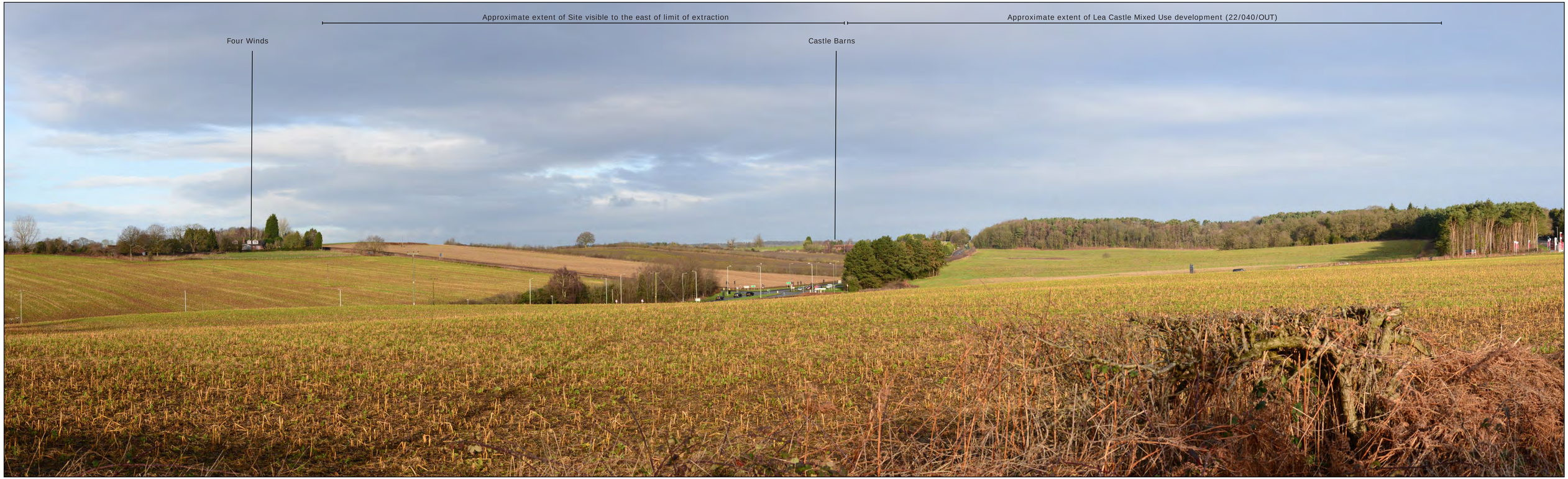

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:42
Direction: Northwest
Grid ref: 384803, 278366
Elevation: 60m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 9: Viewpoint 5 - Annotated Photoview from A451

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:48
Direction: Northwest
Grid ref: 384689, 278395
Elevation: 58m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 10: Viewpoint 6 - Annotated Photoview from Heath Drive

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:45
Direction: Southwest
Grid ref: 384559, 279242
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 11: Viewpoint 9 - Existing View / Year 1 from Castle Barns

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:45
Direction: Southwest
Grid ref: 384559, 279242
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 12: Viewpoint 9 - Year 10 Photomontage from Castle Barns

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:45
Direction: Southwest
Grid ref: 384559, 279242
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 13: Viewpoint 9 - Year 25 Photomontage from Castle Barns

Job no. 08741

Drawing No. 03

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 09:58
Direction: Southwest
Grid ref: 384531, 279521
Elevation: 84m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 14: Viewpoint 8 - Annotated Photoview from public bridleway 625(B)

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 10:05
Direction: Southwest
Grid ref: 384504, 279430
Elevation: 79m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 15: Viewpoint 10 - Annotated Photoview from access track to Castle Barns

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:26
Direction: Southeast
Grid ref: 384313, 279401
Elevation: 69m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 16: Viewpoint 13 - Annotated Photoview from Keeper's Cottage

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:10
Direction: West
Grid ref: 383991, 279131
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 17: Viewpoint 15a - Annotated Photoview from bridleway 626(B) (part 1)

Job no. 08741

Drawing No. 03

Revision -

Dwn/Chkd: NF/CB

Date: January 2023

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:10
Direction: Northwest
Grid ref: 383991, 279131
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 18: Viewpoint 15b - Annotated Photoview from bridleway 626(B) (part 2)

Job no. 08741

Drawing No. 03

Revision -

Dwn/Chkd: NF/CB

Date: January 2023

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:51
Direction: Southwest
Grid ref: 384023, 279242
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 19: Viewpoint 17a - Annotated Photoview from front of Bungalow (part 1)

Job no. 08741

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Revision -

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Date: January 2023

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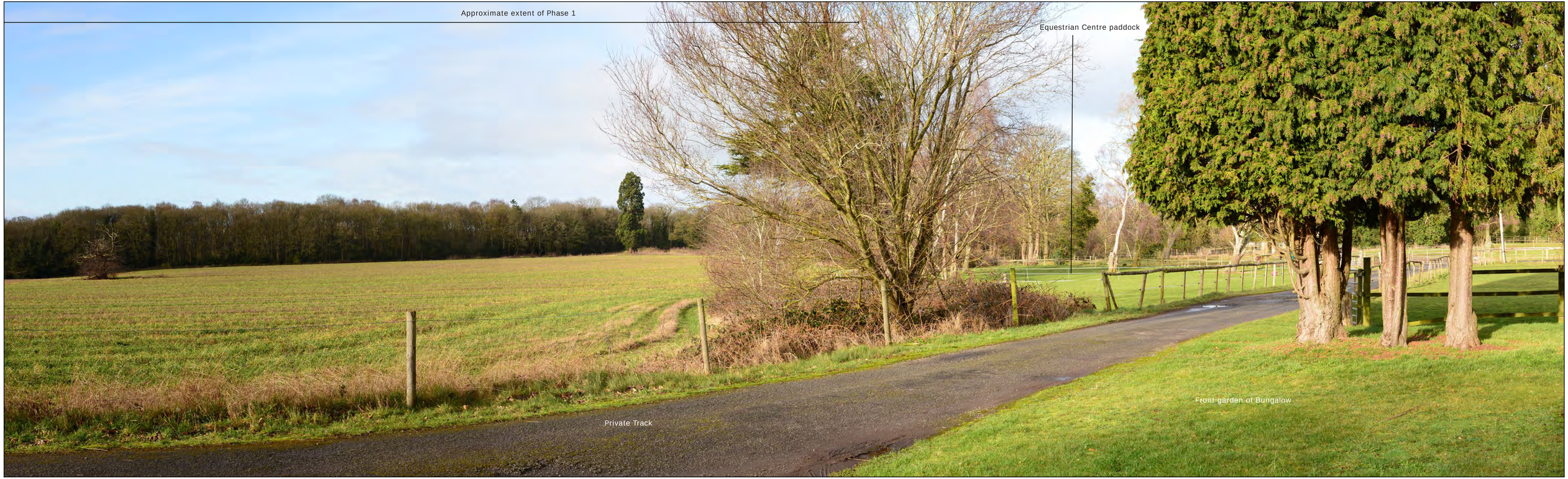

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Viewpoint Information:
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Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:51
Direction: West
Grid ref: 384023, 279242
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 20: Viewpoint 17b - Annotated Photoview from front of Bungalow (part 2)

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:46
Direction: Southeast
Grid ref: 384040, 279225
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 21: Viewpoint 17c - Existing View from rear garden of Bungalow

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:46
Direction: Southeast
Grid ref: 384040, 279225
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 22: Viewpoint 17c - Year 1 Photomontage from rear garden of Bungalow

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage
produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:46
Direction: Southeast
Grid ref: 384040, 279225
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 23: Viewpoint 17c - Year 10 Photomontage from rear garden of Bungalow

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 3 photomontage produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:46
Direction: Southeast
Grid ref: 384040, 279225
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 24: Viewpoint 17c - Year 25 Photomontage from rear garden of Bungalow

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:04
Direction: East
Grid ref: 383666, 279225
Elevation: 59m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 25: Viewpoint 18a - Annotated Photoview from footpath 623(B) (part 1)

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:04
Direction: Southeast
Grid ref: 383666, 279225
Elevation: 59m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 26: Viewpoint 18b - Annotated Photoview from footpath 623(B) (part 2)

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:17
Direction: Northeast
Grid ref: 383608, 279057
Elevation: 62m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 27: Viewpoint 20 - Annotated Photoview from public footpath 622(C)

Job no. 08741

Drawing No. 03

Revision -

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:33
Direction: East
Grid ref: 383281, 279075
Elevation: 53m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 28: Viewpoint 21 - Annotated Photoview from playing fields

Job no. 08741

Drawing No. 03

Revision -

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:26
Direction: East
Grid ref: 383455, 278960
Elevation: 48m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 29: Viewpoint 23 - Annotated Photoview from Wolverley Road

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Drawing No. 03

Revision -

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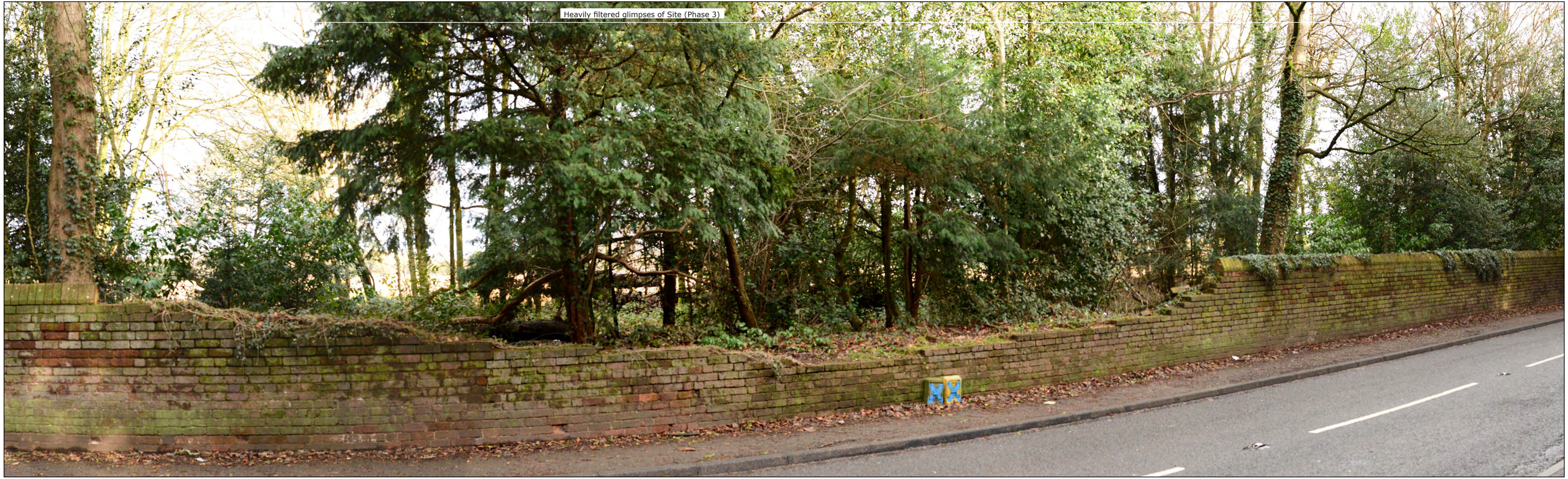

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:31
Direction: Northeast
Grid ref: 383754, 278830
Elevation: 66m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 30: Viewpoint 24 - Annotated Photoview from Wolverley Road (School)

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08741	03	-

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:56
Direction: North
Grid ref: 383919, 278784
Elevation: 63m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 31: Viewpoint 26 - Annotated Photoview from public bridleway 626(B)

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:40
Direction: Northeast
Grid ref: 383983, 278754
Elevation: 64m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 32: Viewpoint 27 - Annotated Photoview from Wolverely Road - Abbots Croft

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:23
Direction: North
Grid ref: 383914, 278748
Elevation: 66m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 33: Viewpoint 28 - Annotated Photoview from Sion Hill

Job no. 08741

Drawing No. 03

Revision -

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Date: January 2023

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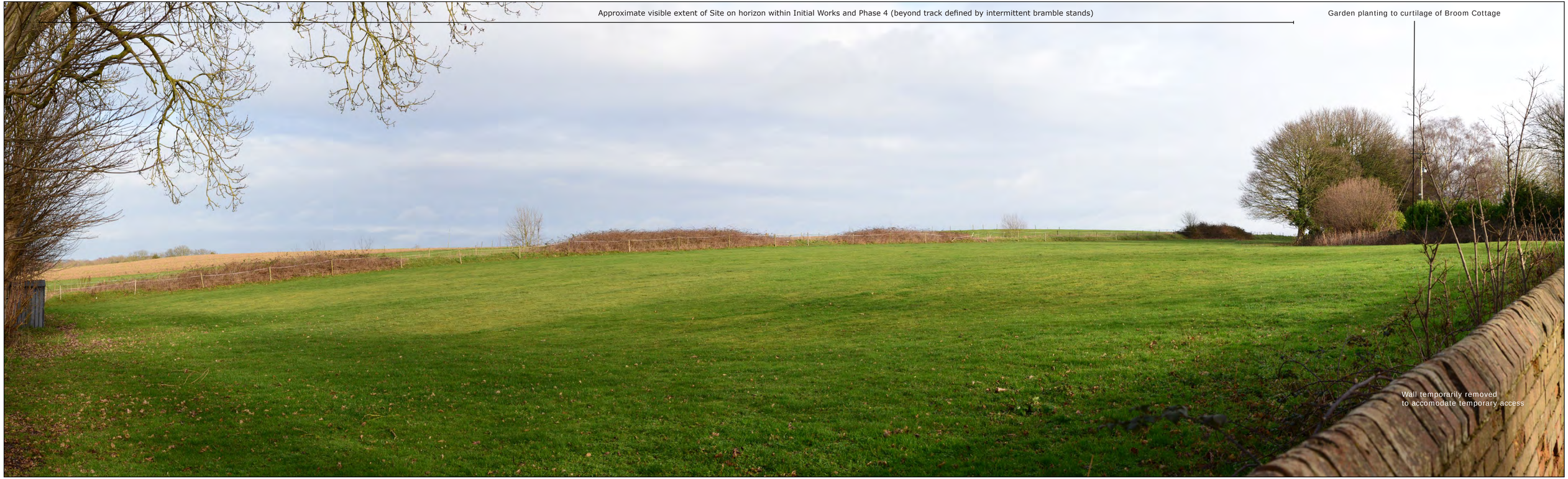

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:50
Direction: Northeast
Grid ref: 384100, 278791
Elevation: 69m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 34: Viewpoint 29 - Annotated Photoview from Wolverely Road near access

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:09
Direction: North
Grid ref: 384180, 278790
Elevation: 76m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 35: Viewpoint 30 - Annotated Photoview from Broom Cottage

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 11:02
Direction: Northwest
Grid ref: 384320, 278776
Elevation: 75m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 36: Viewpoint 31- Annotated Photoview from Wolverley Road at Four Winds

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:26
Direction: South
Grid ref: 384313, 279401
Elevation: 69m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 37: Viewpoint A - Annotated Photoview from public bridleway 625(B)

Job no. 08741

Drawing No. 03

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:18
Direction: East
Grid ref: 384114, 279158
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 38: Viewpoint Ba - Annotated Photoview from bridleway 625(B) (part 1)

Job no. 08741

Drawing No. 03

Revision -

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Date: January 2023

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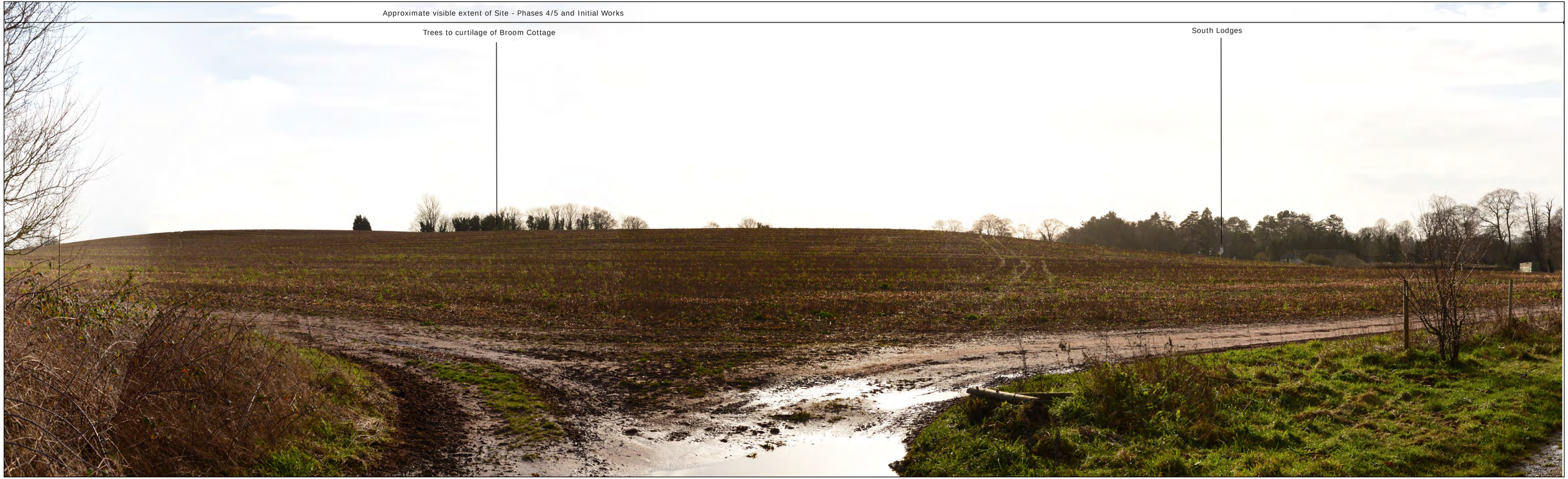

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:18
Direction: Southeast
Grid ref: 384114, 279158
Elevation: 70m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 39: Viewpoint Bb - Annotated Photoview from bridleway 625(B) (part 2)

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:04
Direction: East
Grid ref: 383967, 279013
Elevation: 66m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 40: Viewpoint Ca - Annotated Photoview from bridleway 626(B) (part 1)

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Approximate visible extent of Site - Phases 4/5 and Initial Works

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 12:04
Direction: Southeast
Grid ref: 383967, 279013
Elevation: 66m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 41: Viewpoint Cb - Annotated Photoview from bridleway 626(B) (part 2)

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Approximate visible extent of Site - Phases 1/2

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:00
Direction: East
Grid ref: 383678, 279203
Elevation: 58m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 42: Viewpoint Da - Annotated Photoview from footpath 624(B) (part 1)

Job no. 08741

Drawing No. 03

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Date: January 2023

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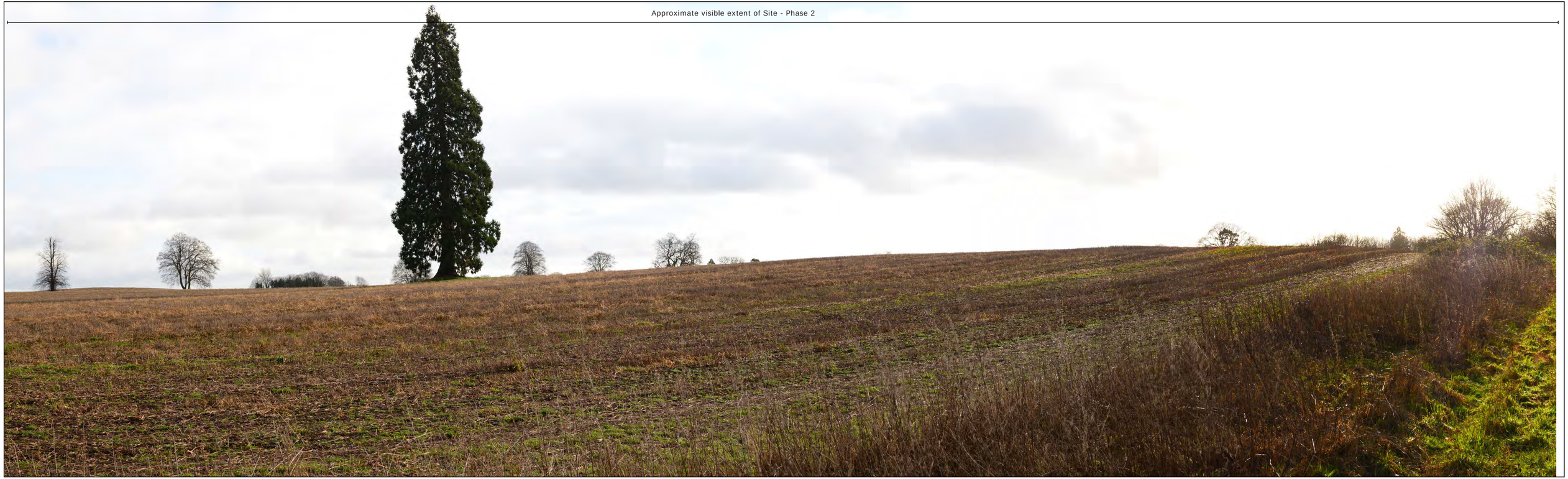

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:00
Direction: Southeast
Grid ref: 383678, 279203
Elevation: 58m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 43: Viewpoint Db - Annotated Photoview from footpath 624(B) (part 2)

Job no. 08741

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Viewpoint Information:
Paper Size: 841 x 297mm
Image Size: 820 x 250mm
Camera/Lens: Nikon D600/50mm
Format: Type 1 annotated photoview produced in accordance with TGN 06/19

Date: 15/01/2023
Time: 13:59
Direction: East
Grid ref: 381896, 279421
Elevation: 81m

Client: NRS Aggregates Ltd

Project: Lea Castle Farm

Figure: Figure 44: Viewpoint E - Annotated Photoview from Hayes Road, Fairfield

Job no. 08741

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Date: January 2023

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Appendix 2 – Evidence of Ms R Canham

Walker Beak Mason Limited
01604 771101 | hq@wbm.co.uk | www.wbm.co.uk

ACOUSTIC CONSULTANTS

Town and Country Planning Act 1990

Section 78 Appeal

Ref: APP / E1885 / W / 22 / 3310099

Land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster, Worcestershire

Appeal by NRS Aggregates Limited against the refusal of planning permission by Worcestershire County Council

Proof of Evidence of Rachel Canham with regard to Noise

Author	Rachel Canham BEng MSc CEng FIOA
Date	27 January 2023
Revision	Final
WBM Ref	5342

ANC ACOUSTICS & NOISE CONSULTANTS

WBM ACOUSTIC CONSULTANTS

Contents

1 Qualifications and Credentials

1.1 My name is Rachel Canham. I am a Director of Walker Beak Mason Limited (WBM), which specialises in acoustic consultancy. My professional address is Steepleton Lodge Barn, Long Lane, East Haddon, Northamptonshire, NN6 8DU.

1.2 WBM is an independent acoustic consultancy that deals with environmental assessments, architectural and building acoustics, and planning application and appeals work. WBM is a member of the Association of Noise Consultants and is an Associate Assessor Member of the Institute of Environmental Management and Assessment.

1.3 I hold the degrees of Bachelor of Engineering in Electroacoustics from Salford University in 1993 and a Master of Science in Environmental Acoustics from London South Bank University in 1998. I became a Chartered Engineer in 2003 and a Fellow of the Institute of Acoustics in 2011. I have been practicing as an acoustic consultant since 1993 and joined WBM in 1999.

1.4 Via WBM I have worked as an acoustic consultant for many of the major mineral extraction companies in the UK on a wide range of surface mineral workings, aggregate related plant sites, waste disposal and recycling projects as well as other industrial sites. I have produced environmental noise reports for planning applications, noise impact assessments and environmental statements.

1.5 WBM has been involved with the consideration of noise for the proposed quarry at the Lea Castle site since 2018, which included undertaking baseline noise surveys, attendance at the public exhibition and preparation of the noise assessment for the environmental statement for the planning application.

1.6 The noise assessment for the proposed quarry dated September 2019 was prepared by Dr Paul Cockcroft, who has since retired. However, I attended the public exhibition about the site, providing information about noise where required. I am therefore familiar with the noise aspects of the proposed development at this site.

1.7 The evidence that I have prepared and provided for this appeal is true and has been prepared and given in accordance with the guidance of my professional institution (the Code of Conduct of the Institute of Acoustics).I confirm that the opinions expressed are my true and professional opinions.

2 Scope of Evidence

2.1 My evidence deals with potential noise arising from quarrying, processing and restoration activities within the proposed quarry site at Lea Castle Farm.

2.2 My evidence will address the noise related reasons for the refusal of the planning application for the proposed quarry, and the comments received from Worcestershire County Council (WCC) and the Rule 6 party (Stop the Quarry Campaign) with regard to noise as set out in their Statements of Case (SoC).

2.3 I will refer to the previous noise assessment undertaken by WBM for the application, as detailed in Section 5 of this document, along with guidance documents related to the assessment of noise impact from mineral sites along with other relevant guidelines. I will also refer to the application details of additional permitted or allocated residential developments and comment on cumulative impact.

2.4 In summary, I have responded to the various comments on noise including the consideration of cumulative impact and shown that this does not affect the outcome of the original noise assessment.

2.5 To aid understanding, a glossary of acoustic terms is provided in Appendix A.

3 Planning Policies and Guidance for Minerals and Noise

3.1 The previous noise assessment report prepared by WBM for the proposed quarry site referred to various guidance documents regarding noise and minerals. For completeness, these are replicated below along with any updated information that has subsequently become available.

Noise Policy Statement for England

3.2 The Noise Policy Statement for England (NPSE) was published in March 2010. The aim of the document is to "…*provide clarity regarding current policies and practices to enable noise management decisions to be made within the wider context, at the most appropriate level, in a cost-effective manner and in a timely fashion*".

3.3 The long term vision of noise policy is to "*Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development*".

3.4 The long term vision is supported by three aims:

"*Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:*

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life*."

3.5 The Explanatory Note to the NPSE introduces the concepts of observed effect levels with regard to noise.

3.6 NOEL (No Observed Effect Level) - this is the level below which no effect can be detected, i.e. below this level there is no detectable effect on health and quality of life due to noise.

3.7 LOAEL (Lowest Observed Adverse Effect Level) – this is the level above which adverse effects on health and quality of life can be detected due to noise.

3.8 SOAEL (Significant Observed Adverse Effect Level) – this is the level above which significant adverse effects on health and quality of life occur due to noise.

3.9 With regard to the first aim of the NPSE, any noise impacts that are above SOAEL should be avoided.

3.10 Where the impact lies somewhere between LOAEL and SOAEL, the second aim of the NPSE requires that all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life. However, as stated in paragraph 2.24 of the Explanatory Note to the NPSE "*This does not mean that such adverse effects cannot occur*".

National Planning Policy Framework

3.11 The National Planning Policy Framework (NPPF) set out the Government's planning policies for England. The version that was in force at the time WBM prepared the quarry noise assessment of September 2019 was dated February 2019, however this has now been superseded by the version dated July 2021. The following text refers to the latest, July 2021 version of the document. However, the content is very similar to the previous February 2019 version.

3.12 Section 15 of the NPPF (*Conserving and enhancing the natural environment*) refers specifically to noise in the following paragraphs:

"*174. Planning policies and decisions should contribute to and enhance the natural and local environment by…*

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability..."

"*185. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:*

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason…"

3.13 Paragraph 185 (a) above refers to the Explanatory Note to NPSE, 2010.

3.14 Paragraph 187 refers to the integration of new development with existing businesses and facilities:

"*187. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed*"

3.15 Mineral sites are considered in Section 17 "Facilitating the sustainable use of minerals" of the NPPF:

"*210. Planning policies should …*

(e) safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;

(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;

(g) when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction..."

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

(c) ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source, and establish appropriate noise limits for extraction in proximity to noise sensitive properties..."

3.16 Paragraph 211 (c) advises that the national planning guidance on minerals sets out how these policies should be implemented, see the following section.

Planning Practice Guidance Noise (PPGN)

3.17 Technical guidance on noise is provided by Planning Practice Guidance, published by the Ministry of Housing, Communities & Local Government.

3.18 Planning Practice Guidance Noise (PPGN) was published in March 2014 and updated in July 2019. PPGN provides advice on how planning can manage potential noise impacts in new development. It makes reference to the Explanatory Note of the NPSE and the NPPF.

3.19 Paragraph 005 Reference ID: 30-005-20190722 of the PPGN provides guidance on how to establish if noise is likely to be a concern, including a table summarising the noise exposure hierarchy based on the likely average response of those affected.

Table 1: Summary of Noise Exposure Hierarchy, based on the likely average response

Response	Examples of outcomes	Increasing effect level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum

Table 1: Summary of Noise Exposure Hierarchy, based on the likely average response			
Response	**Examples of outcomes**	**Increasing effect level**	**Action**
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

3.20 The “Examples of Outcomes” tabulated above can be referred to in the consideration of the effects of impacts.

Planning Practice Guidance Minerals (PPGM)

3.21 Specific guidance for the assessment of noise from mineral sites is provided in the 'Minerals' section of the Planning Practice Guidance, which provides advice regarding the setting of noise limits for such operations.

3.22 Paragraphs 19 to 22 inclusive of the “Minerals” chapter of the Planning Practice Guidance, are under the heading “Noise emissions” within the section “Assessing environmental impacts from mineral extraction” (dated March 2014)

3.23 Paragraph 019 Reference ID: 27-019-20140306 states:

"***How should minerals operators seek to control noise emissions?***

Those making mineral development proposals, including those for related similar processes such as aggregates recycling and disposal of construction waste, should carry out a noise impact assessment, which should identify all sources of noise and, for each source, take account of the noise emission, its characteristics, the proposed operating locations, procedures, schedules and duration of work for the life of the operation, and its likely impact on the surrounding neighbourhood.

Proposals for the control or mitigation of noise emissions should:

- *consider the main characteristics of the production process and its environs, including the location of noise-sensitive properties and sensitive environmental sites;*
- *assess the existing acoustic environment around the site of the proposed operations, including background noise levels at nearby noise-sensitive properties;*
- *estimate the likely future noise from the development and its impact on the neighbourhood of the proposed operations;*
- *identify proposals to minimise, mitigate or remove noise emissions at source;*
- *monitor the resulting noise to check compliance with any proposed or imposed conditions*."

3.24 Paragraph 020 Reference ID: 27-020-20140306 states:

"***How should mineral planning authorities determine the impact of noise?***

Mineral planning authorities should take account of the prevailing acoustic environment and in doing so consider whether or not noise from the proposed operations would:

- *give rise to a significant adverse effect;*
- *give rise to an adverse effect; and*
- *enable a good standard of amenity to be achieved.*

In line with the Explanatory Note of the Noise Policy Statement for England, this would include identifying whether the overall effect of the noise exposure would be above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation. As noise is a complex technical issue, it may be appropriate to seek experienced specialist assistance when applying this policy."

3.25 Paragraph 021 Reference ID: 27-021-20140306 states:

"***What are the appropriate noise standards for mineral operators for normal operations?***

Mineral planning authorities should aim to establish a noise limit, through a planning condition, at the noise-sensitive property that does not exceed the background noise level (LA90,1h) by more than 10dB(A) during normal working hours (0700-1900). Where it will be difficult not to exceed the background level by more than 10dB(A) without imposing unreasonable burdens on the mineral operator, the limit set should be as near that level as practicable. In any event, the total noise from the operations should not exceed 55dB(A) LAeq, 1h (free field).

For operations during the evening (1900-2200) the noise limits should not exceed the background noise level (LA90,1h) by more than 10dB(A) and should not exceed 55dB(A) LAeq, 1h (free field). For any operations during the period 22.00 – 07.00 noise limits should be set to reduce to a minimum any adverse impacts, without imposing unreasonable burdens on the mineral operator. In any event the noise limit should not exceed 42dB(A) LAeq,1h (free field) at a noise sensitive property.

Where the site noise has a significant tonal element, it may be appropriate to set specific limits to control this aspect. Peak or impulsive noise, which may include some reversing bleepers, may also require separate limits that are independent of background noise (e.g. Lmax in specific octave or third-octave frequency bands – and that should not be allowed to occur regularly at night.)

Care should be taken, however, to avoid any of these suggested values being implemented as fixed thresholds as specific circumstances may justify some small variation being allowed."

3.26 Paragraph 022 Reference ID: 27-022-20140306 states:

"***What type of operations may give rise to particularly noisy short-term activities and what noise limits may be appropriate?***

Activities such as soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, construction of new permanent landforms and aspects of site road construction and maintenance.

Increased temporary daytime noise limits of up to 70dB(A) LAeq 1h (free field) for periods of up to eight weeks in a year at specified noise-sensitive properties should be considered to facilitate essential site preparation and restoration work and construction of baffle mounds where it is clear that this will bring longer-term environmental benefits to the site or its environs.

Where work is likely to take longer than eight weeks, a lower limit over a longer period should be considered. In some wholly exceptional cases, where there is no viable alternative, a higher limit for a very limited period may be appropriate in order to attain the environmental benefits. Within this framework, the 70 dB(A) LAeq 1h (free field) limit referred to above should be regarded as the normal maximum."

3.27 With regard to cumulative impact of minerals development, this is addressed in Paragraph 017 Reference ID: 27-017-20140306:

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

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."

Local Authority Guidance

WRS Noise Control Technical Guidance

3.28 At the time WBM prepared the noise assessment for the proposed quarry (September 2019), local guidance on noise was provided by Worcestershire Regulatory Services (WRS) within the "*Noise Control Technical Guidance – Development Control*" 1st Edition November 2013 Version 1.2.4.

3.29 The WRS "*Noise Control Technical Guidance*" was reviewed and found to contain no information specifically for mineral sites. Accordingly, the latest Government advice for such sites contained within planning practice guidance for minerals was used for the noise assessment undertaken by WBM in September 2019.

3.30 Since the refusal of the application, this document appears to have been superseded by the WRS document "Technical Guidance Note for Planning (November 2022), Section 5 "Noise and Vibration – Technical Guidance". As found in the previous WRS document, there is no specific guidance relating to mineral sites.

Waste Core Strategy for Worcestershire, Adopted Waste Local Plan 2012-2027

3.31 WBM did not refer to this document in the quarry noise assessment of September 2019, as the proposal is not a waste management facility. However, this document has been referenced by Worcestershire County Council in their statement of case.

3.32 The Waste Core Strategy for Worcestershire, Adopted Waste Local Plan 2012-2027 (November 2012) provides guidance on the approach to planning for the county's waste management facilities. Noise in mentioned in Policy WCS 14: Amenity:

"*Waste management facilities will be permitted where it is demonstrated that the operation of the facility and any associated transport will not have unacceptable adverse impacts on amenity. This must consider impacts on or of:…*

iii. noise and vibrations…"

3.33 Policy WCS 14 also requires cumulative effects to be considered.

3.34 Noise is also mentioned in paragraph 7.9 of Section 7 of the document (*Safeguarding existing waste management* facilities) under the section "*New sensitive receptors*":

3.35 "*Applicants may need to assess issues such as any noise, vibrations, dust, odours or fumes that may result from the normal operation of the site. Bio-aerosols should be considered where the waste management facility handles biodegradable waste. Where impacts are likely to affect the proposed development, considered design, site layout and landscaping or screening of the proposal will normally be adequate to mitigate any impacts*."

Worcestershire Minerals Local Plan (July 2022)

3.36 This document was adopted in July 2022, after the application for the proposed quarry was submitted. Noise is mentioned in Policy MLP 28: Amenity:

"*Planning permission will be granted where it is demonstrated that the proposed mineral development, including associated transport, will not give rise to unacceptable adverse effects on amenity or health and well-being.*

A level of technical assessment appropriate to the proposed development will be required to demonstrate that, throughout its lifetime and taking into account the cumulative effects of multiple impacts from the site and/or a number of sites in the locality, the proposed development will not cause unacceptable harm to sensitive receptors from:…

c) noise and vibration"

3.37 Noise is also considered in the section "Noise and vibration", paragraphs 6.34 to 6.39 of the Worcestershire Minerals Local Plan. The paragraphs referring to noise are reproduced below:

"*6.34 The introduction of sources of noise or vibration can impact on the use, enjoyment and tranquillity of a locality, and can cause an intrusion that can adversely impact on quality of life, health and well-being.*

6.35 Potential sources of noise within typical mineral operations include extraction activities and the operation of processing plant, haulage vehicles and conveyors. Activities such as soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, the construction of new permanent landforms, and aspects of site road construction and maintenance may also be noisy in the short term. Each source of noise might have a different characteristic and intensity, and could be capable of causing significant impacts if not properly controlled. After-uses also have the potential to introduce or alter the source, type or level of noise arising from the site.

6.37 An assessment will be required where there are likely to be impacts from noise or vibration. This should identify potential sources of noise and vibration, their general character and the location of noise-sensitive or vibration-sensitive receptors, including properties. Reference should be made to the types and levels of noise or vibration, the time of day noise or vibration will occur, whether they will be continuous or intermittent and the pattern and duration of their occurrence, as well as the prevailing acoustic environment and local factors such as topology and topography.

6.38 Where noise or vibration impacts are identified, mitigation measures should be incorporated to ensure that effects are managed to an acceptable level. This might include appropriate design, layout and phasing of operations to increase the distances between the source of noise and potential receptors or to minimise noise transmission through the use of screening by natural barriers, planting or purpose-built features. Setting noise limits at sensitive properties, controlling working hours, and/or monitoring of noise conditions at mineral workings could also safeguard against disturbance from the site.

6.39 Where noise impacts cannot be avoided it may be appropriate to allow temporary increases in daytime noise to facilitate essential site preparation or restoration works; however, clear long-term benefits would need to be demonstrated."

3.38 Paragraphs 6.38 and 6.39 of the Worcestershire Minerals Local Plan refer to the guidance provided in PPGM with regard to noise limits and the duration of temporary works.

Wyre Forest District Local Plan 2016-2036 (April 2022)

3.39 This document was adopted in April 2022 , after the application for the proposed quarry was submitted. Chapter 15 "Pollution Minerals and Waste" contains Policy SP.33 – Pollution and Land Instability. Policy SP.33 does not specifically mention noise but states "*Development proposals must be designed in order to avoid any significant adverse impact from pollution, including cumulative ones*…"

3.40 Paragraph 15.3 of the document confirms that the term "pollution" includes noise.

3.41 Policy SP.LCV1 – "Lea Castle vision" refers to the strategic allocation for Lea Castle Village. The allocation is for the whole site, centred on the former hospital site and bounded by the A449 (Wolverhampton Road), Axborough Lane, the A451 (Stourbridge Road) and the B4190 (Park Gate Road).

4 Reasons for Refusal

4.1 Planning permission for the proposed quarry was refused on 27 May 2022. The stated reasons for refusal of planning permission for the proposed quarry were:

1. Contrary to Policy 2 (Other Sand and Gravel Deposits) of the County of Hereford and Worcester Minerals Local Plan (Adopted April 1997) (Saved Policies);

2. Unacceptable impact on openness of the Green Belt;

3. Unacceptable impact on residential amenity and local schools;

4. Unacceptable impact on the local economy;

5. Loss of 2 Tree Preservation Order (TPO) trees;

6. Unsuitable bridleway next to the Wolverhampton Road (A449);

7. Unacceptable impact on highways;

8. Unacceptable general impact on environment and wildlife; and

9. Unacceptable impact on health of local population.

4.2 Noise was not specifically listed as a reason for refusal.

Statement of Common Ground

4.3 A Statement of Common Ground has been agreed between NRS Aggregates Limited & Worcestershire County Council, dated January 2023. The following is agreed with regard to noise (paragraph 7.12):

"*It is agreed that a Noise Impact Assessment was submitted in support of the planning application. Worcestershire Regulatory Services, the statutory consultees with regard to noise impacts, were satisfied that the Noise report confirms conditions to be within national guidance relating to noise and that the measured noise levels calculated were robust in isolation. Worcestershire Regulatory Services are satisfied that there are no adverse noise impacts associated with the proposed workings in isolation*."

4.4 The matters of disagreement relating to noise, and which are to be defended by WCC, relate to refusal number 3 (paragraph 8.2):

"*With reference to reason for refusal 3: impact on residential amenity and schools, the parties disagree on the following matters…*

- *The cumulative impact of the development in conjunction with adjacent permitted and allocated development as secured by consent 17/0205/OUTL and Wyre Forest Local Plan Policy SP.LCV1 on the noise environment for nearby residential receptors.*
- *The cumulative impact of dust and noise from the development in conjunction with adjacent permitted and allocated development as secured by consent 17/0205/OUTL and Wyre Forest Local Plan Policy SP.LCV1 on the quality of the environment of Heathfield Knoll School and First Steps Nursery*."

WCC Statement of Case

4.5 WCC prepared a Statement of Case (SoC) for the appeal relating to the proposed quarry application at Lea Castle Farm lodged by NRS Aggregates . The document was circulated on 6 January 2023.

4.6 Of the nine reasons for refusal, WCC proposed to defend reason 2 (unacceptable impact on openness of the Green Belt) and reason 3 (Unacceptable impact on residential amenity and local schools). Noise is only relevant to reason 3.

4.7 Paragraphs 5.6 and 5.7 refer to the use of bunds as mitigation.

"*5.6 The appellants include a Noise Assessment within their planning submission; this identified a calculated daytime operations noise impact that sat just below recommended limits, in isolation, for a number of dwellings and receptors including Broom Cottage, South Lodges and Heathfield Knoll School*.

5.7 The identified noise impact is proposed to be mitigated by use of bunds. The Council will demonstrate in evidence that in siting bunds adjacent to residential properties, some up to 6m high, a detrimental impact to the visual outlook of impacted properties occurs as a result."

4.8 Note that visual impact is not considered in this proof but is addressed by Mr Neil Furber in his Landscape and Visual proof.

4.9 Paragraphs 5.8, 5.12, 5.14 and 5.15 refer to cumulative impact on amenity, in particular due the development at Lea Castle Village.

"5.8 *The Council will demonstrate in evidence that irrespective of the proposed mitigation measures, the noise impact of development offers cumulative harm to the amenity of receptors within the locality of the site, and that the additional mitigation recommended to be implemented by Worcestershire Regulatory Services, including a restriction to working hours, is effective only in isolation. The noise environment concluded to provide 'the occasional identifiable noise being heard from use of machinery associated with the extraction' in combination with other environmental impacts, will be demonstrated as offering cumulative harm to amenity*.

5.12 Cumulative Impact was considered within the appellants Environmental Statement, and within an updated Non-Technical Summary during the application. The appellants conclude that the proposed minerals works could satisfactorily co-exist with the permitted and allocated development at Lea Castle Village without offering any cumulative harm. However, no further technical or cumulative assessment on dust or air quality was undertaken to draw this conclusion; the appellants remain reliant on their Vibrook [sic] *Air Quality Assessment of 2019 and it does not consider cumulative impact. Furthermore, no revised cumulative assessment on the impacts of combined noise effects with the Lea Castle Village allocation has been undertaken to draw this conclusion*

5.14 The Council will demonstrate in evidence that the existing review of noise impacts have failed to satisfactorily consider either the impact on an allocated development, secured within the Wyre Forest District Local Plan, or the combined impact of such developments being located within 250m of each other on the area as a whole.

5.15 In drawing these conclusions, the Council will agree in part with the objection raised by Wyre Forest District Council to the application, due to the direct 'adverse impact on existing and future residential dwellings, both in close proximity and further from the site, impacting on their amenity, through adverse noise, dust and vibrations. It would also impact on the wider community reducing the ability to enjoy recreational routes and outdoor space'."

4.10 Paragraphs 5.18, 5.19 and 5.20 and 5.15 refer to the noise impact on the school and nursery, again with reference to cumulative impact from the Lea Castle Village.

"*5.18 The appellants noise assessment identifies the school as one of the sites sitting closest to daytime noise limits of general working operations of the proposed development and mitigation to secure this relies on the implementation of a bund. The school can be expected therefore to be subject to, in isolation, a noise environment concluded by the Worcestershire Regulatory Services to be of 'occasional identifiable noise being heard from use of machinery associated with the extraction'.*

5.19 The combined noise, air and dusts impacts on the school and nursery are concluded by the appellant to be within acceptable ranges, subject to the implementation of mitigation, and Worcestershire Regulatory Services considers the mitigation plan 'strong enough'.

5.20 The Council will demonstrate in evidence that no assessment is provided to determine whether the mitigation plan is "strong enough" when a cumulative impact of the development in combination with Lea Castle Village is assessed. The appellant relies solely on the conclusion that the developments can work in harmony, as the minerals works are temporary."

4.11 Responses to these points raised by WCC will be addressed within this proof.

Rule 6 Party (Stop the Quarry Campaign) Statement of Case

4.12 The Rule 6 Party, Stop the Quarry Campaign (STQC) prepared a Statement of Case dated 05 January 2023. They propose to defend all nine reasons for refusal.

4.13 With regard to noise, the STQC SoC state the following with regard to Reason 3 (unacceptable impact on residential amenity and local schools):

"*7.21 In terms of residential amenity, STQC believes that the applicant has failed to properly assess the impacts, seeking to find little or no adverse impacts throughout it's reporting. There are significant amenities which will be affected by noise and dust. Local schools are very close and whist reports anticipate noise levels within guidelines STQC is still concerned given just how close local schools and with the same daytime hours as the quarry*."

4.14 Noise is also mentioned in general terms in paragraph 7.55: "*STQC have very serious concerns in respect of the evidence presented and accepted by WCC in respect of noise and the impact of noise*." However, no further details are provided.

5 Previous Noise Assessment

5.1 The previous noise assessment for this site was completed by Dr Paul Cockcroft of WBM in September 2019. Dr Cockcroft retired in 2022 and is no longer working in acoustic consultancy.

5.2 It is noted that the noise assessment completed by WBM was found by WCC to be acceptable "in isolation". In summary, the previous assessment determined baseline noise levels at the nearest noise receptors to the proposed quarry, which were measured in 2018. Sample noise measurements were undertaken on three separate days at all locations and installed sound level meters measured noise levels over a week at two locations.

5.3 The results of the baseline noise surveys were used to set limits for site noise from normal, day to day operations, which are 10 dB above the background noise levels ($L_{A90,T}$), with an upper limit of 55 dB $L_{Aeq,1h}$. The site noise limits are based on guidance set out in PPGM.

5.4 Site noise calculations were undertaken to each receptor for a reasonable worst case scenario, i.e. with all mobile plant items operating at the closest practical position of the proposed operating areas to each receiver location. The calculations assumed that all plant on site operates simultaneously in the closest likely working areas to each receiver location for both extraction and infilling. For most dwellings, the activity in the phases for extraction and infilling would not take place simultaneously at the closest part of the site (in practice, these two activities would be taking place in different phases of the development). The actual quarry site noise levels would generally be lower than the calculated worst case values.

5.5 A summary of the measured baseline noise levels, suggested site noise limits and 'reasonable worst case' calculated site noise levels, is presented in Table 2.

Table 2: Summary of Previous Noise Assessment Baseline and Site Noise Levels

Receptor	Baseline Noise Levels (June / July 2018)		Suggested Site Noise Limit dB $L_{Aeq,1h}$	Calculated Site Noise Level dB $L_{Aeq,1h}$
	Average Ambient dB $L_{Aeq,T}$	Average Background dB $L_{A90,T}$		
1. Broom Cottage	51 (54)*	41 (43)*	53	51
2. South Lodge	55	47	55	54
3. Heathfield Knoll	55	48	55	53
4. Brown Westhead Park	54	36	46	45
5. McDonalds Bungalow	43	35	45	45
6. Keeper's Cottage	49	39	49	46
7. Castle Barns	45 (47)*	39 (41)*	51	48

* Values in brackets were determined from the results from installed sound level meters. All other results are from sample measurements.

5.6 The calculated site noise levels are all at or below the PPGM site noise limits for normal, day to day operations.

5.7 The calculated levels from temporary operations, e.g. overburden stripping, bund formation and the final restoration processes, were also calculated and found to be at or below the site noise limit of 70 dB $L_{Aeq,1h}$ which also complies with limits for such activities set out in PPGM. Note that temporary operations are permitted a higher noise limit, but are restricted in terms of duration and should not exceed a total of eight weeks duration at any noise sensitive properties in any twelve month period.

5.8 The noise assessment was undertaken for the nearest noise sensitive properties to the proposed quarry.

6 Impact on Allocated Development

6.1 For the noise assessment prepared for the proposed quarry at Lea Castle Farm, WBM included the receptors nearest to the site that were considered to have the worst potential noise impact.

6.2 At the time that WBM prepared the noise assessment for the proposed quarry in September 2019, there were two housing developments in the vicinity that were approved by Wyre Forest District Council:

- Former Lea Castle Centre (17/0205/OUTL) approved in June 2019
- Stourbridge Road (18/0163/FULL) approved in August 2018

6.3 Both of these developments are further from the proposed quarry site than the noise sensitive receptors included in the WBM noise assessment of September 2019.

6.4 Additional residential properties/developments in the area have subsequently been permitted or have had applications submitted to Wyre Forest District Council. These include:

- Four bungalows on Brown Westhead Park (20/0217/FUL) approved in July 2020
- Four residential dwellings at Wolverley Lodge (22/0235/PIP) submitted in May 2022 (re-submission of 18/0748/PIP)
- Lea Castle Village (22/0404/OUT) submitted in May 2022

6.5 The impact of noise from the proposed quarry on all of these receptors has been considered.

6.6 The majority of these applications do not have associated noise assessments and hence do not have baseline noise data on which suggested site noise limits could be derived. However the additional receptor locations are reasonably near to baseline noise survey locations previously used in the WBM quarry noise assessment report of 2019. As such, I have assumed baseline background noise levels based on the noise levels previously measured by WBM.

6.7 As set out in the Statement of Common Ground, WRS were satisfied that the previous calculated noise levels in the report prepared by WBM were robust, albeit in isolation. As such, the same calculation model as used for the quarry noise assessment undertaken by WBM in 2019 has been used for these additional receptors.

Former Lea Castle Centre (17/0205/OUTL)

6.8 This site is located to the east of the proposed quarry. This is an outline application for up to 600 dwellings, employment uses and mixed use space. The nearest proposed housing is located approximately 600 metres from the closest extraction point on the proposed quarry site and 900 metres from the plant site.

6.9 Planning permission for this development was granted in June 2019, subject to conditions, none of which relate specifically to noise.

6.10 Condition 20 required submission of a Construction Environmental Management Plan (CEMP) for the first reserved matter application for the development or the first reserved matters application for each phase of development. The CEMP is to include a Construction Method Statement with details of the noise, including acoustic screening. Noise and vibration management plans are also required.

6.11 A Construction Management Plan has been uploaded to the planning portal at Wyre Forest District Council that shows the different development parcels. However, no CEMPs, construction method statements or noise and vibration management plans appear to have been uploaded so this information including that regarding construction noise levels is not publicly available.

6.12 From review of the site using Google Maps, housing on the site is under construction.

6.13 There was no noise report submitted with the application and as a result, no baseline noise levels reported for this site. It is envisaged that The A449 Wolverhampton Road would be the main source of environmental noise affecting the proposed residential site. The proposed houses are to be located over 300 metres from this road.

6.14 It is assumed that the baseline noise levels at the proposed housing would be similar to those measured by WBM at Location 6 Keepers Cottage, which is around 400 metres from Wolverhampton Road. The average background noise level at Keepers Cottage, measured in 2018 was 39 dB $L_{A90,T}$. Using guidance in PPGM, this indicates that 49 dB $L_{Aeq,1h}$ would be an appropriate site noise limit at this location.

6.15 The calculated site noise level for normal, day to day operations is 39 dB $L_{Aeq,1h}$ for the housing at the Former Lea Castle Centre site. This is well below the suggested PPGM site noise limit of 49 dB $L_{Aeq,1h}$ at this location.

6.16 The calculated noise due to temporary operations is 41 dB $L_{Aeq,1h}$. This is also well below the PPGM noise limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.17 As such, operations at the proposed quarry at Lea Castle Farm would not cause an impact at the proposed residential development at the Former Lea Castle Centre site.

Stourbridge Road (18/0163/FULL)

6.18 This site is located to the south-east of the proposed quarry. This is a full planning application for 91 dwellings located on land off Stourbridge Road. The nearest housing is located over 700 metres from the closest extraction point on the proposed quarry site and approximately 1 kilometre from the plant site.

6.19 A noise assessment report was submitted as part of the planning application, prepared for Miller Homes by Wardell Armstrong ("Miller Homes, Land off Stourbridge Road, Kidderminster, Noise Assessment Report"). The report included the results of noise measurements undertaken on the site in 2015, in which the baseline noise levels were found to be mainly influenced by road traffic noise. The report provided recommendations for mitigation to the dwellings to control road traffic noise levels.

6.20 The noise report included seven samples measured during daytime hours. The daytime background noise levels ranged from 42 to 47 dB $L_{A90,T}$ with an average level of 44 dB $L_{A90,T}$. This is in keeping with the background levels measured in the area by WBM in 2018.

6.21 There was no mention or consideration of construction noise within the noise report submitted with the application.

6.22 Planning permission was granted in August 2018, subject to conditions. Condition 18 required the noise mitigation strategy for glazing, ventilation and boundary treatments to be as set out in the noise assessment report.

6.23 Condition 14 required submission of a Construction Environmental Management Plan (CEMP) prior to commencement of the development. The CEMP does not appear to have been uploaded to the planning portal at Wyre Forest District Council so this information is not publicly available.

6.24 From a review of the site using Google Maps, the housing has been constructed and is now occupied.

6.25 The 2015 baseline noise survey information included in the noise report submitted with that application had an average daytime background noise level of 44 dB $L_{A90,T}$. Using the guidance in PPGM, this indicates that 54 dB $L_{Aeq,1h}$ would be an appropriate site noise limit at this location.

6.26 The calculated site noise level for normal, day to day operations is 37 dB $L_{Aeq,1h}$ for the housing off Stourbridge Road. This is well below the suggested PPGM site noise limit of 54 dB $L_{Aeq,1h}$ at this location.

6.27 The calculated noise due to temporary operations is 39 dB $L_{Aeq,1h}$. This is also well below the PPGM noise limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.28 As such, operations at the proposed quarry at Lea Castle Farm would not cause an impact at these dwellings.

Four bungalows on Brown Westhead Park (20/0217/FUL)

6.29 This site is located to the west of the proposed quarry and is a full planning application for four 2-bedroom bungalows off Brown Westhead Park. Planning permission was granted in July 2020, subject to conditions, none of which relate to noise. From review of the site using Google Maps, the bungalows have been constructed and appear to be occupied.

6.30 The bungalows are next to the WBM survey and assessment designated Location 4 (Brown Westhead Park). As such, the baseline noise conditions, site noise limit and calculated site noise levels would be the same as those determined for Location 4, Brown Westhead Park.

6.31 The WBM 2018 baseline noise surveys had an average daytime background noise levels of 36 dB $L_{A90,T}$ at this location Using guidance in PPGM, this indicates that 46 dB $L_{Aeq,1h}$ would be an appropriate site noise limit at this location.

6.32 Using the same site noise calculation as Location 4, the calculated site noise level for normal, day to day operations is 45 dB $L_{Aeq,1h}$ for the bungalows. This complies with the suggested PPGM site noise limit of 46 dB $L_{Aeq,1h}$ at this location.

6.33 The calculated noise due to temporary operations is 63 dB $L_{Aeq,1h}$. This also complies with the PPGM noise limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.34 As such, operations at the proposed quarry at Lea Castle Farm would not cause any significant impact at these bungalows.

Four residential dwellings at Wolverley Lodge (22/0235/PIP)

6.35 This site is located over 300 metres further to the west than the four bungalows off Brown Westhead Park.

6.36 Permission in Principle was previously approved under planning reference 18/0448/PIP, but this has expired. The previous Permission in Principle was granted in February 2019, subject to the submission of various technical details and assessments. There was no requirement to submit a noise assessment.

6.37 An updated application for the dwellings was submitted in March 2022. No noise assessment was included in the submission.

6.38 It is assumed that the baseline noise levels at the proposed dwellings would be similar to those measured by WBM at Location 4 (Brown Westhead Park). The average background noise level at Location 4, measured in 2018 was 36 dB $L_{A90,T}$. Using guidance in PPGM, this indicates that 46 dB $L_{Aeq,1h}$ would be an appropriate site noise limit at this location.

6.39 The calculated site noise level for normal, day to day operations is 43 dB $L_{Aeq,1h}$ for the housing at Wolverley Lodge. This complies with the suggested PPGM site noise limit of 46 dB $L_{Aeq,1h}$ at this location.

6.40 The calculated noise due to temporary operations is 46 dB $L_{Aeq,1h}$. This is below the PPGM noise limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.41 As such, operations at the proposed quarry at Wolverley Lodge would not cause any significant impact at these dwellings.

Lea Castle Village (22/0404/OUT)

6.42 This site is located to the east of the proposed quarry, adjacent to the Former Lea Castle Centre site.

6.43 This is an outline application for a mixed development including up to 800 dwellings. The nearest proposed housing is located approximately 250 metres from the closest extraction point on the proposed quarry site and 600 metres from the plant site.

6.44 The planning application was submitted in May 2022. A noise assessment report was submitted as part of the planning application, prepared for Homes England by Wood Group ("Lea Castle Village, Kidderminster, Outline Planning Application, Site Suitability assessment – Noise"). The report included the result of a single noise measurement undertaken adjacent the A449 (near the junction with Wolverley Road) in 2021 with a reported result of 75 dB $L_{A10,18h}$. No other noise parameters were presented. The purpose of the survey was to measure road traffic noise. The report presented the results of road traffic noise modelling and provided an assessment of the suitability of the site for development.

6.45 It is noted that the forecasted traffic flow from the proposed quarry at Lea Castle Farm was included with the assessment of road traffic noise for this site.

6.46 No background ($L_{A90,T}$) noise levels were presented in the report.

6.47 There was no mention or consideration of construction noise within the noise report submitted with the application. However noise from construction is considered within the Health Impact Assessment Checklist Matrix (dated April 2022) submitted with the application. Under Section 3 of the Planning Checklist, within the section on Construction, it is stated:

"*Noise and vibration disruption due to construction will be temporary and limited to the Wider Site and surrounding area and dependent on the rate of annual dwelling completions, likely to be for approximately 10 years. Construction activities would also move around the Wider Site as the Scheme is built out and are only likely to be in close proximity to noise sensitive receptors for short durations. A range of best practice environmental measures would be incorporated into the Proposed Scheme via the CEMP in order to minimise and manage potential construction noise effects, with which contractors will need to comply. Construction hours can also be controlled through a CEMP to decrease period of noise disturbance*."

6.48 Although there was a noise report submitted with the application, no background noise levels were presented in the report. It is envisaged that The A449 Wolverhampton Road would be the main source of environmental noise affecting the proposed residential site. Some of the proposed houses are to be located between the proposed development at Former Lea Castle Centre site and Wolverhampton Road, with some properties adjacent to this road.

6.49 It is assumed that the baseline noise levels at the proposed housing would be similar to those measured by WBM at Location 7 (Castle Barns), which is around 150 metres from Wolverhampton Road. The average background noise level at Castle Barns, measured in 2018 using the installed meter was 41 dB $L_{A90,T}$. Using guidance in PPGM, this indicates that 51 dB $L_{Aeq,1h}$ would be an appropriate site noise limit for these properties.

6.50 The calculated site noise level for normal, day to day operations is 46 dB $L_{Aeq,1h}$ for the housing at the Lea Castle Village. This complies with the suggested PPGM site noise limit of 51 dB $L_{Aeq,1h}$ at this location.

6.51 The calculated noise due to temporary operations is 50 dB $L_{Aeq,1h}$. This is well below the PPGM noise limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.52 As such, operations at the proposed quarry at Lea Castle Farm would not cause any significant impact at the proposed residential development at the Lea Castle Village site.

Summary of Impact on Allocated Development

6.53 A summary of the assumed background levels, suggested site noise limits and 'reasonable worst case' calculated site noise levels for the allocated development sites, is presented in Table 3.

Table 3: Summary of Suggested Site Noise Limits and Calculated Site Noise Levels at Allocated Development Sites

Receptor	Assumed Background dB $L_{A90,T}$	Suggested Site Noise Limit dB $L_{Aeq,1h}$	Calculated Site Noise Level dB $L_{Aeq,1h}$
Former Lea Castle Centre (17/0205/OUTL)	39	49	39
Stourbridge Road (18/0163/FULL)	44	54	37
Four bungalows on Brown Westhead Park (20/0217/FUL)	36	46	45
Four residential dwellings at Wolverley Lodge (22/0235/PIP)	36	46	43
Lea Castle Village (22/0404/OUT)	41	51	46

6.54 The calculated noise levels associated with temporary operations are all well below the PPGM limit of 70 dB $L_{Aeq,1h}$ for such activities.

6.55 All of the calculated site noise levels comply with the site noise limits for normal and temporary operations for these additional receptors.

7 Consideration of Cumulative Impact

7.1 In the Statement of Common Ground and the Statement of Case from WCC, cumulative impact is mentioned, in particular with regard to Lea Castle Village, although the particular noise aspect of cumulative impact is not specified.

Minerals Operations

7.2 With regard to cumulative impact from mineral sites, there are no other mineral sites or operations in the vicinity of the proposed quarry at Lea Castle Farm, so no cumulative assessment of such operations is necessary.

Road Traffic

7.3 When the Lea Castle Farm quarry application was made, the additional traffic generated by the allocated developments at the time, Former Lea Castle Centre (17/0205/OUTL) and Stourbridge Road (18/0163/FULL), were included in the transport assessment prepared for the quarry application.

7.4 It is noted that the forecasted traffic flow from the proposed quarry at Lea Castle Farm was included within the assessment of road traffic noise for Lea Castle Village, as set out in the noise assessment report submitted with that application.

Operational Noise

7.5 The proposed developments are mainly housing, which usually does not generate any significant levels of noise. There are areas of employment use within the proposed development at the Former Lea Castle Centre and Lea Castle Village, however the noise levels from these are likely to be restricted in order not to cause impact on the immediately adjacent residential properties within the same development. As such the cumulative impact on other receptors from the employment use within these sites is expected to be negligible.

Construction Noise

7.6 The noise from construction, in particular of the Lea Castle Village site, is likely to be the most significant noise source associated with other developments that may have an impact on the noise sensitive receptors.

7.7 The Former Lea Castle Centre is already under construction, and construction is complete on the developments at Stourbridge Road and Brown Westhead Park. The development at Wolverley Lodge is small (four dwellings) so is unlikely to generate any significant levels of construction noise.

7.8 There is insufficient information available to determine the levels of construction noise from the Lea Castle Village site. The CEMP required for the Former Lea Castle Centre was not uploaded to the Wyre Valley District Council planning portal and no construction noise information was provided in the application for the Lea Castle Village site.

7.9 Construction noise is highly variable depending on the particular activity, the plant items used, the duration of the works at each location, the mode of operation etc. The only appropriate assumption that can be made is that it would be expected that construction noise would meet appropriate noise limits at the nearest noise sensitive receptors (dwellings) to the construction site.

7.10 As confirmed by the Health Impact Assessment Matrix submitted with the application for the Lea Castle Village site (see paragraph 6.47), any disruption from construction noise will be temporary and will generally be limited to the wider site and surrounding area. The period of construction is expected to be around 10 years. Construction activities are variable and will move around the site, and are only likely to be in close proximity to any noise sensitive receptors for relatively short durations.

7.11 There are no mandatory limits for construction noise, although there are recommendations and guidelines for limits.

7.12 BS 5228-1:2009+A1:2014 "*Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*" provides some example criteria for the assessment of potential significance of construction noise effects in Annex E of the standard. One of the examples provided is the "ABC" Method, which sets threshold values for construction noise during the day, evening and night-time based on the current noise levels without construction activities. Another method compares the total noise including construction activities with the pre-construction levels. However both approaches have the same lower construction noise limit of 65 dB $L_{Aeq,T}$ during the day between 7am and 7pm.

7.13 The Worcestershire Regulatory Services (WRS) document "Code of Best Practice for Demolition and Construction Sites" September 2020 also provides recommendations for construction noise limits and includes the following text within the "Noise Limits " section:

"*Level limits of 75 dBA for a working day over a 10-hour period are recommended as a general rule in urban areas next to busy roads and in semi rural areas a level of 70dBA. WRS expects noise controls employed to meet or reduce the average noise from the site to this level. In built up environment this is not always attainable, in which case best practicable means must be applied to reduce noise and vibration as much as possible. As a guide, typical daytime levels for noisy temporary works at neighbouring premises usually lie in the range of 70 – 80 dBA*

Noise levels within neighbouring offices or residences during noisy periods must enable workers to carry out conversations, both face-to-face and on the telephone, and allow normal business to be conducted. It is considered that a noise level of 65 dBA is likely to cause annoyance and interference (dependent on the type of noise). Such noise should be restricted to hours outside the normal working day of 09.00 –17.00 hours.

In residential areas, timing of works with noise levels exceeding 65dBA should be discussed and agreed with WRS prior to commencing."

7.14 From BS 5228 and WRS guidelines, it appears that 65 dB $L_{Aeq,T}$ could be considered as a conservative daytime noise limit for construction noise. Note that this is higher than the maximum limit usually considered for mineral sites during the day (55 dB $L_{Aeq,1h}$). The suggested site noise limit for the receptors considered in WBM's quarry noise assessment in 2019 ranged from 45-55 dB $L_{Aeq,1h}$ and the suggested site noise limits for the additional receptors considered in this proof range from 46-54 dB $L_{Aeq,1h}$. As the site noise limit for normal, day to day operations at the quarry is no more than 55 dB $L_{Aeq,1h}$ at any receptor and the site noise calculations show that the limits will be complied with, quarry site noise levels at the nearest receptors to the Lea Castle Village development will be at least 10 dB(A) below the maximum potential noise from the construction activity on the housing developments. Site noise from the quarry is therefore likely to be inaudible compared to construction noise.

7.15 The nearest existing residential areas to the Former Lea Castle Centre and Lea Castle Village sites include:

- Castle Road
- Lea Castle Drive / The Crescent
- Axborough Lane
- Park Gate Road
- Isolated farm dwellings to the south of Stourbridge Road
- Castle Barns – located between 50-175 metres to the west of Wolverhampton Road

7.16 In additional there will be new dwellings within the Former Lea Castle Centre site and the Lea Castle Village site that will be completed as ongoing construction occurs in other parts of the site.

7.17 The quarry noise assessment considered the impact of quarry site noise on Castle Barns. For this receptor, the calculated, worst case site noise level for normal quarry operations is 48 dB $L_{Aeq,1h}$. This noise level is well below the possible construction noise limit of 65 dB $L_{Aeq,T}$. This indicates that the site noise from the quarry would be insignificant compared to the potential construction noise from the housing development. As such, the inclusion of site noise from the quarry would not change the cumulative noise impact at this receptor, as the noise environment would be controlled by construction noise.

7.18 Within this proof, the quarry site noise has also been considered at the nearest proposed dwellings within the Former Lea Castle Centre and the Lea Castle Village sites. For the dwellings in the Former Lea Castle Centre and Lea Castle Village sites, as indicated in Section 7, the calculated worst case site noise levels from normal quarry operations are 37 dB $L_{Aeq,1h}$ and 46 dB $L_{Aeq,1h}$ respectively. These noise levels are also well below the possible construction noise limit of 65 dB $L_{Aeq,T.}$ This indicates that the site noise from the quarry would be insignificant compared to the potential construction noise from the housing development. As above, the inclusion of site noise from the quarry would not change the cumulative noise impact at these receptors, as the noise environment would be controlled by construction noise.

7.19 As indicated above in paragraphs 7.9 and 7.10, construction noise will be variable and temporary, and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. As such it is expected that the construction activity would only be up to the construction noise limit for a short period of time when works were near the particular receptor. Also as indicated above (see paragraphs 5.4) the calculated site noise level due to the quarry is a worst case with simultaneous extraction and infilling operations occurring at the nearest parts of the quarry to the receptor, which would not happen in practice.

7.20 Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any receptor.

7.21 Concern has been raised by WCC about the cumulative impact on Heathfield Knoll School and the nursery. These are located approximately 1 kilometre from the Lea Castle Village site. At this distance, any construction noise from the Lea Castle site is highly unlikely to be significant at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

8 Response to WCC Statement of Case

Impact on an allocated development

8.1 For the noise assessment prepared for the proposed quarry at Lea Castle Farm, WBM included the receptors nearest to the site that were considered to have the potential for being subject to the most noise impact.

8.2 At the time that WBM prepared the noise assessment for the proposed quarry in September 2019, there were two housing developments in the vicinity that had planning approval but these developments were further from the proposed quarry site than the noise sensitive receptors included in the WBM noise assessment. Additional residential properties/developments in the area have subsequently been permitted or have had applications submitted.

8.3 The impact of noise from the proposed quarry on all of these receptors has been considered in this proof. The calculated site noise levels for the reasonable worst case normal operations and short term temporary operations have all met appropriate noise limits based on the advice in PPGM.

8.4 As such, operations at the proposed quarry at Lea Castle Farm would not cause any significant impact at the permitted and proposed residential developments.

Cumulative Impact on Residential Receptors

8.5 With regard to cumulative impact from mineral sites, there are no other mineral sites or operations in the vicinity of the proposed quarry at Lea Castle Farm, so no cumulative assessment of such operations is necessary.

8.6 With regard to road traffic, the additional traffic generated by the allocated developments at the time were presented in the transport assessment prepared for the quarry application.

8.7 The forecast traffic flow from the proposed quarry at Lea Castle Farm was included within the assessment of road traffic noise for Lea Castle Village as set out in the noise assessment report submitted with the application. Therefore the cumulative impact of additional traffic from the proposed quarry has already been considered in the noise assessment for the Lea Castle Farm site.

8.8 The cumulative impact with regard to construction activities on the permitted and proposed housing developments has been considered in general terms. Construction noise is highly variable depending on the particular activity, location of the works, the plant items used, the duration of the works at each location and the mode of operation. The Health Impact Assessment Matrix submitted with the application for the Lea Castle Village site confirmed that any disruption from construction noise will be temporary and will generally be limited to the wider site and surrounding area, and are only likely to be in close proximity to any noise sensitive receptors for relatively short durations. The only appropriate assumption that can be made is that it would be expected that construction noise would meet appropriate noise limits at the nearest noise sensitive receptors (dwellings) to the construction site. From BS 5228 and WRS guidelines, it appears that 65 dB $L_{Aeq,T}$ could be considered as a conservative daytime noise limit for construction noise.

8.9 The receptors that could be exposed to both noise from the quarry site and construction activity from Lea Castle Village have been identified as those at Castle Barns, and the new dwellings within the Former Lea Castle Centre and the Lea Castle Village sites. For all these sites, the calculated worst case site noise levels from normal quarry operations are well below the possible construction noise limit of 65 dB $L_{Aeq,T.}$ As the site noise limit for normal, day to day operations at the quarry is no more than 55 dB $L_{Aeq,1h}$ at any receptor and the site noise calculations show that the limits will be complied with, quarry site noise levels at the nearest receptors to the Lea Castle Village development will be at least 10 dB(A) below the maximum potential noise from the construction activity on the housing developments. Site noise from the quarry is therefore likely to be inaudible compared to construction noise.

8.10 The quarry site noise would be insignificant compared to the potential construction noise from the housing development. The inclusion of site noise from the quarry would not change the cumulative noise impact at these receptors, as the noise environment would be controlled by construction noise.

8.11 As indicated above construction noise will be variable and temporary, and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. As such it is expected that the construction activity would only be up to the construction noise limit for a short period of time when works were near the particular receptor, if at all. Also as indicated above, the calculated site noise level due to the quarry is a worst case with simultaneous extraction and infilling operations occurring at the nearest parts of the quarry to the receptor, which would not happen in practice. Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any residential receptor.

8.12 As such, the consideration of cumulative impact does not alter the outcome of the original noise assessment of the site.

Cumulative Impact on Heathfield Knoll School and Nursery

8.13 Heathfield Knoll School and Nursery are located on Heathfield Lane, approximately 1 kilometre from the Lea Castle Village site. At this distance, any construction noise from the Lea Castle site would be insignificant and is likely to be inaudible at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

Identifiable Noise

8.14 Paragraph 5.8 of the WCC statement of case indicates that occasional identifiable noise being heard from the quarry in combination with other environmental impacts will be demonstrated by them as offering cumulative harm to amenity.

8.15 The guidance documents relating to noise generally require noise not to have unacceptable adverse impacts and to avoid significant adverse impact.

8.16 The Noise Exposure Hierarchy from PPGN (see Table 1 of this document) confirms that the that “No Observed Adverse Effect Level” (NOAEL) correspond to noise being heard but does not cause any change in behaviour etc.

8.17 The “Lowest Observed Adverse Effect Level” (LOAEL) corresponds to noise being heard and causing small changes in behaviour etc.

8.18 The “Significant Observed Adverse Effect Level” (SOAEL) corresponds to noise causing a material change in behaviour.

8.19 Note that where the impact lies between LOAEL and SOAEL, the NPSE advises that this does not mean that such adverse effects cannot occur.

8.20 The fact that sound may occasionally be heard does not result in significant adverse impact; “*occasional identifiable noise being heard*” could occur for both NOAEL and LOAEL scenarios, neither of which result in significant adverse impact.

8.21 It is considered that compliance with the noise limits specified within the PPGM should be sufficient to avoid significant adverse impact. The calculations for the reasonable worst case for normal operations at the quarry demonstrates that these limits are achieved for all receptors, and the inclusion of the cumulative impact of construction noise does not affect this outcome. In addition, the calculated site noise levels for the quarry are a worst case assuming that all plant on site operates simultaneously in the closest likely working areas to each receiver location for both extraction and infilling. In practice, these two activities would be taking place in different phases of the development and the quarry site noise levels would generally be lower the worst case calculated levels.

9 Response to Rule 6 Party Statement of Case

9.1 The Rule 6 party (Stop the Quarry Campaign) have raised concerns about noise but have not provided any details.

9.2 The noise assessment prepared by WBM in September 2019 followed appropriate protocols by determining the baseline noise levels at the nearest receptors using robust methods, including measurements on several days.

9.3 The average background noise levels determined from the baseline noise surveys were used to determine appropriate site noise limits following current Government policy and guidelines, i.e. the advice in PPGM.

9.4 Site noise calculations were undertaken, with WBM providing feedback to NRS on the scheme with regard to the mitigation required to ensure that appropriate noise levels were met for the reasonable worst case scenarios.

9.5 The receptors considered included the nearest residential properties and also the Heathfield Knoll School and Nursery.

9.6 Within this proof I have responded to comments from WCC regarding various issues including the consideration of cumulative impact and shown that this does not affect the outcome of the original noise assessment. This reasoning should also be sufficient to respond to the Rule 6 Party concerns regarding noise.

10 Summary and Conclusions

10.1 This proof of evidence has addressed the reasons for the refusal relating to noise of the planning application for a proposed quarry at land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster, Worcestershire

10.2 Summaries of relevant guidance documents relating to noise and mineral sites are presented in this document. These generally show that the aim for noise is to avoid significant adverse impacts.

10.3 A summary of the baseline noise results, suggested site noise limits and calculated site noise levels from the previous noise assessment undertaken by WBM in 2019 is presented in this document. These include the noise levels at the nearest noise sensitive receptors to the proposed quarry site. As set out in the Statement of Common Ground, WCC confirmed that WRS were satisfied that the previous calculated noise levels in the report prepared by WBM were robust, albeit in isolation.

10.4 In response to comments from WCC, the results of calculations for additional noise sensitive receptors, specifically either permitted or allocated developments, have been included in this proof. The same calculation model as used for the quarry noise assessment undertaken by WBM in 2019 has been used for these additional receptors. All of the calculated site noise levels comply with the suggested site noise limits for normal and temporary quarry operations for these additional receptors. Operations at the proposed quarry at Lea Castle Farm would not cause any significant impact at the permitted and proposed residential developments.

10.5 Cumulative impact has been addressed, with noise from construction activities at the Lea Castle Village site considered to be the most significant noise source associated with other developments that may have an impact on the noise sensitive receptors.

10.6 If construction noise was at the possible maximum limit at a noise sensitive receptor, noise from the quarry would be insignificant compared to the potential construction noise from the housing development. As such, the addition of site noise from the quarry would not change the cumulative noise impact at this receptor, as the noise environment would be controlled by construction noise.

10.7 Construction noise will be variable and temporary, and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. In addition, the calculated site noise levels due to the quarry are worst cases, assuming simultaneous extraction and infilling operations occurring at the nearest parts of the quarry to the receptor, which would not happen in practice. Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any receptor.

10.8 As such, the consideration of cumulative impact does not alter the outcome of the original noise assessment of the site.

10.9 With regard to cumulative impact on Heathfield Knoll School and Nursery, these are located approximately 1 kilometre from the Lea Castle Village site. At this distance, any construction noise from the Lea Castle site would be insignificant and is likely to be inaudible at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

10.10 In summary, I have responded to the various comments on noise including the consideration of cumulative impact and shown that this does not affect the outcome of the original noise assessment.

Rachel Canham BEng MSc CEng FIOA

Appendix A: Glossary of Acoustic Terms

General Noise and Acoustics

The following section describes some of the parameters that are used to quantify noise.

Decibels dB

Noise levels are measured in decibels. The decibel is the logarithmic ratio of the sound pressure to a reference pressure ($2x10^{-5}$ Pascals). The decibel scale gives a reasonable approximation to the human perception of relative loudness. In terms of human hearing, audible sounds range from the threshold of hearing (0 dB) to the threshold of pain (140 dB).

A-weighted Decibels dB(A)

The 'A'-weighting filter emulates human hearing response for low levels of sound. The filter network is incorporated electronically into sound level meters. Sound pressure levels measured using an 'A'-weighting filter have units of dB(A) which is a single figure value to represent the overall noise level for the entire frequency range.

A change of 3 dB(A) is the smallest change in noise level that is perceptible under normal listening conditions. A change of 10 dB(A) corresponds to a doubling or halving of loudness of the sound. The background noise level in a quiet bedroom may be around 20 –30 dB(A); normal speech conversation around 60 dB(A) at 1 m; noise from a very busy road around 70-80 dB(A) at 10m; the level near a pneumatic drill around 100 dB(A).

Equivalent Continuous Sound Pressure Level $L_{Aeq,T}$

The 'A'-weighted equivalent continuous sound pressure level $L_{Aeq,T}$, is a notional steady level which has the same acoustic energy as the actual fluctuating noise over the same time period T. The $L_{Aeq,T}$ unit is dominated by higher noise levels, for example, the $L_{Aeq,T}$ average of two equal time periods at, for example, 70 dB(A) and 50 dB(A) is not 60 dB(A) but 67 dB(A).

The $L_{Aeq,}$ is the chosen unit of BS 7445-1:2003 "Description and Measurement of Environmental noise".

Maximum Sound Pressure Level L_{Amax}

The L_{Amax} value describes the overall maximum 'A'-weighted sound pressure level over the measurement interval. Maximum levels are measured with either a fast or slow time weighted, denoted as $L_{Amax,f}$ or $L_{Amax,s}$ respectively.

Statistical Parameters L_N

In order to cover the time variability aspects, noise can be analysed into various statistical parameters, i.e. the sound level which is exceeded for N% of the time. The most commonly used are the $L_{A10,T}$ and the $L_{A90,T}$.

$L_{A10,T}$ is the 'A'-weighted level exceeded for 10% of the time interval T and is often used to describe road traffic noise. It gives an indication of the upper level of a fluctuating noise signal. For high volumes of continuous traffic, the $L_{A10,T}$ unit is typically 2–3 dB(A) above the $L_{Aeq,T}$ value over the same period.

$L_{A90,T}$ is the 'A'-weighted level exceeded for 90% of the time interval T, and is often used to describe the underlying background noise level.

Appendix 3 – Evidence of Ms K Hawkins

Contaminated Land
Air Quality
Environmental Audit

SMITH GRANT Environmental Consultancy LLP

Partnership No: OC 00776

APP/KEH/2

Town & Country Planning Act 1990

Section 78 Appeals

Proposed Sand and Gravel Quarry, Lea Castle Farm

Evidence of:

Katrina Early Hawkins

Smith Grant LLP

DUST and AIR QUALITY

On behalf of: NRS Aggregates Ltd

Planning Inspectorate Reference: APP/E1855/W/22/3310099

Local Authority Reference: 19/000053/CM

January 2023

LEA CASTLE FARM

PROOF OF EVIDENCE: DUST & AIR QUALITY

For: NRS Aggregates Ltd

Contents

Appendices (APP/KEH/3) (Bound Separately)

1 Introduction

1.1 Experience and Qualifications

1.1.1 My name is Katrina Hawkins. I hold a First Class BSc (Hons) degree in Chemistry from the University of Nottingham and MSc degree in Environmental Pollution Control from the University of Leeds. I am a Chartered Environmentalist, a Member of the Institute of Air Quality Management, a Member of the Institute of Environmental Sciences and a Member of the Institute of Environmental Management and Auditing.

1.1.2 I have been in practice as an environmental consultant for over 25 years specialising in air, land and water pollution. I was employed as a Consultant, and later a Technical Director, by RPS Consultants Ltd for eleven years. I am currently Chairman of Smith Grant LLP (SGP), an environmental consultancy based in Wrexham, North Wales, having been a Partner of SGP since 2005.

1.1.3 SGP specialises in air quality and contaminated land investigation and remediation. I have undertaken an extensive number of dust and air quality assessments for a wide range of developments across the UK. Of particular relevance to this Appeal, I have carried out numerous assessments of potential dust and other aerial emissions from mineral extraction facilities, along with other waste management and industrial activities.

1.1.4 I have acted as an Expert Witness at several public inquiries in relation to dust and air quality matters, including recently on behalf of Hanson UK in relation to a successful Appeal regarding a proposed physical extension and extension of time of sandstone quarry.

1.2 Instructions and Scope of Evidence

1.2.1 My evidence has been prepared in relation to the refusal of planning permission by Worcester County Council (WCC) for the planning application submitted by NRS Aggregate Ltd ('the Appellant') in 2020 for a sand and gravel quarry with progressive restoration on land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster ('the Site').

1.2.2 NRS Aggregates Ltd is appealing the refusal (Appeal ref: APP/E1855/W/22/3310099).

1.2.3 In preparing this evidence I have reviewed the relevant documentation and guidance as set out in the Core Documents and appendices to my Proof. As part of this preparation I visited the site and surrounding area in 2023.

1.2.4 My evidence briefly sets out the background information to the site and proposed operations. My Proof primarily deals with 'dust' (particulate matter) and potential impacts on local amenity and addresses the amenity related reasons for refusal in response to the comments set out in

the WCC Statement of Case (SoC). My Proof also deals with other air quality matters in response to comments raised in the Rule 6 Party SoC and other objectors.

1.2.5 My evidence is structured in the following sections:

- Section 2: outline of relevant legislation, planning policy and guidance;
- Section 3: review of relevant submitted application information, consultee responses, reason for refusal, statement of case and third party objections;
- Section 4: summary description of the current site setting, nearby development and Proposed Development;
- Section 5: appraisal of potential dust impacts on local amenity associated with the Proposed Development;
- Section 6: appraisal of potential impacts on local air quality associated with other aerial emissions;
- Section 7: summary and conclusions.

1.2.6 My evidence should be read in conjunction with the other evidence provided as part of the Appeal, including the Appellant's Statement of Case and in particular the evidence on planning issues prepared by Mr Liam Toland.

1.3 Declaration

1.3.1 The evidence which I have prepared and provide for this Appeal is true to the best of my knowledge and I confirm that the opinions expressed are my true and professional opinions in the matters to which they refer.

2 Legislation, Planning Policy and Relevant Guidance

2.1 Technical Context

2.1.1 Mineral extraction, processing and soil handling operations can give rise to releases of airborne particulate matter (PM) or 'dust'. The nature and quantity of airborne PM released at any one time will depend on a wide variety of factors including, but not limited to, the nature of the material being handled, the quantity of materials being handled, the handling processes incorporated and the weather conditions at the time of handling.

2.1.2 Airborne PM is made up of condensed phase (solid or liquid) particles suspended in the atmosphere and comes from both man-made and natural sources. It ranges in size from a few nanometers to around 100µm and can give rise to both soiling effects through dust deposition and human health effects through suspended particulates.

2.1.3 Dust soiling will arise from the deposition of particulate matter in all size fractions but will be associated mostly with particulate matter greater than 30 µm. Particles below 10 µm (referred to as PM_{10}) correspond to the inhalable fraction of particulate matter and, depending on the nature and concentrations of the particles, can be associated with adverse health impacts. PM_{10} includes both fine (those particles of less than 2.5 µm; referred to as $PM_{2.5}$) and coarse (diameter between 2.5-10µm; $PM_{2.5-10}$) fractions of airborne particulate matter which normally arise from different sources.

2.1.4 Haulage transport to and from the Site and non-road mobile machinery (NRMM) associated with on-site activities will also result in emissions of, primarily, oxides of nitrogen (NO_x; comprises nitrogen dioxide (NO_2) and nitric oxide (NO)) and PM_{10}. NO itself is not considered harmful to human health. However, on release to the atmosphere it usually oxidises rapidly to NO_2 which is associated with adverse effects on human health, causing inflammation of the lungs at high concentrations. Long term exposure to NO_2 can affect lung function and respiratory symptoms.

2.2 Legislation and Guidance

'Disamenity Dust' – Standards and Controls

2.2.1 This Proof is primarily concerned with dust deposition and potential resulting impacts on amenity ('disamenity dust'). Public concerns in relation to dust accumulation and soiling may be related to a range of factors including the nature of a site and locality and baseline levels.

2.2.2 Disamenity dust as such is not regulated as a pollutant under air quality regulations and there are no UK statutory or recommended levels that define the point when deposited dust causes annoyance or disamenity. Instead, a number of "custom and practice" thresholds are typically

referred to in conjunction with other criteria such as the frequency of occurrence. Where possible, site-specific thresholds are derived taking into account baseline values.

2.2.3 Controls of soiling and annoyance impacts are typically achieved through conditions within planning permissions and / or environmental permits requiring the implementation of a dust management plan to prevent amenity impacts.

Local Air Quality

2.2.4 Ambient air quality standards in the UK are established through the combination of transposition of European legislation and additional UK legislation and requirements. Following the departure of the UK from the EU the air pollution standards established under EU requirements remain in place having been enshrined in UK law.

2.2.5 In addition, Part IV of the Environment Act 1995 imposes a duty on local authorities in the UK to review existing and projected air quality in their area. Any location likely to exceed the established UK Air Quality Objectives (AQOs) must be declared an Air Quality Management Area (AQMA) and an Action Plan prepared and implemented, with the aim of achieving the UK AQOs. This process is referred to as Local Air Quality Management (LAQM). The LAQM process is supported by national statutory policy and technical guidance provided by Defra.

2.2.6 The full air quality objectives (AQOs) were provided in Table 2.1 of the EnviroCentre Air Quality Assessment report submitted within the application (CD1.08). The current AQOs of specific relevance to the Site and Proposed Development with regards to protection of human health are summarised in Table 2.1 below.

Table 2.1: Air Quality Objectives, Standards and Target Values

pollutant	AQAL	Averaging period
NO_2	40 µg/m^3	annual mean
	200 µg/m^3	hourly mean, not to be exceeded more than 18 times per annum
PM_{10}	40 µg/m^3	annual mean
	50 µg/m^3	24-hour mean, not to be exceeded more than 35 times per annum
$PM_{2.5}$	20 µg/m^3	annual mean
	target of 15% reduction in concentrations at urban background locations	annual mean
	variable target of up to 20% reduction in concentrations at	annual mean

pollutant	AQAL	Averaging period
	urban background locations	

1: $PM_{2.5}$ –responsibility for meeting the $PM_{2.5}$ target sits with national government.

2.2.7 Ambient air refers to the outdoor air and excludes workplaces where members of the pubic do not have regular access. Advice is given in Defra guidance as to where the UK AQOs should apply as summarised below:

Table 2.2: Summary of where the AQOs should apply

Averaging period	Locations where the objective should apply
Annual mean	All locations where members of the public might be regularly exposed; including facades of residential properties, schools, hospitals, care homes etc
24-hour mean and 8-hr mean	All locations where the annual mean objectives apply together with hotels and gardens of residential properties
1-hour mean	All locations where the annual mean, 24-hour and 8-hour means apply; also kerbside Sites, parts of car parks, bus stations and railway stations which are not fully enclosed and any outdoor locations where members of the public might reasonably be expected to spend 1 hour or longer.
15-min mean	All locations where members of the public may be reasonably exposed for a period of 15 minutes.

Note: the AQOs do not apply at building facades or other places of work where members of the public do not have regular access

2.2.8 The **Environment Act 2021** establishes a legally binding duty on government to bring forward at least two new air quality targets in secondary legislation by 31 October 2022. The proposed target objectives under consideration are aimed at reducing $PM_{2.5}$ ambient concentrations with an annual mean concentration target of 10 µg/m^3 and a population exposure target of 35% reduction in population exposure by 2040. At the time of preparation of this Proof the targets had not been confirmed or the secondary legislation enacted.

2.3 Planning Policy, Best Practice and Guidance

National Planning Policy and Guidance

- National Planning Policy Framework (NPPF): in particular paragraphs 174, 185, 186 (CD11.01; extracts provided in Appendix KEH1);
- Planning Practice Guidance regarding Air Quality (nPPG-AQ) (CD12.27);
- Planning Practice Guidance on Minerals (PPG-M); in particular paragraphs 023-032; (CD12.24, extracts provided in Appendix KEH2);
- National Planning Policy for Waste (NPPW); in particular paragraph 7 and Annex B (CD11.02; extracts provided in Appendix KEH3);

Local Planning Policy

- The Worcestershire Mineral Local Plan 2018-2036 (adopted July 2022): in particular MLP 28: Amenity (paragraphs 6.31 and 6.32) and MLP 29: Air Quality (CD11.03; extracts provided in Appendix KEH4);
- Worcestershire Waste Core Strategy Development Plan Document 2012-2027: in particular Policy WCS 14: Amenity (CD11.04: extracts provided in Appendix KEH5);
- Wyre Forest District Local Plan 2016-2036; in particular Policy SP33 Pollution and Land Instability (CD11.05: extracts provided in Appendix KEH6);

National Best Practice and Guidance

- Institute of Air Quality Management (IAQM): Planning for Air Quality (CD12.26),
- Institute of Air Quality Management (IAQM): Guidance on the Assessment of Mineral Dust Impacts for Planning (CD12.24),
- Institute of Air Quality Management (IAQM): Guidance on the Assessment of Dust from Demolition and Construction (CD12.25),
- Defra, Local Air Quality Management, Policy Guidance LAQM PG(22), August 2022
- Defra, Local Air Quality Management, Technical Guidance, LAQM TG(22), August 2022

2.4 Key Policy Considerations

2.4.1 The NPPF provides some guidance to local authorities on taking dust and air pollution into account in planning policies and decisions.

2.4.2 Paragraph 174 of the Framework states: *'Planning policies and decisions should contribute to and enhance the natural and local environment by […] preventing new and existing development from contributing to, being put at* ***unacceptable*** *risk from, or being adversely affected by,* ***unacceptable*** *levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality.'*

2.4.3 Similarly, the Worcestershire MLP Policies 28 and 29 and Worcestershire WCS Policy 14 include the terms ***unacceptable*** *adverse effects* and ***unacceptable*** *adverse impacts* on amenity.

2.4.4 These policies do not therefore require that all adverse effects be prevented. They seek instead to avoid effects and impacts that are found to be unacceptable. Neither is there any specific policy to the effect that even an unacceptable impact or adverse effect will automatically, or always, lead to the refusal of planning permission.

2.4.5 I have therefore in my evidence considered the risk of the Appeal proposals resulting in *unacceptable* impacts on amenity. In determining what defines an *unacceptable* level or

significant adverse impact I have referred to the NPPF and other relevant guidance as detailed above and discussed in the following sections. An adverse impact on its own does not necessarily result in an unacceptable impact or a significant adverse effect.

2.4.6 Of particular note paragraphs 023-032 of the PPG-M requires the consideration and assessment of the potential impacts of dust emissions from a mineral site and provision of recommended mitigation measures. However, it does not specifically state that an adverse impact would result in refusal.

2.4.7 Although PPG-M sets out outline guidance in relation to the assessment of dust in the context of the planning regime, it does not set out a methodology for determining what forms a significant adverse effect or unacceptable impact. Reference is therefore primarily made to available non-statutory guidance.

2.4.8 It is also noted that the available planning polices refer to impacts on general amenity, the effect of an impact being to result in disamenity. The definition of disamenity as given in the IAQM guidance is:

- Disamenity – can be considered as negative element or elements that detract from the overall character or enjoyment of an area.

3 Procedural Matters

3.1 A full review of the planning application and history of the Site is provided by Mr Liam Toland in his evidence (APP/LT/2) and I refer here only to those matters of relevance to dust and air quality impacts.

3.2 Planning Application Submitted Information

3.2.1 The planning application was supported by an Environmental Statement (ES) prepared by Kedd Ltd (December 2019; CD1.03). The Statement included a section on Air Quality and Dust (Chapter 11) which was supported by a Technical Appendix (Technical Appendix E: CD1.08). The Technical Appendix comprised a Dust Impact Assessment prepared by Vibrock Ltd and a separate Air Quality Assessment prepared by EnviroCentre.

3.2.2 The Vibrock dust assessment considered potential dust sources associated with the proposals and best practice measures were recommended in order to minimise any such disturbance at sensitive receptors. It was concluded any dust occurrence event would be limited and of short duration and minimised by the implementation of the dust control measures.

3.2.3 The assessment also considered potential impacts due to PM_{10} and $PM_{2.5}$ and concluded that air quality objectives (AQOs) would not be exceeded.

3.2.4 The separate EnviroCentre Air Quality Assessment considered the emissions generated by traffic movements that would be generated by the quarry and potential impacts on local ambient air quality. It was concluded the additional traffic would not result in significant changes in relevant pollutant concentrations at sensitive receptors.

3.2.5 The ES also included an Heath Impact Assessment Chapter (Chapter 20) and Cumulative Impact Assessment (Chapter 22).

3.2.6 The original ES was supplemented by three Regulation 25 responses. None of these included any further dust and / or air quality assessment in relation to amenity and human health impacts. The amended Non-Technical Summary ES submitted in July 2021 (CD5.16) did however include for a programme of dust monitoring.

3.3 Statutory Consultee Responses

Worcester Regulatory Services, Environmental Health and Licencing (provided shared services including for Wyre Forest District Council)

3.3.1 No technical objections to the proposals were raised by the Environmental Health & Licencing Department with regards to either dust or air quality. There were no requests for further

information or assessment in relation to dust and amenity or local air quality and public health in response to the original submission (CD2.15, CD2.38 and CD2.39).

3.3.2 With regards to dust the Senior Technical Officer stated: *'WRS are satisfied with the methodology and conclusions of the dust impact assessment. With this in mind we would therefore recommend that the prevention strategies should be made conditional should the application be granted planning consent.'* The Officer also set out additional recommended mitigation measures to those set out in the Dust Impact Assessment.

3.3.3 Separately, with regards to the assessment of traffic impacts on local air quality, the Senior Technical Officer concluded: *'Results of appropriate modelling undertaken are presented. No adverse comments'.*

3.3.4 Subsequent responses were provided by the Officers following review of third-party objections and the Appellant's Regulation 25 submissions. These confirmed the WRS comments remained as previously with regards to air quality and dust with no objections or requests for further information in relation to dust and amenity or local air quality and public health during the determination of the application (CD4.06, CD4.21, CD4.27, CD4.28, CD5.03, CD5.16, CD6.30, CD6.42, CD6.44 and CD7.03).

Wyre Forest District Council (WFDC)

3.3.5 WFDC objected to the Proposed Development, including on the following grounds:

'The proposal will directly adversely impact on existing and future residential dwellings both in close proximity and further from the site; impacting on their amenity, through adverse noise, dust, and vibrations. It will also impact on the wider community reducing the ability to enjoy recreational routes and outdoor space.'

3.3.6 The response does not make any reference to the responses provided by WRS detailed above in paragraphs 3.3.1 and 3.3.4.

Environment Agency (EA)

3.3.7 The EA noted that a relevant Environmental Permit would be required to undertake the infilling operations as part of the restoration proposals (CD2.34). This would likely include requirements to undertake monitoring to assess any particular impacts on the environmental and local receptors. Dust was noted as a particular issue that the operator must be aware of during the landfilling phase. No objections to the Proposed Development were raised with regards to dust or air quality.

Kidderminster Town Council

3.3.8 Kidderminster Town Council objected to the Proposed Development, including on the following grounds:

ii) the development will have a detrimental impact on the quality of life especially local housing and schools;

iii) the committee are concerned that the development will pose a threat to the air quality in the neighbourhood.

3.3.9 No further information is provided in relation to these objections.

3.4 Other Parties Responses

3.4.1 Other responses were received from neighbour notification, advertisement and / or other representations objecting with references to dust arising from the proposals and impacts on local air quality, including concerns regarding silicosis.

3.5 Officer's Reports to Planning Committee

3.5.1 The May 2022 Officer's Report (CD10.01) notes that the main issues in the determination of the application included residential amenity where this includes dust, air quality and health impacts.

3.5.2 The Report includes a detailed consideration of the information presented in relation to dust and air quality matters in paragraphs 542-571. In paragraph 571 it states: *'Based on the above advise the Head of Planning and Transport considers that subject to the imposition of appropriate conditions, the proposed development would not have an unacceptable dust and air quality impact'.*

3.5.3 The Officer's Report concluded '*Based on the advice of Worcestershire Regulatory Services, Environment Agency, and the County Public Health Practitioner, the Head of Planning and Transport Planning considers that, subject to the imposition of appropriate conditions that there would be no adverse* ***air pollution****, noise,* ***dust,*** *vibration, odour or lighting impacts on residential amenity or that of human health, in accordance with Policy WCS 14 of the adopted Worcestershire Waste Core Strategy, and Policies SP.16 and SP.33 of the adopted Wyre Forest District Local Plan.'*

3.5.4 The Officer's Report included several recommended conditions. These included conditions 46-47 in relation to dust which required the pre-commencement submission and approval of a Dust Management Plan (DMP), to include dust monitoring.

3.6 Reason for Refusal

3.6.1 The planning application was refused by the Council's Planning Committee. The formal notice of the decision to refuse planning permission (CD10.02) includes several Reasons for Refusal, including:

Reason 3: *Unacceptable impact on residential amenity and local schools*
Reason 8: *Unacceptable general impact on environmental and wildlife; and*
Reason 9: *Unacceptable impact on health of local population*

3.6.2 The information section sets out the location of several residential and commercial properties and schools to the site and states: '*Due to the close proximity of the proposal to these receptors, it is considered it would have an unacceptable impact on residential amenity and local schools particularly in terms of dust emissions.*'

3.7 Statements of Case

WCC Statement of Case

3.7.1 Paragraphs 3.7 and 3.9 of the WCC SoC advise that the Council will not be defending the reason for refusal 8 ('*Unacceptable general impact on environmental and wildlife') or* reason for refusal 9 ('*unacceptable impact on health of the local population*'). Officers concluded that, subject to the implementation of appropriate planning conditions, the proposal would not have a detrimental impact on the environment and wildlife or the health of the local population.

3.7.2 In relation to reason for refusal 3 the WCC SoC focuses on potential cumulative amenity impacts with the (now) permitted and allocated development at Lea Castle Village. Paragraph 5.9 states: *'The Council will demonstrate in evidence therefore that the existing review of air quality and dust impact therefore has failed to satisfactorily consider either the impact on an allocated development, secured within the Wyre Forest District Local Plan, or the combined impact of such developments being located within 250m of each other on the area as a whole.'*

3.7.3 Paragraph 5.20 then goes on to state: '*The Council will demonstrate in evidence that no assessment is provided to determine whether the mitigation plan is "strong enough" when a cumulative impact of the development in combination with Lea Castle Village is assessed. The appellant relies solely on the conclusion that the developments can work in harmony, as the minerals works are temporary.'*

Rule 6 Party - Stop The Quarry Action Group Statement of Case (STQC SoC)

3.7.4 The STQC SoC states STQC agrees with all the reasons for refusal, including those the Council will not be defending. Key comments noted of relevance to dust and air quality matters are noted below:

- Reason for Refusal 3 – unacceptable impact on residential amenity and local schools: : the SoC states the applicant has failed to properly assess the impacts on residential amenity and raises concerns regarding harmful effects of silica sand;

- Reason for Refusal 7 – unacceptable impact on highways: highlights presence of AQMA on the Kidderminster Ring Road;
- Reason for Refusal 9 – unacceptable impact on health of local population:

3.8 Third Party Representations

3.8.1 In addition to the reason for refusal and the issues raised by WCC and the Rule 6 Party in their Statements of Case a large number of third-party representations have been received. These include references to dust and air quality. These issues have therefore been dealt within my Proof.

3.9 Summary of Procedural Matters

3.9.1 In summary, the planning application was supported by an Environmental Statement which considered Air Quality and Dust impacts in detail.

3.9.2 The WRS Environmental Health Deportment did not raise any objections to the proposed development or request further information or assessment in relation to either dust or air quality.

3.9.3 At no stage during the determination process was there any request from WCC or WRS for additional assessment of potential impacts associated with dust and / or air quality in relation to the proposals. No suggestion was made that in-combination effects (i.e cumulative effects) had not been adequately addressed. The Head of Strategic Infrastructure and Economy recommended approval subject to several conditions including in relation to dust and HGV movements.

3.9.4 No specific details were provided in the Decision Notice on the reasons for refusal. However, in light of the information provided in the WCC SoC, I have focused on potential cumulative impacts of dust on amenity of the Proposed Development in conjunction with other existing and approved development, including Lea Castle Village, both on existing receptors and on potential future receptors following completion of committed development. In light of comments raised by the Rule 6 Party and other parties I have also briefly considered the potential impacts of the Appeal Proposals on local air quality.

4 Current Site Setting and Proposed Development

4.1 Full details of the existing site, site setting and proposed operations, including proposed phasing, are provided in the evidence presented by Mr Liam Toland (APP/LT/2), the Planning Statement and the ES. Only key summary details of relevance to dust and air quality are provided below.

4.2 Site Location and Existing Surroundings

4.2.1 The application boundary is provided in plans included in the Planning Application Statement (CD1.17-1.32; in particular plan KD.LCF.014). The Site currently comprises open agricultural land within the historic parkland of Lea Castle. The site is located within the vicinity of several residential and commercial properties, with the closest to the application boundary including South Lodges and Broom Cottage on the southern boundary, 1-12 Castle Barns on the north-eastern boundary, The Bungalow on the northern boundary and properties off Brown Westhead Park close to the western boundary. It is noted that South Lodge is under the control of the applicant. Other properties within 250m of the application Site boundary include Keepers Cottage and Upper Lea Castle Cottages to the north and further dwellings to the south of Wolverley Road (B4189).

4.2.2 Two schools are located within 250m of the application boundary, Heathfield Knoll School and First Day Steps Nursery, both to the south of Wolveley Road.

4.2.3 Several leisure facilities lie within 250m of the application boundary including Lea Castle Equestrian Centre to the north, beyond which lies Keepers Cottage Strong Farm 1988 Equestrian Centre, along with an associated camping area, and Brown Westhead Park & Playing Fields to the west. Wolverley Camping and Caravaning Club site lies beyond the Brown Westhead Park & Playing Fields to the west.

4.2.4 The proposed extraction area does not extend to the limit of the application boundary as shown in plan KD.LCF.013A (CD5.03), providing buffer areas to the nearby properties as discussed above. The closest residential properties to the proposed extraction and processing areas are The Bungalow lying 70m north of the extraction area and South Lodges and Broom Cottage, lying about 60m south of the extraction boundary. The accessible grounds of the two schools to the south lie 80m at their nearest point to the proposed extraction area.

4.2.5 Ground within the Site rises to a high point of 84m aod falling to the valleys of the River Stour to the west and the A449, Wolverhampton Road to the east.

4.2.6 The site is crossed by two public footpaths / bridleways with a third running close to the western site boundary.

4.3 Potential Future Surroundings

4.3.1 Chapter 22 of the original ES identified two committed or proposed developments in the area which were considered to potentially lead cumulatively to adverse / unacceptable impacts upon local receptors.

4.3.2 An additional three planning applications have been submitted since preparation of the original ES for proposed developments in the area and which are considered to require further consideration.

4.3.3 These are:

Table 4.1: Committed / Proposed Developments in the Locality

Planning ref:	Details	Location & Comments
Consented Developments at time of original ES		
17/0205/OUTL	Lea Castle Farm Hospital (Lea Castle Village) – mixed-use development including for up to 600 dwellings	extends to about 450m to east of proposed mineral extraction area; construction currently on-going with earthworks having commenced in all phases application supported by an Air Quality Assessment; decision notice includes requirement for a Construction Environmental Management Plan (CEMP) which was to include for measures for dust suppression
18/0163/FULL	Land off Stourbridge Road – residential development for up to 91 dwellings	about 660m to south-east of proposed mineral extraction area; development now complete
Applications submitted post preparation of the original ES (now consented)		
20/0217/FULL	Land at Brown Westhead Park, Wolverley Road – residential development for 4 dwellings	extends to within 85m to west of proposed mineral extraction area; lies between existing properties on Brown Westhead Park permission granted 23.07.20; construction completed and properties occupied
Applications submitted post preparation of the original ES (awaiting determination)		
22/0404/OUT	Lea Castle Farm Hospital – further 800 dwellings	includes area to the west of the housing associated with 17/0205/OUT; extends to within 230m to the west of the mineral extraction area application supported by an Air Quality Assessment
22/0235/PIP	Wolverley Lodge – erection of 4	extends to within 340m to northwest of Site

Planning ref:	Details	Location & Comments
	residential dwellings	boundary; located beyond Brown Westhead Park and Playing Fields

4.3.4 The locations of these proposed developments in relation to the Site are shown in Figure 1 of the evidence of Mr Neil Furber.

4.3.5 Of these the most relevant are those associated with Lea Castle Village.

4.4 Development Description

4.4.1 Proposals are for the extraction of sand and gravel / solid sand over a 10-year period, with progressive restoration with imported inert material. Final restoration would take place across a further 1 year.

4.4.2 Access to the Site would be provided directly off Wolverley Road (B4189) via a newly constructed and purpose-built access point. This is to be located in the south-east of the Site between South Lodges and Broom Cottage.

4.4.3 Key elements of the proposals are:

- works to be progressed in a phased manner; with Initial Works being undertaken in the central area to create a suitable platform for processing;
- works to then progress across Phases 1 to 5 from the northwest corner in an anti-clockwise manner;
- soil and overburden removal to be carried out in annual blocks, up to 8 weeks duration;
- extraction to be carried out using an hydraulic excavator and loading shovel;
- as-dug material to be transported via internal haulage and conveyor from Phases 1, 2 and 3 to the processing area; material from Phases 4 and 5 to be transported to the processing area by internal haulage;
- siting of processing plant within the initial void at a floor base of c.63.5m aod compared to surrounding ground level of c.70m aod; ground to immediate east rises to c.80m aod;
- processing to involve crushing, screening and sorting; understood that investigations have determined there is only a small proportion of oversized (large gravel boulders) within the deposit and therefore a large crusher section is not required within the plant;
- all stripped soil and overburden to be retained on site for use in restoration; all bunds to be retained for over 3 months or over winter to be grass seeded;
- provision of soil screening bunds to northern, western and southern edges of plant site prior to the commencement of extraction (referred to as Bunds 1-4); to be retained throughout the development until final restoration;
- planting of woodland block in northeast corner with enhancement to existing hedgerows;

- creation of temporary soil storage bunds as works progress across Phases 1-5;
- progressive restoration with imported material and retained soils;
- removal of processing plant and final restoration.

4.4.4 Extraction rates are predicted at 300,000 tonnes per annum (tpa) with an import for restoration of 60,000 m^3 per annum. The sizes and duration of the phases are detailed below:

Table x: Summary of Phases

Phase	Area (ha)	Soils / Overburden (m3)	Mineral tonnages	Anticipated Extraction Duration (years)
Initial works	3.3	45,800	450,000	2.5
Phase 1	4.65	57,400	225,000	0.75
Phase 2	3.78	37,000	300,000	1
Phase 3	4.45	54,500	375,000	1.25
Phase 4	5.97	62,400	975,000	3.25
Phase 5	3.83	52,700	675,000	2.25
Total	**25.98**	**309,800**	**3,000,000**	**10**

4.4.5 A short tunnel conveyor (60m length) would be used to transport material from Phases 1-3 in the western area underneath the access road that leads to the Bungalow and Lea Castle Equestrian Centre to the processing area. As-dug material would be transported to the feed hopper from the working faces by dumper.

4.4.6 All imported material for restoration would comprise inert waste materials, primarily clays and sands with reclaimed construction materials. The imported material would be tipped straight into the void minimising the requirements for any stockpiling of material and hence the likelihood of such material becoming dry and subject to wind blow. Following placement within the void the materials will be compacted, further reducing the potential for dust emissions generation.

4.5 Regulatory Controls

4.5.1 The Officer's Report recommended several conditions to be included in any planning permission that may be granted. Those provided specifically in relation to dust are summarised below:

- **Condition 46** requires the submission and approval of a Dust Management Plan. The plan should be based on the submitted Dust Impact Assessment and set out and require compliance with good practice mitigation measures; the plan should be reviewed every 6 months and updated accordingly in light of good practice and developing evidence; the plan should include dust monitoring;

- **Condition 47** sets out several measures that shall be undertaken to suppress dust emissions on the site. These include provision of a water bowser, use of a road sweeper, minimisation of drop heights and establishment of a site maximum speed limit.

4.5.2 In addition, several other recommended conditions are of relevance to dust and air quality matters, including:

- **Condition 19** requires submission and approval of an HGV Management Plan; this should include measures to ensure that vehicles leaving the site do not deposit mud on the highway; details of HGV routing and requirement that HGV accessing the site only travel left out and right in;
- **Condition 20** requires provision of full details of the proposed wheel wash to the LPA and implementation and operation in accordance with the approved details;
- **Condition 21** requires all HGVs entering the public highway from the site to be cleaned in the wheel wash;
- **Condition 22** requires all loaded vehicles leaving the site to be sheeted
- **Condition 23** requires all HGVs leaving the site to turn left along Wolverley Road to Wolverhampton Road;
- **Condition 45** requires internal roads to be maintained such that surfaces are free of potholes and other defects;
- **Condition 50** requires heights of stockpiles of sand and gravel and inert restoration materials to not exceed 5m;
- **Condition 71** requires that there shall be no crushing, screening, sorting or processing of any waste material on the site.

4.5.3 In addition, the acceptance and handling of waste material for restoration would be controlled under an Environmental Permit to be issued by the Environment Agency under the requirements of the Environmental Permitting (England and Wales) Regulations 2016.

4.5.4 The Permit would require the management and operation of the permitted operations and directly associated activities using Best Available Techniques (BAT) to prevent, or where that is not practicable, reduce emissions. The Permit would include several conditions and would be expected to include standard boundary conditions in relation to dust and other aerial emissions.

4.5.5 Activities not controlled under the Permit, and hence solely controlled under the planning permission with regards to dust, would be the wider quarrying activities comprising soil stripping, overburden removal, extraction and material handling and processing and internal haulage not directly associated with material handling of waste materials.

5 Dust Impact Assessment

5.1 Introduction

5.1.1 Chapter 11 of the ES included a summary of the detailed dust assessment undertaken by Vibrock and included as Appendix E to the ES. I have reviewed the assessment and its findings focusing on the overall scope, methodology, results and conclusions. The assessment considered the potential sources of dust that may arise from the proposals, location and orientation to nearby receptors and potential for adverse impacts at those receptors.

5.1.2 The assessment was comprehensive and followed the approach of the illustrative example procedure for a dust assessment provided in the IAQM guidance on mineral dust and planning, with reference to other applicable guidance. To inform the cumulative dust assessment I have initially summarised key salient points of the original dust assessment below. For detail reference should be made to Chapter 11 of the ES and Technical Appendix E.

5.1.3 Where additional information is now available to that presented in the ES, this is highlighted.

5.2 Baseline Conditions

Baseline Deposition Dust Conditions

5.2.1 The site is located on the outskirts of the urban area of Kidderminster in a mixed-use locality, including residential, leisure and agricultural activities. The existing dust deposition levels are likely to be mainly influenced by agricultural activities. The Dust Assessment included reference to some monitored dust deposition data for several locations on the Site perimeter for the period 24.07-18-15.08.18. The data reports the measured dust deposition levels to be in the range 34-63 mg/m^2/day. Full details of the monitoring exercise and locations are not provided. However, these results are consistent with expectations for the locality, guidance providing a median (50th percentile) level of 56 mg/m^2/day for 'residential areas and town outskirts'.

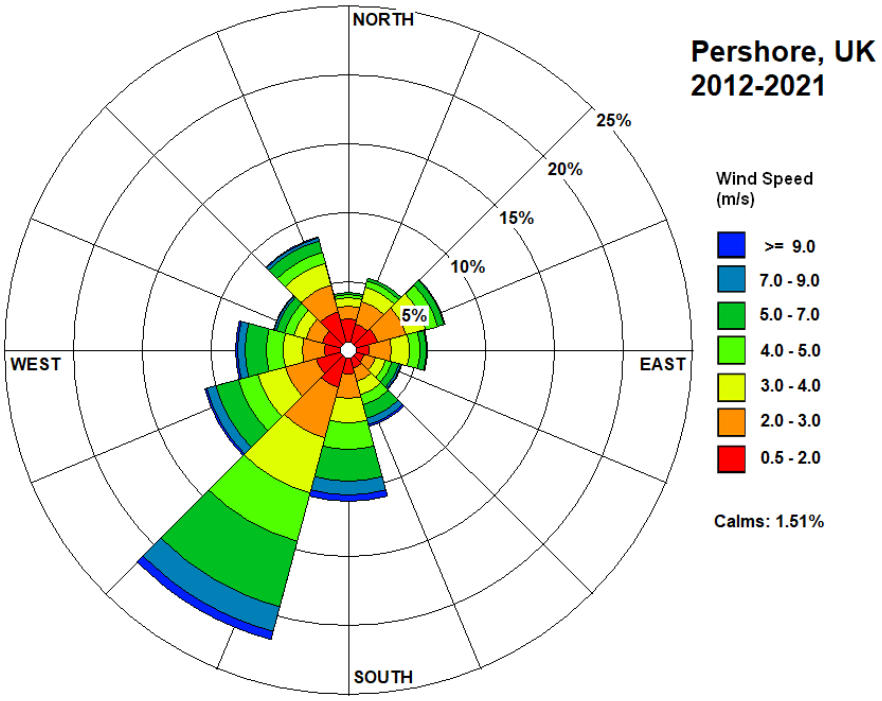
Meteorological Conditions

5.2.2 The prevailing wind direction has been determined through a review of meteorological data provided by the Met Office for Pershore, Worcestershire. The monitoring location is about 30km to the south-southeast of the Site. The station is located at an elevation of about 17m aod. Although differences will exist in conditions locally the data for Pershore is expected to be broadly representative of that for the Site. The use of this data is considered appropriate for the dust assessment.

5.2.3 The windrose for the period 2012-2021 is reproduced below; this depicts average wind speeds and directions over the relevant total monitoring period

5.2.4 The prevailing wind direction is south-westerly (i.e. from the south-west), consistent with typical UK conditions.

Figure 5.1: Pershore Windrose 2012 to 2021



5.3 Disamenity Dust Impact Assessment

5.3.1 The assessment of disamenity impacts follows the Source-Pathway-Receptor concept and considers the potential strength of the identified dust *sources* and the potential *pathway* from these sources to nearby identified *receptors*.

5.3.2 The assessment presented in the ES considered the potential *residual source emissions* taking into account the controls that are to be incorporated into the design of the Proposed Development, as recommended in the IAQM guidance (CD12.24). The assessment therefore takes into account both the in-built design measures, such as the siting of the processing plant at depth within the void, as well as the proposed outline management and control measures that would be applied, and be subject to continual improvements as deemed necessary.

5.3.3 The assessment considers all primary sources associated with the proposed mineral extraction and subsequent restoration. This includes soil stripping, storage and restoration; mineral extraction; loading and tipping; internal haulage; crushing and screening; aggregates stocking; on-road transport; and wind-blow across exposed surfaces and stockpiles.

Potential Sources

5.3.4 Key points in relation to potential dust generating sources are:

Table 5.1: Sources of Dust

Source of Dust	Dust Source Potential	Comment
soil stripping / bund formation	*small / medium* - of short duration; soil stripping to be limited to area required for subsequent 12 months extraction	soils must be handled in an unsaturated condition, but maybe damped down to minimise dust; subsequent stabilising by grass seeding of bunds; risks similar to those of typical agricultural practices
extraction	*small / medium* – to be undertaken using a low-energy extraction method via a single excavator; decrease as excavations deepen and moisture content of mineral increases	typically contained within the void except near-surface workings; fresh mineral will typically be in a damp condition and will be unlikely to give rise to substantial dust; although drying out of quarry surfaces could occur rapidly in warm dry conditions
loading / tipping	*small* – as-dug material of high moisture content; use of one loading shovel; can increase in prolonged dry conditions if stockpiles dry out	short-lived and typically contained within the void; as-dug materials loaded at working face; sales materials loaded within void in processing area; minimisation of drop-heights
internal haulage	*small* – use of up to 2 dump trucks to transport as-dug material to processing area	damping down of internal haul road surfaces may be need under prolonged dry conditions; establishment of internal speed limit (15 mph)
mineral processing	*small* - located with base of quarry in processing area; static plant; wet process; larger crusher not required due to expected size of excavated material	cleaning of plant and conditioning of stockpiles with water sprays may be required in damp conditions
external road transport	*small* - wheel wash to be provided of all HGVs departing the Site; graded road of about 90m length from wheel wash to public highway; ~10-20 departing HGVs per day	internal road surfaces to be maintained in good running order; off-site road surfaces to be swept as necessary
restoration – inert waste material	*medium* – material placed within void to minimise stockpiles; compacted after placement	additional controls under Environmental Permit
restoration - soils	*small* – of short duration in final restoration phase; to be seeded shortly after placement	
wind-blown dust (from stripped / bare surfaces)	*small* - source potential increase during periods of prolonged dry weather; managed through limiting area of soil stripping on annual basis	surfaces may be damped down or have stabilisers applied if necessary
wind-blown dust	*small* - stockpiles located within base	

Source of Dust	Dust Source Potential	Comment
(from stockpiles / bunds)	of quarry; bunds will be stabilised by grass seeding	

Potential Pathways

5.3.5 As detailed in the IAQM guidance the larger dust particles (>30 µm) will mainly deposit within 100m of a source whereas intermediate sized particles (10-30 µm) may travel up to 400m, i.e. those larger and intermediate particles that may result in disamenity impacts. It is commonly accepted however that the greatest impacts will be within 100m of a source (Box 2 page 12 IAQM guidance on mineral dust, CD12.24). The levels of particles in the air available for deposition at further distances will have been reduced through deposition and dispersion.

5.3.6 The IAQM guidance is therefore clear that adverse dust impacts from sand and gravel sites are unlikely beyond 250m as measured from the nearest dust generating activities. Accordingly, the guidance advises that where receptors are not located within 250m of a sand and gravel site it can normally be assumed that a detailed disamenity dust assessment would not be required.

5.3.7 The consideration of the potential *pathway* of any disamenity dust to receptors within the screening distance takes into account the distance from a source to a receptor, local topography and any screening that may be present to impede that pathway along with the prevailing wind direction to determine the likelihood of dust being propagated towards that receptor.

5.3.8 Rainfall acts as a natural suppressant and will suppress wind-blown dust emissions for some time and it is widely accepted that rainfall less than 0.2mm per day may present high-risk conditions. The assessment therefore also takes into account the likelihood of dry days (that is those days when <0.2 mm of rainfall is recorded over a 24 hour period).

5.3.9 Winds with speeds to more than 5 m/s are more likely to give rise to wind-blown dust from exposed surfaces. Equally however higher windspeeds increase dispersion.

5.3.10 These site-specific factors are used to define the *pathway effectiveness* from a source to a receptor. This may range from *ineffective* (i.e. there is a low likelihood of any dust that may be generated being propagated towards a receptor; for example a receptor may be located distant from a source and frequently upwind of that source) to *highly effective* (i.e. there is a high likelihood of any dust that may be generated being propagated towards a receptor; for example a receptor may be located close to a source and frequently downwind of that source).

5.3.11 The assessment methodology is consistent with that advised in the IAQM guidance (Appendix 3 CD12.24).

Potential Receptors

5.3.12 Receptors considered in the original Dust Impact Assessment comprise those nearest the Site boundary, including the Bungalow, South Lodges, Broom Cottage, properties on Brown Westhead Park and Castle Barns and Heathfield Knoll School and First Day Steps Nursery. Other receptors such as Lea Castle Equestrian Centre, Keepers Cottage and Strong Farm are effectively subsumed by these closer receptors.

5.3.13 Additional properties have also now been constructed on Brown Westhead Park to the west of the Site under a planning permission granted in 2020 as detailed in Table 4.1.

5.3.14 The gardens of the nearest properties to the proposed extraction areas (the Bungalow, Broom Cottage and South Lodges) extend to within 65m, 35m and 50m of the boundary at the closest points respectively. The fields used for paddocks at Lea Castle Equestrian Centre extend within about 20m of the extraction boundary.

5.3.15 As detailed above in Section 5.2 the prevailing wind direction is from the south-west. The properties on Brown Westhead Park, South Lodges, Broom Cottages and Heathfield Knoll School and First Schools therefore all lie upwind of the prevailing wind direction across the Site. Castle Barns lie downwind with the Bungalow lying downwind of Phases 1–3.

Assessment

5.3.16 The greatest risk of any dust deposition at the properties nearest the extraction boundary would be during the initial soil stripping and other near-surface activities, including restoration, in the nearest phases to the properties. The initial works to create the platform for processing and subsequent infilling for restoration would comprise a short-period of soil stripping (expected up to an 8-week period) with creation of landscape screening bunds. The potential for dust generation from this activity would be as associated with typical construction earthworks and agricultural activities and can be readily mitigated using standard industry techniques. The screening bunds are to be seeded and thereafter would provide screening to the subsequent mineral extraction and then processing activities.

5.3.17 As extraction within this Initial Works area deepens the risk of off-site dispersion and resulting adverse impacts due to dust diminishes. Processing, stockpiling and handling of material for off-site despatch will occur within the void, serving to reduce the risk of adverse impacts at receptors.

5.3.18 During the restoration phase in the Initial Works area the risk of adverse dust impacts at nearby properties would increase again as placement approaches near-surface levels. This would again be managed through the employment of standard industry mitigation measures, with the screening soil bunds only being removed towards the end of the restoration.

5.3.19 Similarly for other phases the greatest risk of any dust deposition at the nearest properties would be during the initial soil stripping and other near-surface activities, including restoration, in the nearest phases. Again, as extraction deepens the potential risks diminish.

5.3.20 As noted above the Bungalow and properties at Castle Barns lie downwind of the prevailing wind direction across the Site. The assessment concluded, taking account of the designed-in mitigation measures, there is a risk of *moderate adverse* effects, at most, arising from fugitive dust at the Bungalow. As the screening bunds establish and quarrying activities move away from the boundary and deepen within the quarry potential impacts would fall to *slight* to *negligible* at this property.

5.3.21 This is also of relevance with respect to the properties at Castle Barns, where the assessment concludes *slight adverse* effects at most. Potential impacts and resulting effects will reduce to *negligible* throughout the works that are further away from these properties.

5.3.22 The assessment concluded *negligible* effects at all other considered receptors, including South Lodges, Broom Cottage, Heathfield Knoll School and First Steps, Brown Westhead Park and the Bungalow.

5.3.23 The Site access point lies between South Lodges and Broom Cottage and would form about 95m of unpaved roadway to / from the processing / despatch area. The road would be graded and maintained in good running condition and be subject to the Site speed limit. All HGVs leaving the Site would pass through a wheel wash prior to exit onto this access road. This services to minimise the likelihood of track out onto the access road and the public highway which can be subsequently raised to create dust.

5.3.24 The newly constructed properties on Brown Westhead Park are slightly closer to the proposed extraction boundary than the existing properties. However, they are well screened by existing trees and topography and are located upwind of the Site. Resulting effects are *negligible* as for the existing properties.

5.4 Mitigation Measures

5.4.1 As noted above and within the Vibrock Dust Assessment the quarry would be operated in accordance with the dust suppression measures detailed within the assessment report and in Appendix 3 of that report. The recommended conditions by WCC that would be imposed on the grant of any planning permission included conditions mandating that the Site be operated in accordance with a Dust Management Plan (DMP).

5.4.2 In addition, the importation, handling and placement of inert waste materials for the restoration would be regulated by the EA under an Environmental Permit. This would require the operation in accordance with BAT for these activities and would include standard permit ‘boundary’ conditions in relation to dust and other emissions.

5.4.3 The DMP would draw together the management, control and monitoring measures specifically in relation to fugitive dust. Such mitigation measures include, but are not limited to, the following:

- regular visual inspections of the site and local road network;
- regular maintenance of haul roads;
- maintenance of Site speed limit;
- use of a road sweeper as and when required;
- minimisation of drop heights during loading / unloading of dump trucks;
- provision of wheelwash for all departing HGVs;
- use of dust suppression as and when required;
- mobile plant exhausts and colling fans to point away from ground;
- maintenance of complaints log and response procedure.

5.4.4 In addition, the draft Condition 46 in relation to the DMP included reference to 'dust monitoring'. This typically includes for the carrying out of visual inspections of any dust generating activities and site boundaries. It is additionally proposed that physical dust deposition monitoring is included as noted in the amended ES NTS submitted in 2021. The detailed scope of the dust monitoring would be subject to agreement with the MPA.

5.4.5 A standard requirement is that additional measures are implemented immediately in the event of adverse conditions developing which cause, or risk causing, visible dust escaping the site. These could include the modification, reduction or suspension of any activities causing the dust until such time as the situation has been resolved. This may require for example moving site activities to a suitable location until suitable weather conditions return or additional use of water suppression.

5.4.6 The draft Condition includes for a formal review of the DMP every 6 months from the date of planning permission. A regular review process enables the updating and / or amending of the Plan in agreement between the operator and MPA in response to any changes in circumstances potentially requiring additional air quality / dust mitigation measures to ensure it remains robust.

5.4.7 The above is consistent with the essence of guidance in relation to mineral dust, which is that dust emissions can be controlled by effective site management. As stated in Section 7.1 of the IAQM guidance (CD12.24) dust mitigation is a dynamic process involving the review and regulation of the mitigation applied as per the conditions on site.

5.5 Cumulative Disamenity Assessment

Lea Castle Village (referred to as the 'core' site)

5.5.1 As noted above construction is currently on-going of the consented part of the Lea Castle Village to the east of the Site. Aerial imagery indicates the demolition and initial earthworks to create the development platform for this development are now primarily complete and that built development has commenced across all phases.

5.5.2 It appears construction may have commenced in 2019. On the basis of an original projected timescale of 10 years to complete the development there could therefore be an overlap of several years when mineral extraction could be on-going at the Site and construction works completing at the core Lea Castle Village development.

5.5.3 The core Lea Castle Village site lies over 250m from the proposed development, i.e. beyond the standard screening distance for considering disamenity dust effects from sand and gravel quarries (see paragraph 5.3.4 above). Hence, the risk of adverse dust effects from the Site on the new receptors being introduced as part of the core Lea Castle Village site is *negligible*.

5.5.4 Any existing receptors present within the relevant disamenity dust assessment screening distances for both sites could however be subject to cumulative impacts and effects. The IAQM guidance on construction dust (CD12.25; Box 1) provides a screening distance of 350m from the boundary of construction sites. Beyond this it can be concluded any risk is *negligible*. This distance is deliberately conservative because, as for mineral sites, the airborne concentrations and rate of deposition of dust declines exponentially with distance from the dust generating source with larger particles typically being deposited within 100m. The IAQM recommended construction assessment process takes this into account. For example, where there are >100 residential properties between 100m-350m of a construction site then the area sensitivity may be deemed 'medium'. Where there are less than 100 properties located between these distances then the sensitivity is deemed 'low'.

5.5.5 The planning permission for the core Lea Castle Village development requires the submission and agreement of a Construction Environmental Management Plan (CEMP) prior to commencement. This was to include measures for dust suppression. As such the risk of potential fugitive dust being generated during the construction phases should be managed and controlled in accordance with standard industry methods, reducing the potential for adverse effects locally from these activities.

5.5.6 However, there are no relevant sensitive human receptors that lie within 250m of the Site and within 350m of the core Lea Castle Village development as shown in Figure 1 in Appendix KEH7. Hence, the potential for cumulative adverse effects on any receptors should these developments be on-going simultaneously is considered *negligible.*

5.5.7 The access / egress points to the two developments are about 800m apart on different public highways. In light of this, and the various mitigation measures to be employed by the two developments for departing HGVs, cumulative effects due to track-out would be *negligible*.

Lea Castle Village (referred to as the 'wider' site)

5.5.8 An application for development of a subsequent phase of the Lea Castle Village development is currently under determination. If granted the western most part of this development would extend to within 240m of the mineral extraction area of the Site as shown in Figure 2 in Appendix KEH7. Hence this could introduce sensitive relevant receptors to just within the screening distance, with the majority located beyond this distance. This would only occur if Phases 4 and 5 were ongoing when the western part of the Castle Lea Village development was completed and occupied.

5.5.9 If this did occur winds could blow across Phases 4 and 5 up to 11% of dry days *(moderately frequently),* if the phases were operational concurrently (i.e. extraction in Phase 5 occurring whilst infilling in Phase 4). The properties would however be located at least 240m away. With reference to the assessment methodology employed by Vibrock the resulting pathway effectiveness (as defined above in paragraph 5.3.10; i.e. a measure of likelihood of dust being propagated towards that receptor) would be *ineffective (*receptors 'distant' from the extraction area). For a medium residual source emission the resulting dust impact risk would be *negligible*, with resulting *negligible* effects. As discussed in paragraphs 5.3.14 and 5.3.16, risks would further reduce as activities deepen within the void.

5.5.10 Hence in the event of works occurring simultaneously in Phases 4 and 5 of the proposed development when the western most part of the wider Castle Lea Village development is built and occupied, the resulting effects of any dust generated by the proposals on those properties would be *negligible.*

5.5.11 Hence, the Proposed Development is not predicted to have any significant adverse effects on the proposed wider Lea Castle Village development.

5.5.12 There would also be relevant sensitive receptors that would lie within the relevant screening distances of both the Site and the wider Castle Village development and which may therefore be subject to cumulative impacts. The receptors requiring consideration with regards to potential cumulative impacts would be Four Winds and Castle Barns as shown in Figure 2 of Appendix KEH7. The risk of any such cumulative impacts would only occur if extraction and restoration activities occurred in Phases 4 and 5 of the proposed development at the same time as construction activities in the western area of the wider Lea Castle Village development.

5.5.13 The Air Quality Assessment provided with the wider Castle Lea Village planning application included a construction dust assessment and provided recommended mitigation measures to be

implemented during the construction phase to ensure construction dust effects were negligible. It is presumed such measures would be agreed as part of Reserved Matters if permission is granted such as within a CEMP, as for the core Castle Lea Village development.

5.5.14 Both the Four Winds and Castle Barns receptors are upwind of the prevailing wind direction across the Lea Castle Village development.

Castle Barns

5.5.15 Castle Barns comprises several properties and hence spans a distance of 160m. Gardens of the westernmost properties extend to <100m of the proposed extraction boundary and 170m of wider Lea Castle Village boundary. Gardens of easternmost properties extend to 100-200m of the proposed extraction boundary and <100m of wider Lea Castle Village boundary.

5.5.16 Winds may blow from the south-south-west through to the west-south-west across Phases 4 and 5 of the Site, representing about 8.7% of dry windy days (*moderately frequent*). Winds may blow from the east through to the south-south-east across the wider Lea Castle Village development, representing a further 2.7% of dry windy days, hence providing a total of 11.4% *(moderately frequent)* from the combined developments.

5.5.17 Distances from each development area to the receptors at Castle Barns vary although the resulting pathway is *moderately effective* at all locations. With *medium* residual source emissions this results in a *low* dust impact risk and *slight adverse* effect.

5.5.18 The potential contribution of dust impacts that may arise during the wider Lea Castle Village development are not therefore considered to result in significant adverse effects at Castle Barns. In addition, as noted above, such cumulative impacts may only occur if development occurs on the eastern part of the quarry at the same time at the western part of the wider Castle Lea Village development.

Four Winds

5.5.19 The gardens of Four Winds extend to within 85m of the proposed extraction area and 305m of the boundary of the wider Castle Lea Village development. With reference to the outline masterplan for that application however the built development of the wider Castle Lea Village does not extend within 350m of Four Winds. The property therefore lies at the screening distance and is located upwind of this development.

5.5.20 The potential contribution of dust impacts that may arise if the western part of the wider Lea Castle Village development occurs simultaneously with the proposed development are not therefore considered to result in significant adverse effects at Four Winds.

Other Sites

5.5.21 Of the other sites considered with regards to potential cumulative impacts the following observations can be made:

- Land at Stourbridge Road:
  - lies 660m distant and hence beyond the screening distance of potential disamenity dust impacts from the proposed development;
  - development is now complete and hence no cumulative impacts on other receptors should both developments occur simultaneously;
- , Land at Brown Woodhead Park:
  - is of a small nature (4 dwellings) and is nearing completion; and hence no cumulative impacts on other receptors as both developments would not occur simultaneously;
  - is represented by existing properties on Brown Woodhead Park and hence additional assessment of risks of proposed development to these new properties not required;
- Land at Wolverley Lodge:
  - lies 340m distant and hence beyond the screening distance of potential disamenity dust impacts from the proposed development;
  - is of a small nature (4 dwellings) and hence no cumulative impact assessment deemed necessary of risks on other receptors.

5.5.22 No further consideration of these is deemed necessary with regards to potential cumulative impacts in relation to disamenity dust.

6 Other Air Quality Matters

6.1 Fine Particulate Matter Assessment

Baseline PM_{10} / $PM_{2.5}$ Concentrations

6.1.1 WFDC has not identified any areas of concern in relation to PM_{10} or $PM_{2.5}$ in the air quality annual status reports (ASRs) submitted under its LAQM duties. Neither PM_{10} nor $PM_{2.5}$ are monitored within the WFDC area

6.1.2 The PM_{10} and $PM_{2.5}$ concentrations provided in the Vibrock Dust Impact Assessment report were therefore based on predicted background concentrations provided by Defra. This data is published by Defra in the form of predicted background concentration maps for 1km x 1km grid squares across the UK. These are updated on a regular basis due to updates in background data such as vehicle emission factors, vehicle fleet composition, age and distribution, existing local sources and monitoring data.

6.1.3 The latest maps were issued in 2020 and the predicted data is based on 2018 ambient monitoring and meteorological data. This therefore updates the data presented in the Dust Assessment report. The current available data for 2023 and 2028 for the grid squares in which the Site and surroundings are located are summarised below.

Table 6.1: Predicted Background Air Quality Data – Particulate Matter

Grid Square	Location	Annual Mean Concentrations (µg/m^3)			
		2023		2028	
		PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
383500 279500	Site (west), Brown Westhead Park	11.18	7.28	10.87	7.04
383500 278500	Site (south-west), South Lodges, Heathfield Knoll School & First Steps	11.13	7.39	10.82	7.14
384500 279500	Site (east), The Bungalow, Lea Castle Barns	11.41	7.51	11.10	7.26
384500 278500	Site (south-east), Broom Cottage	12.01	7.76	11.70	7.81
AQAL		**40**	**25**	**40**	**25**

6.1.4 The maximum average background PM_{10} and $PM_{2.5}$ concentrations for the grid squares in which the Site is located are predicted to be substantially below the relevant objectives, at 30% and 31% of the objectives in 2023. These are predicted to fall slightly over time.

6.1.5 The data are effectively an average concentration across each 1km square. Pollutant concentrations may therefore be higher than those provided above at any individual receptor close to any particular source such as the nearby A449.

6.1.6 It is noted that it is stated in paragraph 7.22 of the STQC SoC that '*it is also more significant given the already high levels of air particulates to the northern end of Kidderminster*'. The source of this statement is unknown. The annual air quality status reports (ASRs) produced by WFDC under its requirement under the LAQM (latest readily available report dated July 2022 for monitoring data up until end 2021) do not make any reference to any such high levels or raise any concerns with regards to particulate levels within the WFDC area.

Assessment

6.1.7 As noted above the fugitive dust (particulate matter) that could be generated by the proposed operations will include a proportion of 'fine particulate matter' (as PM_{10} and $PM_{2.5}$). The original Dust Impact Assessment carried out by Vibrock accordingly also included a PM_{10} Assessment. This assessment assumed an additional load of 1 µg/m^3 PM_{10} attributable (as an annual mean) to the proposed operations in the existing background level (CD1.08). With the combination of 1 µg/m^3 to the background concentrations the resulting total PM_{10} and $PM_{2.5}$ annual average concentrations would remain well below the relevant AQOs.

6.1.8 A 1km screening distance is applied to determine the need for a PM_{10} assessment to be consistent with the PPG. However as noted by the IAQM guidance on mineral dust (CD12.24, section 2.3) there does not appear to be any firm evidence that such a distance is applicable to all mineral developments, and particularly those with less dust generating activities than open cast coal mines on which the original research was based. Although these smaller particles may remain suspended in the air and travel for longer distances than larger particles, they will also be subject to dispersion thereby reducing concentrations away from a source. The greatest impacts therefore would also be within 100m of a source as for disamenity dust (Box 2 of the IAQM Guidance, CD 12.24).

6.1.9 The IAQM Guidance on mineral dust (CD12.24; section 5.2) advises that where the long-term background PM_{10} concentration is less than 17 µg/m^3 there is little risk that additional contributions from a mineral site would lead to an exceedance of the annual mean air quality objective. The guidance advises that if this is the case then no further consideration is typically required. This is conservative as this guidance is provided for all mineral sites.

6.1.10 As noted above the Defra data predicts annual mean background concentrations of 11.18-12.01 µg/m^3 in the locality, i.e. well below the recommended screening value of 17 µg/m^3. On this basis no further consideration of potential PM_{10} impacts from Proposed Development would be required.

6.1.11 Annual mean PM_{10} concentrations may be higher than the general predicted background levels at some receptors, however there are none that are in close proximity to any particular sources that could lead to substantially higher levels. The closest properties to the Site, including those at Castle Barns for example, are set back at least 40m from the roadside of the A449. Others

are closer to Wolverley Road, but with measured traffic flows of <10,000 AADT (9,840 AADT provided for 2020 baseline) these would not be expected to be subject to high levels of PM_{10}.

6.1.12 The proposed dust mitigation measures would also serve to reduce potential PM_{10} emissions. Hence, taking into account the nature of the sand and gravel quarry, the proposed mitigation measures, location and orientation of receptors and background air quality, as discussed above with regards to disamenity dust, no further assessment is deemed necessary. Contributions of PM_{10} from any fugitive dust from the proposed development to local air quality at relevant receptors is not therefore considered to result in significant adverse effects.

Cumulative Assessment

6.1.13 Cumulative contributions to PM_{10} concentrations from the proposals and other developments in the area may also require consideration as discussed above in relation to disamenity dust. Fine particulate matter may travel longer distances than larger dust particles. However, as for the larger particles the concentrations reduce rapidly from source through deposition and dispersion. As for the proposed quarry, standard dust mitigation measures that would be implemented at the Lea Castle Village development would serve to reduce potential PM_{10} emissions.

6.1.14 The IAQM guidance on construction dust (CD12.25) provides a screening distance of 350m from the source. The guidance however further defines an area being of *low* sensitivity where the background PM_{10} concentration is less than 24 $\mu g/m^3$, except where there are >100 high sensitive receptors within 20m of the source when it would be defined as of *medium* sensitivity. With reference paragraphs the background PM_{10} concentrations are well below all screening thresholds and there are no sensitive receptors that lie within close proximity, and downwind of, of both the Proposed Development and the wider or core Lea Castle Village developments.

6.1.15 In the worst-case scenario of extraction and restoration taking place in Phases 4 and 5 of the proposed development simultaneously with construction of the western part of the wider Lea Castle Village, PM_{10} concentrations are predicted to remain well below the relevant AQOs.

6.2 Vehicle Emissions Assessment

Baseline Conditions

6.2.1 The HGV movements to and from the Proposed Development would result in NO_x / NO_2 and PM_{10} emissions and hence potential adverse impacts on local air quality. A detailed assessment of such emissions and potential impacts was accordingly submitted with the ES (CD1.08). This included atmospheric dispersion modelling of vehicle exhaust emissions and assessment of potential impacts at receptors near the affected local road network.

6.2.2 The EnviroCentre Air Quality Assessment made reference to Defra predicted background NO_2 concentrations along with some ambient monitoring carried out by WFDC.

6.2.3 The current available data for 2023 and 2028 for the grid squares in which the Site and surroundings are located are summarised below.

Table 6.2: Predicted Background Air Quality Data – NO_2

Grid Square	Location	Annual Mean Concentrations ($\mu g/m^3$)	
		2023	2028
383500 279500	Site (west), Brown Westhead Park	7.02	6.30
383500 278500	Site (south-west), South Lodges, Heathfield Knoll School & First Steps	7.33	6.51
384500 279500	Site (east), The Bungalow, Lea Castle Barns	7.51	6.64
384500 278500	Site (south-east), Broom Cottage	7.80	6.94
AQAL		**40**	**40**

6.2.4 The maximum average background NO_2 concentrations for the grid squares in which the Site is located are predicted to be substantially below the relevant objectives, at 20% of the objective in 2023 and falling to 17% by 2028.

6.2.5 As noted in section 2.2.4 of the Air Quality Assessment WFDC has declared an AQMA within Kidderminster which lies about 1.7km to the south of the Site (AQMA plan provided in Appendix KEH8). The area of this AQMA has not been revised since the assessment. It is understood however that a new road layout is being / has been provided in this area which is expected to substantially improve air quality (CD4.28).

6.2.6 The assessment also referred to monitoring data for a diffusion tube located on Stourbridge Road (SBR121). The latest WFDC ASR also reports monitoring data for several additional diffusion tubes located along Chester Road North to the south of the site (see plans in Appendix KEH9). Monitoring at these commenced in 2019 and the available results are summarised below.

Table 6.2: Diffusion Tube Monitoring Data

Ref	Location	Grid ref	Type	NO_2 Annual Mean Concentrations ($\mu g/m^3$)				
				2017	2018	2019	2020[1]	2021[1]
SBR121	121 Stourbridge Road	383905 277857	roadside	29.0	32.2	27.0	22.6	25.8
334CRN[2]	334 Chester Road North	383965 277823	roadside			29.0	26.4	29.3
294CRN[2]	294 Chester Road North	384054 277444	roadside			20.0	16.3	18.0
383CRN[2]	383 Chester Road North	384175 277275	roadside			18.3	15.7	16.4
239CRN[2]	239 Chester Road North	384221 276911	roadside			19.2	16.2	17.0

Ref	Location	Grid ref	Type	NO_2 Annual Mean Concentrations ($\mu g/m^3$)				
				2017	2018	2019	2020[1]	2021[1]
CSLOC	Coventry Street	384726 276909	roadside	32.1	32.5	27.6	23.4	24.2

1: Monitoring data for 2020 and 2021 will be influenced by the impacts of the Covid-19 pandemic on local traffic movements

2: Monitoring commenced in 2019

6.2.7 The annual mean NO_2 concentrations at all locations were lower in 2020 than 2019, and for most remained lower in 2021. This is consistent with expectations due to reduced traffic movements in 2020 and 2021 due to the impacts of the Covid-19 pandemic. However, irrespective of this the results for 2019 for all locations were well below the AQO of 40 $\mu g/m^3$ (<75% of the AQO).

Assessment

6.2.8 The proposals would result in an additional 116 HGV movements (58 in / 58 put) per day (as Annual Average Daily Traffic (AADT)) and 17 LGV movements per day (as AADT). Allowing for 25% of sand and gravel exports being transported on a back-haul basis, the number of HGV movements would reduce to 96 per day.

6.2.9 All movements to / from the Site would be via Wolverley Road to the east of the access road.

6.2.10 It is predicted that 60% of the development HGVs would travel to / from the north and 40% to / from the south. Of those travelling to / from the north these would be distributed via the A449 Wolverhampton Road (north of Wolverley Road) and Park Gate Road / A451 Stourbridge Road.

6.2.11 Of those HGVs travelling to / from the south 60% are predicted to travel via the A449 Chester Road North / to the east of Kidderminster and 40% via the A451 Stourbridge Road / Ring Road close to the Kidderminster town centre. The potential distribution of HGVs is shown in plan 3 in Appendix KEH9.

6.2.12 IAQM guidance on air quality and planning (CD12.26; box 6.2) provides screening criteria for additional traffic movements to be introduced as part of a development above which an air quality assessment is advised. Such as an assessment may take the form of a simple or detailed assessment depending on factors such as the sensitivity of the area, proximity of sensitive receptors to the affected road network etc. The screening criteria for HGVs are +100 AADT where distant from an AQMA and +25 AADT where within or close to an AQMA.

6.2.13 The greatest number of HGVs would be experienced along the access road and Wolverley Road to / from the junction with the A449. Thereafter the movements would be dispersed as shown on Figure 6.1 At 116 HGV AADT movements along Wolverley Road are above the screening criteria of +100 HGV AADT provided in IAQM guidance as indicating a need for an air

quality assessment. However, as noted above this assumes no back-haul; if a prortion of back haul is assumed then flows are below the screening criteria.

6.2.14 The only receptors along this stretch of road would be Broom Cottage and Four Winds. The façade of Broom Cottage is within 2.5m of the roadside, whereas that of Four Winds is set-back at least 23m. Greatest potential impacts may therefore be expected at Broom Cottage, as pollutant concentrations fall rapidly from source, including road traffic. Traffic flows along this road for 2018 - 2020 are given as <10,000 AADT. Given the nature of this stretch of road (no traffic lights, bus stops or other sources of congestion and idling traffic) and based on air quality monitoring data for roads in Kidderminster itself as discussed above, pollutant concentrations would be expected to be well below the relevant AQOs (<75%).

6.2.15 The additional contributions of NO_2 and PM_{10} to façade concentrations from the 116 HGV AADT would not be expected to result in significant adverse impacts at these properties, as determined through the Air Quality Assessment carried out for the planning application.

6.2.16 HGV movements would be dispersed on the wider road network with all movements beyond the Wolverley Road / A449 junction being less than the IAQM screening criteria for where outside an AQMA.

6.2.17 It is predicted that 19 HGVs (as AADT) would travel along Stourbridge Road to / from Kidderminster itself, and hence potentially through the Kidderminster AQMA (assuming no back-haul). This is also below the more stringent screening value of +25 HGV AADT that is provided in IAQM guidance as indicating a need for an air quality assessment.

6.2.18 Potential quarry related LDV movements are well below the relevant IAQM screening criteria of +500 LDV AADT where distant from an AQMA and +100 LDV AADT where within or close to an AQMA.

6.2.19 The EnviroCentre Air Quality Assessment comprised detailed assessment of the potential impacts of the emissions generated by these vehicle movements on the local road network. The assessment concluded no significant changes NO_2, PM_{10} or $PM_{2.5}$ concentrations at any modelled sensitive receptors due to the development. All resulting ambient air concentrations are predicted to remain well below the relevant AQOs.

6.2.20 On this basis it is considered that the contribution of the proposed quarry related HGV exhaust emissions to the local air quality would **not be significant**, as determined through the submitted air quality assessment.

Cumulative Assessment

6.2.21 With reference to Section 4.3 above the only other developments of relevance to a cumulative assessment for vehicle emissions are those of the Castle Lea Village. The planning application

for the recent wider Castle Lea Village application included an air quality assessment which included atmospheric dispersion modelling of vehicle emissions and assessment of changes in NO_2, PM_{10} and $PM_{2.5}$ concentrations at a large number of receptor points (CD12.28). This modelled traffic flows on the wider local road work for 2018 as 'baseline' and for 2024 'with and without' development, 2024 being the project first year of occupation. The assessment states that the traffic data includes potential traffic flows from the Lea Castle Quarry.

6.2.22 Proposals are for the wider Lea Castle Village development to be provided with 6 access points. This would serve to distribute the development-related traffic movements extensively on the wider local road network, with reported resulting decrease on some roads and higher on others. The modelled predicted changes in annual mean NO_2 concentrations were 0% of the AQO at all modelled receptor points other than at one location. This was located on Birmingham Road within Kidderminster where a 1% change was predicted. With reference to the IAQM guidance (CD12.26) all predicted impacts due to the wider Lea Castle Village development were therefore predicted to be *negligible*. Predicted changes in both annual mean PM_{10} and $PM_{2.5}$ concentration were 0% at all receptors, with resulting *negligible* impacts.

6.2.23 The assessment predicted all resulting concentrations of NO_2, PM_{10} and $PM_{2.5}$ to be comfortably below the relevant AQOs at all modelled receptor locations.

6.2.24 Taking this into account, and the comments above in paragraphs 6.08-6.20 in relation to the proposed quarry development, cumulative impacts due to traffic emission and impacts on local air quality are not predicted to be significant.

6.3 Other Matters – Respirable Crystalline Silica (RCS)

6.3.1 In paragraphs 7.22 and 7.24 the Rule 6 Party SoC makes reference to potential harmful effects of silica sand and silicosis. I have therefore provided further information here in relation to the proposed development.

6.3.2 Silica is a naturally occurring substance found in varying amounts in most rocks, sand and clay and in building products such as bricks and mortars. The mechanical breaking of silica containing materials, particularly cutting, sanding carving etc can give rise to fine dust which can include respirable crystalline silica (RCS). Long-term inhalation of RCS may give rise to silicosis, although extremely high exposures can also give rise to acute silicosis more quickly. Risks of exposure to RCS is greatest for construction workers working on materials such as concrete, mortar and sandstone that contain higher quantities of silica.

6.3.3 Quarrying activities may also give rise to RCS and guidance is provided by the Health and Safety Executive (HSE) to the quarrying industry in relation to silica and Control of Substances Hazardous to Health Regulations 2002 (COSHH). Health and safety controls are employed to manage the potential exposure of employees to RCS, as are employed for all activities that may

pose harm to workers and / or exposure to potentially harmful materials. This includes a series of advice sheets produced by the HSE covering aspects such as excavating and haulage, crushing and dry screening detailing recommended measures to reduce workers exposure to RCS. A workplace exposure limit (WEL) is established of 0.1 mg/m^3 (8-hour time weighted average) for RCS, along with other WELs that are provided for respirable dust and total inhalable dust.

6.3.4 The greatest risks for exposure would be to workers in enclosed environments where RCS may be generated through energetic processing such as crushing and other mechanical activities, and to those undertaking cleaning and maintenance activities in such environments.

6.3.5 The HSE advice notes in relation to crushing and dry screening advise that where possible these operations should be located outdoors away from buildings. Advice in relation to excavating and haulage is provided to operators in control cabs along with general advice to use standard dust suppression measures. Respiratory protective equipment (RPE) is generally not normally required other than for certain internal activities where the risk of exposure is greater.

6.3.6 There is no UK established or recommended ambient air quality standard for RCS. HSE advice is that *'No cases of silicosis have been documented among members of the general public in Great Britain, indicating that environmental exposures to silica dust are not sufficiently high to cause this occupational disease'* (extract from HSE website provided in Appendix KEH10).

6.3.7 There is no recommended methodology for the assessment for potential RCS emissions to ambient air or potential off-site impacts. However, RCS will potentially form a proportion of any PM_{10} generated. All the outlined mitigation measures described above in section 5.4, and that would be implemented through a DMP, would serve to reduce dust, PM_{10} and also any potential RSC emissions.

6.3.8 The proposals are for sand and gravel / sand extraction with no blasting or other significant breaking activities. Processing will involve the use of water and is understood to not require the use of large crushing plant. The implementation of dust suppression measures in accordance with a DMP would all serve to minimise the risk of any RCS emissions from the site. There is no evidence therefore that the proposed development would pose a potential significant risk to the local population due to RCS.

7 Overall Conclusions

7.1 WCC has advised it is defending Reason for Refusal 3 with regards to *unacceptable impact on residential amenity and local schools*. In WCCs SoC it is stated that there has not been satisfactory consideration of cumulative impacts with other developments in the area and makes reference to dust and air quality.

7.2 In preparing this proof I have therefore reviewed the original Dust Impact Assessment prepared by Vibrock and submitted with the planning application, and other relevant information and consultee responses.

7.3 The Vibrock Dust Impact Assessment considered the potential impacts from fugitive dust on local receptors, both with regards to dis-amenity dust and PM_{10}. The assessment also included recommended outline mitigation measures that would be incorporated within any future consented operations. The assessment was reviewed by WRS who did not request any further information or raise any objections to the proposals with regards to dust and air quality.

7.4 I have carried out further assessment of the potential cumulative impacts of the proposed developments with other consented / allocated development in the area where the consent/allocation post-dates the publication of the original ES. This specifically considers the core and wider Lea Castle Village development to the east. I have considered both the potential impacts of any dust generated by the proposed development on any new sensitive receptors to be introduced by the Lea Castle Village, and the potential cumulative impacts on any existing receptors that may be affected by these developments should they occur concurrently.

7.5 In undertaking this assessment I have also considered the proposed mitigation measures and the recommended planning condition that would require the operation of the facility in accordance with an agreed DMP, as in standard best practice, and other relevant proposed conditions. Further regulatory control would be provided through the Environmental Permit that would be applicable to the material import aspects of the development.

7.6 I conclude that the Appeal proposals would not result in significant adverse impacts or unacceptable impacts on local amenity either alone or in-combination with the Lea Castle Village development.

7.7 Other potential aerial emissions associated with the proposals such as on-road vehicle exhaust emissions are also not predicted to result in significant adverse impacts.

7.8 Overall, from my review of the information and results of the assessment, I conclude that, with the incorporation of appropriate mitigation as already employed at the site, the proposed

development complies with the relevant national and local planning policies in relation to dust and air quality.

APPENDIX KEH1

Extract of National Planning Policy Framework (NPPF)

Ministry of Housing,
Communities &
Local Government

National Planning Policy Framework

15. Conserving and enhancing the natural environment

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework[58]; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

176. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks

[58] Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

Ground conditions and pollution

183. Planning policies and decisions should ensure that:

a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and

c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.

184. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.

185. Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life[65];

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and

c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

186. Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when

[65] See Explanatory Note to the *Noise Policy Statement for England* (Department for Environment, Food & Rural Affairs, 2010).

determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

187. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

188. The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities.

APPENDIX KEH2

Extract of PPG-M

GOV.UK

Guidance

Minerals

Guidance on the planning for mineral extraction in plan making and the application process.

From: Department for Levelling Up, Housing and Communities (/government/organisations/department-for-levelling-up-housing-and-communities) and Ministry of Housing, Communities & Local Government (/government/organisations/ministry-of-housing-communities-and-local-government)

Published 17 October 2014

Contents

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Related content

Strategic environmental assessment and sustainability appraisal (/guidance/strategic-environmental-assessment-and-sustainability-appraisal)

Dust emissions

How should mineral operators seek to minimise dust emissions?

Where dust emissions are likely to arise, mineral operators are expected to prepare a dust assessment study, which should be undertaken by a competent person/organisation with acknowledged experience of undertaking this type of work.

There are 5 key stages to a dust assessment study:

- establish baseline conditions of the existing dust climate around the site of the proposed operations;
- identify site activities that could lead to dust emission without mitigation;
- identify site parameters which may increase potential impacts from dust;
- recommend mitigation measures, including modification of site design
- make proposals to monitor and report dust emissions to ensure compliance with appropriate environmental standards and to enable an effective response to complaints.

Paragraph: 023 Reference ID: 27-023-20140306

Revision date: 06 03 2014

Stages of the dust assessment study

Paragraph: 024 Reference ID: 27-024-20140306

Revision date: 06 03 2014

Stage 1: Establish existing baseline conditions

Existing ambient conditions should be recorded over a period sufficient to identify seasonal variations in the range of existing conditions which naturally exist (ideally by a dust-monitoring programme). The assessment should take into

account the principal existing dust sources (other than the site) such as air pollution from urban and industrial areas, existing mineral operations, agricultural activities and construction activities.

The location of residential areas, schools and other dust-sensitive land uses should be identified in relation to the site, as well as proposed or likely sources of dust emission from within the site.

The assessment should explain how topography may affect the emission and dispersal of site dust, particularly the influence of areas of woodland, downwind or adjacent to the site boundary, and of valley or hill formations in altering local wind patterns.

The assessment should explain how climate is likely to influence patterns of dispersal by analysing data from the UK Meteorological Office or other recognised agencies on wind conditions, local rainfall and ground moisture conditions.

Paragraph: 025 Reference ID: 27-025-20140306

Revision date: 06 03 2014

Stage 2: Identify site activities that could lead to dust emission without mitigation

Potential dust sources should be identified and their potential to emit dust assessed with respect to the duration of the activity or the potential of dust to become airborne.

Paragraph: 026 Reference ID: 27-026-20140306

Revision date: 06 03 2014

Stage 3: Identify site parameters which may increase potential impacts from dust

This brings together information collected in Stages 1 and 2 with information on sensitive land uses around the site in order to understand how these uses could be affected by dust. Computer modelling techniques can be used to understand how dust could disperse from a site. Alternatively,

a more qualitative approach, relying on professional judgement, could be used to bring together the data collected in Stages 1 and 2.

Paragraph: 027 Reference ID: 27-027-20140306

Revision date: 06 03 2014

Stage 4: Recommend mitigation measures and site design modifications

Measures to control dust should be specified and described in terms of their potential to reduce dust and consequent impacts.

Paragraph: 028 Reference ID: 27-028-20140306

Revision date: 06 03 2014

What facilities are sensitive or less sensitive to dust emissions?

The relationship of the activities within mineral workings to surrounding land uses will vary from site to site. Since the nature of those land uses varies, so will their sensitivity to dust. Some environmental features may also be sensitive to dust.

Paragraph: 029 Reference ID: 27-029-20140306

Revision date: 06 03 2014

What additional dust control measures might be necessary?

Additional measures to control fine particulates (PM10) to address any impacts of dust might be necessary if, within a site, the actual source of emission (eg the haul roads, crushers, stockpiles etc) is in close proximity to any residential property or other sensitive use. Operators should follow the assessment framework for considering the impacts of PM10 from a proposed site.

Paragraph: 030 Reference ID: 27-030-20140306

Revision date: 06 03 2014

When should this additional assessment be carried out?

The actual cut-off point for consideration of additional assessments for individual proposals will vary according to local circumstances (such as the topography, the nature of the landscape, the respective location of the site and the nearest residential property or other sensitive use in relation to the prevailing wind direction and visibility).

Paragraph: 031 Reference ID: 27-031-20140306

Revision date: 06 03 2014

Site Assessment flow chart

Site assessment flow chart (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/579117/minerals1_033.pdf)

PDF, 200 KB, 1 page

This file may not be suitable for users of assistive technology.

- Request an accessible format.

Paragraph: 032 Reference ID: 27-032-20140306

Revision date: 06 03 2014

APPENDIX KEH3

Extract of National Planning Policy for Waste (NPPW)

Department for Communities and Local Government

National Planning Policy for Waste

October 2014
Department for Communities and Local Government

planning authorities, should first look for suitable sites and areas outside the Green Belt for waste management facilities that, if located in the Green Belt, would be inappropriate development. Local planning authorities should recognise the particular locational needs of some types of waste management facilities when preparing their Local Plan.

Determining planning applications

7. When determining waste planning applications, waste planning authorities should:

- only expect applicants to demonstrate the quantitative or market need for new or enhanced waste management facilities where proposals are not consistent with an up-to-date Local Plan. In such cases, waste planning authorities should consider the extent to which the capacity of existing operational facilities would satisfy any identified need;

- recognise that proposals for waste management facilities such as incinerators that cut across up-to-date Local Plans reflecting the vision and aspiration of local communities can give rise to justifiable frustration, and expect applicants to demonstrate that waste disposal facilities not in line with the Local Plan, will not undermine the objectives of the Local Plan through prejudicing movement up the waste hierarchy;

- consider the likely impact on the local environment and on amenity against the criteria set out in Appendix B and the locational implications of any advice on health from the relevant health bodies**.** Waste planning authorities should avoid carrying out their own detailed assessment of epidemiological and other health studies;

- ensure that waste management facilities in themselves are well-designed, so that they contribute positively to the character and quality of the area in which they are located;

- concern themselves with implementing the planning strategy in the Local Plan and not with the control of processes which are a matter for the pollution control authorities. Waste planning authorities should work on the assumption that the relevant pollution control regime will be properly applied and enforced;

- ensure that land raising or landfill sites are restored to beneficial after uses at the earliest opportunity and to high environmental standards through the application of appropriate conditions where necessary.

8. When determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that:

- the likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;

Appendix B

Locational Criteria

In testing the suitability of sites and areas in the preparation of Local Plans and in determining planning applications, waste planning authorities should consider the factors below. They should also bear in mind the envisaged waste management facility in terms of type and scale.

a. protection of water quality and resources and flood risk management
Considerations will include the proximity of vulnerable surface and groundwater or aquifers. For landfill or land-raising, geological conditions and the behaviour of surface water and groundwater should be assessed both for the site under consideration and the surrounding area. The suitability of locations subject to flooding, with consequent issues relating to the management of potential risk posed to water quality from waste contamination, will also need particular care.

b. land instability
Locations, and/or the environs of locations, that are liable to be affected by land instability, will not normally be suitable for waste management facilities.

c. landscape and visual impacts
Considerations will include (i) the potential for design-led solutions to produce acceptable development which respects landscape character; (ii) the need to protect landscapes or designated areas of national importance (National Parks, the Broads, Areas of Outstanding Natural Beauty and Heritage Coasts) (iii) localised height restrictions.

d. nature conservation
Considerations will include any adverse effect on a site of international importance for nature conservation (Special Protection Areas, Special Areas of Conservation and RAMSAR Sites), a site with a nationally recognised designation (Sites of Special Scientific Interest, National Nature Reserves), Nature Improvement Areas and ecological networks and protected species.

e. conserving the historic environment
Considerations will include the potential effects on the significance of heritage assets, whether designated or not, including any contribution made by their setting.

f. traffic and access
Considerations will include the suitability of the road network and the extent to which access would require reliance on local roads, the rail network and transport links to ports.

g. air emissions, including dust
Considerations will include the proximity of sensitive receptors, including ecological as well as human receptors, and the extent to which adverse emissions can be controlled through the use of appropriate and well-maintained and managed equipment and vehicles.

h. odours
Considerations will include the proximity of sensitive receptors and the extent to which adverse odours can be controlled through the use of appropriate and well-maintained and managed equipment.

i. vermin and birds
Considerations will include the proximity of sensitive receptors. Some waste management facilities, especially landfills which accept putrescible waste, can attract vermin and birds. The numbers, and movements of some species of birds, may be influenced by the distribution of landfill sites. Where birds congregate in large numbers, they may be a major nuisance to people living nearby. They can also provide a hazard to aircraft at locations close to aerodromes or low flying areas. As part of the aerodrome safeguarding procedure (ODPM Circular 1/2003[5]) local planning authorities are required to consult aerodrome operators on proposed developments likely to attract birds. Consultation arrangements apply within safeguarded areas (which should be shown on the policies map in the Local Plan).

The primary aim is to guard against new or increased hazards caused by development. The most important types of development in this respect include facilities intended for the handling, compaction, treatment or disposal of household or commercial wastes.

j. noise, light and vibration
Considerations will include the proximity of sensitive receptors. The operation of large waste management facilities in particular can produce noise affecting both the inside and outside of buildings, including noise and vibration from goods vehicle traffic movements to and from a site. Intermittent and sustained operating noise may be a problem if not properly managed particularly if night-time working is involved. Potential light pollution aspects will also need to be considered.

k. litter
Litter can be a concern at some waste management facilities.

l. potential land use conflict
Likely proposed development in the vicinity of the location under consideration should be taken into account in considering site suitability and the envisaged waste management facility.

[5] Safeguarding aerodromes, technical sites and military explosives storage areas and on the application of the Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002

APPENDIX KEH4

Extracts of Worcester Mineral Local Plan: MLP 28 and MLP 29

Worcestershire

Minerals Local Plan 2018-2036

Find out more online:
www.worcestershire.gov.uk/minerals

worcestershire
county council

Amenity

Policy MLP 28: Amenity

Contributing to:

Objectives MO4, MO5

Planning permission will be granted where it is demonstrated that the proposed mineral development, including associated transport, will not give rise to unacceptable adverse effects on amenity or health and well-being.

A level of technical assessment appropriate to the proposed development will be required to demonstrate that, throughout its lifetime and taking into account the cumulative effects of multiple impacts from the site and/or a number of sites in the locality, the proposed development will not cause unacceptable harm to sensitive receptors from:

a) dust;
b) odour;
c) noise and vibration;
d) light;
e) visual impacts; and/or
f) contamination.

Reasoned justification

6.26 Mineral sites can cause concern to local communities because of possible disturbance or harmful effects on people's amenity, health and well-being, and living and working environments. Securing a high standard of amenity is fundamental to creating well-designed development[464] and policy MLP 28 seeks to ensure that minerals developments are planned, managed and restored in a way that protects people and other sensitive receptors from unacceptable effects on amenity or health and well-being. The method, phasing and lifespan of mineral workings, their distance to sensitive receptors, and their relationship to their locality will influence the nature and likelihood of such impacts.

6.27 Policy MLP 28 addresses a broad range of issues which should be considered to ensure there are no unacceptable adverse effects on the amenity or health of communities. The policy requires an appropriate level of technical assessment to be submitted with each application. Such assessments should be undertaken by an appropriate and competent expert and should be proportionate to the nature, location and size of the proposed development and the significance of its effects. The assessments will need to take account of enabling and ancillary works, such as access routes, in addition to the main working area, and will need to consider the impacts which might occur at all stages of the site's life. For each of the issues identified in policy MLP 28, the assessment(s) should:

- identify the sensitive receptor(s)[465] which may be affected by the proposed development;
- quantify the extent of potential impacts at each stage of the proposed development in relation to the baseline conditions, taking account of how the local context (such as topography, watercourses and water features, and man-made structures and infrastructure including roads, railways and waterways) will influence any potential impacts or pathways for effects;
- consider the potential for cumulative impacts from the development itself and/or from other existing or approved development;

464 Ministry of Housing, Communities and Local Government (July 2021) *National Planning Policy Framework*, paragraph 130(f).
465 Sensitive receptors are defined in the glossary.

- demonstrate the measures which would be implemented to ensure adverse impacts would be avoided at source or, where this is not possible, outline the proposed management and mitigation measures to reduce effects to an acceptable level; and
- identify the significance of any residual effects.

6.28 The form which such technical assessments should take will depend on the scale and nature of the proposed development, and in some cases issues may be addressed through an Environmental Impact Assessment. Where there are expected to be significant health impacts,[466] a Health Impact Assessment (HIA)[467] can be a useful tool to enhance the positive aspects of a proposal through assessment, while avoiding or minimising any negative impacts, with particular emphasis on disadvantaged sections of communities that might be affected.

6.29 Developers are expected to proactively monitor impacts and emissions throughout the life of the site to enable issues to be addressed swiftly. Close liaison with communities can help to identify issues and enable feedback and dialogue on the need for and effectiveness of any mitigation measures.

6.30 A wide range of amenity impacts can be mitigated through appropriate site design and layout and the use of the surrounding topography. Complementing the existing features of the natural environment can also deliver wider multifunctional benefits. A common approach to mitigating amenity impacts is to include tree planting or natural screening; this can deliver landscape, biodiversity, and water environment benefits where proposals are influenced by the local context, and should be incorporated in a way which responds to the relevant strategic corridor priorities (see MLP 7 to MLP 12). Other mitigation measures could be realised through considerate site design and working practices including, but not limited to, locating working areas, plant, machinery or haulage routes away from sensitive receptors; fitting plant with silencers; sheeting of lorries and cleaning of wheels before vehicles exit the site; or limiting working hours.

Dust

6.31 Dust can arise from extraction activities, the operation of processing plant, haulage vehicles and conveyors, and the storage of minerals and soils, where dust can be windblown from stockpiles. There may be temporary impacts from some phases of development, such as site preparation works, soil stripping, or restoration works. If not properly controlled at source, dust can cause nuisance to people and businesses, and harm through deposition on property.

6.32 A dust assessment will be required where dust emissions are likely to arise from a development. The assessment should take account of the location of the source of dust and the surrounding land uses as well as local factors that might affect the dispersal of dust, including topography, the nature of the landscape, and local wind patterns. Atmospheric dispersion modelling may be required to determine whether there is a risk of health effects due to dust emissions. Where necessary, mitigation proposals should be outlined. These might include the design, layout and phasing of operations to increase the distances between sources of pollution and potential receptors, locating dusty operations downwind of receptors, or using planting and screening to absorb pollutants. Working practices such as wheel washing, damping haul roads and sheeting of lorries can also be effective.

Odour

6.33 Mineral sites are unlikely to be a source of odour. However, there is some potential for odours to arise from on-site water bodies, such as settlement and silt lagoons, or areas of water that are poorly designed or managed. Applications should identify any potential odour sources and demonstrate how they will be managed effectively to prevent unacceptable effects occurring.

466 Worcestershire County Council (March 2016) *Health Impact Assessments in Planning Toolkit* advocates undertaking health impact screening to determine whether significant health impacts are likely to arise, prior to scoping the extent of any assessment which may be required. The toolkit is available at http://www.worcestershire.gov.uk/info/20122/joint_strategic_needs_assessment.

467 Health Impact Assessment (HIA) is a process to predict the health implications on a population of implementing a plan, policy, programme or project, aiding the decision-making process.

Wheel washing facility at Clifton Quarry

Noise and vibration

6.34 The introduction of sources of noise or vibration can impact on the use, enjoyment and tranquillity of a locality, and can cause an intrusion that can adversely impact on quality of life, health and well-being.[468] [469]

6.35 Potential sources of noise within typical mineral operations include extraction activities and the operation of processing plant, haulage vehicles and conveyors. Activities such as soil-stripping, the construction and removal of baffle mounds, soil storage mounds and spoil heaps, the construction of new permanent landforms, and aspects of site road construction and maintenance may also be noisy in the short term. Each source of noise might have a different characteristic and intensity, and could be capable of causing significant impacts if not properly controlled. After-uses also have the potential to introduce or alter the source, type or level of noise arising from the site.

6.36 Vibration associated with mineral operations is principally caused by vehicle movements, particularly over uneven surfaces. Blasting can be used at some crushed rock workings and can cause both ground vibration and air overpressure.

6.37 An assessment will be required where there are likely to be impacts from noise or vibration. This should identify potential sources of noise and vibration, their general character and the location of noise-sensitive or vibration-sensitive receptors, including properties. Reference should be made to the types and levels of noise or vibration, the time of day noise or vibration will occur, whether they will be continuous or intermittent and the pattern and duration of their occurrence, as well as the prevailing acoustic environment and local factors such as topology and topography.[470]

6.38 Where noise or vibration impacts are identified, mitigation measures should be incorporated to ensure that effects are managed to an acceptable level. This might include appropriate design, layout and phasing of operations to increase the distances between the source of noise and potential receptors or to minimise noise transmission through the use of screening by natural barriers, planting or purpose-built features. Setting noise limits at sensitive properties, controlling working hours, and/or monitoring of noise conditions at mineral workings could also safeguard against disturbance from the site.[471]

468 Defra (2010) *Noise Policy Statement for England.*

469 Tranquil areas which have remained relatively undisturbed by noise, and are prized for their recreational and amenity value for this reason, may be identified and protected. At the time the Minerals Local Plan was submitted to the Secretary of State, there were no designated tranquil areas within Worcestershire but it is possible that such areas may be identified for protection during the life of the plan.

470 Ministry of Housing, Communities and Local Government, *Planning Practice Guidance, Noise* (Revision date: 06 03 2014) and Ministry of Housing, Communities and Local Government, *Planning Practice Guidance, Minerals* (Revision date: 17 10 2014).

471 Ministry of Housing, Communities and Local Government, *Planning Practice Guidance, Minerals* (Revision date: 17 10 2014).

Policy MLP 29: Air Quality

Contributing to:

Objectives MO2, MO3, MO4, MO5

Planning permission will be granted where it is demonstrated that the proposed mineral development, including associated transport, will not give rise to unacceptable adverse effects on air quality, and will help secure net improvements in overall air quality where possible.

A level of technical assessment appropriate to the proposed development will be required to demonstrate that, throughout its lifetime, and taking into account the cumulative effects of multiple impacts from the site and/or a number of sites in the locality, the proposed development will:

a) not cause unacceptable harm to sensitive receptors, sensitive habitats, or designated sites of importance for biodiversity from air quality. Particular consideration will need to be given to air quality impacts in or impacting upon areas where air quality is known to be poor, such as designated Air Quality Management Areas (AQMAs) or areas that are at risk of designation; and

b) deliver improved air quality even when legally binding limits for concentrations of major air pollutants are not being breached, unless it is clearly demonstrated that this is not possible.

Reasoned Justification

6.49 Increases in air pollutants can have harmful effects on human health and the environment. Mineral sites can cause concern to local communities because of possible impacts on air quality. Air quality impacts from mineral development are most likely to arise as a result of emissions from plant and processing equipment or from the impact of associated transport movements. There may also be temporary impacts from some phases of development, such as site preparation or restoration and plant construction.

6.50 Policy MLP 29 seeks to ensure that minerals developments are planned, managed and restored in a way that protects people and other sensitive receptors[477], sensitive habitats,[478] and designated sites of importance for biodiversity[479] from unacceptable effects on air quality. The method, phasing and lifespan of mineral workings, their distance to sensitive receptors and land uses, and their relationship to their locality will influence the nature and likelihood of such impacts.

6.51 Policy MLP 29 requires an appropriate level of technical assessment to be submitted with each application. Such assessments should be undertaken by an appropriate and competent expert and should be proportionate to the nature, location and size of the proposed development and the significance of its effects. Assessments should:

- Establish the baseline local air quality, including the identification of any locations where air quality is or is likely to be a concern.
- Identify likely changes to air quality throughout the life of the development, including any changes in vehicle-related emissions resulting from the development, and any new point sources of air pollution during all phases of development. Where impacts are likely to result from transport movements this should consider traffic impacts in the immediate vicinity of the proposed development site and further afield.

477 Sensitive receptors are defined in the glossary.

478 Sensitive habitats are those habitats that are sensitive to changes in air quality. There is no definitive list or map of such habitats, as they must be identified on a case-by-case basis at the time of the planning application, taking account of non-designated habitats as well as those on any designated sites. Evidence used in the assessment required under policy MLP 31 (Biodiversity) should also help to identify such habitats for the purposes of policy MLP 29, and relevant guidance should be followed such as Institute of Air Quality Management (2019) *A guide to the assessment of air quality impacts on designated nature conservation sites* and Chartered Institute of Ecology and Environmental Management (2021) *Advice on Ecological Assessment of Air Quality Impacts*.

479 Designated sites of importance for biodiversity are those sites of international, national, or local importance, as defined in the glossary under the headings of Natura 2000 sites, Special Areas of Conservation, Ancient Woodland, Aged or veteran trees, Sites of Special Scientific Interest, and Local Wildlife Sites.

- Identify the sensitive receptors, sensitive habitats, and designated sites of importance for biodiversity[480] that may be affected by the proposed development. Particular consideration will need to be given to air quality impacts in or impacting upon areas where air quality is known to be poor, such as designated Air Quality Management Areas (AQMAs) or areas that are at risk of designation. Where relevant, reference should be made to the Worcestershire Air Quality Action Plan[481] and corresponding action plans of surrounding areas.
- Assess the likely air quality impacts and their significance, including the potential for cumulative impacts from the development itself and/or from other existing or approved development, and clearly state the methods adopted to reach these conclusions.
- Where negative effects are identified, set out acceptable mitigation measures to remove these effects or reduce them to acceptable levels.
- Set out measures to deliver improved air quality where possible, and quantify the contribution these measures will make to securing net improvements in overall air quality. This must be considered even when legally binding limits for concentrations of major air pollutants are not being breached. Measures to deliver improved air quality may include multifunctional green infrastructure measures. Where applicants consider that air quality improvements cannot be delivered as part of the proposed development, the reasons for this should be clearly demonstrated.

6.52 The assessment will need to take account of enabling and ancillary works, such as access routes, in addition to the main working area, and will need to consider the impacts which might occur at all stages of the site's life. In some cases, air quality impacts may be addressed through an Environmental Impact Assessment. Where there are expected to be significant health impacts,[482] a Health Impact Assessment (HIA)[483] can be a useful tool to enhance the positive aspects of a proposal through assessment, while avoiding or minimising any negative impacts, with particular emphasis on disadvantaged sections of communities that might be affected.

6.53 Some potential air quality impacts may be able to be mitigated through appropriate site design and layout and the use of the surrounding topography. Air quality mitigation measures should be influenced by the local context, and should be incorporated in a way which responds to the relevant strategic corridor priorities (see MLP 8 to MLP 12). Other mitigation measures could be realised through considerate site design and working practices including, but not limited to, locating working areas, plant, machinery or haulage routes away from sensitive receptors, or limiting working hours.

6.54 Opportunities to secure overall improvements in air quality may be realised through measures such as traffic and travel management and green infrastructure provision and enhancement. Green infrastructure measures that complement the existing features of the natural environment can also deliver wider multifunctional benefits.

480 The requirements of Policy MLP 31 (Biodiversity) will be relevant to considering particular impacts on sensitive habitats and designated biodiversity sites.

481 Worcestershire's *Air Quality Action Plan*, together with information about Air Quality Management Areas in Worcestershire, can be found at www.worcsregservices.gov.uk/pollution/air-quality.aspx.

482 Worcestershire County Council (March 2016) *Health Impact Assessments in Planning Toolkit* advocates undertaking health impact screening to determine whether significant health impacts are likely to arise, prior to scoping the extent of any assessment which may be required. The toolkit is available at http://www.worcestershire.gov.uk/info/20122/joint_strategic_needs_assessment.

483 Health Impact Assessment (HIA) is a process to predict the health implications on a population of implementing a plan, policy, programme or project, aiding the decision-making process.

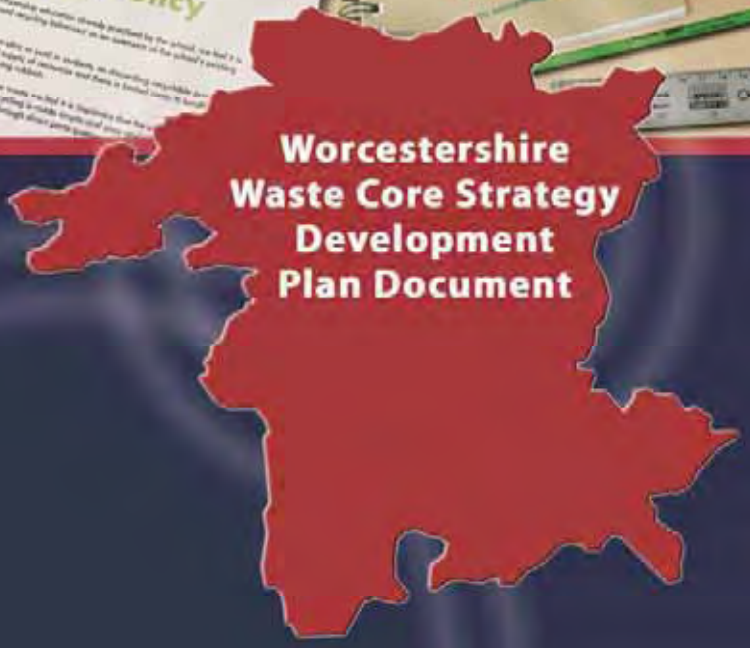
APPENDIX KEH5

Extracts of Worcestershire Waste Core Strategy Development Plan

Waste Core Strategy

for Worcestershire

ADOPTED WASTE LOCAL PLAN 2012-2027



November 2012

Find out more online:
www.worcestershire.gov.uk/wcs

worcestershire
county council

Objectives WO2

Policy WCS 13: Green Belt

Waste management facilities will be permitted in areas designated as Green Belt [117] where the proposal does not constitute inappropriate development, or where very special circumstances exist.

Explanatory text

Green Belt

6.64 Large areas to the north of the County are designated as Green Belt (see **Figure 16**). There is a presumption against inappropriate development in the Green Belt in national policy[118] and in such cases applicants must clearly justify the very special circumstances why permission should be granted. Very special circumstances, individually or cumulatively, will not exist unless the harm to the Green Belt by reason of inappropriateness and any other harm is clearly outweighed by other considerations.

6.65 Some types of waste management development have particular locational needs. It would be expected that these locational needs, together with the wider environmental and economic benefits of sustainable waste management, are material considerations that will be given significant weight in determining whether proposals for waste management facilities should be given planning permission. When considering development proposals, the Council will have regard to the cumulative effect of development.

Policy WCS 14: Amenity

Objectives WO2

Waste management facilities will be permitted where it is demonstrated that the operation of the facility and any associated transport will not have unacceptable adverse impacts on amenity. This must consider impacts on or of:

i. air quality, including any fumes, dust, odours or bioaerosols. Where relevant, the issues identified in the Herefordshire and Worcestershire Air Quality Management Plan, and those of adjoining authorities, must be taken into account; and
ii. planned or unplanned fires; and
iii. noise and vibrations; and
iv. insects, vermin and birds; and
v. litter and windblown materials; and
vi. visual intrusion and light pollution; and
vii. health

Cumulative effects must be considered. Details of any mitigation or compensation proposals must be included; this may be through enclosing operations or through other appropriate measures.

Where there will be unacceptable adverse impacts on amenity, proposals will only be permitted where it is demonstrated that the benefits of the development at the proposed site clearly outweigh any unacceptable adverse impacts.

117 Inappropriate development is defined in the *National Planning Policy Framework (2012)*.
118 Currently the *National Planning Policy Framework (2012)*.

Explanatory text

Amenity

6.66 Relevant assessments should be undertaken to demonstrate that the proposals will not have unacceptable adverse impacts on amenity or health[119]. This should include consideration of any impacts from transport. The issues to be considered will depend on the nature, scale and location of the proposed development. Distances from residential and recreation areas, waterways, waterbodies and other agricultural or urban sites should also be considered where appropriate and should always be taken into account where the proposal relates to landfill[120].

6.67 Where amenity impacts are likely applicants should discuss proposals and mitigation measures with the relevant Environmental Health Officer. Where health impacts are likely applicants should discuss proposals and mitigation measures with Environment Agency and the health protection authorities. Possible amenity and health impacts should be identified before applications for planning permission are submitted.

6.68 In the case of air quality, special attention should be given where the processes could affect:

- national or international sites designated for nature conservation;
- Worcestershire's Air Quality Management Areas (AQMAs), or those of neighbouring authorities, or other areas where air quality is likely to be poor (including the consideration of cumulative impacts of developments on air quality); or
- listed heritage façades through damage or soiling as a result of emissions from point or mobile sources.

6.69 In most cases, waste management operations are expected to be enclosed. However, the appropriateness of this as a method of mitigating amenity impacts will depend on the nature and scale of the operation. For some processes it may be appropriate to consider techniques such as dust suppression or sheeting of vehicles.

6.70 Other facilities may need to be located at a suitable distance from sensitive receptors; for example the Environment Agency requires a bioaerosol risk assessment for development managing biodegradable waste within 250 metres of sensitive receptors. Any such assessment should be included as part of the planning application.

119 Health issues are a material consideration in determining applications for planning permission. The Environment Agency regulates waste management activity in order to prevent harm to human health and the environment from pollution and emissions, currently through Environmental Permitting.

120 In accordance with the *Waste (England and Wales) Regulations 2011*.

APPENDIX KEH6

Extracts of Wyre Forest District Local Plan 2016-36

SP33 Pollution and Land Instability

Wyre Forest
District Council

Local Plan 2016 - 2036

April 2022

Wyre Forest House, Finepoint Way, Kidderminster, DY11 7WF

Policy SP.33 - Pollution and Land Instability

1. Development proposals must be designed in order to avoid any significant adverse impacts from pollution, including cumulative ones, on any of the following:

- Human health and wellbeing.
- Biodiversity.
- The water environment.
- The effective operation of neighbouring land uses.
- An existing or proposed Air Quality Management Area (AQMA) [20]

2. Development proposals will not be permitted where the land is contaminated [21] and not capable of appropriate remediation without compromising development viability or the delivery of sustainable development. For sites where land contamination is suspected, an adequate site investigation survey will need to be prepared (by a competent person) to demonstrate that land contamination issues have been fully addressed or can be addressed through the development.
3. C. Development proposals will not be permitted in locations where there are risks from land instability. Development proposals within areas known or suspected to be at risk of slope instability or poor ground conditions will need to demonstrate the following:

    a. Its structural integrity will not be compromised by slope instability;
    b. The development does not exacerbate any instability on the site or elsewhere;
    c. The developent can tolerate ground conditions by special design; and
    d. There is long term stability of any structures built on filled or mined land.

For sites suspected of land instability, an adequate site investigation survey will need to be prepared (by a competent person) to demonstrate that land instability issues have been fully addressed.

Reasoned Justification

15.1 The NPPF[22] clearly sets out, in broad terms, that pollution and land instability are material planning considerations.

15.2 Pollution can and does have detrimental impacts on the environment and human health. In the absence of a robust local plan policy, both the quality of life of local residents and the ecology of the area would be compromised.

20 The countywide Worcestershire Air Quality Action Plan (September 2013) includes maps of the AQMA in the plan area and is available at http://www.worcsregservices.gov.uk/media/486190/Final-AQAP-Whole-Doc-v23b-adopted.pdf
21 As defined under Part IIA of the Environmental Protection Act 1990
22 NPPF Paragraphs 183, 184, 185, 186

15.3 Pollution can take many forms, e.g. chemical, dust, light, noise, fumes, smell, vibration, all of which can have detrimental impacts on the environment and the quality of life. These potential adverse effects must be carefully considered in the assessment of any planning application and can be the basis for the refusal of a planning application if not adequately addressed. Developers are encouraged to have pre-application discussions with the Council to be advised on the specific requirements.

15.4 Assessments should:

- Identify the sensitive receptor(s) which may be affected by the proposed development, including residents, businesses, land users and sensitive environmental assets;
- Consider the potential for cumulative impacts with other existing or approved development;
- Demonstrate the measures which would be implemented to ensure adverse impacts would be avoided at source or, where this is not possible, outline the proposed management and mitigation measures to reduce effects to an acceptable level; and identify the significance of any residual effects.

15.5 Developers are expected to proactively monitor impacts and emissions to enable issues to be addressed swiftly. Close liaison with communities can support this approach, enabling feedback and dialogue on the need for and effectiveness of any mitigation measures.

15.6 The Wyre Forest District overlies a principal aquifer of regional strategic importance in terms of water supply and there are a number of Source Protection Zones (SPZs) to protect public water resources. For proposed developments that will have an impact on or are affected by groundwater, the Environment Agency's Groundwater protection position statements should be considered to help provide appropriate control measures, especially in areas designated as Source Protection Zone 1 (SPZ1).

15.7 The term 'poor ground conditions' referred to in Policy SP.33 may include, but is not limited to the following:

- Poorly consolidated made ground and fill material;
- Soft, weak and wet natural soils;
- Areas of shallow mine-workings and mineshafts; or
- Colliery spoil mounds.

Minerals

15.8 At present, minerals policy and proposals for the County of Worcestershire are set out in the policies of the Minerals Local Plan (1997) that were "saved" by the Secretary of State in September 2007. These "saved" minerals policies will be replaced by the revised Worcestershire Minerals Local Plan upon its adoption (currently anticipated in sping 2021) which will form part of the overall Development Plan for Wyre Forest District.

15.9 Most of the north-west of Worcestershire consists of Old Red Sandstone. Carboniferous strata occur in the western parts of Wyre Forest Area where they form a western continuation of the South Staffordshire Coalfield. These strata contain layers of sandstone and shales, ironstone and coal deposits. The NPPF states that permission should not be given for the

APPENDIX KEH7

Plans of Site and Lea Castle Village Development

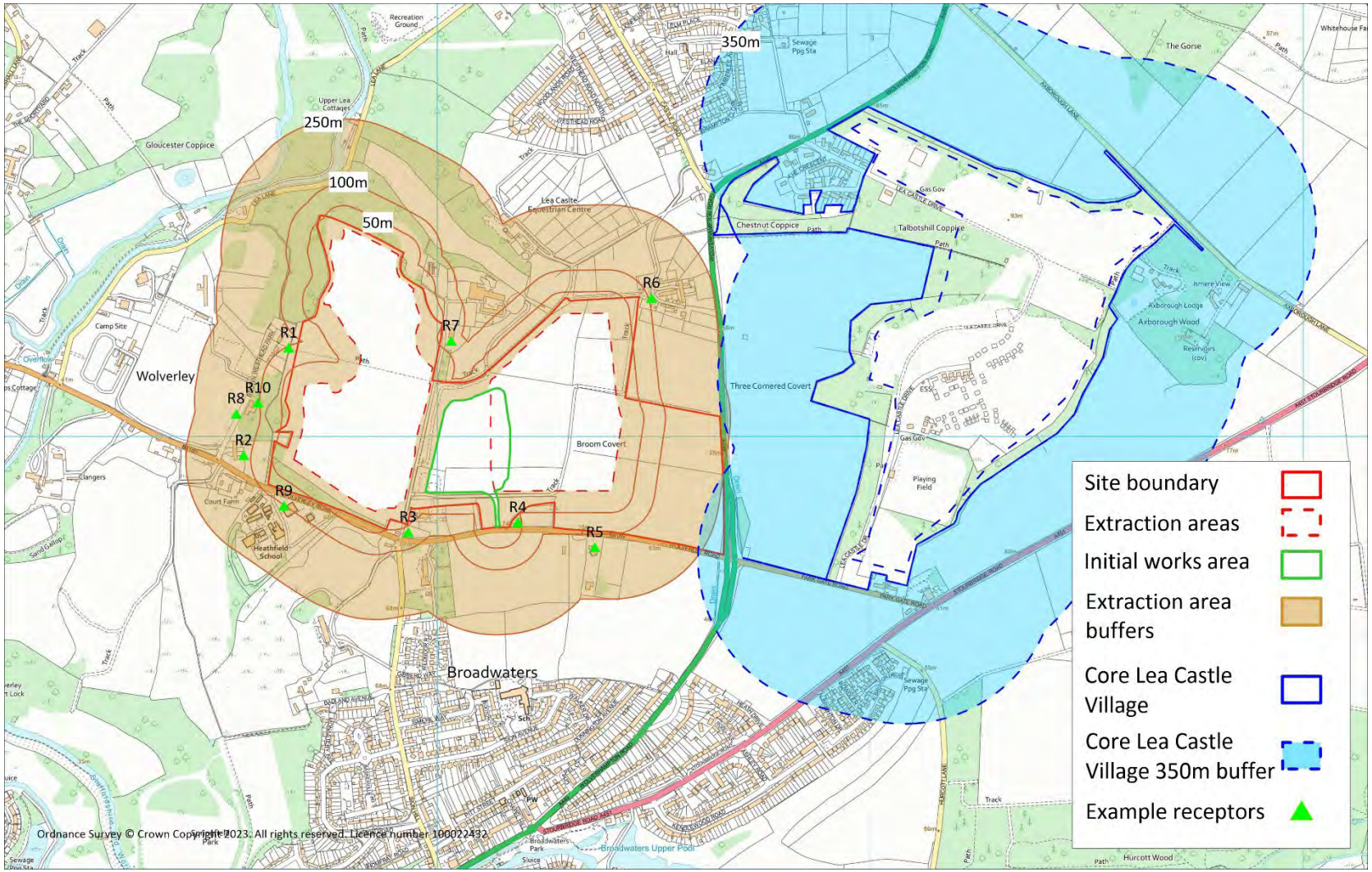


Figure 1: Location of Site and proposed Extraction area in relation to build development part of core Lea Castle Village development

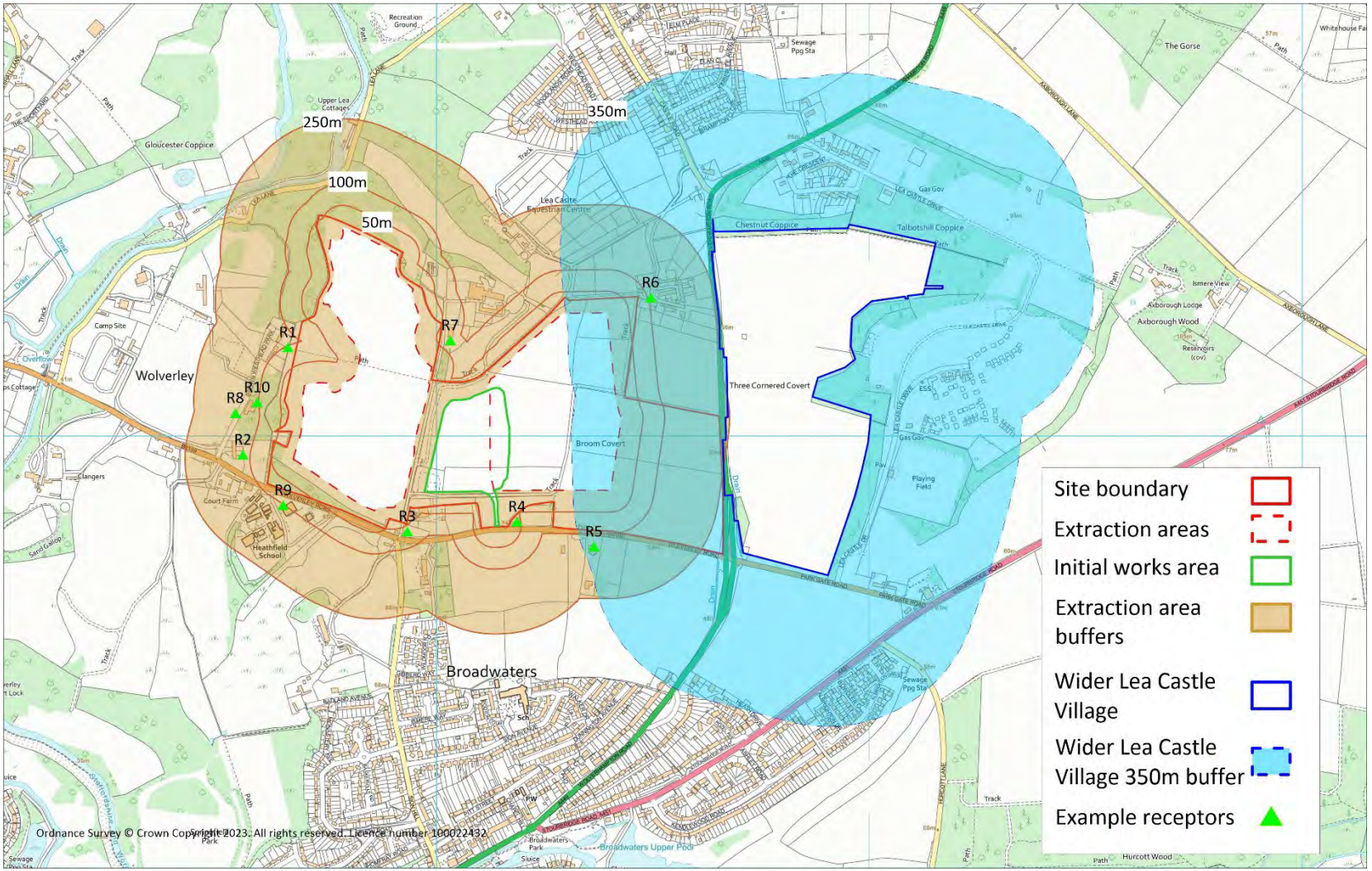
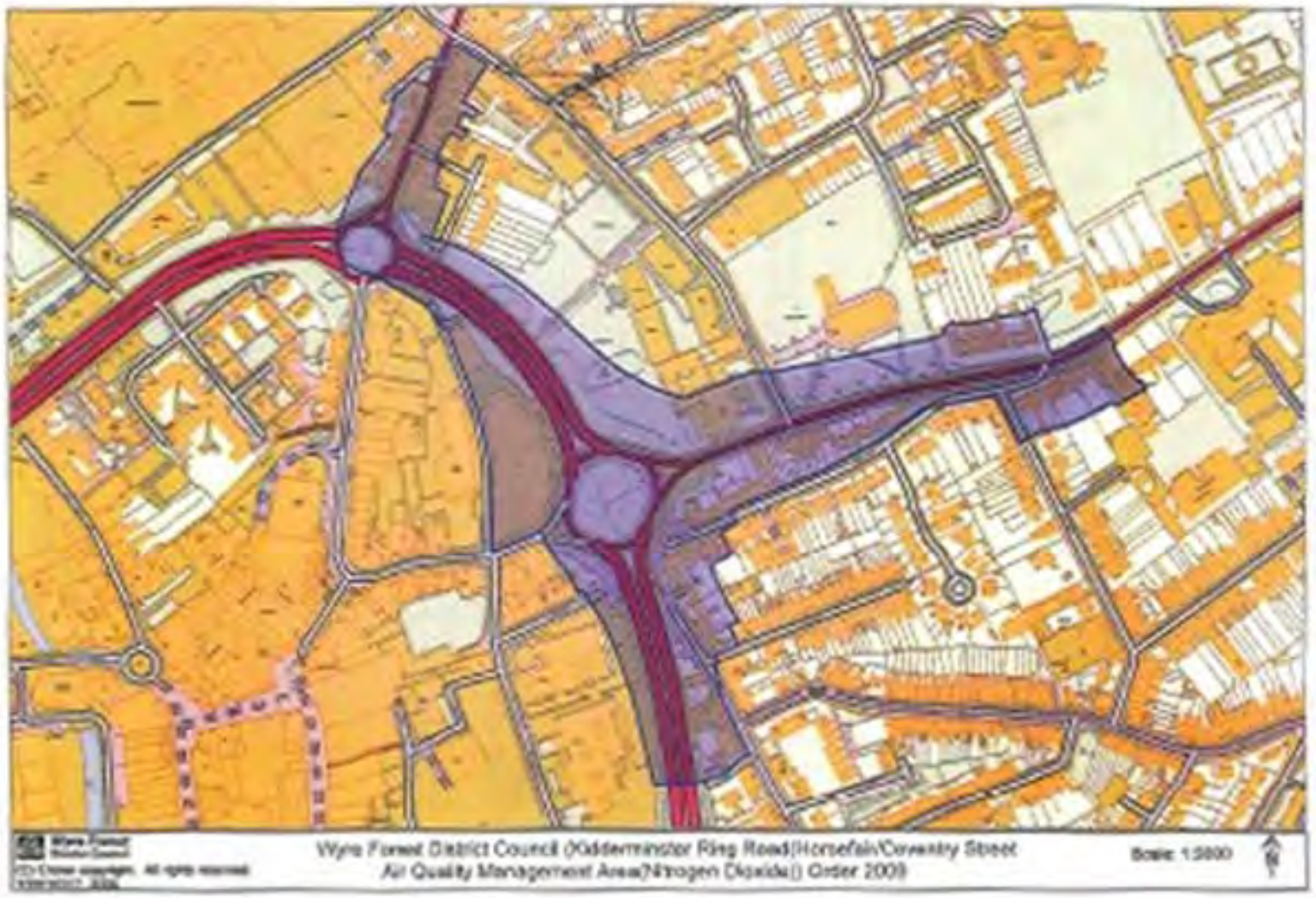


Figure 2: Location of Site and proposed Extraction area in relation to western part of wider Lea Castle Village development

APPENDIX KEH8

Kidderminster Road AQMA

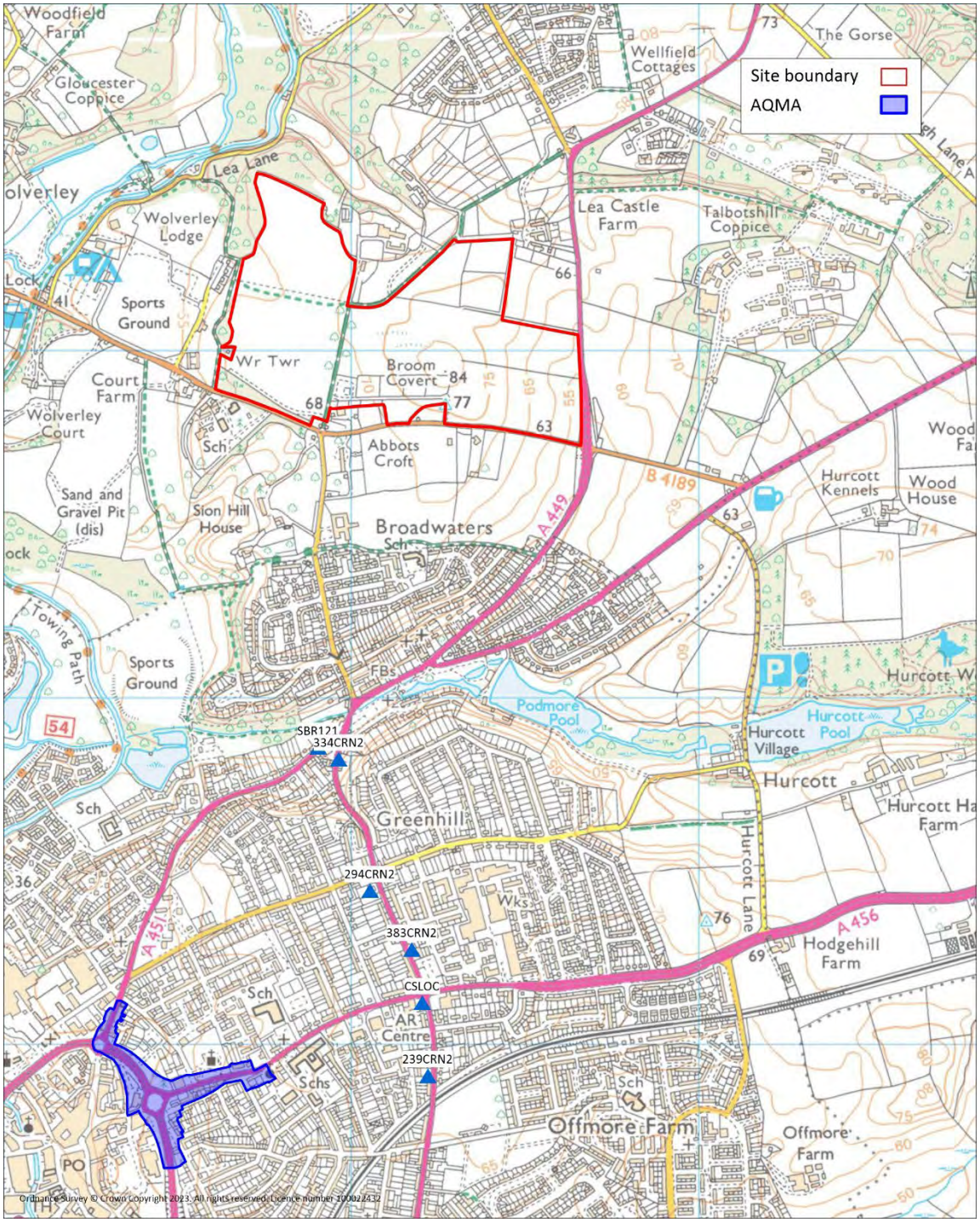


Plan of Kidderminster Ring Road AQMA (as extracted from Defra website)

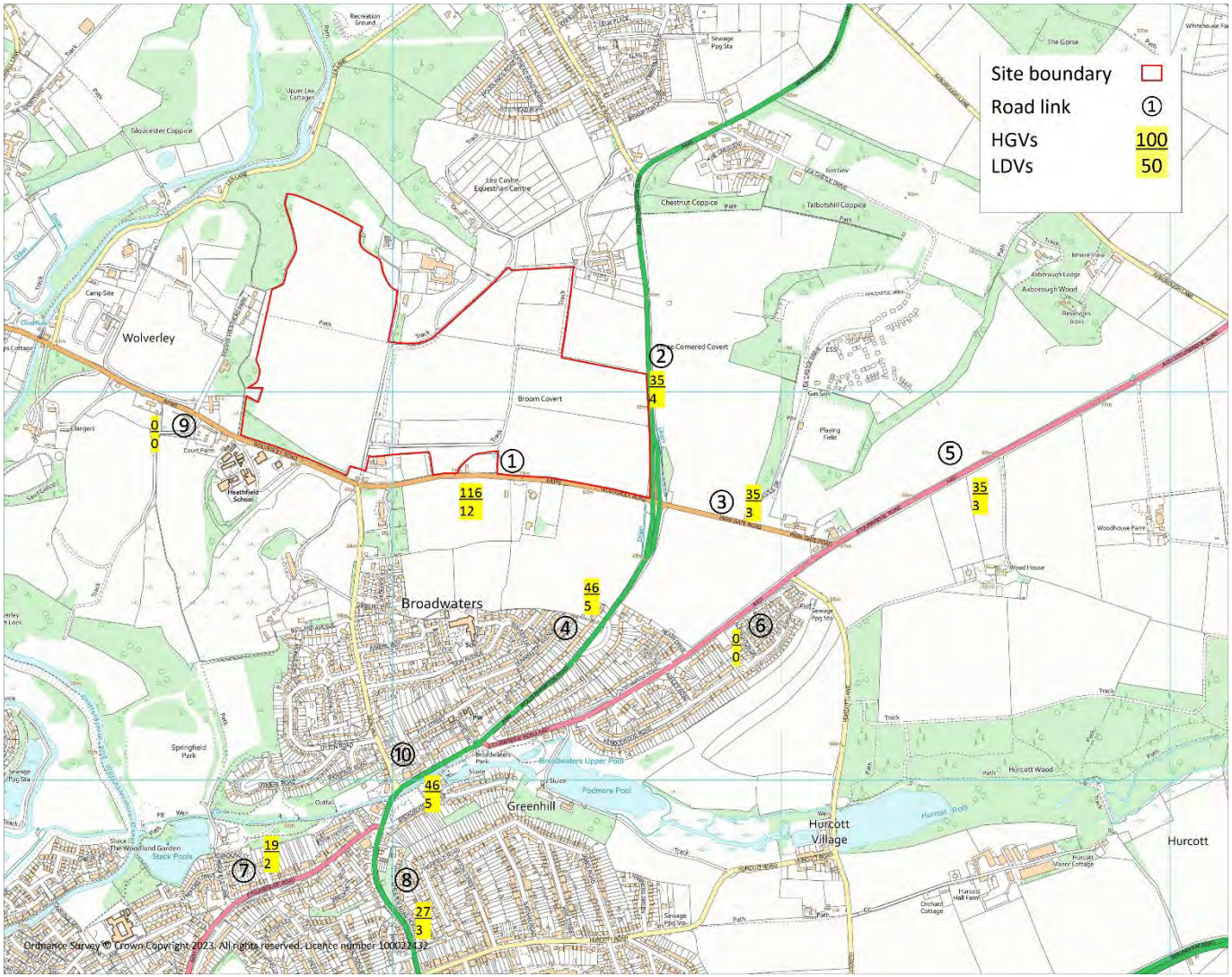
APPENDIX KEH9

Plans of Site and Kidderminster AQMA

and Site related HGV movements



Plan of Site location in relation to Kidderminster AQMA and diffusion tube monitoring on Chester Road North



Plan of predicted development-related traffic changes

APPENDIX KEH10

HSE Guidance in relation to Quarries and RCS

Silica

One of the health risks from working in the quarry industry is that of exposure to fine dust containing crystalline silica (otherwise known as *quartz*). Quartz is found in almost all kinds of rock, sands, clays, shale and gravel. Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". It usually takes a number of years of regular daily exposure before there is a risk of developing silicosis. Silicosis is a disease that has only been seen in workers from industries where there is a significant exposure to silica dust, such as in quarries, foundries, the potteries etc. No cases of silicosis have been documented among members of the general public in Great Britain, indicating that environmental exposures to silica dust are not sufficiently high to cause this occupational disease.

In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis.

It should also be noted that excessive long term exposures to almost **any** dust, are likely to lead to respiratory (breathing) problems.

Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE in the following Hazard Assessment Documents EH75/4[1] and EH75/5[2]. These documents are available from HSE Books.

COSHH essentials in quarries: Silica[3]

HSE guidance on Silica[4]

Failure to report a case of ill health - Successful HSE prosecution[5]

Resources

Health and safety at quarries. Quarries Regulations 1999[6]

Related content

Competence in health and safety[8]

RIDDOR[9]

Explosives[10]

Link URLs in this page

1. EH75/4
   https://www.hse.gov.uk/pubns/books/eh75-4.htm
2. EH75/5
   https://www.hse.gov.uk/pubns/books/eh75-5.htm
3. COSHH essentials in quarries: Silica
   https://www.hse.gov.uk/pubns/guidance/qyseries.htm
4. HSE guidance on Silica
   https://www.hse.gov.uk/pubns/chan35.htm
5. Failure to report a case of ill health - Successful HSE prosecution
   https://www.hse.gov.uk/copd/casestudies/silica.htm
6. Health and safety at quarries. Quarries Regulations 1999
   https://www.hse.gov.uk/pubns/books/l118.htm
7. More resources
   https://www.hse.gov.uk/quarries/resources.htm
8. Competence in health and safety
   https://www.hse.gov.uk/competence/index.htm
9. RIDDOR
   https://www.hse.gov.uk/riddor/index.htm
10. Explosives
    https://www.hse.gov.uk/explosives/ammonium/index.htm

Glossary of abbreviations/acronyms on this page

RIDDOR
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations

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