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INTRODUCTION

13.1 Proposals for the extraction of minerals, along with associated operations (such as processing and transportation) of minerals have the potential to impact upon the health and well-being of local communities. Through good design and suitable mitigation, the impacts can be ameliorated such that any effects on health or well-being are within acceptable limits.

13.2 Particular issues that can affect health and wellbeing include *inter alia* noise, emissions to air (such as dust or fine particulate matter); emissions to water; and changes to the landscape. Such matters have been considered in other chapters of this ES.

13.3 This chapter of the ES therefore provides an assessment of the potential health impacts arising through the proposed development. It is supported by a Health Impact Assessment (HIA), which is provided in **Appendix 13/1**.

LEGAL BACKGROUND

13.4 The NPPF supports the role of planning in creating healthy, inclusive communities by supporting local strategies to improve health, social and cultural wellbeing for all. Section 8 relates to the promotion of healthy and safe communities. Paragraphs 92 and 93 refer to planning decisions, as follows:

91 "*Planning policies and decisions should aim to achieve healthy, inclusive and safe places*" which, amongst other things, "*enable and support healthy lifestyles, especially where this would address identified local health and well-being needs*" – for example "*through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling*".

13.5 Paragraph 92 states that "*To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should…*

take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community".

EIA Regulations

13.6 It is a requirement of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) that the EIA process must (amongst other matters) "*identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors—*

(a) population and human health".

13.7 Human health, along with other matters such as effects on biodiversity, land, soil, water, air and climate, material assets, cultural heritage and the landscape, is therefore at the heart of Environmental Impact Assessment.

13.8 The process of EIA requires the consideration of effects across a wide range of potential impacts. Health effects on the population are assessed with regard to all relevant potential impacts, including air quality, noise, traffic and as such have been considered within other chapters of this ES.

13.9 The aim of EIA is to protect the environment, including the population, by ensuring that a local planning authority when deciding whether to grant planning permission for a project does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process. It is therefore the primary mechanism for supporting the decision-making process for development proposals that are likely to result in significant environmental effects. Consequently, this chapter, and the appended Health Impact Assessment, draws on the findings of the EIA and seeks to avoid duplication of assessment, instead providing signposting, where appropriate, to detailed assessment of health effects reported in the Environmental Statement.

Planning Practice Guidance (PPG)

13.10 Planning Practice Guidance is a web-based resource and that is updated as necessary. It advises that a health impact assessment may be a useful tool to use where there are expected to be significant impacts.

13.11 The range of issues to be considered in decision-making in respect of health and health infrastructure include:

- "*opportunities for healthy lifestyles have been considered (e.g., planning for an environment that supports people of all ages in making healthy choices, helps to promote active travel and physical activity, and promotes access to healthier food, high quality open spaces, green infrastructure and opportunities for play, sport and recreation);*
- *potential pollution and other environmental hazards, which might lead to an adverse impact on human health, are accounted for in the consideration of new development proposals; and*
- *access to the whole community by all sections of the community, whether able-bodied or disabled, has been promoted*".

Definition of Health

13.12 The World Health Organisation (WHO) defines health as not only the absence of disease or infirmity, but also as 'a state of complete physical, mental and social wellbeing.' It emphasises that all people have right to the highest attainable standard of health and wellbeing, stating that health is 'one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.' It is now accepted that an individual or community's health is determined not only by the availability and quality of healthcare services, but that a range of economic, social, psychological and environmental influences play an equally important role.

METHODOLOGY

Scope of HIA

13.13 The consultation exercise described above helped define the scope of the potential environmental impacts including impacts on human health that would be addressed within the EIA, and the outcome of these assessments are reported in the ES accompanying the planning application.

13.14 In scoping the HIA, given the extent of matters addressed in the EIA, it is therefore deemed appropriate that this HIA report should signpost detailed reports provided within the ES and other planning application documents rather than duplicate this work. However, this HIA provides a comprehensive overview of health and wellbeing impacts associated with the proposed development that draws together the available information into one place, thereby supporting better understanding of the health and wellbeing effects of the proposed development (both beneficial and adverse). The HIA also seeks to identify whether the health and wellbeing of any particular population groups might be disproportionately disadvantaged or benefitted by the proposed development.

Methodology

13.15 Whilst there is no statutory regional or national guidance for undertaking HIA, Hertfordshire County Council's Position Statement (see section 3.2.6 of the HIA) advises that the guidance provided by the Welsh Health Impacts Assessment Support Unit (WHIASU) should be used to inform HIA.

13.16 The WHIASU approach is further supplemented by the Applicant's and SLR's experience of other similar projects throughout the UK.

WHIASU Toolkit

13.17 Produced by WHIASU, this toolkit provides the definitions and frameworks for producing an HIA and is the Hertfordshire County Council's recommended format for screening and scoping HIA. The Toolkit sets out three types of HIAs available:

- *"Prospective HIA – at the start of the development of a project, proposal or plan.*
- *Concurrent HIA – runs alongside the implementation of the project (or policy)*
- *Retrospective HIA – assesses the effect of an existing project or policy and can be used as an evaluation tool. Retrospective assessments can also be made of unexpected events, as a way of learning lessons for future similar events".*

13.18 Within these three types, HIAs can be further narrowed down to three sub-categories:

- *"A Desktop HIA exercise can take hours or a day and can encompass a small number of participants around a table using existing knowledge and evidence to assess a proposal, policy or plan.*
- *A Rapid HIA can take days or weeks and usually includes the establishment of a small steering group and often uses the approach of a participatory stakeholder workshop – it typically involves a brief investigation of health impacts, including a short literature review of*

quantitative and qualitative evidence and the gathering of knowledge and further evidence from a number of local stakeholders.

- *Comprehensive HIAs are more in-depth and can take months to complete. They may be time intensive, financially costly, require extensive literature searches and the collection of primary data. This type of HIA is more suited to more complex proposals"*.

13.19 WHIASU acknowledge that some HIAs will cover one or more of these subcategories. It further details the five main steps to be undertaken when conducting an HIA:

- *"Screening*
- *Scoping*
- *Appraisal of Evidence/Assessment*
- *Reporting and Recommendations*
- *Monitoring and Evaluation"*

13.20 Finally, the Toolkit offers a Health and Wellbeing Checklist and a Vulnerable/Disadvantaged Groups Checklist – these act as references for the potential impacts on health and wellbeing that a development may pose and the potential group receptors that the Toolkit highlights as being vulnerable e.g., children, religious groups, unemployed.

BASELINE CONDITIONS

13.21 Section 5 in the HIA sets out the baseline conditions for the area within which the application site is located. It provides information on the current conditions in relation to health and wellbeing for people who live within the local area, including age, health issues, and qualifications. It also provides information on the community, through data on transport, access to recreation facilities and open space, induces of deprivation, and crime. It is necessary to understand the baseline conditions in order to assess how the proposed development would impact on health and wellbeing of the local community, including people working at the proposed quarry in the future.

13.22 As the proposed development spans across two Local Authority jurisdictions, the geographical scope of the baseline review is based primarily on these local authority areas, Welwyn Hatfield Borough Council and St Albans City and District Council. This area is identified as the Local Area of Influence (LAI), within which most effects on the local community would be experienced, although adjustment is made where necessary depending on the type of impacts and receptors.

13.23 For comparative purposes, data is also provided for Hertfordshire as a whole and nationally (Great Britain and England), where available.

ASSESSMENT OF HEALTH IMPACTS

13.24 Based on the scoping exercise summarised in Section 4.0 of the HIA, and the baseline review undertaken in Section 5.0 of the HIA, an assessment and summary of the relevant potential health and wellbeing effects is included in Table 6-1 in Section 6 of the HIA. Much of the information is based on the findings of the comprehensive ES which accompanies the planning application. The table therefore provides a summary of the assessment for each health and wellbeing determinant

and a cross reference is provided where appropriate to the relevant ES chapter, technical appendices and other planning application documents. Table 6-1 is based on the Health and Well-being Determinants Checklist set out in Appendix 1 of the WHIASU Toolkit.

13.25 Where applicable, the assessment identifies if there is a disproportionate effect on vulnerable or disadvantaged groups in the local communities, thereby impacting health inequalities. A guide to vulnerable or disadvantaged groups is provided in Appendix 2 to the WHIASU Toolkit, and comprises the following:

Age related groups

- Children and young people
- Older people

Income related groups

- People on low income
- Economically inactive
- Unemployed/workless
- People who are unable to work due to ill health

Groups who suffer discrimination or other social disadvantage

- People with physical or learning disabilities/difficulties
- Refugee groups
- People seeking asylum
- Travellers
- Single parent families
- Lesbian and gay and transgender people
- Black and minority ethnic groups
- Religious groups

Geographical groups

- People living in areas known to exhibit poor economic and/or health indicators
- People living in isolated/over-populated areas
- People unable to access services and facilities.

MONITORING AND EVALUATION

13.26 The assessment of health impacts undertaken in section 6.0 has confirmed that no significant adverse effects are expected as a result of the proposed development once appropriate mitigation has been applied.

13.27 There is potential for beneficial effects that are also not significant at the level of the population as a whole, although specific population groups may be disproportionately benefitted, especially if the recommended measures regarding support for local workers including skills training and support for active and sustainable travel are put in place.

13.28 The ES proposes the implementation of continued monitoring and reporting with regard to the following matters:

- Air Quality – regular occupational exposure monitoring will be undertaken and any exceedances reported to senior management and a remediation plan put in place.
- Water Quality – A Ground Water Management Plan as detailed in Chapter 6 of the ES will be agreed with the EA and implemented throughout the operational life of the proposed development.

13.29 In addition to the environmental monitoring measures proposed in the ES, it is recommended that the Applicant should prepare an Employment and Skills Plan to promote the following:

- Employment - measures to support employment of local people, including support for people without access to a private transport
- Equality – positive support for potential employees and existing employees with regard to access within the site and flexibility of working arrangements
- Procurement - measures to encourage local firms to supply goods and services
- Training – induction and continuous career training to enhance skills with regard to safety, health and environment
- Monitoring and Evaluation – annual report to senior management and commitment for areas of low performance to be reviewed and positive actions put in place.

CONCLUSIONS

13.30 A Health Impact Assessment (HIA) has been undertaken following the standard Hertfordshire County Council preferred format based on the WHIASU Toolkit. The HIA draws heavily on the extensive assessment work undertaken for the Environmental Impact Assessment which is reported in the Environmental Statement (ES) accompanies the planning application, and signposting to other reports is provided where appropriate.

13.31 The socio-economic and health profile for the surrounding area has been summarised. This generally shows that whilst Hertfordshire in general is relatively buoyant, there are certain geographical areas in the vicinity of the site that are less prosperous than the county as a whole.

13.32 An assessment of health effects is set out in section 6.0 of the HIA and cross-references are provided where appropriate to the detailed studies reported in the ES. Where relevant, the assessment identifies any population groups that may be expected to be disproportionately affected by the proposed development, whether negatively or positively.

13.33 During consultation with stakeholders and the local community, concerns have been raised regarding two environmental issues that have the potential for serious health consequences:

- air quality, including the potential effects of silica from air-borne particulate matter. SLR has undertaken detailed emissions modelling of such matters which is reported in full in the ES. The results show that emissions of particulate matter from the operational phases of the quarry would not give rise to significant adverse effects at surrounding receptors. The assessment (based on the worst case assumption that all PM10 particulate emissions are silica) assessed emissions against the US standard of 3ug/m3 as an annual mean to provide a suitable Air Quality Assessment Level (AQAL) as there is no standard for silica in the UK. The results showed that no sensitive receptor including nearby residential properties exceeded 10% of the AQAL.

- water quality, including the potential for historical bromate pollution to be drawn into the quarry when it is being worked sub-watertable. As there will be no pumping of groundwater from the Lower Mineral Horizon (LMH) the potential for drawing impacted groundwater into the site is considered to be low. However, wet digging of mineral from beneath the LMH could create short lived local changes in groundwater head which could conceivably induce a local gradient towards the site and suitable mitigation measures are proposed including the development of a groundwater and water management plan to be agreed with the Environment Agency and Affinity Water prior to works commencing.

13.34 As a result of the proposed mitigation, no significant effects are predicted.

13.35 The assessment concludes that the proposed development is not predicted to give rise to any significant adverse health-related impacts, and that there will be some benefits particularly to the economy during the site operation and to biodiversity and public access in the longer term. The potential benefits are likely to benefit certain groups within local communities through the provision of skills training and career development. An Employment and Skills Plan is recommended to help reduce potential inequalities in access to work and to ensure that local people, particularly those that may be disadvantaged in terms of employment opportunities, gain maximum benefit from the proposed development.

13.36 In summary, the proposed development is not expected to have a significant adverse impact on health for those living near the site, working on the site or using nearby areas for recreational purposes. Where required, the proposed development provides for appropriate mitigation measures to minimise adverse effects and enhance beneficial effects.