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INTRODUCTION

1.1 This document comprises an Environmental Statement ('ES') and has been prepared by SLR Consulting Limited ('SLR') on behalf of Brett Aggregates Limited ('the applicant'). The ES forms part of a package of documents being formally submitted to Hertfordshire County Council (as Mineral Planning Authority, or 'MPA') in support of a planning application in respect to land at Hatfield Aerodrome, near Hatfield.

1.2 The applicant is submitting a planning application for the establishment of a new quarry on land at the former Hatfield Aerodrome, being part of the allocated site referred to in the extant Minerals Local Plan[1] (refer to Chapters 2 and 4 below for further information on the policy framework for the area). The proposals would involve the winning and working, together with processing for sale, of some 8Mt of sand and gravel over a period of around 30 years. In parallel with the extraction of minerals would be the importation of low permeability inert material to infill the mineral workings to facilitate the restoration of the site to a beneficial after use, combining recreation and nature conservation. The imported material would typically comprise excavation wastes from construction and engineering projects (soils, overburden, clays etc.) within the region. This is set out further in paragraph 1.11 below, and Chapter 3 of this ES.

1.3 This ES aims to provide an objective account of the possible significant environmental effects of the proposed development by setting out the results of the Environmental Impact Assessment ('EIA') which has been undertaken. It is intended to provide the MPA (i.e. Hertfordshire County Council) with sufficient information to determine the planning application having due regard to the protection of the local amenity and the environment as a whole. The ES has been prepared in line with the framework provided in the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 with cognisance of the guidance set out in the online National Planning Practice Guidance and The Institute of Environmental Management and Assessment's (IEMA) "*Guidelines for Environmental Impact Assessment*".

Application Submission Package

1.4 This ES comprises the second of three volumes submitted to Hertfordshire County Council to accompany the planning submission. In addition to the formal planning application forms and certificates, the full submission comprises;

- Volume 1 - Planning Statement;
- Volume 2 - Environmental Statement;
  - **Volume 2A – ES Text (this document);**
  - Volume 2B – ES Technical Appendices;
  - Volume 2C – A Non-Technical Summary of the ES;
- Volume 3 - Statement of Community Involvement.

[1] "Preferred Area 1", and illustrated on Inset Map 6 within the Mineral Local Plan

1.5 The Planning Statement supports the planning submission and considers the proposals in the context of relevant planning policies and strategies, and other material considerations, including need.

1.6 The Non-Technical Summary (NTS) has been produced as a separate, standalone document in line with best practice prescribed by IEMA to accompany the planning submission, being a mandatory part of the ES. The purpose of the NTS is to provide, in non-technical language, a brief summary of the likely significant effects that the proposed development would have on the environment.

1.7 Finally the Statement of Community Involvement provides a summary of the consultation undertaken by the applicant and the feedback received.

The Site

1.8 Land to which the planning application relates (referred to as "*the application site*") is located on the north-western edge of Hatfield and to the east of St Albans on land associated with the former Hatfield Aerodrome. It lies within an area bounded by the A1057 (Hatfield Road/St Albans Road) to the south, Oaklands Lane to the west, Coopers Green Lane to the north and the western fringe of Hatfield to the east.

1.9 The application site covers an area of around 87.1ha and comprises the southern part of the former aerodrome.

1.10 Chapter 2 within this Volume provides further information on the application site and its environs.

The Proposed Development

1.11 The applicant is submitting a planning application for the establishment of a new quarry on land at the former Hatfield Aerodrome, being part of the allocated site referred to in the extant Minerals Local Plan ("*Preferred Area 1*", and illustrated on Inset Map 6 - refer to Chapter 2 above and 4 below for further information). The proposals would involve the winning and working, together with processing for sale, of some 8Mt of sand and gravel over a period of around 30 years (based on an annual output of around 250,000tpa). In parallel with the extraction of minerals would be the importation of low permeability inert material to infill the mineral workings to facilitate the restoration of the site to a beneficial after use, combining recreation and nature conservation. The imported material would typically comprise excavation wastes from construction and engineering projects (soils, overburden, clays etc.) within the region.

1.12 The quarry would be worked on a phased basis to allow for progressive restoration. Sand and gravel would be worked from two discrete horizons; the Upper Mineral Horizon ('UMH'), which lies predominantly above the water table, would be worked dry whilst the Lower Mineral Horizon ('LMH') would be worked wet (i.e. limited dewatering of the workings). Above the UMH is a

clayey material (referred to as 'overburden') on top of which is the soil horizon. The two mineral horizons are separated by a laterally continuous layer of boulder clay (referred to as 'interburden'): the overburden and interburden would be used to control groundwater ingress and to infill the base of the workings to provide a suitable low permeability geological barrier on top of which the imported material would be placed.

1.13 Excavated material would be processed at the quarry using a combination of screening and washing plant to produce a range of graded aggregates and sands. Processed aggregates would either be dispatched from the site in HGVs or used in ancillary 'downstream' plant (a 'concrete batching plant') located within the plant site for the production of concrete. Processed aggregates and concrete (together with the import of cement) would be exported via a new access constructed onto the A1057 (Hatfield Road) on the southern side of the quarry.

1.14 Other ancillary development would include two weighbridges with attendant office, office/welfare accommodation, substation and electrical switch-room, and small stores and maintenance building, fresh water and silt lagoons.

1.15 Chapter 3 of this Volume provides more details of the planning application.

The Applicant

1.16 Brett Aggregates Limited (BAL) is the wholly owned subsidiary company of Robert Brett and Sons Limited (Brett), the Canterbury based aggregates, building materials and civil engineering independent business which was established over a century ago. It is the largest independent producer of sand and gravel in the UK.

1.17 BAL manages all of Brett's quarry, marine dredged aggregate, recycled aggregates and coated stone operations and serves Kent, Sussex, Surrey, Berkshire, Buckinghamshire, Hertfordshire, Essex, Suffolk and London. Its operations in Surrey and the west London area, in general, are currently controlled from its regional office at Shepperton.

1.18 BAL has an enviable record of operating and restoring its quarries of which it is justifiably proud. It has achieved far more awards for the quality of its work, than any other independent company in the industry. In all, it has won over 50 awards, not only made by quarry industry associations in this country but also by European bodies concerned with care for the environment.

1.19 BAL operates an integrated management system, certified to ISO 14001; BES 6001; and ISO 9001 at each of its sites and the proposed operations at Hatfield Aerodrome (should planning permission be granted) would be integrated into the system.

1.20 Further information about the applicant can be found on their website, www.brett.co.uk.

ENVIRONMENTAL IMPACT ASSESSMENT

1.21 EIA is an important procedure for ensuring that the likely effects of a new development on the environment are fully understood and taken into account before the development is allowed to proceed. The term EIA describes a procedure that must be followed for certain types of development before they can be given 'development consent' which in the UK includes the grant of a planning permission. The procedure is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects.

Statutory Background

European Context

1.22 The Environmental Impact Assessment Directive (the 'EIA Directive') requires that, before granting 'development consent' for projects, including development proposals, authorities should carry out a procedure known as environmental impact assessment of any project which is likely to have significant effects on the environment. The aim of the EIA Directive is to ensure that the authority giving consent for a project makes its' decision in the knowledge of any likely significant effects on the environment. The first EIA Directive (85/337/EEC) came into force in 1988. An amended Directive (97/11/EC) came into force on 14 March 1999. This extended the range of development to which the Directive applies and made some small changes to EIA procedures. The Directive was further amended in 2003 by Directive 2003/35/EC which strengthened the requirements within the EIA procedures for public consultation and participation and in 2009 by Directive 2009/31/EC by adding projects related to the transport, capture and storage of carbon dioxide (CO_2). The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. As a result of a review process, on 26 October 2012, the Commission adopted a proposal for a revised Directive. The newly amended EIA Directive (2014/52/EU) came into force on 15 May 2014 to simplify the rules for assessing the potential effects of projects on the environment. This Directive needs to be adopted by the Member States before 2017 and thus is unlikely to affect the planning application.

National Context

1.23 The EIA Directive has been implemented by regulations for development proposals under the Town and Country Planning Act 1990 (the 1990 Act). The current regulations are the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (the 'EIA Regulations').

1.24 The EIA Regulations specify certain types of development for which EIA is mandatory (Schedule 1 projects), and categories of development where an EIA may be required (Schedule 2 projects) dependent upon the likely significance of the impacts. In connection with the proposals for Hatfield Aerodrome, the proposals fall within the scope of Schedule 1 development as

it comprises a *'quarry where the surface of the site exceeded 25 hectares'* (Paragraph 19 of Schedule 1).

The Environmental Statement

1.25 An ES is a report of an EIA that is required to be submitted with a planning application for major and other developments that are likely to have significant impacts on the environment. It evaluates the likely environmental impacts of the development, together with an assessment of how the severity of the impacts could be reduced.

1.26 The EIA Regulations define an ES as a statement:

> "*that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile, but includes at least the information referred to in Part II of Schedule 4.*"

Context

1.27 There is no prescribed format for an ES, provided that the requirements of the EIA Regulations are met.

1.28 Regulation 2(1) and the associated Schedule 4 of the EIA Regulations set out the requirements regarding the content of an ES. For ease of reference, the table below sets out the requirements and highlights the section of the ES in which it is addressed. Referring to paragraph 1.26 above, an ES must contain the information in Part II.

Table 1-1
Document Overview

EIA Requirement	Location in ES where addressed
Part 1	
1) *Description of the development, including in particular:* a) *A description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;* b) *A description of the main characteristics of the production processed, for instance, nature and quantity of materials used;* c) *An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, head radiation etc.) resulting from the operation of the proposed development*	Included within Chapters 1&2 in relation to a description of the development. Chapter 3 in relation to the proposed working scheme.
2) An outline of the main alternatives studied by	Chapter 5 offers a series of alternatives.

EIA Requirement	Location in ES where addressed
the applicant or appellant and an indication of the main reasons for his choice taking into account the environmental effects.	
3) A descriptions of the aspects of the environment likely to be significantly affected by the proposed development, including, in particular, population, flora, fauna, soil, water, air, climatic factors, material assets including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.	These aspects are included within their appropriate sections of the ES, namely; • Chapter 6 Water Environment (Hydrology and Hydrogeology) • Chapter 7 Highways and Transportation • Chapter 8 Landscape and Visual Impact • Chapter 9 Air Quality • Chapter 10 Noise • Chapter 11 Ecology • Chapter 12 Cultural Heritage • Chapter 13 Cumulative Impacts
4) A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative short, medium and long-term, permanent and temporary, positive and negative effects of the development resulting from: a) The existence of the development b) Use of natural resources c) The emissions of pollutants, the creation of nuisances and the elimination of waste, and the description of the measures by the applicant of the forecasting methods used to assess the effects of the environment.	Included within Chapters 6 to 13 as noted above.
5) A description of the measures envisaged to prevent, reduce and where possible, offset any significant adverse effects on the environment.	Included within relevant Chapters as above
6) A non-technical summary of the information provided under paragraphs 1-5 of this Part .	A non-technical summary has been provided as a separate, standalone document. (Volume 2C of the ES)
7) An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.	As noted in this chapter, no technical difficulties were encountered in carrying out any of the assessments
Part II	
1) A description of the development comprising information on the site, design and size of the development.	This is provided in Chapter 2
2) A description of the measures envisaged in order to avoid, reduce and, if possible remedy significant adverse effects.	Included within Chapters 6 to 13
3) The data required to identify and assess the main effects which the development is likely to have on the environment.	Included within Chapters 6 to 13
4) An outline of the main alternatives studies by the applicant or appellant and an indication of the main reasons for his choice, taking into account environmental effects	This is discussed in Chapter 5.
5) A non-technical summary of the information provided under paragraphs 1-4 of this Part.	A non-technical summary has been provided as a separate, standalone document (Volume 2C)

Scoping

1.29 The EIA Regulations require consideration of the likely significant environmental effects of a development proposal. However, the EIA Regulations and associated guidance need to be capable of being applied to all forms of development, and not purely mineral developments. Each development proposal is unique, and the potential impacts associated with one site may not be the same as another. Consequently, it is not always necessary to address all the areas identified in the Regulations in the same amount of detail. It is therefore important to clearly identify or 'scope' the main environmental issues, as this allows for more detailed and targeted assessment to be carried out.

1.30 The applicant has carried out a formal scoping exercise, commencing with an internal scoping appraisal undertaken by SLR to establish the likely significant environmental effects. This was set out in the 'Scoping Report' submitted to the MPA in July 2015, which described the proposed scope of the EIA, and was accompanied by a request for a 'Scoping Opinion'. The Scoping Report is attached as Appendix 1/1.

1.31 Regulation 13 of the EIA Regulations, places a duty on the planning authority, if requested, to give their opinion (known as a 'Scoping Opinion') in writing to the applicant on the information to be provided in the ES. The MPA issued their Scoping Opinion on 19 November 2015, attached as Appendix 1/2.

1.32 In accordance with Regulation 15 of the EIA Regulations, the MPA consulted key statutory consultees and made their responses and advice available to the applicant to assist with the preparation of the EIA.

1.33 The EIA and attendant ES have, therefore, been prepared having regard to the MPA's Scoping Opinion, the scoping appraisal, and the advice received during these, and subsequent, consultation discussions.

1.34 Finally, the assessments of environmental effects (see Chapters 6 to 13) have been undertaken using guidance and professional standards relevant to the individual topic area, and are separately referenced in the appropriate chapter.

Assessment Procedures

1.35 The EIA has identified a range of potential environmental issues, many of which vary in terms of the stage in which they occur within the life cycle of the development and the length of time over which they are significant. The life cycle of the development can be divided into three phases; namely the "*Construction*", "*Operational*" and "*Decommissioning*" ("*Restoration*") Phases.

Phase	Duration
Construction	This would cover the initial site preparation works, including stripping of soils, installation of processing plant, excavation of lagoons and erection of peripheral screen bunds. This phase would be approximately 12 to 18 months in duration
Operational	This would cover the operation of the quarry over a period of around 30 years.
Restoration	This would cover the period following mineral extraction and include the removal of the processing plant and the final restoration works within the extraction area. As the workings would be progressively restored, the final restoration works would be completed within c. 24 months of the cessation of mineral processing operations. Following completion of the restoration works a period of aftercare management would ensue.

1.36 Identified impacts can have differing durations, and the EIA has generally classified impacts into three timeframes; short term, medium term and long-term.

Timeframe	Description
Short Term	Typically being from a few months up to three years in duration.
Medium Term	This would cover a period of around three to ten years.
Long Term	This would cover a period in excess of ten years.

1.37 Notwithstanding this, assessments that have been carried out as part of the EIA may use different definitions for these timescales. Where this is the case, they are clearly outlined in the respective chapter.

1.38 Identified effects can be temporary or permanent; direct or indirect; and positive or negative.

Temporary/Permanent Effects

1.39 In relation to the different time frames above, some of the effects would be temporary, for example, erection of the plant, quarrying, processing and restoration operations (including the infilling with inert materials), whilst others would be permanent, such as the impact of the new landform on the landscape.

Direct/Indirect Effects

1.40 The proposed development could potentially have direct effects upon nearby properties and settlements, together with the environment as a whole in

relation to emissions of noise and dust. Indirect impacts can also occur such as those relating to the transportation of minerals.

Positive/Negative Effects

1.41 The proposed development could generate both negative effects and positive benefits, either by virtue of the proposals themselves or as a result of the mitigation measures proposed.

Cumulative Impacts

1.42 Cumulative impacts can be described[2] as those caused by the sum of the project's impacts on the environmental components, and/or the project's impact when combined with those of other past, present or future projects. Cumulative impacts can be;

- additive, aggregative or "nibbling", namely the simple sum of all the impacts;
- synergistic, where impacts interact to produce an impact greater than the sum of the individual impact; and
- neutralising or antagonistic impact, where the impacts counteract each other, reducing the overall impact.

1.43 Such cumulative impacts have been addressed in each of the respective chapters within the ES. However, there is also the potential for unrelated impacts, which in themselves are not significant, to collectively generate an overall impact that is unacceptable. For example, the sum of minor impacts on noise, odour and traffic could potentially produce an overall significant impact.

1.44 The various impacts are assessed individually within their respective chapters and then collectively in Chapter 13 of this ES.

Depth of Assessment

1.45 As noted earlier, a formal 'scoping' exercise was conducted by SLR Consulting in July 2015. The purpose of this exercise was to provide Hertfordshire County Council with sufficient information to enable them, along with other consultees, to set out the scope of the various assessments that make up an EIA.

1.46 A fundamental aspect of any EIA is to determine the baseline environmental conditions prevailing at the application site, both now, and how they may change over time. These form the benchmark against which predicted changes resulting from the proposed development can be assessed to determine the magnitude of any impact.

[2] Methods of Environmental Impact Assessment. P. Morris and R. Therivel. UCL Press, 2000

1.47 The baseline conditions have been determined by a number of different methods, including desktop research, analytical modelling and the acquisition of data from third party sources.

1.48 Methodologies for predicting the nature and magnitude of any potential environmental impacts are entirely dependent on the subject area. Quantitative methods of assessments are employed to predict values which can be compared against published thresholds and indicative data contained within Government guidance and standards. However, it is not always possible to ascribe quantitative values to environmental assessments and, in these instances, qualitative assessments are used. This type of assessment is largely subjective and therefore relies on previous experience and professional judgement to arrive at a sound conclusion.

1.49 If significant environmental impacts are predicted during the EIA process, then the ES describes the measures which would need to be implemented in order to mitigate any potentially negative impacts. The EIA process is iterative, and therefore a wide range of mitigation measures can be suggested, including changes to operational practice.

Technical Difficulties

1.50 In general, no technical difficulties were encountered when undertaking the EIA. In considering the potential impacts of the proposals on nearby properties, it should be noted that observations and measurements were generally made from public areas (such as rights of way and highways). It is considered that this has not prevented the accurate assessment of potential environmental impacts or the identification of appropriate mitigation measures.

Planning and Pollution Control

1.51 Government advice on planning makes it clear that it is important to avoid unnecessary or confusing duplication. For example, Paragraph 122 of the National Planning Policy Framework (NPPF) states that *"…local planning authorities should focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes. Local planning authorities should assume that these regimes will operate effectively*."

1.52 In addition, paragraph 7 (fifth bullet point) of the National Planning Policy for Waste[3] states:

> *"When determining waste planning applications, waste planning authorities should: …*
>
> - *concern themselves with implementing the planning strategy in the Local Plan and not with the control of processes which are a matter*

[3] National Planning Policy for Waste, DCLG. October 2014

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".

1.53 The proposals for the importation of inert fill material would be governed by an Environmental Permit issued by the Environment Agency in addition to a planning permission. The Environmental Permit will contain a number of conditions intended to regulate the day to day management of the site with the aim of minimising the effect of the operation on the environment; it will also contain conditions regulating site management and monitoring.

The Submission and its Structure

1.54 The first section of this ES provides an overview of the submission and the regulatory framework in which it sits. Subsequent sections of the ES provide a description of the application site; describe the development proposals; set out the relevant planning policy considerations and alternatives considered as part of the EIA; and then provide individual and cumulative analysis and evaluation of the likely significant effects of the development on the human and natural environment. Where potential environmental impacts are identified, mitigation strategies are secured against the impact and residual impacts are assessed. As such, the ES is intended to provide the MPA with sufficient information to determine the planning application having due regard to the protection of local amenity and the environment as a whole.

1.55 This document is organised and presented in the following way;

Background Information (Chapters 1-5) – This part of the ES is descriptive in nature. It provides the reader with an overview of the application site and its surrounding environs alongside a description of the development for which planning permission is being sought. Finally, the relevant planning policies at both a local and national level are outlined and alternatives to the proposed development are considered.

Environmental Assessments (Chapters 6-13) – For each environmental topic, a package of relevant background information and data is provided and the potential impacts are considered. Where appropriate, mitigation measures are suggested and any residual impacts are considered. Taking into consideration the results of the scoping exercise, the following environmental assessments have been undertaken;

Chapter 6 Water Environment (Hydrology and Hydrogeology)
Chapter 7 Transport
Chapter 8 Landscape and Visual Impact
Chapter 9 Air Quality
Chapter 10 Noise
Chapter 11 Ecology
Chapter 12 Cultural Heritage
Chapter 13 Cumulative Impacts

Project Team

1.56 SLR is a multi-disciplinary environmental consultancy to *inter alia* the minerals, energy and waste management industries, and also provides advice to local authorities and the Environment Agency on strategic issues. SLR is a registered Environmental Impact Assessor Member of the Institute of Environmental Management and Assessment (IEMA) and has secured the EIA Quality Mark awarded by IEMA.

1.57 In preparing this submission package, SLR has drawn upon the expertise of an in-house team of specialists comprising planners, landscape architects and environmental scientists for the majority of the technical assessments. SLR has also worked with Dominic Woodfield (of Bioscan (UK) Limited) in connection with the ecological assessment and Andrew Josephs (of Andrew Josephs Associates) who has produced the cultural heritage assessment. SLR has also worked closely with the management teams and technical staff of Brett Aggregates Limited, as part of an iterative process, to ensure that the proposed development is practical, feasible and optimises environmental protection.

Publication

1.58 Paper copies of the ES can be obtained from SLR Consulting Ltd at the following address:

Aspect House
Aspect Business Park
Bennerley Road
Nottingham
NG6 8WR

1.59 The ES, along with the other Volumes to the submission, is available in both paper and CD-ROM format, for which a charge of £250 and £25 is applicable respectively. A copy of the NTS is available free of charge on request. In addition, the application documents will also be available to download from the Hertfordshire County Council website.