Hindlow Lime Works

Town and Country Planning Act 1990

Planning application for a new Combined Heat and Power (CHP) Plant

Lhoist UK Limited

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CONTENTS

1.0 INTRODUCTION

1.1 This document comprises a Planning Statement and has been prepared by SLR Consulting Limited ('SLR') on behalf of Lhoist UK Limited (the 'applicant'). This statement is being submitted to Derbyshire County Council (as Mineral Planning Authority, 'MPA') in support of a planning application in respect of land at Hindlow Lime Works, near Buxton, Derbyshire. The planning application is for the installation and operation of a combined heat and power ('CHP') plant which would generate both electrical and thermal energy through the combustion of natural gas.

1.2 This statement aims to provide Derbyshire County Council and consultees with sufficient information to allow the planning application to be determined.

Application Submission Package

1.3 The full submission comprises:

- Statutory planning application forms and certificates; and
- Planning Statement (text, appendices and associated drawings).

1.4 Section 42 of the Planning and Compulsory Purchase Act 2004 substituted a new Section 62 of the Town and Country Planning Act 1990 and amended Section 10 of the Listed Buildings Act so as to provide that a statement covering design concepts and principles and access issues is submitted with an application for planning permission and listed building consent. Section 42 also inserted a new Section 327A into the 1990 Act, which prohibits, among other things, a local planning authority from entertaining an application unless it is accompanied by a design statement and an access statement, where required.

1.5 Under the provisions of Paragraph 9(4)(c) of the General Development Procedure Order (2015) a Design and Access Statement is not necessary for "*engineering or mining operations"*. Accordingly, as the proposals relate to the installation of plant and machinery within a mineral site it is considered that such a statement is not required. Moreover, the proposed CHP plant comprises standard 'off the shelf' engineered components for which there are no alternative design options appropriate.

The Site

1.6 The Hindlow Lime Works (the 'lime works') lies within a predominantly rural part of Derbyshire approximately 5km to the southeast of Buxton, and 13km west of Bakewell (measured centre to centre). At a more local scale, the lime works is located 2.9km south east of Harpur Hill, 2.8km south west of Chelmorton and 4km north of Longnor, again being measured centre to centre. The lime works comprises the kilns, processing plant and bagging plant associated with the manufacture of lime products, together with administrative offices. To the southeast and east of the lime works are the limestone quarry workings (two areas separated by an east-west orientated railway line) and associated quarry processing plant.

1.7 For identification purposes the lime works is centred on National Grid Reference SK 08708 69042.

1.8 The proposed CHP plant would be located close to the eastern edge of the lime works, to the south of a railway line and adjacent to the 'Sorbacal' Plant.

1.9 Further details of the lime works and the application site are set out in Section 2 below

The Planning Application

1.10 As noted above, planning permission is sought for the installation and operation of a combined heat and power (CHP) plant. The CHP plant would comprise a 2MW gas engine housed within an acoustically insulated steel ISO container. To the roof of the container would be a radiator unit, exhaust silencer and air outlet attenuator.

1.11 Ancillary to the plant would be pipework and heat exchangers associated with the heat offtake, a flue stack, an air inlet filter and fan and two double skinned oil tanks. Allied to this would be gas and electrical connections between the proposed CHP plant and the relevant utility mains.

1.12 Further details of the proposed development are set out in Section 3 below.

The Applicant

1.13 The applicant, Lhoist UK Limited, is part of Lhoist Group which was founded in 1889 in Belgium by Hippolite Dumont.

1.14 In just over a century, the Group has spread internationally: first to France in 1926 where the company was developed by acquiring lime, limestone and dolimite plants. In the eighties, the Group developed into markets within the United States whilst the nineties saw expansion across Western and Eastern Europe, in Germany and Scandinavia. More recently, the Group expanded across Southern Europe to Brazil and progressively to Asia.

1.15 The Group has become a world leading producer of lime, dolime and minerals. It continues to grow through acquisition and entry into new territories. With a focus on existing and emerging customer needs, the Group also invests in new facilities and the development of our portfolio of innovative products and solutions.

1.16 Lhoist now operates more than 90 manufacturing plants in 25 countries and has close to 6,000 employees of around 40 nationalities.

1.17 The applicant produces and delivers high quality lime based products to both UK and international customers from two production sites in UK:

- the main production site is at Brierlow (Hindlow) Quarry, Buxton, Derbyshire (which is subject to this planning application); and
- a satellite hydration plant in Hartley Quarry near Kirkby Stephen, Cumbria.

1.18 Further details about the applicant can be found on the web site:

http://www.lhoist.com/

Project Team

1.19 This Planning Statement has been prepared by SLR. SLR is a multi-disciplinary environmental consultant to *inter alia* the minerals and mining sector, and also

provides advice to local authorities and the Environment Agency on strategic issues[1]. SLR is a registered Environmental Impact Assessor Member of the Institute of Environmental Management and Assessment (IEMA) and has achieved the EIA Quality Mark awarded by IEMA.

1.20 In preparing this planning application and statement, SLR has drawn upon the expertise of an in-house team of specialists including planners, air quality and acoustic specialists. SLR has also worked closely with the management teams and technical staff of Lhoist, in a detailed and iterative process, to ensure that the development is feasible as well as optimising environmental protection.

Publication

1.21 Paper copies of the Planning Statement can be obtained from SLR Consulting Limited at the following address:

Aspect House
Aspect Business Park
Bennerley Road
Nottingham
NG6 8WR

1.22 The Planning Statement is available in both paper and CD Rom formats, for which a charge of £80 and £25 is applicable respectively. The application documents will also be available to download from Derbyshire County Council's web site.

[1] Further details regarding SLR Consulting Limited can be found on its web site www.slrconsulting.com

2.0 THE SITE

Introduction

2.1 This section describes the application site and its immediate environs.

Location

2.2 The Hindlow Lime Works (the lime works) lies within a predominantly rural part of Derbyshire approximately 5km to the southeast of Buxton, and 13km west of Bakewell (measured centre to centre). At a more local scale, the lime works is located 2.9km south east of Harpur Hill, 2.8km south west of Chelmorton and 4km north of Longnor, again being measured centre to centre. In terms of local government and administration, the lime works is situated within the County of Derbyshire and the District of High Peak.

2.3 The proposed CHP plant would be located close to the eastern edge of the lime works, to the south of a railway line and adjacent to the 'Sorbacal' Plant.

2.4 For identification purposes the lime works is centred on National Grid Reference SK 08708 69042, whilst the application site is centred on NGR SK 08790 69058. **Drawing HW 2/1** shows the location of the lime works (along with other land controlled by the applicant and the approximate location of the proposed CHP plant). **Drawing HW 2/2** shows the application site in greater detail.

Site Description

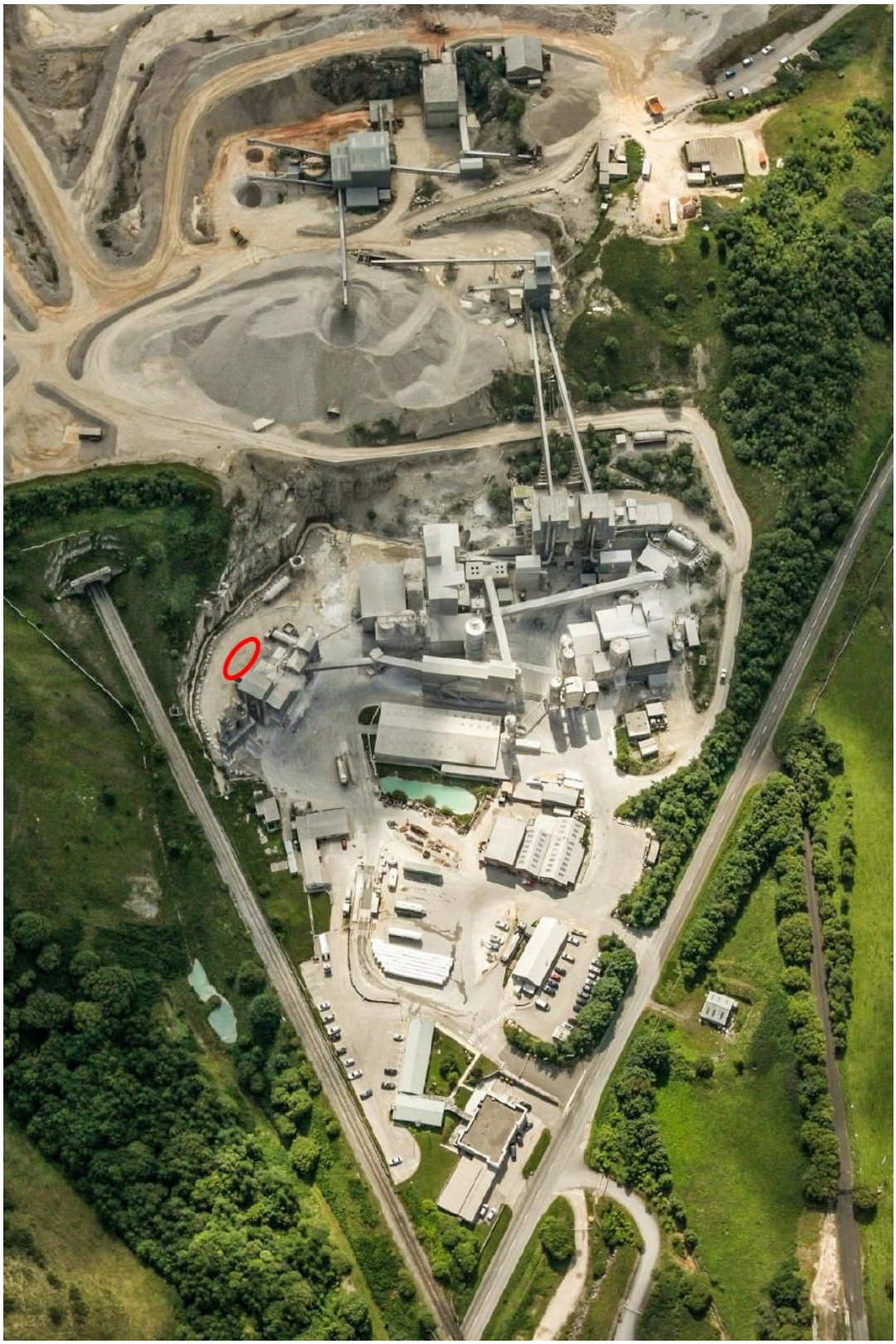
2.5 The lime works forms part of the overall operations at Hindlow Quarry (also known as Brierlow Quarry). The lime works is within a triangular parcel of land bounded by the B5053 to the west, a railway line to the north and quarry workings to the southeast. Within this area are the lime kilns, processing plant (including hydrate plant, grinding plant, 'Sorbacal' plant and bagging plant) associated with the manufacture and packaging of lime products, together with administrative offices and other ancillary facilities (such as workshop, lab, weighbridges, wheel wash and parking areas).

2.6 To the southeast and east of the lime works are the limestone quarry workings. There are two quarry areas separated by the railway line (which is in a tunnel; the Hindlow Tunnel). Within the southern quarry area is the limestone processing plant, comprising *inter alia* primary and secondary crushers, washing plant and stone handling plant; also within this area are the quarry offices and parking areas for plant and machinery. Flanking the northwestern edge of the northern quarry workings is the quarry tip. A screening bund together with landscaping (mature advance tree planting) is present around much of the quarry workings which in combination with the rolling landscape context, generally screens the extraction operations from view of the surrounding area. Mature planting also exists along the roadside frontage of the B5053 (Buxton Road) on the western edge of the lime works.

2.7 The proposed CHP plant would be located on a flat area of land within the eastern part of the lime works, close to the eastern edge of the works (which is formed by a limestone face); south of the railway line and immediately adjacent to the Sorbacal plant. The area, which is rectangular in shape, measures approximately 20m by

15m, giving an area of 300m^2 (or 0.03 hectares). The location is illustrated in Figure 2-1 with the approximate location of the CHP plant shown by the red ellipse.

Figure 2-1
Site Location



Topography

2.8 The lime works (and as a consequence the applications site) is situated at an elevation of between 365m AOD and 370m AOD.

2.9 Undisturbed land in the north of the quarry workings site rises from 330m AOD to 380m AOD before dropping down to the base of the northern extraction bowl to 360m AOD. Clay (filter cake) arising as a by-product of the mineral washing process is stored in an area known as the Northern Tip, located in the northwest of the quarry workings (and along the western side of the northern extraction bowl). The top of this steep sided stockpile of material is currently 400m AOD.

2.10 The northern and southern extraction bowls are separated by a strip of unworked land overlying the Hindlow railway tunnel. The top level of the ridge is at a similar level to the surrounding unworked land at 390m AOD.

2.11 The plant site located within the western boundary of the southern quarry working is located at a ground level of around 400m AOD.

Access

2.12 The main entrance to the lime works is located off the B5053 (Buxton Road) approximately 640m to the south of the junction with the A515; separate access is provided for ingress and egress, with the entrance located approximately 50m to the north of the exit. A further access is present approximately 350m south of the main entrance, providing a secondary point of access to the quarry (for occasional deliveries of plant and equipment and providing direct access to the quarry floor). The visitor car park is situated immediately to the north of the main entrance adjacent to the offices, with its own access.

2.13 The B5053 provides a link to Buxton from Leek via the A53 and the B5055 (Leek Road). The B5053 is also linked to the A515. At this point, the B5053 changes direction and heads north-west through the villages around Harpur Hill before rejoining the A515 at 1km from the centre of Buxton.

2.14 The A515 provides access to Ashbourne and Buxton and borders the north-eastern side of the review Site. A5270 (Old Coal Pit Lane) extends north from A515, by Brierlow Bar Farm, just north of the lime works.

Land Use

2.15 The application site lies within the operational plant area of the lime works and thus has an established mineral/industrial land use.

2.16 As described briefly above, the lime works is located within a rural area of Derbyshire, but outside the boundary of the Peak District National Park. The surrounding area comprises of agricultural land mainly put to use for grazing of livestock rather than arable. Field units in this area are relatively large and boundaries are marked by stone walls.

2.17 The area is relatively open with small woodland coppices scattered throughout the surrounding area. Built development is limited to small clusters of dwellings and farmsteads owing to the rural nature of the area.

2.18 A number of large limestone quarries are present in the surrounding area.

2.19 A network of public footpaths and bridleways provide access through the countryside in the surrounding area. A number of prominent public rights of way are present including the High Peak Trail, Pennine Bridleway and the Midshires Way which are located approximately 1.5km to the north and east of the quarry workings.

2.20 A number of caravan and campsites, mainly based at farmsteads are located in the surrounding area.

Sensitive Receptors

Dwellings

2.21 The nearest properties to the lime works are:

- No.2 Fiveways at 660m north of the proposed CHP plant;
- Brierlow Bar Farm (on the northern side of the A515) is 825m north of the proposed CHP plant;
- Brierlow Grange was located 780m to the east of the proposed CHP plant at its nearest point however this property has now been demolished;
- Harley Grange located 1.2km to the southwest of the proposed CHP plant
- A number of residential properties are located along Sterndale Moor 1.2m east of the proposed CHP plant; and
- Jericho Farm located 1.4 km to the south of the proposed CHP plant.

Ecological Designations

2.22 Table 2-1 below (which has been taken from Chapter 9 of the Environmental Statement produced for the Review under the Environment Act 1995) sets out the ecological designations in the vicinity of the lime works.

Table 2-1
Ecological Designations

Designation	Site Name	Location at closest point[2]	Reason for Designation
Special Area of Conservation	Peak District Dales SAC[3] (Deepdale SSSI is included within this SAC designation and is the only component site within 2km)	500m to the north-east of quarry workings	2326ha of limestone dale habitat in Staffordshire and Derbyshire. Habitat assemblages include, but not restricted to: dry heathland, calcareous grassland, alkaline fens and ash-dominated (Tilio-Acerion) woodland.
SSSI and NNR	Topley Pike and Deepdale SSSI. (This site is also part of the 385 ha Derbyshire Dales NNR)	500m to the north-east of quarry workings	50ha. Notified due to geological interest and the assemblage of species-rich grasslands and ash-dominated woodland and scrub habitats.
	Crome and Parkhouse Hills SSSI	1.5km south-west of quarry workings	Steep hills of reef limestone with distinctive calcicolous flora.
County/ Regional Sites – LWS and	Brierlow Quarry Grassland and verges LWS (Ref: HP006)	Within quarry workings to	2.16ha. Unimproved calcareous grassland

[2] Approximate distance from the boundary of the quarry/works site.

[3] http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUcode=UK0019859

Designation	Site Name	Location at closest point[2]	Reason for Designation
RIGS		south	
	Hindlow Grassland and road Verge LWS (HP007)	Adjacent to west boundary of quarry workings	5.06ha. Unimproved calcareous grassland
	Brierlow Grange Meadow Site LWS (HP009)	500m east of quarry workings	0.085ha. Unimproved calcareous grassland
	Moorland Complex LWS (HP010)	within quarry workings	0.735ha. Unimproved calcareous grassland

Heritage Designations

2.23 There are no statutorily protected heritage designations within the lime works or any entries on the local HER. Within 1km of the lime works is one listed building (Harley Grange, Grade II, Reference 1087899). Within 2km of the lime works is one scheduled monument (Dowel Cave, reference 1011923) and a further seven listed buildings (all Grade II).

2.24 The Scheduled monument comprises a cave with prehistoric to Roman activity. Listed buildings are widely distributed within area in isolated locations and with a small cluster at Earl Sterndale. These are mainly grade II farmhouses, agricultural buildings, houses and churches. They are mainly of 18th and 19th century date.

3.0 THE PROPOSED DEVELOPMENT

Introduction

3.1 This section provides a description of the development for which planning permission is sought

Overview

3.2 As set out in Section 1, planning permission is being sought for the installation and operation of a combined heat and power (CHP) plant. The CHP plant would comprise a 2MW gas engine housed within an acoustically insulated steel ISO container. To the roof of the container would be a radiator unit, exhaust silencer and air outlet attenuator.

3.3 Ancillary to the plant would be:

- pipework and heat exchangers associated with the heat offtake;
- a 10m high flue stack;
- air inlet filter and fan;
- two double skinned tanks; and
- gas and electrical connections to the relevant utility apparatus.

The Proposed CHP Plant

Design

3.4 The overall layout of the CHP plant is shown on **Clarke Energy Drawing C3447-GA-001**. The facility fundamentally comprises a single engine unit along with the ancillary pipework, heat exchangers, flue stack and tanks. The engine unit and associated infrastructure would be sited on a reinforced concrete slabs.

3.5 The proposed CHP plant would comprise a standard engine which uses natural gas as a fuel to generate electricity. The engine (a Jenbacher J612, nominally rated at 2MW) would be housed within a steel container measuring 17m by 4m in plan and 3.75m in height. On top of the roof of the container would be a radiator unit, engine exhaust silencer and an air outlet attenuator. The air outlet attenuator would add a further 3.75m to the height of the CHP plant (making the total height around 7m); both the exhaust silencer and radiator would be lower in height.

3.6 There would be a number of doors to the container; three to the eastern façade and four to the western.

3.7 Between the CHP engine/container and the Sorbacal plant would be the ancillary pipework, heat exchangers etc. A pipe would lead off the exhaust silencer and connect with a heat exchanger and flue stack; the latter would be 10m in height. To the north of the heat exchangers would be the air intake filter, transition duct and an inlet fan from which would be a pipe leading to the heat exchangers. Between the air intake filter and the CHP engine would be two double skinned 5000 litre tanks; one tank would store clean lube oil whilst the other would contain waste lube oil.

3.8 **Clarke Energy Drawing C3447-GA-002** shows the elevations of the CHP plan, whist **Clarke Energy Drawing C3447-GA-003** an isometric view of the plant.

Operation

3.9 Natural gas is burnt in the cylinders of the engine, the force from which turns a crank shaft within the engine. The crank shaft turns an alternator which results in the generation of electricity. Heat from the combustion process is released from the cylinders. This must be either recovered and used in a combined heat and power configuration or dissipated via dump radiators located close to the engine, typically on the roof. Finally advanced control systems facilitate the robust performance of the generator.

3.10 Combined heat and power (CHP) is the simultaneous production of electricity with the recovery and utilisation waste heat. It is a highly efficient form of energy conversion that can generate overall plant efficiencies of more than 90%. The efficient form energy conversion can achieve primary energy savings of approximately 40% by compared to the separate purchase of electricity from the national electricity grid and a gas boiler for onsite heating[4]. Combined heat and power plants are typically embedded close to the end user and therefore help reduce transportation and distribution losses, improving the overall performance of the electricity transmission and distribution network.

3.11 The basic structure of a CHP system consists of an engine/generator unit and heat exchangers for the utilization of waste heat. The heat from the generator is available in from 5 key areas:

1. Engine jacket cooling water
2. Engine lubrication oil cooling
3. First stage air intake intercooler
4. Engine exhaust gases
5. Engine generator radiated heat, second stage intercooler

3.12 Areas 1, 2 and 3 are recoverable in the form of hot water, typically on a 70/90˚C flow return basis and can be interfaced with the site at a plate heat exchanger.

3.13 The engine exhaust gases typically leave the engine at between 400 and 500˚C. This can be used directly for drying, in a waste heat boiler to generate steam, or via an exhaust gas heat exchanger combining with the heat from the cooling circuits. The heat from the second stage intercooler (5 above) is also available for recovery as a lower grade heat.

3.14 With the proposed CHP plant heat recovered from the engine jacket, lube oil and intercooler circuits would generate around $1MW_{th}$ of energy. The engine exhaust would be connected to an exhaust /air heat exchanger to heat the intake air of the existing plant within the adjacent Sorbacal plant.

Hours of Operation

3.15 The CHP plant would operate on a continuous basis 24 hours per day, seven days per week. Notwithstanding this, the plant would be periodically shut down for routine maintenance.

[4] https://www.clarke-energy.com/chp-cogeneration/

Rationale

3.16 The applicant is investing in new sustainable (green) technology. The rationale for the installation of the proposed CHP plant is to provide a greater security over energy supplies to the lime works whilst also reducing the cost of electricity. Allied to this, the use of the waste heat from the CHP process in the lime production process also reduces production costs, whilst at the same time reduces carbon emissions associated with the operation, thereby reducing the operations carbon footprint. Finally, surplus electricity can be supplied back into the national grid for use by the UK market.

4.0 ENVIRONMENTAL CONSIDERATIONS

4.1 This section reviews the potential environmental effects that the proposed CHP plant may have on the environment and amenity of local residential properties.

Air Quality

4.2 An assessment has been undertaken to assess the likely effects the operation of the proposed CHP plant would have on air quality. A quantitative assessment has been undertaken to investigate combustion emissions from the proposed CHP and the potential impact on air quality by comparison to environmental quality standards for the protection of human health and ecological conservation sites contained within legislation and regulatory guidance. The findings of the assessment are set out in a technical report included at **Appendix A** to this statement.

4.3 The assessment of emissions leads to the following conclusions:

- the impact at relevant human exposure locations for the NO2 annual mean and 1-hour mean AQALs is of negligible significance according to IAQM significance criteria;
- the impact on NOx Critical Levels at Topley Pike and Deep Dale SSSI Peak District Dales SAC is concluded to result in 'no adverse effect' and impacts on Critical Loads are 'not likely to have a significant effect alone or in combination irrespective of the background levels' according to the impact framework detailed in Environment Agency guidance; and
- the impact on LWSs is predicted to result in '*no significant pollution'* according to the impact framework detailed in Environment Agency guidance

4.4 On this basis the effects on air quality as a result of emissions from the proposed CHP plant are not considered significant.

Noise

4.5 As for air quality, consideration has been given to the potential for the operation of the CHP plant to impact upon local amenity at residential receptors. A quantitative assessment has been undertaken to predict the likely noise levels at the nearest receptors; the findings of the assessment are set out in a technical report included at **Appendix B** to this statement.

4.6 The noise assessment has demonstrated that noise levels from the operation of the CHP plant would be between 1dB(A) and 8dB(A) at the nearest receptors and so would be barely perceptible and well below the background noise levels at those properties. As such it is concluded that the operation of the proposed CHP plant would not have an adverse effect on the amenity of nearby receptors.

Landscape and Visual Impact

4.7 The proposed CHP plant is not located within an area nationally designated for landscape value; the Peak District National Park though lies around 175m to the south of the lime works and 500m to the north. The nearest residential properties lie nearly 660m from the proposed CHP plant.

4.8 Despite the proximity of the national park the proposed CHP plant would not have any impact upon it visually or in landscape character terms. In visual terms, the

proposed plant would be screened from view by virtue of the adjacent Sorbacal plant (which is 24.35m in height and so over twice the height of the proposed plant); adjacent limestone face; and topography/vegetation. As such there would be no direct intervisibility. The same can be said for any of the residential receptors. Even if the plant were visible, it would be seen against a backdrop of other buildings, plant and machinery, which are much larger in scale. Turning to landscape character, the proposed plant would be located in the existing plant site and would not lead to any lateral extension. As such the character of the area would not alter.

4.9 In view of this it is concluded that no significant effects would arise on visual or landscape amenity.

Ecology

4.10 The proposed CHP plant does not lie within any designated area for ecological interest. Similarly, the area to be developed forms part of the current operational plant site and is clear of any vegetation or other habitats.

4.11 It is noted that European/national designated sites exist around 1100m of the proposed CHP plant (refer to Section 2 above). Whilst there would be no direct effects on this (and other) designations in the vicinity of the plant, consideration has been given to any potential indirect impacts upon these designations as part of the air quality assessment (see above).

Water

4.12 The lime works (and adjoining quarry workings) is underlain by Bee Low Limestone. These rocks are very permeable and rainwater quickly infiltrates into them to form groundwater. Because of this property the limestones are classified by the Environment Agency as a ‘Principal Aquifer’, which means that they can store and transmit significant quantities of groundwater and that this water can provide an important water supply and help to maintain water flows in local rivers.

4.13 Because of the permeable nature of the limestones there are very few surface water features within a 2km radius of the lime works. The River Dove runs in a south-easterly direction, approximately 2km to the south of the southern quarry and the River Wye runs in an easterly direction, approximately 3km to the north. The River Dove does not rely on groundwater from the limestones worked at the quarry; however, the River Wye originates from a series of springs in Buxton and flows over the Bee Low Limestones to the north of the site and is almost wholly dependent on groundwater flow from the limestones. The Environment Agency has classified the quality and ecological status of the water courses as ‘moderate’ or ‘good’. The quarry is elevated above the rivers and is not at risk of flooding from them. There are two nature conservation sites near to the quarry that are dependent on water flow; Topley Pike and Deepdale Site of Special Scientific Interest.

4.14 The Environment Agency defines areas, Source Protection Zones (SPZ), around boreholes and springs that are used as major supplies of water. The quarry is not located in an SPZ, although there is a large SPZ to the north west of the site centred on St Anne’s Well in Buxton.

4.15 The floor of the lime works is higher than the level of the water table.

4.16 The proposals would not materially affect either ground or surface water quality as:

- the footprint of the development is very small, covering around 0.03ha;
- the area to be developed forms part of the overall plant site for the lime works;
- any oils would be stored in double skinned tanks in line with relevant guidance. These tanks would be sited on a concrete pad; and
- the engine is enclosed within a steel container, again sited on a concrete pad.

Heritage

4.17 The proposed plant site has been disturbed through the removal of soils/overburden and to a limited extent the underlying mineral. Accordingly the proposals would have no direct effects upon heritage assets (known or unknown). As noted from Section 2, one scheduled monuments exits within 2km of the proposed plant site, along with eight listed buildings. However, in view of the restricted intervisibility due to existing buildings, topography and intervening vegetation, no indirect effects upon these assets are predicted.

Transport

4.18 The majority of vehicle movements into or out of the lime works associated with the development would be in relation to the construction of the proposed CHP plant. This would include concrete truck mixers for the delivery of concrete (for the concrete slabs) and other HGVs associated with the delivery of the plant and associated ancillary equipment. As an operational lime works, these HGV movements would be very small in comparison to the movements associated with the export of lime products and be readily absorbed within the normal day to day fluctuations in vehicle movements. Once operational, vehicle movements would be limited to the delivery of oil, removal of waste oil and for routine maintenance.

5.0 PLANNING POLICY

5.1 It is clear from national legislation and the National Planning Policy Framework (NPPF) that the Government is committed to a plan led system, with the Development Plan forming the basis of all planning decisions. Section 38(6) of the Planning and Compulsory Purchase Act 2004 (PCPA 2004) introduces a presumption in favour of granting planning permissions for proposals which are in accordance with policies in the development plan. Sub Section 5 of Section 38 states that "*if to any extent a policy contained in a development plan for an area conflicts with another policy in the development plan the conflict must be resolved in favour of the policy which is contained in the last document to be adopted, approved or published (as the case may be).*"

5.2 This principle has been developed and clarified by subsequent case law, which has confirmed that a particular proposal does not need to accord with each and every policy in a development plan; the key issue is that it accords with the overall thrust of the development plan policies taken as a whole.

5.3 Planning permission already exists for the wider lime works and associated mineral workings. Accordingly, the concept of establishing built development (buildings, plant and machinery) ancillary to the quarrying operations has been accepted at this location. Allied to this, the proposed CHP plant is ancillary to the existing operations, providing a source of energy. As such, the policy considerations do not need to look at the locational aspects for the development, but focus on the environmental considerations of the proposed plant.

National Planning Policy

5.4 National planning policy guidance is set out in the NPPF. The NPPF is supplemented by the web based Planning Practice Guidance (PPG) which includes specific guidance on Minerals[5] and forms a material consideration to the consideration of a planning application. The PPG replaces guidance contained in the Technical Guidance Note (March 2012) which originally accompanied the NPPF. National guidance is translated into more detailed policy through the Development Plan, but will take precedence where the Development Plan is out of step with national policy.

5.5 As such national planning policies are a material consideration in determining any planning application.

NPPF

5.6 At the heart of the NPPF is a presumption in favour of sustainable development[6], which for decision making means:

- approving development proposals that accord with the development plan without delay; and
- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:

[5] http://planningguidance.communities.gov.uk/blog/guidance/minerals/
[6] Paragraph 14, NPPF

- any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or
- specific policies in this Framework indicate development should be restricted.

5.7 In terms of sustainable development, the NPPF identifies three dimensions[7] which require the planning system to perform a number of roles:

- an economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and
- an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

5.8 These roles should not be undertaken in isolation, because they are mutually dependent. To achieve sustainable development, economic, social and environmental gains should be sought jointly and simultaneously through the planning system[8].

5.9 In this context the planning proposal would allow the applicant have better security over energy supplies to the existing plant, whilst allowing any surplus electricity to be exported to the national grid. Moreover, through the use of the waste thermal energy, the efficiency of the CHP plant increases and costs associated with the production of lime reduced. Allied to this carbon emissions associated with the generation of energy would be reduced. At the same time, environmental studies undertaken have not identified any significant adverse impact, and thus it is not necessary to consider the balance between the benefits of the scheme and potential harm.

5.10 As the application site is not affected by any designations, then large parts of the NPPF are not applicable. The NPPF does provide policy advice in relation to protecting the environment and amenity of local communities and this is considered in the sub-section titled "*Protection of the Environment*".

The Development Plan

5.11 The PCPA 2004 reformed the development plan system, replacing Local Plans with a requirement to produce a Local Development Framework (LDF). The LDF would comprise a portfolio of Development Plan Documents (DPDs). With the introduction of the Localism Act 2011, the LDF is to be replaced by Local Plans.

[7] Paragraph 7, NPPF
[8] Paragraph 8, NPPF

5.12 To maintain continuity in the Development Plan system during transition to the LDFs (and now Local Plans), arrangements were put in place for the existing adopted Structure Plan and the Minerals, Waste and District Local Plan policies to be 'saved'.

5.13 The following documents form part of the adopted Development Plan and are of relevance:

- The saved policies within the Derby and Derbyshire Minerals Local Plan;
- The High Peak Borough Council Local Plan.

5.14 However, in the context of the High Peak Local Plan (adopted April 2016) and covers all matters involving the development or other use of land, with the exceptions of minerals and waste developments which by virtue of the Town and Country Planning (Prescription of County Matters) (England) Regulations 2003 fall to be considered against the Minerals Local Plan and Waste Local Plan respectively. The main considerations therefore relate to the general policies, and those aimed at safeguarding the environment. As these will be replicated in both the NPPF and the Minerals Local Plan, it is not necessary to consider the Local Plan further.

The Derby and Derbyshire Minerals Local Plan

5.15 Adopted during April 2000 and updated in November 2002, the Derby and Derbyshire Minerals Local Plan ('MLP') provides planning policy to balance between the competing need for minerals and the protection of the environment and amenity. The MLP pre-dates the NPPF and so the weight attached to its policies need to be carefully considered against the provisions of the NPPF.

5.16 Chapter 3 of the MLP contains a number of policies which consider and examine the potential impacts of mineral development on the environment and local amenity. These are considered in more detail under the heading "*Protection of the Environment*" below.

5.17 The operations at Hindlow Quarry have been established for a number of decades during which methods of working, management and mitigation measures have been implemented, improved and refined to a level such that the operations at the quarry as a whole can take place with a minimal impact.

5.18 Of particular note to this planning application is Chapter 6 (Other Mineral Developments) and in particular paragraphs 6.10 to 6.13 together with associated policy MP12, which considers "*mineral related development*". The chapter recognises the existence of permitted development rights and that mines and quarries usually need ancillary developments close by for the treatment, preparation and use of minerals produced at the site. However, it notes the industrial nature of such ancillary development and indicates that the need for a countryside location for such ancillary development must be justified in terms of the net environmental benefits (para. 6.10). Planning approvals have been given in the past for the existing lime works at Hindlow, which are substantive in nature; as such the location of such 'industrial' plant has been found acceptable. The proposed CHP plant would provide electrical and thermal energy to the existing plant and so needs to be located close to the existing plant to maximise efficiency.

5.19 **Policy MP12** is permissive in approach in that planning permission for ancillary development will be granted where there are new environmental benefits and a close link between the industrial and mineral developments. As has been demonstrated in the previous section, the proposed CHP plant would not lead to any significant harm

to the environment, largely by virtue of its limited scale. Benefits would flow from the use of the heat, thereby reducing carbon emissions associated with the generation of energy. In terms of the close link, as noted in the previous paragraph it has been accepted that the processing plant needs to be located close to the quarry workings and that the proposed CHP plant is ancillary to the processing operations. As such the close link required by the policy exists. The policy also provides two caveats in that the development is "*located, designed and landscaped to minimise any adverse effect on the environment*" and "*the development will now create unacceptable traffic problems*". These aspects are considered below under the heading "*Protection of the Environment*".

5.20 Finally, Chapter 12 of the MLP specifically considers the extraction and processing of Industrial Limestone, and states that Derbyshire is one of the most important limestone producing areas in the Country. The MLP also notes the importance of Derbyshire as a national source of industrial limestone which is reflected in the fact that the East Midlands produces the largest amount of non-aggregate limestone of any region (equivalent to 40% of the national output). It is therefore important to support such a vital supplier of lime products to the national economy.

Protection of the Environment

5.21 The NPPF and MLP both contain specific policies on safeguarding and protecting the environment, covering all aspects such as the countryside; the natural environment; built and cultural heritage; agriculture; and landscape. They also set out policies aimed at minimising the loss of amenity through pollution. In this respect, **Policy MP1** is relatively general and provides an overarching environmental aim requiring that the environmental impacts associated with mineral developments should be maintained to an acceptable level with regard to the effect on local community in terms of noise, dust and vibration, the effect on agricultural interests, visual impact, and also the effect on wildlife, ecological and archaeological interest, transport, rights of way and water resources. The policy framework in Policy MP1, and indeed throughout Chapter 3 of the MLP, is mainly aimed at the development of mineral deposits ("*mineral workings*") but the policy still seeks the protection of amenity and the wider the environment, and so the spirit of the policy (and the others contained in Chapter 3) are material to the planning application.

5.22 Similarly, **Policy MP3** in the MLP considers the necessary mitigation measures that should be implemented to reduce the environmental impact of mineral working.

5.23 In terms of land use planning constraints, the application site is not located within a National Park or Area of Outstanding Natural Beauty (AONB). Neither does it directly impinge upon any archaeological or ecological designations of international or national importance, nor is it located within a Green Belt. However the Peak District National Park is located close by and national ecological sites and Scheduled Monuments are located within 2km of the application site. As a result, many sections of national guidance are not relevant to the planning application.

Landscape

5.24 At a national level, landscape policy is addressed in Section 11 of the NPPF. Within this, paragraphs 109, 110, 111, 114, 115 and 118 are of particular relevance with paragraph 109 emphasising the need for the planning system to contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes.

5.25 Great weight is given to conserving landscape and scenic beauty in nationally designated areas, such as National Park or AONB: the application site is not affected by such designations, but is close to the Peak District National Park.

5.26 Paragraph 113 states that the LPAs should set criteria based policies against which proposals for any development on or affecting landscape areas will be judged. Distinctions should be made between the hierarchy of international and locally designated sites, so that the protection afforded is commensurate with their status.

5.27 In the MLP protection of the landscape in terms of character and visual intrusion is afforded through **Policy MP1** (third and fourth limbs) and **Policy MP4** part 2(i) and 2(ii). Policy MP1 is permissive in approach, allowing development where the impact on the environment is acceptable, whereas Policy MP4 is restrictive in approach, seeking to refuse development where there is "*irreparable or unacceptable damage*" to the interests of acknowledged importance.

5.28 As set out in the previous section, being located within the existing lime works and shielded from view by virtue of other buildings, topography and peripheral screening, the potential for impact upon landscape character or visual intrusion is minimal (if at all). As such the proposals would not contravene any policies at the national or local level aimed at safeguarding the landscape character or visual amenity.

Natural Environment

5.29 Section 11 in the NPPF considers the natural environment (ecology), particularly paragraphs 109, 113 and 117 to 119.

5.30 Paragraph 109 emphasises the need for the planning system to contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

5.31 When considering planning applications, paragraph 118 advises that LPAs should aim to conserve and enhance biodiversity by applying the following principles:

- *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated or, as a last resort, compensated for, then planning permission should be refused;*
- *Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that makes it of Special Scientific Interest;*
- *Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- *Opportunities to incorporate biodiversity in and around developments should be encouraged;*
- *Planning permission should be refused for developments resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland*

> *and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss."*

5.32 Paragraph 113 reaffirms the hierarchical approach to designations, indicating that the development plan policies should be criteria-based with the level of protection afforded to the environment being commensurate to the status of the designation.

5.33 Within the MLP protection of the natural environment is afforded through **Policy MP1** (fifth limb) and **Policy MP4** part 3(i) and 3(ii). As noted above Policy MP1 is permissive in approach, allowing development where the impact on the environment is acceptable, whereas Policy MP4 is restrictive in approach, seeking to refuse development where there is "*irreparable or unacceptable damage*" to the interests of acknowledged importance. Allied to this, **Policy MP6** provides that where proposals for mineral development would affect areas of known or potential importance for nature consideration, a planning application needs to be supported by field evaluation and impact assessment, and where appropriate, mitigation measures, prior to determining the application.

5.34 As set out in the previous section there would be no direct effects on such designations or other ecological receptors and through bespoke air quality modelling it has been demonstrated that no indirect effects would occur either. As such the proposals would not contravene any policies at the national or local level aimed at safeguarding natural heritage.

Historic Environment

5.35 Relevant guidance in the NPPF is contained in paragraphs 126 to 141 within Section 12.

5.36 Paragraph 126 recognises that heritage assets are an irreplaceable resource and the need to conserve them in a manner appropriate to their significance. Paragraph 128 adds:

> *"In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance".*

5.37 The relevant policies in the MLP are **Policy MP1** (sixth and seventh limbs) and **Policy MP4** part 4(i) and 4(ii). As noted above, Policy MP1 is permissive in approach, allowing development where the impact on the environment is acceptable, whereas Policy MP4 is restrictive in approach, seeking to refuse development where there is "*irreparable or unacceptable damage*" to the interests of acknowledged importance. Allied to this, **Policy MP7** is also relevant; the policy provides that where proposals for mineral development would affect areas of known or potential archaeological importance, a planning application needs to be supported by an archaeological evaluation and impact assessment, and where appropriate, mitigation measures, prior to determining the application.

5.38 Again, as set out in the previous section, there would be no direct or indirect impacts on heritage assets in the vicinity of the CHP plant. As such the proposals would not contravene any policies at the national or local level aimed at safeguarding the historic environment.

Water Environment

5.39 Guidance formerly contained in PPS25 is now found within paragraphs 99 to 108 of the NPPF.

5.40 The relevant policy in the MLP is **Policy MP4** part 5 which indicates that planning permission will not be granted where a development would adversely affect the quality and quantity of water resources, water supply, land drainage or flood protection interests or create water pollution problems.

5.41 As has been set out in the previous section of this document, no significant adverse effects would arise as a result of the development. In this respect the plant would be sited considerably above the water table and the site is located within the EAs Flood Zone 1. Moreover, the design of the proposed CHP plant includes measures to mitigate against pollution, such as double skinned tanks, siting on concrete pads and enclosing the engine within a container. As such the proposals would not contravene any policies at the national or local level aimed at safeguarding the water environment.

Transport

5.42 At the national level paragraphs 29 to 41 in Section 4 of the NPPF are relevant. All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment[9]. Plans and decisions should take account of whether:

- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- safe and suitable access to the site can be achieved for all people; and
- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

5.43 The NPPF identifies[10] that plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people.

5.44 In the MLP the relevant polices are **MP4** part 6 and **MP5.**

5.45 As noted from the previous section, the proposed development would have minimal HGV movements, with movements mainly associated with the construction phase and thus temporary in nature. In comparison, as an operational lime works, the site access and local highway network are already subject to HGV movements meaning that any increase as a result of the construction operations would be readily absorbed in the usual day to day fluctuations. As such the proposals would not contravene any policies at the national or local level aimed at limiting the effects of transport.

[9] Paragraph 32, NPPF
[10] Paragraph 35, NPPF

Pollution and Amenity of Local Communities

5.46 Pollution issues are set out in paragraphs 109 and 120 to 125 of the NPPF. Paragraph 109 refers to preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.

5.47 Paragraph 122 notes that LPAs should focus on whether the development itself is an acceptable use of land and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution regimes which assume they will operate effectively.

5.48 Finally, paragraph 123 states:

"*Planning policies and decisions should aim to:*

- *Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;*
- *Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;*
- *Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and*
- *Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational ad amenity value for this reason."*

5.49 Guidance can also be found in the National Planning Practice Guidance. Firstly, the guidance addresses the ability to comply with the noise criteria is set out in NPPG (paragraphs 019 to 022[11]). Secondly, the ability to adequately control and mitigate dust emissions is set out in the NPPG at paragraphs 023 – 032[12]).

5.50 In the MLP protection of amenity is afforded through **Policy MP1** (first limb). Policy MP1 is permissive in approach, allowing development where the impact on the environment is acceptable.

5.51 As has been set out in the previous section of this document, no significant adverse effects would arise as a result of the development. As such the proposals would not contravene any policies at the national or local level aimed at safeguarding the amenity of local communities or individual properties.

[11] Reference ID: 27-019-20140306 to 27-022-20140306
[12] Reference ID: 27-023-20140306 to 27-032-20140306

6.0 CONCLUSION

6.1 A planning application is being submitted to Derbyshire County Council as Mineral Planning Authority for the installation and operation of a combined heat and power (CHP) plant at Hindlow Lime Works (the lime works). The proposed CHP plant would generate both electrical and thermal energy through the combustion of natural gas.

6.2 The lime works lies within a predominantly rural part of Derbyshire approximately 5km to the southeast of Buxton, and 13km west of Bakewell (measured centre to centre). At a more local scale, the lime works is located 2.9km south east of Harpur Hill, 2.8km south west of Chelmorton and 4km north of Longnor. The lime works comprises the kilns, processing plant and bagging plant associated with the manufacture of lime products, together with administrative offices. To the southeast and east of the lime works are the limestone quarry workings (two areas separated by a railway) and associated quarry processing plant.

6.3 The CHP plant would comprise a 2MW gas engine housed within an acoustically insulated steel ISO container. To the roof of the container would be a radiator unit, exhaust silencer and air outlet attenuator. The steel container would measure 17m by 4m in plan and 3.75m in height. The air outlet attenuator would add a further 3.75m to the height of the CHP plant (making the total height around 7m). Ancillary to the plant would be pipework and heat exchangers associated with the heat offtake, a flue stack, an air inlet filter and fan and two double skinned oil tanks. Allied to this would be gas and electrical connections between the proposed CHP plant and the relevant utility mains. Overall, the area to be developed would be 300m^2.

6.4 The proposals would not give rise to any significant adverse impacts on the environment or amenity of local residents and would not contravene polices in the Development Plan or National Planning Policy Framework. It is therefore considered that the proposals strike the correct planning balance.

6.5 Accordingly, the applicant respectfully asks that planning permission be granted.

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