FENWICK SOLAR FARM

Fenwick Solar Farm EN010152

Environmental Statement

Volume III Appendix 12-2: Minerals Safeguarding Report

Document Reference: EN010152/APP/6.3

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

October 2024 Revision Number: 00



Revision History

Prepared by: AECOM Limited

Revision Number	Date	Details
00	October 2024	DCO application
Prepared for:		

© 2024 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited ("AECOM") for sole use of our client (the "Client") in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1.	Introduction	1
1.1	Introduction and Background	1
1.2	Minerals and Waste Planning Authority's Comments	2
1.3	Report Structure	
2.	The Scheme	4
2.1	Introduction	4
2.2	Timescale	4
2.3	Grid Connection Corridor	4
3.	Potentially Safeguarded Mineral Resources within the Study Area	6
3.1	Introduction	6
3.2	Superficial Deposits	6
3.3	Bedrock Geology	7
3.4	Mineral Resources	7
4.	Relevant Planning Policy	9
4.1	Introduction	9
4.2	National Policy Statement for Overarching Energy (EN-1)	9
4.3	National Planning Policy Framework (NPPF) (2023)	. 10
4.4	National Planning Practice Guidance (PPG)	. 10
4.5	Doncaster Local Plan 2015 – 2035	. 11
4.6	Doncaster Council and Rotherham Metropolitan Borough Council Local	
Aggre	gate Assessment 2022	
4.7	City of Doncaster Council Annual Monitoring Report 2022	. 13
5.	Case in Support of the Scheme	. 14
6.	Assessment	. 16
6.1	Introduction	
6.2	Doncaster Local Plan Policy 61	
6.3	NPS EN-1	. 21
6.4	Summary	
7.	Conclusions	. 23
8.	References	
Annex	A Figures	. 26
Table	es	
Table	1: Borehole Locations	7

1. Introduction

1.1 Introduction and Background

- 1.1.1 AECOM has been appointed by Fenwick Solar Project Limited (the Applicant) to prepare a Minerals Safeguarding Report in support of an application for a Development Consent Order (DCO) for the construction, operation (including maintenance) and decommissioning of Fenwick Solar Farm to the north of Doncaster. The Scheme consists of solar photovoltaic (PV) generating panels, On-Site Cables, associated Battery Energy Storage System(s) (BESS), an On-Site Substation, a Grid Connection Corridor comprising new below ground cables or a direct connection to existing overhead 400 kV electricity lines connecting the new On-Site Substation to the Existing National Grid Thorpe Marsh Substation (see below), and other associated development including fencing, access tracks, drainage, and biodiversity and landscaping enhancements (hereafter collectively referred to as the 'Scheme').
- 1.1.2 The Scheme is defined under the Planning Act 2008 (Ref. 1) as a Nationally Significant Infrastructure Project (NSIP) because it comprises a generating station in England with a capacity exceeding 50 megawatts (MW). It therefore requires a DCO from the Secretary of State for Energy Security and Net Zero (the SoS).
- 1.1.3 There are three distinct elements to the proposal in respect of assessing the impacts of the Scheme upon minerals and waste resources. These comprise the following areas, referred to collectively as 'the Solar PV Site':
- 1.1.4 The land located east of Fenwick and immediately south of the River Went, hereafter referred to as the 'Solar PV Site'. This area does not fall within a Mineral Safeguarding Area (MSA) or associated 250m buffer, therefore it is not considered further in this report. This report considers the area of the Grid Connection Corridor that are part of the MSA as the Study Area.
- 1.1.5 The land between the Solar PV Site and the compound for the Existing National Grid Thorpe Marsh Substation, hereafter referred to as the 'Grid Connection Corridor'. This corridor crosses a MSA for sand and gravel extraction and the associated 250m buffer, shown on the Proposals Map of the Doncaster Local Plan 2015 2035 (Ref. 2). Consequently, Policy 61 (Providing for and Safeguarding Mineral Resources (Strategic Policy)) of the Doncaster Local Plan 2015 2035 may be considered by the SoS to be important and relevant to the determination of the DCO application; and
- 1.1.6 The land located within the compound for the Existing National Grid Thorpe Marsh Substation, is previously developed and does not fall within a MSA or associated 250m buffer, therefore it is not considered further in this report.
- 1.1.7 This Mineral Safeguarding Report is required because part of the proposed Grid Connection Corridor is located within a MSA and associated 250m buffer zone for sand and gravel. In response to development plan policy requirements, it considers the impact of the Scheme on the safeguarded mineral. The Solar PV Site and the Existing National Grid Thorpe Marsh

- Substation fall outside the MSA and therefore are not considered further in this report.
- 1.1.8 The Scheme is located on approximately 536 hectares (ha) of land, approximately 5 kilometres (km) north of Doncaster, within the administrative boundary of the City of Doncaster Council. The Scheme is located in a predominantly rural area consisting mainly of mixed agricultural land and associated farms.
- 1.1.9 The Scheme is expected to operate for approximately 40 years. After the Scheme ceases to operate, it will undergo decommissioning. The On-Site Substation (which is not relevant to this Report as it is located within the Solar PV Site) and Grid Connection Cables within the Grid Connection Corridor may remain in situ on the decommissioning of the Scheme. This will be confirmed alongside relevant stakeholders/grid providers at the time of decommissioning.

1.2 Minerals and Waste Planning Authority's Comments

- 1.2.1 City of Doncaster Council is the Mineral Planning Authority (MPA) and as such, it is responsible for mineral safeguarding, minerals consultation areas and minerals site allocations.
- 1.2.2 City of Doncaster submitted a formal consultation response to the submitted Environmental Impact Assessment (EIA) Scoping Report for the Scheme on 28 June 2023. The response stated: "No mineral safeguarding issues, agree with findings of the scoping report."
- 1.2.3 In relation to minerals safeguarding, the Scoping Opinion adopted by the Secretary of State on 11 July 2023 states:
- 1.2.4 "The Scoping Report indicates that there is an MSA, located within the 500 m study area around the grid connection corridor search area. In the absence of any specific information relating to the location of the MSA, the Inspectorate is not in agreement that this matter can be scoped out of further assessment at present. This is on the basis that the presence of cabling, other infrastructure and potential standoffs, and the requirement to excavate/drill through the mineral resource during construction and decommissioning, has potential to result in impacts to the MSA.
- 1.2.5 In the event that the chosen cable route(s) pass through the MSA, the ES should also describe why it was not possible to avoid this area (given the currently large search area)."
- 1.2.6 Informal discussions have been undertaken between AECOM and City of Doncaster Council planners. The planning officer at City of Doncaster Council noted the following in their response dated 2 October 2023:
 - "The purpose of the Mineral Safeguarding Areas is to protect potentially important known mineral deposits from sterilisation by non-mineral surface development. Mineral resources are finite; therefore, it is essential that a sustainable approach is used to ensure that there is sufficient supply in the future. The Council acknowledges it is an important requirement through national planning policy to consider and safeguard the remaining minerals that are an important national, regional and local resource. These minerals have a fundamental role in underpinning the local economy by providing

aggregate for construction, dimension stone for prestige buildings and minerals for industry. This policy is designed to ensure that minerals are considered and safeguarded from inappropriate development during and beyond the plan period.

In conclusion, given part of the cabling route passes through the sand and gravel MSA (and buffer), within these safeguarded areas non-mineral development proposals must comply with Policy 61 Part B points 1 to 5. To help determine this you will need to provide a geological assessment report/mineral survey identifying the extent and quality of the mineral, and estimate of the overall economic value, consideration of realistic opportunities for prior mineral extraction, or clarify why the need for the development outweighs the need to safeguard the area."

1.2.7 The purpose of this report is to address the SoS's Scoping Opinion, the comments from City of Doncaster Council's Planning Officer and compliance of the Grid Connection with Policy 61 Part B.

1.3 Report Structure

- 1.3.1 The remainder of this report is structured as follows:
 - a. Section 2 The Scheme;
 - Section 3 Potentially Safeguarded Mineral Resources within the Study Area;
 - c. Section 4 Relevant Planning Policy;
 - d. Section 5 Case in Support of the Scheme;
 - e. Section 6 Assessment; and
 - f. Section 7 Conclusions.

2. The Scheme

2.1 Introduction

- 2.1.1 The Scheme comprises the installation of Solar PV Panels, On-Site Cables, associated BESS Container, an On-Site Substation, a Grid Connection Corridor comprising new below ground cables or a direct connection to existing overhead 400 kV electricity lines connecting the new substation to the Existing National Grid Thorpe Marsh Substation, and other associated development including fencing, access tracks, drainage, and biodiversity and landscaping enhancements.
- 2.1.2 The principal Scheme infrastructure would be as follows:
 - a. Solar PV Mounting Structure;
 - b. Inverters (either string or central type);
 - c. Transformers (Low Voltage (LV) to Medium Voltage (MV) or High Voltage (HV));
 - d. LV, MV and HV switchgear, protection and control equipment;
 - e. MV (33 kilovolt (kV)) Field Stations within the Solar PV Site;
 - f. On-Site Cables underground cabling;
 - g. The BESS Container;
 - h. On-Site Substation;
 - i. Operations and Maintenance Hub with welfare facilities;
 - Fencing and security measures;
 - k. Access tracks; and
 - I. Biodiversity and landscaping enhancements.
- 2.1.3 The indicative layout of the Scheme is shown on **ES Volume II Figure 2-3:** Indicative Site Layout Plan [EN010152/APP/6.2].

2.2 Timescale

- 2.2.1 Subject to being granted consent and following a final investment decision, the earliest construction could start is in 2028. Construction of the Grid Connection Cables is anticipated to require an estimated 12 months; construction of the Solar PV Site is anticipated to require an estimated 24 months, with operation therefore anticipated to commence in 2030.
- 2.2.2 For further detail regarding the Scheme, refer to **ES Volume I Chapter 2:** The Scheme [EN010152/APP/6.1].

2.3 Grid Connection Corridor

2.3.1 Whilst the Solar PV Site and the Existing National Grid Thorpe Marsh Substation does not fall within any MSA or associated 250m buffer, the Grid Connection Corridor does cross a MSA for sand and gravel and the associated buffer.

- 2.3.2 The Grid Connection Corridor enters the MSA buffer at Moss Villa and Trumfleet, then proceeds to enter the MSA at White House Farm, where it follows existing linear features including roads such as Marsh Road and Thorpe Bank Road. Thorpe Bank Road also closely follows the route of the River Don.
- 2.3.3 The proposed Grid Connection Corridor is approximately 5.6km in length, of which approximately 1.47km is located within the MSA and a further 1.1km within the MSA buffer. The cables will be installed and buried using conventional open cut trench techniques. The cable trench would be up to approximately 0.7m wide. Grid Connection Cables will be installed to a minimum depth of 0.9m below ground level (bgl), to the top of the cable. To accommodate this, trench depth is therefore typically 1.2m to 1.4m bgl.
- 2.3.4 Whilst the Solar PV Panels and BESS Container will be temporary for a period of up to 40 years, the On-Site Substation and cabling within the Grid Connection Corridor may not be decommissioned and could be retained in situ following decommissioning of the Solar PV Site.
- 2.3.5 The proposed Grid Connection Corridor has been designed to take account of the following:
 - a. Avoiding, where practicable, environmental designations and existing features within the landscape;
 - b. Minimising impacts on the environment and nearby human receptors e.g. nearby residential properties;
 - c. Negotiations with relevant landowners;
 - d. The cost of grid connection; and
 - e. Minimising the grid connection distance and therefore transmission losses.

3. Potentially Safeguarded Mineral Resources within the Study Area

3.1 Introduction

- 3.1.1 The following studies are considered relevant when considering minerals resources in proximity to the Scheme:
 - British Geological Survey (BGS) Mineral Resource Information in Support of National, Regional and Local Planning: South Yorkshire (2006) (Ref. 3);
 - b. BGS Minerals Resources Map South Yorkshire (2006) (Ref. 4);
 - c. BGS Mineral Safeguarding in England good practice advice (2011) (Ref. 5); and
 - d. Geological mapping and borehole records held on the BGS Geoindex website (Ref. 6).

3.2 Superficial Deposits

- 3.2.1 Geological information held on the BGS Geoindex website shows that the majority of the Grid Connection Corridor is underlain by the following superficial deposits:
 - a. Alluvium clay, silt sand and gravel. Sedimentary superficial deposit formed less than 11.8 thousand years ago during the Holocene;
 - b. Hemingbrough Glaciolacustrine Formation clay, silty. Sedimentary superficial deposit formed in the Devensian Stage, Late Pleistocene, between 116 and 11.8 thousand years ago; and, locally
 - c. Glaciofluvial deposits formed during the Middle Pleistocene (sand and gravel, undifferentiated).
- 3.2.2 The BGS Viewer states "Hemingbrough Glaciolacustrine Formation is present at or near the surface in the Vale of York, from the Escrick Moraine in the north to Doncaster in the south, extending as a concealed unit beneath till deposits to the north of the Escrick Moraine beyond York to approximately 2km east of Knaresborough. It can occur up to 30 m thick in some areas of the country.
- 3.2.3 Alluvium superficial deposits are the unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope. Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present."
- 3.2.4 The BGS Mineral Resources Map and Minerals Resource Information indicate that alluvial deposits associated with the River Don and underling glaciofluvial deposits are the only superficial mineral deposits within the Grid Connection Corridor. The Doncaster Local Plan (2015-2035) Policies Map (Ref. 7) shows that superficial alluvial deposits safeguarded under the plan

- are restricted to an area between Braithwaite in the north and the former Thorpe Marsh Power Station in the south.
- 3.2.5 Figure 12-2-1 shows the extent of MSAs as recorded within the Doncaster Polices Map with the extent of the Grid Connection Corridor overlaid. A small outcrop of glaciofluvial deposits is present in the extreme south east of the Grid Connection Corridor. No borehole information for this outcrop is available on the BGS Geoindex but it is likely to consist of poorly sorted sand and gravels.

3.3 Bedrock Geology

3.3.1 The underlying bedrock within the proposed Grid Connection Corridor is the Sherwood Sandstone Group (Chester Formation), comprising pebbly, gravelly sandstone. It is a sedimentary bedrock formed between 250 and 247.1 million years ago during the Triassic period. The BGS Mineral Resources Information indicates that the sandstones and conglomerates of the Sherwood Sandstone Group have been worked at several sites in South Yorkshire. The sites are generally extracting overlying superficial sand and gravel deposits and work the Sherwood Sandstone Group as a minor component of extraction operations within the quarry floor. The Doncaster Local Plan (2015-2035) Policies Map (Ref. 7) does not identify any of the Sherwood Sandstone outcrop within the Grid Connection Corridor as safeguarded sand and gravel resources.

3.4 Mineral Resources

3.4.1 The BGS Onshore Geoindex (Ref. 6) holds records of a number of boreholes within the Grid Connection Corridor and buffer zone penetrating superficial deposits within the MSA. These are listed in Table 3-1 below along with the full thickness of superficial mineral (alluvium) encountered where penetrated.

Table 1: Boreh	nole Locations	Thickness of Potentially Safeguarded Mineral (m)	
Borehole	Description (Including Potentially Safeguarded		
SW61SW100	Mineral) "Drift" (no description)	8.84	
SE61SW6	"Alluvium" (Sand and gravel)	12.5	
S61SW6	Alluvium (Sand and gravel)	12.80	
SW61SW8	Alluvium (Sand with pebbles)	c. 15 (log shows 24.4m but includes red mudstone probably Triassic)	
SE61SW10/3	Alluvium (Sandy clay over blue clay)	>5.2	
SE61SW10/10	Alluvium (Sandy soil over blue clay over gravel).	Base of gravel not penetrated and thickness not provided	

SE61SW12	Alluvium (Clay (9m) over Gravel and sand (to 11.3 m)	11.3	
SE61SW20	Alluvium (Gravels and river silt).	18.3	

3.4.2 The number of boreholes within safeguarded mineral within the Grid Connection Corridor is small but demonstrates a thickness of between >5.2m and 18m of sand and gravel which may potentially be workable. The thickness of overburden overlying the sand and gravel appears to be minimal.

4. Relevant Planning Policy

4.1 Introduction

- 4.1.1 When determining a DCO application, the Secretary of State is required to have regard to any relevant National Policy Statements (NPS), as well as any Local Impact Report, any prescribed matters, and any other matters that the Secretary of State thinks are both important and relevant. Other national and local planning policies and guidance, including adopted and emerging Development Plan policies, have the potential to be considered by the Secretary of State to be other matters which are important and relevant. The following sections refer to planning policies in relation to minerals that could be considered important and relevant to the Secretary of State's decision.
- 4.1.2 The following Energy NPSs were presented before parliament in November 2023 and came into force on 17th January 2024:
 - a. Overarching NPS for Energy (EN-1) (Ref. 8) (November 2023);
 - b. NPS for Renewable Energy Infrastructure (EN-3) (Ref. 9) (November 2023); and
 - c. NPS for Electricity Networks Infrastructure (EN-5) (Ref. 10) (November 2023).
- 4.1.3 The following other national and local planning policy documents may also be considered important and relevant to the SoS decision:
 - a. National Planning Policy Framework (NPPF) (Ref. 11) (December 2023) as interpreted and explained in the associated Planning Practice Guidance (PPG) (Ref. 12);
 - b. Doncaster Local Plan 2015 2035 (Ref. 2); and
 - c. Accompanying policies map (Ref. 7).
- 4.1.4 In addition, the following studies are considered relevant when considering minerals safeguarding policy for the Scheme:
 - a. City of Doncaster Council Annual Monitoring Report (AMR) 2022 (Ref. 13); and
 - b. Doncaster Council and Rotherham Metropolitan Borough Council Local Aggregate Assessment (LAA) 2022 (Ref. 14).

4.2 National Policy Statement for Overarching Energy (EN-1)

4.2.1 NPS EN-1 (November 2023) states that "Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place" (Paragraph 5.11.19). It also states that "Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources" (Paragraph 5.11.28).

4.2.2 NPS EN-3 (November 2023) and NPS EN-5 (November 2023) do not contain additional policies about mineral safeguarding.

4.3 National Planning Policy Framework (NPPF) (2023)

- 4.3.1 The revised NPPF (December 2023) was published in December 2023 (December 2023). The NPPF, together with the accompanying Planning Practice Guidance (PPG), sets out the Government's planning policies for England for the particular purpose of making development plans and deciding applications under the Town and Country Planning Act 1990.
- 4.3.2 Under Section 17 (Facilitating the Sustainable Use of Minerals), NPPF (December 2023) Paragraph 215 states: "It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation."
- 4.3.3 NPPF (December 2023) Paragraph 216 goes on to state: "Planning policies should...c) safeguard mineral resources by defining Mineral Safeguarding Areas and Mineral Consultation Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked); d) set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place...".
- 4.3.4 Paragraph 218 also states: "Local planning authorities should not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working."

4.4 National Planning Practice Guidance (PPG)

Minerals PPG (2014)

- 4.4.1 The Minerals PPG (2014) (Ref. 15) confirms that minerals 'make an essential contribution to the Country's prosperity and quality of life'. Section 3 of the Minerals PPG states that: "Mineral planning authorities are encouraged to plan for minerals extraction using Ordnance Survey-based proposals maps and relevant evidence provided by the minerals industry and other appropriate bodies. ... This approach will allow mineral planning authorities to highlight areas where mineral extraction is expected to take place, as well as managing potentially conflicting objective for use of land."
- 4.4.2 Section 3 advises MPAs that they should plan for the steady and adequate supply of minerals in one or more of the following ways, specifically noting these are ordered by way of priority:
 - "1. Designating Specific Sites where viable resources are known to exist, landowners are supportive of minerals development and the proposal is likely to be acceptable in planning terms. Such sites may also include essential operations associated with mineral extraction;

- 2. Designating Preferred Areas, where are areas of known resources where planning permission might reasonably be anticipated. Such areas may also include essential operations associated with mineral extraction; and/or;
- 3. Designating Areas of search areas where knowledge of mineral resources may be less certain but within which planning permission may be granted, particularly if there is a potential shortfall in supply."

4.5 Doncaster Local Plan 2015 - 2035

4.5.1 The Doncaster Local Plan and accompanying policies map was adopted by Doncaster Council (DC) on 23 September 2021. The plan forms part of the statutory development plan for the Borough and informs decisions on planning applications. The plan covers the period from 2015 to 2035.

Policy 61 – Providing for and Safeguarding Mineral Resources (Strategic Policy)

- 4.5.2 Part B of the policy covers proposals for non-mineral development within Mineral Safeguarding Area (MSA). The policy states (inter alia):
 - "The extraction and production of aggregate, industrial, building stone and energy minerals that contribute to infrastructure and construction projects will be supported through the following principles:...
 - B) Proposals for non-mineral development within Mineral Safeguarding Areas (see Table 21), and the 250 m buffer zone, will be supported where it can be demonstrated that:
 - 1. consideration has been given to the long term economic value of the mineral; or
 - 2. non-mineral development can take place without preventing the economically viable mineral resource from being extracted in the future; or
 - 3. the proposal can feasibly incorporate the prior extraction of any minerals of economic value in an environmentally acceptable way; or
 - 4. the need for the development outweighs the need to safeguard the area for future minerals extraction; or
 - 5. the development is permitted, minor or temporary in nature (see safeguarding exemptions in Table 20)."
- 4.5.3 With regards to Mineral Safeguarding Areas, the text which accompanies the policy at Paragraph 14.54 states:
 - "Mineral Safeguarding Areas (see Table 21) are areas of known mineral resources that are considered to be of sufficient economic or conservation value to warrant protection beyond the plan period. The purpose of the Mineral Safeguarding Areas is to protect potentially important known mineral deposits from sterilisation by non-mineral surface development. Development proposals for mineral extraction, housing and employment allocated within the Local Plan are considered to be of economic and social importance in line with the objectives of the NPPF and have therefore been removed from the

Mineral Safeguarding Area to deliver the immediate development needs of the Local Plan. The Council acknowledges it is still an important requirement through national planning policy to consider and safeguard the remaining minerals that are an important national, regional and local resource. These minerals have a fundamental role in underpinning the local economy by providing aggregate for construction, dimension stone for prestige buildings and minerals for industry. Mineral resources are finite; therefore it is essential that a sustainable approach is used to ensure that there is sufficient supply in the future."

4.5.4 Paragraph 14.56 goes on to state (inter alia):

"Mineral Safeguarding Areas (and the 250 m buffer zones where relevant) are identified to prevent the sterilisation of shallow coal, crushed rock aggregate, sand and gravel and industrial limestone resources during and beyond the plan period. They are also identified under some developed/sterilised areas to allow for the consideration of prior extraction of mineral should this be appropriate as part of the redevelopment scheme...Within these safeguarded areas non-mineral development proposals will be required to comply with Policy 61 Part B points 1 to 5 by providing a geological report/mineral survey identifying the extent and quality of the mineral and primarily consider realistic opportunities for mineral extraction prior to development. Proposals for temporary, permitted or minor development, and aviation related development within the airport operational area, are not required to consider the impact of mineral sterilisation."

- 4.5.5 Table 21 within the Local Plan lists the following as safeguarded mineral:
 - a. Sand and Gravel:
 - b. Magnesian Limestone; and
 - c. Shallow Coal.
- 4.5.6 Figure 14 within the Local Plan is a mineral resources key diagram which shows the extent of safeguarded minerals. The accompanying policies map also shows the extent of MSAs and the 250m buffer. The Solar PV Site and the Existing National Grid Thorpe Marsh Substation does not fall within a MSA or the 250m buffer. The Grid Connection Corridor falls within a MSA for sand and gravel. Therefore Policy 61 is considered to be important and relevant to the SoS's decision.

4.6 Doncaster Council and Rotherham Metropolitan Borough Council Local Aggregate Assessment 2022

- 4.6.1 National Policy requires all Mineral Planning Authorities to provide for a land bank of at least 7 years for sand and gravel and 10 years for crushed rock. This is monitored by each Council in the form of a Local Aggregates Assessment (LAA).
- 4.6.2 The latest LAA (Incorporating 2021 Aggregates Monitoring Data) for City of Doncaster Council and Rotherham Metropolitan Borough Council was

published in December 2022. In terms of sand and gravel specifically, the LAA notes the following:

"The sand and gravel reserve for Doncaster in 2021 is 7.0Mt. The landbank based on ten year average sales is 18.5 years. The three year average sale landbank is 12.2 years and the fixed rate local plan annual provision landbank is 16.7 years. This is well above the seven year landbank requirement as set out in national policy, but decreasing annually."

- 4.6.3 The 2021 landbanks show there is currently sufficient provision of crushed rock, sand and gravel, but both landbanks are decreasing annually. It should also be noted that both Doncaster and Rotherham are, and will remain reliant on, imports of sand and gravel from other areas to meet development needs.
- 4.6.4 The LAA goes on to note that for the last 11 years, the landbank of sand and gravel is well above seven years as required by national policy.
- 4.6.5 The LAA notes that as of 2021, there were nine active sand and gravel quarries in the Doncaster area. None of these overlap or interfere with the land required for the Scheme.

4.7 City of Doncaster Council Annual Monitoring Report 2022

- 4.7.1 National policy also requires all Council's to publish information at least annually that shows progress with local plan preparation, reports any activity relating to the duty to cooperate, any information collected which relates to indicators in the plan, and any policies which are not being implemented. The Latest Annual Monitoring Report (AMR) was published in 2022 and covers the period 1 April 2021 to 31 March 2022.
- 4.7.2 Paragraph 2.11.2 of the City of Doncaster Council AMR relates to minerals and states:

"Current data suggests that Doncaster will have a sufficient supply of aggregates to meet Local Plan development needs in the short to medium term. The annual Local Aggregate Assessment (LAA) was published in December 2022. This assesses supply and forecasts future demand based on a rolling average of 10 years' sales data and other relevant local information, such as new permissions."

5. Case in Support of the Scheme

- 5.1.1 The Climate Change Act (2008) (Ref. 16) legally binds the UK to reduce carbon emissions. Further legislation and policy measures since 2008 underpin this commitment, and have increased the urgency for the delivery of decarbonisation in order to meet the UK's obligations under the Paris Agreement (2015).
- 5.1.2 In October 2018, the Intergovernmental Panel on Climate Change (IPCC) published a Special Report on the impacts of global warming of 1.5°C above pre-industrial levels (Ref. 17). This report concluded that more urgent international action was required as human-induced warming had already reached approximately 1°C above pre-industrial levels, and that global warming would not be likely to be contained without a significant and rapid decline in emissions across all sectors.
- 5.1.3 The targets for carbon emissions reduction have tightened further in the last three years, including a legally binding commitment for the UK to reach net zero carbon emissions by 2050. The Government's Energy White Paper: Powering our Net Zero Future published in 2020 (Ref. 18) identifies the Government's aim for a fully decarbonised, reliable and low-cost power system by 2050 and that the future energy generation mix for this system is "likely to be composed predominantly of wind and solar". In addition, the Government's Net Zero Strategy, 2021 (Ref. 19) sets out a policy to fully decarbonise the power system by 2035, meaning that the UK must be powered entirely by clean electricity by that date.
- 5.1.4 The Net Zero Strategy also sets out that decarbonisation of the electricity system and the economy is required to happen at a time when demand for electricity is expected to double, even with major improvements to overall energy efficiency. It goes on to identify that this will require a four-fold increase in low carbon electricity generation and significant expansion of the networks that transport it to where it is needed.
- 5.1.5 The Scheme will supply a nationally significant amount of renewable electricity to the National Electricity Transmission System, thereby making a nationally significant contribution to meeting the urgent need for renewable energy generation.
- 5.1.6 As a low carbon generating station, NPS EN-1 (November 2023) classifies the Scheme as a 'critical national priority' (CNP). NPS EN-1 (November 2023) states at Paragraph 3.3.63 that "Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible" and at Paragraph 4.1.7 that "For projects which qualify as CNP Infrastructure, it is likely that the need case will outweigh the residual effects in all but the most exceptional cases".
- 5.1.7 Given the above urgency with which new, large scale renewable energy generation projects are needed, Paragraphs 3.2.6 to 3.2.8 of NPS EN-1 (November 2023) state that all applications for nationally significant energy infrastructure should be assessed on the basis that the need for such infrastructure has been demonstrated. They also state that substantial weight should be given to the contribution that proposals would make towards meeting the identified energy infrastructure need. It is the

Environmental Statement Volume III Appendix 12-2: Mineral Safeguarding Report

substantial weight that must be given to the urgent and nationally significant need for large scale renewable energy generation, that is to be weighed against the impact on minerals in the MSA.

6. Assessment

6.1 Introduction

- 6.1.1 In determining the DCO application for the Scheme, the SoS is required to have regard NPS EN-1 (November 2023). Regarding safeguarded minerals, this sets out that applicants should safeguard mineral resources within the Solar PV Site as far as possible and that where a proposed development has an impact upon an MSA the SoS "should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources" (NPS EN-1 (November 2023) Paragraph 5.11.28).
- 6.1.2 The SoS is not required to determine the DCO application in accordance with the Local Development Plan, as would be the case for a planning application under the Town and Country Planning Act 1990, however, the SoS may consider local planning policies that they consider to be important and relevant. This section therefore presents an assessment of the Scheme in the context of the NPS EN-1 (November 2023) policy relating to safeguarding minerals and Policy 61 of the Doncaster Local Plan.
- 6.1.3 Part B of Policy 61 states that non mineral development within Mineral Safeguarding Areas and the 250m buffer zone will be supported where it can be demonstrated that it complies with one or more of the five criteria set out by the policy. The following assessment considers each of these five criteria set out in Policy 61 against the need for the Scheme.
- 6.1.4 It is noted that, as per the policy requirement, accordance with only one of the criteria needs to be demonstrated by the Applicant for the Council to support non-mineral development within the MSA and the 250m buffer zone. A proportionate approach to each of the criteria has been undertaken based upon the area of the MSA which is directly affected by the route of the grid connection.

6.2 Doncaster Local Plan Policy 61

6.2.1 This section considers the Scheme in the context of the five criteria set out in Part B of Doncaster Local Plan Policy 61.

1. Consideration has been given to the Long Term Economic Value of the Mineral (Policy 61(B)(1))

- 6.2.2 There is little up-to-date detailed information about the precise distribution and quantity of these resources. However, the information that is available (referred to in Section 3) indicates a thickness of between 5.2 and 18m of sand and gravel which may potentially be workable. Whilst it has not been possible to determine the detailed economic value of the mineral at this stage the evidence indicates a narrow seam of sand and gravel resource, which, combined with the narrowness of the land for the Grid Connection Cables within the Grid Connection Corridor means that only a small volume of sand and gravel resource would likely be affected by the Scheme.
- 6.2.3 This, coupled with the fact all but a small section of the Grid Connection Corridor follows existing linear features such as the River Don, Thorpe Road and Marsh Road, mean that the information available indicates that it is

unlikely that an economic proposal to extract mineral from within the Grid Connection Corridor would be expected to come forward. In any event, the proposed cables would be buried at a relatively shallow depth of approximately 1.2 to 1.4m bgl. This means that, should future investigations identify an economic resource is present beneath the Solar PV Site, the cables could be diverted so as not to create an impediment to mineral extraction.

2. Can Non-Mineral Development Take Place Without Preventing the Economically Viable Mineral Resource from being Extracted in the Future? (Policy 61(B)(2))

- 6.2.4 Whilst the Grid Connection Corridor is 100m wide, the actual trench required for installation of the Grid Connection Cables will only require a trench excavation of approximately 0.7m in width, which is not considered significant. The Grid Connection Cables are proposed to be installed approximately 1.2 to 1.4m bgl, which is relatively shallow compared to potential mineral extraction depths which could be as deep as 18m bgl. Consequently, any removal of mineral which may be required for the installation of the grid connection is not significant in the context of the total depths of minerals found at this location.
- 6.2.5 The maximum length of the Grid Connection Corridor which overlies safeguarded mineral is around 3-4km in length (dependent on routeing within the corridor) therefore the land take associated with the Grid Connection Cables is relatively small as it will be a narrow linear feature. Should an operator in the future judge that a specific area along the route of the Grid Connection Cables is commercially viable for mineral extraction, the Grid Connection Cables could be diverted in order to allow for mineral extraction to be undertaken. Therefore, it is considered that non-mineral development can take place without preventing the economically viable mineral resource (if present) being extracted in the future.

3. Can the proposal feasibly incorporate the prior extraction of any minerals of economic value in an environmentally acceptable way? (Policy 61(B)(3))

6.2.6 The majority of the Grid Connection Corridor follows existing linear features including existing roads and the River Don, and is fragmented by minor roads, watercourses, hedges and crossed by public rights of way. These existing features would require certain buffer to be maintained if mineral extraction were to be undertaken prior to installing the Grid Connection Cables. The fragmentation of the landscape by these existing features therefore potentially sterilises access to potential future mineral resource in these areas and could make working of mineral uneconomic for both this proposal, and future proposals. This context means that the practicality of extracting any potential sand and gravel reserve in these locations would be extremely difficult. The low ground level and the granular nature of the superficial deposits also means that any workings are likely to be below groundwater level with consequent need for additional land for dewatering and storage/settlement ponds to allow working to occur, which may also not

- be economic on a smaller scale, such as the minor excavation which would occur in the narrow and linear extent of the Grid Connection Corridor.
- 6.2.7 It may also be necessary to identify a buyer for the mineral who is able to use the mineral resource as it is extracted, without the need to stockpile it on Solar PV Site.
- 6.2.8 If prior extraction were to be undertaken, this could delay the start of construction of the Scheme depending on the amount of mineral that is required to be extracted.
- 6.2.9 If extracted, any mineral void would need to be backfilled with appropriate inert material (either natural/virgin or reclaimed waste material) to provide a suitable area for the Grid Connection Corridor. If the former was required to be imported, then the cost of this material would need to be off-set against the costs of extraction. If the latter, then an Environment Agency (EA) waste recovery permit would need to be applied for and approved before restoration could commence. Both of these would delay the development and also potentially affect its economic viability.
- 6.2.10 The Grid Connection Cables are proposed to be installed approximately 1.2 to 1.4m bgl, which is shallow compared to potential mineral extraction depths which could be as deep as 18m bgl. Consequently, any removal of mineral which may be required for the installation of the grid connection is not significant in the context of the total depths of minerals found at this location.
- 6.2.11 In addition, the further considerations have been taken into account in the judgement of whether prior extraction would be likely to be acceptable at this location:

Acceptability

6.2.12 There can be significant constraints on extraction works in close proximity to other existing development. Parts of the Grid Connection Corridor is located close to residential properties and other sensitive receptors which means that they would be particularly sensitive to the impacts associated with working mineral at the Solar PV Site.

Flood Risk

6.2.13 Prior extraction has the potential to affect the vulnerability of a location to flooding and affect drainage from the Solar PV Site. The Grid Connection Corridor crosses a number of existing field drains, areas of Flood Zone 1, 2 and 3 and along part of the route is located in close proximity to the River Don.

Dust and Noise

6.2.14 Mineral extraction has the potential to cause dust arisings and is a source of noise. The Grid Connection Corridor is close to vulnerable receptors including residential receptors, watercourses and ecological habitats.

Traffic

6.2.15 Prior extraction of the mineral may lead to an increase in the numbers of HGV movements to extract the mineral and bring non inert construction and demolition material or soils from elsewhere to fill the resulting void.

Land Stability

- 6.2.16 The excavation of voids in order to extract mineral has the potential to affect land stability including the stability of features including existing roads, drains and the River Don.
- 6.2.17 On the basis of the above factors, it is therefore considered that prior extraction is not acceptable or feasible in terms of environmental impact at this location, and that it would not be justified on the basis of the small impact that would result from the installation of the Grid Connection Cables at a shallow depth.
 - 4. Does the need for the development outweigh the need to safeguard the area for future minerals extraction? (Policy 61(B)(4))
- 6.2.18 The Scheme safeguards mineral as only part of the Grid Connection Corridor is located within an MSA or MSA Buffer (the Solar PV Site which includes the potentially permanent On-Site Substation is not located within an MSA). The area of the MSA affected is a narrow area within the Grid Connection Corridor, which follows existing features such as roads and the River Don. These already restrict the ability to extract mineral in much of the Grid Connection Corridor, and only a narrow shallow cable trench is proposed, which means that the impact on mineral reserve is small and that should proposals to extract mineral come forward in the future the Grid Connection Cables could be moved so as to not present an impediment to extraction.
- 6.2.19 Notwithstanding the above, the need for the Scheme substantially outweighs the minor impact it may have on mineral reserves within the MSA.
- 6.2.20 At a local level, City of Doncaster Council recognises the urgent need to address the causes of climate change. It declared a climate and biodiversity emergency in 2019, with an aim to become carbon neutral by 2040. This requires a 13-14% year on year reduction of emissions and an 85% reduction by 2030 (compared to a baseline of 2005 levels). Renewable energy projects, like the Scheme, are a vital part of meeting these reductions.
- 6.2.21 In terms of the urgent national need for the Scheme, NPS EN-1 (November 2023) sets out that the provision of nationally significant low carbon infrastructure, including onshore renewable energy generating stations, such as solar farms, is a critical national priority (CNP). Delivery of CNP infrastructure is urgently needed in order to deliver a secure and affordable energy system and to meet decarbonisation and net zero commitments, including a fully decarbonised power system by 2035 and overall net zero by 2050.

- 6.2.22 Paragraph 3.3.63 of NPS EN-1 (November 2023) states that: "the urgent need for CNP Infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible."
- 6.2.23 NPS EN-1 (November 2023) explains out how this urgent need for CNP infrastructure (such as the Scheme) is to be weighed against residual impacts and tests in national or local policy in the determination of DCO applications. At Paragraph 4.2.16 it states that: "...the Secretary of State will take as the starting point for decision-making that such infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy, which requires a clear outweighing of harm, exceptionality or very special circumstances." Paragraph 4.1.7 further reinforces the above, stating that: "For projects which qualify as CNP Infrastructure, it is likely that the need case will outweigh the residual effects in all but the most exceptional cases".
- 6.2.24 In accordance with the above policy, it is clear that the urgent local and national need for the Scheme clearly outweighs any minor impact it may have on safeguarded mineral.

5. Is the Development Permitted, Minor or Temporary in Nature? (Policy 61(B)(5))

- 6.2.25 The Scheme avoids locating the Solar PV Site (which includes the potentially permanent On-Site Substation) within the MSA. The only works within the MSA will be the installation of Grid Connection Cables. The activities necessary to construct and operate the Grid Connection Corridor do not meet one of the listed exempt developments in Table 20 of the Doncaster Local Plan which are not required to demonstrate accordance with the relevant policies for mineral safeguarding area restrictions. As such, the Scheme cannot be considered a "permitted" activity for the purposes of the Plan. This does not however mean that it is not able to be reconciled with the policy direction in the plan (for the reasons set out above).
- 6.2.26 Whilst the Grid Connection Corridor is 100m wide (in order to provide flexibility at the DCO stage for the final layout of the Grid Connection Cables), the actual trench required for installation of the Grid Connection Cables will only require a trench excavation of approximately 0.7m in width, which is not considered significant. In addition, the Grid Connection Corridor largely follows existing linear features such as roads and the River Don, which already restrict the ability to work mineral located there. The scale of the impact on the MSA is therefore small. Overall, the impact on the MSA could therefore be considered minor.
- 6.2.27 Further, while this report has assumed that the Grid Connection Cables will remain in situ following the decommissioning of the Scheme to present a "worst case scenario", there is the potential for these to be either removed entirely or relocated should a future proposal to extract mineral in this area come forward. This means their effects may not be permanent (ie, there are

options to access this resource in the future if it becomes viable or necessary).

Doncaster Local Plan Policy 61 - Summary

6.2.28 For the reasons set out in this section, it is considered that the Scheme accords with criteria 2, 4 and 5 of the Part B of Doncaster Local Plan Policy 61. The Applicant has also satisfied criteria 1 and 3 by giving consideration to the long term economic value of the mineral and the potential and feasibility for prior extraction. As per the wording of the policy, impact on the MSA therefore does not represent a reason for the Council to not support the Scheme.

6.3 NPS EN-1

- 6.3.1 By avoidance of locating the Solar PV Site (which includes the potentially permanent On-Site Substation) within the MSA and designing the Grid Connection Corridor to follow existing linear features such as road and the River Don for the majority of its route through the MSA, the Scheme safeguards mineral resources on the Site as far as possible, in accordance with NPS EN-1 (November 2023) Paragraph 5.11.19.
- 6.3.2 In accordance with Paragraph 5.11.28, the Scheme also includes measures to safeguard mineral resources in the MSA. These include the avoidance of development in the MSA other than the Grid Connection Cables to be installed within a shallow and narrow trench within the Grid Connection Corridor. This means that the Grid Connection Cables could be moved should proposals to extract the mineral come forward in the future.

6.4 Summary

- 6.4.1 The Scheme accords with the requirements of Paragraphs 5.11.19 and 5.11.28 of NPS EN-1 (November 2023).
- 6.4.2 The Scheme also satisfies criteria 2, 4 and 5 of Part B of Policy 61 of the Doncaster Local Plan 2015-2035, and the Applicant has considered the matters set out by criteria 1 and 3 of the same policy, thereby satisfying all of the criterial of Part B of the policy. By being in accordance with one or more of the Part B criteria, the Scheme is compliant with Policy 61 of the Doncaster Local Plan.
- 6.4.3 The trench containing the grid connection will be approximately 0.7m wide and approximately 1.2 to 1.4m bgl deep. Potential mineral extraction depths could be as deep as 18m below ground level. Consequently, any removal of mineral reserve which may be required for the installation of the grid connection is not judged to be significant in the context of the total depths of mineral found at this location. The maximum length of the grid connection which overlies safeguarded mineral is 3-4km in length. Should an operator judge that a specific area along the route of the Grid Connection Cables is commercially viable for mineral extraction, it would be possible to divert the Grid Connection Cables. Therefore, it is considered that the development can take place without preventing economically viable mineral resource (if present) to be extracted in the future.

6.4.4 Decarbonising the power sector is integral to achieving the goal of net zero, providing security of supply and an affordable, reliable system. All forms of renewable generation, including solar, have an urgent role to play in contributing to increased energy supply. The Scheme would positively contribute to the urgent need established in NPS EN-1 (November 2023) for additional low carbon generation as a critical national priority.

7. Conclusions

- 7.1.1 Policy 61 of the adopted Doncaster Council Local Plan seeks to protect mineral resources from sterilisation by other forms of development. It designates Mineral Safeguarding Areas on the Policies Map and sets out the criteria for making decisions on development proposals.
- 7.1.2 AECOM has assessed the proposal against each of the five criteria in Policy 61 to determine whether the Scheme is exempt from mineral extraction and if not, whether there is a justification for prior extraction of the mineral.
- 7.1.3 It is concluded, based on available evidence, that:
 - The landbank for sand and gravel resources within City of Doncaster Council and Rotherham Metropolitan Borough Council is well in excess of the 7 years required by National Planning Policy;
 - b. Whilst it has not been possible to calculate the value or potential value of the mineral, information obtained from the BGS indicates that a potential sand and gravel resource exists which could be between 9 and 18m thick;
 - c. Non mineral development can take place without preventing any potential economically viable mineral resource from being extracted in the future, as the Grid Connection Corridor is only located approximately 1.2 to 1.4m bgl and could be diverted should economically viable mineral be identified by a potential mineral operator;
 - d. Prior extraction of the mineral is not feasible for a number of reasons (see Section 6.3), owing to the location of the Solar PV Site and the potential impacts upon nearby sensitive receptors. It is concluded that the benefits of prior extraction of the mineral are outweighed by the impacts, including delaying the start of construction, as well as potential noise, dust and land stability considerations and wider environmental impacts; and
 - e. Whilst it is considered that the Scheme's design has provided overall for the safeguarding of minerals (given avoidance of the MSA by the Solar PV Site and given the development of the Grid Connection Corridor can take place without preventing future economically viable extraction) it is considered that the need for the development which is a critical national priority would substantially outweigh the need to safeguard the area for future mineral extraction.
- 7.1.4 In conclusion, it is considered that the Scheme satisfies Policy 61 of the Doncaster Council Local Plan and Paragraphs 5.11.19 and 5.11.28 of NPS EN-1 (November 2023).

8. References

- Ref. 1 UK Legislation (2008). Planning Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents. [Accessed 26 January 2024]
- Ref. 2 City of Doncaster Council (2021). Doncaster Local Plan 2015 2035. Available at: https://www.doncaster.gov.uk/services/planning/local-plan. [Accessed 26 January 2024].
- Ref. 3 BGS (2006). Mineral Resource Information in Support of National, Regional and Local Planning: South Yorkshire. Available at: https://nora.nerc.ac.uk/id/eprint/509653/1/CR04173N.pdf. [Accessed 15 March 2024].
- Ref. 4 BGS (2006). Minerals Resources Map South Yorkshire. Available at: https://www2.bgs.ac.uk/mineralsuk/planning/resource.html#MRM. [Accessed 15 March 2024].
- Ref. 5 British Geological Survey (BGS) (2011). Mineral Safeguarding in England good practice advice. Available at:

 https://www2.bgs.ac.uk/mineralsuk/download/planning/mineral-safeguarding-advice.pdf. [Accessed 15 March 2024].
- Ref. 6 BGS (2024). Geoindex. Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html [Accessed 15 March 2024].
- Ref. 7 City of Doncaster Council (2021). Doncaster Local Plan 2015 2035, Policies Map. Available at:

 https://maps.doncaster.gov.uk/portal/apps/webappviewer/index.html?id=c
 8073f15e63849d6a28a509e1eec6c76. [Accessed 26 January 2024].
- Ref. 8 Department for Energy Security and Net Zero (2023). Overarching National Policy Statement for Energy (EN-1). Available at: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1. [Accessed 26 January 2024].
- Ref. 9 Department for Energy Security and Net Zero (2023). National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3. [Accessed 26 January 2024].
- Ref. 10 Department for Energy Security and Net Zero (2023). National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5. [Accessed 26 January 2024].
- Ref. 11 Ministry of Housing, Communities and Local Government (2023). National Planning Policy Framework. Available at:
 https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2023.pdf. [Accessed 26 January 2024].
- Ref. 12 Department of Communities and Local Government (2023). Planning Practice Guidance. Available at:

- https://www.gov.uk/government/collections/planning-practice-guidance. [Accessed 26 January 2024].
- Ref. 13 City of Doncaster Council (2022). Annual Monitoring Report. Available at: https://dmbcwebstolive01.blob.core.windows.net/media/Default/Planning/Documents/Policy%20Monitoring/AMR/Annual%20Monitoring%20Report%202022%20-%20Main%20Report.pdf. [Accessed 26 January 2024].
- Ref. 14 Doncaster Council and Rotherham Metropolitan Borough Council (2022). Local Aggregate Assessment. Available at:

 https://www.rotherham.gov.uk/downloads/file/3077/local-aggregates-assessment-2022. [Accessed 26 January 2024].
- Ref. 15 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities and Local Government (2014). Minerals Planning Practice Guidance. Available at: https://www.gov.uk/guidance/minerals. [Accessed 26 January 2024].
- Ref. 16 UK Legislation (2008). Climate Change Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/27/contents. [Accessed 26 January 2024].
- Ref. 17 Intergovernmental Panel on Climate Change (2018). Special Report on the impacts of global warming of 1.5°C above pre-industrial levels. Available at: https://www.ipcc.ch/sr15/. [Accessed 15 March 2024].
- Ref. 18 HM Government (2020). Energy White Paper: Powering our Net Zero Future. Available at:

 https://assets.publishing.service.gov.uk/media/5fdc61e2d3bf7f3a3bdc8cbf/201216 BEIS_EWP_Command_Paper_Accessible.pdf. [Accessed 15 March 2024].
- Ref. 19 HM Government (2021). Net Zero Strategy. Available at: https://assets.publishing.service.gov.uk/media/6194dfa4d3bf7f0555071b1 b/net-zero-strategy-beis.pdf. [Accessed 15 March 2024].

Annex A Figures

Date:



BUILD | OWN | OPERATE | MAINTAIN

BOOM-POWER.CO.UK