Planning Proof Of Evidence Appendices.

Evidence of Nigel Cussen.

In Respect of Section 78 Appeal: Land West of Bradmore Road and North of Wysall Road, Land West of Wysall, Wysall.
On behalf of Exagen Development Ltd.

Date: February 2026 | Pegasus Ref: P25-1631

Appeal Ref: APP/P3040/W/25/3375110 | LPA Ref: 24/00161/FUL

Author: Nigel Cussen

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Appendices contents.

Appendix1.1 – NFCC Compliance reports in respect of the Application Scheme

Abbott Risk Consulting Limited

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National Fire Chiefs Council Planning Guidance for Battery Energy Storage System (BESS) Compliance Report –

Old Wood Energy Park

Issue 3 – February 2026

Prepared for:

Exagen Development Limited
2nd Floor, Coachworks,
9-10 Charlotte Mews
London W1T 4EF

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Issue 1	August 2025	J Tough	C Clarke-Brown	R Davies	Client comments incorporated
Issue 2	January 2026	J Tough	C Clarke-Brown	R Davies	Layout revision
Issue 3	February 2026	J Tough	C Clarke-Brown	R Davies	NFCC Planning Guidance update

Abbott Risk Consulting Ltd
11 Albyn Place
Edinburgh
EH2 4NG

Phone: +44 (0) 131 220 0164

wwww.consultarc.com

Executive Summary

This National Fire Chief Council (NFCC) Planning Guidance for Battery Energy Storage Systems (BESS) [Ref. 1] was published by the NFCC in November 2022 in response to the growing number of BESS installations being proposed across the United Kingdom, with the aim of providing Regional Fire and Rescue Services (FRS) a set of fire safety recommendations to be considered for BESS installations. Following an extensive consultation period, in February 2026 the NFCC issued an update to the 2022 report [Ref. 2]. This updated version has been considered alongside the original 2022 version of the guidance in this report.

The NFCC Compliance Report has been prepared for Exagen Development Limited (the Applicant and Developer), in relation to the updated layout plan for the Old Wood Energy Park, a ground mounted solar farm with associated BESS, substation and point of connection, on land near Wysall, Nottinghamshire (the Site). The Development was refused planning consent by Rushcliffe Borough Council's planning committee in June 2025 under planning application reference: 24/00161/FUL and is now the subject of a section 78 appeal. The focus of this report is primarily on the BESS element of the Old Wood Energy Park, hereafter referred to as the "Development". The Development will use Lithium Ferrous Phosphate (LFP) chemistry, although at this juncture the exact make and model of BESS is yet to be determined.

This NFCC Compliance Report reviews the proposed site layout and construction against the recommendations detailed in the original NFCC Planning Guidance for BESS (2022) [Ref. 1], drawing on the 14 key recommendations in the report. It provides the claimed alignment status with supporting evidence. In addition the latest update to the NFCC guidance - Planning Guidance for BESS (2026) [Ref. 2], has been reviewed and the alignment status likewise reported on in this document.

Consultation with the FRS at similar BESS installations has concluded that "the developer should produce a risk reduction strategy" incorporating safety measures and risk mitigation in collaboration with the associated Regional FRS and covering the construction, operational and decommissioning phases of the project. This report provides the fundamental building block for such consultation with the FRS. The developer will ensure that the risk of fire is minimised, this is by the implementation of the following measures:

a) The procuring of components and using construction techniques that comply with all relevant and prevailing legislation.

b) Including automatic fire detection and suppression systems as part of the design requirement.

c) Designing the development to contain and restrict the spread of fire using fire-resistant materials and separation between elements of the BESS, conversant with the NFCC Guidance [Ref. 1 and 2].

d) Developing an Emergency Response Plan (ERP) with FRS to minimize the impact of an incident during construction, operation, and decommissioning of the facility.

e) Ensuring the BESS is located away from residential areas. Prevailing wind directions have been factored into the location of the BESS to minimize the impact of a fire on the local populace.

Abbreviations

ALARP	As Low As Reasonably Practicable
ARC	Abbott Risk Consulting Ltd
BESS	Battery Energy Storage System
ERP	Emergency Response Plan
FRS	Fire and Rescue Service
HSAWA	Health and Safety at Work Act
HSE	Health and Safety Executive
LFP	Lithium Ferrous Phosphate
NFCC	National Fire Chiefs Council
R2P2	Reducing Risk, Protecting People

Contents

1.0 Introduction

This NFCC Compliance Report has been developed by Abbott Risk Consulting Ltd (ARC) in the role of the Safety Subject Matter Expert. The NFCC Compliance Report has been prepared for Exagen Development Limited (the Applicant and Developer), in relation to the updated layout plan for the Old Wood Energy Park, a ground mounted solar farm with associated BESS, substation and point of connection, on land to the west of Wysall, Nottinghamshire (the Site). The focus of this report is solely the BESS element of Old Wood Energy Park, hereafter referred to as the Development. The Development was refused planning consent by Rushcliffe Borough Council's planning committee in June 2025 under planning application reference: 24/00161/FUL and is now the subject of a section 78 appeal.

The Old Wood Energy Park BESS solution, in terms of BESS manufacturer and model, has yet to be determined, however it is currently proposed that Lithium Ferrous Phosphate (LFP) chemistry cells will be used. This is subject to change and will be driven by the availability of technology at the time of construction of the site. This approach is common to this type of development given the rapid changes and technological advances being made in the field of lithium-Ion storage systems. Reference to LFP is solely to illustrate the capability that is possible for developments of this type and the safety measures that are generically available.

This NFCC Compliance Report has been developed to provide an overview to how the proposed layout and construction complies with both the original NFCC Guidance for BESS [Ref. 1] and the updated guidance issued in February 2026 [Ref. 2]. This NFCC Compliance Report provides the starting point to support a robust safety strategy. The final design and equipment details is based on the site layout plan and associated details provided by Exagen Development Limited.

2.0 Background

NFCC Planning Guidance for BESS (2022) [Ref. 1] and NFCC Planning Guidance for BESS (2026) [Ref. 2] has been used for this assessment. The original NFCC guidance was subject to an extensive period of consultation from July 2024 until the updated guidance was published in February 2026.

3.0 Aim

The overall safety aim is that the levels of risk of accident, death or injury to personnel or other parties, and to the environment due to the construction, operation and decommissioning of the Development are broadly acceptable or tolerable and 'As Low As Reasonably Practicable' (ALARP) in accordance with the Health and Safety Executive (HSE) Reducing Risk, Protecting People (R2P2) [Ref. 3].

4.0 Scope

The scope of the NFCC Compliance Report for the Development covers the physical and functional aspects of the equipment. The site is flat and is outlined by the red line boundary on the Site Location and Site Layout Plans, submitted as part of the planning application. The BESS facility and associated ancillary infrastructure is illustrated at Figure 4-1. The primary access route is illustrated by the orange arrow route with the secondary accesses shown by the black arrow route.

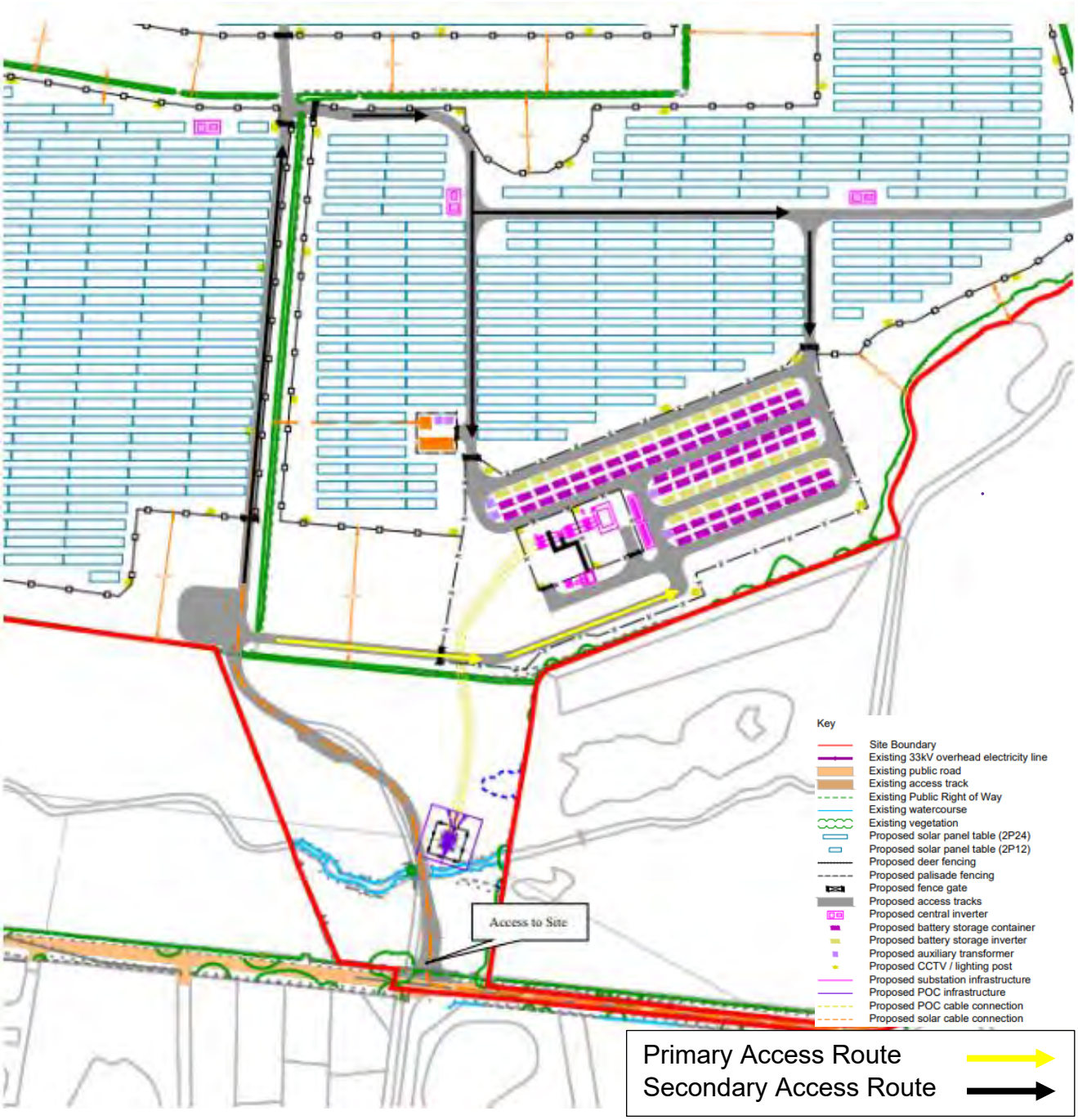


Figure 4-1 Old Wood Energy Park - BESS Layout

The historical wind rose for Nottingham[1] is at Figure 4-2 which illustrates a predominant wind direction from the southwest.

[1] https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/nottingham_united-kingdom_2641170

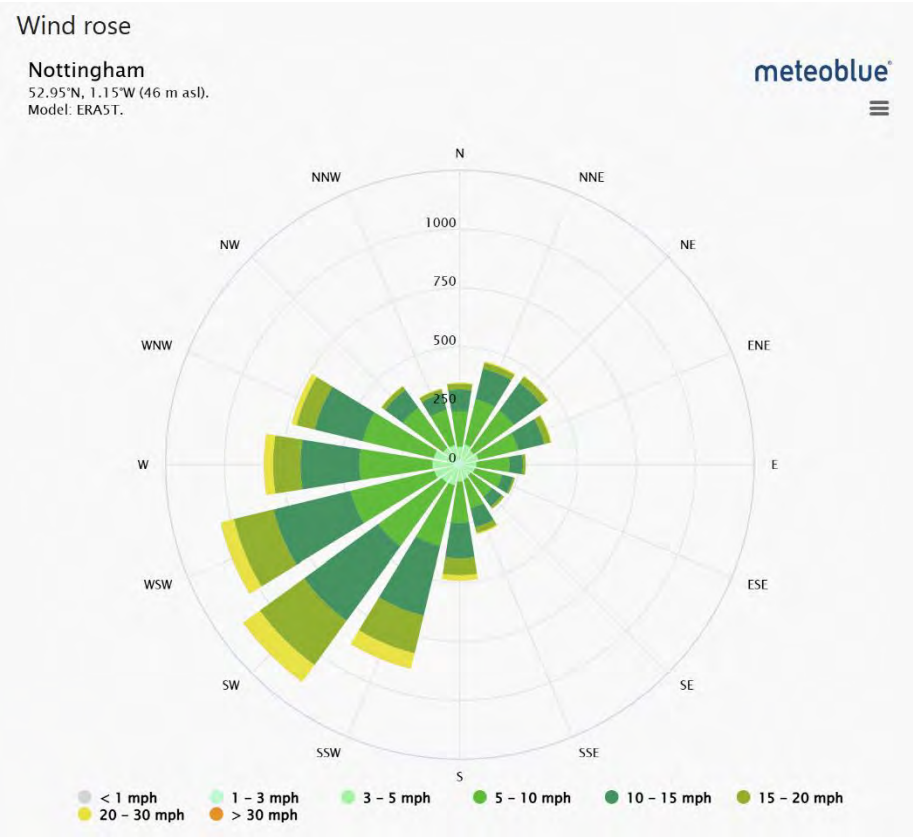


Figure 4-2 Wind Rose, Nottingham

4.1 BESS - Overview

The exact BESS unit type has yet to be determined for the Development, however the option currently available and under consideration is based on LFP chemistry. This type has been considered as being used for this development, although this is subject to change.

4.2 Frequently Asked Questions

Appendix A of this NFCC Compliance Report contains frequently asked questions regarding battery safety and is provided for assurance and a greater awareness of BESS and Lithium-Ion technologies in general.

4.3 NFCC Recommendations

The NFCC Report Grid Scale Battery Energy Storage System Planning (2022) – Guidance for FRS [Ref. 1], details the FRS recommendations for BESS installations. These have been distilled at Table 4-1 cognisant of the site layout at Figure 4-1. Likewise NFCC Report Grid Scale Battery Energy Storage System Planning (2026) [Ref. 2] is contained in the same table for clarity and convenience.

4.4 FRS Consultation

The Site location falls within the jurisdiction of the Nottingham FRS. The Planning Application as originally submitted received response from the FRS, this directed the Applicant to consider

how the development and site layout aligned with the prevailing NFCC Guidance for BESS [Ref. 1], hence the submission of this report.

Further to this addition fire safety concerns have been raised through consultation or at planning committee meetings.

*32. **Fire Service** – No objection raised, a pre-commencement condition is recommended to ensure appropriate risks are known and mitigated for once the final detail/technology of the battery storage equipment is known and that this information is to be submitted through a Risk Management Plan and Emergency Response Plan. The plan is required to include confirmation that Fire Service vehicles can easily access all the site, final safety systems of the containers, final internal suppression system to be used, method of dealing with a fire, container heat output (energy density), contamination levels of gases and vapour and how will it be controlled.*

And under the Fire Safety section of the committee report:

145. Accordingly, the comments from the Fire Safety Officer have been sought on this matter. A number of consultation responses have been received by the Fire Safety Officer which required further information to be supplied.

146. In response to this, a suggested condition which requires the submission of a Risk Management Plan and Emergency Response Plan has been put forward to the fire safety officer. The suggested condition requires the plan to be developed in conjunction with the Nottinghamshire Rescue service using the best practice guidance as detailed and required in the published Grid Scale Battery Storage Energy Storage planning - Guidance for Fire and Rescue Services (FRS) published by National Fire Chiefs Council (NFCC).

147. The plan is required to include confirmation that Fire Service vehicles can easily access all of the site, final safety systems of the containers, final internal suppression system to be used, method of dealing with a fire, container heat output (energy density), contamination levels of gases and vapour and how will it be controlled. Given that the finalised detail of the development in relation to the above matters is to be provided once known, it is considered that the detail can be satisfactorily and appropriately secured by condition.

148. The Fire Safety Officer has confirmed that the suggested condition is appropriate and would invite a further consultation once precise details are available in order to work with the applicant on the production of an emergency response plan.

The proposed condition was condition 16 in the committee report, copied below:

16. Prior to the construction of the Battery Energy Storage System (BESS), a Risk Management Plan and Emergency Response Plan shall be submitted to and approved in writing by the Local Planning Authority. These plans shall be developed in conjunction with Nottinghamshire Rescue Service using the best practice guidance as detailed and required in the published Grid Scale Battery Energy Storage System planning - Guidance for FRS published by NFCC National Fire Chiefs Council and as set out within the consultation response from Nottinghamshire Fire & Rescue Service dated 8 March 2024. Once approved, these plans shall be implemented thereafter and for the duration of the lifetime of the development.

Applicant Response: A Detailed Battery Safety Management Plan (DBSMP) forms an element of the progressive safety assurance process adopted for this site. The DBSMP will detail the infrastructure to be used at the site and the associated fire safety certification / systems. In addition, the Applicant will develop, in conjunction with the FRS the site ERP.

4.5 Building Regulations

The building work will be subject to control under the restrictions of the Building Regulations 2010 (as amended). The Building Regulations are concerned with the safety of individuals in and around a building. The development will be designed and constructed to satisfy the functional requirements of Part B (Fire Safety) to Schedule 1 of the Building Regulations 2010 (as amended), which includes the following:

- B1 – Means of warning and escape.
- B2 – Internal fire spread (linings).
- B3 – Internal fire spread (structure).
- B4 – External fire spread.
- B5 – Access and facilities for the Fire Service.

As majority of the facilities located on Site are external and would be considered as enclosures, as opposed to buildings or structures. Enclosures are not obliged to satisfy Requirement B2 of the Building Regulations; however, the requirements have been applied where reasonably practicable to demonstrate a good level of fire safety (please refer to Table 4-1 below).

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
1	Access - Minimum of 2 separate access points to the site	Achieving adequate vehicular access for the fire and rescue service prevents personnel from having to enter the BESS site and drive through a vapour or gas cloud to reach the scene of operation. It is therefore preferable to have an alternative access point, taking account of the likely wind direction. If the provision of an alternative access point is not practicable, an alternative may be to provide a perimeter 'loop' type of vehicle access around the site	**Compliant to both 2022 and 2026 Guidance**	There are 3 points of access into the BESS compound using the site internal roads. Access to the BESS compound is possible from differing points of the compass allowing access whatever the wind direction. All access emanates from a single point on the public highway, recourse to historic wind data indicates that the prevailing wind direction in the location is southwest veering westerly, see Figure 4.2. <u>Primary Access</u> The primary operational access to the BESS compound is off Wysall Road, heading north over Kingston Brook, turning right towards the BESS compound and turning left (north) into the compound from the south. <u>Emergency Secondary Accesses</u> The secondary emergency accesses to the BESS compound utilise the solar farm tracks. The routes commence as per the primary route but instead of turning east they continue north into the solar farm before turning east and using one of two tracks running south to enter the BESS compound in the northwest or northeast corner. Vehicle tracking has been completed for fire tenders, and these drawings are included at Appendix B of this report. For the avoidance of doubt fire tenders can make all turns and corners safely.
2	Roads/hard standing capable of accommodating fire service vehicles in all weather conditions. As such, there should be no extremes of grade.	Table 15.2 of Approved Document B provides an overview of access routes and hard standing areas which have considered fire service vehicle dimension.	**Compliant to both 2022 and 2026 Guidance**	The site service roads, which allow access around the site and BESS compound, will be a hard compacted surface and a minimum of 4.0m wide. There is no extreme of gradient at the site. The site access road is suitable for HGV traffic during construction and retained to be suitable for fire tenders during the operational period. All internal services roads have been designed with a 10m radii and are compatible for a DB32 Fire Appliance. Refer to fore tender vehicle tracking to all BESS access points in Appendix B.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
3	A perimeter road or roads with passing places suitable for fire service vehicles	Dead-ends are to be avoided where practical	**Compliant to both 2022 and 2026 Guidance**	The BESS compound service roads are 4.0m wide hard surface access running around the site allowing access to all BESS units, Figure 4-1 refers, given the circular nature and compactness of the site the ability to drive-in and drive-out without the need for passing points or the need to reverse is provided. Section 13.4 of Approved Document B5 states that FRS vehicles should not have to reverse more that 20m from the end of an access road – given the provision of a circular perimeter service road the requirement for FRS vehicles to reverse is minimised to situations in which use of the perimeter service road is not possible, and in these circumstances, reversing more than 20m is not a requirement. Section 13.4 references Table 13.1 of the Approved Document B5 which contains typical FRS vehicle access route specifications – the site will meet these specifications.
4	Road networks on sites must enable unobstructed access to all areas of the facility	No change or additions to the NFCC 2022 Guidance	**Compliant to both 2022 and 2026 Guidance**	Access to all BESS units is afforded from the network of services roads in the BESS compound road. The site is designed such that all routes have the capacity to allow for a Fire Tender (based on DB32 Fire Appliance), refer to Appendix B.
5	Turning circles, passing places etc. size to be advised by FRS depending on fleet	No change or additions to the NFCC 2022 Guidance	**Compliant to both 2022 and 2026 Guidance**	The BESS compound access service roads allow access to all BESS units (Figure 4-1 refers) in two differing directions and allow for FRS vehicles to drive in and drive out without the need to reverse. From consultation with the FRS to date it is established that these arrangements are satisfactory. Swept Path Analysis has been carried out for the site to establish that all routes have the capacity to allow Fire Tender (based on 8.68m Fire Tender with a 4.0m wheelbase and 2.18m width). Refer to Appendix B.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
6	Distance from BESS units to occupied buildings & site boundaries. Initial min distance of 25m	The suggested initial minimum distance between BESS cabinets/associated infrastructure and occupied buildings was increased to 30m (based on 100ft distance cited in NFPA 855:2023).	**Compliant to both 2022 and 2026 Guidance**	There are no occupied buildings within 30m of the BESS compound, the nearest residential dwellings are approximately 400 m east/southeast and 450m south of the BESS compound.
7	Access between BESS unit – minimum of 6m suggested. If reducing distances, a clear, evidence based, case for the reduction should be shown.	If the unit has passed certain tests (such as UL 9540A, demonstrating contained propagation), the separation distance can be reduced to a maximum of 0.914m (3ft).	**Compliant to both 2022 and 2026 Guidance**	The BESS units for the Development will be LFP and the smallest separation distances between BESS units is 3m and the BESS units employed will be UL9540A tested.
8	Site Conditions – areas within 10m of BESS Units should be cleared of combustible vegetation	Areas within 3m of BESS cabinets/enclosures should be kept clear of combustible vegetation. Additionally, all other vegetation within the curtilage of the site should be managed appropriately to avoid increased risk of a fire on the site.	**Compliant to both 2022 and 2026 Guidance**	The BESS units will sit on concrete slabs or supporting feet. Internal access tracks will comprise crushed stone and the access road for the abnormal load will be asphalt. Within fence line and between BESS containers units the surface is laid over to gravel. All areas within a minimum of 10m of the BESS are to be cleared of vegetation.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
9	Water Supplies	• The requirement for fire hydrants was clarified to achieve a flow rate of no less than 25L/sec (or 1,500 L/min), based on the value for transportation in the National Guidance Document on the Provision of Water for Firefighting. • If 25L/sec cannot be achieved, an equivalent static supply of approximately 180,000L is required to provide that flow rate for 120 minutes. • The previous guidance recommended 1,900 litres per minute for at least 2 hours. • Any static water storage tanks designed to be used for firefighting should be located at least 10m away from any BESS container/cabinet to allow for safe access and usage. They should be clearly marked with appropriate signage and be easily accessible to fire and rescue service vehicles. • Any required installations of fire hydrants and connections to any dry pipe on the BESS site should comply with BS 9990.	**Compliant to both 2022 and 2026 Guidance**	The design directs any water applied to the site to be collected in a below ground water storage pipe that will be closed off in the event of a fire, via a penstock. The water storage pipe has a greater than 228,000 litre capacity. Access to the water storage pipe will be via a manhole covered sump the location of which will be signposted and details contained in the Emergency Response Plan held in the site entrances GERDA boxes. This will allow for the FRS to recirculate any runoff and use it for boundary cooling. The NFCC Guidance (2022) recommendation was for 1900l/min for 2 hours (requiring a 228,000-litre capacity). The NFCC Guidance (2026) recommendation has reduced this volume, recommending a a minimum of 25l/min for 2 hours, totalling 180,000 litres. As such the design proposed exceed the NFCC Guidance (2026) recommended volume.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
10	Signage	• External audible and visual warnings should be clearly visible to operational crews, along with addressable identification, control, and indicating equipment. • Any static water storage tanks designed to be used for firefighting should be located at least 10m away from any BESS container/cabinet to allow for safe access and usage. They should be clearly marked with appropriate signage and be easily accessible to fire and rescue service vehicles.	**Compliant to both 2022 and 2026 Guidance**	Signage to be positioned at all entrances to the site. Signage to be confirmed through design process and will be detailed in the ERP. Static Water Tanks will be clearly marked and annotated on the site plans included in the ERP.

11	Emergency Plans	• What are the assumptions about active firefighting within the emergency response plan, and what measures are in place to reduce the scale of an incident? • Are the incident assumptions realistic? What is the role of the fire and rescue service at an incident? Are they realistic? What is the expectation of the fire and rescue service in terms of the fire strategy at a thermal event? • What is the provision for firefighting access to, around, and within the site? • What is the size, quantity, and capacity of each BESS unit? • Is the BESS design appropriate for the weather at the proposed location in terms of preventing water ingress and impact of temperature range on cooling systems? • Does the applicant / developer have relevant competence and experience in the field of BESS design and deployment on the scale of the proposed development? If not, do they have access to specialist advisors to support?	**Compliant to both 2022 and 2026 Guidance**	Future iteration of the Outline Battery Safety Management Plan (OBSMP) to DBSMP will roll up the ERP outlining who and how FRS will be alerted, facility description, number of operatives, detailed site plan etc. The ERP will include all the elements recommended in the NFCC Guidance (2026).

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
		• What are the arrangements for ongoing monitoring of the BESS? • What is the response time for onsite technical assistance in the event of an incident?		
12	Environmental Impacts	• How will water run-off be managed? • Directs developers to Fire Prevention Plans: Environmental Permits guidance for the information required in the ERP. Suitable environmental protection measures should be provided, and developers should liaise with the Water Undertakers or the Environment Agency to understand any impacts Protection measures should include systems for containing and managing water run-off. System capability/capacity should be based on anticipated water application rates, including the impact of water-based fixed suppression systems. Sites located in flood zones should have details of flood protection or mitigation measures	**Compliant to both 2022 and 2026 Guidance**	There have been no environmental impact concerns raised for the Site, the EA have responded to the Planning Application and have no objections. A Drainage Report has been prepared for the site as part of the planning application and forms part of the planning application document set. The premise of the drainage strategy is retention of firefighting water runoff is made via the below ground water storage pipe, which can be used by the FRS to recirculate the runoff for boundary cooling. Post the incident the runoff will not be released to the wider environment prior to being tested for any contamination. A Flood Risk Assessment has been conducted and whilst the access to the site from the public highway falls within Flood Zones 2 and 3 the depth of the water is such that it is unlikely to prevent access to the site. The BESS compound is unaffected.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
13	System design, construction, testing and decommissioning	• How will the BESS and associated equipment be monitored, and what is the process for alerting the fire and rescue service? • How will the fire and rescue service align their approach to handling calls to BESS sites to their unwanted fire signals position? A new dedicated section on Battery chemistry was included, drawing on the Department for Energy and Net Zero (DESNZ) 2024 report, and discussing differences in safety profiles, such as the generally better thermal stability of Lithium Iron Phosphate (LFP) compared to Lithium Nickel Manganese Cobalt Oxide (NMC) batteries.	**Compliant at this juncture**	Several of the elements under this aspect of the NFCC Guidance will be contained in the OBSMP, the Planning Application Safety Plan, however details of the construction, testing and decommissioning will only be available in later stages of the programme and be contained in the DBSMP, developed post consent.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
14	Deflagration Prevention and venting	• How will the proposed BESS perform in a thermal event / deflagration, and what proactive or reactive systems are proposed to mitigate this? • How will the thermal event be contained to the BESS cabinet of origin without the radiant heat affecting other cabinets? • How has the performance of the BESS in a thermal runaway event influenced site design? • Has the proposed equipment undergone any full-scale fire testing or has it been certified by a reputable body such as Underwriters Laboratory (UL 9540A)? A new detailed section addresses Explosion control (Deflagration protection), referencing British and NFPA standards (e.g., BS EN 16009:2011, NFPA 68), and mandating that flames and materials discharged during venting should be directed safely outside.	**Compliant at this juncture**	Elements of this requirement will be contained in the OBSMP, but the actual technique to be adopted will not be apparent up to the point the decision is made as to what BESS is being used. It is acknowledged that deflagration venting is possibly most effective when fitted to the roof of the BESS Units, as such deflecting blast upwards and away from FRS personnel, as such this will form an element of the procurement strategy for the BESS units.
15	NA – new recommendation	Site Plans now form a part of the Guidance	**Compliant at this juncture**	Site plans are included as an element of the planning application and the relevant details required under this new recommendation will be captured in the ERP.

Table 4-1 - NFCC Recommendations Cross-Referenced to the Old Wood Energy Park BESS

5.0 Conclusions and Recommendations

5.1 Conclusions

It is concluded that the proposed site layout and construction is compliant with the recommendations detailed in the original NFCC Planning Guidance for BESS 2022 [Ref. 1] and the updated NFCC Planning Guidance for BESS 2026 [Ref. 2].

This NFCC Compliance Report has been developed using existing knowledge of the BESS capability and leans heavily on the subject matter expertise that ARC have in this technological domain.

Installation of the BESS in accordance with OEM instructions followed by a period of qualification and testing will provide the supporting evidence. This will also allow for the consolidation of control evidence and enhanced development of mitigation to further reduce the level of risk posed.

5.2 Recommendations

It is recommended that the BESS safety management and criteria (for assessment and analysis) as defined in this NFCC Compliance Report, is adhered to throughout the site lifecycle to ensure that safety management is developed as the programme progresses and remains valid through the life of the BESS capability. This NFCC Compliance Report will be revised and updated as the programme progresses.

6.0 References

1. NFCC Grid Scale BESS Planning – Guidance for FRS dated Nov 2022 - Grid Scale BESS Planning- Guidance for FRS.

2. NFCC Grid Scale BESS Planning – Guidance for FRS dated Feb 2026 - Grid scale energy storage system planning - Guidance for fire and rescue services - NFCC.

3. Reducing Risk, Protecting People (HSE Publications) - https://www.hse.gov.uk/risk/theory/r2p2.pdf.

Appendix A – Frequently Asked Questions

Ser	Question	Answer
1	How does a BESS work?	A BESS employs technology to temporarily store electrical energy, very much in the same manner as a mobile phone or laptop battery, but on a much bigger scale. The energy can be stored and released when demand on the National Grid is high and assists in balancing out variations in demand or alternately when connected to a Renewable Energy source can be used to store the energy as it is being generated.
2	How safe is a BESS?	The Department for Energy Security and Net Zero promulgates on a quarterly basis the Renewable Energy Planning Database (REPD). From the Oct 2025 REPD this data has been filtered for BESS installations and the following deduced[2]: 1. Listed in the REPD[3], there are: . 136 operational BESS sites. . 8 BESS sites have been decommissioned. . 110 BESS sites are under construction. 2. There have currently been four reported BESS fires in the UK that have required FRS attendance, these occurred at Carnegie Road, Liverpool in Sept 2020, Cirencester March 2025, Rothienorman in Aberdeenshire Feb 2025 and East Tilbury in Feb 2025[4]. 3. The current operational UK BESS sites have accumulated an estimated 741 years of operation[5]. 4. Given the overall UK BESS sites storage capacity of approx. 3GW an estimation of the number of BESS units in use, using an individual BESS generic max capacity of 4MW, it has been determined that there are approx. 735-750 individual BESS units in operation across the UK. This provides an all-up operating time of approx. 25,908,965 hours of cumulative operation (this being approx. 3000 years). 5. Given the approx. 26 million hours of operation and accounting for the four fires, this extrapolates out to approx. 1.54E-07 (0.000000154) failures per hour (fph) for BESS in the UK or 1 incident per 750 years.

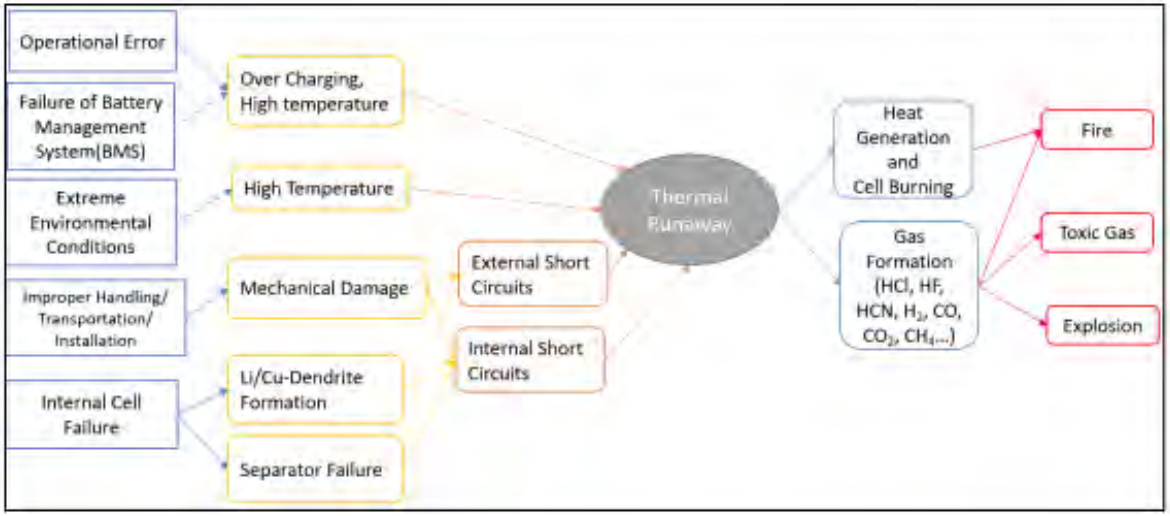
[2] The REPD tracks the progress of energy projects, including BESSs, through the planning system. Until 2021, the REPD only recorded projects with a capacity over 1 MW). Since 2021, it also includes projects with a capacity over 150 kilowatts (kW). Therefore, BESSs that were going through the planning system before 2021 may not have been captured in the REPD – Source: Commons Library Research Briefing, 19 April 2024 – BESS.

[3] This is a conservative figure as the REPD did not account for project under 1MW until 2021.

[4] The root cause of the fires at Cirencester, Aberdeenshire and East Tilbury has yet to be established.

[5] This does not include the operating time of the BESS sites now decommissioned.

Ser	Question	Answer
		6. To date, there have been no recorded fatalities, third-party injuries, or environmental damage resulting from BESS incidents in the UK.
3	Lithium-Ion is sensitive to temperature variations – how is this controlled?	The batteries are housed in an enclosure which is fitted with an Environmental Control Unit (ECU) and/or Active Ventilation System (AVS). The ECU maintains the temperature and humidity within the container, allowing the Lithium-Ion batteries to operate within the optimum temperature range. The temperature of individual cells in each battery is monitored by the battery management system (BMS) and is reported back to the container level BMS which adjusts the internal temperature in response. Should the ECU develop a fault the container will isolate charge and discharge to the batteries until the fault has been rectified. All faults in the BESS are remotely fed to a centralised Operational Control Room (OCR). In some BESS the AVS will activate if any cell off gas is detected, sweeping the enclosure of the gas. Activation of the AVS will raise an alarm in the OCR.
4	What is Thermal Runaway?	Thermal Runaway (TR) is the term used to describe when an internal short-circuit in one of the battery cells, that can lead to cell over-pressure and the venting of combustible gases, results in adjacent cells heating up and likewise venting combustible gases. On ignition of the gas the the cell will increase in over-pressure, and the resulting fire will be self-sustaining until all the material in the cell is expended, a quasi-chain reaction event. The propensity for TR differs from cell chemistry to cell chemistry and the design of the battery can reduce the risk of TR. Cell short-circuits are generally a result of: 1. Cell penetration by a foreign object (not usually an issue for a BESS as the batteries are housed in sturdy containers in secured compounds). 2. Impurities in the electrolyte (deposited during the manufacturing process), which over time can lead to the formation of dendrites (electrolytic crystals) which puncture the membrane isolating the anode and cathode – this can, but not always, result in a short-circuit and TR. 3. Over-temperature in the cell because of: . Over-charging (which is controlled by 2 separate BMS – battery and rack). . High ambient temperature – controlled by the ECU.

Ser	Question	Answer
		The illustration below provides an outline of the possible causes of TR. 
5	How can TR be controlled?	TR is not always inevitable, and the nature of the cell design is such that early warning signs of a stressed cell can be detected by the BMS. Initial signs of cell degradation are an increase in the time it takes the cells to reach full charge (maximum voltage) and a decrease in the time it takes to discharge – slow charge, rapid discharge – as experience in mobile phones as the battery reaches end of life. In a BESS these indicators are picked up by the BMS and if persistent the BMS will isolate (prevent charge and discharge) to the battery and inform the OCR. In turn an engineer will be dispatched to remove the battery and replace it with a serviceable item. Since the early inception of BESS, safeguards in the design have developed and are now detailed in UL1973. If these indicators are not present, and the cell enters early stages of short-circuit the over-pressure in the cell will result in the venting of off-gas which is detected by the off-gas detectors built into the enclosure. This will result in the container disabling the charge and discharge (the act of charging and discharging the batteries generates heat, which is to be avoided) and setting the ECU/AVS to maximum volume setting. This has a twofold effect, it clears the container of combustible gas and cools the internals, taking the energy out of the cells (the cells used in BESS, like other batteries do not perform well in low temperature conditions). It should be noted that most BESS only

Ser	Question	Answer
		operate at between 80-90% of capacity to provide an engineering margin that mitigates the probability of over-charging the cells.
6	How is a BESS fire controlled and suppressed?	If a TR is not controlled and ignition occurs, the fire detection and suppression system (FDSS) will activate. There are generally two types of FDSS that are used in BESS; gaseous systems and aerosol systems. Each system has advantages and disadvantages: 1. Aerosol systems are better in terms of extinguishing the fire and benefit against gaseous systems, which generally supress the fire by reducing the level of oxygen in the container. 2. Gaseous systems are instantaneous in operation; the gas being kept under pressure in bottles. Aerosol, by the nature of the deployment as a fine mist, take a little longer to reach all areas of the container. 3. Aerosol systems generally require a more complex and intricate delivery system to reach all areas of the container. 4. Gaseous systems require a sealed environment in which to operate. As such if the container is opened and oxygen reintroduced it can lead to the fire reigniting, as such they require the ECU to close prior to activation (to prevent the ECU from pushing out the extinguishing medium). 5. Various FDSS aerosols (also known as aqueous) and gaseous systems are available, and they use a variety of aerosol solutions. Under consideration for this site is the use of an aerosol aqueous solution containing potassium carbonate (K_2CO_3) – this inhibits the fire by isolating at a molecular level with the chemical chain reactions forming the flame front. This aerosol is non-harmful to the environment and presents no health and safety concerns to first responders.
7	Can water be used to extinguish a Lithium-Ion fire?	The use of water to extinguish a BESS fire has some drawbacks and disadvantages over bespoke FDSS aerosol mediums, these being: 1. Due to the design of the BESS batteries and racks (in which they are contained), the inability of water to cool the cell interiors may result in re-ignition of a fire once the water application is halted. 2. The high conductivity of water may cause short circuiting of cells presenting collateral damage risk and increase the spread of the fire internal in the BESS. 3. A high volume of water is required to cool the cells below the critical temperature to prevent TR propagation, this results in a high volume of fire water run-off and a potential environmental impact.

Ser	Question	Answer
		4. The application of water on a BESS fire increases the generation of gases such as carbon monoxide (CO), hydrogen (H_2) and hydrogen fluoride (HF). Applying water causes incomplete combustion of organic substances inside the battery resulting in production of CO rather than CO_2; when water is applied, H_2 is released that, without combustion, can react with phosphorus pentafluoride, if present in free form, to produce gaseous HF.
8	What are the environmental consequences of a BESS fire?	In the event of a BESS fire several chemicals in gaseous form can be released and the composition and concentration of the plume (also referred to as the vapour cloud). In the event of a BESS fire amongst the general gases released are CO, HF, oxygen and hydrogen. The BESS fire at Carnegie Road, Liverpool – Sept 2020 was monitored, and the resultant composition of the plume was determined as being negligible in toxic gas concentration. Subsequent plume and concentration modelling has demonstrated that the concentration of HF in the plume is limited to Acute Exposure Level Guidance Level 1, the lowest level of HF. This concentration level is non-fatal. Should the resulting fire be treated with water in the presence of HF the result can be the formation of a HF acid which can be detrimental to the environment, especially the aquatic habitat. To prevent this, it is possible to contain the fire run-off water but often best to let the fire run its course and burn out. It is worth noting that the fire run-off water at Carnegie is considered to have been neutralised by the lime-based gravel covering used at the base of the BESS and on testing was found to be a low alkaline level, as opposed to acidic. Further to this the recent fire at Moss Landing California (Feb 2025), was monitored at 1 second intervals for toxic substances in the smoke plume. It was established that the composition of the plume emanating from the fire was within US Air Pollution limits. California Air Quality limits for HF are stricter than those in the UK.
9	How is the BESS site secured?	The BESS Site is secured through fences / walls and monitored remotely via security cameras. Warning signs along the fence indicates the presence of electrical storage facilities within the site.
10	How is the serviceability of the BESS assured?	The Health and Usage data for each BESS is remoted to a centralised Control Room and the serviceability of each battery determined on an hour-to-hour basis. Given that the batteries have a finite number of cycles over a given period it is envisaged that the batteries will be renewed multiple times in the 40-year life of the site.

Appendix B – Fire Tender Vehicle Tracking Drawings

north

11

12

13

14

See Drawing '2303076-TK38B'

See Drawing '2303076-TK39B'

See Drawing '2303076-TK37B'

See Drawing '2303076-TK36B'

See Drawing '2303076-TK35A'

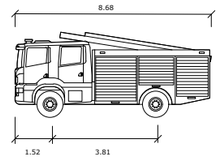
0 50 100 150 200m

SCALE IN METRES
1:2500

C:\Users\droddy\Motion\StaffSite - Exwysa 2303076\Drawings\2303076 - TK34B [Fire Appliance].dwg

Notes

1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

meters

Width	:	2.18
Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

Drawing Status:

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Client:
Exagen Development Limited

Project:
Old Wood Energy Park

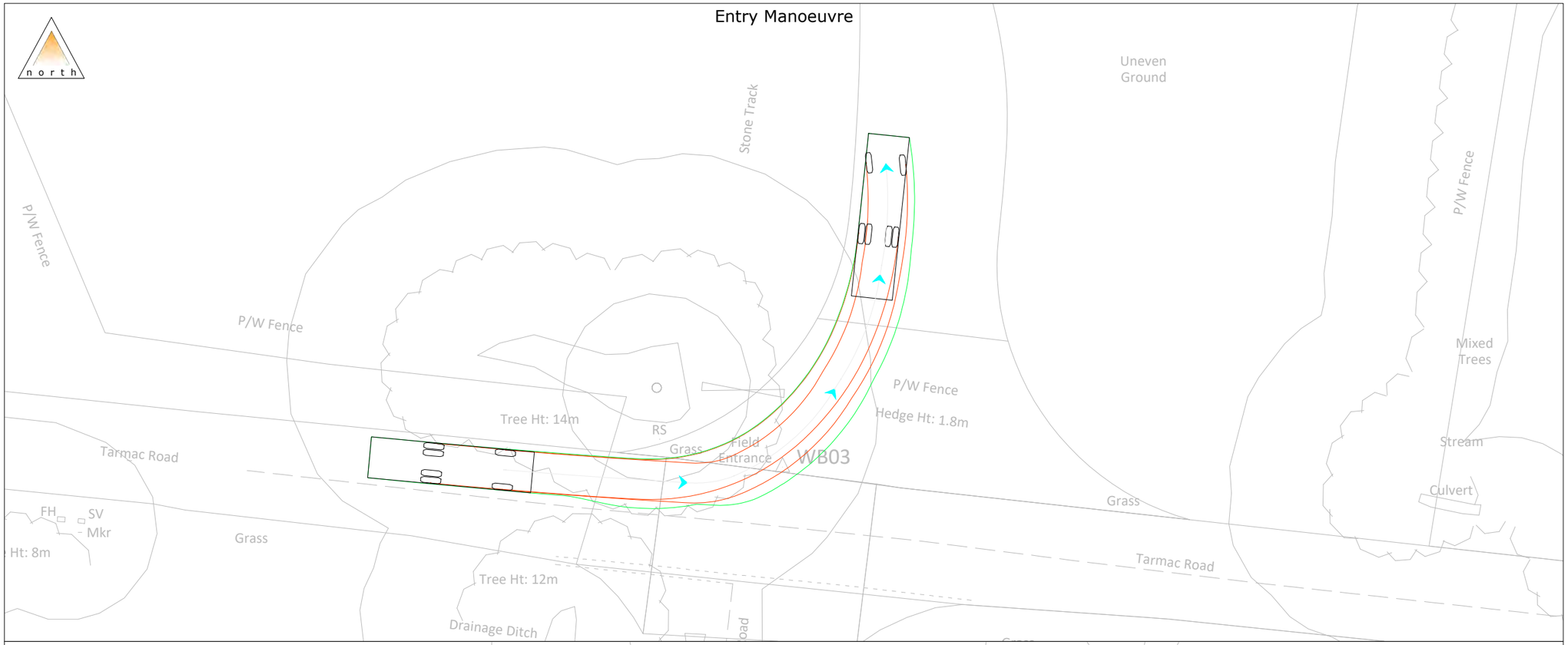
Title:
Swept Path Analysis
Southern Parcel Overview
Fire Appliance

Scale: 1:2,500 (@ A3)

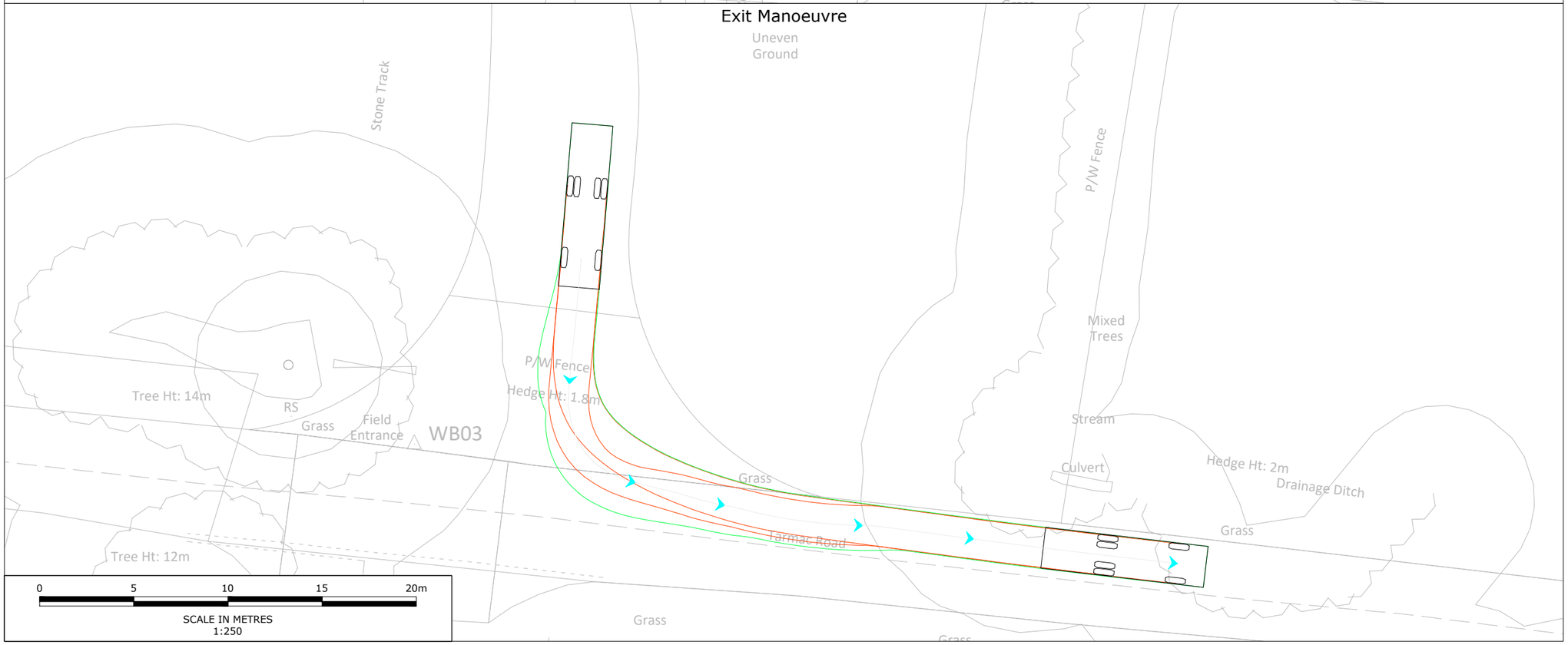
Drawing: 2303076-TK34

Revision: B

Entry Manoeuvre



Exit Manoeuvre



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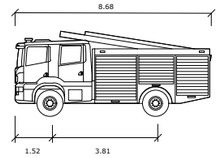
Notes

1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

		meters
Width	:	2.18
Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
A	Updated Project Name	DR	MF	MF	13/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel Access
Fire Appliance

Scale: 1:250 (@ A3)

Drawing: 2303076-TK35

Revision: A

north

Exit Manoeuvre

Hedge Ht: 1.8m
Tree Ht: 7m
Tree Ht: 9m
Hedge Ht: 1.8m
Hedge Ht: 1.8m
Tree Ht: 14m
Tree Ht: 13m
P/W Fence
Tree Ht: 3m
Hedge Ht: 1.8m

0 10 20 30 40m

SCALE IN METRES
1:500

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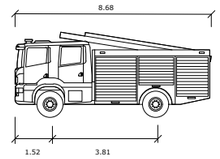
Notes

1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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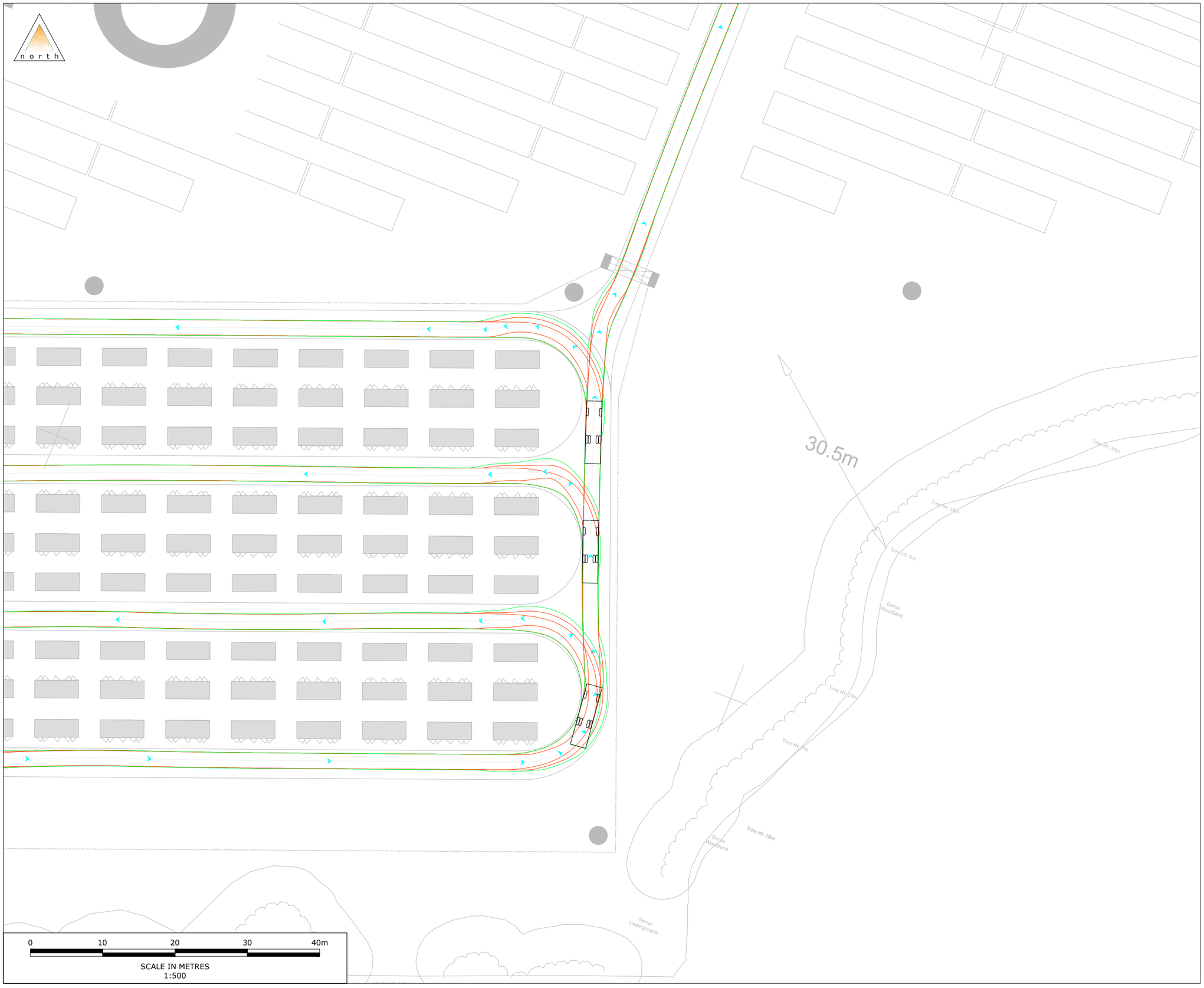
Project:
Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK36

Revision: B



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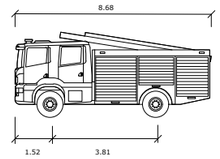
1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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Title:
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Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK37

Revision: B

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Notes

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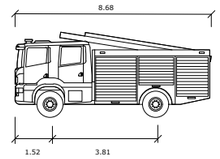
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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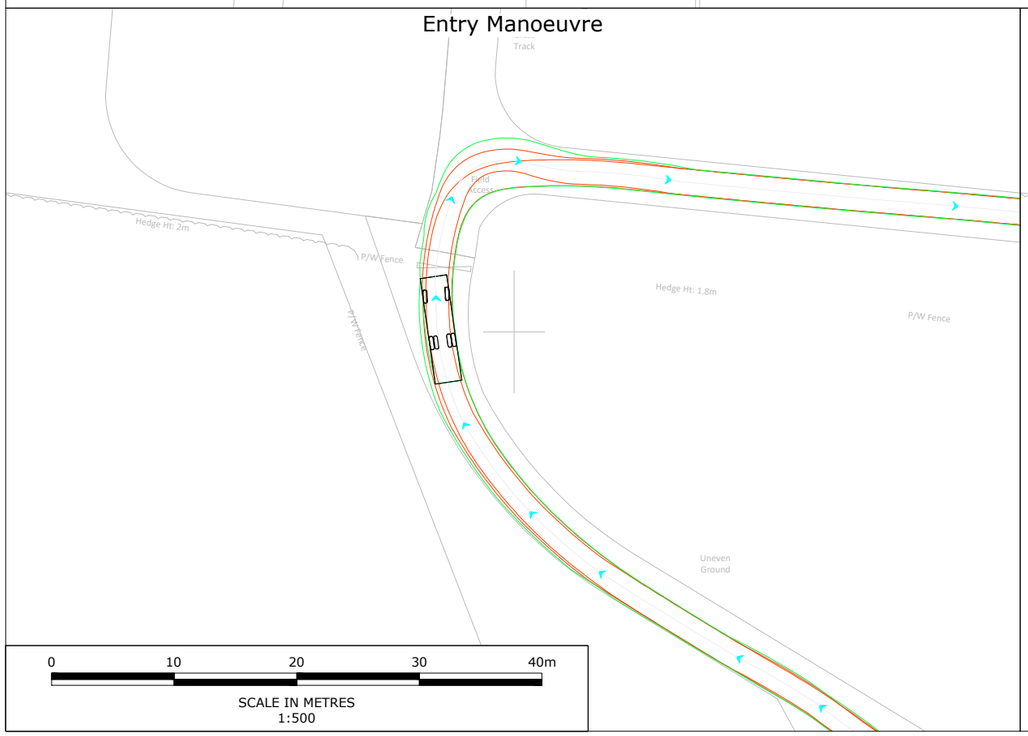
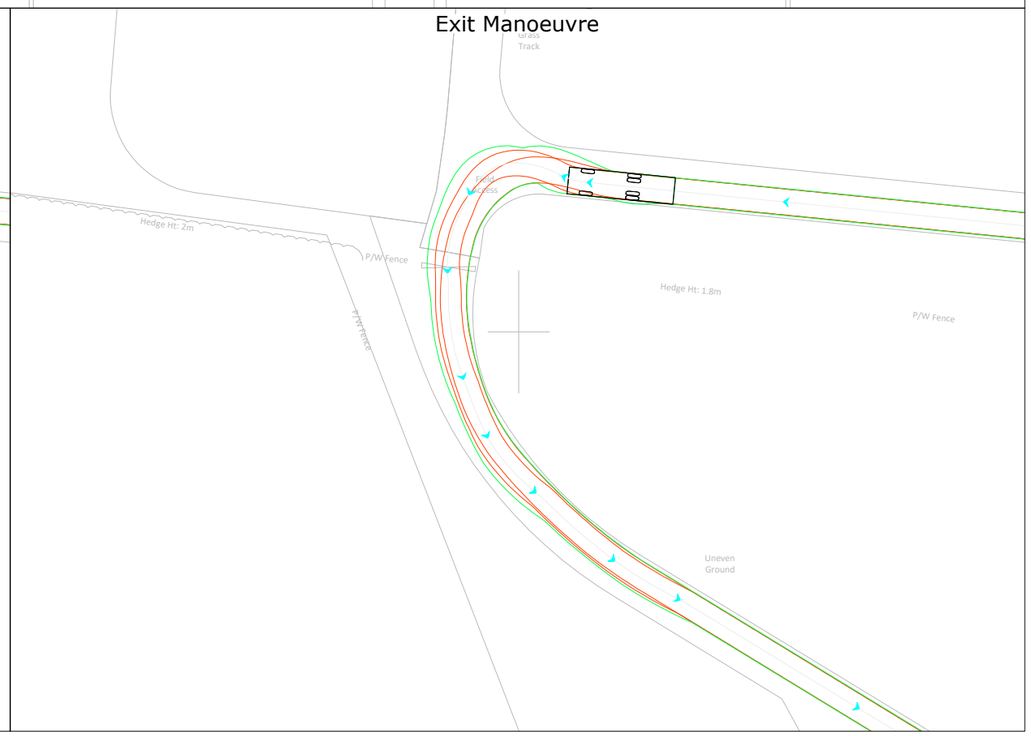
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK38

Revision: B





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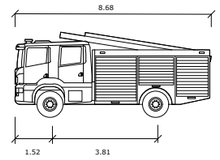

DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

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-	First Issue	DR	MF	MF	06/08/2025

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Title:
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Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK39

Revision: B

Appendix1.2 – NFCC Compliance reports in respect of the Appeal Scheme

Abbott Risk Consulting Limited

ARC-1283-002-R2

National Fire Chiefs Council Planning Guidance for Battery Energy Storage System (BESS) Compliance Report –

Old Wood Energy Park

Issue 1 – February 2026

Prepared for:

Exagen Development Limited
2nd Floor, Coachworks,
9-10 Charlotte Mews
London W1T 4EF

Issue No.	Date	Prepared	Reviewed	Approved	Revision Notes
Issue 1	February 2026	J Tough	M Mankel	I Homes	Client comments incorporated

Abbott Risk Consulting Ltd
11 Albyn Place
Edinburgh
EH2 4NG

Phone: +44 (0) 131 220 0164

wwww.consultarc.com

Executive Summary

This National Fire Chief Council (NFCC) Planning Guidance for Battery Energy Storage Systems (BESS) [Ref. 1] was published by the NFCC in November 2022 in response to the growing number of BESS installations being proposed across the United Kingdom, with the aim of providing Regional Fire and Rescue Services (FRS) a set of fire safety recommendations to be considered for BESS installations. Following an extensive consultation period, in February 2026 the NFCC issued an update to the 2022 report [Ref. 2]. This updated version has been considered alongside the original 2022 version of the guidance in this report.

The NFCC Compliance Report has been prepared for Exagen Development Limited (the Applicant and Developer), in relation to the updated layout plan for the Old Wood Energy Park, a ground mounted solar farm with associated BESS, substation and point of connection, on land near Wysall, Nottinghamshire (the Site). The Development was refused planning consent by Rushcliffe Borough Council's planning committee in June 2025 under planning application reference: 24/00161/FUL and is now the subject of a section 78 appeal. The focus of this report is primarily on the BESS element of the Old Wood Energy Park, hereafter referred to as the "Development". The Development will use Lithium Ferrous Phosphate (LFP) chemistry, although at this juncture the exact make and model of BESS is yet to be determined.

This NFCC Compliance Report reviews the proposed site layout and construction against the recommendations detailed in the original NFCC Planning Guidance for BESS (2022) [Ref. 1], drawing on the 14 key recommendations in the report. It provides the claimed alignment status with supporting evidence. In addition the latest update to the NFCC guidance - Planning Guidance for BESS (2026) [Ref. 2], has been reviewed and the alignment status likewise reported on in this document.

Consultation with the FRS at similar BESS installations has concluded that "the developer should produce a risk reduction strategy" incorporating safety measures and risk mitigation in collaboration with the associated Regional FRS and covering the construction, operational and decommissioning phases of the project. This report provides the fundamental building block for such consultation with the FRS. The developer will ensure that the risk of fire is minimised, this is by the implementation of the following measures:

a) The procuring of components and using construction techniques that comply with all relevant and prevailing legislation.

b) Including automatic fire detection and suppression systems as part of the design requirement.

c) Designing the development to contain and restrict the spread of fire using fire-resistant materials and separation between elements of the BESS, conversant with the NFCC Guidance [Ref. 1 and 2].

d) Developing an Emergency Response Plan (ERP) with FRS to minimize the impact of an incident during construction, operation, and decommissioning of the facility.

e) Ensuring the BESS is located away from residential areas. Prevailing wind directions have been factored into the location of the BESS to minimize the impact of a fire on the local populace.

Abbreviations

ALARP	As Low As Reasonably Practicable
ARC	Abbott Risk Consulting Ltd
BESS	Battery Energy Storage System
ERP	Emergency Response Plan
FRS	Fire and Rescue Service
HSAWA	Health and Safety at Work Act
HSE	Health and Safety Executive
LFP	Lithium Ferrous Phosphate
NFCC	National Fire Chiefs Council
R2P2	Reducing Risk, Protecting People

Contents

1.0 Introduction

This NFCC Compliance Report has been developed by Abbott Risk Consulting Ltd (ARC) in the role of the Safety Subject Matter Expert. The NFCC Compliance Report has been prepared for Exagen Development Limited (the Applicant and Developer), in relation to the updated layout plan for the Old Wood Energy Park, a ground mounted solar farm with associated BESS, substation and point of connection, on land to the west of Wysall, Nottinghamshire (the Site). The focus of this report is solely the BESS element of Old Wood Energy Park, hereafter referred to as the Development. The Development was refused planning consent by Rushcliffe Borough Council's planning committee in June 2025 under planning application reference: 24/00161/FUL and is now the subject of a section 78 appeal.

The Old Wood Energy Park BESS solution, in terms of BESS manufacturer and model, has yet to be determined, however it is currently proposed that Lithium Ferrous Phosphate (LFP) chemistry cells will be used. This is subject to change and will be driven by the availability of technology at the time of construction of the site. This approach is common to this type of development given the rapid changes and technological advances being made in the field of lithium-Ion storage systems. Reference to LFP is solely to illustrate the capability that is possible for developments of this type and the safety measures that are generically available.

This NFCC Compliance Report has been developed to provide an overview to how the proposed layout and construction complies with both the original NFCC Guidance for BESS [Ref. 1] and the updated guidance issued in February 2026 [Ref. 2]. This NFCC Compliance Report provides the starting point to support a robust safety strategy. The final design and equipment details is based on the site layout plan and associated details provided by Exagen Development Limited.

2.0 Background

NFCC Planning Guidance for BESS (2022) [Ref. 1] and NFCC Planning Guidance for BESS (2026) [Ref. 2] has been used for this assessment. The original NFCC guidance was subject to an extensive period of consultation from July 2024 until the updated guidance was published in February 2026.

3.0 Aim

The overall safety aim is that the levels of risk of accident, death or injury to personnel or other parties, and to the environment due to the construction, operation and decommissioning of the Development are broadly acceptable or tolerable and 'As Low As Reasonably Practicable' (ALARP) in accordance with the Health and Safety Executive (HSE) Reducing Risk, Protecting People (R2P2) [Ref. 3].

4.0 Scope

The scope of the NFCC Compliance Report for the Development covers the physical and functional aspects of the equipment. The site is flat and is outlined by the red line boundary on the Site Location and Site Layout Plans, submitted as part of the planning application. The BESS facility and associated ancillary infrastructure is illustrated at Figure 4-1. The primary access route is illustrated by the orange arrow route with the secondary accesses shown by the black arrow route.

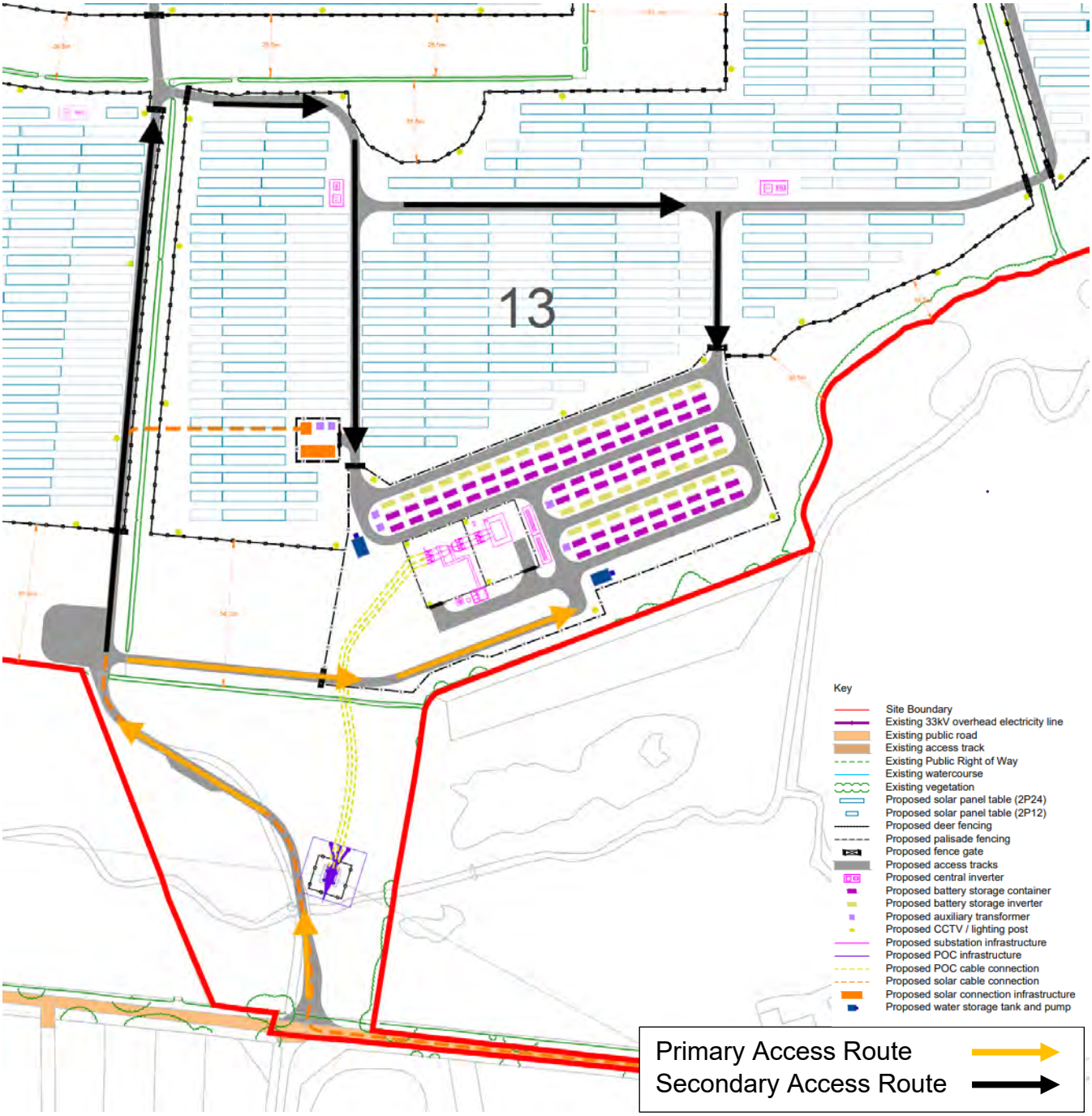


Figure 4-1 Old Wood Energy Park - BESS Layout

The historical wind rose for Nottingham[1] is at Figure 4-2 which illustrates a predominant wind direction from the southwest.

[1] https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/nottingham_united-kingdom_2641170

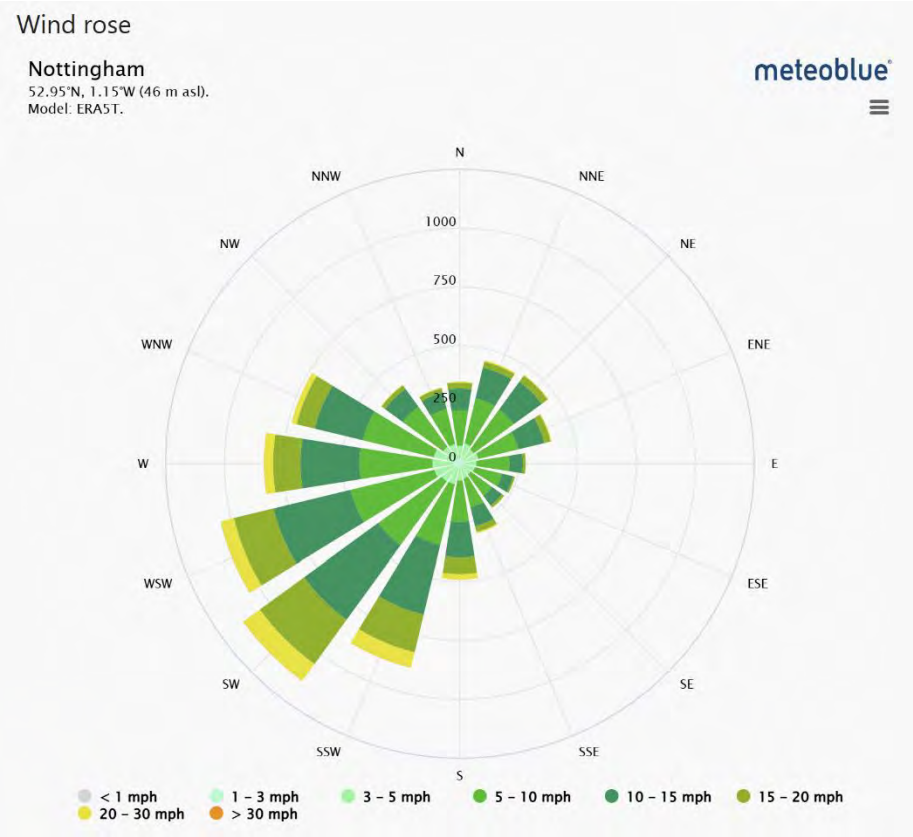


Figure 4-2 Wind Rose, Nottingham

4.1 BESS - Overview

The exact BESS unit type has yet to be determined for the Development, however the option currently available and under consideration is based on LFP chemistry. This type has been considered as being used for this development, although this is subject to change.

4.2 Frequently Asked Questions

Appendix A of this NFCC Compliance Report contains frequently asked questions regarding battery safety and is provided for assurance and a greater awareness of BESS and Lithium-Ion technologies in general.

4.3 NFCC Recommendations

The NFCC Report Grid Scale Battery Energy Storage System Planning (2022) – Guidance for FRS [Ref. 1], details the FRS recommendations for BESS installations. These have been distilled at Table 4-1 cognisant of the site layout at Figure 4-1. Likewise NFCC Report Grid Scale Battery Energy Storage System Planning (2026) [Ref. 2] is contained in the same table for clarity and convenience.

4.4 FRS Consultation

The Site location falls within the jurisdiction of the Nottingham FRS. The Planning Application as originally submitted received response from the FRS, this directed the Applicant to consider

how the development and site layout aligned with the prevailing NFCC Guidance for BESS [Ref. 1], hence the submission of this report.

Further to this addition fire safety concerns have been raised through consultation or at planning committee meetings.

*32. **Fire Service** – No objection raised, a pre-commencement condition is recommended to ensure appropriate risks are known and mitigated for once the final detail/technology of the battery storage equipment is known and that this information is to be submitted through a Risk Management Plan and Emergency Response Plan. The plan is required to include confirmation that Fire Service vehicles can easily access all the site, final safety systems of the containers, final internal suppression system to be used, method of dealing with a fire, container heat output (energy density), contamination levels of gases and vapour and how will it be controlled.*

And under the Fire Safety section of the committee report:

145. Accordingly, the comments from the Fire Safety Officer have been sought on this matter. A number of consultation responses have been received by the Fire Safety Officer which required further information to be supplied.

146. In response to this, a suggested condition which requires the submission of a Risk Management Plan and Emergency Response Plan has been put forward to the fire safety officer. The suggested condition requires the plan to be developed in conjunction with the Nottinghamshire Rescue service using the best practice guidance as detailed and required in the published Grid Scale Battery Storage Energy Storage planning - Guidance for Fire and Rescue Services (FRS) published by National Fire Chiefs Council (NFCC).

147. The plan is required to include confirmation that Fire Service vehicles can easily access all of the site, final safety systems of the containers, final internal suppression system to be used, method of dealing with a fire, container heat output (energy density), contamination levels of gases and vapour and how will it be controlled. Given that the finalised detail of the development in relation to the above matters is to be provided once known, it is considered that the detail can be satisfactorily and appropriately secured by condition.

148. The Fire Safety Officer has confirmed that the suggested condition is appropriate and would invite a further consultation once precise details are available in order to work with the applicant on the production of an emergency response plan.

The proposed condition was condition 16 in the committee report, copied below:

16. Prior to the construction of the Battery Energy Storage System (BESS), a Risk Management Plan and Emergency Response Plan shall be submitted to and approved in writing by the Local Planning Authority. These plans shall be developed in conjunction with Nottinghamshire Rescue Service using the best practice guidance as detailed and required in the published Grid Scale Battery Energy Storage System planning - Guidance for FRS published by NFCC National Fire Chiefs Council and as set out within the consultation response from Nottinghamshire Fire & Rescue Service dated 8 March 2024. Once approved, these plans shall be implemented thereafter and for the duration of the lifetime of the development.

Applicant Response: A Detailed Battery Safety Management Plan (DBSMP) forms an element of the progressive safety assurance process adopted for this site. The DBSMP will detail the infrastructure to be used at the site and the associated fire safety certification / systems. In addition, the Applicant will develop, in conjunction with the FRS the site ERP.

4.5 Building Regulations

The building work will be subject to control under the restrictions of the Building Regulations 2010 (as amended). The Building Regulations are concerned with the safety of individuals in and around a building. The development will be designed and constructed to satisfy the functional requirements of Part B (Fire Safety) to Schedule 1 of the Building Regulations 2010 (as amended), which includes the following:

- B1 – Means of warning and escape.
- B2 – Internal fire spread (linings).
- B3 – Internal fire spread (structure).
- B4 – External fire spread.
- B5 – Access and facilities for the Fire Service.

As majority of the facilities located on Site are external and would be considered as enclosures, as opposed to buildings or structures. Enclosures are not obliged to satisfy Requirement B2 of the Building Regulations; however, the requirements have been applied where reasonably practicable to demonstrate a good level of fire safety (please refer to Table 4-1 below).

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
1	Access - Minimum of 2 separate access points to the site	Achieving adequate vehicular access for the fire and rescue service prevents personnel from having to enter the BESS site and drive through a vapour or gas cloud to reach the scene of operation. It is therefore preferable to have an alternative access point, taking account of the likely wind direction. If the provision of an alternative access point is not practicable, an alternative may be to provide a perimeter 'loop' type of vehicle access around the site	**Compliant to both 2022 and 2026 Guidance**	There are 3 points of access into the BESS compound using the site internal roads. Access to the BESS compound is possible from differing points of the compass allowing access whatever the wind direction. All access emanates from a single point on the public highway, recourse to historic wind data indicates that the prevailing wind direction in the location is southwest veering westerly, see Figure 4.2. <u>Primary Access</u> The primary operational access to the BESS compound is off Wysall Road, heading north over Kingston Brook, turning right towards the BESS compound and turning left (north) into the compound from the south. <u>Emergency Secondary Accesses</u> The secondary emergency accesses to the BESS compound utilise the solar farm tracks. The routes commence as per the primary route but instead of turning east they continue north into the solar farm before turning east and using one of two tracks running south to enter the BESS compound in the northwest or northeast corner. Vehicle tracking has been completed for fire tenders, and these drawings are included at Appendix B of this report. For the avoidance of doubt fire tenders can make all turns and corners safely.
2	Roads/hard standing capable of accommodating fire service vehicles in all weather conditions. As such, there should be no extremes of grade.	Table 15.2 of Approved Document B provides an overview of access routes and hard standing areas which have considered fire service vehicle dimension.	**Compliant to both 2022 and 2026 Guidance**	The site service roads, which allow access around the site and BESS compound, will be a hard compacted surface and a minimum of 4.0m wide. There is no extreme of gradient at the site. The site access road is suitable for HGV traffic during construction and retained to be suitable for fire tenders during the operational period. All internal services roads have been designed with a 10m radii and are compatible for a DB32 Fire Appliance. Refer to fore tender vehicle tracking to all BESS access points in Appendix B.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
3	A perimeter road or roads with passing places suitable for fire service vehicles	Dead-ends are to be avoided where practical	**Compliant to both 2022 and 2026 Guidance**	The BESS compound service roads are 4.0m wide hard surface access running around the site allowing access to all BESS units, Figure 4-1 refers, given the circular nature and compactness of the site the ability to drive-in and drive-out without the need for passing points or the need to reverse is provided. Section 13.4 of Approved Document B5 states that FRS vehicles should not have to reverse more that 20m from the end of an access road – given the provision of a circular perimeter service road the requirement for FRS vehicles to reverse is minimised to situations in which use of the perimeter service road is not possible, and in these circumstances, reversing more than 20m is not a requirement. Section 13.4 references Table 13.1 of the Approved Document B5 which contains typical FRS vehicle access route specifications – the site will meet these specifications.
4	Road networks on sites must enable unobstructed access to all areas of the facility	No change or additions to the NFCC 2022 Guidance	**Compliant to both 2022 and 2026 Guidance**	Access to all BESS units is afforded from the network of services roads in the BESS compound road. The site is designed such that all routes have the capacity to allow for a Fire Tender (based on DB32 Fire Appliance), refer to Appendix B.
5	Turning circles, passing places etc. size to be advised by FRS depending on fleet	No change or additions to the NFCC 2022 Guidance	**Compliant to both 2022 and 2026 Guidance**	The BESS compound access service roads allow access to all BESS units (Figure 4-1 refers) in two differing directions and allow for FRS vehicles to drive in and drive out without the need to reverse. From consultation with the FRS to date it is established that these arrangements are satisfactory. Swept Path Analysis has been carried out for the site to establish that all routes have the capacity to allow Fire Tender (based on 8.68m Fire Tender with a 4.0m wheelbase and 2.18m width). Refer to Appendix B.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
6	Distance from BESS units to occupied buildings & site boundaries. Initial min distance of 25m	The suggested initial minimum distance between BESS cabinets/associated infrastructure and occupied buildings was increased to 30m (based on 100ft distance cited in NFPA 855:2023).	**Compliant to both 2022 and 2026 Guidance**	There are no occupied buildings within 30m of the BESS compound, the nearest residential dwellings are approximately 400 m east/southeast and 450m south of the BESS compound.
7	Access between BESS unit – minimum of 6m suggested. If reducing distances, a clear, evidence based, case for the reduction should be shown.	If the unit has passed certain tests (such as UL 9540A, demonstrating contained propagation), the separation distance can be reduced to a maximum of 0.914m (3ft).	**Compliant to both 2022 and 2026 Guidance**	The BESS units for the Development will be LFP and the smallest separation distances between BESS units is 3m and the BESS units employed will be UL9540A tested.
8	Site Conditions – areas within 10m of BESS Units should be cleared of combustible vegetation	Areas within 3m of BESS cabinets/enclosures should be kept clear of combustible vegetation. Additionally, all other vegetation within the curtilage of the site should be managed appropriately to avoid increased risk of a fire on the site.	**Compliant to both 2022 and 2026 Guidance**	The BESS units will sit on concrete slabs or supporting feet. Internal access tracks will comprise crushed stone and the access road for the abnormal load will be asphalt. Within fence line and between BESS containers units the surface is laid over to gravel. All areas within a minimum of 10m of the BESS are to be cleared of vegetation.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
9	Water Supplies	• The requirement for fire hydrants was clarified to achieve a flow rate of no less than 25L/sec (or 1,500 L/min), based on the value for transportation in the National Guidance Document on the Provision of Water for Firefighting. • If 25L/sec cannot be achieved, an equivalent static supply of approximately 180,000L is required to provide that flow rate for 120 minutes. • The previous guidance recommended 1,900 litres per minute for at least 2 hours. • Any static water storage tanks designed to be used for firefighting should be located at least 10m away from any BESS container/cabinet to allow for safe access and usage. They should be clearly marked with appropriate signage and be easily accessible to fire and rescue service vehicles. • Any required installations of fire hydrants and connections to any dry pipe on the BESS site should comply with BS 9990.	**Compliant to both 2022 and 2026 Guidance**	Original proposals were for any water applied to be collected in a below ground water storage pipe that will be closed off in the event of a fire, via a penstock. This will allow for the FRS to recirculate any runoff and use it for boundary cooling. The water storage pipe has a greater than 228,000 litre capacity. In addition, and through changes made to the design during the appeal, two above ground water tanks are provided in the BESS compound as shown on the site layout plan extract included in Figure 4.1. The tanks each have the following dimensions – 8 m x 5 m x 3 m (h) with a small adjoining housing for a pump of 2 m x 2 m x 2 m. Each tank would have a capacity of circa 120,000 litres so together water capacity of 240,000 litres. The NFCC Guidance (2022) recommendation was for 1900l/min for 2 hours (requiring a 228,000-litre capacity). The NFCC Guidance (2026) recommendation has reduced this volume, recommending a a minimum of 25l/min for 2 hours, totalling 180,000 litres. As such the design proposed exceeds both the 2022 and 2026 NFCC Guidance recommended volumes. The pump houses allow for water to be pumped into and out of the tanks.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
10	Signage	• External audible and visual warnings should be clearly visible to operational crews, along with addressable identification, control, and indicating equipment. • Any static water storage tanks designed to be used for firefighting should be located at least 10m away from any BESS container/cabinet to allow for safe access and usage. They should be clearly marked with appropriate signage and be easily accessible to fire and rescue service vehicles.	**Compliant to both 2022 and 2026 Guidance**	Signage to be positioned at all entrances to the site. Signage to be confirmed through design process and will be detailed in the ERP. Static Water Tanks will be clearly marked and annotated on the site plans included in the ERP.

11	Emergency Plans	• What are the assumptions about active firefighting within the emergency response plan, and what measures are in place to reduce the scale of an incident? • Are the incident assumptions realistic? What is the role of the fire and rescue service at an incident? Are they realistic? What is the expectation of the fire and rescue service in terms of the fire strategy at a thermal event? • What is the provision for firefighting access to, around, and within the site? • What is the size, quantity, and capacity of each BESS unit? • Is the BESS design appropriate for the weather at the proposed location in terms of preventing water ingress and impact of temperature range on cooling systems? • Does the applicant / developer have relevant competence and experience in the field of BESS design and deployment on the scale of the proposed development? If not, do they have access to specialist advisors to support?	**Compliant to both 2022 and 2026 Guidance**	Future iteration of the Outline Battery Safety Management Plan (OBSMP) to DBSMP will roll up the ERP outlining who and how FRS will be alerted, facility description, number of operatives, detailed site plan etc. The ERP will include all the elements recommended in the NFCC Guidance (2026).

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
		• What are the arrangements for ongoing monitoring of the BESS? • What is the response time for onsite technical assistance in the event of an incident?		
12	Environmental Impacts	• How will water run-off be managed? • Directs developers to Fire Prevention Plans: Environmental Permits guidance for the information required in the ERP. Suitable environmental protection measures should be provided, and developers should liaise with the Water Undertakers or the Environment Agency to understand any impacts Protection measures should include systems for containing and managing water run-off. System capability/capacity should be based on anticipated water application rates, including the impact of water-based fixed suppression systems. Sites located in flood zones should have details of flood protection or mitigation measures	**Compliant to both 2022 and 2026 Guidance**	There have been no environmental impact concerns raised for the Site, the EA have responded to the Planning Application and have no objections. A Drainage Report has been prepared for the site as part of the planning application and forms part of the planning application document set. The premise of the drainage strategy is retention of firefighting water runoff is made via the below ground water storage pipe, which can be used by the FRS to recirculate the runoff for boundary cooling. Post the incident the runoff will not be released to the wider environment prior to being tested for any contamination. A Flood Risk Assessment has been conducted and whilst the access to the site from the public highway falls within Flood Zones 2 and 3 the depth of the water is such that it is unlikely to prevent access to the site. The BESS compound is unaffected.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
13	System design, construction, testing and decommissioning	• How will the BESS and associated equipment be monitored, and what is the process for alerting the fire and rescue service? • How will the fire and rescue service align their approach to handling calls to BESS sites to their unwanted fire signals position? A new dedicated section on Battery chemistry was included, drawing on the Department for Energy and Net Zero (DESNZ) 2024 report, and discussing differences in safety profiles, such as the generally better thermal stability of Lithium Iron Phosphate (LFP) compared to Lithium Nickel Manganese Cobalt Oxide (NMC) batteries.	**Compliant at this juncture**	Several of the elements under this aspect of the NFCC Guidance will be contained in the OBSMP, the Planning Application Safety Plan, however details of the construction, testing and decommissioning will only be available in later stages of the programme and be contained in the DBSMP, developed post consent.

Ser	NFCC (2022) Recommendation [Ref. 1]	NFCC (2026) Recommendation [Ref. 2]	Site Status	Options / Comments
14	Deflagration Prevention and venting	• How will the proposed BESS perform in a thermal event / deflagration, and what proactive or reactive systems are proposed to mitigate this? • How will the thermal event be contained to the BESS cabinet of origin without the radiant heat affecting other cabinets? • How has the performance of the BESS in a thermal runaway event influenced site design? • Has the proposed equipment undergone any full-scale fire testing or has it been certified by a reputable body such as Underwriters Laboratory (UL 9540A)? A new detailed section addresses Explosion control (Deflagration protection), referencing British and NFPA standards (e.g., BS EN 16009:2011, NFPA 68), and mandating that flames and materials discharged during venting should be directed safely outside.	**Compliant at this juncture**	Elements of this requirement will be contained in the OBSMP, but the actual technique to be adopted will not be apparent up to the point the decision is made as to what BESS is being used. It is acknowledged that deflagration venting is possibly most effective when fitted to the roof of the BESS Units, as such deflecting blast upwards and away from FRS personnel, as such this will form an element of the procurement strategy for the BESS units.
15	NA – new recommendation	Site Plans now form a part of the Guidance	**Compliant at this juncture**	Site plans are included as an element of the planning application and the relevant details required under this new recommendation will be captured in the ERP.

Table 4-1 - NFCC Recommendations Cross-Referenced to the Old Wood Energy Park BESS

5.0 Conclusions and Recommendations

5.1 Conclusions

It is concluded that the proposed site layout and construction is compliant with the recommendations detailed in the original NFCC Planning Guidance for BESS 2022 [Ref. 1] and the updated NFCC Planning Guidance for BESS 2026 [Ref. 2].

This NFCC Compliance Report has been developed using existing knowledge of the BESS capability and leans heavily on the subject matter expertise that ARC have in this technological domain.

Installation of the BESS in accordance with OEM instructions followed by a period of qualification and testing will provide the supporting evidence. This will also allow for the consolidation of control evidence and enhanced development of mitigation to further reduce the level of risk posed.

5.2 Recommendations

It is recommended that the BESS safety management and criteria (for assessment and analysis) as defined in this NFCC Compliance Report, is adhered to throughout the site lifecycle to ensure that safety management is developed as the programme progresses and remains valid through the life of the BESS capability. This NFCC Compliance Report will be revised and updated as the programme progresses.

6.0 References

1. NFCC Grid Scale BESS Planning – Guidance for FRS dated Nov 2022 - Grid Scale BESS Planning- Guidance for FRS.

2. NFCC Grid Scale BESS Planning – Guidance for FRS dated Feb 2026 - Grid scale energy storage system planning - Guidance for fire and rescue services - NFCC.

3. Reducing Risk, Protecting People (HSE Publications) - https://www.hse.gov.uk/risk/theory/r2p2.pdf.

Page 16 of 28
PROPRIETARY

Appendix A – Frequently Asked Questions

Ser	Question	Answer
1	How does a BESS work?	A BESS employs technology to temporarily store electrical energy, very much in the same manner as a mobile phone or laptop battery, but on a much bigger scale. The energy can be stored and released when demand on the National Grid is high and assists in balancing out variations in demand or alternately when connected to a Renewable Energy source can be used to store the energy as it is being generated.
2	How safe is a BESS?	The Department for Energy Security and Net Zero promulgates on a quarterly basis the Renewable Energy Planning Database (REPD). From the Oct 2025 REPD this data has been filtered for BESS installations and the following deduced[2]: 1. Listed in the REPD[3], there are: . 136 operational BESS sites. . 8 BESS sites have been decommissioned. . 110 BESS sites are under construction. 2. There have currently been four reported BESS fires in the UK that have required FRS attendance, these occurred at Carnegie Road, Liverpool in Sept 2020, Cirencester March 2025, Rothienorman in Aberdeenshire Feb 2025 and East Tilbury in Feb 2025[4]. 3. The current operational UK BESS sites have accumulated an estimated 741 years of operation[5]. 4. Given the overall UK BESS sites storage capacity of approx. 3GW an estimation of the number of BESS units in use, using an individual BESS generic max capacity of 4MW, it has been determined that there are approx. 735-750 individual BESS units in operation across the UK. This provides an all-up operating time of approx. 25,908,965 hours of cumulative operation (this being approx. 3000 years).

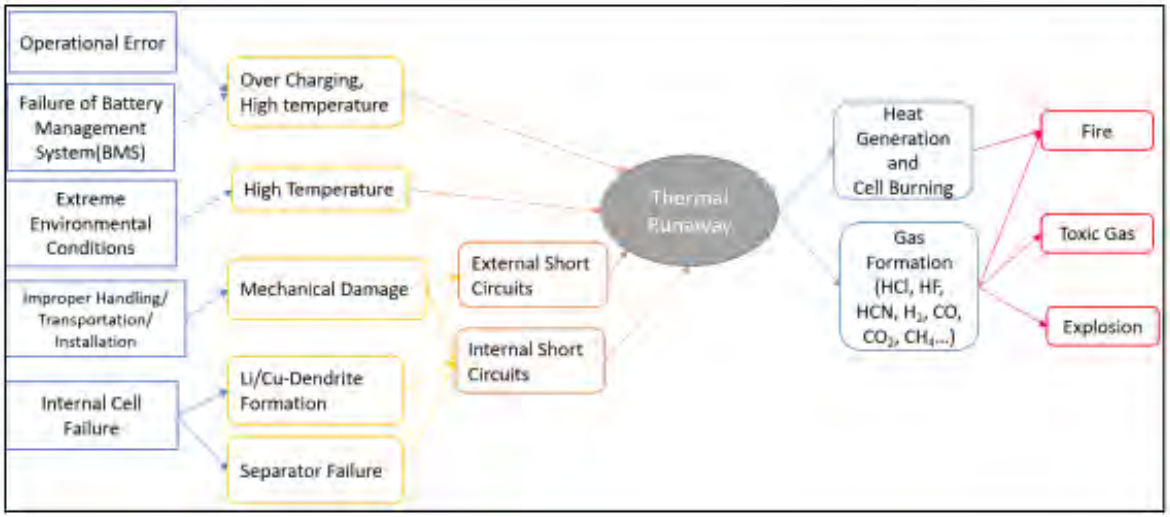
[2] The REPD tracks the progress of energy projects, including BESSs, through the planning system. Until 2021, the REPD only recorded projects with a capacity over 1 MW). Since 2021, it also includes projects with a capacity over 150 kilowatts (kW). Therefore, BESSs that were going through the planning system before 2021 may not have been captured in the REPD – Source: Commons Library Research Briefing, 19 April 2024 – BESS.

[3] This is a conservative figure as the REPD did not account for project under 1MW until 2021.

[4] The root cause of the fires at Cirencester, Aberdeenshire and East Tilbury has yet to be established.

[5] This does not include the operating time of the BESS sites now decommissioned.

Ser	Question	Answer
		5. Given the approx. 26 million hours of operation and accounting for the four fires, this extrapolates out to approx. 1.54E-07 (0.000000154) failures per hour (fph) for BESS in the UK or 1 incident per 750 years. 6. To date, there have been no recorded fatalities, third-party injuries, or environmental damage resulting from BESS incidents in the UK.
3	Lithium-Ion is sensitive to temperature variations – how is this controlled?	The batteries are housed in an enclosure which is fitted with an Environmental Control Unit (ECU) and/or Active Ventilation System (AVS). The ECU maintains the temperature and humidity within the container, allowing the Lithium-Ion batteries to operate within the optimum temperature range. The temperature of individual cells in each battery is monitored by the battery management system (BMS) and is reported back to the container level BMS which adjusts the internal temperature in response. Should the ECU develop a fault the container will isolate charge and discharge to the batteries until the fault has been rectified. All faults in the BESS are remotely fed to a centralised Operational Control Room (OCR). In some BESS the AVS will activate if any cell off gas is detected, sweeping the enclosure of the gas. Activation of the AVS will raise an alarm in the OCR.
4	What is Thermal Runaway?	Thermal Runaway (TR) is the term used to describe when an internal short-circuit in one of the battery cells, that can lead to cell over-pressure and the venting of combustible gases, results in adjacent cells heating up and likewise venting combustible gases. On ignition of the gas the the cell will increase in over-pressure, and the resulting fire will be self-sustaining until all the material in the cell is expended, a quasi-chain reaction event. The propensity for TR differs from cell chemistry to cell chemistry and the design of the battery can reduce the risk of TR. Cell short-circuits are generally a result of: 1. Cell penetration by a foreign object (not usually an issue for a BESS as the batteries are housed in sturdy containers in secured compounds). 2. Impurities in the electrolyte (deposited during the manufacturing process), which over time can lead to the formation of dendrites (electrolytic crystals) which puncture the membrane isolating the anode and cathode – this can, but not always, result in a short-circuit and TR. 3. Over-temperature in the cell because of: . Over-charging (which is controlled by 2 separate BMS – battery and rack). . High ambient temperature – controlled by the ECU.

Ser	Question	Answer
		The illustration below provides an outline of the possible causes of TR. 
5	How can TR be controlled?	TR is not always inevitable, and the nature of the cell design is such that early warning signs of a stressed cell can be detected by the BMS. Initial signs of cell degradation are an increase in the time it takes the cells to reach full charge (maximum voltage) and a decrease in the time it takes to discharge – slow charge, rapid discharge – as experience in mobile phones as the battery reaches end of life. In a BESS these indicators are picked up by the BMS and if persistent the BMS will isolate (prevent charge and discharge) to the battery and inform the OCR. In turn an engineer will be dispatched to remove the battery and replace it with a serviceable item. Since the early inception of BESS, safeguards in the design have developed and are now detailed in UL1973. If these indicators are not present, and the cell enters early stages of short-circuit the over-pressure in the cell will result in the venting of off-gas which is detected by the off-gas detectors built into the enclosure. This will result in the container disabling the charge and discharge (the act of charging and discharging the batteries generates heat, which is to be avoided) and setting the ECU/AVS to maximum volume setting. This has a twofold effect, it clears the container of combustible gas and cools the internals, taking the energy out of the cells (the cells used in BESS,

Ser	Question	Answer
		like other batteries do not perform well in low temperature conditions). It should be noted that most BESS only operate at between 80-90% of capacity to provide an engineering margin that mitigates the probability of over-charging the cells.
6	How is a BESS fire controlled and suppressed?	If a TR is not controlled and ignition occurs, the fire detection and suppression system (FDSS) will activate. There are generally two types of FDSS that are used in BESS; gaseous systems and aerosol systems. Each system has advantages and disadvantages: 1. Aerosol systems are better in terms of extinguishing the fire and benefit against gaseous systems, which generally supress the fire by reducing the level of oxygen in the container. 2. Gaseous systems are instantaneous in operation; the gas being kept under pressure in bottles. Aerosol, by the nature of the deployment as a fine mist, take a little longer to reach all areas of the container. 3. Aerosol systems generally require a more complex and intricate delivery system to reach all areas of the container. 4. Gaseous systems require a sealed environment in which to operate. As such if the container is opened and oxygen reintroduced it can lead to the fire reigniting, as such they require the ECU to close prior to activation (to prevent the ECU from pushing out the extinguishing medium). 5. Various FDSS aerosols (also known as aqueous) and gaseous systems are available, and they use a variety of aerosol solutions. Under consideration for this site is the use of an aerosol aqueous solution containing potassium carbonate (K_2CO_3) – this inhibits the fire by isolating at a molecular level with the chemical chain reactions forming the flame front. This aerosol is non-harmful to the environment and presents no health and safety concerns to first responders.

Ser	Question	Answer
7	Can water be used to extinguish a Lithium-Ion fire?	The use of water to extinguish a BESS fire has some drawbacks and disadvantages over bespoke FDSS aerosol mediums, these being: 1. Due to the design of the BESS batteries and racks (in which they are contained), the inability of water to cool the cell interiors may result in re-ignition of a fire once the water application is halted. 2. The high conductivity of water may cause short circuiting of cells presenting collateral damage risk and increase the spread of the fire internal in the BESS. 3. A high volume of water is required to cool the cells below the critical temperature to prevent TR propagation, this results in a high volume of fire water run-off and a potential environmental impact. 4. The application of water on a BESS fire increases the generation of gases such as carbon monoxide (CO), hydrogen (H_2) and hydrogen fluoride (HF). Applying water causes incomplete combustion of organic substances inside the battery resulting in production of CO rather than CO_2; when water is applied, H_2 is released that, without combustion, can react with phosphorus pentafluoride, if present in free form, to produce gaseous HF.
8	What are the environmental consequences of a BESS fire?	In the event of a BESS fire several chemicals in gaseous form can be released and the composition and concentration of the plume (also referred to as the vapour cloud). In the event of a BESS fire amongst the general gases released are CO, HF, oxygen and hydrogen. The BESS fire at Carnegie Road, Liverpool – Sept 2020 was monitored, and the resultant composition of the plume was determined as being negligible in toxic gas concentration. Subsequent plume and concentration modelling has demonstrated that the concentration of HF in the plume is limited to Acute Exposure Level Guidance Level 1, the lowest level of HF. This concentration level is non-fatal. Should the resulting fire be treated with water in the presence of HF the result can be the formation of a HF acid which can be detrimental to the environment, especially the aquatic habitat. To prevent this, it is possible to contain the fire run-off water but often best to let the fire run its course and burn out. It is worth noting that the fire run-off water at Carnegie is considered to have been neutralised by the lime-based gravel covering used at the base of the BESS and on testing was found to be a low alkaline level, as opposed to acidic. Further to this the recent fire at Moss Landing California (Feb 2025), was monitored at 1 second intervals for toxic substances in the smoke plume. It was established that the composition of the plume emanating from the fire was within US Air Pollution limits. California Air Quality limits for HF are stricter than those in the UK.

Ser	Question	Answer
9	How is the BESS site secured?	The BESS Site is secured through fences / walls and monitored remotely via security cameras. Warning signs along the fence indicates the presence of electrical storage facilities within the site.
10	How is the serviceability of the BESS assured?	The Health and Usage data for each BESS is remoted to a centralised Control Room and the serviceability of each battery determined on an hour-to-hour basis. Given that the batteries have a finite number of cycles over a given period it is envisaged that the batteries will be renewed multiple times in the 40-year life of the site.

Appendix B – Fire Tender Vehicle Tracking Drawings

north

11

12

13

14

See Drawing '2303076-TK38B'

See Drawing '2303076-TK39B'

See Drawing '2303076-TK37B'

See Drawing '2303076-TK36B'

See Drawing '2303076-TK35A'

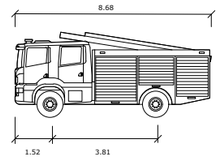
0 50 100 150 200m

SCALE IN METRES
1:2500

C:\Users\droddy\Motion\StaffSite - Exwysa 2303076\Drawings\2303076 - TK34B [Fire Appliance].dwg

Notes

1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

meters

Width	:	2.18
Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

motion
Guildford - Reading - London
www.motion.co.uk

Client:
Exagen Development Limited

Project:
Old Wood Energy Park

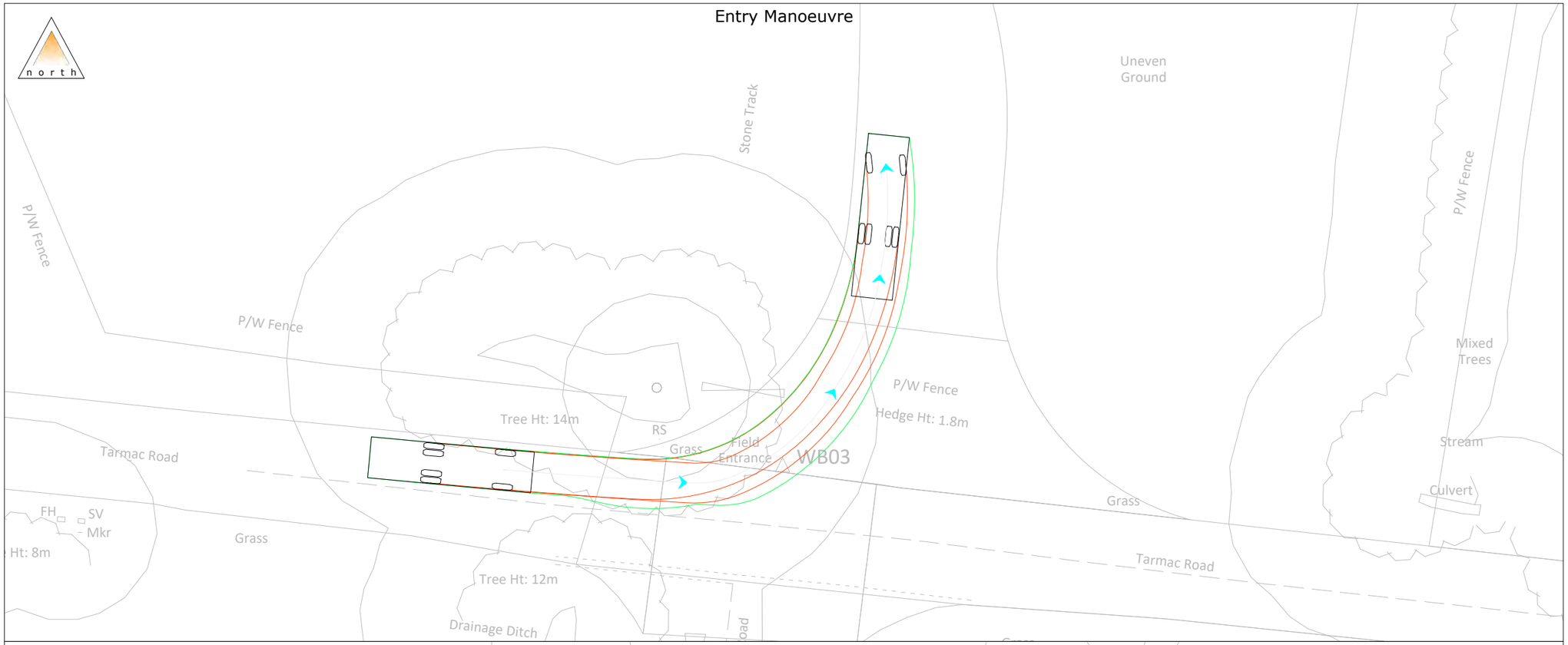
Title:
Swept Path Analysis
Southern Parcel Overview
Fire Appliance

Scale: 1:2,500 (@ A3)

Drawing: 2303076-TK34

Revision: B

Entry Manoeuvre



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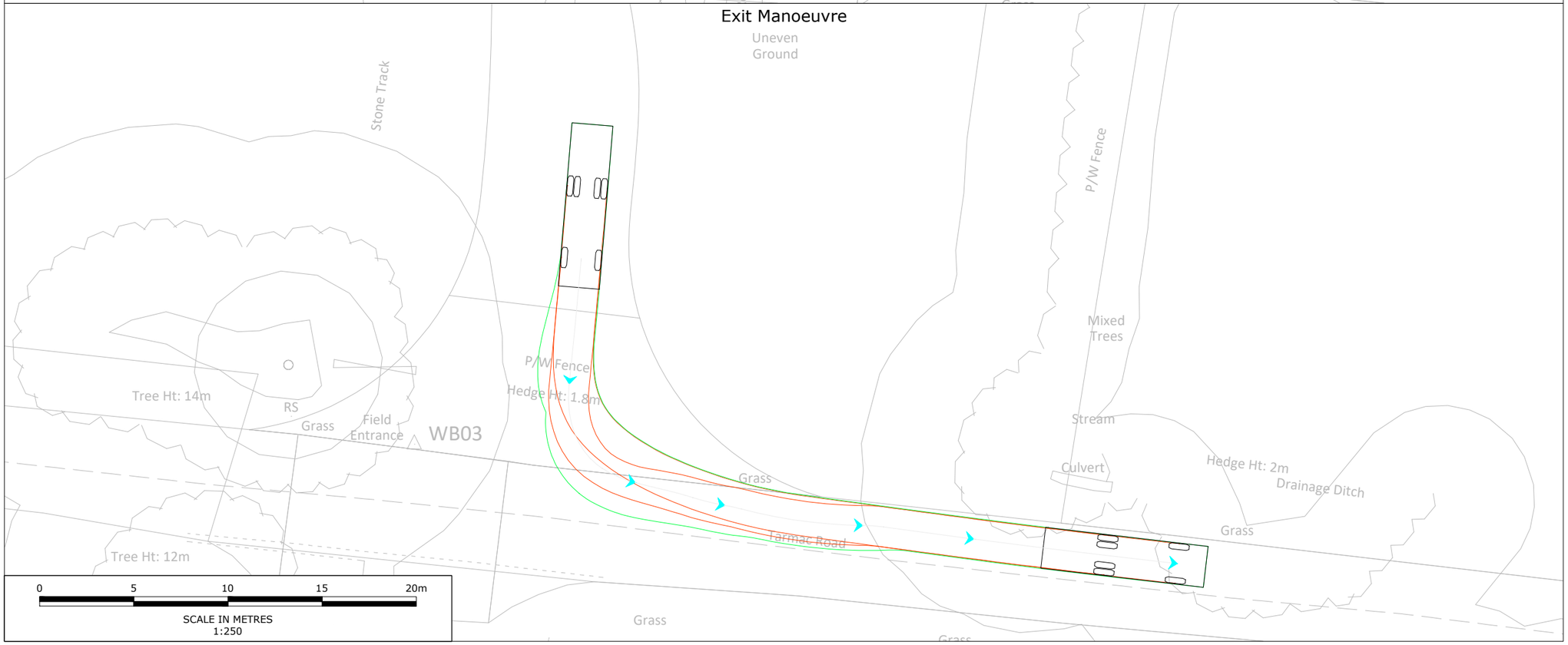

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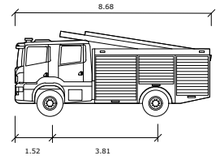
Notes

1. All levels and dimensions to be checked on site before any work commences. All dimensions in metres unless stated otherwise.
2. Motion accepts no liability for any vehicle specification errors or inaccuracies within the vehicle tracking software used / or it's vehicle libraries. The vehicles speeds used for the analysis are as follows: forward 6kph / reversing 6kph.



DB32 Fire Appliance

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
A	Updated Project Name	DR	MF	MF	13/08/2025
-	First Issue	DR	MF	MF	06/08/2025

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

motion
Guildford - Reading - London
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Client:
Exagen Development Limited

Project:
Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel Access
Fire Appliance

Scale: 1:250 (@ A3)

Drawing: 2303076-TK35

Revision: A

north

Exit Manoeuvre

Hedge Ht: 1.8m
Tree Ht: 7m
Tree Ht: 9m
Hedge Ht: 1.8m
Hedge Ht: 1.8m
Tree Ht: 14m
Tree Ht: 13m
P/W Fence
Tree Ht: 3m
Hedge Ht: 1.8m

0 10 20 30 40m

SCALE IN METRES
1:500

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Notes

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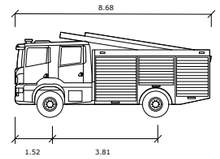

DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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Client:
Exagen Development Limited

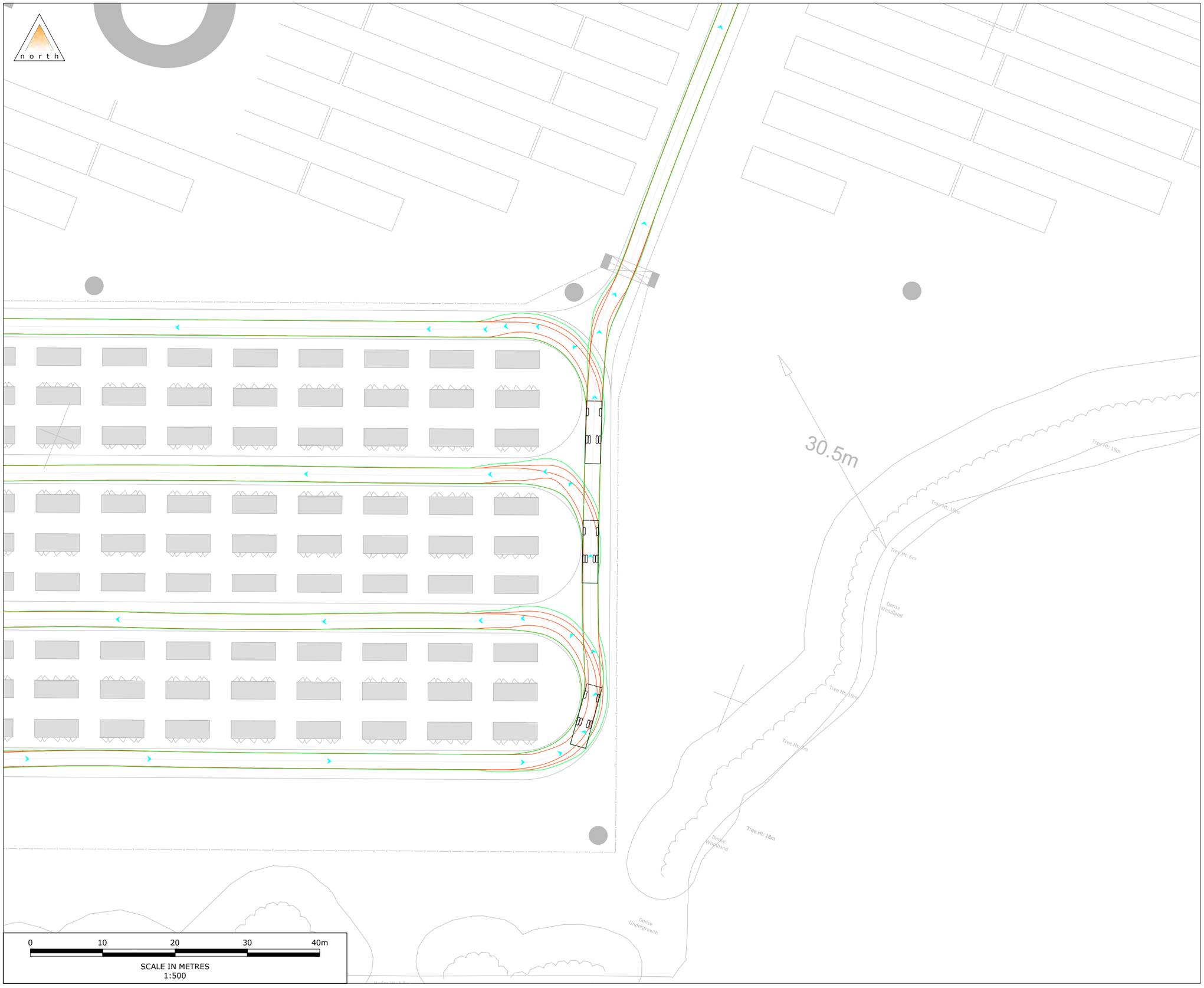
Project:
Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK36

Revision: B



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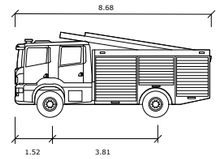

DB32 Fire Appliance

meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

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Exagen Development Limited

Project:
Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK37

Revision: B

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Notes

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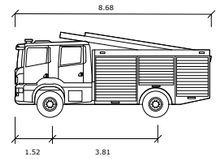

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meters

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Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

Rev.	Description	Drn	Chk	App	Date
B	Updated Project Name	DR	MF	MF	13/08/2025
A	Updated Swept Paths	DR	MF	MF	11/08/2025
-	First Issue	DR	MF	MF	06/08/2025

Drawing Status:

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Client:
Exagen Development Limited

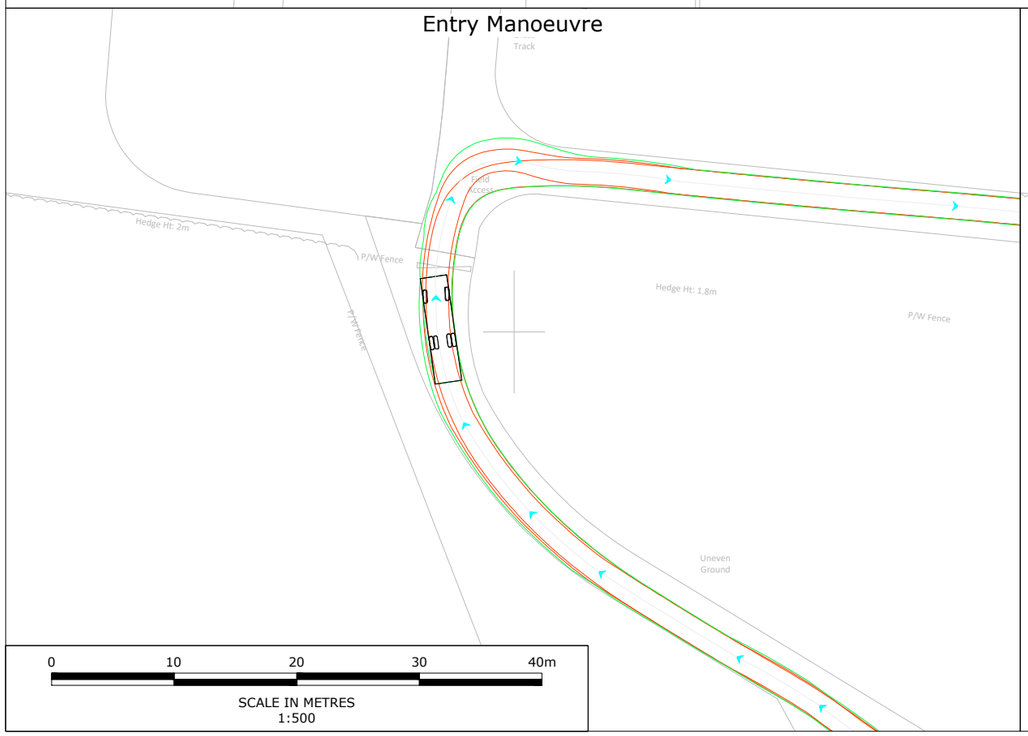
Project:
Old Wood Energy Park

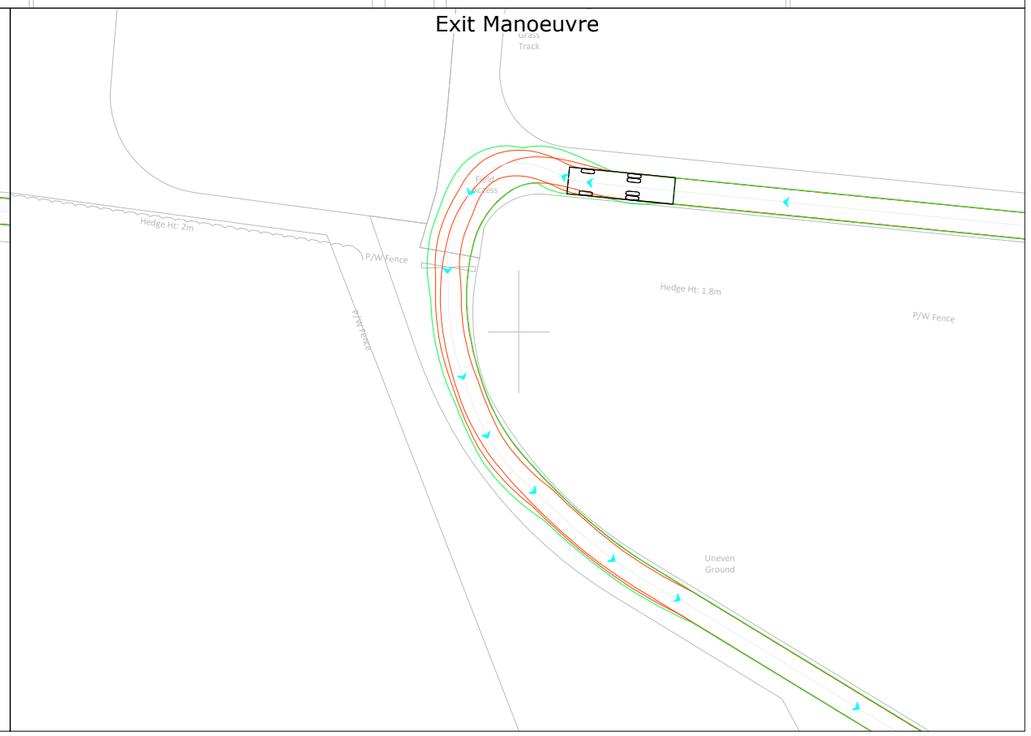
Title:
Swept Path Analysis
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK38

Revision: B





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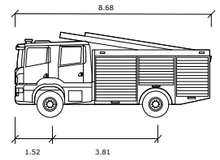

DB32 Fire Appliance

meters

Width	:	2.18
Track	:	2.12
Lock to Lock Time	:	6.0
Steering Angle	:	38.7

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B	Updated Project Name	DR	MF	MF	13/08/2025
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-	First Issue	DR	MF	MF	06/08/2025

Drawing Status:

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Client:
Exagen Development Limited

Project:
Old Wood Energy Park

Title:
Swept Path Analysis
Southern Parcel
Fire Appliance

Scale: 1:500 (@ A3)

Drawing: 2303076-TK39

Revision: B

Appendix 2 – Draft NPPF Summary

Appendix 2 – NPPF Summary of Changes

Introduction

The current National Planning Policy Framework against which development is assessed is that as published in December 2024. The Government have released a revised National Planning Policy Framework on 16th December with a consultation running until March 2026. Whilst it is not yet formerly adopted, it is considered that this is a clear direction of travel from the Government and attracts limited weight in the determination of this appeal.

This document sets out the key proposed changes of relevance to the proposed development.

Presumption in Favour of Sustainable Development

In the current NPPF, the presumption in favour of sustainable development is referenced at Paragraph 11d. This outlines the means to determine development solely dependent on whether or not there is an up-to-date development plan and whether the proposed development is in accordance with relevant local policies.

The proposed revision outlines the approach to the presumption in favour of sustainable development based on the location of the development site. The revised wording proposed is outlined at Policy S3 and states:

1. *Decisions on development proposal should apply a presumption in favour of sustainable development. This means:*
    a. *Policy S4 in the Framework should be applied when considering development proposals within settlements;*
    b. *Outside settlements, policy S5 should be applied; and*
    c. *In all locations, development proposals that accord with an up-to-date development plan and also the decision-making policies in this Framework should be approved without delay.*

As the proposed development is located outside of a settlement, S3b is applicable and therefore attention is averted to Policy S5 'Principle of development outside settlements'. This policy states:

a) *Only certain forms of development should be approved outside settlements, as set out in the following list. These should be approved, unless the benefits of doing so would be substantially outweighed by any adverse effects, when assessed against the national decision-making policies in this Framework:*
    a. *Development proposals which are for: agriculture, horticulture and forestry; outdoor sport and recreation; allotments; cemeteries and burial grounds; mineral extraction; engineering operations and infrastructure (including for transport, energy and water); roadside facilities in accordance with policy T5; and national defence and security. (our emphasis)*

Part 5 of policy S5 however, outline that:

5. *The preceding parts of this policy parts of this policy do not apply to development proposals in the Green Belt or on land designated as Local Green Space, which should instead be determined in accordance with policies HC8, GB6, GB7 and GB8. However, where development is not inappropriate in the Green Belt (as set out in policy GB7), proposals should also be approved unless the benefits of doing so would be substantially outweighed by any adverse effects, when assessed against the national decision-making policies in this Framework*

Renewable and Clean Energy

The existing NPPF outlines at paragraph 161 that:

"The planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."

This is echoed in the revisions of the consultation draft NPPF.

When determining policies for the renewable energy development the consultation draft of the NPPF Policy W3 'Renewable and low carbon energy development and electricity network infrastructure' states:

1. *In considering proposals for renewable and low-carbon energy development and electricity network infrastructure, substantial weight should be given to:*
    a. *The benefits of such development for improving energy security, supporting economic development and moving to a net zero future;*
    b. *In the case of applications for the re-powering and life-extension of existing sites, the additional benefit of utilising an established site for this purpose; and*
    c. *The contribution that small-scale and community-led renewable and low carbon energy projects can make to reducing emissions, along with their associated economic and social benefits.*

Whilst this echoes the outlined in the current NPPF, the increase in the weight applied to renewable energy proposals to 'substantial' shows a clear direction of travel by the Government towards a low carbon future.

The proposed revisions to the NPPF also reaffirms that there should be no requirement on applicants to demonstrate the need for renewable or low carbon energy development as per the current wording in Paragraph 168a).

Natural Environment

It is clear in both the current and the consultation draft NPPF that schemes are expected to 'positively contribute' to the natural environment. The current requirements at Paragraph 187 have however been amended under Policy N2 'Improving the natural environment' in the consultation draft to include the following elements:

a) *Consider the environment qualities of land proposed for development, including habitats, landscape character and the natural beauty of the countryside, and identify opportunities for those qualities to be conserved or enhanced (including through requirements for biodiversity net gain where these apply)*
b) *Use areas of poorer quality agricultural land in preference to that of higher quality, where significant development of agricultural land is demonstrated to be necessary (taking into consideration land which is classified as best and most versatile agricultural land, and its grade);*
c) *Take suitable opportunities to connect to and strengthen ecological networks that extend beyond the site, drawing on the measures proposed by Local Nature Recovery Strategies, National Forest Strategies and Community Forest Plans, where present, and other relevant assessments;*
d) *Conserve and enhance existing natural features of visual, historic or nature conservation value (such as established trees and hedgerows) wherever possible; and use appropriate landscaping to help create a well-designed place and integrate the development into its surroundings;*
e) *Use green infrastructure provided as part of the scheme and nature-based solutions to secure multiple benefits: such as for biodiversity; surface water and pollution management (including maintaining flow rates and water quality); climate change mitigation and adaptation, and recreation;*
f) *Minimise impacts on biodiversity and include features for species which support priority or threatened species such as swifts, bats and hedgehogs. Development proposals should incorporate integrated nest boxes (commonly known as swift bricks) into their construction unless there are compelling technical reasons which prevent their use, or would make them ineffective; and*
g) *Make sure that green infrastructure and other features to support nature are located and designed to minimise risk of future failure, and that appropriate measures are in place for any necessary long-term management.*

For the reasons set out in the Appellant's appeal documentation, the scheme complies with all of these aims.

Heritage

When considering the impacts of a development on heritage assets there have been a number of changes in the consultation draft of the NPPF.

When considering the assessment of effects on heritage assets, Policy HE5 states at Part 2 that:

2. *Assessments of the potential effects of development proposals on heritage assets and their setting should identify whether proposals would be likely to:*
    a. *Have a positive effect, which is where a heritage asset would be enhanced, or its significance better revealed; or*
    b. *Have no effect on the significance of the asset; or*
    c. *Result in harm to the significance of the heritage asset, either from work affecting the asset itself or from development within its setting. The degree of harm should be identified: substantial harm would occur where the development proposal would seriously affect a key element of the asset's significance; or*
    d. *Cause the total loss of the significance of the heritage asset.*

3. *In making this assessment it is the effect on an asset's significance rather than the scale of the development which should be considered.*
4. *Decision makers should be satisfied that this assessment accurately reflects the effects on heritage assets caused by the proposals.*

When considering the potential impact on heritage assets, the consultation draft seeks to remove reference made to 'less than substantial harm' as currently written under Paragraph 215. Instead under Policy HE6, Part 1 harm is defined as either '*positive effect, harm, substantial, or total loss of significance*'.

In line with the current wording of the NPPF, reliance the balancing of harm against demonstrable public benefits is carried through into the wording of the consultation draft. Part 3 of Policy HE6 outlines that:

3. *Where a development proposal would harm the significance of a designated heritage asset the effect on the asset and its significance should be weighed against any public benefits resulting from the proposal. Important public benefits can include securing the long-term re-use of a vacant or underused listed building, and enabling energy efficiency and low carbon heating measures to be employed.*

Similarly, when considering the conservation of a heritage asset the message that weight should be applied is continued in the consultation draft NPPF; in the consultation draft document this is referred to as 'substantial weight'.

<u>Conclusions</u>
As discussed above, it is considered that the consultation draft NPPF attracts limited weight in the determination of the appeal. However, it is considered that the scheme, as presented, gains further support from the provisions made in the consultation draft NPPF which are even more supportive of renewable energy development.

Appendix 3 – Application Scheme FRA Addendum Note

Flood Risk Assessment Addendum

In Respect of Section 78 Appeal: Land West of Bradmore Road and North of Wysall Road, Land West of Wysall, Wysall

On behalf of Exagen Development Ltd

Date: February 2025 | Pegasus Ref: P25-1631

Appeal Ref: APP/P3040/W/25/3375110 | LPA Ref: 24/00161/FUL

Author: Lucy Ginn

Document Management

Version	Date	Author	Checked/ Approved by:	Reason for revision
V1	05/02/2026	Lucy Ginn	Catherine Thorpe	First Issue
V2	09/02/2026	Lucy Ginn	Catherine Thrope	Updated with Client Comments
V3	10/02/2026	Lucy Ginn	Catherine Thorpe	Minor Amendments

Contents

Figures

Appendices

1. Introduction

1.1. This Flood Risk Assessment (FRA) Addendum has been prepared on behalf of Exagen Development Ltd ('the Appellant') and relates to a planning appeal submitted pursuant to Section 78 of the Town and Country Planning Act 1990, concerning Land West of Bradmore Road and North of Wysall Road, Land West of Wysall, Wysall ('the Appeal Site').

1.2. The appeal follows the decision of Rushcliffe Borough Council ("RBC") (CD 4.2) to refuse the application for full planning permission (ref. 24/00161/FUL) ("the Planning Application") on the 19th June 2025. None of the 4 Reasons for Refusal included flood risk or drainage and matters regarding flood risk and the application of the Sequential Test are set out in the agreed Statement of Common Ground between the Appellant and Rushcliffe Borough Council.

1.3. The Planning Application relates to a proposed development ("the Appeal Scheme") comprising the following:

"Construction, operation and subsequent decommissioning of a renewable energy park comprising ground mounted Solar PV with co-located battery energy storage system (BESS) at the point of connection, together with associated infrastructure, access, landscaping and cabling."

1.4. Following the refusal of the application by RBC, further minor changes have been made to the design of the Appeal Proposal to accompany the appeal submission. The proposed changes have been made to address changes to the EA Risk of Flooding from Surface Water mapping published to the Flood Map for Planning in March 2025 and to provide additional NFCC compliance for the BESS proposal, which were assessed in an updated Flood Risk Assessment and Surface Water Drainage Strategy Report submitted with the appeal and prepared by Pegasus Group (version 6 dated 22/10/2025, document reference: R001v6-IN_P21-2533-FRA & Surface Water Drainage Strategy; CD 3.7). The Appellant duly requests that the inspector takes the revised information submitted under cover of the appeal into consideration in their determination. These changes were consulted on at the time of lodging the appeal in accordance with the Holborn principles[1] as set out on the Planning Proof of Evidence of Mr Cussen.

1.5. The LPA, within their Statement of Case (CD 8.4), asserts that these changes fundamentally alter the nature of the development under consideration at this appeal and at the CMC there was no decision made as to whether the changes had been accepted and as such the appeal would proceed covering two options, the original Appeal Scheme and the amended Appeal Scheme.

1.6. This addendum should be read in conjunction with the updated Flood Risk Assessment and Surface Water Drainage Strategy Report; CD 3.7. This addendum summarises the layout amendments included in the Appeal Scheme from a flood risk and drainage perspective before reviewing the Application Scheme against the latest Environment Agency (EA) flood data and concluding as to whether there are any flood risk or drainage concerns associated with reverting back to the Application Scheme. This information will be required only if the

[1] R (Holborn Studios Limited) v The Council of the London Borough of Hackney [2017] EWHC 2823 (Admin)

inspector is minded not to accept the minor amendments made under the cover of the appeal.

2. Appeal Scheme

2.1. From a flood risk perspective, the Appeal Scheme included micro-siting of electrically sensitive infrastructure in four discrete locations across the Appeal Site in order to ensure this infrastructure was located outside of the area associated with the latest EA Risk of Flooding from Surface Water (RoFSW) predicted flood extents. The RoFSW dataset was significantly updated in January 2025 as part of the National Flood and Coastal Erosion Risk Assessment (NaFRA2). In March 2025, the NaFRA2 data was used to update the EA's Flood Map for Planning. The most recent revisions to the RoFSW dataset occurred on the 17th September 2025, but showed no change on site compared to the data assessed during preparation of the appeal FRA (CD 3.7). The Application Scheme was designed based on the available data at the time of application submission and on the basis of that data the infrastructure was located outside of any modelled surface water extents as detailed within the original Flood Risk Assessment and Surface Water Drainage Strategy Report (CD1.17).

2.2. Within the Appeal Scheme, micro-siting of electrically sensitive infrastructure occurred in Land Parcels 1, 9, 12 and 15. The micro-siting included Central Inverters and Solar Connection Infrastructure and further detail on these changes were included in the Summary of Changes Document and Summary of Changes Comparison Plan (CD3.4 and 35 respectively). Figure 1 on the following page highlights the Appeal Scheme micro-siting from a flood risk perspective – the black arrows indicate the relocation of infrastructure outside of the predicted surface water extents. The Appeal Scheme with an overlay of the EA flood risk data is included in Appendix A.

2.3. From a drainage perspective, the Appeal Scheme included two additional above ground water tanks within the BESS compound designed to provide fire water on site. This Appeal Scheme amendment did not materially impact the submitted surface water drainage strategy. However, during the appeal submission the surface water drainage strategy was updated with minor alterations to split the surface water storage on site between two pipes rather than one, and to clarify the proposed penstock location (see CD3.7). These amendments, although part of the Appeal submission were not associated with the layout changes within the Appeal Scheme but were completed to clarify the surface water drainage approach on site. The drainage approach included in the Application Scheme is detailed in Section 3 below. Figure 2 highlights the changes made as part of the Appeal Scheme from a surface water drainage perspective.

Figure 1: Appeal Scheme Flood Risk Amendments (arrows show the micro-siting)

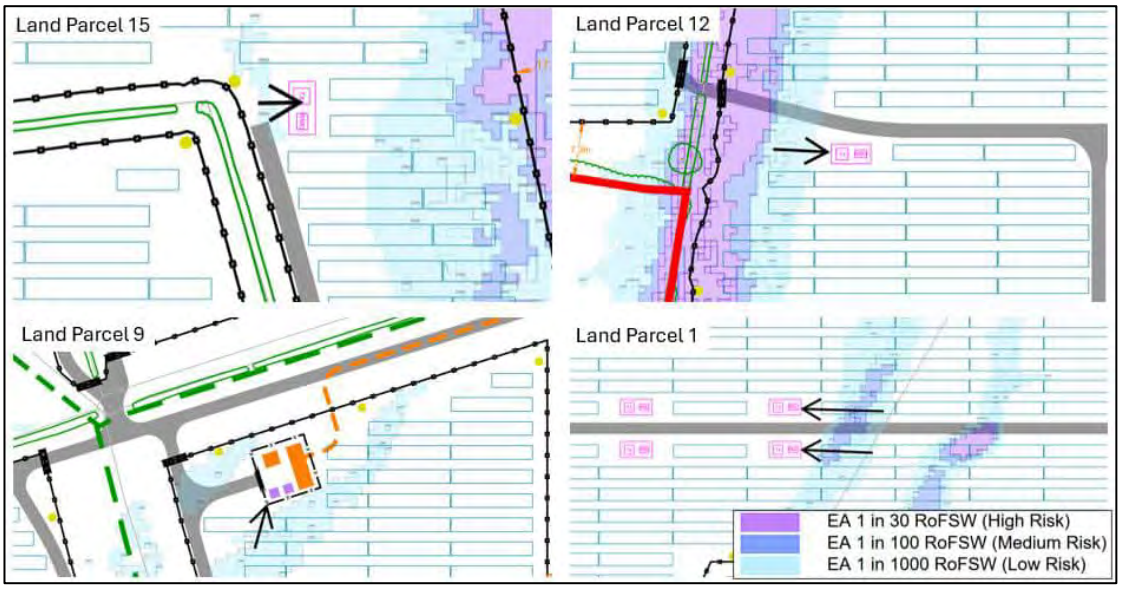
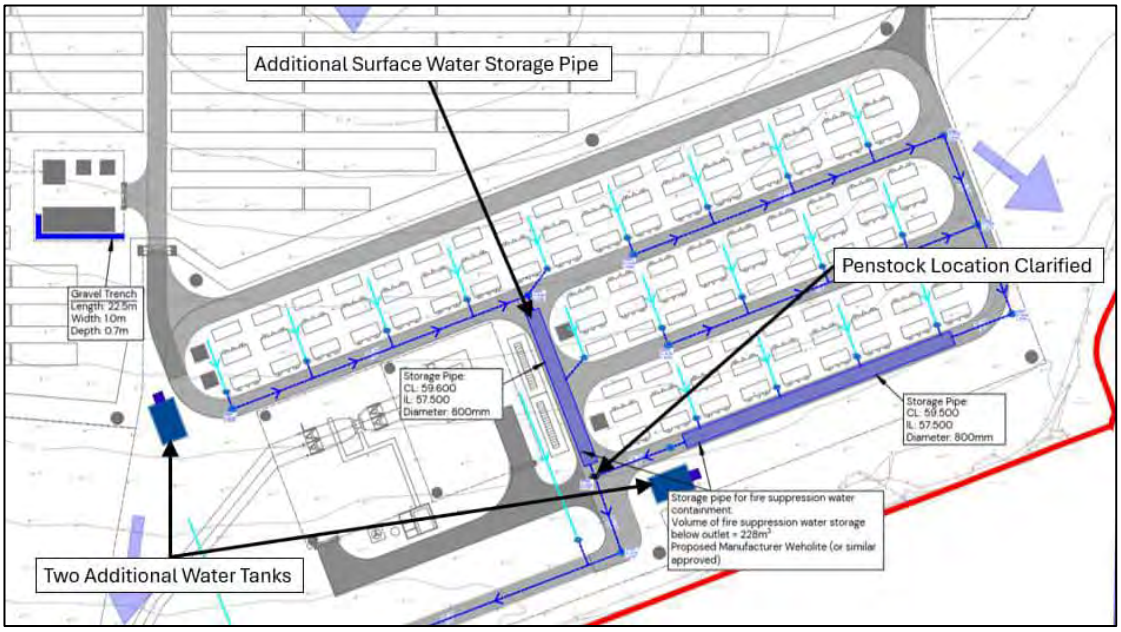


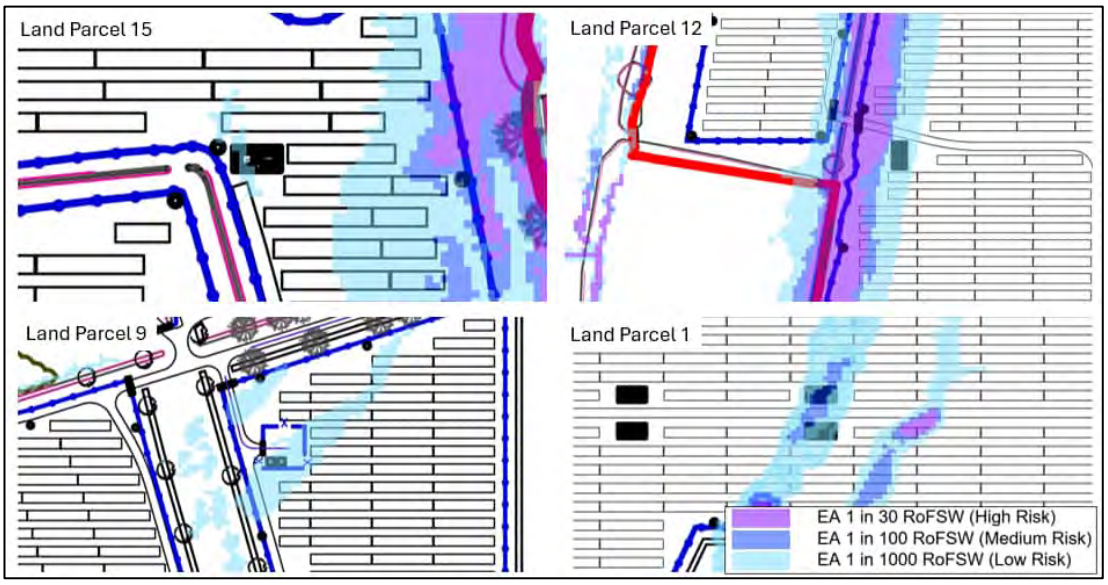
Figure 2: Appeal Scheme Drainage Amendments at the BESS Compound



3. Application Scheme

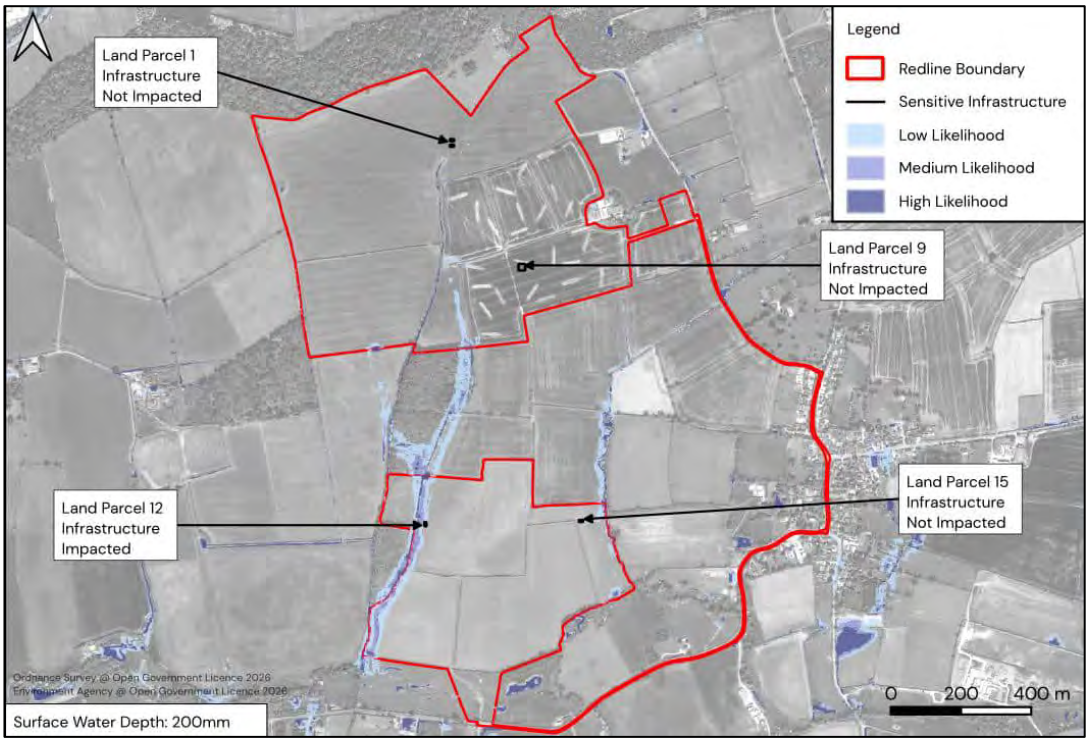
3.1. From a flood risk perspective, reverting to the Application Scheme would locate some electrically sensitive infrastructure within Land Parcels 1, 9, 12 and 15 within the RoFSW predicted flood extent (see Figure 3). The sensitive infrastructure would generally be situated in areas of Low Likelihood of surface water flooding (predicted to be impacted by a 1 in 1,000 year rainfall event). There is however a small area of Medium Likelihood impacting the sensitive infrastructure in Land Parcel 1 predicted to be at risk during a 1 in 100 year rainfall event. The Application Scheme with the latest RoFSW data overlaid is included in Appendix B.

Figure 3: Application Scheme and RoFSW Extents



3.2. The RoFSW dataset does not predict 1 in 1,000 year surface water flood depths associated with the locations of the sensitive infrastructure to exceed 200mm in Land Parcels 1, 9 and 15, whilst depths of up to 300mm are predicted for sensitive infrastructure in Land Parcel 12 (see Figure 4).

Figure 4: Application Scheme and RoFSW 200mm Depths



3.3. If there is a requirement to revert to the Application Scheme, mitigation measures will be implemented on site to ensure all the electrically sensitive equipment in Land Parcels 1, 9, 12 and 15 remain safe and operational over the development's lifetime. This mitigation will comprise raising of the sensitive infrastructure above the RoFSW predicted 1 in 1,000 year surface water flood depths in these areas (200-300mm) plus an additional 300mm freeboard. Raising of sensitive infrastructure 500-600mm above the existing ground would therefore be proposed. Any required raising would be achieved using slits that allow surface water to flow freely below.

3.4. Paragraph 027 of the "Flood Risk and Coastal Change" Planning Practice Guidance (PPG) states that "where a site-specific flood risk assessment demonstrates clearly that the proposed layout, design, and mitigation measures would ensure that occupiers and users would remain safe from current and future surface water flood risk for the lifetime of the development (therefore addressing the risks identified e.g. by Environment Agency flood risk mapping), without increasing flood risk elsewhere, then the sequential test need not be applied". Reverting to the Application Scheme does not change the conclusions with regards to the requirements for a Sequential Test from a surface water flood risk point of view. As detailed in the updated FRA (CD3.7), there is no requirement for a Sequential Test from a surface water point of view with the Appeal Scheme in place given that all electrically sensitive equipment is located outside the predicted RoFSW extents and the overall surface water flood risk on Site is considered to be Low. With the Application Scheme, with the proposed raising of electrically sensitive infrastructure located within the RoFSW extent, surface water flood risk on site is also considered to be Low, not triggering the requirement for a Sequential Test. Site users and occupiers are not considered to be at risk of surface water flooding with either the Appeal Scheme or the Application Scheme and if the Application Scheme is taken forward, mitigation measures will ensure the development itself

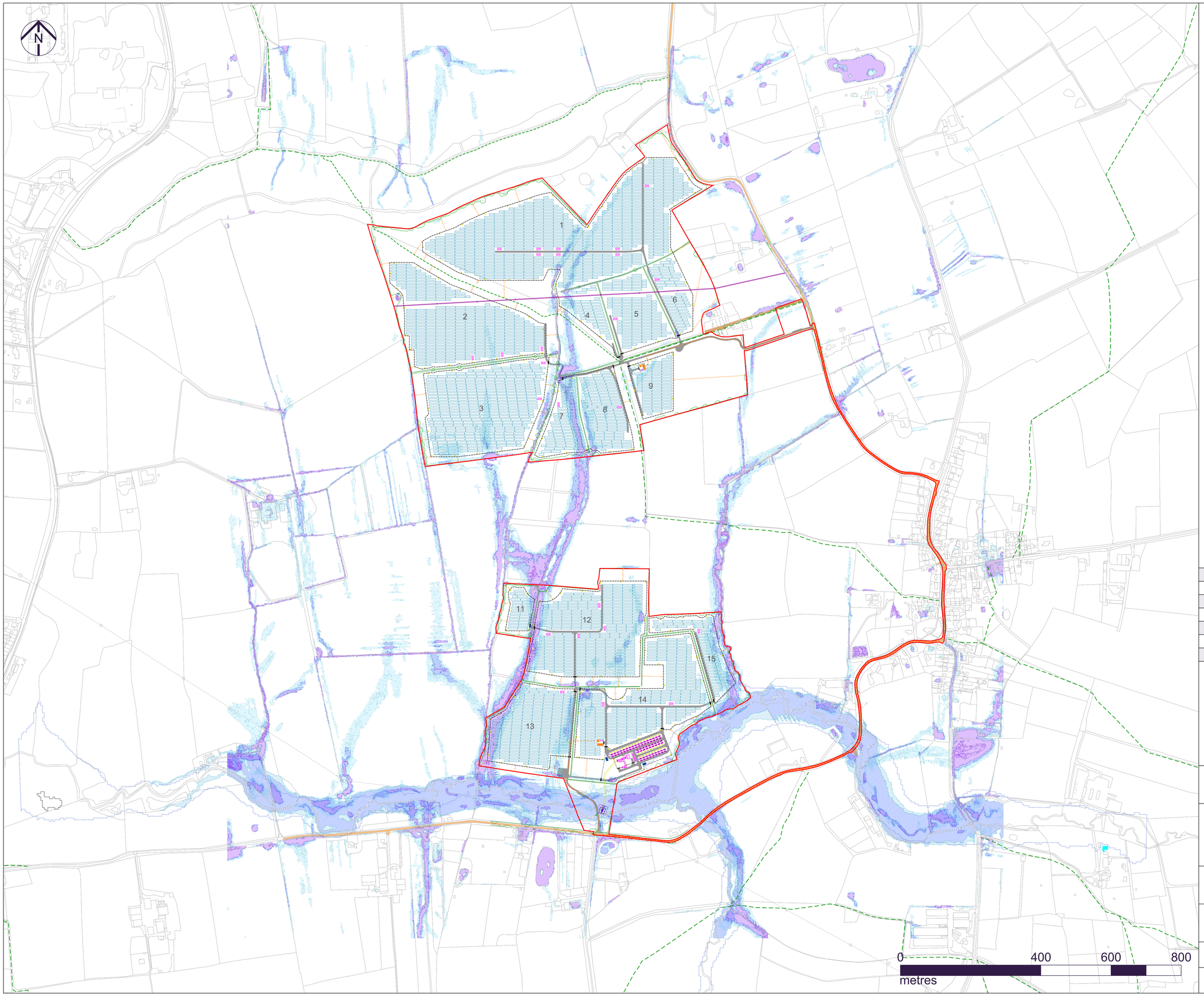
also remains safe and operational, whilst also making sure flood risk elsewhere does not increase.

3.5. The Application Scheme did not include the two additional fire water tanks alongside the proposed BESS. The fire safety impact of reverting to the Application Scheme without the additional fire water tanks has been assessed within NFCC Compliance Report prepared by ARC, January 2026 (Appendix 1 of CD 8.6). Whether these fire water tanks are included on site or not does not materially impact the proposed surface water drainage strategy, with the drainage strategy in both situations ensuring potentially contaminated fire water does not pollute the local environment. Prior to the addition of the two fire water tanks within the Appeal Scheme, it was proposed to provide fire water supply within the proposed underground storage pipes on site, beneath the access tracks in the BESS compound and these pipes had sufficient capacity to be compliant with the NFCC guidance. From a flood risk and drainage perspective, both options for fire water supply are considered suitable.

4. Conclusion

4.1. Although the Appeal Scheme is preferable from a flood risk and drainage perspective and only requires minor relocation of electrically sensitive infrastructure in four isolated locations, it is concluded that both the Appeal Scheme, and the Application Scheme with mitigation measures discussed above, are appropriate from a flood risk and drainage point of view.

Appendix A – Appeal Scheme with Latest EA Flood Risk Data



Notes:
View in conjunction with all relevant documents.
All dimensions to be checked on site before proceeding with work.
To be used only for the status specified.

All dimensions, levels, and coordinates are in metres unless defined.
All areas are approximate and indicative only.
All omissions and discrepancies to be reported in writing to Exagen Development Ltd.

Key

- Site Boundary
- Existing 33kV overhead electricity line
- Existing public road
- Existing access track
- Existing Public Right of Way
- Existing watercourse
- Existing vegetation
- Proposed solar panel table (2P24)
- Proposed solar panel table (2P12)
- Proposed deer fencing
- Proposed palisade fencing
- Proposed fence gate
- Proposed access tracks
- Proposed central inverter
- Proposed battery storage container
- Proposed battery storage inverter
- Proposed auxiliary transformer
- Proposed CCTV / lighting post
- Proposed substation infrastructure
- Proposed POC infrastructure
- Proposed POC cable connection
- Proposed solar cable connection
- Proposed solar connection infrastructure
- Proposed water storage tank and pump
- EA Flood Zone 2 extent (previous)
- EA Flood Zone 2 extent (2025)
- EA Flood Zone 3 extent (2025)
- EA 1 in 30 RoFSW (High Risk)
- EA 1 in 100 RoFSW (Medium Risk)
- EA 1 in 1000 RoFSW (Low Risk)

Rev	Date	Description
07	05.09.25	Track amendments for PROW
06	13.08.25	New flood data changes
05	13.08.24	PV changes
04	05.01.24	PV and planting changes
03	01.08.23	2 BESS access, minor aligns
02	12.07.23	Reduced solar, new planting

exagen

2nd Floor Coachworks
9-10 Charlotte Mews
London W1T 4EF
info@exagen.co.uk
www.exagen.co.uk

Client
Exagen Development Limited

Drawing title
Site Layout Plan
(with EA Flood Risk 2025)

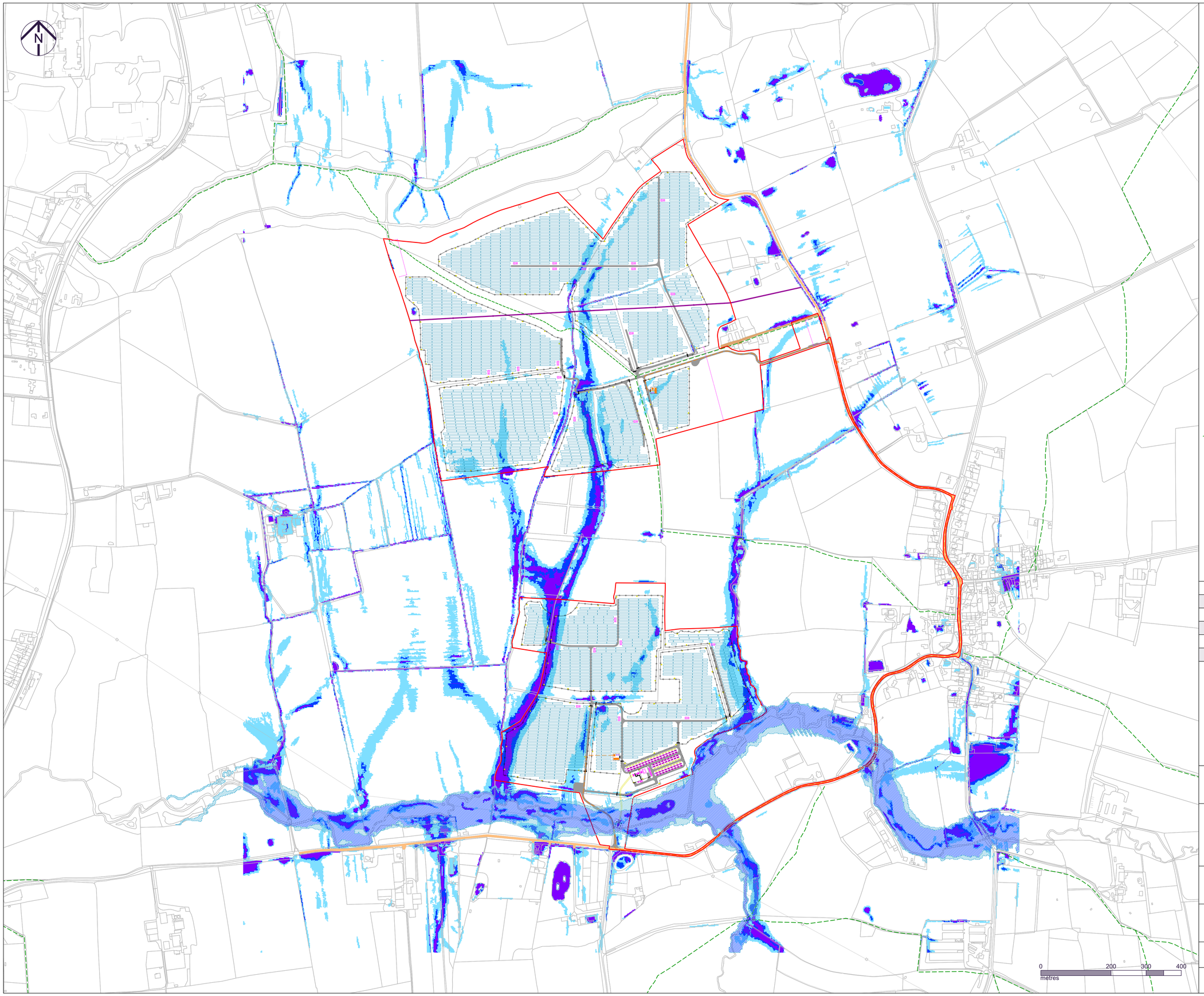
Project
Old Wood Energy Park

Status
Planning Application

Date	Scale at A1	Status code
18/05/2023	1:5000	S4

Drawing number	Revision
WLL02A-EXG-04-00-D-K003	P07

Appendix B – Application Scheme with Latest EA Flood Risk Data



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- EA Flood Zone 3 extent (2025)
- EA 1 in 30 RoFSW (High Risk)
- EA 1 in 100 RoFSW (Medium Risk)
- EA 1 in 1000 RoFSW (Low Risk)

Rev	Date	Description
08	06.02.26	Nov 24 drawing w/ flood zones

exagen

Exagen Development Limited
2nd Floor Coachworks
9-10 Charlotte Mews
London W1T 4EF
+44 (0)3300 100 545
info@exagen.co.uk
www.exagen.co.uk

Client
Exagen Development Limited

Drawing title
Site Layout Plan
(with EA Flood Risk 2025)

Project
Old Wood Energy Park

Status
Planning Application

Date	Scale at A3	Status code
06/02/2026	1:5000	S4

Drawing number	Revision
WLL02A-EXG-04-00-D-K007	P08

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Appendix 4 – Minerals Safeguarding note

Minerals Note

Appendix 4 to Evidence of Nigel Cussen

In Respect of Section 78 Appeal: Land West of Bradmore Road and North of Wysall Road, Land West of Wysall, Wysall

On behalf of Exagen Development Ltd

Date: February 2025 | Pegasus Ref: P25-1631

Appeal Ref: APP/P3040/W/25/3375110 | LPA Ref: 24/00161/FUL

Author: Matthew Sunman

Document Management.

Version	Date	Author	Checked/ Approved by:	Reason for revision
V1	03/02/2026	MS	NC	Draft
V1	10/02/2026	MS	NC	Final

Contents.

Table of Contents:

Table of Figures:

1. Introduction

1.1. This Appendix has been prepared on behalf of Exagen Development Ltd ('The Appellant') and relates to a planning appeal submitted pursuant to Section 78 of the Town and Country Planning Act 1990, concerning Land West of Bradmore Road and North of Wysall Road, Land West of Wysall, Wysall ('the Appeal Site').

1.2. The appeal follows the decision of Rushcliffe Borough Council ("RBC") (CD 4.2) to refuse the application for full planning permission (ref. 24/00161/FUL) ("the Planning Application") on the 19th June 2025. The Planning Application relates to a proposed development ("the Appeal Scheme") comprising the following:

"Construction, operation and subsequent decommissioning of a renewable energy park comprising ground mounted Solar PV with co-located battery energy storage system (BESS) at the point of connection, together with associated infrastructure, access, landscaping and cabling."

1.3. The RBC Planning Committee resolved to refuse the planning application at a meeting held 12 June 2025 against the advice and the recommendation of the Officer's Report (CD 4.1) to Committee, which was that planning permission should be granted subject to the imposition of 23no. planning conditions. The Decision Notice (CD 4.2) was issued by RBC dated 19th June 2025.

1.4. Mineral safeguarding forms no part of the Council's Reasons for Refusal. Whilst Local Plan LPP2 (CD 6.3) Policy 42 and Nottinghamshire Mineral Local Plan 2021 (CD 6.12) Policy SP7 are listed as relevant policy in the Planning Policy consultation response on the planning application (CD 4.19), no specific comment or objection is raised in relation to these policies. Additionally, no objection was made to the planning application by the relevant Minerals Authority at Nottinghamshire County Council.

1.5. Notwithstanding, the Appellant has noted comment made at paragraph 3.5.5 of the Council's Statement of Case for the Appeal (CD 8.4), stating failure to submit a Minerals Safeguarding Assessment with the planning application. This statement is provided as an appendix to the Appellants Planning Proof of Evidence, to address this comment.

1.6. The Appeal Site lies wholly within one of the Mineral Safeguarding Area for Gypsum within the administrative area of Rushcliffe Borough Council ('RBC)' as the Local Planning Authority and Nottinghamshire County Council ('NCC') as the Waste and Minerals Authority. The relevant Gypsum Mineral Safeguarding Area is shown in figure 1 on the following page.

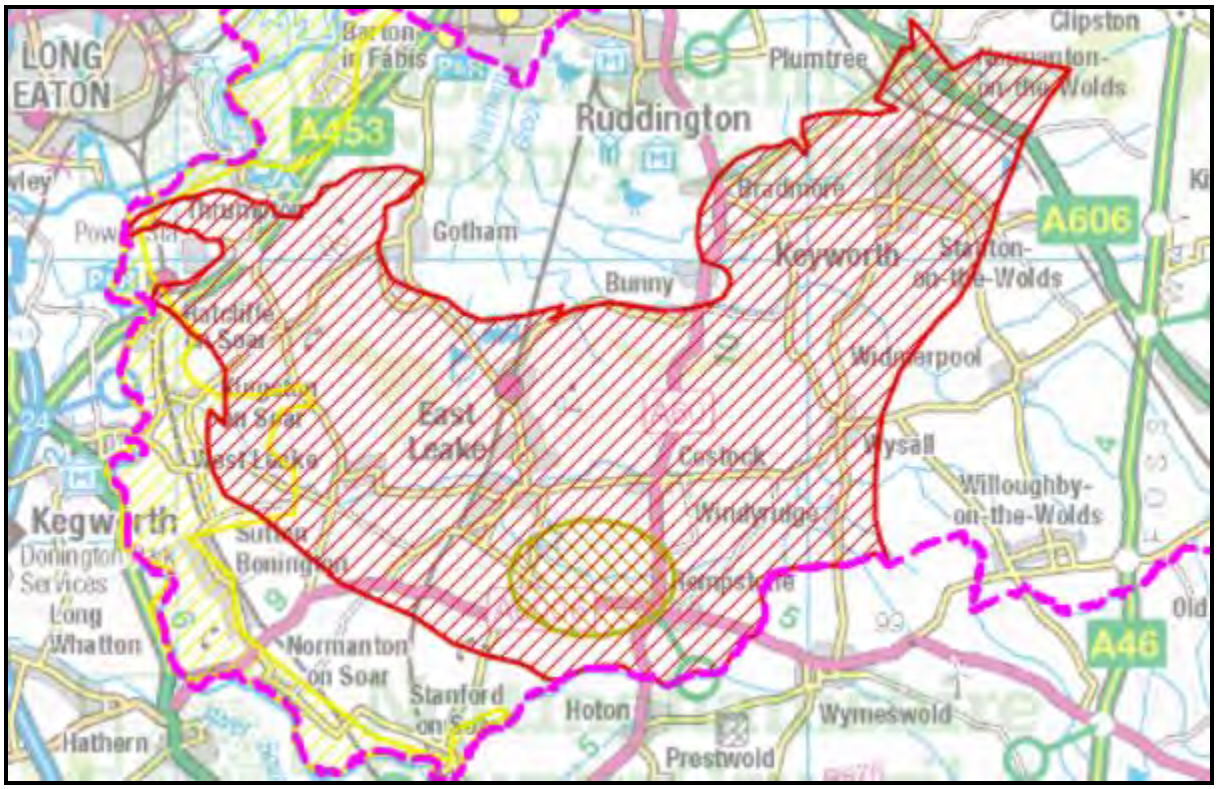

Figure 1 *– Extract of the Nottinghamshire Minerals Local Plan (Adopted March 2021) Policies Map*[1].

1.7. A large area of the gypsum reserves, approximately 3852ha, benefits from planning permission (reference 16/01430/CMA, 16/01432/CMA and 16/01433/CMA) for extraction until 22 February 2042 (orange and red line in figure 2 on the following page). The Appeal Site covers a very small area of the gypsum extraction mineral planning permission (101 ha, equating to around 2.6%) shown as the blue shading in Figure 2 on the following page and covered specifically by planning permission 16/01432/CMA (that extended the operational life of planning permission 8/00/01321/CMA) shown as the red line in Figure 3 on the following page:

[1] Nottinghamshire Minerals Local Plan Interactive Polices Map. Available at https://spectrum.nottscc.gov.uk/connect/analyst/mobile/#/main?mapcfg=%2FAnalyst%2FNamedProjects%2FMinerals%20Local%20Plan#/main?mapcfg=/Minerals%20Local%20Plan . [Accessed 03/02/2026].

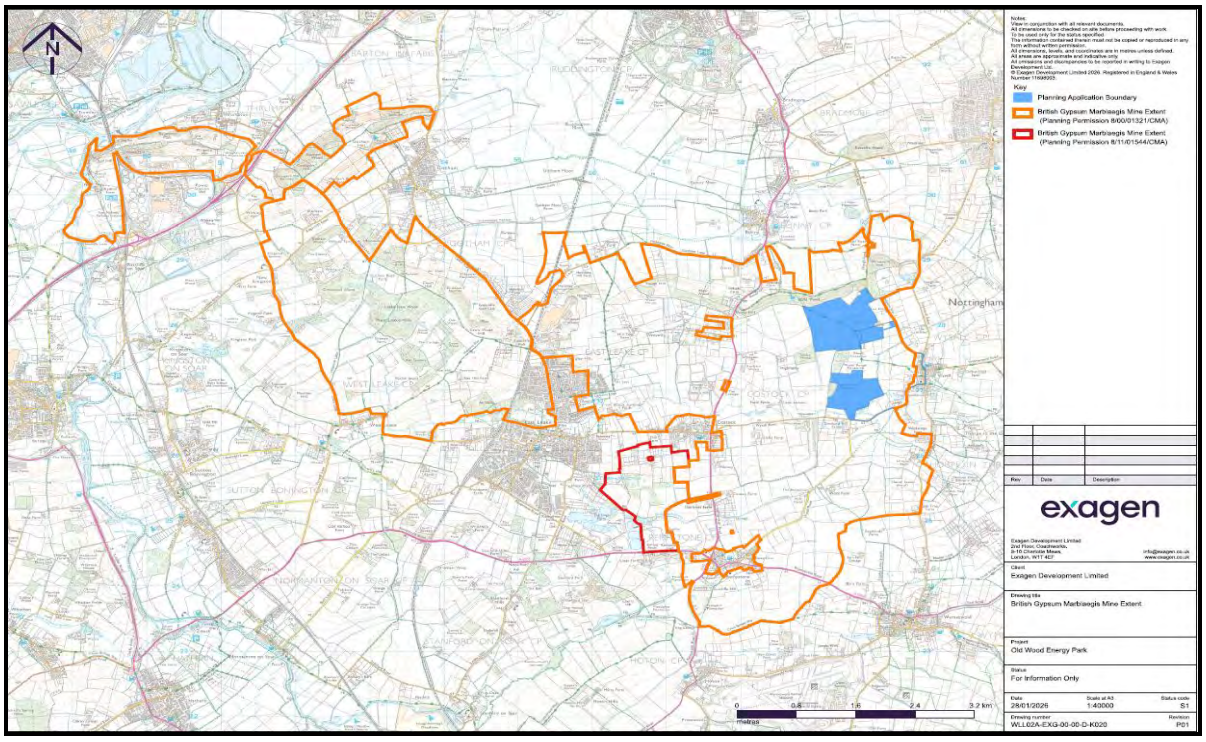

Figure 2 *– Appeal site (blue) and the extent of the gypsum extraction planning permissions (red and orange).*

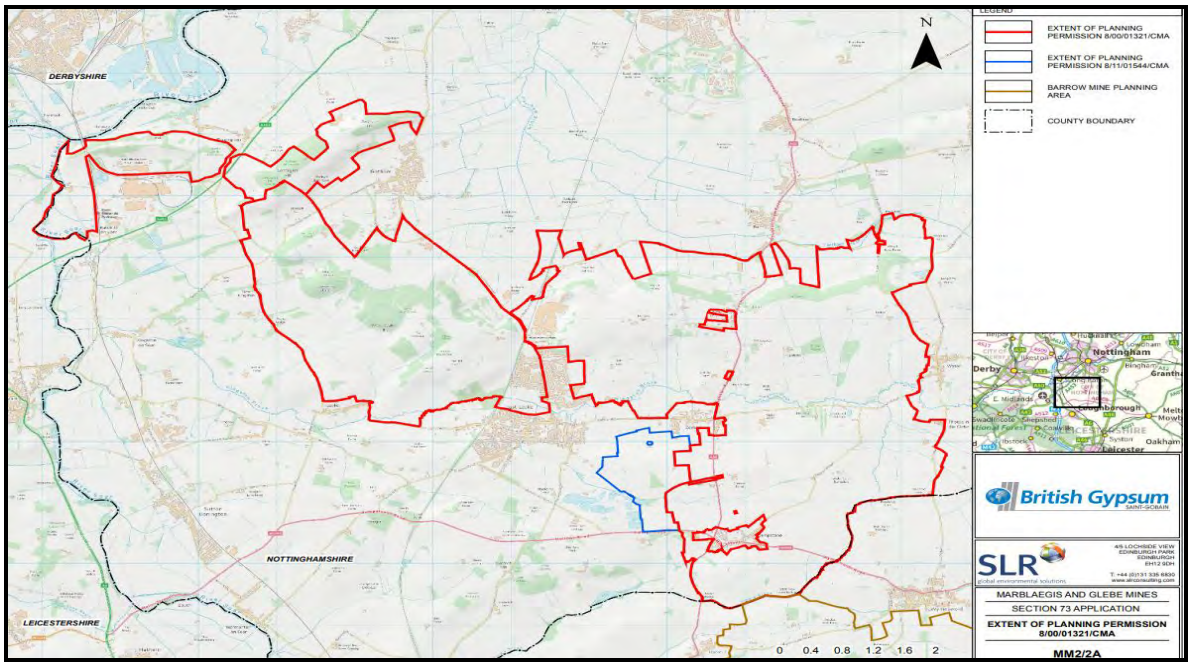

Figure 3 – Different planning permissions for Gypsum at the Marbleaegis and Glebe mines[2]

[2] 16/01432/CMA planning application documents. Available at: https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=O85ECJNL0CT00 . [Accessed 03/02/2026].

1.8. The purpose of this report is to address the requirement of national and local policies relating to minerals and provide an assessment of the Proposed Development impacts on the safeguarded mineral resource.

- Section 2 – Provides a review of relevant national and local mineral policies;
- Section 3 – Provides an assessment of impact of the Appeal Scheme on mineral resource; and
- Section 4 – Impact on supply of minerals.

1.9. Following the refusal of the application by RBC, further minor changes have been made to the design of the Appeal Proposal to accompany the appeal submission. The proposed changes have been made to address changes to the EA Flood Risk mapping published in March 2025 and to provide additional NFCC compliance for the BESS proposal.

1.10. The LPA, within their Statement of Case (CD 8.4), asserts that these changes fundamentally alter the nature of the development under consideration at this appeal. Consequently it is yet to be confirmed whether the appeal will be considered on the basis of the determined planning application or the amended scheme and in accordance with the CMC note it was confirmed that parties should prepare evidence based on either the original or the revised scheme, unless PINS notifies otherwise.

1.11. Accordingly within the Planning Proof of evidence the scheme originally determined by the LPA is referred to as the "Application Scheme" and the appeal amended scheme is referred to as the "Appeal Scheme", Those terms are also adopted in this note.

2. Review of National and Local Mineral Policies

Local Planning Policy

Rushcliffe Local Plan Part 2:Land and Planning Policies (CD 6.3)

2.1. Part 2 to the Local Plan (Land and Planning Policies) was adopted in October 2019.

2.2. Policy 42 of LPP" addresses Mineral Safeguarding and states

"Development will not be permitted which would sterilise mineral resources of economic importance or pose a serious hindrance to future extraction in the vicinity. Where development proposals are located within minerals safeguarding areas, prior extraction of such minerals will be encouraged, subject to whether this is practicable or economically feasible."

2.3. The supporting text to the policy notes the County Council as the Minerals Planning Authority, but confirms that RBC are the determining authority for non-minerals planning applications which may affect minerals resources and accordingly would apply Policy 42 to ensure that the resource is protected.

Nottinghamshire Minerals Local Plan[3] *(CD6.12)*

2.4. The Nottinghamshire Minerals Local Plan forms the land use planning strategy for mineral development within the County up to 2036, but also seeks to ensure the protection of mineral resources from the risk of sterilisation by non-mineral development which potentially prevents future extraction.

2.5. Policy SO4 (Safeguarding Mineral Resources, permitted mineral reserves and associated minerals infrastructure) and Policy SP7 (Mineral Safeguarding, Consultation Areas and Associated Minerals Infrastructure) are the policies relevant to the Proposed Development.

2.6. Policy SO4 aims to "*Protect the County's potential mineral resources of local and national importance, permitted mineral reserves and associated minerals infrastructure from development which would prevent or hinder their future use*".

2.7. Policy SP7 states:

> "*Mineral Safeguarding Areas*
>
> *1. Locally and nationally important mineral resources, permitted reserves, allocated sites and associated minerals infrastructure will be safeguarded from needless sterilisation by non-minerals development through the designation of minerals safeguarding areas as identified on the Policies Map.*
>
> *2. Non-minerals development within minerals safeguarding areas will have to demonstrate that mineral resources will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.*
>
> *3. Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-minerals development, prior extraction will be sought where practicable.*
>
> *Minerals Consultation Areas*
>
> *4. District and Borough Councils within Nottinghamshire will consult the County Council as Minerals Planning Authority on proposals for non-minerals development within the designated Mineral Consultation Area, as shown on the Policies Map.*
>
> *5. The Minerals Planning Authority will resist inappropriate non-minerals development within the Minerals Consultation Areas.*
>
> *6. Where non-minerals development would cause an unacceptable impact on the development, operation or restoration of a permitted minerals site, mineral allocation, or associated minerals infrastructure, suitable mitigation should be provided by the applicant prior to the completion of the development.*"

2.8. Paragraph 3.84 of the Nottinghamshire Minerals Local Plan states:

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[3] Nottinghamshire Minerals Local Plan. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.nottinghamshire.gov.uk/media/5079375/adoptedmineralslocalplancompressed.pdf . [Accessed on 03/02/2026].

"Not every non-mineral development proposal within or close to a Minerals Safeguarding and Consultation Areas represents a risk to future minerals extraction. The main risks will arise from proposals to extend built up areas and new development in the open countryside, as such; the following categories of development are exempt from both consultation and safeguarding:

- *Development which is in accordance with adopted District/Borough Local Plan allocations which took account of minerals sterilisation and where prior extraction is not feasible or appropriate;*
- ***Temporary development****;* (**bold** and underline added for emphasis)
- *Householder planning applications (except for new dwellings);*
- *All applications for advertisements;*
- *Infill development;*
- *Reserved matters; and*
- *Prior notifications (telecoms, forestry, agriculture, demolition)*".

Relevant Planning Permissions

2.9. No mineral development is proposed within the Appeal Site by the Appeal Scheme. In terms of Mineral Safeguarding Areas ('MSA'), the Appeal Scheme affects a relatively small area of gypsum deposits that benefits from planning permission for mineral extraction via an underground mine and are safeguarded by a defined MSA in the Nottinghamshire Local Plan.

2.10. The gypsum planning permissions for the Marbleaegis and Glebe Mines are operated by British Gypsum that supplies raw materials to the plaster and plasterboard industry. Both mines extend from Ratcliffe on Soar in the west to Wysall in the east and between Gotham and Bunny in the north and Rempstone in the south and just to the north of East and West Leake. The main entrance to the mine, together with the mine offices, is located to the north of East Leake.

2.11. Paragraphs 38 and 40 on pages 8 and 9 of the Applicant's Supporting Statement[4] for the most recent planning applications reference 16/01430/CMA, 16/01432/CMA and 16/01433/CMA sets out how gypsum is extracted and processed at the Marbleaegis and Glebe mines:

> "*38. The proposals incorporate the extraction of gypsum from the working face, its primary processing (underground) and bringing to the surface the extracted gypsum for use in the adjoining plaster/plasterboard factory (the Works). The operation of the adjacent Works is not subject to the 1995 Act review ot* (or – sic) *affected by this planning application*".

[4] 16/01432/CMA planning application documents. Available at: https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=O85ECJNL0CT00 . [Accessed 03/02/2026].

And

"*40. Gypsum has been extracted at Marblaegis Mine using both drill and blast techniques and electric face cutting methods. In 2006, electric face cutting equipment was introduced to the mine. The cutting plant comprises a series of metal teeth (with tungsten carbide tips) on a cylindrical drum which can be raised up and down to the full height of the tunnel. The drum rotates with the teeth cutting into the face; extracted rock is collected at the bottom of the cutting machine and fed via conveyor to the back of the cutting machine and fed into a waiting shuttle car (also electrically powered). The shuttle car transfers the extracted rock from the face to the mobile primary crushing plant (feeder breaker) where the rock is crushed to a uniform size so that it can be transferred via the underground conveyor system to the underground secondary crusher (sizer) and then onto the surface. At the surface the rock can be screened with the fine material being sold for cement rock and the coarse retained for on-site plaster and plasterboard manufacture*".

2.12. Paragraphs 76 and 77 on page 14 of the same document sets out environmental considerations with regards Gypsum extraction at the Marbleaegis and Glebe mines:

"*76. Given that the extraction of gypsum occurs below ground, many of the environmental impacts typically associated with "open pit" (or surface) mineral working do not manifest themselves. The nature of the mining operations are such that environmental impacts upon ecological and heritage assets, landscape (visual and landscape character of the area), dust and noise are unlikely to occur, let alone be significant. The use of explosive charges in blasting operations can cause ground vibration; however, since 2006 the gypsum has been extracted using an electric powered face cutting machine in preference to blasting. Notwithstanding this, should harder deposits be found then blasting may need to be re-introduced at the mine. Based on experience at other mines, improvements to blasting techniques has improved the control and management of blasting and resulted in greater control of the amount of vibration generated, allowing mining operations to proceed without significant adverse environmental impact whilst being in close proximity to residential properties.*

77. The workings, being underground, would not directly or indirectly affect any sensitive ecological or heritage designations, or lead to any effects upon landscape character of visual intrusion".

2.13. The mineral planning authority, at paragraph 23 of the Committee Report[5] for planning permissions 16/01430/CMA, 16/01432/CMA and 16/01433/CMA states:

"*Extraction of gypsum occurs below ground and the nature of the mining operations is such that there is no adverse impact on the character and appearance of the area and dust and noise are not issues……conditions* (attached to the mineral extraction planning permissions) *cover matters such as the extent and duration of operations, mine design, blasting, drainage and restoration…….*"

[5] 16/01432/CMA planning application documents. Available at: https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=O85ECJNL0CT00 . [Accessed 03/02/2026].

2.14. In addition to this condition 1 of planning permission reference 8/16/01432/CMA[6] defines the planning permissions as follows:

> 1. This permission is for the completion by 22nd February 2042 of all underground gypsum extraction by pillar and stall methods from the area edged in red shown on Plan titled 'Extent of Planning Permission 8/00/01321/CMA' Reference MM2/2A received by the Minerals Planning Authority (MPA) on 4th May 2016 and the restoration and management of the Silver Seal Mine entrance area in accordance with the details contained in the Silver Seal, Bunny Nature Conservation Management Plan dated October 2012 by FPCR Environment and Design Ltd received by the MPA on the 30th October 2012 and revised Figure 3: Ecological Management Plan Reference No. 3311/P/10 Rev B received by the MPA on 12th November 2012.
>
> *Reason: In order to define the permission.*

2.15. Condition 7 of planning permission reference 8/16/01432/CMA also restricts how mineral is brought to the surface as follows:

> 7. Mineral extracted under this permission shall only be brought to the surface at the East Leake site.
>
> *Reason: To minimise surface traffic.*

Effects of the Appeal Proposals on consented mineral extraction

2.16. In the Appellant's opinion it is clear the gypsum planning application, including plans and support documentation, were prepared and submitted on the basis that mineral extraction takes place via an underground mine (**not** 'open pit' surface mine as the local planning authority are now claiming in their Statement of Case as part of this appeal). The mineral planning authority subsequently assessed and approved planning permission reference 8/16/01432/CMA as an underground rather than an 'open pit' surface mine.

2.17. The Appeal Scheme, subject of this appeal, would take place at the surface level with the gypsum deposit found underground at a depth of 30 metres or more. As mentioned previously, gypsum in this case is extracted by underground methods specifically the "pillar and room" (or "pillar and stall") configuration. Solar farms do not physically or chemically (destroy or alter) minerals located deep underground due to the limited loading and limited amount of ground disturbance at depth as the infrastructure typically only penetrates the top soil for mounting posts and foundations for some infrastructure such as the BESS.

2.18. At the end of its operational life, the Appeal Scheme is reversible. It will be decommissioned, ground structures removed and the site restored. Deep foundations or excavations are not required by the Appeal Scheme. Therefore disturbance is limited to surface layers rather than underlying deposits, thus underlying mineral deposits would not be permanently sterilised and available to exploit either at the same time as the Appeal Scheme or, if required, at a future date.

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[6] 16/01432/CMA planning application documents. Available at: https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=O85ECJNL0CT00 . [Accessed 03/02/2026].

2.19. This is the same position as the recently approved adjoining solar farm, reference 22/00303/FUL, that was assessed against the same local plan policies as this appeal (there has been no change). It's also worth noting that the gypsum planning permissions extend under settlements, roads, watercourses, farmsteads, isolated dwellings and extended areas of mature established woodland. This does not prevent extraction of gypsum from taking place and this has been the same situation since the gypsum mines opened in the 19th Century (pre-dating the planning system).

2.20. In addition to gypsum, the Appeal Site along with large areas of Nottingham fall within Petroleum Exploration and Development License ('PEDL') areas and the older vintage Production Licenses ('PL'). Both are issued by the North Sea Transition Authority ('NSTA') – formerly the Oil and Gas Authority ('OGA') – on behalf of the Crown.

2.21. 'PEDL' is the modern standard licence for onshore oil and gas in Great Britain, introduced around 1996 to combine previous exploration, appraisal, and production phases into one document. A PEDL covers the entire development cycle, from exploration to decommissioning.

2.22. 'PL' is an older "vintage" type of landward licence used before the adoption of the PEDL system (pre-1996). While still active, these are often legacy licenses, sometimes converted to or managed under similar terms to modern licenses, but they represent a different era of licensing.

2.23. In this case a very small part of the Appeal Site on its eastern boundary falls within PEDL 201 and the whole site within historic PL220 that was awarded to BP in 1982[7].

2.24. Oil and gas deposits are found at much greater depths than other minerals and therefore surface development has less potential impact in terms of exploiting the resource. There are no safeguarding areas for hydrocarbons. Existing oil fields are identified and safeguarded with mineral consultation zone around each one. The Appeal Scheme does not affect an existing oil field or come within an oil field mineral consultation zone. Therefore, the Appeal Scheme is not considered to have any implications for existing or proposed exploration and eventual exploration of oil and gas resource within PEDL 201 or historic license PL220.

2.25. Sterilisation of mineral resources have been demonstrated not to occur and the Appeal Scheme within the defined gypsum planning permission and MSA will be available for extraction if this appeal is allowed.

2.26. The Appeal Scheme therefore complies with Policies SO4 and SP7.

National Planning Policy

National Planning Policy Framework (NPPF)[8]

[7] UK Onshore Geophysical Library. Available at https://ukogl.org.uk/map/?e=-93599,7047032,-81216,7054006&l=0,1115463,0&sm=true&b=2 . [Accessed 03/02/2026].

[8] National Planning Policy Framework. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf . [Accessed on 03/02/2026].

2.27. Paragraph 222 of the NPPF (2025) highlights "*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*".

2.28. Paragraph 223 of the NPPF (2025) sets out planning policies should provide for the extraction of mineral resources of local and national importance; so far as practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials; safeguard mineral resources by defining MSAs and Mineral Consultation Areas; set out policies to encourage the prior extraction of minerals; safeguard existing, planned and potential sites; set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts; recognise that some noisy short-term activities are unavoidable to facilitate minerals extraction; and ensure that worked land is reclaimed at the earliest opportunity, and that high quality restoration and aftercare of mineral sites takes place.

2.29. Paragraph 225 of the NPPF (2025) 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*". It is important to note that the Appeal Scheme is temporary, reversible and does note permanently sterilise land beneath.

2.30. Gypsum is not reported in the Local Aggregate Assessment like sand and gravel, crushed rock etc because it is classified as an industrial mineral rather than a primary construction aggregate. It does not require the same specific 'steady and adequate supply' landbank monitoring required by national planning policy and it's a case of the market decides what reserves are necessary. As previously mentioned, because the gypsum deposits are at depths of 30 metres or more, and the Appeal Scheme is at the surface, mineral extraction can still take place should the appeal be allowed.

2.31. Finally, in the delegated officer report for the adjoining Solar farm and BESS development that was approved in 2023 (ref 22/00303/ful), there was no assessment of mineral safeguarding by the Mineral Planning Authority (Nottinghamshire County Council were also consulted and did not comment on minerals/raise any mineral concerns) and that site is also above the consented quarry extraction area as well gypsum mineral safeguarding area as the Appeal Site. There was a paragraph in the Planning Statement regarding minerals, however, there is no evidence on the public planning file to confirm how the mineral planning authority assessed the proposals impact to minerals in that case. Having granted planning permission recently it can only be assumed that the Mineral Planning Authority were satisfied that mineral extraction can still take place and gypsum will not be sterilised. There hasn't been any changes in planning policy and, in the Appellant's opinion, this undermines RBC's mineral safeguarding argument for this appeal.

National Planning Practice Guidance (NPPG)[9]

2.32. Reference 007 of the NPPG states "*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…..*

[9] National Planning Practice Guidance. Available at: https://www.gov.uk/guidance/minerals . [Accessed on 03/02/2026].

2.33. *This approach will allow mineral planning authorities to highlight areas where mineral extraction is expected to take place, as well as managing potentially conflicting objectives for use of land*".

2.34. Mineral Safeguarding in England : Good Practice Advice, British Geological Survey Open Report OR/11/046 (2011) is referred to in the Planning Practice Guidance for detailed advice on mineral safeguarding.

2.35. Paragraph 1.1.4 on page 1 of Mineral Safeguarding in England : Good Practice Advice Report[10] states "*The presence of a MSA neither precludes other forms of development being permitted nor conveys any presumption that the mineral will be worked. MSAs simply provide a policy tool which will be an alert to the fact that minerals may be sterilised by the proposed nonmineral development and that this should be taken into account by the planning process, both when making site allocations in development plans and during development management*".

3. Assessment of Impact of the Proposed Development on Mineral Resource

Mineral Allocations relevant to the Appeal Site

3.1. The Nottinghamshire Minerals Local Plan[11] (March 2021) details sites that are permitted and allocated for mineral development. They are also identified in Plan 3 on page 18 of the Nottinghamshire Minerals Local Plan shown at Figure 4 below:

[10] Mineral Safeguarding in England : Good Practice Advice, British Geological Survey Open Report OR/11/046 (2011). Available at https://www.bgs.ac.uk/mineralsuk/download/mineral-safeguarding-in-england-good-practice-advice/ . [Accessed on 03/02/2026].

[11] Nottinghamshire Minerals Local Plan. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.nottinghamshire.gov.uk/media/5079375/adoptedmineralslocalplancompressed.pdf . [Accessed on 03/02/2026].

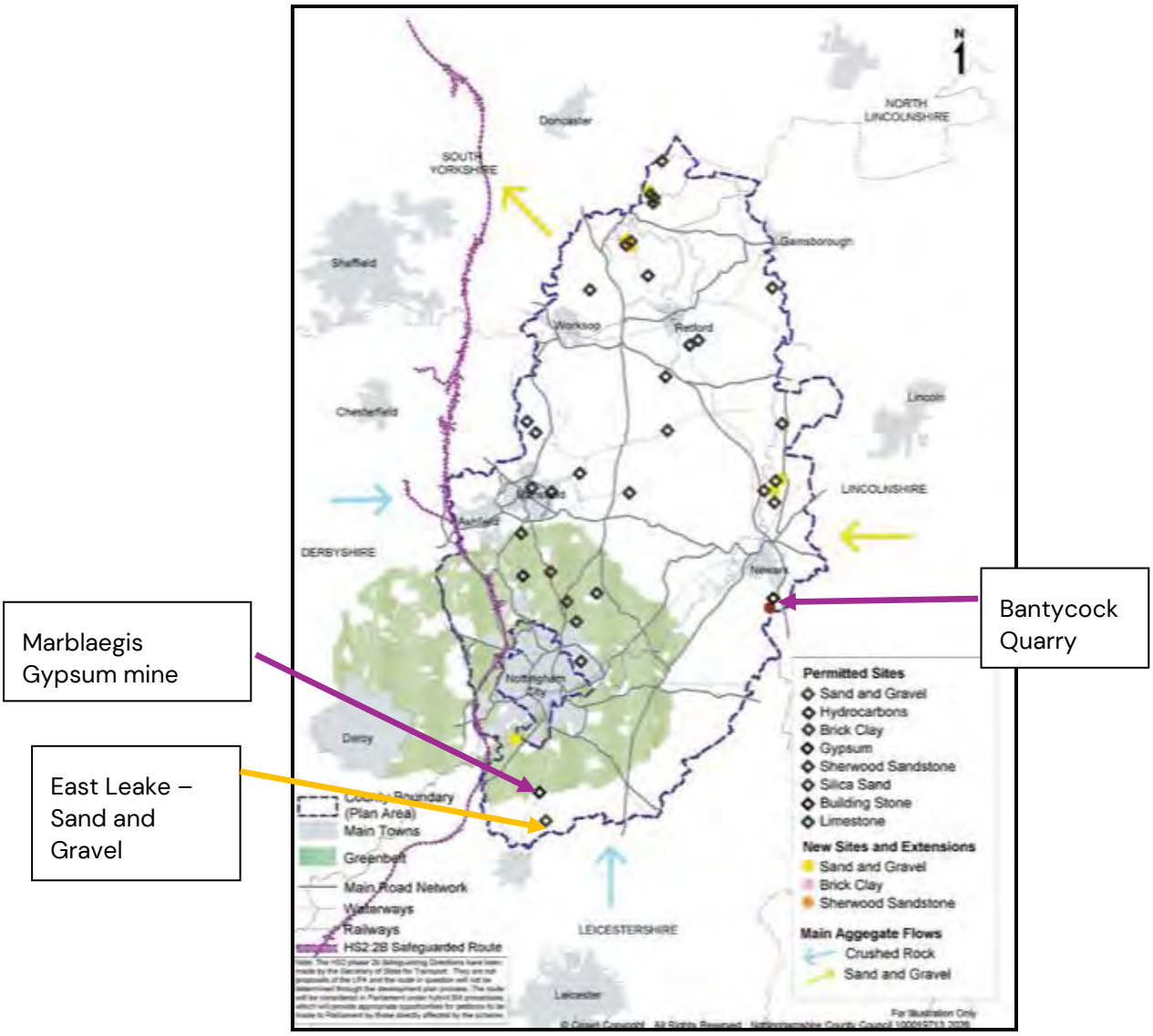

Figure 4 *- Permitted and allocated mineral sites in Nottinghamshire Minerals Local Plan.*

3.2. Plan 4 on page 44 Nottinghamshire Minerals Local Plan shows areas of Mineral Safeguarding and infrastructure shown at Figure 5 below:

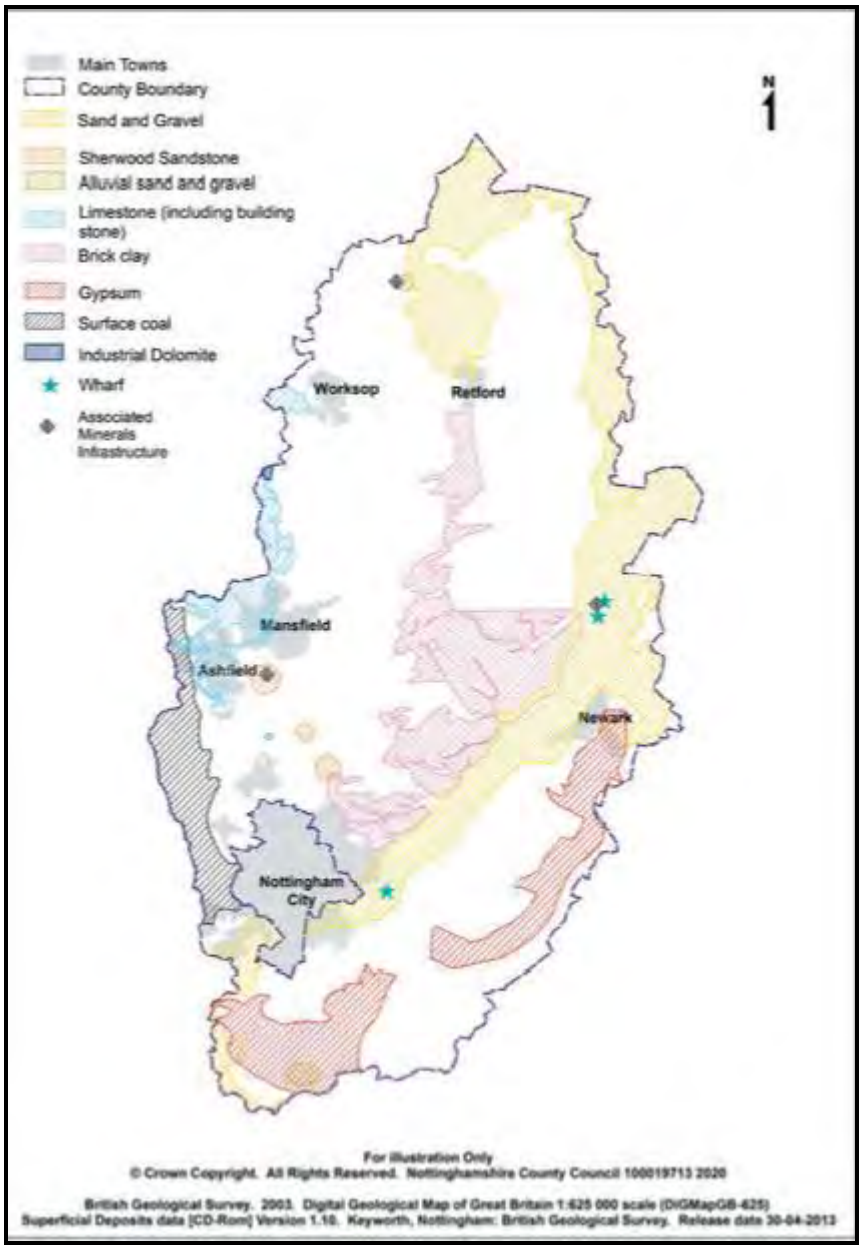

Figure 5 *- Mineral Safeguarding and infrastructure from Nottinghamshire Minerals Local Plan.*

3.3. Policy MP7 Part 1 secures an adequate supply of gypsum identified to meet demand over the plan period from Marblaegis Mine (identified as MP7a), Bantycock Quarry (identified as MP7b) and extension to Bantycock Quarry (identified as MP7c). Part 2 supports proposals for gypsum extraction outside the permitted sites identified above where a need can be demonstrated.

3.4. Justification for Policy MP7 is clear there is no national demand forecast or requirement to identify a local apportionment figure for gypsum production and it is up to the industry to identify adequate reserves to maintain production.

3.5. As previously mentioned the gypsum deposit at the Marblaegis Mine is deep underground (30 metres or more) and the Appeal Scheme subject of this appeal (which is at or just

below ground level for foundations) will not prevent its extraction nor sterilise the mineral. Should the appeal be allowed, mineral can be extracted at the same time or after the Appeal Scheme is removed bearing in mind it is temporary and reversible. The Bantycock Quarry is located south of Newark to the north east in the separate gypsum mineral safeguarding area and is not affected by this appeal. In the Appellant's opinion the Appeal Scheme does not conflict with Policy MP7.

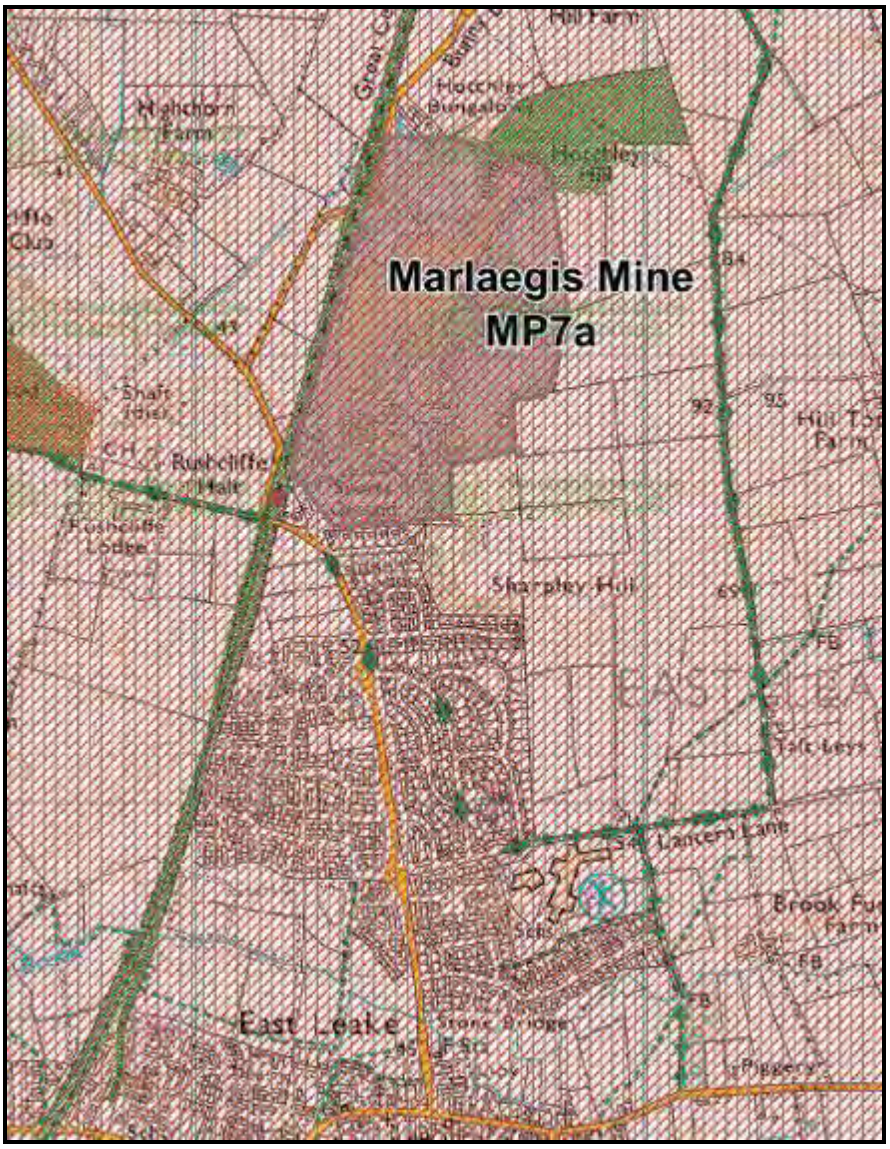

Figure 6 *– Location of the Marblaegis Mine allocation (MP7a) north of East Leake.*

3.6. Policy MP2 secures an adequate supply of sand and gravel identified to meet expected demand over the plan period. This is from the extraction of remaining reserves at ten permitted quarries (identified as MP2a to MP2j), five extensions to existing quarries (identified as MP2k to MP2o) and a new sand and gravel quarry Mill Hill nr Barton in Fabis (identified as MP2p). Proposals to extract specialist grey sand reserves will be supported by Policy MP2 where a need can be demonstrated.

3.7. In this case, only the East Leake existing sand and gravel quarry (identified by Policy MP2i) is near the appeal site. However, it is situated to the south east of East Leak. The Appeal

Site is positioned to the northeast and near to the neighbouring village of Wysall as shown in Figure 2. The Appeal Site does not include the East Leake sand and gravel quarry or its associated sand and gravel safeguarding area. This appeal does not conflict with Policy MP2.

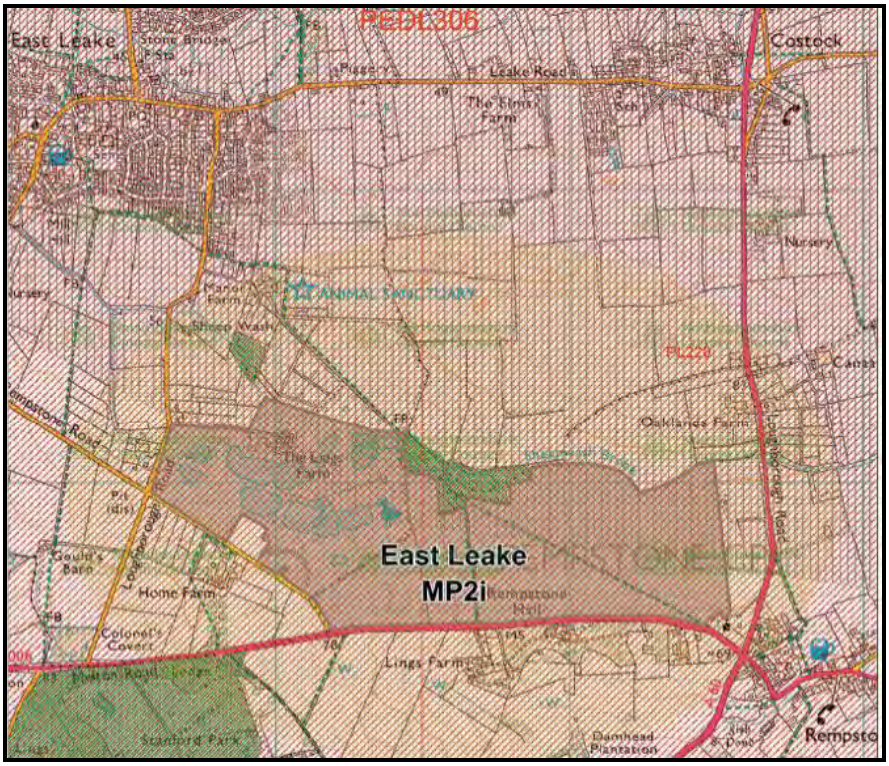

***Figure 7** – Location of the East Leake existing sand and gravel quarry.*

4. Impact on Supply of Minerals

4.1. There is no national demand forecast or requirement to identify a local apportionment figure for gypsum production and it is up to the industry to identify adequate reserves to maintain production. Therefore the Mineral Planning Authority do not have to provide a landbank for gyspum, it does not form part of the Local Aggregate Assessment or the East Midlands Aggregates Working Party (that Nottinghamshire is part of) which provides technical advice about the supply and demand for aggregates to the mineral planning authorities in the East Midlands working with the Department of Levelling Up, Housing and Communities (DLUHC) to do so.

4.2. Nottinghamshire Minerals Local Plan has identified sufficient supplies for gypsum (Policy MP7) as well as sand and gravel (Policy MP2). Both planning policies also allow further supplies to come forward were a need is justified.

4.3. Policy SO4 aims to *"Protect the County's potential mineral resources of local and national importance, permitted mineral reserves and associated minerals infrastructure from development which would prevent or hinder their future use"*.

4.4. Policy SP7 of the Nottinghamshire Minerals Local Plan require that development must not permanently sterilise mineral resource in MSA's, as well as ensuring that existing mineral

sites and associated infrastructure are safeguarded to allow continued operation on site without constraint or impacts.

4.5. The Appeal Site is located within a gypsum safeguarding area, it extends well beyond the Appeal Site and existing gypsum planning permissions the Appeal Site also falls within. A second Gypsum Mineral Safeguarding area within Nottinghamshire is also identified in the Minerals Local Plan. There would be significant opportunities for environmentally suitable gypsum mineral extraction sites to be identified in other areas should the need arise.

4.6. Whilst the Appeal Site is located within a wider planning permission and mineral safeguarding area for gypsum it would not prevent mineral extraction bearing in mind gypsum is mind underground in this instance at depths of 30 metres plus and the proposed temporary reversible development takes place at the surface. The Appeal Scheme would not, therefore, impact gypsum production.

5. Conclusions

5.1. The above sections have outlined the relevant planning policy in relation to minerals safeguarding, the relevant current planning permissions for mineral extraction affecting the Appeal Site and the potential for minerals safeguarding effects arising from the Appeal Scheme.

5.2. The Appeal Site does not affect existing or proposed sand and gravel sites nor sand and gravel mineral safeguarding areas. There are no implications for the proposal for gypsum mining or production.

5.3. The amendments proposed in the Appeal Scheme are minor and do not change the effect that the proposal would have on minerals safeguarding. Therefore the conclusions drawn in this note in regard to the Appeal Scheme apply equally to the Application Scheme.

5.4. The Application Scheme and the Appeal Scheme therefore comply with Policy SO4, SP7, MP2 and MP7 of Nottinghamshire Minerals Local Plan as well as the NPPF and NPPG.

Town & Country Planning Act 1990 (as amended)
Planning and Compulsory Purchase Act 2004

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Expertly Done.

Appendix 5 – 3rd Party Comment Summary

Appendix 5	Summary of 3rd party comments
Theme and Key Comments	**Response**
Landscape and Visual Matters	
• Landscape and visual effects of the proposed development, including its perceived scale, form, and prominence within the surrounding countryside.	The Appeal Scheme and Application Scheme would result in some beneficial effects with regard to the landscape elements that currently define the landscape character of the Appeal Site. The elements that currently contribute to defining the character of the Appeal Site, namely trees and hedgerows would be retained and enhanced to form a more robust collection of landscape elements.
• Cumulative landscape and visual impacts, having regard to the presence of existing and consented developments in the area and the combined effect on landscape character.	Taking into account the two closest approved cumulative schemes the Appeal Scheme and Application Scheme would reinforce the presence of solar energy infrastructure in the local landscape, in terms of landscape pattern, but its underlying character would remain rural, and it would retain an agricultural function. Its undulating landform, the scale and field pattern, blocks of woodland, and field hedgerows would remain unchanged. It is acknowledged that localised enhancements and beneficial effects would occur with regards the landscape elements associated with the cumulative schemes. This would exert limited, but nevertheless beneficial influence over the local landscape helping to partially mitigate against the cumulative adverse landscape character effects. Landscape and visual effects of the Scheme are assessed in the LIVIA (CD 1.5) and in Mr Chanas' evidence.
• Loss of green space and changes to the rural character of the area, including the perceived industrialisation of the landscape and the effect on the enjoyment of open countryside.	The character of the Appeal Site would change from open agricultural land to one that remains in agricultural use - through active hedgerow and woodland management with sheep grazing, alongside generally low lying static renewable energy infrastructure: solar modules, battery modules, ancillary infrastructure, substation compound etc. Given the amount of open and undeveloped land retained across the various field enclosures, coupled with the proposed typology of solar modules c. 3 m in height, would enable the existing structural vegetation to retain their strong influence and continue to form one of the key features of the Appeal Site. This coupled with the current landform, which would be largely retained, would mitigate against the introduced change. Overall, the magnitude of change would be medium, with effects moderate adverse.

	The Appeal Scheme does not represent industrialisation of the countryside. Once in operation the solar farm will not generate significant activity or impacts commonly associated with industrial activity, such as high levels of traffic movements, noise or emissions. It is acknowledged in Paragraph 2.10.28 of EN3 that "*solar farm sites are largely in rural areas*" (Core Document 5.56). Additionally, within the 'General Misconceptions' section of the Solar Roadmap 2025 (CD 5.38), it states that, solar industrialising the countryside is a misconception, as "s*olar farms are carefully designed to have a minimal visual impact. They can usually be easily screened by hedges and other vegetation, and visual impact is carefully considered during the planning process. They operate almost silently, without pollution, and once operational generate very little maintenance traffic*." The PROW cross section appended to Mr Chanas' evidence illustrate the appropriate offset of development from the PROW.
• Effects on residential amenity and mental well-being, arising from changes to views, sense of openness, and access to valued green space.	The nearby residential receptors have been reviewed but none of them have been judged to be subject to any overbearing or unacceptable residential visual amenity effects. It is noted that the issue of residential visual amenity is not explicitly included in any of the RfRs. The Appellant and the LPA agree that the Application or Appeal Schemes are unlikely to adversely impact on the visual amenity of existing residential dwellings. It is agreed that the proposal will not result in unacceptable effects on residential amenity in relation to noise, air quality, glint and glare and the Environmental Health consultee has confirmed no objection to the Scheme subject to the imposition of planning conditions. No evidence has been provided that the Scheme would give rise to any detrimental effect on well-being.
• Effectiveness of proposed landscape mitigation, including concerns regarding the implementation and establishment of planting.	It is considered that the addition of new hedgerows, hedgerow trees, copses and small woodlands would connect the various existing woodland habitats and strengthen the overall landscape framework in this part of the landscape. There would be ongoing obligation to management of the planting during the lifetime of the Scheme. The mitigation and enhancement planting with regard to hedgerows and trees would remain in place

	following the decommissioning of the scheme. This will be controlled by a condition requiring confirmation of the LEMP to be agreed with the LPA, which is to be included in the daft planning conditions.
• Impacts on public rights of way and recreational users, in particular the Midshires Way.	There are a number of PRoW routes within the northern parcel of the Appeal Site, with the Midshires Way coinciding with some of them. There are no PRoW within the southern parcel. The Scheme would not have any direct physical or residual effects upon any of the PRoWs within the Appeal Site during its operational stage. The PRoWs within the Appeal Site would be retained and remain open during the construction with specific management measures set out at paragraph 3.10 of the Construction Traffic Management Plan (CTMP) (November 2024) submitted as part of the application (CD 2.14). Visual impact on users of the PROW is considered in the LVIA (CD 1.5) and the evidence of Mr Chanas. The PROW cross section appended to Mr Chanas' evidence illustrate the appropriate offset of development from the PROW.
Flood Risk and Drainage	
• Drainage and surface water runoff concerns.	The central inverters dispersed across the Site will generally not significantly impact surface water runoff rates and patterns at the Site. In addition, the cessation of intensive agricultural activities at the Site will have beneficial effects which will help reduce soil compaction and surface water runoff rates from the Site. The FRA submitted with the Appeal (CD 3.7) and the FRA addendum provided as Appendix 3 of the Planning Proof of Evidence (CD 8.6) confirm the acceptability of the scheme from a flood risk and drainage perspective. Overall, the proposed solar farm Development at the Site therefore has the potential to provide betterment in terms of surface water runoff rates and downstream flood risk.
• Concerns regarding increased flood risk associated with the proposed development.	With mitigation measures and the proposed surface water drainage strategy in place, the Development will not increase flood risk on Site or elsewhere.

Heritage Matters	
• Impact on historic setting and nearby heritage assets, including concerns about the introduction of an industrial character to the area.	The Scheme would result in less than substantial harm at the lowest end of the scale to the significance of the Wysall Conservation Area. The harm to the conservation area derives from the southern parcel of the Appeal Site only and arises from temporary change in character within a small portion of a single identified Significant View from agricultural to energy generation. The level of harm will only be present for the time it takes for the proposed landscape planting along the eastern edge of Field 15 to establish itself, estimated at around 5 years but noting that even from day 1 the implemented landscaping would provide a filtering effect on views. There would be no harm to the significance of the Grade I Holy Trinity Church and the two Grade II buildings of Highfields and Manor Farmhouse. The Appeal Scheme does not represent industrialisation of the countryside. Once in operation the solar farm will not generate significant activity or impacts commonly associated with industrial activity, such as high levels of traffic movements, noise or emissions. It is acknowledged in Paragraph 2.10.28 of EN3 that "*solar farm sites are largely in rural areas*" (Core Document 5.56). Additionally, within the 'General Misconceptions' section of the Solar Roadmap 2025 (CD 5.38), it states that, solar industrialising the countryside is a misconception, as *"solar farms are carefully designed to have a minimal visual impact. They can usually be easily screened by hedges and other vegetation, and visual impact is carefully considered during the planning process. They operate almost silently, without pollution, and once operational generate very little maintenance traffic."*
• Irreversible changes to the historic rural landscape.	Solar farms are easy to install and decommission and sit lightly within the existing field framework. The Appeal Scheme is temporary, seeking permission for 40 years after which time the infrastructure will be removed and any harm will be reversed.
• Impact on archaeology.	It is agreed between the Appellant and the Council and County Archaeologist that matters relating to archaeology can be dealt with appropriately via condition.
Ecological Matters	
• Impact on protected and notable species, including otters,	The Development presents considerable opportunity for landscape and biodiversity mitigation and enhancement. The objectives for biodiversity include to identify protected or notable species that may be present and potentially affected by the Development, and incorporate suitable avoidance, protection

skylarks, and other breeding birds.	and mitigation measures to ensure their continued favourable conservation status. Additionally the objectives include to provide habitat and landscape enhancements though new planting and creation of connected habitat linked to the wider area, using native species appropriate to the locality. It is common ground with the Council that the scheme is acceptable in respect of protected species other than Skylarks and effect on Skylarks is the only ecological matter in dispute. (CD 8.3a) It is considered that, with the implementation of mitigation and reasonable avoidance measures secured by condition, the impact on skylarks would be less than significant. Small mammal access points will be prescribed at various locations along the solar farm enclosure fencing to allow the passage of small mammals across the Appeal Site.
• The implementation of BNG	The landscape enhancements form part of the scheme's proposals and contribute to the BNG. Therefore, if permitted, the required BNG will be achieved and implemented. The application was submitted prior to the implementation of the requirement to meet the statutory BNG of 10%. Nonetheless the proposal significantly exceeds this.
• Impact of lighting on wildlife and habitats.	No permanent lighting will be necessary on Site, as infrared CCTV cameras will be used to provide night-time visibility for the security company around the perimeter of the solar farm. Task lighting or low-luminance emergency lighting will only be required occasionally, such as when an engineer is present on Site and specifically at the substation and BESS compounds. Regardless, the design and positioning of the substation and BESS compounds ensure that any light spill from the Site will be negligible.
• Impact on woodlands	In terms of structural vegetation: hedgerows, trees, and woodlands with the additional planting there would be a major beneficial effect upon the tree/ woodland and hedgerow resource within the Appeal Site. Off-set distances have been provided from Ancient Woodland, in excess of the minimum requirement.

Loss of Agricultural Land	
• Concern regarding the loss of agricultural land and associated food production.	The Appeal Scheme would assist in maintaining agricultural use through sheep grazing/farming alongside biodiversity enhancement and renewable energy generation. It is agreed based on an independent site specific survey that has been carried out that the majority of the site is Grade 3b and the remaining Grade 4 and there for the site does not constitute best and most versatile (BMV) agricultural land. (CD8.3a) The proposal is for a temporary period of 40 years after which the development will be decommissioned allowing the site to revert to full agricultural use. Additionally, within the 'General Misconceptions' section of the Solar Roadmap 2025 (CD 5.38), it states: "*The biggest threat to food security is crop failure due to climate change14 and solar farms are helping to tackle this directly*. *Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land.*"
Transport and Highways	
• Impact on the local road network and nearby settlements during the construction phase.	Overall, the level of traffic during the temporary six-month construction phase is not considered to be material and it is considered that this will not have a detrimental impact on the safety or operation of the local or strategic highway network. It is agreed (CD 8.3a) that the Appeal Proposal has been reviewed by both Nottinghamshire County Council (the Local Highway Authority) (CD 4.61) and National Highways (CD 4.43), who raised no objection on highway safety grounds.
• Access for the Fire Department.	Nottinghamshire Fire and Rescue Service raised no objections to the Application Scheme and suggested a condition which requires the submission of a Risk Management Plan and Emergency Response Plan. The plan is required to include confirmation that Fire Service vehicles can easily access all of the BESS compound, final safety systems of the containers, final internal suppression system to be used, method of dealing with a fire, container heat output (energy density), contamination levels of gases and vapour and how will it be controlled.

	NFCC compliance reports have been provided for both the Appeal and Application schemes in Appendix 1 of the planning proof of evidence (CD 8.6)
• Impact on parking for local businesses during the construction phase.	During the construction phase, associated vehicles will not use local business parking facilities unless they are visiting those businesses. All vehicle parking associated with construction of the Scheme will be within the Appeal Site.
Other	
• Security and access concerns, including the use of deer fencing and safety when accessing Bunny Old Wood, as well as the status of permissive paths connecting to public footpaths.	To secure the solar farm enclosures within each site parcel, deer fencing will be installed around the perimeter of the solar arrays. This fencing will feature a timber post and wire mesh design to align with the rural character of the area. The proposed perimeter fencing will have an approximate height of 2.5 metres and will be positioned along the outer edges of the individual parcels of arrays to restrict access. A minimum separation of 5 metres will be maintained between the edge of the arrays and the fence, with an additional 5-metre buffer between the deer fencing and the field boundary. In addition to security fencing, it is proposed that pole-mounted CCTV and/or infrared security cameras be installed at intervals along the inner edge of the fencing, facing inward toward the Site to maintain privacy. In addition security fencing is provided to the substation and BESS element of the scheme. None of the proposed fencing will prevent access along the PROW. It is noted in the Landscape Hearing Statement (Appendix 1) (CD 8.2.1) that until recently there were a number of Permissive Paths leading from the southern part of Wysall village towards the southern parcel of the Appeal Site and connecting with the existing Public Footpath Wysall FP3. The Statement confirms that are two notices, however, which indicate that access to these routes first ended in September 2010 and then again on 31st July 2020. No other notices or information has been obtained to indicate these routes are still accessible.
• Fire safety and associated environmental risks, including concerns from the BESS and potential pollution from fire water runoff.	Nottinghamshire Fire and Rescue Service raised no objections to the proposals and suggested a condition which requires the submission of a Risk Management Plan and Emergency Response Plan. There are provisions in place for fire water storage as well as capacity for isolating the drainage system in the event of a fire and fire water being used on site, such that any potentially contaminated run off can be stored and tested and if necessary tankered offsite for treatment and or appropriate disposal. This

	ensures that such run off does not enter the wider environment, including Kingston Brook. It is noted that there were no objections to the planning application from the Environment Agency (CD 4.45). It is common ground that the Council has withdrawn its objection of the fire safety matter and this reason for refusal is not being progressed as it is satisfied that the safety risks can be adequately manged via planning conditions.
• Consultation and procedural concerns, including the reduced opportunity to respond due to Rushcliffe Borough Council's consultation process and potential referral to the Secretary of State for NSIP approval.	This is in relation to a consultation Rushcliffe Borough Council conducted and therefore is a comment for them to address. The Appeal Proposal comprises of a solar PV development which falls short of the 50MW threshold to be treated as a NSIP project under the Planning Act 2008. It is noted that this threshold increased to 100MW in January 2026 as a result of Government amendments to the NSIP regulations made in 2025. During consideration of the Application scheme the applicant provided the Council with a letter setting out the position in respect of the NSIP regulations relevant at the time of the application, confirming that the proposal does not fall under the NSIP regime. (CD 2.10) Additional consultation was undertaken on the appeal scheme as set out in the Summary of Consultation (CD 3.12).
• Practical land management concerns, around the implications for sheep grazing.	Whilst there would be no opportunity for grazing within the BESS modules or the substation the remaining areas could be subject to conservation grazing by sheep with some restrictions on sheep numbers and timing of grazing, as and when necessary. The grazing density for sheep within a solar farm is not materially different to general grazing densities.
• Impact on mental and emotional health of residents.	No evidence has been provided that the Scheme would give rise to any detrimental effect on resident well-being.

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Leeds
5th Floor (East), Capitol, Russell Street,
Leeds. LS1 5SP
T 0113 2878200
E Leeds@pegasusgroup.co.uk
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