Response to Concerns

Kingston Solar Farm

23/08/2022

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Contents

1. INTRODUCTION

1.1. Neo Environmental Ltd has been appointed by Renewable Energy Systems (RES) Ltd (the "Applicant") to produce a response to various objections submitted against the proposed 49.9MW solar farm and associated infrastructure (the "Proposed Development") on lands circa 1.3km south of Gotham and c. 0.75km northwest of East Leake, Nottinghamshire (the "Application Site").

Purpose of this Document

1.2. This supporting statement demonstrates the Applicant's commitment to consultation with stakeholders and the community.

1.3. Neo has received consents for numerous solar projects by taking the approach used to date in the Proposed Development application. However, to allay any concerns ward counsellors and the local community should have, a point-by-point response has been provided.

1.4. This document will respond to the following concerns:

- Compliance with Green Belt Policy;
- Landscape and Visual Effects;
- Ecology and Biodiversity;
- Agricultural Land;
- Open Space and Other Recreational Uses;
- Cumulative Impact with Existing and Proposed Development;
- Vehicular Access and Traffic;
- Herbicides;
- Economies of scale, and
- Electro Magnetic Conduction.

1.5. Each Objection/Concern within this document will be shown in italics and in bold.

Development Description

1.6. The Proposed Development will consist of the construction of a 49.9MW solar farm with bi-facial solar photovoltaic (PV) panels mounted on metal frames, new access tracks,

underground cabling, perimeter fencing with CCTV cameras and access gates, two temporary construction compounds, substation and all ancillary grid infrastructure and associated works.

1.7. The Proposed Development will result in the production of clean energy from a renewable energy resource (daylight). It will also involve additional landscaping including hedgerow tree planting and improved biodiversity management.

Statement of Authority

1.8. Louis Maloney BSc (Hons) and MSc, has four years of professional ecological experience. This includes bird, terrestrial habitat and marine ecology surveys, and the management of Environmental Impact Assessment ("EIA") and Natura Impact Statement ("NIS") reports in Ireland. He holds a BSc in Marine Science from the National University of Ireland, and a MSc in Conservation Behaviour – Marine and Terrestrial Science.

1.9. Dara Dunlop BSc (Hons) is a Qualifying Member of CIEEM with circa 4 years' experience in the ecology sector, including working for an ecological consultancy, undertaking a range of protected species surveys and extended phase 1 habitat surveys for industrial schemes, and land management of designated sites. Dara has authored a number of reports including Ecological Impact Assessments and Protected Species Reports for various developments.

1.10. Issues concerning Landscape and Visual effects (including those relating to Open Space and other Recreational Uses, and Cumulative Impact with Existing and Proposed Development) are addressed by Douglas Harman MLPM CMLI, a Chartered Member of the Landscape Institute. He has significant experience in protected landscape planning and management, landscape character assessment, landscape and visual impact assessment (LVIA), and landscape sensitivity/capacity studies for development.

1.11. With regard to LVIA, Douglas has undertaken over sixty assessments, the majority of which have been for renewable developments, including approximately fifteen solar farms. He has also acted as an expert witness on several occasions. Douglas has also undertaken several strategic landscape-related studies adopted as planning guidance for several local and national Planning Authorities across the UK.

1.12. Michael McGhee of Neo Environmental Ltd. Having completed a civil engineering degree in 2012, Michael has worked on over 2.5GW (approximately 50 individual sites) of solar farm Construction Traffic Management Plans across the UK and Ireland, as well as more detailed transport statements for major developments.

Needed Acceleration of Home-Grown Power in Britain

1.13. The energy security strategy[1]released in April 2022 calls for a major acceleration of new homegrown power generation for greater energy independence and security for the UK. Solar has a huge part to play in this required acceleration, with the proposed development being capable of supplying the energy required to power 15,200 homes per year.

[1] https://www.gov.uk/government/news/major-acceleration-of-homegrown-power-in-britains-plan-for-greater-energy-independence

2. COMPLIANCE WITH GREEN BELT POLICY

Cllr Thomas - Objection

> *"This is inappropriate development in the Green Belt - openness of the landscape is affected, and there is harm. Para 151 of NPPF allows the benefits of renewable energy to be considered as "very special circumstances", but in this case the environmental harm is great and outweighs the wider environmental benefit from the provision of renewable energy in my view."*

Neo Response

2.1. Paragraph 151 of the National Planning Policy Framework (NPPF) notes that "when located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate Very Special Circumstances if projects are to proceed. Such Very Special Circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources."

2.2. Although, the Application Site is entirely located within the Nottingham-Derby Green Belt, it is anticipated that the need for and benefits of renewable energy production at this location and net biodiversity gain from the Proposed Development both justify its location and outweigh any perceived negative impacts on the Green Belt. Furthermore, it should be noted that the project is fully reversible, and the site can therefore be reinstated back to its current greenfield state following the operational period (40 years).

2.3. Renewable energy projects are supported 'in principle' at national and local policy levels, with the impetus at all policy levels being the need to reduce greenhouse gas emissions, reduce reliance on fossil fuels and combat climate change. With the Central Government declaring an Environment and Climate Emergency in May 2019, projects of this nature are essential to combat rising temperatures and CO2 emissions.

2.4. At a local plan level, numerous objectives exist within the Rushcliffe Local Development Plan that encourages and supports the development of low / zero carbon energy. It is therefore clear that the Local Plan offers support for this type of development and that the Proposed Development is acceptable, *subject to there being no significant adverse effects; and where any residual harm is outweighed by the benefits of the Proposed Development.*

2.5. The Application Site was selected due to its suitability for the proposed development including:

- The closest settlement area lies 0.75km southeast, with few residences within close proximity;

- The site has good solar irradiation levels with fields located on a gentle south facing slope;
- It lies outside of any ecology, archaeology and landscape designations;
- The site is generally well screened due to existing boundary vegetation and woodland;
- Over 95% of the site is Grade 3b land, which is not considered best and most versatile land and is appropriate for a solar farm;
- The site lies entirely within Flood Zone 1 (at little to no risk of fluvial or tidal flooding) where solar farm developments are considered appropriate; and
- The site is located close to a viable grid connection point.

2.6. The need to foster and encourage economic development is given much weight in the NPPF. To provide electricity generation, renewable energy developments require a technically and financially viable connection to the electricity network.

2.7. The Applicant has secured 49.9MW (megawatts) of export capacity on the nearby 132kV rated overhead power line that lies to the north of the site boundary, making the site both technically and financially feasible. The site is located close to a viable grid connection point which means that the project is able to maximise existing grid infrastructure, minimise disruption to the local community and biodiversity and reduce energy losses and overall costs.

2.8. It is also important to note that the grid connection costs form a significant portion of the overall construction costs associated with a solar farm. Therefore, the proximity of the proposed Kingston solar farm to a viable grid connection is fundamental to keeping the electricity produced at the lowest cost to the consumer. Analysis on electricity generation costs published by BEIS[2] shows that large-scale solar, alongside onshore wind, are now the cheapest forms of electricity generation.

2.9. It should also be noted that few opportunities exist within the Gotham Neighbourhood Plan, for Brownfield sites, "Gotham has a very limited number of sites that are Brownfield (previously used land). All of the surrounding countryside is protected by the Green Belt". Of the available Brownfield sites most are less than 1 acre in size, which is inadequate for solar development. Analysis of the land within 2km of the proposed grid connection point, confirm that 96% is within the Green Belt, with the remainder of the land being the village of Gotham showing that there is no suitable alternative. As a result, there is the requirement to balance the need for the development and the need to conserve the Green Belt.

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2 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911817/electricity-generation-cost-report-2020.pdf

2.10. The Proposed Development has been sited and designed to integrate into the surrounding area as congruously as possible and there will not be a long-term loss of greenfield or greenbelt land as the development is entirely reversible following the 40-year operational phase and can be returned to its former state.

2.11. Furthermore, the site does not lie within any ecological statutory designated sites and there are no internationally designated sites within 15km. There are five Special Sites of Scientific Interest (SSSIs) and seven Local Nature Reserves (LNRs) within 5km; the nearest being Rushcliffe Golf Course SSSI located adjacent to Field 15 in the southern section of the site, all of which have been considered in the relevant sections of the planning application and will not be impacted.

2.12. It is anticipated that the Application Site would see a biodiversity gain of 44.8% of area-based habitat and 76.21% of linear habitat, following the cessation of the current intensive farming activities, with the site benefitting from a reduction in the use of heavy machinery and pesticides along with the anticipated landscape changes as set out in the Landscape and Ecological Management Plan (LEMP).

2.13. There are no statutory landscape designations covering the site or its immediate surroundings although there are three Registered Parks and Gardens and one Country Park within the wider landscape to be considered. The site is not subject to any statutory designations relating to its historic value.

2.14. While there are several field drains throughout the Application Site, it lies entirely within Flood Zone 1 according to Environment Agency (EA) Flood Mapping, an area described as having a "Low probability" of flooding.

2.15. Overall, the proposed solar development at Kingston, is clearly able to demonstrate very special circumstances exist which include wider environmental benefits associated with increased production of energy from renewable sources, which in turn outweigh any potential harm.

2.16. The Proposed Development will have an export capacity of up to 49.9MW; a solar farm of this size will generate a significant amount of electricity from renewable sources, therefore offsetting the need for power generation from the combustion of fossil fuels including coal and oil. Consequently, during its operational lifespan (40 years), the Proposed Development has the potential to displace electricity generated from fossil fuels and consequently represents carbon savings.

2.17. The Proposed Development will mean a substantial reduction of approximately 25,000t3 of CO2 emissions annually. This is based on multiplying the Proposed Developments average annual yield38 , multiplied by the number of tonnes of carbon which fossil fuels would have produced to generate the same amount of electricity. This represents a significant contribution to the legally binding national and international requirement and associated targets to increase renewable energy generation and reduce CO2 emissions.

2.18. The amount of CO2 savings depends on which source of electricity generation the solar farm generating capacity is displacing at any given time. A renewable energy development would have a maximum potential to save carbon emissions when substituting coal fired generation. However, it is not appropriate to define the electricity source for which this renewable electricity project would substitute due to uncertainty in the future grid mix. As a result, the figure used for calculating the level of CO2 offset as a result of the introduction of the Proposed Development, is the BEIS "all fossil fuels" emissions statistic of 440 tonnes of carbon dioxide per gigawatt hour (GWh) of electricity39 .

2.19. Scaling this up to the CO2 displaced over the lifetime of the Proposed Development (40 years), circa 1,000,000t 3 of CO2 will be displaced. This represents a significant contribution to the legally binding national and international requirement and associated targets to increase renewable energy generation and reduce CO2 emissions.

2.20. Following, the climate emergency announcement in May 2019 the UK Government is committed to achieving net-zero greenhouse gas emissions by 2050. The Proposed Development will assist national and local efforts to achieve these legally binding renewable energy targets.

3. LANDSCAPE AND VISUAL EFFECTS

West Leake - observation:

> *"Policy 16 of the Local Plan states that the area the site is to be located has been selected as having "strong character… should be conserved" – solar farm will impact this."*

Neo Response

3.1. In relation to landscape considerations, Policy 16 states: "The approach will require that….Landscape Character is protected, conserved or enhanced where appropriate in line with the recommendations of the Greater Nottingham Landscape Character Assessment. Criteria for the assessment of proposals and any areas of locally valued landscape requiring additional protection will be included the Local Plan Part 2 (Land and Planning Policies)."

3.2. Although Policy 16 does not appear to state the site is located within a landscape that has a 'strong character', the assessment of landscape character within the LVIA baseline (see Table 1-7 within TA1 – LVA, found in volume 3 of the submitted planning application) is based on the Melton and Rushcliffe Landscape Sensitivity Study: Wind Energy Development (MRLSS), 2014. As part of this, the following key characteristics (as listed in the MRLSS) clearly indicate that the strength of landscape character of the Gotham and West Leake Wooded Hills and Scarps LCU (the landscape area in which the site is located) has been eroded in places by:

- Urban elements such as villages, power station, industry and quarrying are frequent in the landscape;
- Field pattern is mostly modern…; and
- Overhead lines are prominent on low ground between hills.

3.3. Nonetheless, in assessing landscape sensitivity, it is recognised that the Gotham and West Leake Wooded Hills and Scarps LCU is a relatively distinctive landscape, largely a result of its prevailing rural character and the pattern of open areas of land interspersed between plantation woodland on prominent hills and slopes. As such, the LVA attributes a medium-high landscape sensitivity, which is considered to be a very reasonable and balanced professional judgment. Clearly, this rating does not seek to underplay the relative strength of landscape character.

3.4. The LVA also fully recognises that some adverse impacts on landscape character would be experienced. In assessing the magnitude of change however, it should be noted that dense mature woodlands that surround most of the site would restrict the extent of effects to a relatively small part of this landscape.

3.5. Furthermore, as detailed in Section 6 of the LVA, the Landscape Mitigation Strategy aims to conserve and enhance the intrinsic landscape character of the Gotham and West Leake

Wooded Hills and Scarps LCU, most notably, its prevailing wooded character and the sense of enclosure this provides to the composition of intervening open grasslands and fields.

3.6. As part of this, section 6.4 of the LVA states (underlining for added emphasis) "To help ensure that the Proposed Development integrates with its sensitive landscape setting, the following landscape design and mitigation measures have been adopted and embedded into the design of the project:

- *Along the northern edge of Fields 7-10, the Proposed Development has been set back from the route by 20m. A generous 10m grassland strip would line the route beyond which, a 10m buffer of native woodland and scrub would separate recreational users from the Proposed Development. A similar wooded buffer is also proposed at the northern corner of Field 5.*
- *At the northern part of Field 11, a triangular parcel of land would be retained as open grassland (as opposed to solar panels) and along BW 10 to the south, new hedgerow planting is proposed that would provide some physical separation and visual screening from nearby parts of the Proposed Development.*
- *At Field 13, the Proposed Development has been set back from the western field boundary by approximately 180m with new hedgerow planting proposed along the visible western edge.*
- *At the north-east corner of Field 15, the footprint of the Proposed Development has been set back from adjacent BWs and along BW 5, the arrays have been set back from the path by a minimum of 25 m, along with intervening new hedgerow and tree planting. Conversely, open views of the countryside from East Leake would also be conserved.*

3.7. As a result of the extensive package of landscape mitigation measures incorporated into the final design, the characteristic sense of wooded enclosure with open grassland rides and fields would remain largely intact. Although some views of nearby infrastructure would be inevitable in places, the LVA clearly demonstrates that no significant landscape effects are predicted. In relation to Policy 16, it is also important to note that the site is not located within a Valued Landscape, as per para. 174 of the National Planning Policy Framework.

Cllr Thomas - Objection:

"This is an area of high ground and the proposal would build the solar farm along the ridgeline with potential visibility against the skyline from a vast surrounding area, as well as from the footpaths and bridleways that criss-cross the area. There is reliance on significant screening being provided by existing areas of woodland but these are outside the redline of the application so their continued existence can't be assured by conditions. Indeed some of the areas are plantations – planted presumably to take a crop of timber at some time. Unless these areas of woodland can be protected to act as screens for the

duration of the solar farm, additional screening should be provided along their boundaries within the redline."

Neo Response

3.8. Although the site is located within an area of relatively high ground, the site has been selected due to the established screening that is already in place from the characteristic pattern of prominent extensive woodland plantation that covers hill slopes and high ground. The screening effect of woodland is clearly illustrated from the lower-lying viewpoints of Gotham (VP1), East Leake (VP9) and West Leake (VP10). As such, there is no evidence to suggest that the Proposed Development would be visible from a vast surrounding area.

3.9. Concerning the long-term retention of areas of woodland outside of the application boundary, section 7.2 of the LVA notes that in predicting effects, it is assumed that surrounding woodlands would remain largely in situ and/or continue to grow. Although some commercial felling may take place in the future, it is likely that re-planting would also follow.

3.10. In any case, the mature trees and hedgerows along BWs 11 and 12 and the 10m wide woodland buffer proposed as part of the mitigation strategy would ensure that from Gotham and the surrounding landscape, the Proposed Development would be largely screened from view, especially in the longer term. From East Leake, the Proposed Development would be screened from view and to minimise visibility on the surrounding landscape of the village, the arrays have been set back from the skyline and the mature instant hedging proposed, at 1.2m tall upon planting, would soon provide a dense and robust visual screen from nearby BWs. From West Leake, any potential visibility as result of extensive felling would be subject to a FC Felling License and as such, this would provide an opportunity to retain some planting along southern parts of the site to ensure effective screening.

3.11. "In some areas existing hedges would provide the basis of screening and again these would need to be protected, allowed to grow higher with an agreed management plan, and thickened up as necessary. In other areas new hedges would be planted, but it should be noted that these would not provide effective screening for many years. Along the ridgeline, even with fully grown hedges, the equipment would be visible above the hedge. This could be mitigated by increasing the width of buffer strips along the ridges so that the equipment is on ground that is starting to fall away from the ridge so less visible. Breaking up the straight lines of the fenced areas of panels might help also, and providing some clearings where particular planting could provide interest on the ridgeline."

Neo Response

3.12. In relation to existing hedgerows, these are relatively dense and in general, are approximately at least 2m high. To help ensure these provide a robust screening function throughout the duration of the project, the LEMP identifies that any gaps would be planted up and heights managed to approximately 3m. Effective establishment and management of these measures would then be secured through the attachment of Planning Conditions upon any consent.

3.13. Where new hedgerows are proposed, these would be trough grown, mature, instant hedging at 1.2m tall on planting; this is much more effective than 40-60cm pot grown plants typically used for hedgerow mitigation schemes. After a few years of growth, this would reach 3m high and as such, no parts of the Proposed Development would be visible above the hedgerows.

"Long distance views from rights of way within and adjacent to the site would be harmed as follows:

- *the area by Cuckoo Bush Farm looking out towards the Trent Valley,*

Neo Response

3.14. From BW12 to the north of Cuckoo Bush Farm, any views over the Trent Valley (see Figure 1.1: Landscape Character) through the mature trees and hedgerows that line the route would be entirely unaffected. Where the Trent Valley extends to the south-west of the site, dense intervening woodland screens any visibility of this landscape from BW12 (to the south of Cuckoo Bush Farm) as the view only opens out to the south of the site boundary.

– *along Wood Lane through gaps in the hedge and through the hedge in winter,*

Neo Response

3.15. As detailed in the LVA, the existing mature trees hedgerow along Wood Lane (BW12) are relatively dense and tall and with the proposed gapping up and long-term management measures, the Proposed Development would be mostly screened from view; even during winter months, the visual focus along the route would be largely unaffected.

3.16. Of particular note, the Landscape Strategy aims to protect the recreational experience and enjoyment of the countryside that the landscape currently provides to those walking along BW11-13 (routes to north of site). As part of this, the Proposed Development has been set back from BW11 by a significant amount of 20m to allow for a 10m grassland strip and a 10m buffer of native woodland and scrub. A similar wooded buffer is also proposed at the northern corner of Field 5. As such, no significant effects are predicted.

– *across field 6 from BW12 (Gotham),*

Neo Response

3.17. The visual effect on recreational users from the section of the BW12 that leads in between Fields 5&6, has been assessed in detailed within the LVA at Viewpoint 3. Although effects are predicted to be significant along a 200m section at year 0, existing hedgerows alongside the route would be managed to a height of 3m and after a few years of growth, no parts of the Proposed Development would be visible above the hedgerows and as such, effects would not be significant in the longer term. Furthermore, as noted in Table 1-12 of the LVA, there would be little or no visibility of the Proposed Development from the section of the BW12 to the south of the site, due to the screening effect of dense woodland alongside the route.

– *through the trees in winter from BW5 (West Leake) across fields 15 and 16."*

Neo Response

3.18. As with other sections of existing boundary vegetation, any gaps would be planted up and although some parts of the development would be evident through intervening vegetation during winter months, the more important long-range view to the south-east overlooking East Leake would however be unaffected. As such, effects are judged to be not significant when travelling along this section of path.

"Arriving at the top of Fox Hill via FP8 (East Leake) then FP6 (West Leake) onto the Midshires Way (a popular walk from East Leake) there is currently a glorious open view on all sides. The proposal would place the solar farm immediately ahead at the end of "Field 16" instead of an open view to the woodland beyond the field. This open view should be preserved by at least reducing the westward extent of this area of panels, and possibly also by softening their outline to a curve."

Neo Response

3.19. Existing and proposed boundary vegetation along the visible edges of Fields 15 & 16 would very likely screen all parts of the Proposed Development from view from these paths, particularly considering their lower-lying nature. Although the open view of the fields would be lost, the sense of wooded enclosure would be largely unaffected. Furthermore, it should be noted that no significant effects are predicted from VPs 6 and 7, which are located in very close proximity to these Fields.

"Considering views into the site from other public rights of way:

- *The fields around Stone House (12, 13, and 14) would be visible from BW1 (West Leake), FP2 (West Leake), and BW3 (West Leake) to the south and southwest,*

Neo Response

3.20. From BW1, located approximately 1 km to the south-west of Field 13, and FP2 that leads towards the site and connect with BW3, small parts of the arrays are likely to be visible on slightly rising ground above intervening hedgerow but at this distance, effects are very unlikely to be significant. At Viewpoint 8 (located on BW3), it should also be noted that although being partly visible, mature hedge planting along the western edge would provide some visual screening at year 0. As such, visual effects are predicted to be not significant in the LVA.

3.21. During the design process, solar modules were removed from the sloping western part of field 13, which greatly reduces any potential visibility of the solar arrays from any viewpoints to south, south-west and west.

- *The panels and possibly substation compound in field 5 would be visible from the highpoint on BW1 (Gotham) that runs alongside Gotham Hill Wood on the opposite ridgeline,*

Neo Response

3.22. From the highest point (approximately 87m AOD) of BW1 to the south of the site, adjacent woodland would screen all of Field 5 and the intervening Field 6 from view. To the north of this location, BW1 connects with BW12 that leads through the site, and a detailed assessment of effects in the locality is provided from Viewpoint 3.

- *The above seven viewpoints were not included in the Landscape and Visual Assessment and I request that they are added."*

Neo Response

3.23. The selection of the LVA viewpoints aims to represent the typical views experienced by a variety of visual receptors, at varying distances across the study area. The locations have also been carefully selected to demonstrate the worst-case scenario of predicted effects from each locality.

3.24. Nonetheless, as the purpose of the assessment is to focus on likely significant effects, and that considering no significant effects are likely to be experienced from the additional locations (as explained above), no further viewpoint assessment is considered necessary. Furthermore, as alluded to above, the LVA viewpoints and associated assessment cover some of these locations.

4. ECOLOGY AND BIODIVERSITY

Cllr Thomas – Objection:

4.1. Councillor Thomas' first objection raises the question that 10cm gaps under fencing may not be sufficient for the free movement of small to medium mammal species and thus limiting connectivity between local wildlife sites:

> *"The landscape is essentially woodland containing a patchwork of fields in clearings. The woods provide nesting grounds and cover, the fields provide areas for creatures to hunt and forage and for some bird species to nest. These two things work together to support a biodiverse habitat which has viable populations of larger mammals, a diversity of birds (including owls and birds of prey) and bats. There is a SSSI (Golf Course) adjoining one long stretch of panels, which has a similar form of mixed woodland and clearings. There are five further local wildlife sites in and around the adjacent woods (Leake New Wood Track, Ash Spinney Assart, Crowend Wood - Eastern and Western Assarts, and Crowend Wood Ride), showing the richness of the habitat here. The area forms part of an important wildlife corridor, stretching from Bunny Woods, along Ash Lane and Hotchley Hill, over to the Golf Course and beyond towards the Trent, and linking with other areas of woodland around East and West Leake, Gotham and Kingston.*
>
> *I note (Design and Access Statement p13) that the deer fence would have a 10 cm gap at the bottom along its length which would allow movement of smallest mammals, and this is welcomed. I question however whether the height of the gap is enough to allow passage of other small mammals, e.g. hedgehogs. I note that the recently approved Hotchley Hill solar farm application 21/00703/FUL has holes for passage of animals of 1.5 x 0.2m and additional badger gates 300mm wide and 250mm deep. The British Hedgehog Preservation Society recommends 13cm by 13cm for "hedgehog streets". Appropriate gaps should be secured by condition should the application be approved."*

Neo Response

4.2. The height of the gap is enough to allow the passage of small mammals, following guidance from Solar Energy UK[3], 10cm gaps meet the minimum standard to allow for the passage of small to medium mammals through a site. This 10cm minimum accounts for badgers (medium sized mammal) as it gives them sufficient depth to burrow. The 13cm x 13cm recommendation for hedgehog streets has been recommended as a standard as this is typically smaller than household pets. The 10cm x 30cm will allow free movement of small to medium mammals across the size, allowing for connectivity between local wildlife sites.

4.3. Councillor Thomas' second objection follows on from the first with:

[3] Solar Energy UK (2022) Natural Capital Best Practice Guidance report

"However, the deer fence would still prevent movement of larger mammals (including roe and muntjac deer, fox, badger, hare) freely around this area. More corridors across enclosed areas are required, particularly where long stretches of fences would separate areas of woodland and/or open space. For example, within fields 7-11 hedges will be preserved anyway, (hopefully), so by separately fencing each field viable wildlife corridors could be left along the hedges to link the areas of woodland to the north and south. A similar method could be used to provide corridors between the golf course and Crow wood, and from the open fields to the east of Stocking Lane through field 16 into the woodland beyond. The same is true of the fenced areas of panels in fields 1-6 and 12-14."

Neo Response

4.4. In relation to fox, badger and hare (small to medium species) please refer to the above section where it discusses the minimum standard to allow for the passage of small to medium mammals through a site. If deemed necessary, mammal gates (30cm x 30cm gaps) could be included within the fences as an additional option for mammals accessing the site. Both approaches have been successfully used for existing solar farms. With regard to larger species, muntjac deer and roe deer, sufficient ecological connectivity has been incorporated into the solar farm design, allowing for free movement of these species around open spaces and to and from areas of woodland.

4.5. Councillor Thomas refers to fields 7 – 11, recommending that all hedge field boundaries be used as corridors. In this section of the solar farm, two corridors have been proposed, between field 6/7 and 10/11. The corridor between 6/7 provides free movement of deer from Newhaven and Cuckoo Bush to Crownend wood and other southerly areas. The ecological corridor between field 10/11 connects the south-eastern area of Cuckoo Bush to West Leake Hills and further afield. Neo Environmental deems these two corridors sufficient in terms of providing means for these larger species to freely move through and around this section of site. Secondly, there is a corridor located between fields 12 and 15 allowing for free movement of deer from the Golf course to Crow Wood. Free movement of deer can also occur from the easternmost section of the Application Site to Crow Wood as an ecological corridor has been proposed along the northernmost flank of field 16. In addition, an ecological corridor has been proposed between fields 12 and 13 allowing connectivity from Crow wood to West Leake Hills and Leake New Wood.

4.6. Ecological corridors are not necessary when it comes to fields 1 to 6 as Gotham woods provides significant connectivity to both Kingston Spinney and the Newhaven area, providing ample amount of habitat for species of deer to reside in.

4.7. Councillor Thomas's third objection refers to the displacement of feeding grounds for birds of prey, indicating that the placement of solar panels in open fields would cause reduced access to feeding areas and that management techniques would not be helpful to ground-nesting bird species.

"The presence of solar panels on so many of the clearings would mean that birds of prey would have to travel further distances to hunt and mammals would have reduced access

to feeding areas. Ongoing management techniques may not be helpful to ground-nesting bird species. More open space without panels is needed in general to provide areas where it is safe for birds of prey to hunt and for other species that need open spaces such as skylarks and lapwings. These areas could be managed as different habitats or left as smaller arable fields. Wider buffer strips of open land are needed alongside the areas of woodland, outside the deer fence, to facilitate movement and mitigate the loss of feeding ground, and these too should be managed for wildlife."

Neo Response

4.8. There is no scientific evidence to suggest that the presence of solar panels results in the displacement of bird species in the UK. According to various sources, including 'The Barn Owl Trust', solar farms have the potential to be of great benefit to Barn Owls as the array frameworks are typically at a height from which Barn Owls can perch-hunt.[4] The mitigation measures suggested in the Biodiversity Management Plan, such as planting new hedgerows, species-rich grassland and trees, will provide new nesting and foraging resources for both the ground nesting species noted by Councillor Thomas; skylark and lapwing. A 2022 report on Solar Energy5 notes that while skylarks have not been observed nesting on solar farms, they are often seen foraging within the arrays.

4.9. Further habitat enhancements and creation for birds have been proposed in the Biodiversity Management Plan, as follows;

- Measures to increase invertebrate numbers, increasing potential prey availability for insectivorous birds;
- Erection of bird boxes, including a design suitable for the Nottinghamshire priority species barn owl.

4.10. As highlighted in the Net Gain Assessment the enhancements and habitat creation suggested In the Biodiversity Management Plan will provide an overall net gain of 44.8% which exceeds the minimum requirement by over four times its value.

4.11. Implementation of such measures and long-term management will lead to a positive effect on local ground nesting species, and thus, have a positive effect to prey availability to predatorial species of bird such as the Nottinghamshire priority species - barn owl.

4.12. A recent review of the impact of solar farms on birds[6] indicates that "Insectivorous predators including birds such as White Wagtail (Motacilla alba), Yellow Wagtail (Motacilla flava), Magpie (Pica pica), House Sparrow (Passer domesticus) and Great Tit (Parus major) have been

[4] Taylor, R., Conway, J., Gabb, O. & Gillespie, J. (2019). Potential ecological impacts of ground mounted photovoltaic solar panels. Accessed: https://www.bsg-ecology.com/wp-content/uploads/2019/04/Solar-Panels-and-Wildlife-Review-2019.pdf

[5] Solar Energy UK (2022) Natural Capital Best Practice Guidance report

[6] Harrison, C., Lloyd, H., & Field, C. (2016) Evidence review of the impact of solar farms on birds, bats and general ecology. Manchester Metropolitan University.

recorded feeding on polarotactic insects attracted to sources of polarised light such as vertical glass windows, horizontal black plastic sheets and dry asphalt roads[7 8 9] ". Insectivorous birds such as the ones named above will be visible to predatory birds such as barn owl and are likely to be predated upon, and as such, solar panels provide areas for predation.

4.13. Councillor Thomas' fourth objection:

"The noise from inverters could affect wildlife if installed on the woodland edge near badger setts, bat roosts, bird nesting sites etc. Of course this infrastructure needs to be situated away from any homes, and consideration for users of the PROW network is needed, but wildlife needs to be protected from the noise too, and the layout should consider this."

Neo Response

4.14. Appropriate buffers from habitats of importance have been incorporated into the design to safeguard locally important species of bird and mammal. Additionally, pre-commencement surveys have been recommended for birds, badger and bats, findings from such surveys shall contribute towards the formulation of mitigation measures in order to protect breeding birds, badger and bat.

4.15. Councillor Thomas' fifth objection infers that the grass planting suggested is not species rich could be diversified through wildflower planting:

"The vast majority of grass planting proposed is not species rich – could this be improved? There are few areas of wildflowers – again could this be improved?"

Neo Response

4.16. Locally applicable species-rich grassland creation has been proposed in the Biodiversity Management Plan. The Net Gain Calculator indicates that c. 58ha of Other Neutral Grassland be created, this being a species-rich mixture of neutral grasses. As highlighted in the Net Gain Assessment the enhancements and habitat creation suggested In the Biodiversity Management Plan will provide an overall net gain of 44.8% which exceeds the minimum requirement by over four times its value.

4.17. Councillor Thomas' sixth objection:

"Management methods proposed include using herbicides to clear the land (para 2.87 Biodiversity Management Plan) and thereafter to "treat all weeds" (Landscape and

[7] Kriska, G., Horváth, G. and Andrikovics, S. (1998) 'Why do mayflies lay their eggs en masse on dry asphalt roads? Water-imitating polarized light reflected from asphalt attracts Ephemeroptera.' The Journal of experimental biology, 201(Pt 15) pp. 2273–86.

[8] Bernáth, B., Kriska, G., Suhai, B. and Horváth, G. (2008) 'Wagtails (Aves: Motacillidae) as insect indicators on plastic sheets attracting polarotactic aquatic insects.' Acta Zoologica Academiae Scientiarum Hungaricae. Hungarian Natural History Museum, Budapest, 54(1) pp. 145–155.

[9] Horváth, G. et al. Reducing the Maladaptive Attractiveness of Solar Panels to Polarotactic Insects. Conserv. Biol. 24, 1644–1653 (2010).

Ecological Management Plan). In March 2022 Rushcliffe Council unanimously passed a motion to limit use of pesticides in Rushcliffe. Ideally both the construction and ongoing management plans should state that operations will avoid pesticides, apart from for a limited number of exceptional situations where there is no viable alternative, e.g. spot control of invasive alien species such as the Japanese Knotweed on Wood Lane. Such species to be agreed and conditioned, rather than relying on the term "weeds"."

Neo Response

4.18. The Biodiversity Management Plan refers to the use of approved herbicides in order to remove any persistent weeds and to remove current grassland in order to create a more species diverse grassland. As highlighted in the Net Gain Assessment the enhancements and habitat creation suggested In the Biodiversity Management Plan will provide an overall net gain of 44.8% which exceeds the minimum requirement by over four times its value. The initial use of herbicide will allow the suggested species rich grassland to establish, providing local species with a habitat far more beneficial than its current habitat. Furthermore, the site is currently being used for agricultural purposes, a practice which commonly involves a relatively high use of herbicides. Comparatively, the site would see a reduction in the use of herbicide upon approval of the Proposed Development. If required, selective herbicides would be used during specific windows rather than total weed killer herbicides, to target specific unwanted weed species on a case-by-case basis. This will minimise any effect on sensitive habitats (such as rivers or wetland) and species (such as amphibians), as outlined by Natural Capital Best Practice Guidance[10].

4.19. Councillor Thomas' seventh objection:

"There are reports from other solar farms of chemicals used to clean the panels being allowed to run off onto the land. Again the management plan should state the cleaning methods and materials to be used, designed to minimise environmental harm. If the application is allowed the detail of the management plan is key to ensuring biodiversity benefits are absolutely maximised."

Neo Response

4.20. The solar panels will be cleaned via the use of low-pressure de-ionised water, this being the green industry standard, no chemicals are needed[11].

4.21. Rushcliffe Borough Council Policy Team have provided the following ecology and biodiversity commentary:

4.22. It is noted that the application site is located within the Gotham Hills, West Leake and Bunny Ridge Biodiversity Opportunity Area ('BOA'), as identified at Appendix E of the LPP2. Policy 38(3) of LPP2 states that development within these BOA's should retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and

[10] Solar Energy UK (2022) Natural Capital Best Practice Guidance report
[11] Solar Energy UK (2022) Natural Capital Best Practice Guidance report

'steppingstones'; and be designed in order to minimise disturbance to habitats and species. Appendix E of the LPP2 specifically identifies woodland and grassland as predominant habitats that should be protected, restored, expanded and enhanced within this particular BOA. Stating that the existing network of woodland and grassland can be enhanced and buffered. There is also potential for creating important links between existing habitats. Given the application site's proximity to the SSSI, ancient woodland and LWS's, careful consideration will need to be given to whether the proposed development is capable of improving the quantity, quality and connectivity of these habitats and the views of the Council's Environmental Sustainability Officer should be sought in this regard.

4.23. The closest Biodiversity Opportunity Focal Area (BOFA) is named Trent Valley to Thrumpton and is approximately 2.3km northwest of the Proposed Development Boundary. This BOFA primarily consists of wetland, neutral grassland, cultivated/disturbed arable land and mixed woodland plantation. The Biodiversity Net Gain Assessment conducted for this proposed development concludes that through habitat creation and enhancement that there will be a net gain of 44.8% for biodiversity. This will have a positive effect on mobile species that reside within the closest BOFA as the proposed development area with habitat creation and enhancement will provide richer areas for feeding i.e. species-rich grassland providing rich feeding ground for insectivorous bird species.

5. AGRICULTURAL LAND

Cllr Thomas – Objection:

> *"Much of this land is currently in productive agricultural use. At a time when the country needs to step up food production it is difficult to understand how the loss of agricultural land can be justified when there are so many new buildings built without solar panels."*

Neo Response

5.1. National Planning Practice Guidance (March 2014) are material considerations for the consideration of planning applications by the decision maker. NPPG on Renewable and Low Carbon Energy provides specific guidance for solar farm development, at Paragraph 013.

> "Where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays;"

5.2. Contrary to recent comments from the Environment Minster, George Eustice, Best and Most Versatile agricultural land is graded 1 to 3a[12] and there has not been any change in policy. As such, the proposed development, is supported by an Agricultural Land Classification report which demonstrates that the site consists almost entirely of Grade 3b agricultural land (95.5%) which is deemed appropriate for solar development.

5.3. The Proposed Solar Farm at Kingston is designed in such a way to avoid significant losses of agricultural land during the operational stage, with a circa 5% ground level footprint. This means that the site can retain a dual use; agriculture in the form of low intensity sheep grazing on the remaining 95% and renewable energy generation. On this basis the proposed development offers the opportunity for diversification regarding food production not a reduction from the loss of agricultural land. Sheep farming provides employment, supports rural economies and can produce a much more diverse ecological mosaic across the site. Landscapes managed by grazing sheep support a rich diversity of wildlife, while producing food.

5.4. Furthermore, the proposed development will be conditioned for a finite lifespan of 40 years, therefore the proposed solar arrays and associated equipment will be temporary structures which will be removed after this period of time has elapsed. Upon cessation, all equipment will be removed and the site will be fully restored to its current state. This process also allows the ground underneath the solar farm to recover over the 40 years and the soil quality to be

[12] (source: https://www.gov.uk/government/publications/agricultural-land-assess-proposals-for-development/guide-to-assessing-development-proposals-on-agricultural-land)

regenerated, helping to ensure the continued availability of agricultural acreage for future generations.

5.5. The Proposed Development will have an export capacity of up to 49.9MW; a solar farm of this size will generate a significant amount of electricity from renewable sources, therefore offsetting the need for power generation from the combustion of fossil fuels including coal and oil. Consequently, during its operational lifespan (40 years), the Proposed Development has the potential to displace electricity generated from fossil fuels and consequently represents carbon savings.

5.6. The Proposed Development will mean a substantial reduction of approximately 25,000t3 of CO2 emissions annually. This is based on multiplying the Proposed Developments average annual yield38 , multiplied by the number of tonnes of carbon which fossil fuels would have produced to generate the same amount of electricity. This represents a significant contribution to the legally binding national and international requirement and associated targets to increase renewable energy generation and reduce CO2 emissions.

5.7. The amount of CO2 savings depends on which source of electricity generation the solar farm generating capacity is displacing at any given time. A renewable energy development would have a maximum potential to save carbon emissions when substituting coal fired generation. However, it is not appropriate to define the electricity source for which this renewable electricity project would substitute due to uncertainty in the future grid mix. As a result, the figure used for calculating the level of CO2 offset as a result of the introduction of the Proposed Development, is the BEIS “all fossil fuels” emissions statistic of 440 tonnes of carbon dioxide per gigawatt hour (GWh) of electricity39 .

5.8. Scaling this up to the CO2 displaced over the lifetime of the Proposed Development (40 years), circa 1,000,000t 3 of CO2 will be displaced. This represents a significant contribution to the legally binding national and international requirement and associated targets to increase renewable energy generation and reduce CO2 emissions.

5.9. Solar farms are considered to be a key component of the future energy mix. The deployment of renewable energy sources will need to increase significantly by 2030 to be on track to achieve net zero by 2050. To help meet these targets, solar developments need to be a viable commercial proposition. On this basis, fields 15 and 16 are required in order to achieve the 49.9MW output for the site overall. The Application Site has been sensitively sited within the local landscape and is assessed as being a good location for a solar farm due to the site having good solar irradiation levels with fields located on a gentle south facing slope and being close to a viable grid connection.

5.10. It is also important to note that the grid connection costs form a significant portion of the overall construction costs associated with a solar farm. Therefore, the proximity of the proposed Kingston solar farm to a viable grid connection is fundamental to keeping the electricity produced at the lowest cost to the consumer. Analysis on electricity generation

costs published by BEIS[13] shows that large-scale solar, alongside onshore wind, are now the cheapest forms of electricity generation.

13 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911817/electricity-generation-cost-report-2020.pdf

6. OPEN SPACE AND OTHER RECREATIONAL USES

Cllr Thomas - Objection:

> *"The area is criss-crossed by bridleways and footpaths and provides a much valued resource and heavily used amenity for walkers, horse riders and cyclists. Stocking Lane (BW16 East Leake, BW16 Gotham, BW5 West Leake) forms part of a long distance multi-use trail – the Midshires Way. This area is close to areas of population, so that it can be accessed without a car journey, and it is much used at lunchtimes by workers walking from the Gypsum site. Elevated open views and surrounding agricultural fields and woodland create a countryside experience important for mental and physical well-being. Various circular walks and rides are available. If this application goes ahead solar panels and related infrastructure and a high security fence with obtrusive notices will be visible alongside the path for long stretches and at every turn. The experience would not simply be passing one area of these, but they would be present around the whole loop. In parts with high hedges in place to screen the panels, there would be a tunnel effect. There would be significant detriment to the enjoyment of the countryside because of this solar farm layout as currently proposed."*

Neo Response

6.1. The importance of the public rights of way to the local community has been taken into account in the design of the proposed development. The applicant engaged extensively with the Ramblers Association and the British Horse Society, as well as the local community and the ROW officer at RBC. Objections were not received by either the BHS or the Ramblers.

6.2. The network of bridleways and footpaths has been fully recognised in the LVA as providing a locally important recreational resource; para. 5.12 states:

"The site and surrounding local landscape accommodate a well-connected network of recreational routes, including a number of Bridleways (BW) which cross or lie adjacent to the Site. These include Gotham BW No. 10, 11 and 12 and West Leake BW's No. 5 and 13. West Leake BW No. 5, also known as the Midshires Way, is also a Long-Distance Walking Association (LDWA) Route bordering the southern boundary of Fields 15 and 16. Given the relatively large number of people using these routes, recreational users are assessed as having a high sensitivity."

6.3. Furthermore, the Landscape Strategy, particularly the provision of extensive hedgerow and woodland planting and the large set-back distances that have been incorporated into the design (which are detailed at paragraph 3.5 of this document), help to protect the recreational experience and enjoyment of the countryside that the existing network of recreational routes currently provide. Although some occasional and localised views through intervening vegetation in winter would be inevitable, the overriding experience of the characteristic

wooded enclosure would remain intact, as would the important views to the south-west over the Trent Valley and the open views to the south-east over East Leake.

6.4. With an additional permissive path proposed that connects up several other paths, the physical integrity of the network would also be improved and overall, the enjoyment and amenity that this important resource provides to the local community would not be significantly affected.

"It is difficult to see how this negative impact could be completely avoided but something is needed to lessen the impact if the scheme is to go forward in some form. Omitting some of the areas of panels alongside the public rights of way might help. Placing wider strips of open land between the paths and new hedges might help to some extent, especially if these were managed to provide a variety of different habitats like ponds or wildflower meadows or even retaining some strips of arable land. Rather than a uniform width of edging strip, the paths could open out into clearings at intervals to soften the straight lines and give more of a sense of openness."

Neo Response

6.5. As noted in section 6 of the LVA, objectives to minimise adverse landscape and visual effects are of fundamental importance. In working towards a high-quality designed development, a review of relevant policy, landscape character and the findings of a field survey and consultation activities, have all been considered during the iterative design process. The mitigation measures as detailed in the LVA are primarily aimed at avoiding significant effects and these are considered fit for purpose. As such, no other mitigation measures are considered necessary.

"The additional permissive path is welcomed. Linking two bridleways it should be a bridleway rather than a footpath to provide a loop for horse riders and cyclists. Has any consideration been given after the construction period to continuing it along the new access road and down the lane eventually to come out on Stocking Lane between fields 15 and 16?"

Neo Response

6.6. This is really a matter for the LPA; as Notts County Council Rights of Way officer, on behalf of Rushcliffe Borough Council has already consulted on this application, whereby no consideration was given to this in their response. If the project is consented, The Applicant would be open to a discussion on whether the permissive path could be made a bridleway as an additional benefit to the community.

"In terms of other potential improvements to the public rights of way network:

- *The bridleway between fields 10 and 11 (BW10 Gotham) is boggy and drainage work and perhaps surfacing is needed here, particularly if solar panels change the runoff patterns or if construction work compromises the ditch between the two fields."*

Neo Response

6.7. The surface water regime will not be affected and the construction work won't compromise the existing drainage ditches. All drainage features will be reset to their pre-construction stage post construction. Further information has been included within the Flood Risk Assessment & Drainage Impact Assessment within Technical Appendix 4 of Volume 3 (submitted as part of the planning application).

"The gate where BW10 (Gotham) and BW11 (Gotham) intersect by the Cuckoo Bush is very muddy with a large puddle. Any significant additional use of this by workmen etc during the construction phase would render it even more difficult to navigate and improvement work could be undertaken here."

Neo Response

6.8. Any potential change to the surface from the construction work will be returned to original pre-construction condition.

"There is also a problem with mud where BW11 (Gotham) goes through a gate at the start of the wood – walkers trying to avoid this area have created an unofficial path through the woods, continuing on the wrong side of the hedge of field 11 to connect with BW10 (Gotham)."

Neo Response

6.9. As referenced in the Public Rights of Way Management Plan - The Applicant is open to supporting additional enhancements where appropriate, and has received a number of suggestions from the ROW officer and members of the local community, which they continue to explore. The resurfacing of the path at the start of the wood here could be something that would be a benefit to the local community and that the project could support if consented.

"The site adjoins a golf course, and there will be some detriment to the overall experience for golfers. It should be noted that stray golf balls could damage panels".

Neo Response

6.10. The views of golfers would be largely screened from view by existing vegetation alongside BW 13 and woodland within the golf course.

7. CUMULATIVE IMPACT WITH EXISTING AND PROPOSED DEVELOPMENT

Cllr Thomas – Objection:

"The majority of residents in East Leake believe that the network of footpaths/bridleways out into the countryside is important to them1 . Their use increased during lockdown and has remained at a higher level. The "cumulative map" does not reflect the fact that East Leake has seen explosive growth in the local plan period, increasing in size by more than half again. These new estates are positioned around the outside of the village in open countryside and footpaths and bridleways that were once country walks now travel distances through housing estates before reaching open countryside. See section 4.1 of the East Leake Neighbourhood Plan. Examples include:

- *FP5 (East Leake) which now passes through the development off Rempstone Road*
- *BOAT11 East Leake (Lantern Lane), previously a country lane now a made up road*
- *FP27 (East Leake) previously went diagonally across a field and will now cross a housing estate*

The cumulative impact on countryside access around East Leake is already significant, and this application would adversely impact another important area where residents enjoy the countryside. The cumulative map does not reflect the ongoing work at the gravel pit between East Leake and Rempstone, with impact on FP1 (East Leake) and its extension into Rempstone as FP1 (Rempstone). "Temporary" to be sure but over a great many years. RB20 East Leake (also part of the Midshires way) will pass the approved solar farm on Hotchley Hill.

There is also already significant cumulative impact of development for Gotham. The Fairham development to the north, and potential solar farms to the North East will reduce the countryside setting of the village. This solar farm would be an additional loss of open countryside surrounding the village, and accessible countryside at that. Redevelopment of the Ratcliffe on Soar Power Station site to the north of this proposed site and potential quarrying at Barton in Fabis also need to be factored in. This peaceful and biodiverse area is at the centre of all this development and provides an accessible green oasis in an increasingly developed area."

Neo Response

7.1. In assessing cumulative effects, the LVA, quite rightly, identifies a cumulative baseline of other solar projects and as noted in the section 7.5 of the LVA, the screening effect of existing woodlands that surround the site (and the additional hedge and woodland planting proposed as part of the Landscape Strategy), any combined intervisibility in practice is predicted to be very small, if any, and as such, significant cumulative effects are very unlikely to be

experienced. As the cumulative effect of all other built development is well beyond the scope of a LVA, any sequential cumulative assessment of this nature is not considered necessary.

> *"As well as the impact on landscape and residents' amenity, these cumulative developments adversely affect wildlife and habitats, increasingly pushed into smaller spaces in an area being consumed on all sides by development."*

Neo Response

7.2. The Conservation of Habitats and Species Regulations 2017 state that any plan or project that may, either alone or in combination with other plans or projects, significantly affect an international designated site should be the subject of an Appropriate Assessment.

7.3. Cumulative impacts can be an issue when the Proposed Development has a small impact on international sites or other sensitive ecological receptors. If other proposals have a small impact, the combined result can have a significant impact on these features.

7.4. A search of the Rushcliffe Borough Council, North West Leicestershire District Council, Erewash Borough Council, Broxtowe Borough Council and Nottingham City Council online planning portals was undertaken to identify any projects or developments within 5km which could impact any international sites, sensitive habitats or protected/notable species, either alone or in combination with the Proposed Development. One consented solar farm (Sharpley Hill, East Leake Solar Farm, Nottinghamshire) and two solar farms in planning (Glebe Farm, Nottingham & Land at Church Farm Gotham Road Kingston on Soar Nottinghamshire) were considered in the cumulative assessment section of the TA2: Environmental Assessment.

7.5. Similar minor impacts on brown hare would be predicted for the above Glebe Farm Solar Farm and Church Farm Solar Farm developments as a result of habitat loss (if the species is present). However, the effect of this loss can be minimised by appropriate landscape design in these schemes.

7.6. No significant cumulative adverse effect is therefore anticipated upon brown hare (or any other species or designated site) as a result of the Proposed Development. The Council are advised to satisfy themselves that these upcoming schemes are designed appropriately.

7.7. The Ecological Impact Assessment and Planning Report Documents submitted for the consented Sharpley Hill, East Leake Solar Farm conclude that, without mitigation, there could be a moderate adverse impact on mammal species. However, this appears to derive solely from potential harm to badgers. Moreover, with mitigation measures, there would be a 'Neutral to Minor Beneficial' impact on mammals.

7.8. In addition to this, further 'Minor Beneficial Impact' is expected if the enhancement measures detailed in the report, such as supplementary hedgerow planting and creation of permanent calcareous wildflower grassland, are included in the Development's construction. Furthermore, there were no known cumulative impacts outlined within the report.

7.9. As a result, it has been concluded there will be no significant adverse cumulative effects arising from the consented Sharpley Hill, East Leake Solar Farm and proposed Kingston Solar Farm by adhering to all relevant mitigation and enhancement measures outlined are adhered to.

7.10. Finally, the current planning application will adhere to best practice design measures ensuring that wildlife corridors will not to be significantly affected, thus, allowing free movement across the development by affected species.

8. VEHICULAR ACCESS AND TRAFFIC

British House Society (BHS) – Neutral Comment

"New development plans provide opportunities to improve and extend the bridleway and byway network for the shared enjoyment of vulnerable road users equestrians, cyclists, pedestrians, wheelchair users and mobility scooter users. The PRoW with equestrian access that would be immediately impacted by the proposed development are Public Bridleways 1, 10,11, 12 in the parish of Gotham and BW1, 3, 5 and 13 in the parish of West Leake as detailed in the PRoW Management Plan.

- *Gotham Bridleway 1 is outside of the development area however, links directly to the bridleway network (Gotham BW 12). Whilst measures are being taken to accommodate the construction traffic access to the site, equestrians and other vulnerable road users must cross Kegworth road to use the PRoW network. Already a 60mph road, the additional traffic, as detailed in the Transport management Plan Table 5-2, and the added complication of vehicles regularly turning into the access road on BW 12 will make the road crossing higher risk for PRoW users in the absence of speed restrictions, other traffic calming measures or a light controlled multi-user crossing. As construction traffic is intended to be 07.00 to 19.00 on Monday to Friday and 08.00 to 16.00 on Saturdays, this may well coincide with times that equestrians are active on the bridleways and local highways network to reach the off-road routes.*

- *Gotham BW 12 is the intended route of the access road and is also known as Wood Lane. Passing bays are referred to in the Design and Access Statement 1.68 although the number and dimensions of these are unspecified. The 4.5m access road width proposed is of concern, particularly during the construction period: HGV's are generally 2.5m wide and 4.5m high (some vehicles for component transportation significantly larger, Transport Management Plan 5.60) which would sandwich a horse and rider between the vehicle and the hedgerow along the route with little room for refuge which may cause panic. The Traffic Management Plan 5.9 suggests the bridleway may be 'cordoned off'; more detail is needed regarding this as restricting the PRoW could exacerbate the problem and could encourage vehicles to pass at speed. Extending the width by exposing more of the verge to the 6m suggested would be an improvement. Appropriate signage giving priority to users of the PRoW would be welcome and there should be additional signage during construction to warn traffic of equestrians and other vulnerable road users in the area, and ensure they are considerate in terms of vehicles using the passing bays to stop and allow PRoW users to pass safely.*

- *Bridleway Gotham 3/ West Leake 10 is crossed by a new access track. It is positive to note that the Transport Management Plan refers to banksmen being on site to manage these points and priority given to PRoW users. It would be advisable to instruct construction traffic to stop a short distance before the PRoW and to turn the engine off if appropriate to ensure safe and unhindered passing for equestrians.*

- *Bridleway Gotham 12 is crossed by a new access track, therefore the points above apply.*
- *It is positive to note that the current surfacing of the bridleways affected will not be disturbed and the buffer described to prevent the PRoW becoming narrow corridors is appreciated.*
- *The permissive path described in the PRoW Management Plan is difficult to identify on Appendix 1.14a but is a welcome inclusion, although dimensions and surfacing details would be useful. The inverters in the sections adjacent to this route appear to be situated close to the permissive route, whereas with the PRoW, the design has appeared to consider locating the inverters away from the bridleways as is preferable. Sudden noise and continuous levels of noise can be a hazard for equestrians as horses are flight animals, therefore the further these elements can be located from the bridleway, the better it will be for safety but also for undisturbed enjoyment of the permissive route for all users."*

Neo Response

8.1. Wood Lane will be widened to a maximum of 4.5m from the junction with Kegworth Road to the site entrance. There will also be further widening at this junction to allow vehicles to wait as others enter onto the road. Detailed design of the Wood Lane widening will be undertaken post consent and the road design will follow the existing road. Detailed designs of how this will tie into the existing road will also be undertaken post consent. In addition, due to Wood Lane being a Bridleway, there will be a banksman in place at the junction off Kegworth Road for the duration of the construction period. There will also be one in place at the site entrance so that construction vehicles can be managed to mitigate any impact on users of the bridleway. The junction onto Wood Lane currently lacks the required visibility splays for a 60m/h major road, therefore the works to achieve the required visibility as part of this development will make this junction safer for all users in the future.

8.2. With regards to the concerns about the Bridleway crossings, all Bridleways will also be appropriately signed, whilst banksmen will be available when construction vehicles must cross over Bridleways, without fail. Where there are Bridleway crossings, the construction area will be signed to alert construction vehicle drivers not to cross without a banksman available. In addition, should it be deemed appropriate, drivers will be requested to turn off their engines until the users have passed.

"The decision to avoid using Stocking Lane for access is welcomed, as this is heavily used for recreational purposes. However, the creation of an access track through the woods will undoubtedly involve removal of trees and otherwise disrupt the wood – has the impact of this environmental (and perhaps heritage) damage been assessed? Is the intention to leave this track in place after the construction phase? Will it be removed when the solar farm is removed?"

Neo Response

8.3. The route that runs from the northern site area to the southern site area is currently a woodland ride, and as such is already clear of trees. The whole red line boundary was

surveyed for all Technical Appendices and an assessment of this area has already been undertaken which includes Environmental and Ecological Assessments. The Proposed Development will not result in any unacceptable impacts, with any limited harm that may occur being well outweighed by the many benefits associated with the scale of renewable energy that will be provided. The tracks will be left in place for the duration of the developments lifespan and will be reinstated at the decommissioning stage unless agreed otherwise with the council.

"Looking at the access via Wood Lane, it is important that access is maintained at all times for properties off the lane, and that access via the PROW is maintained or a detour route provided as there is no obvious alternative route."

Neo Response

8.4. Wood Lane will be widened to a maximum of 4.5m from the junction with Kegworth Road to the site entrance. There will also be further widening at this junction to allow vehicles to wait as others enter onto the road. Detailed design of the Wood Lane widening will be undertaken post consent and the road design will follow the existing road. Detailed designs of how this will tie into the existing road will also be undertaken post consent. In addition, due to Wood Lane being a Bridleway, there will be a banksman in place at the junction off Kegworth Road for the duration of the construction period. There will also be one in place at the site entrance so that construction vehicles can be managed to mitigate any impact on users of the bridleway.

8.5. The Applicant will conduct a pre- and post-construction condition survey of Wood Lane that the site is accessed from, from the public road up to the site access point. The Applicant would be liable to repair any damage to the road attributed to the construction of the Proposed Development. The operational traffic generation of 10-15 LGVs per year is unlikely to cause any major degradation of the road surface or impact on the users of Wood Lane.

"At the entrance onto Wood Lane the Construction Management plan states that there will be "realignment of 152m of hedgerow and the trimming of 11m of hedgerow". What does "realignment" mean? Presumably that the hedge will be removed, destroyed, and replaced? This is a significant removal. Does this need to be surveyed first so that habitat can be recreated?"

Neo Response

8.6. It is likely that the hedgerow will be removed and replaced by a new hedgerow which is realigned slightly so visibility splays can be achieved. This will be a major planning gain of the project as the junction in its current form lacks the required visibility which has resulted in accidents in the past. A number of ecological pre commencement surveys will be undertaken which will include checks on this hedgerow prior to removal. The overall gain with all of the additional hedgerow planting across the rest of the site will far outweigh the removal and replanting of this one hedgerow – as shown by the expected biodiversity net gain. Mitigation has also been proposed which includes:

- Any vegetation removal from March to September to be carried out directionally towards retained habitat, in two stages
- Careful removal of hedgerow performed with hand tools, only when air temperature is above 10°C, and not after long dry spells. Ecologist to be contacted if herptiles are found
- Construction works affecting hedgerows to be undertaken during the active season (March to September) where possible
- If such works are needed between October and February, removal will be overseen by a suitably qualified and experienced Ecological Clerk of Works

"The documentation also states that Wood lane will be widened to 4.5m. Is this temporarily for the construction period or permanent? It is currently a fairly narrow road with generous verges rich with wildflowers etc and a memorial bench. The character of this part of the bridleway will be significantly altered, becoming more like a road and less like a lane. It forms part of a leisure route connecting East Leake to Thrumpton and the River Trent. Temporary widening may be preferable, with restoration to its current state for the operational period."

Neo Response

8.7. The widening of Wood Lane is proposed to be permanent, however this could be temporary if it is deemed to be more suitable.

"If the road is improved and widened it can be anticipated that there will be more vehicle access. This could perhaps be embraced, with provision for car parking to provide better access into the countryside, or prevented/discouraged in some way. Either way problems like fly tipping are likely to increase. 360 degree coverage by security cameras could assist with this."

Neo Response

8.8. It is not in the Applicants remit to police local roads for fly tipping. The CCTV camera will be inward facing to the site so as not to intrude on the privacy of any users of the PROW network. It's unlikely that a small increase in width of Wood Lane would generate much interest to road users.

9. HERBICIDES

Cllr Way – Objection:

"There is little I can add to the multitude of responses to this application, the majority of which I support. Whilst I am in favour of renewable sources of energy, this proposal will have a detrimental impact on the surroundings, the network of pathways and the wildlife habitats and corridors over a wide area."

Neo Response

9.1. These points have been addressed elsewhere in this document.

"I understand that it is quite common for herbicides be used around the panels to prevent vegetation impacting on their efficiency. It should be noted that Rushcliffe Borough Council recently passed a motion to encourage the reduction in the use of pesticides so other methods should be used to control plant growth."

Neo Response

9.2. The site is currently in agricultural use, a practice which relies on herbicides for the commercial viability of intensive farming. Whilst Rushcliffe Nature Conservation Strategy, serves to *encourage* farmers and landowners to develop sympathetic management practices, and ultimately reduce agricultural pollution. Herbicides are still in constant use in relatively high amounts, within traditional post war farming methods.

9.3. By contrast, it is very likely that the site will see a reduction in the use of herbicide upon approval of the Proposed Solar Development. It will also improve sustainability in other measures, by the increase in overall biodiversity as highlighted in the Net Gain Assessment the enhancements and habitat creation suggested In the Biodiversity Management Plan will provide an overall net gain of 44.8% which exceeds the minimum requirement by over four times its value.

10. ECONOMIES OF SCALE

Cllr Shaw – Objection:

"This is a very unusual design for a solar farm, being spread over a number of fields, which of course magnify the negative aspects."

&

Ramblers Association – Neutral Comment

"The inclusion of fields 15 and 16 should be reconsidered."

Neo Response

10.1. Multiple factors influence the location and siting of solar developments, a crucial one being the availability of a commercially viable grid connection. As such a key advantage of the Application Site is its proximity to a viable grid connection point. .

10.2. Unlike older solar farms which benefitted from subsidies, economies of scale for new solar are required in order to drive the cost efficiencies needed to keep the cost of electricity low for the consumer. In order for new renewable energy schemes to be developed, scale directly influences their generating capacity, and their economic viability. During the design phase, the overall scale of the Application Site has reduced in size from 89.1ha at the pre-application advice request stage (January 2021) to the current site area of 80.65ha (December 2021), with only c. 55.65 hectares accommodating the solar arrays themselves, with the remaining area being used for ancillary infrastructure and mitigation and enhancement measures. These changes were made following discussions with the local community, Parish Councils, the LPA and various other consultees, including British Gypsum and local outdoor recreation groups, reflecting recommendations raised by these parties.

10.3. The expected generation of c. 49.9MW of renewable energy could generate enough electricity to power circa 15,200 homes per year for the local distribution network and offers significant saving of CO2 per year compared to equivalent fossil fuel generation (25,000t3). This is a significant contribution to assist national and local efforts towards achieving a net carbon zero targets for future generations, reducing the detrimental environmental effects of climate change.

"The bridle paths off Stocking Lane are very popular with riders, cyclists and walkers, so the use of fields 15 & 16 will have a material impact on the visual outlook and amenity in this area. I would be happier if these two fields were excluded."

Neo Response

10.4. This point has been discussed in the open space and other recreational uses network of bridleways and footpaths section earlier in this document.

11. ELECTROMAGNETIC CONDUCTION

West Leake - observation:

"Affects to health and well-being, references the Electro Magnetic Conduction."

Neo Response

11.1. While Solar Farms do not emit any harmful by-products or material during their operation, they do generate low levels of electromagnetic fields (EMF). Exposure to low-level electromagnetic fields has been studied extensively, and there is no evidence that it is harmful to human health, according to the World Health Organization (WHO). In fact, the WHO notes that most scientists and doctors agree that if any health effects exist from low-level electromagnetic fields, they are likely to be very small compared to other health risks that people face in daily life for example from electricity power lines.

11.2. In addition to this, publications 'Clean Energy Results – Ground Mounted Solar PV Systems' (June 2015) and ESB's 'Electric and Magnetic Fields in the Environment document' (June 1999) state that solar panels and associated infrastructure produce very low electromagnetic fields that deteriorate quickly over a short distance. With the nearest property to the development being more than 140m from the solar farm, there is limited potential for any health risks associated with electromagnetic fields.

12. SUMMARY AND CONCLUSION

12.1. To allay any concerns Rushcliffe Borough Council, statutory consultee and various interested parties should have regarding the Proposed Development, this document provides a detailed response to the most recurring objections and comments made. This "Response to Concerns" demonstrates the Applicant's commitment to consultation with stakeholders and the community.

12.2. The Application Site has been developed using a rigorous site selection process in order to ensure the Proposed Development is able to be sensitively integrated into the wider landscape, encouraging the protection and enhancement of the environment.

12.3. The Application Site was selected due to its suitability for the proposed development. It has been designed to make the most efficient use of the Application Site, whilst respecting nearby residential properties, public rights of way and existing features such as hedgerows and trees as far as is practically possible.

12.4. In designing the Proposed Development, a number of rigorous technical environmental assessments have been undertaken to ensure compliance with all relevant planning and associated legislation, with appropriate mitigations and enhancements having been proposed. In all cases, the assessments have concluded that the Proposed Development will not result in any unacceptable impacts, with any limited harm that may occur being well outweighed by the many benefits associated with the scale of renewable energy that will be provided.

12.5. In particular from a landscape policy context, the findings of the submitted LVA demonstrate that the Proposed Development, is sensitively sited with a design and layout that positively integrates with its local context, and the wider landscape, encouraging the protection and enhancement of the environment.

12.6. The Proposed Development conserves and enhances local landscape character, protecting and enhancing Green Infrastructure. It protects the landscape setting of listed cultural features (e.g. Listed Buildings, Historic Parks & Gardens), and protects the openness and characteristics of the Green Belt. It has been designed to not be visually intrusive, and serves to protect the visual amenity of any residents and users of public rights of way.

12.7. Overall, this "Response to Concerns" has demonstrated that the Proposed Development is compliant with the Rushcliffe Local Development Plan, the Gotham Neighbourhood Plan and national planning policy and guidance.

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