



Submission by Mallard Pass Action Group (MPAG)

– unique ID ref. 20036230

Deadline 7:

ISH4

Environmental Matters

Written Summary of Oral Case

MPAG representatives: Mrs Sue Holloway; Mrs Helen Woolley; Ms Carly Tinkler (Landscape & Visual expert); Dr James Williams (Ecology expert); Mr Tony Orvis; Mr Phil Britton

ISH4 – Environmental Matters

1.0 Statement of Common Ground

MPAG confirmed they had completed a SoCG at deadline 6. The Applicant indicated that the areas agreed were probably the final areas that would be agreed, however both parties will endeavour to complete a final SoCG. MPAG have been led by the Applicant on the structure of the SoCG, so are not sure why their format therefore precluded us from doing a Statement of Commonality, other than the Applicant preferred to keep us separate from everyone else. MPAG, for completeness, will attempt to complete a Statement of Commonality.

2.0 Matters relating to the scope of the Proposed Development

2.1 Taking account of the recently advised 60 year time limit, MPAG is happy to engage with the Applicant over the output and carbon calculation figures providing there is full transparency with the revised data and it is provided in an excel format whereby calculations can be seen. The Applicant clearly needs to lay out their baseline assumptions on any revised 60 year scenario calculations, so that MPAG can review and comment.

MPAG has questioned some aspects of their existing figures through email/phone exchanges.

2.2 The confusion over the **Plant Load Factor (PLF)** was reflected in the different numbers the Applicant supplied in the various ES documents. MPAG used government data from **DUKES** that at the time which had a PLF of 10%. Since MPAG submitted our original response on output figures, DUKES has updated their PLF to 10.6%. Having seen the Applicant's satellite data and taking it at face value, their hypothesis seems reasonable and therefore we would now have to accept 11.5%.

2.3 The Applicant had not used **actual output** figures but the **best case scenario** assuming 350MW *output capacity* rather than the *actual* 240MW AC energy that the grid would be able to take, noting they have no capacity to store excess energy. This in turn affected the figures they used for the 'Homes' calculations. However still using the Applicant's figures, it shows the proposed development to have the lowest homes per MWp as illustrated in the table below.

Number of homes			
Development	Capacity MWp	Number of homes	Homes/MWp
Gate Burton	500	160,000	320
Cleve Hill	350	110,000	314
Sunnica	500	172,000	344
Cottam	600	180,000	300
Fosse Green	350	110,000	314
Longfield	371	92,000	247
Mallard Pass	350	85,000	242

2.4 The Applicant admitted to not applying a degradation factor to their output scenarios which in turn also affected the 'Homes' calculations. That has since been corrected.

2.5 MPAG spotted [anomalies in their degradation %](#) between their 350MW DC calculations and 240MW AC which they admitted should have been the same.

2.6 Their current figures assume the panels would [last 40 years](#) but there is [no evidence](#) to suggest that this is likely to be the case. As such therefore they included no replacement panel carbon costs in their carbon calculations. It will be important for the 60 year calculation that they explain their replacement panel assumptions and reflect that in their calculations.

2.7 The point that MPAG wanted to make was that the Applicant should not to be [misleading](#) in overstating the number of homes that could be supplied in reality, rather than hypothetically. The same applies to [lack of battery storage](#) which undoubtedly has a huge impact on delivering the 'case for need'. (See [Appendix 1](#) for a deeper review of the importance and evidence on BESS).

2.8 60 years

2.8.1 As this is an NSIP MPAG believe the development should be considered in terms of its wider and longer term implications. Whilst we now have certainty, 60 years is more than a generation, an incredibly long time in whatever context you view it. It is impossible to make any reasonable predictions of future land use need, or energy generation technologies over this period of time. Committing to 60 years means that the government and future generations would be unable to respond to changes brought about by climate change, technology changes and land use need, not just in the UK but globally.

2.8.2 Sustainable development, which is what we are all striving for, is defined as meeting the needs of the present without compromising the ability of future generations to meet their needs. Can the Applicant truly say the proposed development meets this test?

2.8.3 The government seems open to looking at repowering in the future if deemed appropriate at the time. They have also said in NPS EN-3 para 3.1.58 that a time limited consent would not prevent the Applicant at a later date seeking to extend the period. So we cannot comprehend why the Applicant has chosen such a long time period with so many unknown implications into the future.

2.8.4 60 years is 50% more than the baseline for any of the calculations used, 50% more than typical solar farms consented and 50% more than the NPS refers to. Given this huge step change, MPAG believe the Applicant should review systematically all the chapters of the ES to reflect their latest position and to acknowledge the material changes.

2.8.5 One of the key changes is that all the panels (530,000) will have to be replaced during the 60 year period. Yet in answer to RCC's and LCC's comments about SWQ1.0.1 (REP6-004) the Applicant states. *"It is not considered that there are any material or significant differences between decommissioning at 40 years and decommissioning at 60 years for the purposes of assessment. Therefore, the conclusions of the ES remain valid."*

2.8.6 The move to 60 years is a material change on which the EA's were originally assessed. The Applicant is incorrect in stating that there will be no significant impact. Gate Burton, also a client of Pinsent Mason and Si Gillett the expert, who has a defined 60 year period, is quite clear in Chapter 6, Climate Change paragraph 6.4.29:

"Operational maintenance from the replacement of components during the design lifetime of the Scheme are based on replacement rates for similar schemes and based on the design life of the components. It is assumed that all of the PV Panels will require replacement once during the Scheme's design life, with a

further 10% requiring replacement to cover equipment failures, at a constant rate throughout the 60-year project life.

All the inverters and BESS cells are assumed to require replacement twice, with a further 50% requiring replacement to cover equipment failures, at a constant rate throughout the 60- year project life. All transformers are assumed to require replacement once, with a further 10% requiring replacement to cover equipment failures.”

2.8.7 It seems the Applicant is not entirely clear about the **lifespan of their panels**, Mr Phillips for the Applicant says it is **40 years**, yet the **Canadian Solar website** talks about **25-30 years**. There is a lack of clarity moving forward with 60 years at **what point** the Applicant thinks the panels will need to be **replaced**. The view of MPAG is that it will be the economic life of the panel, not necessarily the actual life and that as it stands today, assuming technology does not change considerably in the next 12-18 months, will be approximately 30 years necessitating full replacement in and around that timescale taking account that the panels would need to be updated in efficient blocks.

The replacement will trigger a number of impacts.

- **Gate Burton**, for example, takes this into account in their project’s output and carbon calculations. They say the replacement of equipment has a similar emissions output as the original construction and will contribute **95.9% of carbon emissions** made during the construction phase.
- However there are also the **removal and recycling impacts** to be taken into account
- **Wooden posts** need to be replaced, panel mountings may need replaced, along with much of the rest of the electrical infrastructure
- **Traffic and transport issue**. Whilst the oOEMP sets out a maximum of 5 x 2 way HGVs during operation taking account of replacing panels, MPAG struggles to understand the viability of replacing the panels in such a piecemeal ad hoc way. Based on the oOEMP it would take around 200 days to replace just the panels based on c1000 containers.
- Potential **soil damage** due to trafficking of the soils leading to a higher risk of surface water run off.
- **Loss of food production increases by 50% moving to 60 years** when we know the country will be in a different place with Climate change leading to rising sea levels, global warming, more weather extremes; increased population numbers; less global food production available per head.
- Potential **habitat and species damage and disturbance**.
- **Long term loss of landscape and quality recreational amenity** leading to communities fragmenting.

2.8.8 The overarching **message** the Applicant is trying to give is **concerning**, suggesting that during the operational phase there will be **limited adverse impacts from the proposed development**. In reality if consent were granted based on that assumption, it would be easier for the Applicant to push through material changes given the limited resource of councils to contest, monitor or take enforcement action on any non-compliance.

2.8.9 MPAG and others question the **rationale for 60 years**, seemingly a slightly random number and strange that it wasn’t selected for many of the numerical calculations in the first instance. Mr Fox in the hearing stated ‘we had to pick a number’ and so picked 60.

2.9 National Grid

Is it possible to have a grid connection agreement without having a grid connection. This question was raised to clarify 2 points:

- Grid connection cannot wholly be the determining factor for the justification of a development and therefore the chosen location of a development. Using Fosse Green and Springwell solar farm NSIPs as examples, both have connection agreements but no substation physically exists or necessarily an agreed location for a substation to be built.
- Even though a commercial agreement might be in place with NGET, there may be impediments and reasons why it cannot go ahead, or within the agreed timescale and there is no assessment or clarity what is involved and what effects they may have that have not been assessed in the ES.

3.0 Water & Flood Risk

3.0.1 MPAG is still concerned that the off-site implications of surface water flooding have still not been properly taken into account. Given the Applicant acknowledges surface water run-off will be 256% faster than normal rainfall, it cannot be the case that the grass sward is sufficiently resilient all year around to accommodate the absorption. Greatford and other areas of the site including Banthorpe suffer from both fluvial and pluvial flooding and once the land has reached field capacity, any further extreme weather conditions will result in surface water flooding. Given the 60 year timeline it is essential the Applicant models the flood risk all the way through the 60 year period and does not just look at the 2080s epoch when they are expected to model 20% upflows in the Welland catchment area. More resilient measures need to be put in place upfront during construction, and that first and foremost requires a commitment and guarantee that a grass sward will be established in advance of construction – something that is not in place in the management plans at the moment, it is at their ‘discretion’.

3.0.2 MPAG requested a review of climate change take place every 5 – 10 years so that pre-emptive mitigation could take place if required given unanticipated weather events.

3.0.3 The applicant stated that any agricultural workings on that land will ultimately introduce compaction through agricultural movements. During the baseline, there will be periods where runoff will occur on the agricultural land through compaction and through tilling, and possibility of small patches of bare earth being present during the construction phase is absolutely real. The Applicant has measures committed to that where a particular risk is identified, drainage measures can be put in place to ameliorate that. In terms of compaction and runoff for baseline it’s analogous to what would be considered to be a bare earth scenario during the operational phase.

3.0.4 MPAG would argue that compaction following construction was similar to agricultural levels of compaction. Compaction does occur in agriculture, but great measures are taken to avoid it using low ground pressure tyres, tractors with tracks, only working when the soils are dry, also controlled traffic wheeling where tractors only run in tramlines. If the Applicant is going to traverse all over the field, building a solar array, that's completely different to driving up and down in a tractor with a wide machine on tramlines with low ground pressure tyres.

3.0.5 A question on the management of grassland which the Applicant says will be organic. Can they clarify what they meant by organic in that context? The question is asked as it could affect the creation and management of the sward?

4.0 BMV

4.0.1 The level of BMV is incredibly important in the planning balance and Mallard Pass Solar Farm has one of the **highest % of BMV** compared to other solar NSIPs as outlined in the table below.

Agricultural land classification	%	%	%	%	%	%	%
Development	Grade 1	Grade 2	Grade 3a	Grade 3b	Grade 4	Other	BMV
Gate Burton	0	0	11	84	0	4.1	11
Cleve Hill	0	0.5	2.3	94.2	0	3	2.8
Sunnica	0	0	3.8	50.3	40.1	5.8	3.8
Cottam	0	0.5	3.6	94.8	0	1.1	4.1
Longfield	0	12	22	58	0	8	34
West Burton	2.3	1.3	22.8	73.5	0	0.2	24.1
Heckington Fen	11.1	7.4	30.5	50.6	0	0.4	49
Mallard Pass	0	11.7	30.5	51.5	0	4.2	42.2

Note: this is based on the total site area as that is the only information generically available across all the sites

4.0.2 There are 2 key major issues for consideration:

1. **Protecting the land** and **returning the soil** to its **original ALC grade** once the development is decommissioned and that applies to all land whatever the ALC grading.

2. To **protect BMV land** in accordance with NPS-EN3 policy. 60 years is a huge amount of time to take the land out of arable farming and has to be weighed against the risks during this long period of losing valuable food production set against the likely impacts of climate change on food production, rising populations, population movements, all affecting global food security. The UK has our role to play. By becoming more not less self sufficient that will place less reliance on foods which could be distributed to places more in need across the world.

4.0.3 In order to do those 2 things it requires the **ALC grading** in the first place to be **robust** and **representative** across the site. MPAG do not believe the Applicant can claim the survey work they did to assess the level of BMV was **proportional** and therefore **representative of the full picture**.

The initial **stage 1 auger sampling** was conducted at a **quarter of the density required**, and even when secondary auger sampling was conducted, it was only done in **selected areas** of the order limits not giving a representative reflection of the ALC grades across the order limits (see Appendix 12.4 Agricultural Land Classification Survey P79 (APP-091) or Appendix 2 to this document). Across the 852ha site, **only 334 auger borings** in total were taken, yet Natural England's guidance, TIN049, requires 1 auger boring every hectare. Therefore within the Order Limits the Applicant didn't have the proportionality required to make a robust assessment. They also did not sample anywhere outside the order limits **limiting their options for site selection area** from the very outset of the project.

4.0.4 In the same way the Applicant has sought to **minimize the scale of survey work** for the archaeology due to the **size of the order limits** and **cost**, they have also tried to do the same with ascertaining the correct level of BMV. The level of potential benefits from the proposed development are commensurate with the size of it and therefore just because the site is of such a huge scale should not mean that **corners are cut** when trying to build an accurate picture with representative data.

4.0.5 The Applicant only returned to do secondary sampling as Natural England instructed them to do more sampling in accordance with TIN049 guidance. Mr Kernon, of Kernon Countryside Consultants (KCC) speaking on behalf of the Applicant, seemed to miss the point when he talks about the solar panels not changing the land quality (still a debatable subject). The key issue MPAG is alluding to is concerning the [loss of valuable food production from land graded 1, 2 or 3a ie. BMV land](#). MPAG would argue that all food production lost, especially for a period as long as [60 years](#), has potentially [huge implications](#) as outlined in some detail in REP2-090. The total level of BMV lost (albeit on a temporary 60 year basis) should be the key in determining the impact of this proposed development. If the [% of BMV is even higher than stated](#) by the Applicant, the [negative effects](#) from this scheme are compounded further.

4.0.6 The fact that the survey results show a more complex [pattern of grade 3a and 3b](#) within field parcels, in itself demonstrates why the [site location is not an appropriate choice](#). The default should not be to sacrifice the BMV but to protect the BMV, and that means retaining the 3b in the process as it is not always practical to try and split them apart when designing field parcel layouts.

4.0.7 MPAG has been concerned at the level and robustness of soil sampling at both survey stages and offered a [detailed explanation](#) of the inconsistencies and gaps in our [Written Representation REP2-090 \(Land & Soils section P57-67\)](#). There was no opportunity in the first hearings to elevate these concerns raised in our WR, however in the interim period we have managed to secure the funds to employ a highly qualified soil scientist from [Landscape Land & Property](#) to do some independent assessment and soil survey work for us. There has been [no detail scrutiny undertaken by any authority or consultee](#) as part of the Examination process, other than the limited feedback from Natural England about soil sampling density, hence why we believe this assessment work to be vital.

4.0.8 It is important to say the reason why the inconsistencies don't immediately jump out is because the Applicant has chosen to [be selective in the information provided](#) in the application documents. You have to track back to the relevant [PEIR documents](#) and [cross check all the information from Stage 1 through to stage 2 soil sampling](#), particularly the ALC grading maps at each stage and the data tables; and further cross check that with the [auger sampling map](#) for each stage. Further back-up information is available in Appendix 2.

4.0.9 In addition a review conducted by [Stantec Consultants](#) on behalf of RCC and SKDC (pre-application) after Stage 1 sampling highlighted a number of [errors and omissions](#), something that should not have occurred on such [low density sampling \(see Appendix 2\)](#). SKDC subsequently lodged a pre-application holding objection to the Applicant citing their concerns raised from this Stantec report, particularly in respect of sampling density and BMV results. **(See Appendix 2)**.

4.0.10 There were [5 areas](#) of the site that were resurveyed at [stage 2 sampling](#), indicated by the red dots on the auger sampling map, the black dots relate to the original sampling (see Appendix 12.4 Agricultural Land Classification Survey P79 APP-091 or Appendix 2 to this document). Given the variability across the site, [to just selectively target and resample key BMV areas](#) (probably in the order of 30-40% of the site) was [never going to give a fair representation](#) of the ALC grades across the site.

4.0.11 MPAG more recently received landowner permission to access fields 2, 3 and 1 on the western edge of the Order Limits. It just so happened that [field 2 was 1 of those 5 areas resurveyed at a higher density by KCC](#) which subsequently saw a downgrading of ALC from 3a to 3b, and some 2 to 3a, therefore making it an interesting [case study](#).

4.0.12 In addition to the on-site findings of our soil expert, **areas in 13 field parcels** were identified at stage 1 as having one grade, and at stage 2 sampling another grade, yet no re-sampling had taken place during stage 2 survey work in those field parcels to explain why the areas had all been **downgraded**.

4.0.13 A further area of concern is the amount of **BMV** the Applicant has **not counted** in the **mitigation areas**. The site is 852Ha. If you deduct the retained arable at 239Ha and the solar area + margins at 531Ha, that leaves **82Ha of mitigation**. The Applicant has not identified the ALC grading split in those areas and the amount of **BMV**. **Any area of the site taken out of arable food production** should show the **ALC breakdown** in Ha and %, that means the solar area + margins + substation area as one subset, and mitigation areas not returned to retained arable as another subset.

4.0.14 **The full report from Landscape, Land & Property by Sam Franklin can be found in Appendix 2,** along with useful supporting information for easy reference. **Overall the soil expert concluded that “the land remains mostly BMV quality, with around 50% of the site Grade 3a and a small quantity of Grade 2.” This adds between 10-15% points of BMV to KCC’s 2nd stage results.**

5.0 Soils

5.0.1 With respect to **soil health and ALC grading they can be 2 very different things**, however the Applicant seems to **conflate** the 2 as 1. Soil health is very much about how the land is managed and used, it’s microbial health etc. The Applicant is suggesting the land can be returned to its former soil health, which it may be able to, but it **won’t happen at day one**. It is unlikely because of the nature of the grassland, the soil health will change over the lifetime in order to reflect the way in which the land is used. To assume it can return straight away to **arable production with the right soil conditions is a big assumption**. **Noting Dr Adams** from CPRE’s comments about published evidence being available to also reiterate this point.

5.0.2 **Grass establishment**. The seed mix identified for the grassland is said to be **slow growing**, shade tolerant species and they need considerable time to establish properly to increase infiltration rates and reduce risk of surface water flood risk. It will also help with enhancing resilience of the soil to resist compaction and trafficking. MPAG would like to see **12-18 months before construction**, harvest the crop, drill the grass, and manage it appropriately through the first year so a full root system can be established. That will accrue the necessary benefits to start construction and have a more robust baseline for the next 60 years.

5.0.3 Establishment of grassland is not straightforward due to the soil conditions that will be in place at the point the Applicant is trying to establish it. The issue in part is to do with **compaction** and also to do with **nutrient status of the land**. Currently as arable land the nutrient status will be relatively high and that will make it more difficult to provide the **right conditions for the seed mix to establish** a low nutrient grassland and grow fully. Whether the Applicant has fully thought this through and how they are going to avoid the establishment of **pernicious weeds** and potentially a **poor grass ley**, unless the right care and management is given before construction begins. They may have to go back and re-establish the grassland in areas that have not established effectively.

5.0.4 The converse is true in that after **decommissioning** how will the low fertility soil **return to high fertility soil for arable farming**. Whilst top soil that has been removed for tracks and hard standing areas will be theoretically returned on a like-for-like basis, the grassland areas won’t have had any top soil removed, so it will **take time to re-establish the high fertility levels** to a satisfactory point for arable farming. It is not clear if these impacts have been assessed as the assumption seems to be the land will return to exactly the point it started at.

5.0.5 It would seem the Applicant's **biodiversity credentials** are not as ambitious as initially thought given the nuance in wording concerning now establishing species rich grassland with certain calcareous species involved instead of creating calcareous grassland.

5.0.6 The Applicant agrees that water management, soils management and vegetation management are all inextricably linked to deliver the objectives set, but the area where we are not in agreement is that **establishment of the grassland first is the fundamental building block** to deliver against these objectives. The Applicant still makes no commitment or guarantee concerning this key element, no doubt due to the commercial pressures of the project. However this is one area of the project where **there should be no compromise and short cuts, or a reliance on rectification and mitigation** after the fact.

5.0.7 **Sealing of Agricultural land**. By sealing a section of land you change soil microbiology underneath it. If you unseal you don't immediately revert back to how it was before. There is a lot of research going on about the soils, the impacts on micro-risers, and the impact on micro-organism with respect to how they all function. The science is rapidly developing. These are real issues to determine if the process of sealing will have a long term effect, and the microbiology when unsealed will take considerable effort to re-establish. MPAG is not convinced the effects will not be insignificant accepting the issue mainly relates to tracks, solar station bases and the substation area.

5.0.8 The Applicant recognises that **soils being stored can affect the activity in them** and correct management of the bund is essential to stop the soils becoming too anaerobic.

6.0 Landscape & Visual

6.0.1 **Assessment methodology**. MPAG take on board that the ExA doesn't want to revisit the areas of disagreement of landscape and visual assessment; however we are concerned they have not yet been discussed in an oral forum, just through written submissions. Ms Tinkler suggested on behalf of MPAG that the ExA approaches the **Landscape Institute GLVIA panel** responsible for setting the GVLIA3 guidance and ascertain their full interpretation of the assessment methodology. Sensing the ExA was not necessarily comfortable with that suggestion, in an effort to seek some closure MPAG suggested that Ms Tinkler and Mr Croot on behalf of the Applicant explore this possibility and approach the Landscape Institute accordingly. e.g review double counting mitigation as enhancement, conflating landscape and visual effects etc. The reason for the ongoing challenge to the Applicant's methodology is that it results in an **underestimation of the effects**, which is key in determining the weight applied to landscape and visual harm from the proposed development.

6.0.2 Subsequent to the hearing Ms Tinkler and Mr Croot (for the Applicant) had a discussion and whilst both parties feel confident the ExA understands the differences of opinion on methodology, Ms Tinkler still plans to ask the Landscape Institute GLVIA panel for their **feedback** for her own professional interest. It would be done anonymously in respect of the current application and their response could therefore apply to any LVIA. Given the panel's role she would also be seeking feedback on the **errors in the NPS EN1 and EN3** as they would be the body responsible for instigating the necessary changes.

6.0.3 MPAG still seeks to address the Applicant's comments submitted at deadline 6 on MPAGs response to the ExA's Written Questions mentioned in our covering letter (REP6-XXX). Unfortunately MPAG completely missed the document on the portal and therefore missed the opportunity to comment at deadline 7. Our response can be found in **Appendix 3**.

6.0.4 **60 years**. MPAG are naturally disappointed that the Applicant doesn't feel they need to review and reassess the impacts in the light of 60 years. Previously it was not known what the Applicant was

considering in terms of lifespan other than they chose to use 40 years for any calculation required. In many ES chapters they also talked about the effects being reversible as the development was never going to be permanent. Therefore the SoS's conclusion in the below appeal is pertinent because 60 years is such a huge amount of time and [many aspects are highly unlikely to be reversed](#). The landscape that exists before construction is not the landscape that will be left after decommissioning; the character will have completely changed due to extensive screening which is unlikely to be removed.

6.0.5 The Secretary of State takes the view that *“30 years is a considerable period of time and the reversibility of the proposal is not a matter to which he has given any weight. He considers that a period of 30 years by those who frequent the area as being temporary and that the harmful effect on the landscape would prevail for far too long.”* Appeal in respect of a solar farm at Imolands Farm, Lymington, Hants. PINS ref 3006387 dated March 2016. Planning reference B9506W153006387.

6.0.6 [Post consent and construction fencing change](#). MPAG raised the question of what would happen post consent and construction if the Applicant were forced by their insurance company to change to security fencing at a later date. This would put the LPAs in a very awkward situation, knowing the change was [materially significant](#) in terms of its impact on landscape and visual but under pressure from the Applicant who would appeal if the request was turned down. If the probability of this requirement is potentially very high over the 60 year period, MPAG would argue this needs to be [assessed as a worst case scenario now](#) in the event it is likely to happen.

6.0.7 [Security measures](#). MPAG raised a perfectly reasonable question about the role of CCTV as part of their security measures. Mr Phillips for the Applicant implied there was no need for security personnel or police and that in the event of a theft the insurance would pay out and the items would be replaced.

In respect of the CCTV as a deterrent there is no constructed solar farm in the UK on this scale which has miles and miles of fencing. When MPAG originally measured the perimeter of the Order Limits it came to c 25miles long. Given there will be multiple fences around the various clusters of field parcels, the distances are likely to be even longer. There are [so many options open to criminals to access the site](#) at multiple points and the [high value of materials](#) is likely to see organized crime gangs looking at the next [money making opportunities](#).

6.0.8 What is of [huge concern to local residents](#) is attracting this kind of crime to the area which if you speak to any DOCO, they will tell you one type of rural crime will lead to other [rural crime to properties](#) in the area. With Mr Phillips paying [no regard to the safety and security of residents](#) and only concerned about recovering the value of stolen goods, MPAG are deeply concerned for residents, both in remote locations and in the local communities.

6.0.9 [Mitigation and enhancement measures](#). Although MPAG has already clearly laid out the different interpretation and application of GLVIA3 in previous submissions, we will seek to summarise the key points in our final position statement.

6.0.10 [Design Guidance](#). MPAG were slightly surprised to see the [addition of storage containers](#) in the design guidance parameters, in addition to whatever arrangement they determine for the solar stations which is already aesthetically ambiguous. This is an [additional visual effect](#) if approximately 30 of them are to be dispersed around the site) which has not been assessed.

The addition of [secure access gates](#) at P4.8 seems a bit of an anomaly as secure access gates are slightly pointless when you have deer stock fencing elsewhere.

7.0 Ecology

7.0.1 **Biodiversity Net gain.** The likelihood of being able to achieve the hedgerow gain or enhancement is probably relatively high. With respect to the landscape and the grassland this is not net gain, it is churn because it will not be able to be continued forwards and it is dependent entirely on the establishment of the grassland. We previously discussed things like soil microbiology potentially being affected by compaction, both in terms of the mycorrhiza but also in terms of soil organisms. Greatford Parish Council in the flooding section of ISH4 referred to issues of compaction in terms of how the land is treated compared with the farming scenario where tram lines are used.

7.0.2 There are some really big **issues** with respect to being able to **establish that grassland on high nutrient soil**, and that applies to all of the types of grassland. Quoting from Emorsgate seeds website with respect to seed mix EM1, which is what I believe is being suggested for under the solar panels. *“Endeavour to select ground that is not highly fertile and does not have a problem with perennial weeds. Good preparation is essential to success, so aim to control weeds and produce a good quality seedbed before sowing”*. The way in which the land will be managed, and which order the panels or the grassland may be put in is material to whether or not that biodiversity net gain is established.

7.0.3 There are **similar issues** with respect to soils fertility and establishment of the grassland type in the **mitigation areas** as well.

7.0.4 In terms of **being able to keep good quality grassland, the management**, the way it is mown or grazed is critical. Cutting every **two years** is **not the way to establish a hay meadow**. And if you do that, you will not end up taking off the arisings in the first year, which of course will then rot down and increase the nutrient status of the soil.

7.0.5 The oLEMP for **Gate Burton** states OLEMP states in paragraph 3.6.10 that the grass beneath the panels will be mowed and the **arisings will be sent to green waste** as part of the long term management. This seems a **more appropriate approach** and one that doesn't risk increasing the nutrient status of the soil.

7.0.6 BNG has been put in place by the Government in order to try to improve biodiversity when development takes place. According to our ecologist changing something for 30 years or 60 years, it's actually not going to give an overall increase in biodiversity. **Effectively it's a change from arable to grassland and back again, with some biodiversity benefit in-between.**

7.0.7 In terms of the **strategic requirements** to be able to meet the UK's involvement in the global biodiversity goals agreed in Montreal last year through the **Kunming Montreal Global Biodiversity Framework**, they are hugely ambitious. The government is currently looking at how it makes commitments with each of the four devolved administrations to be able to say this is what we are putting in place for being able to improve biodiversity within the UK as a contribution to the global whole. **The gains will not be achieved unless a more strategic approach is taken about how we use the limited amount of land for its best purpose and avoid creating dis-benefits.** The BNG metric does not do justice to addressing the strategic long term problem.

7.0.8 **Baseline of BNG.** MPAG has a concern the **tree baseline** for the calculations is completely distorted and **artificially low** as all the pockets of woodland have been **removed** from the Order limits despite being surrounded by the Order Limits. Therefore it is very easy to show a high net gain. From a

practical perspective there is no clarity from the Applicant how those areas of woodland will be accessed or **maintained** by the landowners. It was a surprise to hear that all the landowners wanted to maintain those woodland areas when most of them have conducted no maintenance activities other than removing fallen trees where they pose a hazard.

7.0.9 **Monitoring.** This is critical to showing whether or not net gain is being achieved and there are some issues with the frequency of monitoring. It should be **annual** throughout the length of the development or as long as is practicably possible; the results should be **publicly available** with the Applicant highlighting what is working, what isn't and where **corrective measures** are taking place.

7.0.10 To illustrate the importance of monitoring at a species level, **bats are mobile species** that don't necessarily occupy the same locations year to year. Pipistrelle bats under the UK bat monitoring programme, the results from roost monitoring and from field monitoring have been found to be somewhat different. That is partly to do with bats - pipistrelles - operate a fission-fusion model in terms of where they have their maternity roosts and where they have their hibernation roosts. As a result, for the UK biodiversity indicator on bats, it was necessary to actually remove the roost count data from use in the composite indicator and just rely on the field count data. **Contradictory results were being obtained, and it is that level of detail that needs to be understood to interpret the results correctly and truly understand the impacts on biodiversity. This does not just apply to bats but to all key receptor groups.**

7.0.11 MPAG appreciate this could involve a lot of work, but currently there is **little data available on the effects of utility scale ground mount solar on all species.** This is actually an **opportunity** to work alongside a number of **universities** and work together on a long term monitoring scheme. If the Applicant is truly committed to delivering **environmental benefits**, then it is these kinds of activities that would help **inform future decisions by understanding the implications of such a development.**

7.0.12 So for example, there's a study that was recently published in the **Journal of Applied Ecology** with respect to foraging of **bat species** across solar panel farm. And there are some issues there about the way in which species will use a modified landscape.

7.0.13 **Holywell Road** – Ryhall Pastures & Little Warren verges. There is probably no traffic monitoring data available, but even if there was the issue relates to what could happen as a result of the development during the construction process. We know that the use of Holywell Road is used by many people to access the A1 at Stretton or Castle Bytham. Sat nav will tend to show all 3 routes including going through Great Casterton, but if that route becomes busy, people tend to take the shorter cross country route (including many members of MPAG). It would be incredibly difficult to enforce staff and 'white van' drivers to take a different route once they have discovered either of these routes. Although instructions can be given and notices put up, they are not enforceable. This therefore **remains an unresolved concern for the SSSIs.**

7.0.14 **Safety** is a concern as the crossroads junction of Holywell Road and the B1176 does tend to be accident prone, as well as there being a number of areas on both routes to and from the A1 via Stretton and Castle Bytham which are only suitable for one vehicle at a time.

8.0 Traffic and transport

8.0.1 **20 mph speed limits.** The Applicant confirmed the temporary 20mph limits also applies around the site and not just through Essendine (for the cabling activity were it to go ahead). We would assume

the other restrictions are for the duration of the construction period. Whilst safety is a top priority, the impacts of 2 years of 20mph restrictions, temporary traffic lights and diversions across the site, presumably near the compounds and any key road junctions, could impact travel times significantly and be quite disruptive for road users.

8.0.2 **Working groups.** It seems 2 groups are being set up that broadly involve some similar personnel i.e. local councils, parish councils etc, namely **Traffic Management Working Group (TMWG)** and the **Customer Liaison Group (CLG)**. Whilst they don't perform the same functions, there are very **clear overlaps**. It is probably worth the Applicant considering how best to **streamline these activities** so they don't take an inordinate amount of time. If they do the groups won't get the necessary engagement from the various stakeholders e.g. parish councils and local councils.

8.0.3 **Routes and Sutton & Wansford scheme.** MPAG understand the reasons for creating separate inbound and outbound routes for HGV vehicles to reduce the impact on all local communities. Whilst the route map has been partially updated, it does not acknowledge the full route if the HGV driver (worst case scenario) had to return either to their starting point on the A1 or further south on the SRN, the full circuit is in excess of 40 miles. The outbound route is so long it does not seem viable or reasonable to expect the HGV driver to follow such a circuitous route when their sat nav will show routes across country with no restrictions.

8.0.4 Given many of the drivers will be **contractors**, **practically** how will it be possible to **enforce** the correct routing? Unless the LPAs are given dedicated funds by the Applicant to allocate to enforcement officers, local villages will be even more deluged with unwanted HGV movements. Whilst signage would be welcomed, MPAG are hugely concerned that it is **local communities that will suffer**, not the HGV drivers as it is unenforceable.

8.0.5 Noting that route 3 returns to the A1 by the A47, should the Sutton/Wansford A47 scheme overrun, it will directly impact construction traffic for this development.

8.0.6 **Traffic movements during operation.** The Applicant has set a parameter of maximum 5 x 2-way HGV movements a day during operation. The message the Applicant is trying to convey is that the operational disruption (traffic, noise, soil damage etc) would be low and of little impact during the operational life of the development. That might be the case if the life of the development were restricted to 30 years with only maintenance activity for the odd failure or breakage. However this is 60 years and will involve the **full replacement of every panel, replacements for inverters and transformers maybe more than once including other associated solar station equipment, along with replacement fencing once or twice during the lifetime and possible mounting structures.**

8.0.7 To replace just the **panels alone** would take over **200 days**, however as outlined above there is a lot more equipment to replace than just panels. Therefore there will be **times** over the life of the development when, if the activity were to be done efficiently and economically, that the Applicant would need to substantially **exceed the parameter set of 5 x 2-way HGV movements** per day. Note during construction an allowance is made for 55 2-way HGV movements a day. Therefore it seems unlikely given the **magnitude of the replacement panel activity alone, that the impacts during operation will not be as insignificant as the Applicant leads us to believe.**

9.0 Noise.

9.01 MPAG are encouraged that the Applicant has agreed to acoustic validation, albeit it is not clear what the parameters for that will be. Can they give an undertaking to do it for all sensitive residential receptors both during construction and operation?

9.02 There is still concern that there are percussive piling activities taking place at the weekend. Due to the nature of the work 400m distance is not sufficient to mitigate the noise. Evidence shared by other action groups show the noise can be heard over 2 miles away. In reality it probably is better for residents for the piling activity to take longer and for residents to have decent respite at the weekends.

10.0 Visual amenity assessment – Glint & Glare. Looking at App 15.3 Glint & Glare study, Barbers Hill for example is moderate impact, but some properties no mitigation is recommended. As these are desk based reviews, if in practice during operation glint and glare was found to be a problem, will the Applicant consider and implement the necessary mitigation measures?