



Submission by Mallard Pass Action Group (MPAG)

– unique ID ref. 20036230

Deadline 8:

**Comments on the Applicant's
Statement on 60 Year Time Limit**

1. Introduction

1.1 The initial application for a 'time unlimited' development was **unclear in its intentions** and as such untenable. Whilst some calculations had to be provided for some of the assessments, it was always possible that the actual time might be as low as one life cycle of the panels i.e. 25-30 years, or anything in excess of 40 years upwards.

1.2 Accepting the Applicant stated the effects were permanent, they also caveated many of the assessments with saying they were reversible, particularly when they wanted to limit an adverse effect. This has made it confusing to determine what the **nature of the change** would be **from the original baseline** to the **new 60 year baseline**.

1.3 It is of concern that their **intentions are still not wholly clear** and what the **rationale** was for choosing 60 years. When challenged in the hearing the Applicant nonchalantly said they '***picked a figure out of the air***' and '***what was most appropriate in terms of the Applicant's commercial position***'.

1.4 As a National Infrastructure project the timing of the development should not be set based purely on the **commercial benefit** to the Applicant, but should take account of a raft of factors set both by the **national agenda** of government along with **local community** and **environmental considerations**. What we can all be sure of is that **everything** will be very **different in 60 years time**, therefore is it worth taking the **risk** of setting a time limit as long as 60 years when the priorities could be very different.

1.5 Para 1.1.2 of REP7-60 year indirectly acknowledges there will be **operational effects** – "*all effects have been assessed as permanent, which is now changing to long term temporary, with no change to the assessment of effects at construction or decommissioning phases (beyond certainty as to when decommissioning would occur).*"

1.6 The new operational effects to consider are based around the '**replacement of panels**', as noted in **para 2.2.1** with the addition of equipment "**reaching end of life**".

1.7 This is further acknowledged in the oOEMP with new clause in para 2.24 which requires agreement from the LPAs that the replacement activity planned won't lead to "**materially new or materially different environmental effects to those identified in the assessment of the operational phase in the ES.**"

1.8 Whilst it is helpful to see some controls in place in the dDCO and oOEMP, **MPAG can still not reconcile the Applicant's belief there will be no operational adverse impacts and no material changes, a message the Applicant wants to avoid having to declare upfront as it would not weight the planning balance in their favour.**

1.9 Considering:

- 530,000 panels will need replacing at least once, reaching the end of their economic life within 30 years, there are no manufacturers offering longer guarantees, most are 25 years currently.
- Assuming the technology changes, the Applicant may not be able to replace like with like (dimensionally) and that may affect the frame configuration and subsequent construction required.
- Other electrical infrastructure will need replacing at least once e.g. inverters, transformers etc
- The pile driven frames may not last 60 years and may need replacing returning to a more typical construction phase
- Deer Fencing will have to be replaced once or twice or even updated to security fencing.

- The likelihood of ‘drip-feeding’ all of this activity within a 2 way 5 HGV vehicle movements a day makes no sense. Engineering and construction efficiencies dictate that panels would be replaced in logical blocks/groupings/field parcels.
- It could be argued the replacement of panels is akin to a scaled down construction phase, but in this instance occurs during operation and is not necessarily a one-off as there are so many elements involved.

2.0 Landscape & Visual/Residential & visual amenity

2.1 MPAG’s L&V expert Ms Tinkler does not agree there should be **any change in level of effects** from unlimited to 60 years, the effects should stay the same.

2.2 For the majority of affected people in their 20s to 30s, the 60 year lifespan will be permanent and also will have the biggest impact on the incumbent residents today who chose to live in the environment they are now in, not in and amongst and industrial landscape.

2.3 **The Secretary of State** takes the view *“25 years is a considerable period of time and the reversibility of the proposal is not a matter he has taken into account in his consideration of whether the scheme should go ahead¹.”* Therefore it would suggest the SoS view on 60 years would be amplified on this point.

2.4 Even the **construction industry** admits on average the generally expected and acceptable lifespan of a (new) home should last at least 60 years², highlighting the significant amount of time.

3. Ecology & Biodiversity

3.1 The replacement process could certainly cause **disturbance to some species**, and **damage** to some **habitat** areas through the ongoing trafficking across the grassland; as well as damage to **SSSi** verges as passing places will have been removed after construction.

4. Cultural heritage

4.1 The impacts on archaeological assets is still unknown for construction, let alone operation. Whilst the survey work is incomplete, it is not clear what areas of the site are particularly sensitive to any construction activity. If the panel frames have to be replaced for whatever reason (design or end of life), there is a possibility new frames will have to be pile driven all over again and it might not be in exactly the same place.

5. Highways and access

5.1 The Applicant has only supplied information for the number of panels in a 40ft shipping container , that equated to just over 200 days to just replace the panels alone (**529 panels per container**), it took no account of having to break down 40ft containers into **smaller HGV loads**; how many lorry loads of other **electrical infrastructure, fencing, panel infrastructure** etc would also be required.

¹ APP/M2270/A/14/2226557

² <https://propertyregistry.co.uk/how-long-will-a-new-house-last/>. HYPERLINK REMOVED

5.2 The Applicant's claim of residual benefits associated with planning decommissioning around other cumulative schemes seems unlikely. Any highway impacts from decommissioning would have to be agreed by the local authority in advance whether a time limited or fixed period of application, so there are no benefits, only operational negative impacts.

5.3 MPAG sadly have little faith in the HGV limit set in the documents given so many planning conditions on projects are broken all the time as there are not the resources to monitor and enforce. Residents face this frustration on a daily basis. Allied with an unrealistic routing plan, HGV traffic will continue to take cross country routes and cause **damage and disturbance** to villages and local residents.

6. Noise & vibration

6.1 The replacement of panels and other equipment will of course have **noise effects during operation**, perhaps not on the scale of the main construction phase, but if frames and wooden posts have to be piled back in again, that work would be very intrusive.

7. Water Resources

7.1 MPAG are delighted to hear the panels won't get 'wet feet' (so to speak) leading into 2080s by correctly angling the arrays and careful siting near the flood plain, but bitter experience and evidence demonstrates the extent of the flooding experienced over the last 10 years is not reflected in Appendix 1 and 2 to REP7-038 (0.5% AEP depths and Extents).

7.2 Even today as I write this submission (20.10.23) the rainfall today from **storm Babette**, on ground that is relatively dry, is causing **extensive flooding and breaching of the river banks** in places. The peak height of water at Shillingthorpe was indicated as 1.25m during the period 3.15pm – 4.45pm, so within the **Flood Alert (FA) bracket**, as shown on the graph on this link: <https://check-for-flooding.service.gov.uk/station/6027>.

7.3 Back in 2013 it became quickly apparent that the existing heights being used for Flood Alert (FA) and Flood Warning (FW) were not representative of the actual situation. This was reassessed and resolved that FA 1.18m and FW 1.32 m would be best. This was accepted by the EA and has since been shown to be correct.

7.4 Luckily the ground has been quite dry recently, so the situation did not upgrade to a flood warning (FW) in the context of Greatford village, just a flood alert (FA). Had it carried on raining into Saturday and Sunday there is no question the outcome would have been very different, the ground would have been unable to absorb the excess water and there would have been more surface water run-off. Storm Babette was relatively kind to this part of England, but the drone pictures taken on Saturday 21st show the extent of the overspill from the West Glen across the site.

MPAG's absolute concern is the speed of run-off from a hard surface, which then dependant on the amount and duration of rainfall is a cocktail spelling 'disaster'. This was only 1 day's rain and it was not torrential.

Drone photos from Storm Babette taken 21st October 2023:



Essendine, showing the river close to overflowing the road, breaching the banks into Mallard Point's land and surrounding and flooding the area around Essendine church.



Flooding around Essendine Castle looking North towards Carlby. Whilst the church was not flooded this time, any more rain and run-off goes into the aquifers and will come up through the church floor.



Showing river bank breached west of A6121 with Carlby village (top right)



Looking west out of Carlby towards the railway line. Behind the railway line field 7 is partially flooded



Facing upstream south of the railway line between Banthorpe and Essendine.



Facing downstream south of the railway line. Fields flooded either side of River Glen with Banthorpe Lodge in distance



Outside Banthorpe Lodge and associated properties. BRaW/1/1 bridleway completely impassable to foot bridge and river.



Banthorpe Lodge (as seen from the bridleway), flooding overspill from fields 24 and 25 across BRaW1/1



Flooding across bridleway BRaW1/1 from field 25



Road into Greatford flooded from surface water run-off from dyke from the arable fields.



Flooding from East Glen in Braceborough

8. Land Use & Soils

Returning to the land with vehicles and equipment to **replace panels** and **other infrastructure** due to the time limit being 60 years is likely to cause more **compaction** dependant on time of year and the approach taken. It could further compound any compaction that was created at the outset of construction.

Loss of food production in totality, not just from the high level of BMV land identified, is a huge risk to consent to over a 60 year period.

9. Climate & carbon

9.1 Without visibility of any calculations it is difficult to follow everything the Applicant has said in their D7 response.

9.2 The figures the Applicant provides are not conservative just because they state 2 x 40 year cycles. We already know there are the initial carbon costs and the replacement carbon costs, so there are 2 cycles. Whether that is 2 x 30 years or 2 x 40 years or 2 x 50 years is irrelevant as the majority of the carbon cost stems from the construction and associated transport. MPAG believe this is just an easy way for the Applicant not to have to redo their calculations based on 60 years, and the choice they would have to make about when they replace the panels – at 30 years or 40 years. The excel tables should be supplied to show how they have arrived at their headline figures.

9.3 **IPCC's** Technology-specific performance parameters Annex 111, table A.111.2 shows **3 ranges of lifecycle emissions** from 18kgCO₂eq/MWh (min) to 48kgCO₂eq/MWh g (median) to 180kgCO₂eq/MWh g (max). MPAG would contest the Applicant's starting point is **wrong using the median value**. Given the IPCC

report was published in 2014 and data was taken earlier to inform the document, in 2010 China had a market share of 55% of the solar panel market. In 2021 that share had risen to 75%. **Panels made in China use the dirtiest electricity via fossil fuel plants in the world and therefore the emissions of these panels should not be based on the median point of 48g CO₂e/kWh.**

Table A.III.2 | Emissions of selected electricity supply technologies (gCO₂e/kWh)

Options	Direct emissions	Infrastructure & supply chain emissions	Biogenic CO ₂ emissions and albedo effect	Methane emissions	Lifecycle emissions (incl. albedo effect)
	Min/Median/Max	Typical values			Min/Median/Max
Currently Commercially Available Technologies					
Coal—PC	670/760/870	9.6	0	47	740/820/910
Gas—Combined Cycle	350/370/490	1.6	0	91	410/490/650
Biomass—cofiring	n.a. ^a	—	—	—	620/740/890 ^b
Biomass—dedicated	n.a. ^a	210	27	0	130/230/420 ^b
Geothermal	0	45	0	0	6.0/38/79
Hydropower	0	19	0	88	1.0/24/2200
Nuclear	0	18	0	0	3.7/12/110
Concentrated Solar Power	0	29	0	0	8.8/27/63
Solar PV—rooftop	0	42	0	0	26/41/60
Solar PV—utility	0	66	0	0	18/48/180
Wind onshore	0	15	0	0	7.0/11/56
Wind offshore	0	17	0	0	8.0/12/35
Pre-commercial Technologies					
CCS—Coal—Oxyfuel	14/76/110	17	0	67	100/160/200
CCS—Coal—PC	95/120/140	28	0	68	190/220/250
CCS—Coal—IGCC	100/120/150	9.9	0	62	170/200/230
CCS—Gas—Combined Cycle	30/57/98	8.9	0	110	94/170/340
Ocean	0	17	0	0	5.6/17/28

9.4 If the Applicant truly believes the panels manufactured in China only fall within the median value emissions, can they **explain what scenario would sit at the higher or maximum end of the scale?** MPAG’s point, as outlined originally in our Written Representation is that the **carbon cost is underestimated**, and also takes **no account of carbon costs due to grid balancing** which is likely to be **even higher with no battery storage**.

10. Socio-economics

10.1 The impact would only be different had the Applicant been originally considering a shorter lifespan for the development i.e. just 30 years, 1 life cycle. If that was the case the negative impact to local tourism would continue for longer if the development now lasts for 60 years.