Planning Application 22/01682/F by Oxford New Energy

The proposal: - Development of a ground mounted solar farm incorporating the installation of solar PV panels, associated infrastructure and access, as well as landscape planting and designated ecological enhancement areas, on land North of Manor Farm, Noke Parish.

By: Mark R Stanley Price

I have read all the supporting documents; I have made repeated visits to the site, and walked along all field margins both at the site and adjacent; I have visited four other local solar parks. I am aware of the objections being submitted from affected villages, and am conversant with the technical arguments over energy production from the proposed solar park.

The documents attached to this planning application are impressive in scope and thoroughness (even if they are required). But careful scrutiny always pays off and with ancillary information, I am forced to concluded that:

"This planning application should be rejected"

I say this based on the following grounds:

1/ From expert opinion, the proposed solar park will make only a minimal contribution to Cherwell's renewable energy production,

2/ Further, once the electricity grid is upgraded, there will be further sites that are suitably within reach of a power line,

3/ Four other local solar parks of approximately the same size are all almost invisible to anywhere with public access; only one has a short 'avenue' of footpath between panels on either side, (and this footpath appears to be unused from the photo in the LVIA); they are not a relevant model for what the Noke park would look like and its impacts on the landscape if built,

4/ The current Noke proposal, although increasing the width of the 'avenue' over 500 m to 50 meters between fencing, is an improvement but for much of the walking Noke circuit, there will be no distant views of Beckley Hill, Brill Hill etc. All will have been lost, yet just one distant view of Islip church is applauded as highly meritorious,

5/ Conversely, the panels will remain visible from the Oxfordshire Way even after 10 years, and will be a visible, reflective sheet from parts of Beckley village for ever,

6/ While the current biodiversity status of the site is poor, there is little certainty that the proposed improvements will make a significant difference, as assessed for birds and moths;

7/ The loss of arable land for feeding birds will probably be the main cost to the RSPB Otmoor, 500 m distant at its closest; the risk of the panels being mistaken for water remains a threat; much conservation planning is based on the precautionary principle: this would mean that where there is doubt over the impact of the panels on biodiversity, the decision should favour not permitting panels at this time,[1]

8/ The Otmoor basin is a unique geomorphological structure, and its history of development, or lack of it, makes it a unique resource in southern England; this alone is reason for not allowing creeping development at one of its margins,

8/ The justification for building in the Green Belt does not meet the criteria of exceptional circumstances,

9/ The residents of Islip, Noke and Oddington have all stated their firm objections to the proposal; Planning can surely not imposes something so unpopular on many reasoned grounds?

The Otmoor landscape

The Otmoor basin, bounded by the seven 'towns' of, Noke, Oddington, Fencott, Murcott, Horton-cum-Studley and Beckley, together with Islip, surround a unique inland drainage basin, formed in the last glaciation, 30,000 years ago by many changes in the flow of the river Ray into the Cherwell, thence the Thames.

As a wetland, it was for centuries an open access area for the towns' residents; land-grab attempts in 1830 to enclose it led to the futile Otmoor Riots. But the primitive efforts to drain the basin are still evident in the pattern of water courses and generally open terrain.

Having seen off the M40, the RSPB reserve has returned much of the basin to wetland and wilderness, with striking success: the reserve hosts thousand of wintering lapwings, golden plover and diverse ducks; cranes bred there in 2021 for the first time in Oxfordshire for 500 years. 13,000 birders flock there annually, many from hundreds of miles away.

The reserve and surrounding countryside is a resource for amenity and exercise of enormous value, only 6km from central Oxford - yet a world apart, of wide open spaces and magnificent skyscapes.

Solar panels reflect polarised light, just as water bodies do; there is potential for enormous impact on birds and bats; the axis between Islip and Horton-cum Studley is observably a major flyway for

[1] The Otmoor reserve's wintering flocks of birds probably meet the criteria for a site within the Ramsar Convention on Wetlands of International Importance. If done, this would be UK's first non-coastal Ramsar site.

birds, and many leave the reserve to feed on the surrounding arable fields. What would happen if the murmuration of 100,00 starlings was lured to roost on the panels? Who knows. There is a precautionary rule that solar panels cannot be sited along railway lines for fear of fire: surely the same precaution should hold over placing solar panels close to such an important area dedicated to wildlife?

The Otmoor ecological unit is considerably larger than the RSPB reserve: in winter vast flocks of lapwings and golden plovers can been leaving the reserve to feed on the surrounding arable lands.

Otmoor's unique geomorphological origin results in the enduring form of the Otmoor basin, with soft, gentle landforms. Its major attraction is being a large open space, yet close to a major conurbation but hidden from it, all in the crowded south of England. Its rarity should guarantee protection from creeping development, especially one so obvious and intrusive as 33 ha of solar panels. These will be highly visible from the Oxfordshire Way above Noke, and from houses in Beckley along the Roman road down to the RSPB reserve.

Otmoor has huge potential as a recreational area for Oxford, a resource increasingly needed; a resource of open country that feels like countryside and not a light industrial estate which the solar park would confer.

The Landscape and Visual Impact Assessment

My observation on this are presented in Annex 1.

My summary observations on it are:

- 'Professional judgment' has resulted in conclusions which residents and others would not agree with,
- The effort to claim that the site is already industrialised from the presence of power lines is absurd.
- There is no hiding the fact that an area of panels and associated infrastructure will be visible for many years, if not for ever,
- Infill and screening planting may meet one objective but at the same time they cut down on the more distant viewscapes – which will be curtailed anyway by the panels,
- The argument that the solar park meets the exceptional conditions for development in the Green Belt is specious,
- On grounds of amenity and aesthetics, the solar park should not be allowed to take up this area of Green Belt.

Land use and conservation under and around panels

The Noke proposal sets great store by the net gain for biodiversity under the proposed solar park.

There is still only a small literature relating to UK conditions and the impact of solar parks on biodiversity.

However, there is one key study: *H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity.*

This study was based on 11 solar farms on southern England. Each farm had a control plot alongside. Plant, invertebrate, bird and bat surveys were caried out on both the solar plot and its control.

Despite the authors' conclusion of basically positive results, examination of the text shows statements such as those presented in Annex 2:

My observations from this are:

1. There is no overwhelming gain in biodiversity (in the groups sampled) from the presence of panels,
2. Especially, there is no clear benefit to birds,
3. Sheep grazing is a complex issue in relation to density and duration of sheep presence[2]. While the Noke proposal has no detail on a sheep management regime, there should be no assumption that botanical diversity will necessarily gain.
4. Claims for a massive gains in biodiversity such as the 54% for habitats and 6% for hedges (Ecological Appraisal) need to be treated sceptically, even if they are given respectability through use of a government metric.

Proposed conservation areas

The Noke proposal identifies an area on the north side of Horse Field to be a conservation area (largely because it floods frequently and is hence rarely productive under a crop), linked to the riverine woodland and the small island between the River Ray and New River Ray. Together these might amount to 5 ha. Given the mantra for UK conservation that it needs 'more, larger and better connected', these small areas seem little more than a sop.

Further, with the proposed permissive footpath from the existing bridleway between Oddington and the reserve, thence across the south end of Horse Field and then down its western side, with panels to one side, human disturbance of this conservation area will be considerable. Further, the existing footpath from the Logg Farm bridge runs for some 500 m alongside the river.

[2] It is ironic that most rewilding efforts in UK depend on removing sheep because of their close grazing, producing a short sward with all palatable plants eaten out!

Values

The basis of planning discussions in this country is assessing the fair balance between public and private good.

Public and private goods can be seen as costs and benefits, and for the most part are quantifiable. They might include the overall contribution of solar energy to the grid, or the electricity generated per square meter, to be compared with the food or energy production from farming per square metre.

But, this quantitative approach is not of itself wholly adequate in making planning decisions. To this must be added qualitative aspects such as how do various stakeholders regard the solar development. How do they value its existence or presence, or its intended absence, based on the assets currently in place and used.

The solar park application can be viewed as a dynamic equation between the interests of food production, energy production, and biodiversity status, under the conditions of with and without the solar park.

Using this model and assessing private and public benefits and costs under the scenarios of with and without the panels, the following conclusions are evident:

- Public benefit for food production decreases under 'with panels',
- Public energy benefit obviously increases under panels, though the precise quantum of this increase is open to challenge,
- There will be some public benefit for biodiversity under panels,
- Private benefit under food production is present without panels, as the landowner takes a farming income,
- This decreases under panels, but the private benefit for energy production increases greatly,
- There is no public cost without panels for food, energy or biodiversity, but there will be a public cost to food production under panels, and a massive public cost from energy production under panels,
- There will be some private cost with panels due to the reduced farming income received from non-panel areas. But this will be offset against the revenue raised from energy generation.

In summary, building the park yields great economic private gain and some public benefit, with a cost to the public of food production. The costs to local interests and users of the area will be

immense on amenity and aesthetic grounds, through loss of viewscapes and the sense of Otmoor providing wide open landscapes.

Making decisions within this dynamic equation is difficult, especially when the relative quantitative advantages of one change. The last few months, due to the war in Ukraine, has shown this. This country imports 60% of its food; we are more energy independent than many European countries due to the benefits of North Sea oil and gas, and a dependable link with Norway; furthermore, we have the infrastructure to receive liquid gas from the USA.

Fundamentally, energy can be produced renewably in many ways: solar, by wind on land or sea and, increasingly in future, from hydrogen production. But it is inescapable that arable food crops can only be grown in one place – on land. At the moment, despite UK's intentions of net zero by 2030 (which is technically impossible to attain), the diverse crops (which include renewable biomass) grown now on the proposed solar site are more valuable than a marginal increase in renewable energy for Cherwell. Continuing to build new houses in Cherwell's villages, without evident solar panels, only emphasises a solar park as the wrong priority. The warehouses sprouting up around Bicester, creating further brownfield sites, should also be a source of embarrassment, showing that the Noke solar park is a misguided priority.

It is significant that Noke Manor Farm was for sale in 2018, and remained unsold, despite its obvious attractions and assets.

Subsequent to this failure to sell, the concept of a solar park emerged, the results of which we are now dealing with. Not only does the present owner now impose a less-than-preferred solution and use of his land on the public, but he is already planning to move to Oxford, whereupon the property will presumably be sold, with the hoped for added attraction of the solar park.

Is it unreasonable to object very strongly to this situation in which local residents are treated as irrelevant compared to the lure of making money? This is a form of asset-stripping.

Further, the argument that the site is the only feasible one due to the ease of connection to the 33 kv power line does not justify establishing the park: the proximity of site to the power line is merely a commercial advantage, not a justification.

Annex 1

Landscape and Visual Impact Assessment

P4. 'the landscape is influenced by transport corridors including the railway line Oxford-Bicester'. Yes , it exists but what does 'influence 'mean? If you ask locally whether the railway line has any detrimental impact on values of the site, the answer will be none.

p.5. mention is made of professional judgement to LVIA. But, surely the relevant judgement, which is subjective perhaps, should be done by local residents or users of the site?

p.8 'cumulative land use and visual effects ' are not included in this LVIA because it is not required through not being an EIA. But how can cumulative effects be ignored?

P4 Table 1 re ESD13 and natural features. Pre-empting a judgment on this, the whole point about the Otmoor basin is that while it has no strong natural features, it has inestimable value as wide open space, large skies etc; that is what all visitors remark on, and is all the more remarkable though being just 6 km from the centre of invisible Oxford city.

p.19 speaks of the 5 purposes of Green Belt in the NPPF, but does not list them. The LVIA then dismisses Purpose 1 'to prevent the unrestricted sprawl of large built-up areas': does this not describe the solar proposal? It is sprawl, however defined, but who knows that the future might hold. The proposed area of panels cannot be anything but a 'large built-up area'. This must be a major flaw in the LVIA, to be checked / confirmed again later professional judgement.

5.9 re Green Belt: "the impact on the 'openness' of the Green Belt is closely

related to landscape and visual considerations, as are the matters of incursion

into the countryside (sprawl)" So the solar must be include in sprawl.

P20-21 "Views towards Churches are regarded as being 'very important'". Apparently only for Islip.

P18 CTA, although the CTA only covers the eastern side of the site, CTA policy is to exclude development within the CTA and adjacent areas.

P23 On Landform and topography: the key omitted point is that land rises from the northern boundary, the River Ray, to the southern edge of the proposed panels; the land then drops away towards Noke village but by 5-6 m., (measured on the ground by GPS), ensuring that the panels will not be visible at ground level from Noke Manor Farm.

p.26 "A public footpath (ref. 309/1/10) runs through the centre of the site and partly

along the northern boundary, which then extends north and south to the

settlements of Oddington and Noke respectively."

Not correct: there is no public footpath extending south to Noke as stated: the connection between the footpath and bridleway to Noke is across private land – much used but to be replaced by the permissive footpath along the existing bridleway and two sides of Horse Field.

4.27 Wooded farmland LT is not relevant to solar park. Site is entirely within 'Alluvial Lowlands'

4.42 LVIA argues for repair status of the site, to encourage hedge repair replanting etc. But '*Development should be permitted only if the scale, size, materials and character of the scheme are designed so as to blend in to the area with sensitive siting*".

4.51 "Whilst the site and study area do share some commonality with the published assessments, it is useful to go a step further and consider the site and its more local landscape character in order to understand what, if any, further influences are at play."

4.53 "In terms of condition, the hedgerow vegetation across the site is generally

fragmented and lost in places". This is simply not the case as much of the site has hedges which, unlike many locally, are not flayed every year, but every 2-3 years.

4.54 "The mature vegetation on the northern settlement edge of Noke and alongside the River Ray south of Logg Farm creates localised containment of the site. Minor parts of views are available across the site towards built form in Noke and also the Church in Islip which emphasises the proximity of existing built form. Electricity pylons and overhead wires also run across and above the site, comprising detracting features which serve to reinforce the influence of infrastructure across the local landscape context."

This last sentence is blatant misinterpretation: the powerlines in the site (of inestimable value to the applicant) contribute in no way to a built environment.

They are present, silent, and do nothing to impede views which the solar park will do,

4.58 "It accounts for general judgements on the theoretical visibility of a site or proposed development and sets a broad context for the study area within which to address landscape and visual impacts." 'general, 'theoretical', 'broad context' are terms all so woolly and subjective.

4.59 "From the north, views of the site are limited due to intervening vegetation, notably along the River Ray immediately to the north of the site;" this is certainly not true in winter.

"however some views are available from the Oxfordshire Way to the west of Noke." What is meant by 'some'? There is a massive wide view of the site from along a wide front on the Oxfordshire Way across Noke Hill.

4.65 “From Charlton-on-Otmoor, which was not identified in the screened ZTV, to demonstrate the relationship between the settlements in the surrounding landscape and the site.” But why were sightings not done in Oddington which is much closer than Charlton?

4.67 “that a key characteristic of the local landscape are hedgerows with mature hedgerow trees”. Not really: the key impression of the Otmoor landscape is its openness without strong morphological features.

4.73 Rowles Farm solar: see my comments elsewhere; View F p.46 suggests that the footpath between the panels is not used, and this length between panels is only 200 m, unlike the 500 m avenue in the Noke proposal.

5.3 “Therefore, in order to inform the analysis of impacts, judgements should be made with reference to the specific changes which arise from the type of development being considered.” Judgements again: we might not agree.

5.7 “It should be noted that the components of the proposed development at completion are temporary but considered to be long-term.” When does temporary end and long-term begin?!

5.12 “There is sufficient distance and physical separation relating to landform which reduces any intervisibility between the site and the outskirts of Oxford to the west and south and so the site does not play a role in preserving the setting and special character of a historic town.” If so, why is the view of Islip church tower so important?

5.13 “The solar farm development proposal is also considered a temporary development with an expected lifespan of 40 years. At the end of this period the solar photovoltaic panels and associated infrastructure can be dismantled and restored to its existing arable land use.” This is simply not credible.

5.16 There is no information on development of the operational track which is currently a pleasant walk along an agricultural track.

5.17 “The opportunity to continue the ‘enclosed’ character of the public footpath through the site from the south to enhance existing hedgerow vegetation/green infrastructure as well as minimising visual impacts from this route;” But the public footpath is not enclosed throughout the site. The proposal calls for enclosing it.

“The mature vegetation along the northern edge of the settlement of Noke which restricts potential views of the proposed development from residential receptors;” The rise of land (see elsewhere) will ensure the occupants of Noke Manor Farm cannot see any panels.

5.30 “Such enhancements will have benefits including screening the development across the surrounding low-lying landscape, strengthening the local landscape character”. Yes, but the more screening is in place, the greater the reduction of distant views, which will be suffering greatly already, as Beckley Hill, Noke Hill, and Brill Hills will all be invisible from the public footpath along the northern side of the route. This is a major amenity loss.

5.36 “To the north there is an area proposed for ecological enhancement with wetland and meadow planting which will enhance biodiversity and the green infrastructure networks between the site,” This looks good on the map but is ?2ha meaningless in terms of the accepted standard for nature areas of ‘more, larger and better connected’. And the patch will be subject to walkers along the existing bridleway and 2 sides of Horse Field, causing constant disturbance by day to this plot.

6.1 “Landscape sensitivity is a term applied to specific receptors, combining judgements on the value related to a landscape (i.e. the receptor) with the susceptibility of the landscape to the specific type of change proposed.” Are judgements of the scheme being sought from the receptors (=people!) who live in the area, or are we expected do to do this via such responses to the application?

6.7 “Seclusion and remoteness are moderate in the LCT, due to the general physical and visual containment of built form at a local level and views across the wider agricultural landscape. However, the B4027, A34 and railway line cross this LCT which reduces the sense of tranquillity.”

While this LCT may be ‘Elevated or low-lying arable farmland with weak structure’, the whole point is that the site is part of a larger landscape – it is the Otmoor basin that matters. And the bird reserve is no further from the site than the B4027, and the A34 is much more distant. It is simply not acceptable to say that these reduce the sense of tranquillity.

“Associations There are no known associations with people or events in history specifically related to the LCT”. There may not be with the specific LCT but as I argued above the landscape of relevance is the Otmoor basin, for which there are numerous historical, literary and other associations.

6.8 “The scenic quality of the site and its local landscape context is influenced by overhead electricity pylons and powerlines which run across the site and are detracting features. Albeit

relatively well contained by vegetation, a slurry tank lies adjacent to the southern site boundary which further decreases the scenic quality.”

As a local receptor, I would dispute these detracting features: they have been there and accepted by users for decades.

“These routes also pass through the settlements of Noke, Oddington and past Logg Farm and

therefore their amenity is influenced by urban land uses."

This is preposterous: these villages are not urban (compared to the proposed panels), and the whole point of the routes is to connect the villages (historically and now), providing amenity and exercise opportunities to the occupants of these 'urban land uses'.

6.11 "Although not generally visible but often audible, the main transport networks of the B4027, A34 and railway line also run through this LCT." Yes, but the residents of Oddington live with the M40 noise in the background, without detriment. The railway will be electrified well before the end of 40 years, and more vehicles will also be electric. Not a sound point.

6.15 "Overall, the landscape analysis has determined the LCT R1a Elevated or low lying, arable farmland with weak structure to be of **medium value** and **medium susceptibility**. Therefore, the LCT is considered to be of **medium sensitivity** in landscape terms."

But given the site lies within the Otmoor basin, the weak structure is part of a highly valuable landscape, on the appropriate scale. Given this, surely the LCT should be highly sensitive in landscape terms?

6.26 "An existing solar farm near to Rowles Farm is located within the study area and so the LCT is already influenced by the type of development proposed." See my analysis of local solar parks: Rowles is a good example of seclusion and invisibility, which Noke is not. If Rowles falls into the same LCT, than the assessment process is faulty, for the relevant landscape for Noke is the Otmoor basin, not just a small patch of arable.

6.34 "Assessed alongside the **low to medium sensitivity**, this will result in a **moderate adverse effect**." At last an admission of adverse effects , not just minor but moderate. VP5, for example: "Magnitude: **Low to Medium** Significance of effect: **Moderate adverse**

Magnitude: **Low** Significance of effect: **Minor- Moderate adverse"**

But the assessments are based on professional judgement: surely, tolerance of a consultant for a view of a solar park is much greater than most members of the public?

7.8 "The views in some instances also display urbanising infrastructure features including views to existing built form and the electricity pylons and overhead wires which extend across the site." If these are urbanising infrastructures, they are the best reason for not allowing further industrialisation / urbanisation at the edge of the Otmoor basin.

8.3 "Visual assessment is the description and analysis of the views experienced by

receptors from residential properties, public buildings, public open spaces, public rights of way, open access areas and transport corridors and the potential effect of the proposed development on these receptors." Yes, one can describe and analyse the views experienced by receptors – but you cannot assess the attitudes and perceptions of these by the receptors. Public consultation is the only way.

Annex 2

Excerpts from *H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity.*

7.15 Sheep grazing is known to be a good mechanism for grassland diversification where sheep are at lower stocking densities, and especially where grazing is stopped during the flowering season (April to July), as occurs on several sites. However, where sheep grazing is undertaken at higher stocking density, and without a pause for flowering there is little opportunity for the grassland to diversify.

7.1.7 By contrast, at Site 6, Site 2 and Site 4ii, intensive sheep grazing at higher stocking density and with no pause for flowering, has led to a relatively low botanical diversity: these sites ranked lowest of all in terms of botany. For Sites 6 and 4, there was no significant difference in plant diversity between solar and control plots.

7.1.25 Overall, a higher diversity of birds was found within solar plots when compared with control plots *(although none of the results were significant on a site-by-site basis:* my italics*).* This may reflect the change from a homogenous arable environment to one with more foraging opportunities as well as structures for cover or perching.

7.1.26 The abundance of birds was not significantly different between solar and control plots, however, the results indicate a trend towards higher numbers of birds using solar farms when compared with control plots (the P value was close to the threshold of significant at 0.06)

7.1.28 The study shows that overall, both a higher diversity and abundance of birds of conservation concern utilise solar arrays when compared with control plots.

7.1.30 Another aim of the study was to investigate the usage of solar sites by ground nesting birds, as it is generally assumed that these species will be dissuaded from utilising these sites due to the cluttered nature of the environment. Skylark was the only ground nesting bird which was regularly recorded and the analysis shows that at only one site was the number of skylark territories within the control plot significantly higher than at the solar plot. Overall, there was no significant difference between solar and control plots. This shows that skylarks are utilising solar farms within their territorial boundaries

7.1.32 In conclusion, although skylarks were not found to utilise solar sites for nesting, they do incorporate them into their territorial boundaries and some of the sites may represent a valuable foraging resource for this species

7.1.33 The findings of the study generally suggest that fewer bats are recorded within the solar array than within the control plot, although the differences in abundance of bats was only significant on a small number of sites and the overall comparison of solar and control plots was not significantly different. It also appears clear that bats do not entirely avoid solar arrays with regular activity by bats recorded at all sites.

7.1.40 Nevertheless, it remains possible that there is a reduced level of bat activity within solar array sites. This may be explained by the interaction of the bats with the solar panels. Research suggests bats may be confused by artificially smooth surfaces. Bats have been observed trying to drink from flat panels within laboratory settings and it has been suggested that they may have difficulty in perceiving glassy surfaces as they do not reflect the echolocation calls in the same way as a natural (and rough) surface. Instead, bats perceive smooth surfaces as holes and may even collide with these surfaces (pers. com. Stefan Greif). Whilst it seems likely in a natural setting confusion would not be a significant risk, as bats will learn to navigate these objects, the presence of smooth surfaces may be disconcerting to bats who consequently avoid these areas in favour of typical natural environments which they are familiar with.

7.1.42 The findings of the study suggest that a variety of species of bats do use solar arrays but possibly at a lower level than within the control plots. If this pattern is true then the proliferation of solar arrays across the UK could be having a small but nevertheless, adverse effect upon foraging and commuting bats.