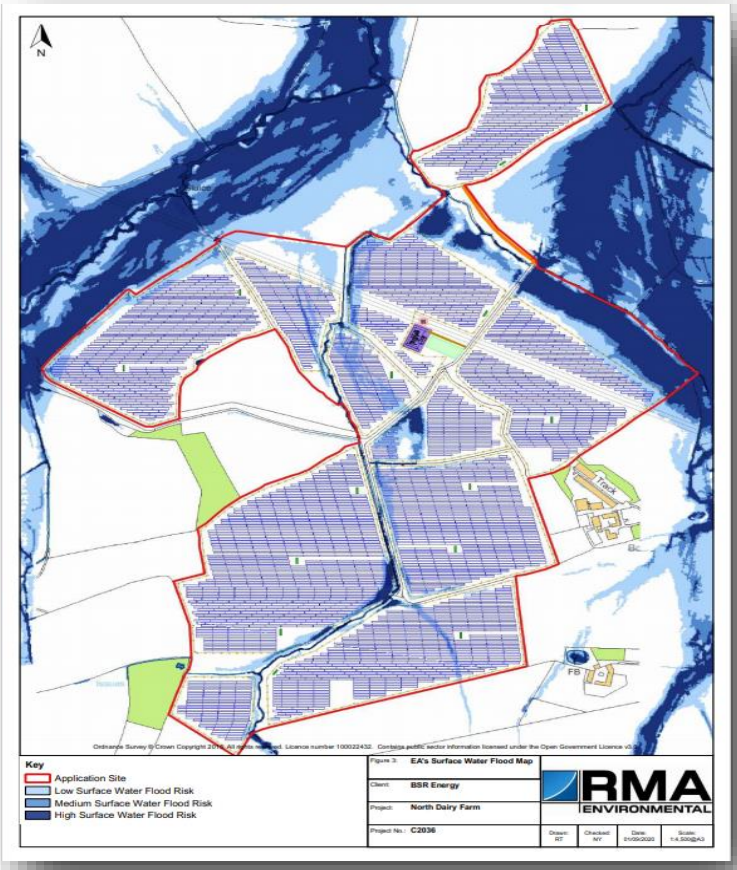
'SAVE HARDY'S VALE' COMMUNITY GROUP - PROPOSED SOLAR GENERATING ARRAYS ON LAND AT NORTH DAIRY FARM, PULHAM DT2 7EA

Full Planning Application P/FUL/2021/01018

SHV MEMORANDUM - IMPORTANT MATERIAL PLANNING MATTERS



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INTRODUCTION

1. **At this time of crisis for food production and low carbon energy generation, why is the North Dairy Farm Solar proposal so controversial and almost universally opposed by the North Dorset community? Well, put simply, it would be in the wrong place and would not conform to the Council's development policies. It certainly would not "protect and enhance" Dorset's "greatest economic asset" its "exceptional countryside". The Applicant has not provided surface runoff calculations to "demonstrate" that the solar development would match or reduce the existing greenfield runoff rates. In the absence of that objective "demonstration", planning approval should be refused.**

RIGHT TIME – WRONG PLACE

2. In late 2020 Dorset Council declared a Climate and Ecological Emergency and committed to work with others to help the county become carbon-neutral by 2050. The Council made clear that we are facing a man-made disaster of global scale. The IPPC and war in the Ukraine have highlighted just how **fragile our food and fuel supplies systems are**. Russia's inhuman aggression has added a European crisis to a world disaster. Few would disagree. [1]

[1] 'AR6 Synthesis Report: Climate Change 2023' The Intergovernmental Panel on Climate Change (IPCC)

OUR HEALTH AND WELLBEING

3. Dorset Council recognise that our communities know the Climate and Ecological Emergency are intrinsically interlinked. Both are crucial to our health and wellbeing. Changes in either have knock-on effects on our physical health, sense of wellbeing, and safety. **We all rely on the natural systems for our very survival, such as food and energy, clean air, and water.** But, in the urgent rush to resolve the crisis and move quickly to low carbon energy generation, it is vital that we don't carelessly destroy the valuable ecological systems we have a duty to protect, or that help to feed us**. It is essential that we choose the right mix of low carbon energy generation - and put it in the right places**. As the Prime Minister set out at COP27, '**there can be no solution to climate change without protecting and restoring nature'.**

PROTECT AND ENHANCE THE LANDSCAPE AND ITS BIODIVERSITY

4. The Local Authority note: "We are not starting from scratch. All the former Councils, which now form Dorset Council, had been working for many years to tackle climate change, improve the **flood resilience of communities**, **and protect and enhance our landscapes and biodiversity in Dorset**".

LOW CARBON ENERGY MIX

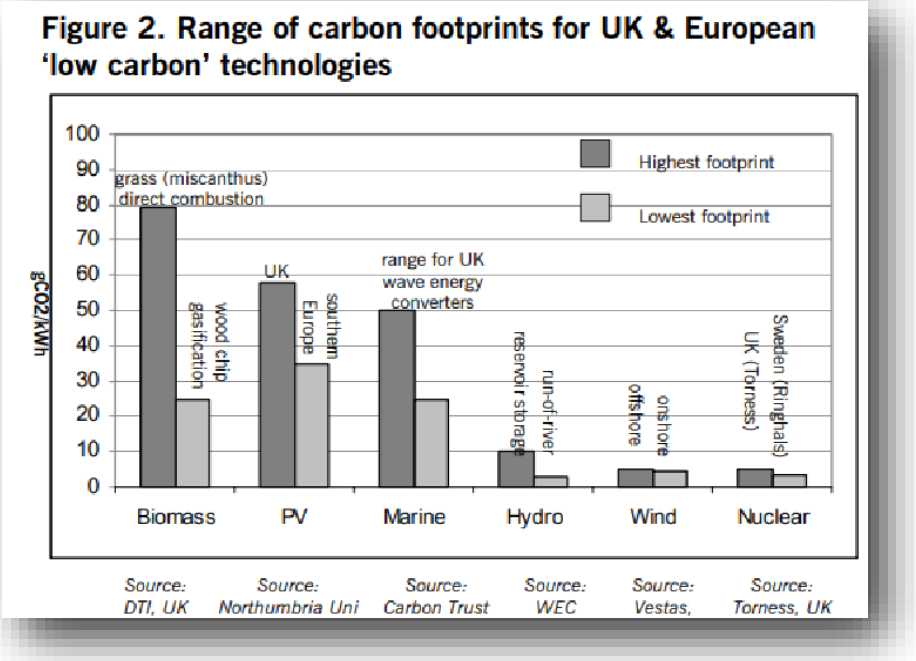
5. It is self-evident that the sun and wind cannot provide all the energy we use. Solar is not much good at overnight electric car charging for example. And, at times of exceptional 'peak demand' additional generation and storage capacity will still be needed. Now, our energy demand peaks are filled by low carbon nuclear, some storage, our continental interconnections, but mainly by easily switched on and off closed cycle gas turbines.

WIND HAS A MUCH LOWER CARBON FOOTPRINT THAN SOLAR

6. Electricity generated from wind energy has one of the lowest life cycle carbon footprints. As with other low carbon technologies, nearly all the emissions occur during the manufacturing and construction phases.

7. There is little difference between onshore (4.64gCO^2 eq/kWh) versus offshore (5.25gCO^2 eq/kWh) wind generation (Fig 2). **Life cycle CO^2 emissions for UK photovoltaic power systems are around 97% higher at about 58gCO^2 eq/kWh.**

8. Wind turbines average just 11 grams of CO^2 emission per kilowatt-hour of electricity generated. That compares with 44 g/kwh for solar, 450 g for natural gas. But beating them all is the original large-scale zero-carbon power source, nuclear power, at 9 g/kwh.



A MISSING LINK!

9. A reliable night and day generator of low carbon energy, and a potential solution for the UK's base load challenge, is tidal power. Our islands are surrounded by that energy source which never stops working.

ON TRACK FOR 2030

10. **The good news is that the Government is on track to supply all the homes in the country by 2030** from the rapidly expanding network of, increasingly efficient, offshore wind turbines. Improvements in storage systems and new technology, including Green Hydrogen, are being rapidly developed. Carbon capture, in all its guises, is now high on the local and national agenda.

THE WRONG PLACE

11. So again, at this time of crisis and wide support for moving urgently to low carbon energy generation, why is the North Dairy Farm Solar proposal so controversial and the community overwhelmingly opposed to it. Put simply - **because it would be in the wrong place!** And importantly, it **would not fully conform to the Council's or national development policy and plans.** [2] Nor would it "protect and enhance" Dorset's **"exceptional countryside"** and **"valued landscapes"** or **improve flood resilience in the area.**

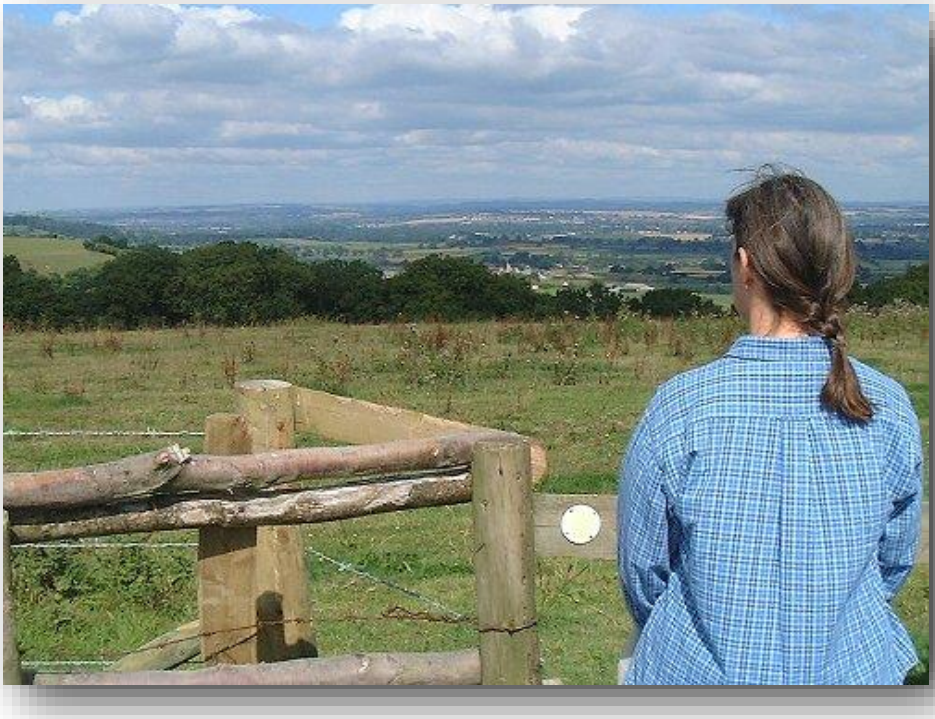
[2] The proposals do not comply with the requirements of paragraph 154 and 170 of the NPPF (now 158 and 174 of the NPPF 2021) or policies 3, 4, and 22 of the North Dorset Local Plan

HYDROLOGY

12. The unique hydrology, flood and natural ground drainage issues of the area have not been fully recognised and addressed in the Application. For half a lifetime the proposal would destroy part of the existing high-quality and protected ecological systems we value, which support the local economy and helps to feed us - some of the **very things national and local policies and the Council's Climate and Bio-diversity Emergency plan is designed to avoid.**

AREA HIGHLY SENSITIVE TO DEVELOPMENT

13. Expert Landscape Assessment has identified that the area around North Dairy Farm is a '**highly valued landscape'** which should be protected. It is within the impact zones of the Blackmore Vale Commons and Moors Site of Special Scientific Interest (SSSI), the Rooksmoor Copse Special Area of Conservation (SAC), and the Alner Gorse Butterfly Reserve. The proposed Site is in the setting of the Dorset Area of Outstanding Natural Beauty and would also impact the settings of two protected Conservation Areas, many listed buildings and heritage assets. Very importantly, it would be in a special area the Council itself identified as **very highly sensitive to large-scale solar development**, and which it also considers **has the qualities of a National Park.** The AONB Management plan makes clear that the Dorset AONB (and the North Dairy Farm) lies "**WITHIN an area known for its OUTSTANDING ENVIRONMENTAL QUALITY"**. It is acknowledged in the Application and by the Local Authority, that the '**outstanding environmental quality'** of the area would suffer harm if the industrial development was allowed.



LANDSCAPE EXPERT'S CONSIDERED VIEW

14. Phillip Hanson, a Chartered Member of the Landscape Institute, wrote to the Council in 2001: "This part of the Blackmore Vale **is a valued landscape** for the purposes of the National Planning Policy Framework. This is mainly, but not exclusively, because of its **perceptual qualities**. It is a **robust and intact landscape with a pastoral and tranquil character**. It has **long-standing dairy farming traditions**, **historic association between the escarpment located Iron Age hillforts** which have directed the evolution of **the Vale's agriculture and settlement patterns, and internationally renowned cultural associations with Thomas Hardy and William Barnes. The Council supported related tourist trade is strong."** The site is enclosed by species rich hedgerows which have remained largely intact since the Middle Ages. **They qualify as 'important' under the Hedgerow Regulations.**

NO EXPERT SUPPORT

15. **Dorset Council's Landscape Architect and the Area of Outstanding Natural Beauty Planning Officer do not support the proposed development.** Both have clearly identified the harms that would be caused to the nationally protected landscape areas in 'Hardy's Vale of the Little Dairies', and listed the planning policies that protect it.

UNACEPTABLE ADVERSE HARM

16. In the recent Park Farm, Gillingham solar Appeal, despite the area already being 'urbanised', the Council argued that the 33-hectare Site was in a "**valued landscape**" and that the solar development would lead to "**unacceptably adverse harm to its character".** In that case there are only two viewpoints where visual harm would be caused. **Around the 77 hectares of the proposed North Dairy Farm development there are 32 public viewpoints,** and the Site is surrounded and crossed by well used Public Rights of Way.

A HIGHLY VISIBLE DEVELOPMENT

17. Even after 15 years growth of the proposed mitigation planting, the North Dairy Farm industrial development would remain visible, particularly from the high ground surrounding the site. From the footpaths crossing the Site, the uninterrupted panoramic views into the Dorset AONB are clearly identified in the Applicant's 'Environmental Assessment' and, of course, are significant material matters in the consideration of the harms identified.

A UNIQUE LOCATION

18. Unlike Canada Farm, the North Dairy Farm Solar proposed development, **cannot be hidden from public view**. Compared to the Spetisbury development, it is **not on freely draining land**. In fact, the Applicants say it is saturated for over six months a year. The North Dairy Farm decision is not "**on a knife edge**", as was speculatively suggested in the Higher Stockbridge Farm solar case. And, unlike the Park Farm Gillingham solar installation, it would be in an un-urbanised rural "**valued landscape" within the setting of the Dorset Area of Outstanding Natural Beauty. Neighbourhood plans** show the landscape is also **"locally valued"** by the community and **therefore is protected by the National Planning Policy Framework.** [3] In the recent Cruxton Farm Application the main reason, noted in the Planning Committee minutes, for refusing to grant planning approval, is that the proposed development, on 17.66 hectares of agricultural land, would have a **"huge"** impact on its surrounding and designated landscape. As noted, the NDF Solar proposal is for 77 hectares i.e., an area 4.36 times larger than at Cruxton.

HERITAGE ASSETS HARMED

19. The expert Heritage Assessment [4] concludes that there would be adverse major effect on significant elements of the setting of the Conservation Area. This includes a major impact on the historic rural character of the fieldscapes within the development site which represent a surviving pre 1800 landscape with earlier Medieval time depth which is intimately related to the character and special interest of the village of Hazelbury Bryan. It also includes major impact on unspoilt views from and towards the Conservation Area boundary from which this relationship can be appreciated.

ALREADY BIO-DIVERSE

20. The Applicant's 'Environmental Statement' shows that the proposed development site and surroundings is already a wonderfully 'bio-diverse area'. To suggest that covering and shading the land from the sun all day is somehow going to improve the area's bio-diversity is a very poor attempt at 'gilding a lily'. Here is what James Gray, MP for N Wiltshire said recently: "The notion that solar farms can be good for biodiversity is, of course, complete nonsense. No shepherd worth his salt would graze his sheep on a solar farm. The grass is low quality. I do not think there is one single solar farm in the west of England currently being grazed, and the notion that they could be is nonsensical. Equally, the notion that, somehow, wildflowers thrive on solar farms is simple nonsense; it is simply not true. There is not a single wildflower that I have ever seen on any of the solar farms that I have ever visited. Therefore, the notion, which the developers put forward, that solar farms are somehow biodiversity-friendly is absolute nonsense".

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[3] Including NPPF 174a.

[4] Heritage Submission – Wyvern Heritage – Emma Rouse MCIfA MA BA Hons

INACCURATE LAND CLASSIFICATION

21. The Agricultural Land Classification survey [5] submitted by the applicant assessed the quality of the land across the site. In total 42 auger bore site locations were selected. Eighteen (43%) of those locations are within the solar farm red line area. Samples of topsoil were only collected from 6 of these locations. The gradings for the 42 locations were stated as 3b, and 4 across the whole farm.

22. The report states that there is no land graded as 3a because the "wetness" factor precludes 3a being awarded. This is incorrect as the analysis provided by the Applicant in their Appendix shows that Field 17 (within the planned solar farm) – **sample location AB26 - had a 3a reading and thus qualifies as BMV land**.

23. In addition, the sample location AB37 in Field 13 (also within the planned solar farm) had a 3b reading even though the soil was classified as Medium Clay Loam (Table 3.2) and similar to AB26 was less than 27% clay. Table 3.3 states that soil with these characteristics **should be classified 3a**.

24. Wetness is a key determinant of Agricultural Land Classification and we note the rainfall rate used in the soil classification is 983mm whereas the Assessment rainfall number used in the Wallingford runoff calculation (SAAR) is 883 mm. While the difference (10%) can be explained (technically different methods, records and locations) the **different rainfall 'numbers' have the effect of lowering the soil grade**.

25. We note that the Soil Analyst makes no mention of examining previous crop records which would have more realistically rated the cropping potential of the land, in our view, an essential part of classifying the soil grade.

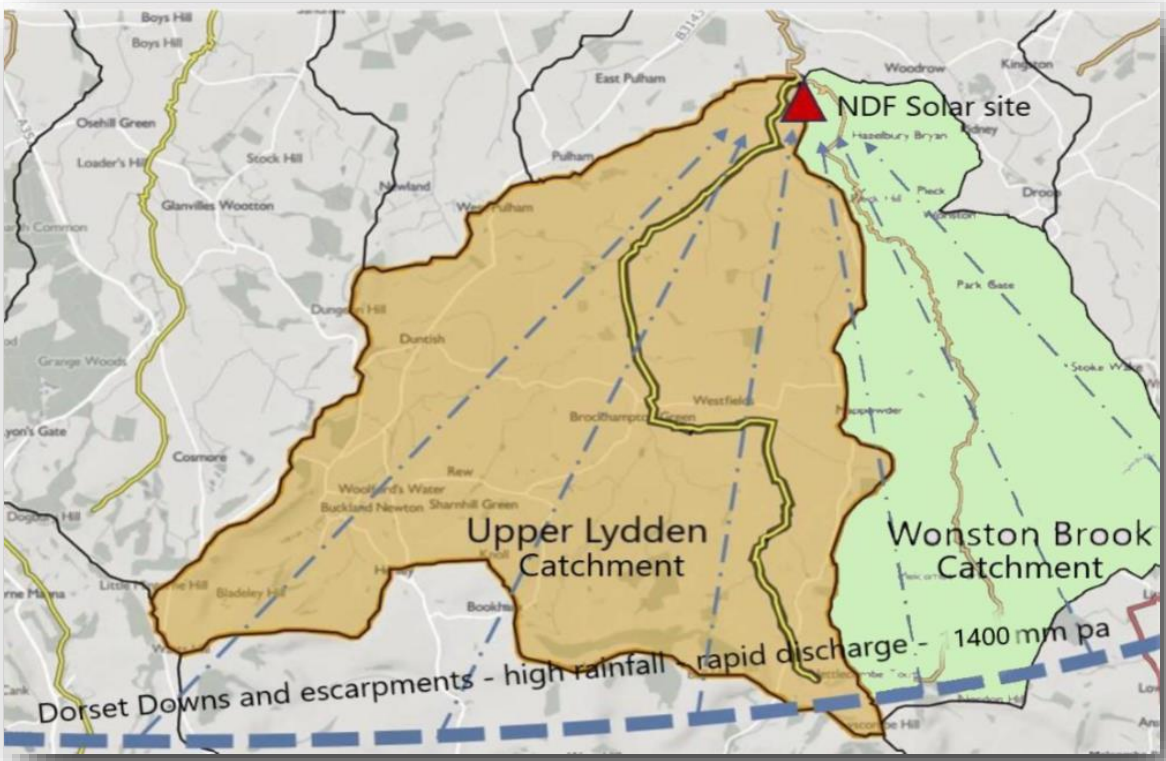
ALTERNATIVE SITE ASSESSMENT

26. We suggest with no alternative Site data on flood risk presented, and objectively compared, the Applicant's 'Alternative Site Assessment' is little more than a retrospective academic exercise with no purpose other than to present the appearance of compliance with planning guidance.[6]

[5] Application Report Reference R015

[6] SHV Comments about the Applicant's Alternative Site Assessment February 10th 2023 (wordpress.com)

HYDROLOGY AND INCREASED SURFACE RUN OFF



40 SQUARE KILOMETER CATCHMENT AREA – FOCUS AT NORTH DAIY FARM

HYDROLOGICLY UNIQUE

27. Despite the Applicant's public acknowledgement in 2020 that the proposed site suffered with "**significant flooding issues**",[7] the Flood Risk Assessment presented fails to identify that North Dairy Farm is in a hydrologically unique location in a landscape shaped by North Dorset's very high rainfall.

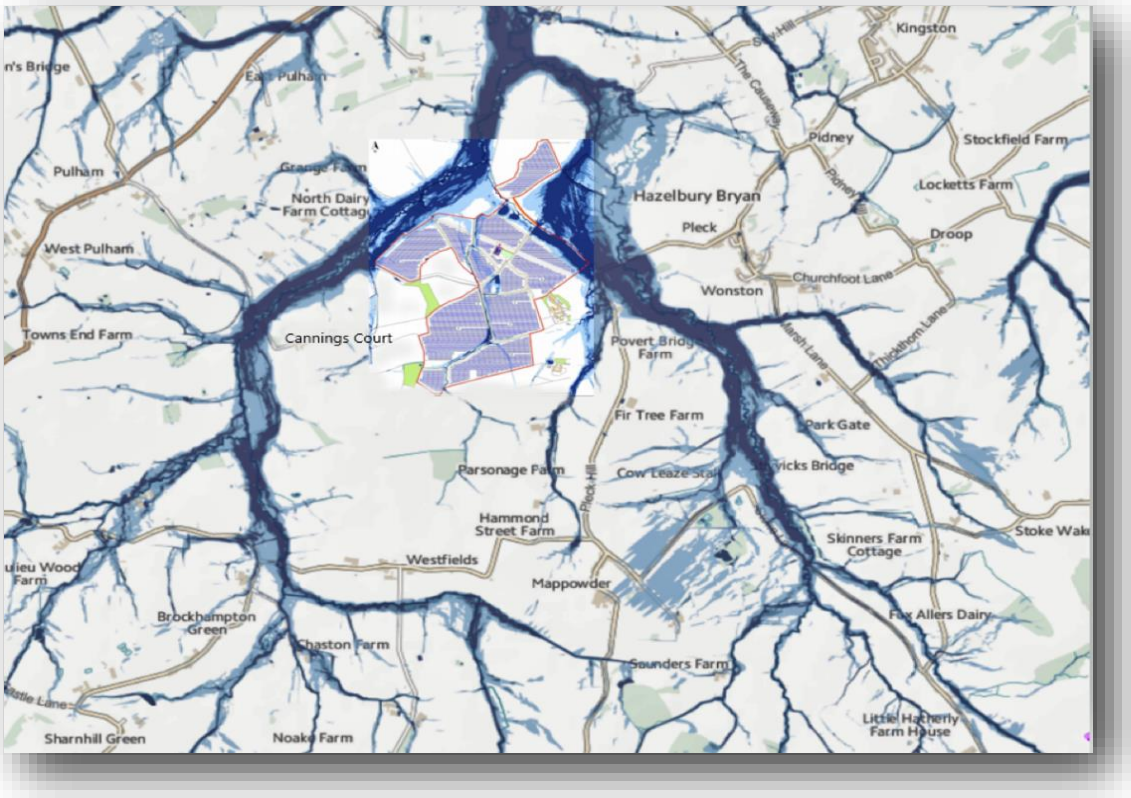
RUNOFF NOT CALCULATED

28. The Council's Flood Risk Management Team note, "**Solar farms have the potential to interrupt overland flow routes, reduce the amount of rainfall absorbed into the ground and increase the rate and volume of surface water runoff."** It is a key planning objective to reduce flooding risk where possible. However, if the Applicant cannot "demonstrate" that flooding downstream **will not increase**, then the **planning Application must be refused. No whole-site calculations on this matter have been presented by the Applicant to the Council.**

[7] Colin Ramsey BSR North Dairy Farm Solar Park - Zoom - Zoom Access Passcode: pp%Wd92p @ 00:54:54

INCREASED RAINFALL AND FLOODING

29. A GovUK flood alert for the area surrounding the Site was recently issued. It emphasised the following essential safety guidance: "**Avoid driving or walking through flood water: just 30 cm (1 foot) of fast-flowing water could move your car and even shallow-moving water can knock you off your feet"**



FLOOD EXTENTS

30. The Environment Agency Flood Extent Map (Above) shows the proposed North Dairy Farm development, edged in red. The landscape, to the south below the escarpments, is shaped by very high levels of rainfall, up to 1400 mm a year. That is about three times the rainfall onto the Dorset coastal wards, which many Planning Committee Members represent. Around half of that rainfall rapidly discharges from the Downs and high ground, often flash flooding into the 40 k^2 Upper Lydden and Wonston Brook Catchment Areas. The two catchments close in and flow around the proposed Site, combining just 90 metres to the north of it, and eventually into the river Stour. Rainfall at the site is estimated to be 984 mm a year. The frequency of extreme weather and rainfall events in the area is significantly increasing. The ground is saturated for 199 days a year and has very low infiltration rates.

31. The Applicant's Flood Risk Assessment states "**It has been demonstrated that the access route could flood to a depth of 1 metre**. The hazard rating for this is defined as a danger for the general public **including the emergency services**" **which could prohibit safe Site access and egress by the only road into the Site.**

EMERGENCY ACCESS/EGRESS

32. The proposed site is classified as Critical Infrastructure, and the Applicant states that unrestricted access to the Site is always required "24/7". This is particularly relevant where there may be an equipment fault or failure on site which needs immediate and urgent repair. High Voltage electricity and the consequential risks around such environments would only be exacerbated where flood water is an influential factor.

NO CALCULATED DEMONSTRATION

33. It is unusual for any single issue to cause a planning application to be refused. However, in this instance the matter of runoff and flood risk must be drawn to the Committee's attention, because the Applicant has not provided runoff calculations to "demonstrate" that the proposed development would match or reduce the existing greenfield runoff rates. **We believe that in the absence of a calculated and reasoned "demonstration", planning approval should be refused.**

AMERICAN RESEARCH FINDINGS

34. The Applicant claims that the existing rates of runoff would not be increased. They state: **"No Sustainable Drainage Systems are proposed for the area covered by the solar panel arrays** as robust and accepted research (Cook and McCuen) has demonstrated that solar panels do not have a significant effect on runoff volumes, peaks or time to peak if grass cover is well maintained underneath panels and between rows".

OFFSITE RISK

35. **The Applicants claim may be valid for other sites which match the ground infiltration characteristics used in the American research. We believe the ground infiltration rates at the NDF Site are significantly lower.** That said, the Applicant has now proposed that swales [8] should be used to control surface runoff from some areas of PV panels, simply to 'reassure the community'. The Authority's Flood Risk Management Team have suggested that a: "**finalised and fully justified drainage system to reduce the increased risk of downstream flooding that the impervious panels pose"** must be submitted to the Council. That has not been produced.

[8] Document P-FUL-2021-01018_Swale_Plan .pdf

UNIQUE HYDROLOGY

36. As noted, the hydrological regime for North Dorset is significantly different from the American study area, and quite unlike other solar developments in Dorset. For example, the Spetisbury arrays are on fast draining highly permeable chalk ground and has no waterways on or around it – a recognised sign that the ground is highly permeable. The Applicant's 'Agricultural Land Survey' notes that North Dairy Farm has low infiltration soils which are saturated for over six months a year. Therefore, the ground has a greater propensity for generating surface runoff.

EXPERT OPINION

37. The Applicant's 'Cook and McCuen based' claim for the proposed NDF Site, is **contradicted by the only expert hydrological opinion presented** (by Hydro-GIS, Harvey J. E. Rodda BSc PhD FRGS FRA), **and by the expert opinions expressed by the Council's and AONB Officers.**

PV ARRAYS AND INCREASED SURFACE RUNOFF

38. Hydrology Engineers, 'Kennedy Jenks' conclude: **"**PV arrays may **have the potential to alter the volume, velocity, and discharge pattern of stormwater runoff at a site during and after construction. According to MPCA, [9] sites can expect a 15 – 50% increase in volume due to the installation of solar PV panels."**

AONB UNIT OPINION

39. Richard Burden BSc, on the matter of 'solar panel induced runoff' notes: "The experience of Cranborne Chase AONB Unit is that although assertions are made that the field surfaces will be largely unchanged **that does not turn out to be the case. Frequently the quantity of rainfall on the hard and impervious surfaces of the panels leads to increased surface runoff".**

DORSET COUNCIL FRM TEAM OPINION

40. The Council's Flood Risk Management Team note, that: "**Solar farms have the potential to interrupt overland flow routes, reduce the amount of rainfall absorbed into the ground and increase the rate and volume of surface water runoff".**

[9] The Minnesota Pollution Control Agency is a State agency that monitors environmental quality

FRM OFFICER'S OPINION

41. Dorset Council's Flood Risk Management Officer stated: "**Regardless of prevailing risk, development, through the introduction of impermeable areas, has the potential to exacerbate or create flood risk**".

RUNOFF RATE NOT 'PROVIDED'

42. Government guidance [10] for assessing surface water runoff states: Applicants need to assess surface water runoff from the site **and provide an estimate of how much surface water runoff** the development will generate - **both the volume and the rate of the runoff.** Since 2020, the Applicant has failed to provide the required estimates.

NO MEASUREMENTS PRESENTED

43. The independent expert Hydro-GIS Assessment notes: "The Applicant's surface water management plan lacks detail**, is not supported by field measurements and is uncertain in the descriptions whether infiltration drainage systems can be used or not".**

NO 'IMPERITIVE' TEST RESULTS

44. Dorset Council's Strategic Flood Risk Assessment SFRA 11 states that**: "ground infiltration tests are imperative" and should be carried out "early in the planning process". No such tests have been undertaken.**

INAPROPRATE INFILTRATION RATES

45. As already mentioned, **"The infiltration rates for the soil types used in the Cook and McCuen modelling are significantly higher than the very low rate of the clay soils found on the proposed Site"** which is expected to have rates close to zero – compared to 5.75 mm per hour for 'B' and 2.54mm per hour for 'C' soil type in the American model.

DOWNSTREAM RISK UNCALCULATED

46. We believe, that if the actual NDF ground infiltration rates were used in the modelling, then the predicted surface runoff rates on saturated ground (200 days), even on good grass, **would increase significantly,** and the **time to peak flow would be reduced.** That would have **significant detrimental consequences for the downstream riparian owners.**

[10] Flood risk assessment in flood zones 2 and 3 - GOV.UK (www.gov.uk)

NO DEMONSTRATION

47. The Applicant has not told the Authority what the actual area of the proposed solar panels is. Therefore, **it is impossible for them to "demonstrate", as the Government Guidance requires, that the existing ground runoff rates would be matched or reduced.**

NO STORAGE CALCULATED

48. The Applicant has not provided any **'Long term runoff storage calculations' to identify the extra volume emanating from the site due to the impermeable area of the solar panels.** In the Mynydd-y-Gwrhyd Flood Risk Assessment, 25% of the panels total area was used to make the necessary calculation. The authors note: "**This is a conservative assumption based upon current research on the hydrological impacts of solar arrays**."

SWALES WITHOUT INFILTRATION ARE DITCHES

49. Swales are intended to store surface runoff and to reduce it by promoting infiltration - **where soil and groundwater conditions allow**. As noted, the ground at the proposed site is saturated for nearly 200 days a year. It is also believed to have very low, or at times close to zero ground infiltration rates. Some areas, are subject to ground water flooding and a high-water table. These factors mean that the swales would not prevent increased runoff rates. They would simply act as 550 m^3 of shallow drainage ditches which would transmit surface runoff directly into the adjacent natural waterways **more rapidly than would normally occur by natural overland greenfield runoff.** The swales are proposed for areas of the Site that have high risk of flood. The Environment Agency warn that their flood zone maps are based on the broadscale national modelling which they warn is **inaccurate** and should not be used for detailed site-specific flood risk assessment.

REMARKABLE STORAGE

50. It is remarkable that the Applicant accurately identifies the requirement to provide 67.5 m^3 of swale storage for the 0.3-hectare area of the 'transformer compound', but proposes only 550 m^3 to help manage the surface runoff from approximately 17 hectares, which includes fields 4, 6, 7, 16 and 17, parts of which flood (ground, fluvial and pluvial) and would be covered by the impermeable PV panels. During a 1 in 100-year event the greenfield runoff for the whole proposed Site would be approximately 1521 litres a second. For the 5 fields where swales are proposed, the greenfield surface runoff is estimated to be approximately 334 litres a second, or 1202 tonnes an hour. That would be well over double the 550 m^3 (tonnes) storage capacity of the proposed swales.

UNREASONABLE AVOIDANCE OF TESTS

51. The Applicant knew in October 2020 that "significant flood issues" affect the proposed Site, and about the harmful consequences that would be suffered by the downstream riparian owners if the offsite surface runoff rates increased, or the time to peak flow from the Site was reduced. We believe that in light of this fact, it is '**unreasonable'** for the Applicant **not** to have undertaken greenfield runoff calculations for the Site, or conducted ground infiltration tests at an **"early stage in the planning process"** (as required by the Council's Strategic Flood Risk Assessment) so that the need for onsite sustainable drainage could be properly assessed and the required calculations and demonstration presented to the Authority.

UNREASONABLE CONDITION

52. We believe the Flood Risk Management Team's suggestion that the design of a drainage system can be left for later and dealt with by the attachment of 'Pre-commencement Conditions' is risky, unreasonable and would not accord with SFRA and EN3 policy guidance or Paragraph 55 of the National Planning Policy Framework. It makes clear that planning conditions should be kept to a minimum, and **only** used where they satisfy the six tests, including that they are: (6.) "Reasonable in all other respects". We suggest that it is unreasonable, in this instance, to rely on an inappropriate American study which uses ground infiltration rates that have not been demonstrated to occur on the proposed development Site, where the ground is saturated for an average of over six months a year, and where extreme rainfall events are predicted to continue to increase.

INACCURATE FLOOD MAPPING

53. The extensive lake among the 'dairy' green grass in this image was the result of a heavy rain event during one day in October 2021. The flooded area significantly exceeded that predicted by the Environment Agency flood mapping. It is also the place chosen by the developer to be the 'Temporary Works Compound' during the estimated six-month construction phase of the proposed development.

TO SUM UP

BACKGROUND

54. We recognise the urgency of **the Climate and Ecological Emergency and the urgent need for low carbon energy**. Its provision would be a significant public benefit.

55. We understand that the Council aims to **protect and enhance the biodiversity in Dorset.**

56. It is self-evident that the sun and wind cannot provide all the energy we use, and it is essential that we **choose the right mix of energy generation and put it in the right places**.

57. Electricity generated from wind energy has one of the lowest life cycle carbon footprints. **Solar is between 75 and 97% more CO^2 costly than wind**.

58. **Wind turbines average just 11 grams of CO2 emission per kilowatt-hour of electricity generated**. That compares with **44 g/kwh for solar**, 450 g for natural gas.

59. **The Government is on track for offshore wind to supply all the homes in the country by 2030**. Dorset Council has estimated that it alone will need 60MW of solar PV - **or only 30MW of wind energy**, to cover their own energy demand once efficiency measures have been taken.

PLACE

60. **The proposed industrial development is in the wrong place**! The area is identified by Dorset Council as being "**highly sensitive to solar development"**.

61. The proposal **does not fully conform to the Council's or national development plans**. It would replace a **high-quality and valued ecological system** which helps to feed us. **One of the very things national policies and the Council's Climate and Bio-diversity Emergency plan is designed to avoid.**

62. A development decision must be based solely on Dorset's agreed planning policy and the National Planning Policy Framework and Guidance – as it is now – **not how we might wish it to be!**

63. Expert Landscape Assessment has identified that the area around North Dairy Farm is a **'highly valued landscape'** which **Dorset Council considers has the qualities of a National Park.** It is within an area the AONB Management Plan describes as of: "**outstanding environmental quality**". The expert Heritage Assessment [11] concludes that there would be adverse major effect on significant elements of the setting of the Conservation Area

64. It is a **robust and intact landscape** with a **pastoral and tranquil character**. It has long-standing **dairy farming traditions**, historic association between the **escarpment located Iron Age hillforts,** renowned **cultural associations with Thomas Hardy and William Barnes**. **The tourist trade is strongly supported by Dorset Council.** The site is enclosed by **species rich hedgerows** which have remained largely intact since the Middle Ages

65. Dorset Council's Landscape Architect and the Area of Outstanding Natural Beauty Planning Officer **do not** support the proposed development.

66. North Dairy Farm is in a "**valued landscape"** within the setting of the Dorset Area of Outstanding Natural Beauty. **Neighbourhood plans** state that the landscape is also **"locally valued"** by the community and **therefore is protected by the National Planning Policy Framework.**

67. Despite the proposed planting mitigation around North Dairy Farm there remain **32 public viewpoints**, where the Applicant has assessed and determined that **visual harm would be caused to 28 of them.**

68. The proposed site and surroundings are **already a wonderful 'bio-diverse area'**.

69. Landscape beauty is not limited to the visual character but includes all aspects which underpin and contribute to that character. Therefore, **the conservation and enhancement of wildlife, built heritage and cultural heritage is integral to the conservation of landscape and its natural beauty. The Dorset AONB and its setting lies within an area known for its outstanding environmental quality – as does the proposed industrial development Site**.

70. **The Agricultural Land Classification survey Field 17 sample location AB26 had a 3a reading and thus qualifies as BMV land.**

71. We believe the Applicants **Alternative Site Assessment is little more than a retrospective academic exercise with no purpose other than to present the appearance of compliance with planning guidance.**

[11] Heritage Submission – Wyvern Heritage – Emma Rouse MCIfA MA BA Hons

FLOODING MATTERS

72. The Applicant publicly acknowledged in 2020 that the proposed site has "**significant flooding issues"** [12]

73. **The proposed Site catchment receives approximately three times the yearly rainfall than falls on the Dorset coastal areas**.

74. Council Officers note: "**Solar farms have the potential to interrupt overland flow routes, reduce the amount of rainfall absorbed into the ground and increase the rate and volume of surface water runoff**

75. The Applicant has not provided runoff calculations to "demonstrate" that the solar development would match or reduce the existing greenfield runoff rates. The Applicant's FRA notes: "**It has been demonstrated that the access route could flood to a depth of 1 metre. which could prohibit safe Site access".**

76. The Applicant states that unrestricted and emergency access to the Site is required at all times "24/7".

77. **"No Sustainable Drainage Systems are proposed for the area covered by the solar panel arrays.**

78. **The Applicants 'Cook and McCuen' claim may be valid, but only for sites which match the ground infiltration characteristics used in the American research. The ground infiltration rates at the NDF Site are significantly lower.**

79. The hydrological regime for North Dorset is significantly different from the American study area, and quite unlike other solar developments in Dorset.

80. **Council Officers note: "**PV arrays may **have the potential to alter the volume, velocity, and discharge pattern of stormwater runoff at a site during and after construction.**

81. **According to MPCA, "Sites can expect a 15 – 50% increase in volume due to the installation of solar PV panels".**

82. AONB Officers note: "**The experience of Cranborne Chase AONB Unit is that although assertions are made that the field surfaces will be largely unchanged that does not turn out to be the case. Frequently the quantity of rainfall on the hard and impervious surfaces of the panels leads to increased surface runoff".**

83. **Council Officers note: Solar farms have the potential to interrupt overland flow routes, reduce the amount of rainfall absorbed into the ground and increase the rate and volume of surface water runoff"**

84. Government guidance states that Applicants need to assess surface water runoff from the site **and provide an estimate of how much runoff** the development will generate - **both the volume and the rate of the runoff**

[12] Colin Ramsey BSR North Dairy Farm Solar Park - Zoom - Access Passcode: pp%Wd92p @ 00:54:54

85. Hydrology expert opinion is that the Applicant's Surface water management plan lacks detail**, is not supported by field measurements and is uncertain in the descriptions whether infiltration drainage systems can be used or not.**

86. **"The infiltration rates for the soil types used in the Cook and McCuen modelling are significantly higher than the very low rate of the clay soils found on the proposed Site"**

87. The Applicant has not told the Authority what the actual area of the proposed solar panels is. Therefore, **it is impossible for them to "demonstrate ", as the Government Guidance requires, that the existing greenfield ground runoff rates would be matched or reduced.**

88. **The Applicant has not provided any 'Long term runoff storage calculations' to identify the extra volume emanating from the site due to the impermeable area of the solar panels.**

89. **Swales without infiltration are ditches** which would simply transmit surface runoff directly into the adjacent natural waterways **more rapidly than would normally occur by natural overland greenfield runoff.**

90. The Environment Agency warn that their flood zone maps are based on the broadscale national modelling which is **inaccurate and should not be used for detailed site flood assessment.**

91. For the 5 fields where swales are proposed, greenfield runoff is estimated to be approximately 334 litres a second, or 1202 tonnes an hour, well over double the 550 m^3 (tonnes) storage capacity of the proposed swales.

92. The Applicant knew in October 2020 about the "significant flood issues" that affect the proposed Site. We believe that the attachment of 'Pre-commencement Conditions' would be risky, unreasonable and would not accord with SFRA and EN3 policy guidance. [13]

93. Every development proposal must be assessed on its unique merits. The planning decision taken by Councillors has to be **based solely on Dorset's agreed planning policy and the National Planning Policy Framework and Guidance – as it is now – not how we might wish it to be!**

FINALLY

94. A short point of law,[14] which should not be controversial, is that the Local Planning Authority cannot lawfully determine the Application unless and until it has **all the necessary information on which to reach its decision.** This is because Members must be able to ask themselves the right questions and to take reasonable steps to acquaint themselves with the relevant information in order to answer those

[13] Paragraph 55 of the National Planning Policy Framework.

[14] Lobbing members – Save Hardy's Vale (savehardysvale.com) Richard Harwood KC - 39 Essex Chambers -

questions correctly.[15] In the absence of such information, a decision to allow the development would not be properly informed and would be unlawful.

95. If the Applicant cannot demonstrate that flooding downstream will be reduced, or at least not increased then, we believe, the planning Application must be refused.

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Ian Bryan

10th April 2023 - For, and on behalf of, the 'Save Hardy's Vale' group.

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SHV Facebook
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[15] *SSE v Tameside* [1977]

ANNEX 1

REFERENCES

Strategic Flood Risk Assessment - Dorset Council Page 9. C.
SHV Flooding and Run-off Memorandum
Cook and McCuen Hydrologic-Response-of-Solar-Farms

SHV BSR Rebuttals & flooding and drainage Memorandum 14th November

SHV Comments about flooding – January 2022

Hydro-GIS Ltd Hydrological Review February 2022

SHV Summary Response to Hydro-GIS Review

SHV Comments about the Flood Risk Assessment March 2022

SHV Additional comments about flood risk – October 2022

SHV Impervious surfaces of the panels leads to increased surface runoff – email 29/10/2022

SHV Comments about the Applicant's Alternative Site Assessment February 10th 2023

SHV Note – The Site is in a "highly valued" landscape in NPPF 174a terms, and should be protected

SHV LOR with Annex 1. Landscape Statement Report Summary June 2021

SHV Landscape Statement A prepared by Phillip Hanson CMLI of The Landscape Practice

SHV Landscape Statement B by Phillip Hanson CMLI of The Landscape Practice.

Heritage Submission – Wyvern Heritage – Emma Rouse MCIfA MA BA Hons

A Rainy Day at a Solar Farm - Kennedy Jenks

MPCA The Minnesota Pollution Control Agency is a Minnesota state agency that monitors environmental quality, offers technical and financial assistance, and enforces environmental regulations for the State

https://www.pca.state.mn.us/

Current generation mix

Microsoft Word - postpn268.doc (parliament.uk)

Analysis: UK low-carbon electricity generation stalls in 2019 - Carbon Brief

Carbon footprint for the UK and England to 2019 - GOV.UK (www.gov.uk)

How Green Is Wind Power, Really? A New Report Tallies Up The Carbon Cost Of Renewables (forbes.com)

Dorset solar farm to power City of London buildings - BBC News

Lobbing members – Save Hardy's Vale (savehardysvale.com)